AGNICO EAGLE

# *Meliadine Extension: Geochemical Characterization and Source Term Report*

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LORAX ENVIRONMENTAL

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# *Glossary and Abbreviations*

AGNICO EAGLE

# Glossary and Abbreviations

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

| | |
|---|---|
| ABA | Acid base accounting |
| AEMP | Aquatic Environment Monitoring Program |
| AP | Acid potential |
| ARD/ML | Acid rock drainage and metal leaching |
| AUCCC | Average upper continental crust concentrations |
| BSE | Backscattered electron |
| CaNP | Carbonate neutralization potential |
| CaNP-adj | Adjusted carbonate neutralization potential |
| CCME | Canadian Environmental Guidelines for the Protection of Aquatic Life |
| CP | Collection pond |
| DI | Deionized (water) |
| EDX | Energy dispersive x-ray |
| FEIS | Final Environmental Impact Statement |
| GB | Gabbro |
| IF | Iron formation |
| LP | Lamprophyres |
| MAP | Maximum acid potential |
| MDMER | Metal and Diamond Mining Effluent Regulations |
| Mod-NP | Modified neutralization potential |
| Mod-sid-NP | Modified-siderite neutralization potential |
| NAG | Net acid generation |
| NIRB | Nunavut Impact Review Board |

| | |
|---|---|
| Non-PAG | Non-potentially acid generating |
| NP | Neutralization potential |
| NPR | Net potential ratio |
| PAG | Potentially acid generating |
| QA/QC | Quality assurance/quality control |
| QUEMSCAN | Quantitative evaluation of materials by scanning electron microscopy |
| RC | Reverse circulation |
| RCP | Representative concentration pathway |
| ROM | Run of mine |
| RPD | Relative percent difference |
| SAP | Sulphide (by difference) acid potential |
| SE | Sedimentary |
| SFE | Shake flask extraction |
| SP | Saline water pond |
| TDS | Total dissolved solids |
| TIC | Total inorganic carbon |
| TIMA-X | Tescan Integrated Mineral Analyzer |
| TIRFM | Tiriganiaq Formation |
| TSF | Tailings storage facility |
| UOFM | Upper Oxide Formation |
| UV | Ultramafic Volcanics |
| VO | Mafic Volcanics |
| VOSR | Sericitized Volcanics |
| WAD | Weak acid dissociable |
| WRSF | Waste rock storage facility |
| XRD | X-ray diffraction |

# 1. Introduction

AGNICO EAGLE

# 1. Introduction

## 1.1 Project Background

The Meliadine Mine is located approximately 25 kilometres (km) north of Rankin Inlet. Since Nunavut Impact Review Board (NIRB) approval in 2015 and to extend the life of the mine, Agnico Eagle has continued to extend its knowledge of the gold deposits around the Meliadine Mine by way of additional exploration. As a result, an improved project, collectively referred to as Meliadine Extension, is being proposed. Meliadine Extension will extend the life of the mine from 2032 to 2043 and will add underground mining activities at the already approved Wesmeg, Pump, F Zone, and Discovery deposits. Agnico Eagle intends to submit a Final Environmental Impact Statement (FEIS) Addendum to the NIRB.

Lorax Environmental Services Ltd. (Lorax) was retained by Agnico Eagle to complete a geochemical characterization program and develop source terms for the Meliadine Extension in support of the NIRB application. The geochemical source terms are used as water quality model input, the results of which are presented in the Water Balance and Water Quality Model-Technical Report (Lorax, 2022).

## 1.2 Previous Studies

Several geochemical characterization studies have occurred at the Meliadine site. The first investigation began in 1998 in conjunction with metallurgical testing. This included static testing on 150 samples from Tiriganiaq mine rock and overburden. This work, in addition to 48 samples collected in 2005 from in and around the exploration decline at Tiriganiaq was presented in SRK (2006). Geochemical characterization at Meliadine was expanded beyond the Tiriganiaq deposit in 2009, with sampling of the F Zone and Discovery deposits (Golder 2010). The most comprehensive geochemical characterization program was completed in 2014 in support of the 2014 FEIS (SD2-6 Geochemical Baseline). This report included previous sampling results in addition to over 600 new samples collected from ore bodies defined as F Zone, Pump, Wesmeg North, Wesmeg, Discovery, Tiriganiaq and Tiriganiaq-Wolf. The program included static testing, mineralogical characterization, and kinetic testing components.

- Tiriganiaq Geochemistry Acid Base Accounting and Metal leaching Analysis, (SRK, 2006)
- Report on Static Test Results for Waste Rock and Tailings, Meliadine Gold Project (Golder, 2010)

- Geochemical Characterization of Mine Wastes at Meliadine Gold Project – FEIS SD6-3 (Agnico Eagle, 2014)

The current work builds on the geochemical characterization work completed in these historic studies. Additional sampling and characterization work presented herein was initiated to ensure spatial coverage of proposed Meliadine Extension mine workings and to continuously improvement of the understanding of geochemical behaviour of mine wastes.

## 1.3 Scope and Purpose

The purpose of the geochemical characterization program is to determine the acid rock drainage and metal leaching (ARD/ML) potential of geologic material that will be disturbed by mining activities of Meliadine Extension. Geochemical samples considered in this assessment include a subset of samples collected in support of the 2014 FEIS and supplemental samples collected in 2020 and 2021. Techniques used to assess ARD/ML potential include static tests, which examine the intrinsic ARD/ML potential of a sample, and kinetic tests, which expose the material to various weathering conditions. These results are used to predict the geochemical evolution of drainage produced from mine waste facilities that will exist during mine operations and closure, and inform mine waste management, water quality predictions, aquatic resources effects assessments and mitigation/contingency measures. Source terms for the Meliadine Extension were developed and used as water quality model input in support of the NIRB application.

## 1.4 Report Structure

The site geology and rock units defined in the geologic block model are described in along with the mine plan Chapter 2. Sample screening, selection and analytical methods used in various field and laboratory testwork are described in Chapter 3. Results from geochemical characterization of waste rock, ore, tailings and overburden are provided in Chapter 4. Chapter 5 describes the ARD classification criteria and defines the ARD potential of mine rock and tailings. The results from the field water quality survey initiated in 2020 are presented in Chapter 6, and a summary of e results are provided in Chapter 7. Finally, Chapter 8 describes the development of geochemical source terms applied in the water quality model.

# 2. Geology and Mine Plan

AGNICO EAGLE

# 2. Geology and Mine Plan

This chapter describes the geology of the Meliadine area provided by Agnico Eagle. The mine plan described in this chapter is based on Agnico Eagle Mine Plan, V11, December, 2020.

## 2.1 Regional Geology

The Meliadine properties are located in the Rankin Inlet Greenstone Belt of the Churchill Structural Province. This is an Archean, deformed and metamorphosed sequence of mafic volcanic, felsic pyroclastic, sedimentary rocks and gabbro sills. The Meliadine trend is defined by the regional Pyke Fault, a prominent high-strain fault zone which is northwest trending within the stratigraphy of the Archean Rankin Inlet Group. The Rankin Inlet Group was subjected to lower to middle greenschist facies metamorphism and multiple periods of deformation, including two identified periods of Archean and Proterozoic age. The Meliadine ore deposits are low-sulphide, gold-quartz vein deposits as per the geo-environmental classifications provided in Plumlee *et al*. (1999).

Stratigraphy in the Project area strikes east-west, and dips to the north at inclinations of 60 to 70 degrees. The stratigraphy is interpreted as being overturned. The principal lithological units that are likely to be disturbed by mining include:

- Turbiditic sedimentary rocks of the hanging wall, comprising greywacke, siltstone and argillite (Sam Formation) with gabbro dykes;
- Volcanic-hosted and sediment-hosted iron formation, including greywacke, siltstone and argillite (Upper Iron Formation) with abundant magnetite and chert layers;
- Sericite altered siltstones and graphitic argillite near the Lower Fault zone contact (Tiriganiaq Formation); and,
- Schistose and carbonate-altered mafic volcanic rocks in the footwall (Wesmeg Formation).

A summary of the rock units that have been included in the Meliadine Extension block model and corresponding lithology codes and rock units used in the 2014 FEIS are shown in Table 2-1.

**Table 2-1:**
**Meliadine Extension Lithologies and Corresponding 2014 FEIS Lithology Codes**

| Meliadine Extension Lithology | Meliadine Extension Lithology Codes | Lithology Codes | 2014 FEIS Lithology |
|---|---|---|---|
| Gabbro | GB | MG | Gabbro |
| Iron Formation | IF | KSC-LJ, LL, LLM, NLJ | Iron Formation |
| Sedimentary | SE | K, KWA-S | Greywacke/Siltstone |
| Graphitic Mudstone | KMG | KMG | |
| Siltstone | TIRFM | KS | |
| Oxidized Sediments | UOFM | KSC-WA | |
| Ultramafic Volcanics | UV | U | Ultramafic |
| Lamprophyres | LP | AUA | |
| Mafic Volcanics | VO | M | Mafic Volcanics |
| Sericitized Volcanics | VOSR | M | |

## 2.2 Local Geology

The Meliadine Mine is situated in a region of historically low seismicity. Archaean and Proterozoic deformational events have resulted in an alignment of stratigraphy trending in a northwest to southeast direction which defines the Meliadine trend. To the south of the deposits is the Pyke Fault, a major regional fault zone, which extends over several kilometres and is characterized by multiple foliations and regional shear zones.

The geology of the Tiriganiaq Deposit consists of greywacke and argillite sediments (Sam Formation), iron formation, and mixed iron formation, greywacke, and siltstone (Upper Oxide Formation) in fault contact with underlying mafic volcanic rocks (Wesmeg Formation).

The sequence trends in an east/west direction, and dips northward at inclinations greater than about 60 degrees. The stratigraphy is aligned for over 3 km along the mineralized shear direction. The fault contact between the Tiriganiaq and the Wesmeg Formation is referred to as the Lower Fault Zone. A zone of graphitic, mineralized fault gouge (0.5 to 3 m in thickness) commonly occurs over this zone.

The Tiriganiaq-Wolf mining area is a hybrid deposit hosted in stratigraphy similar to the Tiriganiaq deposit in the northern portion, while the southern portion is hosted in stratigraphy similar to the Wesmeg and F Zone deposits (AEM, 2015). The geology of the Wolf deposit contains chlorite-rich, massive basalts and pillowed basalts belonging to the Wesmeg Formation, which forms the structural footwall (refer to SD 6-3 of the 2014 FEIS).

Ongoing monitoring of geological structures has led to the identification of 17 faults (*i.e.,* KMS corridor, RM-175) that have been incorporated into the conceptual hydostratigraphy, in addition to the three regional faults (Lower Fault, Pyke Fault, and North Fault) that were previously considered in the 2014 FEIS.

The additional structures are generally located between the Lower Fault and Pyke Fault within the Mafic Volcanic Rock formations, and range in thickness between 2 and 6 metres. An exception is the KMS corridor, which is a wider zone of poor rock quality is generally located between the KMS fault and Lower Fault. Agnico Eagle has completed a review of the structures that may intersect the existing and proposed underground developments for Meliadine Extension.

There appears to be two parts to the Wesmeg gold deposit: a northern and southern part. In the northern part, the stratigraphy strikes east-west and dips 65 degrees to the north. The stratigraphy in the southern part strikes northwest-southeast and dips 50 degrees to the north. The host Wesmeg Formation is massive to pillowed basalts and interlayered mafic volcaniclastics, with rare gabbro dykes and some interflow sediments consisting of siltstone, mudstone, and minor iron formations.

The stratigraphy in the Pump deposit area strikes northwest southeast and dips 50 degrees to the north. Similar to the F Zone and Wesmeg deposits, the host rocks at the Pump area are massive to pillowed basalts of the Wesmeg Formation, which are cut by rare gabbro dykes and interflow sediments.

The stratigraphy of the F Zone area is dominated by mafic volcanic rocks and the east southeast striking Lower Lean Iron Formation. The deposit area is located north of the Pyke Fault which runs sub-parallel to the Lower Iron Formation.

The stratigraphy of the Discovery area is dominated by a thick package of inter-bedded clastic sedimentary units, chemical sediments (oxide facies iron formations) and minor gabbroic dykes. In the deposit area, the hanging wall to the main gold-bearing iron formation horizon is dominated by a greywacke unit which contains minor interbedded argillaceous units, chemical sediments and gabbroic dykes.

### 2.2.1 Mineralization

Gold mineralization is generally restricted to a folded and variably sheared oxide facies iron formation package, which generally consists of banded chert and magnetite horizons (banding on the millimetre [mm] to centimetre [cm] scale), with lesser interbedded chlorite-rich beds and chert and minor local interbedded greywacke units. The footwall to the main mineralized iron formation horizon consists of a similar succession of clastic sedimentary units as found in the hanging wall. The footwall stratigraphy is dominated by

greywacke, with a more argillaceous interval, approximately 20 to 40 metres below the mineralized iron formation.

Sulphide mineralization in the Tiriganiaq Deposit developed in two distinct generations. Primary sulphides are found parallel to bedding in the oxide iron formations and black argillite, and include laminations of pyrrhotite, pyrite, and chalcopyrite. Gold values are low to absent in this generation, indicating gold mineralization is not strongly correlated with primary sulphidization (lodes 1100, 1150, 1250). The second phase of sulphidization includes coarse-grained arsenopyrite and pyrrhotite associated with gold-bearing zones and quartz veining (1000 lode). Galena and sphalerite are also present in both sulphide assemblages and are associated with gold-bearing zones.

Mineralization at the Tiriganiaq-Wolf gold occurs as disseminated and coarse blebs with arsenopyrite and pyrrhotite concentrations in veins (AEM, 2011). Wolf Main is similar to Pump and F Zone in that it is associated with the lower Lean Iron Formation. Wolf Central is similar to lode 1000 of Tiriganiaq in that is associated with lode quartz near the Lower Fault, which is the contact between Upper Oxide Formation and the Wesmeg Formation. Gold mineralization appears as free gold in laminated and non-laminated quartz veins with lesser concentrations of arsenopyrite and pyrrhotite.

The F Zone deposit occurs as a series of mineralized pods of pyrrhotite and arsenopyrite-bearing iron formation that extend over just over 1 kilometer in length. These pods extend to the bedrock surface and are the target of several proposed shallow open pits. Underground potential also exists with gold mineralization present at depths of approximately 250 meters below ground surface (mbgs).

Mineralization in the Pump gold deposit is associated with shearing and quartz veining within the Lower Lean Iron Formation. Higher grade gold sections are found to be associated with east-west shearing. The orientation of the shearing is similar to that found at F Zone. Free gold occurs as discrete blebs in pyrrhotite and quartz shears, while occurring to a lesser extent along grain boundaries in large recrystallized arsenopyrite (Agnico Eagle, 2011).

Similar to the Pump deposit, mineralization in Wesmeg is associated with shearing and quartz veining while gold occurs as discrete to coarse blebs, disseminated, while being closely associated with coarse to finely disseminated arsenopyrite (Agnico Eagle, 2011).

In Discovery, gold mineralization is predominantly hosted in the northernmost ‘upper oxide’ iron formation, located parallel to the trend of the Pyke fault, within southeast-northwest trending stratigraphy. Gold mineralization is structurally controlled within folds and shear zones and is associated with quartz veining, silica flooding and sulphidization of magnetite by pyrrhotite and/or arsenopyrite. Alteration envelopes occur adjacent to veins

of quartz with variable calcite content. Alteration is characterized by assemblages of hornblende/grunerite, biotite and calcite overprinting the iron formation and greywacke greenschist facies. Sulphide mineralization includes arsenopyrite and pyrrhotite with minor chalcopyrite and trace sphalerite. The highest gold concentrations are in structurally controlled zones (shearing, folds) associated with pyrrhotite and porphyroblastic arsenopyrite, as well as disseminated in quartz veins and silicate iron formation.

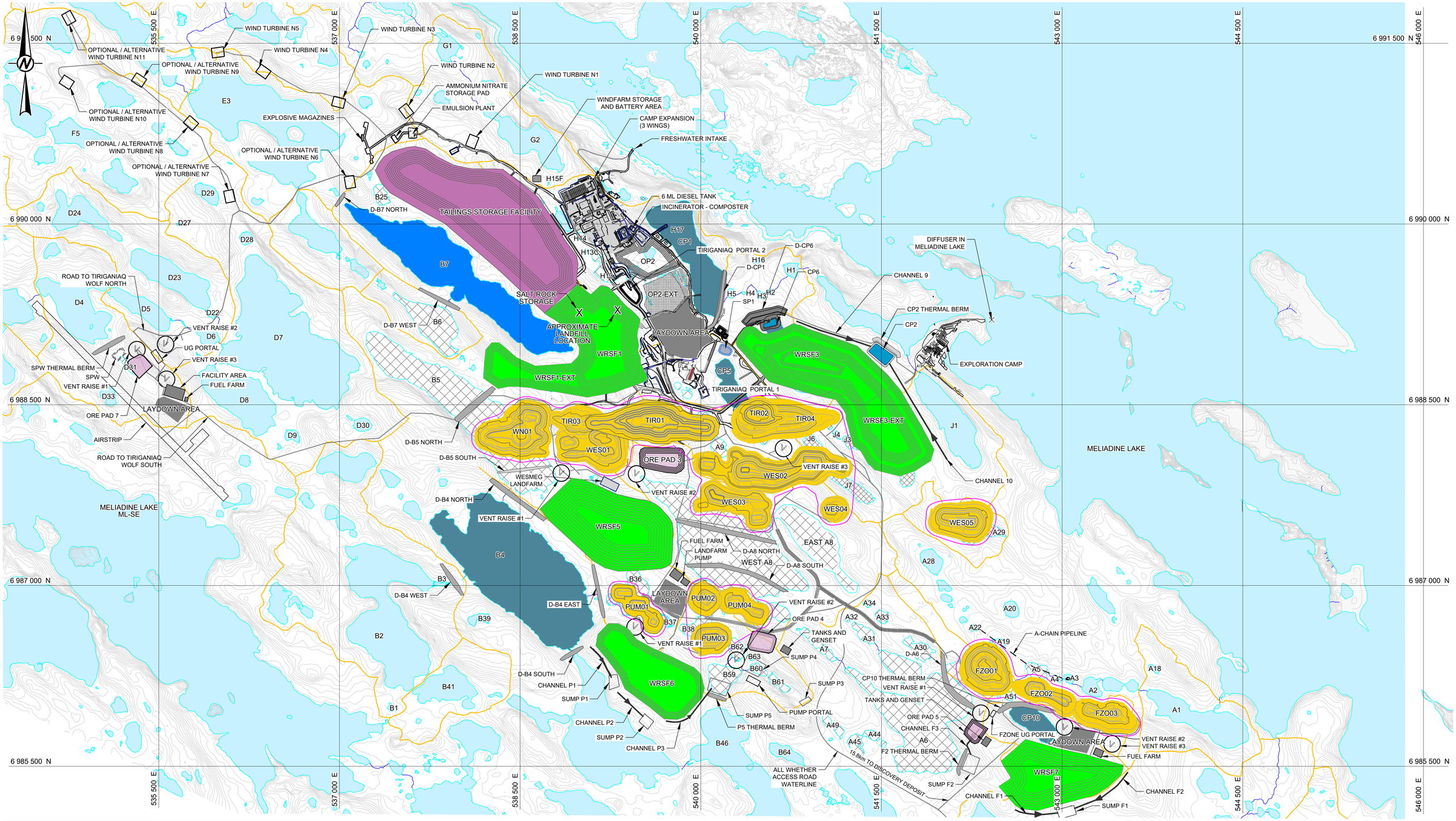
## *2.3 Mine Plan Overview*

The Meliadine Extension includes four underground mines and sixteen open pits. The general Meliadine Extension site layout plan is shown on Figure 2-1. The Meliadine Extension mine sequence is shown in Table 2-2.

### 2.3.1 Mine Schedule

The NIRB approved Meliadine Mine went into operations in 2019 and mining at the Tiriganiaq deposit is currently ongoing. The NIRB approved Meliadine Mine was scheduled to be completed in 2032. The Meliadine Extension is planned to commence in 2024, at which point the mine schedule will deviate from the approved project. The operations phase of the Meliadine Extension will last from 2024 to 2043. Closure will extend for 7 years as pits are being re-flooded, from 2044 to 2050. The filling of open pits with water would extend until the end of the closure phase. Post-closure will be initiated when flooded pits are reconnected to the surrounding environment and will last from 2051 onwards.

The Meliadine Extension is expected to produce approximately 65 million tonnes (Mt) of ore, 191.6 Mt of waste rock, 34.6 Mt of overburden waste, and 65 Mt of tailings (Table 2-4). Overburden will be produced from open pits while waste rock will be generated from both open pit (174.6 Mt) and underground (15.9 Mt) operations. A majority of the underground waste rock (11.8 Mt) will be used as rockfill to support underground operations.




**LEGEND**

- EXISTING GROUND
- ROAD
- CATCHMENT BOUNDARY LINE
- MINING AREA
- DIVERSION CHANNEL
- CONTACT WATER POND
- SALINE POND
- WATER
- DEWATERED
- OPEN PITS
- TAILINGS STORAGE FACILITY
- WASTE ROCK STORAGE FACILITY

**NOTE**

1. ALL UNITS ARE IN METRES UNLESS OTHERWISE NOTED.

**REFERENCE**

1. REFERENCE BASE DRAWING FROM CLIENT "PLOM2021_MEL_ENG_edits_V1-Base.dwg".
2. MINE INFRASTRUCTURE FROM AGNICO EAGLE MINES LTD. "LineWork for WMI PLOM to Jenyfer 09012021.dwg" PROVIDED ON SEPT. 1, 2021.

NOT FOR CONSTRUCTION

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1:15,000 METRES

CLIENT
AGNICO EAGLE MINES LIMITED

PROJECT
MELIADINE MINE EXTENSION

CONSULTANT
GOLDER MEMBER OF WSP

| | |
|---|---|
| YYYY-MM-DD | 2021-10-20 |
| DESIGNED | JR |
| PREPARED | AK |
| REVIEWED | JK |
| APPROVED | LY |

TITLE
**Meliadine Extension site Layout – (Year 2043)**

| PROJECT NO. | PHASE/TASK/DOC. | REV. | FIGURE |
|---|---|---|---|
| 21482774 | 2000/2002 | 0 | 2-1a |

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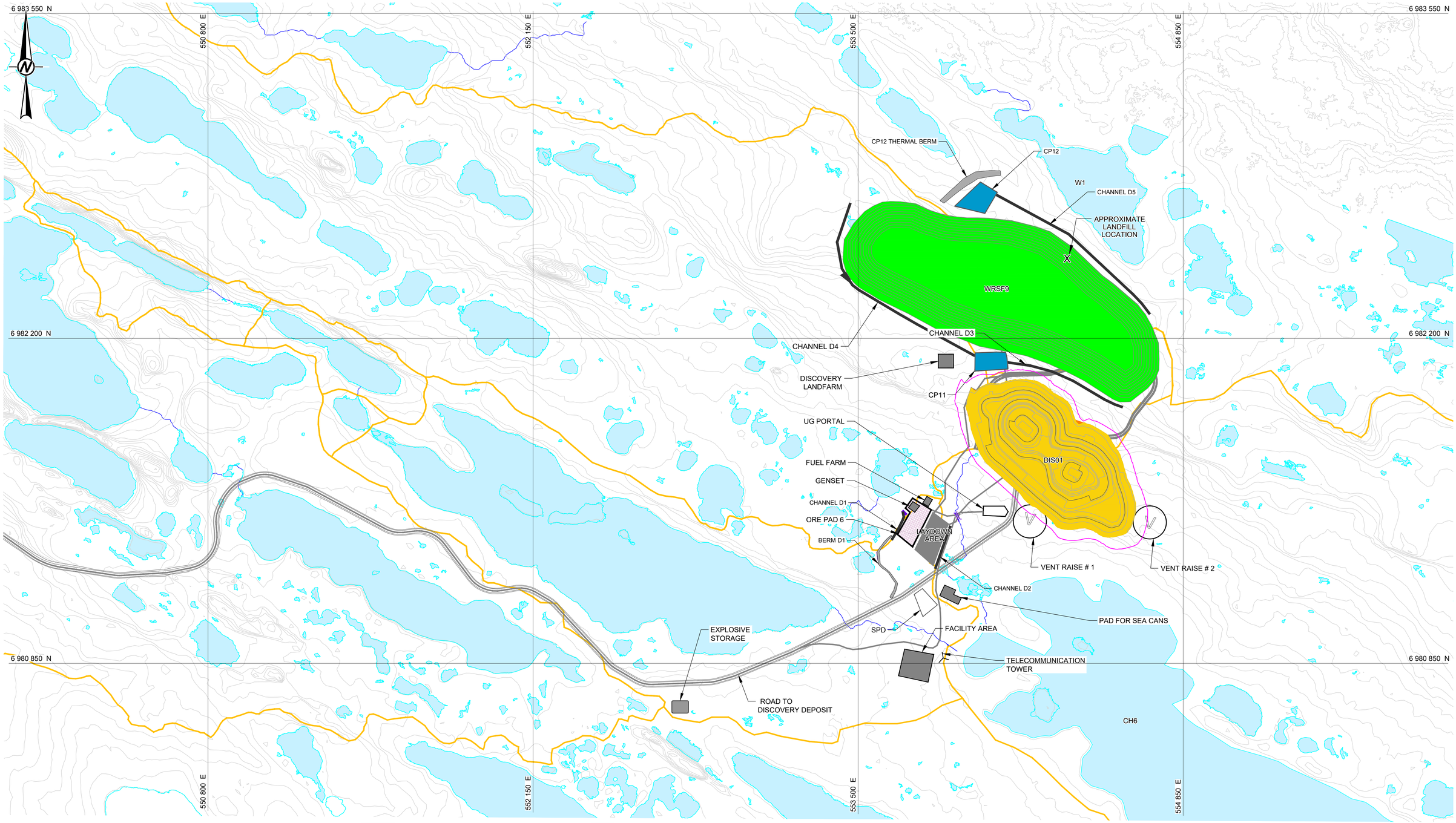


**LEGEND**

- EXISTING GROUND
- ROAD
- CATCHMENT BOUNDARY LINE
- MINING AREA
- DIVERSION CHANNEL
- CONTACT WATER POND
- SALINE POND
- WATER
- DEWATERED
- OPEN PITS
- TAILINGS STORAGE FACILITY
- WASTE ROCK STORAGE FACILITY

**NOTE**

1. ALL UNITS ARE IN METRES UNLESS OTHERWISE NOTED.

**REFERENCE**

1. REFERENCE BASE DRAWING FROM CLIENT "PLOM2021_MEL_ENG_edits_V1-Base.dwg".
2. MINE INFRASTRUCTURE FROM AGNICO EAGLE MINES LTD. "LineWork for WMI PLOM to Jenyfer 09012021.dwg" PROVIDED ON SEPT. 1, 2021.

NOT FOR CONSTRUCTION

0 250 500
1:7,500 METRES

CLIENT
AGNICO EAGLE MINES LIMITED

PROJECT
MELIADINE MINE EXTENSION

CONSULTANT
GOLDER
MEMBER OF WSP

| | |
|---|---|
| YYYY-MM-DD | 2021-10-20 |
| DESIGNED | JR |
| PREPARED | AK |
| REVIEWED | JK |
| APPROVED | LY |

TITLE
**2043 YEAR SITE LAYOUT - DISCOVERY**

| PROJECT NO. | PHASE/TASK/DOC. | REV. | FIGURE |
|---|---|---|---|
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25 mm
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**Table 2-2:**
**Meliadine Extension Mine Development and Sequence**

| | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Approved Mining | | | | Extension Project | | | | | | | | | | | | | | | | | | | |
| **Tiriganiaq Deposit** | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Overburden | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| **Wesmeg Deposit** | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Overburden | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| **Pump Deposit** | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Overburden | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| **F Zone Deposit** | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Overburden | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| **Discovery Deposit** | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Overburden | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Pit Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Ore | | | | | | | | | | | | | | | | | | | | | | | | |
| UG Waste Rock | | | | | | | | | | | | | | | | | | | | | | | | |

**Notes:**
Orange shade indicate years that excavations are active.
Underground Mine = UG
Tiriganiaq includes Tiriganiaq-Wolf
Wesmeg includes Wesmeg North

**Table 2-3:**
**Waste Rock and Overburden Production During Meliadine Extension Life of Mine**

| Year | Total Overburden (t) | Total Waste Rock Open Pit (t) | Total Waste Rock UG (t) | Waste rock required for backfill UG (t) |
|---|---|---|---|---|
| 2020 | 693,226 | 2,424,133 | 832,179 | 305,119 |
| 2021 | 3,349,130 | 1,506,696 | 708,224 | 335,209 |
| 2022 | 1,221,917 | 2,593,910 | 668,700 | 338,728 |
| 2023 | 1,194,525 | 4,268,265 | 791,648 | 345,721 |
| 2024 | 623,602 | 4,680,005 | 836,442 | 346,512 |
| 2025 | 787,056 | 5,333,152 | 872,577 | 342,999 |
| 2026 | 2,225,166 | 3,062,755 | 979,387 | 344,932 |
| 2027 | 2,087,886 | 6,916,269 | 1,174,276 | 354,546 |
| 2028 | 1,918,261 | 9,286,915 | 1,125,163 | 605,205 |
| 2029 | 350,370 | 10,669,542 | 1,067,906 | 744,724 |
| 2030 | 2,432,426 | 8,313,774 | 1,209,051 | 574,068 |
| 2031 | 1,716,222 | 9,470,241 | 1,108,828 | 536,217 |
| 2032 | 1,655,221 | 9,583,821 | 1,006,758 | 631,684 |
| 2033 | 989,498 | 10,383,475 | 677,785 | 614,309 |
| 2034 | - | 11,206,325 | 512,589 | 642,809 |
| 2035 | 2,217,665 | 8,978,764 | 601,856 | 645,155 |
| 2036 | 1,818,870 | 8,636,056 | 521,334 | 699,627 |
| 2037 | 5,373,987 | 5,949,811 | 587,040 | 869,024 |
| 2038 | 19,947 | 10,728,043 | 297,488 | 784,601 |
| 2039 | - | 10,323,391 | 96,872 | 715,817 |
| 2040 | 2,790,454 | 7,379,533 | 153,786 | 315,939 |
| 2041 | 1,171,814 | 10,152,255 | 41,862 | 361,096 |
| 2042 | - | 10,791,759 | - | 292,494 |
| 2043 | - | 1,936,032 | - | 122,245 |
| **Total** | **34,637,243** | **174,574,923** | **15,871,751** | **11,868,782** |

### 2.3.2 Overburden and Waste Rock Management

Waste rock will be stockpiled at the surface in waste rock storage facilities (WRSFs) or backfilled to the mine underground as rockfill. A portion of waste rock will also be used for thermal armouring of overburden exposures on pit walls and cover construction for the TSF. Overburden will be co-disposed with waste rock in WRSFs at the mine surface. Key management features related to Meliadine Extension waste placement are as follows:

- Overburden excavations will be limited to winter months to maintain frozen conditions, mitigating metal and salinity leaching potential from this material.

- Overburden will be encapsulated by waste rock within the core of the WRSF to maintain permanently frozen conditions and promote formation of a frozen core within each WRSF.
- A thermal cover will be installed over WRSF9 to mitigate the ARD potential associated with PAG waste rock from the Discovery open pit.
- Underground waste rock from F Zone, Pump, Discovery and Tiri-Wolf will be temporarily stockpiled in designated facilities termed 'saline WRSFs'. Saline waste rock will be returned to the underground as rockfill during operations. Any material remaining in saline WRSFs at the end of operation will be returned to the mine underground.
- Underground waste rock from Tiriganiaq, Wesmeg-North and Wesmeg will either be used as rockfill or co-disposed with open pit waste rock in WRSF1, WRSF1_Ext and WRSF3. This underground waste rock stored permanently at the mine surface will be encapsulated within the interior of the WRSFs by open pit waste to promote permanently frozen conditions.

These management features have been incorporated into the development of geochemical source terms and water quality predictions.

#### *2.3.2.1 Waste Rock Storage Facilities*

Waste rock and overburden generated from open pits activities will be placed in one of the WRSF assessed (Table 2-4). Overall, the total WRSF surface area will be half the size of the original application and will mostly be within the 2014 FEIS footprint. Most of the material will be stored within one of the following WRSFs:

- WRSF1 and WRSF1_Ext: located near Tiriganiaq and Wesmeg deposits
- WRSF3 and WRSF3_Ext: Located near Wesmeg deposit
- WRSF5: Located near Wesmeg deposit
- WRSF6: Located near Pump deposit
- WRSF7: Located near F Zone deposit
- WRSF9: Located northwest of the Discovery deposit.

In addition to these waste rock facilities, approximately 11.1 Mt of waste and 0.3 Mt of overburden will be progressively placed at the TSF as cover material. An unspecified quantity of waste rock will also be used for thermal covers on pit wall overburden exposures.

**Table 2-4:**
**Composition of Meliadine Extension WRSFs**

| Waste rock and overburden source | Destination |
|---|---|
| TIR02, Wesmeg and Wesmeg North open pits and Underground | WRSF1 |
| | WRSF3 |
| | WRSF3_ext |
| | WRSF1_ext |
| Wesmeg Open Pits | WRSF5 |
| Pump Open Pits | WRSF6 |
| F Zone Open Pits | WRSF7 |
| Discovery Open Pit | WRSF9 |

#### *2.3.2.2 Underground Mine Waste Rock*

Waste rock generated from the underground mining activities will be segregated from the open pit waste rock. The saline WRSFs will be brought back underground throughout the mine life and completely removed from surface at the end of operations. The four saline WRSF are:

- Saline WRSF 1 – from Pump Underground
- Saline WRSF 2 - from F Zone Underground
- Saline WRSF 3 - from Discovery Underground
- Saline WRSF 4 - from Tiriganiaq-Wolf Underground

Underground mine rock from Wesmeg, Tiriganiaq and Wesmeg North not required for rockfill will be placed in WRSF1, WRSF1_Ext and WRSF3. Of the 15.9 Mt of waste rock from underground that will be generated, 11.9 Mt will be used as rockfill in underground mine workings during operations. At the end of operations any remaining waste rock in saline WRSFs will be backfilled to the mine underground, and underground waste rock in WRSF1, WRSF1_Ext and WRSF3 will be encapsulated by open pit waste rock.

### 2.3.3 Mill Processing and Tailings Management

Milled tailings production began in early 2019 at Meliadine and to date have primarily processed ore from the Tiriganiaq underground. The mill employs a conventional gold circuit comprising crushing, grinding, gravity separation and cyanide leaching with carbon-in-leach circuit, followed by cyanide destruction by $SO_2$/air and filtration of the tailings. The filter brings the moisture content of the filter cake below 16%. The filter cake product is then trucked to the TSF or to the paste backfill plant, as required. Tailings trucked to the paste plant is mixed with water and cement, producing a paste product with an average

cement content of 4.5 wt.%. The planned mill throughput is 8,500 tpd for the Meliadine Extension Project, compared to the 10,000 tpd which was assumed in the 2014 FEIS.

Tailings generated by mill production at Meliadine will be dewatered by pressure filtration to a solids content of approximately 85% by weight. The filtered tailings will have the consistency of damp, sandy silt and will be transported by haul truck to either the paste plant for use underground as backfill or for placement and storage in the TSF.

Approximately 51.6 Mt or 79% of the tailings will be deposited within the TSF and the remaining 13.4 Mt or 21% will be used as underground cemented paste backfill for Meliadine Extension. The current production schedule, quantities, and distribution of tailings by year are presented in Table 2-5.

**Table 2-5:**
**Quantities and Distribution of Tailings by Year**

| Year | Tailings Generated (t) | Returned UG as Paste fill (t) | Returned UG as Paste fill (m3) | Stored in TSF (t) |
|---|---|---|---|---|
| 2020 | 1,518,900 | 661,263 | 333,971 | 857,637 |
| 2021 | 1,770,250 | 726,475 | 366,906 | 1,043,775 |
| 2022 | 1,770,250 | 734,101 | 370,758 | 1,036,149 |
| 2023 | 2,007,500 | 749,257 | 378,413 | 1,258,243 |
| 2024 | 2,190,000 | 750,970 | 379,278 | 1,439,030 |
| 2025 | 2,190,000 | 743,356 | 375,433 | 1,446,644 |
| 2026 | 3,102,500 | 747,545 | 377,548 | 2,354,955 |
| 2027 | 3,102,500 | 768,383 | 388,072 | 2,334,117 |
| 2028 | 3,102,500 | 828,973 | 418,673 | 2,273,527 |
| 2029 | 3,102,500 | 782,811 | 395,359 | 2,319,689 |
| 2030 | 3,102,500 | 762,681 | 385,192 | 2,339,819 |
| 2031 | 3,102,500 | 811,585 | 409,891 | 2,290,915 |
| 2032 | 3,102,500 | 763,858 | 385,787 | 2,338,642 |
| 2033 | 3,102,500 | 769,200 | 388,485 | 2,333,300 |
| 2034 | 3,102,500 | 751,731 | 379,662 | 2,350,769 |
| 2035 | 3,102,500 | 740,821 | 374,152 | 2,361,679 |
| 2036 | 3,102,500 | 735,633 | 371,532 | 2,366,867 |
| 2037 | 3,102,500 | 560,673 | 283,168 | 2,541,827 |
| 2038 | 3,102,500 | - | - | 3,102,500 |
| 2039 | 3,102,500 | - | - | 3,102,500 |
| 2040 | 3,102,500 | - | - | 3,102,500 |
| 2041 | 3,102,500 | - | - | 3,102,500 |
| 2042 | 3,093,632 | - | - | 3,093,632 |
| 2043 | 808,256 | - | - | 808,256 |
| Total | 64,988,789 | 13,389,318 | 6,762,282 | 51,599,471 |

**Notes:**
Approximately 11.1 Mt of waste and 0.3 Mt of overburden will be progressively placed at the TSF as cover material.

# 3. Sample Selection and Analytical Methods

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# 3. Sample Selection and Analytical Methods

In the following sections, the rationale for mine waste material sample selection is discussed and a brief overview of analytical methods is provided. The geochemical data used for characterization of mine waste materials is composed of results generated from the 2014 FEIS (Agnico Eagle, 2014) and from a supplemental sampling program conducted in support of the Meliadine Extension. These sampling programs were designed to evaluate the geochemical characteristics of geologic material that will be disturbed over the life of mine. In addition to these data, regular monitoring of excavated material has occurred since mining operations were initiated in 2019. The sampling frequency, methods and results are reporting are carried out as required by the NIRB Project Certificate No. 006 and Water License 2AM-MEL1631 Schedule 2, Item 6. These results are provided in the mines Annual Reports (Agnico Eagle, 2020; Agnico Eagle, 2021a) and are not re-iterated in this chapter.

## 3.1 Sample Selection and Screening

Geochemical characterization samples considered in this assessment include a subset of samples collected in support of the 2014 FEIS submission and supplemental sampling conducted in support of the Meliadine Extension.

Supplemental samples were collected to assess areas that were not characterized as part of the 2014 FEIS. Similarly, some 2014 FEIS samples were screened out from this assessment due to changes in the mine plan which made them spatially distant from planned mine workings (*e.g.*, reduced size of open pits). A summary of the number of samples and analytical data generated as part of the 2014 FEIS and Meliadine Extension supplemental sampling program is provided in Table 3-1.

### 3.1.1 2014 Final Environmental Impact Statement (2014 FEIS)

Previous geochemical characterization of the Meliadine Mine was completed in support of the 2014 FEIS application and summarized 2014 FEIS, (SD6-3 Geochemical Baseline). The characterization program included ore, waste rock, overburden, and tailings to be produced as part of the 2014 FEIS mine plan. This mine plan included open pit operations at five separate deposits defined as Tiriganiaq, Wesmeg, F Zone, Pump, Discovery. A single underground operation was planned at Tiriganiaq. Some samples were collected to assess potential open pit operations at Wesmeg North and Tiriganiaq-Wolf, but these

deposits were not included in the mine plan submitted with the 2014 FEIS. Sample collection for the 2014 FEIS included:

- Waste rock (n= 557) and ore (n=25) samples collected from drill core.
- Tailings samples produced from metallurgical testing (n=20).
- Overburden samples collected from shallow test pits (0.3 to 0.7 m depth) (n=34).
- Waste rock samples collected from a pad constructed near the Tiriganiaq exploration adit (n=12).
- Ore (n=2) samples from two stockpiles (Lode 1000 and Lode 1100) present at the mine surface.

A comprehensive analytical testing program was completed on these samples. All samples were analyzed by acid base accounting (ABA), metals by aqua regia, and whole rock analysis. A subset of samples was also analyzed for net acid generation (NAG) pH, shake flask extractions (SFE) and X-ray diffraction (XRD). A kinetic testing program was initiated which included 46 humidity cell tests, 9 unsaturated column experiments and 4 field cells. Details on analytical methods and sample collection methods can be found in the 2014 FEIS (SD6-3 Geochemical Baseline).

The 2014 FEIS static test database was screened to exclude samples that are no longer representative of planned excavations in the Meliadine Extension. The 2014 FEIS static database was screened based on the following rationale:

- The reduction in the volume of open pits has left many 2014 FEIS samples distant from the planned Meliadine Extension excavations. The sample distribution was reviewed using the LeapFrog Viewer software, and any samples located more than approximately 50 m away from planned mine workings was excluded (n=163).
- Metallurgical tailings samples presented in the 2014 FEIS included a mix of whole ore tailings and slurry tailings. Since the mill at Meliadine produces whole ore tailings, all slurry samples were excluded from consideration (n=10).
- Any samples with unknown origin or lithology were removed from the database (n=16).

Overall, the screening process removed a total of 179 mine rock samples and 10 tailings samples from the dataset used to assess the Meliadine Extension. A summary of the 2014 FEIS static test database and the number of screened samples is provided in Table 3-1.

**Table 3-1:**
**2014 FEIS Static Test Database and Screening Results**

| Deposit | Location | 2014 FEIS Sampling | | | Samples Screened Out of Meliadine Extension Database | | | 2014 FEIS Samples Included in Meliadine Extension Database | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Overburden | Waste Rock | Ore | Overburden | Waste Rock | Ore | Overburden | Waste Rock | Ore |
| Discovery | Open Pit | 3 | 96 | 7 | 0 | 8 | 0 | 3 | 88 | 7 |
| | Underground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F Zone | Open Pit | 5 | 75 | 4 | 0 | 8 | 1 | 5 | 67 | 3 |
| | Underground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pump | Open Pit | 6 | 44 | 4 | 0 | 25 | 0 | 6 | 19 | 4 |
| | Underground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tiriganiaq | Open Pit | 10 | 181 | 7 | 0 | 38 | 1 | 10 | 143 | 6 |
| | Underground | 0 | 66 | 0 | 0 | 33 | 0 | 0 | 33 | 0 |
| Tiriganiaq-Wolf | Open Pit | 4 | 35 | 0 | 0 | 35 | 0 | 4 | 0 | 0 |
| | Underground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wesmeg | Open Pit | 6 | 59 | 3 | 0 | 12 | 2 | 6 | 47 | 1 |
| | Underground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wesmeg North | Open Pit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Underground | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown Lithology or Location | | 0 | 14 | 2 | 0 | 14 | 2 | 0 | 0 | 0 |
| **Total** | | **34** | **570** | **27** | **0** | **173** | **6** | **34** | **397** | **21** |

### 3.1.2 Supplemental Geochemical Sampling for Meliadine Extension

A sampling program was initiated in 2020 to supplement the geochemical dataset generated for the 2014 FEIS. This program included sampling of drill core, tailings, overburden, saline mine wastes, and a water quality survey. Overall, the objective of the supplemental sampling programs was to:

- Characterize geologic material that will be disturbed by the Meliadine Extension which were not characterized in the 2014 FEIS. This mainly consists of deeper bedrock associated with underground mine operations and changes in pit shell geometry from what was planned in the 2014 FEIS.
- Existing mine waste sampling to examine composition of mill tailings and saline mine wastes that were unavailable during the 2014 FEIS
- Seep survey of existing mine facilities to supplement monitoring database.
- Kinetic testing to assess long term drainage chemistry, develop source terms for water quality predictions and evaluate disposal strategies for mine waste.

#### *3.1.2.1 Drill Core Sampling*

The objective of the supplemental drill core sampling program was to complement the 2014 FEIS characterization work and produce a combined dataset representative of the different rock types that would be exposed by the Meliadine Extension. Supplemental sampling targeted excavation areas that were not included in the 2014 FEIS which includes underground operations at Discovery, Pump, F Zone and Tiriganiaq-Wolf, and changes in pit shell geometry. Sample selection considered the following variables:

- Deposit (*e.g.*, Discovery, F Zone, Pump, Wesmeg North, Wesmeg, Tiriganiaq-Wolf and Tiriganiaq)
- Material type (*e.g.,* waste rock, ore, whole ore tailings, paste backfill)
- Lithology classifications (*e.g.,* GB, IF, SE, TIRFM, UOFM, UV, VO)
- Material spatially representative of the planned mine working (*e.g.*, open pit and underground mines)

Waste rock samples were selected from drill core, while ore samples were selected from a combination of drill core and head samples composited for metallurgical testing. The Leapfrog Viewer software was used to ensure a representative spatial distribution for sample collection. Ore was distinguished from waste rock using a cut-off grade of 1.8 ppm Au, and a drill core length between 1 and 2 m was targeted (Agnico Eagle, 2019).

A summary of sample selection is provided in Table 3-2 and Table 3-3. Samples form Tiriganiaq-Wolf deposit have been collected but analytical results were not available prior to the cutoff date of this reporting. Three dimensional visualizations generated in LeapFrog Geo showing sample locations with respect to pit shells and underground operations are provided in Appendix A.

#### *3.1.2.2 Tailings Sampling*

Tailings samples were collected from the TSF and the paste plant on August 18th, 2021. The whole ore tailings samples collected from the TSF were sampled from six test pits excavated by hand shovel to an approximate 5 to 10 cm depth. Two paste samples were collected from the paste plant on August 18th, 2021. The paste was produced using a binder content of 4.5% and was collected in two buckets where it was allowed to cure. The tailings samples were shipped to SGS Burnaby for analysis, arriving in early September. The lab reported that the paste had hardened when the buckets were unsealed. The tailings were characterized by static testing, and used to construct a humidity cell, two saturated columns and an unsaturated column, as described in Section 3.2.3.

#### *3.1.2.3 Saline Mine Waste*

Saline connate water from the underground mines entrained with waste rock can release of salinity at the mine surface. The influence of connate water on geochemical behaviour of mine wastes was not investigated in the 2014 FEIS. Saline permafrost within the overburden is also known to exist in the region around Meliadine (Hivon and Sego, 1993). Therefore, an extension of the existing monitoring program was developed to characterize saline mine waste for Meliadine Extension.

The objectives of this sampling program were to develop an understanding of the potential and duration for salinity release from different material types and inform water quality predictions. Samples were collected from waste rock storage facilities (WRSFs) across Meliadine Mine to determine the distribution and persistence of salinity in underground waste rock stored at surface and in overburden materials, and to assess the influence of depth and duration of exposure on salinity release. Water quality analysis of rinse waters and porewater were conducted on a subset of salinity rinse test samples.

Saline mine waste samples were collected from test pits, pit wall exposures, drill core samples and blast-hole drill cuttings (Table -3-4). Samples were collected during the period of September 2020 to March 2021 from various locations throughout Meliadine Mine, as presented in (Figure 3-1). For sample collection, excavations were conducted from a depth of 0 to 20 m and samples collected at 1 to 2 m intervals. All samples sieved to obtain the <25 mm size fraction for salinity rinse tests. Characterization of this material consisted of rinsing tests and two unsaturated columns; test methods are described in Section 3.2.

## LEGEND

- Saline Mine Waste Sample
- Water Quality Survey Sample

**Coordinate System:** *NAD 1983 UTM Zone 15N*
**Projection:** *Transverse Mercator*
**Datum:** *North American 1983*
**Units:** *Meter*

**1:25,000**

0 200 400
Meters

| | |
|---|---|
| **DATE SAVED:** | Nov 24, 2021 |
| **DRAWN BY:** | GM |
| **REVIEWED:** | GO |
| **VERSION:** | 1 |

*CLIENT:*

AGNICO EAGLE

LORAX ENVIRONMENTAL

*PROJECT:*

**Meliadine Phase 2 Geochemical Characterization**

*TITLE:* Saline Mine Waste and Water Quality Survey Sample Locations

*PROJECT #:* A574-2 *FIGURE:* 3-1

*P:\@Drafting\Meliadine\Drafting Figures\MXD\Saline-WQ Sample Locations_20211125.mxd*

**Table 3-2:**
**Summary of Open Pit Waste Rock and Ore Samples from the 2014 FEIS and Supplemental Sampling Program Included in the Meliadine Extension Database**

| Deposit | Lithologic Unit | Waste Rock | | | | Ore | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Meliadine Extension Tonnage | 2014 FEIS Samples | Meliadine Extension Samples | Total Samples | Meliadine Extension Tonnage | 2014 FEIS Samples | Meliadine Extension Samples | Total Samples |
| | | t | n | n | total n | t | n | n | total n |
| Discovery | GB | 4,066,011 | 9 | 1 | 10 | 0 | 0 | 0 | 0 |
| | IF | 5,544,560 | 28 | 21 | 49 | 494,288 | 5 | 0 | 5 |
| | SE | 27,353,163 | 48 | 29 | 77 | 2,107,227 | 2 | 0 | 2 |
| | TIRFM | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 |
| F Zone | IF | 1,684,840 | 5 | 4 | 9 | 507,870 | 3 | 1 | 4 |
| | VO | 16,661,198 | 62 | 8 | 70 | 1,608,256 | 0 | 1 | 1 |
| Pump | GB | 713,876 | 0 | 1 | 1 | 23,614 | 0 | 0 | 0 |
| | IF | 1,507,071 | 4 | 4 | 8 | 212,522 | 4 | 0 | 4 |
| | VO | 5,711,006 | 15 | 3 | 18 | 944,544 | 0 | 2 | 2 |
| Tiriganiaq | GB | 442,316 | 4 | 0 | 4 | 0 | 0 | *0* | 0 |
| | IF | 3,538,525 | 1 | 8 | 9 | 3,254,906 | 0 | 5 | 5 |
| | SE | 16,807,992 | 99 | 0 | 99 | 171,311 | 0 | *0* | 0 |
| | TIRFM | 2,211,578 | 8 | 0 | 8 | 513,933 | 3 | *0* | 3 |
| | UOFM | 14,154,099 | 14 | 0 | 14 | 4,111,460 | 0 | 3 | 3 |
| | VO | 7,077,049 | 17 | 0 | 17 | 171,311 | *3* | *0* | 3 |
| Wesmeg | GB | 3,870,471 | 1 | 0 | 1 | 389,366 | 0 | 0 | 0 |
| | IF | 3,386,662 | 0 | 4 | 4 | 1,622,360 | 0 | 1 | 1 |
| | UV | 0 | 4 | 0 | 4 | 64,894 | 1 | 0 | 1 |
| | VO | 39,188,516 | 42 | 2 | 44 | 4,347,925 | 0 | 3 | 3 |
| Wesmeg North | GB | 1,332,645 | 0 | 1 | 1 | 268,531 | 0 | 0 | 0 |
| | IF | 222,107 | 0 | 2 | 2 | 146,472 | 0 | 0 | 0 |
| | SE | 3,331,611 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | VO | 15,769,628 | 0 | 14 | 14 | 1,489,128 | 0 | 3 | 3 |
| *Total* | | *174,574,922* | *364* | *102* | *466* | *22,449,918* | *21* | *19* | *40* |

**Notes:** Ore samples identified as mixed rock types (*e.g.,* UOFM/IF, VO/IF) classified as the primary rock type

## Table 3-3:
## Summary of Underground Waste Rock and Ore Samples from the 2014 FEIS and Meliadine Extension Sampling

| Deposit | Lithologic Unit | Waste Rock | | | | Ore | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Meliadine Extension Tonnage | 2014 FEIS Samples | Meliadine Extension Samples | Total Samples | Meliadine Extension Tonnage | 2014 FEIS Samples | Meliadine Extension Samples | Total Samples |
| | | t | n | n | total n | t | n | n | total n |
| Discovery | GB | 11,089 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| | IF | 188,511 | 0 | 15 | 15 | 721,741 | 0 | 16 | 16 |
| | SE | 909,288 | 0 | 19 | 19 | 1,128,878 | 0 | 0 | 0 |
| | TIRFM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F Zone | IF | 444,074 | 0 | 4 | 4 | 1,296,422 | 0 | 5 | 5 |
| | VO | 1,467,376 | 0 | 4 | 4 | 1,790,297 | 0 | 6 | 6 |
| Pump | GB | 143,870 | 0 | 0 | 0 | 178,012 | 0 | 0 | 0 |
| | IF | 328,846 | 0 | 2 | 2 | 1,017,209 | 0 | 5 | 5 |
| | VO | 1,459,255 | 0 | 9 | 9 | 1,347,802 | 0 | 4 | 4 |
| Tiriganiaq | GB | 54,782 | 2 | 0 | 2 | 230,149 | 0 | 0 | 0 |
| | IF | 547,821 | 2 | 3 | 5 | 6,444,170 | 0 | 10 | 10 |
| | SE | 931,296 | 7 | 0 | 7 | 1,150,745 | 0 | 1 | 1 |
| | TIRFM | 493,039 | 9 | 0 | 9 | 3,912,532 | 0 | 3 | 3 |
| | UOFM | 1,753,028 | 1 | 6 | 7 | 10,356,701 | 0 | 6 | 6 |
| | VO | 1,643,464 | 12 | 0 | 12 | 230,149 | 0 | 0 | 0 |
| Tiriganiaq -Wolf | IF | 131,781 | 0 | 5 | 5 | 2,363,866 | 0 | 7 | 7 |
| | SE | 680,867 | 0 | 0 | 0 | 656,629 | 0 | 3 | 3 |
| | VO | 285,525 | 0 | 6 | 6 | 262,652 | 0 | 3 | 3 |
| Wesmeg | GB | 686,650 | 0 | 0 | 0 | 1,041,883 | 0 | 0 | 0 |
| | IF | 363,521 | 0 | 4 | 4 | 1,736,472 | 0 | 7 | 7 |
| | UV | 80,782 | 0 | 0 | 0 | 86,824 | 0 | 0 | 0 |
| | VO | 2,908,165 | 0 | 4 | 4 | 5,817,182 | 0 | 3 | 3 |
| Wesmeg North | GB | 36,604 | 0 | 3 | 3 | 39,596 | 0 | 0 | 0 |
| | IF | 21,962 | 0 | 2 | 2 | 134,627 | 0 | 2 | 2 |
| | SE | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| | VO | 300,151 | 0 | 8 | 8 | 593,945 | 0 | 5 | 5 |
| ***Total*** | | ***15,871,751*** | ***33*** | ***100*** | ***133*** | ***42,538,482*** | ***0*** | ***86*** | ***86*** |

**Notes:** Ore samples identified as mixed rock types (*e.g.*, UOFM/IF,VO/IF) classified as the primary rock type

**Table -3-4:**
**Summary of Run of Mine Waste Rock and Overburden Samples Collected for Salinity Rinse Tests from the Meliadine Gold Mine**

| Sample Location | Material Type | Sample Type | Date Exposed | Date Sampled | Number of Samples (n) |
|---|---|---|---|---|---|
| D-P1 | UG Waste Rock | Test pit | 2016 | 18-Sep-20 | 3 |
| D-P3 | UG Waste Rock | Test pit | 2016 | 18-Sep-20 | 3 |
| Church Pad | UG Waste Rock | Test pit | 2018 | 18-Sep-20 | 1 |
| Paste Plant Ramp | UG Waste Rock | Test pit | 2018 | 18-Sep-20 | 2 |
| Berm 1 | UG Waste Rock | Test pit | 2019 | 18-Sep-20 | 2 |
| Industrial Pad | UG Waste Rock | Test pit | 2019 | 18-Sep-20 | 2 |
| TSF | UG Waste Rock | Test pit | 2019 | 18-Sep-20 | 2 |
| Ore Pad | UG Waste Rock | Test pit | 2019 | 18-Sep-20 | 2 |
| Low Grade Ore | UG Waste Rock | Test pit | 2020 | 18-Sep-20 | 2 |
| OP2 | UG Waste Rock | Test pit | 2020 | 14-Nov-20 | 4 |
| SP4 | UG Waste Rock | Test pit | *NA* | 27-Mar-21 | 2 |
| WRSF1 | UG Waste Rock | Test pit | *NA* | 27-Mar-21 | 2 |
| WRSF3 | UG Waste Rock | Test pit | *NA* | 27-Mar-21 | 2 |
| Tiri01 Cutting Piles | Overburden | Drill Cuttings | *NA* | Dec-20 | 4 |
| Tiri01 Pit wall | Overburden | Pit Wall Exposure | *NA* | 08-Dec-20; 02-Feb-21; 29-Mar-21 | 35 |
| Discovery | Overburden | Drill Core | 2021 | Mar-21 | 13 |
| F Zone | Overburden | Drill Core | 2021 | Mar-21 | 4 |
| Pump | Overburden | Drill Core | 2021 | Mar-21 | 4 |
| Wesmeg | Overburden | Drill Core | 2021 | Mar-21 | 1 |
| WRSF3 | Overburden | Drill Core | 2021 | Mar-21 | 8 |

#### *3.1.2.4 Water Quality Survey*

A targeted water quality survey was completed in the summer and fall of 2020. Mining operations were initiated in Spring 2019, resulting in 2020 being the first year that significant quantities of mine waste were present at the surface. Water quality monitoring provides an opportunity to directly observe the expression of mine rock weathering in the field. The objective of this program was to collect water quality samples which directly reflect mine waste drainage from a known source (*e.g.,* waste rock, ore and tailings). As the monitoring dataset expands, the data will increasingly supplant laboratory weathering experiments as the foundation of water quality predictions.

Field inspection of areas surrounding the WRSFs, ore stockpiles and TSF was conducted throughout June to October 2020 (following freshet) to locate the presence of standing water representative of drainage from waste rock, ore or tailings. Water quality samples were collected from seepage formed at the interface of rock and natural ground, and from low-flow ditches (representing run-off water) located adjacent to the road, stockpile or toe of mine facility. All samples were field filtered and preserved. Sample analysis was completed by ALS Environmental located in Burnaby, BC. A summary of samples collected as part of the water quality survey is provided in Table 3-5 and sample locations are shown in Figure 3-1.

**Table 3-5:**
**Summary of Water Quality Survey Sample Collection for the Meliadine Gold Mine**

| Sampling Location | Water Type | Aug. | Sep. | Oct. | Total |
|---|---|---|---|---|---|
| WRSF1 | Open pit and underground waste rock and overburden seepage | 1 | 0 | 0 | 1 |
| Pad Seepage (IP and DP) | Underground waste rock seepage | 0 | 3 | 4 | 7 |
| Ore Stockpile | Underground ore seepage | 1 | 1 | 0 | 2 |
| TSF | Tailings seepage | 5 | 6 | 10 | 21 |
| | *Total* | *7* | *10* | *14* | *31* |

#### *3.1.2.5 Kinetic Test Sample Selection*

A subset of samples collected from drill core and from the field were submitted for kinetic testing. Kinetic test data are used to assess long term drainage chemistry, develop source terms for water quality predictions and evaluate disposal strategies for mine waste. A comprehensive humidity cell testing program was completed for the 2014 FEIS, which included 46 humidity cells and 9 unsaturated columns. Supplemental kinetic testing conducted in support of Meliadine Extension included one humidity cell, 11 unsaturated columns and two saturated columns. A summary of the kinetic tests initiated for waste rock and tailings in 2020 and 2021 is presented in Table 3-6.

**Table 3-6:**
**Summary of Kinetic Tests Initiated for the Meliadine Extension**

| Test ID | Facility | Material Type | ARD Potential | Drill Core/ Tailings/ ROM Waste Rock Sample IDs | Sample Mass (kg) | Influent | Test Initiated |
|---|---|---|---|---|---|---|---|
| ***Unsaturated Columns*** | | | | | | | |
| 01-TSF | TSF | Whole Ore Tailings | Non-PAG | TSF 26; TSF 27; TSF 28; TSF 29; TSF 30 | 9.7 | Deionized Water | 17-Dec-20 |
| 02-IF-PAG | Discovery | IF Waste Rock | PAG | CAMLD264952; CAMLD264954; CAMLD264947; CAMLD273962; CAMLD264944; CAMLD264941; CAMLD264932; CAMLD264943 | 10.0 | Deionized Water | 21-Jan-21 |
| 03-SED-PAG | Discovery | SE Waste Rock | PAG | CAMLD264942; CAMLD264940; CAMLD264927; CAMLD264928; CAMLD264938 | 10.0 | Deionized Water | 21-Jan-21 |
| 04-GAB-NPAG | Discovery OP | GB Waste Rock | Non-PAG | CAMLD264930; CAMLD264931; CAMLD264957 | 10.0 | Deionized Water | 21-Jan-21 |
| 05-SED-NPAG | Discovery OP | SE Waste Rock | Uncertain | CAMLD264968; CAMLD264937; CAMLD264972; CAMLD264959; CAMLD264961 | 10.0 | Deionized Water | 21-Jan-21 |
| 06-IF-NPAG | Discovery OP | IF Waste Rock | Non-PAG | CAMLD264960; CAMLD264939; CAMLD264933; CAMLD264950; CAMLD264955 | 10.0 | Deionized Water | 21-Jan-21 |
| 07-IF-PAG-CW | Discovery | IF Waste Rock | PAG | Same sample composition as 02-IF-PAG | 10.0 | Connate Water | 21-Jan-21 |
| 08-SED-PAG-CW | Discovery | SE Waste Rock | PAG | Same sample composition as 03-SED-PAG | 10.0 | Connate Water | 21-Jan-21 |
| 09-FZONE-NPAG | F Zone OP | VO Waste Rock | Non-PAG | CAMLD262228; CAMLD262229; CAMLD262231 | 10.0 | Deionized Water | 21-Jan-21 |
| 10-ROM-SR1 | Tiriganiaq UG | ROM Waste Rock | Non-PAG | Pit 16 and Pit 17 (Low Grade Ore) | 5.0 | Deionized Water | 21-Jan-21 |
| 11-ROM-SR2 | Tiriganiaq UG | ROM Waste Rock | Non-PAG | Pit 18 and Pit 19 (Ore Pad) | 5.0 | Deionized Water | 21-Jan-21 |
| ***Saturated Columns*** | | | | | | | |
| TSF_100FP | TSF | Whole Ore Tailings | Non-PAG | Same sample composition as 01-TSF | 6.3 | 100% Filter Press Water | 15-Oct-20 |
| TSF_5FP | TSF | Whole Ore Tailings | Non-PAG | Same sample composition as 01-TSF | 6.3 | 5% Filter Press Water | 15-Oct-20 |
| ***Humidity Cells*** | | | | | | | |
| T1 | Tiriganiaq UG | Paste Backfill | Non-PAG | Cemented Paste | 1.0 | Deionized Water | 11-Feb-21 |

**Notes:**
UG- underground; OP- open pit
ROM- run of mine
TSF- tailings storage facility

Waste rock kinetic tests for specific lithologies used composite samples each constructed from three to eight drill core segments. Drill core samples were selected by comparing ABA and metal abundance results to the respective 2014 FEIS statistics for potentially acid generating (PAG) and non-potentially acid generating (non-PAG) rock for the targeted lithologic units. A composition within the median to 75$^{th}$ percentile range for 2014 FEIS statistics was targeted for key parameters including As, Fe and total S, net potential ratio (NPR) and NAG pH.

Salinity rinsing columns were initiated using run of mine (ROM) waste rock collected as part of the saline mine waste characterization sampling program. A sample from the Low Grade Ore stockpile and Ore Pad were selected because the material showed the highest salinity load from saline rinsing tests in the initial round of testing. Unsaturated and saturated tailings kinetic testwork was conducted on the same composite material constructed from five dry stack tailings samples collected from test pits in the TSF. The humidity cell was constructed from the cemented paste sample, containing 4.5% binder content, collected on August 18$^{th}$, 2021 from the paste plant.

## 3.2 Analytical Methods

A variety of analytical methods were employed in the geochemical characterization program. The testing procedures included static tests, kinetic tests, detailed mineralogical characterization, metal assays, and salinity rinsing tests. A summary of the number of samples and type of tests (by material type) is provided in Table 3-7 for both the 2014 FEIS samples and supplemental geochemical characterization samples included in the Meliadine Extension database. The characterization program analytical methods were developed in accordance with MEND (2009). Test procedures are described below.

**Table 3-7:**
**Summary of Analytical Tests Performed on FEIS and Supplemental Geochemical Samples included in the Meliadine Extension Database as a Function of Material Type**

| Analytical Test | 2014 FEIS Sample Selection | | | | Supplemental Sampling | | | | Meliadine Extension Database | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Overburden | Waste Rock | Ore | Tailings | Overburden | Waste Rock | Ore | Tailings | Overburden | Waste Rock | Ore | Tailings |
| ***Static Tests*** | | | | | | | | | | | | |
| Acid base accounting (ABA) | 31 | 353 | 21 | 10 | 0 | 191 | 92 | 6 | 31 | 544 | 113 | 16 |
| Shake Flask Extraction (SFE) | 30 | 397 | 21 | 10 | 0 | 35 | 25 | 0 | 30 | 432 | 46 | 10 |
| Aqua Regia (ICP-MS) Trace Metals | 31 | 397 | 21 | 10 | 0 | 191 | 92 | 6 | 31 | 588 | 113 | 16 |
| Whole Rock Analysis | 30 | 397 | 21 | 10 | 0 | 190 | 92 | 6 | 30 | 587 | 113 | 16 |
| NAG pH | 0 | 27 | 1 | 10 | 0 | 191 | 92 | 6 | 0 | 218 | 93 | 16 |
| Salinity Rinsing | 0 | 0 | 0 | 0 | 69 | 29 | 0 | 0 | 69 | 29 | 0 | 0 |
| ***Kinetic Tests*** | | | | | | | | | | | | |
| Humidity Cells | 0 | 46 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 46 | 0 | 1 |
| Unsaturated Columns | 0 | 9 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 19 | 0 | 1 |
| Saturated Columns | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Field Cells | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 |
| ***Mineralogy*** | | | | | | | | | | | | |
| X-Ray Diffraction (XRD) | 0 | 49 | 0 | 0 | 0 | 26 | 10 | 6 | 0 | 75 | 10 | 6 |
| QEMSCAN or TIMA-X | 0 | 0 | 0 | 8 | 0 | 8 | 2 | 0 | 0 | 8 | 2 | 8 |

**Notes**:
QEMSCAN- Quantitative Evaluation of Materials by Scanning Electron Microscopy
TIMA-X- Tescan Integrated Mineral Analyzer

### 3.2.1 Mineralogy

Mineralogical characterization of the supplemental geochemical samples includes XRD and Tescan Integrated Mineral Analyzer (TIMA-X) analysis. XRD analysis was conducted on waste rock samples as part of the 2014 FEIS. TIMA-X analysis is similar to the Quantitative Evaluation of Materials by Scanning Electron Microscopy (QEMSCAN) analysis applied on metallurgical tailings for the 2014 FEIS.

*Quantitative X-ray Diffraction*

XRD is used to characterize the crystal structures of materials. Each mineral possesses a characteristic X-ray diffraction pattern that can be matched against a database of recorded phases. XRD data are produced when a monochromatic beam is projected onto a sample at an angle; this produces diffraction pattern peaks, which can be used as "fingerprints" to identify the mineral phases present. XRD was conducted at the University of British Columbia (UBC) Earth & Ocean Sciences Department.

*TIMA-X*

TIMA-X is an automated mineralogy system which can provide quantitative analysis of ores, waste rock and tailings. The TIMA configuration uses four energy dispersive x-ray (EDX) silicon drift detectors attached to a TESCAN MIRA (field emission gun) platform, which also includes backscattered electron (BSE) and secondary electron detectors. The TIMA-X system combines both the EDX and BSE signals to identify minerals at each measurement point. The EDX spectra (and BSE data) are compared to entries in a mineral library on a first match principle to identify the mineral phase.

### 3.2.2 Static Tests

Static tests conducted on the supplemental geochemical samples include ABA, NAG pH, metal abundance by Aqua Regia, whole rock analysis and SFEs. This testwork is consistent with the solid phase characterization conducted as part of the 2014 FEIS.

*Acid-Base Accounting*

ABA consists of a suite of tests used to estimate the acid generating potential (AP) and acid neutralizing potential (NP) of a sample. An accounting technique is then used to compare the AP and NP with standard criteria thereby indicating the theoretical acid generation potential of a sample. ABA was conducted by SGS in Burnaby, B.C. Neutralization potential was measured using the standard Modified NP (mod-NP) method (Lawrence and Wang, 1996). A subset of mod-NP samples were analyzed using a siderite peroxide correction method (mod-sid NP) according to Skousen *et al*. (1997). Carbonate NP (CaNP) was quantified from the total inorganic carbon (TIC) content by treating the sample with

perchloric acid ($HClO_4$) to evolve inorganic carbon as carbon dioxide ($CO_2$), which was then measured by coulometery. Total S was determined using a Leco furnace analyzer. Sulphate S was determined via hydrochloric acid (HCl) extraction and measured gravimetrically after precipitation of barium chloride ($BaCl_2$). Two methods were used to determine sulphide-S, including: 1) direct measurement by Sobek 1:7 nitric acid leach and; 2) by difference which involved subtracting the sulphate S measurement from the total S measurement.

*NAG pH*

NAG testing was done to determine the balance between acid producing and acid consuming components of mine waste materials. An aliquot of 17.5% hydrogen peroxide is added to oxidize a sample's sulfide content. The acid produced by oxidation is subsequently consumed by carbonates and/or other acid consuming components of the material. The pH of the solution is then measured and the acid remaining after the reaction is titrated with sodium hydroxide (NaOH) to determine the net acid generated.

*Metal Abundance by Aqua Regia*

Metal abundance in mine rock was measured as part of the ARD/ML characterization program. Metal analysis conducted as part of the geochemical characterization program used a two acid (aqua regia) digestion followed by a 32 element inductively coupled plasma mass spectrometry (ICP-MS) scan.

*Whole Rock Analysis*

Whole rock analysis was done using lithium metaborate fusion at high temperature to dissolve rock forming minerals, trace minerals and refractory minerals. The leachate was analyzed by ICP-MS for major element oxides.

*Shake Flask Extractions*

SFEs were conducted as described by Price (1997) in *Draft Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia*. Two types of leach solutions were used in the SFE testing. All samples were analyzed using a 24-hour NanoPure deionized (DI) water leach extraction test at a 3:1 liquid to solid ratio. A subset of samples was analyzed using connate water collected in the Tiriganiaq mine underground. The purpose of using connate water was to examine metal leaching potential under the high salinity conditions present in the mine underground. The leachate was filtered and submitted for analysis including pH, conductivity, sulphate and dissolved metals.

### 3.2.3 Kinetic Tests

*Humidity Cells*

The humidity cell test was operated at SGS Laboratories (in Burnaby) to measure the weathering rates of paste backfill, which is exposed to air and water under controlled laboratory conditions. The test is designed to mimic weathering conditions by exposing a sample to alternating cycles of dry and moist air, with regular flushing of the samples.

Humidity cells are composed of Plexiglas cylinders (10.2 cm inner diameter, 25.5 cm length) filled with 1 kg of sample. The sample material is placed on a perforated acrylic disk covered in a nylon mesh. The contents of the cell are subjected to three days of dry air permeation followed by three days of humid air permeation (<10% relative humidity). On the seventh day, at the end of each wet/dry cycle, the contents of the cell are leached with 500 mL of distilled de-ionized water (Price, 1997). The purpose of the leaching step is to recover any readily soluble reaction products that have formed due to mineral dissolution or sulphide oxidation. The leachate is collected and analyzed for key parameters (*e.g.,* pH, conductivity, acidity, alkalinity, total and weak acid dissociable (WAD) cyanide, anions, dissolved metals and nitrogen species) at regular intervals. The humidity cell experiments were operated in a 4°C cold room to mimic the subarctic environment of Meliadine Mine.

*Unsaturated Columns*

Unsaturated column testwork was operated at the Okane Laboratory (in Saskatoon) to determine the kinetic behavior of waste rock and whole ore tailings stored on the surface and exposed to atmospheric weathering (sub-aerial storage). The term used by Okane to describe these columns is advanced customizable leach columns (ACLCs). Unsaturated columns permit more flexibility than humidity cells with respect to test scale, particle size and range, sample mass, water infiltration or flow rate, degree of oxygenation and monitoring (cycle length).

The unsaturated columns are composed of Plexiglas cylinders (15.3 cm inside diameter, ~13.0 to 42.9 cm length) filled with ~10 kg of sample. A thin geotextile fabric was placed on top of a perforated high density polyethylene disk at the base of the column. Columns containing waste rock have the sample crushed to approximately minus 2.5 mm while the grain size distribution of whole ore tailings samples were not modified. Materials were wetted up to field capacity using the specified influent water. The unsaturated columns are subjected to a trickle leach, whereby 250 mL (600 mL for Tiriganiaq underground waste rock columns) of distilled de-ionized water or connate water is sprinkled on a weekly basis.

As per the rationale described above for the humidity cells, the unsaturated columns were operated in a 10°C cold room to mimic the subarctic environment of the Meliadine Mine.

Unsaturated columns were operated in two phases: Phase 1 represents closed conditions to determine oxidation rates by oxygen consumption (initial 2 to 4 weeks), while Phase 2 represents atmospheric conditions (after week 4). During Phase 1 effluent water was recycled in a closed loop to prevent the transfer of atmospheric gas into the column during wetting events. In Phase 2, columns are free draining (water is not recycled) and continual flow of atmospheric gas (21% $O_2$) is applied to dry the materials between wetting events and provide oxygen for oxidation reactions. Gas flow for the waste rock columns is directed from the bottom to top of the column, while the opposite is conducted for the tailings column to maintain an oxic atmosphere above the tailings and create a diffusion dominated system. The Tiriganiaq underground waste rock columns were used to inform salinity rinsing rates and thus were operated only at atmospheric conditions.

Leachate collected from the unsaturated columns was analyzed for the same suite of parameters as the humidity cell test (pH, conductivity, alkalinity, anions, dissolved metals and nutrient parameters, including nitrogen species and phosphorus).

*Saturated Columns*

Saturated column testwork was operated at the Lorax Laboratory (in Vancouver) to characterize the metal leaching characteristics of tailings materials under saturated conditions which can develop in interior sections of the TSF. Understanding how suboxic redox chemistry will affect the release and attenuation of parameters of concern in the TSF can inform the development of water quality predictions.

Saturated columns were constructed from Plexiglass cylinders (13 cm inside diameter, 25 cm length) and filled with 6.3 kg of slurried tailings solids. The base of the column was lined with a dispersion plate (perforated disk), a sheet of non-reactive mesh fabric, and a layer of silica sand (500 g) to allow for the even distribution of water over base area of the column before contacting tailings material. The experiment was designed so that influent (process water) entered from the bottom of the column and flowed upward to minimize the risk of uncontrolled gravity-driven drainage and development of preferential flow paths (Jurjovec *et al.,* 2002; Petrunic *et al.,* 2005; Al *et al.,* 2006). Approximately 250 mL of influent was pumped into the columns on a biweekly basis, and a water quality sample of the equivalent volume was collected. Saturated column testwork was conducted at room temperature (~22°C).

Leachate was collected and analyzed for pH, conductivity, alkalinity, anions, dissolved metals, total and WAD cyanide, and nutrient parameters (nitrogen species and

phosphorus). Arsenic speciation and ferrous iron samples were collected for initial characterization of influent and porewater chemistry.

### 3.2.4 Salinity Rinsing Tests

Rinse tests were completed during four sampling events. The first round of samples were analyzed at site by Agnico Eagle staff (Round 1) in September 2020. The remaining sampling events (Round 2, 3 and 4) were analyzed at Lorax in Vancouver, BC throughout January to April 2021. Sample preparation and the salinity rinse test procedure was originally conceived as a test that can be completed in the field, and is described in detail in the Standard Operating Procedure (SOP; Lorax, 2020) provided in Appendix B.

Rinse tests were conducted by mixing sieved rock with deionized water at a 1:1 ratio for 30 seconds and allowing the mixture settle for 10 minutes. Measurements for supernatant pH and conductivity were taken, and the supernatant decanted and submitted for water quality analysis. The rinse step was repeated two more times with fresh deionized water, for a total of three rinses.

Leachate analysis was primarily done for total dissolved solids (TDS). A strong linear relationship ($R^2$=0.98) was established between conductivity and TDS (Figure 3-2) which allowed for the derivation of TDS concentrations in lieu of a direct measurement. Thus, calculated salinity loads were derived from a combination of analytical and calculated TDS results. Other water quality parameters (alkalinity, ammonia, anions and dissolved metals) were periodically included for chemical characterization of mine rock rinse waters.

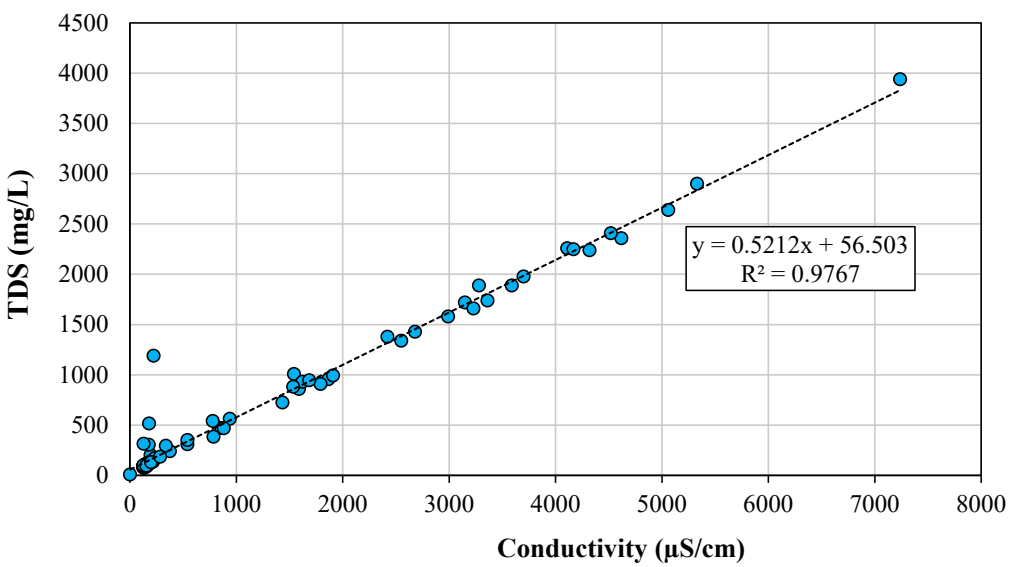


**Figure 3-2: Linear relationship for TDS and conductivity derived for Round 1 and 2 salinity rinse test samples.**

#### *3.2.4.1 Porewater Extraction*

Porewater extraction was conducted on partially frozen or saturated test pit and pit wall samples received during the February and April 2021 sampling events. Waste rock and overburden samples were thawed in a bucket and a subsample was collected for pore water extraction. For the extraction, solid samples were centrifuged for 30 minutes to settle out solid materials and the supernatant collected was submitted for water quality analysis. In some cases limited volumes prevented a full suite of analysis.

### 3.2.5 Water Quality Survey

Field pH and conductivity were measured in most samples by Agnico Eagle staff during collection. Water quality samples were field-filtered and preserved, and submitted for analysis for alkalinity, TDS, anions, dissolved metals, ferrous Fe, arsenic speciation, total and WAD cyanide and nutrient parameters (nitrogen species and phosphorus). Analysis was completed at ALS Environmental in Burnaby, BC.

## *3.3 Quality Assurance and Quality Control*

### 3.3.1 Static Testwork

Internal laboratory quality assurance and quality control (QA/QC) testing was carried out as SGS, which involved analysis of duplicates and internal standards. Approximately one duplicate was measured for every 20 samples. The analytical laboratory adheres to a precision specification of $\pm$10% for internal geochemical laboratory duplicates. Precision can be expressed as a function of concentration:

$$P_c = ((Detection\ Limit\ /\ c) + P) \times 100\%$$

where *Pc* is the precision at concentration c; *c* is concentration of the element; and *P* is the "Precision Factor" of the element. This is the precision of the method at very high concentrations. Any laboratory duplicate result that does not adhere to the precision specifications would trigger a re-analysis.

### 3.3.2 Kinetic Test Program

QA/QC for the laboratory kinetic test programs (humidity cells and columns) includes the collection of a blank sample during each sampling event to monitor any contamination that may occur during sample collection and handling. At the Lorax Laboratory, monitoring of a blank method column is also conducted to account for background contamination associated with leaching from column materials and tubing. QA/QC results will be presented following completion of the kinetic test program in 2022.

Each set of samples submitted for analyses are also subjected to a rigorous internal laboratory QC program. These include analysis of method blanks, blank spikes, matrix spikes, reference standards and method duplicates at a minimum frequency for each analytical batch (*i.e.,* 1/20 samples). Results from these QC samples are not discussed in this report; however, data quality objectives for laboratory QC samples need to be met before a final report is issued by the analytical laboratory.

### 3.3.3 Salinity Rinsing Tests

Five blank samples and 16 duplicate samples (9 TDS only and 7 full suite water quality) were submitted for analysis as part of the QA/QC program for the salinity rinsing tests. For the blank samples the majority of parameter concentrations were below detection limits (>98%), indicating excellent quality control. Relative percent difference (RPD) values were calculated for duplicate pairs by taking the absolute difference between measurements, dividing this value by the mean of the two measurements and multiplying by 100. For parameters where both duplicate values showed levels above detection limits, a small percentage (5.9%) showed RPDs greater than 20%, typically assumed to be the standard level of analytical reproducibility. This suggests that some degree of sample heterogeneity, error associated with sample preparation or analysis, and contamination may be detected. Importantly, these findings are not expected to meaningfully influence the interpretation of salinity rinsing results.

### 3.3.4 Water Quality Survey

Seepage water quality samples were collected by Agnico Eagle staff as part of regular site reconnaissance and monitoring throughout June to October 2020. By extension, the QA/QC program employed at the Meliadine Mine for collection of water quality samples was applicable with respect to the collection of field blanks and duplicates for the water quality survey. All samples submitted for analysis were also subject to internal laboratory QC procedures as previously described.

# 4. Geochemical Characterization Results

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# 4. Geochemical Characterization Results

The following sections provide geochemical characterization results for the Meliadine Extension. Chapter sections are presented by mine waste material; specifically, waste rock, ore, tailings and overburden materials. Within each section, a summary of previous characterization results are provided followed by geochemical characterization testing completed in support of the Meliadine Extension.

Characterization of the Tiriganiaq-Wolf deposit relied on drill core generated from the 2021 exploration drilling program completed in the summer of 2021. Due to the time required for sample selection, shipment and laboratory analysis, the results were not available in time for inclusion in main body of the text and are provided in Appendix D-1 instead. Overall, the results show that Tiriganiaq-Wolf has similar geochemical characteristics as equivalent rock types present at Tiriganiaq and Wesmeg deposits which have similar stratigraphy (Agnico Eagle, 2011).

## 4.1 Waste Rock

### 4.1.1 Summary of Previous Work

A total of 557 waste rock drill core samples were characterized as part of the 2014 FEIS. The analytical methods used included mineralogy by XRD, ABA, NAG pH, SFE and total metal analysis. The sample locations have been screened against the spatial extent of the Meliadine Extension mine workings (Section 3.1.1), and the samples which fall within the currently planned mine workings are incorporated into the dataset considered for the Meliadine Extension in the following sections.

The 2014 FEIS also included a comprehensive waste rock kinetic testing program, consisting of humidity cell tests (n = 46), unsaturated column tests (n = 9) and field cell experiments (n = 4). Collectively, the 2014 FEIS kinetic testing program included samples of most waste rock types and deposits that would be disturbed as part of the Meliadine Extension. Key results are summarized as follows:

- All samples produce slightly alkaline to slightly acidic leachate throughout the reported test period. Values decrease from cycle 0 (7.2 to 8.7) to the last test cycle (6.7 to 8.6);
- The only parameter to exceed the Metal and Diamond Mining Effluent Regulations (MDMER) guidelines is As in unsaturated column tests. Initial concentrations range from 0.004 to 0.08 mg/L (Cycle 0), and the final test cycles range from 0.03

to 0.1 mg/L, with the highest concentrations leaching from the Discovery and Tiriganiaq underground columns.

- The highest As loading rates tended to be associated with the SE and VO waste rock samples, while the lowest As loadings were associated with IF samples.
- A number of parameters, including Cl, F, P, Cr, Sb, Cd, Cu, Co, Pb and Se remained at or near detection limit values for the duration of most humidity cell tests.

Additional kinetic testing was initiated in 2020 and 2021 to expand on this dataset. Details of kinetic testing methods and sample selection are provided in Section 3.2.3 and Section 0, respectively. However, leachate chemistry results will not be presented until 2022 following completion of the kinetic testing program.

### 4.1.2 Mineralogy

This section provides an overview of the mineralogical results for waste rock samples. The results represent 68 waste rock samples which were submitted for XRD and 10 samples submitted for TIMA characterization. Mineralogy of carbonate and sulphide minerals for the major rock units are presented by deposit and location in the open pit or underground mine. Complete mineralogical characterization results for XRD and TIMA analysis are provided in Appendix C.

#### *4.1.2.1 Iron Formation Waste Rock*

Iron formation waste rock samples (IF) are typically characterized by quartz, +/- plagioclase, +/- magnetite, +/- clinochlore, +/- cummingtonite, +/- chamosite and carbonate minerals including +/- calcite, +/- ankerite, +/- dolomite and +/- siderite. Of these, quartz, plagioclase, and magnetite comprise the major rock forming minerals. Magnetite, an iron oxide mineral, is present in greatest amounts in rock materials from the Discovery deposit. Additionally, samples from the Discovery deposit uniquely contain appreciable amounts of actinolite and biotite. Overall, the mineralogy of FEIS and geochemical characterization samples are consistent with the exception of grunerite, an iron-rich amphibole only detected in 2020 rock materials.

The dominant carbonate mineral in IF mine rock is variable among the deposits (Figure 4-1). Siderite represents the dominant carbonate mineral at Pump and Wesmeg. Conversely, calcite and dolomite are the most abundant carbonate mineral in Discovery and Tiriganiaq, while ankerite tends to be most abundant in samples from the Wesmeg North deposit. By comparison, F Zone samples show a relatively mixed composition of ankerite and siderite. The 2020 Tiriganiaq sample (CAEXD216429) is distinct from other samples from this deposit as dolomite, rather than calcite, is present in greatest abundance

and additionally ankerite and siderite content is appreciable. The distinction between dominant carbonate minerals has implications for long-term neutralization capacity of acidic drainage. Calcium and magnesium carbonate minerals, including calcite and dolomite are the most effective minerals for acid neutralization. By comparison, siderite provides little or no NP when dissolved, while ankerite provides approximately 75% of NP compared to calcite per mole carbonate ($CO_3$). The dissolution of these Fe-bearing carbonates liberate $Fe^{2+}$ during dissolution reactions. Following dissolution, the $Fe^{2+}$ is oxidized to $Fe^{3+}$, which precipitates as iron hydroxide ($Fe(OH)_3$) liberating a $H^+$-ions and generating acidity. The net capacity of a sample to neutralize acid decreases as the amount of Fe-bearing carbonate increases (Jambor *et al*., 2002). Overall, carbonate mineral composition is highest in Pump, Tiriganiaq and Wesmeg samples (11 to 30 wt.%) and lowest in Discovery samples (<5 wt.%).

Sulphide minerals are present in most samples, primarily as pyrrhotite (1 to 17 wt.%) and secondarily as pyrite (0.4 to 4 wt.%; Figure 4-1). Arsenopyrite is only detected at low levels (<1 wt.%) in two samples, one from the open pit F Zone deposit (M10-935-02) and one from the underground Wesmeg North deposit (CAEXD252980). Trace amounts of other sulphide minerals (gersdorffite and enargite) were detected by TIMA analysis, and discussed in Section 4.1.2.5. Samples from the Discovery deposit shows the greatest variability in sulphide mineral abundance.

In general, mineralogy is similar between samples representative of open pit and underground operations. Limited findings can be drawn from the comparison of mineralogy for open pit relative to underground samples. With respect to sulphide mineral content, Pump open pit samples show higher abundance relative to underground samples. This finding is supported by ABA results which show that the median sulphide S concentration for IF waste rock is approximately 3.5 times greater in open pit relative to underground samples from the Pump deposit (refer to Section 4.1.3).

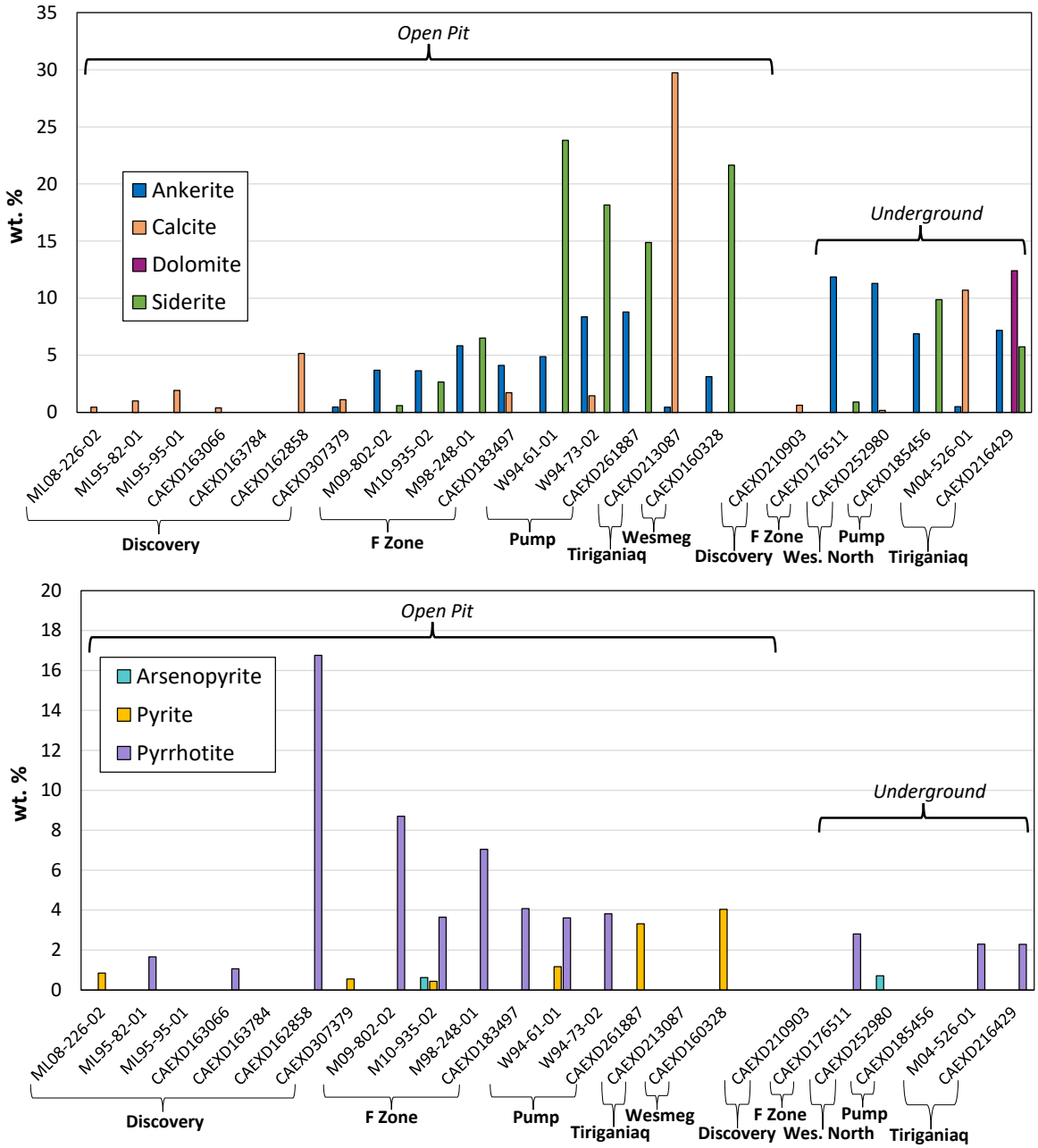



**Figure 4-1: XRD results for carbonate (top) and sulphide (bottom) mineralogy for IF waste rock samples by location in mine workings and deposit.**

#### *4.1.2.2 Sedimentary Waste Rock*

Sedimentary waste rock samples (SE) are typically characterized by quartz, +/- plagioclase, +/- muscovite, +/- biotite, +/- clinochlore and carbonate minerals including +/-calcite, +/- ankerite and +/- dolomite. Quartz, plagioclase, and muscovite comprise the major rock forming minerals. Magnetite composition is only significant in one sample from the open pit Tiriganiaq deposit (M96-74-01). Biotite is consistently present in Discovery samples and similarly for clinochlore in Tiriganiaq and Tiriganiaq-Wolf samples.

Carbonate minerals are detected in most samples, generally below 10 wt%, with the exception of a single sample from the underground Wesmeg North deposit (CAEXD295855) which shows exceptionally high carbonate mineral content (19 wt.%; Figure 4-2). Calcite is the dominant carbonate mineral in samples from the Discovery and Wesmeg North deposits, while Tiriganiaq samples show mixed composition of primarily calcite and ankerite, with only one Tiriganiaq sample showing dolomite content. Discovery waste rock samples show overall lower carbonate mineral content (mostly less than <1 %) relative to waste rock from other deposits, which is consistently reflected in median TIC measurements for this deposit (refer to Section 5.2.2)

Sulphide minerals were not detectable in most sedimentary samples. Pyrite and pyrrhotite were detected at low concentrations (< 1 wt%) in only a few samples, with the notable exception of a single Wesmeg north sample where a pyrrhotite abundance of 5.2 wt.% was detected (CAEXD295855).

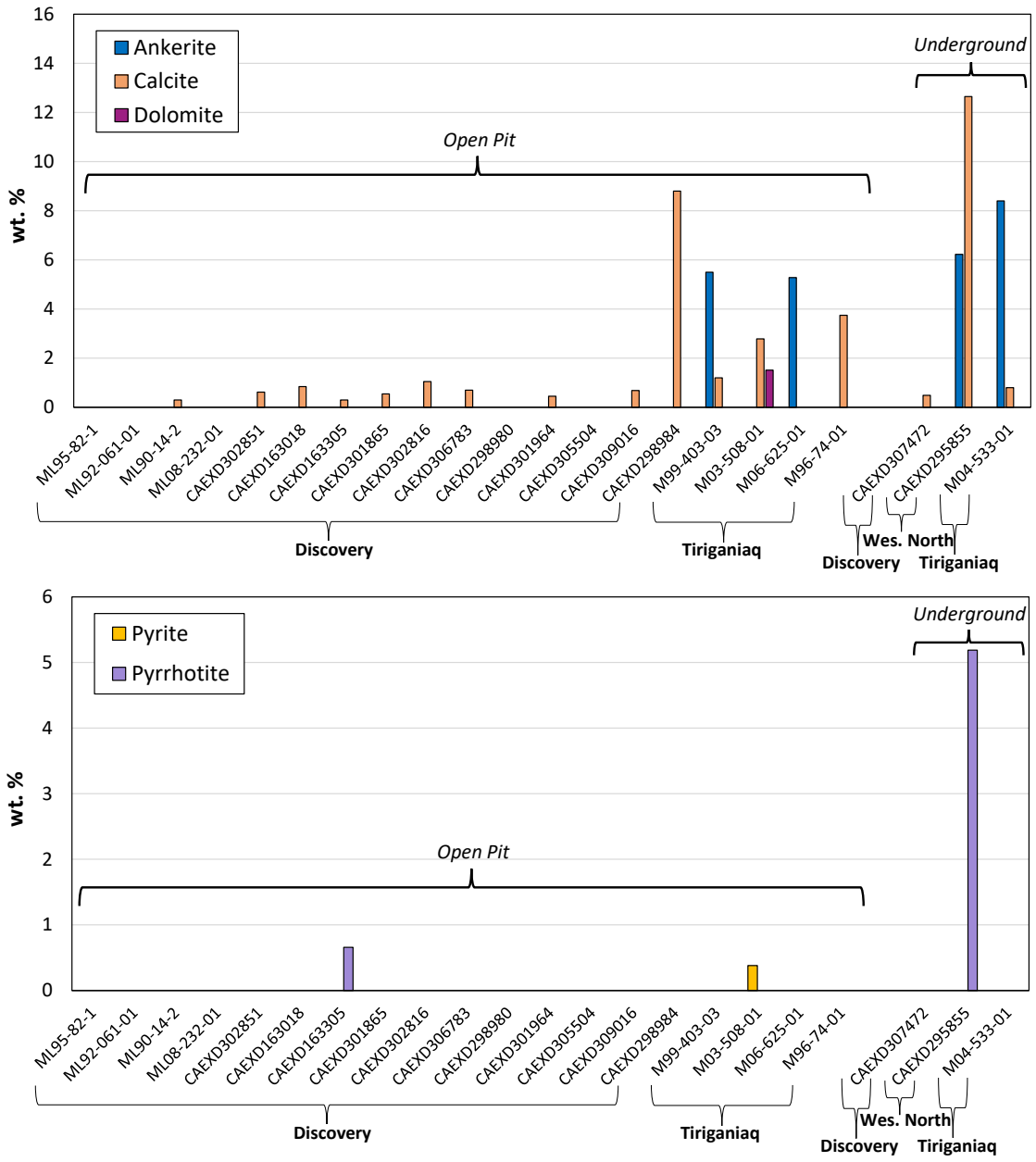



**Figure 4-2: XRD results for carbonate (top) and sulphide (bottom) mineralogy for SE waste rock samples by location in mine workings and deposit.**

### *4.1.2.3 Mafic Volcanics Waste Rock*

Mafic volcanic waste rock (VO) is typically characterized by quartz, plagioclase, clinochlore, +/- muscovite, +/- ilmenite, +/- K-feldspar, +/- magnetite and carbonate minerals including calcite, +/- ankerite and +/- dolomite. Of these, quartz, plagioclase, clinochlore and muscovite comprise the major rock forming minerals. Clinozoisite and

actinolite account for a significant proportion of one Wesmeg (M10-994-04) sample, while biotite is primarily detected in F Zone samples.

Carbonate minerals are present in all samples and account for 3.8 to 40 wt.% of mineral composition (Figure 4-3). Calcite is detected in all samples and is generally the dominant carbonate mineral in samples from the Pump and Wesmeg deposits. By comparison, ankerite accounts for the majority of carbonate mineral composition in samples from the Tiriganiaq deposit, with the exception of one open pit sample (M99-409-05) where calcite is dominant. Carbonate mineralization in F Zone samples is variable, with calcite, dolomite and ankerite all showing appreciable levels. Samples from the Pump deposit show overall lower carbonate mineral content, while samples from the Wesmeg deposit show the greatest variability.

Pyrite is the only sulphide mineral detected and is only present at low levels (< wt.1%) in Tiriganiaq samples (Figure 4-3). Specifically, pyrite is detected in all underground samples and in one open pit sample (M99-409-05).

#### *4.1.2.4 Other Waste Rock Lithologies*

The mineral composition of the TIRFM and UOFM lithologies is characterized by quartz, plagioclase, muscovite, clinochlore, +/- ilmenite, +/- K-feldspar, +/- magnetite, carbonate minerals including +/- calcite and +/- ankerite. Quartz, plagioclase and muscovite comprise the major rock forming minerals. Actinolite and clinozoisite is present at appreciable levels in the GB sample.

Carbonate minerals are detected in all samples (5 to 9 wt.%) with ankerite being dominant in samples from the TIRFM and UOFM units from Tiriganiaq (Figure 4-4). Arsenopyrite is the only sulfide mineral detected and shows low abundance (0.3 wt.%) in the underground Tiriganiaq TIRFM sample (M07-663-01).

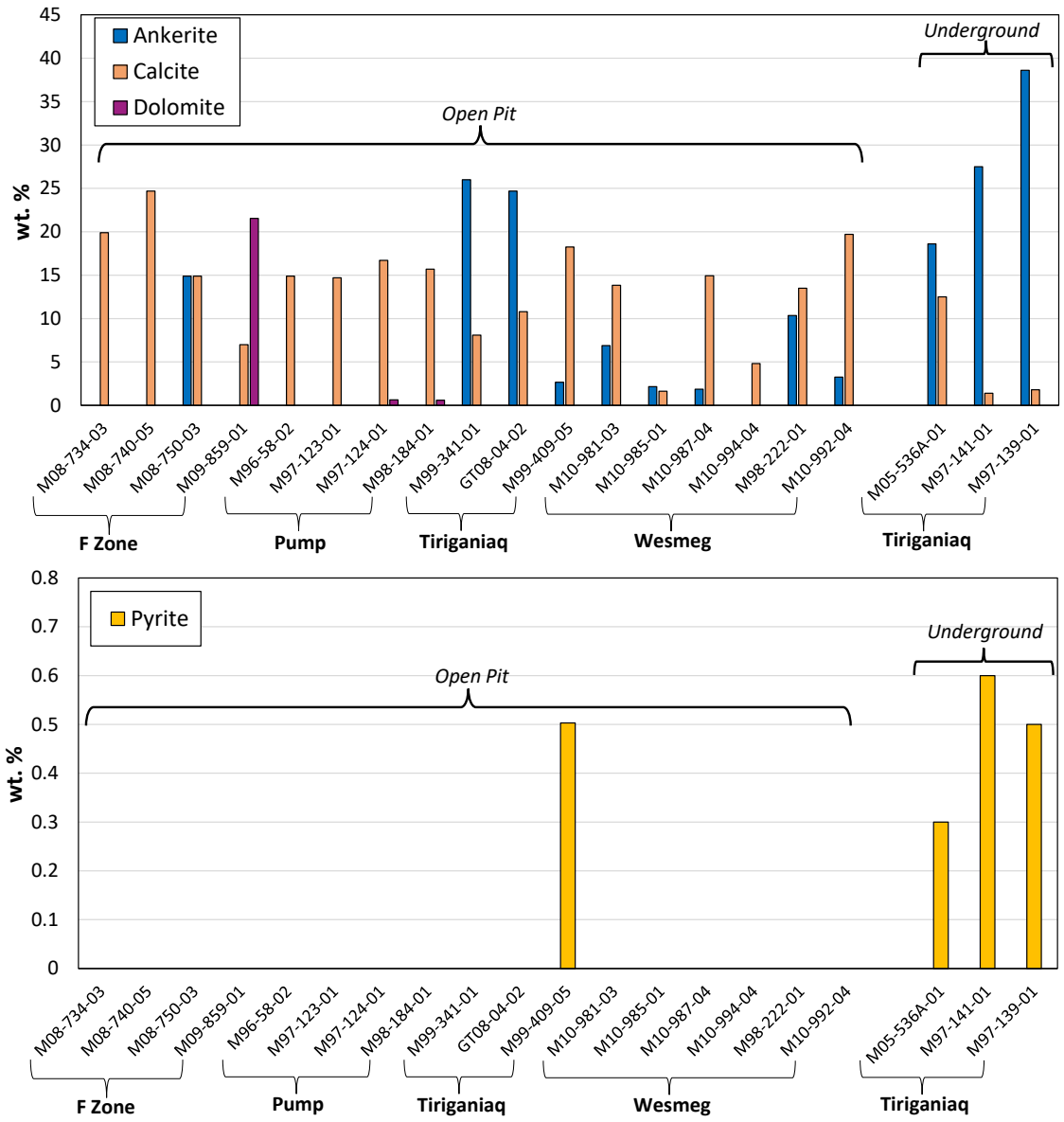



**Figure 4-3: XRD results for carbonate (top) and sulphide (bottom) mineralogy for VO waste rock samples by location in mine workings and deposit.**

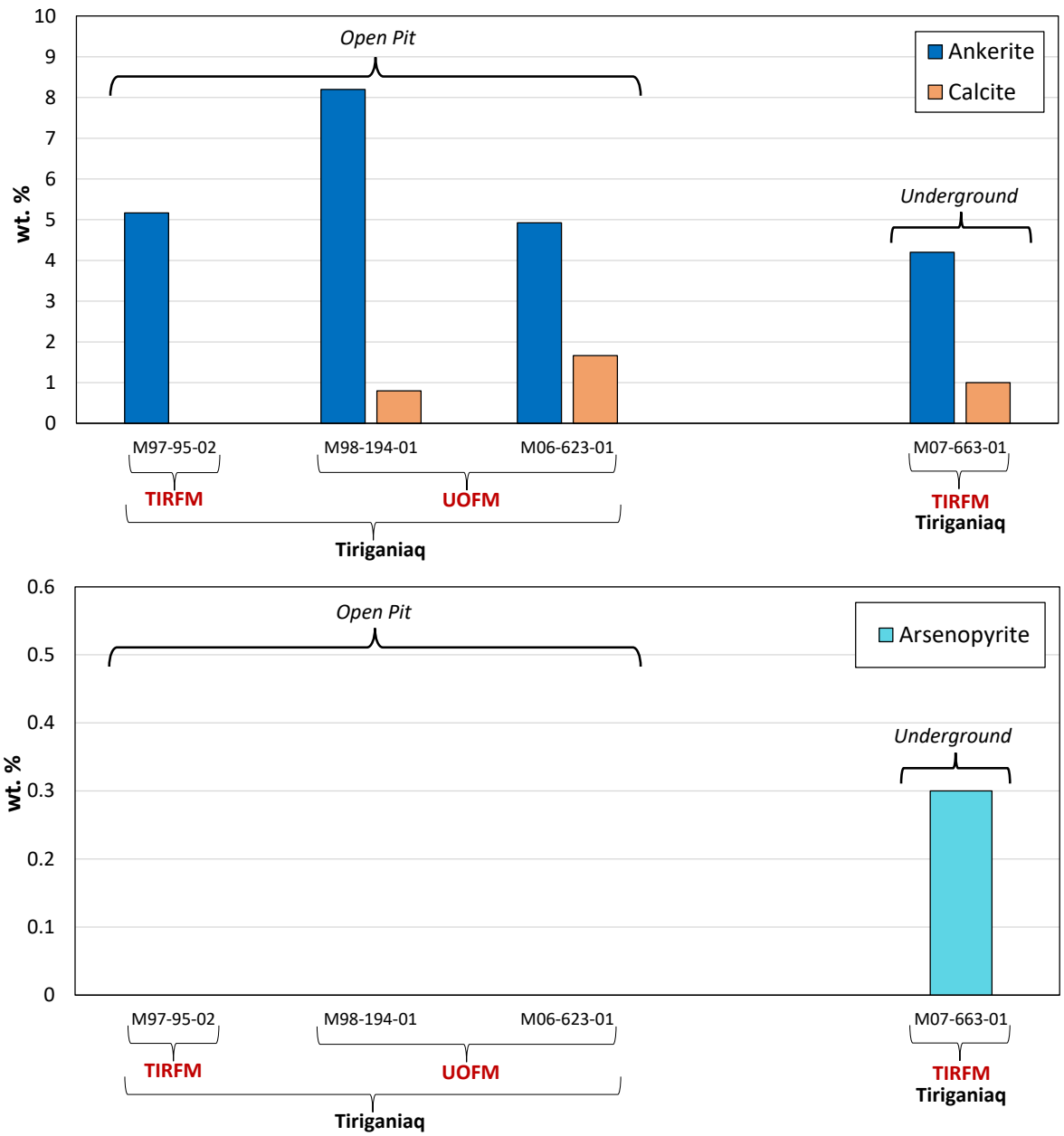



**Figure 4-4: XRD results for carbonate (top) and sulphide (bottom) mineralogy for TIRFM and UOFM waste rock samples by location in mine workings.**

### *4.1.2.5 TIMA-X Results*

For the purposes of identifying the composition of sulphide and carbonate minerals and mineral associations for trace elements of interest, namely As, eight waste rock and two ore samples from the IF and SE units were analyzed using TIMA-X and EDX spectroscopy. The complete results of this analysis are provided in Appendix C-2.

*Minerals of Variable Composition*

An EDX detector was used to separate the characteristic x-rays of different elements to determine the elemental composition of ankerite, siderite and pyrrhotite. These elements were targeted because they have variable compositions which impacts the amount of AP or NP associated with each mineral phase. The results of this analysis are presented as minimum, median and maximum normalized elemental weight concentrations in Table 4-1.

Pyrrhotite is an iron sulfide mineral with a variable formula of $Fe_{(1-x)}S$, where x ranges from 0 to 0.2. The ratio of Fe to S impacts the amount of AP that is generated from pyrrhotite oxidation. The value of x was determined to be 0.13, indicating an average pyrrhotite composition of $Fe_{0.87}S$. This result informs the derivation of AP generated from pyrrhotite oxidation described in Section 5.

Ankerite and siderite occur as dolomite-siderite series carbonate minerals. Both minerals can incorporate variable amounts of Ca, Mg, Fe and Mn. The amount of NP present in these minerals depends on the relative molar abundance of these elements, with lower NP associated with greater Mn and Fe abundance. TIMA results for ankerite show that ankerite has a highly variable amount of Fe, ranging from 8.0% to 22%. Siderite, which forms an end member of the dolomite-siderite series has a more consistent formula, with Fe ranging from 39.0% to 43.7%. Manganese was shown to be only a minor component of both of these minerals, typically being present at concentrations of <1%.

The average molar composition of ankerite, siderite and pyrrhotite is provided in Table 4-2. These results were incorporated into the derivation of acid neutralization equations described in Section 5.2.2.

**Table 4-1:**
**Statistical Summary for Normalized Elemental Composition of Ankerite, Siderite and Pyrrhotite as Determined by EDX**

| Mineral | Ideal Formula | Statistic | %O | %Mg | %Ca | %Mn | %Fe | %S |
|---|---|---|---|---|---|---|---|---|
| Ankerite | $Ca(Fe, Mg, Mn)(CO_3)_2$ | *Min* | 50.7 | 2.92 | 22.9 | 0.18 | 8.04 | *NA* |
| | | *Median* | 52.6 | 5.50 | 23.8 | 0.92 | 17.0 | *NA* |
| | | *Max* | 56.0 | 10.3 | 25.3 | 3.89 | 21.8 | *NA* |
| Siderite | $FeCO_3$ | *Min* | 49.8 | 0.43 | 4.83 | 0.01 | 39.0 | *NA* |
| | | *Median* | 51.5 | 0.79 | 5.44 | 0.25 | 42.2 | *NA* |
| | | *Max* | 53.9 | 1.65 | 5.76 | 0.81 | 43.7 | *NA* |
| Pyrrhotite | $Fe_{(1-x)}S$ | *Min* | *NA* | *NA* | *NA* | *NA* | 60.6 | 37.6 |
| | | *Median* | *NA* | *NA* | *NA* | *NA* | 61.5 | 38.5 |
| | | *Max* | *NA* | *NA* | *NA* | *NA* | 62.4 | 39.4 |

**Table 4-2:**
**Average Mineral Composition from Microprobe Data**

| Statistic | Average Formula | Formula weight (g/mole) |
|---|---|---|
| *Ankerite* | $Ca_{0.52}\,Fe_{0.27}\,Mg_{0.20}\,Mn_{0.01}\,CO_3$ | 101 |
| *Siderite* | $Fe_{0.83}\,Ca_{0.15}\,Mg_{0.02}\,Mn_{0.00}\,CO_3$ | 113 |
| *Pyrrhotite* | $Fe_{0.87}\,S$ | 80.7 |

*Arsenic Deportment*

The TIMA-X results for normalized As deportment are presented in Figure 4-5. For all samples where As was detected, a co-association with Fe and S was observed. This is consistent with XRD results which have identified the presence of arsenopyrite (FeAsS) in waste rock and ore from the IF unit. The results show that As is predominantly present as arsenopyrite in both IF and SE mine rock samples collected from the open pit and underground. Alternatively, Fe-Co gersdorffite (FeCoNiAsS), is present at trace levels in several samples, but only accounts for an appreciable amount of As in one sample from the Tiriganiaq underground (CAEXD216429), while enargite ($Cu_3AsS_4$) is only detected in one sample from the F Zone underground (CAEXD176511).

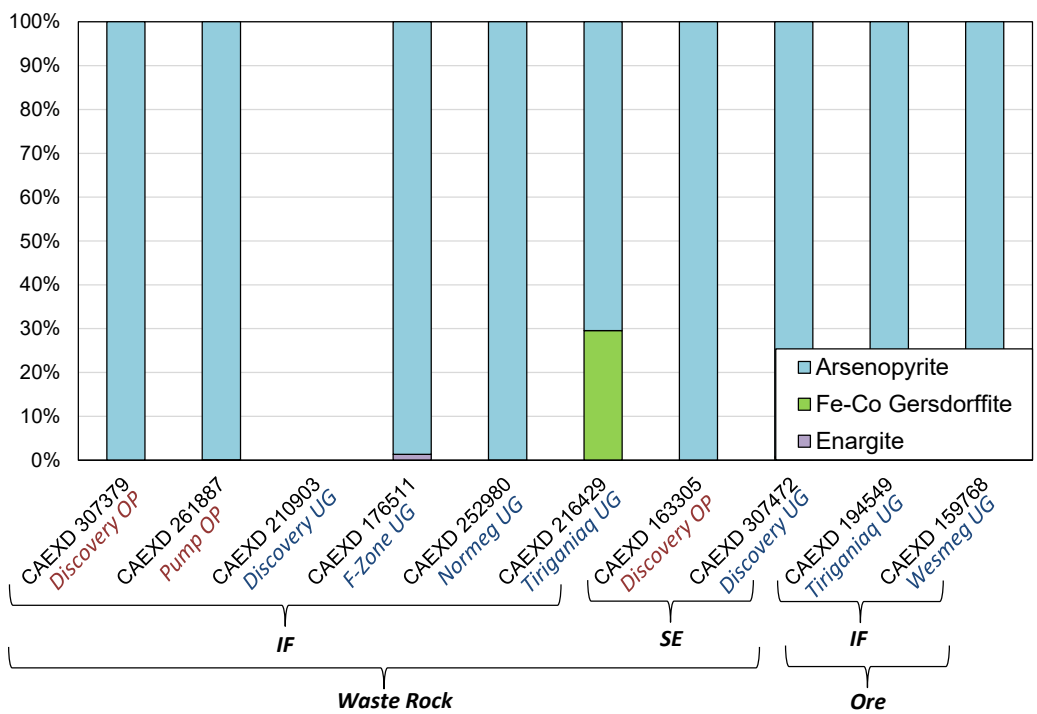



**Figure 4-5: Normalized As deportment for IF and SE waste rock and ore samples by deposit and location in mine workings (OP- open pit; UG- underground).**

#### *4.1.2.6 Summary of Sulphur and Carbonate Mineralogy*

The sulphide minerals pyrrhotite, pyrite and arsenopyrite were identified by XRD in Meliadine waste rock. Each mineral phase will generate different amounts of acidity when oxidized based on the reaction stoichiometry. Sulphide minerals were consistently detected in samples originating from the IF unit, which is consistent with ABA characterization showing highest median sulphide S contents for this lithology (Section 5). Pyrrhotite was found to be dominant in samples from the IF and SE units, which is notable due the lower AP associated with this sulphide mineral but faster reaction kinetics relative to pyrite. Conversely, pyrite was the only detected sulphide mineral in samples from the VO unit. Arsenopyrite, which contains higher AP than pyrite per unit sulfide, was detected in the IF and TIRFM lithologies.

Carbonate mineral phases identified by XRD include: ankerite, calcite, dolomite and siderite. Carbonate mineral abundance was consistent with ABA results which show highest NP associated with the VO unit and lowest NP with samples from the Discovery deposit (Section 5.2.2). Carbonate mineral assemblage for a given lithology is occasionally variable among the deposits. This is most evident for the IF unit, where ankerite and siderite account for appreciable levels in waste rock samples from nearly all deposits except Discovery where calcite is dominant. Similarly for the SE and VO units, samples from the Tiriganiaq and Wesmeg deposits distinctly show the presence of ankerite in addition to calcite.

The most salient findings pertaining to sulphide and carbonate mineral distributions include the following:

- Sulphide and carbonate minerals are most consistently detected at highest abundances in IF and VO waste rock samples, respectively.
- Pyrrhotite was found to be the dominant sulphide mineral in samples from the IF, SE and TIRFM units, while pyrite was found to be dominant in samples from the VO unit. Aresenopyrite was found in minor concentrations in IF samples.
- The TIMA results demonstrate that As detected in IF and SE samples are predominantly present as arsenopyrite. XRD results also confirm the presence of arsenopyrite in samples from the IF and TIRFM lithologies.
- TIMA analysis identified Fe-Co gersdorffite (FeCoNiAsS) was found in an IF sample from Tiriganiaq. The presence this highly reactive sulphide mineral indicates that some Tiriganiaq IF may have elevated As leaching potential. However, the distribution of this mineral across the deposit is not well constrained as trace sulphide concentrations are generally below the analytical detection limit of XRD or visual observation (approx. 1 wt.%).

- Overall, ankerite was found to be the dominant carbonate mineral in samples from the TIRFM, while calcite was found to be dominant in samples from the SE and VO units. A combination of ankerite and siderite dominated carbonate mineralogy is IF samples, with the notable exception of Discovery.
- Carbonate mineralogy at Discovery is distinct, in that calcite dominated the carbonate mineral assemblage in all waste rock lithologies encountered (SE, IF and GB).
- Waste rock samples from Discovery show lower sulphide and carbonate mineral content for the IF and SE lithologies relative to the other deposits.
- Generally, the mineralogical characterization of open pit and underground waste rock samples are consistent.

### 4.1.3 Acid Base Accounting

This section discusses the ABA results for the Meliadine Extension waste rock lithologies. The Meliadine Extension database includes a total of 544 waste rock samples submitted for ABA testwork (Table 3-2 and Table 3-3). The statistical distributions for ABA characteristics for the major waste rock lithologies are presented by deposit for samples collected from the open pit and underground mine operations in Appendix D. In order to compare ABA characteristics between different lithologies, Table 4-3 and Table 4-4 presents the median values for each deposit for samples representative of the proposed open pit and underground mines. The ultimate ARD classification of waste rock samples, using the ARD classification criteria developed in the 2014 FEIS, is described in Chapter 5.

#### *4.1.3.1 Paste pH*

Paste pH values provide information on the pH of a rock type immediately after excavation. On its own, paste pH is not a predictor of the acid generation potential; however, the paste pH can be used as a primary indicator of the presence of existing buffering capacity or water soluble acidity. The paste pH is governed by the carbonate mineral solubility and, hence, the NP present. When the paste pH values are <5.5, NP present is limited or non-existent. Conversely, higher paste pH values imply the presence of immediately available NP. Paste pH tends to produce a relatively high estimate of pH. This is a consequence of the sample being pulverized to 100 µm size or smaller to produce a paste, resulting in an extremely high number of new surfaces and the exposure (and abrasion) of minerals not previously subjected to weathering.

**Table 4-3:**
**Open Pit Waste Rock Median Acid Base Accounting Results by Deposit and Lithology**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Mod- NP/MAP |
| **Discovery (Medians)** | | | | | | | | | | | | | | |
| *GB (n=10)* | 9.8 | 6.1 | 0.12 | 0.04 | 0.06 | 3.7 | 1.4 | 0.16 | 0.12 | 10 | 10 | 25 | 3.6 | 7.4 |
| *IF (n=49)* | 9.0 | 5.9 | 0.37 | 0.28 | 0.06 | 12 | 7.7 | 0.31 | 0.22 | 18 | 18 | 27 | 1.2 | 2.0 |
| *SE (n=77)* | 9.7 | 5.7 | 0.12 | 0.07 | 0.03 | 3.7 | 1.9 | 0.07 | 0.05 | 4.0 | 4.0 | 10 | 1.1 | 3.2 |
| *TIRFM (n=3)* | 9.4 | *ND* | 0.39 | 0.24 | 0.14 | 12 | 7.1 | 0.69 | 0.49 | 40 | 30 | 32 | 2.4 | 3.9 |
| **F Zone (Medians)** | | | | | | | | | | | | | | |
| *IF (n=9)* | 8.4 | 6.5 | 1.75 | 1.65 | 0.07 | 55 | 49 | 1.5 | 0.78 | 65 | 34 | 65 | 0.6 | 0.9 |
| *VO (n=56* | 9.1 | 6.7 | 0.11 | 0.07 | 0.05 | 3.3 | 1.6 | 2.0 | 1.9 | 153 | 154 | 160 | 29 | 31 |
| **Pump (Medians)** | | | | | | | | | | | | | | |
| *GB (n=1)* | 8.7 | 6.4 | 0.02 | 0.01 | <0.01 | 0.6 | 0.5 | 1.7 | 1.7 | 138 | 138 | 140 | 233 | 235 |
| *IF (n=8)* | 8.1 | 7.3 | 2.0 | 2.0 | 0.17 | 63 | 55 | 3.0 | 1.9 | 159 | 85 | 87 | 1.2 | 1.4 |
| *VO (n=18)* | 8.9 | 6.4 | 0.10 | 0.07 | 0.04 | 3.0 | 2.4 | 2.2 | 2.0 | 165 | 168 | 160 | 56 | 53 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | |
| *GB (n=4)* | 9.4 | *NA* | 0.11 | 0.04 | 0.10 | 3.5 | 1.3 | 0.35 | 0.30 | 25 | 25 | 35 | 5.0 | 7.8 |
| *IF (n=9)* | 8.3 | 6.3 | 0.31 | 0.29 | 0.03 | 9.7 | 9.5 | 1.3 | 1.0 | 84 | 63 | 71 | 6.7 | 7.1 |
| *SE (n=99)* | 9.4 | 10.8 | 0.20 | 0.09 | 0.11 | 6.4 | 2.3 | 0.64 | 0.50 | 41 | 41 | 43 | 5.3 | 6.7 |
| *TIRFM (n=8)* | 9.2 | *ND* | 0.19 | 0.06 | 0.10 | 5.8 | 2.1 | 0.89 | 0.70 | 57 | 44 | 55 | 7.3 | 9.7 |
| *UOFM (n=14)* | 9.1 | 10.5 | 0.16 | 0.09 | 0.08 | 5.0 | 2.7 | 1.0 | 0.83 | 67 | 53 | 69 | 10 | 14 |
| *VO (n=17)* | 9.0 | 10.9 | 0.28 | 0.15 | 0.10 | 8.9 | 4.8 | 3.4 | 3.2 | 262 | 232 | 245 | 23 | 30 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | |
| GB (n=1) | 9.3 | *ND* | 0.08 | 0.01 | 0.07 | 2.6 | 0.47 | 1.3 | 1.2 | 97 | 97 | 101 | 38 | 38 |
| *IF (n=4)* | 7.5 | 3.5 | 1.9 | 1.9 | 0.05 | 60 | 53 | 3.2 | 2.7 | 226 | 169 | 46 | 2.5 | 0.65 |
| *UV (n=4)* | 9.2 | *ND* | 0.06 | 0.03 | 0.035 | 2.0 | 1.0 | 3.1 | 2.4 | 193 | 172 | 182 | 87 | 87 |
| *VO (n=44)* | 9.0 | 6.59 | 0.10 | 0.06 | 0.04 | 3.2 | 1.9 | 2.5 | 2.3 | 191 | 170 | 175 | 45 | 47 |
| **Wesmeg North (Medians)** | | | | | | | | | | | | | | |
| *GB (n=1)* | 8.8 | 6.2 | 0.19 | 0.18 | <0.01 | 6.1 | 6.0 | 2.0 | 1.9 | 158 | 158 | 134 | 26 | 22 |
| *IF (n=2)* | 8.2 | 8.4 | 1.5 | 1.5 | 0.03 | 48 | 47 | 3.2 | 3.0 | 249 | 187 | 113 | 4.1 | 2.4 |
| *VO (n=14)* | 8.9 | 6.4 | 0.22 | 0.21 | <0.01 | 7.0 | 6.8 | 4.0 | 4.1 | 341 | 297 | 263 | 40 | 35 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
ND-no data

**Table 4-4:**
**Underground Waste Rock Median Acid Base Accounting Results by Deposit and Lithology**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg CAAO3/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Mod- NP/MAP |
| **Discovery (Medians)** | | | | | | | | | | | | | | |
| *GB (n=4)* | 9.7 | 5.9 | 0.19 | 0.18 | <0.01 | 5.8 | 5.5 | 0.19 | 0.18 | 15 | 15 | 24 | 2.4 | 4.1 |
| *IF (n=15)* | 8.7 | 4.4 | 0.49 | 0.46 | 0.03 | 15 | 13 | 0.35 | 0.23 | 19 | 19 | 23 | 0.7 | 0.8 |
| *SE (n=19)* | 9.6 | 5.0 | 0.12 | 0.11 | <0.01 | 3.8 | 3.3 | 0.05 | 0.03 | 2.5 | 2.5 | 6.6 | 0.4 | 1.8 |
| **F Zone (Medians)** | | | | | | | | | | | | | | |
| *IF (n=4)* | 8.3 | 6.7 | 1.2 | 1.2 | 0.02 | 37 | 33 | 1.0 | 0.97 | 80 | 42 | 56 | 1.2 | 1.6 |
| *VO (n=4)* | 8.7 | 6.5 | 0.42 | 0.41 | <0.01 | 13.0 | 13 | 2.7 | 2.7 | 225 | 225 | 203 | 19 | 17 |
| **Pump (Medians)** | | | | | | | | | | | | | | |
| *IF (n=2)* | 8.4 | 6.2 | 0.57 | 0.56 | <0.01 | 18 | 16 | 1.9 | 1.9 | 154 | 81 | 91 | 5 | 5 |
| *VO (n=9)* | 8.8 | 6.2 | 0.08 | 0.07 | <0.01 | 2.6 | 2.5 | 2.9 | 3.0 | 248 | 248 | 198 | 92 | 76 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | |
| *GB (n=2)* | 8.8 | *ND* | 0.11 | 0.07 | 0.04 | 3.5 | 2.3 | 1.3 | 1.2 | 101 | 103 | 110 | 30 | 32 |
| *IF (n=5)* | 8.4 | 7.5 | 0.78 | 0.49 | 0.03 | 25 | 14 | 1.8 | 1.5 | 121 | 92 | 83 | 4.3 | 4.7 |
| *SE (n=7)* | 9.1 | 10.5 | 0.18 | 0.07 | 0.11 | 5.6 | 2.1 | 0.87 | 0.70 | 57 | 57 | 56 | 9 | 11 |
| *TIRFM (n=9)* | 8.7 | NA | 0.14 | 0.05 | 0.08 | 4.4 | 1.5 | 0.61 | 0.46 | 38 | 29 | 37 | 7.2 | 9.1 |
| *UOFM (n=7)* | 9.3 | 6.1 | 0.09 | 0.08 | <0.01 | 2.8 | 2.6 | 0.84 | 0.85 | 71 | 54 | 56 | 21 | 21 |
| *VO (n=12)* | 8.8 | 11.5 | 0.14 | 0.08 | 0.06 | 4.4 | 2.6 | 3.1 | 2.9 | 236 | 210 | 242 | 43 | 49 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | |
| *IF (n=4)* | 8.1 | 7.7 | 2.1 | 2.0 | 0.03 | 64 | 64 | 3.3 | 3.2 | 263 | 197 | 123 | 2.7 | 1.5 |
| *VO (n=4)* | 9.0 | 6.3 | 0.11 | 0.10 | <0.01 | 3.4 | 4.8 | 2.9 | 3.0 | 249 | 217 | 201 | 78 | 71 |
| **Wesmeg North (Medians)** | | | | | | | | | | | | | | |
| *GB (n=3)* | 8.7 | 6.8 | 0.11 | 0.10 | <0.01 | 3.5 | 3.3 | 1.7 | 1.6 | 134 | 134 | 131 | 37 | 37 |
| *IF (n=2)* | 9.2 | 6.0 | 0.40 | 0.39 | <0.01 | 13 | 18 | 1.2 | 1.2 | 98 | 73 | 72 | 6.0 | 5.9 |
| *SE (n=2)* | 7.8 | 7.8 | 2.0 | 2.0 | 0.04 | 63 | 55 | 1.8 | 1.7 | 143 | 122 | 113 | 1.9 | 1.8 |
| *VO (n=8)* | 8.9 | 6.4 | 0.14 | 0.13 | <0.01 | 4.2 | 3.9 | 2.7 | 2.8 | 235 | 204 | 206 | 46 | 47 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
ND-no data

Paste pH measurements in waste rock are neutral to alkaline, with median values ranging from pH 7.7 to 9.8 for the different lithologies. Lower paste pH values are generally associated with the IF lithology. Furthermore, waste rock samples from the Discovery and Tiriganiaq deposits tend show higher paste pHs relative to the other deposits. For individual deposits, underground waste rock samples show similar or slightly lower paste pHs relative to open pit samples.

#### *4.1.3.2 Sulphur Speciation*

Sulphur content is used to estimate the amount of AP present in mine waste. All samples in the dataset were tested for total S, while a subset of samples were tested for sulphide S and sulphate S. For the Meliadine site, sulphide S is estimated by taking the difference between total S and sulphate S concentrations, since a direct measurement for sulphide S (via nitric acid leach) resulted in analytical inconsistencies attributed to the high pyrrhotite content of certain lithologies. Calculation of AP content based on sulphur results from ABA testing is described in Section 5.1.2.1. Maximum acid potential (MAP) as shown in Table 4-3 and Table 4-4 is calculated from total-S measurements.

Total S is detected in most waste rock samples at concentrations <0.4 wt.%, with median levels ranging from 0.02 to 2.1 wt.% for each rock unit (Table 4-3 and Table 4-4). By comparison, sulphide S measured by difference shows a very similar abundance to total S since sulphate S contents are mainly low (median levels are <0.2 wt.%). In most deposits, highest median total S and sulphide S levels are associated with the IF unit. The exception to this is the underground Wesmeg North deposit, which shows a high total S content (median of 2.0 wt.%) in the SE unit. However, this result may be a relic of the small number of samples (n=2) collected from this deposit, where SE waste rock is rare. Notably, waste rock samples from Discovery and Tiriganiaq show overall lower sulphur levels, even for the IF unit, relative to other deposits for both the open pit and underground. At most deposits, waste rock collected from the underground shows generally higher or similar sulphur concentrations as samples collected from corresponding open pit deposits. The exception to this is the Pump deposit which shows lower sulphur levels in underground samples, specifically for the IF lithology.

Figure 4-6 shows the relationship between sulphide S and total S for mine rock (waste rock and ore) from the different lithologies. In most mine rock samples, sulphate S levels are low (<0.1 wt.%), resulting in a general agreement between the two measures of S (Table 4-3). By extension, this infers that the majority of S in host lithology types is present as sulphide minerals, which is supported by XRD results which did not detect any sulphate minerals in waste rock or ore. Mine rock samples from the IF unit show the greatest

agreement between total S and sulphide S, while samples from the SE and VO lithologies show some variability from the 1:1 relationship. This indicates that minor sulphate minerals are present which were not detected by XRD, likely due to the relatively high detection limit provided by XRD patterns (approx. 1 wt.%).

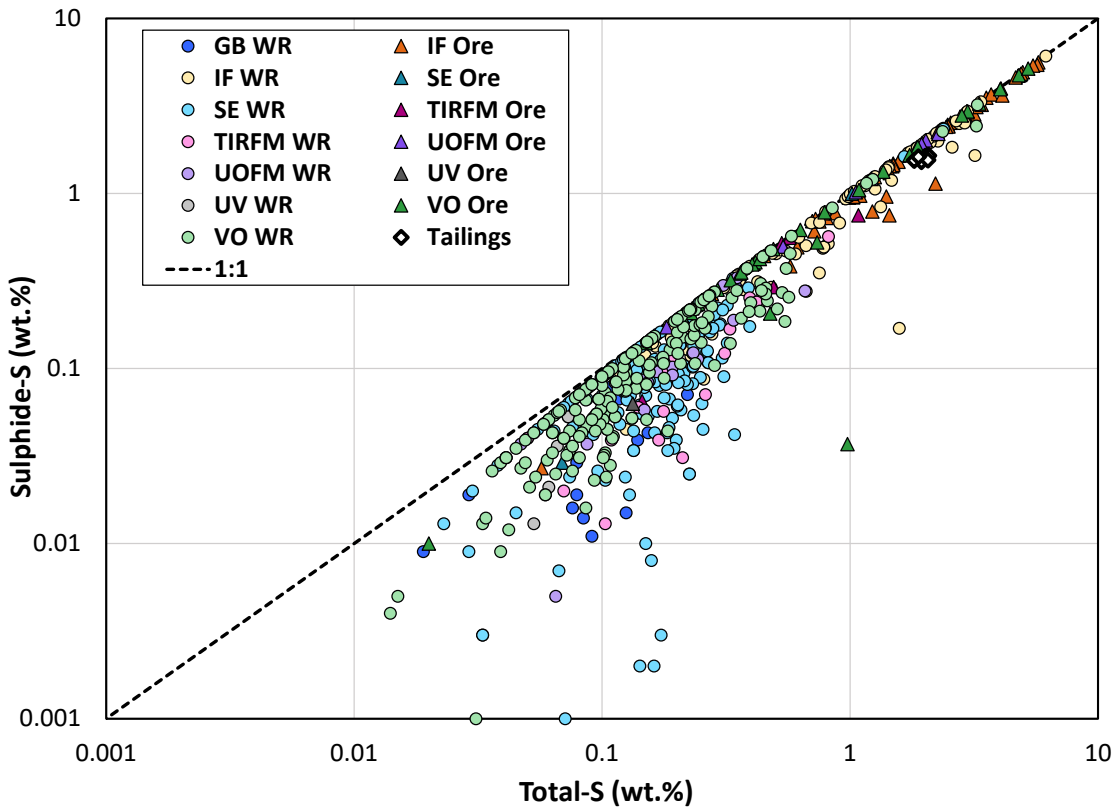



**Figure 4-6: Total-S versus sulphide-S (calculated by difference) for waste rock and ore lithologies and TSF tailings samples.**

### *4.1.3.3 Neutralization Potential*

A number of NP measurements have been used to characterize available NP in Meliadine mine rock. The complex carbonate mineralogy at Meliadine complicates direct application of ABA measurements in determining effective NP. Application of NP measurements in determining ARD potential, and calculation of the adjusted CaNP (CaNP-adj) method which combines static and mineralogic test results are described in Sections 5.2.2 and Section 5.3. Results for CaNP, mod-NP and CaNP-adj for waste rock are discussed in this section.

Overall, median NP values range from 3 to 340 kg $CaCO_3$/t for the different waste rock lithologies. Highest NP are typically measured in samples from the VO lithology (150 to 340 kg $CaCO_3$/t), while lowest NP are measured in samples from the Discovery deposit

(3 to 40 kg $CaCO_3$/t). For the same lithologies, waste rock samples from the Discovery deposit show distinctly lower NP values relative to the other deposits. In particular, median NP for IF and SE Discovery samples (~20 kg $CaCO_3$/t and ~5 kg $CaCO_3$/t) are well below the range observed for the other deposits (30 to 365 kg $CaCO_3$/t and 40 to 145 kg $CaCO_3$/t, respectively). In general, underground samples show higher median NP than corresponding open pit samples for the same deposit.

#### *4.1.3.4 Net Potential Ratio*

For the purposes of ARD classification, NPR was calculated by two methods, CaNP-adj/MAP and Mod- NP/MAP, consistent with the approach taken for the 2014 FEIS. A discussion of the ARD classification criteria and the distribution of ARD potential (*i.e.*, % PAG, % Uncertain and % non-PAG) is provided in Sections 5.1 and 5.1.4, respectively. This section will specifically discuss the variability of NPR values measured in waste rock samples across the different lithologies and deposits (Table 4-3 and Table 4-4).

In general, median NPR (Mod- NP/MAP) are similar or greater than the corresponding NPR (CaNP-adj/MAP), reflecting the relative magnitude of NP values. Consistent with the distribution of NP for the waste rock lithologies, highest median NPR values are measured in VO samples (17 to 100). Conversely, lowest median NPR values are associated with IF samples (0.5 to 11), reflecting generally higher sulphur content. Waste rock samples from Discovery generally show lower median NPRs (0.4 to 7.4) relative to the other deposits, owing to lower NP in these materials. For determination of ARD potential, NPR values below 1(for both measurements) are used to screen PAG samples. Median NPR values for the IF unit at F Zone (open pit) and Discovery (underground) are below this threshold value indicating greater ARD potential in these materials than in other lithologies and deposits. At F Zone, the VO rock type shows high NPR (>2) indicating that most ARD potential is limited to the IF lithology. In contrast, at Discovery, the SE unit shows median NPR values within the PAG-Uncertain range (0.4 and 1.8), indicating that PAG rock may also be present for this lithology. Overall, NPR values are higher in underground relative to corresponding open pit samples.

### 4.1.4 Net Acid Generating Tests

Net acid generating tests provide an estimate of ARD potential independent of ABA analyses. The NAG pH results are incorporated into the ARD classification criteria as defined in Section 5. Comparison of NAG test results with NPR values and resulting ARD classifications are described in Section 5.

Across all deposits, median NAG pH values range from pH 3.5 to 11 with lowest values measured at Discovery (pH 4.4 to 6.1) and highest values in Tiriganiaq samples

(pH 6.3 to 11). Only underground Discovery and open pit Wesmeg samples from the IF unit show a median NAG pH values <4.5, indicating greater acid generating potential in these materials relative to the other deposits and lithologies. At Wesmeg, all other rock types show circumneutral NAG pH indicating that most ARD potential is limited to the IF at this deposit. Conversely, at Discovery both GB (open pit) and SE (open pit and underground) show intermediate NAG pH values ranging from pH 5.1 to pH 5.7, showing that PAG rock may occur in lithologies other than IF at Discovery.

### 4.1.5 Solid-Phase Elemental Abundance

Statistical summaries of solid phase elemental results for Meliadine Extension database open pit and underground waste rock samples (n=588) are presented by deposit and lithology and compared to average upper continental crust concentrations (AUCCC) (Rudnick and Gao, 2014) in Appendix D-4. In order to compare relative metal enrichment between the deposits and lithologies, Table 4-5 and Table 4-6 presents median values for samples collected from the open pit and underground which are then screened against the AUCCC.

The results indicate that waste rock lithologies in most deposits are enriched in As and Cu with respect to the AUCCCs. Other metal parameters including Ag, Cd, Co and Cr are variably enriched across the lithologies and deposits, while enrichment of Mn, Mo, Ni, Pb, Sb, Se and Zn are mainly found in waste rock from the F Zone, Pump and Wesmeg deposits. Iron enrichment is primarily associated with the IF unit. Summary statistics for Ag represents smaller sample sizes due to incomplete solid phase results in the 2014 FEIS dataset. Limited comparisons could be made for Se due to the high detection limits (0.70 ppm and 1 ppm) which are an order of magnitude greater than the AUCCC.

. The data demonstrate that elemental enrichment can be associated with deposit and lithology. Generally, the highest median As, Cd and Mn concentrations are measured in IF waste rock samples, while highest Cu and Zn contents are typically associated with both the IF or VO units. Other trace elements, including Co, Cr and Ni show elevated concentrations primarily in samples from the GB, UV or VO lithologies.

**Table 4-5:**
**Open Pit Waste Rock Median Solid Phase Elemental Concentrations by Deposit and Lithology**

| **AUCCC** | **0.053** | **81,500** | **4.8** | **0.16** | **0.09** | **17** | **92** | **28** | **39,200** | **774** | **1.1** | **47** | **17** | **0.4** | **0.09** | **67** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Ag** | **Al** | **As** | **Bi** | **Cd** | **Co** | **Cr** | **Cu** | **Fe** | **Mn** | **Mo** | **Ni** | **Pb** | **Sb** | **Se** | **Zn** |
| Unit | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| **Discovery (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=10)* | 0.12 | 82,000 | 6.1 | 0.09 | 0.24 | 34 | 73 | 43 | 110,000 | 1,200 | 1.3 | 32 | 9.6 | <0.8 | <0.7 | 150 |
| *IF (n=49)* | 0.08 | 22,000 | 9.0 | 0.11 | 0.15 | 3.9 | 93 | 7 | 225,319 | 250 | 1.4 | 11 | 4.2 | <0.8 | <0.7 | 40 |
| *SE (n=77)* | 0.09 | 84,000 | 36 | 0.15 | 0.24 | 17 | 140 | 38 | 47,000 | 340 | 1.5 | 51 | 8.9 | <0.8 | <0.7 | 77 |
| *TIRFM (n=3)* | *ND* | 46,000 | ***95*** | 0.12 | 0.23 | 7.2 | 130 | 27 | 170,000 | 360 | 2.6 | 15 | 8.1 | <0.8 | <0.7 | 54 |
| **F-Zone (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=9)* | 0.16 | 4,400 | ***200*** | 0.11 | 0.34 | 7.8 | 140 | 78 | 97,000 | 2,549 | 0.90 | 11 | 2.6 | <0.8 | ***<1*** | 100 |
| *VO (n=70)* | 0.10 | 69,000 | 9.0 | 0.09 | 0.18 | 42 | 190 | 100 | 75,000 | 1,200 | 0.80 | 85 | 3.4 | <0.8 | <0.7 | 100 |
| **Pump (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=1)* | 0.01 | 54,700 | ***147*** | 0.02 | 0.04 | 55 | 156 | 14 | 76,700 | 1,114 | 0.48 | 151 | 1.6 | 0.06 | ***<1*** | 133 |
| *IF (n=8)* | 0.11 | 14,500 | ***165*** | 0.09 | ***0.97*** | 17 | 71 | 166 | 140,300 | 2,048 | 1.0 | 23 | 4.6 | <0.8 | ***<1*** | 424 |
| *VO (n=18)* | 0.10 | 65,500 | 27 | 0.09 | 0.19 | 44 | 200 | 93 | 79,500 | 1,300 | 0.30 | 88 | 2.7 | 0.90 | <0.7 | 110 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=4)* | *ND* | 69,000 | 10 | 0.09 | 0.20 | 40 | 87 | 90 | 90,000 | 1,050 | 0.80 | 47 | 8.5 | 1.1 | <0.7 | 92 |
| *IF (n=9)* | 0.14 | 22,000 | ***168*** | 0.09 | 0.11 | 4.1 | 11 | 7.2 | 232,376 | 326 | 1.0 | 8 | 6.7 | 0.19 | ***<1*** | 38 |
| *SE (n=99)* | 0.36 | 79,000 | 46 | 0.13 | 0.26 | 18 | 150 | 43 | 39,000 | 300 | 1.4 | 58 | 13 | <0.8 | <0.7 | 77 |
| *TIRFM (n=8)* | 0.09 | 75,500 | ***140*** | 0.12 | 0.25 | 11 | 85 | 45 | 48,000 | 285 | 1.1 | 34 | 9.8 | <0.8 | <0.7 | 63 |
| *UOFM (n=14)* | 0.21 | 71,500 | ***86*** | 0.09 | 0.18 | 8.9 | 35 | 25 | 53,500 | 280 | 0.70 | 19 | 12 | <0.8 | <0.7 | 47 |
| *VO (n=17)* | 0.15 | 67,000 | ***73*** | 0.09 | 0.20 | 40 | 160 | 97 | 72,000 | 1,400 | 0.40 | 95 | 7.4 | <0.8 | <0.7 | 100 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=1)* | *ND* | 75,000 | 24 | 0.09 | 0.12 | 46 | 160 | 67 | 85,000 | 1,200 | 0.3 | 110 | 2.9 | 3.9 | 0.7 | 99 |
| *IF (n=4)* | *ND* | 6,000 | ***391*** | 0.19 | ***2.0*** | 10 | 5 | 150 | 150,055 | 2,492 | 1.5 | 13 | 4.2 | 0.34 | ***1.5*** | ***760*** |
| *VO (n=44)* | 0.19 | 61,500 | 25 | 0.09 | 0.20 | 41 | 185 | 98 | 83,500 | 1,200 | 0.3 | 96 | 3.3 | <0.8 | <0.7 | 110 |
| *UV (n=4)* | *ND* | 41,000 | ***104*** | 0.09 | 0.13 | 62 | 650 | 62 | 91,000 | 1,300 | 0.20 | 295 | 3.7 | <1 | <0.7 | 105 |
| **Wesmeg-North (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=1)* | 0.35 | 31,600 | ***221*** | 0.05 | 0.23 | 53 | 48 | 160 | 89,500 | 1,143 | 0.87 | 74 | 7.3 | 0.19 | ***<1*** | 125 |
| *IF (n=2)* | 0.18 | 7,700 | ***3,096*** | 0.08 | ***1.4*** | 12 | 49 | 135 | 124,750 | 2,384 | 4.8 | 27 | 4.8 | 0.59 | ***1.5*** | ***699*** |
| *VO (n=14)* | 0.14 | 23,600 | ***53*** | 0.02 | 0.13 | 45 | 150 | 119 | 69,600 | 1,525 | 0.25 | 98 | 3.2 | 0.16 | ***<1*** | 71 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
Data for Ag represent a smaller sample size than for other metal parameters
ND- no data

**Table 4-6:**
**Underground Waste Rock Median Solid Phase Elemental Concentrations by Deposit and Lithology**

| **AUCCC** | **0.053** | **81,500** | **4.8** | **0.16** | **0.09** | **17** | **92** | **28** | **39,200** | **774** | **1.1** | **47** | **17** | **0.4** | **0.09** | **67** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Ag** | **Al** | **As** | **Bi** | **Cd** | **Co** | **Cr** | **Cu** | **Fe** | **Mn** | **Mo** | **Ni** | **Pb** | **Sb** | **Se** | **Zn** |
| Unit | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| **Discovery (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=4)* | 0.05 | 17,350 | 2.5 | 0.02 | 0.035 | 30 | 51 | 49 | 42,600 | 377 | 1.3 | 33 | 1.8 | 0.16 | ***<1*** | 68 |
| *IF (n=15)* | 0.14 | 11,500 | 10.0 | 0.17 | 0.060 | 2.6 | 54 | 9 | 252,691 | 90 | 1.3 | 13 | 3.4 | 0.07 | ***<1*** | 18 |
| *SE (n=19)* | 0.08 | 22,200 | 29 | 0.16 | 0.060 | 21 | 121 | 39 | 38,700 | 284 | 1.5 | 64 | 2.3 | 0.05 | ***<1*** | 76 |
| **F-Zone (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=4)* | 0.06 | 1,800 | ***297*** | 0.06 | 0.44 | 4.3 | 72 | 61 | 62,000 | 1,835 | 2.2 | 7.0 | 2.1 | 0.59 | ***<1*** | 68 |
| *VO (n=4)* | 0.10 | 35,500 | ***71*** | 0.04 | 0.49 | 44 | 103 | 107 | 91,400 | 2,116 | 0.49 | 69 | 3.7 | 0.15 | ***<1*** | 236 |
| **Pump (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=2)* | 0.075 | 23,850 | ***133*** | 0.12 | 0.13 | 16 | 112 | 73 | 101,600 | 1,671 | 2.1 | 59 | 2.0 | 0.055 | ***<1*** | 116 |
| *VO (n=9)* | 0.12 | 35,900 | ***106*** | 0.02 | 0.14 | 54 | 153 | 92 | 74,200 | 1,329 | 0.53 | 142 | 2.6 | 0.15 | ***<1*** | 95 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=2)* | 0.50 | 69,500 | 11 | 0.09 | 0.41 | 45 | 110 | 110 | 90,500 | 1,200 | 0.45 | 109 | 8.4 | 0.90 | <0.7 | 104 |
| *IF (n=5)* | 0.18 | 18,300 | ***210*** | 0.14 | 0.15 | 19 | 44 | 40 | 153,325 | 330 | 1.06 | 15 | 11 | 0.31 | ***<1*** | 66 |
| *SE (n=7)* | 0.39 | 80,000 | ***120*** | 0.19 | 0.22 | 20 | 120 | 51 | 44,000 | 310 | 1.20 | 71 | 12 | <0.8 | <0.7 | 82 |
| *TIRFM (n=9)* | 0.37 | 77,000 | ***110*** | 0.11 | 0.24 | 20 | 120 | 43 | 52,000 | 300 | 1.20 | 69 | 11 | <0.8 | <0.7 | 77 |
| *UOFM (n=7)* | 0.04 | 20,100 | ***55*** | 0.06 | 0.09 | 12 | 20 | 16 | 51,900 | 299 | 0.47 | 24 | 4.2 | 0.13 | ***<1*** | 57 |
| *VO (n=12)* | 0.17 | 70,500 | 12 | 0.09 | 0.19 | 42 | 170 | 115 | 69,000 | 1,500 | 0.60 | 110 | 4.4 | <0.8 | <0.7 | 85 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=4)* | 0.22 | 8,450 | ***3,824*** | 0.21 | ***1.3*** | 14 | 35 | 211 | 119,700 | 2,536 | 2.5 | 18 | 14 | 0.62 | ***2*** | 430 |
| *VO (n=4)* | *ND* | 22,600 | ***401*** | 0.04 | 0.19 | 47 | 87 | 87 | 67,450 | 1,166 | 0.4 | 107 | 6.7 | 0.33 | ***<1*** | 120 |
| **Wesmeg-North (Medians)** | | | | | | | | | | | | | | | | |
| *GB (n=3)* | *ND* | 38,500 | ***80*** | 0.03 | 0.11 | 56 | 61 | 115 | 92,000 | 1,072 | 0.77 | 81 | 4.9 | 0.09 | ***<1*** | 116 |
| *IF (n=2)* | 0.20 | 18,350 | ***4485*** | 0.38 | 0.25 | 16 | 38 | 36 | 57,800 | 380 | 2.4 | 48 | 67 | 1.2 | ***<1*** | 64 |
| *SE (n=2)* | 0.10 | 26,050 | 5.0 | 0.24 | 0.13 | 7.35 | 30 | 121 | 144,500 | 627 | 0.93 | 18 | 5 | 0.11 | ***<1*** | 31 |
| *VO (n=8)* | *ND* | 30,650 | 18 | 0.03 | 0.12 | 43 | 76 | 111 | 67,350 | 1,154 | 0.41 | 81 | 2.8 | 0.27 | ***<1*** | 67 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
Data for Ag represent a smaller sample size than for other metal parameters
ND- no data

Variability in metal enrichment of waste rock samples is observed for the different deposits. Lower median As (6.1 to 95 ppm), Cu (7 to 43 ppm) and Ni (11 to 64 ppm) contents are measured in Discovery open pit and underground samples relative to the other deposits. Conversely, waste rock samples from Wesmeg and Wesmeg North show overall highest median concentrations for most metal parameters. Specifically, As levels measured in waste rock from these deposits are up to three orders of magnitude greater than As contents measured at other deposits. Metal enrichment for As is generally similar or higher in underground relative to open pit samples. The exception to this being the Wesmeg deposit, which shows notably higher median As levels in underground (400 to 3,820 ppm) relative to open pit (24 to 390 ppm) waste rock samples. However, the elevated values are associated with rock types with relatively few samples (n = 2) and may be an artifact of sampling bias.

### 4.1.6 Shake Flask Extractions

Metal concentrations measured by SFE tests provide an indication of the readily soluble metals which will be immediately available for leaching upon exposure of mine rock. SFE samples used two types of leach solutions, as described in section 3.2.2. Most samples used a 3:1 DI water to solids ratio as per the standard operating procedure. A subset of tests were leached using connate collected from a seep in the Tiriganiaq Underground in place of DI water. This modification was introduced to provide information on how connate water may influence the metal leaching potential of mine rock in the mine underground and in salt rock piles. Statistics on SFE results are provided in Appendix D-5, and complete SFE results are provided in Appendix D-6.

In order to gauge the significance of various SFE concentrations, the results are compared to the MDMER (GC, 2018) and to the Aquatic Effects Monitoring Program (AEMP; Azimuth, 2021) surface water quality guidelines for the protection of aquatic life. A summary of the relevant guidelines is presented Table 4-7.

Median leachate chemistry for SFEs conducted with deionized water are presented in Table 4-8 and Table 4-9 for the open pit and underground waste rock samples, respectively (n=404). A statistical summary is also provided for leachate chemistry from SFEs conducted on the waste rock samples (n=7) with connate water in Table 4-10 which was completed on a subset of underground waste rock samples from the Tiriganiaq and Wesmeg deposits. All water quality results were screened relative to the MDMER and AEMP guidelines (Table 4-7).

The SFE tests which used DI water show alkaline median-pH values ranging from pH 7.7. to 8.7. Exceedances of the AEMP guidelines consistently occur for Al for most rock

units and deposits. However, elevated Al concentrations in neutral-alkaline pH SFE tests are typically associated with suspended solids by-passing the filter during leachate extraction, and are not representative of actual metal leaching potential that may be realized in the field. For As, median concentrations exceed the AEMP guideline in all SE and most TIRFM leachates as well as UV and VO leachates from the Wesmeg and Wesmeg North deposits. The IF unit shows variable exceedances across deposits for median sulphate, F, P, Cd, Mn, Se and Zn leachate concentrations. Conversely, leachates from the VO and SE units show median F and Se levels which variably exceed AEMP guidelines.

The results for connate water SFE tests are shown in Table 4-10 and select parameters are plotted against results produced using DI water in Figure 4-7. The connate water is characterized by near neutral pH (7.5), high Cl (36,000 mg/L) and Na (15,100 mg/L) concentrations and detectable levels of trace elements including As, Ba, Cd, Cr, Mn, Mo and Se (Table 4-10). The SFE leachate chemistry show that pH values are slightly lower and more constrained in connate water tests (pH 7.1 to 7.5) relative to the deionized water tests. This result is likely related to connate water being a more strongly buffered solution compared to DI water, limiting the impact that exposure to crushed mine rock samples will have on solution pH. The connate water SFE tests also produces a greater number or exceedances compared to the DI water SFE tests. Median concentrations which exceed AEMP guidelines, which do not exceed guidelines in initial connate water, include As, Mn, Co, Cu, Ni, P and Zn.

Comparison of deionized and connate water SFE results show that tests using connate water consistently produce elevated concentrations relative to DI water for Ba, Co, Cu, Ni and Zn (Figure 4-7). The elevated concentrations observed in connate SFE tests are likely related to cation exchange and the lower pH range of leachate solutions. The impact of connate water on As concentrations is muted compared to other parameters shown in Figure 4-7, with several DI water tests actually producing higher As concentrations compared to connate water tests. This is likely related to aqueous speciation of As. Arsenic forms an oxyanion in solution, and unlike other metal cations (*e.g.*, Ba, Co, Cu, Ni and Zn), the solubility of As tends to decrease with decreasing pH. Therefore, the lower pH produced in connate water SFE tests likely inhibited As release relative to the more alkaline pH conditions produced in the DI water based SFE tests.

**Table 4-7:**
**Summary of Metal and Diamond Mining Effluent Regulations (MDMER) and Aquatic Effects Monitoring Program (AEMP) Water Quality Guidelines**

| Parameter | Unit | MDMER | AEMP |
|---|---|---|---|
| TDS | mg/L | | 1000 |
| $NH_3$-N | mg/L | 37 | 2.68 |
| $NO_3$-N | mg/L | | 2.93 |
| $NO_2$-N | mg/L | | 0.06 |
| Cl | mg/L | | 120 |
| F | mg/L | | 0.12 |
| $SO_4$ | mg/L | | 128 |
| T-CN | mg/L | 0.5 | |
| T-Ag | mg/L | | 0.00025 |
| T-Al | mg/L | | 0.1 |
| T-As | mg/L | 0.1 | 0.025 |
| T-B | mg/L | | 1.5 |
| T-Ba | mg/L | | 1 |
| T-Cd | mg/L | | 0.000042 |
| T-Co | mg/L | | 0.00078 |
| T-Cr | mg/L | | 0.005 |
| T-Cu | mg/L | 0.1 | 0.002 |
| T-Fe | mg/L | | 1.06 |
| T-Hg | mg/L | | 0.000026 |
| D-Mn | mg/L | | 0.21 |
| T-Mo | mg/L | | 0.073 |
| T-Ni | mg/L | 0.25 | 0.025 |
| T-P | mg/L | | 0.01 |
| D-Pb | mg/L | | 0.00331 |
| T-Sb | mg/L | | 0.009 |
| T-Se | mg/L | | 0.001 |
| D-Sr | mg/L | | 2.5 |
| T-Tl | mg/L | | 0.0008 |
| T-U | mg/L | | 0.015 |
| T-V | mg/L | | 0.12 |
| D-Zn | mg/L | | 0.0051 |

**Notes**:
AEMP benchmark for metals apply to the total fraction. In the case of Pb, Mn, Sr, and Zn, the freshwater aquatic life guidelines derived for the dissolved fraction have been adopted as the AEMP benchmark.
AEMP benchmarks for total Cd, Cu and Ni and dissolved Zn are derived from long-term Canadian Council of Ministers of the Environment (CCME, 2007) Freshwater Quality Guidelines for Protection of Aquatic Life. Guidelines for these parameters are hardness dependent and were calculated using median concentrations from monitoring data collected in 1997 to 2020 from Meliadine Lake monitoring stations (hardness = 20 mg $CaCO_3$/L; pH = 7.5; DOC = 2 mg/L).
The sulphate guideline is hardness dependent- 128 mg/L corresponds to a median hardness < 30 mg $CaCO_3$/L in Meliadine Lake.
The ammonia AEMP benchmark is derived from CCME guidelines and assumes a temperature of 10°C and pH 7.5 (median value in Meliadine Lake).

**Table 4-8:**
**Median Shake Flask Extraction Results for Open Pit Waste Rock by Deposit and Lithology**

| Parameter | pH | Cl | F | $SO_4$ | Al | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Discovery (Medians)** | | | | | | | | | | | | | | | | | |
| *GB (n=9)* | 8.3 | 0.8 | *ND* | 2.1 | 1.4 | 0.0008 | 0.0078 | <0.000003 | <0.0005 | 0.00020 | <0.0005 | 0.00013 | 0.0055 | 0.0004 | *ND* | <0.001 | <0.001 |
| *IF (n=31)* | 7.8 | 1 | 0.06 | 2.2 | 0.47 | 0.0006 | 0.0044 | <0.000003 | <0.0005 | 0.000031 | <0.0005 | 0.00007 | 0.0010 | <0.0001 | <0.003 | <0.001 | <0.001 |
| *SE (n=50)* | 8.4 | 0.9 | 0.73 | 2.4 | 1.5 | 0.0007 | 0.059 | <0.000003 | 0.00075 | 0.00015 | <0.0005 | 0.00018 | 0.0024 | 0.0007 | 0.0045 | <0.001 | <0.001 |
| *TIRFM (n=3)* | 7.9 | 1.2 | *ND* | 1.6 | 0.67 | 0.0008 | 0.030 | <0.000003 | <0.0005 | 0.000044 | <0.0005 | 0.00012 | 0.0012 | 0.0003 | *ND* | <0.001 | <0.001 |
| **F Zone (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=7)* | 8.0 | 2.4 | 0.06 | 5.2 | 0.01 | 0.0026 | 0.0026 | <0.000003 | <0.0005 | 0.000091 | <0.0005 | 0.00006 | 0.092 | 0.0003 | 0.025 | <0.001 | <0.001 |
| *VO (n=64)* | 8.3 | 5.45 | 0.09 | 1.8 | 0.73 | 0.0022 | 0.0042 | <0.000003 | <0.0005 | 0.000024 | <0.0005 | <0.00002 | 0.0008 | <0.0001 | 0.004 | <0.001 | <0.001 |
| **Pump (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=6)* | 8.1 | 3.85 | 0.12 | 7.7 | 0.035 | 0.0009 | 0.0015 | <0.000003 | <0.0005 | 0.00011 | <0.0005 | 0.00006 | 0.062 | 0.00095 | 0.0095 | <0.001 | <0.001 |
| *VO (n=17)* | 8.1 | 0.8 | 0.07 | 1.4 | 0.63 | 0.0034 | 0.0068 | <0.000003 | <0.0005 | 0.000018 | <0.0005 | 0.00006 | 0.0013 | 0.0002 | 0.0045 | <0.001 | <0.001 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | | |
| *GB (n=4)* | 8.7 | 0.85 | *ND* | 1.6 | 0.85 | 0.0042 | 0.0081 | <0.000003 | <0.0005 | 0.000027 | <0.0005 | 0.00009 | 0.0006 | 0.0002 | *ND* | <0.001 | <0.001 |
| *IF (n=3)* | 8.2 | 7 | 0.095 | 2.0 | 0.038 | 0.0011 | 0.0039 | <0.000003 | 0.00009 | 0.000006 | 0.0002 | 0.00001 | 0.0051 | 0.0004 | 0.089 | 0.00015 | 0.002 |
| *SE (n=93)* | 8.2 | 1 | *ND* | 2.8 | 0.90 | 0.0038 | 0.043 | <0.000003 | <0.0005 | 0.00004 | <0.0005 | 0.00006 | 0.0009 | 0.0003 | *ND* | <0.001 | <0.001 |
| *TIRFM (n=5)* | 8.2 | 1 | *ND* | 2.3 | 0.87 | 0.004 | 0.035 | <0.000003 | <0.0005 | 0.000039 | <0.0005 | 0.00007 | 0.0008 | 0.0002 | *ND* | <0.001 | 0.005 |
| *UOFM (n=9)* | 8.2 | 1.3 | *ND* | 2.2 | 0.81 | 0.0019 | 0.020 | <0.000003 | <0.0005 | 0.000043 | <0.0005 | 0.00004 | 0.0017 | 0.0003 | *ND* | <0.001 | <0.001 |
| *VO (n=13)* | 8.2 | 1 | *ND* | 1.5 | 0.69 | 0.0017 | 0.013 | <0.000003 | <0.0005 | 0.000048 | <0.0005 | 0.00004 | 0.0035 | 0.0004 | *ND* | <0.001 | <0.001 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | | |
| GB (n=1) | 8.3 | 0.7 | *ND* | 1.1 | 0.91 | 0.0043 | 0.0079 | <0.000003 | <0.0005 | 0.000012 | <0.0005 | 0.00008 | 0.0004 | <0.0001 | *ND* | <0.001 | <0.001 |
| *IF (n=1)* | 7.7 | 12 | 0.06 | 237 | 0.005 | 0.0009 | 0.0005 | 0.00016 | 0.00008 | 0.000089 | 0.0006 | 0.00006 | 0.13 | <0.0001 | <0.003 | 0.002 | 0.019 |
| *UV (n=4)* | 7.9 | 2.7 | *ND* | 1.1 | 0.25 | 0.0026 | 0.069 | <0.000003 | <0.0005 | 0.000063 | <0.0005 | 0.00006 | 0.00061 | 0.0003 | *ND* | <0.001 | <0.001 |
| *VO (n=43)* | 8.1 | 2.1 | 0.26 | 0.9 | 0.58 | 0.0027 | 0.0042 | <0.000003 | <0.0005 | 0.000027 | <0.0005 | 0.00007 | 0.0011 | <0.0001 | <0.003 | <0.001 | <0.001 |
| **Wesmeg North (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=1)* | 8.1 | 3 | 0.08 | 149 | 0.024 | 0.0009 | 0.011 | 0.000008 | 0.00018 | 0.00018 | 0.0002 | <0.00002 | 0.047 | 0.0012 | <0.003 | 0.0013 | 0.002 |
| *VO (n=3)* | 8.4 | 6 | 0.06 | 12 | 0.14 | 0.0016 | 0.022 | <0.000003 | 0.0001 | 0.00011 | 0.0002 | 0.00001 | 0.0052 | 0.0011 | <0.003 | 0.00047 | 0.002 |

**Notes**:
Shaded values indicate concentrations that exceed AEMP benchmark shown in Table 4-7.
ND-no data

## Table 4-9:
## Median Shake Flask Extraction Results for Underground Waste Rock by Deposit and Lithology

| Parameter | pH | Cl | F | $SO_4$ | Al | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | | |
| *GB (n=2)* | 8.1 | 2.4 | *ND* | 0.8 | 0.94 | 0.0025 | 0.0021 | <0.000003 | <0.0005 | 0.000028 | <0.0005 | 0.000035 | 0.0008 | <0.0001 | *ND* | <0.001 | <0.001 |
| *IF (n=3)* | 8.1 | 1.8 | 0.17 | 2.6 | 0.32 | 0.0012 | 0.006 | <0.000003 | <0.0005 | 0.000076 | <0.0005 | <0.00002 | 0.0020 | 0.0002 | <0.003 | <0.001 | 0.017 |
| *SE (n=6)* | 8.2 | 1.3 | *ND* | 1.2 | 0.98 | 0.0043 | 0.032 | <0.000003 | <0.0005 | 0.000044 | <0.0005 | 0.00005 | 0.0007 | <0.0001 | *ND* | <0.001 | <0.001 |
| *TIRFM (n=8)* | 8.2 | 1.7 | *ND* | 2.3 | 0.85 | 0.0044 | 0.025 | <0.000003 | <0.0005 | 0.00006 | <0.0005 | 0.00006 | 0.0007 | 0.0002 | *ND* | <0.001 | 0.0015 |
| *UOFM (n=2)* | 8.3 | 1 | 0.11 | 3.5 | 0.31 | 0.0013 | 0.013 | 0.0000035 | 0.00013 | 0.000012 | 0.00025 | 0.000015 | 0.0022 | <0.0001 | 0.008 | 0.00016 | 0.002 |
| *VO (n=12)* | 8.0 | 0.8 | *NA* | 0.95 | 0.63 | 0.0011 | 0.0016 | <0.000003 | <0.0005 | 0.000029 | <0.0005 | 0.00003 | 0.0026 | 0.0002 | *ND* | <0.001 | <0.001 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=2)* | 7.8 | 4.5 | 0.06 | 219 | 0.003 | 0.0009 | 0.0036 | 0.000031 | 0.00008 | 0.000085 | 0.00075 | <0.00002 | 0.32 | 0.0002 | <0.003 | 0.0011 | 0.0045 |
| *VO (n=1)* | 8.1 | 23 | 0.07 | 6.0 | 0.13 | 0.0012 | 0.021 | <0.000003 | 0.00008 | 0.000072 | 0.0002 | 0.00007 | 0.0048 | 0.0006 | <0.003 | 0.00074 | 0.002 |
| **Wesmeg North (Medians)** | | | | | | | | | | | | | | | | | |
| *VO (n=1)* | 8.4 | 10 | 0.06 | 9.0 | 0.16 | 0.0016 | 0.037 | <0.000003 | 0.00008 | 0.000079 | 0.0002 | 0.00001 | 0.0053 | 0.0007 | 0.004 | 0.0014 | 0.002 |

**Notes**:
Shaded values indicate concentrations that exceed AEMP benchmark shown in Table 4-7
ND-no data

## Table 4-10:
## Shake Flask Extraction Results for Waste Rock using Connate Water by Deposit and Lithology

| Parameter | pH | Cl | F | $SO_4$ | Al | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Connate Water (Influent)** | | | | | | | | | | | | | | | | | |
| *Value* | 7.7 | 36,000 | 0.08 | 2,553 | <0.001 | <0.0009 | 0.017 | 0.0012 | 0.015 | 0.0001 | <0.0002 | <0.00001 | 0.074 | <0.0001 | <0.003 | 0.0019 | <0.002 |
| **Tiriganiaq Underground** | | | | | | | | | | | | | | | | | |
| ***Iron Formation (IF; n=1)*** | | | | | | | | | | | | | | | | | |
| *Value* | 7.5 | 31,000 | 0.14 | 2,766 | 0.012 | 0.0047 | 0.046 | 0.0013 | 0.0013 | 0.00919 | 0.0018 | 0.00093 | 0.18 | 0.023 | <0.003 | 0.00087 | 0.004 |
| ***Upper Oxide Formation (UOFM; n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.4 | 36,000 | 0.10 | 2,683 | 0.005 | <0.0009 | 0.019 | 0.0013 | 0.011 | 0.002 | <0.0002 | <0.00001 | 0.15 | 0.0026 | <0.003 | 0.0006 | 0.003 |
| *Max* | 7.5 | 37,000 | 0.14 | 3,124 | 0.02 | 0.0032 | 0.02 | 0.0016 | 0.013 | 0.0024 | 0.069 | <0.00001 | 0.15 | 0.086 | 0.1 | 0.0023 | 0.15 |
| **Wesmeg Underground** | | | | | | | | | | | | | | | | | |
| ***Iron Formation (IF; n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.1 | 34,000 | 0.10 | 2,698 | <0.001 | 0.0012 | 0.018 | 0.001 | 0.0053 | 0.0007 | 0.0089 | <0.00001 | 0.58 | 0.011 | <0.003 | 0.0013 | 0.026 |
| *Max* | 7.4 | 37,000 | 0.11 | 2,867 | 0.018 | 0.012 | 0.023 | 0.0059 | 0.0096 | 0.0009 | 0.014 | 0.0004 | 1.5 | 0.055 | <0.003 | 0.0021 | 0.13 |
| ***Mafic Volcanics (VO; n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.4 | 34,000 | 0.08 | 2,659 | <0.001 | 0.0025 | 0.032 | 0.0013 | 0.00215 | 0.0029 | 0.005 | <0.00001 | 0.20 | 0.016 | <0.003 | 0.0019 | 0.006 |
| *Max* | 7.5 | 36,000 | 0.08 | 2,806 | 0.013 | 0.012 | 0.032 | 0.0016 | 0.019 | 0.0059 | 0.019 | 0.00013 | 0.34 | 0.036 | <0.003 | 0.0028 | 0.056 |

**Notes**:
Shaded values indicate concentrations that exceed AEMP benchmark shown in Table 4-7
ND-no data

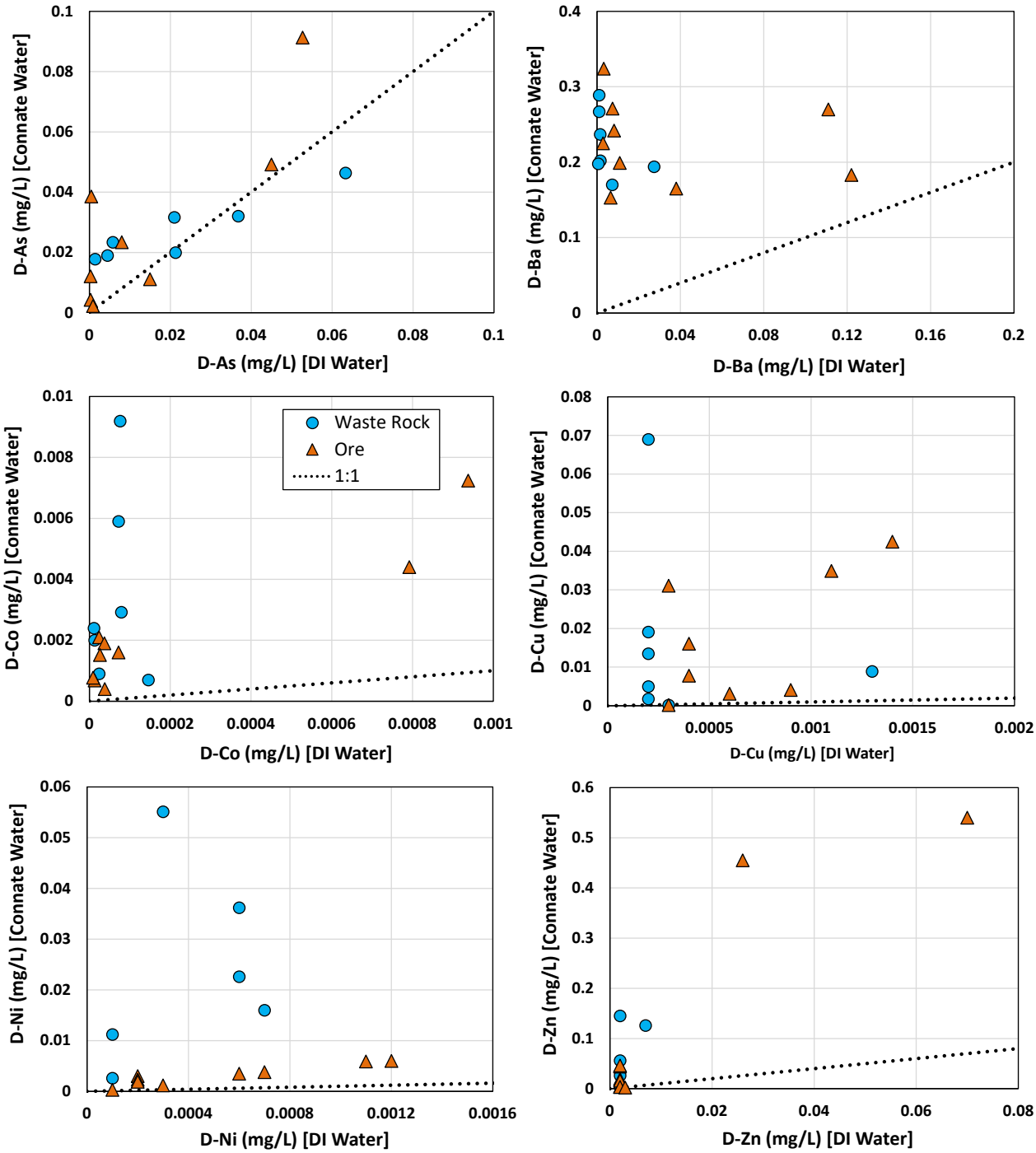



**Figure 4-7: Leachate concentrations for dissolved As, Ba, Co, Cu, Ni and Zn for waste rock and ore SFEs conducted with connate versus deionized (DI) water.**

Overall, these test results show that infiltration of connate water into mine waste will result in elevated metal leaching potential compared to infiltration of meteoric water. Potential release mechanisms include cation exchange and changes in pH driven by the high TDS and well buffered nature of connate water. The degree to which this will impact metal concentrations will vary depending on the sensitivity of a given parameter to pH and the relative abundance of a parameter on cation exchange sites of freshly exposed mineral surfaces.

### 4.1.7 Kinetic Test Sample Selection and Static Results

A series of supplemental kinetic tests were initiated between October 2020 and January 2021 to measure geochemical weathering rates for material types of particular interest (Discovery and F Zone waste rock). The kinetic tests are designed to inform source term calculations, lag time estimates for onset of ARD, cover material selection, and salinity rinsing under site-specific conditions.

The following sections provide a rationale for the selection of kinetic test materials and a discussion of static test results for the characterization of kinetic test materials. Leachate chemistry results will be presented in 2022, following completion of the kinetic testing program.

*Sample Selection*

A total of eight unsaturated columns have been initiated for waste rock from dominant lithologies (*i.e.*, GB, IF, SE and VO) sourced from the Discovery and F Zone deposits to assess the ARD/ML potential of stockpiled waste rock with non-PAG, Uncertain and PAG ARD classifications. A description for the selection of drill core and ROM waste rock samples composited for kinetic testing is provided in Section 3.1.2.5 and Table 3-6. Duplicate waste rock samples were initiated with IF and SE tests to examine the influence of connate water versus DI water on mine waste weathering behavior. Kinetic test samples are summarized and described in Table 4-11.

The compositions of kinetic test samples were compared to the range of total S, As, Fe, NPR and NAG pH values measured in the Meliadine Extension database for corresponding rock types in Figure 4-8 and Figure 4-9. These box plots show the distribution of the aforementioned parameters with the results for the kinetic test composite samples superimposed. The solid phase results indicate that the kinetic test materials generally represent moderate total S and As concentrations and low Fe levels, with respect to the larger sample population (Table 4-11). The SE and GB kinetic test materials show slight variability with total S and As levels deviating from the moderate range of percentile values. Overall, ABA parameters for the test materials correspond to moderate to high

estimates for NPR and low NAG pH values with respect to the larger sample population. Based on the solid phase characteristics of the test materials, leachate data compiled from the kinetic tests are inferred to represent a 'best-estimate' of drainage quality with respect to potential acid generation from different lithologies of subaerially stockpiled waste rock for the Meliadine Extension.

**Table 4-11:**
**Waste Rock Kinetic Test Sample Description and Rationale**

| Deposit | Rock Unit | ARD Classification | Kinetic Test ID | Sample Description |
|---|---|---|---|---|
| Discovery | IF | Non-PAG | 06-IF-NPAG | Moderate total-S (55th PCTL) and As (45th PCTL); high NPRs (70th PCTL); low NAG pH (10th PCTL) and Fe (15th PCTL) |
| | | PAG | 02-IF-PAG & 07-IF-PAG-CW | Moderate total-S (50th PCTL), As, Fe and NAG pH (40th PCTL) and NPR (Mod-NP/MAP) (60th PCTL); high NPR (CaNP-adj/MAP) (70th PCTL) |
| | SE | Uncertain | 05-SED-NPAG | Low total-S (30th PCTL), NAG pH (25th PCTL) and Fe (10th PCTL); moderate As (40th PCTL); high NPR (CaNP-adj/MAP) (90th PCTL) and NPR (Mod-NP/MAP) (75th PCTL) |
| | | PAG | 03-SED-PAG & 08-SED-PAG-CW | High total-S (80th PCTL) and NPR (CaNP-adj/MAP) (70th PCTL); moderate As, Fe and NPR (Mod-NP/MAP) (50th PCTL) and NAG pH (35th PCTL) |
| | GB | Non-PAG | 04-GAB-NPAG | Low total-S (30th PCTL) and Fe (20th PCTL); moderate NPR (Mod-NP/MAP) (60th PCTL) and NAG pH (40th PCTL); high NPR (CaNP-adj/MAP) and As (70th PCTL) |
| F Zone | VO | Non-PAG | 09-FZONE-NPAG | Moderate total-S (65th PCTL), As (55th PCTL) and NPRs (40th PCTL); low NAG pH (<5th PCTL) and Fe (10th PCTL) |
| Tiriganiaq | *NA* | Non-PAG | 10-ROM-SR1 | High TDS load (85th PCTL) |
| Tiriganiaq | | Non-PAG | 11-ROM-SR2 | High TDS load (75th PCTL) |

**Notes:**
NA- not applicable
PCTL- percentile
NAG (Net Acid Generation) pH
NPR- Net Potential Ratio
MAP: Total Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 4.1.3.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

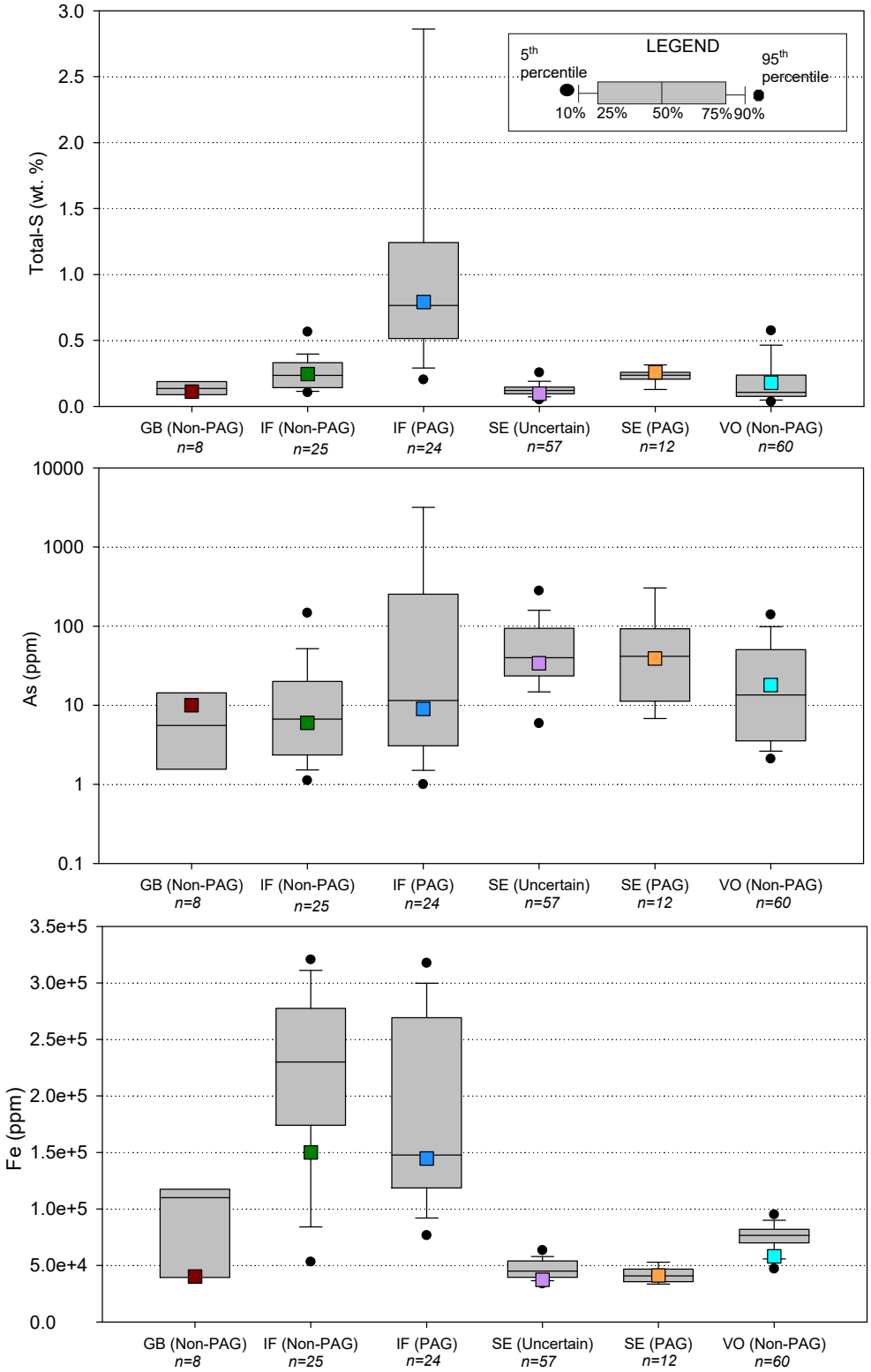



**Figure 4-8: Box plots showing the range of values for total-S, As and Fe for the Meliadine Extension database samples with concentrations for the kinetic test composite samples superimposed.**

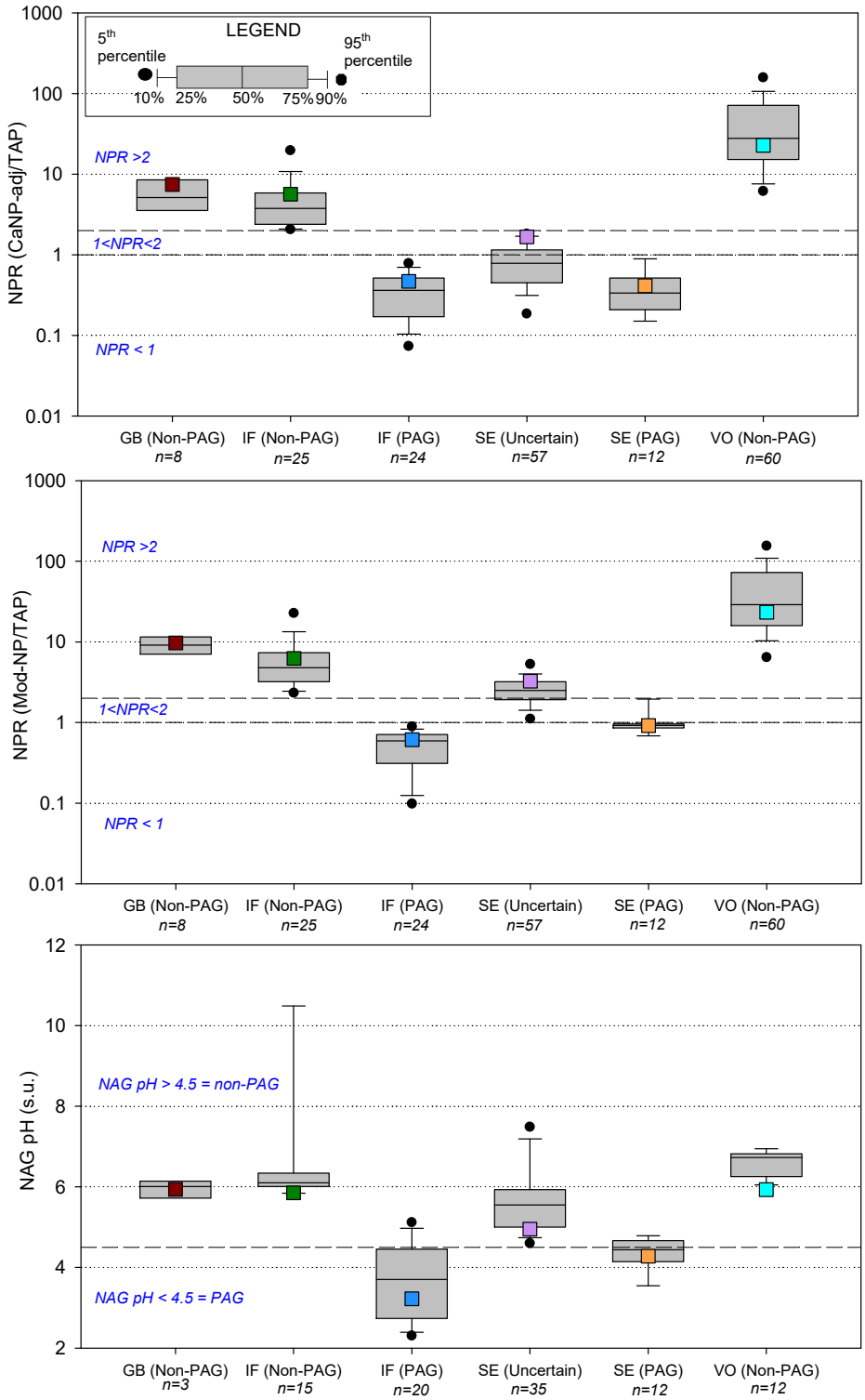



**Figure 4-9: Box plots showing the range of values for NPR (CaNP-adj/MAP), NPR (Mod-NP/MAP), NAG pH for the Meliadine Extension database samples with concentrations for the kinetic test composite samples superimposed.**

*Acid Base Accounting and Solid Phase Elements*

Acid-base accounting and solid phase elemental results for the waste rock kinetic test composite samples are presented in Table 4-12. All composite samples show alkaline paste pH values. Specifically, the IF samples are characterized by lower pH (9.0 to 9.3) while the SE and GB samples show higher pH measurements (9.4 to 10).

Total S concentrations range from 0.10 wt.% to 0.79 wt.% and are highest in the IF and SE PAG samples. Sulphate S is only detected at low levels (<0.05 wt.%) in IF samples, indicating that sulphide is the dominant sulphur species in all kinetic test materials. Overall, NP is greater in non-PAG materials, with the exception of the SE unit which shows a minor difference in NP measurements between the non-PAG and PAG composite samples. NPR values calculated using CaNP-adj and mod-NP were used to derive the ARD classifications per the criteria provided in Section 4.1.3.4. Notably, kinetic test materials for the non-PAG SE column show NPR values which fall within separate classifications for acid generating potential, resulting in a designation of Uncertain with respect to ARD potential. NAG pH results are consistent with the ARD classifications, with only PAG kinetic test samples showing pH values < 4.5.

With respect to solid phase metal content, As and Cu are variably elevated relative to the AUCCC (Rudnick and Gao, 2014) in the SE, GB and VO samples. Specifically, As levels are highest in the SE samples (max of 39 ppm) and comparable in IF, GB and VO samples (6.0 to 18 ppm). Other metal parameters, including Al, Cd, Co, Cr, Cu, Mn, Ni and Zn show highest concentrations in the VO sample. Iron enrichment is evident in the IF samples, with contents up to 4x greater than in samples from other rock units.

Acid base accounting and elemental abundance results for the ROM waste rock column subsamples are presented in Table 4-13. These rock materials are characterized by alkaline paste pHs. Total S contents are variable (0.3 and 1.0 wt.%,) with the sulphur inventory dominated by sulphide S. For both subsamples, CaNP is greater than mod-NP. An estimate for CaNP-adj is not provided as the samples represents a mixed lithological composition. NPR classification based on the mod-NP estimate, indicates that kinetic test materials for ROM-SR1 is within the Uncertain range with regards to ARD potential, while ROM-SR2 materials can be designated as non-PAG. NAG pH for both ROM samples are circumneutral (pH>4.5) which supports the designation that both samples are non-PAG.

Arsenic is enriched in both ROM waste rock subsamples with concentrations measuring 230 and 4,870 ppm in ROM-SR2 and ROM-SR1 materials, respectively. Other metal parameters show variable abundance between the two subsamples but generally do not indicate enrichment relative to the AUCCC.

# Table 4-12: Acid-Base Accounting and Solid Phase Element Results for Waste Rock Kinetic Test Composite Samples

| Deposit | | Discovery | | | | | F Zone |
|---|---|---|---|---|---|---|---|
| Material Type | | IF Waste Rock | | SE Waste Rock | | GB Waste Rock | VO Waste Rock |
| ARD Classification | | Non-PAG | PAG | Uncertain | PAG | Non-PAG | Non-PAG |
| Kinetic Test ID | | 06-IF-NPAG | 02-IF-PAG & 07-IF-PAG-CW | 05-SED-NPAG | 03-SED-PAG & 08-SED-PAG-CW | 04-GAB-NPAG | 09-FZONE-NPAG |
| ***Acid Base Accounting*** | | | | | | | |
| Paste pH | s.u. | 9.3 | 9.0 | 9.9 | 9.7 | 10 | 9.4 |
| Total-S | % | 0.24 | 0.79 | 0.10 | 0.26 | 0.11 | 0.18 |
| Sulphate-S | % | 0.03 | 0.02 | <0.01 | <0.01 | <0.01 | <0.01 |
| Sulphide-S | % | 0.21 | 0.77 | 0.10 | 0.26 | 0.11 | 0.18 |
| MAP | kg $CaCO_3$/t | 7.6 | 25 | 3.0 | 8.1 | 3.5 | 5.6 |
| CaNP | kg $CaCO_3$/t | 43 | 12 | 5.0 | 3.3 | 26 | 127 |
| CaNP-adj | kg $CaCO_3$/t | 43 | 12 | 5.0 | 3.3 | 26 | 127 |
| Modified-NP | kg $CaCO_3$/t | 48 | 15.2 | 9.8 | 7.4 | 34 | 130 |
| NPR (CaNP-adj/MAP) | ratio | 5.6 | 0.47 | 1.7 | 0.41 | 7.4 | 23 |
| NPR (Mod-NP/MAP) | ratio | 6.2 | 0.61 | 3.3 | 0.92 | 9.7 | 23 |
| NAG pH | s.u. | 5.9 | 3.2 | 5.0 | 4.3 | 5.9 | 5.9 |
| ***Solid Phase Elements by Aqua Regia*** | | | | | | | |
| Ag | ppm | 0.050 | 0.080 | 0.090 | 0.13 | 0.060 | 0.09 |
| Al | ppm | 7,400 | 13,000 | 20,700 | 20,600 | 15,800 | 36,600 |
| As | ppm | 6.0 | 9.0 | 34 | 39 | 10 | 18 |
| Bi | ppm | 0.25 | 0.21 | 0.20 | 0.17 | 0.020 | 0.030 |
| Cd | ppm | 0.10 | 0.060 | 0.060 | 0.090 | 0.050 | 0.17 |
| Co | ppm | 2.0 | 2.9 | 15 | 21 | 27 | 48 |
| Cr | ppm | 46 | 55 | 97 | 124 | 42 | 206 |
| Cu | ppm | 11 | 23 | 30 | 52 | 59 | 96 |
| Fe | ppm | >150,000 | 144,700 | 37,400 | 41,100 | 40,200 | 58,000 |
| Mn | ppm | 115 | 84 | 269 | 266 | 357 | 1,118 |
| Mo | ppm | 0.85 | 1.0 | 1.2 | 1.4 | 1.0 | 0.40 |
| Ni | ppm | 4.0 | 9.0 | 47 | 67 | 42 | 83 |
| Pb | ppm | 4.0 | 6.0 | 2.0 | 8.5 | 2.5 | 2.0 |
| Sb | ppm | 0.10 | 0.18 | 0.080 | 0.090 | 0.13 | 0.14 |
| Se | ppm | <1 | <1 | <1 | <1 | <1 | <1 |
| U | ppm | 0.31 | 0.94 | 1.2 | 1.5 | 0.72 | 0.070 |
| Zn | ppm | 15 | 20 | 60 | 82 | 63 | 100 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH

## Table 4-13: Acid-Base Accounting and Solid Phase Element Results for ROM Waste Rock Kinetic Test Composite Samples

| | Deposit | Tiriganiaq | |
|---|---|---|---|
| | Material Type | Run of Mine Waste Rock | |
| | Kinetic Test ID | 10-ROM-SR1 | 11-ROM-SR2 |
| ***Salinity Rinsing Test*** | | | |
| Total TDS | mg/kg | 960 | 780 |
| ***Acid Base Accounting*** | | | |
| Paste pH | s.u. | 8.3 | 8.5 |
| Total-S | % | 1.0 | 0.3 |
| Sulphate-S | % | 0.01 | <0.01 |
| Sulphide-S | % | 1.0 | 0.3 |
| MAP | kg $CaCO_3$/t | 32 | 9 |
| CaNP | kg $CaCO_3$/t | 73 | 188 |
| Modified-NP | kg $CaCO_3$/t | 61 | 173 |
| NPR (Mod-NP/MAP) | ratio | 1.9 | 18 |
| NAG pH | s.u. | 6.1 | 6.5 |
| ***Solid Phase Elements by Aqua Regia*** | | | |
| Ag | ppm | 0.23 | 0.10 |
| Al | ppm | 1.9 | 2.6 |
| As | ppm | 4,870 | 223 |
| Bi | ppm | 0.45 | 0.13 |
| Cd | ppm | 0.14 | 0.12 |
| Co | ppm | 8.6 | 37 |
| Cr | ppm | 81 | 131 |
| Cu | ppm | 48 | 103 |
| Fe | ppm | 112,000 | 63,600 |
| Mn | ppm | 314 | 1238 |
| Mo | ppm | 5.8 | 1.1 |
| Ni | ppm | 28 | 92 |
| Pb | ppm | 80 | 14 |
| Sb | ppm | 0.99 | 0.20 |
| Se | ppm | <1 | <1 |
| U | ppm | 0.52 | 0.22 |
| Zn | ppm | 65 | 79 |

**Notes:**
Sulfide-S is calculated by difference (Total-S wt.% – Sulfate-S wt.%) when the Sulfate-S concentration is greater than the detection limit
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj could not be calculated for these materials because the lithologic compositions of the subsamples are not known.
MAP: Total Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NAG (Net Acid Generation) pH

*Salinity Rinse Test Results*

Mean TDS loads estimated for composite samples used in the ROM salinity rinsing columns are 960 mg/kg (10-ROM-SR1) and 780 mg/kg (11-ROM-SR2) representing materials from the Low Grade Ore stockpile and Ore Pad, respectively (Table 4-13). TDS loads for these samples are within the 75$^{th}$ to 85$^{th}$ percentiles calculated from the larger dataset for mine rock salinity rinsing tests, as described in Section 4.1.8.

*Particle Size Distribution*

The rate of dissolution increases as particle surface area increases; therefore, it is important to know the relative volume of fine particles when discussing the bulk samples as a whole (Jambor, 2002). The particle size distributions for all waste rock kinetic test samples are presented in Table 4-14 and Table 4-15. For the ROM test samples, the results represent the distribution of weighted mean grain sizes. The results indicate that all test samples are predominantly composed of particles measuring >0.425 mm (>80%). For test samples representing specific waste rock lithologies, particles with grain sizes ranging from 4 to 6.3 mm comprise >30% of the sample. Similarly, for the ROM test samples particles measuring >9.5 mm account for >25% of the sample.

**Table 4-14:**
**Mean Particle Size Distribution for Waste Rock Kinetic Test Composite Samples**

| Deposit | | Discovery | | | | | F Zone |
|---|---|---|---|---|---|---|---|
| Material Type | | IF Waste Rock | | SE Waste Rock | | GB Waste Rock | VO Waste Rock |
| ARD Classification | | Non-PAG | PAG | Uncertain | PAG | Non-PAG | Non-PAG |
| Kinetic Test ID | | 06-IF-NPAG | 02-IF-PAG & 07-IF-PAG-CW | 05-SED-NPAG | 03-SED-PAG & 08-SED-PAG-CW | 04-GAB-NPAG | 09-FZONE-NPAG |
| Sieve Designation | Aperture (mm) | Weight Retained (%) | | | | | |
| +3/8" | 9.5 | 1% | 1% | 0% | 1% | 0% | 1% |
| -3/8" + 1/4" | 6.3 | 8% | 11% | 12% | 12% | 7% | 12% |
| -1/4" + 5 | 4 | 31% | 33% | 36% | 33% | 32% | 36% |
| 5 + 10 | 1.7 | 26% | 23% | 23% | 22% | 24% | 22% |
| 25 | 0.425 | 17% | 16% | 17% | 19% | 20% | 17% |
| 52 | 0.15 | 5% | 6% | 4% | 4% | 6% | 4% |
| 70 | 0.053 | 7% | 6% | 3% | 3% | 5% | 3% |
| -270 | -0.053 | 6% | 5% | 6% | 5% | 6% | 5% |
| | *Total* | *100%* | *100%* | *100%* | *100%* | *100%* | *100%* |

**Table 4-15:**
**Weighted Mean Particle Size Distribution for ROM Waste Rock Kinetic Test Composite Samples**

| | **Deposit** | **Tiriganiaq** | |
|---|---|---|---|
| | **Material Type** | **Run of Mine Waste Rock** | |
| | **Kinetic Test ID** | **10-ROM-SR1** | **11-ROM-SR2** |
| **Sieve Designation** | **Aperture (mm)** | **Weight Retained (%)** | |
| +3/8" | 9.500 | 33% | 27% |
| -3/8" + 1/4" | 6.300 | 15% | 13% |
| -1/4" + 5 | 4.000 | 11% | 10% |
| 5 + 10 | 1.700 | 12% | 12% |
| -10 + 35 | 0.425 | 14% | 14% |
| -48 + 100 | 0.150 | 4.4% | 6% |
| -200 + 270 | 0.053 | 3.4% | 6% |
| -270 | -0.053 | 7.0% | 11% |
| | *Total* | 100% | 100% |

### 4.1.8 Salinity Rinsing Tests

Salinity rinsing tests were conducted on ROM waste rock collected from stockpiles, pads and dikes to evaluate the persistence of connate water in underground mine rock. Salinity in underground mine rock is associated with connate water, which forms the initial pore water in mine rock brough to the surface. Mine rock samples were collected in the fall of 2020 and January 2021 representing material deposited from 2016 to 2020 (Figure 4-11). Test pit samples were collected from 0 to 4 m depth, the location of test pits are shown on Figure 4-10 and sample collection details are provided in section 3.1.2.3.

The following discussion uses the terms TDS and salinity interchangeably. While the definition of these terms is not identical, they are essentially equivalent in the current context where Na and Cl are the dominant ions in connate water.

The salinity rinsing test results are screened against the theoretical maximum TDS of underground mine rock assuming an initial connate water content of 2%. Assuming average connate water TDS of 55 ppt, this results in a theoretical maximum TDS of 1100 mg/kg in mine rock when it is initially excavated. In reality, the pore water content will vary depending on how wet mine conditions were when the mine rock was initially excavated, and the particle size distribution of the mine rock itself (*e.g.*, finer grain material will hold more water). Furthermore, screening rinsing samples to <1/4 inch particle size before rinsing tests will introduce a bias, as finer grain size fractions will contain greater moisture content compared to the bulk material. Nonetheless, the 1100 mg/kg provides a useful benchmark for salinity content measured in salinity rinsing tests.

## LEGEND

- Saline Mine Waste Sample

**Coordinate System:** *NAD 1983 UTM Zone 15N*
**Projection:** *Transverse Mercator*
**Datum:** *North American 1983*
**Units:** *Meter*

**1:10,000**

0 200 400 Meters

| | |
|---|---|
| **DATE SAVED:** | Nov 24, 2021 |
| **DRAWN BY:** | GM |
| **REVIEWED:** | GO |
| **VERSION:** | 1 |

*CLIENT:*

AGNICO EAGLE

LORAX ENVIRONMENTAL

*PROJECT:*

**Meliadine Phase 2 Geochemical Characterization**

*TITLE:*

Saline Waste Rock Sample Locations

*PROJECT #:* A574-2 *FIGURE:* 4-10

*P:\@Drafting\Meliadine\Drafting Figures\MXD\Geochem Characterization\Fig 4-9_Saline WR Sampling Locations.mxd*

Salinity rinsing results show that TDS loads ranging from 50 to 2,600 mg/kg in underground mine rock (Table 4-16). The residual TDS loads show a relationship with both age of mine rock and depth of sample collection (Figure 4-12). The range of TDS values is plotted against year of mine rock excavation for shallow test pit samples (<30 cm) in (Figure 4-11). The highest TDS values are observed in 2020 and 2019 mine rock, which show maximum values of 1610 mg/kg and 670 mg/kg, respectively. These values are not dissimilar from the maximum theoretical TDS load of 1,100 mg/kg. The TDS load appears to have been largely rinsed from older samples of mine rock, with samples deposited from 2016 to 2018 showing ~100 mg/kg TDS (Figure 4-11). This indicates that 90% of the salinity has been removed from surficial waste rock after 2 to 4 years of exposure.

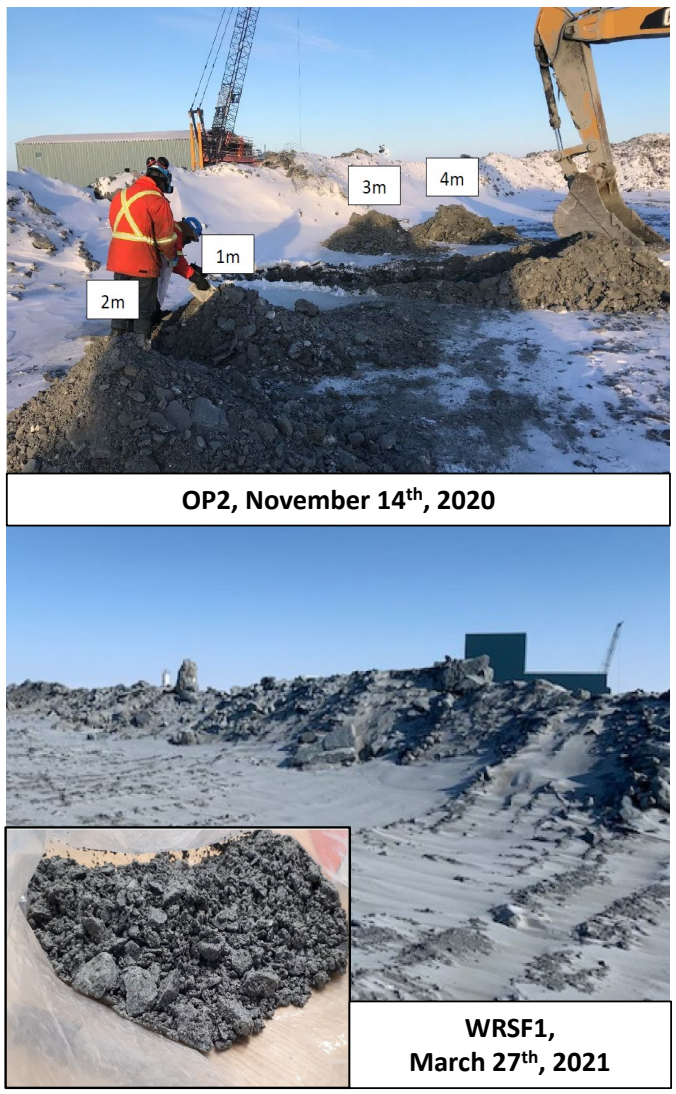



**Figure 4-11: Mine rock sample collection at OP2 (top) and WRSF1 (bottom) in November 2020 and March 2021, respectively.**

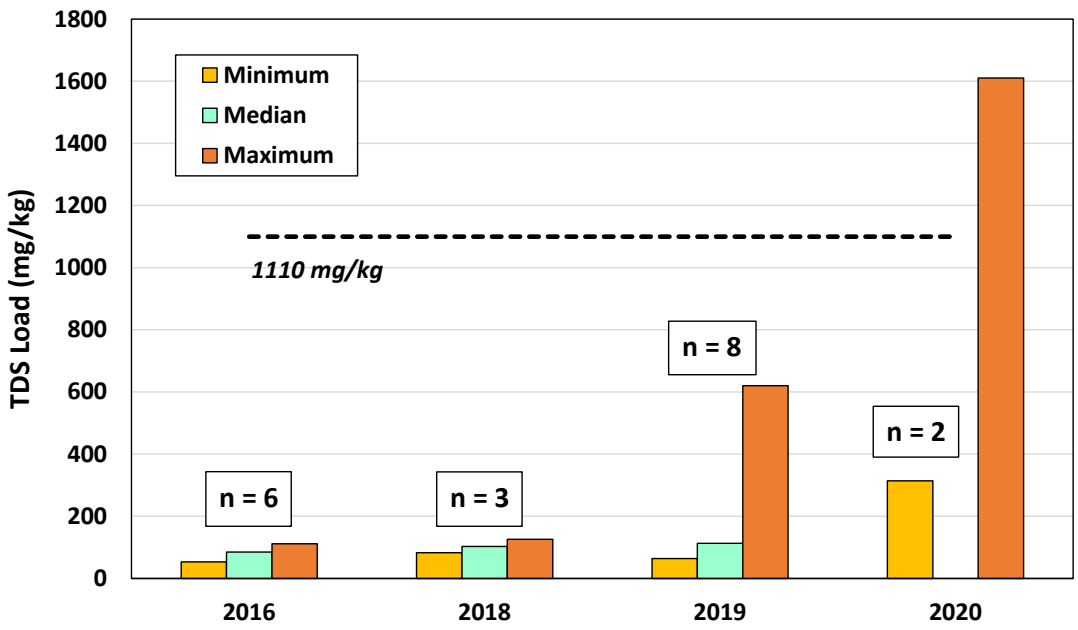



**Figure 4-12: Range of rinsing test TDS results for shallow test pits (≤ 30 cm depth) grouped by age of underground mine rock. Dotted line shows theoretical initial TDS load assuming underground mine rock contained 2% pore water with 55 ppt TDS.**

Depth profiles were collected at two ore pad locations representing 2020 and 2019 mine rock. The depth profile in 2019 mine rock collected a sample at 30cm depth and a sample at 1 m depth (Figure 4-13). The shallow sample showed similar TDS compared to other shallow test pit samples of similar age (Table 4-16). The deeper sample showed significantly higher TDS value (1170 mg/kg), similar to the theoretical TDS value of underground mine rock (1100 mg/kg). A deeper profile extending to 4 m was collected at ore pad 2. These samples produced the highest TDS loads observed, ranging from 2021 mg/kg to 2648 mg/kg, with peak values being observed at 2m depth. This range of values far exceeds the 1100 mg/kg estimated assuming 2% connate water in underground mine rock. Considering the short exposure time of mine rock in Ore Pad 2, minimal rinsing has occurred and the TDS profile likely reflects the initial salinity content of freshly deposited underground mine rock.

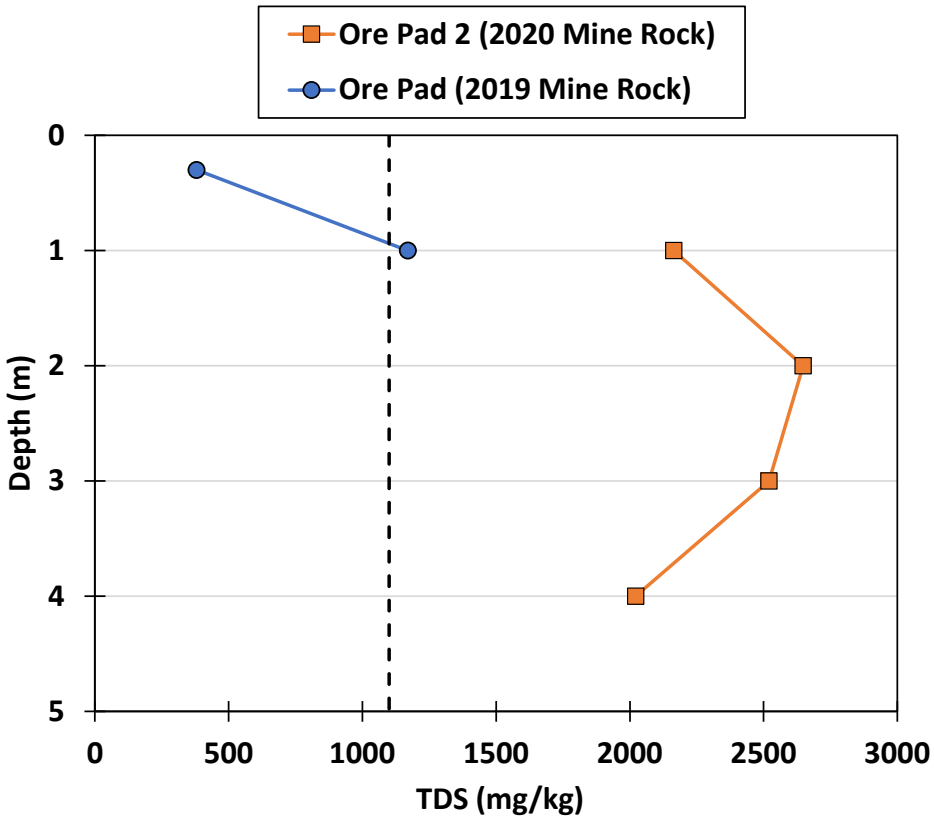



**Figure 4-13: Profiles of salinity rinsing test results for test pit profiles collected at two locations. Dotted line shows theoretical initial TDS load assuming underground mine rock contained 2% pore water with 55 ppt TDS.**

**Table 4-16:**
**Minimum and maximum TDS Loads in Mine Rock Samples by Sampling Location and Year of Material Deposition**

| Sampling Location | Year of Material Deposition | Number of Samples (n) | Depth of Sample Collection (m) | TDS Load (mg/kg) | |
|---|---|---|---|---|---|
| | | | | Min | Max |
| D-P1 | 2016 | 3 | 0.20 | 53 | 107 |
| D-P3 | | 3 | 0.20 | 66 | 111 |
| Church Pad | 2018 | 1 | 0.20 | 103 | |
| Paste Plant Ramp | | 2 | 0.30 | 83 | 126 |
| Berm 1 | 2019 | 2 | 0.20 | 90 | 113 |
| Industrial Pad | | 2 | 0.20 | 96 | 620 |
| TSF | | 2 | 0.30 | 64 | 113 |
| Ore Pad 2 | | 4 | 1.0 to 4.0 | 2,021 | 2,648 |
| Ore Pad | | 2 | 0.30 to 1.0 | 380 | 1,170 |
| Low Grade Ore | 2020 | 2 | 0 (surface) | 314 | 1,610 |

## 4.2 Ore

### 4.2.1 Summary of Previous Work

A total of 28 ore samples were characterized in support of the 2014 FEIS. Characterization consisted of mineralogy by XRD, ABA, NAG pH, SFE and total metal analysis. These results have been screened against the spatial extent of the Meliadine Extension mine workings (Section 3.1.1) and are incorporated into the analysis presented in the following sections.

### 4.2.2 Mineralogy

This section provides an overview of the mineralogical results for ore samples. The results represent 10 ore samples which were submitted for XRD analysis and 2 ore samples submitted for TIMA characterization. Mineralogy of carbonate and sulphide minerals for the major rock units are presented by deposit and location in the open pit or underground mine. All ore samples submitted for mineralogic analysis were from the IF formation, which is the dominant ore lithology. Complete mineralogical characterization results for XRD and TIMA analysis are provided in Appendix C

#### *4.2.2.1 Iron Formation Ore*

Iron formation ore is typically characterized by quartz, +/- plagioclase, +/- grunerite, +/- magnetite, +/- chamosite, +/- clinochlore, +/- biotite, +/- muscovite and carbonate minerals including +/- calcite, +/- ankerite and +/- siderite. Of these, quartz, plagioclase, grunerite, chamosite and magnetite comprise the major rock forming minerals. Actinolite is present in appreciable amounts in the Discovery head samples, and similarly for muscovite in the Wesmeg North sample. Distinctions in IF ore composition relative to waste rock is a greater presence of grunerite and chamosite, a lower abundance of clinochlore, and the absence of cummingtonite.

Carbonate minerals are present at variable abundances (<1 to 28 wt.%) in all samples, consistent with the range measured in IF waste rock (Figure 4-14). Ore samples showing high carbonate mineral content (>20%) were collected from the Pump, Tiriganiaq and Wesmeg deposits. Dominant carbonate minerals present at each deposit are generally in agreement with the corresponding waste rock characterization, described in Section 4.1.2.1.

Sulfide minerals detected in IF ore include pyrite, pyrrhotite and arsenopyrite. Most samples show a mixed composition of sulfide minerals, with abundances ranging from <1 to 15 wt.%. Similar to waste rock characterization, pyrrhotite is detected in most samples while detection of pyrite and arsenopyrite is less frequent. Notably, ore samples

from the Tiriganiaq and Wesmeg deposits show the highest sulphide mineral contents, with comparable levels of arsenopyrite and pyrrhotite (6 to 8 wt.%). This finding is distinct from the characterization of IF waste rock samples, which typically shows much lower arsenopyrite and pyrrhotite content (<1%).

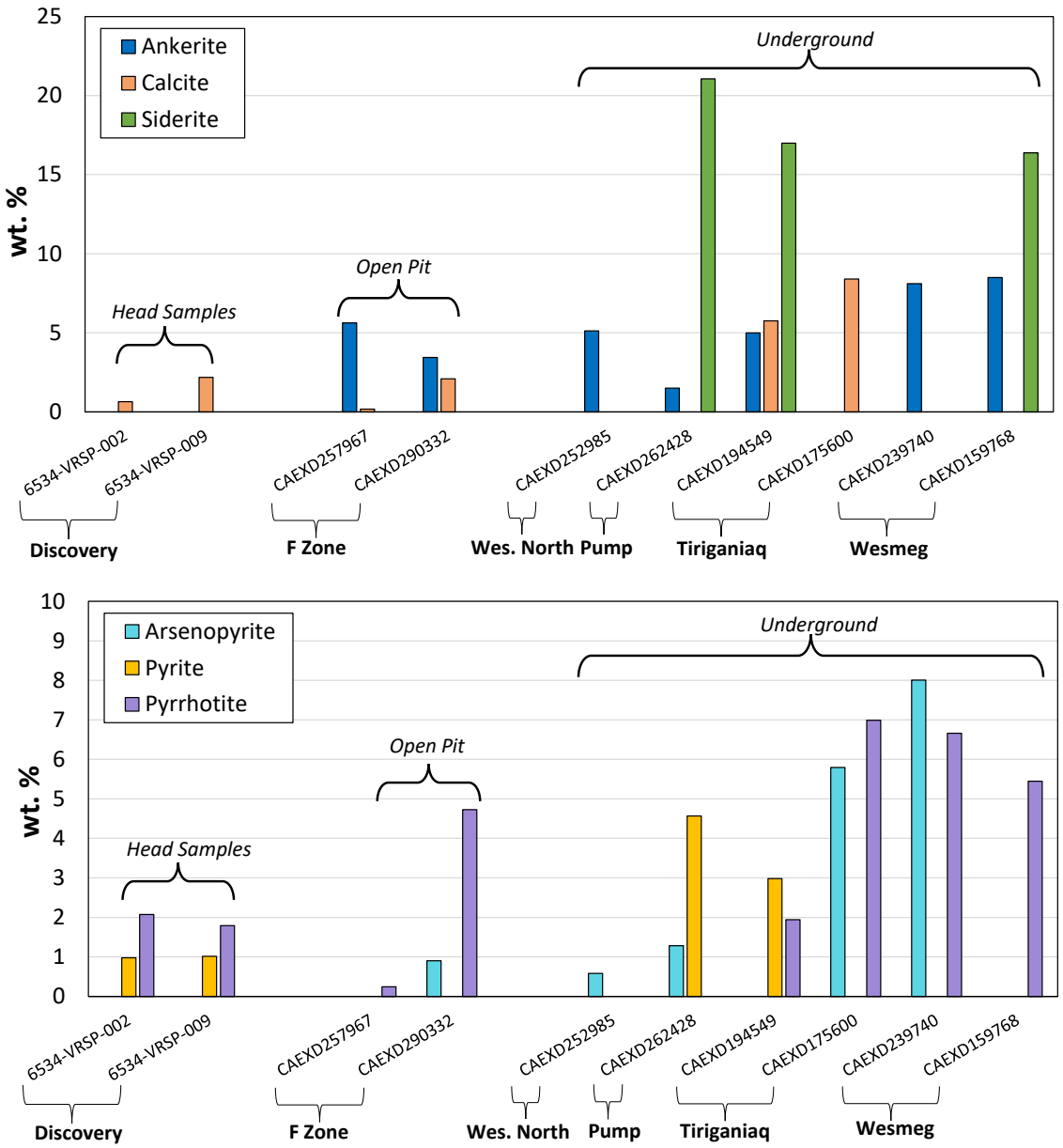



**Figure 4-14: Carbonate (top) and sulphide (bottom) mineralogy for IF ore samples by location in mine workings and deposit.**

#### *4.2.2.2 Trace Metal Occurrence*

The occurrence of elements of interest (As) was investigated in IF ore samples (n=2) using TIMA-X analysis at SGS Burnaby. Results for this analysis are presented in Figure 4-5. Elemental associations for As in ore samples are generally dominated by arsenopyrite similar to waste rock. The complete results of this analysis are provided in Appendix D-4.

### 4.2.3 Acid Base Accounting

This section discusses the ABA results for the Meliadine Extension waste rock lithologies. The Meliadine Extension database includes a total of 113 waste rock samples submitted for ABA testwork (Table 3-2 and Table 3-3). The statistical distributions for ABA characteristics for the major waste rock lithologies are presented by deposit for samples collected from the open pit and underground mine operations in Appendix D-2. In order to compare ABA characteristics between different lithologies, Table 4-17 and Table 4-18 presents the median values for each deposit for samples collected from the open pit and underground, respectively.

In this section, the results for paste pH, sulphur speciation and NP tests and resulting NPR values. The overall ARD classifications are described in Section 5.

#### *4.2.3.1 Paste pH*

Paste pH measurements for ore samples show a similar range as measured for waste rock samples, with median values falling between pH 7.8 and pH 10.0 for the different lithologies. Similar to waste rock samples, median paste pH values are typically lower for underground relative to open pit samples for the same deposit, with the exception of Tiriganiaq and Wesmeg North.

#### *4.2.3.2 Sulphur Speciation*

Total S is detected in most ore samples at concentrations >0.5 wt.% with median levels ranging from 0.02 to 5.2 wt.%. For most deposits, total S levels are higher in underground relative to corresponding open pit samples. By comparison, the inverse is observed for sulphate S measurements which are typically <0.1 wt.%. As a result, closer agreement between total S and sulphide S measurements is observed in underground relative to open pit samples. Consistent with characterization of waste rock samples, for most deposits highest total S and sulphide S levels are measured in ore samples from the IF or mixed IF samples (VO/IF and UOFM/IF). Total S levels are notably lower in Wesmeg North samples from both the open pit and underground (0.33 to 0.42 wt.%). However, this may be a relic of relatively few ore samples (n=3) collected from this deposit.

**Table 4-17:**
**Open Pit Ore Median Acid Base Accounting Results for by Deposit and Lithology**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Mod-NP/MAP |
| **Discovery (Medians)** | | | | | | | | | | | | | | |
| *IF (n=5)* | 8.5 | *ND* | 1.1 | 0.79 | 0.19 | 34 | 27 | 0.28 | 0.17 | 14 | 14 | 21 | 0.4 | 0.6 |
| *SE (n=2)* | 10 | 7.8 | 0.12 | 0.06 | 0.07 | 3.8 | 1.6 | 0.08 | 0.06 | 4.9 | 5.0 | 14 | 1.4 | 4.4 |
| **F Zone (Medians)** | | | | | | | | | | | | | | |
| *IF (n=4)* | 8.7 | 5.6 | 0.79 | 0.57 | 0.24 | 25 | 17 | 1.1 | 0.67 | 56 | 29 | 69 | 3.1 | 5.0 |
| *VO (n=1)* | 9.4 | 6.0 | 0.02 | 0.01 | <0.01 | 0.6 | 0.8 | 3.4 | 3.6 | 296 | 296 | 247 | 473 | 395 |
| **Pump (Medians)** | | | | | | | | | | | | | | |
| *IF (n=4)* | 8.5 | *ND* | 1.9 | 1.7 | 0.18 | 61 | 51 | 2.3 | 1.4 | 114 | 61 | 115 | 1.5 | 2.9 |
| *VO (n=2)* | 8.6 | 7.1 | 1.3 | 1.2 | 0.02 | 39 | 42 | 2.5 | 2.6 | 216 | 216 | 155 | 6.9 | 5.1 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | |
| *IF (n=5)* | 8.3 | 6.1 | 0.78 | 0.77 | <0.01 | 24 | 39 | 1.1 | 1.1 | 90 | 67 | 64 | 2.0 | 2.0 |
| *TIRFM (n=3)* | 9.0 | *ND* | 0.49 | 0.29 | 0.20 | 15 | 8.5 | 1.4 | 0.98 | 80 | 61 | 80 | 4.0 | 5.2 |
| *UOFM (n=3)* | 8.4 | 6.1 | 0.54 | 0.50 | 0.04 | 17 | 19 | 0.71 | 0.70 | 58 | 45 | 40 | 2.8 | 3.0 |
| *VO (n=3)* | 9.0 | *ND* | 0.74 | 0.21 | 0.27 | 23 | 8.8 | 4.2 | 3.7 | 306 | 272 | 273 | 11 | 10 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | |
| *IF (n=1)* | 7.8 | 7.6 | 2.0 | 1.9 | 0.09 | 62 | 54 | 1.6 | 1.5 | 122 | 91 | 70 | 1.5 | 1.1 |
| *VO (n=3)* | 8.8 | 6.8 | 0.23 | 0.22 | <0.01 | 7.2 | 7.0 | 3.0 | 3.0 | 246 | 214 | 181 | 23 | 25 |
| *UV (n=1)* | 9.1 | *ND* | 0.13 | 0.06 | 0.07 | 4.2 | 2.0 | 4.4 | 4.2 | 340 | 302 | 297 | 73 | 71 |
| **Wesmeg North (Medians)** | | | | | | | | | | | | | | |
| *VO (n=3)* | 8.6 | 6.6 | 0.36 | 0.35 | 0.01 | 11 | 13 | 3.7 | 3.8 | 315 | 274 | 252 | 30 | 29 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
ND-no data

**Table 4-18:**
**Underground Ore Median Acid Base Accounting Results for by Deposit and Lithology**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Mod- NP/MAP |
| **Discovery (Medians)** | | | | | | | | | | | | | | |
| IF (n=16) | 8.1 | 2.9 | 1.5 | 1.4 | 0.05 | 46 | 43 | 0.19 | 0.15 | 13 | 12 | 13 | 0.2 | 0.2 |
| **F Zone (Medians)** | | | | | | | | | | | | | | |
| IF (n=5) | 8.0 | 3.3 | 3.7 | 3.7 | 0.04 | 116 | 135 | 1.8 | 1.7 | 145 | 76 | 78 | 0.6 | 0.9 |
| VO (n=3) | 8.4 | 6.5 | 0.23 | 0.21 | 0.02 | 7.1 | 6.5 | 2.4 | 2.4 | 203 | 203 | 160 | 7.7 | 8.9 |
| VO/IF (n=3) | 8.1 | 2.9 | 1.5 | 1.4 | 0.05 | 46 | 43 | 0.19 | 0.15 | 13 | 12 | 13 | 0.2 | 0.2 |
| **Pump (Medians)** | | | | | | | | | | | | | | |
| IF (n=5) | 7.9 | 3.5 | 2.9 | 2.8 | 0.04 | 90 | 117 | 2.4 | 2.2 | 185 | 97 | 83 | 1.1 | 0.7 |
| VO (n=1) | 8.7 | 6.7 | 0.33 | 0.32 | <0.01 | 10 | 11 | 3.1 | 3.3 | 277 | 277 | 189 | 27 | 18 |
| VO/IF (n=3) | 8.1 | 5.9 | 2.8 | 2.8 | 0.04 | 88 | 129 | 1.6 | 1.5 | 121 | 121 | 87 | 1.4 | 1.0 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | |
| IF (n=10) | 8.2 | 6.4 | 2.7 | 2.7 | 0.07 | 85 | 76 | 1.8 | 1.7 | 142 | 106 | 90 | 1.5 | 1.1 |
| SE (n=1) | 8.5 | 6.3 | 1.0 | 1.0 | 0.02 | 32 | 44 | 1.1 | 0.99 | 83 | 71 | 65 | 2.2 | 2.0 |
| TIRFM (n=3) | 9.2 | 5.2 | 0.57 | 0.56 | <0.01 | 18 | 30 | 0.88 | 0.87 | 73 | 54 | 59 | 2.3 | 2.0 |
| UOFM (n=5) | 8.4 | 6.6 | 1.2 | 1.2 | 0.02 | 38 | 48 | 1.4 | 1.4 | 115 | 88 | 89 | 2.4 | 2.4 |
| UOFM/IF (n=1) | 8.1 | 3.3 | 1.9 | 1.9 | 0.03 | 61 | 60 | 0.48 | 0.49 | 41 | 31 | 32 | 0.5 | 0.5 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | |
| IF (n=7) | 7.9 | 4.8 | 3.3 | 3.2 | 0.04 | 104 | 91 | 2.5 | 2.3 | 188 | 141 | 58 | 1.5 | 0.5 |
| VO (n=2) | 8.2 | 6.3 | 0.27 | 0.26 | <0.01 | 8.4 | 8.2 | 3.3 | 3.4 | 280 | 244 | 220 | 29 | 27 |
| VO/IF (n=1) | 8.1 | 4.2 | 5.2 | 5.2 | 0.06 | 164 | 206 | 1.9 | 1.9 | 156 | 136 | 131 | 0.8 | 0.8 |
| **Wesmeg North (Medians)** | | | | | | | | | | | | | | |
| IF (n=2) | 8.9 | 5.9 | 0.33 | 0.32 | <0.01 | 10 | 12 | 0.63 | 0.64 | 53 | 39 | 39 | 4.3 | 4.1 |
| VO (n=5) | 9.0 | 6.3 | 0.42 | 0.41 | <0.01 | 13 | 13 | 3.8 | 3.9 | 326 | 284 | 254 | 21 | 19 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
ND-no data

#### *4.2.3.3 Neutralization Potential*

Median NP values for ore samples are generally comparable to corresponding results for waste rock samples for the same lithology. Overall NP measurements for CaNP, CaNP-adj and mod-NP range from 5 to 340 kg $CaCO_3$/t. Consistent with the characterization of waste rock samples, ore samples from the VO lithology show highest median NP values (160 to 330 kg $CaCO_3$/t) while lowest NP levels are measured in samples originating from the Discovery deposit (5 to 20 kg $CaCO_3$/t). Notably, ore samples from the mixed VO/IF lithologic classification show lower median NP values (10 to 160 kg $CaCO_3$/t) than their VO counterparts. Estimates for NP are generally similar or higher for underground relative to corresponding open pit ore samples.

#### *4.2.3.4 Net-Potential Ratio*

Net potential ratios for ore samples were calculated for CaNP-adj/MAP and Mod-NP/MAP. Consistent with the distribution of NP for the ore lithologies, highest median NPR values are measured in VO samples (5 to 450), while lowest NPR values (0.2 to 0.6) are measured at the Discovery deposit. Median NPR values are lower in underground (0.2 to 32) relative to open pit samples (0.23 to 450) which reflects the distribution of MAP in ore samples. For determination of ARD potential, NPR values below 1 are used to screen PAG samples. For the open pit, only IF samples from Discovery show median NPRs<1. Conversely, underground samples from most deposits for the IF or mixed IF lithologic classifications (VO/IF and UOFM/IF) show median NPR values <1 or within the Uncertain range for ARD generation. Overall, most locations where IF ore will be produced show NPR values that are either PAG (NPR <1) or Uncertain (NPR 1-2), while other ore types are generally non-PAG (NPR >2).

### 4.2.4 Net Acid Generating Tests

Median NAG pH results for ore samples range from pH 2.9 to 7.8, occupying a lower range than waste rock samples. For most deposits, NAG pH results are lower in underground relative to open pit samples. Specifically, underground samples from the IF, UOFM/IF and VO/IF units from most deposits except Wesmeg North show NAG pH values <4.5, reflecting greater acid generating potential in these materials relative to other lithologies and to the open pit samples. Other rock types present at these deposits generally show circumneutral NAG pHs which suggest that most ARD potential is limited to ore samples from the IF and mixed IF lithologies. These findings overlap with waste rock characterization results which show acidic median NAG pH associated with underground IF samples from Discovery. Overall correspondence between the NPR and NAG pH results

suggests that for most deposits IF ore samples from the underground have greater ARD potential than corresponding waste rock samples.

### 4.2.5 Solid Phase Elemental Abundance

Statistical summaries of solid phase elemental results for Meliadine Extension database open pit and underground ore samples (n=113) are presented by deposit and lithology and compared to the AUCCC (Rudnick and Gao, 2014) in Appendix D-4. In order to compare metal enrichment between the different deposits and lithologies, median values for ore samples collected from the open pit and underground are screened against the AUCCC and presented in Table 4-19 and Table 4-20.

The results show that ore lithologies in most deposits are enriched in Ag, As and Cu with respect to AUCCCs. Apart from Ag, the observed metal enrichments for ore samples are consistent with those observed for waste rock samples. Generally, As concentrations in ore samples are up to an order of magnitude greater than values measured in waste rock samples from the same deposit and lithologic group, while concentrations for other metal parameters are generally comparable to the composition of waste rock.

Similar to metal enrichment in waste rock, Bi, Cd, Co, Cr, Mn, Mo, Ni, Pb, Sb and Zn are variably enriched across the lithologies and deposits, while Fe enrichment is primarily associated with the IF lithology. In particular, Cd concentrations in ore samples from the F Zone and Pump deposits and Sb levels in samples from the Pump deposit are enriched above the AUCCC in most rock units. While limited comparisons could be made for Se due to the high detection limits (0.80 ppm and 1 ppm), Se concentrations are consistently detected above the detection limit and above the AUCCC in the F Zone and Pump deposits.

Consistent with findings for waste rock, the data demonstrate that elemental enrichment for ore samples is related to lithology, deposit and location within the mine workings. Specifically, the highest concentrations of Co, Cu, Mn, Ni and Zn are associated with the IF, UV or VO lithologies as observed for waste rock samples. Conversely, As concentrations are elevated across various lithologies including IF, VO, SE and UOFM. Ore samples from the Discovery deposit generally show lower concentrations of metal parameters, namely for As, Cu, Mn, Ni and Zn, while highest concentrations are typically measured in underground samples from the Wesmeg deposit. Overall, higher median concentrations for As, Bi and Cu are measured in underground relative to open pit samples. For As, median concentrations are up to five times greater in ore from the underground (73 to 33,500 ppm) relative to the open pit (30 to 6,770 ppm).

**Table 4-19:**
**Open Pit Ore Median Solid Phase Elemental Concentrations by Deposit and Lithology**

| **AUCCC** | **0.053** | **81,500** | **4.8** | **0.16** | **0.09** | **17** | **92** | **28** | **39,200** | **774** | **1.1** | **47** | **17** | **0.4** | **0.09** | **67** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Ag** | **Al** | **As** | **Bi** | **Cd** | **Co** | **Cr** | **Cu** | **Fe** | **Mn** | **Mo** | **Ni** | **Pb** | **Sb** | **Se** | **Zn** |
| **Unit** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| **Discovery (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=5)* | *ND* | 29,000 | ***390*** | 0.26 | 0.20 | 4.4 | 160 | 16 | 190,000 | 280 | 2.8 | 11 | 6.8 | <0.8 | <0.7 | 52 |
| *SE (n=2)* | 0.27 | 88,500 | 30 | 0.13 | 0.23 | 14 | 130 | 36 | 53,500 | 435 | 2.2 | 47 | 10 | 0.8 | <0.7 | 75 |
| **F-Zone (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=4)* | 0.01 | 18,000 | ***87*** | 0.11 | 0.45 | 16 | 220 | 79 | 80,500 | 2,350 | 1.5 | 39 | 4.1 | 0.85 | ***1.3*** | 126 |
| *VO (n=1)* | 0.04 | 33,200 | ***308*** | 0.13 | 0.13 | 52 | 317 | 31 | 53,300 | 995 | 0.2 | 200 | 2.3 | 0.09 | ***<1*** | 69 |
| **Pump (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=4)* | *ND* | 27,500 | ***2,490*** | 0.20 | ***1.64*** | 37 | 145 | 173 | 155,000 | 1,550 | 1.6 | 57 | 5.1 | 2.2 | 0.85 | ***765*** |
| *VO (n=2)* | ***2.9*** | 11,500 | ***2,451*** | 0.14 | 0.43 | 34 | 51 | 132 | 72,400 | 1,569 | 1.1 | 57 | 14 | 0.71 | ***1*** | 110 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=5)* | 0.31 | 16,900 | ***6,765*** | 0.33 | 0.09 | 13 | 16 | 82 | 111,700 | 368 | 1.5 | 13 | 6.4 | 0.56 | ***<1*** | 41 |
| *TIRFM (n=3)* | *ND* | 63,000 | ***260*** | 0.09 | 0.17 | 7.6 | 120 | 21 | 94,000 | 330 | 1.1 | 17 | 18 | <0.8 | <0.7 | 61 |
| *UOFM (n=3)* | 0.47 | 28,500 | ***3,244*** | 0.18 | 0.16 | 13 | 27 | 25 | 67,700 | 340 | 0.9 | 24 | 14 | 0.54 | ***<1*** | 81 |
| *VO (n=3)* | *ND* | 63,000 | ***2,400*** | 0.19 | ***1.20*** | 39 | 180 | 93 | 62,000 | 1,500 | 1.5 | 90 | 17 | <0.8 | <0.7 | 310 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | |
| *IF (n=1)* | ***0.67*** | 25,100 | ***1,032*** | 0.10 | 0.14 | 21 | 20 | 190 | 135,700 | 763 | 1.2 | 26 | 11 | 0.24 | ***2*** | 112 |
| *VO (n=3)* | 0.23 | 22,000 | ***443*** | 0.07 | 0.18 | 36 | 68 | 102 | 73,700 | 1,495 | 0.8 | 79 | 9.7 | 0.27 | ***<1*** | 97 |
| *UV (n=1)* | *ND* | 54,000 | 40 | 0.09 | 0.16 | 43 | 290 | 97 | 70,000 | 1,200 | 1.1 | 96 | 4.2 | 2.2 | <0.7 | 79 |
| **Wesmeg-North (Medians)** | | | | | | | | | | | | | | | | |
| *VO (n=3)* | 0.21 | 21,100 | 33 | 0.08 | 0.13 | 46 | 173 | 115 | 71,700 | 1,470 | 0.5 | 97 | 3.2 | 0.29 | ***<1*** | 74 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
Data for Ag represent a smaller sample size than for other metal parameters
ND- no data

**Table 4-20:**
**Underground Ore Median Solid Phase Elemental Concentrations by Deposit and Lithology**

| **AUCCC** | **0.053** | **81,500** | **4.8** | **0.16** | **0.09** | **17** | **92** | **28** | **39,200** | **774** | **1.1** | **47** | **17** | **0.4** | **0.09** | **67** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Ag** | **Al** | **As** | **Bi** | **Cd** | **Co** | **Cr** | **Cu** | **Fe** | **Mn** | **Mo** | **Ni** | **Pb** | **Sb** | **Se** | **Zn** |
| **Unit** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| **Discovery (Medians)** | | | | | | | | | | | | | | | | |
| IF (n=16) | 0.25 | 16,100 | ***1,939*** | 0.53 | 0.08 | 4.7 | 30 | 41 | 128,400 | 143 | 1.5 | 11 | 3.4 | 0.32 | ***<1*** | 30 |
| **F-Zone (Medians)** | | | | | | | | | | | | | | | | |
| IF (n=5) | 0.45 | 9,100 | ***7,134*** | 0.65 | 0.69 | 21 | 10 | 147 | 110,200 | 1,774 | 1.3 | 13 | 6.5 | 1.4 | ***3*** | 197 |
| VO (n=3) | 0.28 | 25,800 | ***118*** | 0.12 | 0.20 | 46 | 58 | 121 | 77,500 | 1,260 | 1.1 | 69 | 3.6 | 0.08 | ***<1*** | 112 |
| VO/IF (n=3) | ***1.7*** | 9,300 | ***144*** | 0.40 | 0.55 | 8 | 32 | 182 | 107,700 | 1,229 | 0.5 | 13 | 2.6 | 0.5 | ***2*** | 114 |
| **Pump (Medians)** | | | | | | | | | | | | | | | | |
| IF (n=5) | ***1.2*** | 5,800 | ***6,530*** | 0.22 | 0.84 | 21 | 7 | 166 | 132,500 | 2,401 | 0.9 | 13 | 3.4 | 1.8 | ***4*** | 319 |
| VO (n=1) | 0.36 | 28,400 | ***401*** | 0.41 | 0.28 | 41 | 146 | 32 | 78,700 | 1,138 | 1.1 | 114 | 3.6 | 0.1 | ***<1*** | 175 |
| VO/IF (n=3) | ***0.55*** | 17,400 | ***4,983*** | 0.31 | 0.17 | 52 | 32 | 162 | 117,100 | 1,997 | 2.5 | 46 | 4.4 | 1.8 | ***3*** | 102 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | |
| IF (n=10) | 0.34 | 17,450 | ***660*** | 0.23 | 0.16 | 6.6 | 11 | 91 | 191,817 | 457 | 2.1 | 11 | 19 | 0.31 | ***<1*** | 65 |
| SE (n=1) | 0.13 | 41,300 | ***11,300*** | 0.12 | 0.09 | 6.6 | 20 | 18 | 140,100 | 297 | 0.9 | 15 | 7.8 | 2.1 | ***<1*** | 60 |
| TIRFM (n=3) | ***0.63*** | 15,500 | ***10,200*** | 0.50 | 0.14 | 21.4 | 54 | 43 | 51,300 | 377 | 3.1 | 69 | 50.0 | 3.0 | ***<1*** | 77 |
| UOFM (n=5) | ***0.80*** | 18,200 | ***744*** | 0.91 | 0.22 | 7.4 | 17 | 32 | 102,000 | 402 | 3.0 | 17 | 112 | 0.18 | ***<1*** | 54 |
| UOFM/IF (n=1) | ***0.60*** | 31,700 | ***292*** | 0.35 | 0.06 | 8.6 | 19 | 108 | 141,200 | 359 | 0.9 | 19 | 6.5 | 0.12 | ***<1*** | 74 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | |
| IF (n=7) | ***0.90*** | 6,300 | ***15,000*** | 0.41 | ***1.64*** | 35 | 15 | ***316*** | 127,700 | 2,820 | 2.1 | 23 | 8.2 | 3.2 | ***3*** | 460 |
| VO (n=2) | 0.12 | 24,750 | ***73*** | 0.08 | 0.19 | 51 | 131 | 138 | 65,050 | 1,561 | 0.2 | 104 | 4.4 | 0.42 | ***<1*** | 92 |
| VO/IF (n=1) | ***2.9*** | 16,600 | ***33,500*** | 0.83 | ***1.07*** | 33 | 14 | ***628*** | 192,031 | 810 | 2.6 | 25 | 71.4 | ***7.6*** | ***4*** | 282 |
| **Wesmeg-North (Medians)** | | | | | | | | | | | | | | | | |
| IF (n=2) | 0.20 | 29,650 | ***2,076*** | 0.24 | 0.08 | 15 | 50 | 32 | 84,550 | 336 | 1.0 | 43 | 5.9 | 0.4 | ***<1*** | 64 |
| VO (n=5) | 0.18 | 16,700 | ***199*** | 0.16 | 0.13 | 46 | 58 | 107 | 65,800 | 1,629 | 0.9 | 97 | 3.7 | 0.28 | ***<1*** | 70 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
Data for Ag represent a smaller sample size than for other metal parameters
ND- no data

### 4.2.6 Shake Flask Extractions

Median leachate chemistry for SFEs is presented in Table 4-21 and Table 4-22 for the open pit and underground Meliadine Extension database ore samples (n=31), respectively. A statistical summary is also provided for leachate chemistry from SFEs conducted on the supplemental geochemistry samples (n=9) with connate water in Table 4-23. All water quality results were screened relative to the MDMER and AEMP guidelines. Statistics on SFE results are provided in Appendix D-5, and complete SFE results are provided in Appendix D-6.

Leachate chemistry for ore SFE tests show pH values (7.6 to 8.8) and exceedances consistent with the waste rock SFE tests. Higher concentrations of sulfate, As and Se are generally observed in ore leachates, with maximum median levels reaching 520 mg/L, 0.34 mg/L and 0.0087 mg/L, respectively. Exceedances for median As concentrations are observed across various lithologies (IF, SE, TIRFM, UOFM, VO), in contrast to exceedances for waste rock samples which mainly occurred for SE, TIRFM, UV and VO leachates. Notably, As levels for the VO and TIRFM units from the open pit and underground operations at Tiriganiaq, respectively, exceed the MDMER guideline (0.1 mg/L). Other exceedances occasionally observed for the IF, TIRFM, UOFM and VO units include sulfate, F, P and Se. Overall, leachate results for ore samples from the underground Wesmeg deposit show the greatest number of exceedances relative to the other deposits. Specifically, median IF leachate concentrations from this deposit distinctly show AEMP exceedances for Cd, Co, Mn and Zn.

**Table 4-21:**
**Comparison of Open Pit Median Shake Flask Extraction (DI Water) Results for Ore Samples by Deposit and Lithology**

| Parameter | pH | Cl | F | $SO_4$ | Al | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Discovery (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=5)* | 7.7 | 1.5 | *ND* | 3.6 | 0.34 | 0.0006 | 0.032 | <0.000003 | <0.0005 | 0.000022 | <0.0005 | 0.00012 | 0.0006 | <0.0001 | *ND* | <0.001 | <0.001 |
| *SE (n=2)* | 8.8 | 3.7 | *ND* | 1.7 | 1.8 | 0.0007 | 0.092 | 0.0000035 | 0.001 | 0.00020 | <0.0005 | 0.00018 | 0.0046 | 0.0006 | *ND* | <0.001 | 0.002 |
| **F Zone (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=3)* | 8.1 | 2.5 | *ND* | 2.1 | 0.15 | 0.0036 | 0.007 | <0.000003 | <0.0005 | 0.000088 | <0.0005 | <0.00002 | 0.020 | 0.0004 | *ND* | <0.001 | <0.001 |
| **Pump (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=4)* | 8.2 | 2 | *ND* | 6.6 | 0.15 | 0.0024 | 0.081 | <0.000003 | <0.0005 | 0.00018 | <0.0005 | 0.000075 | 0.062 | 0.0013 | *ND* | <0.001 | <0.001 |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=2)* | 8.2 | 22 | 0.12 | 39 | 0.10 | 0.0009 | 0.0092 | 0.0000035 | 0.00014 | 0.000048 | 0.00095 | 0.00024 | 0.011 | 0.00025 | 0.014 | 0.00028 | 0.0025 |
| *TIRFM (n=3)* | 8.0 | 1.3 | *ND* | 3.4 | 0.6 | 0.0011 | 0.022 | <0.000003 | <0.0005 | 0.000056 | <0.0005 | 0.00006 | 0.0031 | 0.0004 | *ND* | <0.001 | <0.001 |
| *UOFM (n=2)* | 8.1 | 25 | 0.11 | 107 | 0.12 | 0.001 | 0.012 | 0.000005 | 0.00012 | 0.000055 | 0.00055 | 0.00001 | 0.014 | 0.00055 | <0.003 | 0.00042 | 0.002 |
| *VO (n=13)* | 8.1 | 2.8 | *ND* | 2.6 | 0.56 | 0.0031 | ***0.34*** | <0.000003 | <0.0005 | 0.00016 | <0.0005 | 0.00009 | 0.0074 | 0.0013 | *ND* | <0.001 | <0.001 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=1)* | 7.8 | 40 | 0.06 | 380 | 0.018 | 0.0009 | 0.0007 | <0.000003 | 0.00013 | 0.000066 | 0.0007 | 0.00001 | 0.052 | 0.0002 | <0.003 | 0.0034 | 0.002 |
| *UV (n=1)* | 8.5 | 0.8 | *ND* | 0.8 | 0.31 | 0.002 | 0.007 | <0.000003 | <0.0005 | 0.000044 | <0.0005 | <0.00002 | 0.0012 | <0.0001 | *ND* | <0.001 | <0.001 |
| *VO (n=2)* | 7.8 | 13 | 0.06 | 18 | 0.15 | 0.0013 | 0.019 | <0.000003 | 0.00039 | 0.000059 | 0.0006 | 0.00090 | 0.0070 | 0.00075 | 0.0045 | 0.0015 | 0.002 |

**Notes**:
Shaded values indicate concentrations that exceed AEMP benchmark shown in Table 4-7
ND- no data

## Table 4-22:
## Comparison of Underground Median Shake Flask Extraction (DI Water) Results for Ore Samples by Deposit and Lithology

| Parameter | pH | Cl | F | $SO_4$ | Al | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Tiriganiaq (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=2)* | 8.0 | 11 | 0.09 | 188 | 0.04 | 0.0009 | 0.0042 | <0.000003 | 0.00008 | 0.000026 | <0.0005 | <0.00002 | 0.048 | 0.0004 | <0.003 | 0.0011 | 0.002 |
| *TIRFM (n=1)* | 8.3 | 12 | 0.18 | 24 | 0.13 | 0.0048 | ***0.29*** | <0.000003 | 0.0001 | 0.000024 | 0.0009 | 0.00003 | 0.0067 | 0.0012 | <0.003 | 0.0015 | 0.002 |
| *UOFM (n=1)* | 7.9 | 9 | 0.09 | 75 | 0.17 | 0.0013 | 0.045 | 0.000022 | 0.00008 | 0.000037 | 0.0011 | 0.0020 | 0.015 | 0.0002 | <0.003 | 0.0046 | 0.002 |
| **Wesmeg (Medians)** | | | | | | | | | | | | | | | | | |
| *IF (n=2)* | 7.6 | 9.5 | 0.06 | 517 | 0.002 | 0.0013 | 0.027 | 0.00038 | 0.00008 | 0.00087 | 0.00035 | 0.0010 | 0.95 | 0.00085 | <0.003 | 0.0087 | 0.048 |
| *VO (n=1)* | 8.1 | 8 | 0.28 | 104 | 0.11 | 0.0013 | 0.001 | <0.000003 | 0.00009 | 0.000026 | 0.0014 | 0.00005 | 0.023 | 0.0002 | <0.003 | 0.0015 | 0.002 |

**Notes**:
Shaded values indicate concentrations that exceed AEMP benchmark shown in Table 4-7
ND- no data

## Table 4-23:
## Statistical Summary of Shake Flask Extraction Results (Connate Water) for Ore Samples by Deposit and Lithology

| Parameter | pH | Cl | F | $SO_4$ | Al | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Connate Water (Influent)** | | | | | | | | | | | | | | | | | |
| *Value* | 7.7 | 36,000 | 0.08 | 2,553 | <0.001 | <0.0009 | 0.017 | 0.0012 | 0.015 | 0.0001 | <0.0002 | <0.00001 | 0.074 | <0.0001 | <0.003 | 0.0019 | <0.002 |
| **Tiriganiaq Underground** | | | | | | | | | | | | | | | | | |
| ***IF (n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.5 | 33,000 | 0.09 | 2,683 | 0.019 | 0.0014 | 0.0043 | 0.0013 | 0.0019 | 0.0004 | 0.0031 | 0.0002 | 0.16 | 0.0003 | <0.003 | 0.00079 | 0.004 |
| *Max* | 7.5 | 33,000 | 0.12 | 2,802 | 0.02 | 0.002 | 0.023 | 0.0014 | 0.009 | 0.00068 | 0.031 | 0.0015 | 0.59 | 0.0038 | 0.1 | 0.0027 | 0.044 |
| ***TIRFM (n=1)*** | | | | | | | | | | | | | | | | | |
| *Value* | 7.5 | 34,000 | 0.14 | 2,552 | 0.011 | 0.0077 | ***0.27*** | 0.0032 | 0.0063 | 0.0021 | 0.0041 | 0.0014 | 0.18 | 0.006 | 0.1 | 0.0022 | 0.019 |
| ***UOFM (n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.4 | 31,000 | 0.11 | 2,743 | 0.003 | <0.0009 | 0.0022 | 0.0012 | 0.0013 | 0.00077 | 0.016 | 0.00015 | 0.19 | 0.0012 | <0.003 | 0.00051 | 0.003 |
| *Max* | 7.4 | 36,000 | 0.12 | 2,921 | 0.018 | 0.0057 | 0.049 | 0.0051 | 0.014 | 0.0019 | 0.035 | 0.43 | 0.34 | 0.003 | <0.003 | 0.004 | 0.016 |
| **Wesmeg UG** | | | | | | | | | | | | | | | | | |
| ***IF (n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.3 | 34,000 | 0.07 | 3,136 | <0.001 | 0.0018 | 0.012 | 0.0078 | 0.0017 | 0.0044 | <0.0002 | <0.00001 | 0.96 | 0.0035 | <0.003 | 0.0031 | 0.46 |
| *Max* | 7.4 | 36,000 | 0.08 | 3,288 | 0.002 | 0.013 | 0.091 | 0.029 | 0.021 | 0.0072 | 0.0078 | 0.13 | 3.7 | 0.0059 | 0.2 | 0.016 | 0.54 |
| ***VO (n=2)*** | | | | | | | | | | | | | | | | | |
| *Min* | 7.4 | 32,000 | 0.08 | 2,734 | <0.001 | <0.0009 | 0.011 | 0.0016 | 0.0013 | 0.0015 | 0.0031 | <0.00001 | 0.33 | 0.0019 | <0.003 | 0.0015 | <0.002 |
| *Max* | 7.5 | 35,000 | 0.19 | 3,207 | 0.01 | 0.0013 | 0.039 | 0.0035 | 0.0076 | 0.0016 | 0.043 | 0.0005 | 0.67 | 0.0023 | <0.003 | 0.0017 | 0.046 |

**Notes**:
Shaded values indicate concentrations that exceed AEMP benchmark shown in Table 4-7.
ND- no data

## 4.3 Tailings

Meliadine Extension tailings have been characterized through analysis of metallurgical tailings and mill tailings. Mill tailings have the advantage of being produced by the full-scale process that has been deployed at Meliadine. However, existing mine operations are limited to the Tiriganiaq deposit and do not represent the range of tailings compositions that may be produced once other deposits begin generating mill feed.

The mill tailings have been extensively characterized through operational monitoring. This consists of ABA, SFE and metals analysis. These results are reported on in the annual monitoring reports as required by the NIRB Project Certificate No. 006 and Water License 2AM-MEL1631 Schedule 2, Item 6. Additional samples were collected outside of the regular monitoring program from the paste plant and from the TSF in 2020. The purpose of this sampling was to generate material for kinetic tests.

Metallurgical tailings from Meliadine Extension (Discovery, F Zone, Pump, Wesmeg, Tiriganiaq-Wolf in addition to Tiriganiaq deposit) were characterized in support of the 2014 FEIS. Certain aspects of tailings management at the current operation were not reflected in the metallurgical testing program. For example, tailings at Meliadine are dewatered with a filter press and disposed of in a dry stack or mixed with cement and stored as paste backfill in the mine underground. Neither of these steps were included in the 2011 metallurgical testing, which assumed tailings would be spigoted as a slurry and stored in a saturated impoundment. Deposition as a dry stack rather than as a slurry has implications for ARD/ML potential, given the fundamental differences in behaviour that may be evident between unsaturated versus saturated conditions. However, the process of using a filter press would have no obvious impact on the intrinsic geochemical properties of the whole ore tailings. Therefore, characterization data generated from these samples is considered to be representative of dry stack tailings that will be produced by the Meliadine Extension.

Characterization of ore samples can provide information on the geochemical heterogeneity of tailings for the Meliadine Extension. Ore processing at Meliadine consist of a whole ore leach process where solids separation is limited to gravity separation of free gold. Ore processing and reagent addition (e.g., lime, sodium cyanide (NaCN), sulphur dioxide ($SO_2$)/air, and copper sulphate ($CuSO_4$)) will alter the metal leaching potential of tailings relative to ore. Particularly, reagent usage will introduce elevated concentrations of $NH_4$, $SO_4$, Ca, Na, Cu and trace CN, and residual lime will result in elevated pH and NP in tailings relative to ore feed. However, processing will have little impact on sulphide content or abundance of most trace metals (*e.g.*, As). Therefore, the geochemical heterogeneity observed in ore samples can be used as a proxy for ARD/ML characteristics

of future tailings production. The static test results for ore by deposit and lithology are presented in section 4.2 The ore sample ABA results are compared against tailings screening criteria in Chapter 5 to classify the ARD potential of Meliadine Extension tailings.

The following section presents a summary of key results from analysis of metallurgical tailings in 2014 FEIS. This is followed by mineralogic and static test results for the 2020 mill tailings that were sampled in support of the Meliadine Extension. The overall ARD classification of tailings is discussed in Section 5.

### 4.3.1 Summary of Previous Work

A comprehensive testing program was initiated using metallurgical tailings in support of the 2014 FEIS. This consisted of ABA, metal assays, SFE tests, mineralogical characterization, and humidity cell tests. The complete results are presented in SD2-6 Geochemical Baseline of the 2014 FEIS and are not re-iterated herein.

The ABA test results showed that all tailings were non-PAG, with the exception of Discovery tailings. Total metal results identified As, Sb, Mo and Se as being significantly enriched the solid phase. In general, the range in solid phase composition and ARD potential is captured by characterization of Meliadine Extension ore, discussed in Section 4.2.2.2. The kinetic testing program which supported the 2014 FEIS consisted of 9 humidity cells of metallurgical whole ore tailings representing Tiriganiaq, F Zone, Wesmeg, Pump, Tiriganiaq-Wolf and Discovery. These results are presented in SD2-6 Geochemical Baseline of the 2014 FEIS, and key results are as follows:

- All samples produced relatively stable pH leachates (slightly alkaline to slightly acidic) throughout the reported test period. Values decreased slightly from cycle 0 (7.0 to 8.0) to the last test cycle (7.0 to 7.8)
- Parameters which exceeded AEMP guidelines included $SO_4$ As, Co, Cu, Mn, Se, Zn. In general these exceedances were limited to the first few cycles of the test, and are likely related to residual supernatant being rinsed from the tailings sample. The most significant of these exceedances were for As, Cu, Se and Mn which each exceeded >10x AEMP guidelines. The only parameter which exceeded MDMER guidelines was As.
- Manganese remained above the AEMP guideline (0.21 mg/L) for the duration of the kinetic tests. Peak concentrations were observed in cycle 0 (1.75 mg/L to 27.4 mg/L) which quickly stabilized and typically remained between 0.4 and 7 mg/L from cycle 4 onward.

- Copper exceeded AEMP guidelines in cycles 0-5. Maximum concentrations observed in cycle 0 ranged from 0.002 to 0.018 mg/L. All samples typically remained at the detection limit (0.0005 mg/L) from cycles 5 onward.
- Selenium exceeded AEMP guidelines in four humidity cell tests, with the maximum concentration of 0.018 mg/L observed in a Tiriganiaq sample. Selenium concentrations rapidly declined in most columns, reaching detection limit values (0.001 mg/L) by cycle 8 where they remained for the duration of the test.
- Arsenic exceeded the MDMER effluent limit (0.1 mg/L) in leachate in initial test results from the Zone underground, Tiriganiaq open pit, and Tiriganiaq underground tailings sample in more than one cycle. Arsenic concentrations reported decreasing trends in all samples, with initial concentrations ranging from 0.05 to 0.9 mg/L (Cycle 0), and the final test cycle to date ranging from 0.003 to 0.05 mg/L.

Overall, metal leaching test results indicate that Tiriganiaq tailings generally produces similar or greater concentrations of most parameters compared to the other sites. This is not unexpected as IF is the primary ore bearing formation in each deposit, and the deposits show fairly consistent sulphide mineralization dominated by pyrrhotite, arsenopyrite and pyrite. While the ARD potential varies somewhat between deposits, this is primarily related to lower carbonate content at Discovery relative to other deposits. Hence, while Discovery tailings remain at a neutral pH the weathering rates will not be dissimilar from other deposits. This suggests that existing mill tailings generated from Tiriganiaq deposit ore can provide a reasonable proxy for future tailings generated from other deposits.

### 4.3.2 Mill Tailings Analysis

#### *4.3.2.1 Mineralogy*

All six samples collected from TSF test pits in 2020 were analyzed for mineralogy by XRD. The results were highly consistent for all samples. Specifically, tailings samples are characterized by quartz, plagioclase, muscovite, chamosite, magnetite, gypsum, biotite, halite and carbonate minerals including calcite, ankerite and siderite. Carbonate minerals comprise approximately 10% of whole ore tailings samples. Ankerite is the dominant carbonate mineral while calcite and siderite are present in similarly low mineral abundances (Figure 4-15).

Sulfide minerals abundance ranged from 3.8 to 5.2 wt.%. Pyrrhotite and arsenopyrite dominate the composition and are present at similar contents (~2 wt.%), while pyrite and chalcopyrite show similarly low abundances (<0.5 wt.%). Gypsum was present in all

samples, and ranged from 1.0 wt.% to 1.6 wt.%. Gypsum was not detected in any waste rock or ore samples, and is likely formed within the mill as a result of lime and $SO_2$/air reagent addition. Complete XRD results for tailings samples are provided in Appendix C.

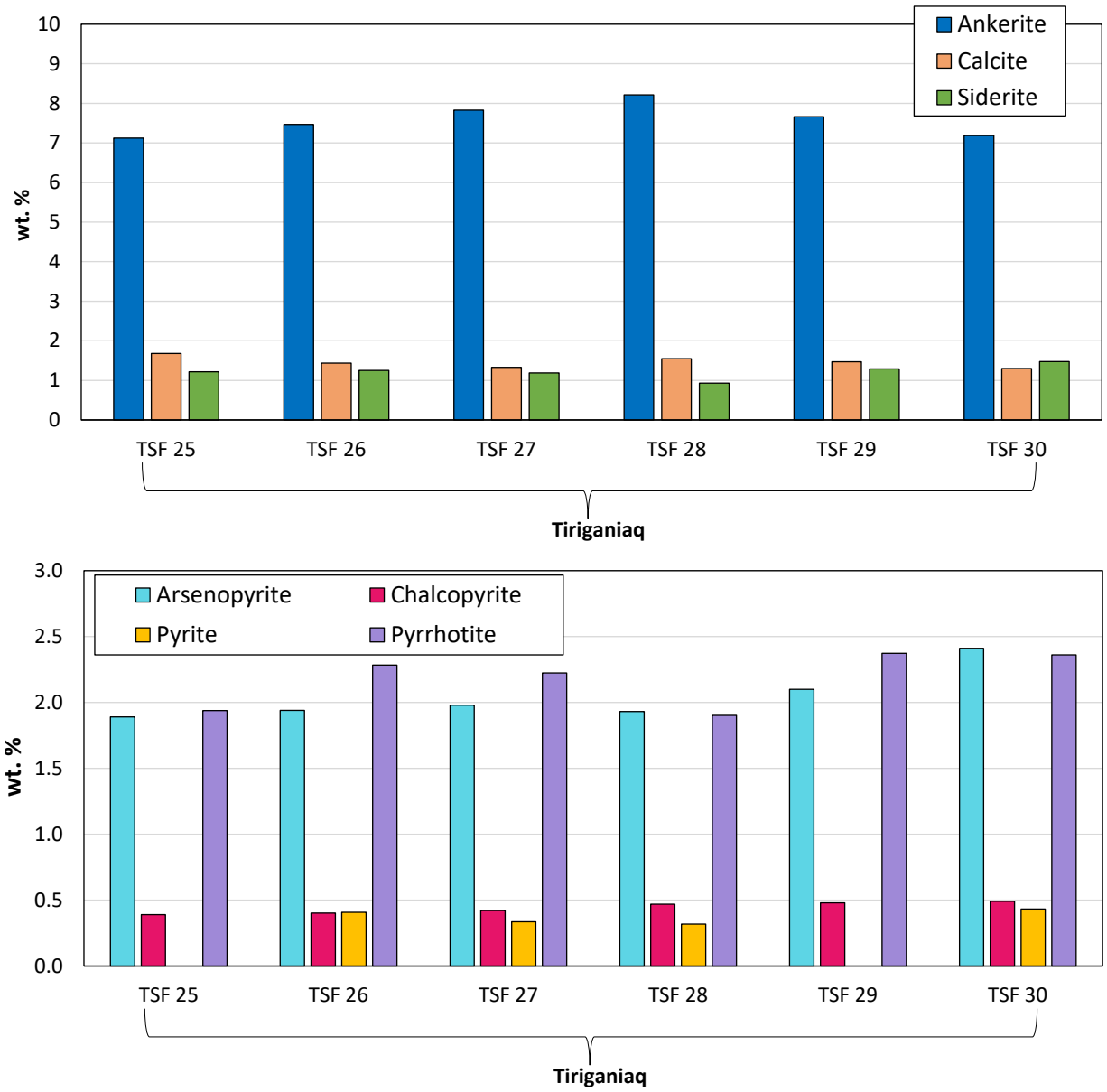



**Figure 4-15: XRD results for carbonate (top) and sulfide (bottom) mineralogy for whole ore tailings samples.**

#### *4.3.2.2 Acid Base Accounting*

The ABA results for TSF and paste tailings samples collected in 2020 are shown in Table 4-24. The TSF tailing samples show highly consistent ABA results. Paste pHs of TSF tailings are slightly alkaline (pH~8.1) which may be partially attributed to the addition of lime during mineral processing. The highly alkaline pH of paste tailings (pH 9.5) is presumably related to cement addition in the paste plant.

Total S and sulphide S contents in the tailings samples are approximately 2.0 and 1.6 wt.%, respectively, reflecting slightly higher sulphate S levels than measured in ore samples. Elevated sulphate S relatively to ore is likely related to gypsum formed as a result of $SO_2$/air and lime addition within the mill. Based on this finding, the sulphide S rather than total S measurement is used to estimate sulphide acid potential (SAP), consistent with the approach selected for the 2014 FEIS.

CaNP-adj estimates and mod-NP values for TSF tailings (69 to 82 kg $CaCO_3$/t) are similar to Tiriganiaq underground ore samples (median of 83 and 92 kg$CaCO_3$t) (Table 4-4). Paste tailings shows a significantly higher NP compared to waste rock and ore, which can be attributed to the introduction of cement in the paste plant. The TSF tailings NPR values range from 1.4 to 1.7, while the paste tailings sample shows NPR values of 2.6 and 3.7 owing to elevated NP. All samples show a NAG pH >4.5, and are therefore classified as non-PAG as per tailings ARD classification criteria described in Chapter 5 below (*i.e.*, NPR values > 1.2).

#### *4.3.2.3 Solid Phase Elemental Abundance*

Solid phase elemental results for key parameters are presented in Table 4-24 for tailings samples and compared to AUCCC values (Rudnick and Gao, 2014). Summary statistics for trace metal results are provided in Appendix D-4, and complete results are provided in Appendix D-6. Overall metal enrichment is consistent with characterization results for ore samples. In particular, As and Pb are enriched in most tailings samples with levels exceeding 10x the AUCCCs, while Se levels are at the detection limit and also suggest some level of enrichment. Other parameters including Ag, Bi, Cd, Cu, , Mo and Sb are enriched in most samples by at least 3x the AUCCCs. The level of enrichment measured for Pb and the relatively low Mn contents observed for the tailings samples is distinct from characterization results for ore samples. Most metal concentrations in tailing samples are generally within the lower range of median metal concentrations for ore samples.

## Table 4-24: Acid Base Accounting Results for Whole Ore Tailing Samples

| Parameter | Paste pH | NAG pH | Total-S | Sulphide S | Sulphate-S | SAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/SAP | Mod-NP/SAP |
| **Whole Ore Tailings (n=6)** | | | | | | | | | | | | | | |
| TSF 25 | 8.0 | 5.8 | 1.9 | 1.5 | 0.42 | 48 | 55 | 1.5 | 1.2 | 98 | 69 | 74 | 1.5 | 1.6 |
| TSF 26 | 8.0 | 5.7 | 2.0 | 1.6 | 0.38 | 51 | 59 | 1.5 | 1.2 | 100 | 70 | 77 | 1.4 | 1.5 |
| TSF 27 | 8.0 | 5.9 | 2.1 | 1.6 | 0.43 | 51 | 60 | 1.6 | 1.2 | 103 | 72 | 79 | 1.4 | 1.5 |
| TSF 28 | 8.1 | 5.7 | 2.1 | 1.6 | 0.51 | 49 | 57 | 1.6 | 1.2 | 103 | 72 | 82 | 1.5 | 1.7 |
| TSF 29 | 8.1 | 5.6 | 1.8 | 1.5 | 0.27 | 48 | 56 | 1.5 | 1.2 | 101 | 71 | 79 | 1.5 | 1.6 |
| TSF 30 | 8.2 | 5.7 | 1.9 | 1.6 | 0.27 | 51 | 59 | 1.5 | 1.2 | 102 | 71 | 77 | 1.4 | 1.5 |
| Paste Tailings | 9.5 | 7.1 | 1.4 | 1.1 | 0.28 | 42 | 42 | 2.1 | 1.9 | 154 | 108 | 150 | 2.6 | 3.5 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
SAP: Sulphide Acid Potential is calculated from Sulphide-S (by difference) content (Sulphide-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/SAP and Modified-NP/SAP
NAG (Net Acid Generation) pH

## Table 4-25:
## Solid Phase Element Results for Whole Ore Tailing Samples

| Parameter | Ag | Al | As | Bi | Cd | Co | Cr | Cu | Fe | Mn | Mo | Ni | Pb | Sb | Se | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **Whole Ore Tailings (n=6)** | | | | | | | | | | | | | | | | |
| TSF 25 | 0.37 | 18,800 | ***8,658*** | 0.79 | 0.25 | 14 | 24 | 83 | 108,900 | 389 | 8.5 | 28 | ***280*** | 1.2 | <1 | 81 |
| TSF 26 | 0.37 | 18,000 | ***9,650*** | 0.81 | 0.39 | 16 | 24 | 91 | 106,400 | 413 | 8.9 | 30 | ***287*** | 1.3 | ***1*** | 109 |
| TSF 27 | 0.37 | 17,000 | ***9,936*** | 0.85 | 0.59 | 17 | 23 | 106 | 104,300 | 430 | 8.6 | 32 | ***276*** | 1.4 | ***1*** | 160 |
| TSF 28 | 0.31 | 16,600 | ***9,233*** | 0.78 | 0.56 | 19 | 25 | 111 | 95,000 | 454 | 8.7 | 34 | ***230*** | 1.2 | ***1*** | 159 |
| TSF 29 | 0.29 | 16,900 | ***9,210*** | 0.81 | 0.51 | 15 | 24 | 106 | 103,900 | 435 | 8.7 | 32 | ***289*** | 1.4 | ***1*** | 134 |
| TSF 30 | 0.29 | 18,100 | ***9,379*** | 0.79 | 0.37 | 15 | 24 | 90 | 108,300 | 422 | 8.1 | 30 | ***280*** | 1.4 | <1 | 109 |
| Paste Tailings | 0.44 | 18,700 | ***7,739*** | 0.69 | 0.27 | 15 | 33 | 106 | 102,100 | 639 | 6.6 | 42 | ***320*** | 1.7 | <1 | 96 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
.

#### *4.3.2.4 Kinetic Tests Sample Selection*

Four tailings kinetic tests were initiated between October 2020 and January 2021 to measure geochemical weathering rates for mill tailings and paste tailings. These samples were generated from the 2020 field program which collected six samples from the TSF and one sample from the paste plant, the static test results for which are provided in the previous section. Five TSF samples were composited to produce material for one unsaturated and two saturated columns (Table 3-6). These tests were initiated to generate information on metal leaching rates under various disposal scenarios in the TSF. Additionally, one humidity cell was initiated using the paste tailings backfill sample collected in 2020. The purpose of this test was to provide information on metal leaching potential of tailings backfill in the mine underground. Details of test setup are provided in Table 3-6. Leachate chemistry results will be presented in 2022, following completion of the kinetic testing program.

## *4.4 Overburden*

### 4.4.1 Summary of Previous Work

Geochemical characterization of overburden from across the Meliadine Extension was completed as part of the 2014 FEIS. This included 34 samples analyzed for ABA, NAG pH, total metals and SFE tests. Overall, these results showed the material to be non-acid generating and to contain low metal concentrations relative to other mine rock. Total S and As contents were found to be low, measuring <0.1 wt.% and <80 ppm, respectively. Furthermore, SFE leachate concentrations for all overburden samples met the mine effluent criteria (MDMER), except for Zn in one sample from the Tiriganiaq deposit. This dataset is considered to provide adequate characterization of ARD/ML potential of overburden in the Meliadine Mine area, and no further samples were submitted for geochemical characterization as part of the Meliadine Extension.

### 4.4.2 Overburden Salinity

Salinity associated with overburden permafrost is the focus of overburden characterization completed in support of the Meliadine Extension. This section opens with a data review on regional permafrost salinity concentrations, followed by results from a site investigation completed in 2020 and 2021 at Meliadine.

The following discussion uses the terms TDS and salinity interchangeably. While the definition of these terms is not identical, they are essentially equivalent in the current context where Na and Cl are the dominant ions in overburden pore water.

#### *4.4.2.1 Regional Occurrence of Saline Permafrost*

Permafrost salinity in the Kivalliq Region is related to the intrusion by the Tyrrell Sea which inundated the area at the postglacial marine maximum 5-6 ka (Hivon and Sego, 1993). The marine maximum is estimated to have reached approximately 150 km inland from its current location (Randour *et al.,* 2016). An outline showing the shoreline of the of Tyrell Sea (Hudson Bay) post-glaciation is shown in Figure 4-16.

A survey of permafrost salinity across Nunavut and the Northwest Territories reported salinity concentrations ranging from 2.6 to 30.6 ppt in the area around Rankin Inlet (Hivon and Sego, 1993). Similar values were reported from regional sampling at Baker Lake (4.1 to 30 ppt) and Eskimo Point (0.8 to 38.3 ppt). The lowest salinity values tended to be in or near the active zone.

A relationship between overburden salinity and permafrost depth was documented in Rankin Inlet by Oldenbofger et al. (2017), whom reported salinity increasing from 4.4 ppt to 8.6 ppt in permafrost between 3.7 m and 11.6 m in depth. Salinities approaching that of seawater (35 ppt) have been reported near Rankin Inlet at depths greater than 10 m (35 ppt) (Knapik and Hanna, 1998), consistent with the hypothesis of pore water salinity in glaciomarine sediments originating from historic marine inundation of the region. A separate study found minimal conductivity values in active zone pore water and at Rankin Inlet, showing that seasonal thawing of the active zone has effectively rinsed salinity associated with historic marine intrusion (Oldenbofger *et al.,* 2015).

Overall, the literature review suggests that salinity in permafrost below the active zone could be widespread across the Meliadine site owing to intrusion by the Tyrrell Sea at the post-glacial marine maximum. The data also shows that salinity can vary widely around Rankin Inlet (2.6 to 30.6 ppt), but is unlikely to exceed that of sea water (35ppt). Salinity concentrations are expected to show a depth dependence, with minimal salinity present in the active zone and salinity concentrations increasing in at least the first few meters of underlying permafrost. A relationship between landform and pore water salinity has not been established. However, any overburden formed from sediments deposited after the post-glacial marine maximum can be expected to contain minimal pore-water salinity.

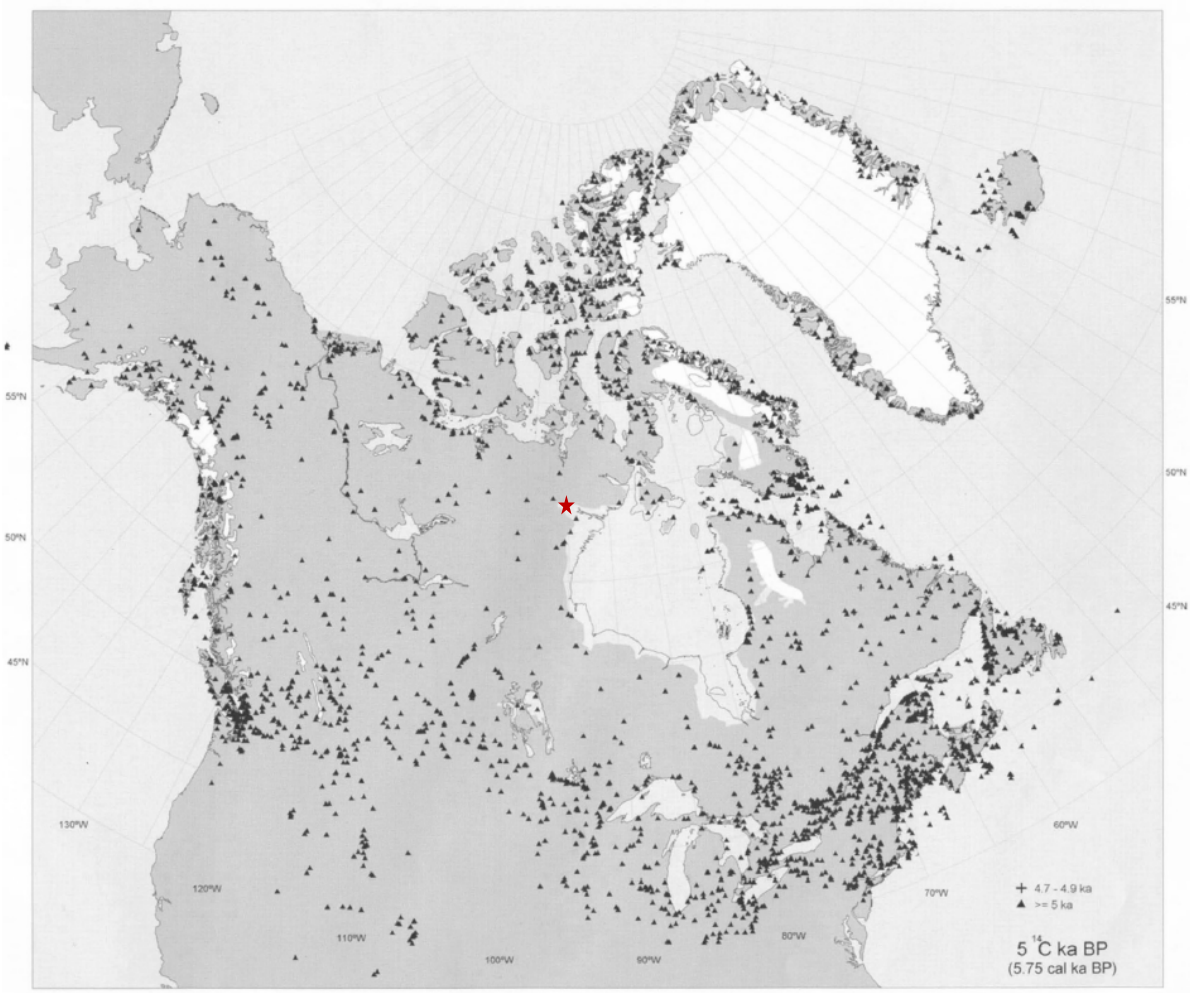
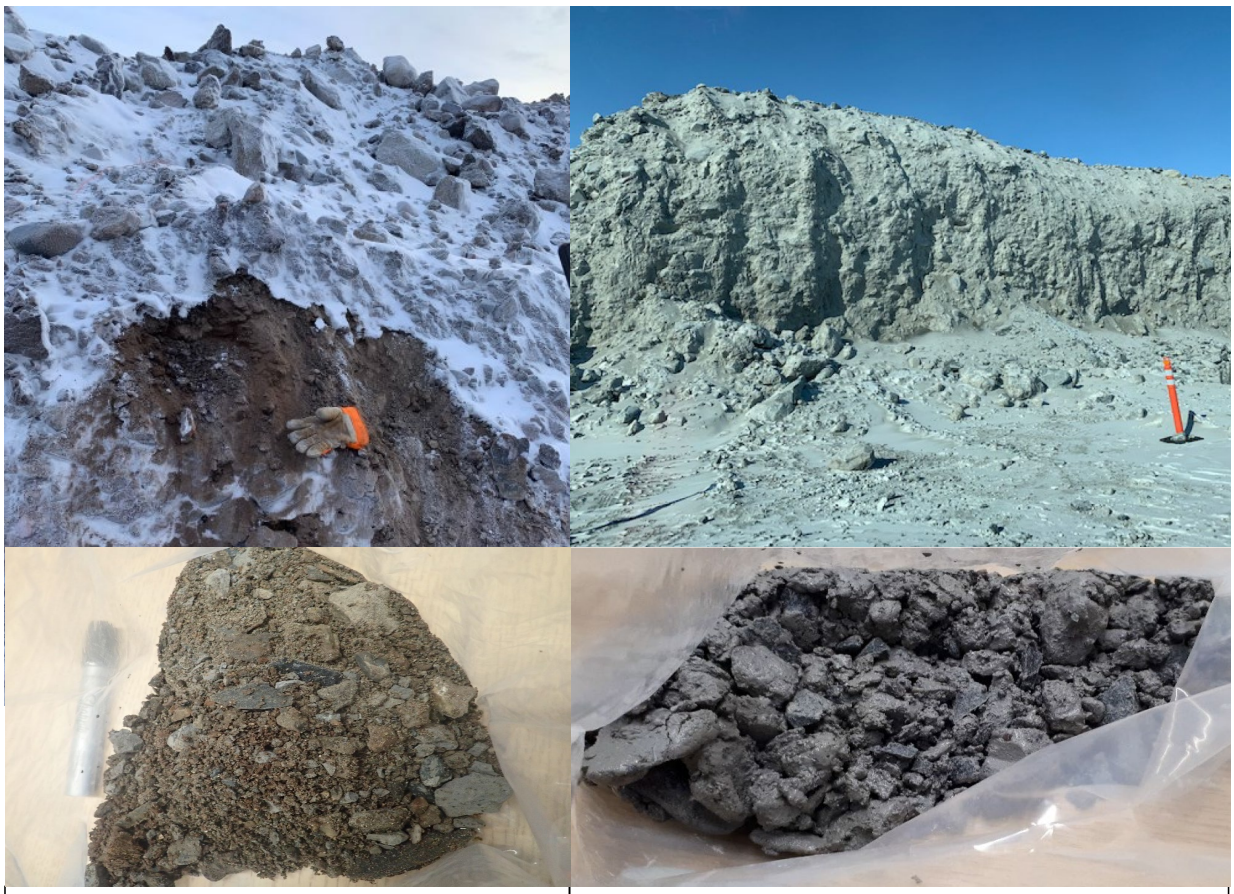



**Figure 4-16: Paleographic map of glaciated North America showing shoreline of Tyrell Sea (Hudson Bay) at 5000 years before present (5 ka BP). Red star indicates approximate location of Meliadine Mine (modified from Dyke, 2004)**

### *4.4.2.2 Salinity Rinsing Test and Pore Water Results*

Salinity rinsing tests were conducted on overburden samples collected from Tiriganiaq, Discovery, Wesmeg, Pump, F Zone and WRSF3 to assess salinity content. Overburden from the Tiriganiaq area were collected from pit wall exposures within Tiri01, from a depth range of 1 to 20 m. Sampling from the other deposits was collected from reverse circulation (RC) drill core, adjacent to the proposed open pits. Samples from these deposits ranged in depth from 1 to 10 m. A composite sample of the entire RC drill core depth range was collected at for sample near F Zone, Pump and Wesmeg. The location of overburden samples is shown in Figure 4-17, and details of sample collection are provided in Section 3.1.2.2.

Statistics for salinity rinsing tests by mine area are shown in Table 4-26. In general, the lowest TDS loads were observed in active zone samples collected from < 2 m depth, (median values range from 294 mg/kg to 430 mg/kg). Greater TDS loads were found in deeper samples. With the exception of Tiriganiaq, overburden at > 2 m depth showed similar median values at F Zone, Pump, Discovery (Deep) and WRSF3 (Deep). Tiriganiaq overburden shows a significantly higher range of TDS, with a median salinity load from 2-10 m of 2582 mg/kg. Tiriganiaq is the only deposit where overburden was collected from greater than 10 m depth. The TDS load in samples from 10-20 m was generally similar to those collected from 2-10 m.



| February 2nd and 7th, 2021 | March 29th, 2021 |
|---|---|

**Figure 4-17: Tiriganiaq pit wall exposures within Tiri01where overburden samples were collected in February and March 2021.**

**Table 4-26:**
**Overburden Salinity Rinsing Test Results**

| | | | Rinsing Test TDS (mg/kg) | | |
|---|---|---|---|---|---|
| | **n** | **Depth Range (m)** | **Min** | **Median** | **Max** |
| F Zone | 4 | 0-11.4 | 690 | 878 | 1,254 |
| Pump | 4 | 0-12.4 | 583 | 760 | 962 |
| Wesmeg | 1 | 0-9 | - | 339 | - |
| Discovery (Shallow) | 4 | 1-2 | 153 | 430 | 1,065 |
| Discovery (Deep) | 5 | 3-10 | 422 | 752 | 1,384 |
| Tiriganiaq (Shallow) | 3 | 1-2 | 192 | 441 | 487 |
| Tiriganiaq (Intermediate) | 22 | 2-10 | 1,203 | 2,582 | 5,372 |
| Tiriganiaq (Deep) | 14 | 10-20 | 668 | 2,657 | 5,188 |
| WRSF 3 Area (Shallow) | 1 | 1-2 | - | 294 | - |
| WRSF 3 Area (Deep) | 3 | 3-6 | 476 | 808 | 1,156 |

**Note**: Entire RC drill core depth interval provided from F Zone, Pump and Wesmeg samples.

A depth profile of salinity rinsing test results and pore water extractions for samples collected from discrete depths are plotted in Figure 4-18. The rinse test results show increasing salinity loads between 0 and 6 m depth. Samples collected from 6 to 20 m show a relatively constant TDS load. The TDS loads from the 4 to 10 m are notably higher at Tiriganiaq compared to WRSF3 Area and Discovery, indicating that there is some spatial variability to permafrost salinity profiles across the site. However, this may also be relic of different sample collection techniques (RC cuttings vs. pit wall exposures) or the greater sample density at Tiriganiaq.

Pore water was successfully extracted from 6 overburden samples by centrifuge. The pore water extraction results are plotted alongside salinity test results in Figure 4-18. Pore water TDS concentrations increased from 168 mg/L to 11,417 mg/L in samples collected from 1 to 10 m depth (Figure 4-18). This result is consistent with data reported by Oldenbofger *et al*. (2017), which showed salinity concentrations increasing from 4,400 mg/L to 8,600 mg/L between 3.7 m and at 11.6 m below ground surface near Rankin Inlet. Pore water analysis included trace metal and anion analysis, in addition to TDS. These results are presented alongside with waste rock pore water and seepage survey results in Chapter 6.

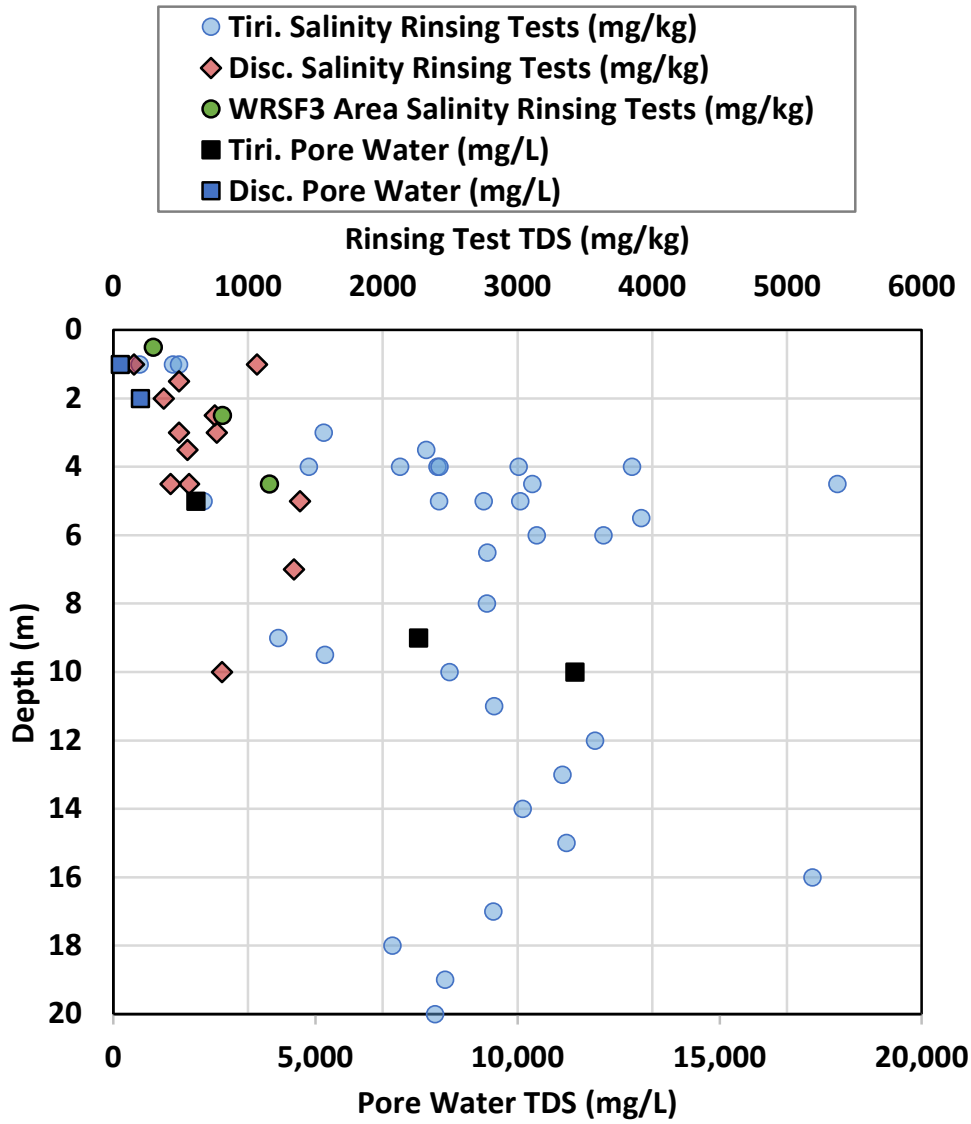



**Figure 4-18: Depth profile of salinity rinsing tests and pore water extraction samples collected from Tiriganiaq, Discovery and WRSF3 area.**

# 5. Acid Rock Drainage Potential of Mine Rock Results

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# 5. Acid Rock Drainage Potential of Mine Rock Results

In this section the ARD potential of mine rock that will be disturbed as part of the Meliadine Extension is described. The source of NP and AP are analyzed and compared to the classification criteria as defined by the 2014 FEIS (SD2-6 Geochemical Baseline). While no updates to the classification criteria are provided, some modifications to the CaNP-adj were required in order to incorporate the expanded XRD dataset.

## 5.1 Classification Criteria

The acid generating potential of mine wastes defined in the 2014 FEIS used two NPR calculations and the NAG pH to define ARD potential. The NPR used to define the acid generating potential of mine rock are calculated by:

i) CaNP-adj and mod-NP measurements to capture the range of NP present in mine materials; and

ii) MAP for waste rock and ore samples and SAP for tailings samples as a conservative estimate of AP.

Specifically, the classification criteria used to screen for ARD potential are as follows:

- Where both NPR values (CaNP-adj/MAP and mod-NP/MAP) are greater than 2, the sample is classified as non-PAG.
- Where both NPR measurements yield values in the range of $1 \leq NPR \leq 2$ or within different ranges, the sample is classified as having an uncertain acid generating potential.
- Where both NPR values are less than 1, the sample is classified as potentially acid generating (PAG).
- Where the NAG pH value is less than 4.5, the sample is classified as potentially acid generating (PAG).

The ARD classification criteria for tailing samples differs from waste rock and ore samples, as a threshold NPR value of 1.2 is applied and SAP is used in NPR calculations. The classification criteria used to screen tailings for ARD potential are as follows:

- Where both NPR values (CaNP-adj and mod-NP) are greater than 1.2, the sample is classified as non-potentially acid generating (non-PAG).

- Where NPR measurements yield values within different ranges (>1.2 or <1.2), the sample is classified as having an uncertain acid generating potential.
- Where both NPR values are less than 1.2, the sample is classified as potentially acid generating (PAG).
- Where the NAG pH value is less than 4.5, the sample is classified as potentially acid generating (PAG).

## 5.2 Acid Potential and Neutralization Potential in Meliadine Mine Rock

### 5.2.1 Acid Potential

The potential for acidity to be generated from mine rock is estimated by analysis of sulphur content characterized through ABA testing. The concentration of total S or sulphide S is typically converted to AP by assuming that 100% of measured S is present as pyrite. This assumption is valid at most mine sites, as globally pyrite is the most abundant sulphide mineral. However, mineralogical investigation at Meliadine (Section 4.1.2) identified pyrrhotite as the dominant S-bearing mineral in most lithologies, namely IF, SE, TIRFM and UOFM. Additionally, the presence of arsenopyrite was detected in the IF and TIRFM waste rock and was the dominant sulphide in some ore and tailings samples. Stoichiometric equations for the oxidation of sulphide minerals known to exist at Meliadine are presented in Table 5-1.

The amount of acidity (*i.e.,* moles of $H^+$) produced per mole of S is dependent on the sulphide mineral being oxidized (Table 5-1). For example, pyrrhotite produces fewer moles of $H^+$ per S compared to pyrite (exact ratio depends on pyrite composition), while arsenopyrite contains 1.5 to 2 times more moles of $H^+$ per mole of sulphur than pyrite. Chalcopyrite notably contains the least amount of acidity, accounting for only half the $H^+$ produced per mole S compared to pyrite. As such, the mineral source of sulphur may influence the relationship of total S or sulphide S measured in ABA testing with AP.

Due to the unique assemblage of sulphide minerals present at Meliadine, three estimates of AP will be presented in the following sections. These include MAP, SAP and site-specific AP. The MAP and SAP are calculated by applying standard equations which assume pyrite is the only S mineral present. Site-specific approach to AP is also calculated which considers the specific contribution of pyrite, pyrrhotite and arsenopyrite in the derivation of AP calculations.

**Table 5-1:**
**Stoichiometry of Sulphide Mineral Oxidation under Aerobic, Neutral pH Conditions**

| Mineral | Formula | Oxidation Reaction* |
|---|---|---|
| Pyrite | $FeS_2$ | $FeS_2 + 3.75\ O_2 + 3.5\ H_2O = Fe(OH)_3 + 2\ SO_4^{2-} + 4\ H^+$ |
| Pyrrhotite | $Fe_{(1-x)}S$ | $Fe^{2+} + 2.5\ H_2O + 0.25\ O_2 = Fe(OH)_3 + 2\ H^+$ |
| | | $S^{2-} + 2\ O_2 = SO_4^{2-}$ |
| Arsenopyrite (pH 2.2 - 6.8) | FeAsS | $FeAsS + 3.5\ O_2 + 4\ H_2O = Fe(OH)_3 + SO_4^{2-} + 3\ H^+ + H_2AsO_4^-$ |
| Arsenopyrite (pH 6.8 - 11.9) | FeAsS | $FeAsS + 3.5\ O_2 + 4\ H_2O = Fe(OH)_3 + 4\ H^+ + HAsO_4^{2-} + SO_4^{2-}$ |
| Chalcopyrite | $CuFeS_2$ | $CuFeS_2 + 4.25\ O_2 + 2.5\ H_2O = Cu^{2+} + Fe(OH)_3 + 2\ SO_4^{2-} + 2\ H^+$ |

*Assumes complete oxidation at of all reduced constituents by $O_2$

#### *5.2.1.1 Maximum and Sulphide Acid Potential*

The AP associated with sulphur can be calculated using the sulphide S or total S measurements. The standard conversions used to calculate MAP and SAP are as follows:

$$MAP = \text{Total-S wt.\%} \times 31.25$$

$$SAP = \text{Sulphide-S wt.\%} \times 31.25$$

A comparison of SAP and MAP for waste rock, ore and TSF tailings is provided in Figure 5-1. Overall, the relationship shows that MAP is generally greater than SAP owing to the presence of sulphate minerals. Sulphate minerals are not present in sufficient abundance to be detected by XRD at Meliadine, with the notable exception of mill tailings where gypsum is likely precipitated as a result of ore processing (Section 4.3.2.1). The neutral-alkaline in-situ pH of mine rock samples suggests that acidic sulphate minerals (*e.g.*, jarosite or alunite) are not present in significant concentrations. Hence, SAP likely provides a more accurate prediction of actual AP in Meliadine mine rock compared to MAP.

The SAP and MAP calculations assumes that 100% of total S and sulphide S are present as pyrite and do not account for any other sulphide minerals which may contribute to AP. This assumption will produce a conservative AP estimate in samples where pyrrhotite or sulphate minerals are present, which produce lower amounts of acidity per mole S compared to pyrite. Conversely, this approach may underestimate AP in samples where sulphur speciation is dominated by arsenopyrite, which produces greater amounts of AP per mole S compared to pyrite when oxidized at pH > 6.8 (Table 5-1). In order to confirm

the degree of conservatism in these AP estimates, a site-specific AP is calculated which considers site specific sulphide mineralogy and compared to SAP and MAP in the next section.

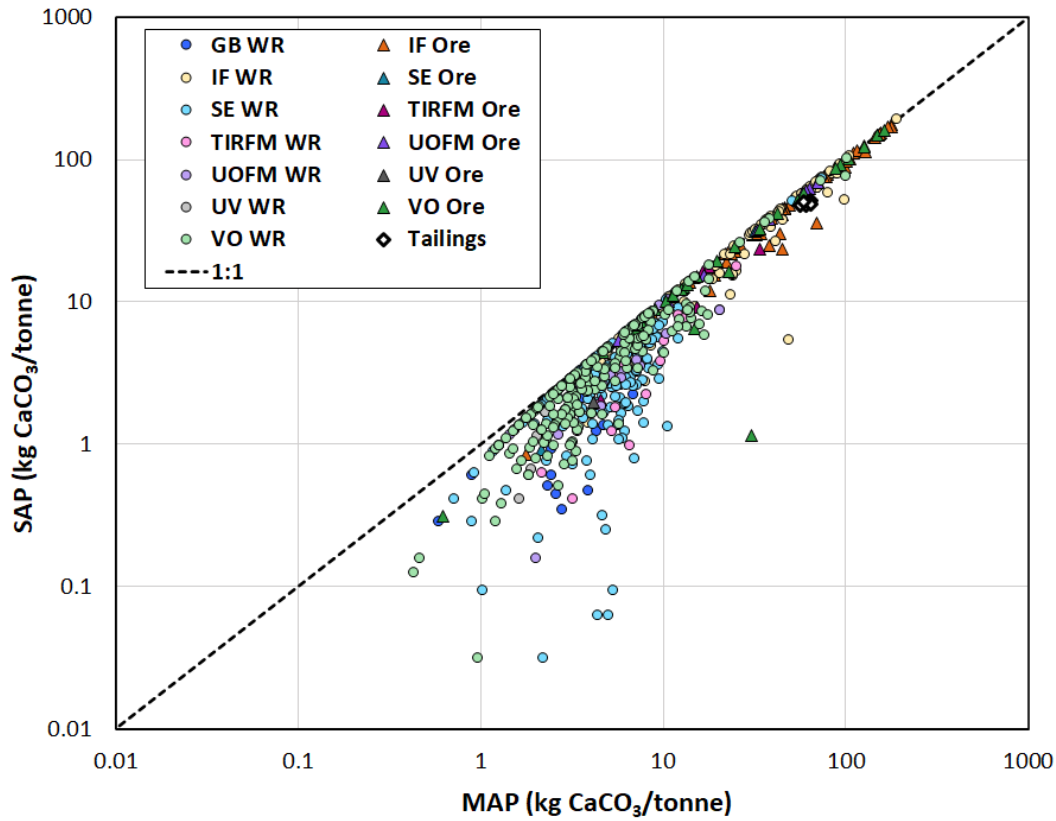



**Figure 5-1: Sulphide acid potential (SAP) versus maximum acid potential (MAP) in waste rock, ore and TSF tailings samples.**

### *5.2.1.2 Site-Specific Acid Potential*

A site-specific AP calculation was derived to account for the variable sulphide mineralogy present in Meliadine mine rock. The standard AP equation as applied for the total S measurement, assumes that pyrite is the dominant sulphide mineral present in mine rock. As this is not the case for several dominant rock units at Meliadine, an alternative approach for characterization of AP is presented.

The amount of acidity generated by oxidation of the three dominant sulphide minerals (arsenopyrite, pyrrhotite and pyrite) is presented in Table 5-2. The associated stoichiometry used to generate these AP estimates are shown in Table 5-1. The relative abundance of these sulphide minerals can be estimated based on mineralogic characterization and elemental abundance.

**Table 5-2:**
**Elemental composition of carbonate minerals and associated NP normalized to wt.%C and mineral wt.%.**

| Statistic | Average Formula | Formula weight (g/mole) | AP/ S wt.% | AP / mineral wt.% |
|---|---|---|---|---|
| Pyrite | $FeS_2$ | 120 | 31.25 | 18.75 |
| Pyrrhotite* | $Fe_{(1-x)}S$ | 80.7 | 27.19 | 12.12 |
| Arsenopyrite | FeAsS | 100 | 62.5 | 13.81 |

**Notes:**
*X=0.13 from TIMA analysis of %S and %Fe (described in Section 4.1.2.6)
Arsenopyrite AP estimates assume oxidization occurs at pH 6.8-11.9

Arsenopyrite was the only As bearing mineral identified by XRD, and the dominance of this mineral in As deportment was confirmed by TIMA (Table 5-2). Therefore, the portion of sulphide S comprised of arsenopyrite can be estimated directly from total As measured in metal assays. The relative abundance of pyrite and pyrrhotite cannot be distinguished from elemental data. Therefore, mineralogical characterization results were used to estimate the relative abundance of pyrite and pyrrhotite in mine rock lithologies, as shown in Table 5-3. Pyrrhotite composition is estimated to be dominant (>85%) in all rock units except GB, UV and VO where pyrite is more common. The relative proportions of pyrite and pyrrhotite shown in Table 5-3 are used in the site-specific AP calculations.

**Table 5-3:**
**Estimated % Pyrite and Pyrrhotite Composition Normalized to Sulphur Content in Mine Rock Lithologies and Whole Ore Tailings**

| Lithology/Mine Material | Pyrite | Pyrrhotite |
|---|---|---|
| GB | 100% | - |
| IF | 15% | 85% |
| SE | 12% | 88% |
| TIRFM | 15% | 85% |
| UOFM | 15% | 85% |
| UV | 100% | - |
| VO | 100% | - |
| Whole Ore Tailings | 10% | 90% |

For derivation of site-specific AP, sulfide associated with arsenopyrite was subtracted from the sulfide-S measurement. The remaining sulfide-S was then apportioned to pyrite and pyrrhotite fractions, according to the relative composition provided in Table 5-3. AP conversions per sulphur content were then applied for pyrite, pyrrhotite and arsenopyrite

(Table 5-1) and summed to produce a site-specific AP estimate. The equations to derive site specific AP are provided below:

$$\text{Sulphide-S wt.\%}_{(py+po)} = [\textit{Sulphide-S wt.\%}] - ([\textit{As } \mu g/g] \times \frac{\text{Sulphur g/mol}}{\text{As g/mol}} \times 10^{-4})$$

$$\text{Arsenopyrite AP} = ([\textit{As } \mu g/g] \times \frac{\text{Sulphur g/mol}}{\text{As g/mol}} \times 10^{-4}) \times [\text{AP}_{(AS)} / \text{S wt.\%}]$$

$$\text{Pyrrhotite AP} = [\text{Sulphide-S wt.\%}_{(py+po)}] \times [\text{\% Pyrrhotite by lithology}] \times [\text{AP}_{(PO)} / \text{S wt.\%}]$$

$$\text{Pyrite AP} = [\text{Sulphide-S wt.\%}_{(py+po)}] \times [\text{\% Pyrite by lithology}] \times [\text{AP}_{(PY)} / \text{S wt.\%}]$$

$$\text{Site-Specific AP} = \text{Arsenopyrite AP} + \text{Pyrrhotite AP} + \text{Pyrite AP}$$

In this series of equations, $AP_{(AS)}$ $AP_{(PO)}$ and $AP_{(PY)}$ represent the amount of AP generated per wt.% S as outlined in Table 5-2. The % Pyrrhotite and % Pyrite by lithology refers to the relative abundance of these two sulfides estimated from XRD results, shown in Table 5-3. Analytical data required to perform the above calculation for a given sample are limited to sulfide-S wt.% and As ug/g (shown in italics).

The relationship between site-specific AP with MAP and SAP is presented for waste rock and ore by lithology in Figure 5-2. Overall, these results show MAP tends to overestimate site specific AP. This overestimate is driven by the presence of sulphate minerals which are incorporated into the MAP calculation but are not expected to contribute acidity. Sulphide AP and site-specific AP tend to produce similar results. The largest divergence between SAP and site-specific AP occurs in ore samples where arsenopyrite is the dominant sulphide mineral, leading to SAP underestimating the site-specific AP. Conversely, SAP tends to slightly overestimate site-specific AP in waste rock samples where pyrrhotite is the dominant sulphide mineral and arsenopyrite is relatively rare.

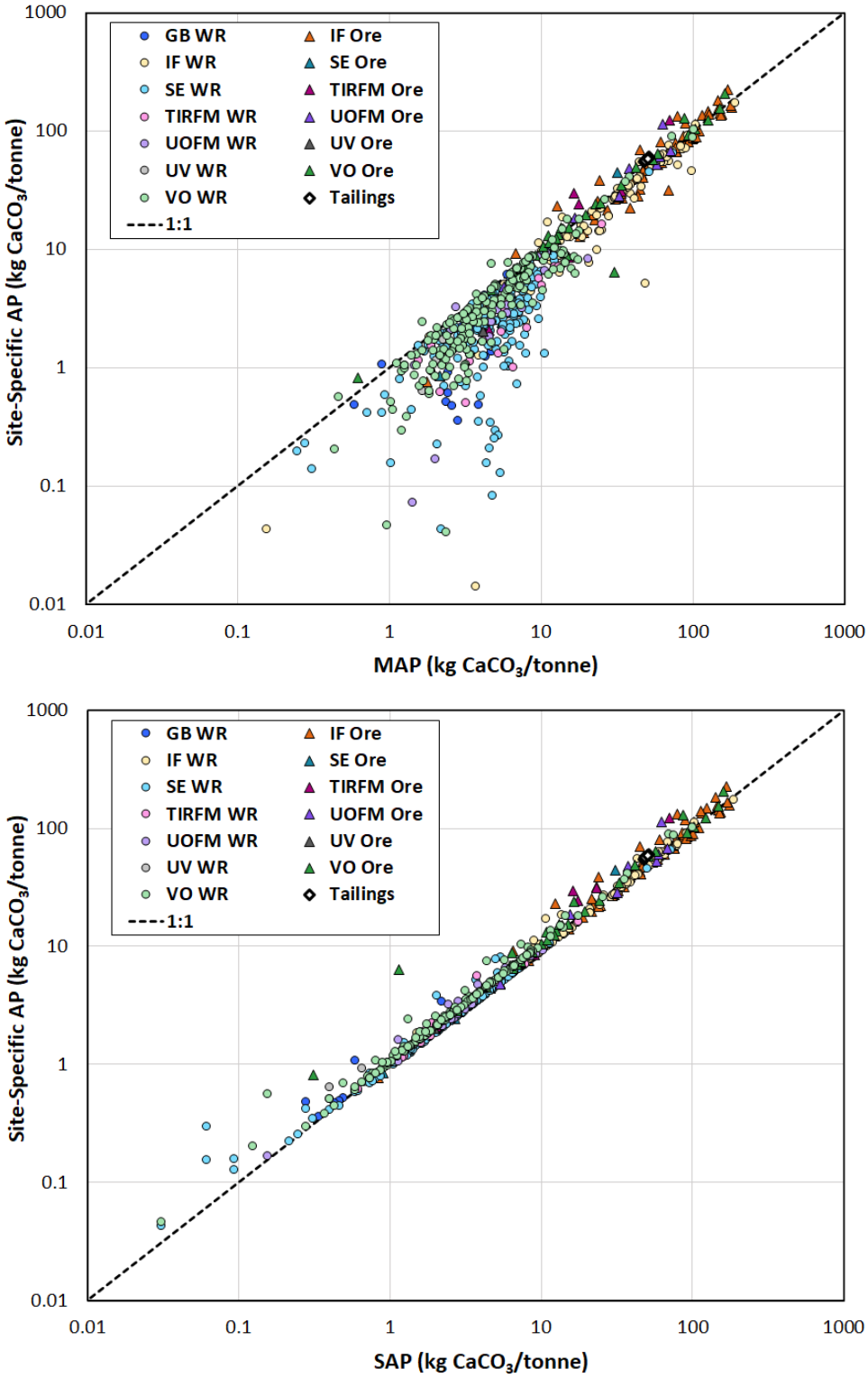



**Figure 5-2: Site-Specific AP versus AP for waste rock and ore lithologies (calculated from total-S) and tailings samples (calculated from sulphide-S).**

### 5.2.2 Neutralization Potential

Neutralization potential provides an estimate of a geologic material's ability to neutralize acidity generated from sulphide mineral oxidation. Analytical methods used in ABA analyses to measure NP at Meliadine include CaNP, mod-NP, and mod-sid NP (Section 3.2.2). Each method has certain limitations governed by the mineralogy of NP bearing minerals and the specifics of analytical methodologies. For example, the standard calculation for CaNP from TIC content assumes that Ca or Mg carbonates (calcite and dolomite) are the only carbonate minerals contributing to the NP of a sample (Table 5-4). This would result in an overestimation of NP for lithologies where ankerite or siderite are present, namely the IF, TIRFM and UOFM units. Methodologies such as the siderite correction technique attempt to account for non-NP bearing carbonate minerals. However, this technique can only be applied to titration-based methods (*e.g.*, mod-NP) which may capture NP of reactive aluminosilicate minerals which are not capable of maintaining neutral pH conditions in the face of sulphide oxidation. Furthermore, the siderite correction technique itself can introduce errors associated with incomplete removal of unreacted $H_2O_2$ before leachate titration.

In this section, four NP estimates are presented. These include three NP estimates generated directly from ABA analytical results (mod-sid NP, CaNP and mod-NP,), and a fourth method which applies an adjustment to the CaNP measurement (CaNP-adj) to account for the presence of non-NP bearing carbonate minerals.

**Table 5-4:**
**Carbonate Mineral Specific NP Calculations for the Carbonate Mineral Assemblage Present at Meliadine**

| Mineral | Formula | Dissolution Reaction |
|---|---|---|
| Calcite | $CaCO_3$ | $CaCO_3 + 2\ H^+ = Ca^{2+} + CO_2(g) + H_2O$ |
| Dolomite | $CaMg(CO_3)_2$ | $CaMg(CO_3)_2 + 4\ H^+ = Ca^{2+} + 2\ CO_2(g) + Mg^{2+} + 2\ H_2O$ |
| Siderite | $FeCO_3$ | $FeCO_3 + 1.5\ H_2O + 0.25\ O_{2(aq)} = CO_2(g) + Fe(OH)_3$ |
| Ankerite | $Ca(Fe,Mg,Mn)(CO_3)_2$ | $CaMg(CO_3)_2 + 4\ H^+ = Ca^{2+} + 2\ CO_2(g) + Mg^{2+} + 2\ H_2O$ |
| | | $CaFe(CO_3)_2 + 2\ H^+ + 0.25\ O_2(aq) = Ca^{2+} + 2\ CO_2(g) + Fe(OH)_3 + 2\ H_2O$ |
| | | $CaMn(CO_3)_2 + 2\ H^+ + 0.25\ O_2(aq) = Ca^{2+} + 2\ CO_2(g) + MnO(OH) + 2\ H_2O$ |

**Notes:**
Reaction stoichiometry assumes aerobic open system.

#### *5.2.2.1 Modified-Siderite Neutralization Potential*

The mod-sid NP test method uses a siderite correction step designed to account for non-NP bearing Fe or Mn carbonate minerals that can interfere with other NP analyses. This is done by adding a 5 ml of 30% hydrogen peroxide ($H_2O_2$) to 100ml of the NP solution after the initial acid titration step to oxidize residual $Fe^{2+}$ and $Mn^{2+}$. The procedure is otherwise identical to the non-siderite corrected mod-NP approach. Without analytical interferences, the mod-sid NP method should produce identical or lower NP estimates compared to the mod-NP method.

Results for mod-sid NP are compared to other NP methods for 7 samples where siderite was identified by XRD in Table 5-5. The results show that mod-sid NP produces a much lower NP estimate compared to CaNP, which is an expected result in siderite bearing samples. However, mod-sid NP produces a higher estimate compared to mod-NP measurements where the siderite correction was not applied. This result can likely be explained by two processes:

- Minimal unoxidized $Fe^{2+}$and $Mn^{2+}$ remains in the NP solution before the siderite correction step.
- During the siderite correction step, the solution is boiled to remove residual $H_2O_2$. This can also volatilize HCl amended in the acid titration step, thereby leaving less acidity in the solution to backtitrate in the subsequent base titration step.

Overall, the results show that the siderite correction method biases NP results upward compared to the mod-NP method. This is likely caused by analytical interferences and is not reflective of mineral characteristics in the test sample. Therefore, the mod-sid NP method is not used in subsequent calculations of ARD potential.

**Table 5-5:**
**Comparison of Neutralization Potential Methods in Samples where Siderite was Detected by X-ray Diffraction**

| ID | Deposit | Ore/Waste | Lith. | X-ray Diffraction Results | | | Acid Base Accounting Results | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Ankerite | Siderite | Dolomite | CaNP | Modified NP | Modified NP with Siderite Correction |
| | | | | wt.% | | | kgCaCO$_3$/t | | |
| M12-1559 | F Zone | Waste | IF | 11.85 | 0.90 | | 117 | 78 | 88 |
| M13-1977 | Pump | Waste | IF | 8.78 | 14.88 | | 190 | 71 | 80 |
| M12-1599 | Pump | Waste | IF | 6.87 | 9.88 | | 150 | 52 | 65 |
| M12-1767 | Tiriganiaq | Waste | IF | 7.19 | 5.74 | 12.40 | 218 | 141 | 164 |
| M12-1393 | Wesmeg | Waste | IF | 3.13 | 21.65 | | 212 | 55 | 84 |
| M13-1982 | Pump | Waste | IF | 1.50 | 21.06 | | 178 | 22 | 32 |
| M12-1510 | Wesmeg | Ore | IF | 8.50 | 16.38 | | 218 | 79 | 88 |

#### *5.2.2.2 Carbonate and Modified Neutralization Potential*

A comparison of CaNP and mod-NP can provide information about the NP sources and characteristics of carbonate minerals. If mod-NP is higher than CaNP, for example, it can be inferred there is measurable neutralization available from non-carbonate minerals. Conversely, if CaNP is greater than mod NP it suggests that non-NP bearing carbonate mineral such as siderite are present.

Figure 5-3 plots mod-NP as a function of CaNP for waste rock and ore samples from each lithologic unit. At higher NP levels (>20 kg $CaCO_3$ /tonne), the two methods show general agreement for most lithologies. The IF samples are known to contain significant siderite, resulting in CaNP significantly overestimating mod-NP in most samples from this rock type. Conversely, mod-NP tends to overestimate CaNP at lower NP values (< 10 kg $CaCO_3$/t). This result may be driven by dissolution of minor amounts of aluminosilicate during the titration-based mod-NP procedure. Minor amounts of aluminosilicate dissolution become more significant at lower NP values, resulting in the observed divergence.

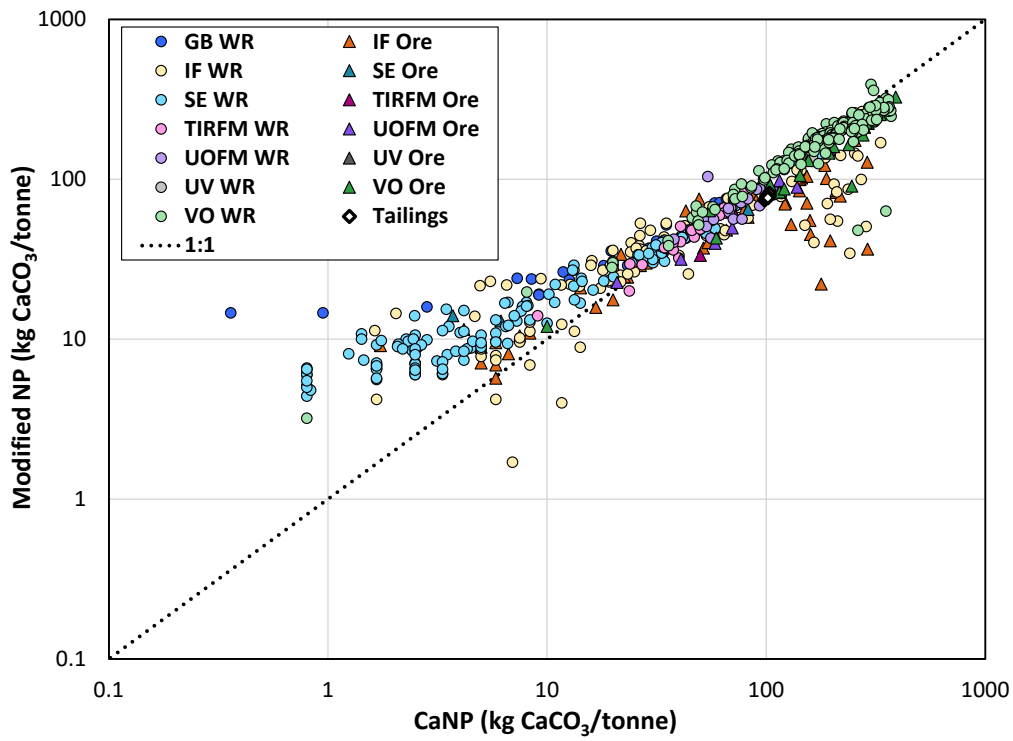



**Figure 5-3: Modified NP versus CaNP for waste rock and ore lithologies and tailings samples.**

These results show that both mod-NP and CaNP have certain limitations when applied to Meliadine Extension mine rock. The mod-NP is less affected by the presence of siderite which creates interferences for the CaNP method. However, mod-NP tends to overestimate CaNP in samples with minimal NP. Owing to the presence of non-NP contributing carbonate minerals (ankerite and siderite), a correction would need to be applied when applying CaNP to ARD classifications. In the next section, a correction is introduced to the CaNP method to produce a conservative estimate of NP for determination of ARD potential.

#### *5.2.2.3 Adjusted Carbonate Neutralization Potential*

An adjustment to the CaNP method (CaNP-adj) was developed to quantify NP based on the average composition of carbonate minerals present within each rock unit, consistent with the approach taken to estimate NP for the 2014 FEIS. To that end, the average carbonate mineral assemblage for each rock type measured by XRD was normalized to carbon content for the dominant rock units across all deposits (Table 5-6). The NP associated with each of these carbonate minerals is shown in Table 5-7. These values are calculated using the stoichiometry shown in Table 5-4, and average elemental composition for siderite and ankerite measured by EDX in Section 4.1.2.5.

To derive an estimate of CaNP-adj, TIC content was apportioned to the relative composition of carbonate minerals and converted to NP and summed. The equations to derive CaNP-adj are provided below:

Ankerite NP = [*TIC wt.%*] × [% Ankerite by lithology] × [$NP_{(AK)}$ /C wt.%]

Calcite NP = [*TIC wt.%*] × [% Calcite by lithology] × [$NP_{(CA)}$ /C wt.%]

Dolomite NP = [*TIC wt.%*] × [% Dolomite by lithology] × [$NP_{(DO)}$ /C wt.%]

Siderite NP = [*TIC wt.%*] × [% Siderite by lithology] × [$NP_{(SI)}$ /C wt.%]

CaNP-adj = Ankerite NP + Calcite NP + Dolomite NP + Siderite NP.

In these equations, $NP_{(AK)}$ $NP_{(CA)}$ $NP_{(DO)}$ $NP_{(SI)}$ represent the amount of NP generated per C wt.% from mineral dissolution, as shown in Table 5-7. The % mineral by lithology represents the apportionment of %C within each rock type, as shown in (Table 5-6). The only analytical data required to perform the above calculation for a given sample is TIC wt.%, (shown in italics).

**Table 5-6:**
**Estimated % Ankerite, Calcite and Siderite Composition Normalized to Carbon Content in Mine Rock Lithologies and Whole Ore Tailings**

| Deposit | Lithology | Ankerite | Calcite | Dolomite | Siderite | n XRD |
|---|---|---|---|---|---|---|
| Discovery | GB | *0%* | *100%* | *0%* | *0%* | *0* |
| | IF | 3% | 97% | 0% | 0% | 10 |
| | SE | 0% | 100% | 0% | 0% | 16 |
| Tiriganiaq, Wesmeg, Wesmeg North | GB | 0% | 100% | 0% | 0% | 1 |
| | IF | 33% | 43% | 4% | 19% | 12 |
| | SE | 52% | 44% | 4% | 0% | 9 |
| | TIRFM | 90% | 10% | 0% | 0% | 2 |
| | UOFM | 83% | 17% | 0% | 0% | 2 |
| | UV | *46%* | *54%* | *0%* | *0%* | *0* |
| | VO | 46% | 54% | 0% | 0% | 12 |
| F Zone and Pump | GB | *0%* | *100%* | *0%* | *0%* | *0* |
| | IF | 52% | 8% | 0% | 40% | 9 |
| | VO | 0% | 98% | 2% | 0% | 4 |

**Note:** Rock types not analyzed by XRD use the carbonate mineral assemblage from equivalent rock types in other deposits.

**Table 5-7:**
**Elemental composition of carbonate minerals and associated NP normalized to wt.%C and mineral wt.%.**

| Mineral | Average Formula | Formula weight (g/mole) | NP/ C wt.% | NP / mineral wt.% |
|---|---|---|---|---|
| Ankerite | $Ca_{0.52}\,Fe_{0.27}\,Mg_{0.20}\,Mn_{0.01}\,CO_3$ | 101 | 60.0 | 7.1 |
| Siderite | $Fe_{0.83}\,Ca_{0.15}\,Mg_{0.02}\,Mn_{0.00}\,CO_3$ | 113 | 14.2 | 1.5 |
| Calcite | $CaCO_3$ | 100 | 83.3 | 10.0 |
| Dolomite | $(Ca, Mg)CO_3$ | 92 | 83.3 | 10.9 |

The CaNP-adj values generated from the above equation are compared to mod NP and CaNP in Figure 5-4. Comparison of CaNP-adj shows consistently lower NP estimates compared to CaNP, which is consistent with the presence of siderite or ankerite in most rock types. Comparison to mod-NP shows that CaNP-adj generally produces more conservative NP estimates. However, a number of samples from the IF lithology show that CaNP-adj is overestimating the mod NP, indicating that the adjustment does not fully account for siderite content in all samples. This is a significant limitation of the CaNP-adj estimate, as the IF lithology shows the greatest ARD potential of any Meliadine Extension mine rock. Moving forward both the CaNP-adj and mod-NP methods will be used to classify ARD potential. Details of the ARD classification scheme are provide in the next section.

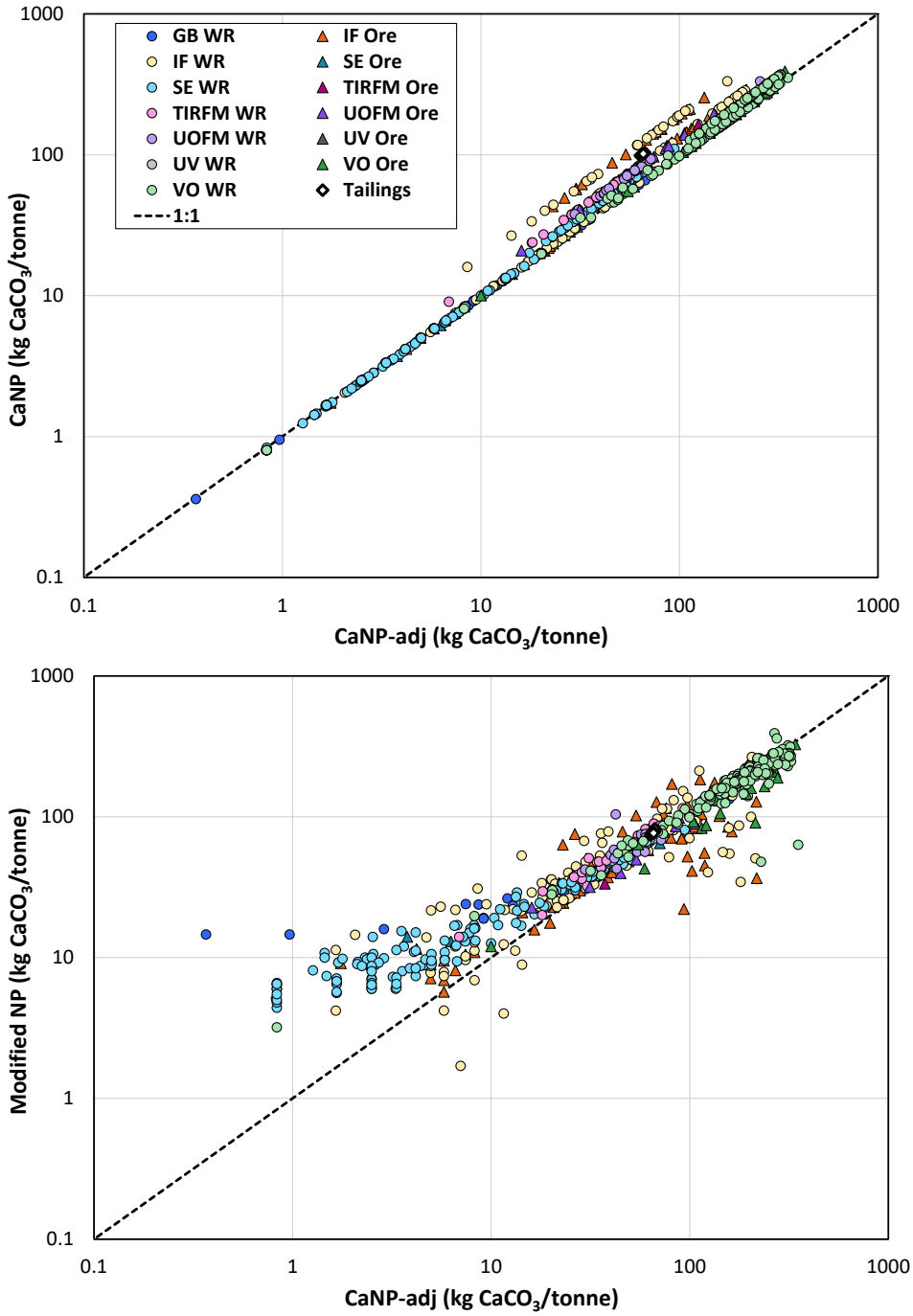



**Figure 5-4: CaNP-adj versus CaNP (top) and modified NP (bottom) for waste rock and ore lithologies and tailings samples.**

## 5.3 Application of Acid Rock Drainage Screening Criteria

In this section, NPR and NAG pH results produced from static testwork are screened using the ARD classification criteria defined in Section 5.1. The screening criteria for ore and waste rock includes NPR calculated by two methods (CaNP-adj/MAP and Mod NP/MAP) as well as NAG pH. The screening criteria for tailings is similar, with the difference being an NPR cutoff of 1.2 to define PAG and non-PAG, and SAP used in place of MAP in NPR calculations.

### 5.3.1 Waste rock and Ore

The two calculations used to derive NPR values are compared against one another in Figure 5-5. Samples are only classified as PAG or non-PAG if both NPR methods produce values <2 or >2, respectively. For intermediate NPR values (2>NPR>1) or when samples have a split classification (non-PAG and PAG), the samples are classified as Uncertain (Section 5). Note that both NPR calculations use MAP in the denominator, so any discrepancy between NPR estimates can be entirely attributed to differences in CaNP-adj and mod-NP.

In general, these methods show broad agreement in ARD classification, with IF samples forming a majority of samples classified as PAG or Uncertain, while other lithologies (VO, UV, TIFM, UOFM) are typically classified as non-PAG. The largest discrepancies between the methods were found for SE and GB where mod-NP is elevated relative to CaNP-adj (Figure 5-4). These lithologies would largely be classified as non-PAG based on mod-NP NPRs alone. However, the relatively low NPR values calculated from CaNP-adj results in an overall Uncertain classification for many of the GB and SE samples (Section 5). Most of the GB and SE samples classified as Uncertain originate from the Discovery deposit.

The NPR results are compared with NAG pH in Figure 5-6. Any sample with a NAG pH <4.5 is classified as PAG, regardless of NPR value (Section 5). Note that only a subset of samples collected for the 2014 FEIS were submitted for NAG pH testing, preventing this screening criteria from being applied to the entire dataset. Most samples with NAG pH <4.5 also have an NPR <1. Of samples with NAG pH <4.5, only 8 have CaNP-adj NPRs >1, and 4 have mod-NP NPRs >1. There is notably better alignment of SE and GB lithologies with the mod-NP versus CaNP-adj NPR values. Suggesting that the mod-NP more accurately characterizes the available NP of these lithologies compared to CaNP-adj. Ultimately, applying the NAG pH screening criteria for PAG classification only impacts the classification of 8 samples (*e.g.,* samples one or both NPRs >1 with NAG pH <4.5). Most of these samples would otherwise have been classified as Uncertain owing to the elevated CaNP-adj NPR values.

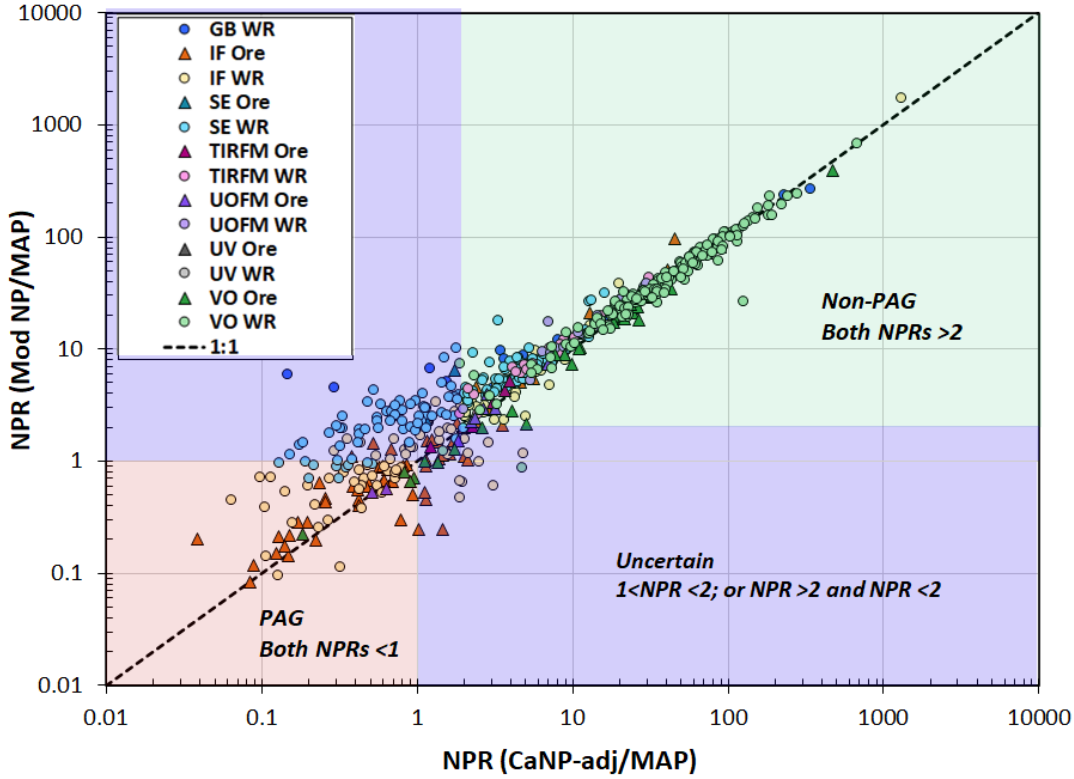



**Figure 5-5: NPR (CaNP-adj/MAP) versus NPR (Mod NP/AP) with waste rock and ore classifications for ARD potential superimposed.**

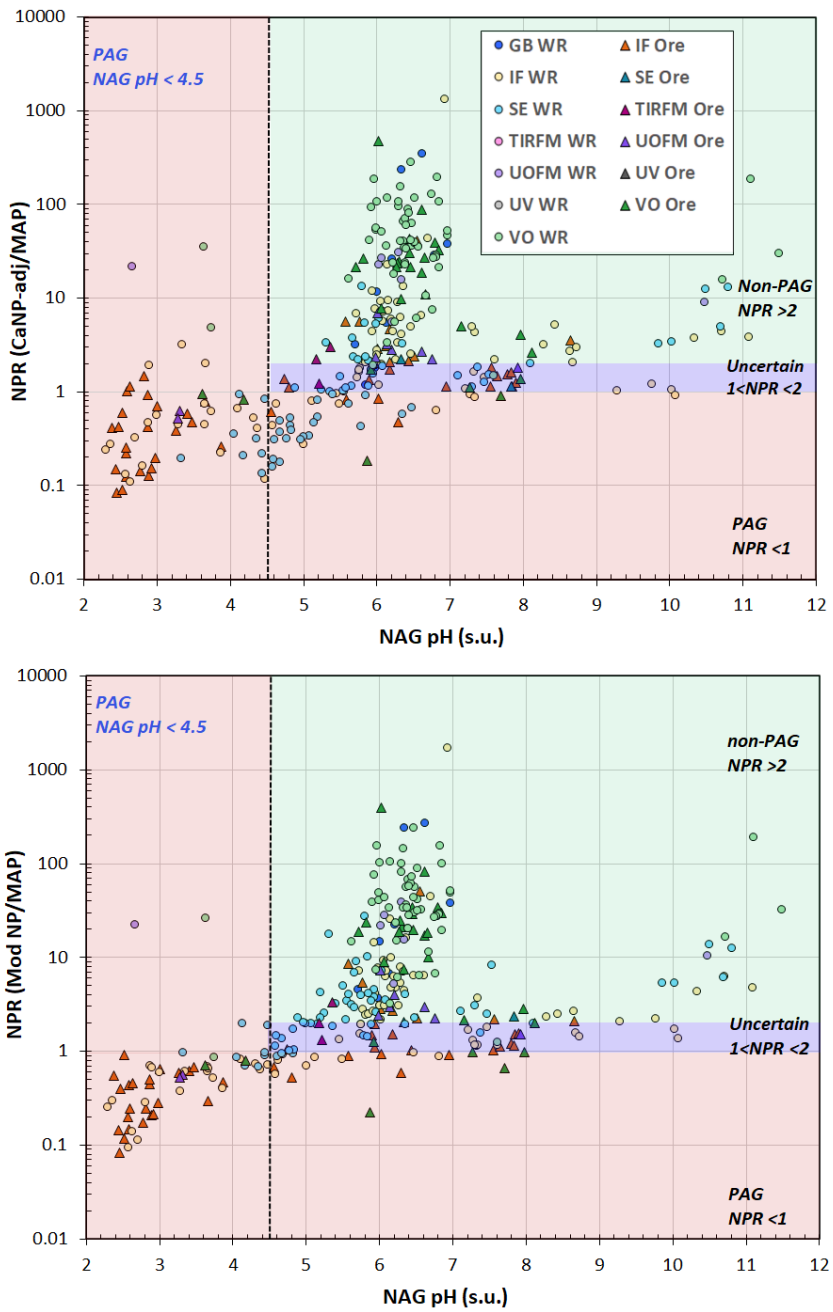



**Figure 5-6: NAG pH versus NPR (CaNP-adj/MAP; top) and NPR (Mod NP/MAP; bottom) with waste rock and ore ARD Classification superimposed.**

### 5.3.2 Tailings

Characterization of ore samples can provide information on the geochemical heterogeneity of tailings for the Meliadine Extension. Ore processing at Meliadine consist of a whole ore leach process where solids separation is limited to gravity separation of free gold. Hence, processing will have little impact on sulphide or carbonate mineral abundance. The

addition of lime within the mill may increase the NP of tailings relative to ore. Hence, ABA and NAG pH results from ore are expected to provide a conservative estimate of tailings ARD potential at Meliadine.

The two calculations used to derive NPR values are compared against one another in Figure 5-7. Samples are only classified as PAG or non-PAG if both NPR methods produce values <1.2 or >1.2, respectively. For samples with a split classification (non-PAG and PAG), the samples are classified as Uncertain (Section 5). Note that both NPR calculations use SAP in the denominator, so any discrepancy between NPR estimates can be entirely attributed to differences in CaNP-adj and mod-NP.

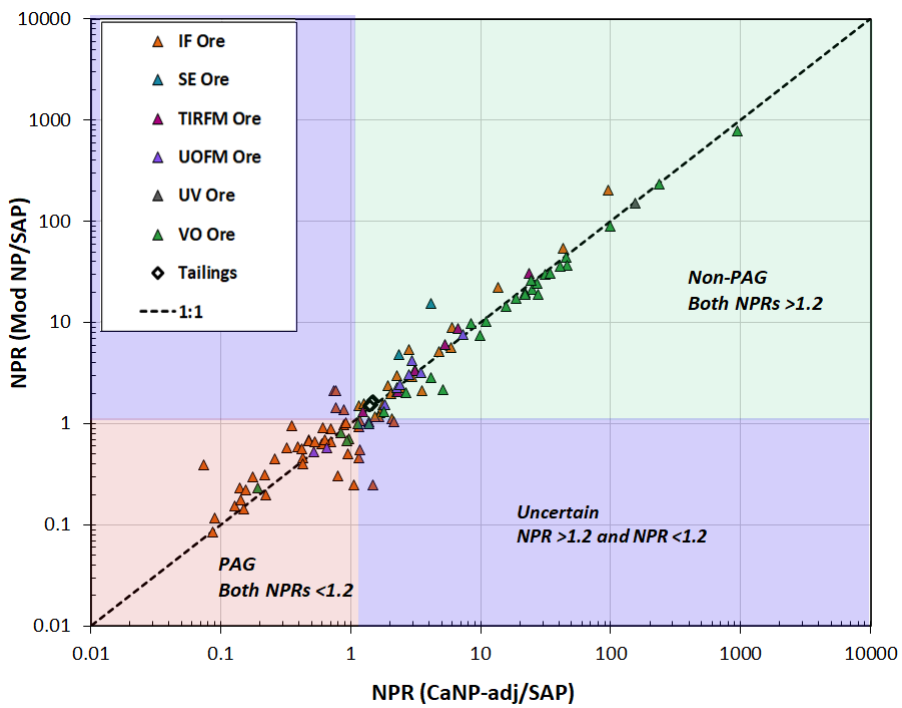



**Figure 5-7: NPR (CaNP-adj/SAP) versus NPR (Mod NP/SAP) results for ore samples compared with tailings classifications for ARD potential superimposed.**

In general, these methods show broad agreement in ARD classification, with IF samples forming a majority of samples classified as PAG or Uncertain, while other lithologies (TIRFM, UOFM, UV, VO) are typically classified as non-PAG. The largest discrepancies between the methods were found for SE and GB where mod-NP is elevated relative to CaNP-adj (Figure 5-4). These lithologies would largely be classified as non-PAG based on mod-NP NPRs alone. However, the relatively low NPR values calculated from CaNP-adj results in an overall Uncertain classification for many of the GB and SE samples

(Section 5). Most of the GB and SE samples classified as Uncertain originate from the Discovery deposit.

The NPR results are compared with NAG pH in Figure 5-6. Any sample with a NAG pH <4.5 is classified as PAG, regardless of NPR value (Section 5.1). Only a single sample with NPR >1.2 has a NAG pH <4.5. Hence, this screening criteria has minimal impact on the overall ARD classification.

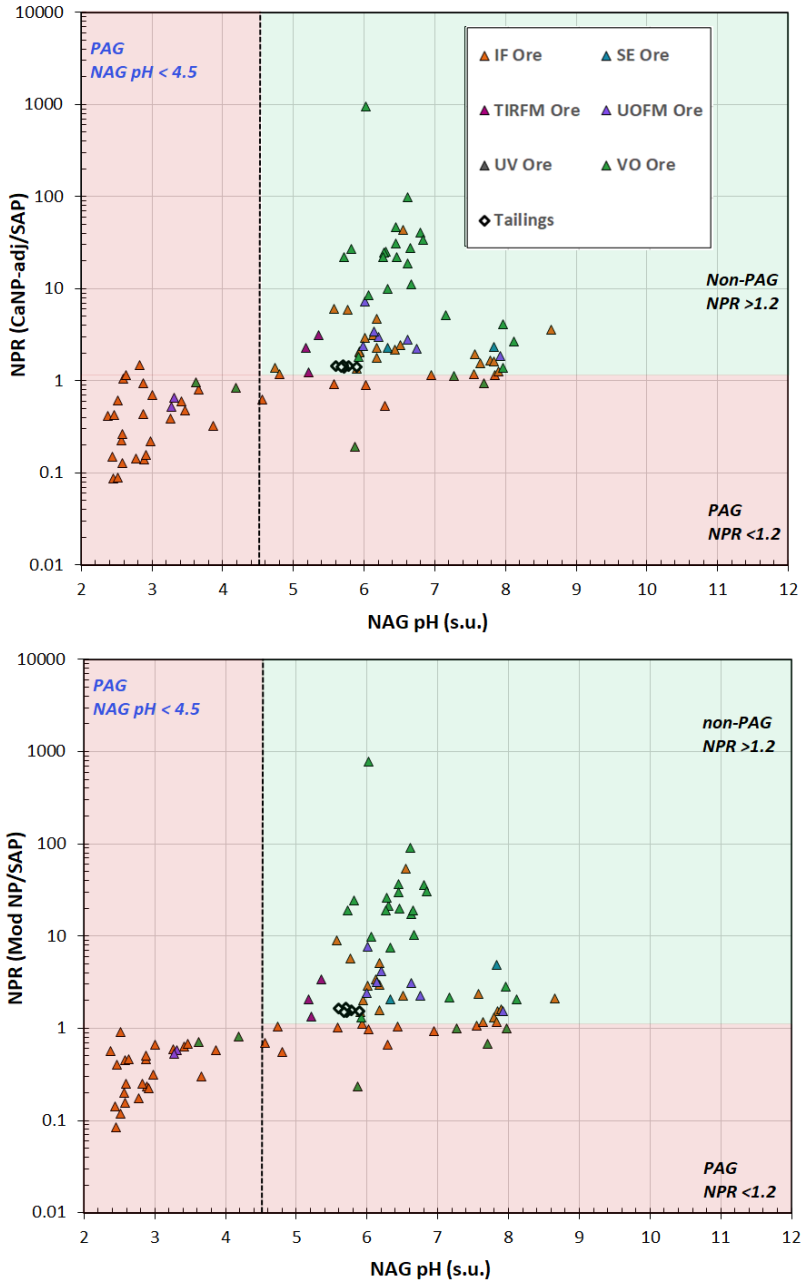



**Figure 5-8: NAG pH versus NPR (CaNP-adj/SAP; top) and NPR (Mod NP/SAP; bottom) with tailings ARD Classification superimposed.**

## 5.4 Distribution of Acid Generation Potential at Meliadine

### 5.4.1 Waste Rock

The distribution of PAG, Uncertain, and non-PAG ore and waste rock are presented by lithologic unit for each deposit in Table 5-8 to Table 5-13. Most waste rock and ore samples classified as Uncertain or PAG originate from the IF lithology. Fifty percent or more of IF waste rock at Pump, Discovery, F Zone, and Wesmeg is classified as PAG or Uncertain (50%, 61%, 84% and 88%, respectively). Tiriganiaq and Wesmeg North show notably lower ARD potential in IF waste rock. A majority of the Tiriganiaq IF waste rock is classified as non-PAG (79%), and all samples from Wesmeg North were classified as non-PAG. Note that the absence of PAG IF samples at Wesmeg North may be a relic of the relatively small number of IF samples at this deposit (n=4) where IF makes up a small portion of the total waste rock. Non-IF waste rock samples classified as PAG or Uncertain are rare outside of the Discovery deposit. At Discovery, most SE waste rock (72%) and a portion of GB waste rock (43%) is classified as PAG or Uncertain. The elevated ARD potential of waste rock at Discovery is related to the lower NP which characterizes Discovery mine rock (Table 4-3 and Table 4-4). The SE lithology is also classified as Uncertain at Wesmeg North. Beyond Wesmeg North and Discovery, all occurrences of SE and GB lithologies are uniformly classified as non-PAG.

The ARD classification of various lithologies from each deposit is combined with the excavation tonnages shown in Table 3-2 and Table 3-3 to estimate the relative tonnage of non-PAG versus PAG and Uncertain mine rock from each deposit shown in Figure 5-9. Note that mine rock at Tiriganiaq-Wolf is classified by assigning the ARD potential found at Tiriganiaq, which is the most proximate deposit to Tiriganiaq-Wolf and hosts similar mineralization (Section 2.2.1). Overall, the results show that minimal PAG or Uncertain waste rock will be produced from open pit deposits outside of Discovery (Figure 5-9). Approximately 62% of Discovery waste rock is expected to be classified as PAG or Uncertain. Excluding Discovery, approximately 5% of total waste rock from open pit deposits are expected to be classified as PAG or Uncertain. The limited potential for ARD in other deposits is mainly related to the minimal amounts of IF waste rock that are expected to be produced. Outside of Discovery, the largest sources of IF waste rock are Wesmeg and Tiriganiaq open pits which are each expected to produce approximately 3.4 Mt of IF waste. The IF waste rock at Tiriganiaq shows lower ARD potential compared to other deposits Table 5-11. The IF waste at Wesmeg tends to show greater ARD potential, and this deposit will be the largest potential source of PAG or Uncertain mine waste outside of Discovery. The ARD potential associated with Discovery open pit waste rock will be mitigated through construction of a thermal cover, as discussed in OKC (2022a).

## Table 5-8: Classification of Discovery Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| GB | Waste Rock | *Total No. Samples* | *14* | | *14* | | *5* | | *14* | |
| | | Non-PAG | 8 | 57% | 14 | 100% | 5 | 100% | 8 | 57% |
| | | Uncertain | 4 | 29% | 0 | 0% | 0 | 0% | 6 | 43% |
| | | PAG | 2 | 14% | 0 | 0% | 0 | 0% | 0 | 0% |
| IF | Waste Rock | *Total No. Samples* | *64* | | *64* | | *43* | | *64* | |
| | | Non-PAG | 25 | 39% | 30 | 47% | 27 | 63% | 25 | 39% |
| | | Uncertain | 9 | 14% | 9 | 14% | 0 | 0% | 15 | 23% |
| | | PAG | 30 | 47% | 25 | 39% | 16 | 37% | 24 | 38% |
| | Ore | *Total No. Samples* | *21* | | *21* | | *17* | | *21* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 5 | 29% | 0 | 0% |
| | | Uncertain | 1 | 5% | 1 | 5% | 0 | 0% | 1 | 5% |
| | | PAG | 20 | 95% | 20 | 95% | 12 | 71% | 20 | 95% |
| SE | Waste Rock | *Total No. Samples* | *96* | | *96* | | *60* | | *96* | |
| | | Non-PAG | 27 | 28% | 67 | 70% | 52 | 87% | 27 | 28% |
| | | Uncertain | 22 | 23% | 19 | 20% | 0 | 0% | 57 | 59% |
| | | PAG | 47 | 49% | 10 | 10% | 8 | 13% | 12 | 13% |
| | Ore | *Total No. Samples* | *2* | | *2* | | *1* | | *2* | |
| | | Non-PAG | 0 | 0% | 2 | 100% | 1 | 100% | 0 | 0% |
| | | Uncertain | 2 | 100% | 0 | 0% | 0 | 0% | 2 | 100% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| TIRFM | Waste Rock | *Total No. Samples* | *3* | | *3* | | *0* | | *3* | |
| | | Non-PAG | 3 | 100% | 3 | 100% | *NA* | *NA* | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |

**Notes**:
*n* = number of analyses included in distribution.
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
NA- not applicable

## Table 5-9: Classification of F Zone Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| IF | Waste Rock | *Total No. Samples* | *13* | | *13* | | *8* | | *13* | |
| | | Non-PAG | 2 | 15% | 4 | 31% | 8 | 100% | 2 | 15% |
| | | Uncertain | 4 | 31% | 3 | 23% | 0 | 0% | 5 | 38% |
| | | PAG | 7 | 54% | 6 | 46% | 0 | 0% | 6 | 46% |
| | Ore | *Total No. Samples* | *9* | | *9* | | *6* | | *9* | |
| | | Non-PAG | 2 | 22% | 2 | 22% | 3 | 50% | 2 | 22% |
| | | Uncertain | 2 | 22% | 4 | 44% | 0 | 0% | 4 | 44% |
| | | PAG | 5 | 56% | 3 | 33% | 3 | 50% | 3 | 33% |
| VO | Waste Rock | *Total No. Samples* | *60* | | *60* | | *12* | | *60* | |
| | | Non-PAG | 60 | 100% | 60 | 100% | 12 | 100% | 60 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *4* | | *4* | | *4* | | *4* | |
| | | Non-PAG | 4 | 100% | 4 | 100% | 4 | 100% | 4 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| VO/IF | Ore | *Total No. Samples* | *3* | | *3* | | *3* | | *3* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 3 | 100% | 0 | 0% |
| | | Uncertain | 1 | 33% | 0 | 0% | 0 | 0% | 1 | 33% |
| | | PAG | 2 | 67% | 3 | 100% | 0 | 0% | 2 | 67% |

**Notes**:
*n* = number of analyses included in distribution.
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
NA- not applicable

# Table 5-10: Classification of Pump Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| GB | Waste Rock | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| IF | Waste Rock | *Total No. Samples* | *10* | | *10* | | *6* | | *10* | |
| | | Non-PAG | 5 | 50% | 5 | 50% | 6 | 100% | 5 | 50% |
| | | Uncertain | 1 | 10% | 5 | 50% | 0 | 0% | 5 | 50% |
| | | PAG | 4 | 40% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *9* | | *9* | | *5* | | *9* | |
| | | Non-PAG | 2 | 22% | 2 | 22% | 2 | 40% | 2 | 22% |
| | | Uncertain | 4 | 44% | 3 | 33% | 0 | 0% | 3 | 33% |
| | | PAG | 3 | 33% | 4 | 44% | 3 | 60% | 4 | 44% |
| VO | Waste Rock | *Total No. Samples* | *27* | | *27* | | *12* | | *27* | |
| | | Non-PAG | 26 | 96% | 26 | 96% | 10 | 83% | 24 | 89% |
| | | Uncertain | 1 | 4% | 0 | 0% | 0 | 0% | 1 | 4% |
| | | PAG | 0 | 0% | 1 | 4% | 2 | 17% | 2 | 7% |
| | Ore | *Total No. Samples* | *3* | | *3* | | *3* | | *3* | |
| | | Non-PAG | 3 | 100% | 3 | 100% | 3 | 100% | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| VO/IF | Ore | *Total No. Samples* | *3* | | *3* | | *3* | | *3* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 2 | 67% | 0 | 0% |
| | | Uncertain | 2 | 67% | 1 | 33% | 0 | 0% | 2 | 67% |
| | | PAG | 1 | 33% | 2 | 67% | 1 | 33% | 1 | 33% |

**Notes**:
*n* = number of analyses included in distribution.
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
NA- not applicable

# Table 5-11: Classification of Tiriganiaq Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| GB | Waste Rock | *Total No. Samples* | *6* | | *6* | | *0* | | *6* | |
| | | Non-PAG | 6 | 100% | 6 | 100% | *NA* | *NA* | 6 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| IF | Waste Rock | *Total No. Samples* | *14* | | *14* | | *12* | | *14* | |
| | | Non-PAG | 12 | 86% | 11 | 79% | 11 | 92% | 11 | 79% |
| | | Uncertain | 1 | 7% | 2 | 14% | 0 | 0% | 2 | 14% |
| | | PAG | 1 | 7% | 1 | 7% | 1 | 8% | 1 | 7% |
| | Ore | *Total No. Samples* | *15* | | *15* | | *15* | | *15* | |
| | | Non-PAG | 6 | 40% | 6 | 40% | 12 | 80% | 5 | 33% |
| | | Uncertain | 5 | 33% | 4 | 27% | 0 | 0% | 6 | 40% |
| | | PAG | 4 | 27% | 5 | 33% | 3 | 20% | 4 | 27% |
| SE | Waste Rock | *Total No. Samples* | *76* | | *76* | | *3* | | *76* | |
| | | Non-PAG | 76 | 100% | 76 | 100% | 3 | 100% | 76 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| TIRFM | Waste Rock | *Total No. Samples* | *17* | | *17* | | *0* | | *17* | |
| | | Non-PAG | 16 | 94% | 17 | 100% | *NA* | *NA* | 16 | 94% |
| | | Uncertain | 1 | 6% | 0 | 0% | *NA* | *NA* | 1 | 6% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | Ore | *Total No. Samples* | *6* | | *6* | | *3* | | *6* | |
| | | Non-PAG | 5 | 83% | 5 | 83% | 3 | 100% | 5 | 83% |
| | | Uncertain | 1 | 17% | 1 | 17% | 0 | 0% | 1 | 17% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |

## Table 5-11 (continued): Classification of Tiriganiaq Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| UOFM | Waste Rock | *Total No. Samples* | *21* | | *21* | | *7* | | *21* | |
| | | Non-PAG | 21 | 100% | 21 | 100% | 6 | 75% | 20 | 95% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 1 | 13% | 1 | 5% |
| | Ore | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 6 | 75% | 6 | 75% | 7 | 88% | 6 | 75% |
| | | Uncertain | 1 | 13% | 1 | 13% | 0 | 0% | 1 | 13% |
| | | PAG | 1 | 13% | 1 | 13% | 1 | 13% | 1 | 13% |
| UOFM/IF | Ore | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| VO | Waste Rock | *Total No. Samples* | *29* | | *29* | | *3* | | *29* | |
| | | Non-PAG | 29 | 100% | 29 | 100% | 3 | 100% | 29 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *3* | | *3* | | *0* | | *3* | |
| | | Non-PAG | 3 | 100% | 3 | 100% | *NA* | *NA* | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |

**Notes**:
*n* = number of analyses included in distribution.
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
NA- not applicable

# Table 5-12: Classification of Wesmeg Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| GB | Waste Rock | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| IF | Waste Rock | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 6 | 75% | 1 | 13% | 5 | 63% | 1 | 13% |
| | | Uncertain | 2 | 25% | 3 | 38% | 0 | 0% | 4 | 50% |
| | | PAG | 0 | 0% | 4 | 50% | 3 | 38% | 3 | 38% |
| | Ore | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 2 | 25% | 1 | 13% | 5 | 63% | 1 | 13% |
| | | Uncertain | 4 | 50% | 3 | 38% | 0 | 0% | 4 | 50% |
| | | PAG | 2 | 25% | 4 | 50% | 3 | 38% | 3 | 38% |
| UV | Waste Rock | *Total No. Samples* | *4* | | *4* | | *0* | | *4* | |
| | | Non-PAG | 4 | 100% | 4 | 100% | *NA* | *NA* | 4 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | Ore | *Total No. Samples* | *1* | | *1* | | *0* | | *1* | |
| | | Non-PAG | 1 | 100% | 1 | 100% | *NA* | *NA* | 1 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| VO | Waste Rock | *Total No. Samples* | *48* | | *48* | | *6* | | *48* | |
| | | Non-PAG | 47 | 98% | 47 | 98% | 6 | 100% | 47 | 98% |
| | | Uncertain | 1 | 2% | 1 | 2% | 0 | 0% | 1 | 2% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *5* | | *5* | | *5* | | *5* | |
| | | Non-PAG | 5 | 100% | 5 | 100% | 5 | 100% | 5 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| VO/IF | Ore | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |

**Notes**:
*n* = number of analyses included in distribution.
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
NA- not applicable

## Table 5-13: Classification of Wesmeg North Waste Rock and Ore Acid Rock Drainage Potential by Lithology

| Lithology | Material Type | ARD Designation | NPR (CaNP-adj/MAP) | | NPR (Mod-NP/MAP) | | NAG pH | | Complete ARD Classification Scheme | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| GB | Waste Rock | *Total No. Samples* | *4* | | *4* | | *4* | | *4* | |
| | | Non-PAG | 4 | 100% | 4 | 100% | 4 | 100% | 4 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| IF | Waste Rock | *Total No. Samples* | *4* | | *4* | | *4* | | *4* | |
| | | Non-PAG | 4 | 100% | 4 | 100% | 4 | 100% | 4 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *2* | | *2* | | *2* | | *2* | |
| | | Non-PAG | 2 | 100% | 2 | 100% | 2 | 100% | 2 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| SE | Waste Rock | *Total No. Samples* | *2* | | *2* | | *2* | | *2* | |
| | | Non-PAG | 1 | 50% | 0 | 0% | 2 | 100% | 0 | 0% |
| | | Uncertain | 1 | 50% | 2 | 100% | 0 | 0% | 2 | 100% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| VO | Waste Rock | *Total No. Samples* | *22* | | *22* | | *22* | | *22* | |
| | | Non-PAG | 22 | 100% | 22 | 100% | 22 | 100% | 22 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | Ore | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 8 | 100% | 8 | 100% | 8 | 100% | 8 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |

**Notes**:
*n* = number of analyses included in distribution.
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
NA- not applicable

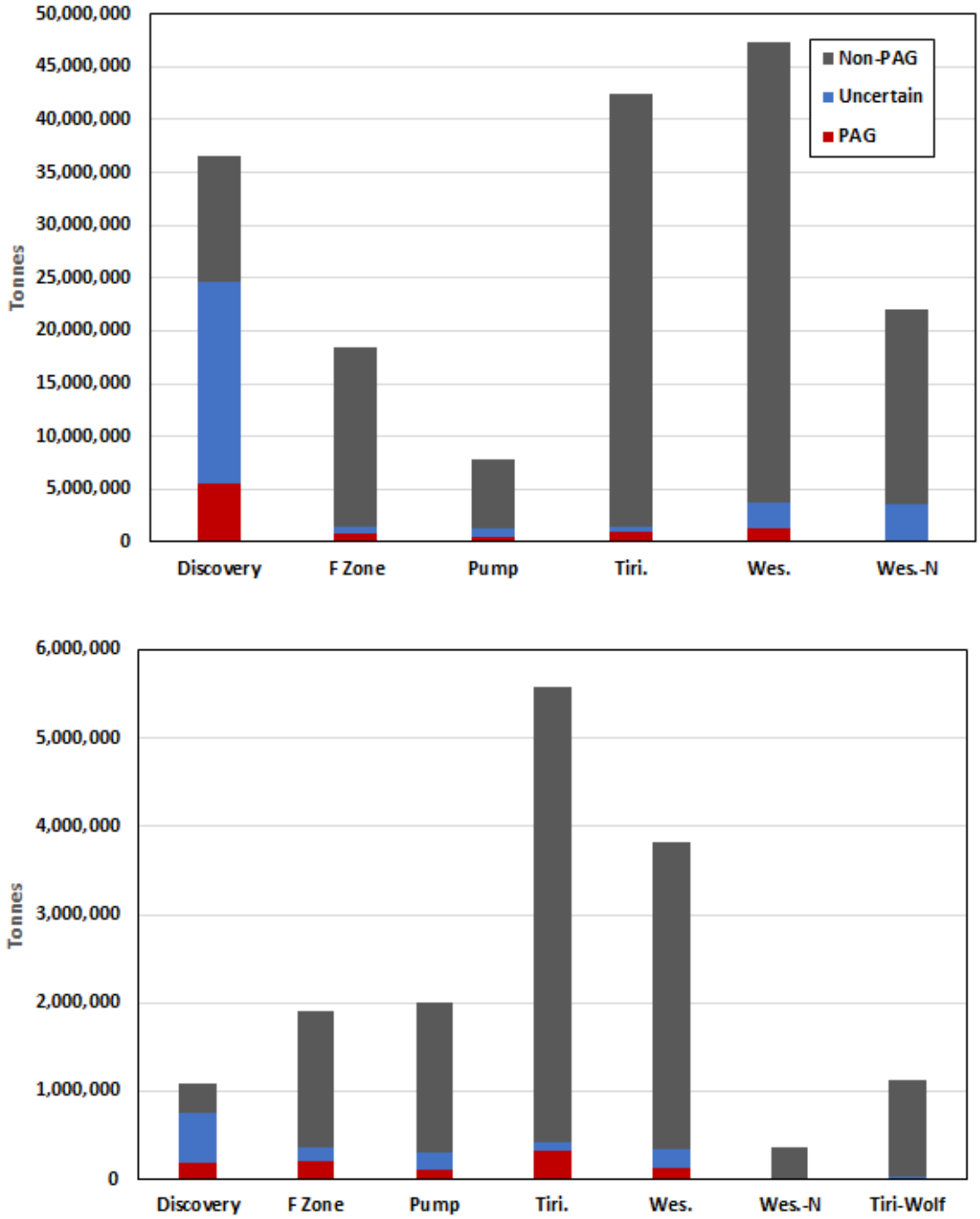



**Figure 5-9: Tonnage of open pit (top) and underground (bottom) waste rock predicted to be non-PAG or PAG/ Uncertain by deposit.**

The percentage of underground waste rock classified as PAG or Uncertain tends to be greater than adjacent open pits due to IF being more prevalent. Discovery is the only deposit where a majority of waste rock is classified as PAG or Uncertain. Excluding Discovery, approximately 10% of total waste rock from other underground deposits is expected to be classified as PAG or Uncertain. Note that all underground waste rock will be backfilled into the mine undergrounds before the end of operations, mitigating any ARD potential associated with these waste facilities.

### 5.4.2 Ore

In general, ore has greater ARD potential than the equivalent waste rock lithologies in each deposit owing to sulphide enrichment (Table 5-8 to Table 5-13). With the exception of Wesmeg North, a majority of IF ore samples are classified as PAG or Uncertain at all deposits. The highest ARD potential is associated with the Discovery deposit, where 100% of samples are classified as PAG (95%) or Uncertain (5%). The percent IF samples classified as PAG or Uncertain at F Zone, Pump, and Wesmeg range from 77% to 88%. Similar to waste rock, Tiriganiaq IF ore shows somewhat lower ARD potential, with only 67% of samples classified as PAG or Uncertain. Other ore lithologies where samples are classified as PAG or Uncertain include SE at Discovery (100%), UOFM at Tiriganiaq (25%) and TIRFM at Tiriganiaq (17%).

The ARD classification of various lithologies from each deposit is combined with the excavation schedule shown in Section 2.3 to estimate the relative tonnage of PAG and Uncertain open pit and underground ore in and Figure 5-10. Overall, a majority of ore from open pit deposits will be classified as non-PAG, with the exception of Discovery. The Discovery deposit produces a mixture of IF and SE, both of which are classified as PAG or Uncertain. The lower ARD potential at other deposits is related to differences in IF and SE composition, as well as the mixture of ore types being produced.

Similar to waste rock, the percentage of underground ore classified as PAG or Uncertain tends to be greater than adjacent open pits due to IF being more prevalent. Discovery is the only deposit where a majority of underground ore is classified as PAG or Uncertain. Significant proportions of underground ore from F Zone and Tiriganiaq-Wolf are also expected to be PAG or Uncertain (42% and 50%, respectively). All ore excavated from open pit and underground mines will be milled and deposited as tailings, the ARD potential of tailings is discussed in the next section.

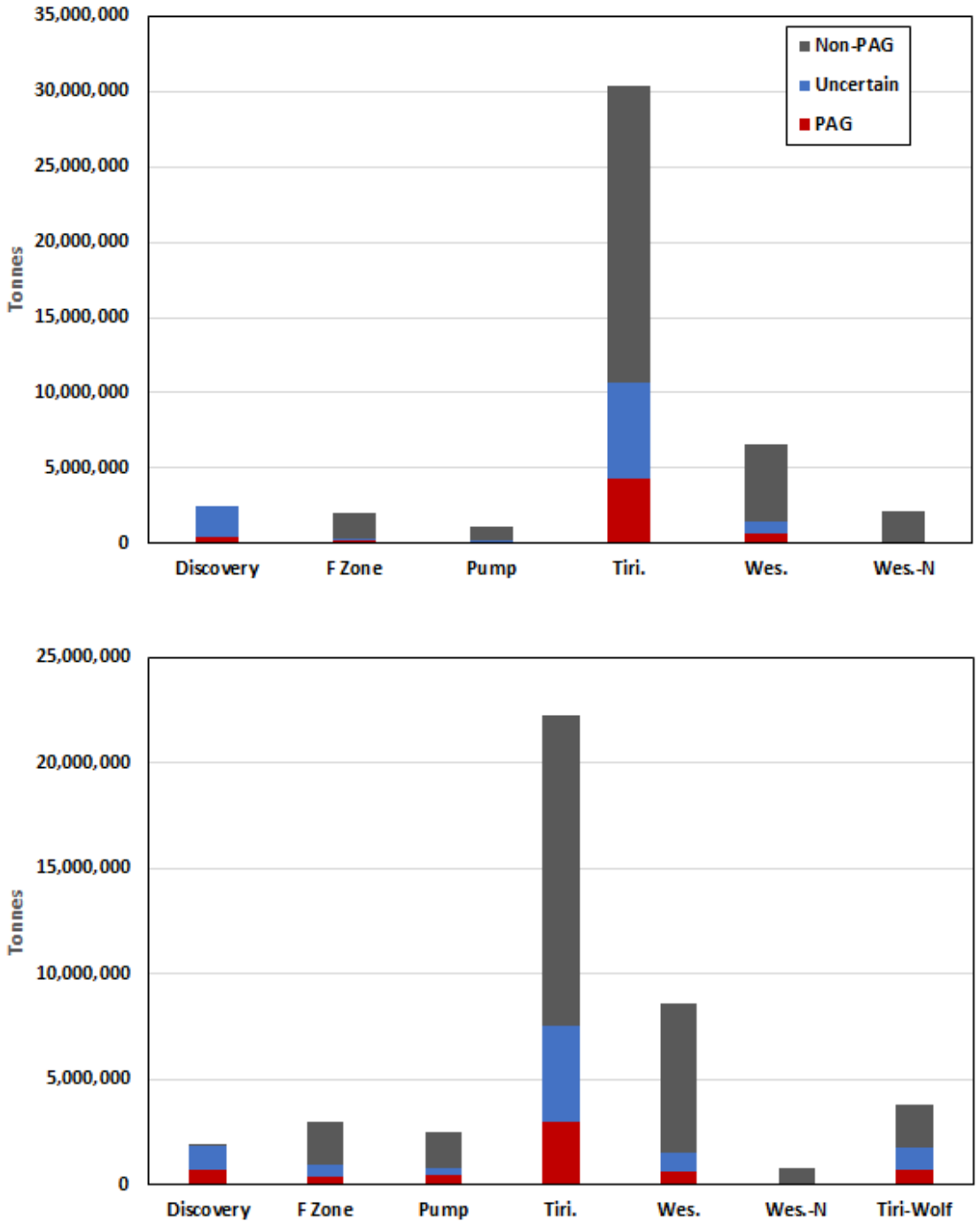



**Figure 5-10: Tonnage of open pit ore (top) and underground ore (bottom) predicted to be non-PAG or PAG/ Uncertain by deposit.**

### 5.4.3 Tailings

Ore processing at Meliadine utilizes a whole ore leach process where solids separation is limited to gravity separation of free gold. Ore processing may increase the NP of tailings through lime addition within the mill. The magnitude of lime addition on the final NP of tailings will be variable, as much of the alkalinity associated with lime will be consumed through $SO_2$/air destruction of CN. Therefore, reagent addition is assumed to not increase the NP of mill tailings relative to ore as a relatively conservative approximation.

The NP would be more substantially, and reliably, altered through cement addition within the paste plant. The increased NP expected in paste tailings is incorporated into the screening of ARD potential in paste tailings, which is discussed separately from mill tailings within this section.

*Mill Tailings*

The results of screening ore ABA and NAG pH results against tailings ARD criteria are presented in Table 5-14. Overall, tailings show lower ARD potential as compared to ore due entirely to differences in screening criteria. This difference is most evident for IF samples at Tiriganiaq, where the % non-PAG has increased from 33% of ore to 53% of tailings. Moderate increases in the % non-PAG are also observed at Pump, Discovery, and F Zone; however, a majority of IF samples at these deposits remain classified as PAG or Uncertain. The only other lithology which shows ARD potential in tailings is UOFM at Tiriganiaq, where a minority of samples (13%) were classified as PAG or Uncertain.

Both SE ore samples at Discovery are classified as non-PAG when screened against tailings ARD criteria. This may be in part a relic of limited sample numbers (n=2), as the much broader waste rock dataset (n=96) for this lithology at Discovery shows most samples to be classified as Uncertain. Therefore, it should be assumed that a significant quantity of SE tailings generated from Discovery will be classified as Uncertain.

## Table 5-14:
## Classification of Acid Rock Drainage Potential of Tailings Lithologies by Deposit

| Deposit | Lithology | ARD Designation | NPR (CaNP-adj/SAP) | | NPR (Mod-NP/SAP) | | NAG pH | | ARD Classification | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | n | % | n | % | n | % | n | % |
| Discovery | IF | *Total No. Samples* | *21* | | *21* | | *17* | | *21* | |
| | | Non-PAG | 1 | 5% | 2 | 10% | 5 | 29% | 1 | 5% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 5% |
| | | PAG | 20 | 95% | 19 | 90% | 12 | 71% | 19 | 90% |
| | SE | *Total No. Samples* | *2* | | *2* | | *1* | | *2* | |
| | | Non-PAG | 2 | 100% | 2 | 100% | 1 | 100% | 2 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| F Zone | IF | *Total No. Samples* | *9* | | *9* | | *6* | | *9* | |
| | | Non-PAG | 3 | 33% | 6 | 67% | 3 | 50% | 3 | 33% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 33% |
| | | PAG | 6 | 67% | 3 | 33% | 3 | 50% | 3 | 33% |
| | VO | *Total No. Samples* | *4* | | *4* | | *4* | | *4* | |
| | | Non-PAG | 4 | 100% | 4 | 100% | 4 | 100% | 4 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | VO/IF | *Total No. Samples* | *3* | | *3* | | *3* | | *3* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 3 | 100% | 0 | 0% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 3 | 100% | 3 | 100% | 0 | 0% | 3 | 100% |
| Pump | IF | *Total No. Samples* | *9* | | *9* | | *5* | | *9* | |
| | | Non-PAG | 4 | 44% | 4 | 44% | 2 | 40% | 3 | 33% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 2 | 22% |
| | | PAG | 5 | 56% | 5 | 56% | 3 | 60% | 4 | 44% |
| | VO | *Total No. Samples* | *3* | | *3* | | *3* | | *3* | |
| | | Non-PAG | 3 | 100% | 3 | 100% | 3 | 100% | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | VO/IF | *Total No. Samples* | *3* | | *3* | | *3* | | *3* | |
| | | Non-PAG | 2 | 67% | 1 | 33% | 2 | 67% | 1 | 33% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 33% |
| | | PAG | 1 | 33% | 2 | 67% | 1 | 33% | 1 | 33% |
| Tiriganiaq | IF | *Total No. Samples* | *15* | | *15* | | *15* | | *15* | |
| | | Non-PAG | 9 | 60% | 8 | 53% | 12 | 80% | 8 | 53% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 7% |
| | | PAG | 6 | 40% | 7 | 47% | 3 | 20% | 6 | 40% |
| | SE | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | TIRFM | *Total No. Samples* | *6* | | *6* | | *3* | | *6* | |
| | | Non-PAG | 6 | 100% | 6 | 100% | 3 | 100% | 6 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | UOFM | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 7 | 88% | 7 | 88% | 7 | 88% | 7 | 88% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 1 | 13% | 1 | 13% | 1 | 13% | 1 | 13% |
| | UOFM/IF | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| | VO | *Total No. Samples* | *3* | | *3* | | *0* | | *3* | |
| | | Non-PAG | 3 | 100% | 3 | 100% | *NA* | *NA* | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| Wesmeg | IF | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 5 | 63% | 1 | 13% | 5 | 63% | 1 | 13% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 38% |
| | | PAG | 3 | 38% | 7 | 88% | 3 | 38% | 4 | 50% |
| | UV | *Total No. Samples* | *1* | | *1* | | *0* | | *1* | |
| | | Non-PAG | 1 | 100% | 1 | 100% | *NA* | *NA* | 1 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | *NA* | *NA* | 0 | 0% |
| | VO | *Total No. Samples* | *5* | | *5* | | *5* | | *5* | |
| | | Non-PAG | 5 | 100% | 5 | 100% | 5 | 100% | 5 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | VO/IF | *Total No. Samples* | *1* | | *1* | | *1* | | *1* | |
| | | Non-PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 1 | 100% | 1 | 100% | 1 | 100% | 1 | 100% |
| Wesmeg North | IF | *Total No. Samples* | *2* | | *2* | | *2* | | *2* | |
| | | Non-PAG | 2 | 100% | 2 | 100% | 2 | 100% | 2 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | VO | *Total No. Samples* | *8* | | *8* | | *8* | | *8* | |
| | | Non-PAG | 8 | 100% | 8 | 100% | 8 | 100% | 8 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |

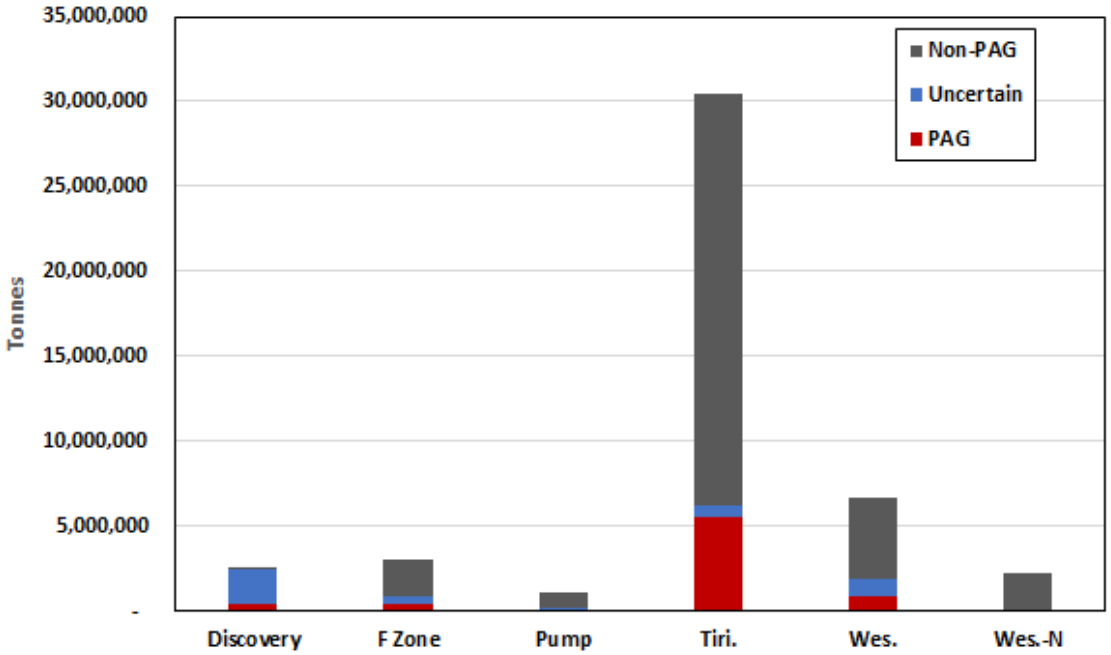
**Notes:**
*n* = number of analyses included in distribution.
SAP: Sulphide Acid Potential is calculated from Sulphide-S (by difference) content (Sulphide-S wt.% x 31.25)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3); Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/SAP and Modified-NP/SAP; NAG (Net Acid Generation) pH
NA- not applicable

*Paste Tailings*

The NP of tailings will be substantially increased through cement addition within the paste plant. This is observed in paste tailings sampled in 2020, which had a mod-NP of 150 kg$CaCO_3$/t compared to concurrent sampling of TSF tailings which showed an average NP of 78 kg$CaCO_3$/t. The difference in NP between these two tailings streams is consistent with the NP that would be introduced by a 4.5% cement addition in the paste plant. That is, assuming cement has an average calcium oxide (CaO) content of 60%, amending 4.5% cement would result in an NP increase of 80 kg$CaCO_3$/t. Applying this NP increase to the ABA dataset would result in over 90% of ore samples having an NPR >1.2. Any residual ARD potential of paste tailings would be mitigated through flooding of mine workings at the end of operations.

The ARD classification of various lithologies from each deposit is combined with the excavation schedule shown in Section 2.3 to estimate the relative tonnage of PAG and Uncertain open pit and underground tailings in and Figure 5-11. Note that in this classification, it is assumed that the SE lithology has the same ARD potential as IF tailings at Discovery. Overall, the majority of tailings generated from open pit deposits will be classified as non-PAG, with the exception of Discovery. Excluding Discovery, only 18% of tailings will be classified as PAG or Uncertain. Most of which will originate from Tiriganiaq and Wesmeg, where a total of 6.6 Mt of PAG or Uncertain tailings are expected to be generated over the Meliadine Extension.

The ARD potential of mill tailings stored in the TSF can be mitigated through encapsulation with non-PAG tailings, consistent with the approved TSF design. That is, oxygen diffusion modelling has shown that the oxygen ingress will be limited to the upper 10cm of the tailings dry stack (OKC, 2022b). Hence, excluding PAG tailings from the final lift will effectively mitigate long-term ARD potential from the TSF.



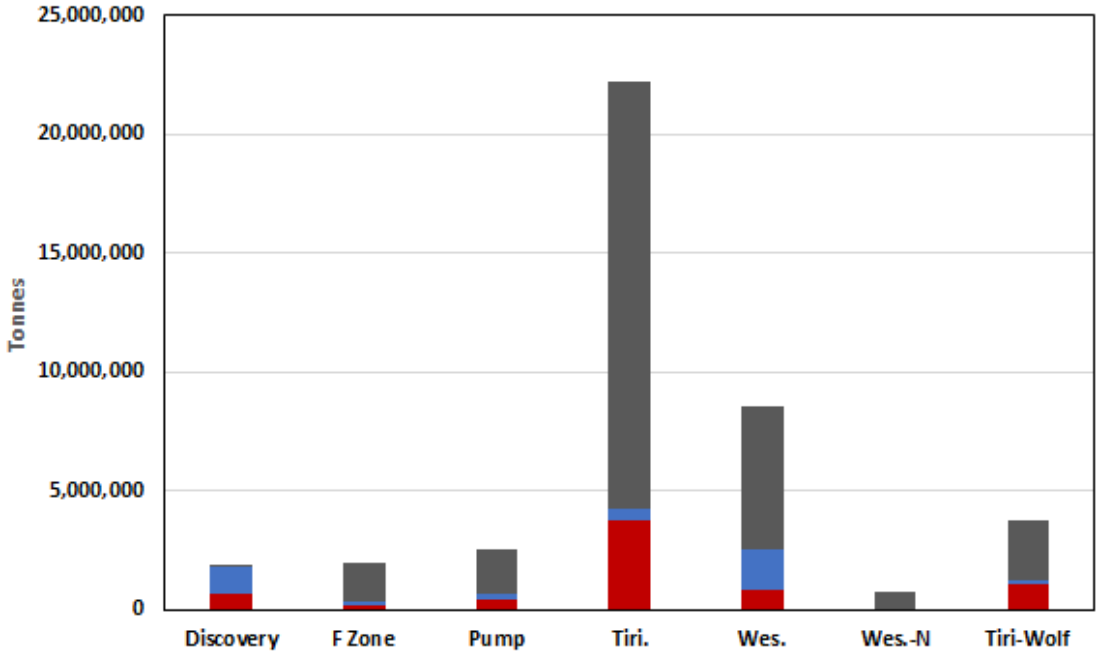




**Figure 5-11: Tonnage of open pit tailings (top) and underground tailings (bottom) predicted to be non-PAG or PAG/ Uncertain by deposit.**

# 6. Water Quality Survey Results

AGNICO EAGLE

# 6. Water Quality Survey Results

A targeted water quality survey was completed in the summer and fall of 2020. The objective of this program was to capture the expression of mine rock weathering in the field by collecting water quality samples which reflect drainage from a known source of mine waste. This data is intended to provide information on metal leaching potential of various mine waste types, and support water quality model development. As part of this program, 33 seepage samples were collected, representing standing water or runoff produced from contact of meteoric water with waste rock, ore or tailings deposited in stockpiles or used for the construction of pads or berms. During the period of sample collection, mine waste storage facilities were composed of waste rock from the Tiriganiaq underground as well as waste rock and overburden from Tiri-01 and Tiri-02 open pits.

In parallel to the seepage survey, porewater chemistry was also collected from waste rock and overburden samples (n=8). These samples were collected between August 2020 and February 2021, and represent solutions extracted by centrifugation from waste rock and overburden. Pore water extraction results are considered analogous to seepage samples, as both sample types provide valuable geochemical information regarding the release of leachable parameters from mine rock solids under natural weathering conditions at site.

In the following sections, porewater and seepage quality results for waste rock, ore, tailings, and overburden are discussed. Water quality results are screened relative to the AEMP and MDMER guidelines (see Table 4-7) to highlight parameters of potential concern. The location of seepage and pore water samples are illustrated in Figure 6-1 for reference. Complete results for water quality samples are provided in Appendix F.

## LEGEND

- Pore Water Sample
- Seep Sample

**Coordinate System:** NAD 1983 UTM Zone 15N
**Projection:** Transverse Mercator
**Datum:** North American 1983
**Units:** Meter

**1:10,000**

0 200 400 Meters

| | |
|---|---|
| **DATE SAVED:** | Nov 24, 2021 |
| **DRAWN BY:** | GM |
| **REVIEWED:** | GO |
| **VERSION:** | 1 |

CLIENT:

AGNICO EAGLE

LORAX ENVIRONMENTAL

PROJECT:

**Meliadine Phase 2 Geochemical Characterization**

TITLE:

Seep and Pore Water Sampling Locations

PROJECT #: A574-2

FIGURE: 6-1

P:\@Drafting\Meliadine\Drafting Figures\MXD\Geochem Characterization\Fig 6-1_Seep and PW Sampling Locations.mxd

### 6.1.1 Waste Rock Seepage and Porewater

Eight waste rock seepage samples were collected in 2020 from stockpiles (WRSF1), dike pads (DP) and industrial pads (IP) located near the mill and camp area (Figure 6-1). During this period, WRSF1 was composed of open pit and underground waste rock as well as overburden. The DP and IP sampling locations represent pads constructed from underground waste rock early during mine construction (prior to 2019). Also, during this time period, brine was being used in drilling fluid, so the salinity associated with these pads may be from a mixture of drilling brine and connate water. In April 2021, two porewater samples were extracted from drill core samples collected at SP4 and WRSF1. The SP4 sample was collected from a berm adjacent to sediment pond representing waste rock sourced from the Tiriganiaq open pit. Note that this is the only sample collected which is solely influenced by open pit mine rock. Water quality results are presented in Table 6-1 for waste rock seepage and porewater samples. Only dissolved metal results are available for the WRSF1 porewater sample due to limited sample volume extracted by centrifuge.

Mine rock lithology plays an important roll in determining seepage quality. In general, similar lithologies are encountered in the Tiriganiaq underground and open pit. To date, the open pit excavations have primarily encountered SE and UOFM lithologies, while the underground excavations have removed SE, UOFM, IF and VO lithologies. The geochemistry of these rock units is presented in 4.1, and operational monitoring data collected as part of the ARD/ML Monitoring Program is presented in Agnico Eagle, (2021a).

All seepage samples from underground waste rock used to construct the DP and IP pads show elevated TDS (3179 to 9030 mg/L). Distinctly lower TDS is found in areas where open pit waste rock (SP4) (444 mg/L) or a combination of open pit waste rock with other materials (WRSF1) (2902 to 3440 mg/L). This result is consistent with the absence of salinity sources (connate water or drilling brine) in open pit waste rock. Seepage from DP and IP also show distinctly higher metal cation concentrations (Cd, Co, Cu, Mn, Ni, Zn) and nitrogen species compared WRSF1 and SP4. Conversely, SP4 and WRSF1 show higher pH, Sb and As concentrations. The relationship between TDS with Co and As is illustrated in Figure 6-2. This result shows that TDS and Co concentrations tend to be correlated, while As and TDS tend to have an inverse relationship.

**Table 6-1:**
**Waste Rock and Ore Seepage Water Quality and Pore Water Extraction Chemistry**

| Sample ID | Date Sampled | Lab pH | TDS | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Waste Rock Seepage** | | | | | | | | | | | | | | | | | | | | | | | |
| WRSF1 Seep | 15-Aug-2020 | 8.2 | 3,440 | 1,240 | 0.62 | 602 | 0.17 | 3.2 | 0.05 | *ND* | 0.0013 | ***0.10*** | 0.00003 | *ND* | 0.0021 | 0.0078 | 0.00028 | 0.2 | 0.017 | <0.1 | 0.00064 | 0.028 | <0.001 |
| DP1-Seep-37 | 18-Sep-2020 | 7.8 | 7,100 | 3,670 | <1 | 522 | *ND* | 38 | 0.26 | <0.005 | 0.00054 | 0.0053 | 0.00032 | <0.001 | 0.0078 | 0.0045 | 0.00018 | 1.5 | 0.022 | <0.5 | 0.00040 | 0.0055 | 0.020 |
| DP1-Seep-37 | 16-Oct-2020 | *ND* | 4,468* | 2,560 | <2 | 378 | 3.9 | 24 | 0.10 | <0.005 | <0.0005 | 0.0051 | 0.00022 | *ND* | 0.0053 | 0.0035 | <0.00025 | 1.1 | 0.014 | <0.25 | 0.00025 | 0.0043 | 0.017 |
| DP1-Seep-37 | 22-Oct-2020 | 7.6 | 9,030 | 4,240 | <1 | 603 | 4.9 | 40 | 0.27 | <0.01 | 0.00069 | 0.0074 | 0.00043 | *ND* | 0.0081 | 0.0053 | 0.00028 | 1.9 | 0.025 | <0.25 | 0.00034 | 0.0062 | 0.047 |
| DP3-Seep-36 | 18-Sep-2020 | 7.8 | 3,310 | 1,300 | 0.4 | 298 | *ND* | 12 | 1.2 | <0.005 | 0.00044 | 0.0054 | 0.00019 | <0.0005 | 0.0066 | 0.0067 | 0.00014 | 1.2 | 0.032 | <0.25 | 0.00053 | 0.0084 | 0.0058 |
| DP3-Seep-36 | 16-Oct-2020 | *ND* | 3,179* | 1,680 | <2 | 384 | 6.0 | 17 | 0.32 | <0.005 | 0.00031 | 0.0086 | 0.00031 | *ND* | 0.0026 | 0.0061 | <0.0001 | 0.7 | 0.026 | <0.1 | <0.0002 | 0.010 | 0.014 |
| IP-Seep-39 | 27-Sep-2020 | 7.8 | 3,660 | 1,410 | <1 | 512 | 28 | 39 | 1.9 | 0.008 | 0.0021 | 0.022 | 0.00012 | *ND* | 0.017 | 0.0035 | 0.00043 | 3.4 | 0.043 | <0.25 | 0.0039 | 0.0054 | 0.0097 |
| IP-Seep-39 | 16-Oct-2020 | *ND* | 3,251* | 1,460 | <2 | 536 | 29 | 38 | 1.8 | 0.007 | 0.0024 | 0.018 | 0.00020 | *ND* | 0.024 | 0.0058 | 0.00094 | 4.1 | 0.078 | <0.25 | 0.0035 | 0.0071 | 0.012 |
| **Waste Rock Porewater** | | | | | | | | | | | | | | | | | | | | | | | |
| SP4WR02_PW | 15-Apr-2021 | 8.2 | 444 | 52 | 0.24 | 152 | 0.82 | 1.02 | 0.09 | *ND* | 0.010 | 0.050 | <0.00001 | <0.0001 | 0.0007 | 0.0014 | 0.00056 | 0.018 | 0.0050 | <0.05 | 0.0023 | 0.011 | 0.0007 |
| WRSF102_PW | 15-Apr-2021 | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | 0.036 | 0.017 | 0.00003 | <0.0005 | 0.012 | 0.0008 | 0.000054 | 0.05 | 0.017 | <0.25 | 0.0028 | 0.024 | 0.0025 |
| **Ore Pad Seepage** | | | | | | | | | | | | | | | | | | | | | | | |
| OP-Seep-38 | 18-Sep-2020 | 7.9 | 1,090 | 310 | 0.1 | 118 | *ND* | 6.1 | 0.10 | <0.005 | 0.0007 | 0.010 | 0.00001 | <0.0002 | 0.0004 | 0.0015 | 0.00004 | 0.10 | 0.0016 | <0.1 | 0.0003 | 0.0006 | <0.001 |
| Ore Pad Seep | 15-Aug-2020 | 7.4 | 35,800 | 14,600 | <2 | 2,600 | ***126*** | 371 | 4.0 | *ND* | 0.018 | ***0.58*** | <0.0001 | *ND* | 0.006 | 0.031 | 0.00030 | 0.08 | 0.018 | <1 | 0.0074 | 0.0029 | <0.01 |

**Notes**:
*TDS calculated: TDS = (0.22 x $HCO_3$ as $CaCO_3$) + Cl + $SO_4$ + Na + K + Ca + Mg + (0.23 x$NO_3$-N)
Shaded values indicate concentrations above the AEMP benchmark shown in Table 4-7.
***Italicized bolded*** values indicate concentrations above the MDMER benchmark shown in Table 4-7.
ND- no data

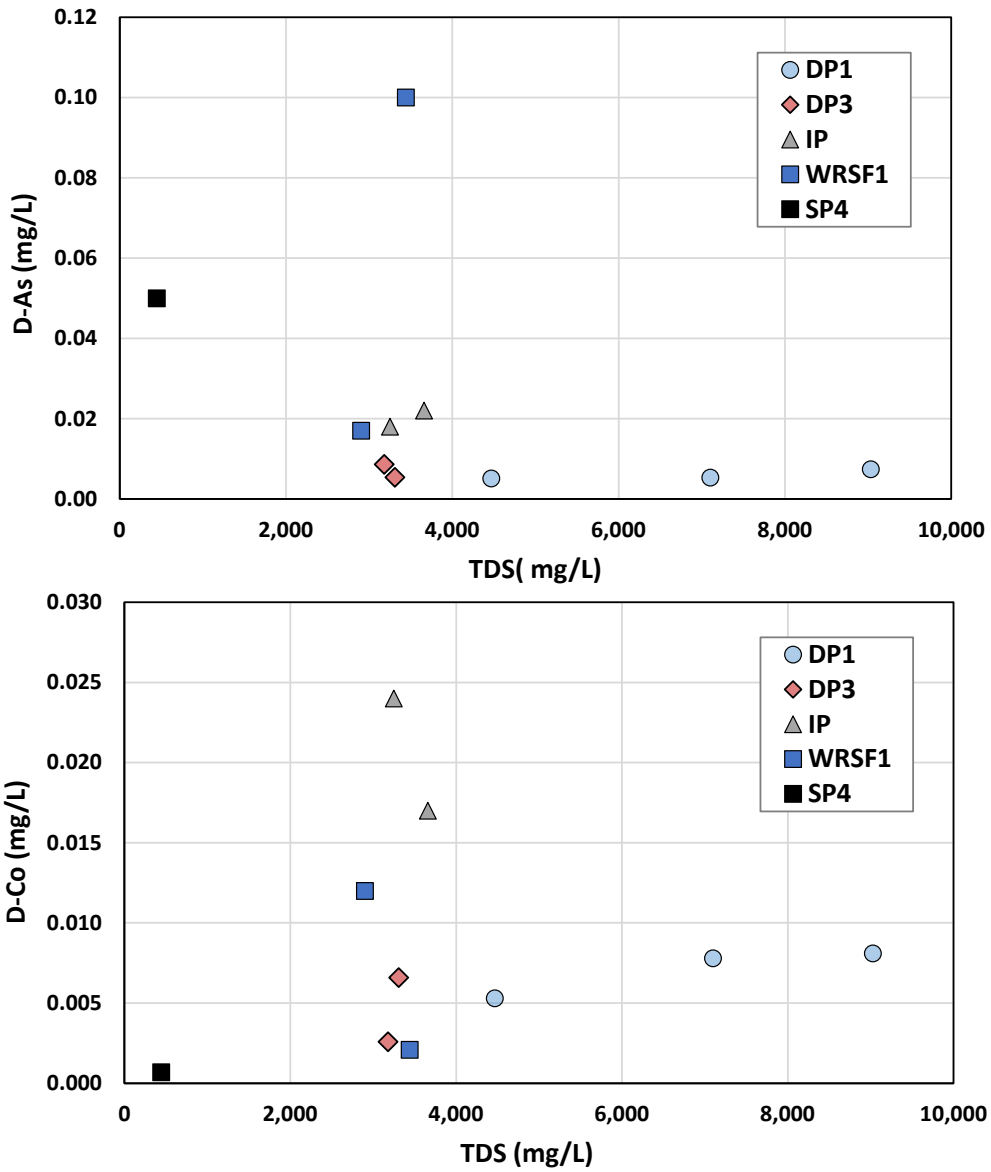



**Figure 6-2: Regression between TDS and D-Co (top) and D-As (bottom) in waste rock seepage and pore extraction samples.**

Differences in open pit and underground mine rock seepage quality may be related to compositional differences in mine rock from these two sources. That is, underground mine rock tends to have elevated metal and sulphur content compared to equivalent lithologies in open pit mine rock (Section 4.1.3). Furthermore, there are compositional differences, as underground excavations have produced a more diverse range of waste rock lithologies, which include VO and IF which have not yet been encountered in open pit excavations. The results are also consistent with SFE rinsing tests (Section 4.1.6), which examined the influence of connate water vs. DI water on water soluble metal concentrations (Figure 4-7).

These tests found that metal cations were leached in higher concentrations when connate water was used in SFE tests compared to DI water. These tests used duplicate waste rock samples, so this result can entirely be attributed to the impact of connate water. This result is attributed to connate waters ability to drive metal leaching through cation exchange reactions and increase metal cation solubility through reducing pore water pH to more circumneutral values.

Parameters with concentrations above AEMP guidelines include TDS, Cl, F, sulphate, nitrogen species, As, Sb, Co, Cd, Cu, Mn, Ni, Se, U and Zn. Exceedances of MDMER guidelines were limited to As at WRSF1 seep (Table 6-1).

### 6.1.2 Ore Stockpile Seepage

Two seepage samples were collected adjacent to ore stockpiles in August and September 2020. Significantly higher concentrations are measured in the sampled labelled 'Ore Pad Seep' compared to the OP-Seep-38 (Table 6-1). In general, OP-Seep-38 shows comparable concentrations to waste rock seepages discussed above. The Ore Pad Seep has a TDS of 35,000 mg/L, which shows only moderate dilution from connate water (TDS of 55,000 mg/L) and numerous exceedances relative to AEMP guidelines.

These results show that Ore Pad Seep is likely representative of freshly excavated ore, showing similar TDS and $NH_3$ levels as underground sump water. OP-Seep-38 is more consistent with the chemistry produced by mine rock that has been exposed at the surface for several years.

With respect to AEMP guidelines, TDS, Cl, nitrate, nitrite concentrations exceed benchmarks in both ore pad samples, while sulfate, ammonia, Sb, As, B, Co, Cu, Mo and Se levels only exceed guideline values in the Ore Pad Seep. The only parameters to exceed MDMER guidelines are $NH_3$ and As in the Ore Pad Seep (Table 6-1).

### 6.1.3 Tailings Seepage

The survey was successful in capturing a time series of TSF seepage, with five seepage locations being sampled on at least four occasions between August and October 2020 (n=21). Seep 31 and 35 are located on the eastern side of the TSF while Seep 32, 33 and 34 are located on the western side of the TSF (Figure 6-3). During the period of sample collection, the TSF primarily contained tailings produced from processing IF ore from the Tiriganiaq underground. The surface area of the facility was partially covered with waste rock, also sourced from the Tiriganiaq underground. Thus, the seepage chemistry presented likely reflect contributions from both tailings and underground waste rock.

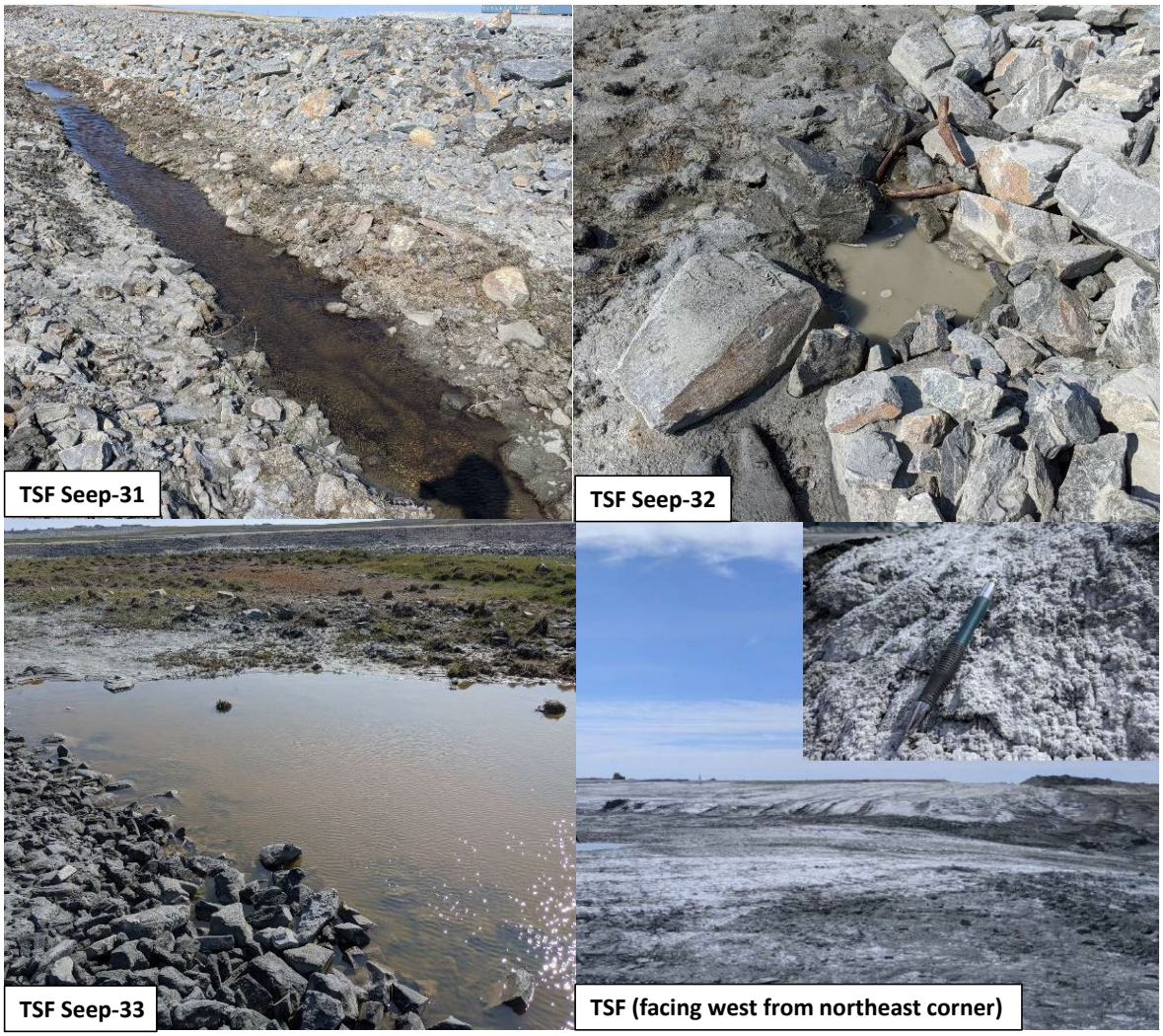



**Figure 6-3: Sample locations for TSF Seeps 31, 32 and 33 (top and left bottom). Northeast corner of TSF showing white precipitate layer at surface (right bottom).**

TSF seepage is characterized by circumneutral pH (7.3 to 7.8) and elevated levels of TDS, nitrogen species and dissolved metals (Table 6-2). Spatial variability in TSF seepage quality is observed, with seeps located on the western flank of the TSF (Seep 32, 33 and 34) generally showing higher TDS, ammonia, T-CN and dissolved Co, Ni and U concentrations compared to seeps on the eastern side (Seep 31 and 35). Elevated T-CN and TDS indicates that the western seeps are more representative of water which has interacted with tailings in the TSF through infiltration. Whereas the eastern seeps are more representative of surface runoff which has experienced more limited interaction with tailings mineral surfaces.

In Figure 6-4, a time series of TSF seepage concentrations is presented in reference to average filter press water and CP3 monitoring results. CP3 is a collection pond which drains the western portion of the TSF, and thus is a relevant point of comparison for TSF samples. The western seeps (Seep 32, 33 and 34) show TDS levels exceeding concentrations in the filter press water. Field observations noted the presence of a white precipitate layer on the surface of the TSF which was identified as halite (NaCl) by XRD analysis of TSF tailings (Appendix C; Figure 6-3). Thus, elevated TDS levels may be related to re-solubilization of accumulated salts. With regards to Ni, seeps uniformly show elevated concentrations compared to the filter press water (<0.02 mg/L) suggesting that this metal is being mobilized through post-depositional weathering of tailings.

Water quality of CP3 generally reflect lower concentrations than observed in Seep 32, 33 and 34 (Figure 6-4). This may be attributed to dilution of the TSF drainage signature by input from non-contact water and potentially attenuation mechanisms which can occur along the drainage pathway or within the pond (*e.g.*, volatilization, adsorption, precipitation). The exception to this is As, which is present in CP3 in concentrations that are similar or elevated compared to concentrations measured in the western seep samples (Seep 32, 33 and 34) (Figure 6-4). Given the nature of how seepage samples are produced (weather-dependent), there may be a lag or discontinuity with the expression of TSF drainage quality at CP3.

Parameters which show concentrations above AEMP benchmarks in TSF seepage samples include TDS, sulphate, nitrogen species, As, B, Cd, Co, Cu, Pb, Mn, Ni, Se, Ag, Tl, U and Zn (Table 6-2). Only one TSF 31 sample exceeds the AEMP value for F. The only parameters which exceeded MDMER guidelines were $NH_3$ and As.

**Table 6-2:**
**Tailings Seepage Water Quality**

| Sample ID | Date Sampled | Lab pH | TDS | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pH units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Tailings Seepage** | | | | | | | | | | | | | | | | | | | | | | | |
| TSF-Seep-31 | 04-Aug-2020 | 7.8 | 5,870 | 2,340 | <1 | 670 | 22 | 16 | 0.34 | 0.005 | 0.0011 | ***0.18*** | 0.00031 | *ND* | 0.020 | 0.0146 | 0.00092 | 3.0 | 0.028 | <0.5 | 0.0034 | 0.0034 | <0.005 |
| TSF-Seep-31 | 18-Sep-2020 | 7.6 | 9,640 | 9,200 | 51 | 6,100 | *ND* | 234 | 25 | 0.023 | 0.0004 | 0.056 | 0.00076 | <0.001 | 0.029 | 0.0044 | 0.00040 | 2.3 | 0.023 | <0.5 | 0.014 | 0.0036 | 0.012 |
| TSF-Seep-31 | 27-Sep-2020 | 7.8 | 14,800 | 4,620 | <2 | 1,260 | ***64*** | 87 | 0.66 | 0.008 | 0.0007 | ***0.18*** | 0.00051 | *ND* | 0.030 | 0.0053 | 0.0012 | 4.9 | 0.015 | <0.5 | 0.014 | 0.0040 | 0.0067 |
| TSF-Seep-31 | 16-Oct-2020 | *ND* | 11,504* | 5,970 | <2 | 1,400 | ***49*** | 174 | 0.38 | 0.039 | <0.001 | ***0.11*** | 0.0016 | *ND* | 0.041 | 0.0054 | 0.00071 | 3.0 | 0.034 | <0.5 | 0.020 | 0.0054 | 0.015 |
| TSF-Seep-31 | 22-Oct-2020 | 7.7 | 16,600 | 6,320 | <2 | 1,640 | ***115*** | 136 | 1.1 | 0.017 | 0.00055 | 0.014 | 0.00099 | *ND* | 0.070 | 0.0043 | 0.00095 | 7.0 | 0.023 | <1 | 0.024 | 0.0043 | 0.015 |
| TSF-Seep-32 | 04-Aug-2020 | 7.4 | 39,200 | 17,800 | <2 | 2,900 | ***484*** | 869 | 0.73 | 0.32 | 0.0048 | ***0.16*** | 0.0019 | *ND* | 0.070 | 0.0190 | 0.0094 | 11 | 0.136 | <5 | 0.019 | 0.063 | <0.05 |
| TSF-Seep-32 | 27-Sep-2020 | 7.7 | 9,360 | 4,110 | <2 | 1,340 | ***90*** | 136 | 0.10 | 0.069 | 0.0017 | ***0.18*** | 0.00021 | *ND* | 0.021 | 0.0071 | 0.00050 | 3.6 | 0.031 | <0.5 | 0.008 | 0.020 | 0.0057 |
| TSF-Seep-32 | 16-Oct-2020 | *ND* | 8,615* | 4,240 | <2 | 1,340 | ***88*** | 161 | 0.62 | 0.088 | 0.0016 | ***0.15*** | 0.00061 | *ND* | 0.025 | 0.0163 | <0.0005 | 2.8 | 0.036 | <0.5 | 0.007 | 0.018 | <0.01 |
| TSF-Seep-32 | 22-Oct-2020 | 7.4 | 28,200 | 11,200 | <2 | 4,180 | ***265*** | 388 | 0.15 | 0.21 | 0.0049 | ***0.35*** | 0.00025 | *ND* | 0.092 | 0.0083 | 0.0016 | 9.9 | 0.078 | <2.5 | 0.027 | 0.071 | 0.039 |
| TSF-Seep-33 | 04-Aug-2020 | 7.6 | 22,900 | 10,700 | <2 | 1,860 | ***240*** | 389 | 0.10 | 0.15 | 0.0025 | 0.064 | 0.0013 | *ND* | 0.079 | 0.0177 | 0.0144 | 14 | 0.117 | <5 | 0.010 | 0.038 | <0.05 |
| TSF-Seep-33 | 27-Sep-2020 | 7.6 | 23,400 | 12,000 | <2 | 2,450 | ***301*** | 497 | 0.80 | 0.31 | 0.0066 | 0.063 | 0.0018 | *ND* | 0.070 | 0.0106 | 0.0039 | 11 | 0.133 | <2.5 | 0.013 | 0.042 | 0.033 |
| TSF-Seep-33 | 16-Oct-2020 | *ND* | 11,832* | 5,630 | <2 | 1,520 | ***134*** | 214 | 0.53 | 0.14 | 0.0021 | ***0.14*** | 0.0010 | *ND* | 0.038 | 0.0142 | 0.00191 | 6.6 | 0.066 | <0.5 | 0.007 | 0.028 | 0.023 |
| TSF-Seep-33 | 22-Oct-2020 | 7.3 | 35,300 | 14,300 | <2 | 3,030 | ***361*** | 579 | 0.52 | 0.34 | 0.0028 | ***0.11*** | 0.0013 | *ND* | 0.11 | 0.0063 | 0.0048 | 16 | 0.192 | <2.5 | 0.013 | 0.062 | 0.073 |
| TSF-Seep-34 | 04-Aug-2020 | 7.7 | 29,700 | 15,000 | <2 | 2,590 | ***475*** | 680 | 1.4 | 0.14 | 0.0057 | 0.042 | 0.0021 | *ND* | 0.049 | 0.0215 | <0.0005 | 4.7 | 0.170 | <2.5 | 0.019 | 0.053 | <0.025 |
| TSF-Seep-34 | 27-Sep-2020 | 7.5 | 31,000 | 15,000 | <2 | 2,410 | ***447*** | 729 | 4.3 | 0.34 | 0.0028 | 0.0046 | 0.0012 | *ND* | 0.071 | 0.0057 | <0.0005 | 6.7 | 0.132 | <2.5 | 0.012 | 0.020 | <0.025 |
| TSF-Seep-34 | 16-Oct-2020 | *NA* | 19,653* | 10,500 | <2 | 1,740 | ***304*** | 485 | 2.5 | 0.17 | 0.0020 | 0.015 | 0.00089 | *ND* | 0.046 | 0.0090 | 0.0013 | 4.9 | 0.079 | <1 | 0.009 | 0.016 | <0.02 |
| TSF-Seep-34 | 22-Oct-2020 | 7.4 | 36,100 | 13,800 | <2 | 2,260 | ***445*** | 641 | 2.4 | 0.27 | 0.0029 | 0.0097 | 0.0015 | *ND* | 0.072 | 0.0121 | 0.00084 | 7.5 | 0.137 | <2.5 | 0.011 | 0.025 | 0.039 |
| TSF-Seep-35 | 04-Aug-2020 | 7.4 | 8,760 | 3,450 | <1 | 1,080 | 22 | *ND* | 3.7 | 0.046 | 0.0022 | 0.096 | <0.0001 | *ND* | 0.008 | 0.0133 | 0.00023 | 1.3 | 0.016 | <1 | 0.0010 | 0.0097 | <0.01 |
| TSF-Seep-35 | 27-Sep-2020 | 7.7 | 11,500 | 5,360 | <2 | 1,150 | ***113*** | 152 | 0.57 | 0.034 | 0.0019 | 0.054 | 0.00036 | *ND* | 0.029 | 0.0072 | 0.0011 | 4.9 | 0.027 | <0.5 | 0.0040 | 0.0088 | 0.013 |
| TSF-Seep-35 | 16-Oct-2020 | *ND* | 7,764* | 3,820 | <2 | 1,040 | ***65*** | 95 | 0.32 | 0.017 | 0.0017 | 0.060 | 0.00039 | *ND* | 0.027 | 0.0071 | 0.00058 | 4.1 | 0.023 | <0.5 | 0.0066 | 0.0098 | <0.01 |
| TSF-Seep-35 | 22-Oct-2020 | 7.5 | 13,300 | 5,910 | <2 | 1,450 | ***99*** | 143 | 0.68 | 0.012 | 0.0021 | 0.089 | 0.00061 | *ND* | 0.033 | 0.0091 | 0.0011 | 6.2 | 0.033 | <0.5 | 0.0060 | 0.013 | 0.015 |

**Notes**:

*TDS calculated using equation: TDS = (0.22 x $HCO_3$ as $CaCO_3$) + Cl + $SO_4$ + Na + K + Ca + Mg + (0.23 x$NO_3$-N)
Shaded values indicate concentrations above the AEMP benchmark shown in Table 4-7.
***Italicized bolded*** values indicate concentrations above the MDMER benchmark shown in Table 4-7.
ND- no data

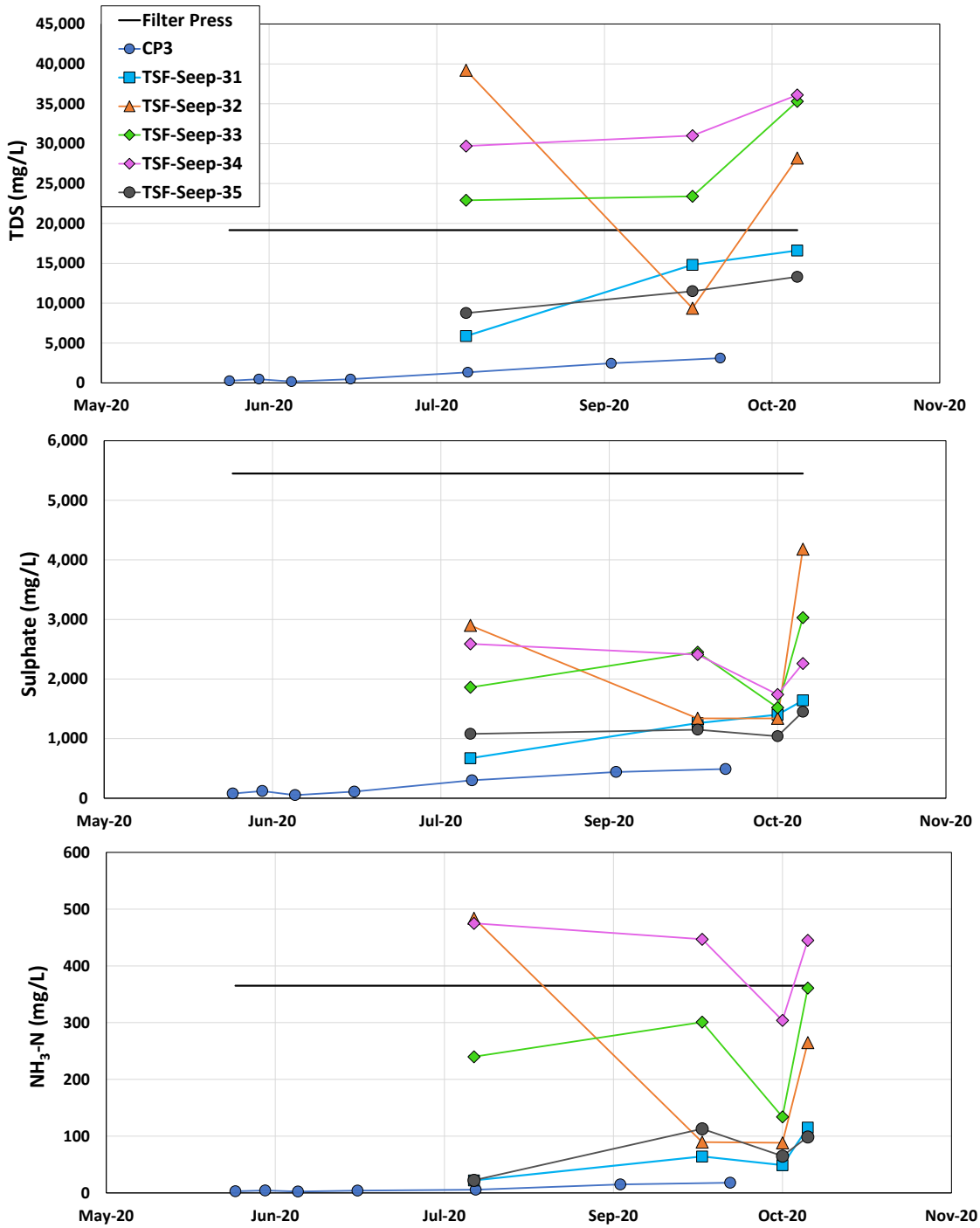



**Figure 6-4: Tailings seepage results in comparison to CP6 time series data for TDS, ammonia, sulfate, T-CN, and dissolved As and Ni.**

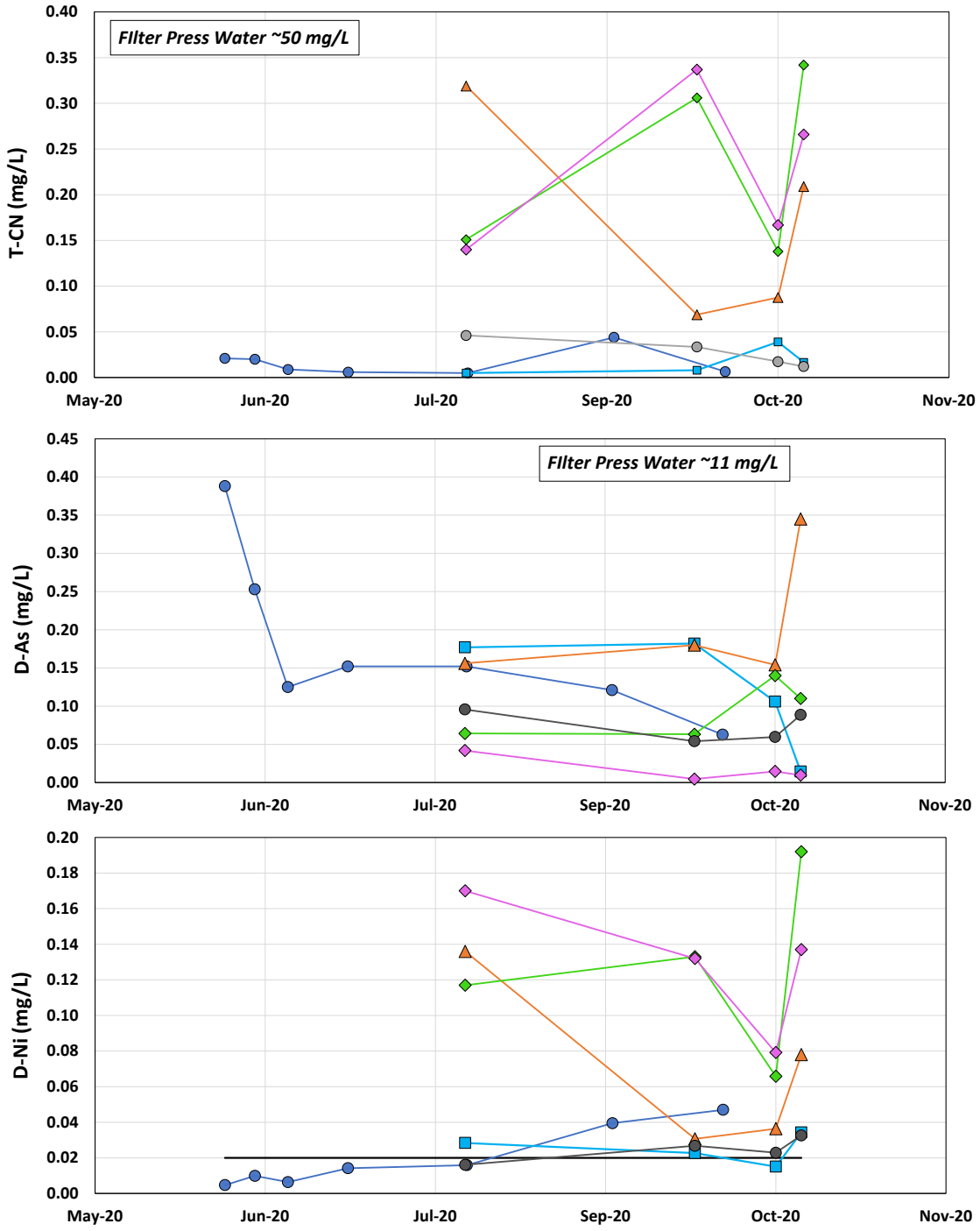



**Figure 6-4 (continued): Tailings seepage results in comparison to CP6 time series data for TDS, ammonia, sulfate, T-CN, and dissolved As and Ni.**

### 6.1.4 Overburden Porewater

Overburden porewater samples were successfully extracted from RC drill cuttings at Pump and Discovery, and pit wall exposures at Tiriganiaq (n=6). Discovery samples represent overburden collected from shallow depths (1 to 2 m) while Tiriganiaq samples were collected from depths below the active zone (5 to 9.5 m). The depth of the overburden sampled at Pump is less certain, as it represents the entire RC drill core profile ranging from 0 to 10.4 m.

Water quality results for overburden porewater samples are presented in Table 6-3. Due to limited sample volume the parameter list was sometimes abridged. The Pump sample (GT21-25_PW) was only analyzed for pH and TDS, and the two Discovery samples (GT21-91-1_PW and GT21-91-2_PW) were only analyzed for pH, TDS and dissolved metals.

Discussion of overburden results provided in Section 4.4.2 demonstrates that TDS and salinity load increases from surface to a depth of approximately 6 m (see Figure 4-18). A similar trend can be observed for most metals, as shown in Figure 6-5. Salinity rinsing tests presented in Section 4.4.2 shows that TDS loads remain relatively constant below a depth of 6 m. A similar trend is expected for metal concentrations owing to the strong relationship with TDS observed in pore water. Elevated levels of nitrogen species are also observed in Tiriganiaq samples (Table 6-3), which is likely a relic of explosive use within the mine pit.

Parameters which were found to exceed AEMP guidelines in overburden porewater include TDS, As, Co, Cu, Mn, Ni, P, Se and U. Notably, overburden pore water has higher Co concentrations than any waste rock sample, with a peak concentration of 0.033 mg/L at Tiri01-P9-9.5_PW (Table 6-3). No parameters exceeded MDMER guidelines in overburden porewater samples.

**Table 6-3:**
**Overburden Pore Water Extraction Chemistry**

| Sample ID | Date Sampled | Depth of Sample Collection (m) | Lab pH | TDS | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | pH units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Overburden Porewater** | | | | | | | | | | | | | | | | | | | | | | | | |
| Tiri01-P9-5_PW | 23-Feb-2021 | 5 | 7.6 | 2,420 | 846 | <0.4 | 437 | 2.4 | 23 | 0.86 | *ND* | 0.00038 | 0.0067 | 0.00014 | <0.0002 | 0.031 | 0.0053 | 0.00003 | 1.8 | 0.020 | <0.1 | 0.0008 | 0.0091 | <0.001 |
| Tiri01-P6-9_PW | 23-Feb-2021 | 9 | 7.8 | 6,550 | 3,180 | 1.2 | 740 | 21 | 42 | 6.0 | *ND* | 0.0039 | 0.023 | 0.00013 | <0.002 | 0.013 | 0.0037 | <0.0002 | 0.3 | 0.062 | <1 | 0.0015 | 0.023 | <0.01 |
| Tiri01-P9-9.5_PW | 23-Feb-2021 | 9.5 | 7.9 | 10,000 | 5,000 | <2 | 981 | 9.2 | 25 | 4.7 | *ND* | 0.0033 | 0.028 | 0.00031 | <0.002 | 0.033 | 0.0053 | <0.0002 | 0.8 | 0.052 | <1 | 0.0037 | 0.028 | <0.01 |
| GT21-25_PW | 15-Apr-2021 | 0-10.4 | 7.8 | 2,160 | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* |
| GT21-91-1_PW | 15-Apr-2021 | 1 | 7.0 | 192 | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | 0.00018 | 0.0020 | 0.00002 | 0.00018 | 0.001 | 0.0093 | 0.00004 | 0.2 | 0.009 | 0.062 | 0.0004 | 0.0021 | 0.00077 |
| GT21-91-2_PW | 15-Apr-2021 | 2 | 7.6 | 1,030* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | *ND* | 0.00037 | 0.0042 | 0.00004 | 0.00016 | 0.002 | 0.011 | 0.00001 | 0.5 | 0.010 | <0.05 | 0.0022 | 0.052 | 0.0012 |

**Notes**:
*TDS calculated using correlation between Ca, Mg and Na and TDS observed in overburden samples
Shaded values indicate concentrations above the AEMP benchmark shown in Table 4-7.
***Italicized bolded*** values indicate concentrations above the MDMER benchmark shown in Table 4-7.
Entire RC drill core depth interval provided for GT21-25_PW sample.
ND- no data

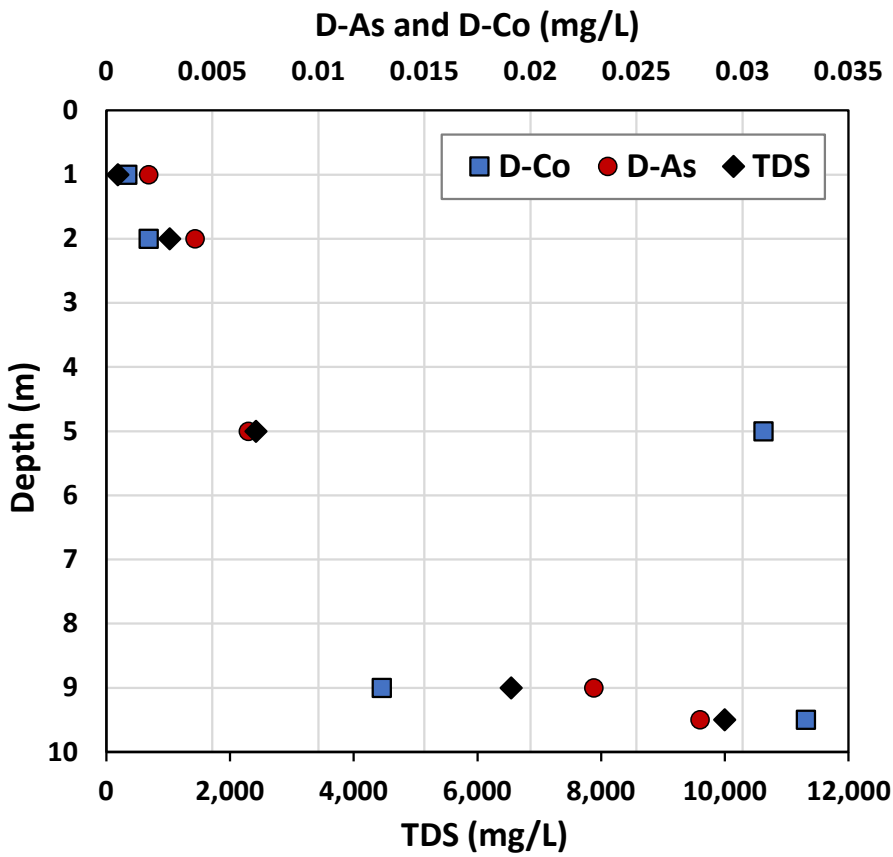



**Figure 6-5: Depth profile showing D-Co, D-As and TDS from overburden pore water extractions collected at Tiriganiaq and Discovery area.**

# 7. Results Summary

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# 7. Results Summary

## 7.1 Waste Rock

Most waste rock that will be excavated as part of the Meliadine Extension is classified as non-PAG outside of the Discovery deposit. The distinct ARD potential at Discovery is due to lower carbonate mineralization compared to other deposits, reducing the amount of NP available to neutralize AP associated with sulphide minerals. Owing to the relatively low carbonate content, material classified as PAG or Uncertain are found in all three major waste rock lithologies at Discovery (SE, GB and IF). The occurrence of PAG rock outside of Discovery is essentially limited to the IF lithology. The IF lithology is the primary host of Au mineralization and comprises only a minor percentage of waste rock at most deposits. The ARD potential of IF does show some variation in different deposits. Occurrences of IF at Wesmeg, Pump and F Zone show similar ARD potential as IF at Discovery, while most IF samples collected at Tiriganiaq and Wesmeg North are non-PAG.

Overall, 60% of Discovery waste rock is classified as PAG or Uncertain. Conversely, only 5% of the total waste rock outside of Discovery is expected to be classified as PAG or Uncertain. The ARD potential associated with Discovery open pit waste rock will be mitigated through the progressive construction of a thermal cover using non-PAG mine rock, as defined in OKC (2022a). Discovery underground waste rock will be backfilled into the underground mine workings and flooded at mine closure, thereby eliminating the ARD potential associated this material.

Solid phase metal analysis found that As and Cu were enriched (>10x AUCCC) in waste rock from most deposits. Elemental enrichment showed some association with deposit and lithology. Specifically, greatest enrichment for As and Cu were found in samples from the IF and VO units. The highest median concentration of these metals were observed in samples from Wesmeg and Wesmeg North, while the lowest concentrations were measured at Discovery.

The metal leaching potential was assessed through a variety of laboratory tests and through a seep survey completed in the summer-fall of 2020. Both laboratory kinetic tests and the seep survey confirmed that As was the only parameter to exceed MDMER guidelines in waste rock seepages. Kinetic tests and SFEs results showed that TIRFM and SE lithologies generally produced the highest As concentrations, while lower concentrations were generally observed in IF waste. A field survey of waste rock seepage found that a number of parameters exceeded AEMP guidelines, including $NH_3$, Co, Cu, Ni and Zn. The survey results also indicated distinct metal leaching potential of underground versus open pit mine rock; that is, underground mine rock tended to show greater concentrations of metal cations

(Co, Cu, Ni and Zn), while open pit mine rock tended to have higher As and Sb concentrations. This behaviour was also observed in SFE tests, where both connate water and DI water was used to rinse water soluble metal content. A subset of SFE tests were initiated using connate water in place of DI water to examine metal leaching potential specific to underground mine waste. These tests consistently produced elevated concentrations for Ba, Co, Cu, Ni and Zn relative to testing that used deionized water on duplicate waste rock samples. The elevated concentrations are likely related to cation exchange and the lower, but still circumneutral, pH of leachate solutions. The impact of connate water on As concentrations was more variable, and likely related to the counteracting influences of cation exchange and lower pH on As solubility. Overall, the result indicate that underground waste rock will have elevated metal leaching potential compared to the equivalent lithologies excavated from adjacent open pits.

Underground mine rock is a potential source of salinity release due to the presence of connate water in the initial pore water of mine rock brought to the surface. To assess the salinity leaching potential of existing and future underground mine rock, salinity rinsing tests were completed on waste rock stockpiled at the mine surface. The results showed that over 90% of the salinity load appears to have been rinsed from surficial (<30 cm) waste rock samples after 2 to 4 years of exposure. Deeper profiles (1-4 m depth) completed on stockpiles of recently excavated waste rock (0-1 years) showed relatively high salinity loads, indicating that minimal rinsing of connate water has occurred in the relatively short time period that the stockpiles have been exposed. During mine operations, seepage from underground mine rock will be directed into the saline water management system. This water will be isolated from surrounding lakes and will ultimately be treated and discharged to Itivia Harbour via truck or waterline.

## 7.2 Ore

Ore tends to have greater ARD potential compared to waste rock due to elevated sulphur content, and the association of Au mineralization and the IF lithology in most deposits. Discovery is the only deposit where the majority of ore is classified as PAG or Uncertain due to the low carbonate content at this deposit. Outside of Discovery, a total of 30% of Meliadine Extension ore is classified as PAG or Uncertain. Ore will only be temporarily stockpiled before being milled and deposited as dry stack tailings or paste backfill. The ARD potential of the ultimate tailings waste streams are discussed in section 7.3.

Solid phase metal analysis found that As, Cu and Ag were enriched in ore lithologies from most deposits (>10x AUCCC). Arsenic concentrations in ore samples were up to an order of magnitude greater than values measured in corresponding waste rock samples. Ore samples from the Discovery deposit showed lower concentrations of metal parameters,

while the highest concentrations were measured in underground samples from the Wesmeg deposit.

The metal leaching potential of ore was assessed through laboratory SFE tests and a field seepage survey. Ore samples generally showed higher SFE concentrations compared to waste rock, particularly for As and Se. The seep survey provided limited data on ore seepage, with only one sample representative of the existing ore stockpile. This sample was characterized by high TDS (35,800 mg/L) and elevated As (0.58 mg/L). This chemistry is consistent with the significant enrichment of As found in ore, and the transient nature of ore stockpiles resulting in minimal flushing of connate water before the ore is rehandled to the mill. The SFE tests showed that elevated metal leaching potential is generated by using connate water instead of DI water as the leach solution. The use of connate water in SFE tests resulted in a number of a number of parameters exceeding AEMP guidelines, including Co, Cu, Pb, Mn and Zn. Overall, the result indicates that ore will have greater metal leaching potential compared to waste rock, and underground ore stockpiles will have elevated metal leaching potential compared to the equivalent lithologies excavated from adjacent open pits. All ore will be processed through the mill before the end of mine life, eliminating the long-term metal leaching and ARD potential associated with this material type. Characterization of ARD potential for ore materials corresponds with the findings of the 2014 FEIS regarding the designation of Discovery ore primarily as PAG.

## 7.3 Tailings

Ore processing at Meliadine consist of a whole ore leach process where solids separation is limited to gravity separation of free gold. Therefore, tailings will have a similar solid phase composition as the ore mill feed and geochemical characterization of ore can be used to estimate the metal enrichment and ARD potential of tailings. Ore processing may increase the NP of tailings through lime addition within the mill. The magnitude of lime addition on the ultimate NP of tailings will be variable, as much of the alkalinity associated with lime will be consumed during $SO_2$/air destruction of CN. Therefore, reagent addition is assumed to not increase the NP of mill tailings relative to ore as a conservative approximation. Tailings NP would be more substantially, and reliably, altered through cement addition within the paste plant. Therefore, the increased NP associated with cement addition in the paste plant is incorporated into the paste tailings ARD assessment.

Mill tailings tend to have lower ARD potential compared to ore due to differences in ARD screening criteria. Discovery is the only deposit where the majority of tailings are considered PAG. At Discovery, both major ore types (SE and IF) are expected to be PAG or Uncertain. Outside of Discovery, the ARD potential is essentially limited to IF. Only 18% of tailings from all other deposits are classified as PAG or Uncertain. Mitigation of

ARD potential of tailings placed in the TSF will occur through encapsulation by non-PAG tailings, consistent with the approved TSF design. Oxygen diffusion modelling shows that oxygen ingress into compacted tailings will be minimal (approx. 10cm) (OKC, 2022b). Hence, excluding PAG tailings from the final lift will effectively mitigate long-term ARD potential from any PAG tailings within the TSF.

The paste plant will substantially increase the NP of tailings through cement addition. That is, cement addition is expected to increase NP by 80 kg$CaCO_3$/t. Applying this NP increase to the ore ABA results would result in over 90% of paste samples being classified as non-PAG. Any residual ARD potential of paste tailings would be mitigated through flooding of mine workings at the end of operations.

Tailings will have distinct metal leaching potential compared to waste rock and ore owing to grinding and reagent addition within the mill and paste plant. Kinetic tests and seepage surveys have found that As and $NH_4$ are the only parameters to exceed MDMER guidelines. TSF seepage water quality shows a variety of AEMP exceedances for other parameters (As, B, Cd, Co, Cu, Pb, Mn, Ni, Se, Ag, Tl, U and Zn), which are likely related to rinsing of process water from recently placed tailings. Throughout operations a closure cover will be progressively installed over the TSF to minimize the metal leaching potential from this facility.

Metallurgical whole ore tailings were characterized as part of the 2014 FEIS, while mill tailings and paste tailings were characterized as part of the supplemental geochemical sampling program. In contrast to metallurgical tailings, mill tailings reflect dewatering and deposition in a dry stack. These processes are not expected to alter the intrinsic geochemical properties of whole ore tailings. As such, there are broad similarities between the ARD/ML properties of both materials.

## 7.4 Overburden

Geochemical characterization of overburden for the 2014 FEIS, showed the material to be non-acid generating and to contain low metal concentrations relative to other mine rock. Total S and As contents were found to be low, measuring <0.1 wt.% and <80 ppm, respectively. Furthermore, SFE leachate concentrations for all overburden samples met the mine effluent criteria (MDMER), except for Zn in one sample from the Tiriganiaq deposit.

Salinity associated with overburden permafrost is the primary water quality concern associated with this material type. Permafrost salinity in the Kivalliq Region is related to the intrusion by the Tyrrell Sea which inundated the area at the postglacial marine maximum 5-6 ka (Hivon and Sego, 1993). Investigation of overburden salinity at Meliadine was undertaken to supplement the earlier characterization work. Salinity was

found to be generally absent from the active zone above permafrost. Below the active zone, permafrost salinity is observed to increase from 2 to 6 m depth. Below a depth of 6m, salinity was observed to remain relatively constant, with a peak pore water TDS of 10,000 mg/L. A relationship between landform and overburden salinity has not been established. However, any overburden present in the active zone, or formed from sediments deposited after the post-glacial marine maximum can be assumed to contain minimal salinity.

Analysis of saline overburden pore water found that a variety of metals exceeded AEMP guidelines. Most samples showed exceedances in Cd, Co, Cu, Mn and Se and U. Notably, overburden contained higher Co concentrations than observed in any waste rock seepage, with a peak concentration of 0.033 mg/L. Most metal concentrations showed a direct relationship with TDS; therefore, metal concentrations can be expected to show similar depth profiles as described for salinity above. Overburden excavated from mine pits will be co-disposed with waste rock in the WRSFs. Permafrost excavations will be limited to winter months, and a thermal waste rock cover will be placed over the stockpiled permafrost to maintain frozen conditions, mitigating metal and salinity leaching potential from this material.

# 8. Source Term Development

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# 8. Source Term Development

## 8.1 Overview

In this chapter, the geochemical test results described in the previous sections are combined with site monitoring data, waste facility design and composition, thermal modelling, and climate and hydrology to produce geochemical source term predictions. Geochemical source terms are chemistry predictions for water which comes into direct contact with geologic material disturbed by mining activities. Individual source terms are developed for each mine component on an annual time step. The source terms include: seven open pit WRSFs, four saline WRSFs, seven ore stockpiles (Ore Pad), five underground mine operations, pit wall rock exposures from 18 mine pits (pit wall rock), the TSF and runoff from disturbed areas and mine facility areas. The source terms are calculated using the Agnico Eagle Mine Plan, V11, December, 2020. For the purpose of source term calculation, minor lithologies defined in this mine plan combined with similar rock types to simplify source term calculations. This consisted of combining VO with VOSR, LP with GB, and KMG with TIRFM (Table 2-1).

A summary of the approaches used to develop source terms for operations, active-closure and post-closure are provided in Table 8-1. Source term development is supported by a calibration to observed water quality using the water balance described in Section 3.7.2 of the Water Balance and Water Quality Model (Lorax, 2022). This calibration exercise is fundamental to the overall source term approach and is described in more detail in Section 8.2 below. Details of source term development for each type of mine facility are provided in Section 8.3 to Section 8.7. Complete source term results are provided in Appendix G.

**Table 8-1:**
**Overview of Source Terms and Modelling Approach**

| Mine Facility | Operations | Active Closure and Post-Closure |
|---|---|---|
| Waste Rock Storage Facilities | Calibrated to existing monitoring data and scaled based on composition of different WRSFs. | End of mine life source terms scaled to reflect the long-term increased temperature and runoff under the RCP 4.5 scenario. |
| Saline Waste Rock Storage Facilities | Calibrated to existing monitoring data and scaled to account for changes in waste rock composition on annual time step.<br>Major ion chemistry and TDS determined from 2020 seep survey. Decay in TDS concentrations during operations calculated based on nitrogen rinsing data observed at analogue minesites. | Saline WRSFs will be backfilled to the mine underground at closure. No source term is required. |
| Tailings Storage Facility | Calibrated to existing monitoring data and scaled based on composition of tailings over mine life. Progressive construction of tailings cover over mine life is not considered as a conservative simplification to source term calculations.<br>Influence of connate water on TDS and major ions scaled based on ratio of open pit to underground ore processed on an annual time step. | Cover system will be completed during active closure, effectively isolating surface runoff from underlying tailings. Therefore, the surface runoff component of TSF drainage is assigned a waste rock contact water source term in closure.<br>Infiltration will react with shallow tailings along the cover/tailings interface. The source term is calculated from unsaturated tailings column results. |
| Underground Mine Water | Trace metal concentrations calibrated to Tiriganiaq underground monitoring data.<br>TDS predicted based on connate water chemistry predicted in hydrogeology model (Golder, 2021).<br>Nitrogen losses are calibrated to observed data at Tiriganiaq and Amaruq underground, then scaled based on explosive use. | Underground mines will be backfilled and flooded at the end of operations. No source term is required. |
| Pit Walls | Wall rock source terms are based on calibrated WRSF source terms scaled for differences in mass exposure and runoff between waste rock and wall rock. | Over 95% of pit wall surface area will be flooded during active closure. Residual pit wall exposures in closure were assigned the same source term as end of operations. |
| Mine Facilities Area | Developed based on site monitoring data and validated with calibrated water quality model. | All mine facilities areas, ore pads, and disturbed areas will be reclaimed at end of operations. These areas will revert to background water quality at closure. |
| Ore Pads | | |
| Disturbed Areas | | |

## 8.2 Source Term Calibration

A water quality model was constructed for the purpose of calibrating model inputs using site monitoring data from January 2019 to December 2020. The Meliadine Mine site layout and catchments discretized for the calibration exercise used aerial photos taken in October 2019 (Figure 8-1) and September 2020 (Figure 8-2) along with supporting information on mine waste movement provided in the annual report (Agnico Eagle, 2021b). Catchment discretization and the associated water balance assumptions are described in more detail within Section 3.8 of the Water Balance and Water Quality Model-Technical Report (Lorax, 2022). Following calibration of the water balance source term calibration was completed in the following steps.

- Source terms for waste rock, overburden and the TSF were calibrated to reproduce annual average chemistry observed in CP3 (TSF) and CP6 (waste rock and overburden). The source term calibration was based on the predicted runoff volume from each discretized catchment, shown in Figure 8-1 and Figure 8-2, entering these collection ponds on a monthly time step.
- The source terms for undisturbed areas (*i.e.*, background), disturbed areas, mine facilities and ore pads were estimated based on monitoring data and are not adjusted as part of source term calibration.
- The calibrated source terms were then constrained by the 10$^{th}$ percentile and 90$^{th}$ percentile seep survey concentrations (Chapter 6).

Following source term calibration, the model inputs were validated against downstream monitoring locations, including Channel 1 and CP1. Channel 1 is a constructed ditch that drains much of the mining area, including the TSF, WRSF1, plant site area and ore pads, into CP1. The ultimate discharge point of freshwater from the mine for Meliadine Extension will continue to be CP1, and this location is considered the most relevant modelling node as it represents the composite surface runoff from the entire mine site.

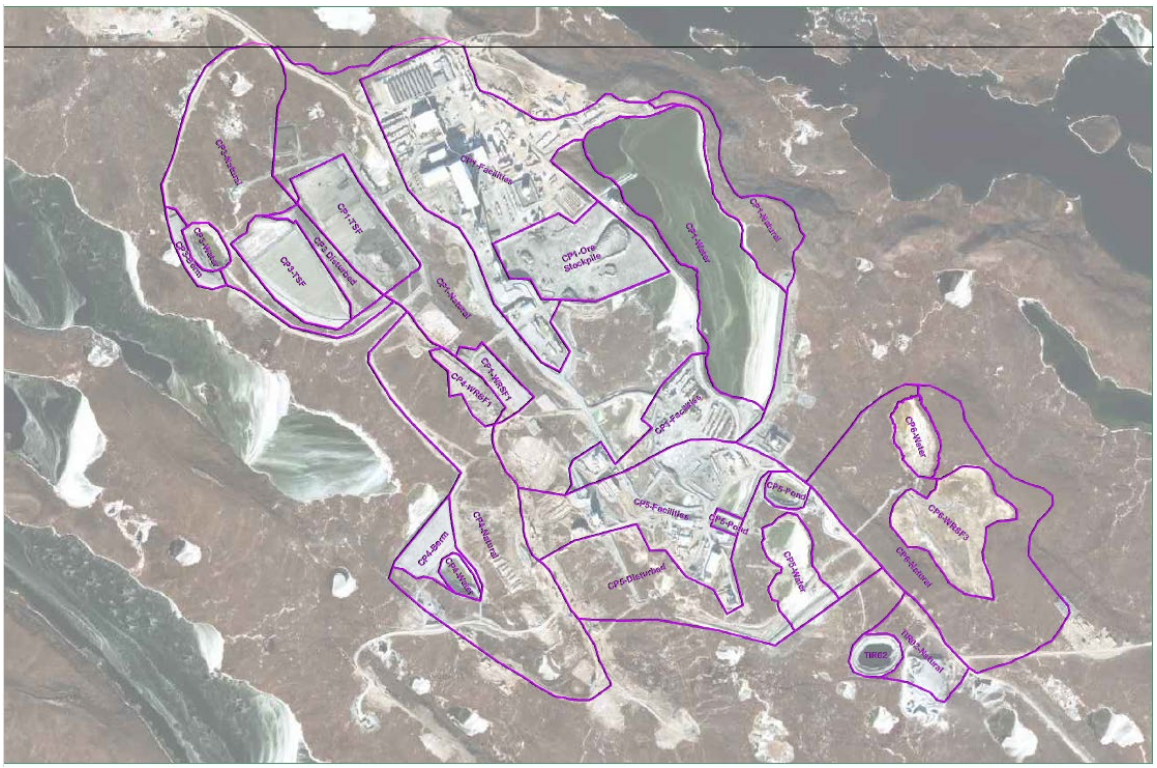


**Figure 8-1: Meliadine Mine site layout and catchment delineation for 2019 based on aerial photo from October 2019.**

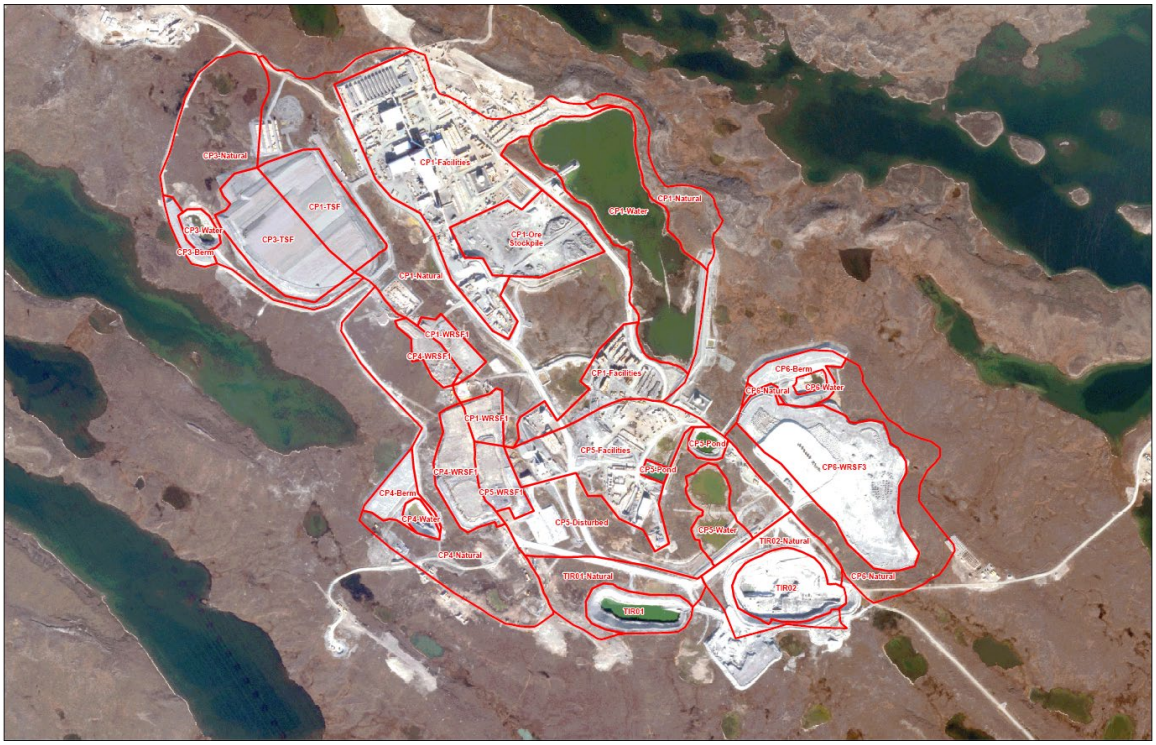


**Figure 8-2: Meliadine Mine site layout and catchment delineation for 2020 based on aerial photo from September 2020.**

### 8.2.1 Non-Calibrated Water Quality

Non-calibrated source terms included ore pads, mine facilities, disturbed areas, and background runoff. These source terms were assigned chemistry observed from monitoring data and were not adjusted through the calibration exercise. Although these source terms were not calibrated, they are included in model validation presented in Section 8.2.. Background runoff varies on a monthly basis and is presented in Section 4.3 of Lorax (2022). Development of source terms for ore pads, mine facilities and disturbed areas are described below.

Ore pad seepage chemistry was estimated based on two ore pad seep samples collected in 2020 (Table 6-1). The sample labelled Ore Pad Seep shows high salinity, reflecting significant influence of connate water which is likely characteristic of freshly excavated ore. The seepage sampled OP-Seep-38 has much lower salinity, indicating that a greater degree of rinsing has occurred at this location. The ore seepage term is estimated by taking a weighted average of these two samples, with OP-Seep-38 and Ore Pad Seep weighted at a 9:1 ratio. While it is unclear which sample better represents bulk drainage from the ore pad, placing a greater weight on the lower concentrations of OP-Seep-38 results in higher calibrated concentrations for the waste rock, TSF and overburden source terms, hence, is considered a conservative assumption for the purpose of the calibration exercise.

Disturbed area runoff represents mine areas impacted by vehicle traffic and road construction. This source term was calculated using the 2019 monitoring data from CP4, where over 80% of the catchment could be characterized as 'disturbed' (Figure 8-1). The non-disturbed areas consisted of a thermal berm constructed with waste rock and overburden stockpiled within the footprint of WRSF1. The disturbed area source term was calculated as the monthly weighted average observed at CP6 from June 2019 to September 2019.

The mine facilities area source term represents mine areas constructed on waste rock pads, nominally 2 m thick. During the calibration period, this consists of the mill area, industrial pad and pond embankments. Seepage from the industrial pad and mill areas were directly measured as part of the 2020 seep sampling, as described in Chapter 6. The mine facilities source term is calculated as the average of seep chemistry from the DP1 and IP seeps (Table 6-1).

### 8.2.2 Calibrated Source Terms

A vast majority of geologic material excavated as part of mining activities will be disposed in a WRSF or the TSF. Therefore, runoff from WRSF3 and the TSF were chosen as calibration targets.

The tailings runoff and infiltration source terms were calibrated to 2019-2020 CP3 monitoring data. The relative concentration of runoff and infiltration is defined by the average concentration of seeps representing runoff (TSF-Seep-31 and TSF-Seep-35) and infiltration (TSF-Seep32, TSF-Seep-33 and TSF-Seep-34) sampled in 2020 (Table 6-2). The volume of TSF infiltration, seepage, and other non-calibrated flow types in CP3 is defined using the water balance illustrated in Figure 8-3. The TSF source terms are then calibrated to re-produce the average monthly concentration of CP3.

The waste rock contact water source term was calibrated to 2020 CP6 monitoring data. The CP6 catchment was almost entirely occupied by WRSF3 in 2020, which contained approximately 2.53 Mt of waste rock and 0.78 Mt of overburden from the Tiriganiaq open pits (Agnico Eagle, 2021b). The relative concentration of these two material types is defined by the average concentration for overburden pore water (Table 6-3) and waste rock seeps (Table 6-1). The calibrated CP6 water balance used to calibrate source terms is shown in Figure 8-4. The source term concentration for waste rock and overburden are then calculated to re-produce the average monthly concentration of CP6 over the calibration time period.

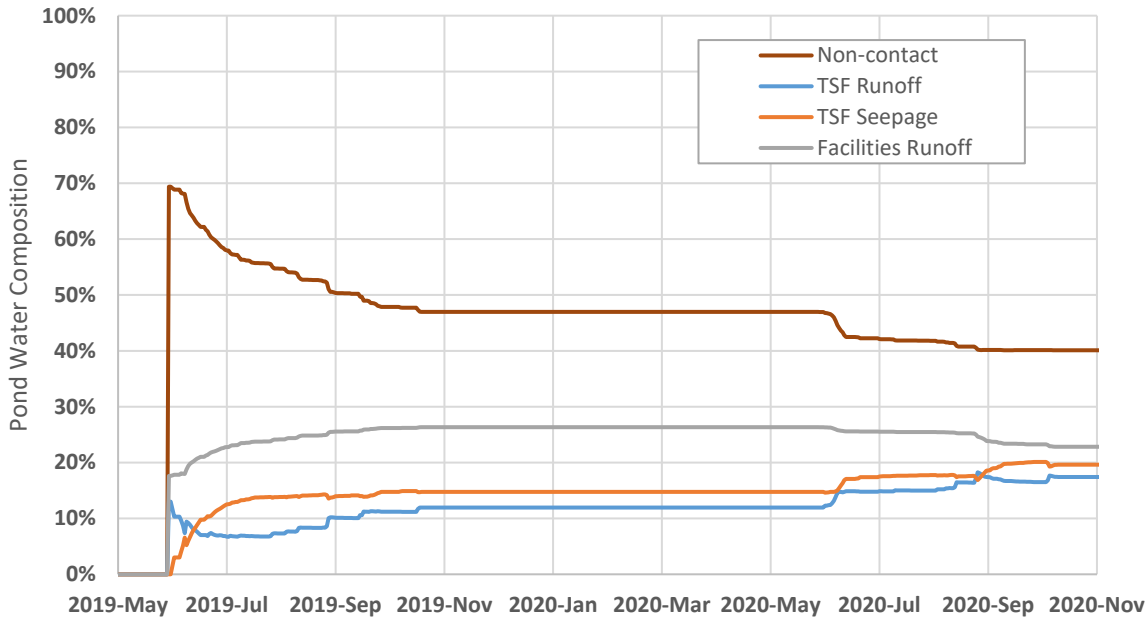


**Figure 8-3: Sources of pond water in CP3 predicted by water balance used to calibrated waste rock and overburden source terms.**

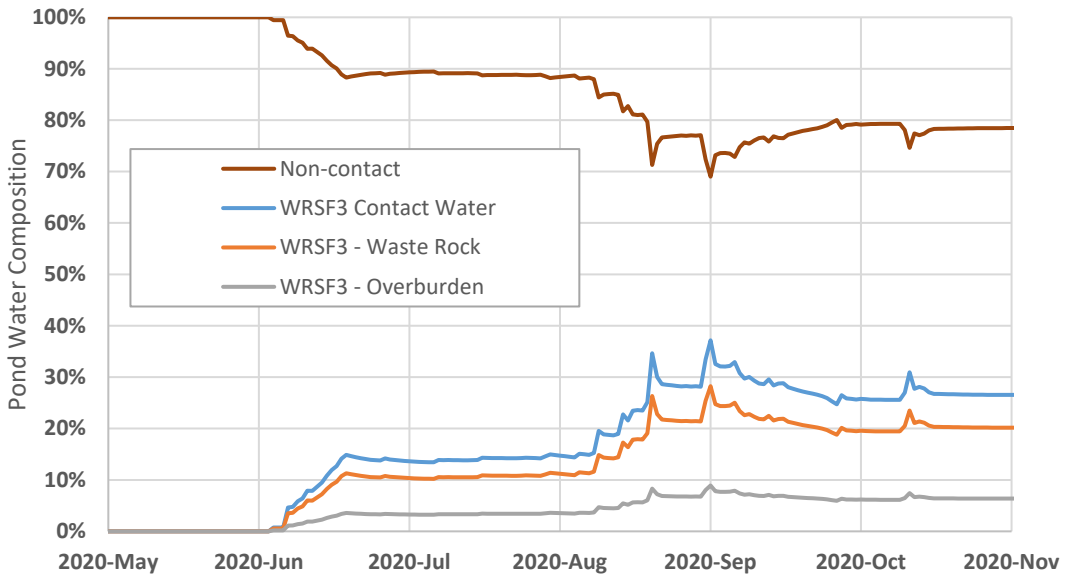


**Figure 8-4: Sources of pond water in CP6 predicted by water balance used to calibrated waste rock and overburden source terms.**

Following calibration, source terms were constrained by direct measurements of site seepage. This step ensures that calibrated source terms are within the range of drainage chemistry directly observed in field monitoring, eliminating outlier source term concentrations produced from calibration to the site water balance. The data used to constrain calibrated source terms is presented in Chapter 6 and applied as follows:

- Waste rock contact water was constrained by the range of concentrations observed in waste rock pore water and seepage presented in Table 6-1.
- TSF infiltration was constrained by concentrations observed in TSF-Seep-31 and TSF-Seep-35 (Table 6-2)
- TSF infiltration was constrained by TSF-Seep-32, TSF-Seep-33 and TSF-Seep35 (Table 6-2)
- Overburden contact water was constrained by overburden pore water extractions presented in Table 6-3.

The results of the calibrated source terms are illustrated in Figure 8-5 to Figure 8-8. In general, the calibrated source terms generally fall within the range of values estimated by seepage data. The calibrated source terms constrained by seepage monitoring data are shown in Table 8-3 and are carried forward along with the non-calibrated source terms shown in Table 8-2 in the validation exercise described in the next section.

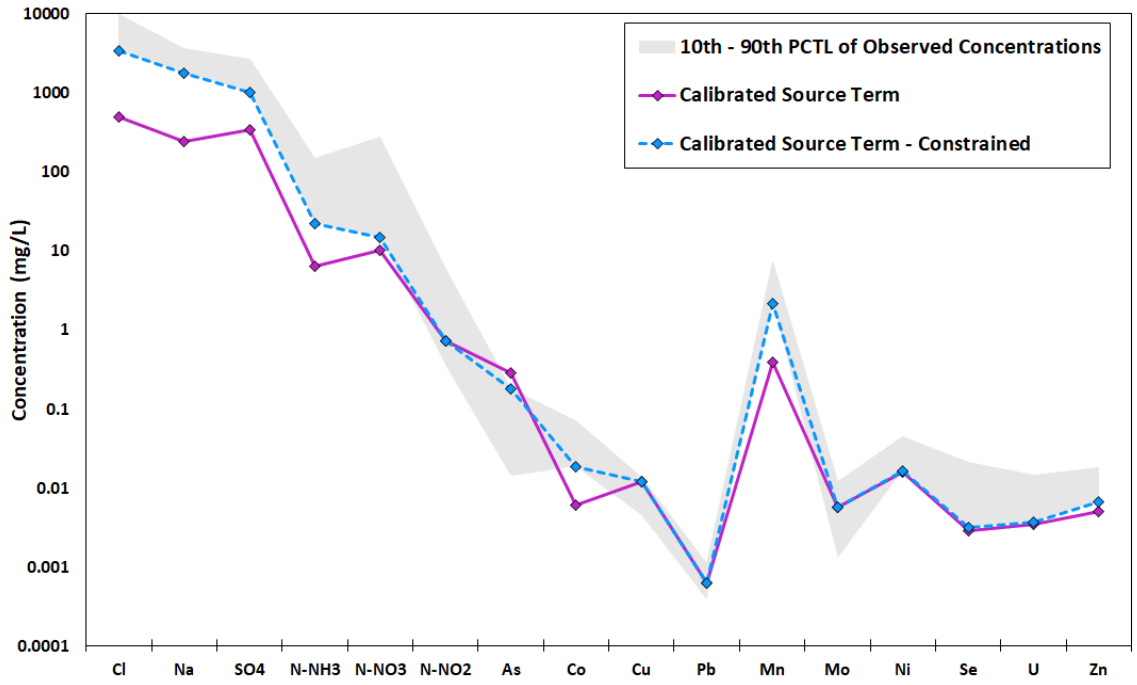


**Figure 8-5: Tailings Storage Facility (TSF) surface runoff constrained by 10th and 90th percentile seep monitoring data.**

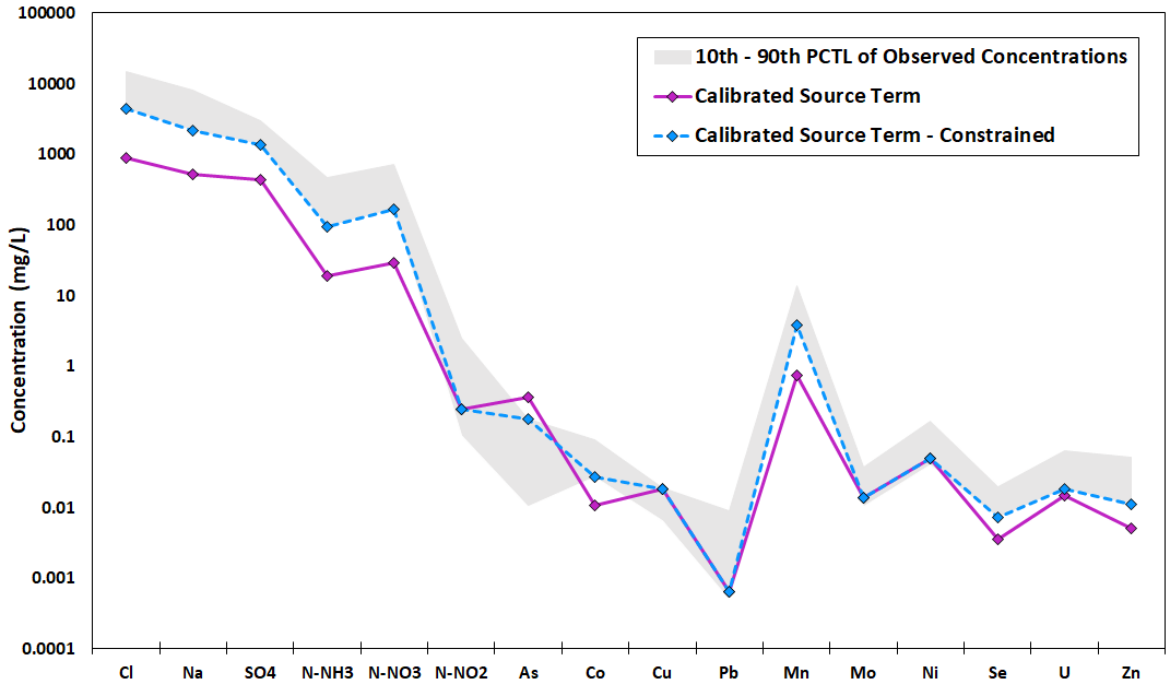


**Figure 8-6: Tailings Storage Facility (TSF) infiltration calibration constrained by 10th and 90th percentile seep monitoring data.**

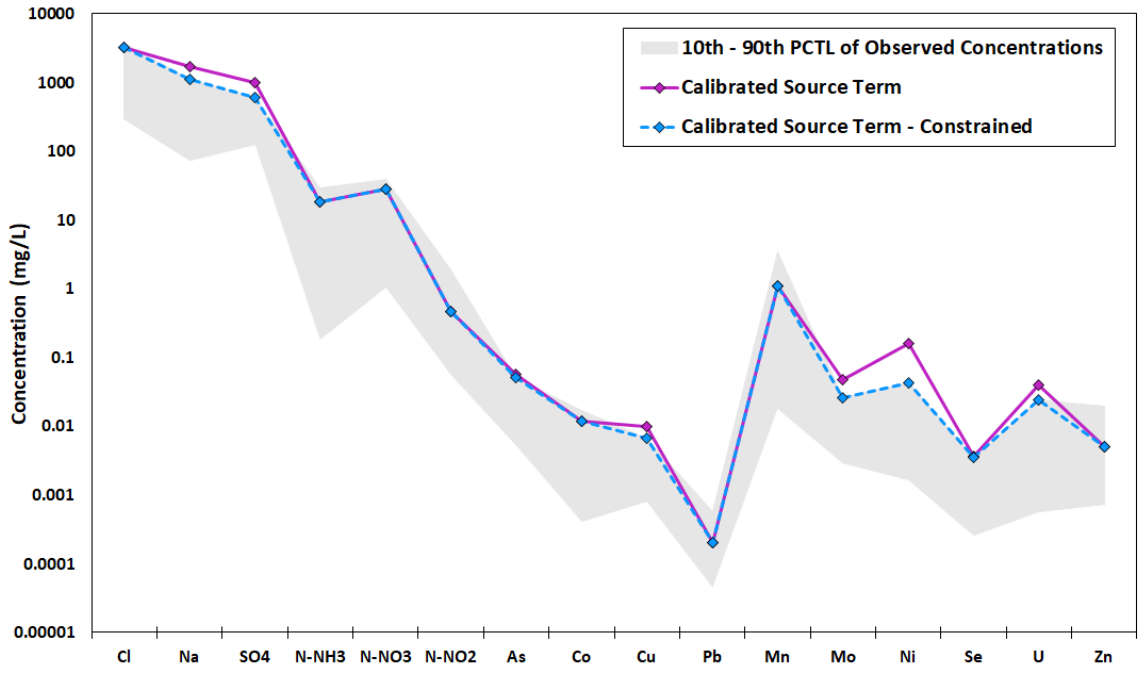


**Figure 8-7: Waste rock contact water calibration constrained by 10th and 90th percentile seep monitoring data.**

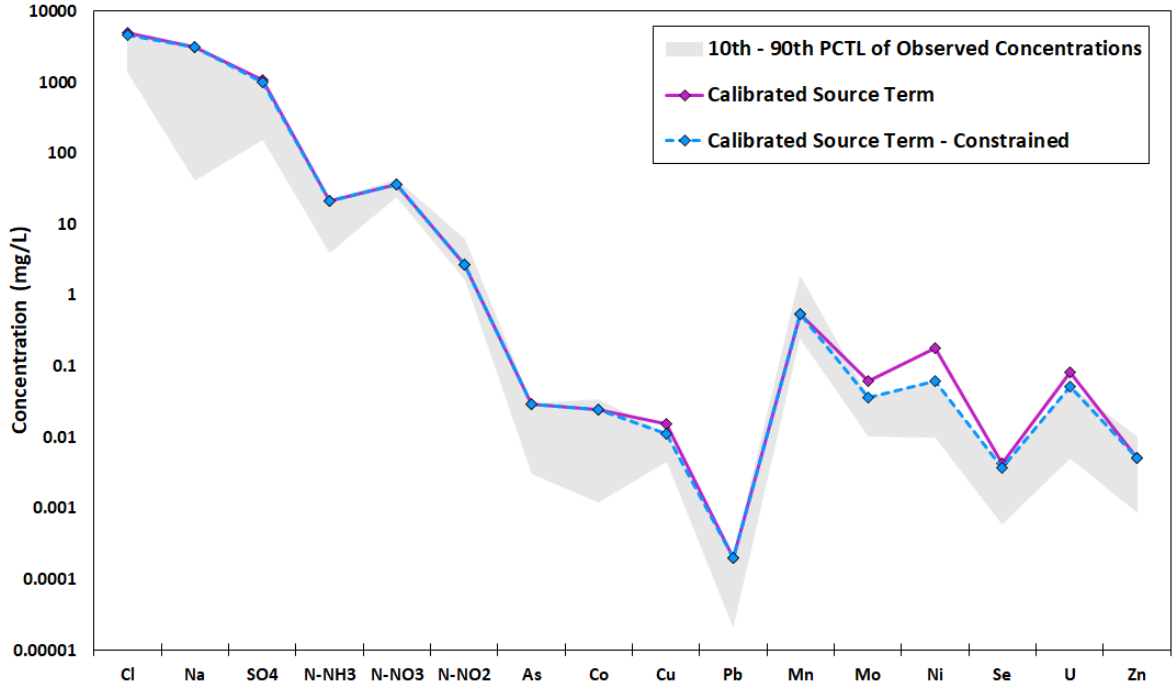


**Figure 8-8: Overburden contact water calibration constrained by 10th and 90th percentile seep monitoring data.**

**Table 8-2:**
**Non-Calibrated Source Terms Used in Validation Model**

| Parameter | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Na | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| Ore Pad | 2700 | 1.23 | 528 | 16.3 | 43.9 | 0.909 | - | 0.00183 | 0.0403 | 0.000217 | 0.000538 | 0.00881 | 0.00592 | 0.000296 | 1.67 | 1020 | 0.0294 | 0.0164 | 0.00149 | 0.00582 | 0.0155 |
| Mine Facilities | 2080 | 1.19 | 419 | 10.5 | 26.7 | 0.748 | - | 0.000959 | 0.0122 | 0.000223 | 0.000567 | 0.00898 | 0.00462 | 0.000295 | 1.76 | 662 | 0.0301 | 0.018 | 0.00118 | 0.00597 | 0.0158 |
| Disturbed Footprint | 225 | 0.115 | 95 | 1.4 | 1.94 | 0.074 | - | 0.00395 | 0.0163 | 0.0000165 | 0.001 | 0.00128 | 0.00445 | 0.0002 | 0.0889 | 109 | 0.0133 | 0.02 | 0.00019 | 0.00442 | 0.005 |

**Table 8-3:**
**Calibrated Source Terms Used in Validation Model**

| Parameter | Cl | F | $SO_4$ | N-$NH_3$ | N-$NO_3$ | N-$NO_2$ | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Na | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| Waste Rock | 3160 | 0.756 | 603 | 18.3 | 28.1 | 0.465 | - | 0.00995 | 0.0499 | 9.76E-05 | 0.001 | 0.0118 | 0.00667 | 0.0002 | 1.07 | 1090 | 0.0425 | 0.0276 | 0.00353 | 0.0241 | 0.005 |
| Overburden | 4640 | 0.8 | 981 | 21.2 | 36 | 2.68 | - | 0.00387 | 0.0284 | 6.85E-05 | 0.001 | 0.0239 | 0.0112 | 0.0002 | 0.532 | 3100 | 0.062 | 0.0581 | 0.00367 | 0.0519 | 0.005 |
| TSF Infiltration | 4380 | 0.104 | 1360 | 94 | 166 | 0.239 | 0.0926 | 0.0022 | 0.178 | 0.000286 | 0.001 | 0.0263 | 0.018 | 0.00063 | 3.73 | 2130 | 0.048 | 0.0143 | 0.00712 | 0.0178 | 0.011 |
| TSF Runoff | 3340 | 0.346 | 1000 | 22.3 | 14.7 | 0.714 | 0.00952 | 0.000951 | 0.178 | 0.000291 | 0.001 | 0.0183 | 0.0121 | 0.00063 | 2.17 | 1780 | 0.016 | 0.0171 | 0.00318 | 0.0036 | 0.0065 |

### 8.2.3 Validation of Calibrated Source Terms

In this section, source terms developed in the previous sections are combined with the GoldSim water balance described in Section 3.7.2 of Lorax (2022) to predict drainage chemistry at downstream monitoring nodes to validate model assumptions. The results for Channel 1 and CP1 are compared to monitoring data in Figure 8-9 and Figure 8-10, respectively. Results for other modelling nodes, including CP6 and CP3 are provided in Appendix G.

Overall the validation model shows that calibrated source terms conservatively predict water quality at CP1, particularly for As, Cu, Mn and Ni. The observed concentration of these elements are significantly overestimated by the validation model in most months. Results for $NH_3$ are mixed, with concentrations being underestimated in 2019 shortly after model initiation and overestimated in 2020. Validation of this parameter in CP1 is complicated by attenuation processes impacting $NH_3$ such as oxidation and biological uptake which are not incorporated in the model. Note that the significant overprediction of $NH_3$ in 2020 is consistent with observed algal growth in CP1 and nutrient (*e.g.,* $NH_3$, P) drawdown (*pers. comm.,* P. Marcotte, Aug. 2021). A number of T-CN values are underestimated in 2019, which could be impacted by model initialization and the fact that most T-CN measurements are below the method detection limit, complicating validation of this parameter. Comparison of T-CN to Channel 1 data in Figure 8-10 shows the range of T-CN concentrations is captured at this upstream monitoring point which is closer to the point source (TSF) of T-CN loading to CP1.

The validation model results for Channel 1 generally reflect the range of observed concentrations (Figure 8-10). The validation model overestimates observed $SO_4$ and Na in the spring, indicating that the model overestimates runoff concentrations during the freshet, which is presumably a relic of applying annual average source term concentrations. The range of trace metal concentrations are generally accurately captured, with the exception of a series of anomalously high Ni concentrations in 2019. The validation model conservatively estimates most Ni concentrations at Channel 1 in 2021, and significantly overestimated Ni in CP1, providing confidence that this parameter is conservatively captured. Overall, the validation exercise shows that the calibrated water balance and source terms are able to conservatively re-produce most observed concentrations in site monitoring data

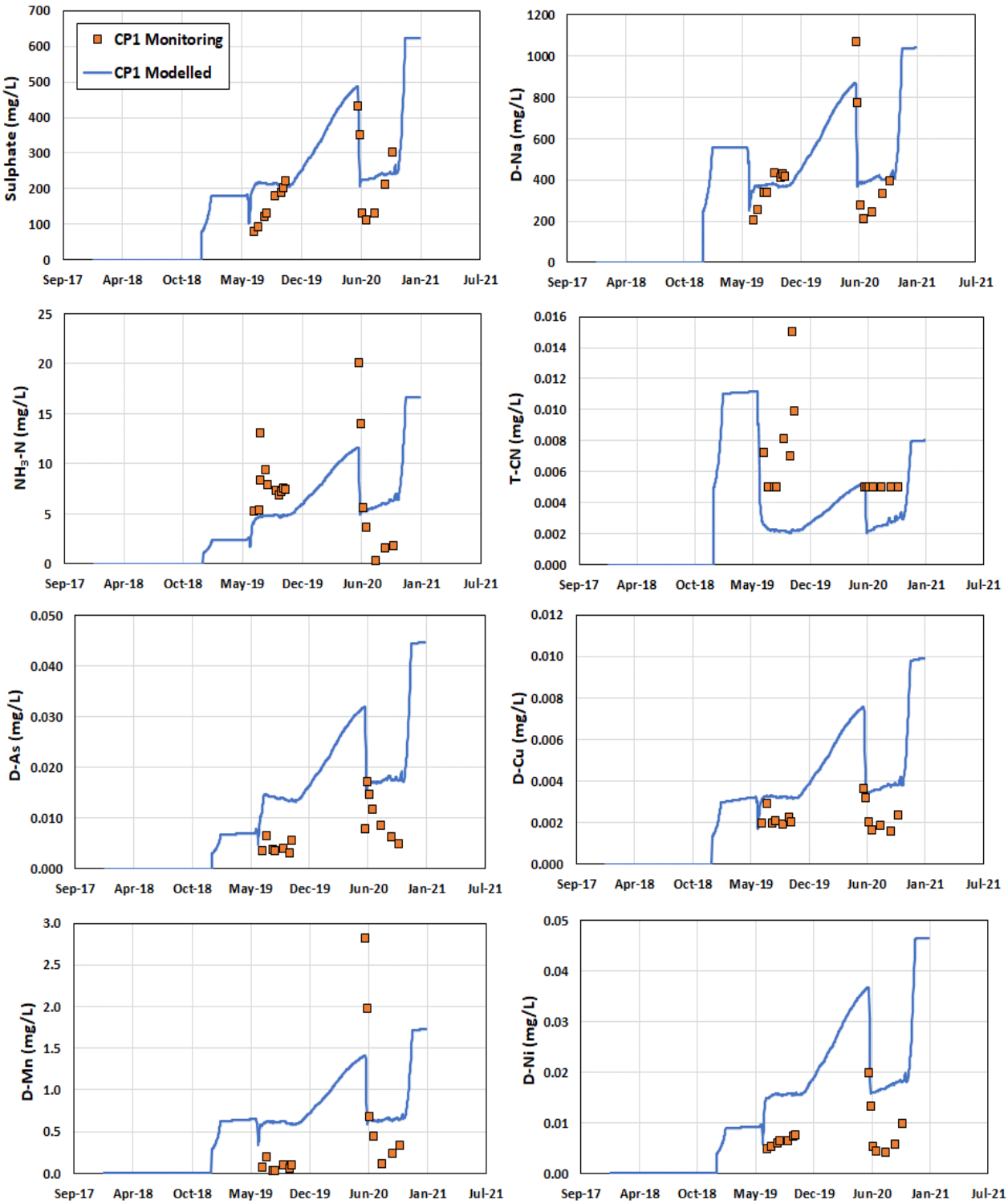


**Figure 8-9: Validation of calibrated GoldSim model predictions at CP1.**

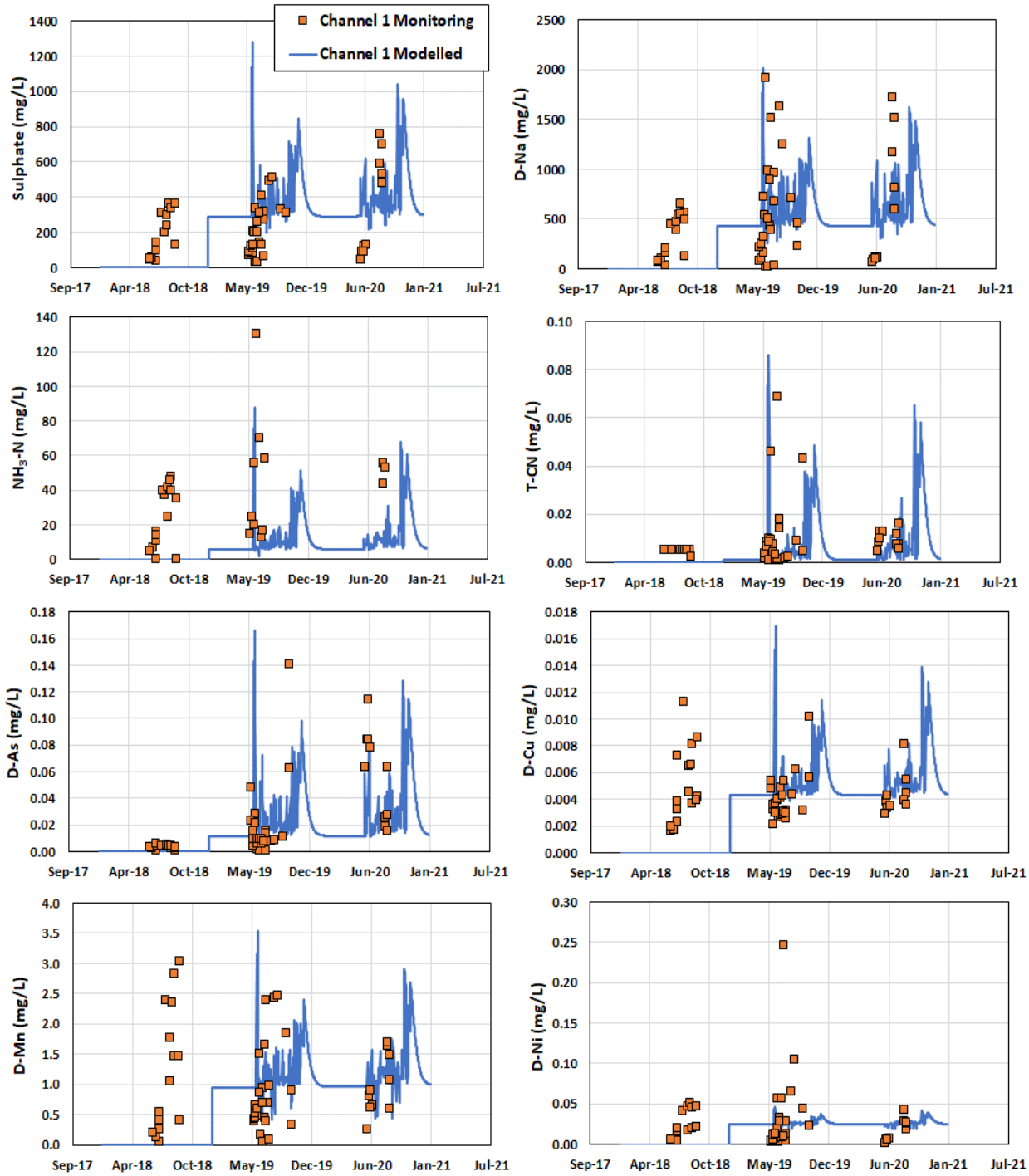


**Figure 8-10: Validation of calibrated GoldSim model predictions at Channel 1. Channel 1 monitoring data plotted in this figure includes sampling of upstream culverts 'Culvert 2 and Culvert 3' as well as the Channel 2 tributary.**

## 8.3 Waste Rock Storage Facilities

Waste rock storage facilities will be constructed in lifts and segregated into open pit or underground (saline) WRSFs. A summary of waste rock and overburden management is provided in Section 2.3.2. Implications of these management practices on source term derivation are described below.

Overburden excavations will be limited to winter months to maintain frozen conditions, mitigating metal and salinity leaching potential from this material. Overburden will be encapsulated by waste rock within the core of the WRSF to maintain permanently frozen conditions and promote formation of a frozen core within each WRSF. Therefore, overburden geochemistry and saline permafrost is not incorporated into WRSF source term derivation.

A non-PAG thermal cover will be installed at WRSF9 to prevent the oxidation of PAG waste rock from the Discovery deposit. Thermal modelling completed by OKC (2022a) shows that the active zone will not extend below the cover thickness of 6 m under RCP4.5, effectively preventing oxidation of underlying PAG waste rock. Hence, the source term for WRSF9 only reflects weathering of non-PAG waste rock used in cover construction. The non-PAG cover material is assumed to be sourced from segregation of non-PAG rock types excavated at Discovery, hence, the source term for this WRSF is calculated using the same approach as other WRSFs.

A majority of underground waste rock will be consumed as rockfill during operations. These facilities will then be backfilled upon cessation of underground operations before the mine workings are flooded. This will mitigate further oxidation or release of salinity associated with underground waste. For the purpose of source term derivation, it is assumed that the saline WRSFs will remain at the surface until the end of operations. However, in reality the saline WRSFs will likely be backfilled shortly after underground operations are complete at each respective deposit.

A mix of saline and open pit waste rock will be stored in WRSF1, WRSF1_Ext and WRSF3. Co-disposal of saline waste rock into WRSF1, WRSF1_Ext was captured by a distinct source term. It was assumed that all saline waste rock placed in these facilities will be placed in the sub catchment draining towards saline pond (SP) B7 (Figure 2-1), referred to as WRSF1_saline area. The source term for this sub-catchment is derived using the same approach as other saline WRSFs described below. Saline rock in this sub catchment will be backfilled or encapsulated with open pit waste rock before the end of operations; therefore, the source term for this area reverts to that of WRSF1 at the beginning of active closure. It was assumed that any saline waste rock disposed in WRSF3 will be encapsulated by open pit waster rock, similar to overburden.

### 8.3.1 Operations

Waste rock source terms were developed for individual lithologies by applying a parameter specific scaling factor to calibrated source terms which captures the variability in median solid phase elemental composition of the different lithologies. For select deposits, lithologies were grouped together based on similarity in geological and geochemical properties to provide a robust representation of solid phase characteristics. These groupings include: i) Discovery; ii) F Zone and Pump; and iii) Tiriganiaq, Tiriganiaq-Wolf, Wesmeg and Wesmeg-North. Within each grouping, median total sulphur and metal contents were calculated for waste rock samples representative of open pit and underground operations, with these results being used for scaling of WRSF and Saline WRSF source terms, respectively. The composition of each WRSF at the end of mine operations is presented in Table 8-4.

To account for existing mine conditions, waste rock monitoring results (2020 to 2021) from the Tiriganiaq deposit were used to relate calibrated values to the source materials (mined rock units) producing this drainage. The results showed that open pit SE and UOFM samples accounted for approximately 75% and 25% of the monitoring samples collected. By extension, a composite median solid phase composition for the existing WRSF was calculated. This composite WRSF was assumed to correspond to the calibrated waste rock contact water chemistry. Scaling factors were calculated by dividing the median solid phase composition for a specific lithology, in this case the Tiriganiaq SE unit, by the composite WRSF values (example calculation shown below). Application of the scaling factors to the calibrated source terms was done to estimate Tiriganiaq SE chemistry. Monitoring results were then related to waste rock compositions by developing subsequent scaling factors in a similar manner, by dividing median solid phase composition for each lithology by the median Tiriganiaq SE monitoring results (example calculation shown below). These scaling factors were applied to the Tiriganiaq SE chemistry to derive source terms for individual lithologies, summarized in Table 8-5. Note that $SO_4$ concentrations were scaled using the solid phase composition for total sulphur.

**Table 8-4:**
**Waste Rock Storage Facility Composition at Full Build**

| Facility | Deposit | Overburden | Gabbro | Lamprophyre | Iron Formation | KMG | Ultramafic | Siltstone | Oxidized Sediments | Sericitized Volcanics | Volcanics | Sediments | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | OVB | GB | LP | IF | KMG | UV | TIRFM | UOFM | VOSR | VO | SE | |
| | | kilotonnes | | | | | | | | | | | |
| WRSF1 | Tiriganiaq, Wesmeg and Wesmeg North | 4510 | 25 | - | 455 | 14.5 | - | 93.9 | 1200 | 34.9 | 589 | 3540 | 10500 |
| WRSF1_Ext | | 3180 | 1590 | 1.99 | 402 | 5.44 | 218 | 413 | 1170 | 99.9 | 17300 | 3720 | 28100 |
| WRSF3 and WRSF3_Ext | | 6190 | 713 | - | 3130 | 259 | 3.25 | 1750 | 11800 | 756 | 15500 | 12000 | 52000 |
| WRSF5 | Wesmeg | 10400 | 4030 | 37.1 | 3430 | 1.95 | 1890 | - | 0.321 | 793 | 29900 | 2.84 | 50500 |
| WRSF6 | Pump | 3580 | 682 | - | 1460 | - | 15.3 | - | - | - | 5650 | 0.0474 | 11400 |
| WRSF7 | F Zone | 5020 | - | 242 | 1660 | - | - | - | - | - | 16600 | - | 23500 |
| WRSF9 | Discovery | 2540 | 3930 | - | 5400 | - | - | - | - | - | - | 27200 | 39100 |
| Saline WRSF1 | Pump | 0.73 | 56.8 | - | 109 | - | 6.3 | - | - | - | 774 | 100 | 1050 |
| Saline WRSF2 | F Zone | 0.47 | - | 0.772 | 113 | - | - | - | - | - | 781 | - | 895 |
| Saline WRSF3 | Discovery | 0.17 | 7.54 | - | 106 | - | - | - | - | - | - | 648 | 762 |
| Saline WRSF4 | Tiriganiaq-Wolf | - | - | - | 28.3 | - | - | - | - | - | 137 | 294 | 459 |

**Table 8-5:**
**Scaled source terms for individual waste rock lithologies by deposit.**

| Parameter | $SO_4$ | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| **Discovery- Open Pit** | | | | | | | | | | | | | |
| **GB** | 342 | 0.00136 | 0.000276 | 0.000844 | 0.000904 | 0.007 | 0.000182 | 0.5 | 0.025 | 0.005 | 0.00353 | 0.0144 | 0.011 |
| **IF** | 1,150 | 0.00101 | 0.000172 | 0.00115 | 0.00263 | 0.00114 | 0.0000813 | 0.5 | 0.00858 | 0.005 | 0.00353 | 0.0109 | 0.00293 |
| **SE** | 358 | 0.0216 | 0.000264 | 0.0015 | 0.0105 | 0.00609 | 0.000163 | 0.5 | 0.0382 | 0.005 | 0.00353 | 0.0274 | 0.00557 |
| **Discovery- Underground** | | | | | | | | | | | | | |
| **GB** | 535 | 0.00167 | 0.0000402 | 0.00059 | 0.000904 | 0.008 | 0.0000331 | 0.5 | 0.0253 | 0.005 | 0.00504 | 0.00753 | 0.00498 |
| **IF** | 1,140 | 0.00225 | 0.0000689 | 0.000624 | 0.00184 | 0.0014 | 0.0000643 | 0.317 | 0.0101 | 0.005 | 0.00504 | 0.00993 | 0.00132 |
| **SE** | 358 | 0.0161 | 0.0000689 | 0.00124 | 0.0134 | 0.00586 | 0.0000473 | 0.5 | 0.0437 | 0.005 | 0.00504 | 0.0173 | 0.00557 |
| **F-Zone/Pump- Open Pit** | | | | | | | | | | | | | |
| **GB** | 320 | 0.00562 | 0.00023 | 0.00101 | 0.000904 | 0.0148 | 0.000147 | 0.5 | 0.0472 | 0.005 | 0.00353 | 0.00394 | 0.00703 |
| **IF** | 5,740 | 0.0397 | 0.000586 | 0.00114 | 0.00114 | 0.0181 | 0.0000719 | 0.5 | 0.0109 | 0.005 | 0.00504 | 0.00394 | 0.0177 |
| **VO** | 278 | 0.00498 | 0.000207 | 0.00224 | 0.000434 | 0.0165 | 0.0000643 | 0.5 | 0.0663 | 0.005 | 0.00353 | 0.00308 | 0.00806 |
| **F Zone/Pump- Underground** | | | | | | | | | | | | | |
| **GB** | 326 | 0.0182 | 0.000149 | 0.000705 | 0.000904 | 0.0189 | 0.0000927 | 0.5 | 0.0632 | 0.005 | 0.00504 | 0.00394 | 0.0085 |
| **IF** | 2,600 | 0.0809 | 0.000258 | 0.000832 | 0.00283 | 0.01 | 0.0000388 | 0.5 | 0.00624 | 0.005 | 0.00504 | 0.00257 | 0.00674 |
| **SE** | 580 | 0.0461 | 0.000207 | 0.00139 | 0.0125 | 0.00889 | 0.000208 | 0.5 | 0.0538 | 0.005 | 0.00353 | 0.0274 | 0.00535 |
| **VO** | 248 | 0.0306 | 0.000184 | 0.0017 | 0.000434 | 0.0152 | 0.0000492 | 0.5 | 0.0749 | 0.005 | 0.00504 | 0.00154 | 0.00828 |
| **Tiriganiaq/Wesmeg/Wesmeg-North- Open Pit** | | | | | | | | | | | | | |
| **GB** | 320 | 0.00562 | 0.00023 | 0.00101 | 0.000904 | 0.0148 | 0.000147 | 0.5 | 0.0472 | 0.005 | 0.00353 | 0.00394 | 0.00703 |
| **IF** | 2,180 | 0.0454 | 0.000172 | 0.000127 | 0.00414 | 0.00372 | 0.000117 | 0.5 | 0.00858 | 0.005 | 0.00504 | 0.00548 | 0.00425 |
| **SE** | 540 | 0.0305 | 0.000299 | 0.00173 | 0.0118 | 0.00708 | 0.000246 | 0.5 | 0.0452 | 0.005 | 0.00353 | 0.0291 | 0.00564 |
| **TIRFM** | 538 | 0.0629 | 0.000281 | 0.000983 | 0.00724 | 0.00733 | 0.000184 | 0.5 | 0.0261 | 0.005 | 0.00353 | 0.0223 | 0.00458 |
| **UOFM** | 460 | 0.0396 | 0.000207 | 0.000399 | 0.00585 | 0.00412 | 0.000227 | 0.5 | 0.0144 | 0.005 | 0.00353 | 0.018 | 0.00344 |
| **UV** | 183 | 0.0262 | 0.000149 | 0.00751 | 0.000434 | 0.0101 | 0.000069 | 0.5 | 0.23 | 0.005 | 0.00353 | 0.00556 | 0.00769 |
| **VO** | 436 | 0.0141 | 0.000207 | 0.00197 | 0.000434 | 0.0165 | 0.0000662 | 0.5 | 0.0749 | 0.005 | 0.00353 | 0.00257 | 0.00725 |
| **Tiriganiaq/Wesmeg/Wesmeg-North- Underground** | | | | | | | | | | | | | |
| **GB** | 326 | 0.0182 | 0.000149 | 0.000705 | 0.000904 | 0.0189 | 0.0000927 | 0.5 | 0.0632 | 0.005 | 0.00504 | 0.00394 | 0.0085 |
| **IF** | 3,000 | 0.217 | 0.000402 | 0.000497 | 0.00927 | 0.0184 | 0.000314 | 0.5 | 0.0187 | 0.005 | 0.00504 | 0.00771 | 0.00637 |
| **SE** | 580 | 0.0461 | 0.000207 | 0.00139 | 0.0125 | 0.00889 | 0.000208 | 0.5 | 0.0538 | 0.005 | 0.00353 | 0.0274 | 0.00535 |
| **TIRFM** | 404 | 0.0492 | 0.000276 | 0.00139 | 0.0132 | 0.00708 | 0.000208 | 0.5 | 0.0538 | 0.005 | 0.00353 | 0.0274 | 0.00564 |
| **UOFM** | 257 | 0.0394 | 0.000103 | 0.000231 | 0.00776 | 0.00267 | 0.0000794 | 0.5 | 0.0187 | 0.005 | 0.00504 | 0.00651 | 0.00418 |
| **VO** | 391 | 0.00637 | 0.000184 | 0.00168 | 0.000434 | 0.0181 | 0.0000804 | 0.5 | 0.0846 | 0.005 | 0.00479 | 0.000933 | 0.0059 |

**Notes:** IF = Iron Formation; SE = Sedimentary; VO = Mafic Volcanics; UV = Ultramafic; TIRFM=Siltstone; UOFM = Oxidized Sediments.

For the duration of WRSF construction, annual source terms for $SO_4$ and metal parameters represent the sum of expected lithological compositions (%) multiplied by the corresponding end member chemistries (example calculation shown below). Overburden chemistry, as defined by the calibrated values, were incorporated only in the derivation of WRSF source terms. Generally, lower source term concentrations for metal parameters are observed for the WRSFs relative to the saline WRSFs. This is attributed to higher median solid phase metal contents for underground waste rock samples and thus higher scaling factors particularly for the F Zone/Pump and Tiriganiaq/Wesmeg/Wesmeg-North deposits.

Example calculations for scaling and derivation of annual source term for Parameter A:

- Scaling of calibrated source term by the median Tiriganiaq solid phase monitoring results:

  [Tiri. $SE_A$ mg/L] = [Calibrated$_A$ mg/L] x [Tiri. $SE_A$ ppm/WRSF composite$_A$ ppm]

- Scaling of Tiriganiaq SE chemistry by the median solid phase composition of each lithology:

  [Disc. $IF_A$ mg/L] = [Tiri. $SE_A$ mg/L] x [Disc. $IF_A$ ppm/ Tiri. $SE_A$ ppm]

- Calculation of annual source term for a WRSF or SRP for Year Y:

  [WRSF9$_Y$ mg/L] = [%$GB_y$ x Disc. $GB_A$ mg/L] + [%$IF_y$ x Disc. $IF_A$ mg/L] + [%$SE_y$ x Disc. $SE_A$ mg/L]

Annual source terms for major ions (Ca, Mg, Na and Cl) were estimated based on a charge balance between Na and Cl and between Ca+Mg and $SO_4$. These concentrations were calculated by maintaining the ratios for Na:$SO_4$ and Ca:Mg observed in the calibrated source terms. Other parameters including nitrogen species (ammonia, nitrate and nitrite), F, B and Hg were calculated directly from calibrated waste rock and overburden source terms multiplied by the expected compositions of each material type. The TDS concentration was calculated assuming a constant alkalinity level of 120 mg $CaCO_3$/L.

For the Saline WRSFs, annual source terms were derived similarly to the WRSFs with exception of TDS related parameters (nitrogen species, $SO_4$, Ca, Mg, K, Cl and Na) and $^{226}$Ra. During SRP expansion, nitrogen species, Na, $SO_4$ and K levels were assumed to constantly reflect the chemistry of the Ore Pad Seep sample collected on August 15$^{th}$, 2020. Water quality for this seep is inferred to be representative of freshly excavated material sourced from the underground (as discussed in Section 6.1.2). The concentration of Cl was set in charge balance with Na, and the concentration of Mg and Ca were set to charge balance with $SO_4$. For $^{226}$Ra, which is primarily associated with connate water present in the underground mine, WRSF source terms were assumed to be equal to the detection limit

(0.01 mg/L) while SRP source terms were calculated based the ratio of $^{226}$Ra to TDS observed in average underground sump water concentration (2019 to 2020).

During periods when expansion is ceased or once a WRSF or Saline WRSFs reaches maximum size, annual source terms for non-TDS parameters remain constant in succeeding years at levels estimated in the last year of expansion. For TDS parameters (nitrogen species, Cl and Na), an annual rinsing rate was applied resulting in a progressive decline of concentrations throughout the duration of the operations period. The rinsing rate was derived from the nitrogen release rate measured at the Diavik Mine (2007-2010), located in the North Slave Region of the Northwest Territories. The rate was scaled to the mean annual precipitation observed at the Meliadine Mine and results in a 13% decline in TDS levels each year that mine rock is exposed at the surface. This is considered a conservative assumption because field salinity rinsing tests at Meliadine Mine found that 90% of salinity is removed from shallow waste rock within 2-3 years of deposition. For the SRPs, the rinsing rate was additionally applied to major ions and $^{226}$Ra concentrations which decline proportionally to calculated TDS levels.

#### *8.3.1.1 Solubility Constraints*

Scaling source terms can often generate concentrations that are beyond thermodynamic solubility constraints. The geochemical modelling program PHREEQC (Parkhurst & Appelo, 1999) was used to calculate solubility limits for dissolved F, Mn and P which have relatively well-defined thermodynamic characteristics. Solubility constraints for Co are developed based on empirical observations of this element's behaviour. Specifically, mafic rock types (VO, UV and GB) contain elevated Co, which is typically of mafic and ultramafic igneous lithologies, resulting in scaled Co source term concentrations which were several orders of magnitude beyond concentrations observed in geochemical testing on these material types (*e.g.*, unsaturated column and SFE test). Therefore, the Co concentration for these parameters were capped using 90$^{th}$ percentile concentrations produced by preliminary unsaturated column test results for the GB and VO rock type (Table 4-11). The solubility constraints for F, Mn, P and Co are applied to the lithology-specific waste rock source terms shown in Table 8-5.

### 8.3.2 Active Closure and Post Closure

The thermal profile and hydrology of WRSFs will evolve over time as a result of climate forcing's predicted under the representative concentration pathway (RCP) 4.5 scenarios developed for the Meliadine Extension (OKC, 2022a). The impact of climate change becomes increasingly pronounced over time and was therefore incorporated into source terms developed for the active closure and post closure period.

The average annual temperatures under the RCP 4.5 scenario are predicted to increase from the current annual average of -10.4ºC to -4.6ºC (average 2090 - 2120). This will impact WRSF thermal profiles by increasing the average temperature and duration that the active zone is unfrozen. The impact of RCP 4.5 climate scenario on the thermal profile of the WRSFs has been assessed through landform modelling completed by OKC (2022a). The thermal profiles show the active zone will be limited to the upper 6 m of the WRSF throughout the model period (Figure 8-11). Impacts to the active zone are most pronounced in the upper 2 m, where the annual duration of unfrozen conditions will increase from 4.5 months to 5.2 months, and the average temperature during summer months will increase from 6.2ºC to 8.9ºC over the model period. The impacts on climate change are predicted to be increasingly muted with depth.

Temperature increase will accelerate sulphide oxidation rates, which can be estimated based on the Arrhenius relationship illustrated in Figure 8 12. This figure shows the Arrhenius relationship normalized to 25ºC using the activation energy experimentally determined for pyrite, pyrrhotite and chalcopyrite (Ahonen and Tuovinen, 1991). The increase in loading rates predicted by the Arrhenius equation, using the activation energy of pyrrhotite, are used to scale calibrated source terms to reflect changes in the thermal profile of the WRSFS over time. The cumulative impact of temperature change and increased duration of unfrozen conditions within the active zone results in an 8% increase in loading rates between 2043 (end of operations) and 2120.

The mean annual precipitation is expected to increase from by 0.07 mm/year on average in the RCP 4.5 climate scenario (OKC, 2022a). This would result in an increase in mean annual precipitation from 429 mm (current) to 519 mm by 2120. Landform modelling completed by OKC (2022a) predicts that average annual WRSF surface infiltration water will increase from an average of 22.6 mm in operations to 101.4 mm in the final decade of the modelling period (2110 to 2120). The increase in surface infiltration is combined with the increase in loading rates to generate active-closure and post-closure source terms. Since the increase in surface infiltration is a significantly greater magnitude compared to the increase in loading rates, the source term concentrations are predicted to decline over time.

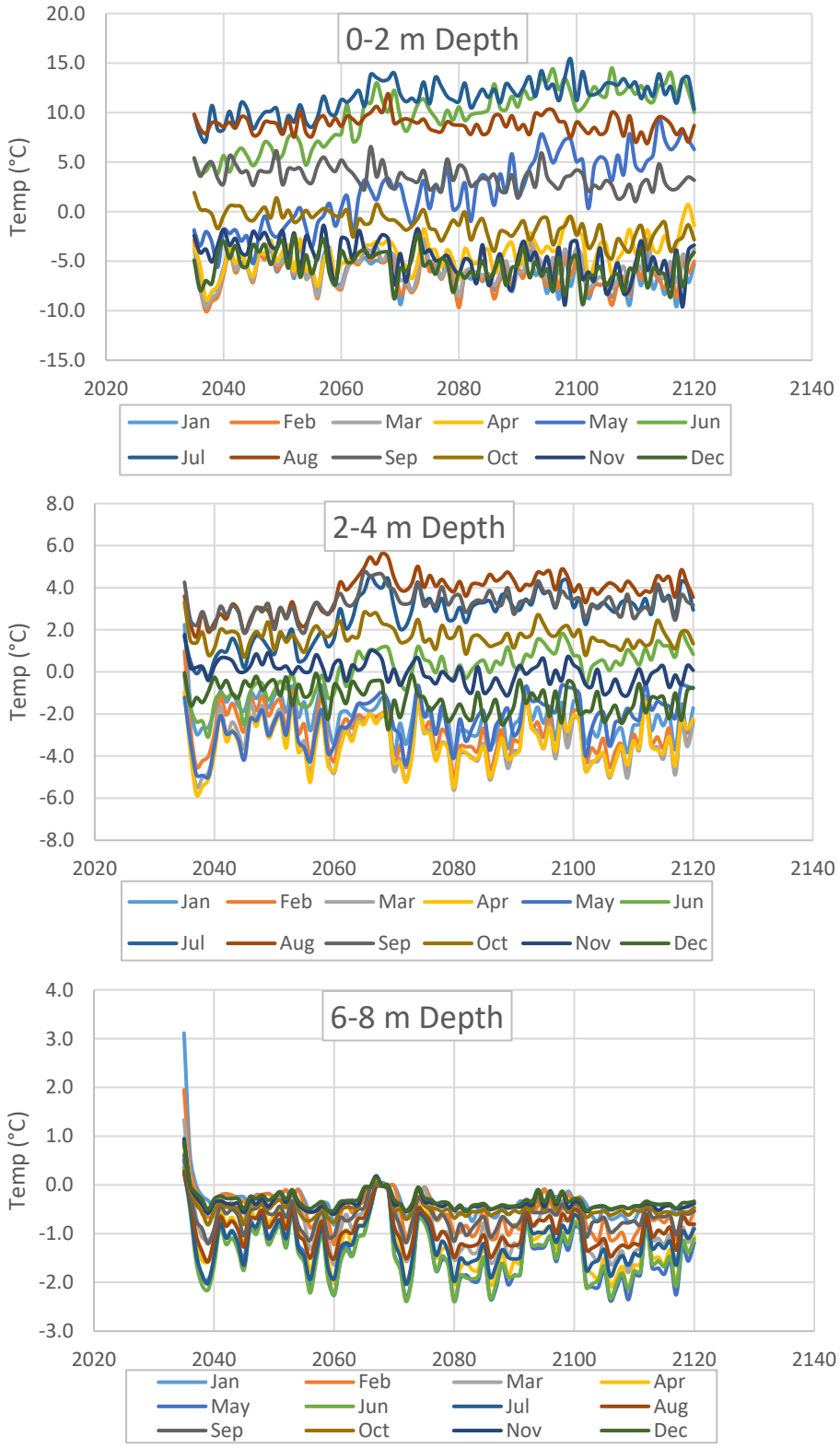


**Figure 8-11: Monthly internal temperature projections for WRSFs under RCP4.5 climate scenario (OKC, 2022a).**

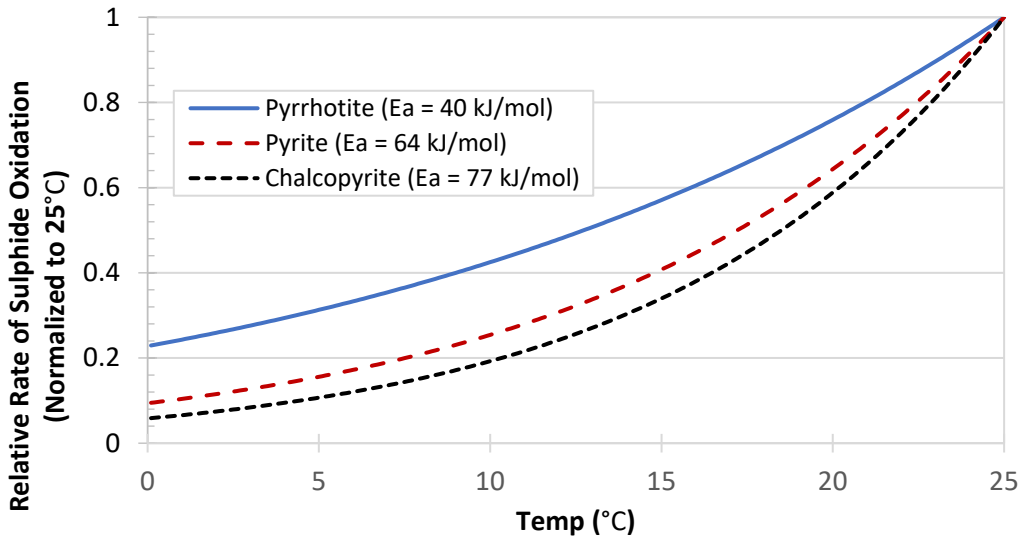


**Figure 8-12: Arrhenius relationship for sulphide mineral weathering using activation energy (Ea) for pyrrhotite, pyrite and chalcopyrite normalized to 25ºC.**

### 8.3.3 Source Term Results

The WRSF source terms are developed on an annual basis for each WRSF throughout operations, active-closure and post-closure. The saline WRSFs are only present during mine operations, so closure source terms are not developed for these facilities.

A summary of source terms is provided in Table 8-6, while the complete source terms are provided in Appendix G. Source terms presented in Table 8-6 show peak TDS years during operations (variable year), end of mine life (2043) and the end of the post-closure modelling period (2120). A time series for TDS and As source terms are plotted in Figure 8-13 to illustrate temporal trends.

# Table 8-6: Waste Rock Storage Facility Source Term Summary

| Year | Parameter | TDS | Cl | F | $SO_4$ | $N\text{-}NH_3$ | $N\text{-}NO_3$ | $N\text{-}NO_2$ | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Na | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **WRSF1** | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | **Peak TDS** | 4,000 | 1,800 | 0.756 | 654 | 18.3 | 28.1 | 0.465 | 0.00934 | 0.033 | 0.000261 | 0.00131 | 0.00904 | 0.0068 | 0.000217 | 0.499 | 1,180 | 0.0372 | 0.00499 | 0.00366 | 0.0228 | 0.00514 |
| **2043** | **End of Operations** | 1,030 | 93.6 | 0.756 | 574 | 1.08 | 1.67 | 0.0275 | 0.00963 | 0.0297 | 0.000257 | 0.00146 | 0.008 | 0.00834 | 0.000198 | 0.498 | 61.5 | 0.0438 | 0.00498 | 0.00358 | 0.0205 | 0.0055 |
| **2120** | **End of Modelling** | 258 | 23.4 | 0.189 | 144 | 0.0000342 | 0.0000526 | 0.000000869 | 0.00241 | 0.00743 | 0.0000643 | 0.000364 | 0.002 | 0.00209 | 0.0000496 | 0.124 | 15.4 | 0.0109 | 0.00124 | 0.000896 | 0.00511 | 0.00137 |
| **WRSF1 Ext** | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | **Peak TDS** | 4,330 | 1,980 | 0.756 | 721 | 18.3 | 28.1 | 0.465 | 0.00897 | 0.0205 | 0.000203 | 0.00147 | 0.00152 | 0.0133 | 0.0000926 | 0.499 | 1,300 | 0.0572 | 0.00499 | 0.00378 | 0.00435 | 0.00644 |
| **2043** | **End of Operations** | 1,300 | 332 | 0.756 | 463 | 4.76 | 7.33 | 0.121 | 0.00995 | 0.0393 | 0.00021 | 0.000446 | 0.00607 | 0.00422 | 0.000228 | 0.5 | 218 | 0.0155 | 0.005 | 0.00353 | 0.0184 | 0.00352 |
| **2120** | **End of Modelling** | 324 | 82.8 | 0.189 | 116 | 0.00015 | 0.000231 | 0.00000382 | 0.00249 | 0.00982 | 0.0000525 | 0.000112 | 0.00152 | 0.00106 | 0.0000569 | 0.125 | 54.4 | 0.00388 | 0.00125 | 0.000882 | 0.00459 | 0.00088 |
| **WRSF3 and WRSF3 Ext** | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | **Peak TDS** | 4,400 | 1,990 | 0.756 | 724 | 18.3 | 28.1 | 0.465 | 0.00893 | 0.0382 | 0.000224 | 0.000766 | 0.00639 | 0.00581 | 0.000199 | 0.498 | 1,310 | 0.0247 | 0.00498 | 0.00374 | 0.0173 | 0.00435 |
| **2043** | **End of Operations** | 4,040 | 1,820 | 0.756 | 661 | 18.3 | 28.1 | 0.465 | 0.00911 | 0.0446 | 0.000218 | 0.000507 | 0.00593 | 0.00481 | 0.000204 | 0.497 | 1,200 | 0.0167 | 0.00497 | 0.00367 | 0.0174 | 0.00378 |
| **2120** | **End of Modelling** | 1,010 | 454 | 0.189 | 165 | 0.000577 | 0.000888 | 0.0000147 | 0.00228 | 0.0111 | 0.0000544 | 0.000127 | 0.00148 | 0.0012 | 0.0000509 | 0.124 | 299 | 0.00417 | 0.00124 | 0.000918 | 0.00434 | 0.000945 |
| **WRSF5** | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | **Peak TDS** | 5,990 | 2,700 | 0.8 | 981 | 21.2 | 36 | 2.68 | 0.00387 | 0.0284 | 0.0000685 | 0.0019 | 0.0239 | 0.0112 | 0.0000775 | 0.532 | 1,770 | 0.062 | 0.0058 | 0.00367 | 0.0519 | 0.005 |
| **2043** | **End of Operations** | 3,100 | 1,270 | 0.756 | 694 | 12.2 | 18.8 | 0.311 | 0.00933 | 0.0196 | 0.000197 | 0.00208 | 0.00113 | 0.0133 | 0.0000853 | 0.498 | 838 | 0.0753 | 0.00498 | 0.00378 | 0.00354 | 0.00672 |
| **2120** | **End of Modelling** | 775 | 319 | 0.189 | 173 | 0.000386 | 0.000593 | 0.0000098 | 0.00233 | 0.00489 | 0.0000492 | 0.00052 | 0.000283 | 0.00334 | 0.0000213 | 0.124 | 209 | 0.0188 | 0.00124 | 0.000944 | 0.000884 | 0.00168 |
| **WRSF6** | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | **Peak TDS** | 11,700 | 5,410 | 0.756 | 1,970 | 18.3 | 28.1 | 0.465 | 0.00995 | 0.0157 | 0.000324 | 0.0019 | 0.000654 | 0.017 | 0.0000666 | 0.5 | 3,560 | 0.0492 | 0.005 | 0.004 | 0.00335 | 0.011 |
| **2043** | **End of Operations** | 5,270 | 1,800 | 0.756 | 1,680 | 7.13 | 11 | 0.181 | 0.0103 | 0.0139 | 0.000305 | 0.00176 | 0.000679 | 0.0165 | 0.0000775 | 0.495 | 1,180 | 0.0488 | 0.00495 | 0.00388 | 0.0034 | 0.0103 |
| **2120** | **End of Modelling** | 1,320 | 449 | 0.189 | 419 | 0.000225 | 0.000346 | 0.00000572 | 0.00258 | 0.00347 | 0.0000762 | 0.000439 | 0.00017 | 0.00412 | 0.0000194 | 0.124 | 295 | 0.0122 | 0.00124 | 0.00097 | 0.000848 | 0.00257 |
| **WRSF7** | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | **Peak TDS** | 9,410 | 4,360 | 0.756 | 1,580 | 18.3 | 28.1 | 0.465 | 0.00993 | 0.0133 | 0.000297 | 0.00197 | 0.000603 | 0.0168 | 0.000066 | 0.499 | 2,860 | 0.0529 | 0.00499 | 0.00388 | 0.00328 | 0.0103 |
| **2043** | **End of Operations** | 3,400 | 1,150 | 0.756 | 1,080 | 7.13 | 11 | 0.181 | 0.00983 | 0.01 | 0.00026 | 0.00205 | 0.000533 | 0.0165 | 0.0000646 | 0.494 | 758 | 0.0574 | 0.00494 | 0.00371 | 0.00317 | 0.00937 |
| **2120** | **End of Modelling** | 850 | 288 | 0.189 | 269 | 1.78 | 2.74 | 0.0453 | 0.00246 | 0.0025 | 0.0000649 | 0.000512 | 0.000133 | 0.00413 | 0.0000162 | 0.123 | 189 | 0.0143 | 0.00123 | 0.000927 | 0.000792 | 0.00234 |
| **WRSF9** | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | **Peak TDS** | 1,940 | 620 | 0.312 | 566 | 16.4 | 25.6 | 0.579 | 0.0188 | 0.0185 | 0.0000683 | 0.0042 | 0.00908 | 0.00938 | 0.000407 | 0.319 | 407 | 0.137 | 0.0443 | 0.00331 | 0.0553 | 0.0164 |
| **2043** | **End of Operations** | 1,270 | 242 | 0.312 | 552 | 6.39 | 9.97 | 0.226 | 0.0188 | 0.0182 | 0.0000688 | 0.00416 | 0.00947 | 0.00956 | 0.000412 | 0.34 | 159 | 0.138 | 0.0443 | 0.00331 | 0.055 | 0.017 |
| **2120** | **End of Modelling** | 318 | 60.4 | 0.0778 | 138 | 0.000202 | 0.000315 | 0.00000713 | 0.0047 | 0.00456 | 0.0000172 | 0.00104 | 0.00237 | 0.00239 | 0.000103 | 0.0849 | 39.7 | 0.0344 | 0.0111 | 0.000827 | 0.0137 | 0.00425 |
| **Saline WRSF1** | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | **Peak TDS** | 24,200 | 11,900 | 0.756 | 2,600 | 126 | 371 | 3.92 | 0.00475 | 0.0359 | 0.000191 | 0.00154 | 0.00474 | 0.0131 | 0.000107 | 0.5 | 7,840 | 0.0663 | 0.005 | 0.0045 | 0.0108 | 0.00723 |
| **2043** | **End of Operations** | 6,670 | 3,110 | 0.756 | 950 | 32.8 | 96.6 | 1.02 | 0.00298 | 0.0436 | 0.000201 | 0.0013 | 0.00121 | 0.0142 | 0.0000524 | 0.5 | 2,040 | 0.053 | 0.005 | 0.00504 | 0.00219 | 0.00786 |
| **Saline WRSF2** | | | | | | | | | | | | | | | | | | | | | | |
| **2037** | **Peak TDS** | 24,200 | 11,900 | 0.756 | 2,600 | 126 | 371 | 3.92 | 0.00475 | 0.0359 | 0.000191 | 0.00154 | 0.00474 | 0.0131 | 0.000107 | 0.5 | 7,840 | 0.0663 | 0.005 | 0.0045 | 0.0108 | 0.00723 |
| **2043** | **End of Operations** | 11,300 | 5,320 | 0.756 | 950 | 32.8 | 96.6 | 1.02 | 0.00298 | 0.0436 | 0.000201 | 0.0013 | 0.00121 | 0.0142 | 0.0000524 | 0.5 | 2,040 | 0.053 | 0.005 | 0.00504 | 0.00219 | 0.00786 |
| **Saline WRSF3** | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | **Peak TDS** | 24,200 | 11,900 | 0.756 | 2,600 | 126 | 371 | 3.92 | 0.000663 | 0.0129 | 0.0000686 | 0.0011 | 0.0107 | 0.00491 | 0.0000508 | 0.46 | 7,840 | 0.0361 | 0.005 | 0.00504 | 0.0156 | 0.00463 |
| **2043** | **End of Operations** | 3,990 | 1,580 | 0.756 | 345 | 16.7 | 49.3 | 0.521 | 0.000649 | 0.0136 | 0.0000688 | 0.00113 | 0.0113 | 0.00508 | 0.0000502 | 0.468 | 1,040 | 0.0377 | 0.005 | 0.00504 | 0.016 | 0.00481 |
| **Saline WRSF4** | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | **Peak TDS** | 24,200 | 11,900 | 0.756 | 2,600 | 126 | 371 | 3.92 | 0.00684 | 0.0339 | 0.000181 | 0.00113 | 0.00466 | 0.0127 | 0.000113 | 0.496 | 7,840 | 0.0577 | 0.00496 | 0.00466 | 0.00693 | 0.00558 |
| **2043** | **End of Operations** | 24,200 | 11,900 | 0.756 | 2,600 | 126 | 371 | 3.92 | 0.00798 | 0.0463 | 0.000209 | 0.00122 | 0.00523 | 0.014 | 0.000138 | 0.497 | 7,840 | 0.0598 | 0.00497 | 0.00455 | 0.00865 | 0.00578 |
| **WRSF1_Saline Area** | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | **Peak TDS** | 24,200 | 11,900 | 0.756 | 2,600 | 126 | 371 | 3.92 | 0.00764 | 0.0427 | 0.000201 | 0.00122 | 0.00355 | 0.0153 | 0.000123 | 0.487 | 7,840 | 0.0622 | 0.00487 | 0.00463 | 0.00521 | 0.00584 |
| **2043** | **End of Operations** | 6,960 | 3,110 | 0.756 | 677 | 32.8 | 96.6 | 1.02 | 0.00191 | 0.0396 | 0.000107 | 0.000272 | 0.00793 | 0.00289 | 0.000084 | 0.5 | 2,040 | 0.02 | 0.005 | 0.00499 | 0.00725 | 0.00422 |

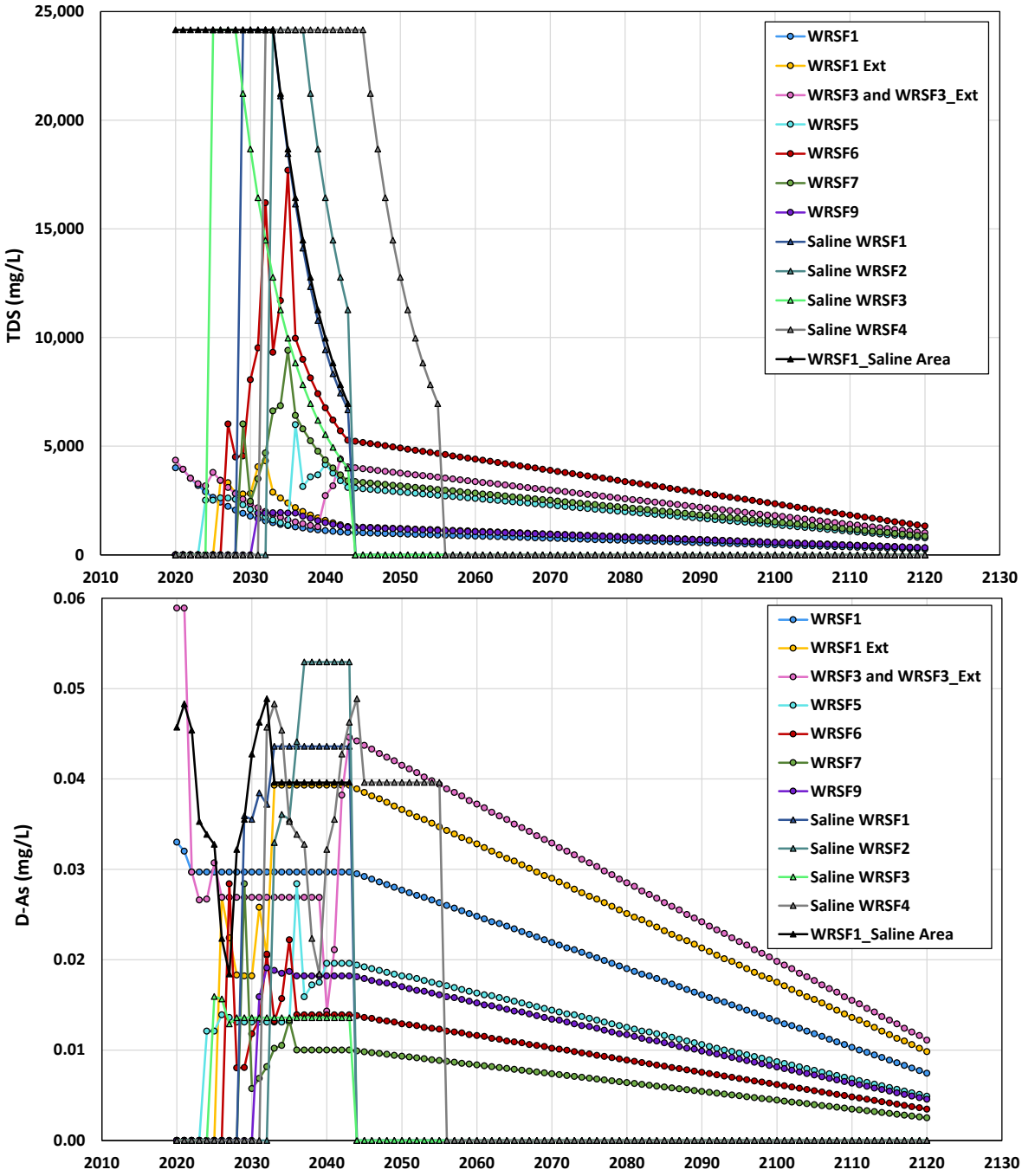


**Figure 8-13: Waste rock storage facility annual source terms for TDS (top) and As (bottom).**

## 8.4 Tailings Storage Facility

The TSF will receive dry stack tailings trucked directly from the mill. An engineered cover will be progressively placed on the surface of the TSF as it reaches its ultimate design elevation. By the end of mine life 80% of the cover will be completed and the final 20% will be completed during active closure. The intent of the engineered cover will be to limit vertical infiltration of water into the tailings. The proposed cover system configuration includes waste rock placed at surface on both the slope and plateau of the TSF, with a minimum thickness of 2.5 m. The cover system design is provided in OKC (2022a), and details germane to source term derivation are as follows:

- Contact water from the TSF will be limited to surface runoff, which interacts with the waste rock cover system, and infiltration which interacts with shallow tailings beneath the cover.
- Frozen conditions will persist at the base of the TSF in all climate scenarios. As a result, basal seepage from the landform is negligible.
- Oxygen ingress modelling shows that the waste rock cover will be fully oxic, but oxygen ingress into the underlying tailings will be limited by the high degree of saturation and fine particle size. This limitation on oxygen resupply will limit oxygen ingress to minimal depths (< 10 cm) (Figure 8-14).

For the purpose of calculated source terms, the engineered cover is not considered during the operations phase as a conservative approximation. During operations both surface runoff and infiltration are assigned a source term which reflects contact with TSF tailings. Upon active closure and post closure, it is assumed that the cover is fully constructed. During the closure periods surface runoff is assigned a source term reflective of waste rock used in cover construction, while infiltration is assigned a source term reflective of contact with tailings.

### 8.4.1 Operations

Tailings source terms were developed in a similar manner to waste rock source terms, with scaling factors applied to the calibrated values reflecting the variability in median solid phase elemental composition of different ore lithologies. As mine activity is presently limited to the Tiriganiaq deposit, tailings present at the TSF are assumed to predominantly represent processed IF ore. Geochemical characterization of mill tailings collected from the TSF and Tiriganiaq IF ore samples generally showed similar solid phase elemental composition, which is consistent with the minimal influence on solid phase composition that mill processing exerts on initial ore composition (Section 4.3). As such, characterization results for ore lithologies presented in Section 4.2 were assumed to be

representative of corresponding mill tailings. Source terms for the TSF were developed to reflect mixtures of ore lithologies expected to be mined throughout the operations period. To that end, ore samples representative of the open pit and underground operations were combined in the same groupings applied for waste rock samples: i) Discovery; ii) F Zone and Pump; and iii) Tiriganiaq, Tiriganiaq-Wolf, Wesmeg and Wesmeg-North, to calculate median metal contents for individual lithologies. Results for corresponding lithologies were then combined across deposits and weighted by the relative tonnage of ore expected to be mined from each group by deposit, to derive a median composite solid phase composition to be used for scaling of calibrated values.

Based on existing mine conditions, calibrated tailings contact water chemistry was assumed to correspond to drainage from processed Tiriganiaq IF ore. Parameter specific scaling factors were calculated by dividing the median solid phase composition of composite ore lithologies by the median composition of Tiriganiaq IF ore. These scaling factors were then applied to the calibrated TSF runoff and infiltration chemistries to produce source terms for the composite ore lithologies, presented in Table 8-7.

Throughout operations, annual source terms for the TSF reflect cumulative mean concentrations. Source terms for metal parameters represent the sum of expected lithological compositions for dry stack tailings (%) multiplied by the corresponding end member chemistries (Table 8-8). Other parameters, including nitrogen species, CN (WAD and total) are not expected to fluctuate with lithology consistently reflect calibrated values for TSF runoff and infiltration. For TDS parameters ($SO_4$, Cl, Na, K, Ca, Mg) and $^{226}Ra$, source term chemistry reflects the relative contribution of ore sourced from the open pit and underground for a given year. This was calculated using the mill water balance, assuming that currently observed filter press values were produced by milling of 100% underground ore containing 2% connate water in 2019-2020. The TDS associated with connate water was removed to calculate the TDS produced from open pit mill tailings. A similar calculation was performed for $^{226}Ra$, assuming that 100% of this parameters loading is associated with connate water. Source terms were then derived from variable mixing ratios of process water chemistry representative of 100% open pit or 100% underground ore composition.

**Table 8-7:**
**Scaled source terms for composite lithologies for Tailings Storage Facility runoff and infiltration.**

| Parameter | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **TSF Runoff** | | | | | | | | | | | | | |
| IF | 0.00184 | 0.37 | 0.000579 | 0.00198 | 0.041 | 0.0127 | 0.000552 | 4.58 | 0.0239 | 0.0171 | 0.00365 | 0.00351 | 0.0117 |
| SE | 0.0035 | 0.65 | 0.000387 | 0.0071 | 0.03 | 0.00379 | 0.000677 | 2.23 | 0.0494 | 0.0171 | 0.00261 | 0.0109 | 0.00896 |
| VO | 0.000726 | 0.0933 | 0.000472 | 0.00884 | 0.117 | 0.0137 | 0.000392 | 8.46 | 0.125 | 0.0171 | 0.00318 | 0.00109 | 0.013 |
| UV | 0.00581 | 0.0112 | 0.000358 | 0.0242 | 0.118 | 0.0128 | 0.000311 | 7.07 | 0.14 | 0.0171 | 0.00222 | 0.00163 | 0.0103 |
| TIRFM | 0.00519 | 0.507 | 0.000369 | 0.00596 | 0.0559 | 0.00489 | 0.00167 | 2.12 | 0.0953 | 0.0171 | 0.0027 | 0.00729 | 0.008 |
| UOFM | 0.000951 | 0.507 | 0.000425 | 0.00175 | 0.0314 | 0.00377 | 0.00212 | 2.08 | 0.0349 | 0.0171 | 0.00318 | 0.00497 | 0.008 |
| **TSF Infiltration** | | | | | | | | | | | | | |
| IF | 0.00424 | 0.37 | 0.000569 | 0.00198 | 0.0587 | 0.0189 | 0.000552 | 7.88 | 0.0717 | 0.0143 | 0.00818 | 0.0174 | 0.0199 |
| SE | 0.00809 | 0.651 | 0.00038 | 0.0071 | 0.043 | 0.00564 | 0.000677 | 3.84 | 0.148 | 0.0143 | 0.00585 | 0.0537 | 0.0152 |
| VO | 0.00168 | 0.0934 | 0.000464 | 0.00884 | 0.168 | 0.0204 | 0.000392 | 14.6 | 0.376 | 0.0143 | 0.00712 | 0.00539 | 0.022 |
| UV | 0.0134 | 0.0112 | 0.000352 | 0.0242 | 0.168 | 0.0191 | 0.000311 | 12.2 | 0.419 | 0.0143 | 0.00498 | 0.00805 | 0.0174 |
| TIRFM | 0.012 | 0.507 | 0.000363 | 0.00596 | 0.0801 | 0.00728 | 0.00167 | 3.65 | 0.286 | 0.0143 | 0.00605 | 0.036 | 0.0135 |
| UOFM | 0.0022 | 0.507 | 0.000418 | 0.00175 | 0.0451 | 0.00561 | 0.00212 | 3.58 | 0.105 | 0.0143 | 0.00712 | 0.0246 | 0.0135 |

**Notes:**
IF = Iron Formation; SE = Sedimentary; VO = Mafic Volcanics; UV = Ultramafic; TIRFM=Siltstone; UOFM = Oxidized Sediments.

# Table 8-8:
# Dry Stack Production by Lithology

| Year | Overburden | Gabbro | Lamprophyres | Iron Formation | KMG | Ultramafic | Siltstone | Oxidized Sediments | Sericitized Volcanics | Volcanics | Sediments | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OVB | GB | LP | IF | KMG | UV | TIRFM | UOFM | VOSR | VO | SE | |
| units | kilotonnes | | | | | | | | | | | |
| 2020 | - | | - | 350 | 38 | - | 118 | 348 | - | 0.211 | 22.5 | 858 |
| 2021 | - | 0.04 | - | 439 | 23.7 | - | 140 | 407 | - | 1.91 | 31.7 | 1040 |
| 2022 | - | 2.55 | - | 318 | 64.1 | - | 148 | 436 | - | 17.5 | 51 | 1040 |
| 2023 | - | 6.08 | - | 496 | 30.7 | - | 147 | 542 | - | 1.64 | 34.2 | 1260 |
| 2024 | - | 10.3 | - | 517 | 26.3 | - | 154 | 604 | - | 2.42 | 124 | 1440 |
| 2025 | - | 7.84 | - | 446 | 45.3 | - | 193 | 666 | - | 10.8 | 77 | 1450 |
| 2026 | - | 50.9 | - | 643 | 74.8 | 0.18 | 285 | 1140 | 0.0381 | 96.2 | 62 | 2350 |
| 2027 | - | 41.5 | 0.04 | 489 | 55.6 | 4.2 | 480 | 701 | 48.8 | 394 | 120 | 2330 |
| 2028 | - | 115 | 0.0221 | 486 | 2.04 | 7.76 | 436 | 430 | 23.3 | 517 | 258 | 2270 |
| 2029 | - | 146 | 1.26 | 485 | 18.6 | 19.0 | 190 | 291 | 30.4 | 784 | 354 | 2320 |
| 2030 | - | 233 | 0.895 | 400 | 0.824 | 20.0 | 131 | 321 | 25.3 | 981 | 228 | 2340 |
| 2031 | - | 132 | 5.18 | 524 | 6.71 | 11.2 | 59.8 | 289 | 122 | 1030 | 110 | 2290 |
| 2032 | - | 89.1 | 4.4 | 628 | 13.9 | 4.80 | 95.4 | 249 | 28.8 | 1110 | 120 | 2340 |
| 2033 | - | 104 | - | 708 | 9.41 | 1.75 | 42.8 | 270 | 0.385 | 991 | 207 | 2330 |
| 2034 | - | 60 | 1.57 | 579 | 6.1 | 3.36 | 87.8 | 342 | 14.4 | 926 | 331 | 2350 |
| 2035 | - | 109 | - | 623 | 16.3 | 3.68 | 49.5 | 362 | 70.8 | 705 | 422 | 2360 |
| 2036 | - | 111 | 3.7 | 673 | - | - | 45.5 | 317 | 76 | 861 | 268 | 2370 |
| 2037 | - | 105 | 7.22 | 924 | 8.05 | 20.8 | 74 | 281 | 80.7 | 882 | 159 | 2540 |
| 2038 | - | 85.4 | 8.61 | 1210 | 18.1 | 22.5 | 44.8 | 163 | 0.84 | 1360 | 183 | 3100 |
| 2039 | - | 101 | 9.83 | 1040 | 15.6 | 23.1 | 65.1 | 87.3 | 0.415 | 1610 | 156 | 3100 |
| 2040 | - | 81.2 | 8.06 | 919 | 30.3 | 17.7 | 49.9 | 252 | 1.35 | 1540 | 200 | 3100 |
| 2041 | - | 37.6 | 0.002 | 1580 | 61.3 | 4.37 | 87.2 | 624 | 3.09 | 402 | 301 | 3100 |
| 2042 | - | 31.3 | 0.002 | 1120 | 88.7 | 3.64 | 99.7 | 1130 | 2.57 | 362 | 257 | 3090 |
| 2043 | - | - | - | 267 | 13.7 | - | 79.6 | 408 | - | 0.296 | 39.8 | 808 |
| **TOTAL** | - | 1660 | 50.8 | 15900 | 649 | 180 | 3300 | 10700 | 530 | 14600 | 4110 | 51600 |

### 8.4.2 Active Closure and Post Closure

Distinct source terms are developed for surface runoff and infiltration TSF source terms. The surface runoff source term is analogous to WRSF contact water while the infiltration source term is based on whole ore tailings kinetic testing results.

Surface runoff chemistry interacting with the waste rock cover system will be analogous to other WRSF seepage source terms. The lithologic composition of the cover system waste rock is expected to be similar in composition to waste rock placed in nearby WRSF1. Therefore, the WRSF1 source term is applied to TSF surface runoff chemistry upon completion of the cover system at the beginning of active closure.

Infiltration will receive an oxidative load from the upper 10 cm of tailings where oxygen ingress occurs (Figure 8-14). This scale of interaction is similar to the Meliadine Extension unsaturated column testing initiated with whole ore tailings (Section 4.3). This column was designed to reflect temperature and infiltration rate that will be experienced by tailings in the field. Therefore, unsaturated column results are applied directly to the infiltration source term. The final cycle available from the whole ore tailings column at the time of reporting (cycle 36) is applied to tailings infiltration in the closure period.

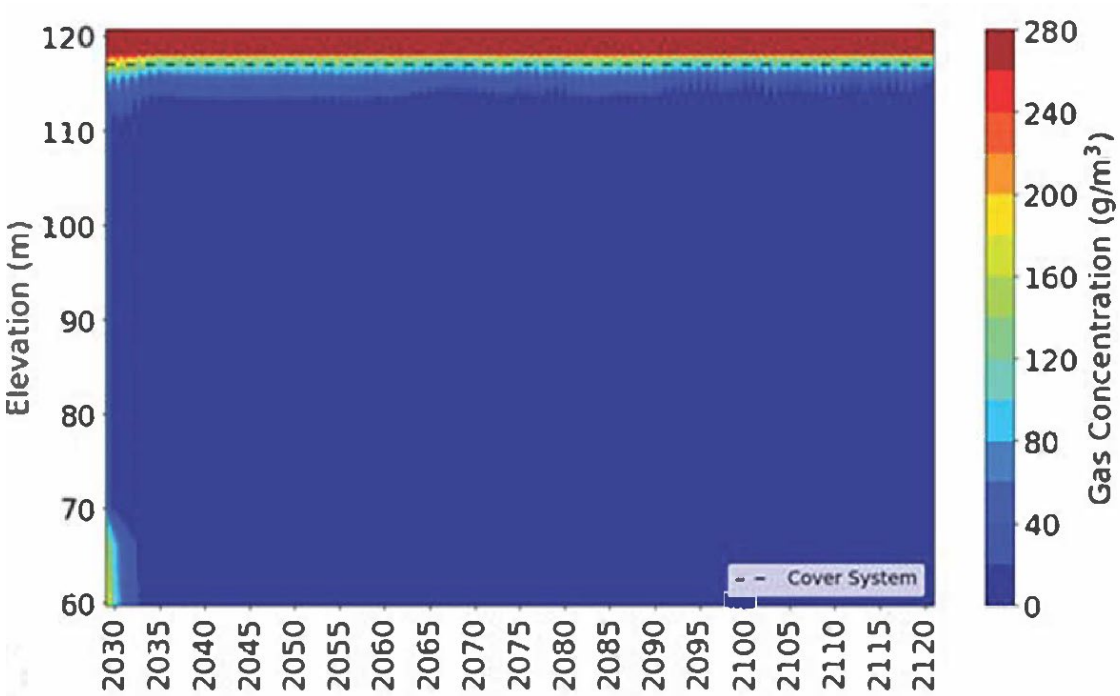


**Figure 8-14: Oxygen concentration profile along the TSF plateau under RCP 4.5 conditions. Dotted line indicates base of cover system (modified from OKC, 2022b)**

### 8.4.3 Source Term Results

The tailings infiltration and surface runoff source terms are developed on an annual basis in operations, active closure and post closure. A summary of source terms is provided in Table 8-9, while the complete source terms are provided in Appendix G. Source terms presented in Table 8-9 show peak concentrations predicted for operations, end of mine life (2043) and the end of the post-closure modelling period (2120). A time series for TDS and As source terms are plotted in Figure 8-15 to illustrate temporal trends.

**Table 8-9:**
**Tailings Storage Facility Source Term Summary**

| Parameter | TDS | Cl | F | $SO_4$ | $N\text{-}NH_3$ | $N\text{-}NO_3$ | $N\text{-}NO_2$ | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Na | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| **TSF Runoff** | | | | | | | | | | | | | | | | | | | | | | |
| **Operations (max)** | 5,480 | 2,450 | 0.346 | 863 | 22.3 | 14.7 | 0.714 | 0.00952 | 0.00193 | 0.445 | 0.000461 | 0.00445 | 0.058 | 0.00907 | 0.00135 | 4.47 | 1,370 | 0.0606 | 0.0166 | 0.00317 | 0.00482 | 0.0102 |
| **End of Operations (2043)** | 5,090 | 2,160 | 0.346 | 855 | 22.3 | 14.7 | 0.714 | 0.00952 | 0.00166 | 0.35 | 0.000458 | 0.00427 | 0.0561 | 0.00893 | 0.000967 | 4.36 | 1,300 | 0.0582 | 0.0164 | 0.0031 | 0.00395 | 0.0101 |
| **End of Modelling (2120)** | 321 | 29.1 | 0.236 | 179 | 0.0000342 | 0.0000526 | 8.69E-07 | NA | 0.003 | 0.00927 | 0.0000801 | 0.000453 | 0.00249 | 0.0026 | 0.0000618 | 0.155 | 19.2 | 0.0136 | 0.00155 | 0.00112 | 0.00637 | 0.00171 |
| **TSF Infiltration** | | | | | | | | | | | | | | | | | | | | | | |
| **Operations (max)** | 18,800 | 9,190 | 0.104 | 2,140 | 94 | 166 | 0.239 | 0.0926 | 0.00446 | 0.445 | 0.000453 | 0.00445 | 0.0831 | 0.0135 | 0.00135 | 7.71 | 5,150 | 0.182 | 0.0138 | 0.00709 | 0.0238 | 0.0172 |
| **End of Operations (2043)** | 17,400 | 8,130 | 0.104 | 2,120 | 94 | 166 | 0.239 | 0.0926 | 0.00383 | 0.35 | 0.000451 | 0.00427 | 0.0803 | 0.0133 | 0.000967 | 7.51 | 4,870 | 0.175 | 0.0136 | 0.00695 | 0.0195 | 0.0171 |
| **End of Modelling (2120)** | 3,410 | 92.5 | 0.2 | 2,310 | 0.0025 | 4.83 | 0.48 | 0.0613 | 0.00475 | 0.303 | 0.000035 | 0.00125 | 0.012 | 0.00115 | 0.000125 | 0.855 | 350 | 0.00125 | 0.0136 | 0.0084 | 0.00384 | 0.0025 |

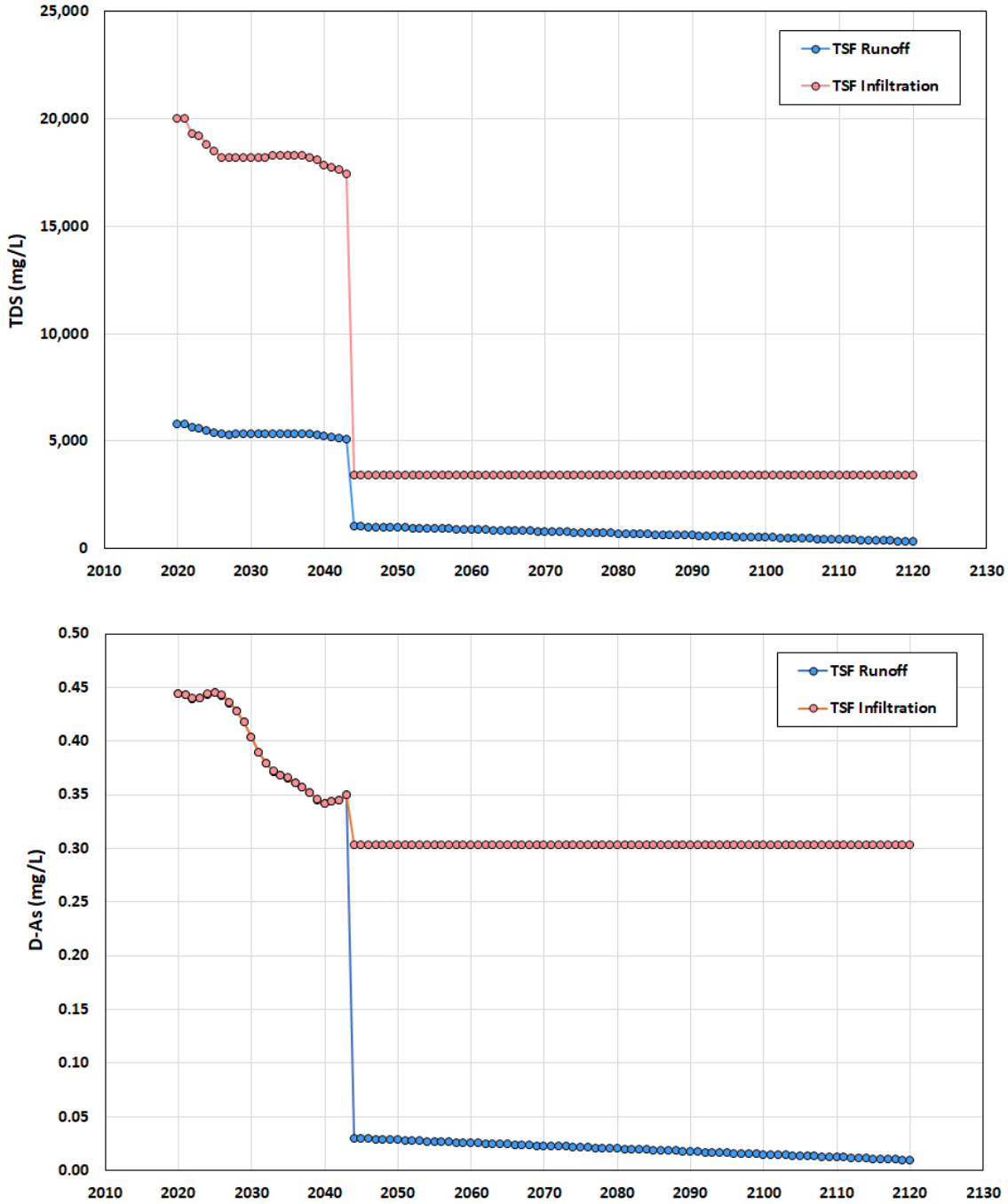


**Figure 8-15: Tailings storage facility annual source terms for TDS (top) and As (bottom).**

## 8.5 Open Pits

Pit wall rock refers to rock exposures within the mining pit itself. This includes the pit floor, benches and blast damaged rock. The composition of pit wall rock exposures will be broadly similar to waste rock. Therefore, the pit wall rock source terms are calculated by scaling the calibrated waste rock source terms developed in Section 8.2. Wall rock source terms are calculated by scaling calibrated waste rock source terms based on physical differences in exposed rock mass and analogue site data.

### 8.5.1 Operations

Pit walls will be subject internal fracturing and ravelling as a result of blasting, thereby exposing fresh rock surfaces to precipitation. This blast-damaged zone typically extends 1.0 to 3.0 m into the wall rock profile (Hustrulid, 1999). This thickness is approximately 50% of the active zone thickness predicted for WRSFs (approx. 6.0 m) (OKC, 2022a). The blasted rock deposited in WRSFs will have a much higher reactive surface area and produce smaller volumes of runoff compared to pit wall rock exposures. Therefore, pit wall runoff source term should be less than 50% of the waste rock source term concentrations.

Analogue data from the Meadowbank Mine can provide direct evidence on the relative concentrations produced from WRSF and wall rock runoff. Meadowbank mine is operated by Agnico Eagle and located approximately 300 km Northwest of Meliadine in similar geologic terrane. The Vault deposit has been in operation since 2013 and monitoring data is available for the Phaser Pit (ST-41), BB Phaser Pit (ST-41) and the Vault WRSF (ST-24) (Agnico Eagle, 2021c). The median TDS, $SO_4$, Ca and Mg concentrations observed in summer months (July to September) are shown in Table 8-10. Major ions are generally not as influenced by pH related solubility constraints, and therefore provide a better indication of the mass of rock contributing to geochemical weathering reactions compared to most trace metals. The results show that major ion concentrations in sump water are typically 45% of what is observed in waste rock seepage.

Based on this evidence, a scaling factor of 0.45 is applied to calibrated waste rock source terms to estimate pit wall runoff chemistry. This scaling factor is applied to lithology-specific waste rock source terms presented in Table 8-5, which are then mixed proportional to the final pit wall lithologic exposures (Table 8-11). For TDS and major ions, the annual rinsing rate developed in Section 8.3.1 is applied to the wall rock source terms during operations, resulting in a progressive decline in TDS after mining activities are concluded in each deposit.

During mine operations overburden will be thermally armoured with waste rock to prevent permafrost thaw on the pit high wall. This will inhibit release of salinity and metal content associated with overburden. However, the waste rock cover placed on this material will contribute a geochemical load similar the geochemical signature of the underlying pit wall rock exposures. Further, the lithologic composition of pit wall cover material is expected to reflect the rock types present in each mine pit. Therefore, the overburden exposures within the pit shell are assigned the average pit wall runoff chemistry produced by waste rock in each mine pit rather than an overburden source term.

**Table 8-10:**
**Major Ion and Total Dissolved Solids Concentrations Observed During Vault WRSF and Phaser Pit Sump Monitoring**

| Station ID | Period | Facility | TDS | $SO_4$ | Ca | Mg |
|---|---|---|---|---|---|---|
| | | | mg/L | mg/L | mg/L | mg/L |
| ST-24 | 2018-2020 | Vault WRSF | 260 | 67.6 | 63.3 | 12.0 |
| ST-42 and ST 41 | 2018-2020 | Pit Sumps | 86.5 | 101 | 21.9 | 4.11 |
| | | *Ratio* | *0.33* | *0.67* | *0.35* | *0.34* |
| | | *Average Ratio* | | | | *0.45* |

**Table 8-11:**
**Pit Wall Surface Area at End of Mine**

| Pit | Overburden | Gabbro | Lamprophyres | Iron Formation | KMG | Ultramafic | Siltstone | Oxidized Sediments | Sericitized Volcanics | Volcanics | Sediments | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OVB | GB | LP | IF | KMG | UV | TIRFM | UOFM | VOSR | VO | SE | |
| units | $m^2$ | | | | | | | | | | | |
| DIS01 | 42,194 | 24,621 | | 41,755 | | | | | | | 290,849 | 399,419 |
| FZO01 | 35,139 | | 1,397 | 9,766 | | | | | | 158,011 | | 204,313 |
| FZO02 | 38,712 | | 767 | 12,603 | | | | | | 58,950 | | 111,032 |
| FZO03 | 60,099 | | 513 | 9,693 | | | | | | 64,816 | | 135,121 |
| WN01 | 45,102 | 15,874 | | 3,978 | | 2,185 | 3,678 | 9,090 | | 197,747 | 42,865 | 320,519 |
| PUM01 | 40,468 | 4,998 | | 12,529 | | | | | | 37,139 | | 95,134 |
| PUM02 | 26,555 | | | 9,489 | | | | | | 36,320 | | 72,364 |
| PUM03 | 28,154 | 6,807 | | 4,686 | | | | | | 53,523 | 42 | 93,212 |
| PUM04 | 37,847 | 6,696 | | 9,394 | | 1,664 | | | | 39,347 | | 94,948 |
| TIR01 | 72,082 | 8,901 | | 15,715 | 2,160 | | 6,140 | 47,353 | 25,557 | 95,943 | 110,711 | 384,562 |
| TIR02 | 27,566 | 1.0 | | 21,383 | | | | 39,221 | | | 47,478 | 135,649 |
| TIR03 | 45,465 | 8,256 | | 3,533 | | | 3,214 | 5,029 | | 20,684 | 30,786 | 116,967 |
| WES01 | 66,779 | 15,709 | 120 | 2,203 | | 2,366 | 4.0 | 912 | 13,528 | 139,588 | 562 | 241,771 |
| WES04 | 93,576 | 41,679 | 321 | 23,759 | 14 | 22,611 | | | | 277,626 | | 459,586 |
| WES05 | 47,279 | 3,352 | 197 | 25,882 | 28 | 3,908 | | | | 113,269 | | 193,915 |
| WES06 | 25,023 | 5,960 | | 445 | | | | | | 14,870 | | 46,298 |
| WES09 | 48,930 | 2,823 | | 6,311 | | | | | | 134,760 | | 192,824 |

Nitrogen species from blasting residues will be leached from pit walls, contributing a nitrogen load to pit sump water. Pit wall runoff is assigned median concentrations of $NO_2$, $NO_3$, and $NH_3$ observed in active Meadowbank and Amaruq mine pits (Agnico Eagle, 2021c) (Table 8-12). Upon termination of active mining, residual nitrogen species will be rapidly rinsed from pit wall rock exposures. Nitrogen species are assumed to return to background concentrations in inactive mine pits.

**Table 8-12:**
**Nitrogen monitoring results for Meadowbank and Amaruq mine pits.**

| Station ID | Period | Facility | $NH_3$-N | $NO_3$-N | $NO_2$-N |
|---|---|---|---|---|---|
| | | | mg/L | mg/L | mg/L |
| ST-WT-4 | 2018-2020 | Whale Tail Pit Sump | 1.93 | 4.11 | 0.240 |
| ST-42 | 2018-2020 | BB Phaser Pit Sump | 2.84 | 0.46 | 0.01 |
| ST-41 | 2018-2020 | Phaser Pit Sump | 6.42 | 1.43 | 0.02 |
| ST-23 | 2014-2019 | Vault Pit Sump | 0.13 | 8.67 | 0.23 |
| | | *Average* | *2.83* | *3.67* | *0.13* |

### 8.5.2 Active Closure and Post Closure

Upon mine closure the pits will be actively flooded with Meliadine Lake water, submerging a majority of pit wall rock exposures. The end of operations source terms are applied throughout active closure and post closure to the minimal high wall surface area remaining above the final pit lake elevations.

### 8.5.3 Source Term Results

The wall rock source terms are developed using the ultimate lithologic composition of each mine pit Table 8-13. The source terms remain constant through operations, except for TDS and major ions which decline through rinsing once excavations in each open pit are terminated Figure 8-16.

**Table 8-13:**
**Pit Wall Source Term Summary**

| Parameter | TDS | Cl | F | $SO_4$ | $N\text{-}NH_3$ | $N\text{-}NO_3$ | $N\text{-}NO_2$ | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Na | Ni | P | Se | U | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **DIS01** | 2,450 | 1,490 | 0.342 | 227 | 2.83 | 3.67 | 0.125 | 0.00419 | 0.00852 | 0.000106 | 0.00057 | 0.00473 | 0.00278 | 0.0000622 | 0.227 | 586 | 0.0166 | 0.00477 | 0.0016 | 0.0124 | 0.0025 |
| **FZO01** | 2,630 | 1,540 | 0.344 | 296 | 2.83 | 3.67 | 0.125 | 0.00398 | 0.00478 | 0.0000898 | 0.000803 | 0.00203 | 0.00699 | 0.0000239 | 0.226 | 646 | 0.0281 | 0.00634 | 0.00162 | 0.00517 | 0.00357 |
| **FZO02** | 3,200 | 1,650 | 0.347 | 514 | 2.83 | 3.67 | 0.125 | 0.00349 | 0.00767 | 0.00009 | 0.000593 | 0.00392 | 0.00662 | 0.000019 | 0.228 | 805 | 0.0261 | 0.0106 | 0.00168 | 0.00908 | 0.00361 |
| **FZO03** | 3,260 | 1,720 | 0.349 | 442 | 2.83 | 3.67 | 0.125 | 0.00324 | 0.00804 | 0.0000772 | 0.00052 | 0.00492 | 0.00638 | 0.0000162 | 0.231 | 892 | 0.0271 | 0.0129 | 0.00166 | 0.0112 | 0.00331 |
| **WN01** | 2,510 | 1,520 | 0.343 | 244 | 2.83 | 3.67 | 0.125 | 0.00413 | 0.00883 | 0.0000903 | 0.000706 | 0.0025 | 0.00618 | 0.0000412 | 0.227 | 618 | 0.0296 | 0.00561 | 0.00161 | 0.00623 | 0.00294 |
| **PUM01** | 3,420 | 1,700 | 0.349 | 585 | 2.83 | 3.67 | 0.125 | 0.00339 | 0.0088 | 0.0000896 | 0.000485 | 0.00475 | 0.00646 | 0.000019 | 0.231 | 875 | 0.0253 | 0.0124 | 0.0017 | 0.0108 | 0.00359 |
| **PUM02** | 3,300 | 1,670 | 0.348 | 564 | 2.83 | 3.67 | 0.125 | 0.00347 | 0.00816 | 0.0000925 | 0.000573 | 0.00412 | 0.00664 | 0.0000188 | 0.23 | 822 | 0.0259 | 0.011 | 0.0017 | 0.0095 | 0.00369 |
| **PUM03** | 2,900 | 1,620 | 0.346 | 346 | 2.83 | 3.67 | 0.125 | 0.00375 | 0.00623 | 0.0000835 | 0.000637 | 0.00342 | 0.00667 | 0.0000231 | 0.229 | 763 | 0.0274 | 0.00946 | 0.00164 | 0.00807 | 0.00339 |
| **PUM04** | 3,260 | 1,690 | 0.348 | 494 | 2.83 | 3.67 | 0.125 | 0.00341 | 0.00797 | 0.0000842 | 0.0005 | 0.00445 | 0.00636 | 0.0000198 | 0.227 | 850 | 0.0255 | 0.0117 | 0.00165 | 0.0102 | 0.00341 |
| **TIRI01** | 2,660 | 1,550 | 0.344 | 287 | 2.83 | 3.67 | 0.125 | 0.00384 | 0.0119 | 0.0000929 | 0.000546 | 0.00408 | 0.00471 | 0.0000588 | 0.226 | 660 | 0.0234 | 0.00671 | 0.00162 | 0.00981 | 0.00256 |
| **TIRI02** | 2,820 | 1,560 | 0.344 | 389 | 2.83 | 3.67 | 0.125 | 0.00342 | 0.0158 | 0.0000924 | 0.000334 | 0.00511 | 0.00294 | 0.0000766 | 0.228 | 674 | 0.0153 | 0.0071 | 0.00171 | 0.0121 | 0.0021 |
| **TIRI03** | 3,000 | 1,680 | 0.348 | 325 | 2.83 | 3.67 | 0.125 | 0.00274 | 0.00707 | 0.0000689 | 0.000415 | 0.00172 | 0.00284 | 0.0000473 | 0.138 | 841 | 0.0135 | 0.00138 | 0.000992 | 0.00447 | 0.00165 |
| **TIRI04** | 2,820 | 1,590 | 0.345 | 334 | 2.83 | 3.67 | 0.125 | 0.00311 | 0.00992 | 0.0000807 | 0.000432 | 0.00223 | 0.00284 | 0.0000609 | 0.166 | 725 | 0.0138 | 0.00166 | 0.00122 | 0.00574 | 0.00181 |
| **WES01** | 2,760 | 1,610 | 0.346 | 267 | 2.83 | 3.67 | 0.125 | 0.00379 | 0.00811 | 0.0000762 | 0.000626 | 0.00317 | 0.00659 | 0.0000246 | 0.229 | 740 | 0.0315 | 0.00884 | 0.00161 | 0.00741 | 0.00296 |
| **WES04** | 2,650 | 1,560 | 0.344 | 276 | 2.83 | 3.67 | 0.125 | 0.00393 | 0.00829 | 0.0000791 | 0.000745 | 0.00245 | 0.00642 | 0.0000282 | 0.228 | 674 | 0.0332 | 0.00711 | 0.00164 | 0.00586 | 0.00299 |
| **WES05** | 2,820 | 1,580 | 0.345 | 357 | 2.83 | 3.67 | 0.125 | 0.00343 | 0.00982 | 0.0000753 | 0.0006 | 0.003 | 0.00599 | 0.0000262 | 0.228 | 711 | 0.0294 | 0.00807 | 0.00169 | 0.00678 | 0.00283 |
| **WES06** | 3,270 | 1,780 | 0.351 | 330 | 2.83 | 3.67 | 0.125 | 0.00315 | 0.00946 | 0.0000606 | 0.000343 | 0.00595 | 0.00598 | 0.0000186 | 0.233 | 978 | 0.0287 | 0.0152 | 0.00163 | 0.0132 | 0.00269 |
| **WES09** | 2,740 | 1,590 | 0.345 | 283 | 2.83 | 3.67 | 0.125 | 0.0037 | 0.00837 | 0.0000769 | 0.000627 | 0.00294 | 0.00661 | 0.0000235 | 0.229 | 720 | 0.0311 | 0.00831 | 0.00163 | 0.00684 | 0.00296 |

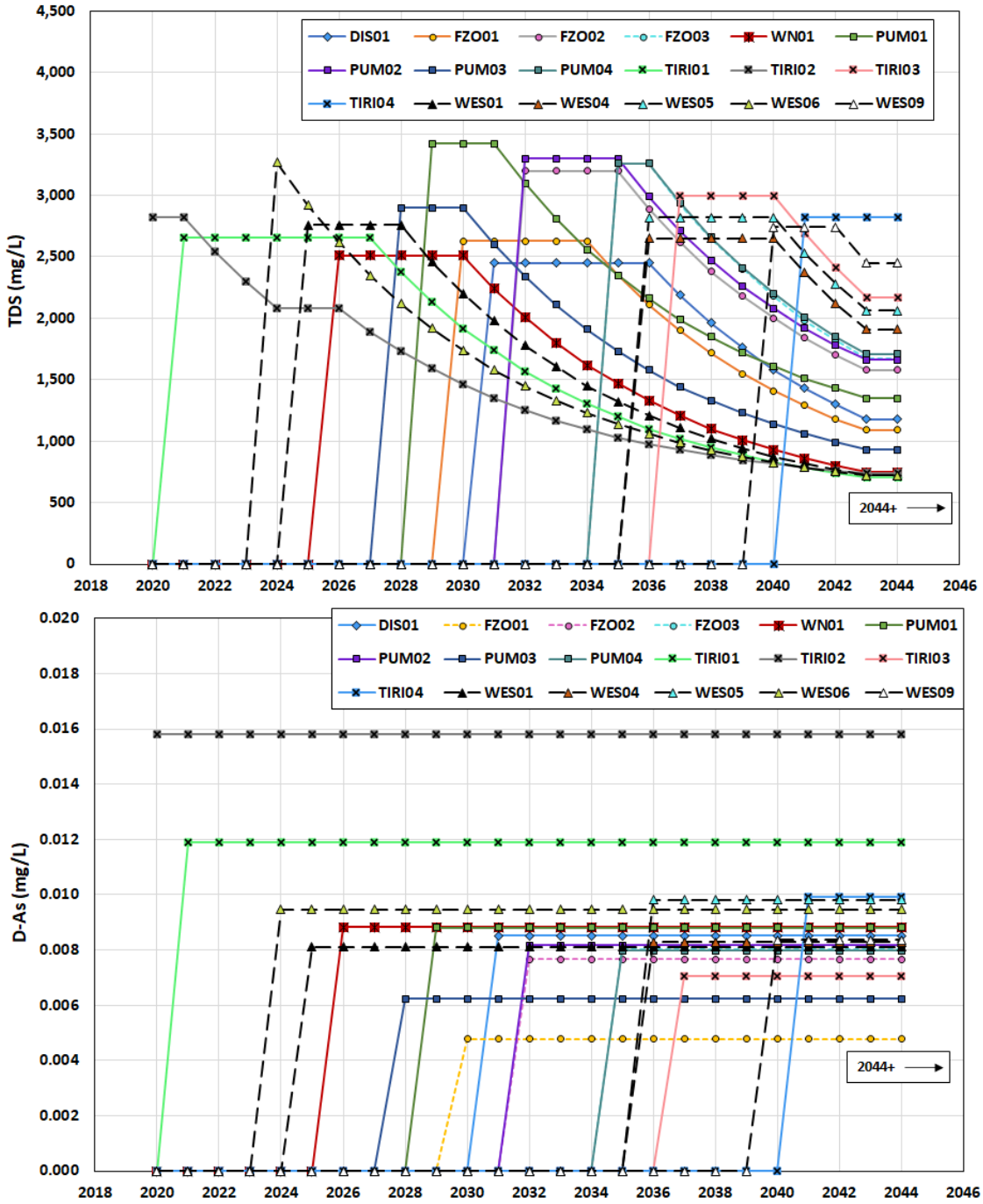


**Figure 8-16: Pit wall source terms for TDS (top) and As (bottom).**

## 8.6 Underground Mines

The underground mine source terms represent the cumulative geochemical load of wall rock, groundwater, paste backfill and rockfill that is collected in sumps and eventually dewatered to the mine surface. Source terms for the underground mines are developed from Tiriganiaq underground monitoring data and supported by Meliadine Extension geochemical characterization results.

Excavations at Tiriganiaq underground were initiated in 2015 during advanced exploration. Since this time the Tiriganiaq underground has been continuously active, with the first backfill of waste rock and paste tailings occurring in 2018 and 2019, respectively. By the end of 2020, a total of 5.5 Mt of waste rock and ore had been excavated from the mine underground, and the mine had been backfilled with 0.42 Mt and 0.74 Mt of paste tailings and rockfill, respectively (Agnico Eagle, 2021b).

Water quality in the mine underground has been regularly monitored from diamond drill hole (DDH) seepage and mine sumps. The DDH water represents background connate water entering the mine, while the sump monitoring data represents stored mine water used to support drilling and dust suppression in the mine underground and eventually dewatered to the saline water ponds at the mine surface. Regular monitoring of DDH and sump water was initiated in 2018 and plots for select parameters are shown in Figure 8-17 to Figure 8-20. The data presented in these figures are used to support the conceptual approach to source term development discussed in the following sections. Key observations from existing Tiriganiaq underground water quality are summarized below:

- Major ions and TDS concentrations show little or no difference between DDH water and sump water, indicating that infiltrating connate water dominates the TDS load in underground mine water (Figure 8-20).
- Nitrogen species and certain trace metals (As, Ba, Mo and Se) show elevated concentrations in sump water relative to DDH water. This result shows that underground workings are leaching these parameters into mine water (Figure 8-20).
    - Nitrogen species are primarily released from explosive residues in the mine underground.
    - Arsenic, Mo and Se are likely being released from oxidation of mine workings and paste tailings bleed water within the mine underground. These elements speciate as oxyanions that are relatively soluble under neutral pH environments.
    - Barium is likely released within the underground mine through cation exchange, as indicated by SFE tests in Section 4.1.6.

- Most trace metals are typically below detection limit in both DDH water and sump water (F, Ag, Al, B, Be, Cd, Co, Cr, Cu, Hg, Ni, P, Pb, Sb, Tl, U, V and Zn) (Figure 8-25). This shows that these elements are not associated with connate water, and release is either minimal or secondary solubility constraints are limiting their release in the mine underground.
- Parameters which show a decline between DDH and sump water include Mn, Fe and Ra-226. This result indicates attenuation of these parameters is occurring within the mine underground (Figure 8-19).
    - Attenuation of Mn and Fe in the mine underground is likely related to oxidation and precipitation of Fe and Mn-oxides.
    - Mechanism of $^{226}Ra$ attenuation is likely coprecipitation with barite ($BaSO_4$) or sorption to Fe and Mn-oxides forming within the mine underground.

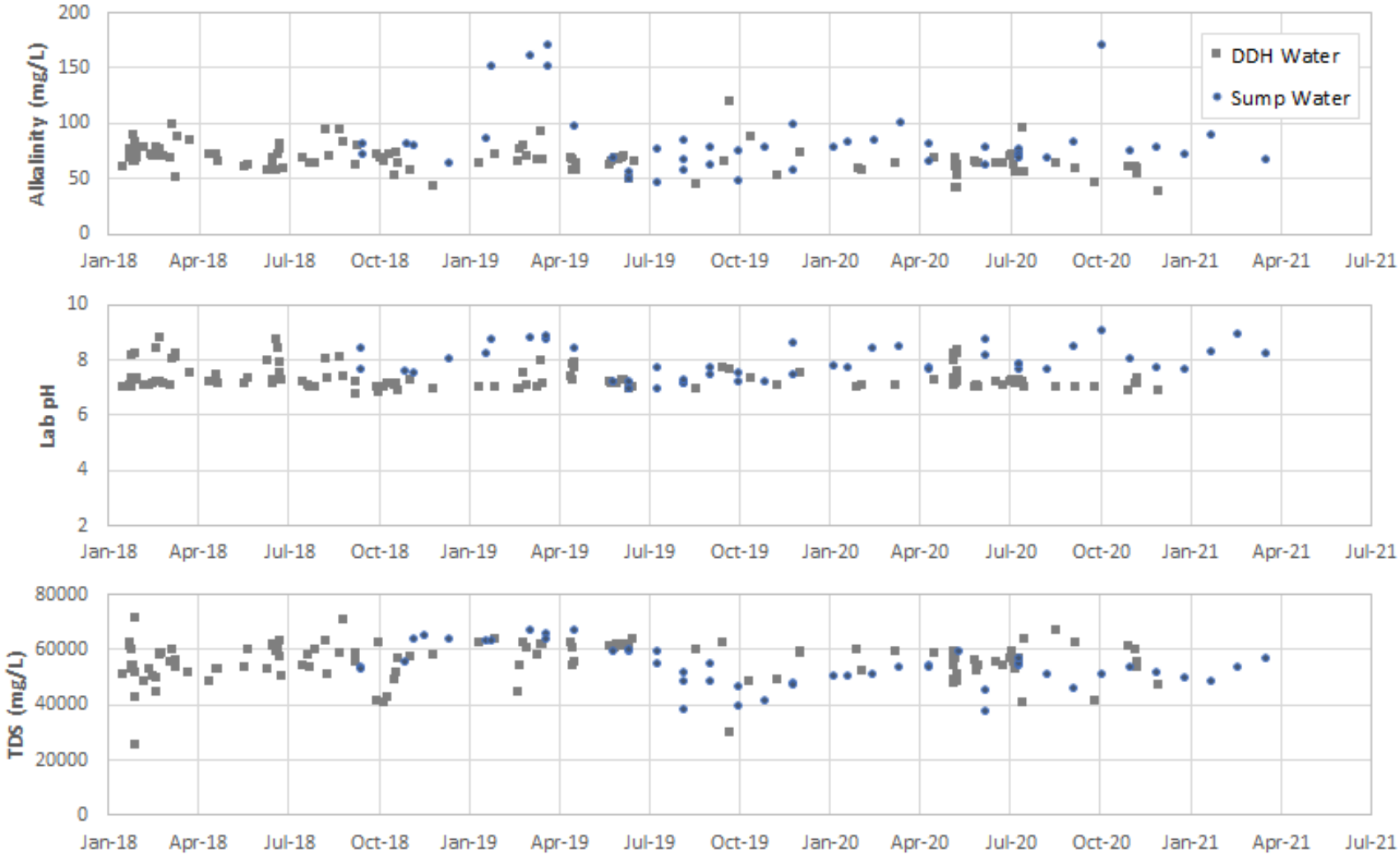


**Figure 8-17: Time series of alkalinity, lab-pH and total dissolved solids (TDS) observed in diamond drill hole (DDH) seepage and sump water in Tiriganiaq underground.**

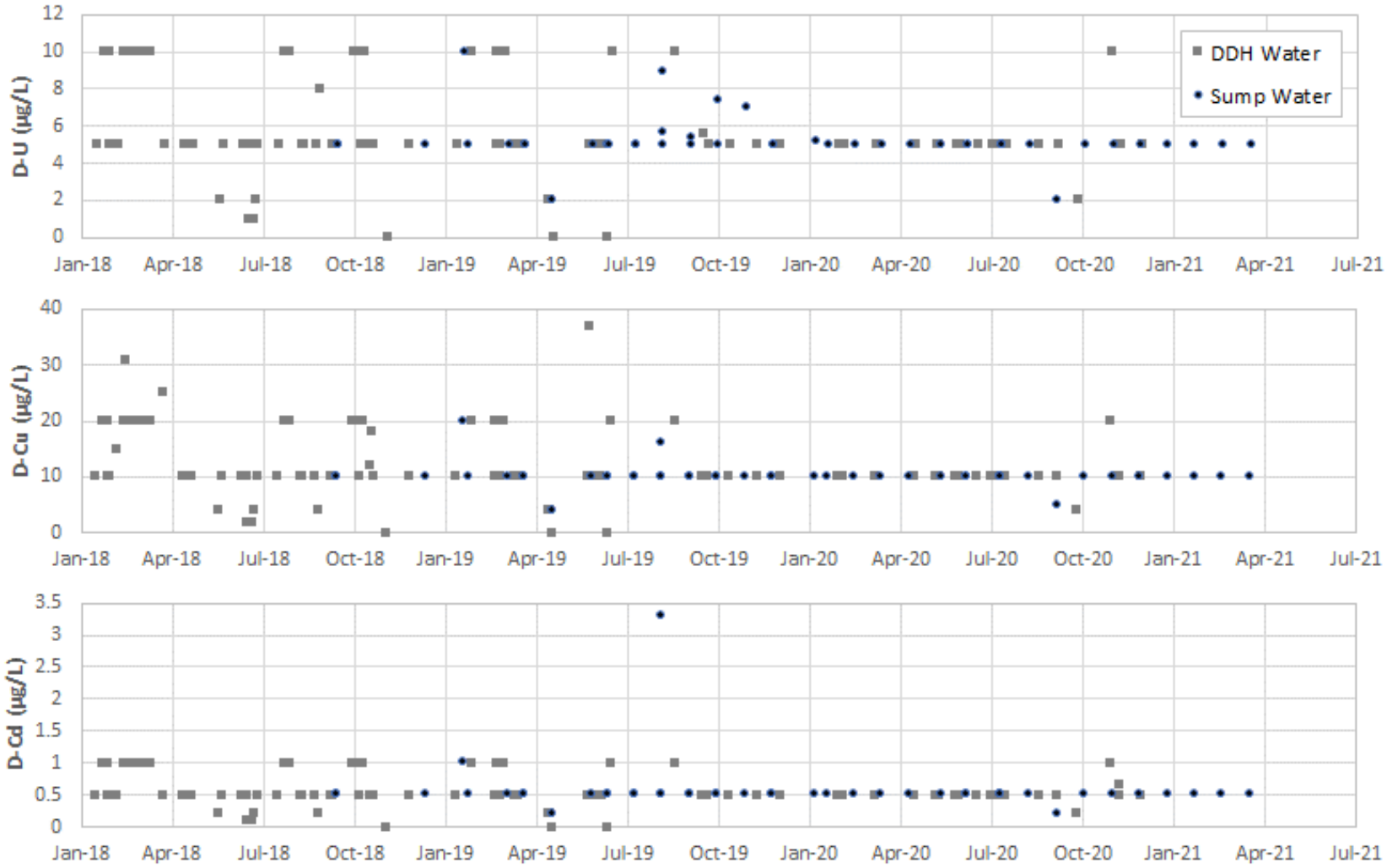


**Figure 8-18: Time series of D-U, D-Cu and D-Cd observed in diamond drill hole (DDH) seepage and sump water in Tiriganiaq underground.**

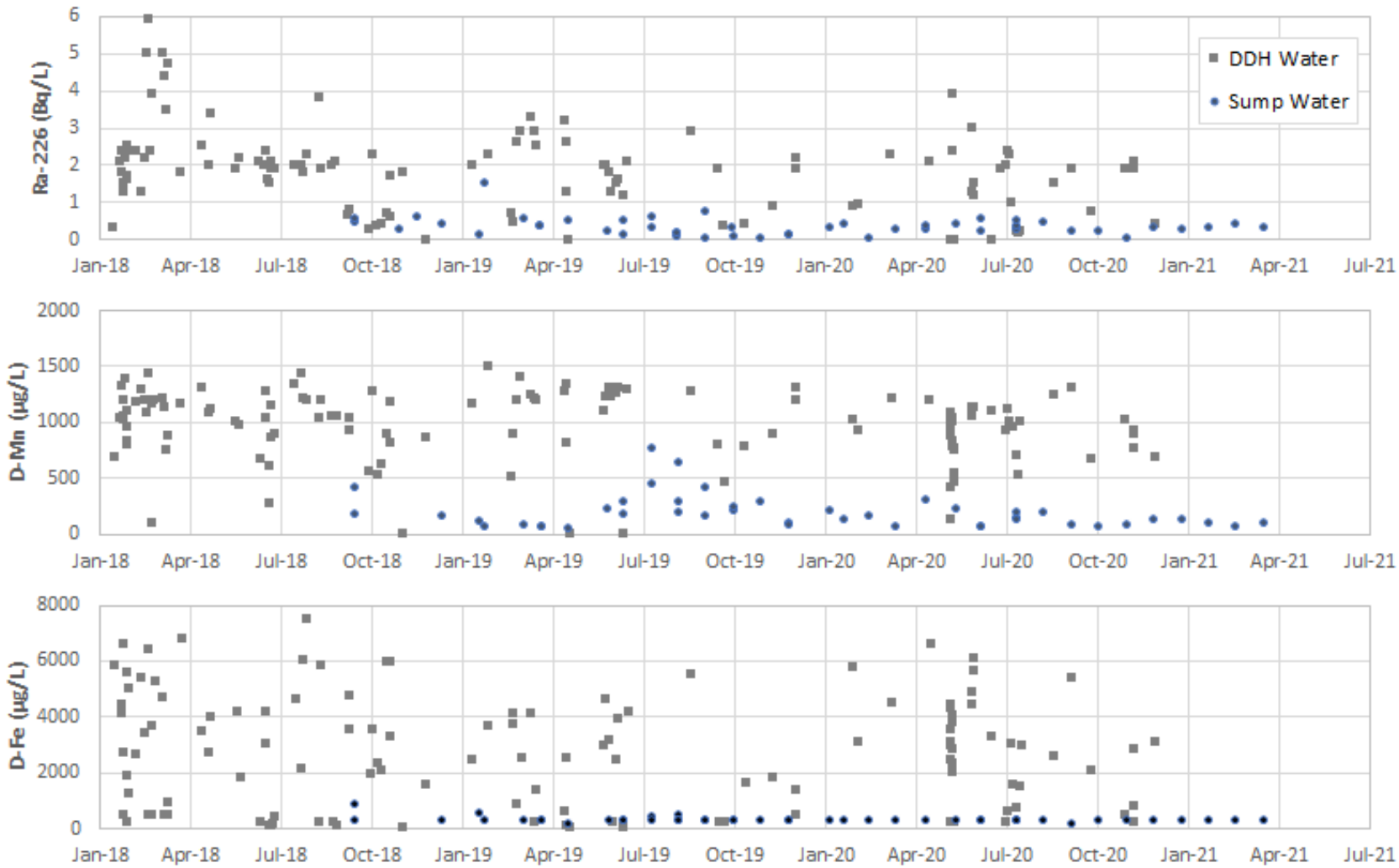


**Figure 8-19: Time series of $^{226}$Ra, D-Mn and D-Fe observed in diamond drill hole (DDH) seepage and sump water in Tiriganiaq underground.**

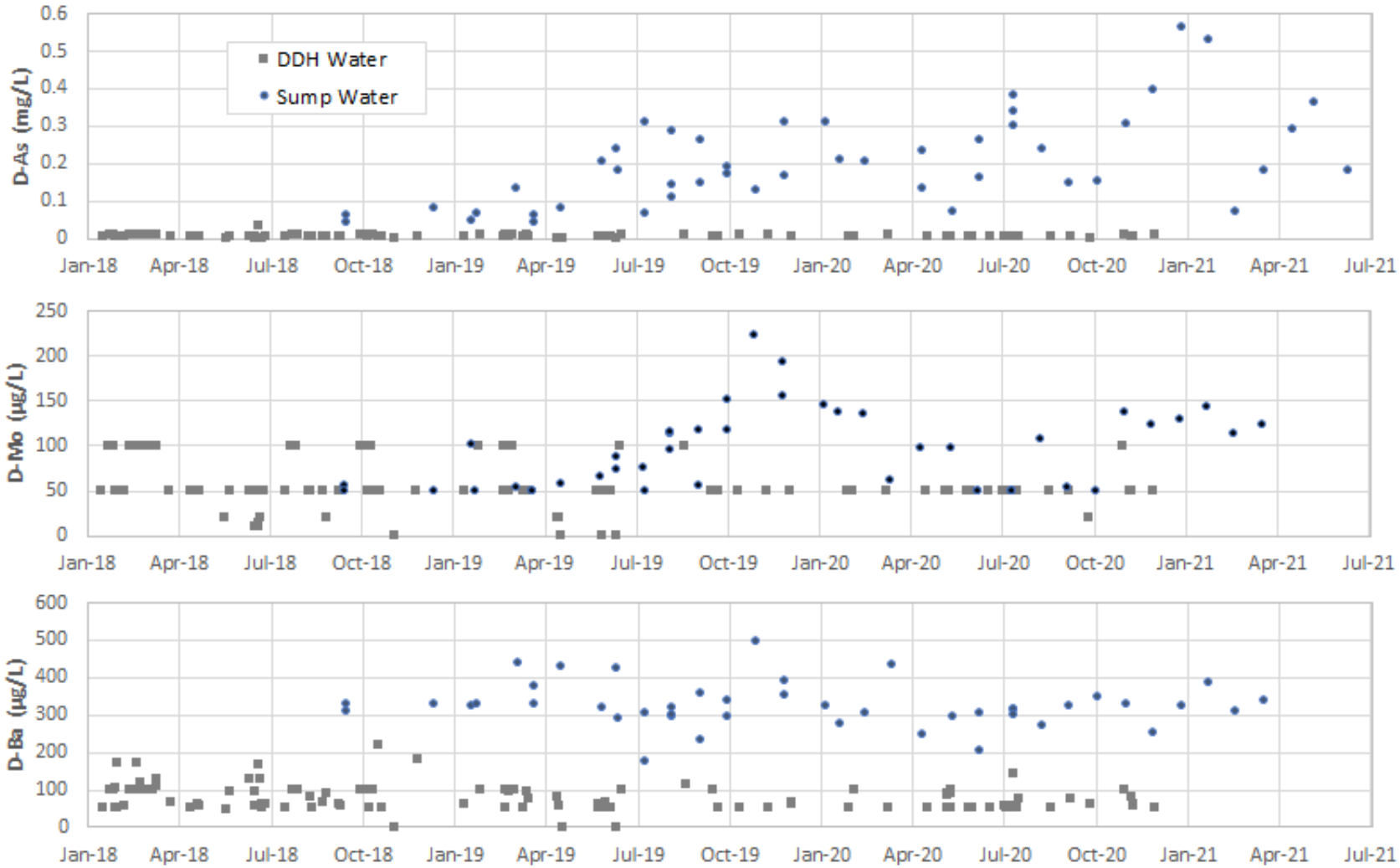


**Figure 8-20: Time series of D-As, D-Se and D-Ba observed in diamond drill hole (DDH) seepage and sump water in Tiriganiaq underground.**

### 8.6.1 Operations

#### *8.6.1.1 Major Ions and TDS*

Major ions show little or no difference in DDH and sump water concentrations, indicating that infiltrating connate water dominates the TDS load in underground mine water (Figure 8-17). The TDS of groundwater infiltrating into underground mine workings has been estimated for each proposed underground mine on an annual basis by Golder (2021a). The major ions are calculated by applying the relative concentration of major ions ($SO_4$, Ca, Mg, K, Na and Cl) to TDS currently observed at Tiriganiaq DDH water to the other underground mine operations. In this way, major ion concentrations are scaled based on TDS estimates predicted by Golder (2021a) for each underground mine.

#### *8.6.1.2 Trace Metals*

Most trace metals are below detection limit in both DDH water and sump water (Ag, Al, B, Be, Cd, Co, Cr, Cu, Hg, Ni, Pb, Sb, Tl, U, V and Zn) (Figure 8-19). The absence of these metals in DDH water shows that they are not present in connate water, and the similarly low concentrations in mine sumps shows that release from mine workings is either minimal or inhibited by the neutral pH conditions and/or co-precipitation with Fe and Mn-oxides (Figure 8-17 and Figure 8-19). Similar conditions are expected in other underground mine operations; therefore, median concentrations reported in Tiriganiaq sump water are assigned to other underground mine operations for the duration of operations.

#### *8.6.1.3 Arsenic, Selenium and Molybdenum*

The elements As, Mo and Se, show evidence for release in underground mine workings beginning in early to mid 2019. These elements speciate as negatively charged oxyanions that are relatively soluble under the neutral pH conditions that prevail in the underground mine.

Potential metal leaching sources in the mine underground include paste tailings, rockfill and wall rock exposures. Preliminary results from the Meliadine Extension kinetic testing program can provide insight into the relative significance of metal release from these mine components. The Meliadine Extension kinetic testing program included a paste tailings humidity cell and unsaturated column tests for a variety of waste rock lithologies (Figure 8-21). Details of kinetic test composition and testing methods are provided in section 4.1.7 and section 4.3.2. In general, the rockfill and wall rock exposures in the mine underground will exhibit geochemical characteristics similar to waste rock. Results show that paste tailings produced As concentrations that were often 1000x that observed in waste

rock kinetic tests, showing that this material type has significantly higher As leaching potential compared to rockfill and wall rock exposures.

Temporal trends in monitoring data show an association between paste tailings placement and As, Mo and Se trends in underground mine water. Paste deposition in the underground mine was initiated in April 2019, shortly preceding an increase in sump water As, Se and Mo concentrations (Figure 8-20). Concentrations stabilized in the months after initial paste deposition, and As has typically remained between 0.2 mg/L and 0.4 mg/L since June 2019. The relationship between paste placement, flow and As loading is illustrated in Figure 8-22. Peak As loadings occur in April 2020 and May 2020, which followed a period of minimal dewatering. Since this time, both paste placement and As loading have remained relatively constant. The observed loading rates notably have not been increasing as paste has accumulated in the mine underground, indicating that As release is mainly associated with recently placed backfill. This is consistent with the nature of cement curing and bleed water production from paste. Paste bleed water is only produced during initial 28 days after paste placement while the cement cures. Following the curing and settling process, metal leaching from paste tailings will be limited by the impermeability of the backfilled stopes, restricting the ability of infiltrating groundwater to interact with mineral surfaces.

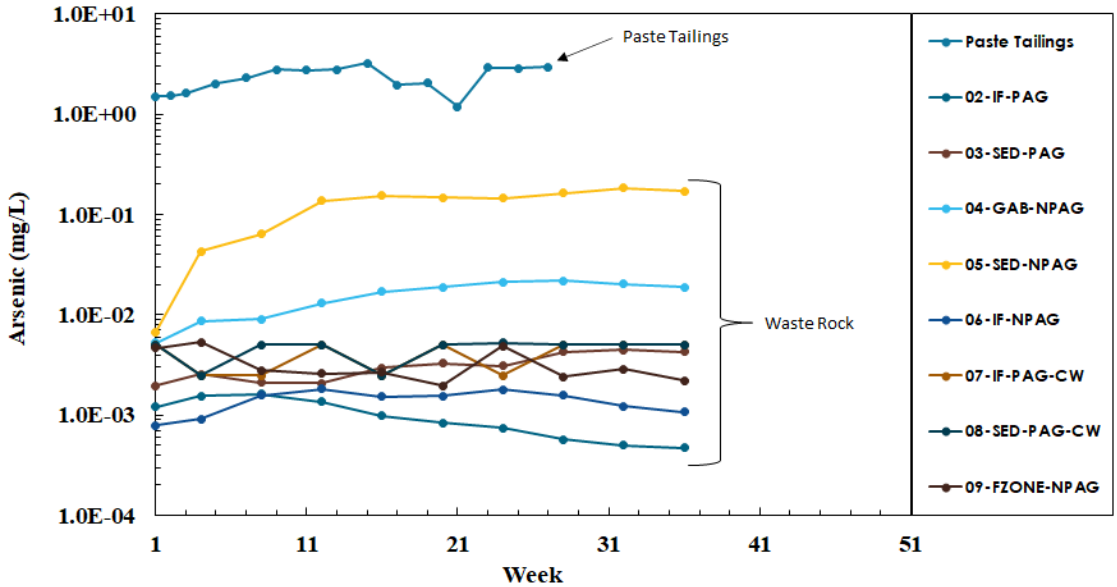


**Figure 8-21: Preliminary Meliadine Expansion kinetic test results for waste rock and paste tailings.**

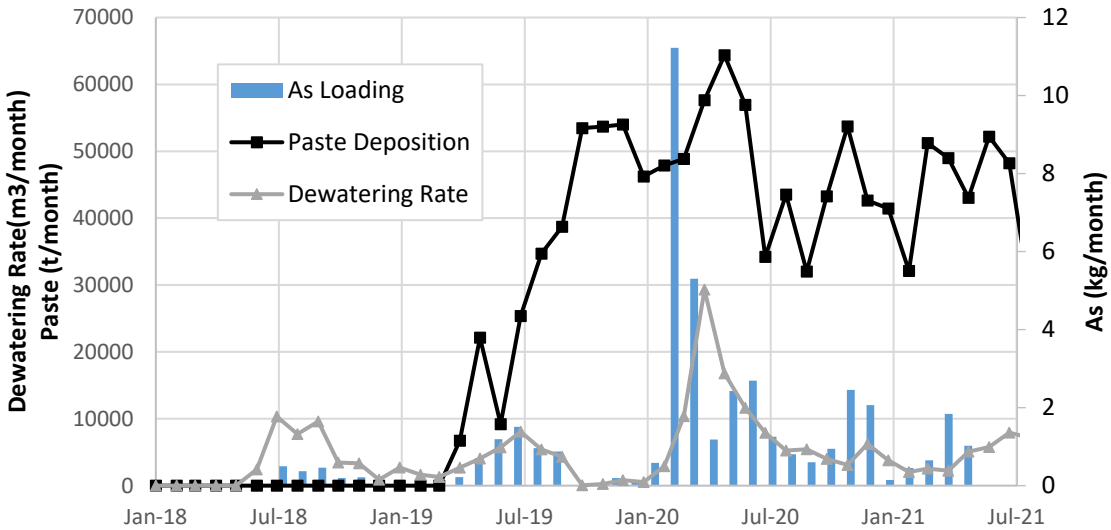


**Figure 8-22: Monthly paste deposition, arsenic loading rate and dewatering rate from Tiriganiaq underground.**

The loading rates for As, Se and Mo were calibrated to underground dewatering rates and sump water chemistry. The As, Se and Mo loading rates were calibrated to monthly paste placement using data from 2019 and 2020. The loading associated with wall rock and rockfill was calibrated using data from 2018, prior to the introduction of paste in the mine underground. Loading rates for paste backfill, wall rock, and rockfill are shown in Table 8-14 These loading rates are combined with Agnico Eagle Mine Plan, V11, December 30, 2020 to generate annual loading rates. The loading rates are then converted to source term concentrations using groundwater inflows provided in Golder (2021a). A summary of the mine workings at the end of operations for each underground deposit are shown in Figure 8-15. The loading rates shown in Figure 8-15 are applied to all underground mine operations. This is considered a conservative approximation as the Tiriganiaq underground shows similar or greater metal enrichment of As, Se and Mo compared to other deposits (Appendix D-4).

**Table 8-14:**
**Calibrated Loading Rates for Underground Mine Components.**

| Mine Component | Units | Se | As | Mo |
|---|---|---|---|---|
| Wall Rock | mg/m2/yr | 0.23 | 2.64 | 2.33 |
| Rockfill | mg/t/yr | 0.05 | 0.53 | 0.47 |
| Paste Backfill | mg/t/yr | 0.988 | 47.3 | 12.4 |

Note: wall rock and rockfill applied to cumulative underground mine exposures, paste backfill load applied to annual paste placement in underground mine

**Table 8-15:**
**Total Underground Mine Workings at the End of Operation**

| | Wall Rock | Paste Backfill | Rockfill |
|---|---|---|---|
| | m2 | Tonnes | Tonnes |
| Tiriganiaq | 3,047,966 | 13,389,318 | 4,272,940 |
| Wesmeg | 1,562,614 | 0 | 1,381,101 |
| Wesmeg North | 149,299 | 0 | 110,586 |
| Pump | 572,555 | 0 | 1,392,564 |
| F Zone | 672,342 | 0 | 1,596,421 |
| Discovery | 412,823 | 0 | 941,754 |
| Tiriganiaq-Wolf | 407,713 | 0 | 2,173,416 |

#### *8.6.1.4 Barium*

Barium has consistently been elevated in sump water compared to DDH water since regular monitoring was initiated (Figure 8-20). Barium release is likely related to cation exchange, which is driven by interaction of the high cation concentrations (Na, Ca, Mg and K) in connate water with freshly exposed mineral surfaces, as exemplified in connate water SFE tests in Section 4.1.6. Shake flask extraction tests which used connate water in place of DI water produced Ba concentrations typically ranging from 0.15 to 0.32 mg/L, which is similar to the concentration range observed in sump water (Figure 8-20). The degree of Ba release will be by limited by barite saturation ($BaSO_4$), which has well-defined thermodynamic characteristics which can be modeled using the PHREEQC geochemical modelling program coupled to the pitzer.dat database for high TDS conditions (Parkhurst and Appello, 1999). Barium concentrations were modelled by assuming the degree of barite supersaturation currently observed in the sump water (SI = 1.1) will persist in underground mine workings. Formation of barite in the mine underground also has significance for $^{226}Ra$ behaviour, and barite SI values are plotted against $^{226}Ra$ activities in Figure 8-24 for reference.

#### *8.6.1.5 Radium-226*

Radium-226 is one of the main contributors to radiological doses in naturally occurring radioactive materials (NORM) and is the only radio-isotope regulated under MDMER. Radium occurrence is widely documented in connate water and has consistently been observed above detection limit values in Tiriganiaq DDH water (Figure 8-19). The $^{226}Ra$ activity in connate water systems typically correlates with TDS (Fisher, 1998; Sutrchio *et al.,* 2001), and activities observed at Tiriganiaq similar to activities observed at other connate water systems with similar TDS (Figure 8-23).

Comparison of DDH water and sump water shows a decline in $^{226}Ra$ activities, indicating that $^{226}Ra$ present in infiltrating groundwater is being attenuated within the mine workings. The mechanism of $^{226}Ra$ attenuation is likely related to coprecipitation with barite ($BaSO_4$) and/or sorption onto Fe and Mn-oxides.

There is abundant information from environmental radiochemical research which shows that the solubility of Ra(II) is mainly controlled by $BaSO_4$ formation (Martin and Akber, 1999; Grandia *et al.,* 2008, Martin *et al.,* 2003). The affinity of Ra to the barite crystal lattice is related to the similar ionic radius of Ra(II) and Ba(II) (1.36 Å and 1.43 Å, respectively), with $(Ba,Ra)SO_4$ behaving as a near ideal solid solution (Kulik *et al.,* 2003). The relationship between $^{226}Ra$ and barite saturation indices (SI) calculated in PHREEQC is shown in Figure 8-24 (Parkhurst and Appello, 1999). The results show that $^{226}Ra$ activity declines as the potential for barite precipitation increases, as indicated by elevated SI values. These results strongly suggest that barite formation is occurring in the mine underground, and co-precipitation can at least partially account for observed $^{226}Ra$ attenuation.

Sorption of $^{226}Ra$ to Fe and Mn-oxides may also contributes to Ra attenuation (Van Sice *et al.,* 2018), but the relative importance of this mechanism cannot be easily distinguished. Ultimately, the mechanisms driving barite supersaturation and precipitation (cation exchange) and Fe and Mn oxide precipitation (oxidation of connate water), are expected to persist in future mine workings. Therefore, the existing ratio of $^{226}Ra$ to TDS observed in Tiriganiaq sump data is used to calculate the $^{226}Ra$ source term as a function of TDS in underground mine source terms.

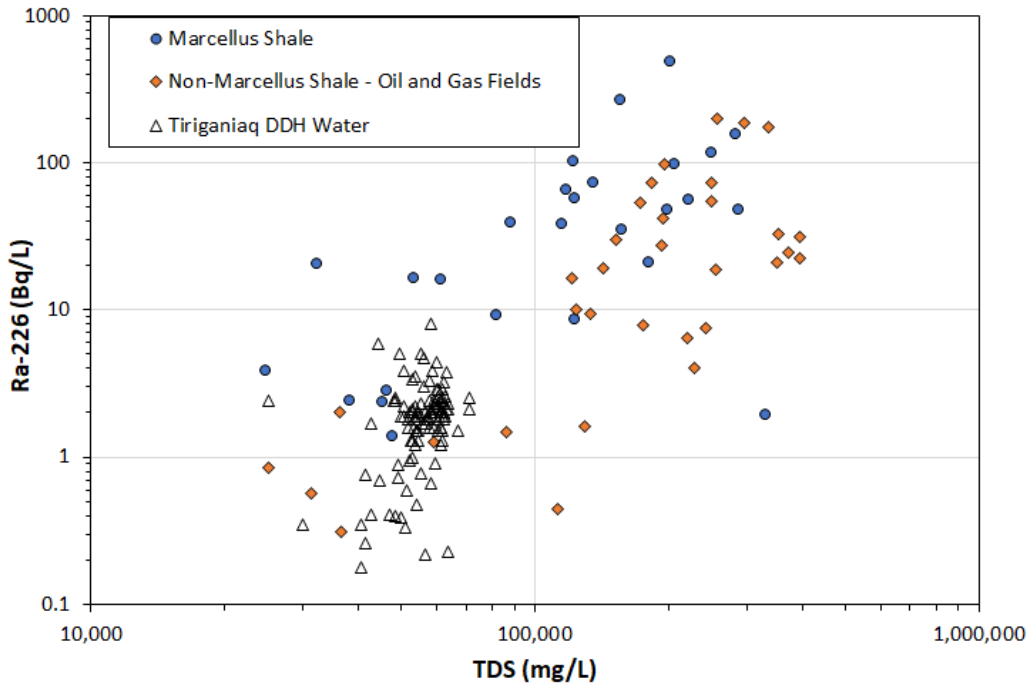


**Figure 8-23: Relationship between TDS and $^{226}$Ra activity observed in DDH water from the Tiriganiaq underground compared to oil shale connate water reported in USGS (2011).**

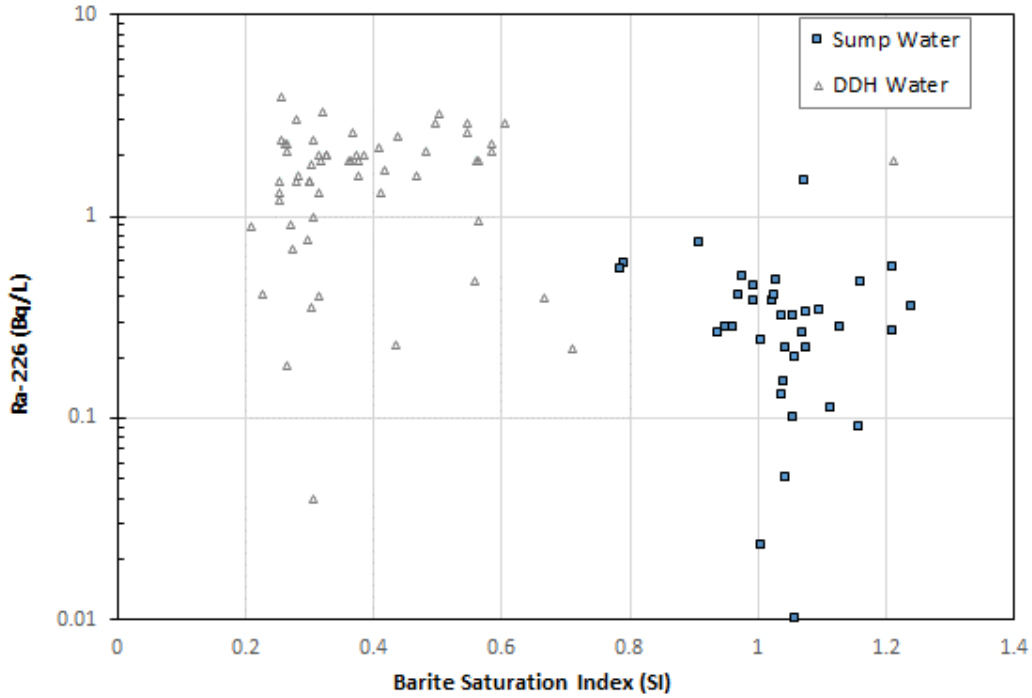


**Figure 8-24: Activity of $^{226}$Ra in Diamond Drill Hole (DDH) and sump water quality compared to Barite ($BaSO_4$) saturation indices calculated in PHREEQC.**

#### *8.6.1.6 Nitrogen Species*

Nitrogen (N) containing residues from explosives are typically the primary source of N on blasted rock surfaces and in underground mine water. Ammonia, $NO_3$ and $NO_2$ are water soluble and are readily mobilized from the N containing residues by contact water (Ferguson and Leask, 1988; Baily *et al.*, 2013; Sidenko, 2018). The release of N from blasted rock to mine water is influenced by site specific conditions including, but not limited to, groundwater infiltration rates, blasting methods, dust suppression methods, blasting conditions and explosives type. Meliadine Mine uses packaged ammonium nitrate fuel oil (Amex™) and ammonium nitrate based emulsion (DYNO® AP) explosives for blasting in dry conditions and in wet conditions, respectively.

The operational data for mine water quality, flows and blasted tonnage at the Amaruq and Tiriganiaq mine workings are presented in Figure 8-25 and Figure 8-26, respectively. The records for Amaruq represent the early stages of mining when access tunnels are excavated within permafrost, groundwater inflows are negligible, and the water volumes available for receiving N loads are approximated from water supplied for drilling and dust suppression (70 to 650 $m^3$/month). The high concentrations of $NH_3$, $NO_3$ and $NO_2$, (0.2 to 1006 mg-N/L, 0.3 to 996 mgN/L and 1.48 to 14.2 mg N/L, respectively) (Figure 8-25) that are observed in the Amaruq mine water at the Mud Wizard station are attributed to the low water volumes that are available for dilution when advancing access tunnels through waste rock within the permafrost layer.

In contrast, Tiriganiaq represents the mining of both ore and waste for mine workings that extended beyond permafrost, with increased groundwater inflows compared to mining within the permafrost layer. The Tiriganiaq dewatering flows range from 1,300 to 9,100 $m^3$/month, and the concentrations of ammonia, nitrate and nitrite in the Level 300 Sump range from 46 to 160 mg N/L, 52 to 189 mg N/L and 2.6 to 10.5 mg N/L, respectively (Figure 8-26). The explosive use rate, or powder factor (PF), for the monitoring periods was 1.3 kg/t at Amaruq and 1.1 kg/t at Tiriganiaq, and monthly excavation rates ranged from 3,400 to 12,600 t/month and 81,000 to 182,000 t/month, respectively. Monthly N loads released to mine water are calculated from the measured concentrations and flows and range from 90 to 1040 kg N/month at Amaruq and 650 to 3040 kg N/month at Tiriganiaq.

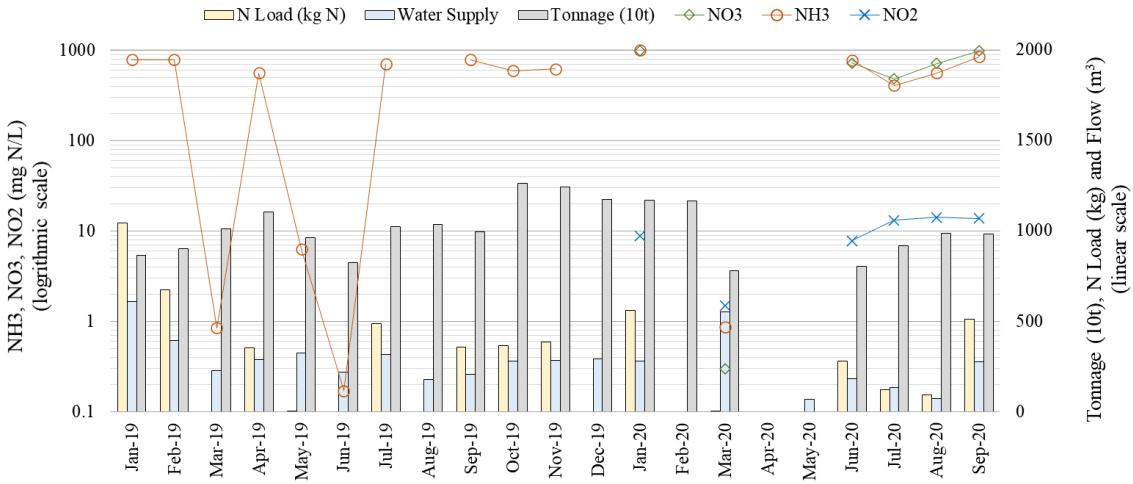


**Figure 8-25: Amaruq ammonia, nitrate and nitrite monitoring results, water supply flows, blasted tonnage and calculated nitrogen (N) loads in mine water for the January 2019 through September 2020 period.**

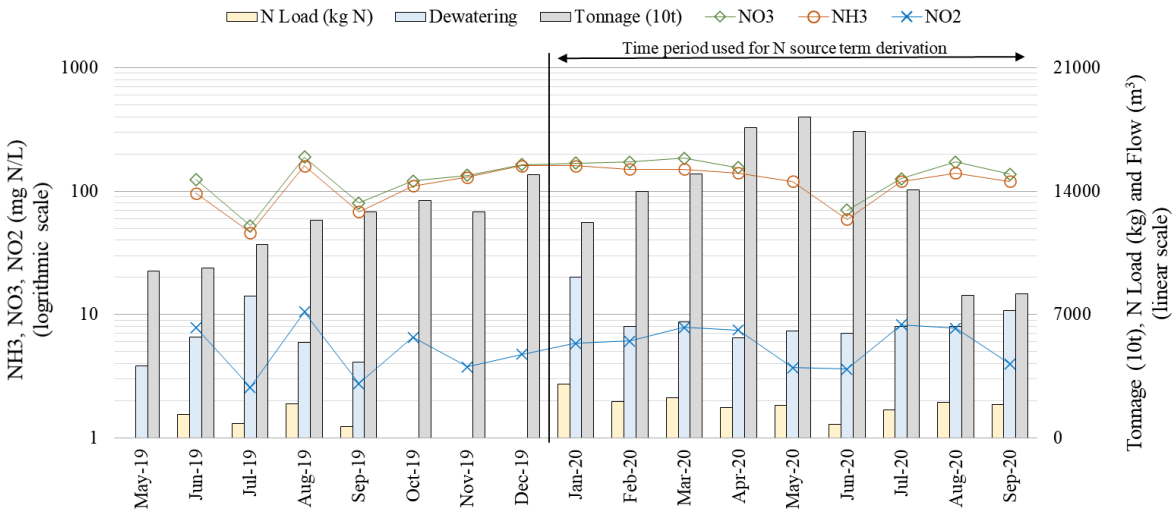


**Figure 8-26: Tiriganiaq ammonia, nitrate and nitrite monitoring results, water supply flows, blasted tonnage and calculated nitrogen loads in mine water for the May 2019 through September 2020 period.**

Nitrogen release from blasted rock to mine water is empirically estimated from mining and monitoring records using approaches similar to those described by Mueller and Fredrickson (2021) for an underground gold mine in northern British Columbia. Records of blasting, mine dewatering flows and mine water quality are used to derive N release rates from blasted rock to mine water that are based on the blasted tonnage.

Annual N source terms are calculated using groundwater inflow conditions from Golder (2021a). For years when the mine workings are entirely within permafrost, the N source terms are derived from operational data collected from Amaruq. The Tiriganiaq operational data are used to derive source terms for years when the water balance model indicates that groundwater infiltration will occur.

The N source terms for periods when there are no groundwater inflows into the mine workings are modeled using operational data from Amaruq (Figure 8-25), whereas Tiriganiaq data (Figure 8-26) are used to model N release during groundwater inflow periods. Total N in mine water is calculated by summing $NH_3$, $NO_3$ and $NO_2$ as N. For the 2019 Amaruq dataset, when only $NH_3$ results are available, the $NH_3$ is scaled to total N based on the species distribution observed for samples collected in 2020. The N species distribution is modeled using the median distribution values of the 2020 datasets for Amaruq and Tiriganiaq. The Amaruq median values for total N during the derivation period (2019 and 2020) are combined with the period total volume and total blasted tonnage to derive the N release rates. For Tiriganiaq, the 2020 N loads were summed and divided by the blasted tonnage to calculate N release rate. The N release rates, and speciation used for source term calculations are summarized in Table 8-16.

**Table 8-16:**
**Nitrogen (N) release rates and N species distributions used for ammonia, nitrate and nitrite source term calculations.**

| | No Groundwater Inflow (Permafrost) | Groundwater Inflow |
|---|---|---|
| N Release Rate (kg N/t) | 0.038 | 0.0135 |
| Ammonia proportion | 45.9% | 45.4% |
| Nitrate proportion | 53.3% | 52.1% |
| Nitrite proportion | 0.8% | 2.4% |

The mine water source terms for $NH_3$, $NO_3$ and $NO_2$ are calculated by combining the N release rates and speciation, summarized in Table 8-16, with the scheduled excavation tonnages and the groundwater inflows predicted by the hydrogeology model for each deposit (Golder, 2021a). The nitrogen source term calculations assume that Amex™ and DYNO® AP explosives will continue to be used for mining at a similar overall PF of 1.3 and 1.1 kg/t for Amaruq and Tiriganiaq, respectively, and that standard industry good practices for blasting, explosives use and nitrogen source control will be implemented for the duration of mine operations.

The $NH_4$, $NO_3$ and $NO_2$ annual source terms for mining the Tiriganiaq, Wesmeg, Pump, Wesmeg North, F zone, Discovery and Tiriganiaq-Wolf deposits are presented in

Figure 8-27. The source terms are initially elevated for the Discovery, F Zone and Tiriganiaq-Wolf deposits, similar to what is observed at Amaruq, due the limited volumes of mine water and no groundwater inflows that are indicated by the water balance model for those years. During years when groundwater inflows are expected, the N source term concentrations are lower and are similar to those observed at the Tiriganiaq deposit.

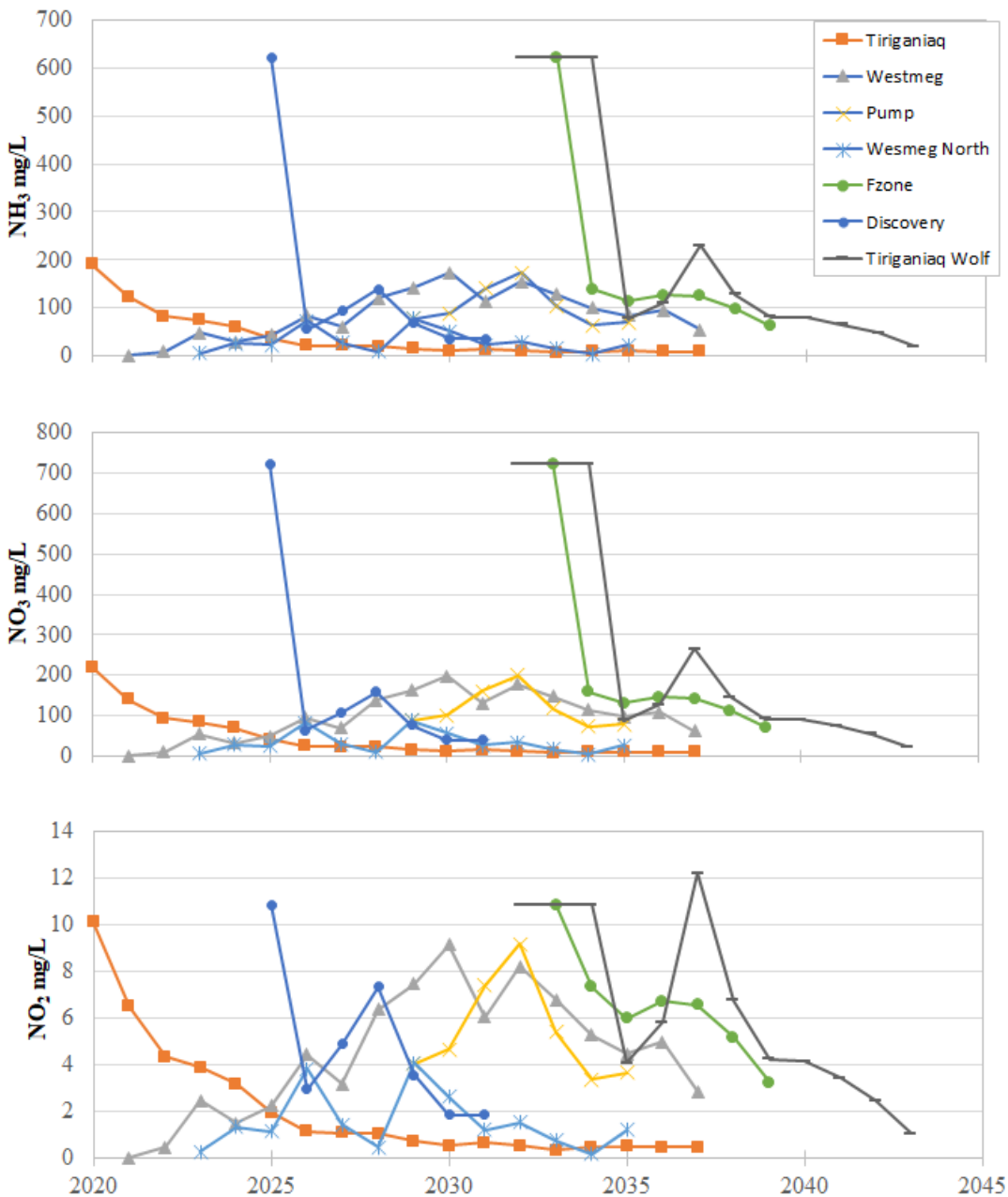


**Figure 8-27: Ammonia, nitrate and nitrite mine water source terms for the Tiriganiaq, Wesmeg, Pump, Wesmeg North, F Zone, Discovery and Tiriganiaq-Wolf deposits.**

### 8.6.2 Active Closure and Post Closure

Upon completion of mining activities dewatering of underground mines will be terminated. Mine workings will be passively flooded with infiltrating groundwater and/or be actively flooded with collection pond water from the mine surface. Over time, open taliks may form beneath flooded mine pits, creating a potential groundwater pathway from the mined pits and associated underground working to the deep sub-permafrost groundwater regime (Golder, 2021b). Owing to the low permeability of bedrock in the area travel times are expected to require decades to centuries before seepage reaches Meliadine Lake. Therefore, closure source terms for underground mines are not included in the Meliadine Extension water quality model.

### 8.6.3 Source Term Results

The underground mine source terms are developed on an annual basis in operations while mine workings are actively dewatered. A summary of peak annual concentrations produced from each deposit during operations is shown in Table 8-17, while the complete source terms are provided in Appendix G. A time series for TDS and As source terms are plotted in Figure 8-28 to illustrate temporal trends.

## *8.7 Disturbed Areas, Ore Pads and Mine Facilities*

Source terms for disturbed areas, ore pads and mine facility areas were developed from monitoring data and incorporated into the source term calibration described in Section 8.2. The source terms developed for the model calibration are applied throughout mine operations (Table 8-2). Disturbed areas, ore pads and mine facilities are reclaimed at the end of mine life. Therefore, the source terms for these areas revert to baseline chemistry in active closure and post-closure.

**Table 8-17:**
**Maximum Source Term Concentrations for Underground Mines**

| Parameter | TDS | Cl | F | $SO_4$ | N-$NH_3$ | N-$NO_3$ | N-$NO_2$ | T-CN | Sb | As | Cd | Cr | Co | Cu | Pb | Mn | Na | Ni | P | Se | U | Zn | $^{226}Ra$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **Bq/L** |
| **Discovery** | 60,000 | 35,100 | 0.01 | 3,410 | 623 | 723 | 10.9 | 0.005 | 0.025 | 0.0322 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.135 | 16,100 | 0.05 | 0.03 | 0.005 | 0.00016 | 0.04 | 0.31 |
| **F-Zone** | 60,000 | 35,100 | 0.01 | 3,410 | 623 | 723 | 10.9 | 0.005 | 0.025 | 0.0649 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.135 | 16,100 | 0.05 | 0.03 | 0.00554 | 0.00016 | 0.04 | 0.31 |
| **Pump** | 59,000 | 34,600 | 0.01 | 3,350 | 174 | 199 | 9.18 | 0.005 | 0.025 | 0.0829 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.133 | 15,800 | 0.05 | 0.03 | 0.00708 | 0.00016 | 0.04 | 0.30 |
| **Tiriganiaq** | 59,500 | 34,800 | 0.01 | 3,380 | 191 | 219 | 10.1 | 0.207 | 0.025 | 0.425 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.134 | 15,900 | 0.05 | 0.03 | 0.0189 | 0.00016 | 0.04 | 0.30 |
| **Tiriganiaq-Wolf** | 56,500 | 33,100 | 0.01 | 3,210 | 623 | 723 | 12.2 | 0.005 | 0.025 | 0.0718 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.127 | 15,100 | 0.05 | 0.03 | 0.00614 | 0.00016 | 0.04 | 0.29 |
| **Wesmeg** | 60,000 | 35,100 | 0.01 | 3,410 | 173 | 199 | 9.15 | 0.005 | 0.025 | 0.151 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.135 | 16,100 | 0.05 | 0.03 | 0.0129 | 0.00016 | 0.04 | 0.31 |
| **Wesmeg-North** | 35,000 | 20,500 | 0.01 | 1,990 | 77.2 | 88.6 | 4.08 | 0.005 | 0.025 | 0.0432 | 0.0005 | 0.01 | 0.00006 | 0.003 | 0.0002 | 0.0789 | 9,380 | 0.05 | 0.03 | 0.005 | 0.00016 | 0.04 | 0.18 |

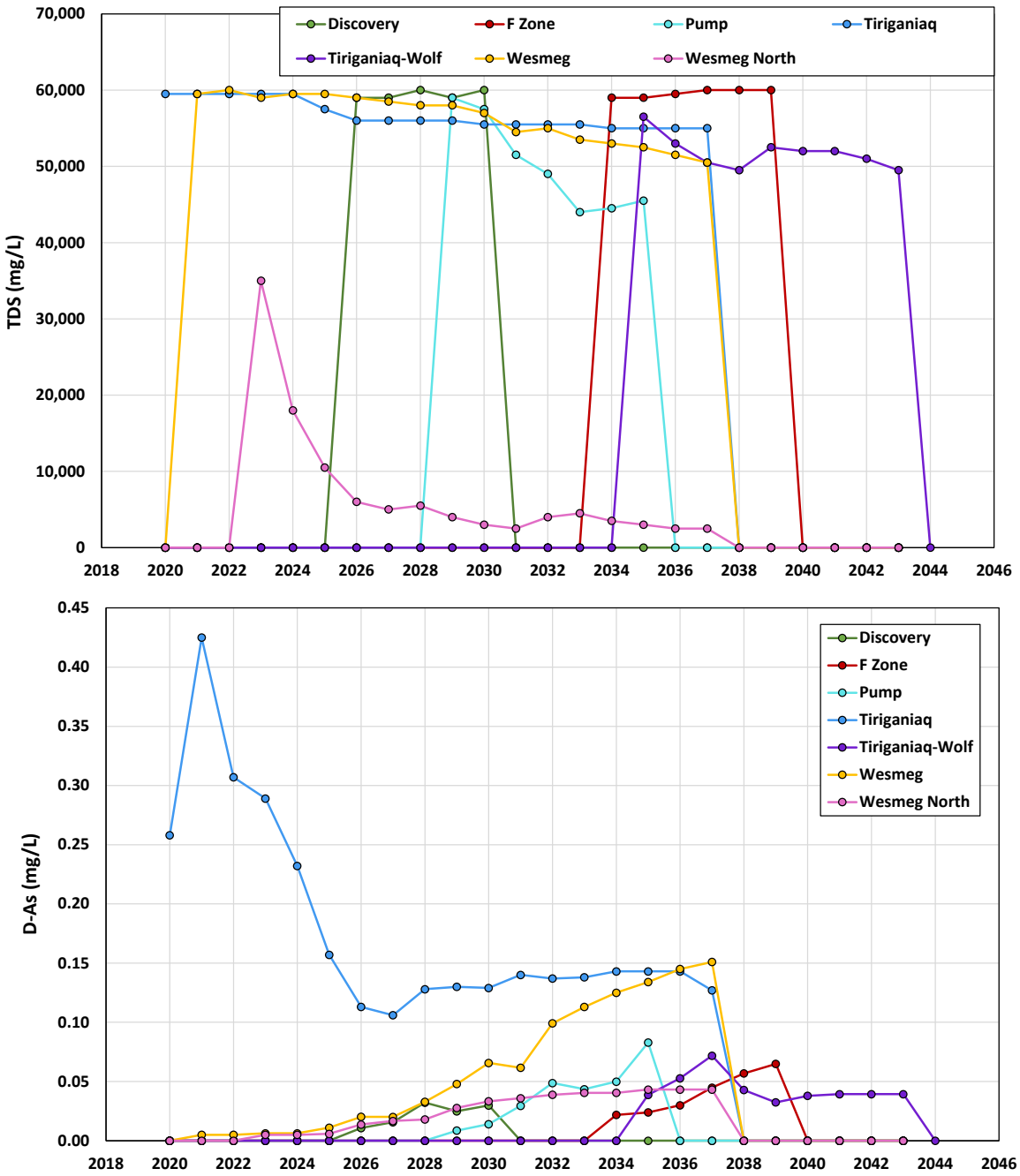


**Figure 8-28: Underground mine annual source term for TDS (top) and As (bottom).**

# 9. Closure

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# 9. Closure

We trust that this report meets your requirements at this time. Please contact us should you have any questions or concerns or require additional information in support of this work.

**LORAX ENVIRONMENTAL SERVICES LTD.**

**Prepared by:**

**Original Signed by:**

REGISTERED PROFESSIONAL GEOSCIENTIST
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Mar. 1/2022

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**Gladys Oka, M.Sc.**
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**David Flather, M.Sc.**
President and Senior Environmental Scientist

PERMIT TO PRACTICE
LORAX ENVIRONMENTAL SERVICES LTD.
Signature
Date March 1, 2022
PERMIT NUMBER: P 1487
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# *Appendix A: Drill Core Sample Distribution in the Open Pit and Underground Mine*

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## Appendix A: Drill Core Sample Distribution in the Open Pit and Underground Mine

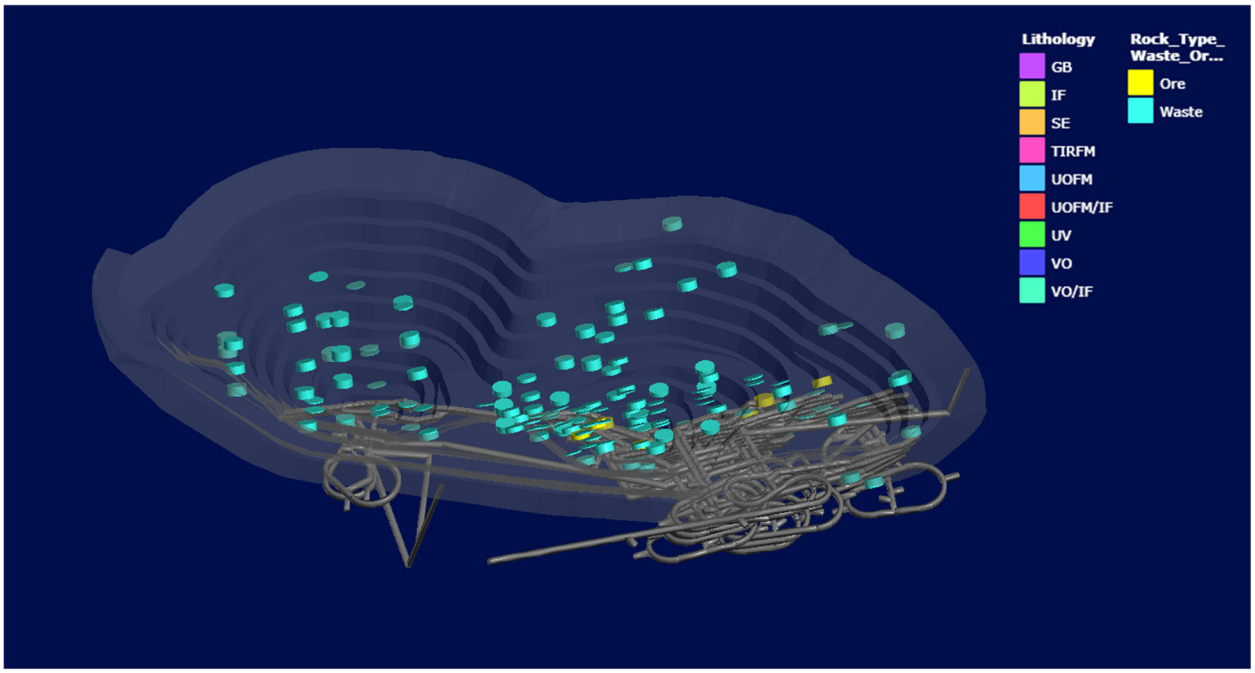


**Figure 1:** **Distribution of Discovery drill core samples collected from the open pit and underground classified by sample type (waste rock or ore). Perspective from open pit.**

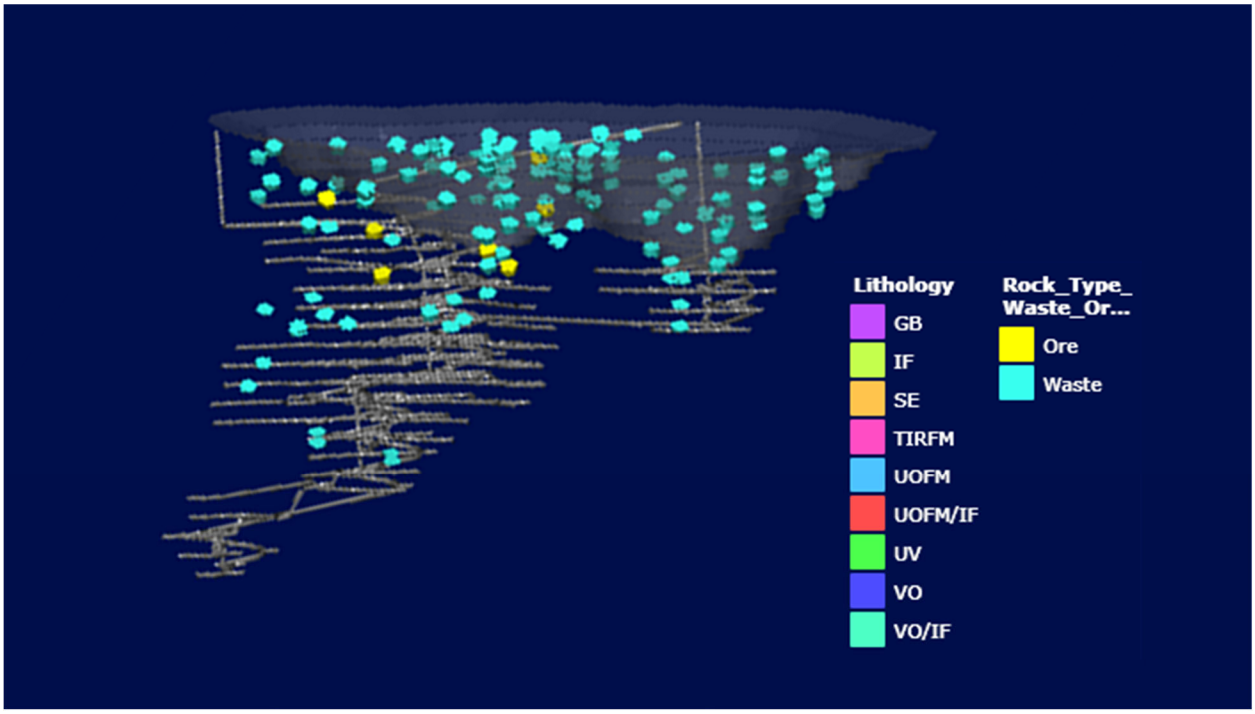


**Figure 2:** **Distribution of Discovery drill core samples collected from the open pit and underground classified by sample type (waste rock or ore). Perspective from mine underground.**

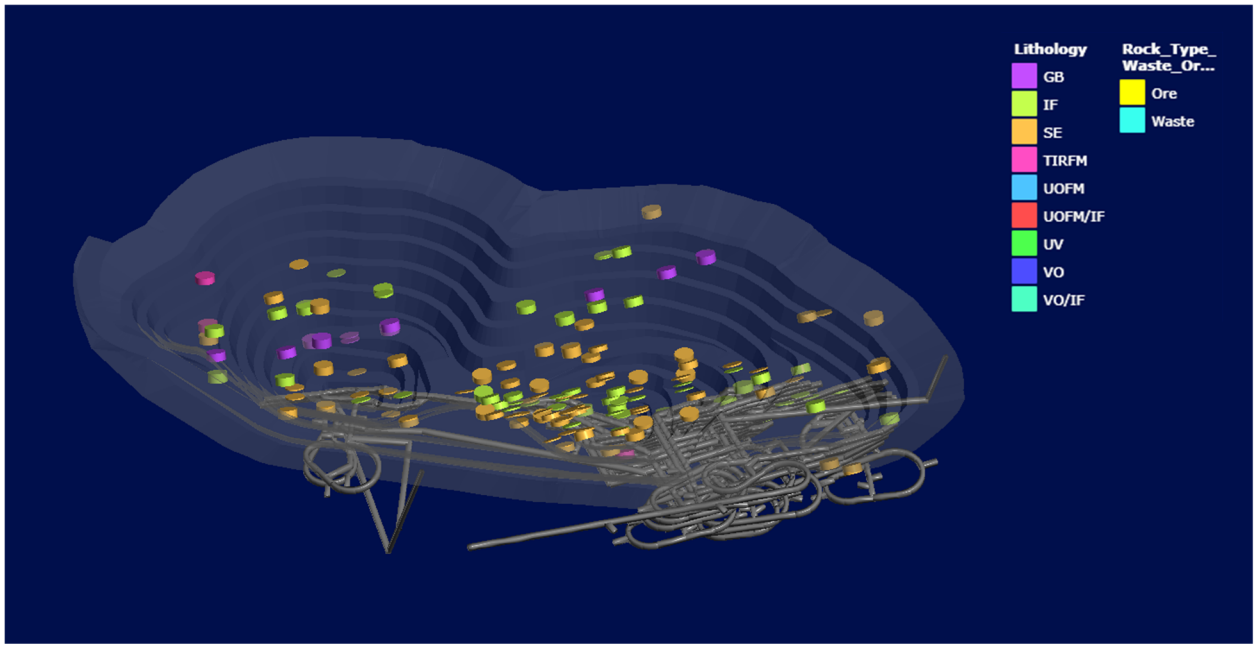


**Figure 3:** **Distribution of Discovery drill core samples collected from the open pit and underground classified by lithology. Perspective from open pit.**

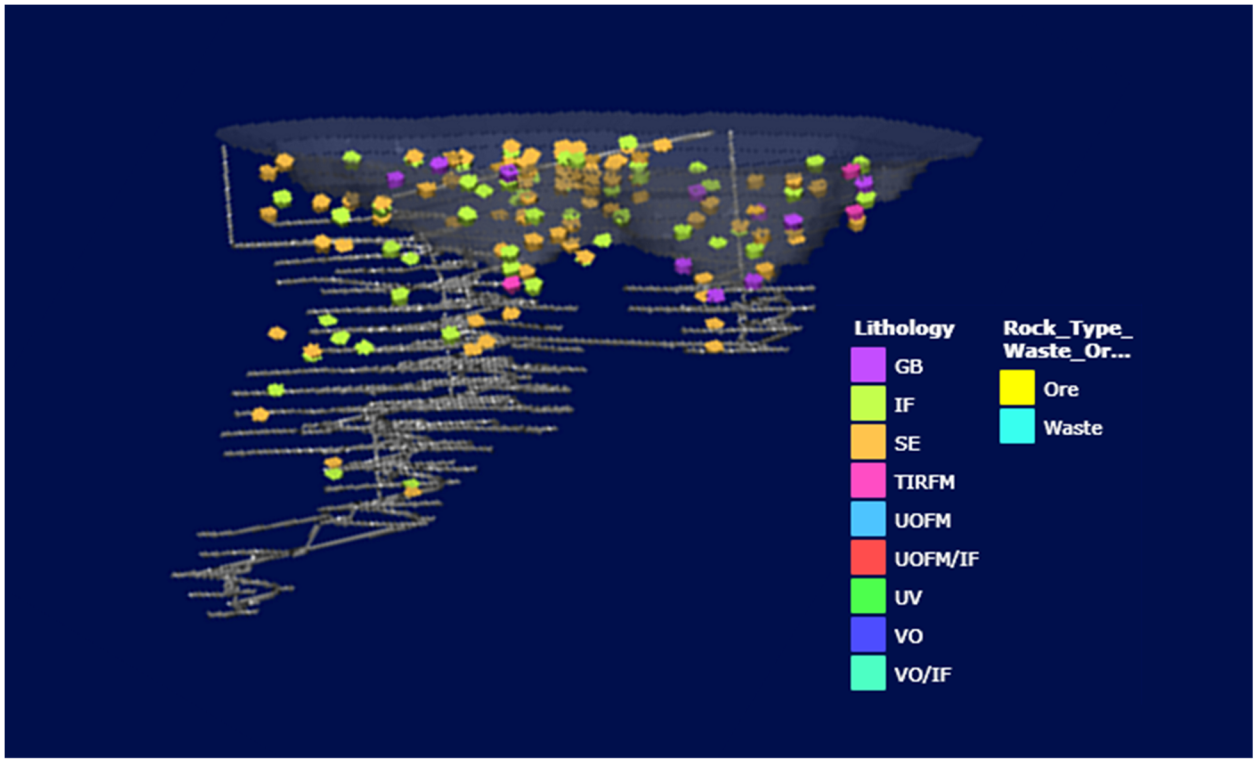


**Figure 4:** **Distribution of Discovery drill core samples collected from the open pit and underground classified by lithology. Perspective from mine underground.**

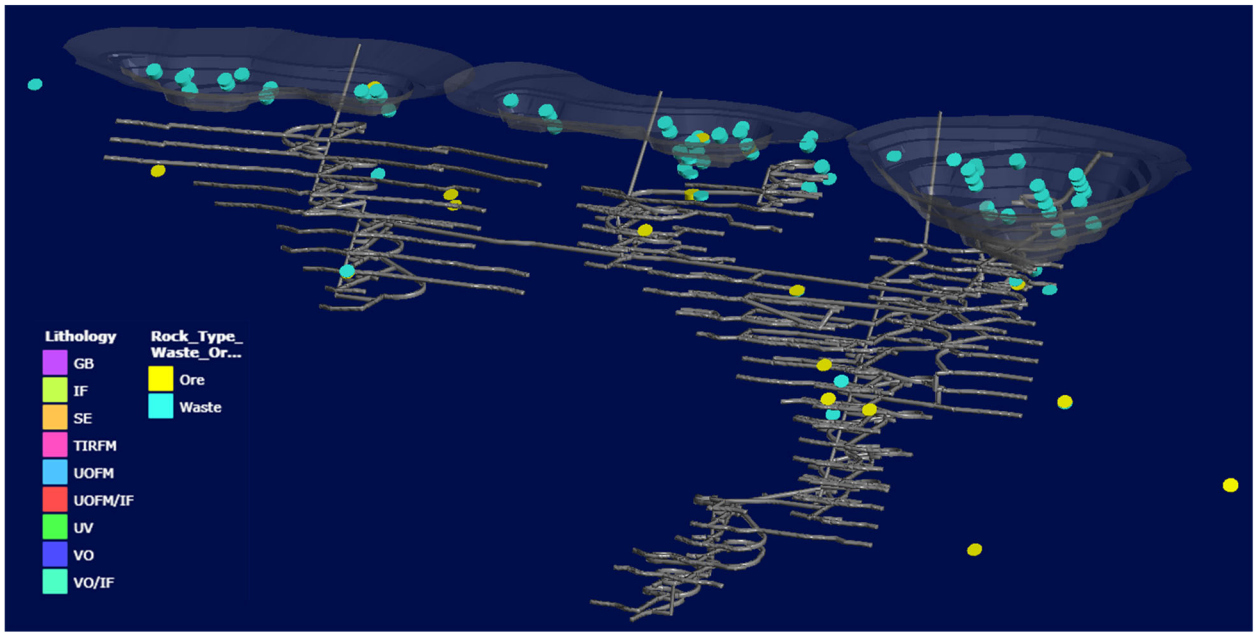


**Figure 5:** **Distribution of F-Zone drill core samples collected from the open pit and underground classified by sample type (waste rock or ore).**

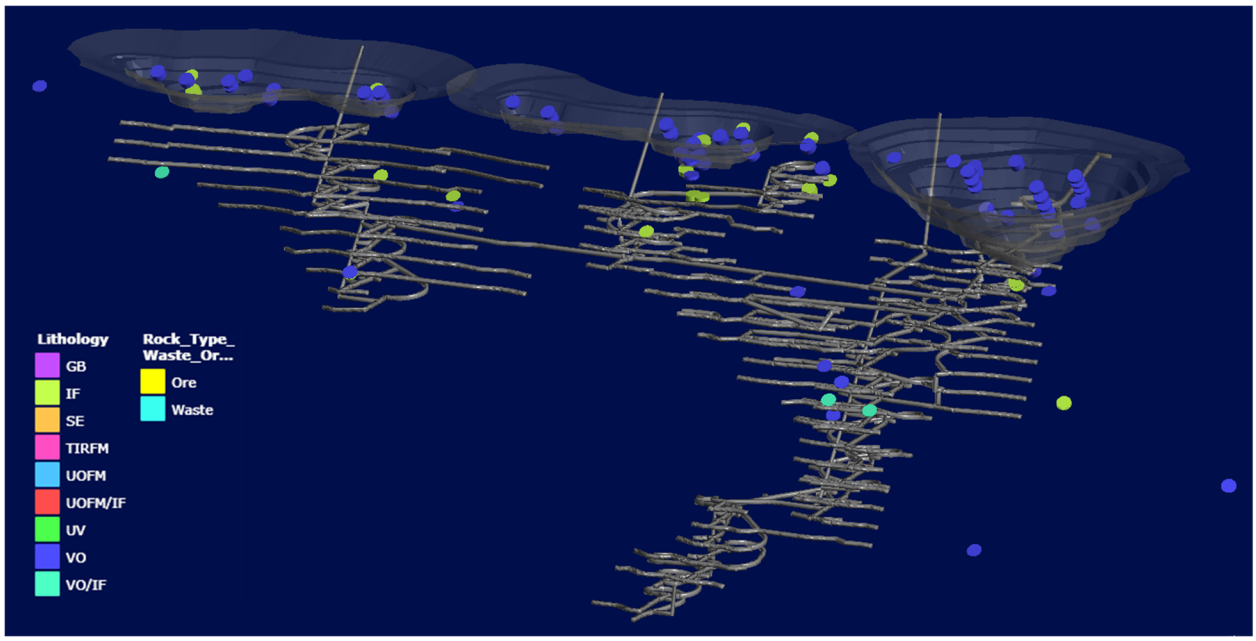


**Figure 6:** **Distribution of F-Zone drill core samples collected from the open pit and underground classified by lithology.**

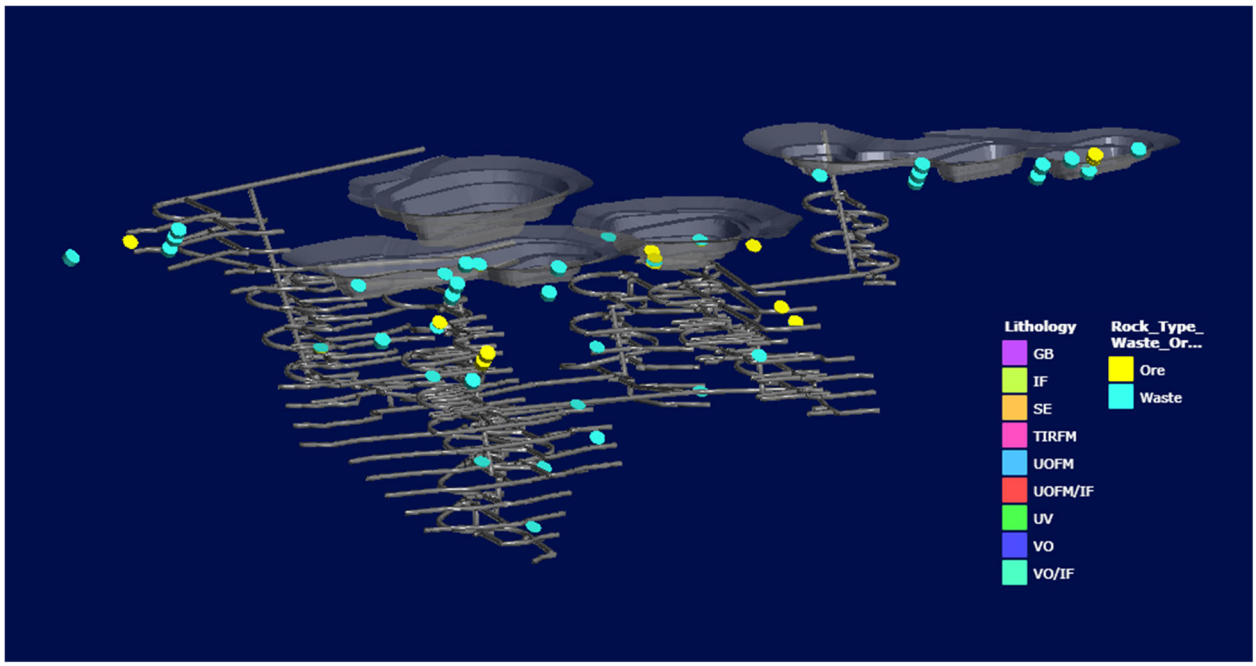


**Figure 7: Distribution of Pump drill core samples collected from the open pit and underground classified by sample type (waste rock or ore).**

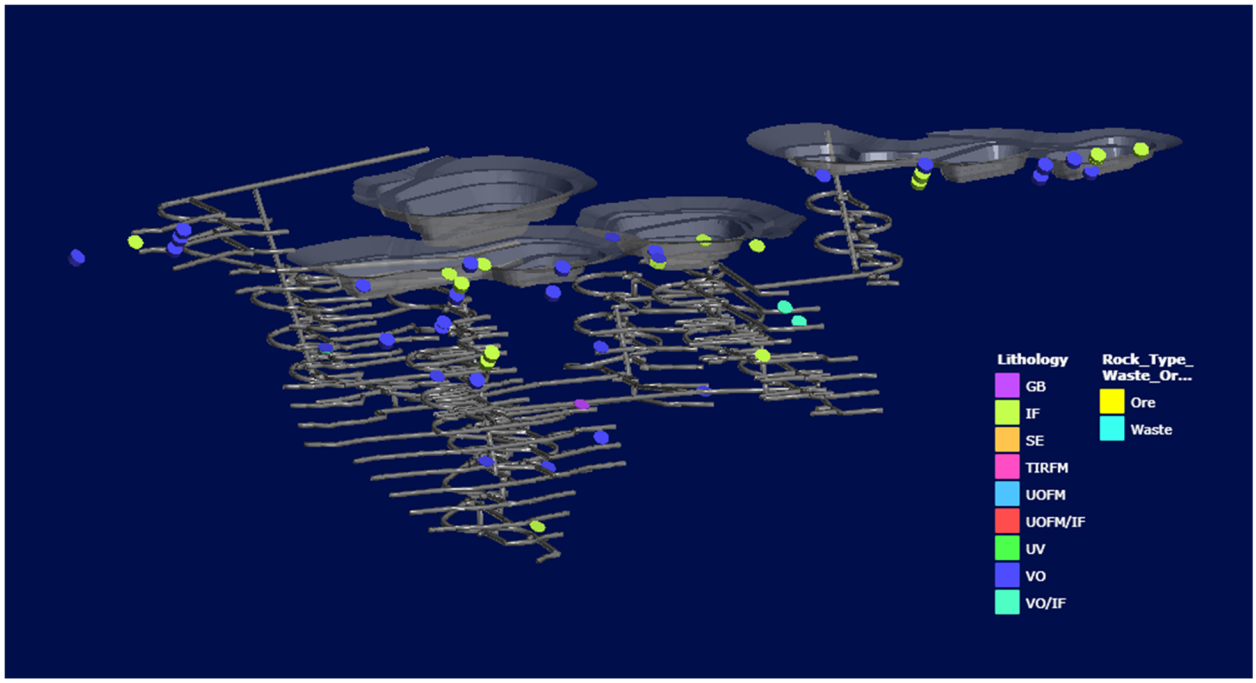


**Figure 8: Distribution of Pump drill core samples collected from the open pit and underground classified by lithology.**

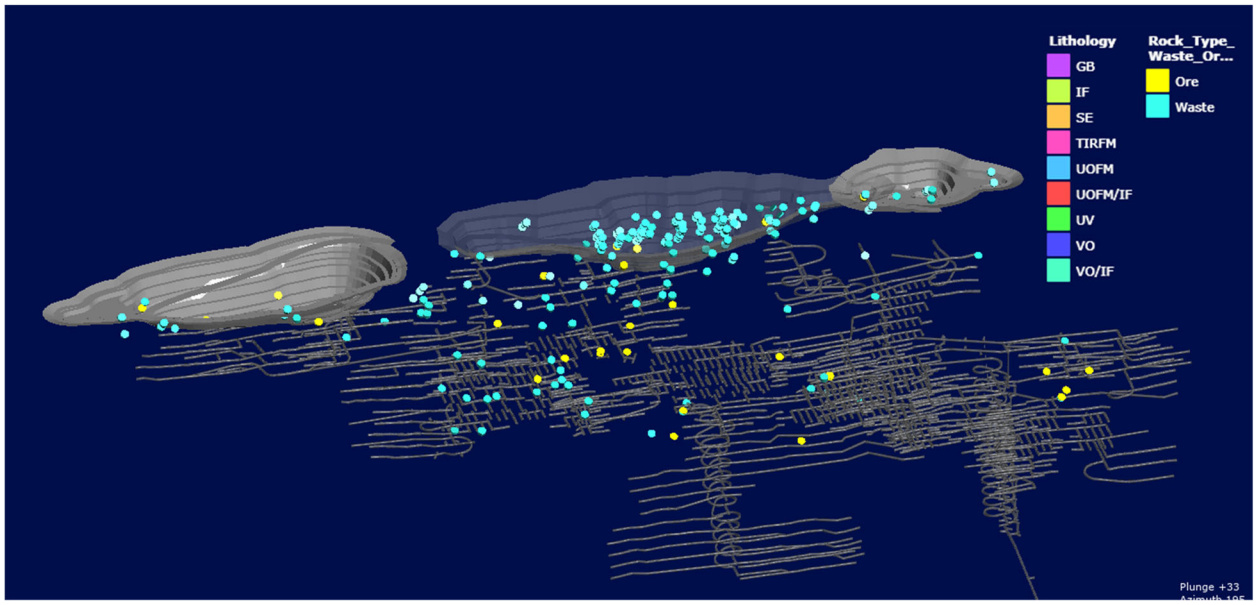


**Figure 9: Distribution of Tiriganiaq drill core samples collected from the open pit and underground classified by sample type (waste rock or ore).**

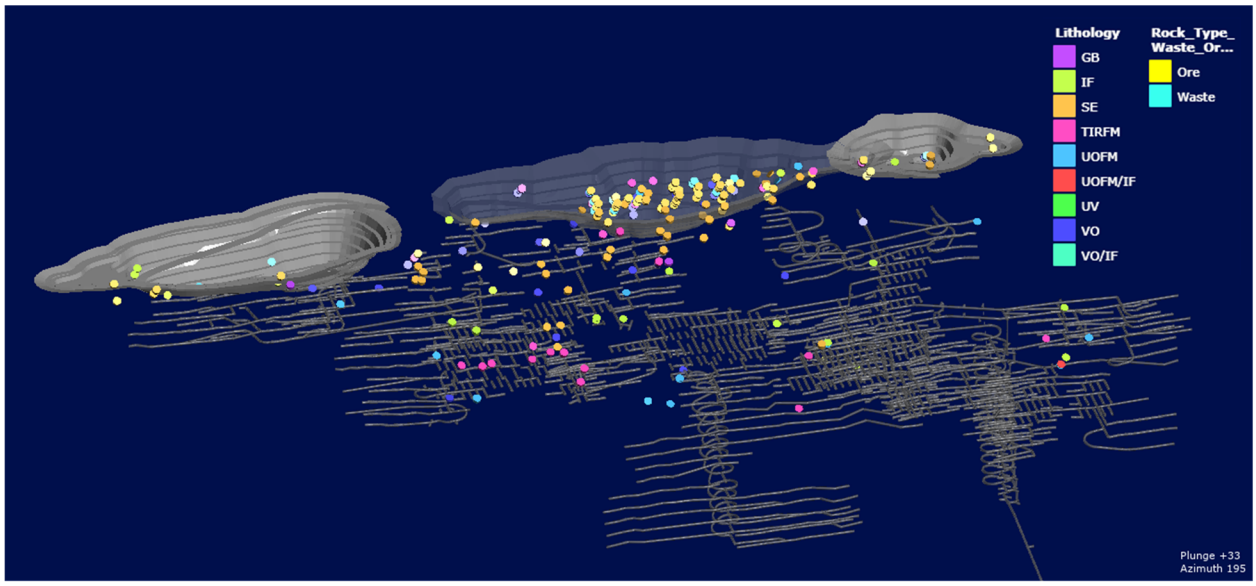


**Figure 10: Distribution of Tiriganiaq drill core samples collected from the open pit and underground classified by lithology.**

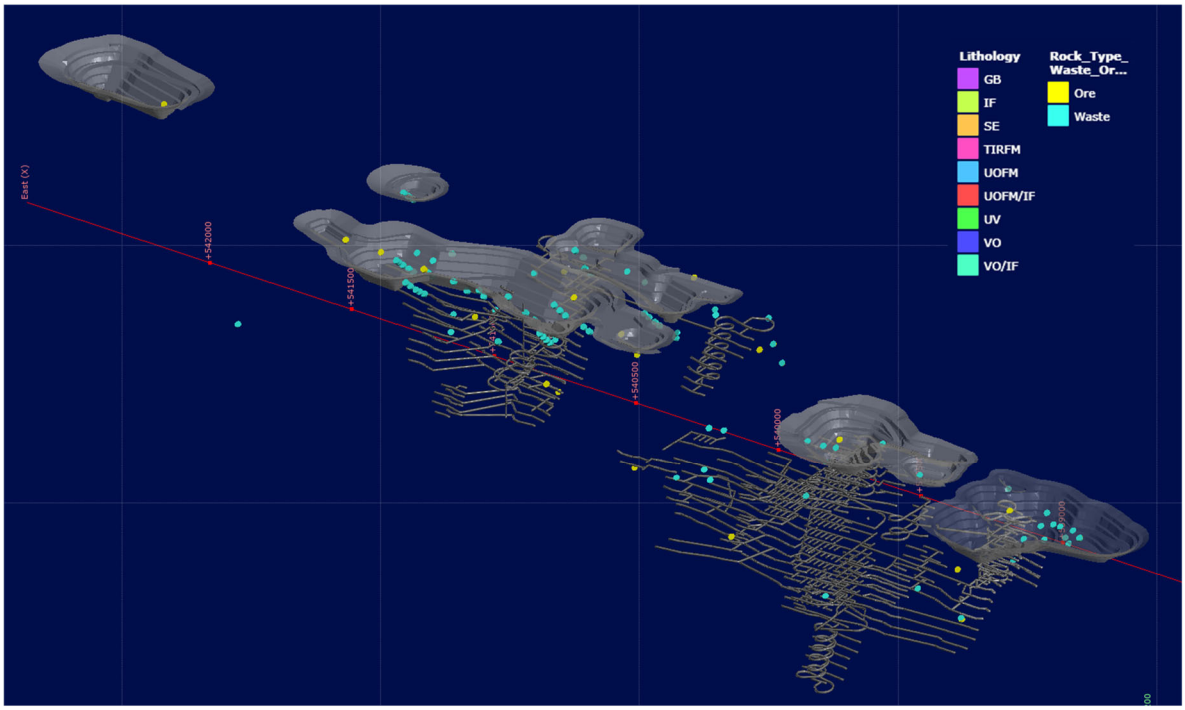


**Figure 11: Distribution of Wesmeg and Wesmeg-North drill core samples collected from the open pit and underground classified by sample type (waste rock or ore).**

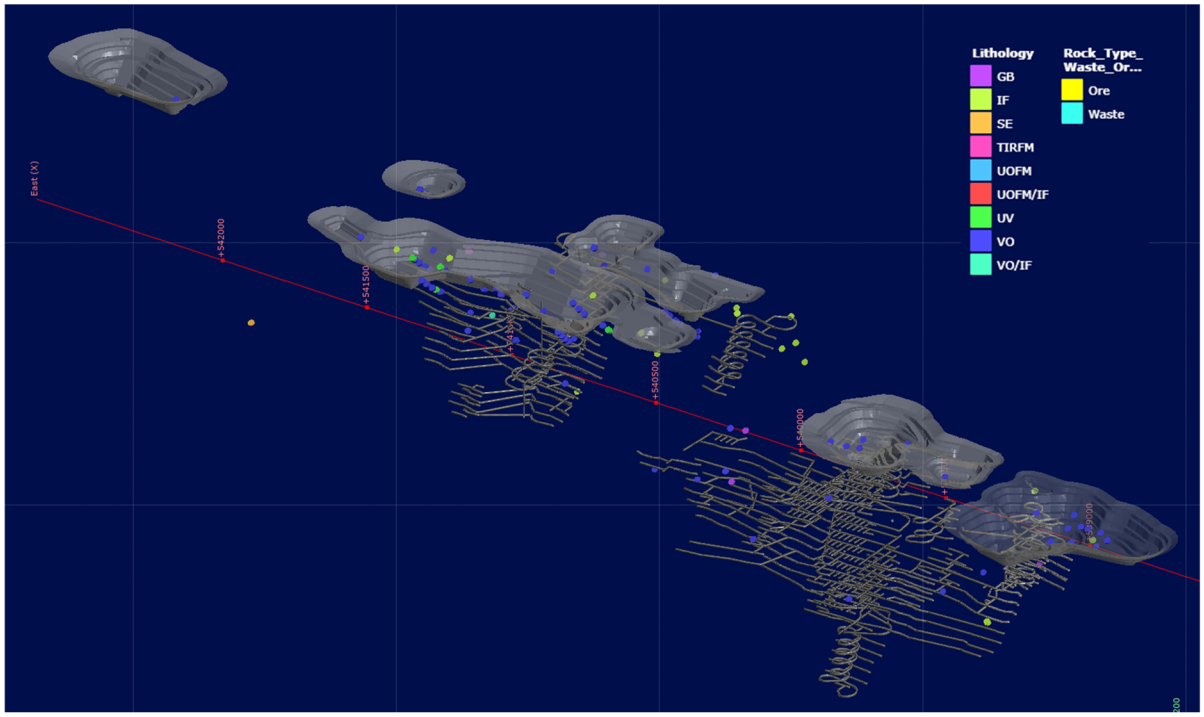


**Figure 12: Distribution of Wesmeg and Wesmeg-North drill core samples collected from the open pit and underground classified by lithology.**

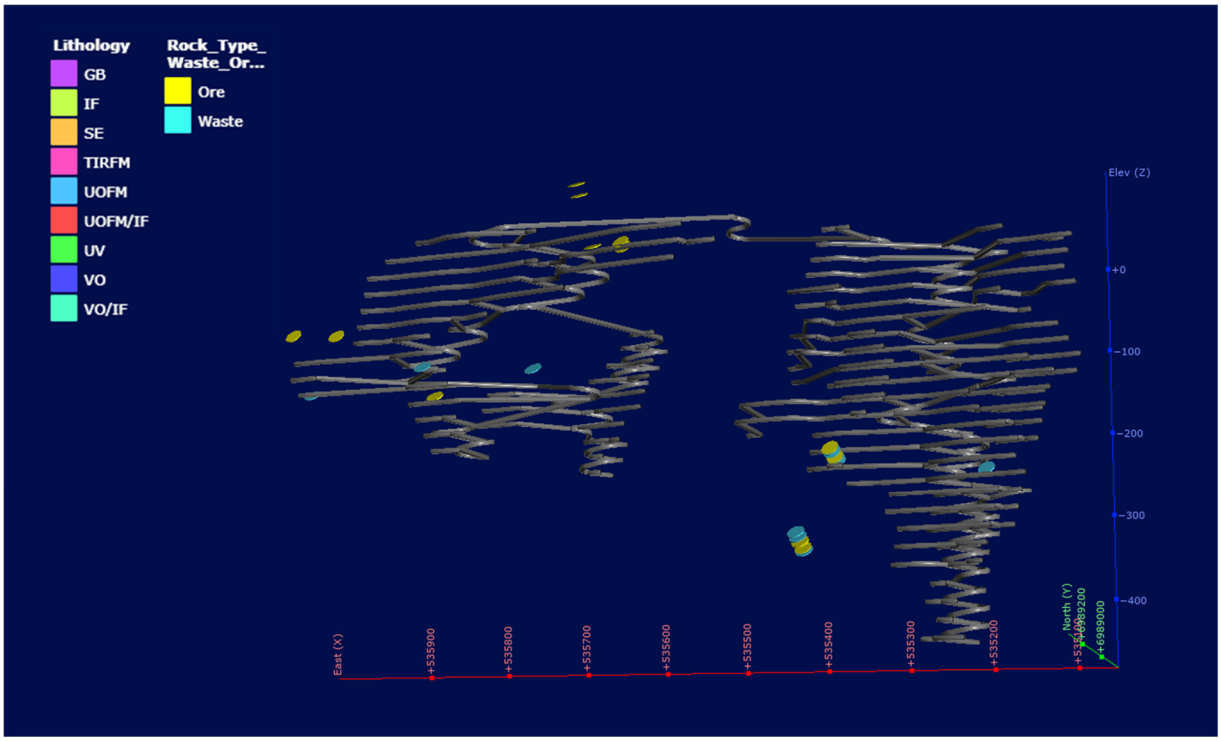


**Figure 13: Distribution of Wolf drill core samples collected from the underground classified by sample type (waste rock or ore).**

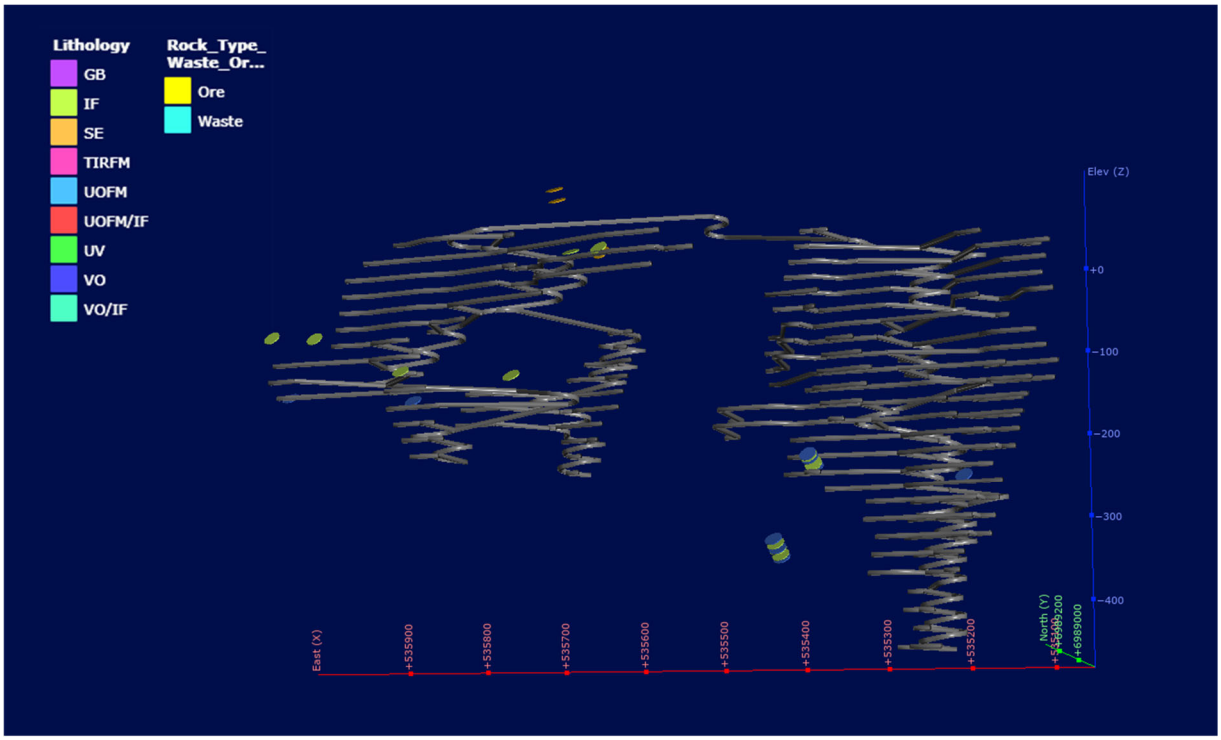


**Figure 14: Distribution of Wolf drill core samples collected from the underground classified by lithology.**

# *Appendix B: Field Rinsing Procedure for Determination of Salinity Load*

AGNICO EAGLE

# Standard Operating Procedure: Test Pit Sampling for Salinity Rinsing Tests

Provided by Lorax Environmental for Agnico Eagle Mines
November 6th, 2020

Objective: To collect test pit samples and conduct salinity rinsing experiments to evaluate salinity leaching potential.

## SOP Part 1: Test Pit and Sample Preparation:

Number of Samples and Test Pits:

- 1 test pit located on WRSF1 overburden
- 1 test pit located on WRSF1 waste rock
- 2 test pits located on older underground mine rock (2016-2018)
- 2 test pits located on younger underground mine rock (2019-2020)
- 4 samples per test pit (total of 24 test samples + 4 duplicates)
- 28 x 1 kg samples sieved to <1 inch collected from test pits for salinity rinsing tests (SOP Part 2)

Materials:

- Excavator and shovel
- Balance
- Piece of plywood or clean surface to cone and quarter samples
- 1" Sieve
- Sample bags
- Sample labels
- Bucket

Selection of Sampling Locations:

1. Select one test pit location on WRSF1 where overburden has recently been deposited.

2. Select one test pit location on WRSF1 where open pit waste rock has recently been deposited.

3. Select two test pit locations on underground mine rock deposited between 2016 and 2018. Locations should be adjacent to areas previously sampled in September 2020, shown Table 1 and Figure 1.

4. Select two test pit locations on underground mine rock deposited between 2019 and 2020. Locations should be adjacent to areas previously sampled in September 2020, shown Table 1 and Figure 1.

5. Locations should be selected in consultation with staff familiar with underground mine rock management and may be dictated by the thickness of waste deposited and excavator access.

6. No test pits are to be excavated into TSF waste rock or Berm 1 (personal communication from Jennifer Pyliuk).

**Table 1: Coordinates of shallow test pits and approximate age of underground mine rock collected in first round of salinity rinsing tests collected in September 2020.**

| Test Pit ID | Easting | Northing | Facility | Year of Deposition |
|---|---|---|---|---|
| Pit 1 | 540121 | 6989026 | D-P3 | 2016 |
| Pit 2 | 540098 | 6988959 | D-P3 | 2016 |
| Pit 3 | 540077 | 6988903 | D-P3 | 2016 |
| Pit 4 | 539617 | 6989239 | D-P1 | 2016 |
| Pit 5 | 539669 | 6989271 | D-P1 | 2016 |
| Pit 6 | 539754 | 6989270 | D-P1 | 2016 |
| Pit 9 | 539526 | 6988946 | Paste Plant Ramp | 2018 |
| Pit 10 | 539502 | 6989053 | Paste Plant Ramp | 2018 |
| Pit 11 | 539078 | 6989943 | Church Pad | 2018 |
| Pit 14 | 539135 | 6990142 | Industrial Pad | 2019 |
| Pit 15 | 539041 | 6990213 | Industrial Pad | 2019 |
| Pit 16 | 539612 | 6989499 | Low Grade Ore | 2020 |
| Pit 17 | 539681 | 6989774 | Low Grade Ore | 2020 |
| Pit 18 - 20 | 539626 | 6989810 | Ore Pad | 2019 |

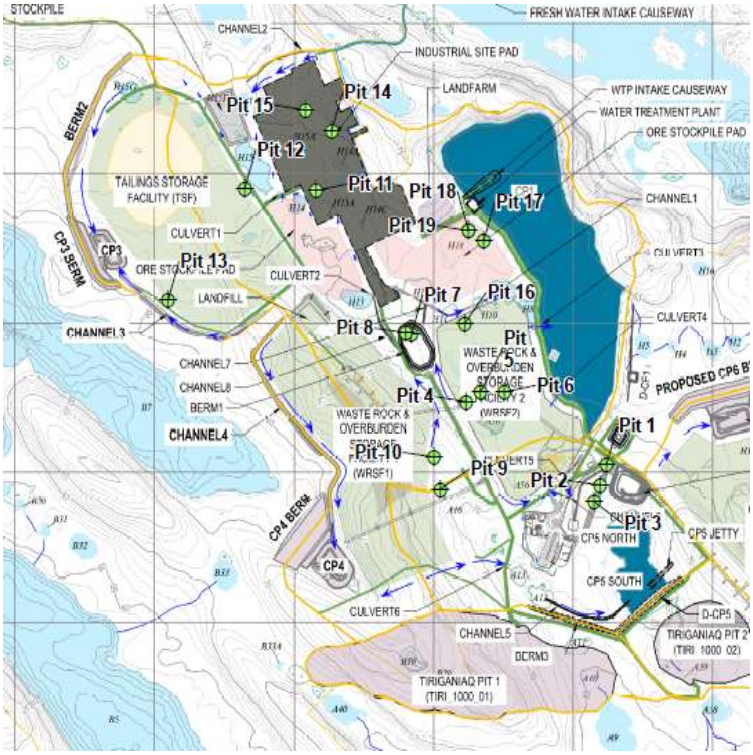


**Figure 1: Map showing locations of shallow tests pits completed in September 2020.**

Sampling Procedure:

1. Excavate test pits to a depth of approximately 2 m.

2. Collect a sample from each 50 cm depth interval: 0-50 cm; 50-100 cm; 100-150cm; and 150 to 200 cm.

3. Record a description of the location, facility, depth of sample collection, material type and age for each test pit sample. Refer to the *Example Notes*.

4. On a clean surface (e.g. piece of plywood in field or clean cement floor), cone and quarter a representative sample to maintain the particle size distribution of subsamples. Make note of any large boulders excluded from cone and quartering.

5. Collect enough sample from the cone and quartering procedure to pass 1 kg through a 1" screen. Label the sample and set aside for field rinsing experiments.

6. Randomly select one test pit and repeat step 5. These samples will be used as duplicates for QAQC of rinsing tests.

**SOP Part 2: Salinity Rinsing Procedure:**

Number of samples**:**

- 45 x 500ml HDPE sample bottles for TDS, pH, alkalinity and anions.
- 45 x 100ml glass amber bottles and $H_2SO_4$ preservative for D-$NH_3$
- 45 x 120ml HDPE sample bottles and $HNO_3$ preservative for D-metals

Chemical Requirements:

- Standard pH buffer solutions (pH 4, 7 and 10)
- Electrical conductivity buffer solutions (1 mS/cm to 30 mS/cm)*
- Deionized or potable water

*Ensure that high EC buffer solution (30mS/cm or higher) is available to calibrate probe for high salinity solutions.

Materials:

- Nitrile gloves
- pH and EC multiprobe
- Stirring rod
- Plastic beakers (approx. 2L)*
- Balance
- Weigh trays
- Graduated cylinder (≥1L)
- 500 mL HDPE sample bottles
- 125 mL amber glass sample bottles and preservatives ($H_2SO_4$) for D-$NH_3$ analysis
- 120 ml HDPE sample bottles and preservatives ($HNO_3$) for D-metals analysis
- 60 mL syringes to filter D-$NH_3$ and D-metals samples
- 0.45 µm filters
- Sample labels and COC forms
- 28 x 1 kg rock samples sieved to <1/4 inch

*multiple beakers will allow for more than one rinsing test to proceed simultaneously

Test Procedure:

1. Calibrate pH/EC multiprobe at beginning of each day that rinsing tests are being conducted.

2. Combine 1 kg of the sieved rock with 1 L of deionized water in the beaker and mix thoroughly using the stirring rod for 30 seconds.

3. Let the mixture sit for 10 minutes without disturbance.

4. Insert the pH and EC electrodes into the supernatant and gently swirl the probe as parameters stabilize.

5. When readings remain constant, record the temperature, pH and EC of the supernatant. Refer to the *Example Notes*.

6. Decant the supernatant and record the decanted volume. Refer to the *Example Notes.*

7. Collect a 500 mL subsample of the decanted supernatant in an unpreserved 500 mL HDPE bottle for analysis.

8. For the first rinse of each test pit sample, filter the remaining supernatant through a 0.45 µm filter using the syringes to collect 100 mL subsamples for each of the following:
    a. D-metals (125 mL HDPE bottle; $HNO_3$ preservative to be added)
    b. D-$NH_3$ (125 mL amber glass bottle; $H_2SO_4$ preservative to be added)

9. Rinse the plastic beaker and pH and EC electrodes with deionized water and ensure the probe is clean before re-use.

10. For the deepest rock sample collected from each test pit (150 cm to 200cm), repeat Steps 2 to 8 two more times. For these samples 3 total rinses will occur and water quality samples collected from each rinse.

11. For the remaining rock samples (0-50cm; 50-100cm; and,100-150cm) repeat Steps 2 to 6 two more times. For these samples, 3 total rinses will occur with water quality samples only being collected from the first rinse. The second and third rinsing steps will only be measured for field EC and pH.

12. All water quality samples will be submitted to ALS Laboratories. Shipping address is provided at the end of this SOP.

13. Randomly select two rinse tests to collect duplicate WQ samples for laboratory QAQC.

14. Collect 1 sample of the de-ionized/potable water used in salinity rinsing experiments as a blank for QAQC.

## Additional Information:

Address for Water Quality Samples:
ALS Vancouver Laboratory
ATTN: Heather McKenzie - Account Manager, Environmental
8081 Lougheed Hwy
Burnaby, BC, Canada, V5A 1W9
T +1 604 253 4188  D +1 778 370 3298
heather.mckenzie@alsglobal.com

## Example Notes: Test Pit Samples

| Test Pit ID | Location GIS | Facility | Depth Sampled (cm) | Mass of <1" rinse test sample (kg) | Material Type | Approx. Age | Notes |
|---|---|---|---|---|---|---|---|
| Pit 1 | 15V 539941E/ 6989003N | Ore Stockpile | 40-50 | 1.2 | Overburden | < 3 months | Coarse gravel to fine sand |
| | | | | | | | |
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## Example Notes: Salinity Rinsing Tests

| Test Pit ID | Sample Mass (kg) | Rinse 1 | | | | Rinse 2 | | | | Rinse 3 | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Temp. (°C) | pH (s.u.) | EC (mS/cm) | Vol. Decanted (mL) | Temp. (°C) | pH (s.u.) | EC (mS/cm) | Vol. Decanted (mL) | Temp. (°C) | pH (s.u.) | EC (mS/cm) | Vol. Decanted (mL) | |
| Pit 1 | 1.01 | 12.3 | 8.3 | 32 | 900 | 12.3 | 8.3 | 32 | 900 | 12.3 | 8.3 | 32 | 900 | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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# *Appendix C: Mineralogy*

APPENDIX C-1: MELIADINE EXTENSION DATABASE: XRD RESULTS

APPENDIX C-2: LABORATORY REPORTS FOR PHASE 2 XRD AND TIMA-X ANALYSIS

AGNICO EAGLE

# APPENDIX C-1: MELIADINE EXTENSION DATABASE: XRD RESULTS

**Appendix C-1: Meliadine Extension Database: XRD Results**

| Sample ID | Drill ID or Sample Description | Deposit | Sample Type | Lithology Codes | Phase 2 Lithology Codes | Year of Analysis | Location | $Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$ | $Fe_3Al_2(SiO_4)_3$ | $Ca(Fe,Mg,Mn)(CO_3)_2$ | $Ca_5(PO_4)_3(OH,F,Cl)$ | FeAsS | $K(Mg,Fe)_3(Al,Fe)Si_3O_{10}(OH,F)_2$ | $CaCO_3$ | $CuFeS_2$ | $(Fe^{2+},Mg,Fe^{3+})_5Al(Si_3Al)O_{10}(OH,O)_8$ | $FeCr_2O_4$ | $(Mg,Fe^{2+})_5Al(Si,Al)_4O_{10}(OH)_8$ | $(Ca_2)(Al_3)[O\|OH\|SiO_4\|Si_2O_7]$ | $Mg_7Si_8O_{22}(OH)_2$ | $CaMg[Si_2O_6]$ | $CaMg(CO_3)_2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Actinolite | Almandine | Ankerite | Apatite | Arsenopyrite | Biotite | Calcite | Chalcopyrite | Chamosite | Chromite | Clinochlore | Clinozoisite | Cummingtonite | Diopside | Dolomite |
| ML08-226-02 | ML08-226 | Discovery | Waste Rock | NLJ | IF | 2011 | Open Pit | 8.8 | | | | | 3 | 0.45 | | | | 1.2 | | | | |
| ML95-82-01 | ML95-82 | Discovery | Waste Rock | NLJ | IF | 2011 | Open Pit | 8.6 | | | | | 5.6 | 1 | | | | 5.4 | | 14 | | |
| ML95-95-01 | ML95-95 | Discovery | Waste Rock | NLJ | IF | 2011 | Open Pit | 8.2 | | | | | 7.1 | 1.9 | | | | 5.4 | | 12 | | |
| CAEXD163066 | M08-244 | Discovery | Waste Rock | L | IF | 2020 | Open Pit | 27 | 0.83 | | | | 7.2 | 0.38 | | 12 | | | | | | |
| CAEXD163784 | DS09GT-03 | Discovery | Waste Rock | L | IF | 2020 | Open Pit | 5 | | | | | 17 | | | 4.2 | | | | | | |
| CAEXD162858 | M08-237 | Discovery | Waste Rock | L | IF | 2020 | Open Pit | 9.1 | | | | | 4.8 | 5.2 | | | | 4.1 | | | | |
| CAEXD307379 | M13-2188 | Discovery | Waste Rock | Nlj | IF | 2020 | Open Pit | | | 0.47 | | | 11 | 1.1 | | | | 1.9 | | | | |
| ML95-82-1 | ML95-82 | Discovery | Waste Rock | KWA-S | SE | 2009 | Open Pit | | | | | | 6.1 | | | | | 11 | | | | |
| ML92-061-01 | ML92-061 | Discovery | Waste Rock | KWA-S | SE | 2009 | Open Pit | | | | | | 7.5 | | | | | 9.9 | | | | |
| ML90-14-2 | ML90-14 | Discovery | Waste Rock | KWA-S | SE | 2009 | Open Pit | 3.9 | | | | | 8.4 | 0.3 | | | | 9.2 | | | | |
| ML08-232-01 | ML08-232 | Discovery | Waste Rock | KWA-S | SE | 2011 | Open Pit | | | | | | 6.4 | | | | | 7.5 | | | | |
| CAEXD302851 | M13-2161 | Discovery | Waste Rock | Kwa | SE | 2020 | Open Pit | 0.81 | | | | | 13 | 0.62 | | 8 | | | | | | |
| CAEXD163018 | M08-243 | Discovery | Waste Rock | KWA | SE | 2020 | Open Pit | | | | | | 9.8 | 0.84 | | | | 5.8 | | | | |
| CAEXD163305 | M09-251 | Discovery | Waste Rock | KWA | SE | 2020 | Open Pit | | | | | | 13 | 0.3 | | | | 1.8 | | | | |
| CAEXD301865 | M13-2153 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | | | | | | 22 | 0.54 | | 3.5 | | | | | | |
| CAEXD302816 | M13-2161 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | | | | | | 21 | 1.1 | | | | | | | | |
| CAEXD306783 | M13-2171 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | | | | | | 15 | 0.7 | | | | 1.6 | | | | |
| CAEXD298980 | M13-2190 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | | | | | | 9.2 | | | | | 5.6 | | | | |
| CAEXD301964 | M13-2156 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | | | | | | 19 | 0.45 | | | | 2.9 | | | | |
| CAEXD305504 | M13-2149 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | | | | | | 12 | | | 9.2 | | | | | | |
| CAEXD309016 | M13-2158 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Open Pit | 1.6 | | | | | 15 | 0.69 | | 5.5 | | | | | | |
| CAEXD298984 | M13-2190 | Discovery | Waste Rock | Nlm | SE | 2020 | Open Pit | 3.4 | | | | | 8.4 | 8.8 | | 6.7 | | | | | | |
| CAEXD210903 | M12-1755 | Discovery | Waste Rock | NLM | IF | 2020 | Underground | 8 | | | | | 5.6 | 0.62 | | 4.1 | | | | | | |
| CAEXD307472 | M13-2188 | Discovery | Waste Rock | Kwa-s | SE | 2020 | Underground | | | | | | 17 | 0.49 | | | | 1.9 | | | | |
| M09-802-02 | M09-802 | F Zone | Waste Rock | LLM | IF | 2011 | Open Pit | | | 3.7 | | | | | | | | 4.7 | | 10 | | |
| M10-935-02 | M10-935 | F Zone | Waste Rock | NLJ | IF | 2011 | Open Pit | | | 3.6 | | 0.63 | | | | | | 1.4 | | 9 | | |
| M98-248-01 | M98-248 | F Zone | Waste Rock | LL | IF | 2011 | Open Pit | | | 5.8 | | | | | | | | 2 | | 6.6 | | |
| M08-734-03 | M08-734 | F Zone | Waste Rock | M | VO | 2009 | Open Pit | | | | | | 2.8 | 20 | | | | 30 | | | | |
| M08-740-05 | M08-740 | F Zone | Waste Rock | M | VO | 2009 | Open Pit | | | | | | 6.6 | 25 | | | | 25 | | | | |
| M08-750-03 | M08-750 | F Zone | Waste Rock | M | VO | 2009 | Open Pit | | | 15 | | | 4.9 | 15 | | | | 22 | | | | |
| M09-859-01 | M09-859 | F Zone | Waste Rock | M | VO | 2011 | Open Pit | | | | | | 2.6 | 7 | | | | 23 | | | | 22 |
| CAEXD183497 | M12-1614 | F-Zone | Waste Rock | L_LLJ | IF | 2020 | Open Pit | | | 4.1 | | | | 1.7 | | | | 2.2 | | | | |
| CAEXD176511 | M12-1559 | F-Zone | Waste Rock | L_LLM | IF | 2020 | Underground | | | 12 | | | | | | 4.8 | | | | | | |
| CAEXD252980 | M13-1936 | Normeg | Waste Rock | Ksc-lj | IF | 2020 | Underground | | | 11 | | 0.71 | | 0.18 | | 6.6 | | | | | | |
| CAEXD295855 | M13-2127 | Normeg | Waste Rock | Kwa | SE | 2020 | Underground | | | 6.2 | 0.68 | | | 13 | | | | 6.5 | | | | |
| W94-61-01 | W94-61 | Pump | Waste Rock | NLJ | IF | 2011 | Open Pit | | | 4.9 | | | | | | | | 4.3 | | 1 | | |
| W94-73-02 | W94-73 | Pump | Waste Rock | NLJ | IF | 2011 | Open Pit | | | 8.4 | | | | 1.5 | | | | 6.5 | | 1.4 | | |
| CAEXD261887 | M13-1977 | Pump | Waste Rock | Ll | IF | 2020 | Open Pit | | | 8.8 | | | | | | | | 9.9 | | | | |
| M96-58-02 | M96-58 | Pump | Waste Rock | M | VO | 2011 | Open Pit | 7.2 | | | | | 4.3 | 15 | | | | 28 | | | | |
| M97-123-01 | M97-123 | Pump | Waste Rock | M | VO | 2011 | Open Pit | | | | | | | 15 | | | | 10 | | | | |
| M97-124-01 | M97-124 | Pump | Waste Rock | M | VO | 2011 | Open Pit | | | | | | 3 | 17 | | | | 21 | | | | 0.63 |
| M98-184-01 | M98-184 | Pump | Waste Rock | M | VO | 2011 | Open Pit | | | | | | 1.9 | 16 | | | | 16 | | | | 0.59 |
| CAEXD185456 | M12-1599 | Pump | Waste Rock | L_LL | IF | 2020 | Underground | | | 6.9 | | | | | | 14 | | | | | | |
| CAEXD213087 | M12-1759 | Tiriganiaq | Waste Rock | N_NLJ | IF | 2020 | Open Pit | | | 0.46 | | | | 30 | | 7.4 | | | | | | |
| M99-403-03 | M99-403 | Tiriganiaq | Waste Rock | KWA-S | SE | 2009 | Open Pit | | | 5.5 | | | | 1.2 | | | | 12 | | | | |
| M03-508-01 | M03-508 | Tiriganiaq | Waste Rock | KWA-S | SE | 2011 | Open Pit | | | | | | | 2.8 | | | | 8.2 | | | | 1.5 |
| M06-625-01 | M06-625 | Tiriganiaq | Waste Rock | KWA-S | SE | 2011 | Open Pit | | | 5.3 | | | | | | | | 8.2 | | | | |

**Appendix C-1: Meliadine Extension Database: XRD Results**

| Sample ID | Drill ID or Sample Description | Deposit | Sample Type | Lithology Codes | Phase 2 Lithology Codes | Year of Analysis | Location | $Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$ | $Fe_3Al_2(SiO_4)_3$ | $Ca(Fe,Mg,Mn)(CO_3)_2$ | $Ca_5(PO_4)_3(OH,F,Cl)$ | FeAsS | $K(Mg,Fe)_3(Al,Fe)Si_3O_{10}(OH,F)_2$ | $CaCO_3$ | $CuFeS_2$ | $(Fe^{2+},Mg,Fe^{3+})_5Al(Si_3Al)O_{10}(OH,O)_8$ | $FeCr_2O_4$ | $(Mg,Fe^{2+})_5Al(Si,Al)_4O_{10}(OH)_8$ | $(Ca_2)(Al_3)[O\|OH\|SiO_4\|Si_2O_7]$ | $Mg_7Si_8O_{22}(OH)_2$ | $CaMg[Si_2O_6]$ | $CaMg(CO_3)_2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Actinolite | Almandine | Ankerite | Apatite | Arsenopyrite | Biotite | Calcite | Chalcopyrite | Chamosite | Chromite | Clinochlore | Clinozoisite | Cummingtonite | Diopside | Dolomite |
| M96-74-01 | M96-7 | Tiriganiaq | Waste Rock | KWA-S | SE | 2011 | Open Pit | | | | | | 3.8 | 3.7 | | | | 14 | | 10 | | |
| M97-95-02 | M97-95 | Tiriganiaq | Waste Rock | KS | TIRFM | 2011 | Open Pit | | | 5.2 | | | | | | | | 7.4 | | | | |
| M98-194-01 | M98-194 | Tiriganiaq | Waste Rock | KSC-WA | UOFM | 2009 | Open Pit | | | 8.2 | | | | 0.8 | | | | 4.7 | | | | |
| M06-623-01 | M06-623 | Tiriganiaq | Waste Rock | KSC-WA | UOFM | 2011 | Open Pit | | | 4.9 | | | | 1.7 | | | | 6.8 | | | | |
| M99-341-01 | M99-341 | Tiriganiaq | Waste Rock | M | VO | 2009 | Open Pit | | | 26 | | | | 8.1 | | | | 9.9 | | | | |
| GT08-04-02 | GT08-04 | Tiriganiaq | Waste Rock | M | VO | 2009 | Open Pit | | | 25 | | | | 11 | | | | 7 | | | | |
| M99-409-05 | M99-409 | Tiriganiaq | Waste Rock | M | VO | 2011 | Open Pit | | | 2.7 | | | | 18 | | | | 23 | | | | |
| M04-526-01 | M04-526 | Tiriganiaq | Waste Rock | LLM | IF | 2009 | Underground | 1.8 | | 0.5 | | | | 11 | | | | 17 | | | | |
| CAEXD216429 | M12-1767 | Tiriganiaq | Waste Rock | LLM | IF | 2020 | Underground | | | 7.2 | | | 2.2 | | | 11 | | | | | | 12 |
| M04-533-01 | M04-533 | Tiriganiaq | Waste Rock | KWA-S | SE | 2009 | Underground | | 2.3 | 8.4 | | | 5.4 | 0.8 | | | | 6.4 | | | | |
| M07-663-01 | M07-663 | Tiriganiaq | Waste Rock | KS | TIRFM | 2009 | Underground | | | 4.2 | | 0.3 | | 1 | | | | 13 | | | | |
| M05-536A-01 | M05-536 | Tiriganiaq | Waste Rock | M | VO | 2009 | Underground | | | 19 | | | | 13 | | | | 18 | | | | |
| M97-141-01 | M97-141 | Tiriganiaq | Waste Rock | M | VO | 2009 | Underground | | | 28 | | | | 1.4 | | | 0.7 | 18 | | | | |
| M97-139-01 | M97-139 | Tiriganiaq | Waste Rock | M | VO | 2009 | Underground | | | 39 | | | | 1.8 | | | | 3.8 | | | | |
| CAEXD160328 | M12-1393 | Wesmeg | Waste Rock | L_LL | IF | 2020 | Open Pit | | | 3.1 | | | | | | | | 0.63 | | | | |
| M10-981-03 | M10-981 | Wesmeg | Waste Rock | M | VO | 2011 | Open Pit | | | 6.9 | | | | 14 | | | | 20 | | | | |
| M10-985-01 | M10-985 | Wesmeg | Waste Rock | M | VO | 2011 | Open Pit | | | 2.2 | | | | 1.6 | | | | 11 | | | | |
| M10-987-04 | M10-987 | Wesmeg | Waste Rock | M | VO | 2011 | Open Pit | | | 1.9 | | | | 15 | | | | 27 | | | | |
| M10-994-04 | M10-994 | Wesmeg | Waste Rock | M | VO | 2011 | Open Pit | 17 | | | | | 2.5 | 4.8 | | | | 20 | 22 | | 1.8 | |
| M98-222-01 | M98-222 | Wesmeg | Waste Rock | M | VO | 2011 | Open Pit | | | 10 | | | | 14 | | | | 20 | | | | |
| M10-992-04 | M10-992 | Wesmeg | Waste Rock | U | VO* | 2011 | Open Pit | 1.5 | | 3.2 | | | | 20 | | | | 28 | | | | |
| 6534-VRSP-002 | Composite Head Sample | Discovery | Ore | | IF | 2020 | Head sample | 9.1 | | | | | 6.2 | 0.64 | | | | 3.8 | | | | |
| 6534-VRSP-009 | Composite Head Sample | Discovery | Ore | | IF | 2020 | Head sample | 16 | 1.1 | | | | 5.2 | 2.2 | | | | 4.5 | | | | |
| CAEXD257967 | GT13-62 | F-Zone | Ore | L_Llm | IF | 2020 | Open Pit | | | 5.6 | | | 0.9 | 0.17 | | | | 0.84 | | | | |
| CAEXD290332 | M13-2069 | F-Zone | Ore | L_Ll | IF | 2020 | Underground | | | 3.4 | | 0.9 | 5.4 | 2.1 | | 15 | | | | | | |
| CAEXD252985 | M13-1936 | Normeg | Ore | Ksc-lj | IF | 2020 | Underground | | | 5.1 | | 0.58 | | | | 17 | | | | | | |
| CAEXD262428 | M13-1982 | Pump | Ore | Llm | IF | 2020 | Underground | | | 1.5 | | 1.3 | | | | 9.4 | | | | | | |
| CAEXD194549 | M12-1692 | Tiriganiaq | Ore | N_NLJ | IF | 2020 | Underground | | | 5 | | | | 5.8 | | 5.5 | | | | | | |
| CAEXD175600 | M12-1589 | Tiriganiaq | Ore | NLJ | IF | 2020 | Underground | | | | | 5.8 | 8 | 8.4 | | 9.4 | | | | | | |
| CAEXD239740 | M12-1826 | Wesmeg | Ore | L_LLJ | IF | 2020 | Underground | | | 8.1 | | 8 | | | | | | 2.3 | | | | |
| CAEXD159768 | M12-1510 | Wesmeg | Ore | LLM | IF | 2020 | Underground | | | 8.5 | | | | | | | | 1.5 | | | | |
| TSF 25 | Test Pit 1 | Tiriganiaq | Whole Ore Tailings | | | 2020 | TSF | | | 7.1 | | 1.9 | 2.2 | 1.7 | 0.39 | 10 | | | | | | |
| TSF 26 | Test Pit 2 | Tiriganiaq | Whole Ore Tailings | | | 2020 | TSF | | | 7.5 | | 1.9 | 2.9 | 1.4 | 0.4 | 9.7 | | | | | | |
| TSF 27 | Test Pit 3 | Tiriganiaq | Whole Ore Tailings | | | 2020 | TSF | | | 7.8 | | 2 | 2.2 | 1.3 | 0.42 | 8.8 | | | | | | |
| TSF 28 | Test Pit 4 | Tiriganiaq | Whole Ore Tailings | | | 2020 | TSF | | | 8.2 | | 1.9 | 2.4 | 1.6 | 0.47 | 8.9 | | | | | | |
| TSF 29 | Test Pit 5 | Tiriganiaq | Whole Ore Tailings | | | 2020 | TSF | | | 7.7 | | 2.1 | 2.5 | 1.5 | 0.48 | 9.7 | | | | | | |
| TSF 30 | Test Pit 6 | Tiriganiaq | Whole Ore Tailings | | | 2020 | TSF | | | 7.2 | | 2.4 | 2.7 | 1.3 | 0.49 | 9.4 | | | | | | |

**Appendix C-1: Meliadine Extension Database: XRD Results**

| Sample ID | Drill ID or Sample Description | $Ca_2(Al_2Fe^{3+}[O(OH)SiO_4(Si_2O_7)]$ | $Ca_3Al_2(SiO_4)_3$ | $Fe_7Si_8O_{22}(OH)_2$ | $CaSO_4$ | NaCl | $FeTiO_3$ | $Al_2Si_2O_5(OH)_4$ | $KAlSi_3O_8$ | $Fe_3O_4$ | K $(AlSi_3O_8)$ | $KAl_2(AlSi_3)O_{10}(OH)_2$ | $NaAl_2AlSi_3O_{10}(OH)_2$ | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | $(Na,Ca)AlSi_3O_8$ | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | $FeS_2$ | $Fe_{1-x}S$ | $SiO_2$ | $FeCO_3$ | $Mn_3Al_2(SiO_4)_3$ | $Mg_3Si_4O_{10}(OH)_2$ | $CaTi(SiO_4)O$ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Epidote | Grossular | Grunerite | Gypsum | Halite | Ilmenite | Kaolinite | K-feldspar | Magnetite | Microcline | Muscovite | Paragonite | Plabioclase (Albite low, calcian) | Plagioclase | Plagioclase (Andesine) | Pyrite | Pyrrhotite | Quartz | Siderite | Spessartine | Talc | Titanite | |
| ML08-226-02 | ML08-226 | | 0.51 | | | | | | | 38 | | | | | 5.9 | | 0.85 | | 42 | | | | | 100 |
| ML95-82-01 | ML95-82 | | | | | | | | | 10 | | | | | 11 | | | 1.7 | 42 | | | | | 100 |
| ML95-95-01 | ML95-95 | | 1.4 | | | | | | | 22 | | | | | 8 | | | | 34 | | | | | 100 |
| CAEXD163066 | M08-244 | | | 7.7 | | | | | | 0.35 | | | | | 5.9 | | | 1.1 | 38 | | | | | 100 |
| CAEXD163784 | DS09GT-03 | | | 10 | | | | | 4.8 | | | | | | 24 | | | | 35 | | | | | 100 |
| CAEXD162858 | M08-237 | | | 14 | | | | | | 1.3 | | | | | | | | 17 | 45 | | | | | 100 |
| CAEXD307379 | M13-2188 | | | | | | | | | 20 | | | | | 27 | | 0.55 | | 38 | | | | | 100 |
| ML95-82-1 | ML95-82 | | | | | | | | | | | 20 | | | 30 | | | | 32 | | | | | 99 |
| ML92-061-01 | ML92-061 | | | | | | | | | | | 16 | | | 35 | | | | 31 | | | | | 99 |
| ML90-14-2 | ML90-14 | | | | 0.7 | | | | | | | 7.5 | | | 39 | | | | 30 | | | | | 99 |
| ML08-232-01 | ML08-232 | | | | | | 0.82 | | | | | 18 | | | 37 | | | | 31 | | | | | 100 |
| CAEXD302851 | M13-2161 | | | | | | | | | | 4.6 | | | | 44 | | | | 29 | | | | | 100 |
| CAEXD163018 | M08-243 | | | | | | 0.38 | | | | | 18 | | 20 | 8.2 | | | | 37 | | | | | 100 |
| CAEXD163305 | M09-251 | | | | | | | | | | | 26 | | | | 10 | | 0.66 | 49 | | | | | 100 |
| CAEXD301865 | M13-2153 | | | | | | | | | | 5.2 | 3.2 | | | 34 | | | | 31 | | | | | 100 |
| CAEXD302816 | M13-2161 | | | 2 | | | | 0.64 | | 1.2 | | 9.3 | | 26 | | | | | 39 | | | | | 100 |
| CAEXD306783 | M13-2171 | | | | | | | | | | | 9.8 | | 40 | | | | | 33 | | | | | 100 |
| CAEXD298980 | M13-2190 | | | | | | 0.59 | | | | | 14 | | 29 | 11 | | | | 31 | | | | | 100 |
| CAEXD301964 | M13-2156 | | | | | | | | | | | 2.9 | | 44 | | | | | 31 | | | | | 100 |
| CAEXD305504 | M13-2149 | | | | | | | | | | 6.4 | | | 35 | | | | | 37 | | | | | 100 |
| CAEXD309016 | M13-2158 | | | | | | 0.52 | | | | | 6.7 | | 37 | | | | | 33 | | | | | 100 |
| CAEXD298984 | M13-2190 | | | 4.9 | | | | | | 5.6 | | | | 2.2 | | | | | 60 | | | | | 100 |
| CAEXD210903 | M12-1755 | | | 16 | | | | | | 18 | | | | 2.7 | | | | | 45 | | | | | 100 |
| CAEXD307472 | M13-2188 | | | | | | | | | | 2.6 | 14 | | 22 | | | | | 41 | | | | | 100 |
| M09-802-02 | M09-802 | | | | | | | | | 3.1 | | | | | | | | 8.7 | 69 | 0.59 | | | | 100 |
| M10-935-02 | M10-935 | | | | | | | | | 3.6 | | | | | | | 0.43 | 3.6 | 75 | 2.7 | | | | 100 |
| M98-248-01 | M98-248 | | | | | | | | | 0.37 | | | | | | | | 7 | 72 | 6.5 | | | | 100 |
| M08-734-03 | M08-734 | | | | | | 1.5 | | | | | | | | 27 | | | | 20 | | | | | 100 |
| M08-740-05 | M08-740 | | | | | | 0.9 | | | | | | | | 20 | | | | 23 | | | | | 100 |
| M08-750-03 | M08-750 | | | | | | 2.7 | | | | | | | | 30 | | | | 25 | | | | | 110 |
| M09-859-01 | M09-859 | | | | | | 0.92 | | | | | | | | 25 | | | | 20 | | | | | 100 |
| CAEXD183497 | M12-1614 | | | 26 | | | | | | 6.3 | | | | | | | | 4.1 | 56 | | | | | 100 |
| CAEXD176511 | M12-1559 | | | 16 | | | | | | 3.8 | | | | | | | | 2.8 | 60 | 0.9 | | | | 100 |
| CAEXD252980 | M13-1936 | | | | | | 0.53 | | | | | 27 | | | 17 | | | | 36 | | | | | 100 |
| CAEXD295855 | M13-2127 | | | | | | | | | 9.9 | | | | | 1.5 | | | 5.2 | 56 | | 1 | | | 100 |
| W94-61-01 | W94-61 | | | | | | | | | 7.7 | | | | | | | 1.2 | 3.6 | 53 | 24 | | | | 100 |
| W94-73-02 | W94-73 | | | | | | | | | 2.7 | | | | | 1.6 | | | 3.8 | 56 | 18 | | | | 100 |
| CAEXD261887 | M13-1977 | | | 0.8 | | | | | | | | | | | | | 3.3 | | 60 | 15 | 2.5 | | | 100 |
| M96-58-02 | M96-58 | 4.7 | | | | | 1.2 | | | 1.1 | | | | | 14 | | | | 25 | | | | | 100 |
| M97-123-01 | M97-123 | | | | | | 0.64 | | | | | 14 | | | 33 | | | | 28 | | | | | 100 |
| M97-124-01 | M97-124 | | | | | | 1.8 | | | | | 4.4 | | | 21 | | | | 31 | | | | | 100 |
| M98-184-01 | M98-184 | | | | | | 0.86 | | | | | 11 | | | 25 | | | | 29 | | | | | 100 |
| CAEXD185456 | M12-1599 | | | | | | | | | 2.1 | | | | | | | | | 67 | 9.9 | | | | 100 |
| CAEXD213087 | M12-1759 | | | | | | | | | | | | | | | | | | 62 | | | | | 100 |
| M99-403-03 | M99-403 | | | | | | 0.4 | | | | | 15 | | | 24 | | | | 43 | | | | | 100 |
| M03-508-01 | M03-508 | | | | | | | | 1.4 | | | 21 | | | 29 | | 0.38 | | 36 | | | | | 100 |
| M06-625-01 | M06-625 | | | | | | | | 1.7 | | | 23 | | | 25 | | | | 37 | | | | | 100 |

**Appendix C-1: Meliadine Extension Database: XRD Results**

| Sample ID | Drill ID or Sample Description | $Ca_2(Al_2Fe^{3+}[O(OH)SiO_4(Si_2O_7)]$ | $Ca_3Al_2(SiO_4)_3$ | $Fe_7Si_8O_{22}(OH)_2$ | $CaSO_4$ | NaCl | $FeTiO_3$ | $Al_2Si_2O_5(OH)_4$ | $KAlSi_3O_8$ | $Fe_3O_4$ | K $(AlSi_3O_8)$ | $KAl_2(AlSi_3)O_{10}(OH)_2$ | $NaAl_2AlSi_3O_{10}(OH)_2$ | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | $(Na,Ca)AlSi_3O_8$ | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | $FeS_2$ | $Fe_{1-x}S$ | $SiO_2$ | $FeCO_3$ | $Mn_3Al_2(SiO_4)_3$ | $Mg_3Si_4O_{10}(OH)_2$ | $CaTi(SiO_4)O$ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Epidote | Grossular | Grunerite | Gypsum | Halite | Ilmenite | Kaolinite | K-feldspar | Magnetite | Microcline | Muscovite | Paragonite | Plabioclase (Albite low, calcian) | Plagioclase | Plagioclase (Andesine) | Pyrite | Pyrrhotite | Quartz | Siderite | Spessartine | Talc | Titanite | |
| M96-74-01 | M96-7 | | | | | | | | | 25 | | | | | 1.1 | | | | 42 | | | | | 100 |
| M97-95-02 | M97-95 | | | | | | 0.62 | | 1.2 | | | 27 | | | 24 | | | | 34 | | | | | 100 |
| M98-194-01 | M98-194 | | | | | | | | | 1.7 | | 14 | | | 37 | | | | 33 | | | | | 100 |
| M06-623-01 | M06-623 | | | | | | 0.38 | | | | | 21 | | | 34 | | | | 32 | | | | | 100 |
| M99-341-01 | M99-341 | | | | | | | | 2.6 | 0.9 | | 12 | 6.5 | | 6.5 | | | | 27 | | | | | 100 |
| GT08-04-02 | GT08-04 | | | | | | | | 2.7 | 1 | | 10 | 8.3 | | 8.4 | | | | 27 | | | | | 100 |
| M99-409-05 | M99-409 | | | | | | | | 1.4 | | | 10 | | | 18 | | 0.5 | | 25 | | | | | 100 |
| M04-526-01 | M04-526 | | | | | | | | | 8.6 | | 2 | | | | | | 2.3 | 57 | | | | | 100 |
| CAEXD216429 | M12-1767 | | | 3.6 | | | | | | 1.5 | | | | | | | | 2.3 | 50 | 5.7 | | 3.9 | | 100 |
| M04-533-01 | M04-533 | | | | | | | | | | | 29 | | | 21 | | | | 27 | | | | | 100 |
| M07-663-01 | M07-663 | | | | | | 1 | | | | | 23 | | | 23 | | | | 34 | | | | | 100 |
| M05-536A-01 | M05-536 | | | | | | | | | | | 10 | | | 18 | | 0.3 | | 21 | | | | | 99 |
| M97-141-01 | M97-141 | | | | | | 1.1 | | | | | 7.2 | | | 21 | | 0.6 | | 22 | | | | | 100 |
| M97-139-01 | M97-139 | | | | | | 0.8 | | 1.9 | | | 21 | | | 14 | | 0.5 | | 17 | | | | | 100 |
| CAEXD160328 | M12-1393 | | | | | | | | | 0.79 | | | | | | | 4 | | 70 | 22 | | | | 100 |
| M10-981-03 | M10-981 | | | | | | 2.7 | | | 0.43 | | 7 | | | 23 | | | | 26 | | | | | 100 |
| M10-985-01 | M10-985 | | | | | | | | 1.4 | | | 20 | | | 30 | | | | 34 | | | | | 100 |
| M10-987-04 | M10-987 | | | | | | 0.86 | | | 4.1 | | | | | 21 | | | | 26 | | | | 4.2 | 100 |
| M10-994-04 | M10-994 | | | | | | | | 1.5 | | | | | | 16 | | | | 14 | | | | | 100 |
| M98-222-01 | M98-222 | | | | | | 2.9 | | | | | 9.9 | | | 19 | | | | 25 | | | | | 100 |
| M10-992-04 | M10-992 | | | | | | 1.1 | | | 3.6 | | | | | 15 | | | | 27 | | | | | 100 |
| 6534-VRSP-002 | Composite Head Sample | | | 14 | | | | | | 4.9 | | | 2.1 | | 3 | | 0.98 | 2.1 | 54 | | | | | 100 |
| 6534-VRSP-009 | Composite Head Sample | | | 19 | | | | | | 13 | | | 1.9 | | 2.5 | | 1 | 1.8 | 31 | | | | | 100 |
| CAEXD257967 | GT13-62 | | | | | | | | | | | | | | 4.7 | | | 0.24 | 88 | | | | | 100 |
| CAEXD290332 | M13-2069 | | | 16 | | | | | | 4.2 | | 3.2 | | 3.6 | | | | 4.7 | 41 | | | | | 100 |
| CAEXD252985 | M13-1936 | | | | | | 0.48 | | | | | 14 | | | 24 | | | | 38 | | | | | 100 |
| CAEXD262428 | M13-1982 | | | 0.87 | | | | | | 3.8 | | | | | 0.94 | | 4.6 | | 57 | 21 | | | | 100 |
| CAEXD194549 | M12-1692 | | | | | | | | | 6.9 | | 2 | | | 2.1 | | 3 | 1.9 | 51 | 17 | | | | 100 |
| CAEXD175600 | M12-1589 | | | 3.9 | | | | | | 12 | | | | | | | | 7 | 45 | | | | | 100 |
| CAEXD239740 | M12-1826 | | | | | | | | | | | | | | | | | 6.7 | 75 | | | | | 100 |
| CAEXD159768 | M12-1510 | | | | | | | | | | | | | | | | | 5.4 | 68 | 16 | | | | 100 |
| TSF 25 | Test Pit 1 | | | | 1.6 | 0.69 | 0.34 | | | 3.2 | | 14 | | 11 | | | | 1.9 | 43 | 1.2 | | | | 100 |
| TSF 26 | Test Pit 2 | | | | 1.3 | 0.64 | | | | 3.5 | | 13 | | 11 | | | 0.41 | 2.3 | 43 | 1.3 | | | | 100 |
| TSF 27 | Test Pit 3 | | | | 1.1 | 0.56 | | | | 3 | | 14 | | 11 | | | 0.34 | 2.2 | 44 | 1.2 | | | | 100 |
| TSF 28 | Test Pit 4 | | | | 1.4 | 0.77 | 0.37 | | | 2.6 | | 14 | | 12 | | | 0.32 | 1.9 | 42 | 0.93 | | | | 100 |
| TSF 29 | Test Pit 5 | | | 0.81 | 1.1 | 0.4 | | | | 3.8 | | 13 | | 11 | | | | 2.4 | 42 | 1.3 | | | | 100 |
| TSF 30 | Test Pit 6 | | | | 0.97 | 0.48 | | | | 3.6 | | 12 | | 11 | | | 0.43 | 2.4 | 44 | 1.5 | | | | 100 |

# APPENDIX C-2: LABORATORY REPORTS FOR PHASE 2 XRD AND TIMA-X ANALYSIS

**Table 1. Results of quantitative phase analysis (wt.%) XRD-Rietveld - Lorax Environmental Project A574-1 Meladine - 38 samples**

| **UBC** | **#1** | | **#2** | | **#3** | | **#4** | | **#5** | | **#6** | | **#7** | | **#8** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **6534-VRSP-002** | | **6534-VRSP-006** | | **6534-VRSP-009** | | **CAEXD163066** | | **CAEXD163784** | | **CAEXD302851** | | **CAEXD301865** | | **CAEXD302816** |
| Quartz | 53.6 | Quartz | 35.7 | Quartz | 31.3 | Quartz | 37.6 | Quartz | 35.4 | Quartz | 28.7 | Quartz | 31.3 | Quartz | 38.7 |
| Clinochlore | 3.8 | Clinochlore | 3.7 | Clinochlore | 4.5 | Actinolite | 26.7 | Albite low, calcian | 23.7 | Albite low, calcian | 44.1 | Microcline intermediate | 5.2 | Biotite 1M | 21.4 |
| Grunerite | 13.5 | Actinolite | 20.9 | Actinolite | 15.8 | Biotite 1M | 7.2 | Grunerite | 10.0 | Biotite 1M | 13.1 | Calcite ? | 0.5 | Grunerite | 2.0 |
| Biotite 1M | 6.2 | Grunerite | 14.1 | Grunerite | 19.3 | Albite low | 5.9 | Actinolite | 5.0 | Microcline intermediate | 4.6 | Biotite 1M | 22.1 | Magnetite | 1.2 |
| Magnetite | 4.9 | Biotite 1M | 6.5 | Biotite 1M | 5.2 | Grunerite | 7.7 | Biotite 1M | 17.0 | Calcite ? | 0.6 | Chamosite 1M | 3.5 | Albite low, calcian | 25.8 |
| Albite low | 3.0 | Magnetite | 8.6 | Magnetite | 13.4 | Almandine | 0.8 | Magnetite | 4.8 | Chamosite 1M | 8.0 | Muscovite 2M1 | 3.2 | Muscovite 2M1 | 9.3 |
| Paragonite | 2.1 | Pyrrhotite | 4.1 | Albite low | 2.5 | Pyrrhotite | 1.1 | Chamosite 1M | 4.2 | Actinolite ? | 0.8 | Albite low, calcian | 34.2 | Kaolinite 1A | 0.6 |
| Pyrrhotite | 2.1 | Arsenopyrite | 1.4 | Pyrrhotite | 1.8 | Chamosite 1M | 12.2 | | | | | | | Calcite | 1.1 |
| Pyrite | 1.0 | Calcite ? | 0.4 | Calcite | 2.2 | Magnetite ? | 0.3 | | | | | | | | |
| Calcite | 0.6 | Almandine | 1.1 | Almandine | 1.1 | Calcite ? | 0.4 | | | | | | | | |
| Actinolite | 9.1 | Albite low | 3.5 | Paragonite | 1.9 | | | | | | | | | | |
| | | | | Pyrite | 1.0 | | | | | | | | | | |
| **Total** | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** |

| **UBC** | **#9** | | **#10** | | **#11** | | **#12** | | **#13** | | **#14** | | **#15** | | **#16** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **CAEXD306783** | | **CAEXD307472** | | **CAEXD162858** | | **CAEXD307379** | | **CAEXD163018** | | **CAEXD163305** | | **CAEXD298980** | | **CAEXD301964** |
| Quartz | 32.8 | Quartz | 41.3 | Quartz | 44.6 | Quartz | 38.1 | Quartz | 36.5 | Quartz | 48.9 | Quartz | 31.4 | Quartz | 30.6 |
| Biotite 1M | 15.4 | Biotite 1M | 17.4 | Pyrrhotite | 16.8 | Magnetite | 20.0 | Clinochlore | 5.8 | Muscovite 2M1 | 24.2 | Muscovite 2M1 | 13.8 | Clinochlore | 2.9 |
| Clinochlore | 1.6 | Muscovite 2M1 | 13.8 | Biotite 1M | 4.8 | Albite low | 26.6 | Muscovite 2M1 | 18.1 | Biotite 1M | 12.7 | Biotite 1M | 9.2 | Albite low, calcian | 44.0 |
| Muscovite 2M1 | 9.8 | Albite low, calcian | 22.5 | Calcite, magnesian | 5.2 | Ankerite | 0.5 | Biotite 1M | 9.8 | Andesine | 10.0 | Clinochlore | 5.6 | Calcite ? | 0.5 |
| Albite low, calcian | 39.8 | Clinochlore II | 1.9 | Clinochlore | 4.1 | Biotite 1M | 11.3 | Albite low, calcian | 20.4 | Illite/Muscovite 1M | 1.5 | Albite low, calcian | 28.6 | Biotite 1M | 19.2 |
| Calcite ? | 0.7 | Calcite ? | 0.5 | Magnetite | 1.3 | Clinochlore | 1.9 | Calcite | 0.8 | Clinochlore | 1.8 | Ilmenite | 0.6 | Muscovite 2M1 | 2.9 |
| | | Microcline (ordered) | 2.6 | Grunerite | 14.2 | Pyrite | 0.6 | Ilmenite ? | 0.4 | Calcite ? | 0.3 | Albite low | 10.7 | | |
| | | | | Actinolite | 9.1 | Calcite, magnesian | 1.1 | Albite low | 8.2 | Pyrrhotite 5C de Villiers ? | 0.7 | | | | |
| **Total** | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** |

| **UBC** | **#17** | | **#18** | | **#19** | | **#20** | | **#21** | | **#22** | | **#23** | | **#24** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **CAEXD305504** | | **CAEXD309016** | | **CAEXD298984** | | **CAEXD210903** | | **CAEXD257967** | | **CAEXD183497** | | **CAEXD290332** | | **CAEXD176511** |
| Quartz | 37.3 | Quartz | 32.9 | Quartz | 60.0 | Quartz | 44.9 | Quartz | 87.5 | Quartz | 55.9 | Quartz | 41.1 | Quartz | 60.0 |
| Albite low, calcian | 35.2 | Chamosite 1M | 5.5 | Biotite 1M | 8.4 | Biotite 1M | 5.6 | Albite low | 4.7 | Magnetite | 6.3 | Magnetite | 4.2 | Chamosite 1M | 4.8 |
| Biotite 1M | 11.9 | Muscovite 2M1 | 6.7 | Actinolite | 3.4 | Chamosite 1M | 4.1 | Ankerite | 5.6 | Pyrrhotite | 4.1 | Pyrrhotite | 4.7 | Grunerite | 15.7 |
| Chamosite 1M | 9.2 | Albite low, calcian | 37.2 | Chamosite 1M | 6.7 | Magnetite | 17.9 | Clinochlore | 0.8 | Ankerite | 4.1 | Ankerite | 3.4 | Ankerite | 11.9 |
| Microcline intermediate | 6.4 | Calcite ? | 0.7 | Calcite, magnesian | 8.8 | Grunerite | 16.2 | Biotite 1M | 0.9 | Calcite, magnesian | 1.7 | Albite low, calcian | 3.6 | Magnetite | 3.8 |
| | | Biotite 1M | 14.8 | Magnetite | 5.6 | Albite low, calcian | 2.7 | Calcite ? | 0.2 | Clinochlore | 2.2 | Calcite, magnesian | 2.1 | Pyrrhotite | 2.8 |
| | | Ilmenite | 0.5 | Grunerite | 4.9 | Calcite | 0.6 | Pyrrhotite | 0.2 | Grunerite | 25.7 | Chamosite 1M | 15.0 | Siderite | 0.9 |
| | | Actinolite ? | 1.6 | Albite low, calcian | 2.2 | Actinolite | 8.0 | | | | | Muscovite 2M1 | 3.2 | | |
| | | | | | | | | | | | | Biotite 1M | 5.4 | | |
| | | | | | | | | | | | | Arsenopyrite ? | 0.9 | | |
| | | | | | | | | | | | | Grunerite | 16.5 | | |
| **Total** | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** |

| **UBC** | **#25** | | **#26** | | **#27** | | **#28** | | **#29** | | **#30** | | **#31** | | **#32** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **CAEXD252985** | | **CAEXD252980** | | **CAEXD295855** | | **CAEXD261887** | | **CAEXD262428** | | **CAEXD185456** | | **CAEXD213087** | | **CAEXD194549** |
| Quartz | 38.1 | Quartz | 36.1 | Quartz | 56.3 | Quartz | 59.9 | Quartz | 56.6 | Quartz | 67.3 | Quartz | 62.4 | Quartz | 50.8 |
| Chamosite 1M | 16.9 | Muscovite 2M1 | 27.4 | Calcite | 12.7 | Clinochlore | 9.9 | Ankerite | 1.5 | Ankerite | 6.9 | Calcite, magnesian | 29.7 | Ankerite | 5.0 |
| Muscovite 2M1 | 14.5 | Ilmenite | 0.5 | Magnetite | 9.9 | Ankerite | 8.8 | Pyrite | 4.6 | Siderite | 9.9 | Ankerite | 0.5 | Siderite | 17.0 |
| Ilmenite | 0.5 | Albite low | 17.2 | Clinochlore | 6.5 | Pyrite | 3.3 | Siderite 1 | 18.0 | Magnetite | 2.1 | Chamosite 1M | 7.4 | Magnetite | 6.9 |
| Albite low | 24.4 | Ankerite | 11.3 | Ankerite | 6.2 | Siderite 1 | 14.1 | Magnetite | 3.8 | Chamosite 1M | 13.9 | | | Pyrite | 3.0 |
| Ankerite | 5.1 | Calcite ? | 0.2 | Albite low | 1.5 | Siderite 2 | 0.8 | Siderite 2 | 3.1 | | | | | Pyrrhotite | 1.9 |
| Arsenopyrite ? | 0.6 | Chamosite 1M | 6.6 | Apatite | 0.7 | Grunerite | 0.8 | Albite low | 0.9 | | | | | Albite low | 2.1 |
| | | Arsenopyrite | 0.7 | Pyrrhotite 4C | 5.2 | Spessartine | 2.5 | Arsenopyrite | 1.3 | | | | | Muscovite 2M1 | 2.0 |
| | | | | Spessartine ? | 1.0 | | | Chamosite 1M | 9.4 | | | | | Calcite, magnesian | 5.8 |
| | | | | | | | | Grunerite | 0.9 | | | | | Chamosite 1M | 5.5 |
| **Total** | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** |

| **UBC** | **#33** | | **#34** | | **#35** | | **#36** | | **#37** | | **#38** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **CAEXD175600** | | **CAEXD216429** | | **CAEXD160328** | | **CAEXD239740** | | **CAEXD159768** | | **CAEXD156245** |
| Quartz | 45.0 | Quartz | 49.8 | Quartz | 69.8 | Quartz | 75.0 | Quartz | 68.1 | Quartz | 59.0 |
| Chamosite 1M | 9.4 | Chamosite 1M | 11.4 | Siderite | 21.7 | Ankerite | 8.1 | Ankerite | 8.5 | Ankerite | 22.0 |
| Magnetite | 12.5 | Pyrrhotite | 2.3 | Magnetite | 0.8 | Pyrrhotite | 6.7 | Pyrrhotite | 5.4 | Clinochlore | 4.0 |
| Biotite 1M | 8.0 | Grunerite | 3.6 | Ankerite | 3.1 | Arsenopyrite | 8.0 | Clinochlore | 1.5 | Siderite | 6.3 |
| Pyrrhotite | 7.0 | Siderite | 5.7 | Pyrite | 4.0 | Clinochlore | 2.3 | Siderite | 16.4 | Pyrite | 4.0 |
| Arsenopyrite | 5.8 | Talc 1A | 3.9 | Clinochlore ? | 0.6 | | | | | Biotite 1M | 2.1 |
| Grunerite | 3.9 | Magnetite | 1.5 | | | | | | | Albite low | 1.1 |
| Calcite, magnesian | 8.4 | Dolomite | 12.4 | | | | | | | Pyrrhotite | 0.6 |
| | | Ankerite | 7.2 | | | | | | | Arsenopyrite | 0.9 |
| | | Biotite 1M | 2.2 | | | | | | | | |
| **Total** | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** |

# *QUANTITATIVE PHASE ANALYSIS OF 38 POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.*

***Project: A574-1 Meliadine***

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***September 17, 2020***

## EXPERIMENTAL METHOD

The 38 samples of **Project A574-1 Meliadine** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 10 minutes. Continuous-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKα radiation on a Bruker D8 Advance Bragg-Brentano diffractometer equipped with an Fe filter foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye-XE detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

## RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Bruker. X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1 (separate file, ***Lorax Environmental Results Sept 17 2020 - Project A574-1 Meliadine - 38 samples.xlsx***). These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 38. Ideal formulae of the mineral phases present are shown in Table 2.

Table 2.

| **Mineral** | **Ideal Formula** |
|---|---|
| Actinolite | $Ca_2(Mg,Fe^{2+})_5Si_8O_{22}(OH)_2$ |
| Almandine | $Fe_3^{2+}Al_2(SiO_4)_3$ |
| Ankerite-Dolomite | $Ca(Fe^{2+},Mg,Mn)(CO_3)_2/CaMg(CO_3)_2$ |
| Apatite | $Ca_5(PO_4)_3(OH,F,Cl)$ |
| Arsenopyrite | FeAsS |
| Biotite | $K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$ |
| Calcite-Calcite magnesian | $CaCO_3 – (Ca,Mg)CO_3$ |
| Chamosite | $(Fe^{2+},Mg,Fe^{3+})_5Al(Si_3Al)O_{10}(OH,O)_8$ |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$ |
| Grunerite | $Fe_7^{2+}Si_8O_{22}(OH)_2$ |
| Ilmenite | $Ca_5(PO_4)_3(OH)$ |
| Kaolinite | $Al_2Si_2O_5(OH)_4$ |
| K-feldspar (microcline) | $KAlSi_3O_8$ |
| Magnetite | $Fe_3O_4$ |
| Muscovite 1M, 2M1 | $KAl_2AlSi_3O_{10}(OH)_2$ |
| Paragonite | $NaAl_2(Si_3Al)O_{10}(OH)_2$ |
| Plagioclase (albite, albite calcian, andesine) | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ |
| Pyrite | $FeS_2$ |
| Pyrrhotite | $Fe_{1-x}S$ |
| Quartz | $SiO_2$ |
| Siderite | $Fe^{2+}CO_3$ |
| Spessartine | $Mn^{2+}{}_3Al_2(SiO_4)_3$ |
| Talc | $Mg_3Si_4O_{10}(OH)_2$ |

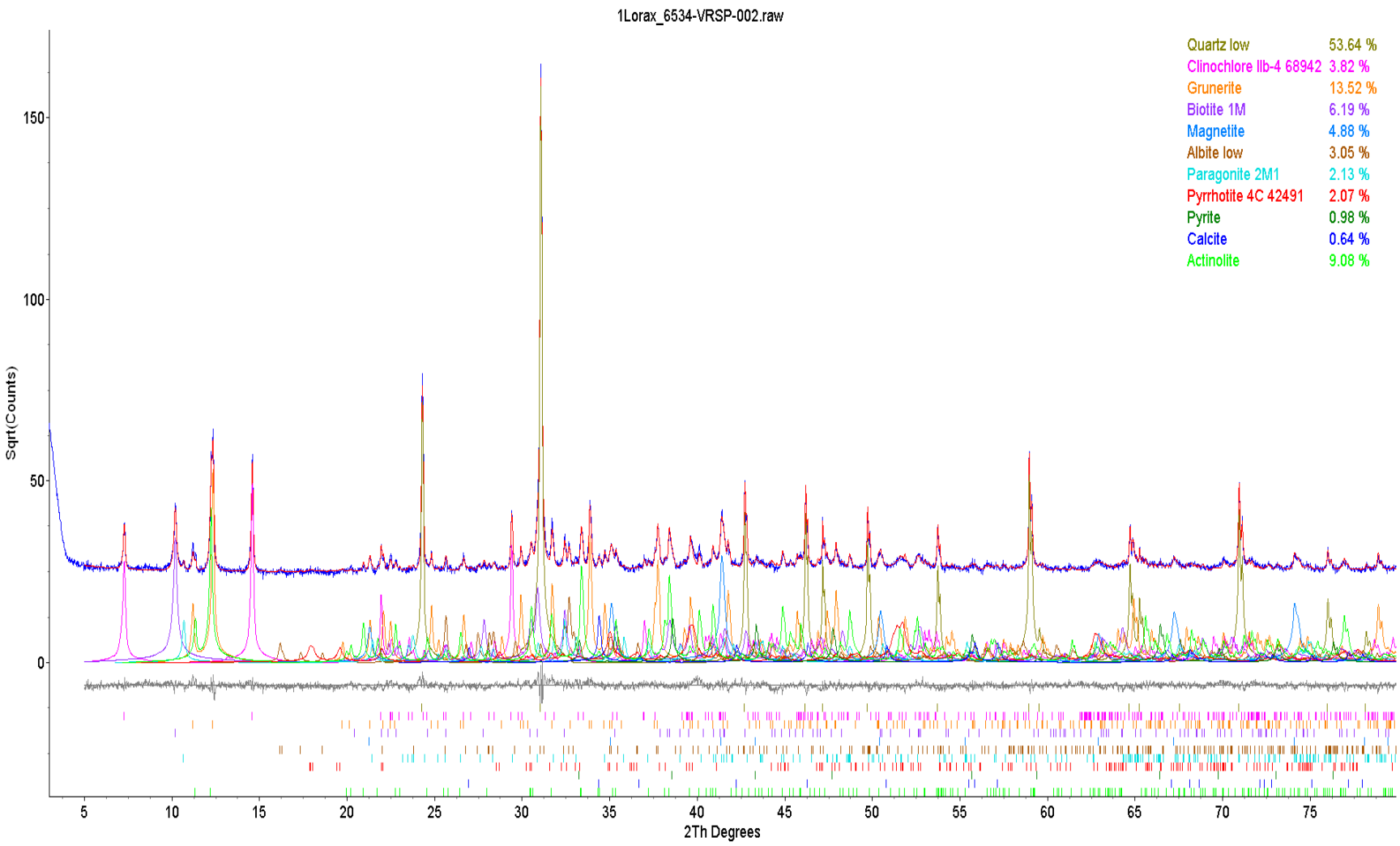


Figure 1. Rietveld refinement plot of sample **1 Lorax Environmental – 6534-VRSP-002** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

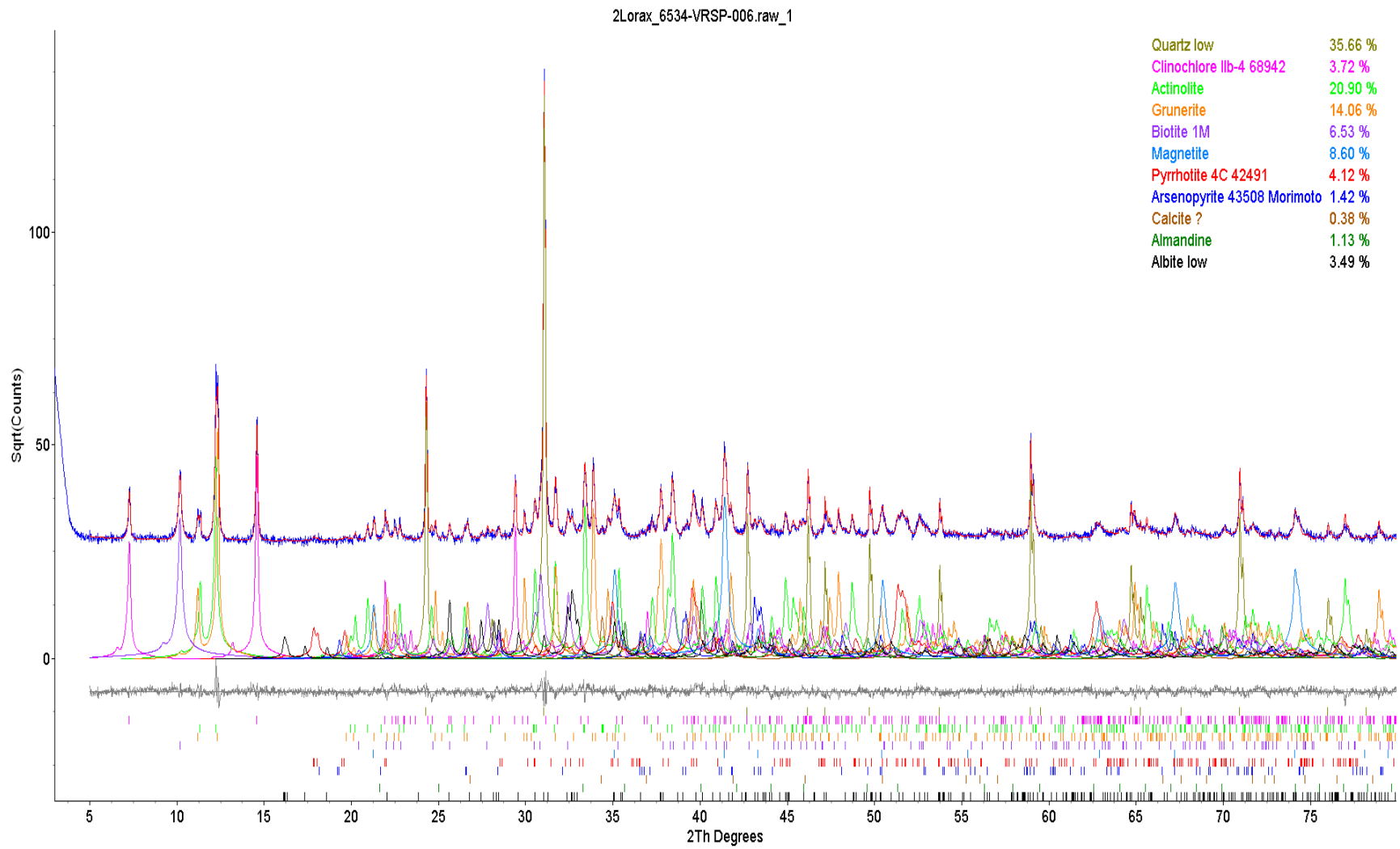


Figure 2. Rietveld refinement plot of sample **2 Lorax Environmental – 6534-VRSP-006** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

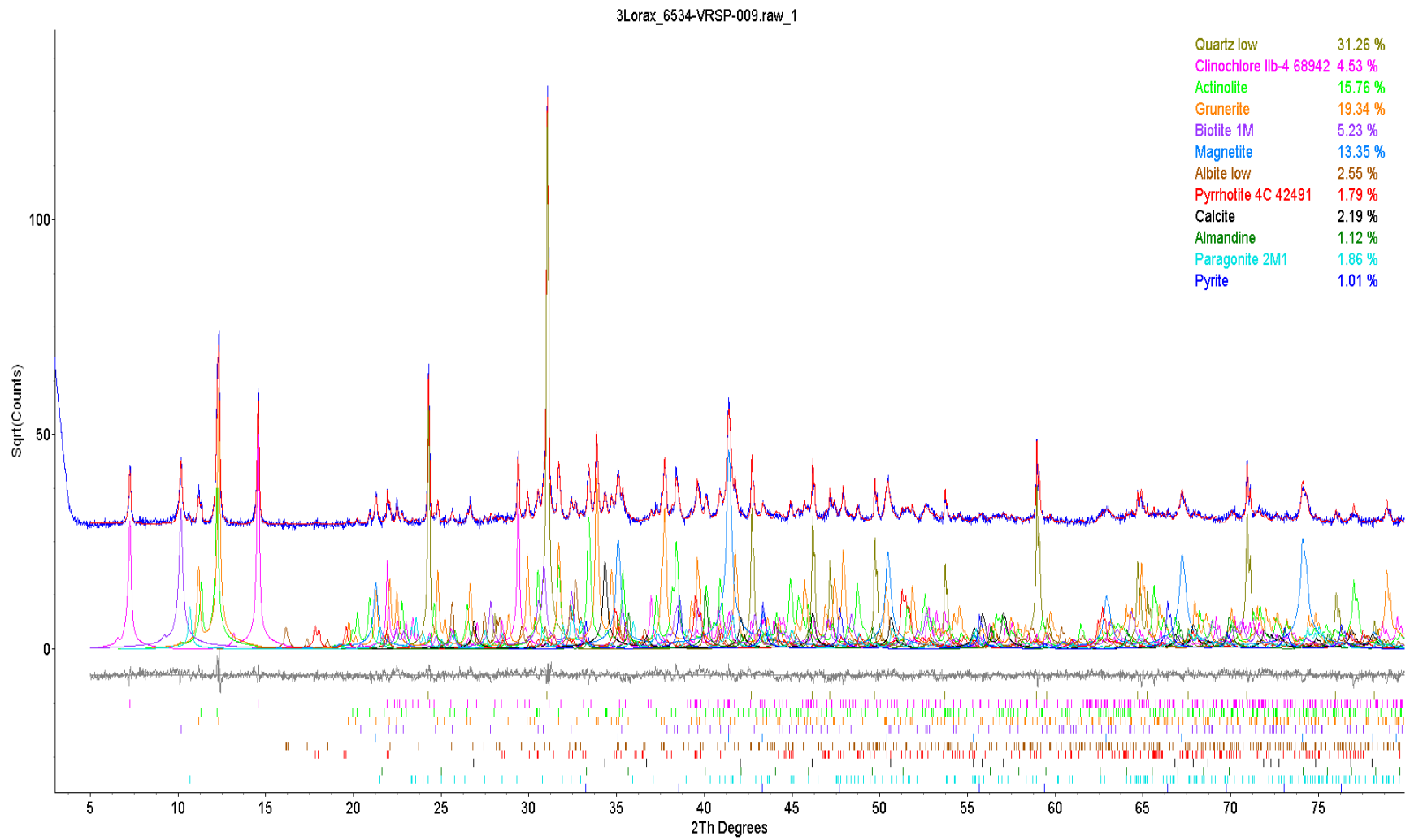


Figure 3. Rietveld refinement plot of sample **3 Lorax Environmental – 6534-VRSP-009** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

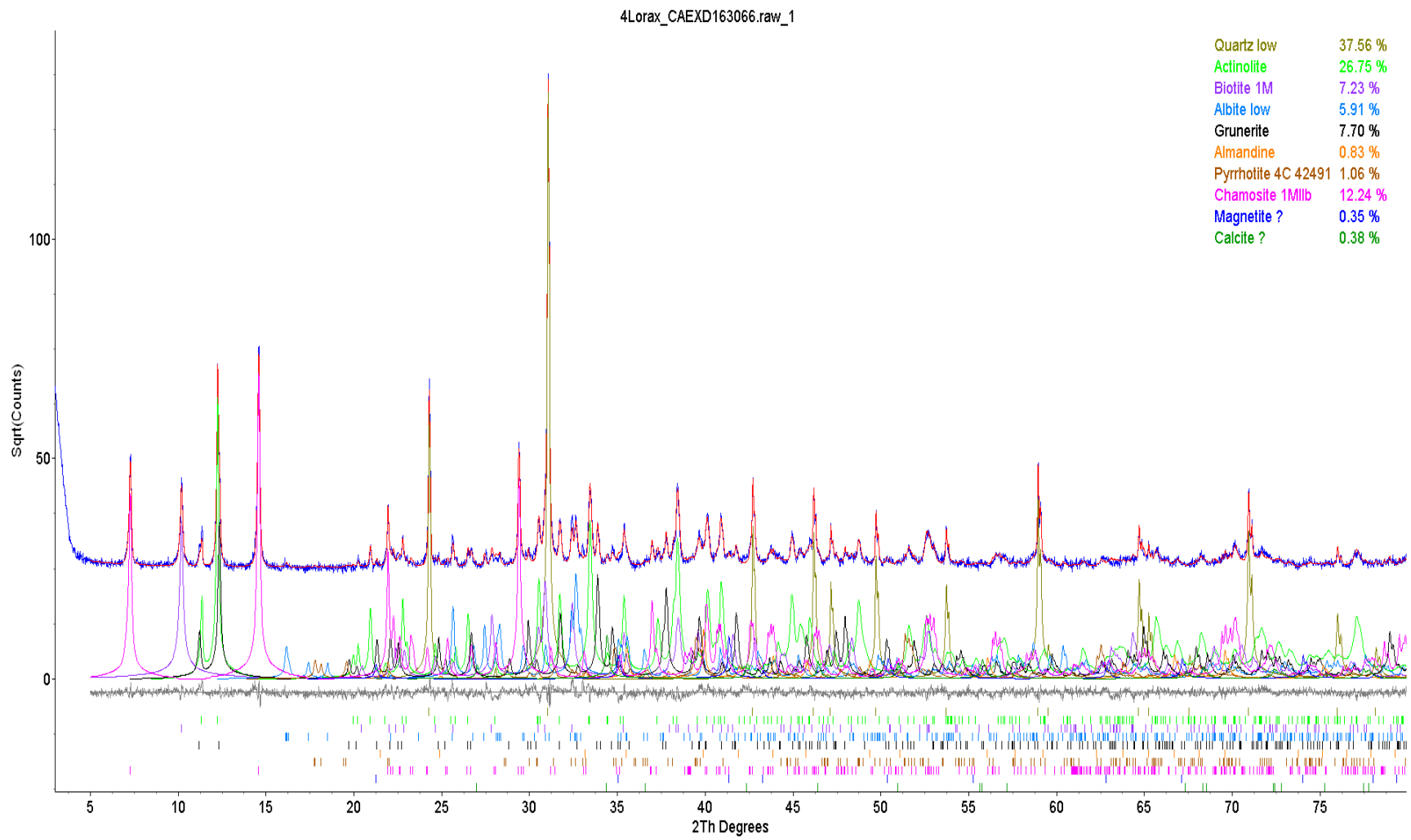


Figure 4. Rietveld refinement plot of sample **4 Lorax Environmental – CAEXD163066** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

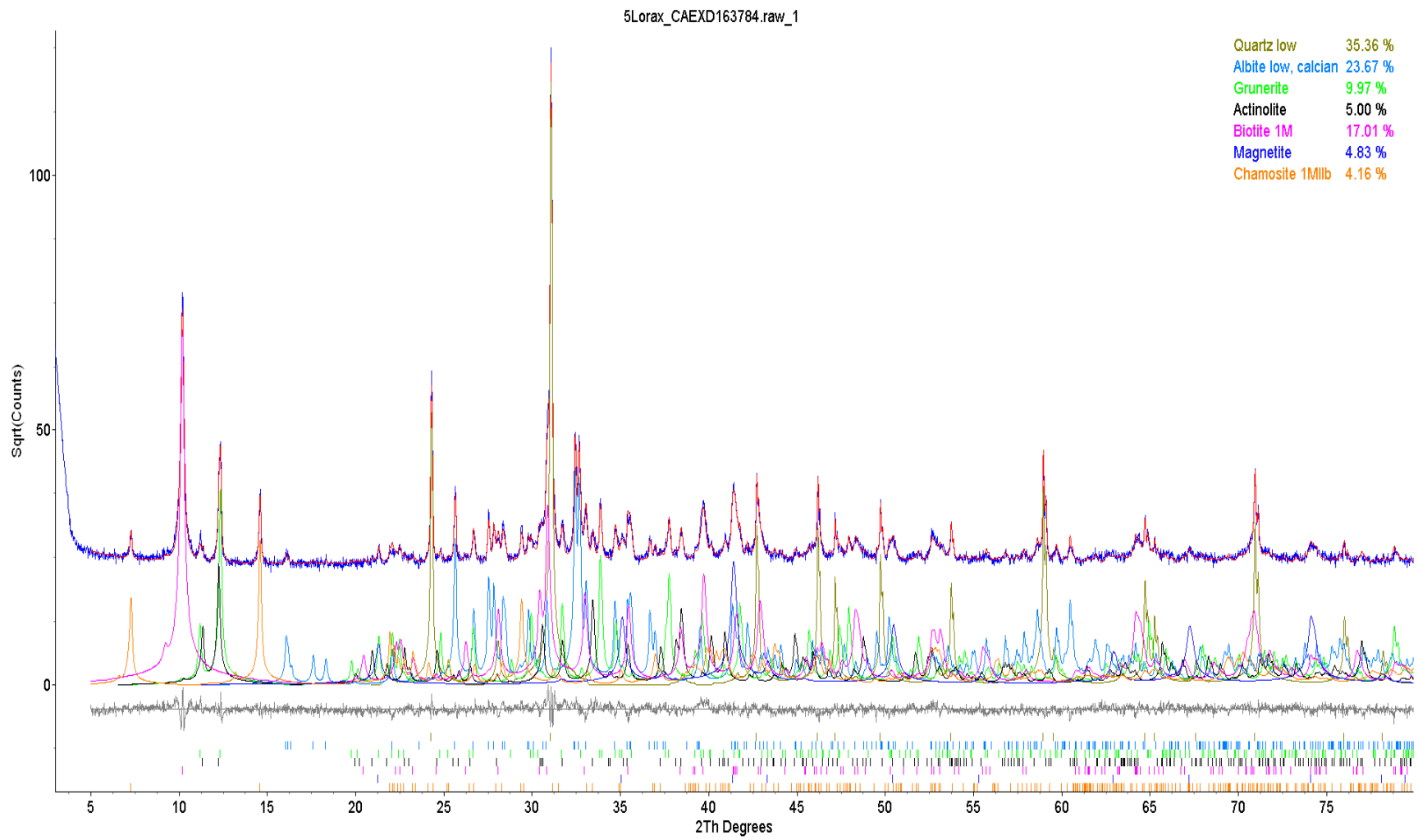


Figure 5. Rietveld refinement plot of sample **5 Lorax Environmental – CAEXD163784** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

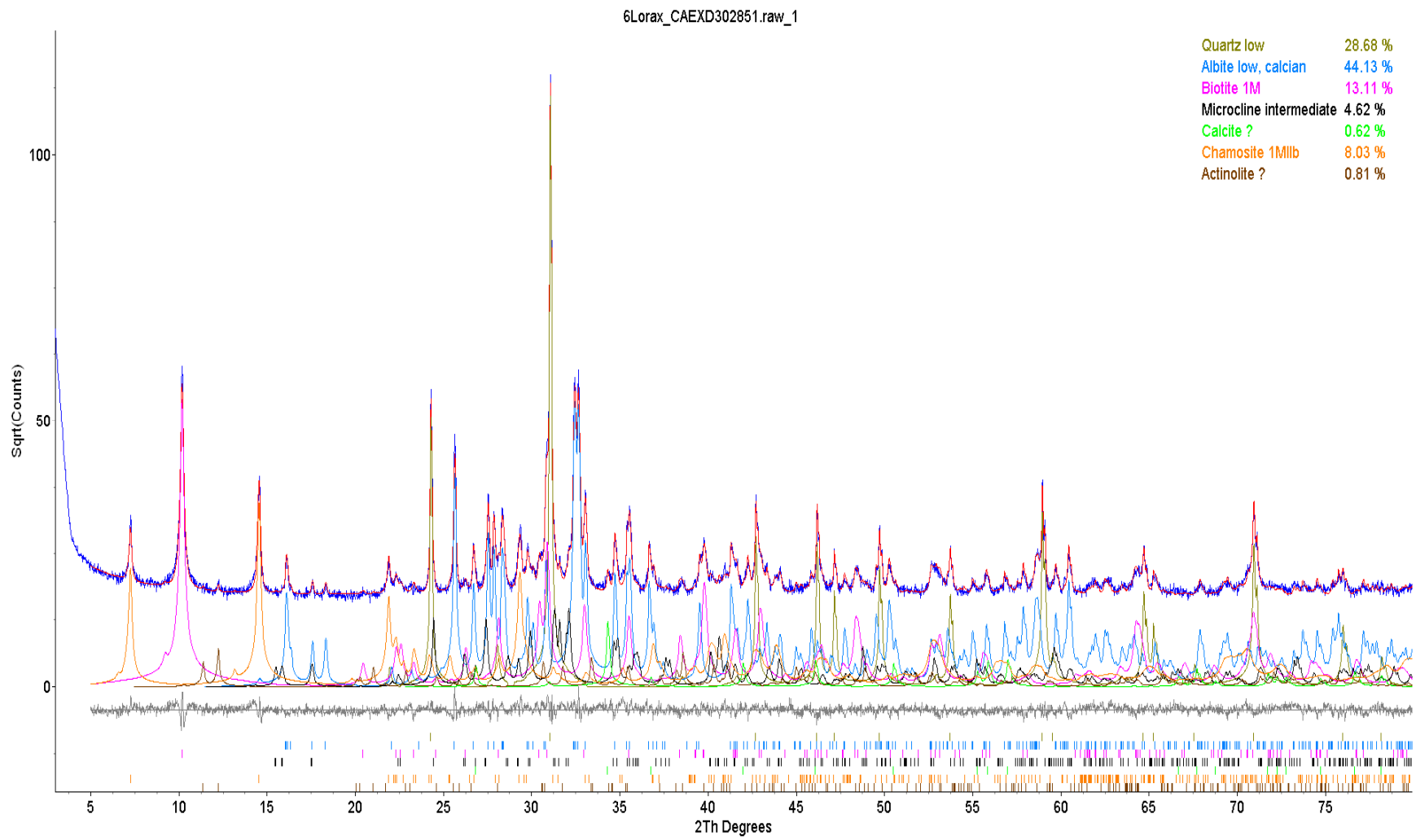


Figure 6. Rietveld refinement plot of sample **6 Lorax Environmental – CAEXD302851** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

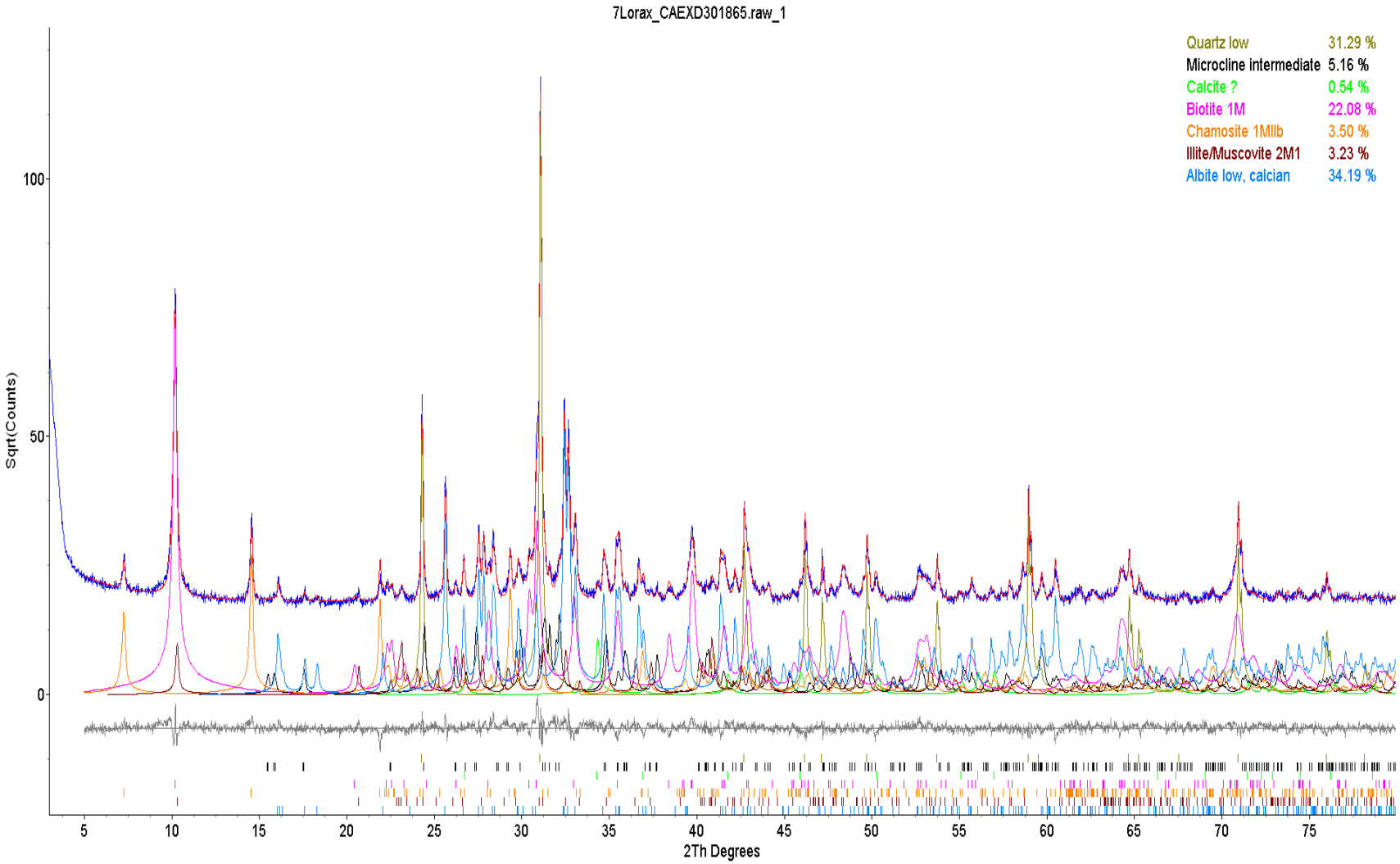


Figure 7. Rietveld refinement plot of sample **7 Lorax Environmental – CAEXD301865** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

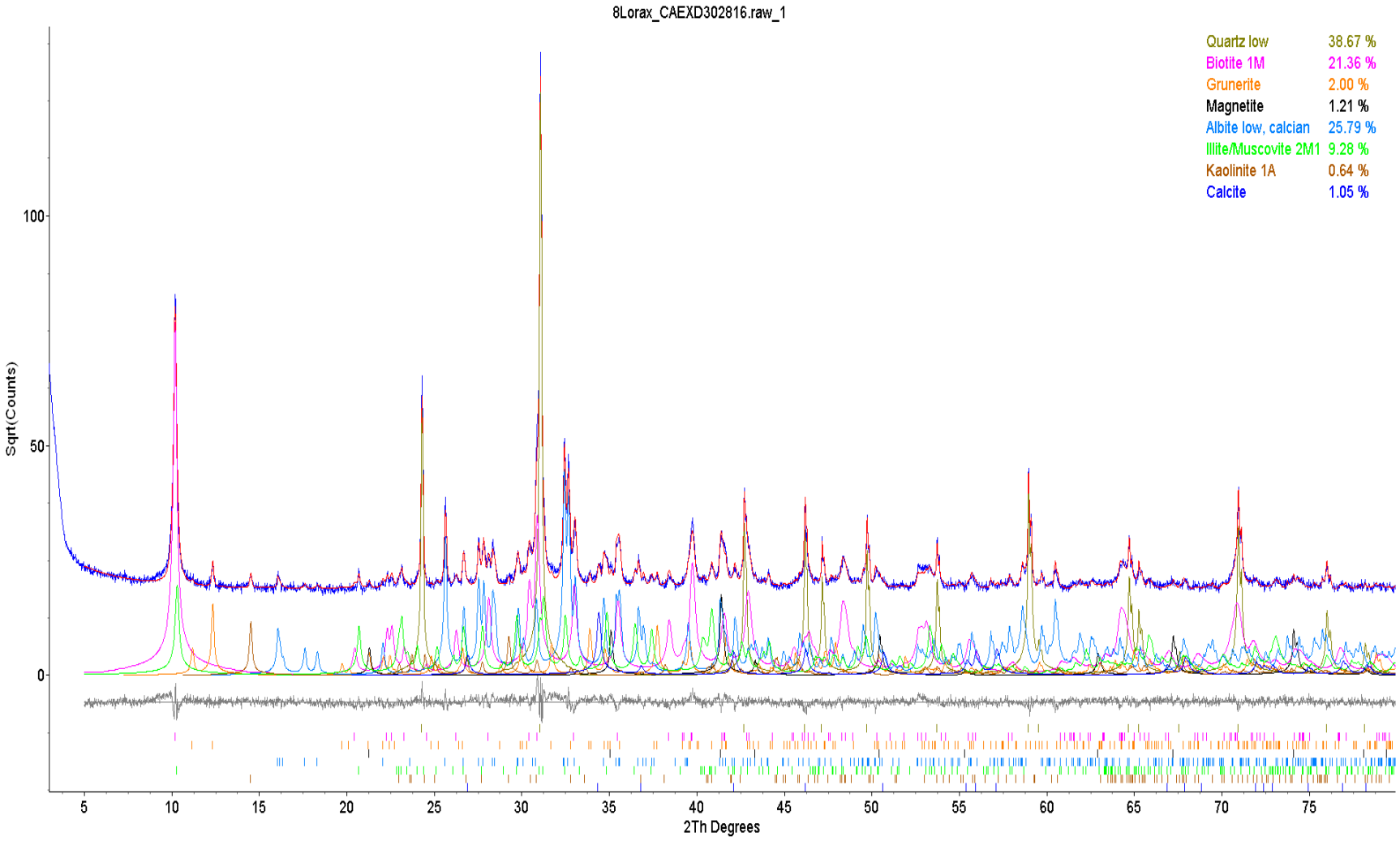


Figure 8. Rietveld refinement plot of sample **8 Lorax Environmental – CAEXD302816** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

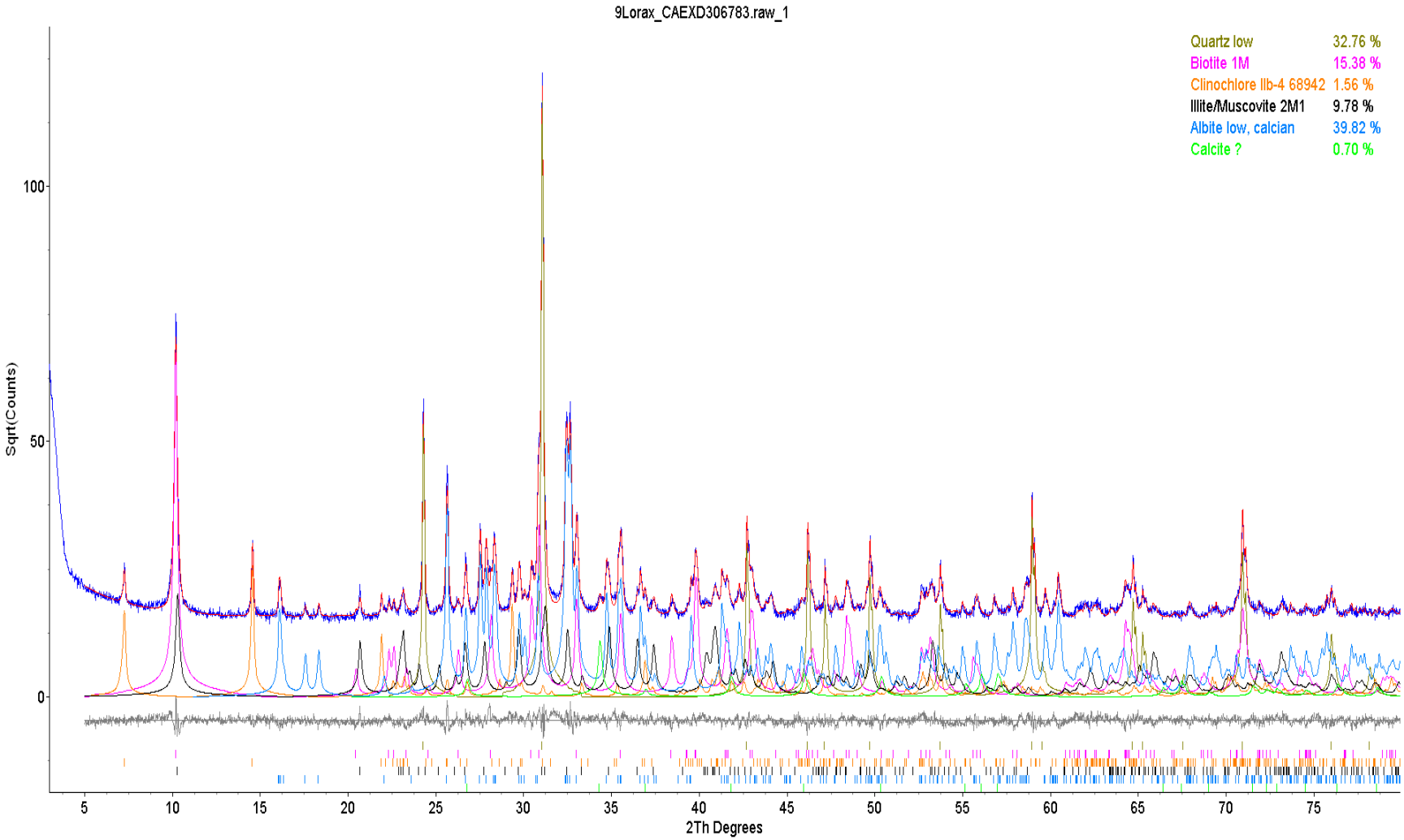


Figure 9. Rietveld refinement plot of sample **9 Lorax Environmental – CAEXD306783** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

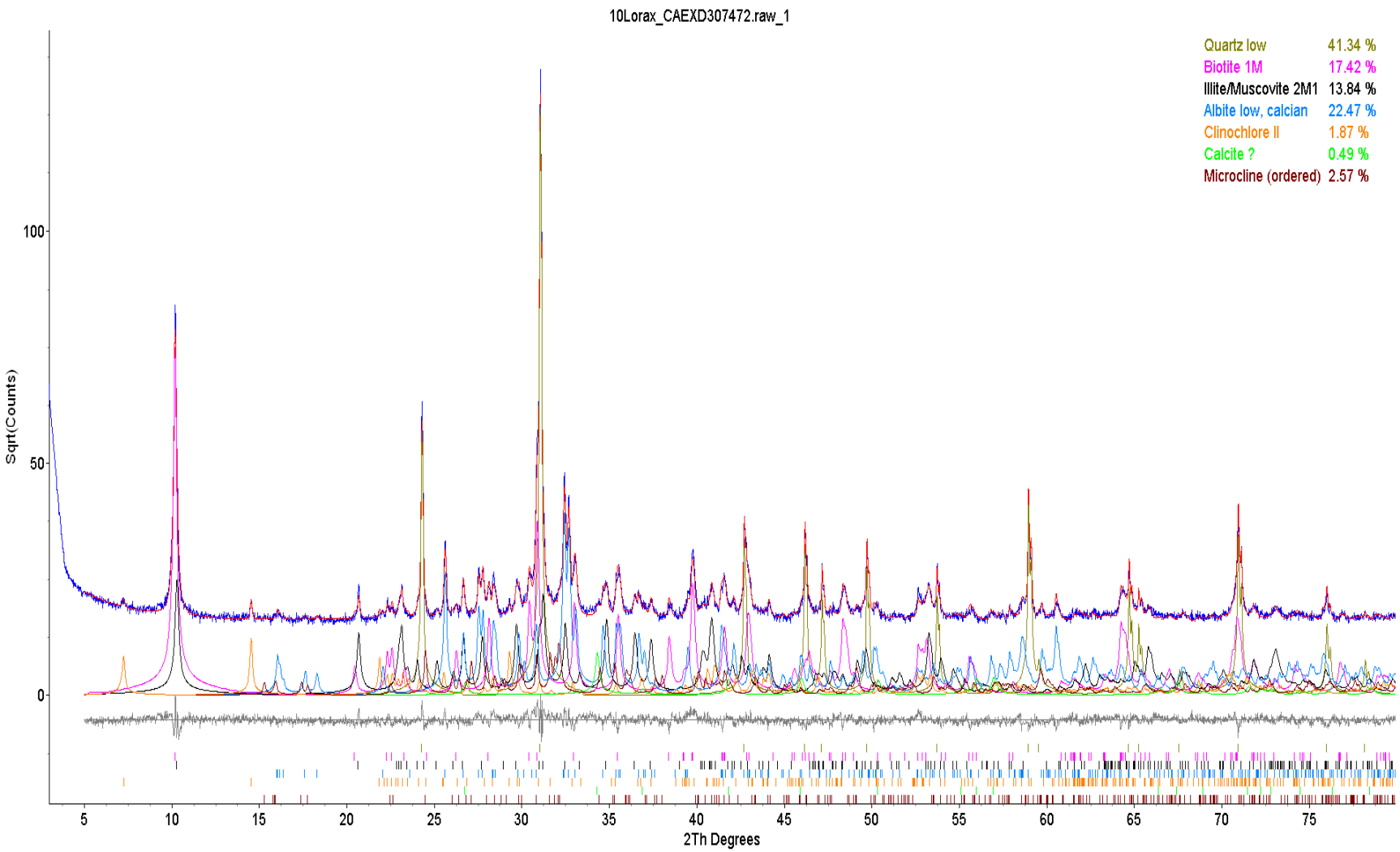


Figure 10. Rietveld refinement plot of sample **10 Lorax Environmental – CAEXD307472** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

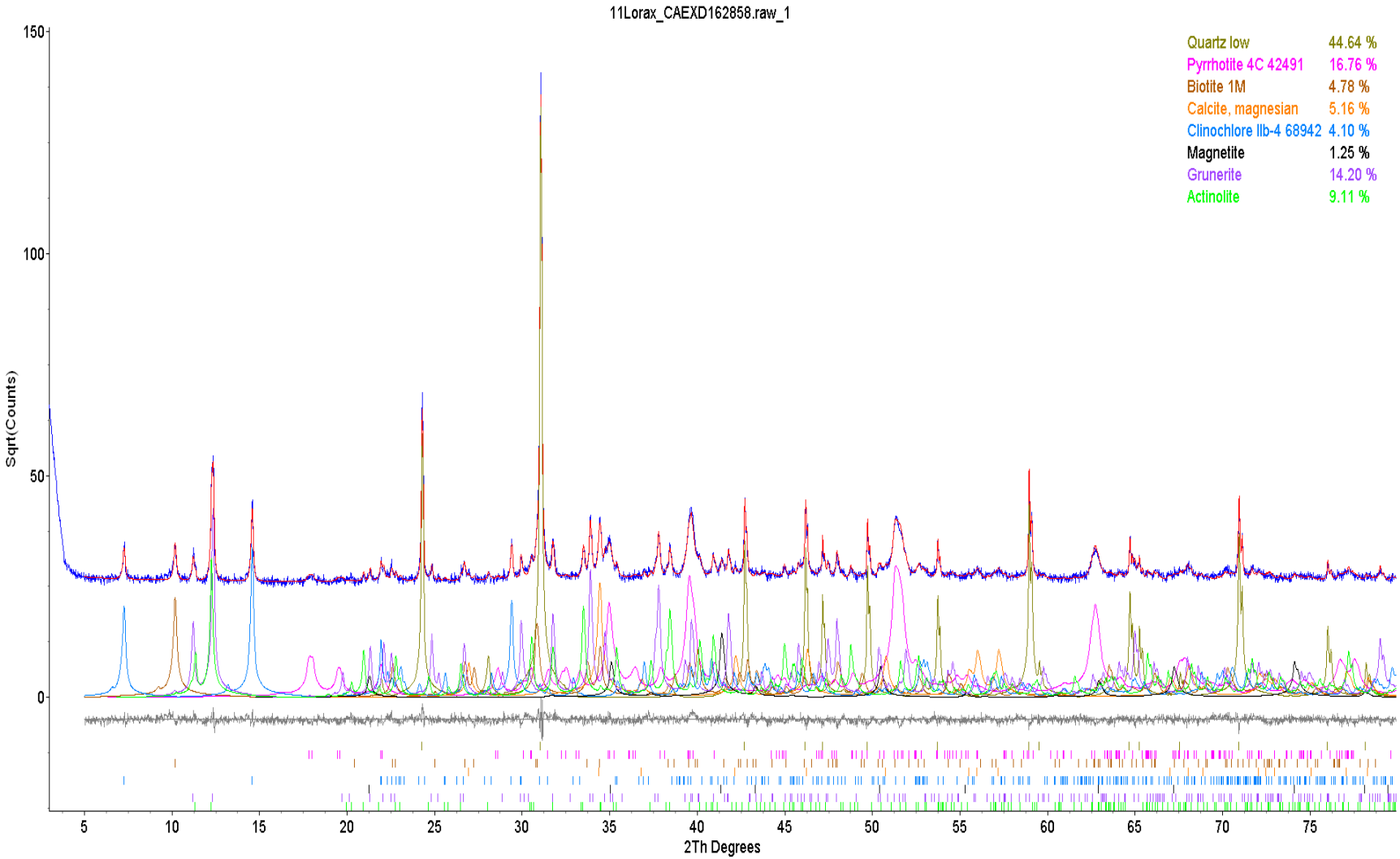


Figure 11. Rietveld refinement plot of sample **11 Lorax Environmental – CAEXD162858** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

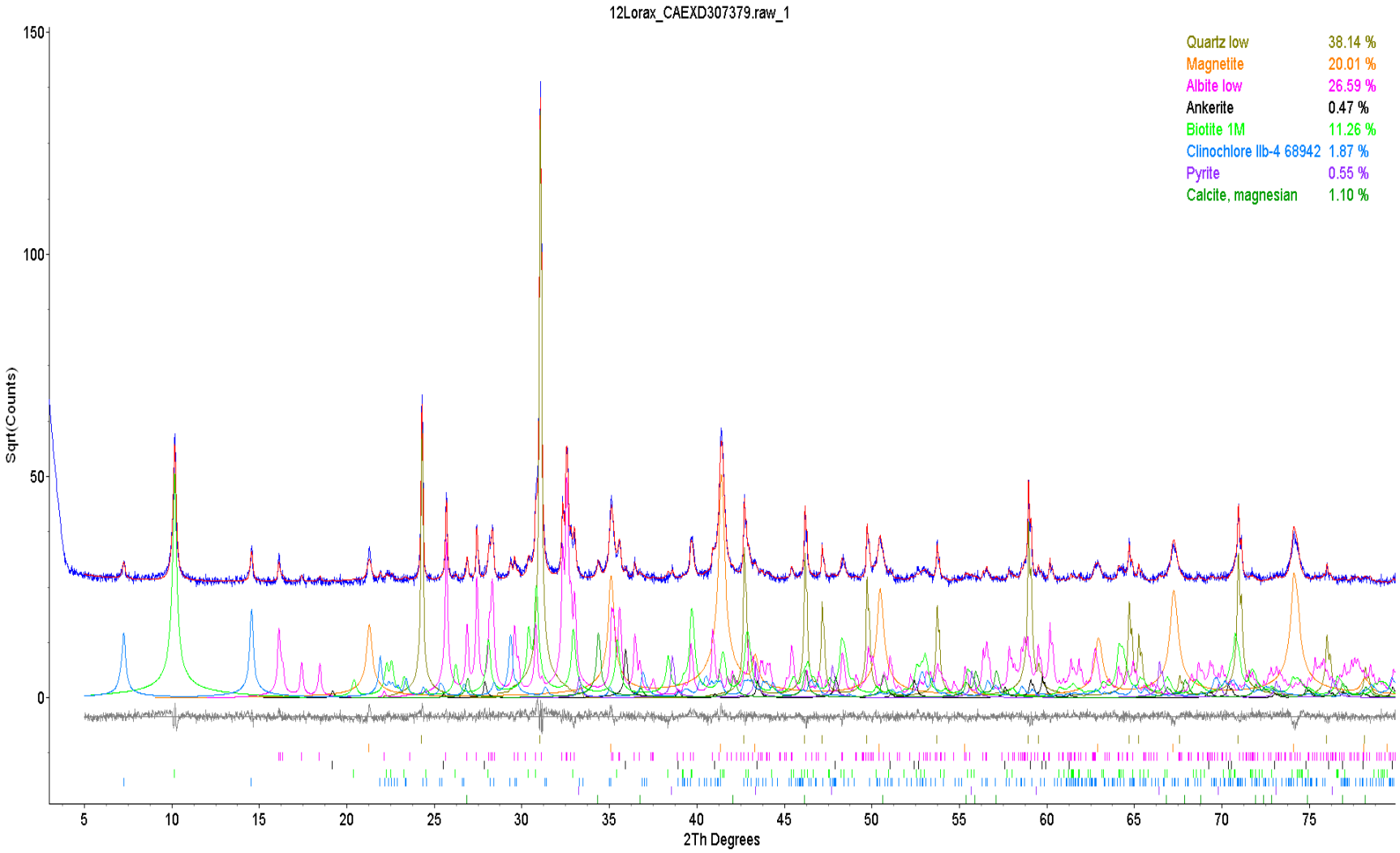


Figure 12. Rietveld refinement plot of sample **12 Lorax Environmental – CAEXD307379** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

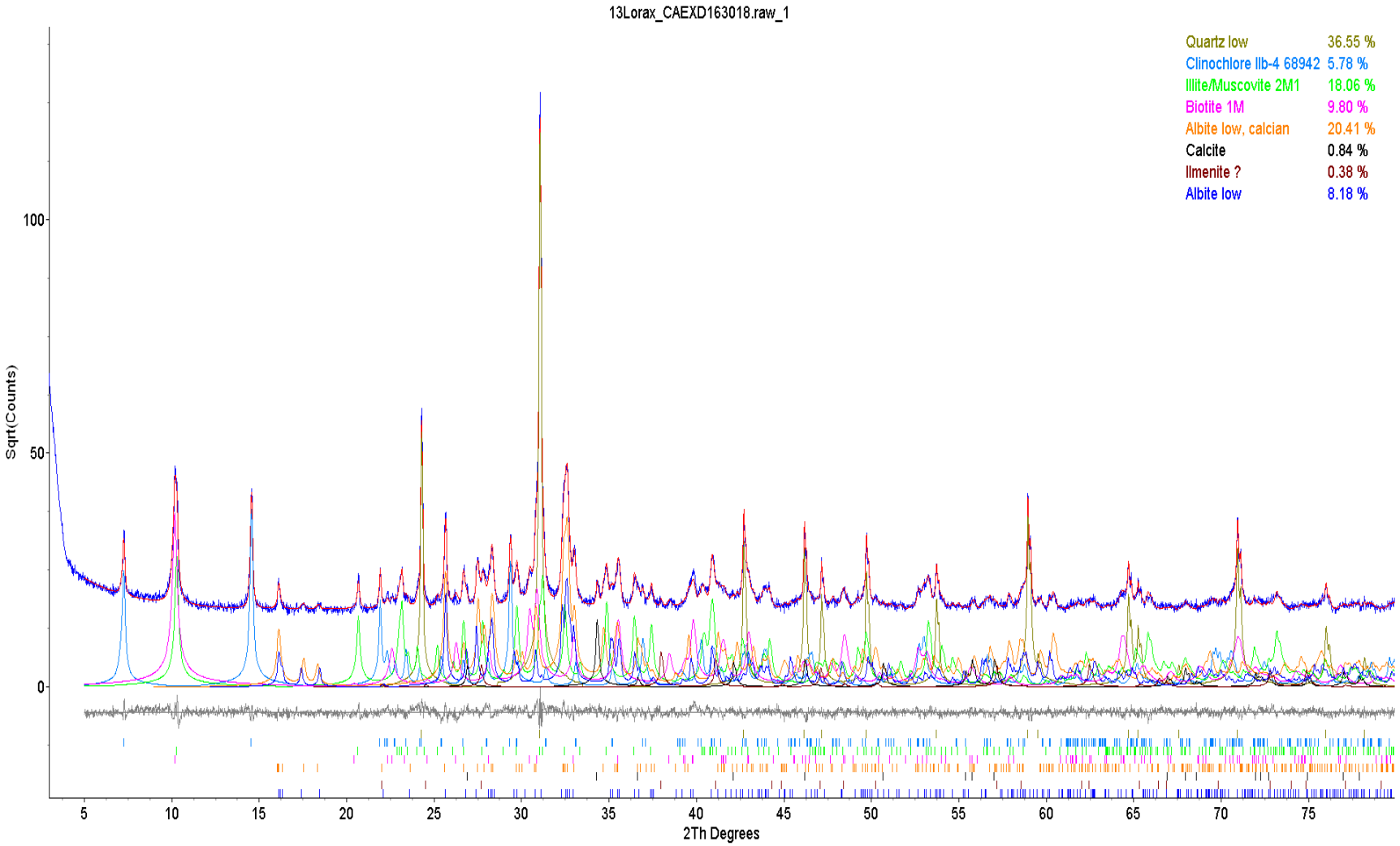


Figure 13. Rietveld refinement plot of sample **13 Lorax Environmental – CAEXD163018** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

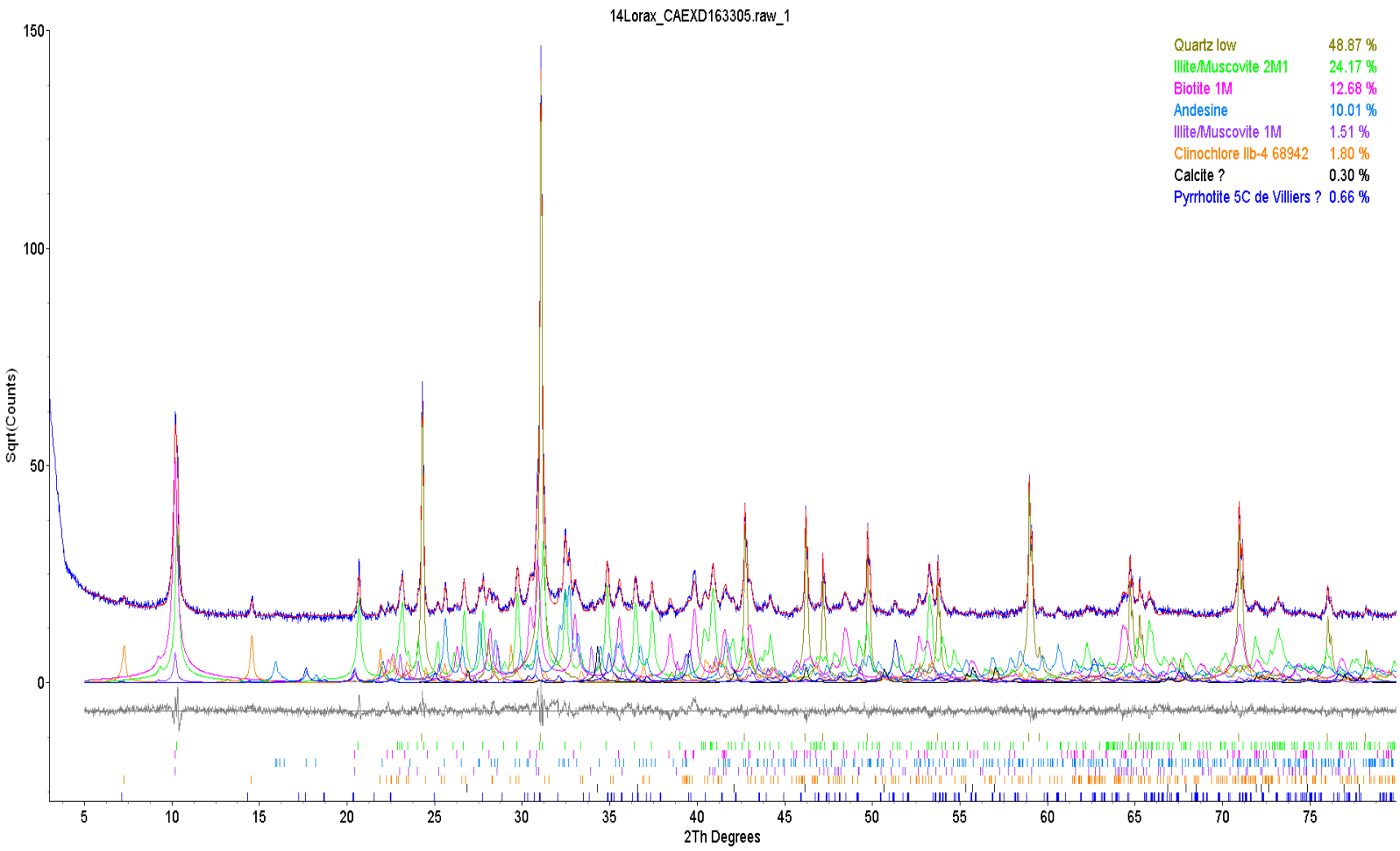


Figure 14. Rietveld refinement plot of sample **14 Lorax Environmental – CAEXD163305** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

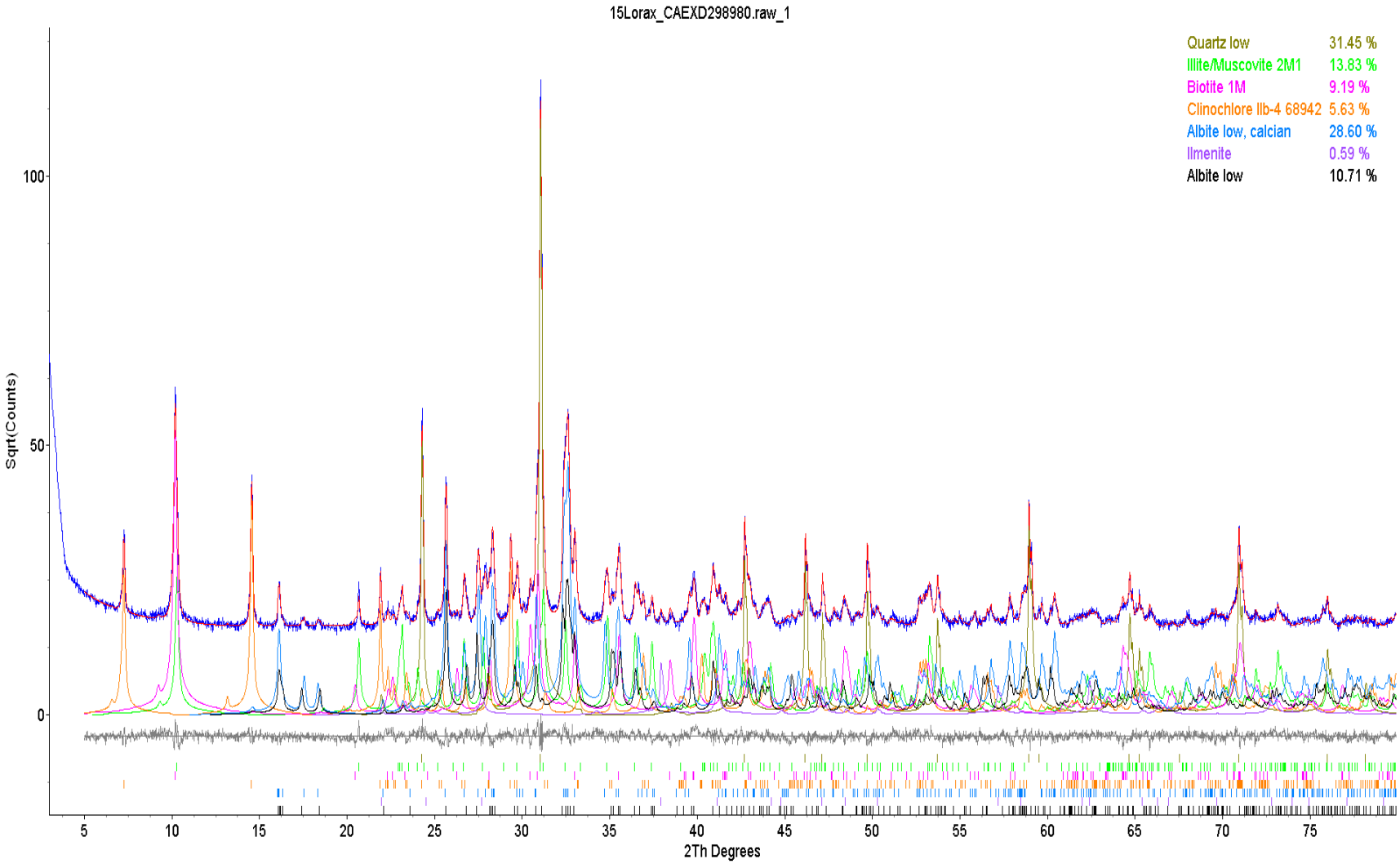


Figure 15. Rietveld refinement plot of sample **15 Lorax Environmental – CAEXD298980** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

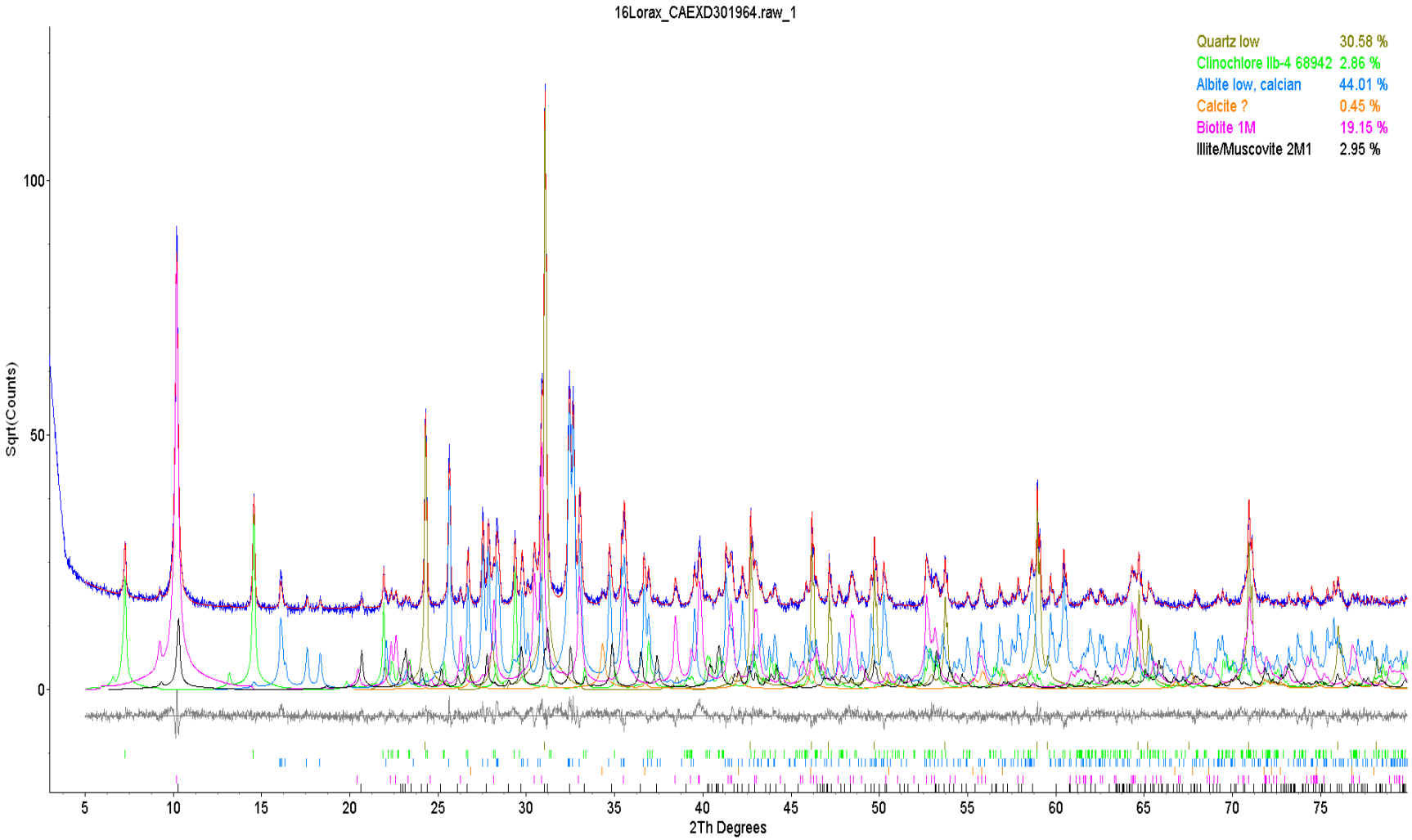


Figure 16. Rietveld refinement plot of sample 1**6 Lorax Environmental – CAEXD301964** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

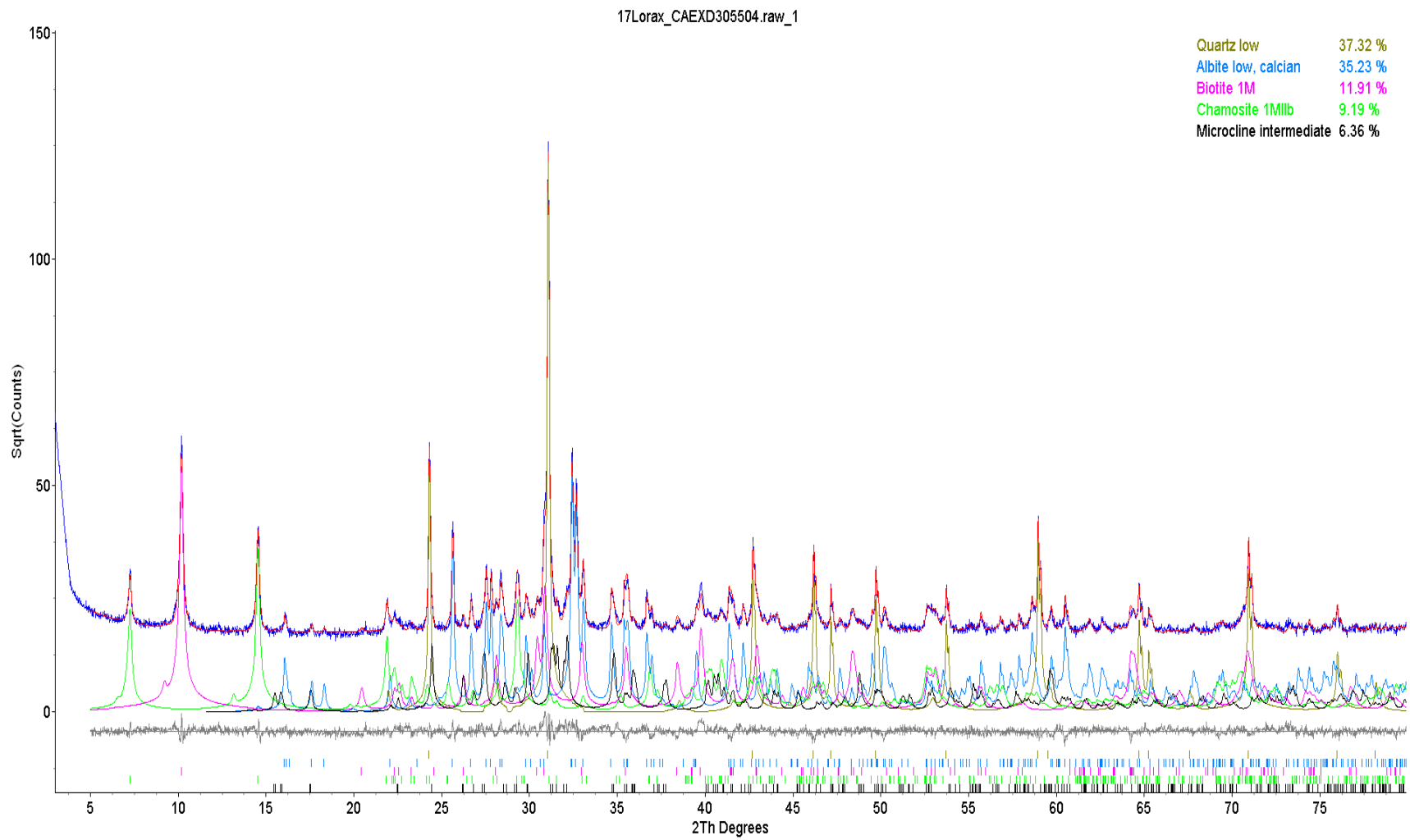


Figure 17. Rietveld refinement plot of sample **17 Lorax Environmental – CAEXD305504** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

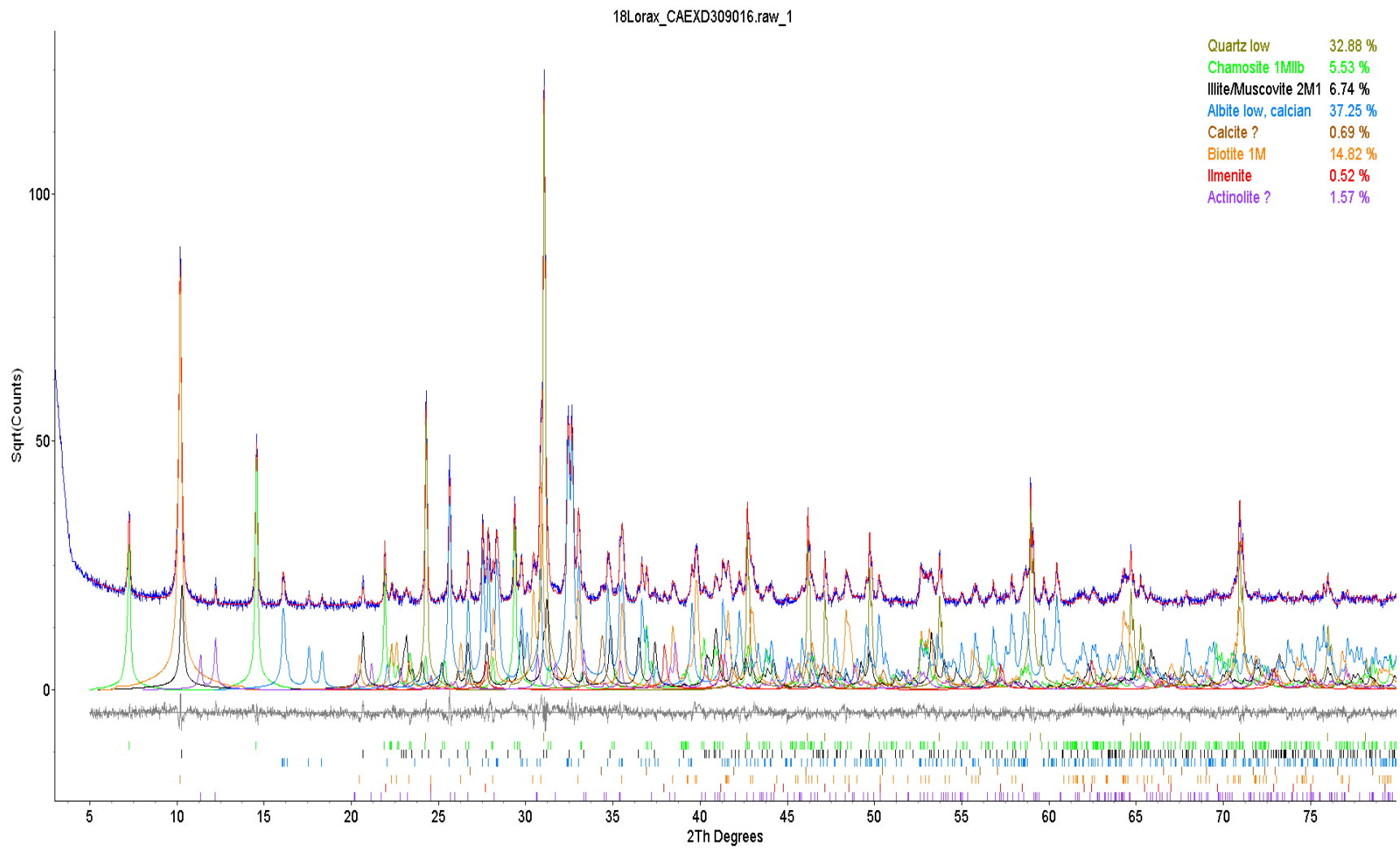


Figure 18. Rietveld refinement plot of sample **18 Lorax Environmental – CAEXD309016** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

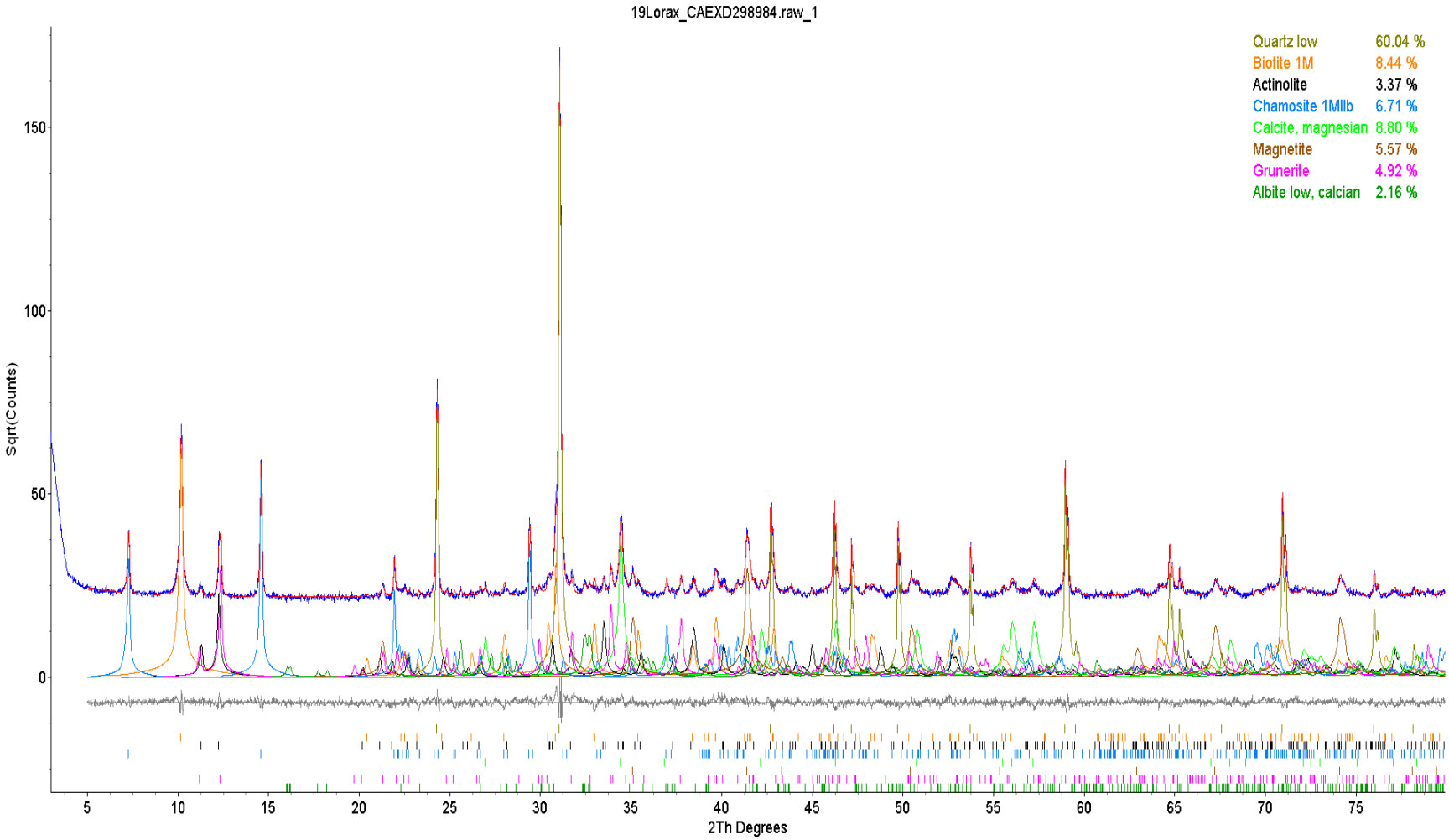


Figure 19. Rietveld refinement plot of sample **19 Lorax Environmental – CAEXD298984** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

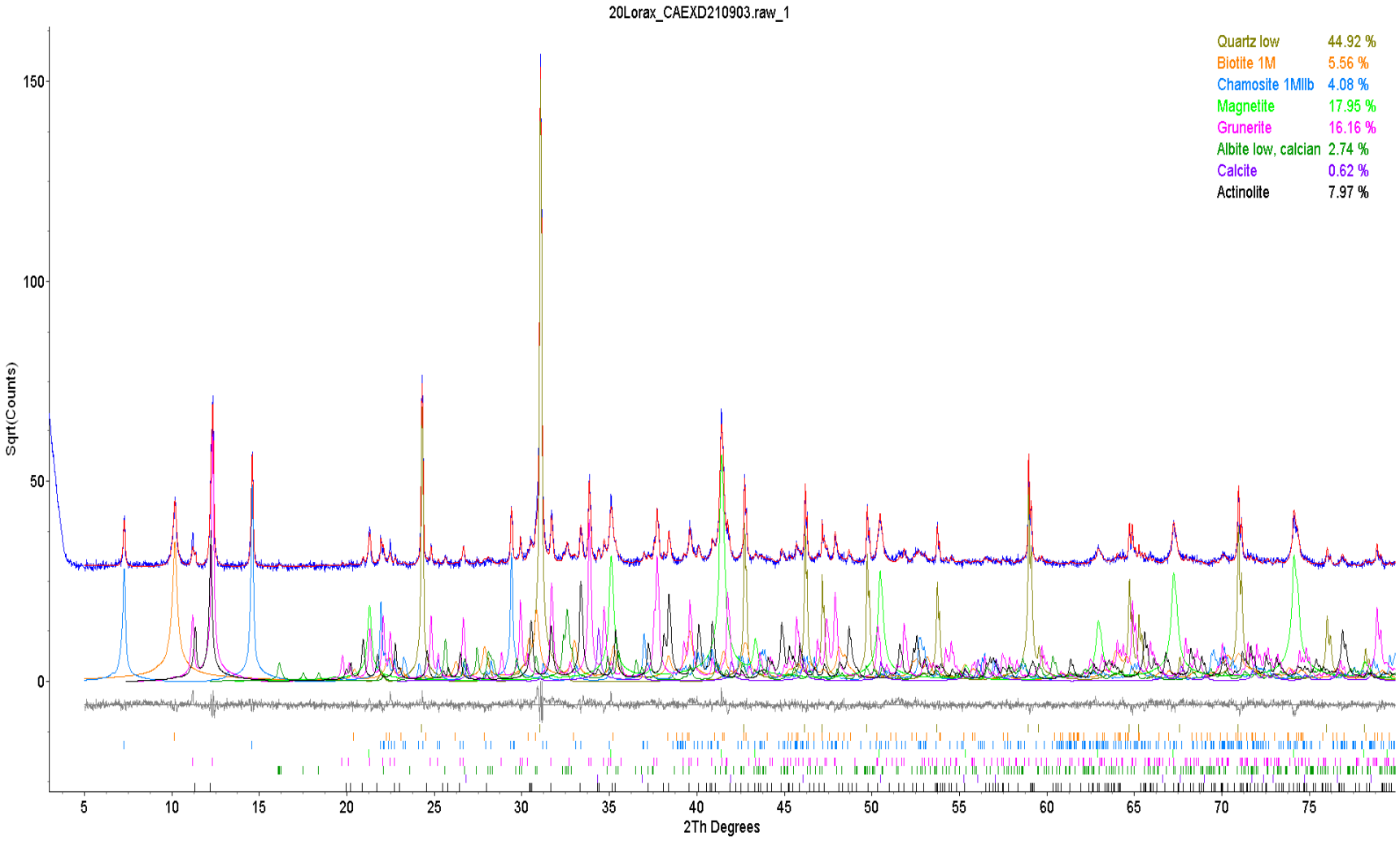


Figure 20. Rietveld refinement plot of sample **20 Lorax Environmental – CAEXD210903** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

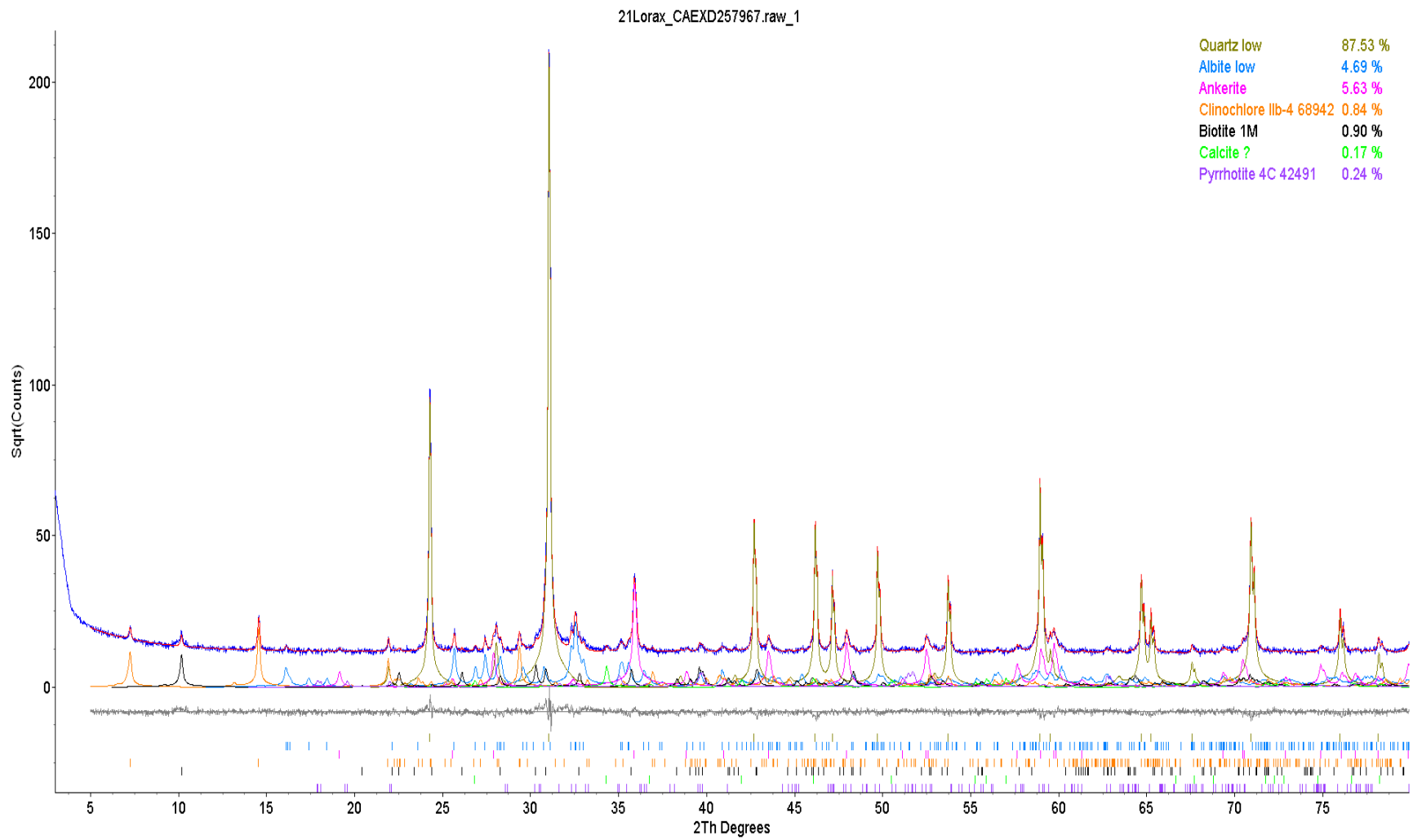


Figure 21. Rietveld refinement plot of sample **21 Lorax Environmental – CAEXD257967** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

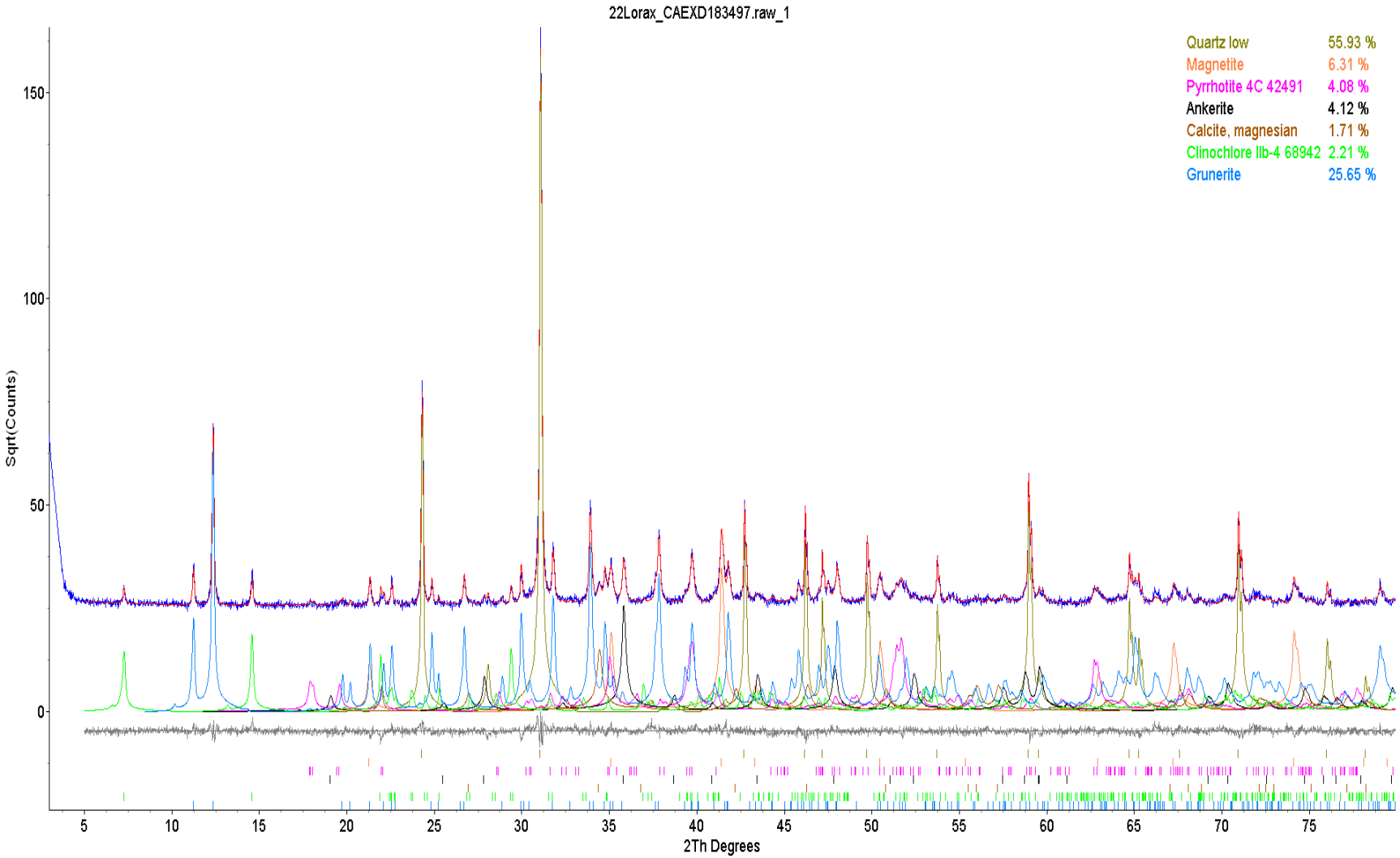


Figure 22. Rietveld refinement plot of sample **22 Lorax Environmental – CAEXD183497** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

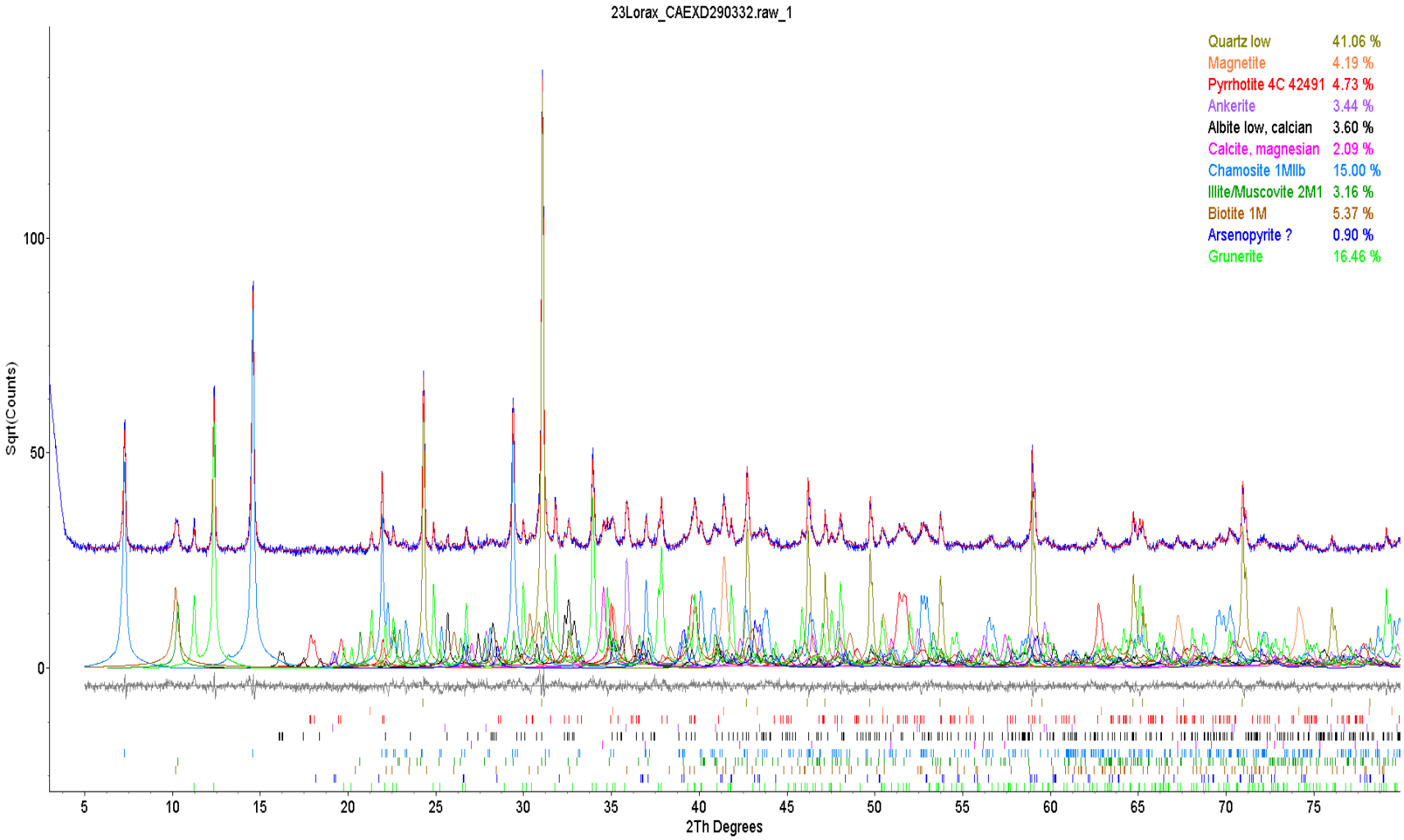


Figure 23. Rietveld refinement plot of sample **23 Lorax Environmental – CAEXD290332** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

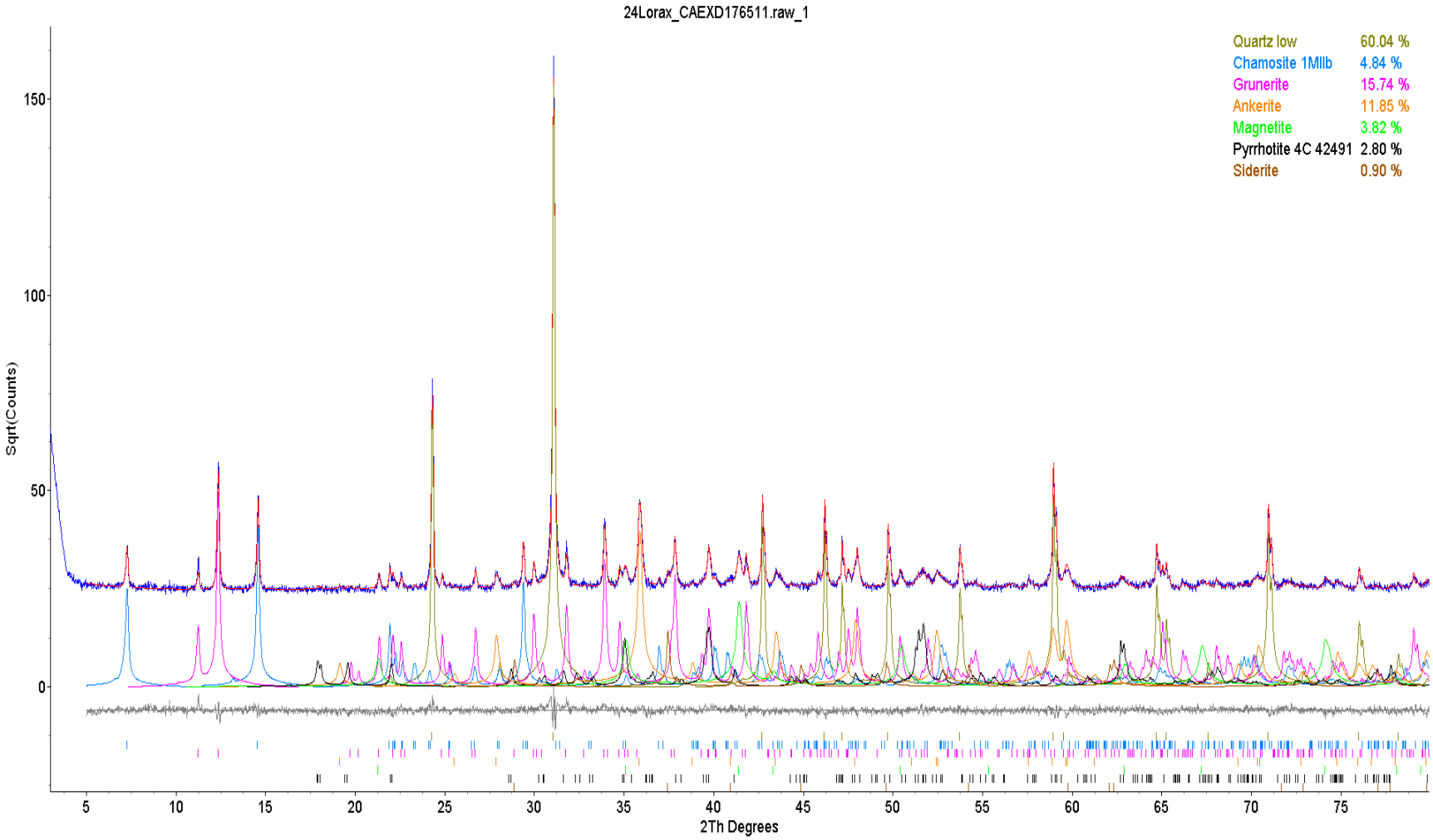


Figure 24. Rietveld refinement plot of sample **24 Lorax Environmental – CAEXD176511** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

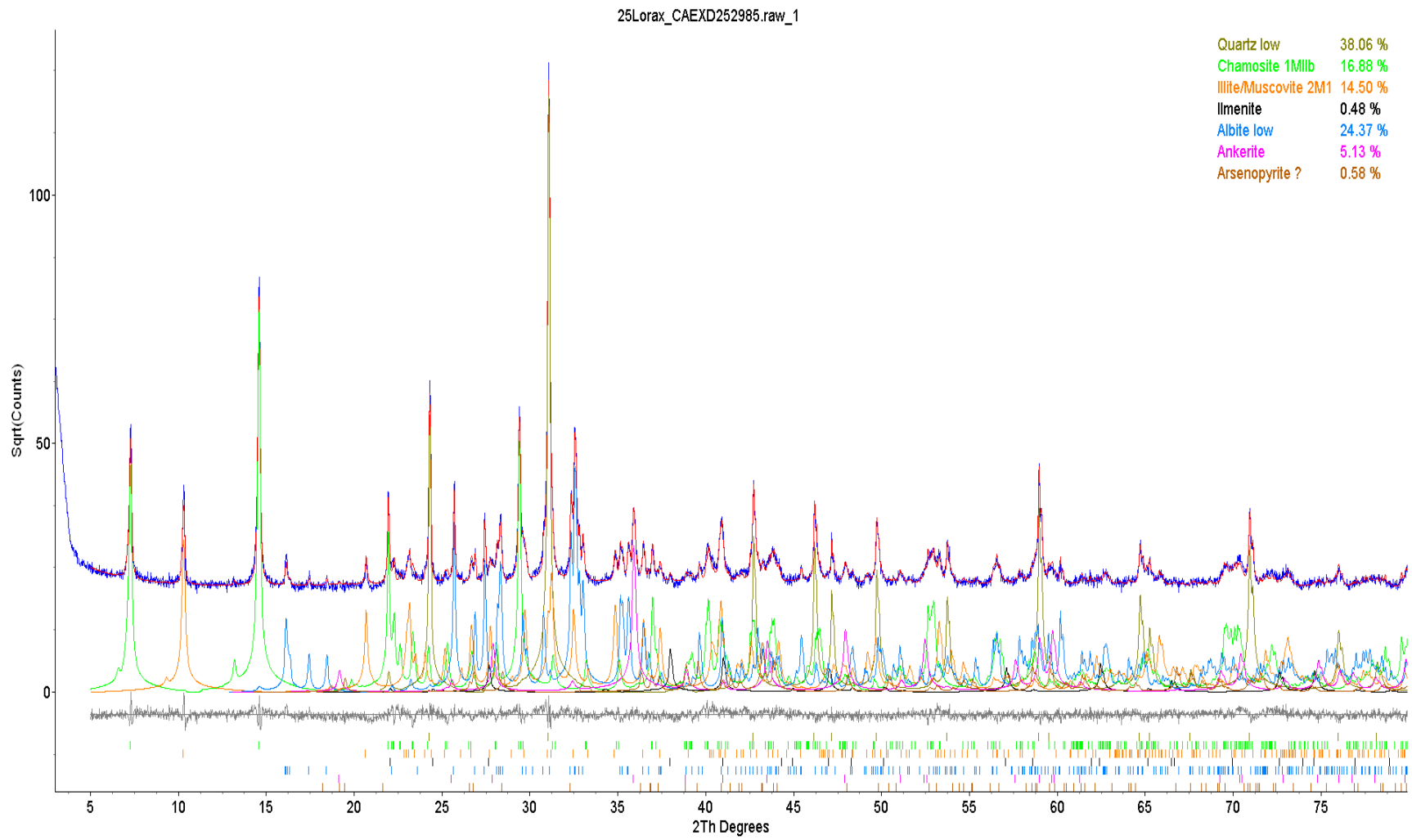


Figure 25. Rietveld refinement plot of sample **25 Lorax Environmental – CAEXD252985** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

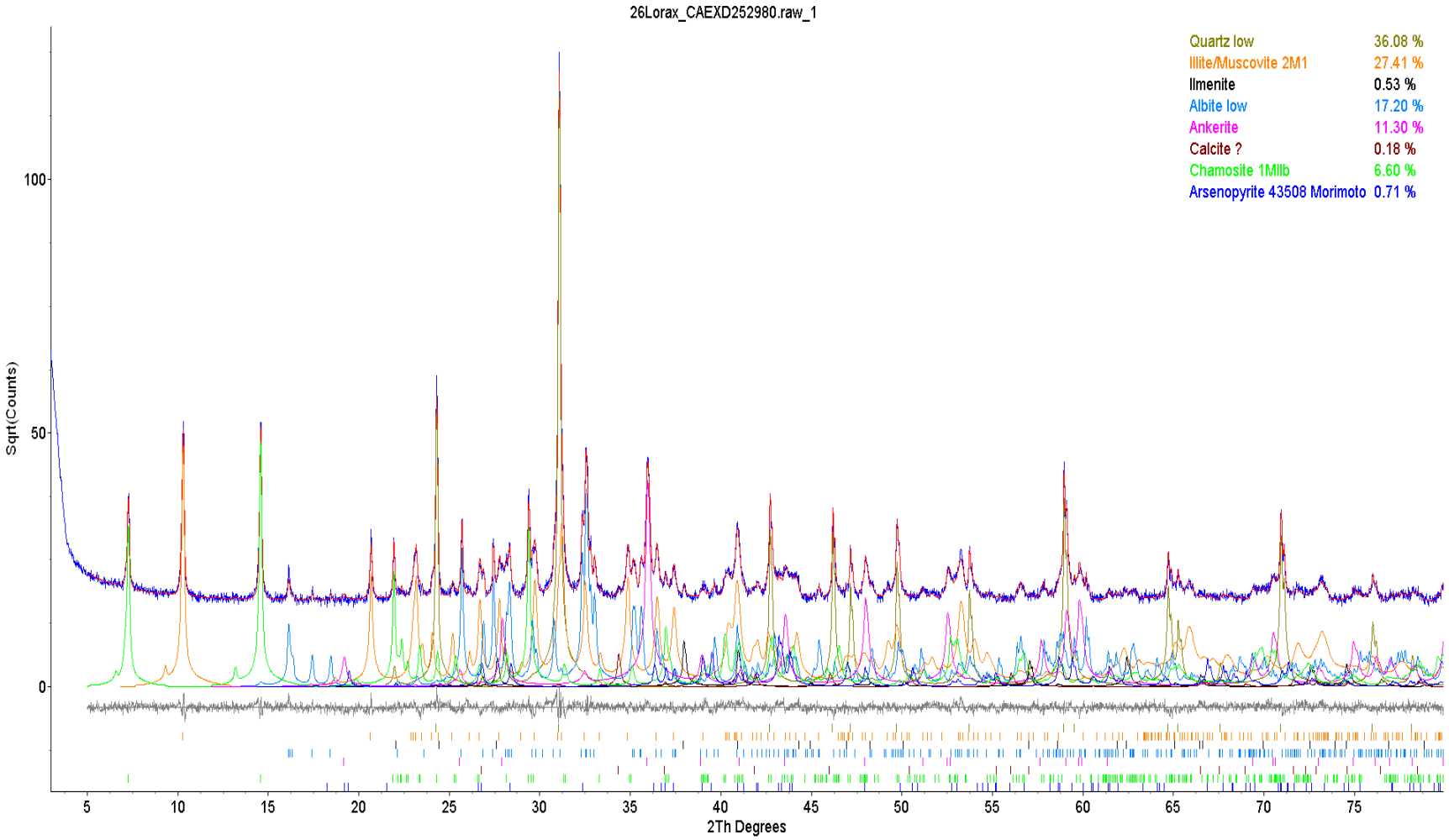


Figure 26. Rietveld refinement plot of sample **26 Lorax Environmental – CAEXD252980** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

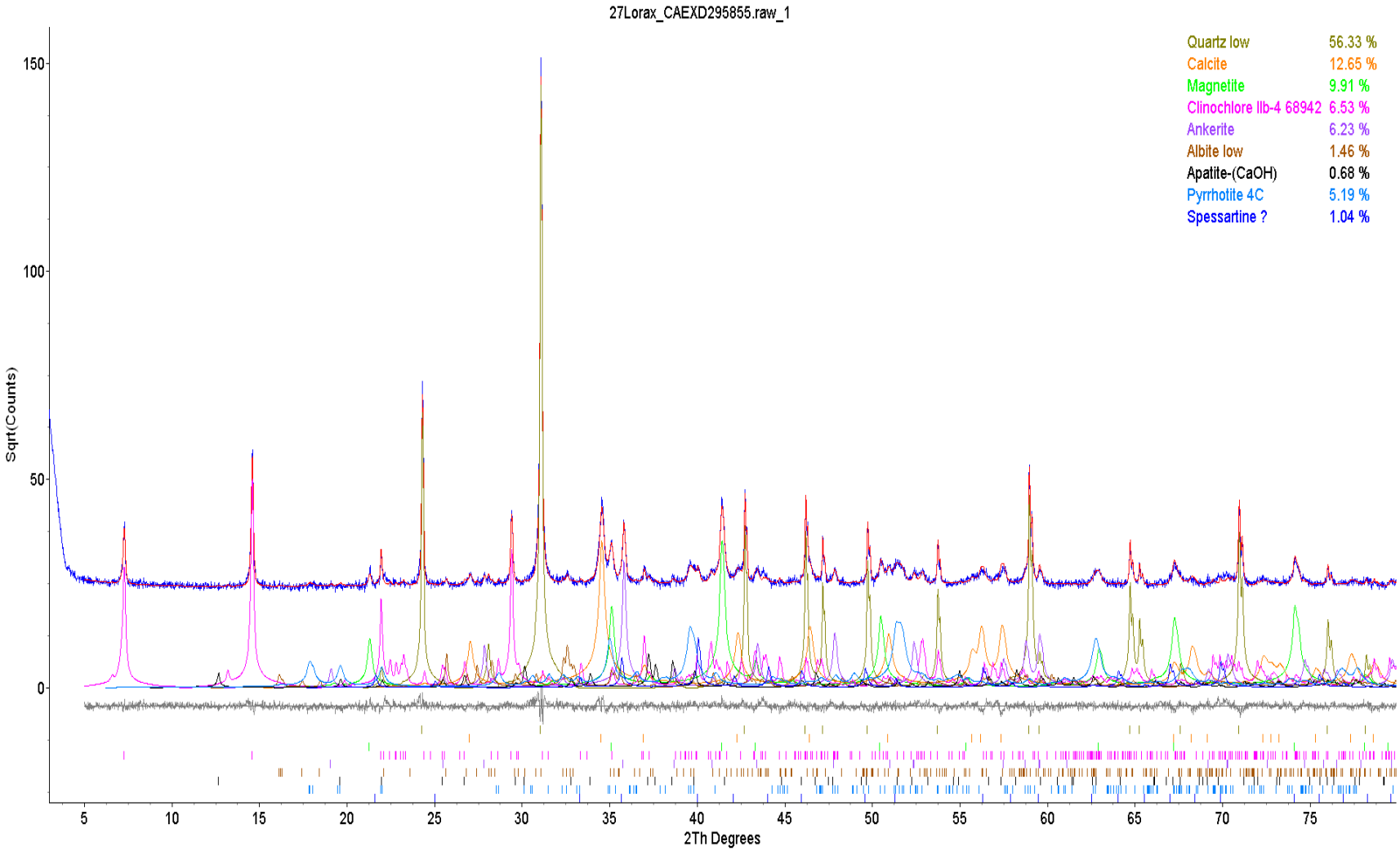


Figure 27. Rietveld refinement plot of sample **27 Lorax Environmental – CAEXD295855** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

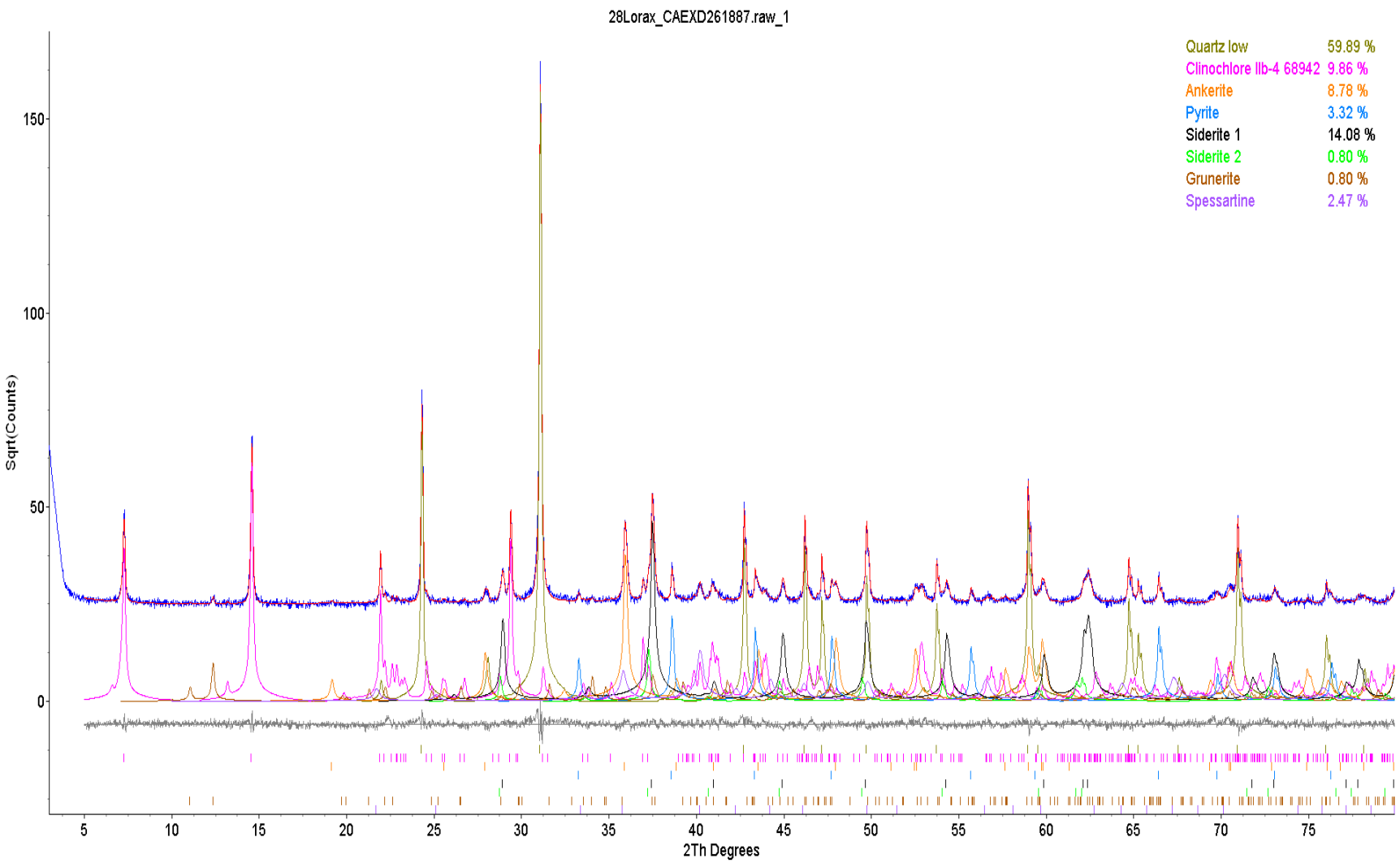


Figure 28. Rietveld refinement plot of sample **28 Lorax Environmental – CAEXD261887** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

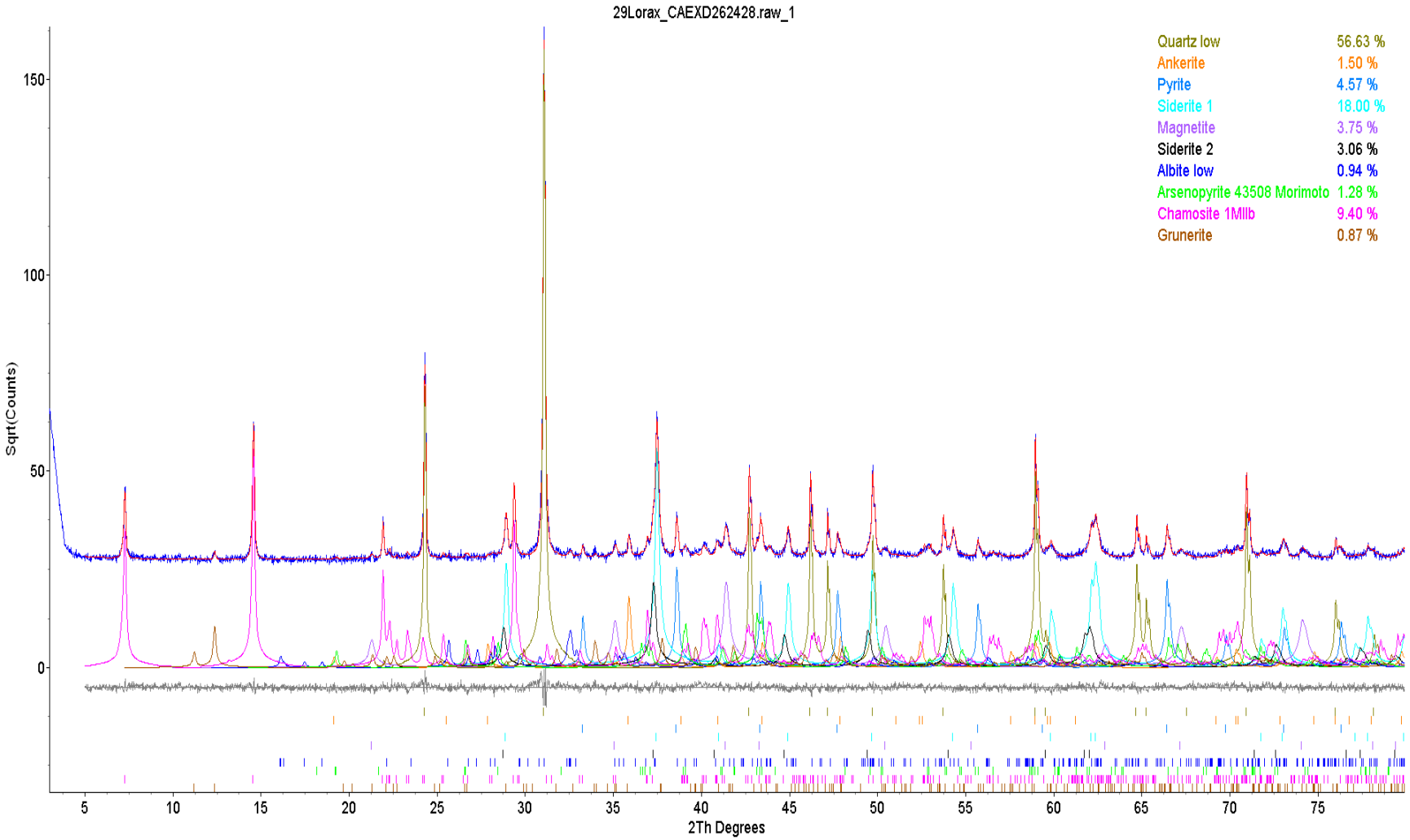


Figure 29. Rietveld refinement plot of sample **29 Lorax Environmental – CAEXD262428** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

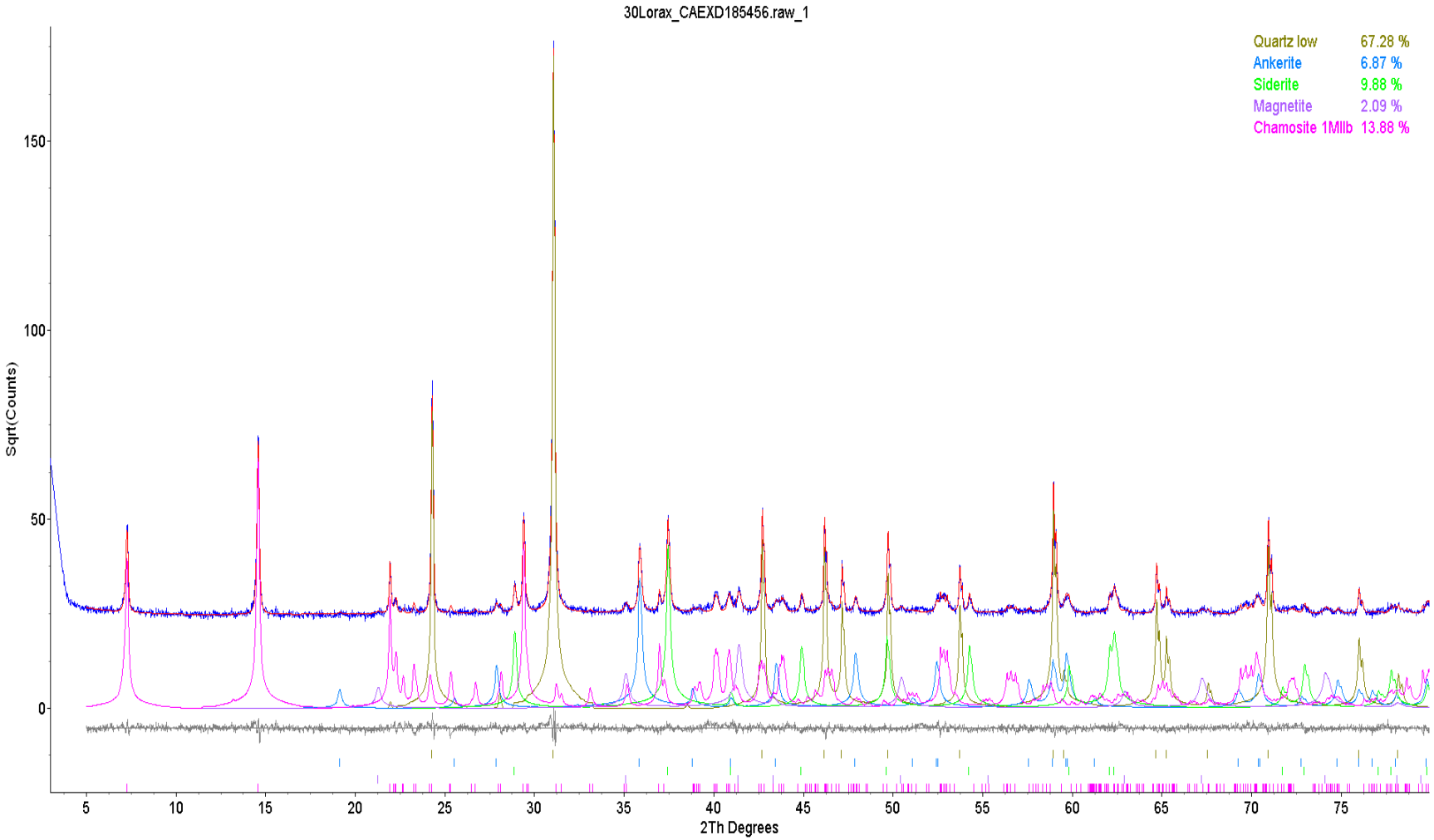


Figure 30. Rietveld refinement plot of sample **30 Lorax Environmental – CAEXD185456** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

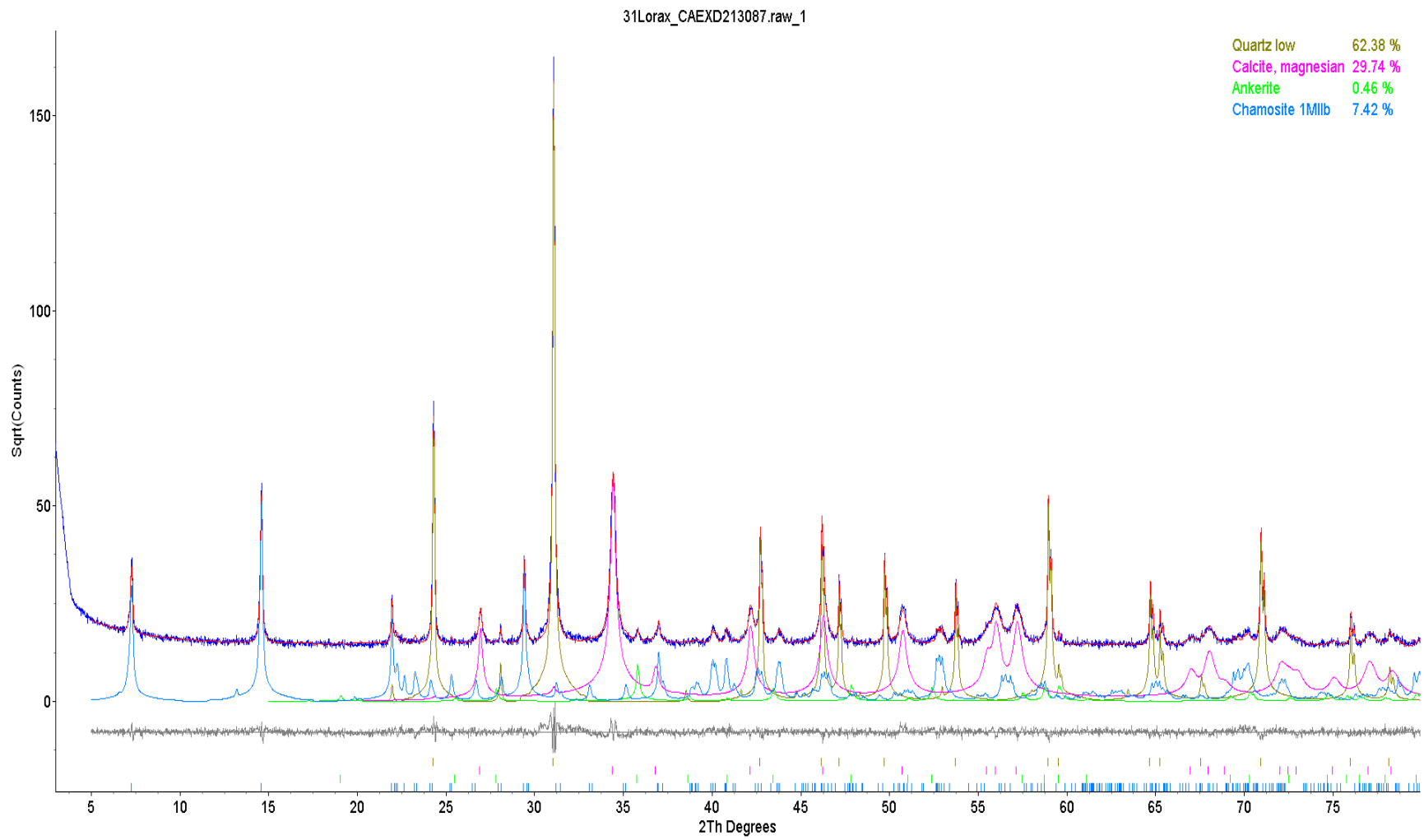


Figure 31. Rietveld refinement plot of sample **31 Lorax Environmental – CAEXD213087** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

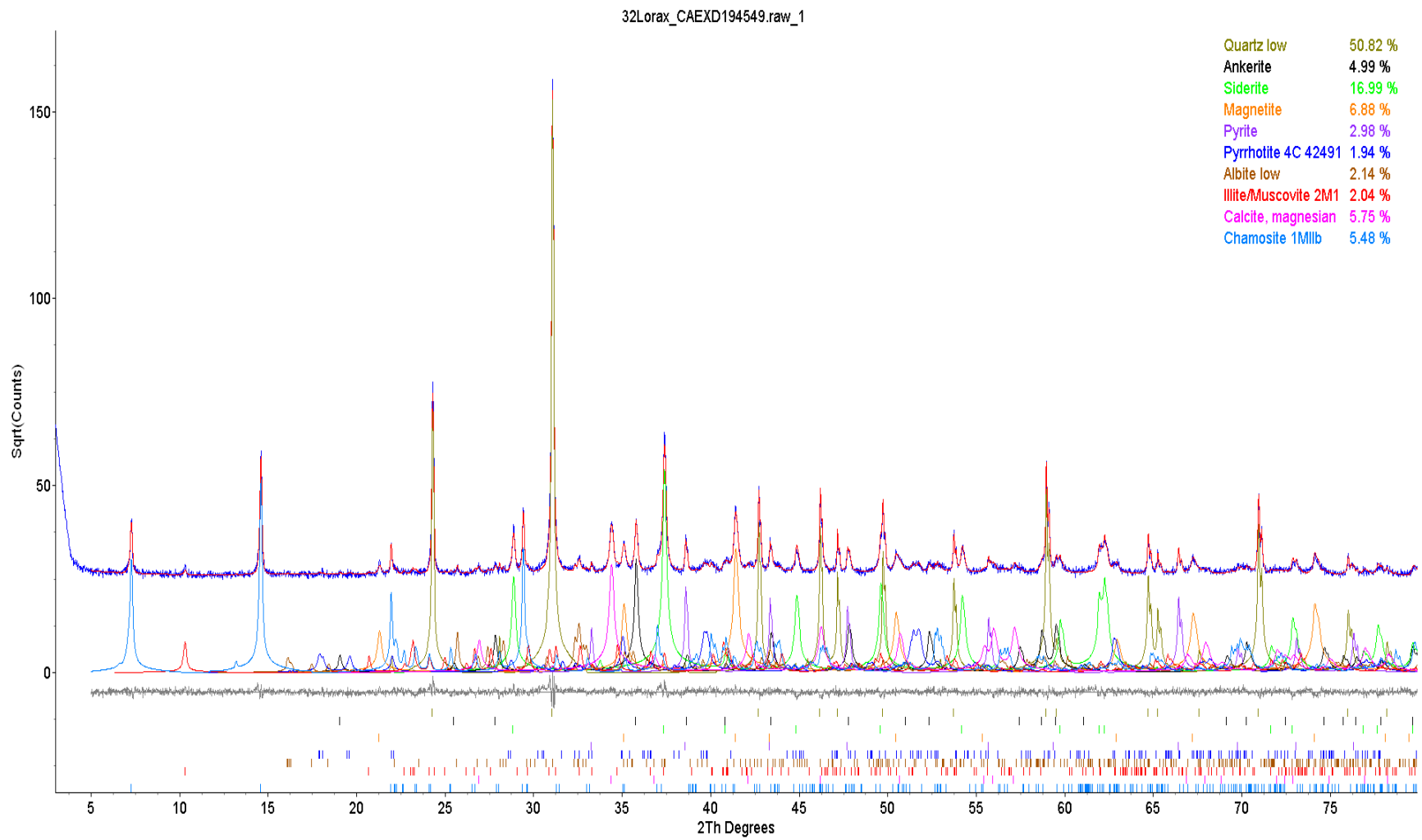


Figure 32. Rietveld refinement plot of sample **32 Lorax Environmental – CAEXD194549** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

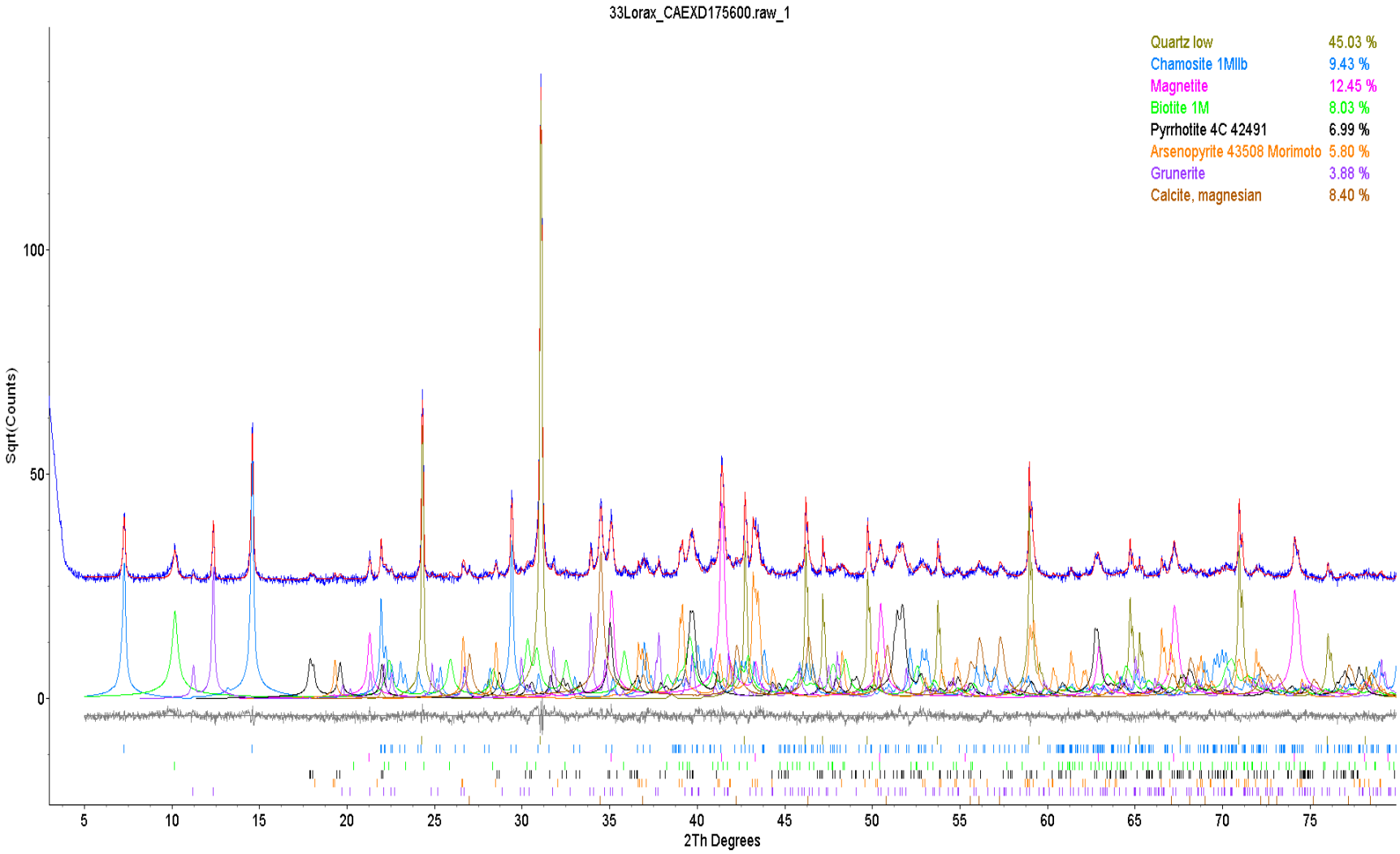


Figure 33. Rietveld refinement plot of sample **33 Lorax Environmental – CAEXD175600** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

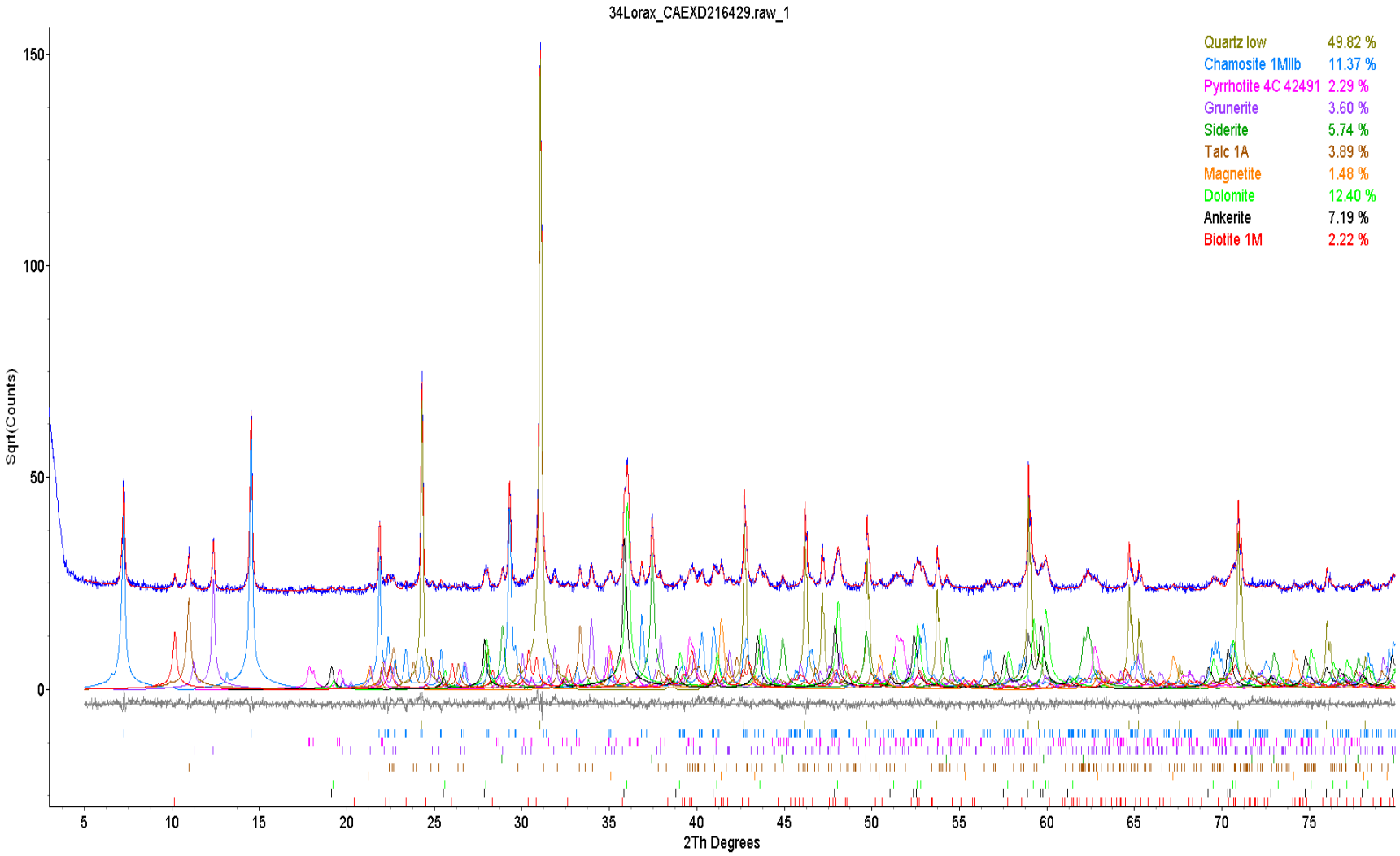


Figure 34. Rietveld refinement plot of sample **34 Lorax Environmental – CAEXD216429** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

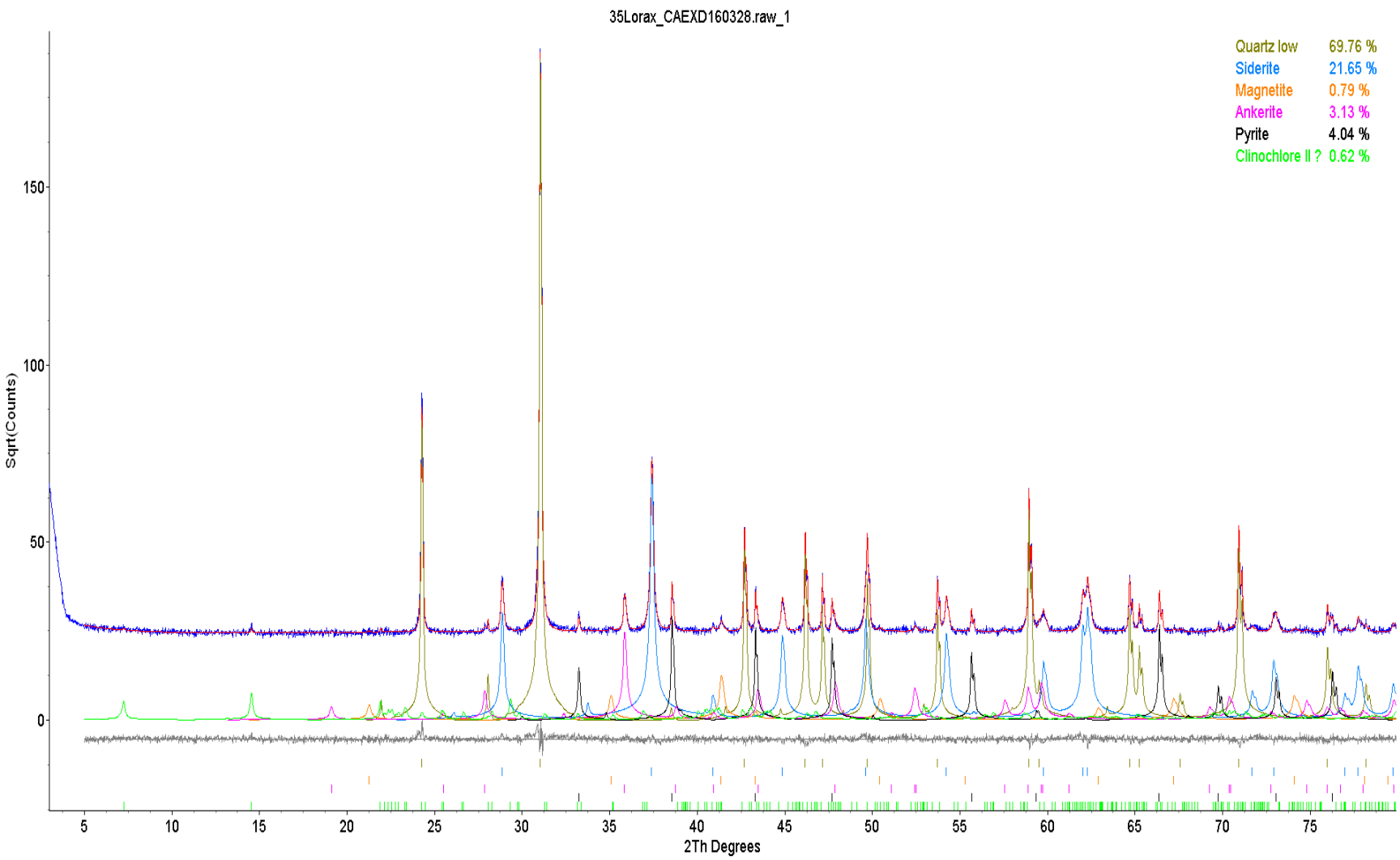


Figure 35. Rietveld refinement plot of sample **35 Lorax Environmental – CAEXD160328** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

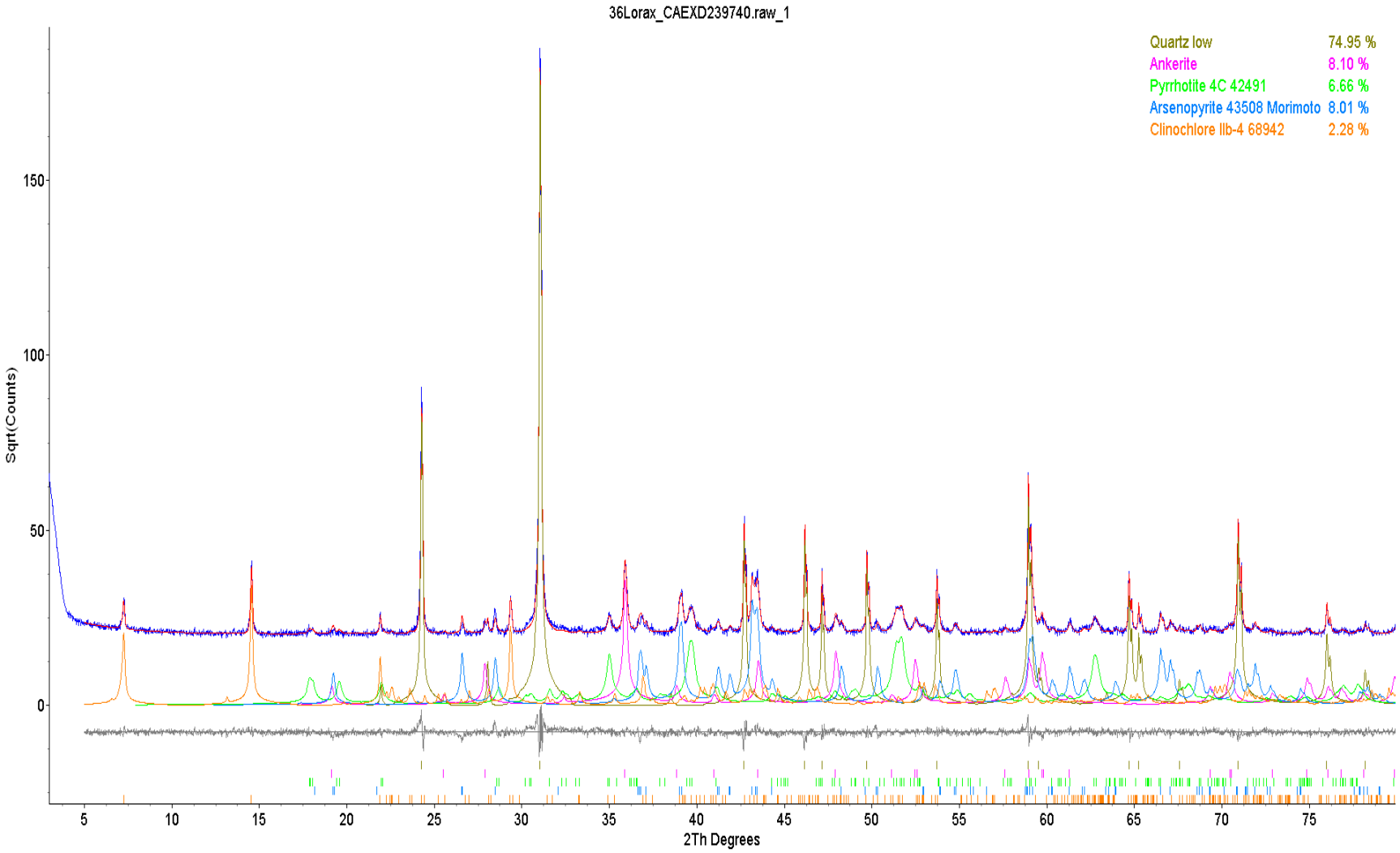


Figure 36. Rietveld refinement plot of sample **36 Lorax Environmental – CAEXD239740** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

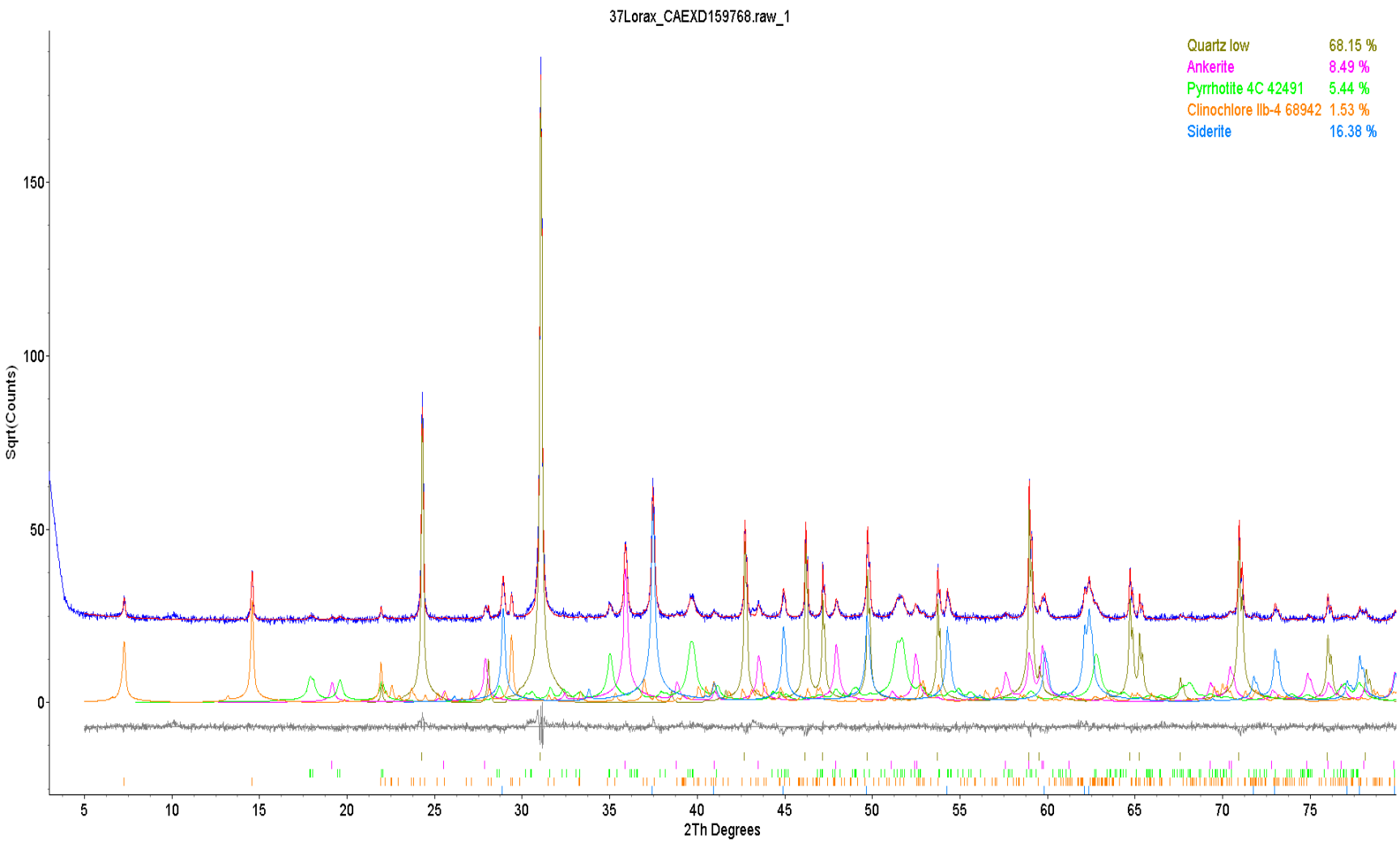


Figure 37. Rietveld refinement plot of sample **37 Lorax Environmental – CAEXD159768** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

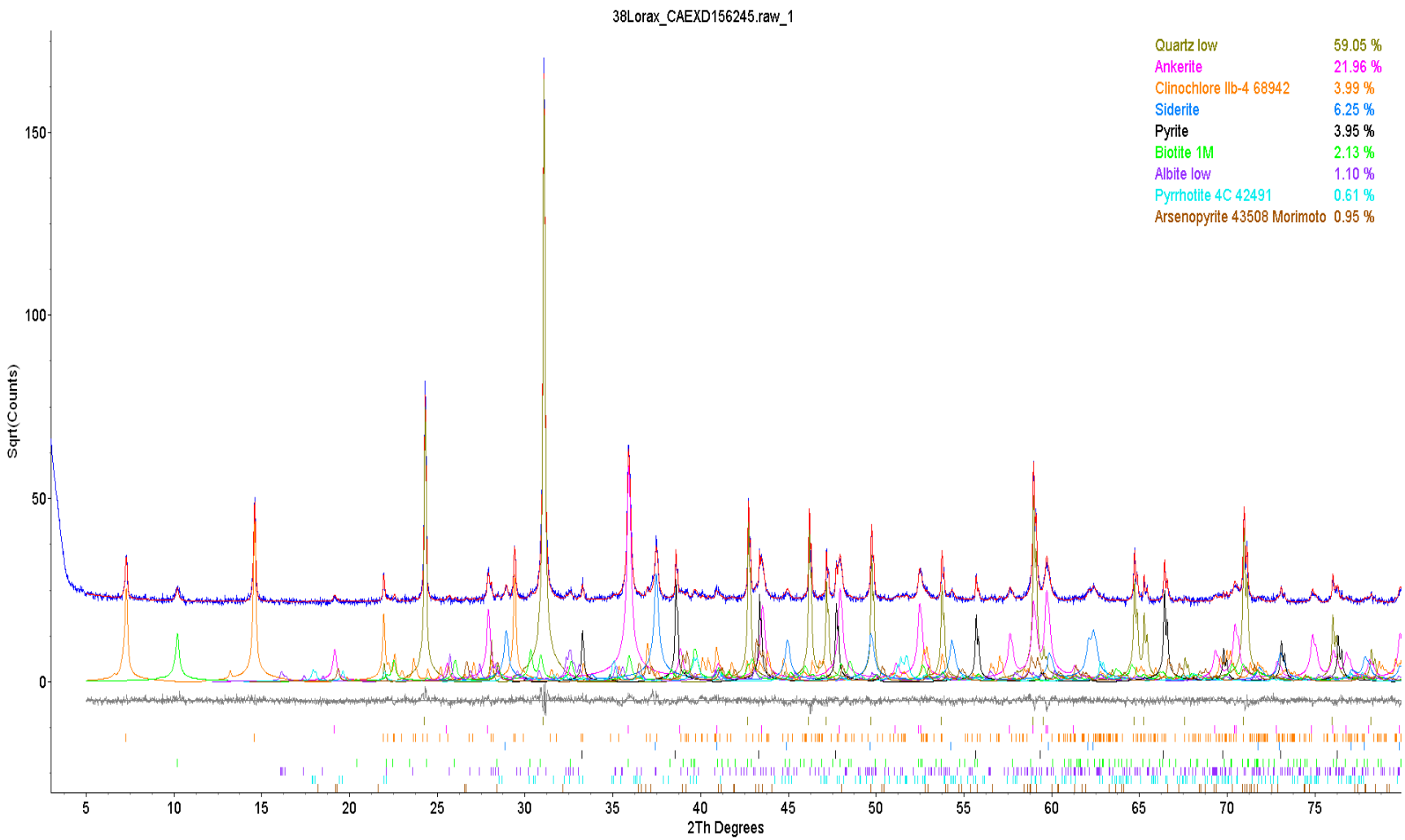


Figure 38. Rietveld refinement plot of sample **38 Lorax Environmental – CAEXD156245** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

**Table 1. Results of quantitative phase analysis (wt.%) XRD-Rietveld - Lorax Environmental Project A574-1**

| **UBC** | **#1** | | **#2** | | **#3** | | **#4** | | **#5** | | **#6** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **TSF 25** | | **TSF 26** | | **TSF 27** | | **TSF 28** | | **TSF 29** | | **TSF 30** |
| Quartz | 42.9 | Quartz | 43.3 | Quartz | 43.6 | Quartz | 41.9 | Quartz | 42.4 | Quartz | 44.0 |
| Muscovite 2M1 | 13.9 | Muscovite 2M1 | 12.9 | Muscovite 2M1 | 14.1 | Muscovite 2M1 | 13.9 | Muscovite 2M1 | 12.9 | Muscovite 2M1 | 12.5 |
| Plagioclase | 10.6 | Plagioclase | 10.6 | Plagioclase | 11.3 | Plagioclase | 12.5 | Plagioclase | 11.1 | Plagioclase | 10.8 |
| Magnetite | 3.2 | Magnetite | 3.5 | Magnetite | 3.0 | Magnetite | 2.6 | Magnetite | 3.8 | Magnetite | 3.6 |
| Gypsum | 1.6 | Gypsum | 1.3 | Gypsum | 1.1 | Gypsum | 1.4 | Gypsum | 1.1 | Gypsum | 1.0 |
| Calcite | 1.7 | Calcite | 1.4 | Calcite | 1.3 | Calcite | 1.6 | Calcite | 1.5 | Calcite | 1.3 |
| Ankerite | 7.1 | Ankerite | 7.5 | Ankerite | 7.8 | Ankerite | 8.2 | Ankerite | 7.7 | Ankerite | 7.2 |
| Biotite 1M | 2.2 | Biotite 1M | 2.9 | Biotite 1M | 2.2 | Biotite 1M | 2.4 | Biotite 1M | 2.5 | Biotite 1M | 2.7 |
| Arsenopyrite | 1.9 | Arsenopyrite | 1.9 | Arsenopyrite | 2.0 | Arsenopyrite | 1.9 | Arsenopyrite | 2.1 | Arsenopyrite | 2.4 |
| Pyrrhotite | 1.9 | Pyrrhotite | 2.3 | Pyrrhotite | 2.2 | Pyrrhotite | 1.9 | Pyrrhotite | 2.4 | Pyrrhotite | 2.4 |
| Siderite | 1.2 | Siderite | 1.3 | Siderite | 1.2 | Siderite | 0.9 | Siderite | 1.3 | Siderite | 1.5 |
| Halite ? | 0.7 | Halite ? | 0.6 | Halite ? | 0.6 | Halite ? | 0.8 | Halite ? | 0.4 | Halite ? | 0.5 |
| Chalcopyrite ? | 0.4 | Chalcopyrite ? | 0.4 | Chalcopyrite ? | 0.4 | Chalcopyrite ? | 0.5 | Chalcopyrite ? | 0.5 | Chalcopyrite ? | 0.5 |
| Chamosite | 10.4 | Pyrite ? | 0.4 | Chamosite | 8.8 | Chamosite | 8.9 | Chamosite | 9.7 | Chamosite | 9.4 |
| Ilmenite ? | 0.3 | Chamosite | 9.7 | Pyrite ? | 0.3 | Pyrite ? | 0.3 | Grunerite | 0.8 | Pyrite ? | 0.4 |
| | | | | | | Ilmenite | 0.4 | | | | |
| **Total** | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** | | **100.0** |

# *QUANTITATIVE PHASE ANALYSIS OF 6 POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.*

***Project: A574-1 Meliadine***

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***Vancouver, BC  V6J 3H9***

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***Dept. of Earth, Ocean & Atmospheric Sciences***
***The University of British Columbia***
***6339 Stores Road***
***Vancouver, BC  V6T 1Z4***

***October 16, 2020***

## EXPERIMENTAL METHOD

The 6 samples of **Project A574-1** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 10 minutes. Continuous-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKα radiation on a Bruker D8 Advance Bragg-Brentano diffractometer equipped with an Fe filter foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye-XE detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

## RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Bruker. X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1 (separate file, ***Lorax Environmental Results Oct 16 2020 - Project A574-1 - 6 samples.xlsx***). These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 6. Ideal formulae of the mineral phases present are shown in Table 2.

Table 2.

| **Mineral** | **Ideal Formula** |
|---|---|
| Ankerite-Dolomite | $Ca(Fe^{2+},Mg,Mn)(CO_3)_2/CaMg(CO_3)_2$ |
| Arsenopyrite | FeAsS |
| Biotite | $K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$ |
| Calcite | $CaCO_3$ |
| Chalcopyrite | $CuFeS_2$ |
| Chamosite | $(Fe^{2+},Mg,Fe^{3+})_5Al(Si_3Al)O_{10}(OH,O)_8$ |
| Grunerite | $Fe_7^{2+}Si_8O_{22}(OH)_2$ |
| Gypsum | $CaSO_4 \cdot 2H_2O$ |
| Halite | NaCl |
| Ilmenite | $Ca_5(PO_4)_3(OH)$ |
| Magnetite | $Fe_3O_4$ |
| Muscovite 2M1 | $KAl_2AlSi_3O_{10}(OH)_2$ |
| Plagioclase (albite) | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ |
| Pyrite | $FeS_2$ |
| Pyrrhotite | $Fe_{1-x}S$ |
| Quartz | $SiO_2$ |
| Siderite | $Fe^{2+}CO_3$ |

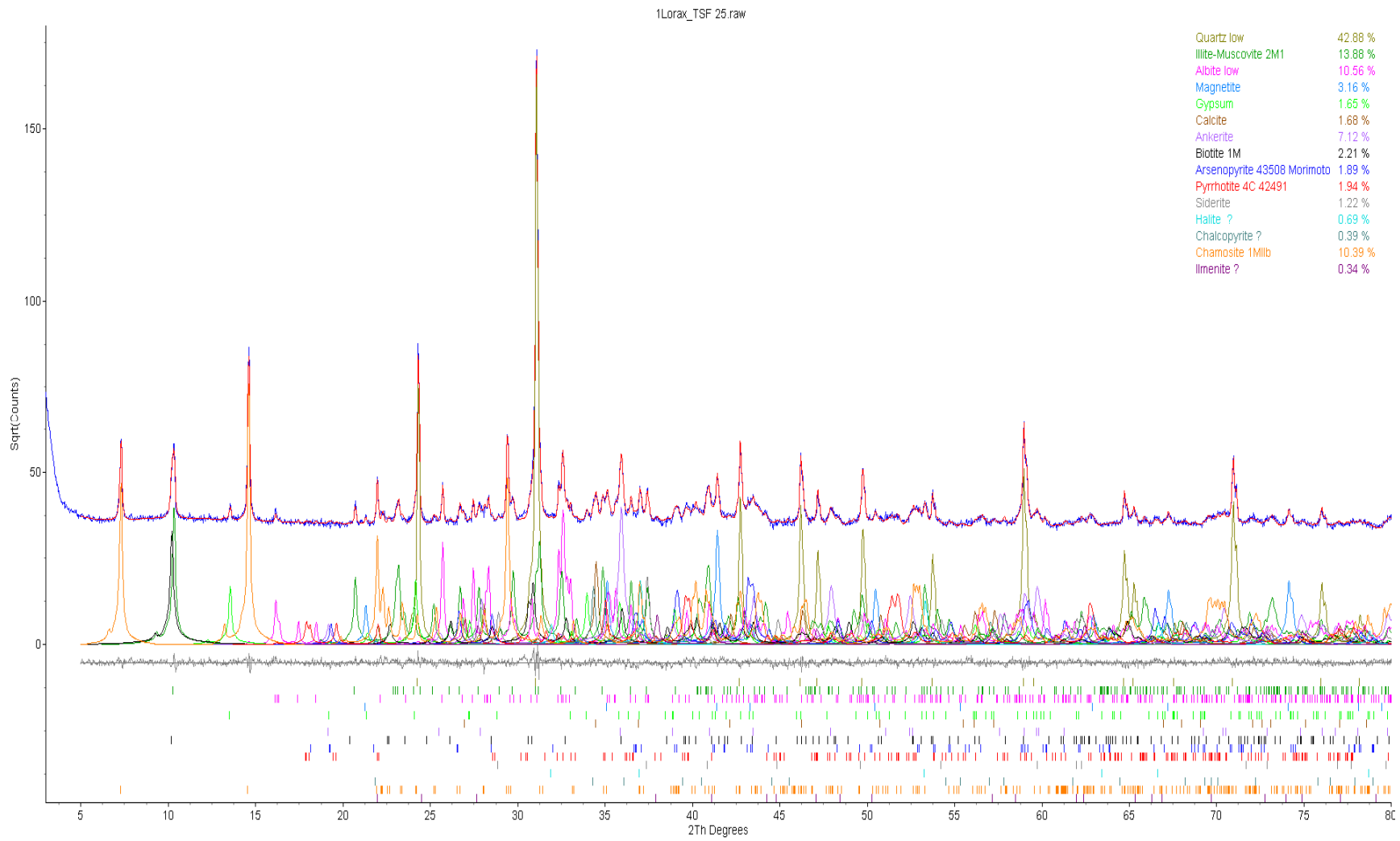



Figure 1. Rietveld refinement plot of sample **1 Lorax Environmental – TSF 25** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

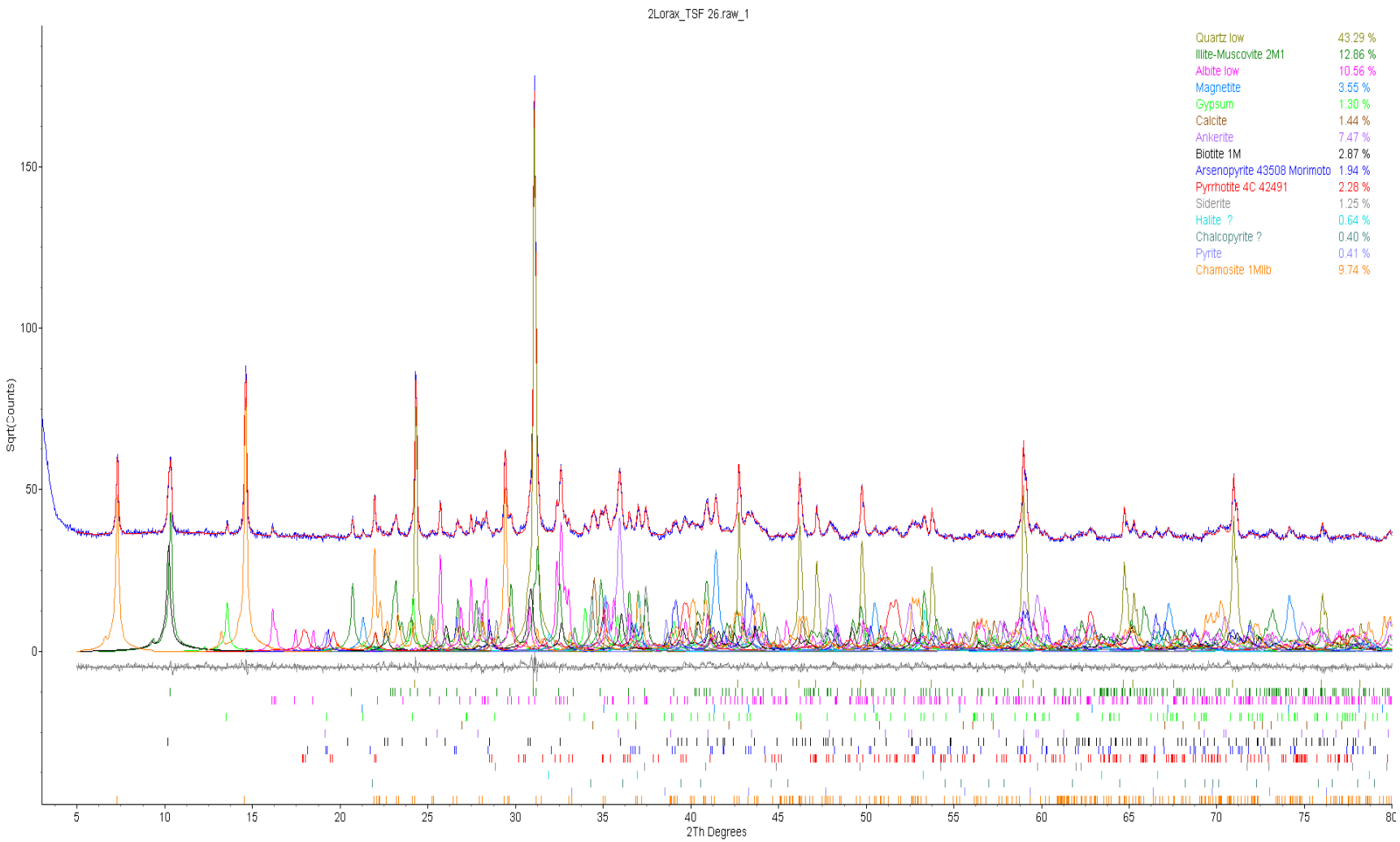



Figure 2. Rietveld refinement plot of sample **2 Lorax Environmental – TSF 26** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

Figure 3. Rietveld refinement plot of sample **3 Lorax Environmental – TSF 27** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

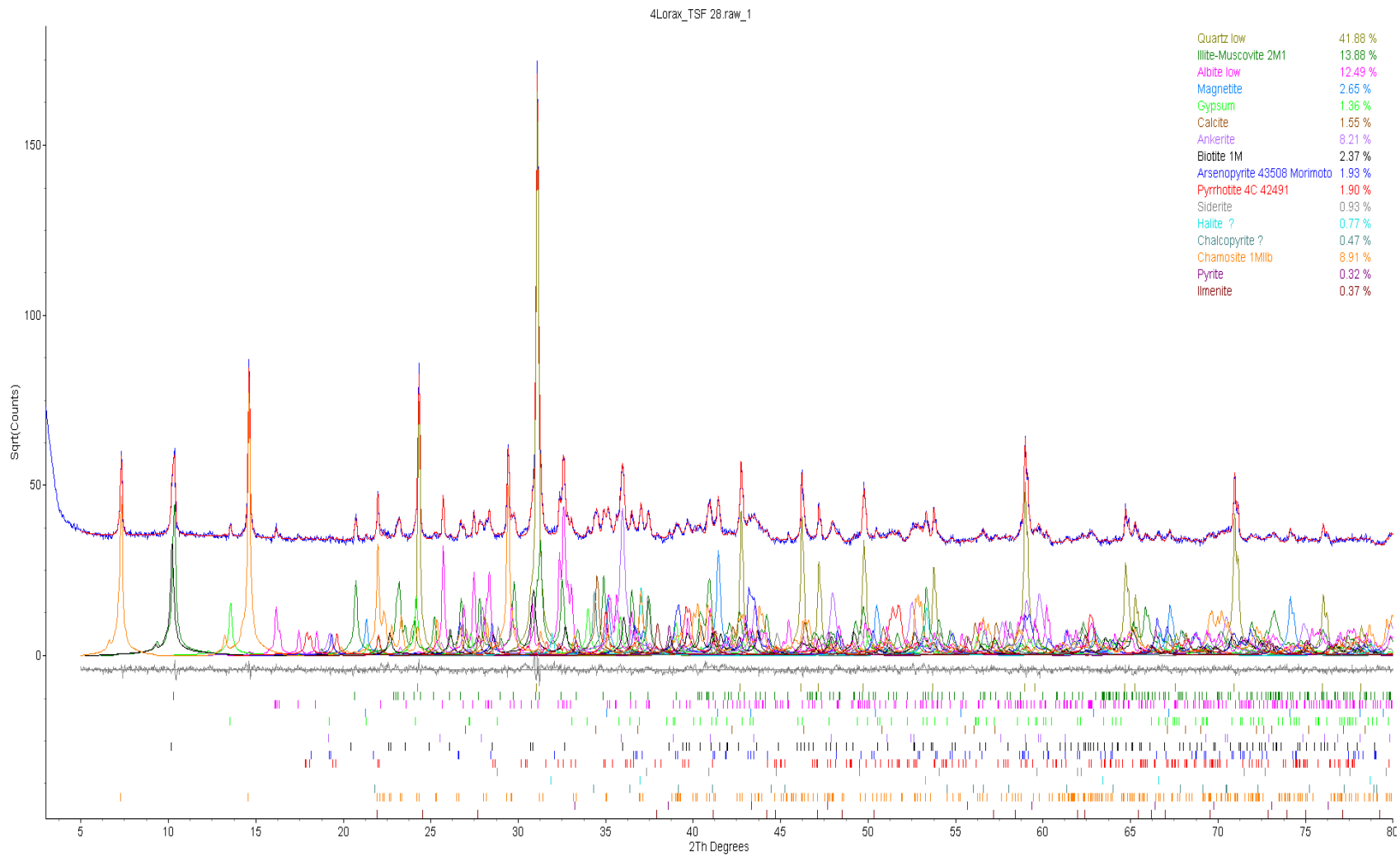



Figure 4. Rietveld refinement plot of sample **4 Lorax Environmental – TSF 28** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

Figure 5. Rietveld refinement plot of sample **5 Lorax Environmental – TSF 29** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

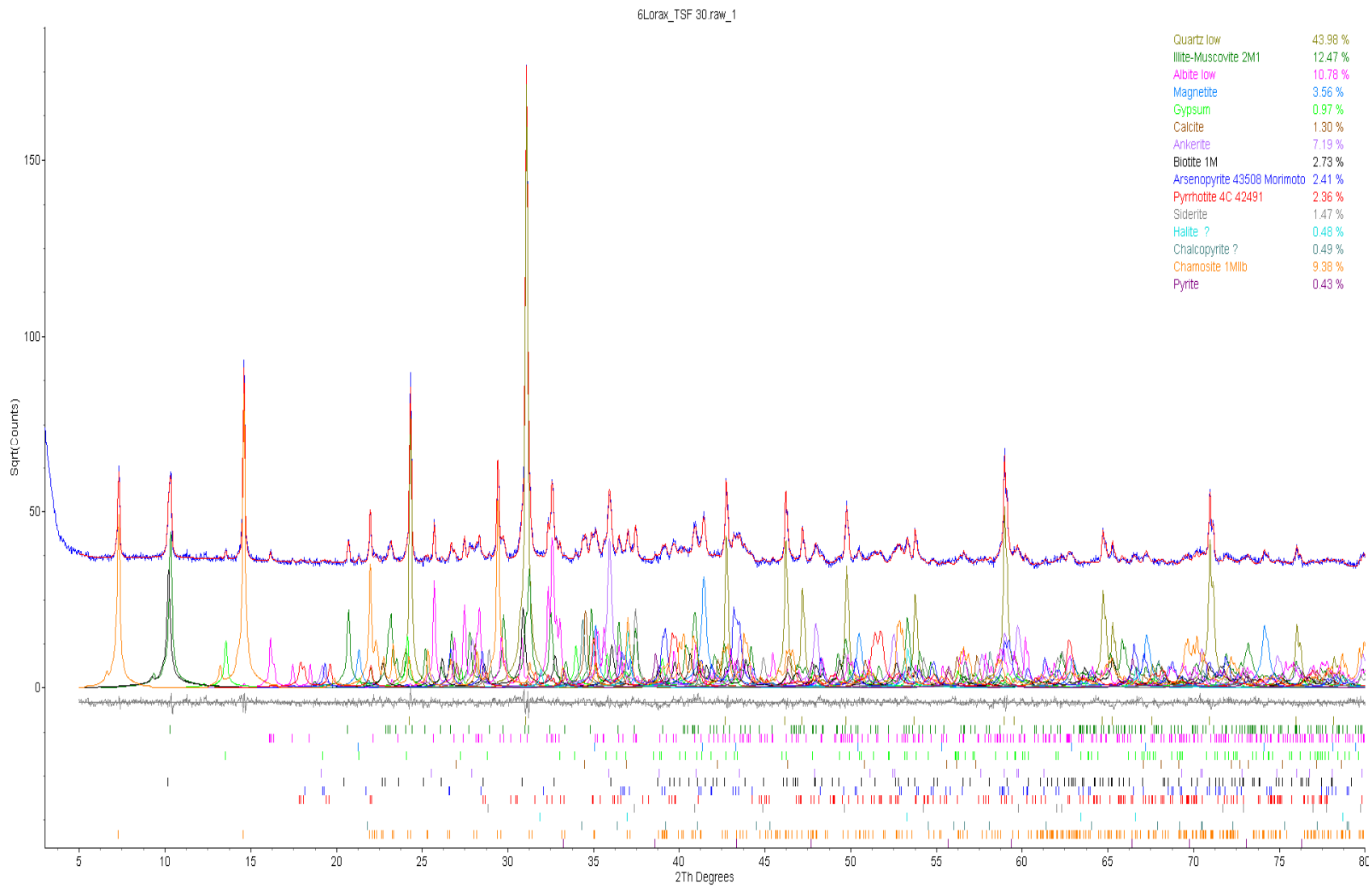



Figure 6. Rietveld refinement plot of sample **6 Lorax Environmental – TSF 30** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

# TIMA DATA

**prepared for:**

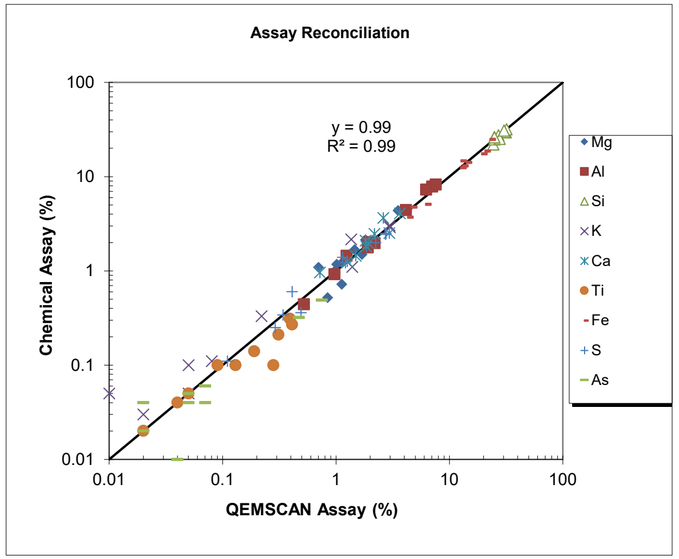
## Lorax

**CA20I-00000-211-14936-01**
**MI7016-SEP20**
**November 26, 2021**

**Prepared by:**

**Logan Jameson**
**Senior Mineralogist**

**Elemental Mass (%)**

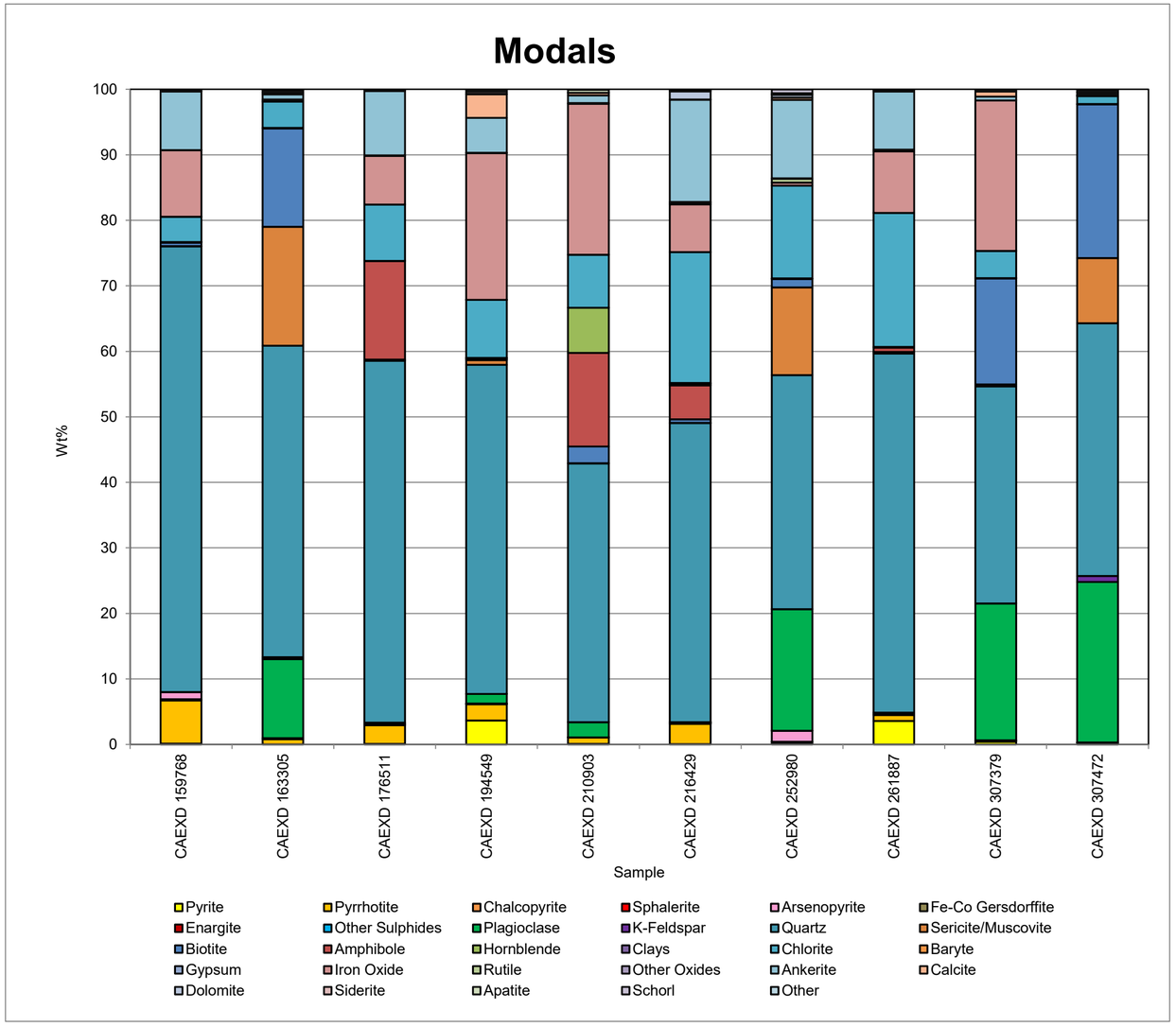


**Elemental Mass (%) Absolute**

| | Magnesium | | Aluminum | | Silicon | | Potassium | | Calcium | | Titanium | | Iron | | Sulphur | | Arsenic | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mineral Name** | Mg (Calculated) | Mg (Assay) | Al (Calculated) | Al (Assay) | Si (Calculated) | Si (Assay) | K (Calculated) | K (Assay) | Ca (Calculated) | Ca (Assay) | Ti (Calculated) | Ti (Assay) | Fe (Calculated) | Fe (Assay) | S (Calculated) | S (Assay) | As (Calculated) | As (Assay) |
| CAEXD 159768 | 0.70 | 1.09 | 0.52 | 0.44 | 31.4 | 29.5 | 0.05 | 0.05 | 1.85 | 1.81 | 0.02 | 0.02 | 13.1 | 12.9 | 2.73 | 2.44 | 0.47 | 0.32 |
| CAEXD 163305 | 1.12 | 1.21 | 7.06 | 7.83 | 31.8 | 31.7 | 2.96 | 3.02 | 1.49 | 1.44 | 0.31 | 0.21 | 4.28 | 3.70 | 0.34 | 0.34 | 0.07 | 0.04 |
| CAEXD 176511 | 1.46 | 1.68 | 0.97 | 0.92 | 30.5 | 29.7 | 0.01 | 0.05 | 2.18 | 2.47 | 0.04 | 0.04 | 12.6 | 14.7 | 1.14 | 1.39 | 0.07 | 0.06 |
| CAEXD 194549 | 0.84 | 0.52 | 1.24 | 1.44 | 24.4 | 22.0 | 0.08 | 0.11 | 2.60 | 3.65 | 0.05 | 0.05 | 20.6 | 18.6 | 2.76 | 2.50 | 0.04 | 0.01 |
| CAEXD 210903 | 1.12 | 0.72 | 1.95 | 2.01 | 24.9 | 26.2 | 0.22 | 0.33 | 1.25 | 1.26 | 0.09 | 0.10 | 22.8 | 24.8 | 0.41 | 0.60 | 0.00 | 0.01 |
| CAEXD 216429 | 3.51 | 4.36 | 1.91 | 1.77 | 24.9 | 24.9 | 0.05 | 0.10 | 3.66 | 4.06 | 0.19 | 0.14 | 12.6 | 12.5 | 1.21 | 1.22 | 0.05 | 0.05 |
| CAEXD 252980 | 1.69 | 1.49 | 6.24 | 7.25 | 27.0 | 27.3 | 1.36 | 2.15 | 2.95 | 2.51 | 0.39 | 0.31 | 6.17 | 5.09 | 0.49 | 0.36 | 0.75 | 0.49 |
| CAEXD 261887 | 1.82 | 2.13 | 2.19 | 1.97 | 27.7 | 25.2 | 0.02 | 0.03 | 1.93 | 1.97 | 0.13 | 0.10 | 14.1 | 14.1 | 2.24 | 1.99 | 0.05 | 0.04 |
| CAEXD 307379 | 0.96 | 0.98 | 4.13 | 4.42 | 24.9 | 26.1 | 1.39 | 1.10 | 0.72 | 0.96 | 0.28 | 0.10 | 19.3 | 17.5 | 0.29 | 0.25 | 0.02 | 0.02 |
| CAEXD 307472 | 1.01 | 1.17 | 7.57 | 8.21 | 30.2 | 30.7 | 2.98 | 2.89 | 1.82 | 2.09 | 0.41 | 0.27 | 4.62 | 4.76 | 0.11 | 0.11 | 0.02 | 0.04 |

Lorax
CA20I-00000-211-14936-01
MI7016-SEP20

| Mineral Mass | CAEXD 159768 | CAEXD 163305 | CAEXD 176511 | CAEXD 194549 | CAEXD 210903 | CAEXD 216429 | CAEXD 252980 | CAEXD 261887 | CAEXD 307379 | CAEXD 307472 |
|---|---|---|---|---|---|---|---|---|---|---|
| Pyrite | 0.13 | 0.01 | 0.09 | 3.66 | 0.08 | 0.04 | 0.11 | 3.60 | 0.41 | 0.01 |
| Pyrrhotite | 6.60 | 0.81 | 2.84 | 2.49 | 0.99 | 3.10 | 0.30 | 0.92 | 0.17 | 0.26 |
| Chalcopyrite | 0.07 | 0.01 | 0.02 | 0.03 | 0.00 | 0.03 | 0.02 | 0.07 | 0.00 | 0.00 |
| Sphalerite | 0.12 | 0.00 | 0.02 | 0.00 | 0.00 | 0.09 | 0.00 | 0.10 | 0.01 | 0.00 |
| Arsenopyrite | 1.07 | 0.15 | 0.15 | 0.08 | 0.01 | 0.07 | 1.65 | 0.12 | 0.05 | 0.04 |
| Fe-Co Gersdorffite | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0312 | 0.0005 | 0.0001 | 0.0000 | 0.0003 |
| Enargite | 0.0000 | 0.0000 | 0.0049 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Other Sulphides | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Plagioclase | 0.02 | 12.0 | 0.18 | 1.46 | 2.30 | 0.03 | 18.6 | 0.05 | 20.9 | 24.5 |
| K-Feldspar | 0.00 | 0.29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.90 |
| Quartz | 68.0 | 47.5 | 55.2 | 50.2 | 39.5 | 45.6 | 35.7 | 54.8 | 33.1 | 38.6 |
| Sericite/Muscovite | 0.04 | 18.1 | 0.06 | 0.74 | 0.04 | 0.06 | 13.4 | 0.17 | 0.30 | 9.96 |
| Biotite | 0.51 | 15.0 | 0.11 | 0.09 | 2.54 | 0.55 | 1.30 | 0.07 | 16.2 | 23.4 |
| Amphibole | 0.11 | 0.03 | 15.1 | 0.16 | 14.3 | 5.16 | 0.01 | 0.67 | 0.04 | 0.05 |
| Hornblende | 0.00 | 0.02 | 0.01 | 0.07 | 6.90 | 0.23 | 0.01 | 0.08 | 0.01 | 0.01 |
| Clays | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.13 | 0.05 | 0.00 | 0.00 | 0.00 |
| Chlorite | 3.86 | 4.02 | 8.59 | 8.84 | 8.09 | 20.0 | 14.2 | 20.5 | 4.16 | 1.21 |
| Baryte | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gypsum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Iron Oxide | 10.2 | 0.22 | 7.43 | 22.4 | 23.0 | 7.30 | 0.47 | 9.42 | 23.0 | 0.12 |
| Rutile | 0.02 | 0.08 | 0.05 | 0.08 | 0.07 | 0.27 | 0.57 | 0.21 | 0.01 | 0.01 |
| Other Oxides | 0.01 | 0.03 | 0.02 | 0.02 | 0.02 | 0.10 | 0.10 | 0.04 | 0.00 | 0.01 |
| Ankerite | 8.92 | 0.78 | 9.81 | 5.32 | 1.17 | 15.6 | 11.9 | 8.85 | 0.55 | 0.25 |
| Calcite | 0.02 | 0.29 | 0.03 | 3.60 | 0.40 | 0.04 | 0.37 | 0.01 | 0.77 | 0.23 |
| Dolomite | 0.02 | 0.00 | 0.16 | 0.04 | 0.00 | 1.23 | 0.42 | 0.05 | 0.03 | 0.00 |
| Siderite | 0.02 | 0.00 | 0.03 | 0.33 | 0.00 | 0.03 | 0.00 | 0.08 | 0.00 | 0.00 |
| Apatite | 0.03 | 0.30 | 0.04 | 0.32 | 0.50 | 0.18 | 0.22 | 0.17 | 0.30 | 0.30 |
| Schorl | 0.22 | 0.12 | 0.00 | 0.01 | 0.00 | 0.00 | 0.57 | 0.00 | 0.02 | 0.07 |
| Other | 0.03 | 0.07 | 0.02 | 0.05 | 0.04 | 0.10 | 0.04 | 0.04 | 0.01 | 0.06 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |



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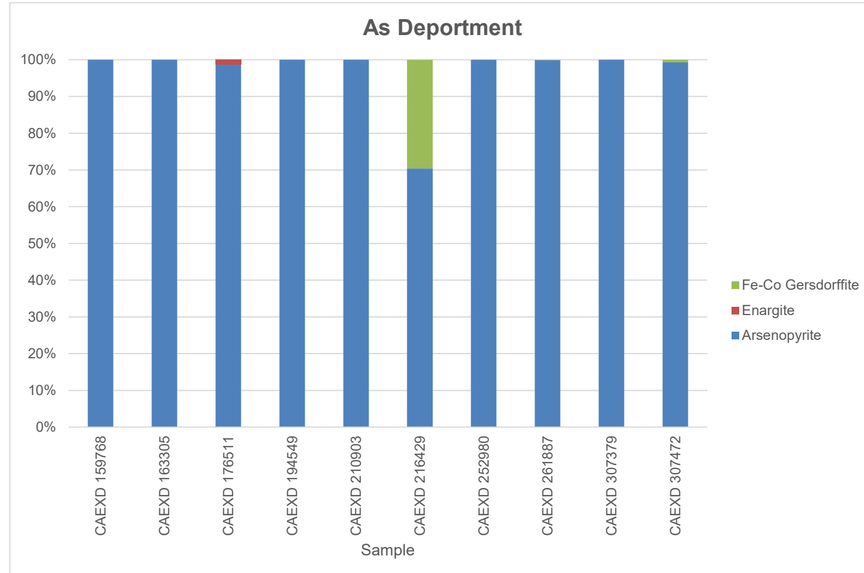
**As Deportment**

**Absolute**

| Mineral Mass | CAEXD 159768 | CAEXD 163305 | CAEXD 176511 | CAEXD 194549 | CAEXD 210903 | CAEXD 216429 | CAEXD 252980 | CAEXD 261887 | CAEXD 307379 | CAEXD 307472 |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenopyrite | 0.47 | 0.07 | 0.07 | 0.04 | 0.00 | 0.03 | 0.75 | 0.05 | 0.02 | 0.02 |
| Enargite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fe-Co Gersdorffite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 0.47 | 0.07 | 0.07 | 0.04 | 0.00 | 0.05 | 0.75 | 0.05 | 0.02 | 0.02 |

**Normalized**

| Mineral Mass | CAEXD 159768 | CAEXD 163305 | CAEXD 176511 | CAEXD 194549 | CAEXD 210903 | CAEXD 216429 | CAEXD 252980 | CAEXD 261887 | CAEXD 307379 | CAEXD 307472 |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenopyrite | 100.0 | 100.0 | 98.7 | 100.0 | 100.0 | 70.4 | 100.0 | 99.9 | 100.0 | 99.3 |
| Enargite | 0.00 | 0.00 | 1.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fe-Co Gersdorffite | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 29.6 | 0.03 | 0.08 | 0.00 | 0.69 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |



## Pyrrhotite

**Normalized weight concentration**

| | S | Fe |
|---|---|---|
| Pyrrhotite_01 | 38.54% | 61.45% |
| Pyrrhotite_02 | 37.95% | 62.04% |
| Pyrrhotite_03 | 37.96% | 62.03% |
| Pyrrhotite_04 | 37.74% | 62.25% |
| Pyrrhotite_05 | 37.75% | 62.24% |
| Pyrrhotite_06 | 38.39% | 61.60% |
| Pyrrhotite_07 | 39.18% | 60.81% |
| Pyrrhotite_08 | 39.38% | 60.61% |
| Pyrrhotite_09 | 39.00% | 60.99% |
| Pyrrhotite_10 | 38.52% | 61.47% |
| Pyrrhotite_11 | 37.61% | 62.38% |
| Pyrrhotite_12 | 38.53% | 61.46% |
| Pyrrhotite_13 | 38.53% | 61.46% |
| Pyrrhotite_14 | 37.95% | 62.04% |
| Pyrrhotite_15 | 38.82% | 61.17% |
| Pyrrhotite_16 | 39.25% | 60.74% |
| Pyrrhotite_17 | 38.47% | 61.52% |
| Pyrrhotite_18 | 38.33% | 61.66% |
| Pyrrhotite_19 | 38.55% | 61.44% |
| Pyrrhotite_20 | 38.33% | 61.66% |
| Pyrrhotite_21 | 38.65% | 61.34% |
| Pyrrhotite_22 | 38.66% | 61.33% |
| Pyrrhotite_23 | 38.62% | 61.37% |
| Pyrrhotite_24 | 38.39% | 61.60% |
| Pyrrhotite_25 | 38.42% | 61.57% |
| Pyrrhotite_26 | 38.48% | 61.51% |
| Pyrrhotite_27 | 38.61% | 61.38% |
| Pyrrhotite_28 | 38.53% | 61.46% |
| Pyrrhotite_29 | 38.85% | 61.14% |
| Pyrrhotite_30 | 39.17% | 60.82% |
| **Average concentration** | **38.50%** | **61.49%** |
| **Standard deviation** | **0.43%** | **0.43%** |

## Pyrite

**Normalized weight concentration**

| | S | Fe |
|---|---|---|
| Pyrite_01 | 53.93% | 46.06% |
| Pyrite_02 | 53.86% | 46.13% |
| Pyrite_03 | 53.77% | 46.22% |
| Pyrite_04 | 53.14% | 46.85% |
| Pyrite_05 | 53.96% | 46.03% |
| Pyrite_06 | 53.39% | 46.60% |
| Pyrite_07 | 52.43% | 47.56% |
| Pyrite_08 | 53.03% | 46.96% |
| Pyrite_09 | 53.91% | 46.08% |
| Pyrite_10 | 53.24% | 46.75% |
| Pyrite_11 | 53.77% | 46.22% |
| Pyrite_12 | 53.58% | 46.41% |
| Pyrite_13 | 53.97% | 46.02% |
| Pyrite_14 | 52.82% | 47.17% |
| Pyrite_15 | 52.98% | 47.01% |
| Pyrite_16 | 53.02% | 46.97% |
| Pyrite_17 | 53.61% | 46.38% |
| Pyrite_18 | 53.32% | 46.67% |
| Pyrite_19 | 52.52% | 47.47% |
| Pyrite_20 | 53.29% | 46.70% |
| Pyrite_21 | 53.20% | 46.79% |
| Pyrite_22 | 53.03% | 46.96% |
| Pyrite_23 | 53.66% | 46.33% |
| Pyrite_24 | 53.76% | 46.23% |
| Pyrite_25 | 53.93% | 46.06% |
| Pyrite_26 | 52.06% | 47.93% |
| Pyrite_27 | 52.20% | 47.79% |
| Pyrite_28 | 53.67% | 46.32% |
| Pyrite_29 | 52.41% | 47.58% |
| Pyrite_30 | 53.82% | 46.17% |
| **Average concentration** | **53.31%** | **46.68%** |
| **Standard deviation** | **0.55%** | **0.55%** |

## Ankerite

* Carbon not included in quantification

**Normalized weight concentration**

| | O | Mg | Ca | Mn | Fe |
|---|---|---|---|---|---|
| Ankerite_01 | 52.92% | 5.43% | 23.71% | 0.28% | 17.63% |
| Ankerite_02 | 52.60% | 5.47% | 23.75% | 1.13% | 17.02% |
| Ankerite_03 | 52.44% | 5.62% | 24.34% | 0.61% | 16.97% |
| Ankerite_04 | 53.45% | 7.55% | 25.30% | 1.44% | 12.24% |
| Ankerite_05 | 50.65% | 3.42% | 23.52% | 2.30% | 20.09% |
| Ankerite_06 | 52.22% | 4.59% | 23.64% | 1.79% | 17.75% |
| Ankerite_07 | 50.69% | 4.30% | 23.68% | 3.89% | 17.42% |
| Ankerite_08 | 51.44% | 4.03% | 23.27% | 2.48% | 18.76% |
| Ankerite_09 | 52.16% | 5.39% | 23.86% | 1.60% | 16.96% |
| Ankerite_10 | 53.04% | 6.54% | 24.35% | 0.18% | 15.87% |
| Ankerite_11 | 53.22% | 6.41% | 24.66% | 0.43% | 15.26% |
| Ankerite_12 | 51.76% | 4.48% | 23.76% | 1.73% | 18.25% |
| Ankerite_13 | 50.95% | 3.76% | 23.56% | 2.38% | 19.33% |
| Ankerite_14 | 51.38% | 3.82% | 22.95% | 3.02% | 18.81% |
| Ankerite_15 | 52.68% | 5.52% | 23.45% | 0.52% | 17.81% |
| Ankerite_16 | 52.60% | 6.27% | 24.91% | 2.15% | 14.05% |
| Ankerite_17 | 51.50% | 2.92% | 22.91% | 0.82% | 21.82% |
| Ankerite_18 | 54.54% | 8.72% | 24.93% | 0.54% | 11.25% |
| Ankerite_19 | 55.59% | 7.92% | 23.66% | 0.48% | 12.33% |
| Ankerite_20 | 55.33% | 9.59% | 25.01% | 0.65% | 9.39% |
| Ankerite_21 | 51.10% | 2.95% | 23.33% | 1.10% | 21.50% |
| Ankerite_22 | 55.96% | 10.26% | 25.11% | 0.62% | 8.04% |
| Ankerite_23 | 51.78% | 4.61% | 23.84% | 1.01% | 18.74% |
| Ankerite_24 | 54.49% | 7.49% | 24.00% | 0.55% | 13.45% |
| Ankerite_25 | 53.69% | 6.76% | 23.91% | 0.74% | 14.88% |
| Ankerite_26 | 53.52% | 6.48% | 23.67% | 0.71% | 15.59% |
| Ankerite_27 | 53.59% | 7.63% | 25.02% | 1.72% | 12.02% |
| Ankerite_28 | 51.32% | 4.12% | 23.48% | 1.90% | 19.15% |
| Ankerite_29 | 52.71% | 5.60% | 24.35% | 0.33% | 16.97% |
| Ankerite_30 | 52.24% | 4.24% | 24.72% | 0.50% | 18.28% |
| **Average concentration** | **52.72%** | **5.73%** | **24.02%** | **1.25%** | **16.25%** |
| **Standard deviation** | **1.40%** | **1.86%** | **0.65%** | **0.90%** | **3.33%** |

## Siderite

* Carbon not included in quantification

**Normalized weight concentration**

| | O | Mg | Ca | Mn | Fe |
|---|---|---|---|---|---|
| Siderite_02 | 53.89% | 1.65% | 5.44% | 0.01% | 38.99% |
| Siderite_03 | 51.47% | 0.63% | 5.50% | 0.23% | 42.15% |
| Siderite_04 | 52.15% | 0.70% | 5.44% | 0.09% | 41.60% |
| Siderite_08 | 49.81% | 0.93% | 4.83% | 0.74% | 43.68% |
| Siderite_09 | 52.36% | 1.51% | 5.76% | 0.09% | 40.25% |
| Siderite_10 | 50.82% | 1.23% | 5.63% | 0.42% | 41.87% |
| Siderite_13 | 49.87% | 0.69% | 5.15% | 0.81% | 43.46% |
| Siderite_18 | 50.88% | 0.43% | 5.02% | 0.40% | 43.25% |
| Siderite_19 | 51.60% | 0.79% | 5.13% | 0.25% | 42.21% |
| **Average concentration** | **51.43%** | **0.95%** | **5.32%** | **0.34%** | **41.94%** |
| **Standard deviation** | **1.21%** | **0.39%** | **0.28%** | **0.26%** | **1.44%** |

## Fe-Co Gersdorffite

**Normalized weight concentration**

| | S | Fe | Co | Ni | As |
|---|---|---|---|---|---|
| Fe-Co Gersdorfitte_1 | 15.34% | 11.92% | 6.10% | 19.55% | 47.06% |

# Appendix D: Static Test Results


APPENDIX D-1: GEOCHEMICAL CHARACTERIZATION OF TIRIGANIAQ WOLF

APPENDIX D-2: SUMMARY STATISTICS FOR ACID BASE ACCOUNTING RESULTS

APPENDIX D-3: SUMMARY STATISTICS FOR WHOLE ROCK ANALYSIS RESULTS

APPENDIX D-4: SUMMARY STATISTICS FOR SOLID PHASE ELEMENTAL ABUNDANCE RESULTS

APPENDIX D-5: SUMMARY STATISTICS FOR SHAKE FLASK EXTRACTION RESULTS

APPENDIX D-6: MELIADINE EXTENSION DATABASE: STATIC TEST RESULTS


AGNICO EAGLE

# APPENDIX D-1: GEOCHEMICAL CHARACTERIZATION OF TIRIGANIAQ WOLF

# TECHNICAL MEMORANDUM

| | | |
|---|---|---|
| **To:** | **Jenyfer Mosquera, Colleen Prather, Jamie Quesnel, Michel Groleau** | **Date: February 28, 2022** |
| **From:** | **Gladys Oka, John Dockrey** | **Project #: A574-3** |
| **Subject:** | **Geochemical Characterization of Tiriganiaq-Wolf Mine Rock** | |

## 1. Introduction

The Meliadine Mine is located approximately 25 kilometres (km) north of Rankin Inlet. The project is composed of seven gold deposits which are being developed in a phased approach. The initial phase of development has been in operations since 2019 and is focused on development of the Tiriganiaq deposit. The Meliadine Extension includes the development of 6 additional gold deposits (F Zone, Pump, Wesmeg, Wesmeg North, Tiriganiaq-Wolf and Discovery) and associated infrastructure.

Lorax Environmental Services Ltd. (Lorax) was retained by Agnico Eagle to complete a geochemical characterization program in support of the Meliadine Extension. The results of this program are presented in the *Meliadine Extension: Geochemical Characterization and Source Term Report* (Lorax, 2022) for the Discovery, F Zone, Pump, Tiriganiaq, Wesmeg and Wesmeg North deposits. This memo provides a complementary assessment of the geochemical characteristics of waste rock and ore collected from the Tiriganiaq-Wolf deposit.

Characterization of the Tiriganiaq-Wolf deposit relied on drill core generated from the 2021 exploration drilling program which was completed in the summer of 2021. Due to the time required for sample selection, shipment and laboratory analysis, the results were not available in time for inclusion in the main body of the Lorax (2022) report. Gold mineralization at Tiriganiaq-Wolf follows the same geologic structures as the nearby Tiriganiaq and Wesmeg deposits, and waste rock and ore are comprised of the same lithologic units (Agnico Eagle, 2011). Hence, the geochemical assessment of Tiriganiaq-Wolf is consistent with the approach used for other deposits, described in Lorax (2022).

## 2. Sample Collection and Analytical Methods

Waste rock (n=11) and ore (n=13) samples from the Tiriganiaq-Wolf underground were selected from drill core of iron formation (IF), sedimentary (SE) and mafic volcanic (VO) lithologies in the summer and fall of 2021. Samples were selected from drill core produced from the 2021 exploration program (n=12) as well as historic drill core samples from 1998 (n=6) and 2014 (n=6) found in storage at site. Note that IF, SE and VO are the only three lithologies identified in the Tiriganiaq-Wolf block model. Ore samples were collected from all three lithologies while waste rock was only available for the IF and VO lithologies. Details of sample collection, selection

criteria and location are described in Section 3.1.2 and Appendix A of Lorax (2022) and are not reiterated herein.

Static testing of the geochemical samples included acid base accounting (ABA), net acid generating (NAG) tests, whole rock analysis and elemental abundance by Aqua Regia digestion. All samples were submitted to SGS Laboratories in Burnaby, B.C. for analysis. Method descriptions for the specific tests are provided in Section 3.2 of Lorax (2022).

# 3. Results

## 3.1 Acid Base Accounting

Acid base accounting results for the Tiriganiaq-Wolf waste rock and ore samples are presented along with NAG pH results in Table 3-1 and Table 3-2, respectively. The derivation of various acid potential (AP) and neutralization potential (NP) estimates applied to the Meliadine Extension dataset are discussed in Section 5.2.1 and 5.2.2 of Lorax (2022). For the purposes of ARD classification, net potential ratio (NPR) was calculated using: i) maximum acid potential (MAP) as a conservative estimate of AP; and ii) two measurements of NP, including adjusted carbonate NP (CaNP-adj) and modified NP, to capture the range of NP present in mine materials. Complete static test results for the Tiriganiaq-Wolf deposit are provided in Appendix D.1.A.

### 3.1.1 Waste Rock

Paste pH results for Tiriganiaq-Wolf waste rock are consistently alkaline (pH 7.9 to 9.0), with VO generally showing a higher range (pH 8.7 to 9.0) compared to IF samples (7.9 to 8.8). This indicates that the VO lithology may produce a higher runoff pH compared to IF upon initial exposure, which is consistent with the presence of mafic Mg-silicate minerals present in the VO lithology.

Total S abundance showed a bi-modal distribution in both VO and SE lithologies, with total S concentrations ranging from 0.1 to 0.3 wt.% in 7 samples, while the remaining four samples showed a total S of 1.1 to 1.5 wt.%. This difference can be related to Au mineralization, with samples in the upper range generally showing elevated Au content (0.032 to 0.547 ppm) compared to samples in the lower S range (Au of 0.01 to 0.098 ppm). This result is consistent with an association of Au and S mineralization at Meliadine. Both lithologies show similar total S content, with IF and VO waste showing median concentrations of 0.3 and 0.2 wt.%, respectively. Sulphate S concentrations are mostly at or below the analytical detection limit (0.01 wt.%), indicating that sulphide S dominates S speciation.

# Table 3-1:
# Acid Base Accounting Results for Underground Waste Rock Samples from Tiriganiaq-Wolf

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR | ARD Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Mod NP/MAP | |
| **IF (n=5)** | | | | | | | | | | | | | | | |
| *313476* | 8.7 | 6.4 | 1.2 | 1.1 | 0.01 | 36 | 45 | 3.2 | 3.2 | 264 | 198 | 205 | 5.5 | 5.7 | non-PAG |
| *313495* | 7.9 | 6.3 | 1.1 | 1.1 | 0.01 | 33 | 30 | 3.9 | 2.9 | 238 | 178 | 34 | 5.3 | 1.0 | Uncertain |
| *313684* | 8.7 | 6.1 | 0.2 | 0.2 | <0.01 | 7.2 | 6.7 | 3.9 | 3.7 | 312 | 233 | 213 | 32 | 30 | non-PAG |
| *321017* | 8.5 | 6.2 | 0.2 | 0.2 | 0.01 | 6.3 | 5.7 | 1.3 | 1.0 | 82 | 61 | 67 | 9.8 | 11 | non-PAG |
| *M14-2261-318118* | 8.8 | 6.1 | 0.3 | 0.3 | 0.01 | 8.7 | 9.3 | 1.1 | 1.1 | 95 | 71 | 68 | 8.2 | 7.8 | non-PAG |
| **VO (n=6)** | | | | | | | | | | | | | | | |
| *313677* | 9.0 | 6.0 | 0.1 | 0.1 | <0.01 | 3.4 | 3.6 | 3.6 | 3.7 | 304 | 265 | 189 | 79 | 56 | non-PAG |
| *313717* | 9.0 | 6.3 | 0.2 | 0.2 | <0.01 | 4.8 | 5.5 | 3.7 | 3.7 | 304 | 265 | 230 | 55 | 48 | non-PAG |
| *325113* | 9.0 | 6.6 | 0.1 | 0.1 | <0.01 | 3.2 | 3.8 | 4.2 | 4.1 | 340 | 296 | 268 | 92 | 83 | non-PAG |
| *M98-239-818975* | 9.0 | 6.4 | 0.2 | 0.2 | <0.01 | 8 | 8 | 3.7 | 3.6 | 298 | 259 | 197 | 33 | 25 | non-PAG |
| *313481* | 8.7 | 6.4 | 1.5 | 1.5 | 0.02 | 48 | 59 | 3.9 | 4.0 | 329 | 287 | 250 | 6.0 | 5.2 | non-PAG |
| *313499* | 8.9 | 6.7 | 1.4 | 1.4 | 0.01 | 45 | 45 | 3.6 | 3.6 | 300 | 261 | 235 | 5.8 | 5.3 | non-PAG |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
PAG: Potentially Acid Generating

# Table 3-2:
# Acid Base Accounting Results for Underground Ore Samples from Tiriganiaq-Wolf

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR | ARD Classification |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Mod NP/MAP | |
| **IF (n=7)** | | | | | | | | | | | | | | | |
| *313491* | 7.9 | 2.7 | 2.7 | 2.7 | 0.03 | 85 | 101 | 2.1 | 1.8 | 148 | 111 | 34 | 1.3 | 0.4 | PAG |
| *313710* | 8.9 | 6.5 | 6.6 | 6.6 | 0.04 | 207 | 260 | 1.9 | 1.8 | 153 | 114 | 122 | 0.6 | 0.6 | PAG |
| *313698* | 8.8 | 8.1 | 2.8 | 2.8 | 0.02 | 88 | 80 | 3.8 | 3.7 | 308 | 231 | 231 | 2.6 | 2.6 | Non-PAG |
| *323992* | 8.5 | 6.2 | 2.3 | 2.3 | 0.01 | 73 | 75 | 1.4 | 1.2 | 98 | 73 | 78 | 1.0 | 1.1 | Uncertain |
| *325173* | 8.3 | 6.5 | 2.7 | 2.6 | 0.03 | 83 | 118 | 2.4 | 2.3 | 190 | 142 | 139 | 1.7 | 1.7 | Uncertain |
| *M98-234-305993* | 8.0 | 2.6 | 3.6 | 3.6 | 0.03 | 113 | 126 | 1.3 | 1.0 | 86 | 64 | 48 | 0.6 | 0.4 | PAG |
| *M98-283-818257* | 8.1 | 2.9 | 3.2 | 3.2 | 0.04 | 100 | 128 | 1.2 | 0.9 | 77 | 57 | 56 | 0.6 | 0.6 | PAG |
| **SE (n=3)** | | | | | | | | | | | | | | | |
| *M98-234-305945* | 9.0 | 5.7 | 0.5 | 0.5 | <0.01 | 14 | 14 | 0.8 | 0.8 | 68 | 58 | 54 | 4.0 | 3.8 | Non-PAG |
| *M98-234-305952* | 9.3 | 5.7 | 0.2 | 0.2 | <0.01 | 5 | 5 | 1.0 | 1.0 | 82 | 70 | 67 | 13 | 12 | Non-PAG |
| *M98-283-818266* | 8.9 | 5.6 | 0.5 | 0.5 | <0.01 | 16 | 16 | 0.8 | 0.8 | 67 | 57 | 60 | 3.6 | 3.8 | Non-PAG |
| **VO (n=3)** | | | | | | | | | | | | | | | |
| *313696* | 8.5 | 7.6 | 2.1 | 2.0 | 0.02 | 64 | 65 | 6.5 | 6.1 | 512 | 446 | 397 | 6.9 | 6.2 | Non-PAG |
| *321068* | 9.0 | 5.9 | 0.3 | 0.3 | <0.01 | 10 | 10 | 3.1 | 3.0 | 251 | 219 | 188 | 21 | 18 | Non-PAG |
| *313471* | 8.5 | 8.2 | 3.0 | 2.9 | 0.02 | 92 | 99 | 2.8 | 2.8 | 234 | 204 | 179 | 2.2 | 1.9 | Uncertain |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from Sulphide-S multiplied by the relative composition and AP contribution of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2).
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).
Modified-NP (Neutralization Potential) is determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
PAG: Potentially Acid Generating

Measurements of NP used to characterize the Tiriganiaq-Wolf waste rock include carbonate NP (CaNP), CaNP-adj and modified NP. A correction to CaNP is applied to calculate CaNP-adj, as described in Section 5.2.2.3 of Lorax (2022). For most samples, the modified NP measurement is slightly lower than CaNP and CaNP-adj which is consistent with the presence of Mn and Fe carbonate minerals in the deposit (Section 4.1.2 of Lorax, 2022). Samples from the VO lithology generally showed greater NP values (median of 232 $kgCaCO_3/t$) compared to the IF lithology (median of 68 $kgCaCO_3/t$).

Two estimates of NPR are presented in Table 3-1 for evaluation of ARD potential. In most instances, Higher NPR values are measured in VO (5.2 to 92) relative to IF samples (1.0 to 32), reflecting the distribution of NP in the waste rock lithologies. All samples have NPR values >2 and are classified as non-PAG, with the exception of a single IF sample (313495). The two NPR estimates for this IF sample show a significant discrepancy, with the mod-NP/MAP NPR equal to 1.0 and a CaNP/MAP NPR equal to 5.3. Based on ARD classification presented in Chapter 5 of Lorax (2022) NPR (mod-NP/MAP) this sample is classified as having an uncertain ARD potential. All NAG pH measurements were found to be circumneutral (pH 6.0 to 6.7), supporting the ABA results which show most samples to be non-PAG.

### 3.1.2 Ore

Paste pH results show alkaline values ranging from pH 7.9 to 9.3 for all lithologies. Higher paste pH values were generally associated with the VO and SE units (pH 8.5 to 9.3) compared to the IF unit (pH 7.9 to 8.9). This indicates that all ore will generate neutral pH drainage upon initial exposure, with the VO and SE lithologies producing somewhat more alkaline runoff pH compared to the IF lithology.

Total S shows a strong association with lithology and is generally greater in ore compared to waste rock. Total-S concentrations are highest in IF ore (median of 2.8 wt.%), intermediate in VO ore (median of 2.1 wt.%), and lowest in SE ore (median of 0.5 wt.%). Sulphate-S is above detection limits in most samples (<0.01 to 0.04 wt.%) but composes a minor portion of the overall S speciation. This shows that sulphide S is the dominant sulphur species in ore.

Neutralization potential is highly variable and shows an association with lithology, with values generally being similar to equivalent waste rock lithologies. Modified-NP values are highest in the VO lithology (median of 188 $kgCaCO_3/t$), intermediate in the IF lithology (median of 78 $kgCaCO_3/t$) and lowest in the SE lithology (median of 60 $kgCaCO_3/t$). In all lithologies, modified NP values are generally lower than CaNP, which is consistent with the presence of Fe and Mn carbonate in this deposit.

Ore generally shows lower NPR values compared to waste rock owing to elevated total-S content. A majority of IF samples are classified as PAG (n=3) or Uncertain (n=2). Only a single IF ore

sample is classified as non-PAG. Conversely, all VO and SE samples are designated as non-PAG, with the exception of a single VO sample classified as Uncertain with a NPR value of 1.9. Note that this VO sample would be re-classified as non-PAG if the tailings classification criteria were applied, which uses an NPR cutoff of 1.2 for defining non-PAG tailings (see Section 5.1 of Lorax, 2022).

NAG pH measurements generally show agreement with the ARD classification determined by NPR. Three samples show NAG pH <4.5. All three of these samples also have a mod-NP/MAP NPR value of <1, while only two of the three samples show a CaNP/MAP NPR value of <1. Overall, these results show that ARD potential is limited to IF ore at the Tiriganiaq-Wolf deposit.

## 3.2 Elemental Abundance

Solid phase elemental results for Tiriganiaq-Wolf underground waste rock and ore samples are presented by lithology and compared to average upper continental crust concentrations (AUCCC) (Rudnick and Gao, 2014) in Table 3-3 and Table 3-4, respectively.

### 3.2.1 Waste Rock

Trace metal concentrations in waste rock samples from Tiriganiaq-Wolf show consistent enrichment in Ag, As and Cu compared to the AUCCC benchmark. Arsenic concentrations range from 140 to 8,590 ppm for the IF and VO samples. Variable enrichment is observed for other metal parameters including, Cd, Co, Cr, Fe, Mo, Ni, Pb, Sb, Se and Zn. Most of these parameters show similar concentrations in VO and IF waste lithologies. Notable differences in metal between rock types include Ni, Cr and Co which are preferentially enriched in VO samples, and Fe which is only enriched in IF. With respect to Se, only a subset of samples show values at or slightly above the detection limit (1 ppm) which is above the AUCCC. One VO sample (313717) shows a particularly elevated Pb content (2,090 ppm) which exceeds levels observed in other samples by over two orders of magnitude. This sample represents an outlier of the overall dataset and is not considered representative of typical VO waste rock.

### 3.2.2 Ore

Tiriganiaq-Wolf ore lithologies show consistent enrichment in Ag, As and Cu, similar to waste rock. Other enriched elements include in Bi, Cd, Co, Fe, Mn, Mo, Pb, Sb, Se and Zn. Metal enrichment for Fe, Sb and Zn are only measured in IF samples. This lithology also shows the greatest degree of Se enrichment. In general, metal enrichment in ore is greater than that of equivalent waste rock lithologies, particularly for As in the IF lithology which shows median As content 70x that of waste rock.

# Table 3-3:
# Trace Element Results for Tiriganiaq-Wolf Waste Rock Samples

| *AUCCC* | *0.053* | *81,500* | *5* | *0.16* | *0.09* | *17* | *92* | *28* | *39,200* | *774* | *1.1* | *47* | *17* | *0.4* | *0.09* | *67* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Ag** | **Al** | **As** | **Bi** | **Cd** | **Co** | **Cr** | **Cu** | **Fe** | **Mn** | **Mo** | **Ni** | **Pb** | **Sb** | **Se** | **Zn** |
| Unit | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| **IF (n=5)** | | | | | | | | | | | | | | | | |
| *313476* | 0.40 | 18,700 | ***8,593*** | 0.050 | 0.6 | 42 | 227 | 144 | 79,800 | 1,306 | 0.9 | 117 | 144 | 0.8 | ***1.0*** | 158 |
| *313495* | ***0.60*** | 1,200 | ***192*** | 0.3 | 0.6 | 4.1 | 4.0 | 99 | 198,075 | 2,209 | 0.8 | 6.0 | 91 | 0.3 | ***1.0*** | 301 |
| *313684* | 0.04 | 1,100 | ***177*** | 0.02 | 0.2 | 4.0 | 5.0 | 18 | 46,200 | 1,688 | 0.9 | 7.0 | 6.0 | 0.2 | ***<1*** | 69 |
| *321017* | 0.03 | 33,000 | ***248*** | 0.1 | 0.1 | 7.4 | 21 | 14 | 140,000 | 391 | 2.2 | 15 | 3.0 | 0.2 | ***<1*** | 48 |
| *M14-2261-318118* | 0.02 | 53,900 | ***1,259*** | 0.1 | 0.1 | 6.7 | 22 | 15 | 191,710 | 361 | 1.3 | 13 | 6.4 | 0.3 | ***<1*** | 78 |
| **VO (n=6)** | | | | | | | | | | | | | | | | |
| *313677* | 0.2 | 17,900 | ***138*** | <0.03 | 0.2 | 40 | 105 | 96 | 56,300 | 1,264 | 0.5 | 85 | 12 | 0.4 | ***<1*** | 121 |
| *313717* | ***2.4*** | 25,100 | ***507*** | <0.35 | 0.4 | 50 | 234 | 93 | 70,500 | 1,087 | 0.3 | 132 | ***2,085*** | 2.1 | ***1.0*** | 135 |
| *325113* | 0.1 | 19,100 | ***399*** | 0.020 | 0.1 | 44 | 134 | 82 | 64,300 | 1,527 | 0.3 | 112 | 12 | 0.5 | ***<1*** | 82 |
| *M98-239-818975* | 0.2 | 21,600 | ***244*** | 0.02 | 0.2 | 46 | 127 | 111 | 72,900 | 1,188 | 0.3 | 90 | 11 | 0.3 | ***<1*** | 143 |
| *313481* | ***1.9*** | 3,000 | ***8,539*** | 0.02 | 0.2 | 23 | 5.0 | 102 | 67,700 | 1,560 | 4.1 | 32 | 28 | 0.8 | ***<1*** | 55 |
| *313499* | 0.4 | 27,200 | ***546*** | 0.2 | ***2.1*** | 55 | 543 | 222 | 79,400 | 1,070 | 1.4 | 212 | 39 | 0.5 | ***2.0*** | 626 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC

# Table 3-4:
# Trace Element Results for Tiriganiaq-Wolf Ore Samples

| *AUCCC* | *0.053* | *81,500* | *5* | *0.16* | *0.09* | *17* | *92* | *28* | *39,200* | *774* | *1.1* | *47* | *17* | *0.4* | *0.09* | *67* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Ag** | **Al** | **As** | **Bi** | **Cd** | **Co** | **Cr** | **Cu** | **Fe** | **Mn** | **Mo** | **Ni** | **Pb** | **Sb** | **Se** | **Zn** |
| Unit | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| **IF (n=7)** | | | | | | | | | | | | | | | | |
| *313491* | ***2.7*** | 1,200 | ***17,500*** | 0.1 | ***1.7*** | 13 | 3.0 | 171 | 150,445 | 1,979 | 2.0 | 12 | 61 | 3.8 | ***3.0*** | 539 |
| *313710* | ***20*** | 3,300 | ***51,500*** | 1.1 | ***6.8*** | 83 | 11 | ***634*** | 121,000 | 713 | 4.2 | 73 | ***503*** | ***4.8*** | ***8.0*** | ***1,129*** |
| *313698* | ***1.4*** | 2,900 | ***1,564*** | 0.2 | ***1.6*** | 13 | 20 | ***379*** | 87,400 | 2,074 | ***57*** | 30 | ***185*** | 1.1 | ***2.0*** | 334 |
| *323992* | ***1.3*** | 16,900 | ***7,095*** | 0.3 | 0.1 | 7.2 | 16 | 49 | 127,900 | 385 | 7.8 | 18 | 11 | 1.0 | ***2.0*** | 43 |
| *325173* | ***2*** | 17,500 | ***30,000*** | 0.5 | 0.1 | 16 | 14 | 47 | 115,400 | 452 | 7.0 | 24 | 40 | ***4.7*** | ***2.0*** | 43 |
| *M98-234-305993* | ***0.8*** | 15,400 | ***17,600*** | 0.3 | 0.1 | 6.2 | 16 | 39 | 190,731 | 408 | 1.8 | 7.0 | 47 | 2.5 | ***3.0*** | 69 |
| *M98-283-818257* | ***1*** | 20,900 | ***26,800*** | 0.6 | 0.1 | 6.5 | 13 | 25 | 230,458 | 361 | 1.6 | 11 | 50 | 3.7 | ***3.0*** | 57 |
| **SE (n=3)** | | | | | | | | | | | | | | | | |
| *M98-234-305945* | ***0.8*** | 7,600 | ***1,108*** | 1.1 | 0.3 | 11 | 17 | 114 | 30,900 | 354 | ***17*** | 35 | ***396*** | 0.8 | ***<1*** | 44 |
| *M98-234-305952* | 0.3 | 12,500 | ***262*** | 0.7 | 0.2 | 18 | 30 | 50 | 35,600 | 487 | 1.6 | 53 | 137 | 0.4 | ***<1*** | 59 |
| *M98-283-818266* | 0.3 | 24,200 | ***1,203*** | 0.1 | 0.1 | 9.2 | 19 | 25 | 88,900 | 310 | 1.9 | 18 | 21 | 0.3 | ***<1*** | 69 |
| **VO (n=3)** | | | | | | | | | | | | | | | | |
| *313696* | ***0.6*** | 300 | ***1,390*** | 0.2 | 0.5 | 8.7 | 3.0 | 169 | 81,500 | 2,697 | 8.8 | 12 | ***175*** | 0.7 | ***2.0*** | 75 |
| *321068* | 0.2 | 19,600 | ***180*** | 0.2 | 0.1 | 37 | 79 | 107 | 61,700 | 936 | 1.1 | 101 | 49 | 0.6 | ***<1*** | 74 |
| *313471* | ***0.7*** | 9,400 | ***5,475*** | 0.1 | 0.7 | 29 | 111 | 198 | 87,600 | 1,161 | 0.6 | 66 | 43 | 0.7 | ***2.0*** | 151 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC

## 3.3 Comparison to Other Deposits

Gold mineralization at Tiriganiaq-Wolf represents an extension of the same stratigraphic sequences encountered at Tiriganiaq and Wesmeg deposits (Agnico Eagle, 2011). As such, there are broad similarities in the geochemistry of waste rock and ore.

A comparison of trace metal and total sulphur concentrations is provided in Table 3-5, and ARD potential is shown in Table 3-6. Overall, the distribution of metal enrichment and ARD potential at Tiriganiaq-Wolf is similar to these nearby deposits. That is, ARD potential is largely limited to IF ore, and metal enrichment is typically limited to Ag, As and Cu. There is some variability in the degree of As enrichment between individual rock and waste types. The IF waste rock shows lower As concentrations, and VO waste rock shows higher As concentrations compared to other Meliadine Extension deposits. However, the concentrations observed at Tiriganiaq-Wolf are captured within the variability observed at these other deposits.

**Table 3-5:**
**Median Trace Metal and Total Sulphur Concentrations for Tiriganiaq-Wolf Compared to Combined Tiriganiaq, Wesmeg and Wesmeg North Results**

| Parameter | Unit | IF - Waste Rock | | IF - Ore | | VO - Waste Rock | | VO - Ore | | SE - Ore | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tiriganiaq/Wesmeg/ N-Wesmeg | Tiriganiaq-Wolf | Tiriganiaq/Wesmeg/ N-Wesmeg | Tiriganiaq-Wolf | Tiriganiaq/Wesmeg/ N-Wesmeg | Tiriganiaq-Wolf | Tiriganiaq/Wesmeg/ N-Wesmeg | Tiriganiaq-Wolf | Tiriganiaq/Wesmeg/ N-Wesmeg | Tiriganiaq-Wolf |
| **T-S** | **wt.%** | 1.0 | 0.28 | 2.4 | 2.8 | 0.14 | 0.20 | 0.4 | 2.1 | 0.5 | 0.46 |
| **Ag** | **µg/g** | 0.2 | 0.04 | 0.3 | 1.4 | 0.13 | 0.3 | 0.2 | 0.59 | 0.2 | 0.3 |
| **As** | **µg/g** | 1,232 | 248 | 2,381 | 17,600 | 17 | 453 | 317 | 1,390 | 4,622 | 1,108 |
| **Au** | **µg/g** | 0.14 | 0.098 | 4.9 | 7.8 | 0.010 | 0.016 | 4.6 | 5.0 | 3.7 | 8.6 |
| **Ba** | **µg/g** | 45 | 42 | 58 | 71 | 54 | 62 | 39 | 27 | 431 | 53 |
| **Be** | **µg/g** | 0.2 | 0.1 | 0.2 | 0.2 | 0.26 | 0.1 | 0.1 | 0.1 | 0.8 | 0.2 |
| **Bi** | **µg/g** | 0.2 | 0.06 | 0.3 | 0.33 | 0.09 | 0.025 | 0.1 | 0.15 | 0.1 | 0.72 |
| **Ca** | **µg/g** | 25,300 | 25,200 | 25,334 | 28,000 | 69,250 | 62,900 | 64,131 | 52,500 | 22,375 | 18,400 |
| **Cd** | **µg/g** | 0.35 | 0.23 | 0.3 | 0.14 | 0.16 | 0.23 | 0.2 | 0.46 | 0.2 | 0.22 |
| **Co** | **µg/g** | 14 | 6.7 | 15 | 13 | 43 | 45 | 43 | 29 | 11 | 11 |
| **Cr** | **µg/g** | 43 | 21 | 24 | 14 | 145 | 131 | 106 | 79 | 85 | 19 |
| **Cu** | **µg/g** | 112 | 18 | 96 | 49 | 110 | 99 | 104 | 169 | 29 | 50 |
| **Fe** | **µg/g** | 109,900 | 140,000 | 138,482 | 127,900 | 68,500 | 69,100 | 69,542 | 81,500 | 88,790 | 35,600 |
| **Hg** | **µg/g** | 0.01 | 0.01 | 0.011 | 0.01 | 0.005 | 0.01 | 0.01 | 0.01 | 0.004 | 0.01 |
| **K** | **µg/g** | 1,100 | 1,100 | 1,320 | 2,400 | 2,950 | 1,250 | 1,470 | 900 | 15,684 | 1,500 |
| **Mg** | **µg/g** | 12,900 | 13,200 | 9,435 | 7,600 | 29,000 | 37,200 | 29,155 | 31,600 | 13,085 | 9,500 |
| **Mn** | **µg/g** | 1,735 | 1,306 | 777 | 452 | 1,377 | 1,226 | 1,437 | 1,161 | 379 | 354 |
| **Mo** | **µg/g** | 2.13 | 0.91 | 1.7 | 4.2 | 0.6 | 0.41 | 0.8 | 1.06 | 1.7 | 1.9 |
| **Ni** | **µg/g** | 24 | 13 | 16 | 18 | 109 | 101 | 86 | 66 | 34 | 35 |
| **Pb** | **µg/g** | 17 | 6.4 | 7.4 | 50 | 4.3 | 20 | 5.3 | 49 | 9.1 | 137 |
| **Sb** | **µg/g** | 0.8 | 0.28 | 0.7 | 3.7 | 0.73 | 0.47 | 0.3 | 0.66 | 1.3 | 0.35 |
| **Se** | **µg/g** | 1 | 1 | 1.1 | 3 | 0.95 | 1 | 1 | 2 | 0.8 | 1 |
| **Sr** | **µg/g** | 85 | 97.5 | 102 | 95 | 104 | 80 | 85 | 128 | 217 | 116 |
| **Tl** | **µg/g** | 0.05 | 0.06 | 0.1 | 0.2 | 0.1 | 0.07 | 0.1 | 0.06 | 0.3 | 0.06 |
| **U** | **µg/g** | 0.45 | 0.26 | 0.4 | 0.42 | 0.055 | 0.075 | 0.1 | 0.13 | 1.3 | 0.64 |
| **V** | **µg/g** | 21 | 26 | 22 | 18 | 193 | 79 | 114 | 34 | 67 | 20 |
| **Y** | **µg/g** | 2.8 | 3.0 | 3.4 | 3.7 | 6.0 | 2.4 | 2.9 | 2.7 | 7.4 | 3.9 |
| **Zn** | **µg/g** | 87 | 78 | 90 | 69 | 81 | 128 | 100 | 75 | 69 | 59 |

**Table 3-6:**
**Acid Rock Drainage Classification of Tiriganiaq-Wolf Samples Compared to Combined Tiriganiaq, Wesmeg and Wesmeg North Samples**

| Lithology | Material Type | ARD Designation | Tiriganiaq/Wesmeg/ N-Wesmeg* | | Tiriganiaq-Wolf | |
|---|---|---|---|---|---|---|
| | | | n | % | n | % |
| IF | Waste Rock | Total No. | 26 | | 5 | |
| | | Non-PAG | 16 | 62% | 4 | 80% |
| | | Uncertain | 6 | 23% | 1 | 20% |
| | | PAG | 4 | 15% | 0 | 0% |
| | Ore | Total No. | 25 | | 7 | |
| | | Non-PAG | 8 | 32% | 1 | 14% |
| | | Uncertain | 10 | 40% | 2 | 29% |
| | | PAG | 7 | 28% | 4 | 57% |
| | Tailings | Total No. | 25 | | 7 | |
| | | Non-PAG | 11 | 44% | 2 | 29% |
| | | Uncertain | 4 | 16% | 0 | 0% |
| | | PAG | 10 | 40% | 5 | 71% |
| SE | Waste Rock | Total No. | 78 | | 0 | |
| | | Non-PAG | 76 | 97% | - | - |
| | | Uncertain | 2 | 3% | - | - |
| | | PAG | 0 | 0% | - | - |
| | Ore | Total No. | 1 | | 3 | |
| | | Non-PAG | 1 | 100% | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% |
| | Tailings | Total No. | 1 | | 3 | |
| | | Non-PAG | 1 | 100% | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% |
| VO | Waste Rock | Total No. | 99 | | 6 | |
| | | Non-PAG | 98 | 99% | 6 | 100% |
| | | Uncertain | 1 | 1% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% |
| | Ore | Total No. | 16 | | 3 | |
| | | Non-PAG | 16 | 100% | 2 | 67% |
| | | Uncertain | 0 | 0% | 1 | 33% |
| | | PAG | 0 | 0% | 0 | 0% |
| | Tailings | Total No. | 16 | | 3 | |
| | | Non-PAG | 16 | 100% | 3 | 100% |
| | | Uncertain | 0 | 0% | 0 | 0% |
| | | PAG | 0 | 0% | 0 | 0% |

**Notes**:
*n* = number of analyses included in distribution.
*Results originally presented in Lorax (2022)

# 4. Results Summary

The main findings of the geochemical evaluation for waste rock and ore samples from the Tiriganiaq-Wolf deposit can be summarized as follows:

- Paste pH results show neutral to alkaline values for all waste rock and ore samples. This indicates that all Tiriganiaq-Wolf mine rock will generate neutral pH drainage upon initial exposure, with the VO and SE lithologies producing somewhat more alkaline runoff pH compared to the IF lithology.
- Sulphur speciation was dominated by sulphide-S and sulphur distribution generally showed an association with Au mineralization. That is, ore showed greater sulphur content than equivalent waste rock lithologies, and the distribution of sulphur within waste rock can be correlated to Au content.
- Waste rock was found to be non-PAG, irrespective of lithology. All VO samples were classified as non-PAG. A single IF sample was found to have an uncertain ARD potential, while all other IF waste samples were found to be strongly non-PAG with NPR values ranging from 5.5 to 32.
- Ore samples were found to have variable ARD potential depending on lithology. All VO and SE ore samples were classified as non-PAG, with the exception of a single VO sample which was classified as uncertain. Note that this sample would be re-classified as non-PAG if tailings ARD classification criteria, which use an NPR cut off of 1.2 to define ARD potentials, was applied. Conversely, a majority of IF ore samples were classified as PAG or Uncertain.
- No samples from the SE waste rock lithology from Tiriganiaq-Wolf were made available for the current analysis. The results for SE ore samples shows that this unit is non-PAG and has similar or lower levels of metal enrichment compared to IF and VO ore. Considering that waste rock tends to show reduced ARD potential and lower metal content compared to ore, the SE waste rock at Tiriganiaq-Wolf can be assumed to be non-PAG and have similar or lower metal content compared to other waste rock lithologies. This is consistent with other SE rock samples collected from the Tiriganiaq and Wesmeg North deposits, where over 70 drill core samples of SE waste rock and ore were characterized.
- Overall, results for Tiriganiaq-Wolf are similar to the Tiriganiaq and Wesmeg deposits. That is, ARD potential is largely limited to IF ore, and metal enrichment is typically limited to Ag, As and Cu.

## 5. Closure

This memorandum was prepared for the exclusive use of Agnico Eagle. Please contact the undersigned with any comments or questions regarding the contents of this memorandum.

Best regards,

**LORAX ENVIRONMENTAL Services Ltd.**

**Prepared by:**

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PERMIT TO PRACTICE
LORAX ENVIRONMENTAL SERVICES LTD.
Signature
Date March 1, 2022
PERMIT NUMBER: P 1487
NT/NU Association of Professional Engineers and Geoscientists

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# *Appendix A: Static Test Results for Waste Rock and Ore*

AGNICO EAGLE

| Drill Core Information | | | | | | | | Acid Base Accounting | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **Borehole** | **Interval** | | **Year (analysis)** | **Sample Type** | **Lithology Code** | **Meliadine Extension Lithology Code** | **Paste pH** | **NAG pH** | **Total-C** | **Total Inorganic-C** | **CaNP** | **CaNP-adj** | **Modified NP** | **Total-S** | **Sulphate-S** | **Sulphide-S** | **Sulphide-S (by difference)** | **MAP** | **Site Specific AP** | **NPR** | **NPR** | **ARD Designation*** |
| | | **From (m)** | **To (m)** | | | | | **units** | **units** | **wt. %** | **wt. %** | **kg $CaCO_3$/t** | **kg $CaCO_3$/t** | **kg $CaCO_3$/t** | **wt. %** | **wt. %** | **wt. %** | **wt. %** | **kg $CaCO_3$/t** | **kg $CaCO_3$/t** | **Mod-NP/MAP** | **CaNP-adj/MAP** | |
| CAMLD313491 | M21-3307 | 474.5 | 475 | 2021 | Ore | Ll | IF | 7.88 | 2.65 | 2.11 | 1.78 | 148 | 111 | 34 | 2.72 | 0.03 | 0.62 | 2.69 | 85 | 101 | 0.39 | 1.3 | PAG |
| CAMLD313710 | M21-3306 | 519.9 | 520.6 | 2021 | Ore | Ll | IF | 8.86 | 6.46 | 1.85 | 1.83 | 153 | 114 | 122 | 6.64 | 0.04 | 1.78 | 6.60 | 207 | 260 | 0.59 | 0.55 | PAG |
| CAMLD313698 | M21-3306 | 512 | 512.8 | 2021 | Ore | Llm | IF | 8.83 | 8.10 | 3.83 | 3.70 | 308 | 231 | 231 | 2.82 | 0.02 | 0.23 | 2.80 | 88 | 80 | 2.6 | 2.6 | Non-PAG |
| CAEXD323992 | M14-2329A | 236.5 | 237.5 | 2021 | Ore | NLJ | IF | 8.45 | 6.17 | 1.39 | 1.17 | 98 | 73 | 78 | 2.33 | 0.01 | 0.23 | 2.32 | 73 | 75 | 1.1 | 1.0 | Uncertain |
| CAEXD325173 | M14-2334 | 232.9 | 234.1 | 2021 | Ore | NLJ | IF | 8.27 | 6.51 | 2.37 | 2.28 | 190 | 142 | 139 | 2.67 | 0.03 | 1.33 | 2.64 | 83 | 118 | 1.7 | 1.7 | Uncertain |
| M98-234_CR305993 | M98-234 | 92.85 | 93.86 | 2021 | Ore | NLJ | IF | 8.00 | 2.62 | 1.34 | 1.03 | 86 | 64 | 48 | 3.61 | 0.03 | 0.78 | 3.58 | 113 | 126 | 0.43 | 0.57 | PAG |
| M98-283_CR818257 | M98-283 | 126.72 | 127.9 | 2021 | Ore | NLJ | IF | 8.13 | 2.87 | 1.22 | 0.92 | 77 | 57 | 56 | 3.20 | 0.04 | 1.31 | 3.16 | 100 | 128 | 0.55 | 0.57 | PAG |
| M98-234_CR305945 | M98-234 | 20.22 | 21.28 | 2021 | Ore | KWA-S | SE | 8.98 | 5.72 | 0.82 | 0.81 | 68 | 58 | 54 | 0.46 | <0.01 | 0.29 | 0.46 | 14 | 14 | 3.8 | 4.0 | Non-PAG |
| M98-234_CR305952 | M98-234 | 33 | 34 | 2021 | Ore | KWA-S | SE | 9.27 | 5.65 | 1.03 | 0.98 | 82 | 70 | 67 | 0.17 | <0.01 | 0.08 | 0.17 | 5 | 5 | 12 | 13 | Non-PAG |
| M98-283_CR818266 | M98-283 | 133.9 | 134.9 | 2021 | Ore | KWA-S | SE | 8.94 | 5.60 | 0.83 | 0.80 | 67 | 57 | 60 | 0.51 | <0.01 | 0.14 | 0.51 | 16 | 16 | 3.8 | 3.6 | Non-PAG |
| CAMLD313696 | M21-3306 | 510.6 | 511.5 | 2021 | Ore | M | VO | 8.53 | 7.56 | 6.47 | 6.14 | 512 | 446 | 397 | 2.05 | 0.02 | 0.55 | 2.03 | 64 | 65 | 6.2 | 6.9 | Non-PAG |
| CAEXD321068 | M14-2292 | 307.5 | 309 | 2021 | Ore | M | VO | 9.02 | 5.88 | 3.05 | 3.01 | 251 | 219 | 188 | 0.33 | <0.01 | 0.22 | 0.33 | 10 | 10 | 18 | 21 | Non-PAG |
| CAMLD313471 | M21-3307 | 459.4 | 459.9 | 2021 | Ore | MV | VO | 8.45 | 8.16 | 2.84 | 2.81 | 234 | 204 | 179 | 2.95 | 0.02 | 0.23 | 2.93 | 92 | 99 | 1.9 | 2.2 | Uncertain |
| CAMLD313476 | M21-3307 | 461.7 | 462.7 | 2021 | WR | Ll | IF | 8.66 | 6.35 | 3.23 | 3.17 | 264 | 198 | 205 | 1.16 | 0.01 | 0.29 | 1.15 | 36 | 45 | 5.7 | 5.5 | Non-PAG |
| CAMLD313495 | M21-3307 | 476.5 | 477.3 | 2021 | WR | Ll | IF | 7.94 | 6.33 | 3.94 | 2.85 | 238 | 178 | 34 | 1.07 | 0.01 | 0.12 | 1.06 | 33 | 30 | 1.0 | 5.3 | Uncertain |
| CAMLD313684 | M21-3306 | 504 | 505 | 2021 | WR | Ll | IF | 8.70 | 6.09 | 3.90 | 3.74 | 312 | 233 | 213 | 0.23 | <0.01 | 0.06 | 0.23 | 7.2 | 6.7 | 30 | 32 | Non-PAG |
| CAEXD321017 | M14-2292 | 268 | 269.1 | 2021 | WR | NLJ | IF | 8.51 | 6.24 | 1.30 | 0.98 | 82 | 61 | 67 | 0.20 | 0.01 | 0.03 | 0.19 | 6.3 | 5.7 | 11 | 9.8 | Non-PAG |
| CAEXD318118 | M14-2261 | 290.8 | 292 | 2021 | WR | NLJ | IF | 8.77 | 6.06 | 1.12 | 1.14 | 95 | 71 | 68 | 0.28 | 0.01 | 0.06 | 0.27 | 8.7 | 9.3 | 7.8 | 8.2 | Non-PAG |
| CAMLD313677 | M21-3306 | 497.5 | 498.6 | 2021 | WR | M | VO | 8.97 | 6.02 | 3.60 | 3.65 | 304 | 265 | 189 | 0.11 | <0.01 | 0.05 | 0.11 | 3.4 | 3.6 | 56 | 79 | Non-PAG |
| CAMLD313717 | M21-3306 | 523.3 | 524.4 | 2021 | WR | M | VO | 9.02 | 6.27 | 3.74 | 3.65 | 304 | 265 | 230 | 0.15 | <0.01 | 0.03 | 0.15 | 4.8 | 5.5 | 48 | 55 | Non-PAG |
| CAEXD325113 | M14-2332 | 284.1 | 285.1 | 2021 | WR | M | VO | 9.02 | 6.57 | 4.20 | 4.08 | 340 | 296 | 268 | 0.10 | <0.01 | 0.05 | 0.10 | 3.2 | 3.8 | 83 | 92 | Non-PAG |
| M98-239_CR818975 | M98-239 | 452.96 | 454.42 | 2021 | WR | M | VO | 8.99 | 6.38 | 3.70 | 3.57 | 298 | 259 | 197 | 0.25 | <0.01 | 0.04 | 0.25 | 7.8 | 8.1 | 25 | 33 | Non-PAG |
| CAMLD313481 | M21-3307 | 465.8 | 466.3 | 2021 | WR | MV | VO | 8.74 | 6.42 | 3.95 | 3.95 | 329 | 287 | 250 | 1.53 | 0.02 | 0.55 | 1.51 | 48 | 59 | 5.2 | 6.0 | Non-PAG |
| CAMLD313499 | M21-3307 | 481 | 481.8 | 2021 | WR | MV | VO | 8.89 | 6.67 | 3.56 | 3.60 | 300 | 261 | 235 | 1.43 | 0.01 | 0.13 | 1.42 | 45 | 45 | 5.3 | 5.8 | Non-PAG |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2 of Lorax, 2022)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3 of Lorax, 2022).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

*Based on classification criteria for waste rock and ore presented in Chapter 5.1 of Lorax (2022)

| | | Whole Rock Analysis | | | | | | | | | | | | | Elemental Abundance by Aqua Regia | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **Borehole** | **$SiO_2$** | **$Al_2O_3$** | **$Fe_2O_3$** | **MgO** | **CaO** | **$Na_2O$** | **$K_2O$** | **$TiO_2$** | **$P_2O_5$** | **MnO** | **$Cr_2O_3$** | **Loss on Ignition** | **Sum** | **Ag** | **Al** | **As** | **Au** | **Ba** | **Be** | **Bi** | **Ca** | **Cd** | **Co** | **Cr** |
| | | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **µg/g** | **µg/g** | **µg/g** | **ug/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| CAMLD313491 | M21-3307 | 60 | 1.5 | 22 | 1.0 | 1.2 | 0.76 | 0.09 | 0.01 | 0.01 | 0.27 | <0.01 | 7.0 | 86 | 2.67 | 1,200 | 17,500 | 5.54 | 19 | <0.1 | 0.13 | 8,100 | 1.67 | 12.6 | 3 |
| CAMLD313710 | M21-3306 | 53 | 6.0 | 18 | 2.2 | 4.6 | 0.51 | 1.58 | 0.33 | 0.05 | 0.10 | 0.01 | 9.7 | 87 | 20.0 | 3,300 | 51,500 | 2.31 | 56 | 0.1 | 1.14 | 31,300 | 6.84 | 83.1 | 11 |
| CAMLD313698 | M21-3306 | 55 | 2.9 | 13 | 3.6 | 9.3 | 0.28 | 0.78 | 0.20 | 0.10 | 0.27 | 0.01 | 8.3 | 85 | 1.4 | 2,900 | 1,564 | 7.7 | 32 | 0.1 | 0.24 | 63,700 | 1.56 | 12.6 | 20 |
| CAEXD323992 | M14-2329A | 58 | 7.5 | 19 | 1.4 | 4.0 | 0.13 | 1.67 | 0.20 | 0.11 | 0.05 | <0.01 | 3.5 | 92 | 1.33 | 16,900 | 7,095 | 7.76 | 98 | 0.3 | 0.3 | 28,000 | 0.11 | 7.2 | 16 |
| CAEXD325173 | M14-2334 | 50 | 8.4 | 17.7 | 1.5 | 7.3 | 0.34 | 1.62 | 0.24 | 0.15 | 0.06 | <0.01 | 6.6 | 87 | 1.81 | 17,500 | 30,000 | 10.8 | 71 | 0.2 | 0.45 | 49,400 | 0.11 | 15.8 | 14 |
| M98-234_CR305993 | M98-234 | 56 | 3.5 | 27.3 | 1.2 | 2.5 | 0.11 | 0.37 | 0.09 | 0.16 | 0.06 | <0.01 | 5.2 | 91 | 0.78 | 15,400 | 17,600 | 12.3 | 82 | 0.3 | 0.33 | 16,800 | 0.12 | 6.2 | 16 |
| M98-283_CR818257 | M98-283 | 51 | 4.9 | 33.0 | 1.3 | 2.9 | 0.17 | 0.46 | 0.12 | 0.15 | 0.05 | <0.01 | 4.8 | 94 | 1.17 | 20,900 | 26,800 | 14.9 | 101 | 0.2 | 0.55 | 19,100 | 0.14 | 6.5 | 13 |
| M98-234_CR305945 | M98-234 | 72 | 5.7 | 4.7 | 1.7 | 2.1 | 0.95 | 0.90 | 0.30 | 0.02 | 0.05 | <0.01 | 3.4 | 88 | 0.82 | 7,600 | 1,108 | 8.59 | 35 | <0.1 | 1.08 | 14,200 | 0.34 | 11.2 | 17 |
| M98-234_CR305952 | M98-234 | 64 | 13 | 5.8 | 2.4 | 2.6 | 1.9 | 2.3 | 0.51 | 0.07 | 0.07 | 0.02 | 4.9 | 93 | 0.3 | 12,500 | 262 | 11.2 | 53 | 0.2 | 0.72 | 18,400 | 0.22 | 18.1 | 30 |
| M98-283_CR818266 | M98-283 | 58 | 13 | 13 | 1.4 | 3.2 | 2.7 | 1.4 | 0.33 | 0.11 | 0.04 | <0.01 | 4.1 | 93 | 0.26 | 24,200 | 1,203 | 3.02 | 55 | 0.2 | 0.07 | 21,400 | 0.05 | 9.2 | 19 |
| CAMLD313696 | M21-3306 | 42 | 1.2 | 12.0 | 6.5 | 15 | 0.31 | 0.23 | 0.09 | 0.02 | 0.37 | <0.01 | 19 | 78 | 0.59 | 300 | 1,390 | 11.7 | 13 | <0.1 | 0.15 | 100,800 | 0.46 | 8.7 | 3 |
| CAEXD321068 | M14-2292 | 46 | 13 | 9.4 | 5.1 | 7.5 | 1.6 | 2.1 | 0.56 | 0.05 | 0.12 | 0.03 | 12 | 85 | 0.19 | 19,600 | 180 | 3.24 | 80 | 0.2 | 0.17 | 52,500 | 0.12 | 36.5 | 79 |
| CAMLD313471 | M21-3307 | 57 | 4.4 | 13 | 3.9 | 6.8 | 0.18 | 0.81 | 0.28 | 0.04 | 0.15 | 0.03 | 6.8 | 87 | 0.65 | 9,400 | 5,475 | 5.02 | 27 | 0.1 | 0.05 | 45,700 | 0.66 | 28.5 | 111 |
| CAMLD313476 | M21-3307 | 51 | 6.4 | 12 | 5.6 | 7.7 | 0.22 | 1.00 | 0.45 | 0.05 | 0.17 | 0.05 | 11 | 85 | 0.4 | 18,700 | 8,593 | 0.547 | 41 | 0.1 | 0.05 | 54,700 | 0.56 | 42.1 | 227 |
| CAMLD313495 | M21-3307 | 59 | 0.7 | 28 | 1.6 | 1.5 | 0.04 | 0.12 | 0.03 | 0.06 | 0.32 | <0.01 | 12 | 91 | 0.6 | 1,200 | 192 | 0.123 | 42 | <0.1 | 0.25 | 9,700 | 0.6 | 4.1 | 4 |
| CAMLD313684 | M21-3306 | 65 | 1.0 | 6.6 | 3.5 | 9.4 | 0.27 | 0.15 | 0.05 | 0.06 | 0.22 | <0.01 | 13 | 87 | 0.04 | 1,100 | 177 | 0.098 | 21 | <0.1 | <0.02 | 66,100 | 0.23 | 4 | 5 |
| CAEXD321017 | M14-2292 | 61 | 9.8 | 21 | 1.5 | 3.8 | 0.79 | 0.70 | 0.25 | 0.15 | 0.06 | <0.01 | 5.3 | 99 | 0.03 | 33,000 | 248 | 0.032 | 333 | 0.2 | 0.06 | 25,200 | 0.04 | 7.4 | 21 |
| CAEXD318118 | M14-2261 | 43 | 10 | 27 | 2.1 | 3.4 | 0.09 | 1.1 | 0.24 | 0.12 | 0.05 | <0.01 | 6.0 | 88 | 0.02 | 53,900 | 1,259 | 0.075 | 180 | 0.7 | 0.06 | 23,500 | 0.1 | 6.7 | 22 |
| CAMLD313677 | M21-3306 | 43 | 12 | 9.3 | 6.4 | 8.8 | 2.6 | 1.3 | 0.72 | 0.05 | 0.17 | 0.03 | 14 | 84 | 0.17 | 17,900 | 138 | 0.008 | 106 | 0.1 | 0.03 | 60,700 | 0.2 | 40.2 | 105 |
| CAMLD313717 | M21-3306 | 44 | 12 | 12 | 7.8 | 9.5 | 1.3 | 1.8 | 0.92 | 0.07 | 0.16 | 0.06 | 15 | 90 | 2.42 | 25,100 | 507 | 0.01 | 81 | 0.2 | 0.35 | 62,600 | 0.39 | 50.2 | 234 |
| CAEXD325113 | M14-2332 | 40 | 12 | 9.3 | 4.1 | 13 | 1.9 | 0.84 | 0.73 | 0.04 | 0.20 | 0.04 | 16 | 83 | 0.1 | 19,100 | 399 | 0.012 | 14 | <0.1 | <0.02 | 88,900 | 0.12 | 43.7 | 134 |
| M98-239_CR818975 | M98-239 | 42 | 12 | 11.3 | 6.2 | 9.2 | 1.8 | 1.7 | 0.82 | 0.06 | 0.17 | 0.04 | 14 | 86 | 0.17 | 21,600 | 244 | 0.02 | 27 | 0.1 | 0.02 | 63,200 | 0.22 | 45.7 | 127 |
| CAMLD313481 | M21-3307 | 51 | 6.4 | 10.2 | 4.1 | 9.7 | 0.51 | 1.7 | 0.54 | 0.05 | 0.20 | <0.01 | 12 | 84 | 1.92 | 3,000 | 8,539 | 1.62 | 43 | 0.1 | <0.02 | 67,600 | 0.24 | 22.6 | 5 |
| CAMLD313499 | M21-3307 | 42 | 9.2 | 12 | 8.9 | 8.7 | 0.46 | 1.2 | 0.64 | 0.05 | 0.15 | 0.1 | 13 | 84 | 0.43 | 27,200 | 546 | 0.032 | 122 | 0.2 | 0.18 | 59,200 | 2.09 | 55.2 | 543 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2 of Lorax, 2022)
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3 of Lorax, 2022).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
*Based on classification criteria for waste rock and ore presented in Chapter 5.1 of Lorax (2022)

| | | Elemental Abundance by Aqua Regia | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample ID** | **Borehole** | **Cu** | **Fe** | **Hg** | **K** | **Li** | **Mg** | **Mn** | **Mo** | **Na** | **Ni** | **Pb** | **Sb** | **Se** | **Sn** | **Sr** | **Ti** | **Tl** | **U** | **V** | **Y** | **Zn** |
| | | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| CAMLD313491 | M21-3307 | 171 | 150,445 | 0.04 | 300 | <1 | 6,400 | 1,979 | 1.95 | 200 | 12 | 61.1 | 3.81 | 3 | <0.3 | 20.6 | <100 | 0.03 | 0.18 | 5 | 0.88 | 539 |
| CAMLD313710 | M21-3306 | 634 | 121,000 | 0.06 | 1,600 | 3 | 12,500 | 713 | 4.24 | 200 | 73 | 503 | 4.76 | 8 | 0.5 | 43.3 | <100 | 0.2 | 0.32 | 10 | 2.42 | 1129 |
| CAMLD313698 | M21-3306 | 379 | 87,400 | 0.01 | 900 | 3 | 21,400 | 2,074 | 57.22 | 100 | 30 | 185 | 1.12 | 2 | <0.3 | 138 | <100 | 0.08 | 0.17 | 14 | 4.09 | 334 |
| CAEXD323992 | M14-2329A | 48.5 | 127,900 | 0.01 | 3,700 | 14 | 7,600 | 385 | 7.76 | 100 | 18 | 10.8 | 1.03 | 2 | <0.3 | 113 | 400 | 0.29 | 1.72 | 18 | 5.32 | 43 |
| CAEXD325173 | M14-2334 | 47.4 | 115,400 | <0.01 | 2,400 | 17 | 8,100 | 452 | 6.56 | 100 | 24 | 39.5 | 4.74 | 2 | <0.3 | 160 | 300 | 0.22 | 1.32 | 20 | 4.78 | 43 |
| M98-234_CR305993 | M98-234 | 39.1 | 190,731 | <0.01 | 2,400 | 8 | 6,600 | 408 | 1.81 | <100 | 7 | 47.3 | 2.53 | 3 | <0.3 | 83.4 | 400 | 0.24 | 0.43 | 26 | 3.19 | 69 |
| M98-283_CR818257 | M98-283 | 25 | 230,458 | <0.01 | 2,500 | 12 | 7,100 | 361 | 1.57 | <100 | 11 | 50.1 | 3.73 | 3 | <0.3 | 95.3 | 400 | 0.17 | 0.42 | 22 | 3.67 | 57 |
| M98-234_CR305945 | M98-234 | 114 | 30,900 | <0.01 | 800 | 14 | 9,500 | 354 | 16.7 | 200 | 35 | 396 | 0.79 | <1 | <0.3 | 102 | <100 | 0.02 | 0.5 | 12 | 1.78 | 44 |
| M98-234_CR305952 | M98-234 | 49.8 | 35,600 | <0.01 | 1,500 | 24 | 13,200 | 487 | 1.57 | 200 | 53 | 137 | 0.35 | <1 | <0.3 | 116 | 200 | 0.06 | 0.64 | 20 | 3.85 | 59 |
| M98-283_CR818266 | M98-283 | 24.8 | 88,900 | 0.01 | 1,900 | 20 | 7,900 | 310 | 1.9 | 200 | 18 | 20.7 | 0.31 | <1 | <0.3 | 134 | 300 | 0.2 | 0.84 | 26 | 3.97 | 69 |
| CAMLD313696 | M21-3306 | 169 | 81,500 | 0.01 | 200 | <1 | 39,400 | 2,697 | 8.76 | 200 | 12 | 175 | 0.74 | 2 | <0.3 | 132 | <100 | 0.03 | 0.13 | 5 | 3.68 | 75 |
| CAEXD321068 | M14-2292 | 107 | 61,700 | <0.01 | 1,600 | 33 | 31,600 | 936 | 1.06 | 200 | 101 | 49.4 | 0.59 | <1 | <0.3 | 128 | 100 | 0.06 | 0.47 | 46 | 2.73 | 74 |
| CAMLD313471 | M21-3307 | 198 | 87,600 | 0.02 | 900 | 12 | 23,700 | 1,161 | 0.55 | 100 | 66 | 43.4 | 0.66 | 2 | <0.3 | 84.4 | <100 | 0.07 | 0.08 | 34 | 2.31 | 151 |
| CAMLD313476 | M21-3307 | 144 | 79,800 | 0.02 | 1,600 | 28 | 33,300 | 1,306 | 0.91 | 100 | 117 | 144 | 0.79 | 1 | <0.3 | 76.7 | 200 | 0.17 | 0.05 | 62 | 2.44 | 158 |
| CAMLD313495 | M21-3307 | 98.7 | 198,075 | 0.01 | 200 | <1 | 8,900 | 2,209 | 0.79 | <100 | 6 | 91 | 0.28 | 1 | <0.3 | 16.1 | <100 | 0.02 | 0.26 | 8 | 1.85 | 301 |
| CAMLD313684 | M21-3306 | 17.6 | 46,200 | 0.01 | 200 | <1 | 22,100 | 1,688 | 0.91 | 100 | 7 | 6 | 0.24 | <1 | <0.3 | 97.5 | <100 | <0.02 | 0.13 | 4 | 3.02 | 69 |
| CAEXD321017 | M14-2292 | 13.8 | 140,000 | <0.01 | 1,100 | 21 | 8,400 | 391 | 2.24 | 100 | 15 | 3 | 0.23 | <1 | <0.3 | 130 | 300 | 0.06 | 0.48 | 26 | 4.46 | 48 |
| CAEXD318118 | M14-2261 | 14.7 | 191,710 | <0.01 | 9,900 | 45 | 13,200 | 361 | 1.34 | <100 | 13 | 6.4 | 0.28 | <1 | 0.5 | 139 | 1300 | 0.46 | 0.76 | 34 | 4.57 | 78 |
| CAMLD313677 | M21-3306 | 95.8 | 56,300 | <0.01 | 1,000 | 29 | 38,200 | 1,264 | 0.47 | 200 | 85 | 12.3 | 0.37 | <1 | <0.3 | 101 | 300 | 0.05 | <0.05 | 63 | 2.47 | 121 |
| CAMLD313717 | M21-3306 | 92.8 | 70,500 | <0.01 | 2,100 | 39 | 44,300 | 1,087 | 0.34 | 200 | 132 | 2085 | 2.07 | 1 | <0.3 | 79.7 | 400 | 0.3 | <0.05 | 85 | 2.11 | 135 |
| CAEXD325113 | M14-2332 | 81.8 | 64,300 | <0.01 | 700 | 41 | 24,900 | 1,527 | 0.25 | 600 | 112 | 12 | 0.48 | <1 | <0.3 | 81.2 | <100 | 0.03 | 0.05 | 80 | 6.27 | 82 |
| M98-239_CR818975 | M98-239 | 111 | 72,900 | 0.02 | 1,300 | 43 | 36,200 | 1,188 | 0.29 | 200 | 90 | 11.2 | 0.29 | <1 | <0.3 | 50.6 | 300 | 0.08 | 0.1 | 78 | 2.23 | 143 |
| CAMLD313481 | M21-3307 | 102 | 67,700 | 0.03 | 1,200 | 3 | 24,200 | 1,560 | 4.07 | 200 | 32 | 28.3 | 0.79 | <1 | <0.3 | 117 | <100 | 0.06 | 0.15 | 12 | 3.21 | 55 |
| CAMLD313499 | M21-3307 | 222 | 79,400 | 0.01 | 1,700 | 39 | 53,900 | 1,070 | 1.35 | 100 | 212 | 39.4 | 0.45 | 2 | <0.3 | 69.5 | 200 | 0.22 | 0.25 | 105 | 2.42 | 626 |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2 of Lorax, 2022)
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3 of Lorax, 2022).
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
*Based on classification criteria for waste rock and ore presented in Chapter 5.1 of Lorax (2022)

# APPENDIX D-2: SUMMARY STATISTICS FOR ACID BASE ACCOUNTING RESULTS

**Appendix D-2: Summary Statistics for Acid Base Accounting Results**

**Summary Statistics for Discovery Waste Rock Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 10 | 1 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| *10th PCTL* | 9.5 | 6.1 | 0.079 | 0.019 | 0.046 | 2.5 | 0.59 | 0.028 | 0.011 | 0.89 | 0.91 | 15 | 0.28 | 5.0 |
| *25th PCTL* | 9.7 | 6.1 | 0.086 | 0.032 | 0.053 | 2.7 | 0.99 | 0.081 | 0.048 | 3.9 | 4.0 | 18 | 1.3 | 6.1 |
| *Median* | 9.8 | 6.1 | 0.12 | 0.044 | 0.060 | 3.7 | 1.4 | 0.16 | 0.12 | 10 | 10 | 25 | 3.6 | 7.4 |
| *75th PCTL* | 9.9 | 6.1 | 0.14 | 0.054 | 0.095 | 4.3 | 1.7 | 0.29 | 0.27 | 22 | 23 | 34 | 5.3 | 9.4 |
| *95th PCTL* | 10 | 6.1 | 0.19 | 0.10 | 0.13 | 6 | 3.7 | 0.67 | 0.58 | 48 | 49 | 62 | 8.4 | 11 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 49 | 28 | 49 | 48 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| *10th PCTL* | 8.1 | 2.6 | 0.13 | 0.097 | <0.01 | 4.1 | 2.7 | 0.078 | 0.054 | 4.4 | 4.4 | 7.1 | 0.15 | 0.38 |
| *25th PCTL* | 8.5 | 4.3 | 0.19 | 0.14 | 0.02 | 6.0 | 3.6 | 0.13 | 0.085 | 6.9 | 7.0 | 13 | 0.36 | 0.7 |
| *Median* | 9.0 | 5.9 | 0.37 | 0.28 | 0.060 | 12 | 7.7 | 0.31 | 0.22 | 18 | 18 | 27 | 1.2 | 2.0 |
| *75th PCTL* | 9.2 | 6.3 | 0.67 | 0.47 | 0.12 | 21 | 13 | 0.45 | 0.34 | 28 | 28 | 37 | 3.7 | 4.4 |
| *95th PCTL* | 9.7 | 10 | 1.6 | 1.6 | 0.30 | 50 | 49 | 0.71 | 0.60 | 50 | 49 | 55 | 9.2 | 11 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 77 | 41 | 77 | 72 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| *10th PCTL* | 9.3 | 4.4 | 0.048 | 0.023 | <0.01 | 1.5 | 0.39 | 0.033 | 0.019 | 1.6 | 1.6 | 6.5 | 0.35 | 1.3 |
| *25th PCTL* | 9.5 | 4.9 | 0.077 | 0.048 | <0.01 | 2.4 | 1.3 | 0.046 | 0.030 | 2.5 | 2.5 | 8.5 | 0.65 | 2.2 |
| *Median* | 9.7 | 5.7 | 0.12 | 0.07 | 0.03 | 3.7 | 1.9 | 0.07 | 0.049 | 4.0 | 4.1 | 9.9 | 1.1 | 3.2 |
| *75th PCTL* | 9.8 | 6.0 | 0.15 | 0.11 | 0.060 | 4.6 | 3.0 | 0.12 | 0.089 | 7.3 | 7.4 | 15 | 2.3 | 5.2 |
| *95th PCTL* | 10 | 7.5 | 0.26 | 0.23 | 0.12 | 8.2 | 6.2 | 0.21 | 0.18 | 14 | 15 | 23 | 5.9 | 12 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| *n* | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 9.2 | *ND* | 0.16 | 0.058 | <0.1 | 5.0 | 1.8 | 0.27 | 0.19 | 15 | 12 | 18 | 2.2 | 2.9 |
| *25th PCTL* | 9.3 | *ND* | 0.25 | 0.13 | 0.12 | 7.8 | 3.8 | 0.43 | 0.30 | 24 | 19 | 23 | 2.3 | 3.2 |
| *Median* | 9.4 | *ND* | 0.39 | 0.24 | 0.14 | 12 | 7.1 | 0.69 | 0.49 | 40 | 30 | 32 | 2.4 | 3.9 |
| *75th PCTL* | 9.5 | *ND* | 0.41 | 0.25 | 0.16 | 13 | 7.1 | 0.69 | 0.49 | 40 | 31 | 42 | 2.4 | 4.1 |
| *95th PCTL* | 9.6 | *ND* | 0.42 | 0.25 | 0.18 | 13 | 7.1 | 0.69 | 0.50 | 41 | 31 | 49 | 2.5 | 4.3 |
| **Underground** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 9.5 | 5.8 | 0.11 | 0.098 | <0.01 | 3.4 | 3.0 | 0.12 | 0.11 | 9.2 | 9.2 | 19 | 1.4 | 2.8 |
| *25th PCTL* | 9.6 | 5.8 | 0.15 | 0.14 | <0.01 | 4.6 | 4.2 | 0.14 | 0.11 | 9.2 | 9.2 | 19 | 1.6 | 3.4 |
| *Median* | 9.7 | 5.9 | 0.19 | 0.18 | <0.01 | 5.8 | 5.5 | 0.19 | 0.18 | 15 | 15 | 24 | 2.4 | 4.1 |
| *75th PCTL* | 9.7 | 6.0 | 0.22 | 0.21 | <0.01 | 6.7 | 6.4 | 0.26 | 0.27 | 22 | 22 | 31 | 5.2 | 7.0 |
| *95th PCTL* | 9.7 | 6.0 | 0.24 | 0.23 | <0.01 | 7.5 | 7.2 | 0.32 | 0.33 | 28 | 28 | 36 | 10 | 13 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| *10th PCTL* | 8.3 | 3.1 | 0.29 | 0.27 | 0.014 | 9.2 | 7.5 | 0.13 | 0.082 | 6.8 | 6.8 | 7.3 | 0.42 | 0.43 |
| *25th PCTL* | 8.6 | 3.7 | 0.36 | 0.31 | 0.025 | 11 | 8.7 | 0.26 | 0.12 | 10 | 9.9 | 9.6 | 0.49 | 0.60 |
| *Median* | 8.7 | 4.4 | 0.49 | 0.46 | 0.030 | 15 | 13 | 0.35 | 0.23 | 19 | 19 | 23 | 0.66 | 0.81 |
| *75th PCTL* | 8.9 | 5.8 | 0.66 | 0.62 | 0.035 | 21 | 18 | 0.50 | 0.27 | 23 | 22 | 25 | 2.1 | 2.4 |
| *95th PCTL* | 9.3 | 6.1 | 1.5 | 1.5 | 0.053 | 47 | 41 | 1.5 | 0.62 | 51 | 51 | 55 | 4.8 | 5.2 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| *10th PCTL* | 9.3 | 4.6 | 0.081 | 0.071 | <0.01 | 2.5 | 2.1 | 0.022 | 0.010 | 0.80 | 0.83 | 5.7 | 0.18 | 0.94 |
| *25th PCTL* | 9.6 | 4.7 | 0.10 | 0.093 | <0.01 | 3.2 | 2.6 | 0.032 | 0.015 | 1.2 | 1.3 | 6.3 | 0.31 | 1.2 |
| *Median* | 9.6 | 5.0 | 0.12 | 0.11 | <0.01 | 3.8 | 3.3 | 0.053 | 0.030 | 2.5 | 2.5 | 6.6 | 0.42 | 1.8 |
| *75th PCTL* | 9.8 | 5.6 | 0.18 | 0.17 | <0.01 | 5.5 | 4.6 | 0.061 | 0.035 | 2.9 | 2.9 | 7.6 | 1.0 | 2.4 |
| *95th PCTL* | 10 | 6.0 | 0.25 | 0.24 | <0.01 | 8.0 | 6.9 | 0.13 | 0.080 | 6.7 | 6.7 | 15 | 2.1 | 4.3 |

**Summary Statistics for Discovery Ore Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 5 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 8.4 | *ND* | 0.76 | 0.53 | 0.1 | 24 | 17 | 0.088 | 0.033 | 2.7 | 2.7 | 10 | 0.12 | 0.36 |
| *25th PCTL* | 8.5 | *ND* | 1.0 | 0.75 | 0.13 | 32 | 22 | 0.16 | 0.051 | 4.2 | 4.2 | 12 | 0.23 | 0.61 |
| *Median* | 8.5 | *ND* | 1.1 | 0.79 | 0.19 | 34 | 27 | 0.28 | 0.17 | 14 | 14 | 21 | 0.42 | 0.64 |
| *75th PCTL* | 8.6 | *ND* | 1.2 | 0.95 | 0.44 | 38 | 27 | 0.47 | 0.25 | 21 | 21 | 27 | 0.57 | 0.83 |
| *95th PCTL* | 8.7 | *ND* | 1.4 | 0.97 | 0.64 | 44 | 31 | 0.52 | 0.26 | 22 | 22 | 32 | 0.64 | 0.87 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 9.7 | 7.8 | 0.069 | 0.029 | 0.04 | 2.2 | 0.85 | 0.071 | 0.045 | 3.7 | 3.8 | 13 | 1.1 | 2.4 |
| *Max* | 10 | 7.8 | 0.18 | 0.086 | 0.09 | 5.5 | 2.4 | 0.095 | 0.075 | 6.1 | 6.3 | 14 | 1.8 | 6.5 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| *10th PCTL* | 7.2 | 2.5 | 0.76 | 0.72 | <0.01 | 24 | 22 | 0.095 | 0.065 | 5.4 | 5.4 | 7.0 | 0.11 | 0.13 |
| *25th PCTL* | 7.9 | 2.6 | 0.96 | 0.9 | 0.02 | 30 | 26 | 0.11 | 0.07 | 5.8 | 5.8 | 8.7 | 0.14 | 0.17 |
| *Median* | 8.1 | 2.9 | 1.5 | 1.4 | 0.045 | 46 | 43 | 0.19 | 0.15 | 13 | 12 | 13 | 0.21 | 0.25 |
| *75th PCTL* | 8.4 | 4.0 | 2.1 | 2.1 | 0.065 | 67 | 62 | 0.34 | 0.27 | 23 | 22 | 24 | 0.59 | 0.63 |
| *95th PCTL* | 8.5 | 5.9 | 3.1 | 3.1 | 0.13 | 97 | 92 | 0.38 | 0.35 | 29 | 29 | 31 | 0.98 | 1.1 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

ND - no data

**Appendix D-2: Summary Statistics for Acid Base Accounting Results**

**Summary Statistics for F-Zone Waste Rock Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 9 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 8.1 | 6.1 | 0.82 | 0.69 | 0.020 | 26 | 22 | 0.76 | 0.30 | 25 | 13 | 33 | 0.14 | 0.50 |
| *25th PCTL* | 8.3 | 6.2 | 1.3 | 0.96 | 0.020 | 42 | 27 | 0.85 | 0.41 | 34 | 18 | 48 | 0.34 | 0.78 |
| *Median* | 8.4 | 6.5 | 1.8 | 1.7 | 0.070 | 55 | 49 | 1.5 | 0.78 | 65 | 34 | 65 | 0.62 | 0.87 |
| *75th PCTL* | 8.5 | 6.9 | 2.6 | 1.8 | 0.49 | 81 | 54 | 1.8 | 1.7 | 140 | 73 | 110 | 1.2 | 2.1 |
| *95th PCTL* | 9.0 | 7.2 | 3.0 | 2.4 | 1.2 | 94 | 66 | 2.5 | 2.4 | 200 | 110 | 180 | 13 | 24 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 56 | 8 | 56 | 55 | 56 | 56 | 68 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| *10th PCTL* | 8.9 | 6.2 | 0.049 | 0.022 | <0.01 | 1.5 | 0.011 | 0.65 | 0.59 | 48 | 49 | 60 | 9.3 | 11 |
| *25th PCTL* | 9.0 | 6.5 | 0.077 | 0.032 | 0.020 | 2.4 | 0.66 | 1.3 | 1.2 | 96 | 98 | 110 | 15 | 18 |
| *Median* | 9.1 | 6.7 | 0.11 | 0.066 | 0.045 | 3.3 | 1.6 | 2.0 | 1.9 | 150 | 150 | 160 | 29 | 31 |
| *75th PCTL* | 9.3 | 6.8 | 0.21 | 0.14 | 0.073 | 6.5 | 3.4 | 2.3 | 2.1 | 180 | 180 | 190 | 71 | 72 |
| *95th PCTL* | 9.6 | 6.9 | 0.48 | 0.28 | 0.22 | 15 | 8.3 | 2.9 | 2.7 | 220 | 220 | 220 | 150 | 150 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 8.1 | 5.7 | 0.54 | 0.53 | <0.01 | 17 | 15 | 0.51 | 0.50 | 41 | 22 | 28 | 0.79 | 0.96 |
| *25th PCTL* | 8.2 | 5.9 | 0.84 | 0.83 | <0.01 | 26 | 23 | 0.53 | 0.52 | 43 | 23 | 31 | 0.88 | 1.2 |
| *Median* | 8.3 | 6.7 | 1.2 | 1.2 | 0.015 | 37 | 33 | 1.0 | 0.97 | 80 | 42 | 56 | 1.2 | 1.6 |
| *75th PCTL* | 8.4 | 7.3 | 1.6 | 1.6 | 0.025 | 51 | 45 | 1.5 | 1.4 | 120 | 63 | 83 | 1.5 | 2.1 |
| *95th PCTL* | 8.6 | 7.5 | 2.2 | 2.2 | 0.037 | 70 | 62 | 1.6 | 1.5 | 130 | 67 | 94 | 1.8 | 2.9 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 8.5 | 6.3 | 0.11 | 0.099 | <0.01 | 3.4 | 3.2 | 1.9 | 1.8 | 150 | 150 | 130 | 11 | 9.2 |
| *25th PCTL* | 8.6 | 6.3 | 0.20 | 0.19 | <0.01 | 6.2 | 6.0 | 2.0 | 1.9 | 160 | 160 | 140 | 15 | 13 |
| *Median* | 8.7 | 6.5 | 0.42 | 0.41 | <0.01 | 13 | 13 | 2.7 | 2.7 | 230 | 230 | 200 | 19 | 17 |
| *75th PCTL* | 8.8 | 6.8 | 0.74 | 0.73 | 0.015 | 23 | 24 | 3.5 | 3.5 | 290 | 290 | 260 | 39 | 35 |
| *95th PCTL* | 8.9 | 6.8 | 1.1 | 1.1 | 0.027 | 36 | 37 | 3.7 | 3.8 | 320 | 320 | 270 | 83 | 72 |

**Summary Statistics for F-Zone Ore Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 4 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 8.4 | 5.6 | 0.095 | 0.071 | 0.016 | 3.0 | 2.0 | 0.86 | 0.55 | 45 | 24 | 53 | 0.43 | 1.2 |
| *25th PCTL* | 8.5 | 5.6 | 0.15 | 0.14 | 0.025 | 4.7 | 3.9 | 1.0 | 0.58 | 48 | 26 | 60 | 0.49 | 1.4 |
| *Median* | 8.7 | 5.6 | 0.79 | 0.57 | 0.24 | 25 | 17 | 1.1 | 0.67 | 56 | 29 | 69 | 3.1 | 5.0 |
| *75th PCTL* | 8.9 | 5.6 | 1.6 | 1.0 | 0.60 | 50 | 29 | 1.4 | 1.0 | 84 | 45 | 99 | 16 | 30 |
| *95th PCTL* | 9.0 | 5.6 | 2.1 | 1.1 | 0.98 | 65 | 31 | 1.9 | 1.7 | 140 | 74 | 160 | 40 | 83 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 9.4 | 6.0 | 0.020 | 0.010 | 0.010 | 0.63 | 0.82 | 3.4 | 3.6 | 300 | 300 | 250 | 470 | 390 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 7.8 | 2.5 | 1.9 | 1.9 | 0.018 | 59 | 56 | 0.90 | 0.83 | 70 | 36 | 56 | 0.31 | 0.50 |
| *25th PCTL* | 7.9 | 2.6 | 2.5 | 2.5 | 0.030 | 77 | 79 | 1.1 | 1.1 | 88 | 46 | 71 | 0.39 | 0.59 |
| *Median* | 8.0 | 3.3 | 3.7 | 3.7 | 0.040 | 120 | 140 | 1.8 | 1.7 | 150 | 76 | 78 | 0.6 | 0.91 |
| *75th PCTL* | 8.1 | 6.2 | 4.1 | 4.0 | 0.070 | 130 | 150 | 1.9 | 1.8 | 150 | 80 | 110 | 1.2 | 1.5 |
| *95th PCTL* | 8.3 | 7.5 | 5.4 | 5.3 | 0.12 | 170 | 160 | 2.8 | 2.8 | 230 | 120 | 160 | 1.6 | 1.5 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.1 | 6.1 | 0.17 | 0.15 | 0.012 | 5.2 | 4.9 | 0.99 | 1 | 85 | 85 | 83 | 3.6 | 3.4 |
| *25th PCTL* | 8.2 | 6.3 | 0.19 | 0.17 | 0.015 | 5.9 | 5.5 | 1.5 | 1.6 | 130 | 130 | 110 | 5.2 | 5.5 |
| *Median* | 8.4 | 6.5 | 0.23 | 0.21 | 0.020 | 7.1 | 6.5 | 2.4 | 2.4 | 200 | 200 | 160 | 7.7 | 8.9 |
| *75th PCTL* | 9.1 | 7.3 | 1.8 | 1.7 | 0.040 | 55 | 55 | 2.8 | 2.8 | 240 | 240 | 180 | 26 | 21 |
| *95th PCTL* | 9.7 | 8.0 | 3.0 | 3.0 | 0.056 | 94 | 93 | 3.1 | 3.2 | 260 | 260 | 200 | 40 | 32 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 7.6 | 6.2 | 2.0 | 1.9 | 0.048 | 62 | 65 | 0.58 | 0.35 | 29 | 29 | 26 | 0.33 | 0.31 |
| *25th PCTL* | 7.8 | 6.6 | 2.4 | 2.3 | 0.060 | 74 | 75 | 0.84 | 0.69 | 57 | 57 | 48 | 0.55 | 0.44 |
| *Median* | 8.0 | 7.3 | 3.0 | 2.9 | 0.080 | 93 | 92 | 1.3 | 1.3 | 100 | 100 | 83 | 0.91 | 0.66 |
| *75th PCTL* | 8.1 | 7.5 | 3.5 | 3.4 | 0.085 | 110 | 110 | 1.4 | 1.3 | 110 | 110 | 88 | 1.0 | 0.82 |
| *95th PCTL* | 8.1 | 7.7 | 3.9 | 3.8 | 0.089 | 120 | 120 | 1.4 | 1.4 | 110 | 110 | 91 | 1.1 | 0.96 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

ND - no data

**Appendix D-2: Summary Statistics for Acid Base Accounting Results**

**Summary Statistics for Pump Waste Rock Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 8.7 | 6.4 | 0.019 | 0.0090 | <0.01 | 0.59 | 0.48 | 1.7 | 1.7 | 140 | 140 | 140 | 230 | 240 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 8.0 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 7.8 | 6.6 | 1.1 | 0.31 | 0.017 | 36 | 8.8 | 1.7 | 0.87 | 71 | 38 | 74 | 0.67 | 1.1 |
| *25th PCTL* | 7.9 | 7.1 | 1.6 | 0.99 | 0.035 | 49 | 28 | 2.2 | 1.3 | 110 | 56 | 78 | 0.82 | 1.1 |
| *Median* | 8.1 | 7.3 | 2.0 | 2.0 | 0.17 | 63 | 55 | 3.0 | 1.9 | 160 | 85 | 87 | 1.2 | 1.4 |
| *75th PCTL* | 8.3 | 7.7 | 2.3 | 2.1 | 0.30 | 71 | 63 | 3.7 | 2.3 | 190 | 100 | 120 | 2.2 | 2.8 |
| *95th PCTL* | 8.5 | 8.5 | 2.7 | 2.4 | 1.0 | 84 | 68 | 4.1 | 3.5 | 290 | 150 | 160 | 6.8 | 6.2 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 18 | 3 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| *10th PCTL* | 8.8 | 4.3 | 0.041 | 0.024 | <0.01 | 1.3 | 0.77 | 1.3 | 1.2 | 100 | 100 | 85 | 22 | 22 |
| *25th PCTL* | 8.8 | 5.1 | 0.073 | 0.031 | 0.023 | 2.3 | 1.0 | 1.7 | 1.6 | 130 | 130 | 120 | 26 | 26 |
| *Median* | 8.9 | 6.4 | 0.096 | 0.074 | 0.04 | 3.0 | 2.4 | 2.2 | 2.0 | 170 | 170 | 160 | 56 | 53 |
| *75th PCTL* | 9.0 | 6.4 | 0.13 | 0.084 | 0.058 | 4.2 | 2.8 | 2.8 | 2.6 | 210 | 220 | 180 | 85 | 70 |
| *95th PCTL* | 9.0 | 6.4 | 0.57 | 0.46 | 0.10 | 18 | 17 | 3.9 | 3.6 | 290 | 300 | 220 | 150 | 140 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 8.3 | 6.2 | 0.35 | 0.34 | <0.01 | 11 | 9.6 | 1.9 | 1.8 | 150 | 79 | 52 | 3.3 | 4.7 |
| *Max* | 8.4 | 6.3 | 0.80 | 0.79 | <0.01 | 25 | 22 | 2.0 | 1.9 | 160 | 83 | 130 | 7.2 | 5.3 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 8.4 | 5.5 | 0.032 | 0.022 | <0.01 | 0.99 | 0.87 | 1.3 | 1.2 | 97 | 97 | 94 | 3.0 | 6.5 |
| *25th PCTL* | 8.7 | 6.0 | 0.041 | 0.031 | <0.01 | 1.3 | 1.1 | 2.2 | 2.2 | 190 | 190 | 150 | 35 | 26 |
| *Median* | 8.8 | 6.2 | 0.084 | 0.074 | <0.01 | 2.6 | 2.5 | 2.9 | 3.0 | 250 | 250 | 200 | 92 | 76 |
| *75th PCTL* | 8.8 | 6.5 | 0.15 | 0.14 | <0.01 | 4.7 | 4.5 | 3.6 | 3.6 | 300 | 300 | 230 | 120 | 100 |
| *95th PCTL* | 9.1 | 6.7 | 0.81 | 0.80 | 0.016 | 25 | 26 | 3.7 | 3.8 | 310 | 310 | 260 | 250 | 210 |

**Summary Statistics for Pump Ore Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 8.2 | *ND* | 0.41 | 0.37 | 0.040 | 13 | 11 | 1.6 | 0.85 | 70 | 37 | 66 | 0.33 | 0.58 |
| *25th PCTL* | 8.2 | *ND* | 0.61 | 0.52 | 0.085 | 19 | 15 | 1.7 | 1.1 | 89 | 48 | 89 | 0.56 | 1 |
| *Median* | 8.5 | *ND* | 1.9 | 1.7 | 0.18 | 61 | 51 | 2.3 | 1.4 | 110 | 61 | 110 | 1.5 | 2.9 |
| *75th PCTL* | 8.8 | *ND* | 3.8 | 3.5 | 0.27 | 120 | 110 | 2.8 | 1.8 | 150 | 79 | 140 | 5.0 | 8.7 |
| *95th PCTL* | 9.0 | *ND* | 5.3 | 5.0 | 0.33 | 170 | 150 | 3.0 | 2.4 | 200 | 110 | 180 | 11 | 19 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 8.4 | 6.3 | 0.63 | 0.62 | 0.010 | 20 | 20 | 2.2 | 2.3 | 190 | 190 | 150 | 4.1 | 2.8 |
| *Max* | 8.7 | 8.0 | 1.9 | 1.8 | 0.030 | 59 | 64 | 2.8 | 2.9 | 240 | 240 | 160 | 9.8 | 7.4 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 7.4 | 2.6 | 2.5 | 2.5 | 0.018 | 78 | 76 | 2.3 | 1.9 | 160 | 82 | 30 | 0.70 | 0.33 |
| *25th PCTL* | 7.6 | 2.6 | 2.5 | 2.5 | 0.030 | 80 | 88 | 2.4 | 2.1 | 180 | 93 | 41 | 1.0 | 0.46 |
| *Median* | 7.9 | 3.5 | 2.9 | 2.8 | 0.040 | 90 | 120 | 2.4 | 2.2 | 190 | 97 | 83 | 1.1 | 0.68 |
| 75th PCTL | 8.1 | 4.7 | 2.9 | 2.8 | 0.040 | 91 | 130 | 2.5 | 2.4 | 200 | 100 | 110 | 1.2 | 1.0 |
| 95th PCTL | 8.3 | 7.3 | 4.6 | 4.5 | 0.072 | 140 | 140 | 2.8 | 2.5 | 210 | 110 | 120 | 1.3 | 1.5 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 8.7 | 6.7 | 0.33 | 0.32 | <0.01 | 10 | 11 | 3.1 | 3.3 | 280 | 280 | 190 | 27 | 18 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.0 | 4.1 | 1.4 | 1.4 | 0.032 | 45 | 53 | 0.97 | 0.86 | 72 | 72 | 52 | 1.0 | 0.76 |
| *25th PCTL* | 8.0 | 4.8 | 2.0 | 1.9 | 0.035 | 61 | 82 | 1.2 | 1.1 | 90 | 90 | 65 | 1.2 | 0.84 |
| *Median* | 8.1 | 5.9 | 2.8 | 2.8 | 0.040 | 88 | 130 | 1.6 | 1.5 | 120 | 120 | 87 | 1.4 | 0.98 |
| 75th PCTL | 8.2 | 6.9 | 3.8 | 3.8 | 0.050 | 120 | 140 | 1.7 | 1.6 | 130 | 130 | 96 | 1.6 | 1.1 |
| 95th PCTL | 8.3 | 7.8 | 4.6 | 4.5 | 0.058 | 140 | 150 | 1.8 | 1.7 | 140 | 140 | 100 | 1.7 | 1.2 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

ND - no data

**Appendix D-2: Summary Statistics for Acid Base Accounting Results**
**Summary Statistics for Tiriganiaq Waste Rock Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 9.3 | *ND* | 0.093 | 0.012 | 0.045 | 2.9 | 0.39 | 0.21 | 0.17 | 14 | 15 | 25 | 4.6 | 6.8 |
| *25th PCTL* | 9.4 | *ND* | 0.096 | 0.014 | 0.068 | 3.0 | 0.45 | 0.24 | 0.21 | 17 | 17 | 27 | 4.7 | 7.2 |
| *Median* | 9.4 | *ND* | 0.11 | 0.041 | 0.095 | 3.5 | 1.3 | 0.35 | 0.30 | 25 | 25 | 35 | 5.0 | 7.8 |
| *75th PCTL* | 9.5 | *ND* | 0.14 | 0.073 | 0.11 | 4.5 | 2.3 | 0.56 | 0.49 | 40 | 41 | 50 | 9.4 | 12 |
| *95th PCTL* | 9.5 | *ND* | 0.19 | 0.086 | 0.11 | 5.9 | 2.7 | 0.82 | 0.74 | 61 | 62 | 70 | 20 | 22 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 9 | 8 | 9 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 8.0 | 5.1 | 0.048 | 0.11 | <0.01 | 1.5 | 1.5 | 0.96 | 0.74 | 62 | 46 | 45 | 1.5 | 1.7 |
| *25th PCTL* | 8.2 | 5.8 | 0.16 | 0.17 | <0.01 | 5.1 | 3.8 | 0.98 | 0.88 | 73 | 55 | 58 | 4.9 | 6.4 |
| *Median* | 8.3 | 6.3 | 0.31 | 0.29 | 0.030 | 9.7 | 9.5 | 1.3 | 1.0 | 84 | 63 | 71 | 6.7 | 7.1 |
| *75th PCTL* | 8.5 | 6.5 | 0.36 | 0.41 | 0.040 | 11 | 11 | 1.6 | 1.3 | 110 | 80 | 80 | 16 | 16 |
| *95th PCTL* | 8.8 | 6.8 | 1.6 | 1.5 | 0.12 | 49 | 40 | 2.6 | 2.5 | 210 | 160 | 190 | 810 | 1000 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 69 | 2 | 78 | 76 | 78 | 78 | 99 | 69 | 69 | 69 | 69 | 69 | 69 | 69 |
| *10th PCTL* | 9.1 | 11 | 0.15 | 0.030 | 0.057 | 4.7 | 0.095 | 0.48 | 0.35 | 29 | 25 | 33 | 3.7 | 4.5 |
| *25th PCTL* | 9.2 | 11 | 0.18 | 0.055 | 0.080 | 5.6 | 0.32 | 0.54 | 0.41 | 34 | 30 | 38 | 4.4 | 5.3 |
| *Median* | 9.4 | 11 | 0.20 | 0.094 | 0.11 | 6.4 | 2.3 | 0.64 | 0.50 | 41 | 36 | 43 | 5.3 | 6.7 |
| *75th PCTL* | 9.5 | 11 | 0.25 | 0.14 | 0.14 | 7.7 | 3.7 | 0.74 | 0.61 | 50 | 43 | 49 | 6.5 | 7.8 |
| *95th PCTL* | 9.6 | 11 | 0.32 | 0.22 | 0.19 | 10 | 6.4 | 1.0 | 0.84 | 69 | 60 | 65 | 9.3 | 10 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| *n* | 8 | 0 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 8.9 | *ND* | 0.058 | 0.037 | <0.01 | 1.8 | 1.1 | 0.59 | 0.49 | 40 | 30 | 41 | 4.6 | 6.1 |
| *25th PCTL* | 9.0 | *ND* | 0.091 | 0.048 | 0.033 | 2.8 | 1.4 | 0.63 | 0.54 | 45 | 34 | 46 | 5.0 | 6.4 |
| *Median* | 9.2 | *ND* | 0.19 | 0.059 | 0.10 | 5.8 | 2.1 | 0.89 | 0.70 | 57 | 44 | 55 | 7.3 | 9.7 |
| *75th PCTL* | 9.4 | *ND* | 0.22 | 0.082 | 0.17 | 7.0 | 2.5 | 1.0 | 0.85 | 70 | 53 | 68 | 17 | 22 |
| *95th PCTL* | 9.5 | *ND* | 0.30 | 0.15 | 0.19 | 9.5 | 4.4 | 1.1 | 0.93 | 76 | 58 | 79 | 28 | 39 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| *n* | 14 | 1 | 14 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| *10th PCTL* | 8.9 | 10 | 0.072 | 0.049 | 0.043 | 2.2 | 0.55 | 0.76 | 0.65 | 53 | 42 | 52 | 5.9 | 7.5 |
| *25th PCTL* | 9.0 | 10 | 0.12 | 0.083 | 0.060 | 3.8 | 1.9 | 0.85 | 0.66 | 54 | 42 | 56 | 7.1 | 9.4 |
| *Median* | 9.1 | 10 | 0.16 | 0.092 | 0.080 | 5.0 | 2.7 | 1.0 | 0.83 | 67 | 53 | 69 | 9.9 | 14 |
| *75th PCTL* | 9.2 | 10 | 0.22 | 0.11 | 0.11 | 7.0 | 3.3 | 1.1 | 0.94 | 77 | 60 | 75 | 19 | 23 |
| *95th PCTL* | 9.3 | 10 | 0.45 | 0.22 | 0.23 | 14 | 7.1 | 1.3 | 1.1 | 91 | 72 | 93 | 24 | 30 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 17 | 2 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| *10th PCTL* | 8.7 | 11 | 0.11 | 0.051 | 0.038 | 3.6 | 1.7 | 2.5 | 2.3 | 190 | 170 | 190 | 15 | 16 |
| *25th PCTL* | 8.8 | 11 | 0.19 | 0.10 | 0.070 | 6.0 | 3.5 | 3.0 | 2.9 | 240 | 210 | 230 | 18 | 19 |
| *Median* | 9.0 | 11 | 0.28 | 0.15 | 0.10 | 8.9 | 4.8 | 3.4 | 3.2 | 260 | 230 | 250 | 23 | 30 |
| *75th PCTL* | 9.0 | 11 | 0.4 | 0.24 | 0.18 | 12 | 8.8 | 3.9 | 3.6 | 300 | 260 | 280 | 40 | 40 |
| *95th PCTL* | 9.1 | 11 | 1.1 | 0.78 | 0.45 | 34 | 28 | 4.1 | 3.9 | 320 | 280 | 370 | 97 | 100 |
| **Underground** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 8.6 | *ND* | 0.11 | 0.067 | 0.030 | 3.4 | 2.1 | 0.83 | 0.75 | 61 | 63 | 72 | 17 | 20 |
| *Max* | 8.9 | *ND* | 0.12 | 0.079 | 0.050 | 3.7 | 2.5 | 1.8 | 1.7 | 140 | 140 | 150 | 42 | 43 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 8.1 | 6.4 | 0.15 | 0.099 | 0.014 | 4.7 | 3.0 | 0.78 | 0.68 | 56 | 42 | 48 | 2.8 | 2.2 |
| *25th PCTL* | 8.3 | 7.0 | 0.21 | 0.10 | 0.020 | 6.7 | 3.1 | 0.97 | 0.76 | 62 | 47 | 49 | 3.8 | 3.7 |
| *Median* | 8.4 | 7.5 | 0.78 | 0.49 | 0.030 | 25 | 14 | 1.8 | 1.5 | 120 | 92 | 83 | 4.3 | 4.7 |
| *75th PCTL* | 8.8 | 8.5 | 1.2 | 1.2 | 0.11 | 38 | 34 | 2.8 | 2.5 | 210 | 160 | 120 | 7.1 | 7.3 |
| *95th PCTL* | 9.2 | 11 | 2.1 | 2.1 | 0.25 | 66 | 60 | 2.8 | 2.6 | 220 | 160 | 140 | 11 | 13 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 7 | 1 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 8.6 | 11 | 0.13 | 0.045 | 0.022 | 4.0 | 1.4 | 0.52 | 0.42 | 34 | 30 | 36 | 5.6 | 6.6 |
| *25th PCTL* | 8.8 | 11 | 0.16 | 0.054 | 0.04 | 5.1 | 1.7 | 0.65 | 0.53 | 43 | 38 | 46 | 7.0 | 8.4 |
| *Median* | 9.1 | 11 | 0.18 | 0.068 | 0.11 | 5.6 | 2.1 | 0.87 | 0.70 | 57 | 50 | 56 | 8.8 | 11 |
| *75th PCTL* | 9.2 | 11 | 0.22 | 0.10 | 0.13 | 7.0 | 2.9 | 1.0 | 0.90 | 73 | 64 | 75 | 11 | 13 |
| *95th PCTL* | 9.3 | 11 | 0.29 | 0.20 | 0.20 | 9.1 | 5.6 | 1.1 | 0.95 | 78 | 68 | 77 | 12 | 14 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| *n* | 9 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 8.5 | *ND* | 0.088 | 0.035 | 0.048 | 2.7 | 1.0 | 0.37 | 0.29 | 24 | 18 | 27 | 2.7 | 3.5 |
| *25th PCTL* | 8.6 | *ND* | 0.11 | 0.039 | 0.070 | 3.4 | 1.3 | 0.44 | 0.33 | 27 | 21 | 30 | 4.2 | 6.7 |
| *Median* | 8.7 | *ND* | 0.14 | 0.052 | 0.080 | 4.4 | 1.5 | 0.61 | 0.46 | 38 | 29 | 37 | 7.2 | 9.1 |
| *75th PCTL* | 9.1 | *ND* | 0.18 | 0.098 | 0.13 | 5.6 | 3.1 | 0.89 | 0.75 | 61 | 47 | 60 | 8.4 | 11 |
| *95th PCTL* | 9.2 | *ND* | 0.62 | 0.39 | 0.23 | 19 | 12 | 1.6 | 0.95 | 78 | 59 | 80 | 16 | 21 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| *n* | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 8.6 | 4.4 | 0.068 | 0.037 | <0.01 | 2.1 | 1.4 | 0.69 | 0.65 | 54 | 42 | 49 | 11 | 11 |
| *25th PCTL* | 9.0 | 6.0 | 0.085 | 0.055 | <0.01 | 2.6 | 1.8 | 0.74 | 0.68 | 57 | 44 | 55 | 15 | 18 |
| *Median* | 9.3 | 6.1 | 0.089 | 0.079 | <0.01 | 2.8 | 2.6 | 0.84 | 0.85 | 71 | 54 | 56 | 21 | 21 |
| *75th PCTL* | 9.3 | 6.3 | 0.21 | 0.20 | 0.015 | 6.4 | 5.8 | 1.0 | 1.0 | 85 | 66 | 62 | 24 | 25 |
| *95th PCTL* | 9.4 | 6.3 | 0.34 | 0.32 | 0.041 | 11 | 9.0 | 3.2 | 3.1 | 260 | 200 | 210 | 29 | 35 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 12 | 1 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| *10th PCTL* | 8.7 | 12 | 0.076 | 0.045 | 0.031 | 2.4 | 1.4 | 2.4 | 2.3 | 180 | 160 | 190 | 18 | 22 |
| *25th PCTL* | 8.7 | 12 | 0.099 | 0.053 | 0.048 | 3.1 | 1.6 | 2.7 | 2.6 | 210 | 190 | 210 | 28 | 30 |
| *Median* | 8.8 | 12 | 0.14 | 0.082 | 0.055 | 4.4 | 2.6 | 3.1 | 2.9 | 240 | 210 | 240 | 43 | 49 |
| *75th PCTL* | 8.9 | 12 | 0.29 | 0.19 | 0.11 | 9.0 | 6.0 | 3.4 | 3.0 | 250 | 220 | 260 | 63 | 73 |
| *95th PCTL* | 8.9 | 12 | 0.47 | 0.25 | 0.23 | 15 | 7.9 | 4.1 | 3.7 | 300 | 270 | 290 | 87 | 100 |

**Appendix D-2: Summary Statistics for Acid Base Accounting Results**
**Summary Statistics for Tiriganiaq Ore Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 7.7 | 4.6 | 0.53 | 0.52 | <0.01 | 16 | 21 | 0.92 | 0.85 | 71 | 53 | 46 | 1.1 | 0.66 |
| *25th PCTL* | 8.3 | 5.9 | 0.70 | 0.69 | <0.01 | 22 | 23 | 1.1 | 0.95 | 79 | 59 | 48 | 1.6 | 1.2 |
| *Median* | 8.3 | 6.1 | 0.78 | 0.77 | <0.01 | 24 | 39 | 1.1 | 1.1 | 90 | 67 | 64 | 2.0 | 2.0 |
| *75th PCTL* | 8.5 | 6.2 | 1.9 | 1.8 | 0.090 | 59 | 52 | 1.6 | 1.5 | 120 | 92 | 72 | 3.1 | 3.4 |
| *95th PCTL* | 8.6 | 7.5 | 4.3 | 4.2 | 0.11 | 130 | 120 | 1.9 | 1.8 | 150 | 110 | 73 | 4.3 | 4.7 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| *n* | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.9 | *ND* | 0.21 | 0.11 | 0.1 | 6.7 | 3.4 | 1.1 | 0.82 | 67 | 51 | 66 | 3.7 | 4.4 |
| *25th PCTL* | 8.9 | *ND* | 0.32 | 0.18 | 0.14 | 10 | 5.3 | 1.2 | 0.88 | 72 | 55 | 71 | 3.8 | 4.7 |
| *Median* | 9.0 | *ND* | 0.49 | 0.29 | 0.20 | 15 | 8.5 | 1.4 | 0.98 | 80 | 61 | 80 | 4.0 | 5.2 |
| *75th PCTL* | 9.0 | *ND* | 0.79 | 0.52 | 0.27 | 25 | 20 | 1.9 | 1.5 | 120 | 93 | 110 | 7.3 | 9.5 |
| *95th PCTL* | 9.1 | *ND* | 1.0 | 0.70 | 0.32 | 32 | 29 | 2.2 | 1.9 | 160 | 120 | 140 | 10 | 13 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.2 | 3.9 | 0.25 | 0.24 | 0.016 | 7.9 | 7.6 | 0.35 | 0.34 | 28 | 22 | 26 | 1.1 | 1.0 |
| *25th PCTL* | 8.2 | 4.7 | 0.36 | 0.33 | 0.025 | 11 | 12 | 0.49 | 0.48 | 40 | 30 | 31 | 1.7 | 1.8 |
| *Median* | 8.4 | 6.1 | 0.54 | 0.50 | 0.040 | 17 | 19 | 0.71 | 0.70 | 58 | 45 | 40 | 2.8 | 3.0 |
| *75th PCTL* | 8.7 | 6.2 | 1.4 | 1.3 | 0.060 | 44 | 43 | 0.77 | 0.77 | 64 | 49 | 45 | 3.0 | 3.5 |
| *95th PCTL* | 9.1 | 6.2 | 2.1 | 2.0 | 0.076 | 66 | 63 | 0.82 | 0.83 | 69 | 53 | 49 | 3.2 | 3.9 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.9 | *ND* | 0.53 | 0.071 | 0.22 | 17 | 6.9 | 4.1 | 3.6 | 290 | 260 | 250 | 9.3 | 9.2 |
| *25th PCTL* | 8.9 | *ND* | 0.61 | 0.12 | 0.24 | 19 | 7.6 | 4.1 | 3.6 | 300 | 260 | 260 | 10 | 9.6 |
| *Median* | 9.0 | *ND* | 0.74 | 0.21 | 0.27 | 23 | 8.8 | 4.2 | 3.7 | 310 | 270 | 270 | 11 | 10 |
| *75th PCTL* | 9.0 | *ND* | 0.86 | 0.37 | 0.61 | 27 | 16 | 4.4 | 3.9 | 320 | 280 | 280 | 15 | 15 |
| *95th PCTL* | 9.0 | *ND* | 0.95 | 0.49 | 0.87 | 30 | 23 | 4.5 | 4.0 | 330 | 290 | 280 | 19 | 18 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| *10th PCTL* | 8.0 | 2.9 | 0.69 | 0.64 | <0.01 | 22 | 23 | 1.2 | 0.92 | 76 | 57 | 70 | 0.47 | 0.59 |
| *25th PCTL* | 8.1 | 6.0 | 1.1 | 1.1 | 0.060 | 35 | 38 | 1.3 | 1.0 | 84 | 63 | 78 | 0.81 | 0.72 |
| *Median* | 8.2 | 6.4 | 2.7 | 2.7 | 0.065 | 85 | 76 | 1.8 | 1.7 | 140 | 110 | 90 | 1.5 | 1.1 |
| *75th PCTL* | 8.5 | 6.9 | 3.9 | 3.5 | 0.088 | 120 | 120 | 1.9 | 1.8 | 150 | 110 | 100 | 2.1 | 2.2 |
| *95th PCTL* | 9.0 | 7.6 | 5.2 | 5.1 | 0.31 | 160 | 190 | 3.4 | 2.9 | 240 | 180 | 190 | 23 | 29 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 8.5 | 6.3 | 1 | 1 | 0.020 | 32 | 44 | 1.1 | 0.99 | 83 | 71 | 65 | 2.2 | 2.0 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 9.1 | 5.2 | 0.54 | 0.53 | <0.01 | 17 | 25 | 0.66 | 0.65 | 55 | 41 | 38 | 1.4 | 1.5 |
| *25th PCTL* | 9.1 | 5.2 | 0.55 | 0.54 | <0.01 | 17 | 27 | 0.74 | 0.74 | 61 | 46 | 46 | 1.7 | 1.7 |
| *Median* | 9.2 | 5.2 | 0.57 | 0.56 | <0.01 | 18 | 30 | 0.88 | 0.87 | 73 | 54 | 59 | 2.3 | 2.0 |
| *75th PCTL* | 9.3 | 5.3 | 1.4 | 1.4 | <0.01 | 44 | 76 | 1.2 | 1.1 | 94 | 70 | 76 | 2.7 | 2.7 |
| *95th PCTL* | 9.5 | 5.3 | 2.1 | 2.1 | <0.01 | 65 | 110 | 1.4 | 1.3 | 110 | 83 | 90 | 3 | 3.2 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 8.2 | 6.0 | 0.63 | 0.6 | <0.01 | 20 | 17 | 1.3 | 1.2 | 100 | 79 | 81 | 2.0 | 1.8 |
| *25th PCTL* | 8.4 | 6.0 | 1.1 | 1.0 | <0.01 | 33 | 28 | 1.4 | 1.3 | 110 | 85 | 86 | 2.2 | 2.2 |
| *Median* | 8.4 | 6.6 | 1.2 | 1.2 | 0.02 | 38 | 48 | 1.4 | 1.4 | 120 | 88 | 89 | 2.4 | 2.4 |
| 75th PCTL | 9.0 | 6.8 | 1.9 | 1.8 | 0.020 | 58 | 52 | 1.7 | 1.7 | 140 | 110 | 98 | 2.7 | 3.0 |
| 95th PCTL | 9.3 | 7.7 | 2.0 | 2.0 | 0.036 | 62 | 100 | 2.2 | 2.2 | 180 | 140 | 140 | 6.1 | 6.4 |
| **Upper Oxide Formation /Iron Formation (VO/IF)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 8.1 | 3.3 | 1.9 | 1.9 | 0.030 | 61 | 60 | 0.48 | 0.49 | 41 | 31 | 32 | 0.52 | 0.52 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

ND - no data

**Appendix D-2: Summary Statistics for Acid Base Accounting Results**

**Summary Statistics for Wesmeg Waste Rock Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 9.3 | *ND* | 0.084 | 0.014 | 0.070 | 2.6 | 0.47 | 1.3 | 1.2 | 97 | 99 | 100 | 38 | 38 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 7.2 | 3.0 | 1.5 | 1.5 | 0.030 | 48 | 43 | 2.5 | 2.1 | 180 | 130 | 36 | 1.9 | 0.61 |
| *25th PCTL* | 7.4 | 3.2 | 1.7 | 1.7 | 0.030 | 54 | 48 | 2.7 | 2.4 | 200 | 150 | 39 | 2.0 | 0.63 |
| *Median* | 7.5 | 3.5 | 1.9 | 1.9 | 0.045 | 60 | 53 | 3.2 | 2.7 | 230 | 170 | 46 | 2.5 | 0.65 |
| *75th PCTL* | 7.6 | 4.6 | 2.2 | 2.1 | 0.065 | 68 | 59 | 3.6 | 3.0 | 250 | 190 | 52 | 3.6 | 0.78 |
| *95th PCTL* | 7.8 | 6.8 | 2.6 | 2.5 | 0.077 | 80 | 70 | 4.0 | 3.3 | 280 | 210 | 54 | 4.6 | 1.1 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 44 | 2 | 44 | 43 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| *10th PCTL* | 8.8 | 6.4 | 0.062 | 0.032 | 0.013 | 1.9 | 1 | 1.1 | 1.0 | 84 | 75 | 69 | 20 | 22 |
| *25th PCTL* | 8.9 | 6.5 | 0.078 | 0.044 | 0.030 | 2.4 | 1.4 | 1.9 | 1.8 | 150 | 130 | 140 | 29 | 28 |
| *Median* | 9.0 | 6.6 | 0.10 | 0.058 | 0.040 | 3.2 | 1.9 | 2.5 | 2.3 | 190 | 170 | 180 | 45 | 47 |
| 75th PCTL | 9.1 | 6.7 | 0.18 | 0.11 | 0.060 | 5.6 | 3.6 | 3.1 | 3.0 | 240 | 220 | 210 | 67 | 70 |
| 95th PCTL | 9.3 | 6.7 | 0.26 | 0.18 | 0.080 | 8.1 | 5.6 | 4.1 | 3.8 | 320 | 280 | 280 | 130 | 120 |
| **Ultramafics (UV)** | | | | | | | | | | | | | | |
| *n* | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 9.1 | *ND* | 0.055 | 0.015 | 0.023 | 1.7 | 0.72 | 2.7 | 1.9 | 160 | 140 | 140 | 77 | 81 |
| *25th PCTL* | 9.1 | *ND* | 0.059 | 0.019 | 0.028 | 1.8 | 0.85 | 2.7 | 2.0 | 160 | 140 | 150 | 84 | 82 |
| *Median* | 9.2 | *ND* | 0.064 | 0.029 | 0.035 | 2.0 | 1.0 | 3.1 | 2.4 | 190 | 170 | 180 | 87 | 87 |
| 75th PCTL | 9.2 | *ND* | 0.068 | 0.040 | 0.040 | 2.1 | 1.3 | 3.5 | 2.9 | 240 | 210 | 220 | 95 | 98 |
| 95th PCTL | 9.2 | *ND* | 0.072 | 0.050 | 0.040 | 2.2 | 1.6 | 3.6 | 3.3 | 270 | 240 | 230 | 110 | 110 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 8.0 | 6.5 | 1.3 | 1.3 | 0.013 | 40 | 38 | 2.8 | 2.6 | 210 | 160 | 69 | 2.2 | 1.1 |
| *25th PCTL* | 8.0 | 6.6 | 1.7 | 1.6 | 0.018 | 52 | 47 | 3.0 | 2.9 | 240 | 180 | 89 | 2.4 | 1.3 |
| *Median* | 8.1 | 7.7 | 2.1 | 2.0 | 0.025 | 64 | 64 | 3.3 | 3.2 | 260 | 200 | 120 | 2.7 | 1.5 |
| 75th PCTL | 8.4 | 8.7 | 2.4 | 2.4 | 0.033 | 76 | 79 | 3.4 | 3.3 | 270 | 200 | 160 | 3.8 | 2.7 |
| 95th PCTL | 8.8 | 8.7 | 2.9 | 2.8 | 0.039 | 90 | 88 | 3.4 | 3.3 | 280 | 210 | 200 | 5.9 | 5.6 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 8.3 | 6.1 | 0.052 | 0.042 | <0.01 | 1.6 | 1.5 | 2.3 | 2.3 | 190 | 170 | 150 | 16 | 14 |
| *25th PCTL* | 8.7 | 6.2 | 0.062 | 0.052 | <0.01 | 1.9 | 1.9 | 2.7 | 2.7 | 230 | 200 | 180 | 39 | 32 |
| *Median* | 9.0 | 6.3 | 0.11 | 0.10 | <0.01 | 3.4 | 4.8 | 2.9 | 3.0 | 250 | 220 | 200 | 78 | 71 |
| 75th PCTL | 9.0 | 6.7 | 0.93 | 0.91 | 0.020 | 29 | 31 | 3.0 | 3.1 | 260 | 230 | 200 | 120 | 110 |
| 95th PCTL | 9.1 | 7.4 | 2.8 | 2.8 | 0.044 | 87 | 87 | 3.2 | 3.3 | 270 | 240 | 210 | 140 | 140 |

**Summary Statistics for Wesmeg Ore Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 7.8 | 7.6 | 2.0 | 1.9 | 0.090 | 62 | 54 | 1.6 | 1.5 | 120 | 91 | 70 | 1.5 | 1.1 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.4 | 6.4 | 0.21 | 0.2 | <0.01 | 6.7 | 6.9 | 2.4 | 2.5 | 200 | 180 | 110 | 8.7 | 6.7 |
| *25th PCTL* | 8.5 | 6.5 | 0.22 | 0.21 | <0.01 | 6.9 | 6.9 | 2.6 | 2.6 | 220 | 190 | 140 | 14 | 14 |
| *Median* | 8.8 | 6.8 | 0.23 | 0.22 | <0.01 | 7.2 | 7.0 | 3.0 | 3.0 | 250 | 210 | 180 | 23 | 25 |
| 75th PCTL | 8.8 | 7 | 0.80 | 0.78 | 0.020 | 25 | 28 | 3.2 | 3.2 | 270 | 230 | 200 | 31 | 29 |
| 95th PCTL | 8.8 | 7.1 | 1.2 | 1.2 | 0.028 | 39 | 45 | 3.4 | 3.5 | 290 | 250 | 220 | 37 | 33 |
| **Ultramafic Volcanics (UV)** | | | | | | | | | | | | | | |
| *n* | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 9.1 | *ND* | 0.13 | 0.063 | 0.070 | 4.2 | 2.0 | 4.4 | 4.2 | 340 | 300 | 300 | 73 | 71 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 7.5 | 2.7 | 2.2 | 2.2 | 0.022 | 70 | 77 | 1.4 | 1.3 | 110 | 83 | 46 | 0.73 | 0.34 |
| *25th PCTL* | 7.8 | 2.8 | 2.6 | 2.6 | 0.035 | 82 | 85 | 2.0 | 1.7 | 140 | 110 | 54 | 1.0 | 0.45 |
| *Median* | 7.9 | 4.8 | 3.3 | 3.2 | 0.040 | 100 | 91 | 2.5 | 2.3 | 190 | 140 | 58 | 1.5 | 0.52 |
| 75th PCTL | 8.1 | 7.1 | 4.0 | 3.9 | 0.055 | 130 | 140 | 3.3 | 3.0 | 250 | 190 | 90 | 1.9 | 1.1 |
| 95th PCTL | 8.2 | 8.4 | 4.7 | 4.7 | 0.14 | 150 | 170 | 4.6 | 3.5 | 290 | 220 | 120 | 3.1 | 1.8 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 7.6 | 5.8 | 0.24 | 0.23 | <0.01 | 7.6 | 7.4 | 3.2 | 3.3 | 280 | 240 | 220 | 26 | 24 |
| *Max* | 8.8 | 6.8 | 0.29 | 0.28 | <0.01 | 9.1 | 8.9 | 3.4 | 3.4 | 290 | 250 | 230 | 33 | 30 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 8.1 | 4.2 | 5.2 | 5.2 | 0.060 | 160 | 210 | 1.9 | 1.9 | 160 | 140 | 130 | 0.83 | 0.80 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

ND - no data

**Appendix D-2 Summary Statistics for Acid Base Accounting Results**

**Summary Statistics for Wesmeg North Waste Rock Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 8.8 | 6.2 | 0.19 | 0.18 | <0.01 | 6.1 | 6 | 2 | 1.9 | 160 | 160 | 130 | 26 | 22 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 8.1 | 8.3 | 1.1 | 1.1 | <0.01 | 35 | 31 | 3.0 | 2.8 | 240 | 180 | 87 | 3.2 | 2.3 |
| *Max* | 8.3 | 8.4 | 2.0 | 1.9 | 0.04 | 62 | 62 | 3.4 | 3.1 | 260 | 200 | 140 | 5.1 | 2.5 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| *10th PCTL* | 8.7 | 6 | 0.14 | 0.13 | <0.01 | 4.2 | 4.0 | 3.4 | 3.5 | 290 | 260 | 240 | 27 | 23 |
| *25th PCTL* | 8.9 | 6.2 | 0.17 | 0.16 | <0.01 | 5.4 | 5.2 | 3.8 | 3.9 | 320 | 280 | 240 | 35 | 32 |
| *Median* | 8.9 | 6.4 | 0.22 | 0.21 | <0.01 | 7.0 | 6.8 | 4.0 | 4.1 | 340 | 300 | 260 | 40 | 35 |
| 75th PCTL | 9.1 | 6.5 | 0.27 | 0.26 | <0.01 | 8.4 | 8.2 | 4.3 | 4.3 | 360 | 310 | 270 | 55 | 46 |
| 95th PCTL | 9.3 | 6.7 | 0.41 | 0.40 | <0.01 | 13 | 13 | 4.4 | 4.4 | 370 | 320 | 280 | 82 | 78 |
| **Underground** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.6 | 6.7 | 0.046 | 0.036 | <0.01 | 1.4 | 1.5 | 1.6 | 1.6 | 130 | 130 | 130 | 30 | 29 |
| *25th PCTL* | 8.6 | 6.7 | 0.071 | 0.061 | <0.01 | 2.2 | 2.2 | 1.7 | 1.6 | 130 | 130 | 130 | 33 | 32 |
| *Median* | 8.7 | 6.8 | 0.11 | 0.10 | <0.01 | 3.5 | 3.3 | 1.7 | 1.6 | 130 | 130 | 130 | 37 | 37 |
| 75th PCTL | 8.8 | 6.9 | 0.13 | 0.12 | <0.01 | 4.1 | 3.9 | 2.7 | 2.7 | 220 | 220 | 190 | 190 | 150 |
| 95th PCTL | 8.8 | 7.0 | 0.15 | 0.14 | <0.01 | 4.6 | 4.4 | 3.5 | 3.5 | 290 | 290 | 230 | 310 | 240 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 9.1 | 6.0 | 0.36 | 0.35 | <0.01 | 11 | 17 | 1.0 | 0.99 | 83 | 62 | 57 | 4.4 | 4.1 |
| *Max* | 9.3 | 6.0 | 0.45 | 0.44 | <0.01 | 14 | 18 | 1.4 | 1.4 | 110 | 84 | 86 | 7.6 | 7.7 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 7.8 | 7.4 | 1.7 | 1.6 | 0.030 | 52 | 45 | 1.4 | 1.3 | 110 | 94 | 81 | 1.8 | 1.6 |
| *Max* | 7.9 | 8.1 | 2.4 | 2.3 | 0.050 | 75 | 65 | 2.2 | 2.1 | 180 | 150 | 140 | 2.0 | 1.9 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 8.5 | 5.9 | 0.09 | 0.08 | <0.01 | 2.8 | 2.5 | 2.2 | 2.2 | 180 | 160 | 170 | 13 | 12 |
| *25th PCTL* | 8.7 | 6.2 | 0.12 | 0.11 | <0.01 | 3.9 | 3.6 | 2.5 | 2.5 | 210 | 180 | 180 | 32 | 35 |
| *Median* | 8.9 | 6.4 | 0.14 | 0.13 | <0.01 | 4.2 | 3.9 | 2.7 | 2.8 | 230 | 200 | 210 | 46 | 47 |
| 75th PCTL | 9.0 | 6.5 | 0.24 | 0.23 | <0.01 | 7.5 | 8.1 | 3.0 | 3.1 | 260 | 230 | 220 | 61 | 56 |
| 95th PCTL | 9.1 | 6.8 | 0.72 | 0.7 | 0.017 | 22 | 23 | 3.5 | 3.6 | 300 | 260 | 230 | 92 | 85 |

**Summary Statistics for Wesmeg North Ore Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | MAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/MAP | Modified NP/MAP |
| **Open Pit** | | | | | | | | | | | | | | |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 8.0 | 6.5 | 0.15 | 0.14 | <0.01 | 4.7 | 4.9 | 3.6 | 3.7 | 310 | 270 | 250 | 15 | 14 |
| *25th PCTL* | 8.2 | 6.5 | 0.23 | 0.22 | <0.01 | 7.2 | 8.0 | 3.7 | 3.7 | 310 | 270 | 250 | 21 | 20 |
| *Median* | 8.6 | 6.6 | 0.36 | 0.35 | <0.01 | 11 | 13 | 3.7 | 3.8 | 320 | 270 | 250 | 30 | 29 |
| 75th PCTL | 8.8 | 6.6 | 0.57 | 0.56 | <0.01 | 18 | 19 | 4.2 | 4.2 | 350 | 310 | 290 | 59 | 55 |
| 95th PCTL | 9.0 | 6.7 | 0.75 | 0.74 | <0.01 | 23 | 23 | 4.6 | 4.6 | 380 | 330 | 320 | 83 | 76 |
| **Underground** | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 8.8 | 5.8 | 0.22 | 0.21 | <0.01 | 6.8 | 9.2 | 0.60 | 0.62 | 52 | 39 | 37 | 2.9 | 2.9 |
| *Max* | 9.0 | 6.0 | 0.45 | 0.44 | <0.01 | 14 | 15 | 0.66 | 0.65 | 54 | 41 | 40 | 5.7 | 5.4 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 8.9 | 5.9 | 0.38 | 0.37 | <0.01 | 12 | 12 | 3.4 | 3.5 | 290 | 250 | 230 | 20 | 18 |
| *25th PCTL* | 8.9 | 6.3 | 0.40 | 0.39 | <0.01 | 13 | 12 | 3.6 | 3.7 | 310 | 270 | 250 | 21 | 19 |
| *Median* | 9.0 | 6.3 | 0.42 | 0.41 | <0.01 | 13 | 13 | 3.8 | 3.9 | 330 | 280 | 250 | 21 | 19 |
| 75th PCTL | 9.0 | 6.5 | 0.43 | 0.42 | <0.01 | 14 | 15 | 4.0 | 4.0 | 330 | 290 | 260 | 22 | 20 |
| 95th PCTL | 9.2 | 6.6 | 0.48 | 0.47 | <0.01 | 15 | 15 | 4.2 | 4.3 | 360 | 310 | 270 | 24 | 21 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

ND - no data

**Appendix D-2: Summary Statistics for Acid Base Accounting**
**Results Summary Statistics for Whole Ore Tailings Samples**

| Parameter | Paste pH | NAG pH | Total-S | Sulphide-S | Sulphate-S | SAP | Site-Specific AP | Total-C | Total Inorganic-C | CaNP | CaNP-adj | Modified NP | NPR | NPR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | s.u. | s.u. | wt.% | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | CaNP-adj/SAP | Modified NP/SAP |
| **Whole Ore Tailings (n=6)** | | | | | | | | | | | | | | |
| *TSF 25* | 8.0 | 5.8 | 1.9 | 1.5 | 0.42 | 48 | 55 | 1.5 | 1.2 | 98 | 69 | 74 | 1.5 | 1.6 |
| *TSF 26* | 8.0 | 5.7 | 2.0 | 1.6 | 0.38 | 51 | 59 | 1.5 | 1.2 | 100 | 70 | 77 | 1.4 | 1.5 |
| *TSF 27* | 8.0 | 5.9 | 2.1 | 1.6 | 0.43 | 51 | 60 | 1.6 | 1.2 | 100 | 72 | 79 | 1.4 | 1.5 |
| *TSF 28* | 8.1 | 5.7 | 2.1 | 1.6 | 0.51 | 49 | 57 | 1.6 | 1.2 | 100 | 72 | 82 | 1.5 | 1.7 |
| *TSF 29* | 8.1 | 5.6 | 1.8 | 1.5 | 0.27 | 48 | 56 | 1.5 | 1.2 | 100 | 71 | 79 | 1.5 | 1.6 |
| *TSF 30* | 8.2 | 5.7 | 1.9 | 1.6 | 0.27 | 51 | 59 | 1.5 | 1.2 | 100 | 71 | 77 | 1.4 | 1.5 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

SAP: Sulphide Acid Potential is calculated from Sulphide-S (by difference) content (Sulphide-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3).

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/SAP and Modified-NP/SAP

NAG (Net Acid Generation) pH

ND - no data

# APPENDIX D-3: SUMMARY STATISTICS FOR WHOLE ROCK ANALYSIS RESULTS

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**

**Summary Statistics for Discovery Waste Rock Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 |
| *10th PCTL* | 48 | 15 | 15 | 2.9 | 8.0 | 2.9 | 1.0 | 2.0 | 0.31 | 0.18 | <0.01 | 0.028 |
| *25th PCTL* | 48 | 15 | 15 | 3.2 | 8.1 | 3.1 | 1.1 | 2.1 | 0.35 | 0.19 | <0.01 | 0.040 |
| *Median* | 49 | 16 | 15 | 3.7 | 8.3 | 3.2 | 1.2 | 2.4 | 0.42 | 0.20 | <0.01 | 0.040 |
| *75th PCTL* | 49 | 16 | 16 | 4.1 | 8.3 | 3.4 | 1.3 | 2.5 | 0.49 | 0.20 | <0.01 | 0.040 |
| *95th PCTL* | 51 | 16 | 16 | 4.7 | 8.6 | 3.6 | 2.1 | 2.8 | 0.55 | 0.20 | <0.01 | 0.050 |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 28 |
| *10th PCTL* | 48 | 3.0 | 20 | 1.4 | 1.7 | 0.13 | 0.16 | 0.080 | 0.12 | 0.030 | <0.01 | <0.01 |
| *25th PCTL* | 51 | 3.7 | 26 | 1.5 | 2.3 | 0.36 | 0.31 | 0.090 | 0.15 | 0.040 | <0.01 | <0.01 |
| *Median* | 53 | 5.6 | 34 | 1.6 | 2.7 | 0.80 | 0.72 | 0.13 | 0.19 | 0.040 | <0.01 | <0.01 |
| *75th PCTL* | 56 | 7.2 | 38 | 1.8 | 3.4 | 1.4 | 1.1 | 0.18 | 0.22 | 0.050 | 0.020 | <0.01 |
| *95th PCTL* | 62 | 11 | 44 | 2.0 | 4.3 | 2.0 | 2.1 | 0.27 | 0.26 | 0.066 | 0.020 | <0.01 |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 48 |
| *10th PCTL* | 61 | 15 | 5.6 | 2.1 | 1.4 | 2.5 | 1.9 | 0.46 | 0.11 | 0.030 | <0.01 | <0.01 |
| *25th PCTL* | 62 | 16 | 6.1 | 2.2 | 1.6 | 3.0 | 2.1 | 0.52 | 0.11 | 0.040 | 0.020 | 0.020 |
| *Median* | 64 | 16 | 6.7 | 2.4 | 2.3 | 3.3 | 2.4 | 0.56 | 0.12 | 0.050 | 0.020 | 0.020 |
| *75th PCTL* | 65 | 17 | 7.6 | 2.6 | 2.8 | 3.6 | 2.7 | 0.62 | 0.13 | 0.050 | 0.030 | 0.020 |
| *95th PCTL* | 67 | 18 | 9.2 | 2.9 | 3.2 | 4.2 | 3.1 | 0.68 | 0.15 | 0.060 | 0.030 | 0.030 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 54 | 6.5 | 12 | 1.8 | 1.9 | 0.64 | 1.7 | 0.16 | 0.16 | 0.044 | <0.01 | <0.01 |
| *25th PCTL* | 54 | 7.4 | 17 | 1.8 | 1.9 | 0.84 | 1.8 | 0.19 | 0.17 | 0.050 | <0.01 | <0.01 |
| *Median* | 55 | 9.1 | 25 | 1.9 | 2.0 | 1.2 | 1.9 | 0.22 | 0.18 | 0.060 | <0.01 | <0.01 |
| *75th PCTL* | 58 | 13 | 30 | 2.5 | 2.5 | 2.0 | 2.1 | 0.47 | 0.18 | 0.060 | 0.015 | 0.015 |
| *95th PCTL* | 60 | 17 | 33 | 3.0 | 3.0 | 2.6 | 2.2 | 0.66 | 0.18 | 0.060 | 0.019 | 0.019 |
| **Underground** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 45 | 15 | 15 | 3.8 | 7.9 | 3.0 | 0.85 | 2.2 | 0.32 | 0.18 | <0.01 | *ND* |
| *25th PCTL* | 46 | 15 | 15 | 3.9 | 8.0 | 3.1 | 0.89 | 2.2 | 0.33 | 0.19 | <0.01 | *ND* |
| *Median* | 49 | 15 | 16 | 4.0 | 8.2 | 3.2 | 0.95 | 2.3 | 0.34 | 0.19 | <0.01 | *ND* |
| *75th PCTL* | 49 | 15 | 16 | 4.4 | 8.5 | 3.2 | 1.1 | 2.4 | 0.37 | 0.19 | <0.01 | *ND* |
| *95th PCTL* | 49 | 16 | 16 | 4.7 | 8.6 | 3.2 | 1.2 | 2.4 | 0.39 | 0.19 | <0.01 | *ND* |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 0 |
| *10th PCTL* | 45 | 2.3 | 31 | 1.3 | 2.1 | 0.11 | 0.098 | 0.058 | 0.16 | 0.034 | <0.01 | *ND* |
| *25th PCTL* | 48 | 4.0 | 34 | 1.5 | 2.3 | 0.36 | 0.17 | 0.11 | 0.18 | 0.040 | <0.01 | *ND* |
| *Median* | 49 | 4.6 | 37 | 1.7 | 2.7 | 0.40 | 0.30 | 0.15 | 0.19 | 0.050 | <0.01 | *ND* |
| *75th PCTL* | 52 | 6.2 | 42 | 1.8 | 3.7 | 0.92 | 0.62 | 0.17 | 0.21 | 0.050 | <0.01 | *ND* |
| *95th PCTL* | 59 | 8.4 | 45 | 2.2 | 4.7 | 1.4 | 0.78 | 0.24 | 0.22 | 0.060 | 0.020 | *ND* |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 0 |
| *10th PCTL* | 61 | 15 | 5.2 | 1.9 | 1.6 | 2.5 | 1.9 | 0.45 | 0.10 | 0.048 | <0.01 | *ND* |
| *25th PCTL* | 62 | 16 | 5.5 | 2.1 | 1.7 | 2.9 | 2.1 | 0.50 | 0.11 | 0.050 | 0.020 | *ND* |
| *Median* | 64 | 16 | 6.3 | 2.4 | 2.1 | 3.1 | 2.3 | 0.58 | 0.12 | 0.050 | 0.030 | *ND* |
| *75th PCTL* | 65 | 17 | 7.6 | 2.6 | 2.6 | 3.8 | 2.7 | 0.64 | 0.13 | 0.055 | 0.030 | *ND* |
| *95th PCTL* | 66 | 18 | 9.2 | 2.8 | 2.9 | 4.2 | 3.1 | 0.71 | 0.14 | 0.060 | 0.031 | *ND* |

**Summary Statistics for Discovery Ore Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 50 | 4.9 | 25 | 1.4 | 1.8 | 0.42 | 0.43 | 0.12 | 0.14 | 0.034 | <0.01 | <0.01 |
| *25th PCTL* | 54 | 5.4 | 27 | 1.5 | 2.1 | 0.47 | 0.50 | 0.14 | 0.16 | 0.040 | <0.01 | <0.01 |
| *Median* | 59 | 5.6 | 28 | 1.5 | 2.3 | 0.56 | 0.59 | 0.15 | 0.17 | 0.040 | 0.020 | <0.01 |
| *75th PCTL* | 61 | 6.2 | 33 | 1.6 | 2.9 | 0.89 | 0.67 | 0.17 | 0.20 | 0.050 | 0.020 | <0.01 |
| *95th PCTL* | 64 | 6.2 | 38 | 1.7 | 3.0 | 0.98 | 0.69 | 0.18 | 0.22 | 0.058 | 0.028 | <0.01 |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 62 | 16 | 7.6 | 2.3 | 2.9 | 3.1 | 2.1 | 0.57 | 0.14 | 0.040 | 0.020 | 0.020 |
| *Max* | 64 | 17 | 7.7 | 2.5 | 2.9 | 4.0 | 2.8 | 0.57 | 0.14 | 0.060 | 0.030 | 0.020 |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 0 |
| *10th PCTL* | 53 | 5.0 | 23 | 1.4 | 2.2 | 0.37 | 0.39 | 0.11 | 0.14 | 0.040 | <0.01 | *ND* |
| *25th PCTL* | 54 | 5.5 | 25 | 1.5 | 2.3 | 0.48 | 0.51 | 0.12 | 0.15 | 0.040 | <0.01 | *ND* |
| *Median* | 55 | 6.2 | 28 | 1.6 | 2.8 | 0.64 | 0.66 | 0.16 | 0.18 | 0.040 | <0.01 | *ND* |
| *75th PCTL* | 59 | 7.5 | 33 | 1.8 | 3.4 | 0.86 | 0.99 | 0.22 | 0.18 | 0.050 | <0.01 | *ND* |
| *95th PCTL* | 66 | 9.5 | 37 | 1.9 | 3.6 | 1.3 | 1.6 | 0.29 | 0.20 | 0.053 | 0.020 | *ND* |

**Notes: ND - no data**

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**

**Summary Statistics for F-Zone Waste Rock Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 5 |
| *10th PCTL* | 48 | 0.44 | 13 | 1.0 | 1.3 | 0.040 | 0.018 | 0.018 | 0.048 | 0.23 | <0.01 | <0.01 |
| *25th PCTL* | 62 | 0.55 | 14 | 1.4 | 1.8 | 0.050 | 0.040 | 0.030 | 0.060 | 0.36 | <0.01 | <0.01 |
| *Median* | 66 | 0.88 | 17 | 2.2 | 2.8 | 0.060 | 0.040 | 0.030 | 0.070 | 0.41 | <0.01 | <0.01 |
| *75th PCTL* | 74 | 1.5 | 25 | 2.3 | 6.1 | 0.070 | 0.080 | 0.050 | 0.070 | 0.50 | 0.020 | <0.01 |
| *95th PCTL* | 79 | 9.1 | 28 | 4.9 | 8.9 | 0.89 | 0.98 | 0.55 | 0.13 | 0.54 | 0.032 | 0.042 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 62 |
| *10th PCTL* | 42 | 12 | 9.4 | 4.3 | 8.4 | 1.4 | 0.12 | 0.67 | 0.050 | 0.17 | 0.030 | 0.040 |
| *25th PCTL* | 43 | 13 | 10 | 5.1 | 9.0 | 1.8 | 0.22 | 0.79 | 0.060 | 0.18 | 0.030 | 0.040 |
| *Median* | 45 | 14 | 11 | 5.7 | 11 | 2.1 | 0.38 | 0.89 | 0.070 | 0.20 | 0.040 | 0.050 |
| *75th PCTL* | 48 | 14 | 12 | 6.4 | 12 | 2.6 | 0.66 | 0.99 | 0.090 | 0.24 | 0.040 | 0.050 |
| *95th PCTL* | 52 | 16 | 14 | 7.9 | 13 | 3.2 | 0.99 | 1.1 | 0.15 | 0.32 | 0.060 | 0.060 |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 62 | 0.27 | 8.2 | 0.95 | 1.3 | 0.033 | 0.016 | 0.010 | 0.013 | 0.27 | <0.01 | *ND* |
| *25th PCTL* | 63 | 0.33 | 9.5 | 1.2 | 1.7 | 0.038 | 0.025 | 0.010 | 0.018 | 0.32 | <0.01 | *ND* |
| *Median* | 66 | 0.41 | 16 | 2.0 | 2.6 | 0.040 | 0.035 | 0.015 | 0.020 | 0.45 | 0.020 | *ND* |
| *75th PCTL* | 73 | 0.77 | 21 | 2.7 | 3.7 | 0.048 | 0.045 | 0.030 | 0.030 | 0.63 | 0.030 | *ND* |
| *95th PCTL* | 83 | 1.5 | 22 | 2.8 | 4.4 | 0.066 | 0.057 | 0.054 | 0.054 | 0.84 | 0.030 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 40 | 9.6 | 11 | 4.6 | 6.9 | 0.56 | 0.24 | 0.70 | 0.056 | 0.22 | 0.013 | *ND* |
| *25th PCTL* | 41 | 10 | 12 | 4.8 | 8.2 | 0.91 | 0.35 | 0.74 | 0.065 | 0.27 | 0.018 | *ND* |
| *Median* | 42 | 12 | 14 | 4.9 | 11 | 2.0 | 0.65 | 0.78 | 0.095 | 0.30 | 0.020 | *ND* |
| *75th PCTL* | 45 | 14 | 16 | 5.1 | 13 | 2.9 | 1.0 | 0.89 | 0.12 | 0.31 | 0.025 | *ND* |
| *95th PCTL* | 46 | 15 | 16 | 5.4 | 14 | 3.1 | 1.3 | 1.1 | 0.13 | 0.33 | 0.037 | *ND* |

**Summary Statistics for F-Zone Ore Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 |
| *10th PCTL* | 51 | 1.6 | 4.9 | 1.1 | 2.3 | 0.42 | 0.065 | 0.074 | 0.019 | 0.11 | 0.023 | <0.01 |
| *25th PCTL* | 61 | 2.4 | 8.2 | 1.6 | 2.8 | 0.44 | 0.088 | 0.11 | 0.033 | 0.17 | 0.028 | <0.01 |
| *Median* | 66 | 3.5 | 12 | 2.4 | 3.1 | 0.49 | 0.20 | 0.16 | 0.045 | 0.36 | 0.035 | <0.01 |
| *75th PCTL* | 68 | 6.6 | 14 | 3.9 | 5.1 | 0.90 | 0.41 | 0.33 | 0.050 | 0.52 | 0.045 | 0.030 |
| *95th PCTL* | 72 | 12 | 17 | 6.2 | 9.9 | 1.8 | 0.67 | 0.66 | 0.050 | 0.54 | 0.057 | 0.046 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 39 | 13 | 8.9 | 11 | 9.4 | 0.54 | 1.8 | 0.40 | 0.030 | 0.12 | 0.080 | *ND* |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| *10th PCTL* | 53 | 0.71 | 18 | 2.3 | 2.8 | 0.034 | 0.014 | 0.014 | <0.01 | 0.22 | <0.01 | *ND* |
| *25th PCTL* | 53 | 0.85 | 19 | 2.5 | 3.4 | 0.040 | 0.020 | 0.020 | <0.01 | 0.22 | <0.01 | *ND* |
| *Median* | 56 | 1.7 | 23 | 2.7 | 4.7 | 0.040 | 0.080 | 0.050 | 0.040 | 0.28 | <0.01 | *ND* |
| *75th PCTL* | 58 | 2.5 | 27 | 3.1 | 5.6 | 0.070 | 0.13 | 0.060 | 0.070 | 0.41 | <0.01 | *ND* |
| *95th PCTL* | 62 | 5.8 | 30 | 3.1 | 7.5 | 0.31 | 0.40 | 0.15 | 0.070 | 0.68 | 0.018 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 42 | 9.7 | 12 | 3.4 | 5.9 | 1.9 | 0.61 | 0.51 | 0.028 | 0.15 | <0.01 | *ND* |
| *25th PCTL* | 43 | 11 | 13 | 3.7 | 6.2 | 2.2 | 0.79 | 0.70 | 0.055 | 0.16 | <0.01 | *ND* |
| *Median* | 44 | 13 | 15 | 4.2 | 6.7 | 2.9 | 1.1 | 1.0 | 0.10 | 0.17 | <0.01 | *ND* |
| *75th PCTL* | 48 | 13 | 16 | 4.5 | 8.5 | 3.6 | 1.1 | 1.3 | 0.17 | 0.30 | 0.015 | *ND* |
| *95th PCTL* | 51 | 13 | 17 | 4.7 | 10 | 4.2 | 1.1 | 1.6 | 0.22 | 0.40 | 0.019 | *ND* |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 54 | 1.1 | 20 | 1.9 | 3.0 | 0.022 | 0.038 | 0.030 | 0.026 | 0.098 | <0.01 | *ND* |
| *25th PCTL* | 57 | 1.4 | 20 | 2.0 | 3.4 | 0.025 | 0.065 | 0.045 | 0.035 | 0.17 | <0.01 | *ND* |
| *Median* | 62 | 1.9 | 21 | 2.0 | 4.1 | 0.030 | 0.11 | 0.070 | 0.050 | 0.29 | <0.01 | *ND* |
| *75th PCTL* | 62 | 3.9 | 26 | 2.0 | 4.7 | 0.51 | 0.34 | 0.14 | 0.12 | 0.33 | 0.015 | *ND* |
| *95th PCTL* | 62 | 5.4 | 31 | 2.0 | 5.2 | 0.89 | 0.52 | 0.19 | 0.18 | 0.36 | 0.019 | *ND* |

**Notes: ND - no data**

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**

**Summary Statistics for Pump Waste Rock Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 42 | 15 | 13 | 8.3 | 7.2 | 0.11 | 1.9 | 0.61 | 0.040 | 0.16 | 0.030 | *ND* |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 4 |
| *10th PCTL* | 52 | 0.67 | 17 | 1.8 | 3.0 | 0.010 | <0.01 | 0.031 | 0.054 | 0.16 | <0.01 | <0.01 |
| *25th PCTL* | 54 | 2.1 | 19 | 2.3 | 3.2 | 0.018 | <0.01 | 0.085 | 0.075 | 0.20 | <0.01 | <0.01 |
| *Median* | 54 | 3.1 | 21 | 2.5 | 3.7 | 0.040 | 0.025 | 0.13 | 0.10 | 0.28 | <0.01 | <0.01 |
| *75th PCTL* | 59 | 4.0 | 24 | 3.3 | 5.1 | 0.073 | 0.043 | 0.19 | 0.11 | 0.32 | <0.01 | <0.01 |
| *95th PCTL* | 65 | 5.3 | 26 | 3.8 | 7.5 | 0.12 | 0.063 | 0.38 | 0.15 | 0.45 | 0.017 | <0.01 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 15 |
| *10th PCTL* | 42 | 12 | 9.6 | 4.6 | 8.9 | 1.3 | 0.054 | 0.62 | 0.060 | 0.17 | 0.017 | 0.040 |
| *25th PCTL* | 44 | 13 | 11 | 5.0 | 9.0 | 1.6 | 0.12 | 0.80 | 0.070 | 0.19 | 0.030 | 0.040 |
| *Median* | 45 | 13 | 12 | 5.8 | 9.7 | 2.0 | 0.36 | 0.91 | 0.080 | 0.22 | 0.030 | 0.050 |
| *75th PCTL* | 47 | 14 | 12 | 6.2 | 11 | 2.7 | 0.65 | 0.97 | 0.090 | 0.23 | 0.040 | 0.050 |
| *95th PCTL* | 48 | 15 | 16 | 6.9 | 12 | 3.5 | 1.2 | 1.1 | 0.10 | 0.36 | 0.052 | 0.060 |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 60 | 4.6 | 13 | 2.4 | 2.2 | 0.020 | 0.050 | 0.10 | 0.040 | 0.24 | <0.01 | *ND* |
| *Max* | 64 | 6.0 | 19 | 4.2 | 5.8 | 0.51 | 0.39 | 0.34 | 0.090 | 0.25 | 0.040 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
| *10th PCTL* | 41 | 9.7 | 9.8 | 3.6 | 5.0 | 0.11 | 0.47 | 0.55 | 0.018 | 0.15 | 0.018 | *ND* |
| *25th PCTL* | 42 | 10 | 10 | 4.9 | 6.5 | 1.8 | 0.55 | 0.58 | 0.030 | 0.16 | 0.030 | *ND* |
| *Median* | 42 | 13 | 12 | 7.2 | 8.6 | 1.9 | 0.68 | 0.64 | 0.040 | 0.18 | 0.030 | *ND* |
| *75th PCTL* | 49 | 14 | 14 | 8.1 | 9.7 | 2.6 | 0.81 | 0.80 | 0.10 | 0.21 | 0.030 | *ND* |
| *95th PCTL* | 56 | 16 | 16 | 9.0 | 11 | 3.9 | 1.4 | 1.3 | 0.15 | 0.27 | 0.074 | *ND* |

**Summary Statistics for Pump Ore Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 45 | 1.7 | 15 | 2.4 | 2.5 | 0.065 | 0.013 | 0.065 | 0.059 | 0.17 | <0.01 | <0.01 |
| *25th PCTL* | 47 | 2.5 | 19 | 2.7 | 3.1 | 0.088 | 0.018 | 0.088 | 0.073 | 0.18 | <0.01 | <0.01 |
| *Median* | 52 | 5.7 | 23 | 4.1 | 4.3 | 0.10 | 0.24 | 0.26 | 0.085 | 0.24 | <0.01 | 0.015 |
| *75th PCTL* | 57 | 9.7 | 26 | 5.5 | 6.0 | 0.55 | 0.49 | 0.55 | 0.090 | 0.30 | 0.015 | 0.028 |
| *95th PCTL* | 59 | 12 | 28 | 6.0 | 8.3 | 1.6 | 0.59 | 0.85 | 0.090 | 0.32 | 0.027 | 0.046 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 55 | 4.7 | 8.9 | 2.5 | 6 | 1.0 | 0.27 | 0.34 | 0.060 | 0.20 | <0.01 | *ND* |
| *Max* | 57 | 9.0 | 15 | 2.9 | 7.1 | 1.4 | 1.4 | 0.54 | 0.060 | 0.23 | 0.030 | *ND* |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| *10th PCTL* | 51 | 0.78 | 16 | 1.4 | 1.2 | <0.01 | <0.01 | 0.020 | 0.020 | 0.22 | <0.01 | *ND* |
| *25th PCTL* | 55 | 1.1 | 17 | 1.5 | 1.6 | <0.01 | <0.01 | 0.020 | 0.020 | 0.30 | <0.01 | *ND* |
| *Median* | 62 | 1.4 | 20 | 1.8 | 3.3 | 0.060 | 0.020 | 0.030 | 0.030 | 0.32 | <0.01 | *ND* |
| *75th PCTL* | 63 | 3.0 | 21 | 2.2 | 4.9 | 0.17 | 0.050 | 0.090 | 0.090 | 0.34 | <0.01 | *ND* |
| *95th PCTL* | 65 | 4.8 | 26 | 2.6 | 5.1 | 0.50 | 0.29 | 0.30 | 0.14 | 0.38 | 0.018 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 44 | 11 | 13 | 6.2 | 8.3 | 2.9 | 0.42 | 0.48 | 0.010 | 0.17 | 0.030 | *ND* |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 55 | 3.7 | 19 | 2.1 | 2.6 | 0.022 | 0.022 | 0.13 | 0.030 | 0.18 | <0.01 | *ND* |
| *25th PCTL* | 56 | 4.3 | 19 | 2.1 | 3.1 | 0.025 | 0.025 | 0.21 | 0.030 | 0.22 | <0.01 | *ND* |
| *Median* | 56 | 5.3 | 20 | 2.2 | 3.9 | 0.030 | 0.030 | 0.33 | 0.030 | 0.29 | <0.01 | *ND* |
| *75th PCTL* | 60 | 5.7 | 21 | 2.4 | 4.4 | 0.54 | 0.34 | 0.34 | 0.075 | 0.44 | 0.015 | *ND* |
| *95th PCTL* | 64 | 6.0 | 22 | 2.6 | 4.8 | 0.95 | 0.59 | 0.34 | 0.11 | 0.56 | 0.019 | *ND* |

**Notes: ND - no data**

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**
**Summary Statistics for Tiriganiaq Waste Rock Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 50 | 14 | 13 | 4.5 | 7.7 | 2.2 | 0.46 | 1.1 | 0.10 | 0.19 | <0.01 | 0.036 |
| *25th PCTL* | 50 | 14 | 13 | 5.0 | 8.7 | 2.3 | 0.48 | 1.1 | 0.11 | 0.19 | <0.01 | 0.045 |
| *Median* | 51 | 14 | 13 | 5.3 | 9.3 | 2.4 | 0.53 | 1.1 | 0.11 | 0.19 | <0.01 | 0.050 |
| *75th PCTL* | 52 | 14 | 14 | 5.4 | 9.3 | 2.5 | 0.76 | 1.2 | 0.14 | 0.19 | <0.01 | 0.053 |
| *95th PCTL* | 52 | 14 | 15 | 5.4 | 9.3 | 2.5 | 1.2 | 1.5 | 0.20 | 0.19 | <0.01 | 0.059 |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 1 |
| *10th PCTL* | 46 | 3.8 | 8.2 | 1.2 | 2.7 | 0.01 | 0.066 | 0.082 | 0.11 | 0.038 | <0.01 | <0.01 |
| *25th PCTL* | 50 | 4.5 | 23 | 1.3 | 3.7 | 0.02 | 0.14 | 0.10 | 0.14 | 0.050 | <0.01 | <0.01 |
| *Median* | 53 | 4.7 | 33 | 1.4 | 3.9 | 0.04 | 0.26 | 0.15 | 0.16 | 0.050 | <0.01 | <0.01 |
| *75th PCTL* | 56 | 8.0 | 37 | 1.5 | 4.1 | 0.24 | 1.1 | 0.22 | 0.17 | 0.060 | <0.01 | <0.01 |
| *95th PCTL* | 63 | 12 | 38 | 1.6 | 11 | 1.4 | 2.3 | 0.28 | 0.20 | 0.094 | <0.01 | <0.01 |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| *10th PCTL* | 61 | 15 | 4.8 | 1.9 | 1.4 | 2.5 | 2.0 | 0.52 | 0.10 | 0.040 | <0.01 | <0.01 |
| *25th PCTL* | 62 | 15 | 5.2 | 2.1 | 1.6 | 2.8 | 2.1 | 0.55 | 0.11 | 0.040 | 0.020 | 0.020 |
| *Median* | 63 | 16 | 5.8 | 2.4 | 1.9 | 3.0 | 2.3 | 0.59 | 0.12 | 0.050 | 0.020 | 0.020 |
| *75th PCTL* | 65 | 17 | 6.3 | 2.5 | 2.1 | 3.3 | 2.5 | 0.63 | 0.12 | 0.050 | 0.030 | 0.020 |
| *95th PCTL* | 67 | 17 | 7.9 | 2.8 | 3.0 | 3.9 | 2.8 | 0.67 | 0.15 | 0.060 | 0.030 | 0.030 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | |
| *n* | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 60 | 13 | 5.5 | 1.1 | 1.8 | 2.2 | 1.5 | 0.30 | 0.10 | 0.037 | <0.01 | <0.01 |
| *25th PCTL* | 61 | 14 | 5.7 | 1.3 | 1.9 | 2.6 | 1.8 | 0.33 | 0.11 | 0.040 | <0.01 | <0.01 |
| *Median* | 62 | 15 | 7.2 | 1.8 | 2.6 | 3.0 | 2.1 | 0.46 | 0.11 | 0.040 | 0.015 | <0.01 |
| *75th PCTL* | 63 | 16 | 9.1 | 2.3 | 3.1 | 3.5 | 2.4 | 0.59 | 0.12 | 0.043 | 0.020 | 0.020 |
| *95th PCTL* | 65 | 17 | 12 | 2.4 | 4.1 | 4.0 | 2.8 | 0.61 | 0.15 | 0.050 | 0.020 | 0.020 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | |
| *n* | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| *10th PCTL* | 61 | 13 | 5.5 | 1.2 | 2.3 | 2.9 | 1.6 | 0.28 | 0.080 | 0.033 | <0.01 | <0.01 |
| *25th PCTL* | 61 | 13 | 6.6 | 1.3 | 2.4 | 3.2 | 1.7 | 0.35 | 0.090 | 0.040 | <0.01 | <0.01 |
| *Median* | 63 | 14 | 8.0 | 1.4 | 3.0 | 3.5 | 2.1 | 0.40 | 0.10 | 0.040 | <0.01 | <0.01 |
| *75th PCTL* | 64 | 15 | 8.8 | 1.6 | 3.3 | 3.6 | 2.2 | 0.41 | 0.11 | 0.040 | <0.01 | <0.01 |
| *95th PCTL* | 65 | 15 | 10 | 2.0 | 3.8 | 4.1 | 2.5 | 0.53 | 0.14 | 0.054 | 0.014 | 0.020 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| *10th PCTL* | 39 | 12 | 9.4 | 3.5 | 9.6 | 1.2 | 0.31 | 0.68 | 0.060 | 0.18 | 0.020 | 0.040 |
| *25th PCTL* | 41 | 12 | 9.7 | 3.8 | 11 | 1.5 | 0.43 | 0.76 | 0.060 | 0.20 | 0.020 | 0.040 |
| *Median* | 42 | 13 | 10 | 4.0 | 12 | 1.8 | 1.0 | 0.80 | 0.070 | 0.23 | 0.020 | 0.050 |
| *75th PCTL* | 43 | 13 | 11 | 4.4 | 13 | 2.3 | 1.3 | 0.86 | 0.070 | 0.28 | 0.030 | 0.050 |
| *95th PCTL* | 46 | 14 | 13 | 5.0 | 15 | 2.5 | 2.0 | 0.94 | 0.082 | 0.39 | 0.030 | 0.052 |
| **Underground** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 44 | 12 | 12 | 4.9 | 9.2 | 1.8 | 0.19 | 0.77 | 0.050 | 0.20 | 0.020 | 0.050 |
| *Max* | 50 | 14 | 15 | 6.7 | 10 | 2.3 | 0.20 | 1.2 | 0.15 | 0.22 | 0.030 | 0.060 |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 |
| *10th PCTL* | 51 | 2.1 | 10 | 1.4 | 2.5 | 0.010 | 0.090 | 0.082 | 0.060 | 0.044 | <0.01 | <0.01 |
| *25th PCTL* | 53 | 3.3 | 18 | 1.6 | 3.2 | 0.010 | 0.12 | 0.13 | 0.060 | 0.050 | <0.01 | <0.01 |
| *Median* | 55 | 5.6 | 22 | 1.7 | 3.8 | 0.020 | 0.15 | 0.16 | 0.10 | 0.060 | <0.01 | <0.01 |
| *75th PCTL* | 60 | 5.9 | 24 | 2.4 | 5.7 | 0.040 | 0.59 | 0.23 | 0.17 | 0.22 | 0.020 | <0.01 |
| *95th PCTL* | 62 | 13 | 34 | 6.3 | 6.5 | 2.6 | 2.0 | 0.48 | 0.19 | 0.27 | 0.060 | <0.01 |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 57 | 16 | 5.6 | 1.9 | 1.6 | 2.3 | 2.2 | 0.51 | 0.10 | 0.046 | 0.016 | 0.016 |
| *25th PCTL* | 60 | 16 | 5.9 | 2.4 | 1.9 | 2.5 | 2.4 | 0.58 | 0.12 | 0.050 | 0.020 | 0.020 |
| *Median* | 61 | 17 | 6.6 | 2.6 | 2.3 | 2.7 | 2.6 | 0.65 | 0.13 | 0.050 | 0.020 | 0.020 |
| *75th PCTL* | 61 | 17 | 7.1 | 2.9 | 3.1 | 2.7 | 2.8 | 0.68 | 0.14 | 0.060 | 0.020 | 0.020 |
| *95th PCTL* | 63 | 17 | 7.9 | 3.2 | 3.5 | 4.0 | 3.5 | 0.71 | 0.17 | 0.067 | 0.020 | 0.027 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 58 | 13 | 6.8 | 1.4 | 1.1 | 2.1 | 1.6 | 0.33 | 0.12 | 0.040 | <0.01 | <0.01 |
| *25th PCTL* | 59 | 16 | 7.0 | 2.5 | 1.2 | 2.5 | 2.4 | 0.56 | 0.12 | 0.040 | 0.020 | 0.020 |
| *Median* | 60 | 17 | 7.9 | 2.7 | 1.7 | 2.6 | 2.6 | 0.69 | 0.12 | 0.040 | 0.020 | 0.020 |
| *75th PCTL* | 60 | 17 | 8.8 | 2.8 | 2.3 | 3.1 | 2.7 | 0.71 | 0.13 | 0.050 | 0.020 | 0.020 |
| *95th PCTL* | 61 | 18 | 14 | 2.9 | 4.0 | 3.6 | 2.9 | 0.73 | 0.13 | 0.060 | 0.020 | 0.030 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 1 |
| *10th PCTL* | 51 | 12 | 6.7 | 1.5 | 2.4 | 1.8 | 1.4 | 0.39 | 0.060 | 0.036 | <0.01 | <0.01 |
| *25th PCTL* | 59 | 14 | 7.5 | 1.5 | 2.7 | 2.8 | 1.6 | 0.41 | 0.080 | 0.040 | <0.01 | <0.01 |
| *Median* | 59 | 15 | 7.7 | 1.8 | 3.0 | 4.4 | 1.8 | 0.41 | 0.080 | 0.040 | <0.01 | <0.01 |
| *75th PCTL* | 61 | 15 | 8.8 | 2.0 | 3.4 | 4.6 | 2.2 | 0.45 | 0.090 | 0.040 | <0.01 | <0.01 |
| *95th PCTL* | 62 | 15 | 10 | 4.6 | 9.3 | 5.1 | 2.6 | 0.59 | 0.10 | 0.12 | 0.017 | <0.01 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| *10th PCTL* | 40 | 13 | 9.5 | 4.0 | 10 | 1.7 | 0.38 | 0.68 | 0.050 | 0.21 | 0.030 | 0.041 |
| *25th PCTL* | 41 | 13 | 10 | 4.2 | 12 | 1.8 | 0.48 | 0.69 | 0.050 | 0.23 | 0.030 | 0.050 |
| *Median* | 42 | 13 | 10 | 4.5 | 12 | 2.0 | 0.61 | 0.78 | 0.060 | 0.24 | 0.030 | 0.050 |
| *75th PCTL* | 43 | 14 | 11 | 4.9 | 13 | 2.3 | 0.88 | 0.82 | 0.070 | 0.26 | 0.033 | 0.050 |
| *95th PCTL* | 44 | 15 | 12 | 5.7 | 14 | 2.8 | 1.8 | 0.94 | 0.080 | 0.28 | 0.040 | 0.055 |

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**
**Summary Statistics for Tiriganiaq Ore Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Open Pit** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| *10th PCTL* | 52 | 3.5 | 11 | 1.0 | 2.6 | 0.034 | 0.13 | 0.10 | 0.10 | 0.044 | <0.01 | *ND* |
| *25th PCTL* | 55 | 5.4 | 13 | 1.2 | 2.7 | 0.070 | 0.31 | 0.16 | 0.11 | 0.050 | <0.01 | *ND* |
| *Median* | 58 | 8.3 | 19 | 1.2 | 3.2 | 1.1 | 1.1 | 0.20 | 0.14 | 0.050 | <0.01 | *ND* |
| *75th PCTL* | 60 | 13 | 29 | 1.5 | 3.7 | 3.1 | 1.3 | 0.34 | 0.21 | 0.050 | <0.01 | *ND* |
| *95th PCTL* | 60 | 13 | 31 | 1.8 | 3.8 | 3.5 | 1.3 | 0.36 | 0.23 | 0.074 | <0.01 | *ND* |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 51 | 12 | 10 | 1.4 | 2.9 | 1.6 | 1.7 | 0.32 | 0.12 | 0.042 | <0.01 | <0.01 |
| *25th PCTL* | 54 | 12 | 11 | 1.4 | 3.1 | 2.0 | 1.7 | 0.34 | 0.13 | 0.045 | <0.01 | <0.01 |
| *Median* | 58 | 13 | 14 | 1.5 | 3.4 | 2.6 | 1.8 | 0.38 | 0.13 | 0.050 | <0.01 | <0.01 |
| *75th PCTL* | 59 | 14 | 15 | 2.3 | 5.2 | 2.8 | 2.2 | 0.55 | 0.15 | 0.080 | 0.025 | 0.02 |
| *95th PCTL* | 59 | 15 | 15 | 2.9 | 6.6 | 2.9 | 2.4 | 0.69 | 0.17 | 0.10 | 0.037 | 0.028 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 57 | 12 | 11 | 1.6 | 1.6 | 2.3 | 1.7 | 0.35 | 0.12 | 0.042 | <0.01 | *ND* |
| *25th PCTL* | 58 | 13 | 11 | 1.8 | 1.8 | 2.4 | 1.7 | 0.36 | 0.12 | 0.045 | <0.01 | *ND* |
| *Median* | 59 | 14 | 11 | 2.1 | 2.1 | 2.7 | 1.9 | 0.37 | 0.12 | 0.050 | <0.01 | *ND* |
| *75th PCTL* | 60 | 15 | 14 | 2.3 | 2.4 | 2.8 | 2.0 | 0.47 | 0.13 | 0.050 | 0.015 | *ND* |
| *95th PCTL* | 61 | 16 | 16 | 2.5 | 2.5 | 2.8 | 2.1 | 0.54 | 0.13 | 0.050 | 0.019 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 41 | 12 | 8.7 | 3.6 | 10 | 1.2 | 1.7 | 0.72 | 0.060 | 0.21 | 0.022 | 0.032 |
| *25th PCTL* | 42 | 12 | 8.9 | 3.6 | 11 | 1.2 | 1.8 | 0.73 | 0.060 | 0.23 | 0.025 | 0.035 |
| *Median* | 44 | 13 | 9.2 | 3.7 | 12 | 1.3 | 1.9 | 0.75 | 0.060 | 0.26 | 0.030 | 0.040 |
| *75th PCTL* | 44 | 13 | 9.2 | 3.8 | 12 | 1.8 | 2.2 | 0.77 | 0.075 | 0.26 | 0.030 | 0.045 |
| *95th PCTL* | 45 | 13 | 9.2 | 3.9 | 12 | 2.2 | 2.4 | 0.78 | 0.087 | 0.26 | 0.030 | 0.049 |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 0 |
| *10th PCTL* | 45 | 2.8 | 14 | 1.2 | 4.0 | <0.01 | 0.14 | 0.079 | 0.058 | 0.040 | <0.01 | *ND* |
| *25th PCTL* | 47 | 3.0 | 23 | 1.3 | 4.3 | 0.013 | 0.21 | 0.12 | 0.10 | 0.045 | <0.01 | *ND* |
| *Median* | 47 | 4.4 | 27 | 1.4 | 4.9 | 0.14 | 0.30 | 0.13 | 0.16 | 0.070 | <0.01 | *ND* |
| *75th PCTL* | 50 | 6.9 | 30 | 1.8 | 5.5 | 1.4 | 0.60 | 0.18 | 0.19 | 0.098 | <0.01 | *ND* |
| *95th PCTL* | 55 | 14 | 34 | 4.7 | 8.1 | 2.4 | 2.9 | 0.49 | 0.23 | 0.17 | 0.021 | *ND* |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 60 | 10 | 21 | 2.0 | 4.7 | 0.95 | 1.1 | 0.26 | 0.2 | 0.050 | <0.01 | *ND* |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 45 | 14 | 5.9 | 2.4 | 1.8 | 3.8 | 2.0 | 0.53 | 0.046 | 0.050 | 0.020 | *ND* |
| *25th PCTL* | 49 | 15 | 6.7 | 2.5 | 2.1 | 3.9 | 2.0 | 0.57 | 0.055 | 0.050 | 0.020 | *ND* |
| *Median* | 55 | 16 | 7.9 | 2.8 | 2.5 | 4.1 | 2.0 | 0.63 | 0.070 | 0.050 | 0.020 | *ND* |
| *75th PCTL* | 58 | 16 | 9.4 | 2.8 | 3.4 | 4.9 | 2.1 | 0.64 | 0.080 | 0.060 | 0.020 | *ND* |
| *95th PCTL* | 61 | 16 | 11 | 2.9 | 4.1 | 5.6 | 2.1 | 0.65 | 0.088 | 0.068 | 0.020 | *ND* |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| *10th PCTL* | 44 | 6.3 | 8.3 | 1.3 | 4.2 | 0.93 | 0.37 | 0.21 | 0.054 | 0.044 | <0.01 | *ND* |
| *25th PCTL* | 49 | 8.8 | 9.2 | 1.4 | 4.4 | 2.0 | 0.50 | 0.26 | 0.090 | 0.050 | <0.01 | *ND* |
| *Median* | 57 | 11 | 15 | 1.8 | 4.8 | 2.8 | 0.98 | 0.28 | 0.15 | 0.050 | <0.01 | *ND* |
| *75th PCTL* | 58 | 13 | 23 | 1.9 | 5.6 | 4.8 | 1.3 | 0.34 | 0.16 | 0.090 | <0.01 | *ND* |
| *95th PCTL* | 59 | 16 | 24 | 2.5 | 5.8 | 5.6 | 2.5 | 0.64 | 0.16 | 0.11 | 0.018 | *ND* |
| **Upper Oxide Formation /Iron Formation (VO/IF)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 57 | 10 | 22 | 1.9 | 1.9 | 0.59 | 1.5 | 0.31 | 0.14 | 0.050 | <0.01 | *ND* |

**Notes: ND - no data**

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**

**Summary Statistics for Wesmeg Waste Rock Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Open Pit** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 46 | 15 | 12 | 5.5 | 11 | 2.9 | 0.15 | 0.97 | 0.08 | 0.22 | 0.03 | 0.04 |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 45 | 0.45 | 18 | 1.1 | 1.3 | 0.01 | 0.013 | 0.016 | 0.022 | 0.27 | <0.01 | *ND* |
| *25th PCTL* | 46 | 0.84 | 20 | 1.3 | 1.4 | 0.01 | 0.018 | 0.025 | 0.040 | 0.28 | <0.01 | *ND* |
| *Median* | 47 | 1.2 | 22 | 1.6 | 1.7 | 0.01 | 0.025 | 0.040 | 0.070 | 0.32 | <0.01 | *ND* |
| *75th PCTL* | 50 | 1.4 | 23 | 2.0 | 2.0 | 0.01 | 0.033 | 0.053 | 0.093 | 0.39 | <0.01 | *ND* |
| *95th PCTL* | 55 | 1.5 | 24 | 2.2 | 2.1 | 0.01 | 0.039 | 0.059 | 0.099 | 0.48 | <0.01 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 42 |
| *10th PCTL* | 41 | 10 | 10 | 4.6 | 7.9 | 1.3 | 0.07 | 0.62 | 0.05 | 0.15 | 0.013 | 0.030 |
| *25th PCTL* | 42 | 12 | 11 | 5.1 | 8.5 | 1.7 | 0.13 | 0.80 | 0.068 | 0.17 | 0.020 | 0.040 |
| *Median* | 44 | 13 | 12 | 5.8 | 9.7 | 2.1 | 0.47 | 0.90 | 0.075 | 0.19 | 0.030 | 0.040 |
| *75th PCTL* | 46 | 14 | 13 | 7.0 | 11 | 2.5 | 0.76 | 1.2 | 0.13 | 0.23 | 0.040 | 0.050 |
| *95th PCTL* | 48 | 15 | 14 | 9.4 | 12 | 3.2 | 1.9 | 1.7 | 0.23 | 0.26 | 0.087 | 0.070 |
| **Ultramafics (UV)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 38 | 6.6 | 10 | 7.1 | 5.4 | 0.39 | 0.013 | 0.49 | 0.033 | 0.17 | 0.043 | 0.030 |
| *25th PCTL* | 41 | 8.7 | 11 | 7.2 | 7.3 | 0.88 | 0.018 | 0.53 | 0.038 | 0.19 | 0.048 | 0.030 |
| *Median* | 43 | 10 | 12 | 10 | 9.3 | 1.5 | 0.11 | 0.63 | 0.045 | 0.20 | 0.11 | 0.030 |
| *75th PCTL* | 43 | 11 | 13 | 15 | 11 | 2.0 | 0.32 | 0.77 | 0.055 | 0.22 | 0.20 | 0.033 |
| *95th PCTL* | 43 | 12 | 14 | 21 | 11 | 2.3 | 0.59 | 0.90 | 0.067 | 0.25 | 0.30 | 0.039 |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 51 | 1.3 | 16 | 2 | 2.9 | 0.010 | 0.025 | 0.038 | 0.010 | 0.34 | <0.01 | *ND* |
| *25th PCTL* | 53 | 1.5 | 17 | 2.1 | 4.1 | 0.010 | 0.048 | 0.065 | 0.010 | 0.35 | <0.01 | *ND* |
| *Median* | 56 | 1.9 | 18 | 2.3 | 5.5 | 0.025 | 0.075 | 0.12 | 0.015 | 0.36 | <0.01 | *ND* |
| *75th PCTL* | 60 | 2.7 | 20 | 4.1 | 6.7 | 0.053 | 0.11 | 0.18 | 0.033 | 0.39 | 0.03 | *ND* |
| *95th PCTL* | 63 | 3.8 | 21 | 8.0 | 7.4 | 0.083 | 0.14 | 0.23 | 0.063 | 0.45 | 0.078 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 43 | 7.3 | 10 | 3.0 | 6.9 | 0.15 | 0.90 | 0.43 | 0.053 | 0.15 | 0.016 | *ND* |
| *25th PCTL* | 43 | 11 | 10 | 4.4 | 8 | 0.24 | 1.5 | 0.69 | 0.058 | 0.16 | 0.025 | *ND* |
| *Median* | 44 | 14 | 11 | 5.2 | 8.9 | 0.97 | 2.0 | 0.85 | 0.060 | 0.17 | 0.030 | *ND* |
| *75th PCTL* | 49 | 15 | 13 | 5.4 | 9.4 | 1.7 | 2.4 | 0.86 | 0.070 | 0.17 | 0.030 | *ND* |
| *95th PCTL* | 60 | 15 | 16 | 6.0 | 10 | 1.9 | 3.0 | 0.88 | 0.094 | 0.17 | 0.030 | *ND* |

**Summary Statistics for Wesmeg Ore Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Open Pit** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 58 | 4.7 | 20 | 3.6 | 3.3 | 0.030 | 0.090 | 0.48 | 0.090 | 0.10 | <0.01 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 45 | 2.7 | 11 | 2.2 | 4.9 | 0.42 | 0.23 | 0.26 | 0.032 | 0.16 | 0.012 | *ND* |
| *25th PCTL* | 46 | 5.8 | 11 | 2.9 | 6.4 | 1.0 | 0.53 | 0.62 | 0.065 | 0.18 | 0.015 | *ND* |
| *Median* | 47 | 11 | 12 | 3.9 | 9.0 | 2.0 | 1.0 | 1.2 | 0.12 | 0.21 | 0.020 | *ND* |
| 75th PCTL | 51 | 12 | 14 | 4.9 | 10 | 2.1 | 1.1 | 1.3 | 0.17 | 0.29 | 0.020 | *ND* |
| 95th PCTL | 55 | 13 | 15 | 5.6 | 11 | 2.2 | 1.1 | 1.4 | 0.20 | 0.35 | 0.020 | *ND* |
| **Ultramafic Volcanics (UV)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 40 | 11 | 10 | 7.1 | 11 | 2.4 | 0.90 | 0.64 | 0.040 | 0.20 | 0.050 | 0.04 |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 0 |
| *10th PCTL* | 44 | 0.74 | 15 | 1.4 | 2.1 | <0.01 | 0.010 | 0.022 | <0.01 | 0.24 | <0.01 | *ND* |
| *25th PCTL* | 54 | 0.85 | 16 | 1.7 | 2.4 | <0.01 | 0.020 | 0.030 | <0.01 | 0.33 | <0.01 | *ND* |
| *Median* | 63 | 1.3 | 19 | 1.8 | 2.6 | 0.02 | 0.050 | 0.050 | 0.020 | 0.35 | <0.01 | *ND* |
| 75th PCTL | 64 | 1.9 | 20 | 1.9 | 3.3 | 0.030 | 0.11 | 0.075 | 0.055 | 0.44 | <0.01 | *ND* |
| 95th PCTL | 68 | 2.7 | 33 | 3.1 | 5.1 | 0.044 | 0.16 | 0.16 | 0.10 | 0.69 | <0.01 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 44 | 12 | 11 | 5.5 | 9.3 | 2.5 | 0.90 | 0.83 | 0.060 | 0.21 | 0.020 | *ND* |
| *Max* | 46 | 12 | 11 | 6.8 | 11 | 2.7 | 0.95 | 1 | 0.060 | 0.22 | 0.040 | *ND* |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 48 | 3.8 | 27 | 1.6 | 7.1 | <0.1 | 0.14 | 0.46 | 0.080 | 0.11 | <0.01 | *ND* |

**Notes: ND - no data**

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**

**Summary Statistics for Wesmeg North Waste Rock Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Open Pit** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 46 | 13 | 14 | 3.8 | 6.4 | 2.5 | 1.2 | 1.5 | 0.18 | 0.16 | <0.01 | *ND* |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 50 | 0.65 | 16 | 1.6 | 3.4 | 0.010 | 0.050 | 0.030 | 0.050 | 0.29 | <0.01 | *ND* |
| *Max* | 54 | 2.5 | 23 | 4.1 | 5.3 | 0.010 | 0.18 | 0.18 | 0.050 | 0.33 | 0.020 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 0 |
| *10th PCTL* | 40 | 8.8 | 9.4 | 5.2 | 9.8 | 1.2 | 0.59 | 0.64 | 0.040 | 0.16 | 0.016 | *ND* |
| *25th PCTL* | 40 | 9 | 9.8 | 5.5 | 10 | 1.3 | 0.71 | 0.65 | 0.040 | 0.17 | 0.030 | *ND* |
| *Median* | 41 | 12 | 11 | 6.3 | 11 | 1.7 | 0.92 | 0.74 | 0.055 | 0.21 | 0.030 | *ND* |
| 75th PCTL | 41 | 12 | 11 | 6.4 | 11 | 2.1 | 1.1 | 0.81 | 0.070 | 0.25 | 0.048 | *ND* |
| 95th PCTL | 44 | 14 | 13 | 6.9 | 13 | 3.0 | 1.9 | 0.92 | 0.084 | 0.29 | 0.054 | *ND* |
| **Underground** | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 41 | 9.4 | 14 | 3.9 | 6.8 | 0.68 | 0.096 | 0.89 | 0.082 | 0.16 | <0.01 | *ND* |
| *25th PCTL* | 43 | 11 | 14 | 3.9 | 7 | 1.7 | 0.14 | 1.1 | 0.13 | 0.17 | <0.01 | *ND* |
| *Median* | 46 | 13 | 15 | 4.0 | 7.3 | 3.3 | 0.20 | 1.5 | 0.21 | 0.17 | <0.01 | *ND* |
| 75th PCTL | 46 | 13 | 15 | 8.6 | 8.2 | 3.4 | 0.21 | 1.6 | 0.21 | 0.18 | 0.10 | *ND* |
| 95th PCTL | 46 | 13 | 15 | 12 | 8.9 | 3.4 | 0.21 | 1.6 | 0.21 | 0.18 | 0.17 | *ND* |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 58 | 12 | 7.3 | 2.3 | 2.7 | 2.0 | 1.6 | 0.39 | 0.080 | 0.050 | <0.01 | *ND* |
| *Max* | 61 | 14 | 10 | 2.5 | 3.5 | 2.4 | 2.6 | 0.52 | 0.14 | 0.050 | 0.020 | *ND* |
| **Sedimentary (SE)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 48 | 3.2 | 22 | 1.0 | 4.3 | 0.010 | <0.01 | 0.10 | 0.12 | 0.08 | <0.01 | *ND* |
| *Max* | 56 | 6.9 | 24 | 2.1 | 8.2 | 0.17 | 0.060 | 0.22 | 0.18 | 0.10 | <0.01 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 |
| *10th PCTL* | 42 | 10 | 8.9 | 4.2 | 8.2 | 1.3 | 0.44 | 0.6 | 0.037 | 0.15 | <0.01 | *ND* |
| *25th PCTL* | 43 | 11 | 10 | 4.6 | 8.7 | 2.1 | 0.59 | 0.68 | 0.04 | 0.16 | <0.01 | *ND* |
| *Median* | 44 | 12 | 10 | 5.5 | 9.6 | 2.3 | 0.90 | 0.71 | 0.05 | 0.17 | 0.030 | *ND* |
| 75th PCTL | 47 | 13 | 12 | 6.3 | 10 | 2.4 | 1.1 | 0.90 | 0.073 | 0.19 | 0.030 | *ND* |
| 95th PCTL | 52 | 13 | 13 | 6.8 | 12 | 2.5 | 1.5 | 1.3 | 0.72 | 0.22 | 0.037 | *ND* |

**Summary Statistics for Wesmeg North Ore Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Open Pit** | | | | | | | | | | | | |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 40 | 7.7 | 10 | 5.3 | 9.6 | 1.1 | 0.65 | 0.63 | 0.026 | 0.17 | 0.014 | *ND* |
| *25th PCTL* | 41 | 9.2 | 10 | 5.6 | 10 | 1.5 | 0.66 | 0.66 | 0.035 | 0.18 | 0.020 | *ND* |
| *Median* | 41 | 12 | 11 | 6.1 | 11 | 2.1 | 0.66 | 0.71 | 0.050 | 0.19 | 0.030 | *ND* |
| 75th PCTL | 42 | 12 | 11 | 7.8 | 11 | 3.0 | 0.67 | 0.75 | 0.055 | 0.21 | 0.085 | *ND* |
| 95th PCTL | 43 | 12 | 11 | 9.1 | 11 | 3.7 | 0.67 | 0.78 | 0.059 | 0.23 | 0.13 | *ND* |
| **Underground** | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 57 | 13 | 12 | 2.3 | 1.8 | 2.3 | 1.5 | 0.41 | 0.12 | 0.05 | <0.01 | *ND* |
| *Max* | 60 | 14 | 13 | 2.3 | 1.9 | 2.5 | 1.6 | 0.44 | 0.14 | 0.05 | <0.01 | *ND* |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| *10th PCTL* | 42 | 9.7 | 9.4 | 4.4 | 10 | 1.8 | 0.99 | 0.61 | 0.040 | 0.18 | 0.014 | *ND* |
| *25th PCTL* | 42 | 11 | 10 | 4.5 | 11 | 2.0 | 1.0 | 0.64 | 0.040 | 0.19 | 0.020 | *ND* |
| *Median* | 42 | 12 | 10 | 5.2 | 11 | 2.4 | 1.1 | 0.67 | 0.040 | 0.21 | 0.030 | *ND* |
| 75th PCTL | 45 | 12 | 11 | 5.3 | 11 | 2.5 | 1.6 | 0.81 | 0.070 | 0.22 | 0.030 | *ND* |
| 95th PCTL | 48 | 13 | 12 | 5.8 | 11 | 3.4 | 1.9 | 0.83 | 0.070 | 0.25 | 0.038 | *ND* |

**Notes: ND - no data**

**Appendix D-3: Summary Statistics for Whole Rock Analysis Results**
**Summary Statistics for Whole Ore Tailings Samples**

| Parameter | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | % | % | % | % | % | % | % | % | % | % | % | % |
| **Whole Ore Tailings (n=6)** | | | | | | | | | | | | |
| *TSF 25* | 53 | 9.3 | 17 | 1.8 | 4.1 | 2.2 | 1.6 | 0.32 | 0.12 | 0.05 | <0.01 | *ND* |
| *TSF 26* | 53 | 9.4 | 16 | 1.8 | 4.1 | 2.1 | 1.6 | 0.34 | 0.12 | 0.06 | <0.01 | *ND* |
| *TSF 27* | 54 | 9.6 | 16 | 1.8 | 4.1 | 1.9 | 1.7 | 0.35 | 0.13 | 0.06 | <0.01 | *ND* |
| *TSF 28* | 51 | 9.5 | 14 | 1.8 | 4.4 | 2.3 | 1.6 | 0.37 | 0.12 | 0.06 | <0.01 | *ND* |
| *TSF 29* | 54 | 9.7 | 16 | 1.8 | 4.0 | 1.7 | 1.7 | 0.36 | 0.12 | 0.06 | <0.01 | *ND* |
| *TSF 30* | 54 | 9.6 | 17 | 1.8 | 4.1 | 1.8 | 1.7 | 0.34 | 0.12 | 0.06 | <0.01 | *ND* |

**Notes: ND - no data**

# APPENDIX D-4: SUMMARY STATISTICS FOR SOLID PHASE ELEMENTAL ABUNDANCE RESULTS

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**
**Summary Statistics for Discovery Waste Rock Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **AUCCC** | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 10 | 10 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| *10th PCTL* | 0.12 | 67,000 | 2.0 | 0.066 | 350 | 0.66 | 0.085 | 51,000 | 0.16 | 28 | 60 | 23 | 100,000 | 0.091 | 9,500 | 26 | 17,000 | 1,000 | 0.8 | 17,000 | 20 | 5.5 | 0.73 | <0.7 | 0.84 | 240 | 12,000 | <0.2 | 0.59 | 110 | 22 | 110 |
| *25th PCTL* | 0.12 | 78,000 | 3.4 | 0.070 | 380 | 0.73 | 0.090 | 59,000 | 0.21 | 29 | 64 | 29 | 110,000 | <0.1 | 11,000 | 27 | 17,000 | 1,100 | 1.0 | 22,000 | 22 | 6.6 | <0.8 | <0.7 | 1.0 | 280 | 13,000 | 0.22 | 0.65 | 150 | 25 | 140 |
| *Median* | 0.12 | 82,000 | 6.1 | 0.080 | 410 | 0.85 | 0.090 | 60,000 | 0.24 | 34 | 73 | 43 | 110,000 | <0.1 | 11,000 | 28 | 22,000 | 1,200 | 1.3 | 23,000 | 32 | 9.6 | <0.8 | <0.7 | 1.3 | 300 | 15,000 | 0.23 | 0.84 | 170 | 29 | 150 |
| *75th PCTL* | 0.12 | 85,000 | 9.4 | 0.090 | 430 | 0.95 | 0.090 | 62,000 | 0.38 | 37 | 80 | 48 | 120,000 | <0.1 | 13,000 | 33 | 24,000 | 1,200 | 1.9 | 24,000 | 40 | 11 | <0.8 | <0.7 | 1.5 | 310 | 16,000 | 0.28 | 1.1 | 190 | 34 | 170 |
| *95th PCTL* | 0.12 | 88,000 | ***490*** | 0.22 | 710 | 1.1 | 0.090 | 64,000 | 0.63 | 40 | 91 | 71 | 120,000 | <0.1 | 20,000 | 40 | 26,000 | 1,200 | 2.3 | 26,000 | 59 | 12 | <0.8 | 0.87 | 1.8 | 320 | 18,000 | 0.41 | 1.4 | 200 | 40 | 170 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 31 | 49 | 49 | 31 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 39 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| *10th PCTL* | 0.030 | 9,300 | 2.0 | 0.030 | 82 | <0.1 | 0.086 | 7,700 | 0.018 | 2.3 | 8.6 | 1.4 | 94,000 | <0.01 | 1,500 | 4.6 | 2,100 | 66 | 0.51 | 400 | 5.6 | 2.4 | <0.05 | <0.7 | <0.3 | 46 | 300 | 0.038 | 0.33 | 12 | 3.4 | 15 |
| *25th PCTL* | 0.045 | 14,000 | 3.0 | 0.030 | 150 | 0.20 | 0.090 | 12,000 | 0.060 | 3.2 | 38 | 4.0 | 150,000 | <0.01 | 2,600 | 7.0 | 5,300 | 140 | 0.80 | 600 | 8.0 | 3.2 | 0.090 | <0.7 | <0.3 | 86 | 510 | 0.080 | 0.43 | 15 | 4.2 | 28 |
| *Median* | 0.080 | 22,000 | 9.0 | 0.060 | 290 | 0.42 | 0.11 | 17,000 | 0.15 | 3.9 | 93 | 6.6 | 230,000 | 0.03 | 5,700 | 16 | 8,200 | 250 | 1.4 | 1,900 | 11 | 4.2 | <0.8 | <0.7 | 0.50 | 210 | 740 | 0.16 | 0.63 | 19 | 5.7 | 40 |
| *75th PCTL* | 0.22 | 32,000 | 23 | 0.18 | 410 | 0.82 | 0.23 | 22,000 | 0.21 | 5.0 | 130 | 14 | 260,000 | <0.1 | 9,400 | 21 | 9,500 | 320 | 3.3 | 6,000 | 14 | 6.3 | <0.8 | ***<1*** | 0.50 | 250 | 1,000 | 0.24 | 1.0 | 27 | 6.7 | 46 |
| *95th PCTL* | 0.52 | 45,000 | ***1,300*** | 0.50 | 810 | 1.4 | 0.68 | 27,000 | 0.26 | 7.8 | 160 | 55 | 310,000 | <0.1 | 15,000 | 39 | 11,000 | 380 | 4.1 | 12,000 | 22 | 9.6 | <0.8 | ***<1*** | 1.2 | 400 | 1,500 | 0.42 | 1.4 | 37 | 8.2 | 66 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 58 | 77 | 77 | 39 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 48 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 |
| *10th PCTL* | 0.047 | 22,000 | 11 | 0.030 | 170 | <0.1 | 0.09 | 2,600 | 0.050 | 12 | 77 | 21 | 38,000 | <0.01 | 8,800 | 34 | 12,000 | 260 | 0.83 | 600 | 38 | 2.1 | <0.05 | <0.7 | 0.40 | 13 | 1,500 | 0.25 | 0.92 | 56 | 5.3 | 56 |
| *25th PCTL* | 0.060 | 27,000 | 21 | 0.030 | 330 | <0.1 | 0.12 | 4,800 | 0.080 | 14 | 100 | 26 | 41,000 | <0.01 | 15,000 | 36 | 13,000 | 290 | 1.2 | 800 | 42 | 4.0 | <0.05 | <0.7 | 0.60 | 24 | 2,100 | 0.31 | 1.2 | 71 | 6.3 | 65 |
| *Median* | 0.090 | 84,000 | 36 | 0.030 | 530 | 0.93 | 0.15 | 11,000 | 0.24 | 17 | 140 | 38 | 47,000 | <0.01 | 19,000 | 40 | 14,000 | 340 | 1.5 | 21,000 | 51 | 8.9 | <0.8 | <0.7 | 0.90 | 260 | 3,500 | 0.39 | 1.6 | 80 | 8.0 | 77 |
| *75th PCTL* | 0.25 | 90,000 | ***71*** | 0.050 | 580 | 1.0 | 0.20 | 18,000 | 0.30 | 18 | 160 | 45 | 53,000 | <0.1 | 22,000 | 44 | 15,000 | 370 | 1.9 | 24,000 | 63 | 11 | <0.8 | ***<1*** | 1.2 | 300 | 3,900 | 0.44 | 1.9 | 94 | 8.8 | 87 |
| *95th PCTL* | 0.49 | 94,000 | ***170*** | 0.071 | 680 | 1.2 | 0.28 | 22,000 | 0.36 | 22 | 200 | 60 | 63,000 | <0.1 | 25,000 | 57 | 17,000 | 430 | 3.3 | 29,000 | 71 | 15 | <0.8 | ***<1*** | 1.5 | 320 | 4,200 | 0.55 | 2.8 | 100 | 9.7 | 98 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | *ND* | 33,000 | 22 | 0.050 | 460 | 1.0 | 0.096 | 14,000 | 0.21 | 5.4 | 120 | 8.4 | 82,000 | <0.1 | 16,000 | 25 | 10,000 | 280 | 1.3 | 4,100 | 13 | 7.6 | <0.8 | <0.7 | <0.5 | 160 | 1,000 | 0.29 | 0.79 | 24 | 6.3 | 49 |
| *25th PCTL* | *ND* | 38,000 | ***49*** | 0.050 | 470 | 1.1 | 0.11 | 14,000 | 0.22 | 6.1 | 130 | 15 | 120,000 | <0.1 | 17,000 | 27 | 11,000 | 310 | 1.8 | 5,400 | 14 | 7.8 | <0.8 | <0.7 | <0.5 | 170 | 1,200 | 0.30 | 0.87 | 27 | 6.6 | 51 |
| *Median* | *ND* | 46,000 | ***95*** | 0.050 | 480 | 1.1 | 0.12 | 14,000 | 0.23 | 7.2 | 130 | 27 | 170,000 | <0.1 | 18,000 | 31 | 11,000 | 360 | 2.6 | 7,500 | 15 | 8.1 | <0.8 | <0.7 | <0.5 | 190 | 1,400 | 0.30 | 1.0 | 31 | 7.1 | 54 |
| *75th PCTL* | *ND* | 70,000 | ***190*** | 0.060 | 570 | 1.3 | 0.19 | 18,000 | 0.32 | 14 | 160 | 30 | 220,000 | <0.1 | 20,000 | 40 | 15,000 | 380 | 2.9 | 14,000 | 44 | 11 | <0.8 | <0.7 | <0.6 | 280 | 3,000 | 0.37 | 1.6 | 71 | 8.0 | 77 |
| *95th PCTL* | *ND* | 89,000 | ***260*** | 0.068 | 640 | 1.4 | 0.25 | 21,000 | 0.39 | 19 | 180 | 32 | 250,000 | <0.1 | 22,000 | 46 | 18,000 | 400 | 3.1 | 19,000 | 66 | 13 | <0.8 | <0.7 | 0.68 | 350 | 4,200 | 0.43 | 2.0 | 100 | 8.7 | 95 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 0.033 | 14,000 | 1.0 | *ND* | 81 | 0.13 | 0.020 | 17,000 | 0.030 | 24 | 43 | 44 | 37,000 | <0.01 | 2,400 | 20 | 7,800 | 330 | 1.1 | 1,500 | 21 | 1.3 | 0.089 | ***<1*** | <0.3 | 26 | 1,900 | 0.11 | 0.4 | 77 | 15 | 53 |
| *25th PCTL* | 0.038 | 16,000 | 1.0 | *ND* | 140 | 0.18 | 0.020 | 18,000 | 0.030 | 27 | 47 | 46 | 40,000 | <0.01 | 3,700 | 29 | 9,600 | 350 | 1.2 | 1,600 | 27 | 1.5 | 0.10 | ***<1*** | <0.3 | 31 | 2,100 | 0.16 | 0.42 | 78 | 15 | 63 |
| *Median* | 0.050 | 17,000 | 2.5 | *ND* | 200 | 0.20 | 0.020 | 19,000 | 0.035 | 30 | 51 | 49 | 43,000 | <0.01 | 5,100 | 36 | 11,000 | 380 | 1.3 | 1,600 | 33 | 1.8 | 0.16 | ***<1*** | <0.3 | 35 | 2,200 | 0.19 | 0.44 | 80 | 15 | 68 |
| *75th PCTL* | 0.060 | 18,000 | 4.3 | *ND* | 240 | 0.20 | 0.028 | 21,000 | 0.043 | 31 | 56 | 55 | 43,000 | <0.01 | 6,100 | 38 | 11,000 | 390 | 1.4 | 1,600 | 37 | 2.1 | 0.22 | ***<1*** | 0.33 | 37 | 2,300 | 0.20 | 0.54 | 87 | 16 | 69 |
| *95th PCTL* | 0.060 | 18,000 | 4.9 | *ND* | 240 | 0.20 | 0.046 | 22,000 | 0.049 | 32 | 62 | 64 | 44,000 | <0.01 | 6,700 | 40 | 12,000 | 410 | 1.5 | 1,600 | 42 | 2.4 | 0.25 | ***<1*** | 0.39 | 39 | 2,400 | 0.22 | 0.76 | 100 | 17 | 70 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 15 | 15 | 15 | 3 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| *10th PCTL* | 0.028 | 5,500 | 1.8 | 0.15 | 24 | <0.1 | 0.048 | 6,000 | 0.034 | 1.5 | 32 | 5.6 | 130,000 | <0.01 | 400 | 1.8 | 1,300 | 56 | 0.78 | 340 | 5.0 | 1.8 | <0.05 | ***<1*** | <0.3 | 49 | 240 | <0.02 | 0.28 | 13 | 2.9 | 10 |
| *25th PCTL* | 0.040 | 8,300 | 3.0 | 0.34 | 48 | <0.1 | 0.095 | 8,200 | 0.045 | 2.2 | 44 | 7.0 | 140,000 | <0.01 | 650 | 3.5 | 2,100 | 67 | 0.90 | 400 | 7.5 | 2.3 | <0.05 | ***<1*** | <0.3 | 94 | 300 | 0.030 | 0.33 | 14 | 3.4 | 14 |
| *Median* | 0.14 | 12,000 | 10 | 0.65 | 130 | <0.1 | 0.17 | 13,000 | 0.06 | 2.6 | 54 | 8.5 | 250,000 | <0.01 | 2,100 | 9.0 | 2,500 | 90 | 1.3 | 600 | 13 | 3.4 | 0.07 | ***<1*** | <0.3 | 120 | 400 | 0.12 | 0.58 | 20 | 4.0 | 18 |
| *75th PCTL* | 0.17 | 14,000 | 32 | 0.70 | 190 | <0.1 | 0.37 | 14,000 | 0.08 | 4.2 | 58 | 18 | 300,000 | <0.01 | 4,200 | 14 | 3,800 | 110 | 1.5 | 650 | 16 | 5.5 | 0.16 | ***<1*** | <0.3 | 190 | 600 | 0.16 | 0.91 | 23 | 4.2 | 22 |
| *95th PCTL* | 0.40 | 25,000 | ***430*** | 0.74 | 360 | 0.23 | 0.9 | 23,000 | 0.1 | 5.3 | 83 | 38 | 320,000 | <0.01 | 5,200 | 20 | 7,000 | 150 | 1.9 | 860 | 18 | 17 | 0.47 | ***<1*** | <0.3 | 300 | 700 | 0.17 | 1.6 | 32 | 12 | 38 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 19 | 19 | 19 | 5 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| *10th PCTL* | 0.050 | 19,000 | 5.8 | 0.024 | 120 | <0.1 | 0.098 | 1,900 | 0.038 | 13 | 73 | 31 | 34,000 | <0.01 | 5,900 | 38 | 11,000 | 240 | 1.0 | 400 | 36 | 1.7 | <0.05 | ***<1*** | <0.3 | 11 | 1,200 | 0.21 | 0.68 | 51 | 4.4 | 49 |
| *25th PCTL* | 0.060 | 20,000 | 14 | 0.030 | 150 | <0.1 | 0.12 | 2,200 | 0.050 | 16 | 98 | 32 | 36,000 | <0.01 | 8,500 | 40 | 12,000 | 260 | 1.2 | 500 | 48 | 2.1 | <0.05 | ***<1*** | <0.3 | 12 | 1,400 | 0.27 | 0.82 | 57 | 5.1 | 69 |
| *Median* | 0.080 | 22,000 | 29 | 0.030 | 210 | <0.1 | 0.16 | 2,800 | 0.060 | 21 | 120 | 39 | 39,000 | <0.01 | 9,100 | 43 | 14,000 | 280 | 1.5 | 600 | 64 | 2.3 | <0.05 | ***<1*** | <0.5 | 13 | 1,700 | 0.33 | 1.1 | 65 | 5.9 | 76 |
| *75th PCTL* | 0.10 | 28,000 | ***110*** | 0.030 | 280 | <0.1 | 0.30 | 3,300 | 0.075 | 23 | 130 | 48 | 49,000 | <0.01 | 14,000 | 46 | 15,000 | 340 | 1.9 | 700 | 71 | 3.6 | 0.060 | ***<1*** | 0.60 | 17 | 1,900 | 0.38 | 1.2 | 78 | 6.5 | 86 |
| *95th PCTL* | 0.22 | 32,000 | ***180*** | 0.030 | 390 | 0.13 | 0.45 | 7,800 | 0.19 | 27 | 140 | 59 | 57,000 | <0.01 | 17,000 | 54 | 17,000 | 370 | 2.1 | 920 | 77 | 14 | 0.12 | ***<1*** | 0.81 | 31 | 2,200 | 0.47 | 3.0 | 86 | 8.3 | 100 |

**Summary Statistics for Discovery Ore Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **AUCCC** | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | *ND* | 25,000 | ***200*** | 0.19 | 180 | 0.36 | 0.16 | 13,000 | 0.17 | 3.8 | 120 | 9.2 | 180,000 | <0.1 | 4,000 | 10 | 7,200 | 230 | 0.82 | 2,500 | 9.5 | 6.2 | <0.8 | <0.7 | <0.5 | 130 | 710 | 0.10 | 0.69 | 15 | 5.1 | 49 |
| *25th PCTL* | *ND* | 27,000 | ***230*** | 0.29 | 260 | 0.47 | 0.24 | 15,000 | 0.17 | 4.0 | 130 | 13 | 190,000 | <0.1 | 4,700 | 13 | 8,600 | 270 | 1.0 | 2,700 | 11 | 6.3 | <0.8 | <0.7 | <0.5 | 170 | 890 | 0.12 | 0.72 | 19 | 5.9 | 51 |
| *Median* | *ND* | 29,000 | ***390*** | 1.4 | 300 | 0.57 | 0.26 | 18,000 | 0.20 | 4.4 | 160 | 16 | 190,000 | <0.1 | 5,300 | 14 | 8,600 | 280 | 2.8 | 3,600 | 11 | 6.8 | <0.8 | <0.7 | <0.5 | 220 | 890 | 0.13 | 0.76 | 20 | 6.2 | 52 |
| *75th PCTL* | *ND* | 31,000 | ***1,400*** | 1.7 | 330 | 0.59 | 0.54 | 21,000 | 0.22 | 4.8 | 170 | 19 | 240,000 | <0.1 | 5,700 | 15 | 9,100 | 350 | 4.1 | 6,100 | 12 | 8.6 | <0.8 | <0.7 | <0.5 | 240 | 1,100 | 0.14 | 0.89 | 22 | 6.4 | 52 |
| *95th PCTL* | *ND* | 33,000 | ***6,300*** | 19 | 370 | 0.69 | ***1.8*** | 21,000 | 0.28 | 5.1 | 200 | 23 | 280,000 | <0.1 | 6,500 | 17 | 9,200 | 360 | 4.3 | 6,200 | 14 | 11 | 1.4 | <0.7 | <0.5 | 290 | 1,200 | 0.16 | 0.93 | 23 | 6.5 | 60 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.080 | 88,000 | 29 | *ND* | 590 | 1.0 | 0.10 | 20,000 | 0.21 | 14 | 130 | 31 | 53,000 | *ND* | 21,000 | 41 | 15,000 | 430 | 1.3 | 21,000 | 45 | 9.1 | <0.8 | <0.7 | 1.7 | 240 | 3,600 | 0.40 | 1.8 | 87 | 8.9 | 74 |
| *Max* | 0.46 | 89,000 | 30 | *ND* | 650 | 1.1 | 0.16 | 21,000 | 0.25 | 14 | 130 | 41 | 54,000 | *ND* | 23,000 | 42 | 15,000 | 440 | 3.1 | 27,000 | 49 | 11 | <0.8 | <0.7 | 1.8 | 330 | 3,800 | 0.41 | 1.9 | 90 | 9.9 | 76 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| *10th PCTL* | 0.12 | 13,000 | ***150*** | 0.94 | 120 | <0.1 | 0.24 | 6,800 | 0.040 | 3.1 | 12 | 20 | 110,000 | <0.01 | 2,500 | 9.5 | 3,300 | 91 | 0.82 | 550 | 6.0 | 2.4 | 0.07 | ***<1*** | <0.3 | 65 | 400 | 0.085 | 0.52 | 16 | 3.4 | 22 |
| *25th PCTL* | 0.16 | 14,000 | ***990*** | 1.6 | 160 | <0.1 | 0.31 | 7,700 | 0.068 | 3.5 | 18 | 24 | 120,000 | <0.01 | 3,400 | 11 | 3,600 | 100 | 1.1 | 600 | 7.0 | 2.7 | 0.085 | ***<1*** | <0.3 | 70 | 480 | 0.13 | 0.55 | 18 | 3.9 | 23 |
| *Median* | 0.25 | 16,000 | ***1,900*** | 2.8 | 200 | <0.1 | 0.53 | 9,900 | 0.080 | 4.7 | 30 | 41 | 130,000 | <0.01 | 4,100 | 15 | 4,100 | 140 | 1.5 | 650 | 11 | 3.4 | 0.32 | ***<1*** | <0.3 | 91 | 600 | 0.16 | 0.75 | 21 | 4.3 | 30 |
| *75th PCTL* | 0.38 | 19,000 | ***3,900*** | 5.4 | 230 | 0.13 | 0.84 | 14,000 | 0.11 | 7.7 | 46 | 61 | 170,000 | 0.020 | 5,400 | 20 | 5,800 | 180 | 1.9 | 830 | 19 | 4.5 | 1.0 | ***<1*** | <0.3 | 110 | 800 | 0.17 | 1.0 | 29 | 4.6 | 37 |
| *95th PCTL* | ***0.76*** | 24,000 | ***7,000*** | 10 | 260 | 0.23 | ***1.8*** | 17,000 | 0.14 | 10 | 68 | 92 | 260,000 | 0.083 | 8,800 | 28 | 8,200 | 250 | 2.6 | 1,000 | 27 | 6.0 | 1.6 | ***1.3*** | 0.43 | 130 | 1,100 | 0.26 | 1.8 | 36 | 6.0 | 46 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
ND - no data

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**

**Summary Statistics for F-Zone Waste Rock Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **AUCCC** | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 9 | 9 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 0.12 | 2,400 | ***81*** | 0.020 | 5.5 | <0.1 | 0.074 | 9,700 | 0.15 | 4.1 | 8.4 | 69 | 83,000 | <0.01 | 180 | 1.0 | 3,100 | 1,200 | 0.59 | 100 | 3.8 | 2.2 | 0.58 | <0.7 | 0.58 | 12 | <100 | <0.02 | 0.098 | 1.8 | 2.4 | 55 |
| *25th PCTL* | 0.16 | 2,500 | ***110*** | 0.020 | 9.4 | 0.12 | <0.09 | 13,000 | 0.22 | 6.0 | 25 | 71 | 84,000 | <0.01 | 300 | 2.0 | 3,500 | 1,400 | 0.80 | 100 | 8.0 | 2.5 | <0.8 | 0.80 | 0.70 | 13 | <100 | <0.02 | 0.11 | 3.0 | 2.5 | 66 |
| *Median* | 0.16 | 4,400 | ***200*** | 0.070 | 14 | 0.20 | 0.11 | 20,000 | 0.34 | 7.8 | 140 | 78 | 97,000 | 0.085 | 360 | 2.0 | 7,800 | 2,500 | 0.90 | 200 | 11 | 2.6 | <0.8 | ***<1*** | 0.90 | 20 | 110 | 0.030 | 0.23 | 8.0 | 3.0 | 100 |
| *75th PCTL* | 0.17 | 6,700 | ***430*** | 0.13 | 27 | 0.25 | 0.19 | 42,000 | 0.51 | 8.4 | 210 | 110 | 120,000 | <0.1 | 700 | 2.0 | 12,000 | 2,900 | 1.3 | 280 | 12 | 3.8 | 1.3 | ***<1*** | 0.90 | 38 | 200 | 0.050 | 0.30 | 21 | 4.1 | 240 |
| *95th PCTL* | 0.37 | 49,000 | ***7,000*** | 0.27 | 150 | 0.34 | 0.89 | 59,000 | ***1.2*** | 32 | 240 | 120 | 190,000 | <0.1 | 9,000 | 21 | 27,000 | 3,600 | 2.8 | 6,200 | 84 | 5.6 | 3.9 | ***1.1*** | 1.1 | 97 | 3,300 | 0.30 | 0.55 | 130 | 6.0 | 260 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 58 | 70 | 70 | 14 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 20 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| *10th PCTL* | 0.010 | 45,000 | 2.2 | 0.020 | 28 | <0.1 | <0.09 | 51,000 | 0.070 | 37 | 140 | 81 | 60,000 | <0.01 | 1,000 | 20 | 24,000 | 960 | 0.20 | 2,200 | 56 | 1.6 | 0.54 | <0.7 | <0.5 | 52 | 2,200 | <0.02 | 0.050 | 160 | 6.2 | 75 |
| *25th PCTL* | 0.033 | 63,000 | 3.4 | 0.020 | 50 | 0.23 | <0.09 | 60,000 | 0.10 | 40 | 160 | 90 | 70,000 | <0.01 | 1,900 | 25 | 28,000 | 1,100 | 0.40 | 12,000 | 63 | 2.4 | <0.8 | <0.7 | 0.60 | 91 | 4,100 | 0.033 | 0.11 | 180 | 9.8 | 89 |
| *Median* | 0.095 | 69,000 | 9.0 | 0.020 | 74 | 0.27 | <0.09 | 70,000 | 0.18 | 42 | 190 | 100 | 75,000 | <0.1 | 3,400 | 33 | 32,000 | 1,200 | 0.80 | 14,000 | 85 | 3.4 | <0.8 | <0.7 | 0.95 | 110 | 5,300 | 0.12 | 0.19 | 210 | 13 | 100 |
| *75th PCTL* | 0.17 | 75,000 | 32 | 0.038 | 140 | 0.37 | <0.09 | 79,000 | 0.30 | 46 | 230 | 110 | 82,000 | <0.1 | 5,500 | 43 | 38,000 | 1,400 | 1.0 | 18,000 | 110 | 5.6 | <0.8 | ***<1*** | 1.4 | 130 | 5,800 | 0.26 | 0.28 | 230 | 16 | 120 |
| *95th PCTL* | 0.36 | 81,000 | ***130*** | 0.070 | 220 | 0.65 | 0.10 | 89,000 | 0.61 | 52 | 330 | 160 | 94,000 | <0.1 | 8,900 | 53 | 46,000 | 1,900 | 1.4 | 21,000 | 140 | 9.5 | 1.7 | ***1.9*** | 2.8 | 200 | 6,700 | 0.42 | 0.94 | 290 | 20 | 190 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 0.039 | 1,300 | 43 | 0.23 | 5.3 | <0.1 | 0.020 | 9,100 | 0.13 | 2.4 | 37 | 29 | 32,000 | <0.01 | 160 | 1.0 | 2,000 | 1,200 | 0.67 | 100 | 4.3 | 1.2 | 0.41 | ***<1*** | <0.3 | 16 | <100 | <0.02 | 0.098 | 4.3 | 1.3 | 25 |
| *25th PCTL* | 0.053 | 1,600 | ***96*** | 0.24 | 5.8 | <0.1 | 0.020 | 11,000 | 0.21 | 2.7 | 48 | 31 | 38,000 | <0.01 | 250 | 1.0 | 2,400 | 1,300 | 0.84 | 100 | 4.8 | 1.7 | 0.52 | ***<1*** | <0.3 | 20 | <100 | <0.02 | 0.13 | 4.8 | 1.5 | 31 |
| *Median* | 0.060 | 1,800 | ***300*** | 0.29 | 8.5 | <0.1 | 0.055 | 18,000 | 0.44 | 4.3 | 72 | 61 | 62,000 | <0.01 | 300 | 1.0 | 3,900 | 1,800 | 2.2 | 100 | 7.0 | 2.1 | 0.59 | ***<1*** | <0.3 | 28 | <100 | <0.02 | 0.15 | 14 | 2.3 | 68 |
| *75th PCTL* | 0.065 | 3,600 | ***500*** | 0.49 | 12 | <0.1 | 0.14 | 25,000 | 0.71 | 6.0 | 93 | 150 | 85,000 | <0.01 | 330 | 1.3 | 6,200 | 2,600 | 3.5 | 130 | 9.3 | 3.0 | 0.74 | ***<1*** | 0.33 | 40 | <100 | 0.023 | 0.15 | 24 | 3.0 | 130 |
| *95th PCTL* | 0.077 | 7,600 | ***590*** | 0.88 | 13 | <0.1 | 0.26 | 31,000 | ***0.91*** | 6.4 | 99 | ***290*** | 90,000 | <0.01 | 390 | 1.9 | 8,400 | 3,300 | 3.6 | 190 | 9.9 | 5.1 | 1.1 | ***<1*** | 0.39 | 55 | <100 | 0.029 | 0.15 | 25 | 3.5 | 190 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 0.063 | 32,000 | ***51*** | 0.030 | 28 | <0.1 | 0.023 | 42,000 | 0.14 | 37 | 61 | 81 | 68,000 | <0.01 | 1,700 | 35 | 28,000 | 1,600 | 0.30 | 290 | 50 | 1.8 | 0.11 | ***<1*** | 0.52 | 29 | 620 | 0.080 | 0.083 | 130 | 7.5 | 110 |
| *25th PCTL* | 0.068 | 34,000 | ***58*** | 0.030 | 31 | <0.1 | 0.028 | 46,000 | 0.15 | 38 | 81 | 89 | 75,000 | <0.01 | 2,300 | 39 | 29,000 | 1,900 | 0.35 | 430 | 55 | 2.1 | 0.14 | ***<1*** | 0.70 | 43 | 800 | 0.13 | 0.088 | 150 | 7.5 | 160 |
| *Median* | 0.10 | 36,000 | ***71*** | 0.030 | 39 | 0.15 | 0.035 | 65,000 | 0.49 | 44 | 100 | 110 | 91,000 | <0.01 | 3,000 | 42 | 30,000 | 2,100 | 0.49 | 550 | 69 | 3.7 | 0.15 | ***<1*** | 0.90 | 69 | 950 | 0.18 | 0.095 | 180 | 7.7 | 240 |
| *75th PCTL* | 0.21 | 38,000 | ***670*** | 0.095 | 59 | 0.20 | 0.16 | 84,000 | ***1.2*** | 49 | 150 | 180 | 100,000 | 0.020 | 4,500 | 45 | 31,000 | 2,300 | 0.73 | 630 | 90 | 25 | 0.25 | ***1.3*** | 1.0 | 100 | 1,100 | 0.25 | 0.17 | 210 | 8.2 | 310 |
| *95th PCTL* | 0.41 | 43,000 | ***2,100*** | 0.25 | 93 | 0.20 | 0.43 | 87,000 | ***2.0*** | 51 | 220 | ***330*** | 110,000 | 0.044 | 7,500 | 53 | 33,000 | 2,500 | 1.1 | 690 | 110 | 73 | 0.49 | ***1.9*** | 1.0 | 140 | 1,200 | 0.36 | 0.32 | 240 | 8.8 | 370 |

**Summary Statistics for F-Zone Ore Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **AUCCC** | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | <0.01 | 6,100 | 31 | 1.7 | 9.1 | 0.13 | 0.096 | 17,000 | 0.041 | 6.9 | 120 | 26 | 34,000 | 0.019 | 500 | 4.2 | 6,500 | 690 | 0.89 | 950 | 19 | 1.8 | 0.30 | ***0.93*** | 0.45 | 31 | 320 | 0.026 | 0.070 | 21 | 1.4 | 40 |
| *25th PCTL* | <0.01 | 12,000 | ***61*** | 1.9 | 9.2 | 0.17 | 0.11 | 20,000 | 0.073 | 12 | 170 | 54 | 57,000 | 0.033 | 500 | 6.0 | 9,400 | 1,000 | 1.0 | 2100 | 29 | 2.8 | 0.62 | ***0.98*** | 0.68 | 33 | 660 | 0.035 | 0.083 | 31 | 2.7 | 66 |
| *Median* | <0.01 | 18,000 | ***87*** | 2.1 | 19 | 0.21 | 0.11 | 22,000 | 0.45 | 16 | 220 | 79 | 81,000 | 0.055 | 1,600 | 12 | 14,000 | 2,400 | 1.5 | 3000 | 39 | 4.1 | 0.85 | ***1.3*** | 1.1 | 41 | 1,000 | 0.13 | 0.14 | 46 | 3.8 | 130 |
| *75th PCTL* | 0.31 | 34,000 | ***310*** | 2.4 | 49 | 0.24 | 0.15 | 36,000 | ***0.96*** | 24 | 260 | 99 | 98,000 | 0.078 | 3,600 | 22 | 23,000 | 3,500 | 2.5 | 5900 | 60 | 4.8 | 1.0 | ***1.5*** | 1.4 | 69 | 2,000 | 0.26 | 0.23 | 100 | 6.2 | 190 |
| *95th PCTL* | ***0.54*** | 65,000 | ***840*** | 2.6 | 98 | 0.30 | 0.25 | 68,000 | ***1.3*** | 41 | 320 | 120 | 120,000 | 0.096 | 5,900 | 35 | 37,000 | 3,500 | 4 | 12000 | 100 | 4.9 | 1.3 | ***1.6*** | 1.5 | 120 | 3,800 | 0.36 | 0.33 | 220 | 11 | 230 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 0.040 | 33,000 | ***310*** | 7.3 | 74 | 0.20 | 0.13 | 65,000 | 0.13 | 52 | 320 | 31 | 53,000 | <0.01 | 2,400 | 55 | 59,000 | 1,000 | 0.17 | 1200 | 200 | 2.3 | 0.09 | ***<1*** | <0.3 | 68 | 300 | 0.18 | 0.11 | 68 | 3.2 | 69 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 0.28 | 3,200 | ***440*** | 2.4 | 14 | <0.1 | 0.18 | 18,000 | 0.27 | 8.0 | 7.4 | 72 | 100,000 | <0.01 | 140 | 1.0 | 5,300 | 770 | 0.51 | 100 | 9.0 | 2.0 | 0.67 | ***1.4*** | <0.3 | 22 | <100 | 0.020 | 0.19 | 11 | 2.3 | 74 |
| *25th PCTL* | 0.32 | 3,700 | ***710*** | 2.9 | 16 | <0.1 | 0.40 | 21,000 | 0.28 | 12 | 8.0 | 110 | 110,000 | <0.01 | 200 | 1.0 | 7,500 | 870 | 0.77 | 100 | 12 | 3.2 | 1.1 | ***2.0*** | <0.3 | 33 | <100 | 0.020 | 0.22 | 13 | 3.0 | 120 |
| *Median* | 0.45 | 9,100 | ***7,100*** | 4.9 | 16 | <0.1 | 0.65 | 32,000 | 0.69 | 21 | 10 | 150 | 110,000 | <0.01 | 600 | 2.0 | 9,900 | 1,800 | 1.3 | 100 | 13 | 6.5 | 1.4 | ***3.0*** | 0.40 | 33 | <100 | 0.060 | 0.30 | 16 | 3.5 | 200 |
| *75th PCTL* | ***0.54*** | 11,000 | ***22,000*** | 6.2 | 19 | <0.1 | 1.1 | 36,000 | ***1.5*** | 23 | 31 | 250 | 130,000 | <0.01 | 700 | 10 | 11,000 | 3,000 | 1.8 | 100 | 14 | 6.9 | ***6.0*** | ***5.0*** | 0.50 | 110 | <100 | 0.080 | 0.70 | 18 | 4.5 | 360 |
| *95th PCTL* | ***1.3*** | 24,000 | ***24,000*** | 8.2 | 27 | 0.18 | ***2.0*** | 47,000 | ***1.8*** | 25 | 37 | ***590*** | 140,000 | 0.018 | 1,800 | 12 | 13,000 | 3,300 | 2.2 | 180 | 16 | 8.3 | ***9.4*** | ***5.0*** | 1.3 | 150 | 260 | 0.31 | 0.85 | 20 | 6.5 | 470 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.10 | 23,000 | 31 | 2.2 | 170 | 0.12 | 0.064 | 29,000 | 0.11 | 43 | 35 | 63 | 77,000 | <0.01 | 4,700 | 27 | 18,000 | 840 | 0.73 | 640 | 44 | 2.7 | 0.056 | ***<1*** | 0.62 | 44 | 1,100 | 0.29 | 0.24 | 130 | 4.4 | 100 |
| *25th PCTL* | 0.17 | 24,000 | ***64*** | 2.4 | 170 | 0.15 | 0.085 | 36,000 | 0.15 | 44 | 44 | 84 | 77,000 | <0.01 | 6,300 | 28 | 21,000 | 1,000 | 0.87 | 700 | 54 | 3.1 | 0.065 | ***<1*** | 0.95 | 74 | 1,200 | 0.38 | 0.28 | 140 | 5.2 | 110 |
| *Median* | 0.28 | 26,000 | ***120*** | 2.6 | 180 | 0.20 | 0.12 | 47,000 | 0.20 | 46 | 58 | 120 | 78,000 | <0.01 | 8,900 | 28 | 25,000 | 1,300 | 1.1 | 800 | 69 | 3.6 | 0.08 | ***<1*** | 1.5 | 130 | 1,400 | 0.52 | 0.35 | 160 | 6.6 | 110 |
| *75th PCTL* | 0.31 | 26,000 | ***470*** | 7.6 | 190 | 0.25 | 1.2 | 54,000 | 0.25 | 46 | 83 | 150 | 94,000 | 0.015 | 9,200 | 31 | 26,000 | 2,200 | 4.0 | 800 | 72 | 4.6 | 0.12 | ***1.5*** | 1.7 | 130 | 1,600 | 0.53 | 0.61 | 170 | 12 | 120 |
| *95th PCTL* | 0.33 | 26,000 | ***760*** | 12 | 190 | 0.29 | ***2.1*** | 60,000 | 0.28 | 47 | 100 | 170 | 110,000 | 0.019 | 9,400 | 33 | 26,000 | 2,900 | 6.4 | 800 | 74 | 5.4 | 0.14 | ***1.9*** | 1.9 | 130 | 1,700 | 0.53 | 0.81 | 180 | 16 | 120 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | ***1.2*** | 5,000 | ***90*** | 2.5 | 15 | <0.1 | 0.30 | 12,000 | 0.15 | 5.0 | 29 | 56 | 110,000 | <0.01 | 280 | 1.6 | 3,500 | 320 | 0.33 | 100 | 9.0 | 1.3 | 0.43 | ***1.2*** | <0.3 | 38 | <100 | 0.030 | 0.078 | 11 | 2.6 | 38 |
| *25th PCTL* | ***1.4*** | 6,600 | ***110*** | 3.3 | 18 | <0.1 | 0.34 | 17,000 | 0.30 | 6.2 | 30 | 100 | 110,000 | <0.01 | 400 | 2.5 | 4,100 | 660 | 0.40 | 100 | 11 | 1.8 | 0.45 | ***1.5*** | <0.3 | 52 | <100 | 0.045 | 0.12 | 14 | 2.7 | 67 |
| *Median* | ***1.7*** | 9,300 | ***140*** | 4.7 | 21 | <0.1 | 0.40 | 26,000 | 0.55 | 8.0 | 32 | 180 | 110,000 | <0.01 | 600 | 4.0 | 4,900 | 1,200 | 0.51 | 100 | 13 | 2.6 | 0.47 | ***2.0*** | <0.3 | 75 | <100 | 0.070 | 0.19 | 17 | 3.0 | 110 |
| *75th PCTL* | ***2.6*** | 11,000 | ***2,300*** | 4.9 | 110 | <0.1 | 0.62 | 30,000 | ***1.1*** | 8.7 | 40 | 280 | 120,000 | <0.01 | 2,000 | 7.0 | 6,000 | 1,700 | 0.84 | 350 | 14 | 5.7 | 0.79 | ***2.5*** | <0.3 | 81 | 300 | 0.095 | 0.41 | 18 | 3.7 | 180 |
| *95th PCTL* | ***3.4*** | 12,000 | ***4,100*** | 5.0 | 180 | <0.1 | 0.80 | 34,000 | ***1.5*** | 9.2 | 46 | ***360*** | 130,000 | <0.01 | 3,100 | 9.4 | 6,800 | 2,000 | 1.1 | 550 | 15 | 8.2 | 1.0 | ***2.9*** | <0.3 | 85 | 460 | 0.12 | 0.59 | 18 | 4.2 | 230 |

**Notes:**

Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).

Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC

ND - no data

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**

**Summary Statistics for Pump Waste Rock Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **AUCCC** | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 0.010 | 55,000 | ***150*** | 0.030 | 76 | 0.40 | <0.02 | 48,000 | 0.040 | 55 | 160 | 14 | 77,000 | <0.01 | 4,700 | 76 | 46,000 | 1,100 | 0.48 | 400 | 150 | 1.6 | 0.060 | ***<1*** | 0.30 | 25 | 700 | 0.41 | 0.54 | 120 | 7.2 | 130 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 0.072 | 3,500 | ***70*** | 0.051 | 2.1 | <0.1 | 0.048 | 21,000 | 0.25 | 8.7 | 7.7 | 76 | 110,000 | <0.01 | 90 | 1.7 | 11,000 | 1,100 | 0.29 | 76 | 12 | 1.6 | 0.17 | 0.84 | 0.30 | 16 | <100 | <0.02 | <0.05 | 5.8 | 1.6 | 140 |
| *25th PCTL* | 0.090 | 10,000 | ***92*** | 0.068 | 9.6 | <0.1 | 0.068 | 22,000 | 0.62 | 16 | 21 | 110 | 120,000 | <0.01 | 100 | 2.8 | 13,000 | 1,300 | 0.53 | 97 | 18 | 3.3 | 0.49 | ***0.98*** | 0.45 | 19 | 180 | <0.02 | 0.10 | 18 | 2.7 | 300 |
| *Median* | 0.11 | 15,000 | ***170*** | 0.12 | 12 | 0.30 | <0.09 | 25,000 | ***0.97*** | 17 | 71 | 170 | 140,000 | 0.055 | 100 | 6.5 | 14,000 | 2,000 | 1.0 | 100 | 23 | 4.6 | <0.8 | ***<1*** | 0.70 | 21 | 350 | <0.02 | 0.22 | 27 | 3.9 | 420 |
| *75th PCTL* | 0.14 | 21,000 | ***520*** | 0.18 | 16 | 0.46 | 0.17 | 37,000 | ***1.2*** | 26 | 120 | 260 | 160,000 | <0.1 | 210 | 12 | 19,000 | 2,300 | 1.4 | 110 | 25 | 10 | 1.2 | ***1.1*** | 1.3 | 23 | 720 | 0.035 | 0.38 | 39 | 5.1 | 580 |
| *95th PCTL* | 0.20 | 28,000 | ***3,000*** | 0.45 | 25 | 0.55 | 0.27 | 50,000 | ***2.6*** | 61 | 130 | ***530*** | 170,000 | <0.1 | 560 | 16 | 23,000 | 3,300 | 2.4 | 400 | 35 | 12 | 1.5 | ***1.8*** | 2.1 | 31 | 2,000 | 0.063 | 0.48 | 59 | 5.6 | ***1300*** |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| *10th PCTL* | 0.092 | 29,000 | 6.3 | 0.030 | 15 | <0.1 | 0.069 | 56,000 | 0.13 | 33 | 150 | 70 | 64,000 | <0.01 | 450 | 29 | 25,000 | 990 | 0.24 | 500 | 69 | 1.8 | 0.60 | <0.7 | <0.5 | 34 | 1,300 | <0.02 | 0.058 | 150 | 5.5 | 77 |
| *25th PCTL* | 0.095 | 60,000 | 16 | 0.033 | 22 | 0.24 | <0.09 | 62,000 | 0.16 | 39 | 170 | 83 | 74,000 | <0.1 | 770 | 32 | 28,000 | 1,200 | 0.30 | 9,100 | 74 | 2.0 | <0.8 | <0.7 | <0.5 | 79 | 3,900 | 0.035 | 0.093 | 180 | 7.3 | 100 |
| *Median* | 0.10 | 66,000 | 27 | 0.050 | 47 | 0.32 | <0.09 | 68,000 | 0.19 | 44 | 200 | 93 | 80,000 | <0.1 | 3,200 | 36 | 33,000 | 1,300 | 0.30 | 11,000 | 88 | 2.7 | 0.90 | <0.7 | <0.5 | 87 | 5,200 | 0.090 | 0.13 | 200 | 12 | 110 |
| *75th PCTL* | 0.32 | 68,000 | ***91*** | 0.060 | 82 | 0.36 | <0.09 | 75,000 | 0.26 | 46 | 210 | 110 | 85,000 | <0.1 | 6,000 | 43 | 34,000 | 1,400 | 0.40 | 14,000 | 110 | 4.9 | 1.3 | 0.78 | <0.5 | 100 | 5,800 | 0.21 | 0.18 | 200 | 15 | 130 |
| *95th PCTL* | 0.49 | 72,000 | ***2,200*** | 0.072 | 190 | 0.51 | 0.58 | 88,000 | ***0.96*** | 54 | 310 | 130 | 110,000 | <0.1 | 10,000 | 48 | 37,000 | 2,200 | 2.9 | 24,000 | 150 | 65 | 1.9 | ***1.2*** | 0.80 | 110 | 6,700 | 0.53 | 0.26 | 210 | 19 | 320 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.05 | 23,000 | ***110*** | 0.020 | 12 | <0.1 | 0.030 | 14,000 | 0.070 | 2.3 | 23 | 14 | 82,000 | <0.01 | 100 | 24 | 14,000 | 1,600 | 1.1 | 100 | 7 | 1.2 | 0.050 | ***<1*** | 0.40 | 13 | <100 | <0.02 | 0.19 | 5.0 | 3.1 | 83 |
| *Max* | 0.10 | 24,000 | ***150*** | 0.50 | 35 | <0.1 | 0.20 | 39,000 | 0.19 | 30 | 200 | 130 | 120,000 | <0.01 | 1,800 | 30 | 25,000 | 1,700 | 3.1 | 200 | 110 | 2.7 | 0.060 | ***<1*** | 0.60 | 67 | 400 | 0.12 | 0.59 | 85 | 4.5 | 150 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 0.062 | 24,000 | 45 | 0.020 | 19 | <0.1 | <0.02 | 31,000 | 0.070 | 44 | 71 | 39 | 61,000 | <0.01 | 820 | 26 | 21,000 | 1,000 | 0.050 | 280 | 60 | 1.5 | 0.12 | ***<1*** | 0.30 | 21 | 300 | 0.058 | <0.05 | 96 | 2.1 | 66 |
| *25th PCTL* | 0.090 | 32,000 | ***57*** | 0.020 | 28 | <0.1 | <0.02 | 45,000 | 0.090 | 49 | 140 | 90 | 64,000 | <0.01 | 1,100 | 38 | 29,000 | 1,100 | 0.21 | 300 | 91 | 2.2 | 0.13 | ***<1*** | 0.30 | 27 | 400 | 0.090 | <0.05 | 120 | 2.8 | 80 |
| *Median* | 0.12 | 36,000 | ***110*** | 0.025 | 31 | <0.1 | <0.02 | 56,000 | 0.14 | 54 | 150 | 92 | 74,000 | <0.01 | 1,400 | 47 | 45,000 | 1,300 | 0.53 | 300 | 140 | 2.6 | 0.15 | ***<1*** | 0.40 | 40 | 700 | 0.19 | <0.05 | 150 | 3.0 | 95 |
| *75th PCTL* | 0.14 | 37,000 | ***170*** | 0.030 | 44 | <0.1 | 0.040 | 65,000 | 0.41 | 56 | 190 | 110 | 89,000 | <0.01 | 2,900 | 61 | 48,000 | 1,400 | 0.80 | 400 | 160 | 3.7 | 0.15 | ***<1*** | 0.40 | 50 | 900 | 0.21 | 0.16 | 160 | 5.3 | 170 |
| *95th PCTL* | 0.24 | 54,000 | ***520*** | 0.21 | 70 | 0.16 | 0.31 | 67,000 | ***1.7*** | 65 | 440 | 280 | 92,000 | <0.01 | 4,500 | 74 | 56,000 | 1,900 | 1.6 | 460 | 260 | 15 | 0.25 | ***1.6*** | 0.46 | 110 | 900 | 0.27 | 0.71 | 190 | 7.5 | 280 |

**Summary Statistics for Pump Ore Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| **AUCCC** | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | *ND* | 8,000 | ***220*** | 0.15 | 4.8 | 0.28 | <0.09 | 18,000 | 0.47 | 30 | 120 | 85 | 110,000 | <0.1 | 76 | 2.3 | 12,000 | 1,000 | 0.39 | 70 | 32 | 3.9 | 1.7 | <0.7 | <0.5 | 14 | 400 | <0.02 | 0.15 | 18 | 3.7 | 260 |
| *25th PCTL* | *ND* | 11,000 | ***390*** | 0.34 | 8.1 | 0.36 | <0.09 | 22,000 | 0.67 | 31 | 130 | 86 | 130,000 | <0.1 | 89 | 2.8 | 13,000 | 1,100 | 0.53 | 120 | 41 | 4.2 | 1.8 | <0.7 | <0.5 | 19 | 540 | <0.02 | 0.19 | 24 | 3.9 | 440 |
| *Median* | *ND* | 28,000 | ***2,500*** | 0.66 | 50 | 0.41 | 0.20 | 31,000 | ***1.6*** | 37 | 150 | 170 | 160,000 | <0.1 | 2100 | 20 | 22,000 | 1,600 | 1.6 | 280 | 57 | 5.1 | 2.2 | 0.85 | 0.70 | 32 | 1,500 | 0.12 | 0.28 | 69 | 4.2 | ***770*** |
| *75th PCTL* | *ND* | 48,000 | ***5,900*** | 0.99 | 98 | 0.43 | 0.41 | 43,000 | ***3.2*** | 48 | 160 | ***360*** | 170,000 | <0.1 | 4500 | 36 | 31,000 | 2,100 | 2.7 | 3,300 | 71 | 6 | 3.2 | ***1.7*** | 0.93 | 54 | 3,200 | 0.24 | 0.37 | 130 | 4.6 | ***1300*** |
| *95th PCTL* | *ND* | 61,000 | ***9,200*** | 1.2 | 120 | 0.47 | 0.64 | 57,000 | ***5.0*** | 62 | 180 | ***590*** | 190,000 | <0.1 | 5500 | 36 | 33,000 | 2,300 | 2.9 | 10,000 | 79 | 6.8 | ***4.6*** | ***3.3*** | 0.99 | 81 | 5,000 | 0.29 | 0.41 | 170 | 5.2 | ***2000*** |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.28 | 9,900 | ***170*** | 1.7 | 14 | <0.1 | 0.14 | 40,000 | 0.29 | 34 | 29 | 95 | 53,000 | <0.01 | 300 | 12 | 13,000 | 1,500 | 0.86 | 200 | 43 | 3.5 | 0.15 | ***<1*** | <0.3 | 46 | <100 | 0.030 | 0.10 | 31 | 2.3 | 77 |
| *Max* | ***5.4*** | 13,000 | ***4,700*** | 5.6 | 17 | 0.20 | 0.14 | 47,000 | 0.56 | 35 | 72 | 170 | 92,000 | <0.01 | 1000 | 18 | 17,000 | 1,700 | 1.3 | 300 | 71 | 24 | 1.3 | ***<1*** | <0.3 | 59 | 400 | 0.050 | 0.10 | 38 | 2.9 | 140 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | ***0.62*** | 2,800 | ***190*** | 7.3 | 11 | <0.1 | 0.13 | 7,800 | 0.35 | 6.9 | 5.8 | 68 | 110,000 | <0.01 | <100 | 1.8 | 8,200 | 1,600 | 0.72 | 100 | 8.2 | 2.2 | 0.28 | ***2.0*** | <0.3 | 7.5 | <100 | <0.02 | 0.054 | 7.8 | 1.5 | 63 |
| *25th PCTL* | ***1.1*** | 3,000 | ***450*** | 9.1 | 11 | <0.1 | 0.18 | 10,000 | 0.70 | 8.8 | 7 | 120 | 110,000 | <0.01 | <100 | 3.0 | 9,000 | 2,100 | 0.80 | 100 | 13 | 3.0 | 0.40 | ***2.0*** | <0.3 | 9.4 | <100 | <0.02 | 0.060 | 12 | 2.0 | 88 |
| *Median* | ***1.2*** | 5,800 | ***6,500*** | 9.9 | 13 | <0.1 | 0.22 | 21,000 | 0.84 | 21 | 7 | 170 | 130,000 | 0.02 | <100 | 3.0 | 11,000 | 2,400 | 0.85 | 100 | 13 | 3.4 | 1.8 | ***4.0*** | <0.3 | 16 | <100 | <0.02 | 0.080 | 14 | 2.1 | 320 |
| 75th PCTL | ***1.5*** | 15,000 | ***26,000*** | 17 | 21 | <0.1 | 0.25 | 34,000 | 0.9 | 27 | 12 | 250 | 130,000 | 0.02 | <100 | 10 | 12,000 | 2,500 | 1.1 | 200 | 14 | 3.6 | ***10*** | ***4.0*** | 0.90 | 16 | <100 | <0.02 | 0.39 | 37 | 3.3 | 330 |
| 95th PCTL | ***2.3*** | 20,000 | ***38,000*** | 26 | 21 | 0.18 | 0.66 | 34,000 | ***1.1*** | 47 | 76 | ***590*** | 180,000 | 0.02 | 900 | 11 | 14,000 | 2,800 | 2.5 | 280 | 46 | 7 | ***16*** | ***6.4*** | 1.7 | 53 | 340 | 0.20 | 0.57 | 38 | 4.2 | 340 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 0.36 | 28,000 | ***400*** | 5.4 | 30 | <0.1 | 0.41 | 55,000 | 0.28 | 41 | 150 | 32 | 79,000 | <0.01 | 1500 | 37 | 37,000 | 1,100 | 1.1 | 300 | 110 | 3.6 | 0.12 | ***<1*** | <0.5 | 73 | 400 | 0.23 | 0.080 | 140 | 2.2 | 180 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.20 | 14,000 | ***2,000*** | 2.7 | 12 | <0.1 | 0.13 | 18,000 | 0.13 | 20 | 25 | 61 | 110,000 | <0.01 | <100 | 7.2 | 8,000 | 1,300 | 2.2 | 100 | 24 | 1.8 | 1.3 | ***1.4*** | <0.3 | 22 | <100 | <0.02 | 0.37 | 50 | 2.3 | 72 |
| *25th PCTL* | 0.33 | 15,000 | ***3,100*** | 3.2 | 13 | <0.1 | 0.20 | 21,000 | 0.15 | 32 | 28 | 99 | 110,000 | <0.01 | <100 | 11 | 9,300 | 1,600 | 2.3 | 100 | 32 | 2.8 | 1.5 | ***2.0*** | <0.3 | 25 | <100 | <0.02 | 0.40 | 51 | 2.4 | 83 |
| *Median* | ***0.55*** | 17,000 | ***5,000*** | 4.0 | 15 | <0.1 | 0.31 | 27,000 | 0.17 | 52 | 32 | 160 | 120,000 | <0.01 | <100 | 16 | 11,000 | 2,000 | 2.5 | 100 | 46 | 4.4 | 1.8 | ***3.0*** | <0.3 | 29 | <100 | <0.02 | 0.45 | 51 | 2.7 | 100 |
| 75th PCTL | ***0.62*** | 24,000 | ***18,000*** | 4.2 | 21 | <0.1 | 0.93 | 30,000 | 0.21 | 59 | 43 | ***370*** | 120,000 | <0.01 | 750 | 21 | 14,000 | 2,100 | 2.5 | 150 | 53 | 4.9 | 3.1 | ***3.5*** | 0.40 | 30 | 150 | 0.070 | 0.52 | 66 | 3.1 | 140 |
| 95th PCTL | ***0.67*** | 28,000 | ***29,000*** | 4.4 | 25 | <0.1 | 1.4 | 33,000 | 0.24 | 65 | 52 | ***530*** | 130,000 | <0.01 | 1300 | 24 | 16,000 | 2,100 | 2.5 | 190 | 59 | 5.2 | ***4.1*** | ***3.9*** | 0.48 | 30 | 190 | 0.11 | 0.58 | 78 | 3.4 | 170 |

**Notes:**

Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).

Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC

ND - no data

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**
**Summary Statistics for Tiriganiaq Waste Rock Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | *ND* | 68,000 | 7.9 | 0.040 | 90 | 0.35 | <0.09 | 53,000 | 0.16 | 38 | 82 | 73 | 89,000 | <0.1 | 4,300 | 23 | 25,000 | 1,000 | 0.40 | 14,000 | 47 | 7.4 | 0.86 | <0.7 | 0.56 | 220 | 6,500 | 0.13 | 0.20 | 170 | 18 | 89 |
| *25th PCTL* | *ND* | 68,000 | 8.0 | 0.040 | 91 | 0.36 | <0.09 | 58,000 | 0.18 | 39 | 83 | 78 | 90,000 | <0.1 | 4,400 | 24 | 27,000 | 1,000 | 0.40 | 15,000 | 47 | 7.9 | 0.95 | <0.7 | 0.65 | 230 | 6,600 | 0.14 | 0.22 | 190 | 18 | 90 |
| *Median* | *ND* | 69,000 | 10 | 0.045 | 100 | 0.39 | <0.09 | 63,000 | 0.20 | 40 | 87 | 90 | 90,000 | <0.1 | 4,800 | 26 | 29,000 | 1,100 | 0.80 | 15,000 | 47 | 8.5 | 1.1 | <0.7 | 0.80 | 240 | 6,700 | 0.17 | 0.23 | 200 | 19 | 92 |
| *75th PCTL* | *ND* | 70,000 | 26 | 0.055 | 180 | 0.54 | <0.09 | 64,000 | 0.24 | 44 | 91 | 110 | 95,000 | <0.1 | 6,800 | 30 | 30,000 | 1,100 | 1.3 | 16,000 | 58 | 9.3 | 1.1 | <0.7 | 0.98 | 250 | 7,500 | 0.27 | 0.52 | 200 | 20 | 100 |
| *95th PCTL* | *ND* | 71,000 | ***60*** | 0.067 | 360 | 0.85 | <0.09 | 65,000 | 0.30 | 53 | 94 | 130 | 110,000 | <0.1 | 11,000 | 35 | 30,000 | 1,100 | 1.5 | 17,000 | 84 | 11 | 1.1 | <0.7 | 1.2 | 260 | 9,300 | 0.43 | 1.2 | 210 | 22 | 120 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 0.010 | 16,000 | 41 | 0.020 | 29 | 0.18 | 0.044 | 18,000 | 0.058 | 2.4 | 7.2 | 0.50 | 48,000 | <0.01 | 420 | 7.8 | 4,300 | 230 | 0.57 | 100 | 4.4 | 4.0 | 0.098 | ***0.94*** | <0.3 | 140 | <100 | 0.028 | 0.27 | 12 | 3.8 | 27 |
| *25th PCTL* | 0.025 | 19,000 | ***61*** | 0.030 | 38 | 0.20 | 0.060 | 24,000 | 0.080 | 2.7 | 10 | 1.8 | 160,000 | <0.01 | 600 | 10 | 6,700 | 280 | 0.70 | 100 | 6.0 | 5.5 | 0.12 | ***<1*** | <0.3 | 200 | 200 | 0.040 | 0.32 | 15 | 4.1 | 32 |
| *Median* | 0.14 | 22,000 | ***170*** | 0.23 | 58 | 0.30 | <0.09 | 27,000 | 0.11 | 4.1 | 11 | 7.2 | 230,000 | <0.01 | 1,500 | 11 | 7,700 | 330 | 1.0 | 200 | 8.0 | 6.7 | 0.19 | ***<1*** | <0.3 | 210 | 400 | 0.060 | 0.60 | 16 | 4.8 | 38 |
| *75th PCTL* | 0.29 | 24,000 | ***910*** | 0.35 | 170 | 0.40 | 0.12 | 29,000 | 0.12 | 6.3 | 13 | 16 | 260,000 | <0.01 | 4,100 | 14 | 7,900 | 450 | 1.3 | 200 | 12 | 8.8 | 0.31 | ***<1*** | <0.3 | 240 | 400 | 0.18 | 0.69 | 19 | 5.1 | 54 |
| *95th PCTL* | 0.51 | 33,000 | ***1,700*** | 0.92 | 320 | 0.80 | 0.79 | 74,000 | 0.31 | 8.2 | 67 | 24 | 270,000 | 0.072 | 8,100 | 17 | 8,000 | 730 | 8.6 | 1,100 | 18 | ***520*** | 0.72 | ***<1*** | 0.42 | 370 | 980 | 0.26 | 0.83 | 42 | 7.2 | 65 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 54 | 99 | 99 | 45 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 69 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| *10th PCTL* | 0.16 | 73,000 | 18 | 0.020 | 540 | 0.90 | <0.09 | 9,000 | 0.22 | 15 | 110 | 31 | 32,000 | <0.1 | 18,000 | 23 | 10,000 | 250 | 0.98 | 16,000 | 49 | 8.8 | <0.8 | <0.7 | <0.5 | 250 | 1,000 | 0.31 | 1.5 | 69 | 6.3 | 58 |
| *25th PCTL* | 0.31 | 76,000 | 31 | 0.020 | 580 | 0.95 | <0.09 | 11,000 | 0.23 | 17 | 130 | 38 | 35,000 | <0.1 | 20,000 | 27 | 12,000 | 270 | 1.2 | 18,000 | 54 | 10 | <0.8 | <0.7 | 0.70 | 270 | 1,200 | 0.34 | 1.6 | 78 | 6.4 | 70 |
| *Median* | 0.36 | 79,000 | 46 | 0.020 | 630 | 1.0 | 0.13 | 13,000 | 0.26 | 18 | 150 | 43 | 39,000 | <0.1 | 22,000 | 32 | 13,000 | 300 | 1.4 | 19,000 | 58 | 13 | <0.8 | <0.7 | <0.9 | 290 | 1,700 | 0.39 | 1.7 | 86 | 6.7 | 77 |
| *75th PCTL* | 0.40 | 82,000 | ***99*** | 0.030 | 750 | 1.1 | 0.19 | 15,000 | 0.28 | 19 | 170 | 48 | 43,000 | <0.1 | 23,000 | 36 | 14,000 | 330 | 1.6 | 20,000 | 64 | 17 | <0.8 | <0.7 | <0.9 | 320 | 2,400 | 0.44 | 1.8 | 94 | 7.3 | 84 |
| *95th PCTL* | 0.50 | 89,000 | ***500*** | 0.086 | 870 | 1.2 | 0.35 | 21,000 | 0.34 | 21 | 180 | 64 | 52,000 | <0.1 | 26,000 | 40 | 16,000 | 380 | 2.9 | 22,000 | 70 | 38 | <0.8 | <0.7 | 1.2 | 360 | 3,300 | 0.51 | 1.9 | 100 | 8.2 | 95 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 8 | 8 | 3 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 0.078 | 69,000 | ***57*** | 0.020 | 400 | 0.84 | <0.09 | 13,000 | 0.16 | 6.4 | 23 | 22 | 37,000 | <0.1 | 15,000 | 18 | 7,200 | 240 | 0.61 | 14,000 | 13 | 7.4 | <0.8 | <0.7 | 0.80 | 190 | 1,400 | 0.20 | 0.77 | 31 | 4.7 | 44 |
| *25th PCTL* | 0.090 | 75,000 | ***82*** | 0.020 | 440 | 0.92 | 0.11 | 14,000 | 0.17 | 6.7 | 24 | 26 | 40,000 | <0.1 | 18,000 | 20 | 7,500 | 270 | 0.70 | 16,000 | 13 | 8.5 | <0.8 | <0.7 | 0.88 | 270 | 1,600 | 0.25 | 0.85 | 35 | 5.5 | 50 |
| *Median* | 0.090 | 76,000 | ***140*** | 0.020 | 530 | 1.0 | 0.12 | 17,000 | 0.25 | 11 | 85 | 45 | 48,000 | <0.1 | 21,000 | 24 | 11,000 | 290 | 1.1 | 19,000 | 34 | 9.8 | <0.8 | <0.7 | <0.9 | 300 | 1,800 | 0.32 | 1.3 | 61 | 6.3 | 63 |
| *75th PCTL* | 0.23 | 82,000 | ***210*** | 0.040 | 570 | 1.0 | 0.17 | 21,000 | 0.26 | 17 | 150 | 46 | 67,000 | <0.1 | 22,000 | 28 | 13,000 | 320 | 1.3 | 20,000 | 54 | 11 | <0.8 | <0.7 | <0.9 | 330 | 2,100 | 0.39 | 1.7 | 86 | 6.7 | 74 |
| *95th PCTL* | ***0.57*** | 84,000 | ***320*** | 0.056 | 700 | 1.1 | 0.27 | 29,000 | 0.27 | 19 | 170 | 81 | 80,000 | <0.1 | 27,000 | 32 | 14,000 | 340 | 2.4 | 21,000 | 63 | 13 | <0.8 | <0.7 | <0.9 | 470 | 2,900 | 0.48 | 1.8 | 92 | 8.2 | 79 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 13 | 14 | 14 | 1 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| *10th PCTL* | 0.09 | 67,000 | 20 | 0.030 | 390 | 0.85 | <0.09 | 16,000 | 0.15 | 7.0 | 20 | 18 | 40,000 | <0.1 | 16,000 | 15 | 7,100 | 250 | 0.50 | 16,000 | 11 | 6.5 | <0.8 | <0.7 | <0.9 | 210 | 1,500 | 0.27 | 0.69 | 32 | 4.3 | 39 |
| *25th PCTL* | 0.10 | 70,000 | 25 | 0.030 | 430 | 0.92 | <0.09 | 16,000 | 0.16 | 7.3 | 28 | 20 | 47,000 | <0.1 | 17,000 | 15 | 7,300 | 260 | 0.60 | 17,000 | 13 | 8 | <0.8 | <0.7 | <0.9 | 250 | 1,700 | 0.27 | 0.91 | 39 | 4.6 | 42 |
| *Median* | 0.21 | 72,000 | ***86*** | 0.030 | 610 | 0.98 | <0.09 | 20,000 | 0.18 | 8.9 | 35 | 25 | 54,000 | <0.1 | 20,000 | 19 | 8,200 | 280 | 0.70 | 19,000 | 19 | 12 | <0.8 | <0.7 | <0.9 | 300 | 1,900 | 0.32 | 1.1 | 42 | 5.3 | 47 |
| *75th PCTL* | 0.31 | 77,000 | ***300*** | 0.030 | 640 | 1.1 | <0.09 | 23,000 | 0.20 | 11 | 64 | 41 | 60,000 | <0.1 | 22,000 | 22 | 9,900 | 310 | 0.93 | 21,000 | 30 | 19 | <0.8 | <0.7 | <0.9 | 350 | 1,900 | 0.38 | 1.3 | 52 | 6.1 | 65 |
| *95th PCTL* | 0.35 | 81,000 | ***840*** | 0.030 | 1000 | 1.1 | 0.36 | 26,000 | 0.28 | 17 | 110 | 110 | 71,000 | <0.1 | 25,000 | 26 | 11,000 | 370 | 1.5 | 23,000 | 56 | 44 | <0.8 | <0.7 | 1.4 | 450 | 2,500 | 0.5 | 1.6 | 74 | 7.6 | 78 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 11 | 17 | 17 | 6 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 16 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| *10th PCTL* | 0.11 | 62,000 | 8.5 | 0.025 | 38 | 0.25 | <0.09 | 67,000 | 0.13 | 32 | 130 | 68 | 63,000 | <0.1 | 3,200 | 26 | 20,000 | 1,000 | 0.20 | 7,900 | 78 | 3.0 | <0.8 | <0.7 | <0.5 | 110 | 1,900 | 0.062 | 0.078 | 160 | 5.5 | 78 |
| *25th PCTL* | 0.14 | 64,000 | 28 | 0.030 | 100 | 0.30 | <0.09 | 77,000 | 0.15 | 36 | 140 | 76 | 65,000 | <0.1 | 4,700 | 36 | 21,000 | 1,100 | 0.20 | 9,700 | 87 | 4.7 | <0.8 | <0.7 | <0.5 | 120 | 2,300 | 0.12 | 0.092 | 170 | 6.5 | 89 |
| *Median* | 0.15 | 67,000 | ***73*** | 0.035 | 160 | 0.41 | <0.09 | 80,000 | 0.20 | 40 | 160 | 97 | 72,000 | <0.1 | 10,000 | 45 | 23,000 | 1,400 | 0.40 | 11,000 | 95 | 7.4 | <0.8 | <0.7 | <0.9 | 140 | 2,800 | 0.32 | 0.11 | 180 | 8.0 | 100 |
| *75th PCTL* | 0.20 | 70,000 | ***250*** | 0.048 | 250 | 0.50 | <0.09 | 91,000 | 0.27 | 43 | 170 | 110 | 74,000 | <0.1 | 14,000 | 51 | 25,000 | 1,800 | 0.50 | 15,000 | 97 | 13 | <0.8 | <0.7 | <0.9 | 160 | 3,000 | 0.53 | 0.18 | 210 | 9.8 | 110 |
| *95th PCTL* | 0.37 | 74,000 | ***3,300*** | 0.065 | 560 | 0.62 | 0.13 | 100,000 | 0.84 | 46 | 180 | 170 | 89,000 | <0.1 | 20,000 | 56 | 29,000 | 2,200 | 2.20 | 18,000 | 110 | 36 | 1.1 | ***1.3*** | 1.0 | 190 | 4,600 | 0.68 | 0.54 | 220 | 15 | 220 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.21 | 62,000 | 8.7 | *ND* | 87 | 0.25 | <0.09 | 58,000 | 0.26 | 43 | 60 | 99 | 85,000 | *ND* | 1,800 | 22 | 27,000 | 1,100 | 0.40 | 14,000 | 68 | 2.7 | 0.90 | <0.7 | <0.5 | 140 | 5,000 | 0.04 | 0.056 | 200 | 14 | 88 |
| *Max* | ***0.78*** | 77,000 | 13 | *ND* | 130 | 0.39 | <0.09 | 73,000 | 0.56 | 46 | 160 | 120 | 96,000 | *ND* | 2,200 | 37 | 41,000 | 1,300 | 0.50 | 15,000 | 150 | 14 | 0.90 | <0.7 | 1.0 | 320 | 7,900 | 0.09 | 0.23 | 260 | 21 | 120 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 0.14 | 11,000 | ***170*** | 0.02 | 42 | 0.20 | 0.11 | 17,000 | 0.10 | 5.2 | 21 | 19 | 64,000 | <0.01 | 800 | 1.8 | 7,900 | 310 | 0.56 | 77 | 11 | 8.3 | 0.20 | <0.7 | 0.54 | 34 | 140 | 0.04 | 0.19 | 12 | 2.6 | 41 |
| *25th PCTL* | 0.16 | 16,000 | ***210*** | 0.02 | 49 | 0.20 | 0.13 | 21,000 | 0.13 | 6.4 | 25 | 31 | 110,000 | <0.01 | 1,100 | 3 | 8,900 | 310 | 0.80 | 100 | 13 | 9.8 | 0.28 | <0.7 | <0.9 | 51 | 200 | 0.04 | 0.24 | 16 | 2.7 | 41 |
| *Median* | 0.18 | 18,000 | ***210*** | 0.02 | 53 | 0.30 | 0.14 | 25,000 | 0.15 | 19 | 44 | 40 | 150,000 | <0.01 | 1,600 | 4 | 9,200 | 330 | 1.1 | 100 | 15 | 11 | 0.31 | ***<1*** | <0.9 | 60 | 300 | 0.05 | 0.55 | 19 | 3.6 | 66 |
| *75th PCTL* | 0.22 | 30,000 | ***490*** | 0.29 | 66 | 0.36 | 0.2 | 38,000 | ***1.8*** | 20 | 77 | 140 | 160,000 | <0.1 | 1,900 | 5 | 13,000 | 1,700 | 1.2 | 330 | 63 | 17 | <0.8 | ***2.0*** | 1.8 | 150 | 690 | 0.08 | 0.64 | 21 | 5.5 | 650 |
| *95th PCTL* | 0.23 | 31,000 | ***1,100*** | 0.51 | 170 | 0.61 | 0.44 | 44,000 | ***1.9*** | 31 | 310 | 140 | 220,000 | <0.1 | 5,100 | 20 | 29,000 | 2,000 | 2.1 | 550 | 150 | 33 | <0.8 | ***2.8*** | 1.9 | 250 | 770 | 0.11 | 0.7 | 51 | 5.9 | 660 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 0 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 0.33 | 75,000 | ***49*** | *ND* | 550 | 0.94 | <0.09 | 10,000 | 0.11 | 15 | 76 | 23 | 38,000 | <0.1 | 21,000 | 23 | 10,000 | 290 | 0.76 | 15,000 | 51 | 10 | <0.8 | <0.7 | 0.74 | 240 | 2,300 | 0.35 | 1.4 | 74 | 6.1 | 59 |
| *25th PCTL* | 0.38 | 79,000 | ***64*** | *ND* | 600 | 0.99 | 0.14 | 13,000 | 0.15 | 18 | 110 | 34 | 41,000 | <0.1 | 24,000 | 26 | 13,000 | 310 | 1.1 | 16,000 | 66 | 11 | <0.8 | <0.7 | <0.9 | 260 | 2,500 | 0.43 | 1.6 | 91 | 6.8 | 68 |
| *Median* | 0.39 | 80,000 | ***120*** | *ND* | 620 | 1.0 | 0.19 | 16,000 | 0.22 | 20 | 120 | 51 | 44,000 | <0.1 | 27,000 | 34 | 14,000 | 310 | 1.2 | 17,000 | 71 | 12 | <0.8 | <0.7 | <0.9 | 290 | 2,800 | 0.50 | 1.7 | 110 | 7.8 | 82 |
| *75th PCTL* | 0.49 | 87,000 | ***140*** | *ND* | 690 | 1.1 | 0.23 | 21,000 | 0.24 | 21 | 130 | 58 | 45,000 | <0.1 | 28,000 | 39 | 16,000 | 370 | 1.3 | 18,000 | 75 | 16 | <0.8 | <0.7 | 1.1 | 390 | 3,300 | 0.51 | 1.8 | 110 | 8.4 | 90 |
| *95th PCTL* | ***0.64*** | 89,000 | ***210*** | *ND* | 2400 | 2.8 | 0.45 | 22,000 | 0.24 | 23 | 130 | 67 | 54,000 | <0.1 | 35,000 | 41 | 18,000 | 450 | 1.5 | 23,000 | 80 | 96 | <0.8 | <0.7 | 1.2 | 620 | 3,600 | 1.0 | 1.9 | 120 | 10 | 120 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 9 | 9 | 9 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| *10th PCTL* | 0.29 | 60,000 | 38 | *ND* | 440 | 0.91 | <0.09 | 6,600 | 0.13 | 8.2 | 70 | 26 | 44,000 | <0.1 | 16,000 | 19 | 8,200 | 260 | 0.48 | 13,000 | 23 | 8.6 | <0.8 | <0.7 | 0.68 | 180 | 2,000 | 0.29 | 0.95 | 37 | 5.5 | 60 |
| *25th PCTL* | 0.37 | 73,000 | 43 | *ND* | 460 | 0.94 | <0.09 | 7,600 | 0.16 | 18 | 92 | 27 | 48,000 | <0.1 | 21,000 | 26 | 13,000 | 280 | 0.90 | 15,000 | 63 | 10 | <0.8 | <0.7 | 0.80 | 190 | 3,000 | 0.39 | 1.4 | 91 | 6.0 | 73 |
| *Median* | 0.37 | 77,000 | ***110*** | *ND* | 490 | 1.0 | 0.11 | 11,000 | 0.24 | 20 | 120 | 43 | 52,000 | <0.1 | 23,000 | 31 | 14,000 | 300 | 1.2 | 17,000 | 69 | 11 | <0.8 | <0.7 | <0.9 | 220 | 3,300 | 0.41 | 1.6 | 110 | 6.7 | 77 |
| *75th PCTL* | 0.43 | 85,000 | ***200*** | *ND* | 620 | 1.1 | 0.16 | 15,000 | 0.24 | 20 | 120 | 44 | 59,000 | <0.1 | 27,000 | 33 | 15,000 | 350 | 1.4 | 18,000 | 71 | 14 | <0.8 | <0.7 | <0.9 | 230 | 3,600 | 0.46 | 1.7 | 110 | 8.1 | 85 |
| *95th PCTL* | 0.49 | 94,000 | ***1,000*** | *ND* | 1200 | 1.4 | 0.26 | 25,000 | 0.28 | 22 | 130 | 57 | 91,000 | <0.1 | 30,000 | 37 | 17,000 | 360 | 1.4 | 20,000 | 77 | 30 | 0.86 | <0.7 | 1.2 | 380 | 3,800 | 0.53 | 1.8 | 120 | 9.2 | 88 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 0.030 | 14,000 | 25 | 0.020 | 42 | <0.1 | 0.036 | 16,000 | 0.046 | 10 | 13 | 12 | 44,000 | <0.01 | 1,400 | 16 | 7,700 | 270 | 0.3 | 300 | 18 | 3.6 | 0.056 | 0.88 | <0.3 | 90 | 220 | 0.036 | 0.19 | 16 | 2.8 | 54 |
| *25th PCTL* | 0.030 | 18,000 | 45 | 0.020 | 57 | <0.1 | 0.045 | 18,000 | 0.055 | 11 | 14 | 14 | 49,000 | <0.01 | 1,500 | 20 | 7,900 | 280 | 0.33 | 400 | 20 | 3.8 | 0.075 | ***<1*** | <0.3 | 100 | 300 | 0.04 | 0.30 | 17 | 2.9 | 56 |
| *Median* | 0.040 | 20,000 | ***55*** | 0.020 | 62 | <0.1 | 0.06 | 20,000 | 0.09 | 12 | 20 | 16 | 52,000 | <0.01 | 2,400 | 24 | 9,600 | 300 | 0.47 | 600 | 24 | 4.2 | 0.13 | ***<1*** | <0.3 | 140 | 400 | 0.10 | 0.38 | 23 | 3.6 | 57 |
| *75th PCTL* | 0.16 | 21,000 | ***260*** | 0.028 | 100 | 0.20 | 0.12 | 22,000 | 0.16 | 13 | 43 | 42 | 61,000 | <0.01 | 3,900 | 27 | 11,000 | 300 | 0.75 | 600 | 38 | 6.9 | 0.41 | ***<1*** | <0.3 | 140 | 500 | 0.22 | 0.55 | 45 | 3.8 | 64 |
| *95th PCTL* | 0.25 | 64,000 | ***580*** | 0.083 | 530 | 1.0 | 0.18 | 61,000 | 0.2 | 31 | 73 | 97 | 69,000 | 0.073 | 21,000 | 29 | 27,000 | 940 | 1.4 | 11,000 | 84 | 19 | 0.75 | ***<1*** | 0.72 | 200 | 1,700 | 0.41 | 1.5 | 68 | 6.2 | 81 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 12 | 12 | 12 | 0 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 0 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| *10th PCTL* | 0.10 | 68,000 | 3.8 | *ND* | 57 | 0.23 | <0.09 | 69,000 | 0.10 | 39 | 140 | 84 | 64,000 | *ND* | 3,400 | 32 | 23,000 | 1,300 | 0.51 | 12,000 | 99 | 3.3 | <0.8 | <0.7 | 0.81 | 98 | 1,100 | 0.10 | 0.044 | 190 | 4.6 | 78 |
| *25th PCTL* | 0.11 | 68,000 | 5.9 | *ND* | 83 | 0.26 | <0.09 | 78,000 | 0.14 | 41 | 150 | 98 | 67,000 | *ND* | 4,500 | 37 | 24,000 | 1,400 | 0.60 | 12,000 | 110 | 3.9 | <0.8 | <0.7 | <0.9 | 110 | 1,900 | 0.13 | 0.051 | 210 | 6.1 | 80 |
| *Median* | 0.17 | 71,000 | 12 | *ND* | 92 | 0.31 | <0.09 | 83,000 | 0.19 | 42 | 170 | 120 | 69,000 | *ND* | 5,400 | 49 | 27,000 | 1,500 | 0.60 | 15,000 | 110 | 4.4 | <0.8 | <0.7 | 1.2 | 130 | 3,200 | 0.19 | 0.058 | 220 | 7.1 | 85 |
| *75th PCTL* | 0.20 | 73,000 | 27 | *ND* | 140 | 0.33 | <0.09 | 86,000 | 0.23 | 46 | 180 | 130 | 74,000 | *ND* | 7,700 | 57 | 29,000 | 1,600 | 0.83 | 17,000 | 120 | 5.4 | <0.8 | <0.7 | 1.4 | 130 | 4,200 | 0.27 | 0.072 | 240 | 9.2 | 96 |
| *95th PCTL* | 0.40 | 78,000 | ***180*** | *ND* | 220 | 0.58 | 0.18 | 94,000 | 0.46 | 48 | 200 | 150 | 82,000 | *ND* | 16,000 | 68 | 34,000 | 1,700 | 1.1 | 19,000 | 130 | ***190*** | 0.85 | 0.79 | 2.7 | 140 | 5,100 | 0.47 | 0.28 | 240 | 13 | 110 |

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**

**Summary Statistics for Tiriganiaq Ore Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | - | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 0.16 | 13,000 | ***980*** | 4.6 | 34 | <0.1 | 0.15 | 17,000 | 0.064 | 7.1 | 7.2 | 7.2 | 70,000 | <0.01 | 540 | 4.8 | 5,700 | 290 | 0.63 | 140 | 10 | 3.6 | 0.19 | ***<1*** | <0.3 | 87 | <100 | 0.032 | 0.22 | 14 | 3.3 | 34 |
| *25th PCTL* | 0.24 | 16,000 | ***2,000*** | 5.5 | 57 | <0.1 | 0.18 | 18,000 | 0.07 | 8.9 | 12 | 16 | 78,000 | <0.01 | 1,200 | 9.0 | 6,500 | 350 | 0.79 | 200 | 11 | 6.2 | 0.36 | ***<1*** | <0.3 | 94 | <100 | 0.05 | 0.39 | 16 | 3.3 | 39 |
| *Median* | 0.31 | 17,000 | ***6,800*** | 6.4 | 57 | <0.1 | 0.33 | 23,000 | 0.09 | 13 | 16 | 82 | 110,000 | <0.01 | 1,500 | 16 | 6,800 | 370 | 1.5 | 400 | 13 | 6.4 | 0.56 | ***<1*** | <0.3 | 130 | 200 | 0.05 | 0.42 | 17 | 3.3 | 41 |
| *75th PCTL* | 0.36 | 24,000 | ***8,200*** | 7.0 | 69 | <0.1 | 0.39 | 26,000 | 0.09 | 16 | 16 | 140 | 210,000 | <0.01 | 1,600 | 17 | 8,800 | 370 | 1.6 | 400 | 20 | 8.5 | 0.81 | ***<1*** | <0.3 | 190 | 200 | 0.06 | 0.46 | 21 | 4.0 | 50 |
| *95th PCTL* | ***1.1*** | 27,000 | ***11,000*** | 9.7 | 110 | 0.18 | 0.61 | 26,000 | 0.19 | 17 | 18 | 280 | 220,000 | <0.01 | 1,800 | 20 | 9,800 | 530 | 1.9 | 560 | 21 | 33 | 1 | ***1.8*** | <0.3 | 190 | 280 | 0.076 | 0.73 | 23 | 4.2 | 65 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | *ND* | 59,000 | ***200*** | 0.19 | 400 | 1.1 | <0.09 | 21,000 | 0.16 | 7.0 | 89 | 9.8 | 69,000 | <0.1 | 15,000 | 18 | 7,700 | 310 | 0.94 | 9,800 | 17 | 11 | <0.8 | <0.7 | 0.70 | 210 | 2,000 | 0.22 | 0.98 | 38 | 4.9 | 55 |
| *25th PCTL* | *ND* | 61,000 | ***220*** | 0.42 | 410 | 1.1 | <0.09 | 22,000 | 0.17 | 7.3 | 100 | 14 | 79,000 | <0.1 | 16,000 | 19 | 7,800 | 320 | 1.0 | 13,000 | 17 | 14 | <0.8 | <0.7 | 0.85 | 230 | 2,100 | 0.23 | 0.99 | 40 | 5.1 | 57 |
| *Median* | *ND* | 63,000 | ***260*** | 0.79 | 430 | 1.1 | <0.09 | 24,000 | 0.17 | 7.6 | 120 | 21 | 94,000 | <0.1 | 17,000 | 20 | 7,900 | 330 | 1.1 | 17,000 | 17 | 18 | <0.8 | <0.7 | 1.1 | 270 | 2,300 | 0.24 | 1.0 | 42 | 5.4 | 61 |
| *75th PCTL* | *ND* | 70,000 | ***3,600*** | 1.3 | 500 | 1.1 | 0.32 | 36,000 | 0.18 | 21 | 160 | 55 | 97,000 | <0.1 | 20,000 | 27 | 12,000 | 500 | 1.4 | 18,000 | 50 | 23 | 2.5 | <0.7 | 1.3 | 280 | 2,500 | 0.48 | 1.1 | 91 | 6.6 | 62 |
| *95th PCTL* | *ND* | 75,000 | ***6,300*** | 1.7 | 560 | 1.1 | 0.50 | 45,000 | 0.18 | 31 | 180 | 81 | 99,000 | <0.1 | 22,000 | 32 | 15,000 | 630 | 1.6 | 19,000 | 76 | 26 | 3.9 | <0.7 | 1.5 | 290 | 2,600 | 0.67 | 1.1 | 130 | 7.6 | 62 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.17 | 23,000 | ***660*** | 3.1 | 54 | <0.1 | 0.068 | 10,000 | 0.096 | 11 | 21 | 20 | 66,000 | <0.01 | 1,800 | 24 | 8,600 | 320 | 0.72 | 400 | 24 | 10 | 0.16 | ***<1*** | <0.3 | 65 | 340 | 0.06 | 0.51 | 27 | 2.6 | 65 |
| *25th PCTL* | 0.29 | 25,000 | ***1,600*** | 5.3 | 68 | <0.1 | 0.11 | 12,000 | 0.12 | 12 | 24 | 22 | 67,000 | <0.01 | 2,800 | 26 | 9,800 | 330 | 0.79 | 400 | 24 | 12 | 0.31 | ***<1*** | <0.3 | 70 | 400 | 0.12 | 0.52 | 32 | 2.7 | 71 |
| *Median* | 0.47 | 29,000 | ***3,200*** | 9.0 | 91 | <0.1 | 0.18 | 14,000 | 0.16 | 13 | 27 | 25 | 68,000 | <0.01 | 4,400 | 29 | 12,000 | 340 | 0.90 | 400 | 24 | 14 | 0.54 | ***<1*** | <0.3 | 78 | 500 | 0.22 | 0.52 | 41 | 2.9 | 81 |
| *75th PCTL* | 0.49 | 31,000 | ***4,000*** | 12 | 110 | 0.15 | 0.26 | 16,000 | 0.22 | 14 | 53 | 59 | 86,000 | 0.015 | 6,300 | 38 | 13,000 | 350 | 2.6 | 400 | 43 | 29 | 0.54 | ***<1*** | <0.3 | 96 | 850 | 0.34 | 0.63 | 41 | 3.7 | 86 |
| *95th PCTL* | 0.50 | 33,000 | ***4,600*** | 14 | 130 | 0.19 | 0.32 | 17,000 | 0.26 | 14 | 73 | 86 | 100,000 | 0.019 | 7,800 | 44 | 14,000 | 350 | 3.9 | 400 | 57 | 40 | 0.54 | ***<1*** | <0.3 | 110 | 1,100 | 0.44 | 0.71 | 41 | 4.3 | 90 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | *ND* | 59,000 | ***1,900*** | 0.52 | 230 | 0.69 | 0.11 | 73,000 | 0.52 | 37 | 170 | 77 | 60,000 | <0.1 | 16,000 | 17 | 19,000 | 1,300 | 0.78 | 7,300 | 88 | 17 | <0.8 | <0.7 | <0.5 | 160 | 2,200 | 0.65 | 0.24 | 150 | 5.4 | 150 |
| *25th PCTL* | *ND* | 61,000 | ***2,100*** | 0.81 | 250 | 0.79 | 0.14 | 76,000 | 0.78 | 38 | 180 | 83 | 61,000 | <0.1 | 17,000 | 17 | 20,000 | 1,400 | 1.1 | 7,700 | 89 | 17 | <0.8 | <0.7 | <0.5 | 160 | 2,600 | 0.68 | 0.29 | 160 | 6.1 | 210 |
| *Median* | *ND* | 63,000 | ***2,400*** | 1.3 | 270 | 0.95 | 0.19 | 79,000 | ***1.2*** | 39 | 180 | 93 | 62,000 | <0.1 | 18,000 | 17 | 20,000 | 1,500 | 1.5 | 8,200 | 90 | 17 | <0.8 | <0.7 | <0.5 | 160 | 3,100 | 0.71 | 0.36 | 160 | 7.2 | 310 |
| *75th PCTL* | *ND* | 64,000 | ***4,100*** | 57 | 310 | 0.96 | 0.23 | 81,000 | ***1.5*** | 39 | 180 | 100 | 63,000 | <0.1 | 20,000 | 24 | 21,000 | 1,600 | 5.2 | 12,000 | 91 | 74 | 1.4 | <0.7 | <0.5 | 190 | 3,600 | 0.77 | 0.44 | 170 | 8.4 | 480 |
| *95th PCTL* | *ND* | 64,000 | ***5,400*** | 100 | 330 | 0.96 | 0.26 | 83,000 | ***1.7*** | 39 | 180 | 110 | 63,000 | <0.1 | 22,000 | 29 | 21,000 | 1,600 | 8.1 | 14,000 | 92 | 120 | 1.8 | <0.7 | <0.5 | 210 | 3,900 | 0.82 | 0.50 | 170 | 9.4 | 610 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| *10th PCTL* | 0.068 | 9,500 | ***130*** | 2.1 | 23 | 0.19 | 0.075 | 27,000 | 0.068 | 3.5 | 6.8 | 14 | 95,000 | <0.01 | 650 | 3.0 | 4,700 | 270 | 0.63 | 100 | 6.0 | 3.3 | 0.16 | ***<1*** | <0.3 | 48 | <100 | 0.029 | 0.16 | 17 | 2.6 | 26 |
| *25th PCTL* | 0.14 | 12,000 | ***240*** | 3.5 | 57 | 0.23 | 0.11 | 28,000 | 0.1 | 3.8 | 10 | 43 | 150,000 | <0.01 | 1,000 | 4.0 | 5,600 | 300 | 1.1 | 100 | 6.5 | 6.5 | 0.24 | ***<1*** | <0.3 | 120 | 230 | 0.053 | 0.26 | 19 | 3.2 | 37 |
| *Median* | 0.34 | 17,000 | ***660*** | 4.7 | 110 | 0.30 | 0.23 | 33,000 | 0.16 | 6.6 | 11 | 91 | 190,000 | <0.01 | 1,700 | 7.0 | 6,900 | 460 | 2.1 | 150 | 11 | 19 | 0.31 | ***<1*** | <0.3 | 170 | 300 | 0.11 | 0.39 | 22 | 4.0 | 65 |
| *75th PCTL* | ***1.4*** | 22,000 | ***16,000*** | 8.1 | 140 | 0.38 | 0.54 | 35,000 | 0.25 | 7.8 | 14 | 96 | 220,000 | 0.020 | 2,300 | 8.8 | 9,800 | 730 | 5.7 | 200 | 20 | 90 | 1.3 | ***<1*** | <0.3 | 240 | 400 | 0.14 | 0.79 | 24 | 4.4 | 83 |
| *95th PCTL* | ***2.2*** | 25,000 | ***40,000*** | 30 | 170 | 0.40 | ***1.8*** | 54,000 | ***1.7*** | 33 | 46 | ***300*** | 240,000 | 0.051 | 5,300 | 29 | 26,000 | 1,200 | ***23*** | 460 | 80 | ***380*** | ***8.7*** | ***2.6*** | 1.2 | 460 | 560 | 0.33 | 1.5 | 68 | 6.0 | 540 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 0.13 | 41,000 | ***11,000*** | 9 | 160 | 0.4 | 0.12 | 25,000 | 0.09 | 6.6 | 20 | 18 | 140,000 | <0.01 | 6,500 | 36 | 10,000 | 300 | 0.90 | 100 | 15 | 7.8 | 2.1 | ***<1*** | 0.40 | 120 | 1,000 | 0.23 | 0.42 | 36 | 4.5 | 60 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.29 | 12,000 | ***6,800*** | 3.3 | 43 | 0.12 | 0.32 | 13,000 | 0.11 | 20 | 41 | 33 | 39,000 | <0.01 | 1,700 | 15 | 12,000 | 350 | 1.6 | 420 | 63 | 16 | 1.3 | ***<1*** | <0.3 | 57 | <100 | 0.062 | 0.47 | 25 | 2.5 | 59 |
| *25th PCTL* | 0.42 | 13,000 | ***8,100*** | 4.5 | 47 | 0.15 | 0.39 | 14,000 | 0.12 | 20 | 46 | 37 | 43,000 | <0.01 | 1,800 | 17 | 14,000 | 360 | 2.1 | 450 | 66 | 29 | 2 | ***<1*** | <0.3 | 68 | <100 | 0.065 | 0.48 | 31 | 2.6 | 66 |
| *Median* | ***0.63*** | 16,000 | ***10,000*** | 6.6 | 53 | 0.20 | 0.50 | 17,000 | 0.14 | 21 | 54 | 43 | 51,000 | <0.01 | 1,800 | 20 | 16,000 | 380 | 3.1 | 500 | 69 | 50 | 3 | ***<1*** | <0.3 | 86 | <100 | 0.07 | 0.48 | 40 | 2.7 | 77 |
| *75th PCTL* | ***0.84*** | 18,000 | ***26,000*** | 8.1 | 57 | 0.20 | 0.66 | 22,000 | 0.25 | 23 | 58 | 46 | 63,000 | <0.01 | 2,300 | 21 | 16,000 | 430 | 3.3 | 500 | 73 | 58 | ***7.2*** | ***1.5*** | <0.3 | 110 | 150 | 0.12 | 0.60 | 42 | 3.3 | 84 |
| *95th PCTL* | ***1.0*** | 20,000 | ***38,000*** | 9.4 | 59 | 0.20 | 0.79 | 27,000 | 0.34 | 23 | 61 | 49 | 72,000 | <0.01 | 2,700 | 22 | 16,000 | 470 | 3.4 | 500 | 75 | 65 | ***11*** | ***1.9*** | <0.3 | 120 | 190 | 0.15 | 0.70 | 43 | 3.7 | 90 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 0.24 | 6,500 | ***300*** | 2.2 | 58 | 0.20 | 0.22 | 28,000 | 0.088 | 6.5 | 15 | 9.7 | 55,000 | <0.01 | 1,600 | 6.8 | 6,600 | 330 | 0.74 | 240 | 14 | 5.2 | 0.13 | ***<1*** | <0.3 | 170 | 140 | 0.062 | 0.36 | 17 | 3.5 | 35 |
| *25th PCTL* | 0.50 | 9,400 | ***710*** | 2.9 | 66 | 0.20 | 0.33 | 30,000 | 0.1 | 6.6 | 15 | 18 | 58,000 | <0.01 | 1,800 | 11 | 7,300 | 360 | 0.76 | 300 | 16 | 6.5 | 0.17 | ***<1*** | <0.3 | 190 | 200 | 0.08 | 0.46 | 24 | 3.8 | 43 |
| *Median* | ***0.80*** | 18,000 | ***740*** | 3.0 | 66 | 0.20 | 0.91 | 32,000 | 0.22 | 7.4 | 17 | 32 | 100,000 | <0.01 | 2,300 | 15 | 9,400 | 400 | 3.0 | 300 | 17 | 110 | 0.18 | ***<1*** | <0.3 | 250 | 500 | 0.08 | 0.64 | 24 | 3.9 | 54 |
| *75th PCTL* | ***0.98*** | 23,000 | ***9,800*** | 5.5 | 99 | 0.20 | 1.6 | 37,000 | 0.31 | 13 | 22 | 47 | 150,000 | 0.020 | 2,500 | 24 | 10,000 | 670 | 6.3 | 400 | 31 | ***510*** | 1.3 | ***<1*** | <0.3 | 290 | 500 | 0.16 | 0.65 | 38 | 4.5 | 62 |
| *95th PCTL* | ***1.4*** | 31,000 | ***33,000*** | 8.7 | 180 | 0.36 | ***1.8*** | 41,000 | 0.33 | 23 | 23 | 52 | 160,000 | 0.11 | 3,600 | 25 | 14,000 | 770 | ***24*** | 560 | 74 | ***580*** | ***6.6*** | ***3.4*** | <0.3 | 430 | 500 | 0.20 | 2.4 | 64 | 6.5 | 76 |
| **Upper Oxide Formation /Iron Formation (VO/IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | ***0.60*** | 32,000 | ***290*** | 5.3 | 87 | 0.2 | 0.35 | 12,000 | 0.06 | 8.6 | 19 | 110 | 140,000 | <0.01 | 3,300 | 25 | 8,800 | 360 | 0.85 | 200 | 19 | 6.5 | 0.12 | ***<1*** | <0.3 | 77 | 500 | 0.24 | 0.39 | 29 | 3.5 | 74 |

**Notes:**

Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).

Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC

ND - no data

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**

**Summary Statistics for Wesmeg Waste Rock Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | - | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | *ND* | 75,000 | 24 | 0.040 | 30 | 0.25 | <0.09 | 75,000 | 0.12 | 46 | 160 | 67 | 85,000 | <0.1 | 1400 | 20 | 30,000 | 1,200 | 0.30 | 20,000 | 110 | 2.9 | 3.9 | <0.7 | 0.90 | 140 | 6000 | 0.040 | 0.23 | 200 | 16 | 99 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 0.094 | 2,100 | ***160*** | 0.020 | 19 | <0.1 | 0.12 | 9,100 | 0.67 | 8.7 | 3.3 | 140 | 130,000 | <0.01 | <100 | 1.3 | 6,200 | 2,100 | 0.73 | 100 | 11 | 2.8 | 0.23 | ***<1*** | 0.52 | 8.7 | <100 | 0.030 | 0.14 | 6.9 | 1.5 | 300 |
| *25th PCTL* | 0.13 | 4,200 | ***190*** | 0.020 | 20 | <0.1 | 0.16 | 9,700 | ***1.2*** | 9.0 | 3.8 | 140 | 130,000 | <0.01 | <100 | 1.8 | 7,100 | 2,200 | 0.91 | 100 | 12 | 3.4 | 0.29 | ***<1*** | 0.70 | 9.4 | <100 | 0.030 | 0.15 | 8.3 | 1.9 | 550 |
| *Median* | 0.17 | 6,000 | ***390*** | 0.080 | 23 | <0.1 | 0.19 | 12,000 | ***2.0*** | 9.7 | 4.5 | 150 | 150,000 | <0.01 | 150 | 2.0 | 9,900 | 2,500 | 1.5 | 100 | 13 | 4.2 | 0.34 | ***1.5*** | 0.95 | 11 | <100 | 0.035 | 0.16 | 9.5 | 2.2 | ***760*** |
| *75th PCTL* | 0.19 | 7,000 | ***650*** | 0.19 | 28 | <0.1 | 0.19 | 14,000 | ***2.8*** | 10 | 7.3 | 160 | 160,000 | <0.01 | 230 | 2.3 | 12,000 | 3,000 | 2.0 | 100 | 14 | 5.9 | 0.37 | ***2*** | 1.3 | 13 | <100 | 0.043 | 0.22 | 10 | 2.4 | ***970*** |
| *95th PCTL* | 0.20 | 8,000 | ***820*** | 0.30 | 31 | <0.1 | 0.2 | 14,000 | ***3.7*** | 11 | 13 | 160 | 170,000 | <0.01 | 290 | 2.9 | 13,000 | 3,700 | 2.0 | 100 | 15 | 8.9 | 0.43 | ***2*** | 1.8 | 16 | <100 | 0.049 | 0.32 | 10 | 2.6 | ***1300*** |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| *10th PCTL* | 0.093 | 33,000 | 6 | 0.040 | 11 | 0.24 | <0.09 | 55,000 | 0.11 | 36 | 84 | 54 | 69,000 | <0.1 | 730 | 24 | 25,000 | 940 | 0.2 | 8,500 | 57 | 1.7 | <0.8 | <0.7 | <0.5 | 77 | 1300 | 0.02 | 0.075 | 140 | 3.8 | 84 |
| *25th PCTL* | 0.13 | 52,000 | 15 | 0.040 | 28 | 0.29 | <0.09 | 61,000 | 0.16 | 37 | 140 | 79 | 79,000 | <0.1 | 1300 | 29 | 28,000 | 1,000 | 0.28 | 11,000 | 65 | 2.2 | <0.8 | <0.7 | <0.5 | 91 | 3900 | 0.04 | 0.14 | 170 | 7.6 | 92 |
| *Median* | 0.19 | 62,000 | 25 | 0.060 | 82 | 0.41 | <0.09 | 67,000 | 0.20 | 41 | 190 | 98 | 84,000 | <0.1 | 3900 | 33 | 32,000 | 1,200 | 0.3 | 14,000 | 96 | 3.3 | <0.8 | <0.7 | 0.60 | 100 | 5400 | 0.14 | 0.17 | 190 | 10 | 110 |
| *75th PCTL* | 0.24 | 67,000 | ***66*** | 0.070 | 160 | 0.49 | <0.09 | 79,000 | 0.25 | 45 | 250 | 130 | 92,000 | <0.1 | 6900 | 39 | 37,000 | 1,300 | 0.4 | 17,000 | 110 | 4.6 | 2 | <0.7 | 0.80 | 130 | 7500 | 0.23 | 0.29 | 220 | 15 | 110 |
| *95th PCTL* | 0.29 | 77,000 | ***210*** | 0.10 | 650 | 0.88 | <0.09 | 85,000 | 0.43 | 61 | 520 | 180 | 100,000 | <0.1 | 13000 | 43 | 53,000 | 1,600 | 0.94 | 22,000 | 300 | 9.0 | ***34*** | 0.79 | 1.2 | 330 | 11000 | 0.37 | 1.1 | 280 | 23 | 180 |
| **Ultramafics (UV)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | *ND* | 29,000 | 22 | 0.043 | 7.7 | 0.30 | <0.09 | 41,000 | 0.13 | 40 | 280 | 46 | 73,000 | <0.1 | 160 | 17 | 39,000 | 1,000 | 0.13 | 2,500 | 90 | 2.3 | <0.8 | <0.7 | <0.5 | 79 | 1700 | 0.02 | 0.12 | 110 | 3.5 | 80 |
| *25th PCTL* | *ND* | 34,000 | 32 | 0.048 | 8.5 | 0.31 | <0.09 | 55,000 | 0.13 | 45 | 300 | 47 | 83,000 | <0.1 | 210 | 20 | 40,000 | 1,200 | 0.18 | 6,100 | 110 | 2.9 | <0.8 | <0.7 | <0.5 | 84 | 2500 | 0.02 | 0.13 | 140 | 4.9 | 93 |
| *Median* | *ND* | 41,000 | ***100*** | 0.055 | 39 | 0.40 | <0.09 | 69,000 | 0.13 | 62 | 650 | 62 | 91,000 | <0.1 | 1200 | 24 | 57,000 | 1,300 | 0.20 | 10,000 | 300 | 3.7 | 1.0 | <0.7 | 0.55 | 100 | 3900 | 0.045 | 0.33 | 160 | 7.3 | 110 |
| *75th PCTL* | *ND* | 51,000 | ***180*** | 0.063 | 76 | 0.56 | <0.09 | 77,000 | 0.14 | 82 | ***1200*** | 100 | 98,000 | <0.1 | 3200 | 30 | 88,000 | 1,400 | 0.25 | 13,000 | ***570*** | 5.0 | ***5.7*** | 0.73 | 0.68 | 130 | 5100 | 0.093 | 0.59 | 170 | 9.4 | 110 |
| *95th PCTL* | *ND* | 63,000 | ***200*** | 0.069 | 95 | 0.71 | <0.09 | 83,000 | 0.17 | 96 | ***1800*** | 160 | 110,000 | <0.1 | 5700 | 40 | 120,000 | 1,600 | 0.37 | 16,000 | ***800*** | 7.0 | ***16*** | 0.79 | 0.86 | 150 | 5900 | 0.15 | 0.77 | 200 | 11 | 120 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 0.14 | 6,100 | ***1,400*** | 0.056 | 14 | 0.13 | 0.13 | 19,000 | 0.20 | 12 | 11 | 130 | 97,000 | <0.01 | 220 | 4.0 | 12,000 | 2,400 | 1.6 | 100 | 11 | 5.0 | 0.27 | ***1.3*** | 0.39 | 26 | <100 | 0.023 | 0.12 | 12 | 1.9 | 130 |
| *25th PCTL* | 0.18 | 7,200 | ***1,900*** | 0.11 | 19 | 0.18 | 0.18 | 25,000 | 0.34 | 13 | 12 | 170 | 110,000 | <0.01 | 400 | 4.0 | 12,000 | 2,500 | 1.9 | 100 | 11 | 8.8 | 0.36 | ***1.8*** | 0.53 | 34 | <100 | 0.028 | 0.22 | 13 | 2.0 | 200 |
| *Median* | 0.22 | 8,500 | ***3,800*** | 0.48 | 26 | 0.20 | 0.21 | 34,000 | ***1.3*** | 14 | 35 | 210 | 120,000 | <0.01 | 600 | 4.5 | 13,000 | 2,500 | 2.5 | 100 | 18 | 14 | 0.62 | ***2*** | 0.65 | 62 | 150 | 0.07 | 0.31 | 28 | 2.2 | 430 |
| *75th PCTL* | 0.31 | 12,000 | ***6,300*** | 0.82 | 31 | 0.20 | 0.31 | 42,000 | ***2.2*** | 26 | 190 | 240 | 130,000 | <0.01 | 730 | 5.0 | 21,000 | 2,800 | 11 | 100 | 96 | 18 | 1.1 | ***2.3*** | 0.85 | 94 | 200 | 0.11 | 0.37 | 50 | 2.5 | 620 |
| *95th PCTL* | 0.51 | 19,000 | ***8,600*** | 0.83 | 33 | 0.20 | 0.54 | 47,000 | ***2.2*** | 55 | 490 | 250 | 130,000 | <0.01 | 790 | 5.0 | 38,000 | 3,400 | ***30*** | 100 | 270 | 22 | 1.9 | ***2.9*** | 1.2 | 110 | 200 | 0.12 | 0.43 | 68 | 2.7 | 620 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| *10th PCTL* | 0.060 | 16,000 | ***180*** | 0.023 | 34 | 0.13 | <0.02 | 45,000 | 0.11 | 25 | 32 | 75 | 61,000 | <0.01 | 870 | 15 | 17,000 | 1,000 | 0.21 | 130 | 47 | 2.4 | 0.23 | ***<1*** | <0.3 | 49 | 130 | 0.046 | 0.05 | 37 | 3.1 | 79 |
| *25th PCTL* | 0.060 | 18,000 | ***250*** | 0.028 | 34 | 0.18 | <0.02 | 54,000 | 0.15 | 38 | 54 | 80 | 63,000 | <0.01 | 1300 | 25 | 25,000 | 1,100 | 0.24 | 180 | 85 | 4.4 | 0.27 | ***<1*** | <0.3 | 58 | 180 | 0.055 | 0.05 | 48 | 3.8 | 95 |
| *Median* | 0.070 | 23,000 | ***400*** | 0.23 | 36 | 0.20 | 0.040 | 60,000 | 0.19 | 47 | 87 | 87 | 67,000 | <0.01 | 1700 | 39 | 30,000 | 1,200 | 0.37 | 250 | 110 | 6.7 | 0.33 | ***<1*** | <0.3 | 63 | 300 | 0.06 | 0.06 | 64 | 4.2 | 120 |
| *75th PCTL* | ***0.77*** | 28,000 | ***950*** | 0.52 | 40 | 0.23 | 1.1 | 62,000 | ***1.1*** | 49 | 110 | 120 | 80,000 | <0.01 | 1900 | 50 | 32,000 | 1,200 | 0.91 | 330 | 110 | ***450*** | 0.44 | ***1.8*** | <0.3 | 66 | 450 | 0.063 | 0.13 | 82 | 4.5 | 150 |
| *95th PCTL* | ***2.4*** | 31,000 | ***2,000*** | 0.74 | 43 | 0.29 | ***3.4*** | 65,000 | ***3.1*** | 51 | 130 | 180 | 100,000 | <0.01 | 2000 | 54 | 35,000 | 1,300 | 1.9 | 390 | 110 | ***1500*** | 0.62 | ***3.6*** | <0.3 | 71 | 570 | 0.069 | 0.26 | 100 | 4.8 | 200 |

**Summary Statistics for Wesmeg Ore Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | - | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | ***0.67*** | 25,000 | ***1,000*** | 12 | 20 | <0.1 | 0.10 | 22,000 | 0.14 | 21 | 20 | 190 | 140,000 | <0.01 | 200 | 14 | 21,000 | 760 | 1.2 | 200 | 26 | 11 | 0.24 | ***2*** | 0.90 | 33 | 300 | <0.02 | 0.33 | 89 | 3.1 | 110 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.10 | 6,900 | ***130*** | 5.2 | 16 | <0.1 | 0.054 | 34,000 | 0.18 | 16 | 22 | 75 | 66,000 | <0.01 | 280 | 6.6 | 13,000 | 1,200 | 0.76 | 140 | 26 | 6.4 | 0.11 | ***<1*** | <0.3 | 38 | 180 | 0.022 | 0.08 | 33 | 2.0 | 92 |
| *25th PCTL* | 0.15 | 13,000 | ***250*** | 5.4 | 20 | <0.1 | 0.060 | 45,000 | 0.18 | 23 | 39 | 85 | 69,000 | <0.01 | 550 | 15 | 17,000 | 1,300 | 0.79 | 200 | 46 | 7.7 | 0.17 | ***<1*** | <0.3 | 43 | 300 | 0.025 | 0.11 | 63 | 2.7 | 94 |
| *Median* | 0.23 | 22,000 | ***440*** | 5.8 | 27 | <0.1 | 0.070 | 62,000 | 0.18 | 36 | 68 | 100 | 74,000 | <0.01 | 1000 | 29 | 23,000 | 1,500 | 0.83 | 300 | 79 | 9.7 | 0.27 | ***<1*** | <0.3 | 50 | 500 | 0.030 | 0.16 | 110 | 3.8 | 97 |
| *75th PCTL* | ***0.74*** | 28,000 | ***3,000*** | 6.1 | 48 | <0.1 | 1.2 | 67,000 | 0.9 | 37 | 99 | 120 | 91,000 | <0.01 | 3000 | 38 | 29,000 | 2,200 | ***25*** | 350 | 92 | 19 | 0.73 | ***1.5*** | <0.5 | 69 | 850 | 0.12 | 0.31 | 140 | 6.9 | 240 |
| *95th PCTL* | ***1.1*** | 32,000 | ***5,000*** | 6.4 | 64 | <0.1 | ***2.1*** | 71,000 | ***1.5*** | 37 | 120 | 130 | 110,000 | <0.01 | 4500 | 44 | 34,000 | 2,800 | ***44*** | 390 | 100 | 26 | 1.1 | ***1.9*** | 0.66 | 85 | 1100 | 0.18 | 0.42 | 160 | 9.5 | 350 |
| **Ultramafic Volcanics (UV)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | *ND* | 54,000 | 40 | 0.13 | 120 | 0.51 | 0.090 | 75,000 | 0.16 | 43 | 290 | 97 | 70,000 | 0.1 | 8300 | 26 | 39,000 | 1,200 | 1.1 | 16,000 | 96 | 4.2 | 2.2 | <0.7 | <0.5 | 120 | 2600 | 0.21 | 0.19 | 160 | 4.1 | 79 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| *10th PCTL* | 0.47 | 3,700 | ***2,100*** | 3 | 16 | <0.1 | 0.27 | 14,000 | 0.7 | 18 | 12 | 200 | 110,000 | <0.01 | <100 | 1 | 8,500 | 1,800 | 1.9 | <100 | 13 | 4.4 | 0.33 | ***2*** | <0.3 | 14 | <100 | <0.02 | 0.16 | 9.6 | 1.4 | 290 |
| *25th PCTL* | 0.53 | 4,400 | ***6,600*** | 3.3 | 17 | <0.1 | 0.32 | 17,000 | ***1.1*** | 23 | 14 | 240 | 120,000 | <0.01 | <100 | 1.5 | 10,000 | 2,600 | 2.0 | <100 | 17 | 4.9 | 1.3 | ***2.5*** | <0.5 | 17 | <100 | <0.02 | 0.19 | 11 | 1.7 | 360 |
| *Median* | ***0.90*** | 6,300 | ***15,000*** | 5.5 | 23 | <0.1 | 0.41 | 18,000 | ***1.6*** | 35 | 15 | ***320*** | 130,000 | <0.01 | 300 | 2.0 | 12,000 | 2,800 | 2.1 | <100 | 23 | 8.2 | 3.2 | ***3*** | 0.9 | 37 | <100 | 0.04 | 0.27 | 15 | 2.1 | 460 |
| *75th PCTL* | ***2.2*** | 8,900 | ***18,000*** | 6.4 | 41 | <0.1 | 0.55 | 24,000 | ***2.7*** | 39 | 22 | ***430*** | 140,000 | <0.01 | 450 | 4.0 | 12,000 | 3,500 | ***12*** | <100 | 28 | 43 | ***5.5*** | ***3.5*** | 1.2 | 49 | <100 | 0.085 | 0.45 | 23 | 2.5 | ***1000*** |
| *95th PCTL* | ***3.9*** | 13,000 | ***31,000*** | 15 | 46 | 0.17 | ***2.6*** | 37,000 | ***5.2*** | 69 | 37 | ***690*** | 230,000 | 0.017 | 1100 | 4.0 | 18,000 | 5,200 | ***19*** | <100 | 36 | ***410*** | ***8.5*** | ***5.4*** | 1.5 | 52 | 170 | 0.11 | 2.0 | 25 | 3.1 | ***1400*** |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.12 | 23,000 | ***71*** | 2.3 | 13 | <0.1 | <0.02 | 61,000 | 0.18 | 47 | 71 | 91 | 64,000 | <0.01 | 700 | 34 | 32,000 | 1,500 | 0.18 | 300 | 94 | 2.2 | 0.25 | ***<1*** | <0.3 | 59 | 500 | 0.030 | 0.050 | 110 | 2.6 | 82 |
| *Max* | 0.12 | 26,000 | ***74*** | 8.8 | 20 | <0.1 | 0.14 | 75,000 | 0.20 | 55 | 190 | 190 | 66,000 | 0.020 | 900 | 36 | 39,000 | 1,600 | 0.23 | 400 | 110 | 6.6 | 0.59 | ***<1*** | <0.3 | 91 | 700 | 0.030 | 0.050 | 140 | 5.8 | 100 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | ***2.9*** | 17,000 | ***34,000*** | 15 | 24 | 0.20 | 0.83 | 45,000 | ***1.1*** | 33 | 14 | ***630*** | 190,000 | 0.050 | 200 | 12 | 8,700 | 810 | 2.6 | <100 | 25 | 71 | ***7.6*** | ***4*** | 0.40 | 49 | <100 | <0.02 | 0.31 | 66 | 3.7 | 280 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
ND - no data

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**
**Summary Statistics for Wesmeg North Waste Rock Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | - | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Value* | 0.35 | 32,000 | ***220*** | 0.030 | 110 | 0.20 | 0.050 | 43,000 | 0.23 | 53 | 48 | 160 | 90,000 | 0.020 | 3,600 | 31 | 23,000 | 1,100 | 0.87 | 400 | 74 | 7.3 | 0.19 | ***<1*** | <0.3 | 96 | 1,100 | 0.19 | 0.58 | 110 | 9.1 | 130 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.16 | 3,100 | ***270*** | 0.48 | 25 | <0.1 | 0.04 | 23,000 | ***1.0*** | 6.1 | 16 | 84 | 100,000 | <0.01 | 300 | 1.0 | 8,800 | 2,200 | 4.3 | 100 | 8 | 2.9 | 0.13 | ***<1*** | 0.80 | 23 | <100 | 0.03 | 0.10 | 6.0 | 2.2 | 360 |
| *Max* | 0.20 | 12,000 | ***5,900*** | 1.5 | 39 | <0.1 | 0.12 | 36,000 | ***1.8*** | 17 | 82 | 190 | 150,000 | 0.030 | 1,300 | 8.0 | 24,000 | 2,600 | 5.3 | 100 | 45 | 6.6 | 1.0 | ***2*** | 1.0 | 54 | 200 | 0.13 | 0.11 | 40 | 2.3 | ***1,000*** |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| *10th PCTL* | 0.073 | 17,000 | 25 | 0.030 | 13 | <0.1 | <0.02 | 65,000 | 0.093 | 39 | 66 | 93 | 64,000 | <0.01 | 500 | 22 | 32,000 | 1,200 | 0.15 | 300 | 81 | 1.8 | 0.05 | ***<1*** | <0.3 | 42 | <100 | <0.02 | <0.05 | 62 | 2.4 | 63 |
| *25th PCTL* | 0.093 | 19,000 | 45 | 0.030 | 13 | <0.1 | <0.02 | 68,000 | 0.10 | 41 | 98 | 110 | 68,000 | <0.01 | 580 | 32 | 35,000 | 1,300 | 0.17 | 300 | 91 | 2.1 | 0.055 | ***<1*** | <0.3 | 51 | <100 | <0.02 | <0.05 | 93 | 2.5 | 65 |
| *Median* | 0.14 | 24,000 | ***53*** | 0.070 | 17 | <0.1 | <0.02 | 72,000 | 0.13 | 45 | 150 | 120 | 70,000 | <0.01 | 900 | 37 | 38,000 | 1,500 | 0.25 | 350 | 98 | 3.2 | 0.16 | ***<1*** | <0.3 | 69 | 200 | 0.03 | 0.055 | 110 | 2.9 | 71 |
| 75th PCTL | 0.17 | 26,000 | ***170*** | 0.26 | 24 | <0.1 | <0.02 | 77,000 | 0.15 | 49 | 200 | 150 | 76,000 | <0.01 | 1,100 | 45 | 39,000 | 1,800 | 0.32 | 500 | 120 | 4.3 | 0.19 | ***<1*** | <0.3 | 94 | 380 | 0.038 | 0.08 | 120 | 3.6 | 85 |
| 95th PCTL | 0.18 | 29,000 | ***1,000*** | 0.57 | 34 | 0.20 | 0.047 | 81,000 | 0.20 | 56 | 230 | 180 | 86,000 | <0.01 | 1,400 | 55 | 42,000 | 2,200 | 0.59 | 570 | 130 | 17 | 0.35 | ***<1*** | <0.3 | 120 | 640 | 0.077 | 0.13 | 120 | 4.0 | 93 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.084 | 38,000 | ***66*** | 0.036 | 20 | 0.22 | 0.03 | 46,000 | 0.11 | 55 | 61 | 64 | 82,000 | 0.014 | 220 | 30 | 24,000 | 1,000 | 0.46 | 160 | 80 | 4.7 | 0.066 | ***<1*** | 0.34 | 81 | 320 | <0.02 | 0.16 | 150 | 3.7 | 120 |
| *25th PCTL* | 0.09 | 38,000 | ***71*** | 0.045 | 20 | 0.25 | 0.03 | 47,000 | 0.11 | 55 | 61 | 83 | 86,000 | 0.020 | 250 | 35 | 24,000 | 1,100 | 0.58 | 250 | 81 | 4.8 | 0.075 | ***<1*** | 0.40 | 82 | 500 | <0.02 | 0.34 | 160 | 6.2 | 120 |
| *Median* | 0.10 | 39,000 | ***80*** | 0.060 | 20 | 0.30 | 0.03 | 49,000 | 0.11 | 56 | 61 | 120 | 92,000 | 0.030 | 300 | 44 | 24,000 | 1,100 | 0.77 | 400 | 81 | 4.9 | 0.09 | ***<1*** | 0.50 | 84 | 800 | <0.02 | 0.62 | 170 | 10 | 120 |
| 75th PCTL | 0.10 | 39,000 | ***220*** | 0.070 | 24 | 0.45 | 0.035 | 53,000 | 0.12 | 63 | 550 | 120 | 92,000 | 0.060 | 300 | 45 | 49,000 | 1,200 | 0.85 | 400 | 190 | 5.5 | 0.12 | ***<1*** | 0.55 | 99 | 800 | 0.025 | 0.70 | 170 | 12 | 150 |
| 95th PCTL | 0.10 | 40,000 | ***330*** | 0.078 | 27 | 0.57 | 0.039 | 57,000 | 0.13 | 69 | ***940*** | 120 | 92,000 | 0.084 | 300 | 46 | 69,000 | 1,300 | 0.91 | 400 | 280 | 6.0 | 0.14 | ***<1*** | 0.59 | 110 | 800 | 0.029 | 0.76 | 170 | 14 | 170 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.10 | 15,000 | ***4,100*** | 0.44 | 45 | <0.1 | 0.19 | 18,000 | 0.15 | 13 | 32 | 36 | 46,000 | <0.01 | 1,900 | 20 | 13,000 | 360 | 2.3 | 400 | 40 | 23 | 1.1 | ***<1*** | <0.3 | 130 | <100 | 0.05 | 0.55 | 22 | 3.1 | 53 |
| *Max* | 0.29 | 22,000 | ***4,900*** | 0.51 | 70 | 0.2 | 0.56 | 24,000 | 0.35 | 19 | 43 | 36 | 69,000 | <0.01 | 2,300 | 23 | 14,000 | 400 | 2.6 | 400 | 56 | 110 | 1.2 | ***<1*** | <0.3 | 230 | 200 | 0.17 | 0.83 | 33 | 4.3 | 74 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.050 | 15,000 | 3.0 | 0.030 | 14 | <0.1 | 0.16 | 29,000 | 0.090 | 4.8 | 15 | 110 | 140,000 | <0.01 | 100 | 4.0 | 5,300 | 580 | 0.84 | 100 | 10 | 2.5 | 0.1 | ***<1*** | <0.3 | 160 | <100 | <0.02 | 0.20 | 17 | 3.4 | 21 |
| *Max* | 0.15 | 37,000 | 7.0 | 0.60 | 18 | <0.1 | 0.32 | 53,000 | 0.16 | 9.9 | 44 | 140 | 150,000 | <0.01 | 100 | 14 | 12,000 | 680 | 1.0 | 100 | 26 | 6.6 | 0.12 | ***<1*** | <0.3 | 320 | 300 | <0.02 | 0.33 | 42 | 4.2 | 41 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| *10th PCTL* | 0.062 | 18,000 | 6.9 | 0.027 | 12 | <0.1 | <0.02 | 54,000 | 0.077 | 36 | 30 | 100 | 53,000 | <0.01 | 370 | 29 | 25,000 | 1,100 | 0.17 | 300 | 38 | 1.3 | <0.05 | ***<1*** | <0.3 | 41 | 170 | <0.02 | <0.05 | 94 | 2.1 | 58 |
| *25th PCTL* | 0.088 | 27,000 | 11 | 0.053 | 13 | <0.1 | <0.02 | 57,000 | 0.10 | 41 | 42 | 110 | 61,000 | <0.01 | 480 | 37 | 28,000 | 1,100 | 0.24 | 300 | 53 | 1.6 | 0.11 | ***<1*** | <0.3 | 43 | 280 | <0.02 | <0.05 | 120 | 3.0 | 63 |
| *Median* | 0.11 | 31,000 | 18 | 0.10 | 14 | 0.15 | 0.025 | 61,000 | 0.12 | 43 | 76 | 110 | 67,000 | <0.01 | 700 | 49 | 32,000 | 1,200 | 0.41 | 300 | 81 | 2.8 | 0.27 | ***<1*** | <0.3 | 61 | 600 | <0.02 | <0.05 | 150 | 4.5 | 67 |
| 75th PCTL | 0.22 | 38,000 | ***93*** | 0.22 | 22 | 0.23 | 0.06 | 65,000 | 0.15 | 44 | 140 | 130 | 73,000 | <0.01 | 1,500 | 60 | 36,000 | 1,400 | 0.56 | 330 | 99 | 3.9 | 0.37 | ***<1*** | <0.3 | 120 | 600 | 0.043 | 0.08 | 180 | 6.6 | 79 |
| 95th PCTL | 0.24 | 39,000 | ***1,600*** | 0.79 | 620 | 0.30 | 0.17 | 76,000 | 0.17 | 46 | 180 | 180 | 79,000 | 0.043 | 4,200 | 64 | 40,000 | 1,600 | 0.83 | 470 | 110 | 25 | 0.52 | ***<1*** | 0.56 | 590 | 1,200 | 0.22 | 0.27 | 200 | 13 | 88 |

**Summary Statistics for Wesmeg North Ore Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | - | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| *10th PCTL* | 0.11 | 18,000 | 27 | 1.9 | 12 | <0.1 | 0.032 | 65,000 | 0.11 | 42 | 60 | 110 | 68,000 | <0.01 | 600 | 22 | 33,000 | 1,300 | 0.26 | 260 | 65 | 1.4 | 0.098 | ***<1*** | <0.3 | 60 | 140 | 0.022 | 0.098 | 100 | 2.3 | 70 |
| *25th PCTL* | 0.15 | 19,000 | 30 | 1.9 | 14 | <0.1 | 0.05 | 68,000 | 0.12 | 43 | 100 | 110 | 70,000 | <0.01 | 600 | 24 | 35,000 | 1,300 | 0.33 | 350 | 77 | 2.1 | 0.17 | ***<1*** | <0.3 | 76 | 200 | 0.025 | 0.11 | 100 | 2.4 | 72 |
| *Median* | 0.21 | 21,000 | 33 | 1.9 | 16 | <0.1 | 0.08 | 73,000 | 0.13 | 46 | 170 | 120 | 72,000 | <0.01 | 600 | 26 | 38,000 | 1,500 | 0.45 | 500 | 97 | 3.2 | 0.29 | ***<1*** | <0.3 | 100 | 300 | 0.030 | 0.13 | 110 | 2.6 | 74 |
| 75th PCTL | 0.39 | 25,000 | ***850*** | 2.3 | 24 | 0.20 | 0.11 | 73,000 | 0.17 | 52 | 440 | 130 | 73,000 | <0.01 | 1,200 | 37 | 46,000 | 1,600 | 0.58 | 500 | 170 | 4.9 | 0.37 | ***<1*** | <0.3 | 150 | 450 | 0.095 | 0.25 | 120 | 2.6 | 84 |
| 95th PCTL | 0.53 | 28,000 | ***1,500*** | 2.5 | 30 | 0.28 | 0.13 | 74,000 | 0.20 | 56 | 660 | 140 | 73,000 | <0.01 | 1,700 | 46 | 53,000 | 1,700 | 0.68 | 500 | 230 | 6.2 | 0.43 | ***<1*** | <0.3 | 180 | 570 | 0.15 | 0.34 | 130 | 2.6 | 91 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| *Min* | 0.10 | 29,000 | ***1,900*** | 1.8 | 51 | 0.2 | 0.2 | 12,000 | 0.07 | 14 | 48 | 18 | 84,000 | <0.01 | 1,400 | 27 | 13,000 | 330 | 0.97 | 400 | 42 | 4 | 0.29 | ***<1*** | <0.3 | 160 | 200 | 0.04 | 0.45 | 37 | 3.4 | 62 |
| *Max* | 0.29 | 30,000 | ***2,300*** | 8.9 | 60 | 0.2 | 0.28 | 13,000 | 0.08 | 16 | 52 | 47 | 85,000 | <0.01 | 1,500 | 32 | 13,000 | 340 | 0.99 | 400 | 44 | 7.7 | 0.51 | ***<1*** | <0.3 | 180 | 200 | 0.05 | 0.58 | 43 | 4.2 | 66 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| *10th PCTL* | 0.12 | 11,000 | ***140*** | 2.5 | 16 | <0.1 | 0.074 | 67,000 | 0.13 | 42 | 33 | 97 | 58,000 | <0.01 | 840 | 16 | 26,000 | 1,400 | 0.29 | 300 | 57 | 1.9 | 0.12 | ***<1*** | <0.3 | 68 | 140 | 0.024 | 0.050 | 40 | 2.2 | 48 |
| *25th PCTL* | 0.17 | 15,000 | ***190*** | 3.3 | 17 | <0.1 | 0.08 | 71,000 | 0.13 | 45 | 51 | 100 | 62,000 | <0.01 | 900 | 21 | 27,000 | 1,400 | 0.41 | 300 | 85 | 1.9 | 0.14 | ***<1*** | <0.3 | 87 | 200 | 0.030 | 0.050 | 51 | 2.2 | 54 |
| *Median* | 0.18 | 17,000 | ***200*** | 7.4 | 21 | <0.1 | 0.16 | 72,000 | 0.13 | 46 | 58 | 110 | 66,000 | <0.01 | 1,100 | 22 | 30,000 | 1,600 | 0.85 | 300 | 97 | 3.7 | 0.28 | ***<1*** | <0.3 | 93 | 300 | 0.030 | 0.10 | 80 | 2.8 | 70 |
| 75th PCTL | 0.18 | 18,000 | ***550*** | 8.8 | 24 | <0.1 | 0.21 | 73,000 | 0.18 | 48 | 110 | 110 | 71,000 | <0.01 | 1,100 | 33 | 32,000 | 1,600 | 1.2 | 400 | 99 | 4.0 | 0.40 | ***<1*** | <0.3 | 94 | 300 | 0.030 | 0.14 | 86 | 2.8 | 96 |
| 95th PCTL | 0.30 | 25,000 | ***1,300*** | 13 | 29 | <0.1 | 0.32 | 73,000 | 0.19 | 50 | 130 | 140 | 77,000 | 0.018 | 1,300 | 39 | 36,000 | 1,800 | 1.2 | 480 | 100 | 15 | 0.47 | ***<1*** | <0.3 | 100 | 460 | 0.038 | 0.18 | 110 | 4.4 | 99 |

**Notes:**
Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).
Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC
ND - no data

**Appendix D-4: Summary Statistics for Solid Phase Elemental Abundance Results**

**Summary Statistics for Whole Ore Tailings Samples**

| Parameter | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| AUCCC | *0.053* | *81,500* | *4.8* | *-* | *628* | *2.1* | *0.16* | *25,700* | *0.09* | *17.3* | *92* | *28* | *39,200* | *0.05* | *23,200* | *24* | *15,000* | *774* | *1.1* | *24,300* | *47* | *17* | *0.4* | *0.09* | *2.1* | *320* | *3,840* | *0.9* | *2.7* | *97* | *21* | *67* |
| **Whole Ore Tailings (n=6)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *TSF 25* | 0.37 | 19,000 | ***8,700*** | *ND* | 96 | 0.3 | 0.79 | 27,000 | 0.25 | 14 | 24 | 83 | 110,000 | <0.01 | 3300 | 17 | 9,300 | 390 | 8.5 | 8,300 | 28 | ***280*** | 1.2 | <1 | <0.3 | 150 | 300 | 0.13 | 0.52 | 28 | 3.9 | 81 |
| *TSF 26* | 0.37 | 18,000 | ***9,700*** | *ND* | 96 | 0.3 | 0.81 | 27,000 | 0.39 | 16 | 24 | 91 | 110,000 | 0.01 | 3200 | 17 | 9,300 | 410 | 8.9 | 7,100 | 30 | ***290*** | 1.3 | ***1*** | <0.3 | 140 | 300 | 0.13 | 0.52 | 27 | 4.1 | 110 |
| *TSF 27* | 0.37 | 17,000 | ***9,900*** | *ND* | 99 | 0.2 | 0.85 | 27,000 | 0.59 | 17 | 23 | 110 | 100,000 | <0.01 | 3100 | 16 | 9,300 | 430 | 8.6 | 5,700 | 32 | ***280*** | 1.4 | ***1*** | <0.3 | 140 | 300 | 0.13 | 0.55 | 27 | 4.2 | 160 |
| *TSF 28* | 0.31 | 17,000 | ***9,200*** | *ND* | 89 | 0.3 | 0.78 | 29,000 | 0.56 | 19 | 25 | 110 | 95,000 | <0.01 | 3200 | 17 | 10,000 | 450 | 8.7 | 9,000 | 34 | ***230*** | 1.2 | ***1*** | <0.3 | 140 | 300 | 0.13 | 0.5 | 28 | 4.0 | 160 |
| *TSF 29* | 0.29 | 17,000 | ***9,200*** | *ND* | 100 | 0.2 | 0.81 | 27,000 | 0.51 | 15 | 24 | 110 | 100,000 | <0.01 | 2900 | 16 | 9,700 | 440 | 8.7 | 3,900 | 32 | ***290*** | 1.4 | ***1*** | <0.3 | 150 | 300 | 0.14 | 0.55 | 28 | 4.1 | 130 |
| *TSF 30* | 0.29 | 18,000 | ***9,400*** | *ND* | 98 | 0.2 | 0.79 | 27,000 | 0.37 | 15 | 24 | 90 | 110,000 | <0.01 | 3000 | 17 | 9,600 | 420 | 8.1 | 5,000 | 30 | ***280*** | 1.4 | <1 | <0.3 | 140 | 300 | 0.13 | 0.51 | 28 | 3.9 | 110 |

**Notes:**

Average Upper Continental Crust Composition (AUCCC) according to Rudnick and Gao (2014).

Values shaded in light grey are 3x's the AUCCC; bolded and italicized values are 10x's the AUCCC

ND - no data

# APPENDIX D-5: SUMMARY STATISTICS FOR SHAKE FLASK EXTRACTION RESULTS

**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**

**Summary Statistics for Discovery Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 9 | 9 | 0 | 9 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
| *10th PCTL* | 8.0 | 83 | *ND* | 0.48 | *ND* | 1.0 | <0.0001 | <0.00001 | 1.21 | 0.0045 | 0.0051 | *ND* | <0.00002 | <0.00001 | 2.3 | <0.000003 | 0.000025 | <0.0005 | <0.0005 | 0.03 | 10 | 0.011 | 0.26 | 0.00064 | 0.00016 | 6.0 | 0.00020 | *ND* | 0.000070 | 0.00060 | <0.001 | <0.00001 | 0.0084 | 0.0023 | <0.00002 | 0.00015 | 0.016 | 0.00095 | 0.000026 | <0.001 | *ND* |
| *25th PCTL* | 8.0 | 84 | *ND* | 0.50 | *ND* | 1.2 | <0.0001 | <0.00001 | 1.31 | 0.0057 | 0.0059 | *ND* | <0.00002 | <0.00001 | 2.4 | <0.000003 | 0.00015 | <0.0005 | <0.0005 | 0.38 | 11 | 0.013 | 0.30 | 0.0032 | 0.00021 | 7.2 | 0.00030 | *ND* | 0.00011 | 0.00070 | <0.001 | <0.00001 | 0.011 | 0.024 | <0.00002 | 0.00019 | 0.017 | 0.0012 | 0.000089 | <0.001 | *ND* |
| *Median* | 8.3 | 85 | *ND* | 0.80 | *ND* | 2.1 | <0.0001 | <0.00001 | 1.41 | 0.0078 | 0.0065 | *ND* | <0.00002 | <0.00001 | 3.5 | <0.000003 | 0.00020 | <0.0005 | <0.0005 | 0.56 | 12 | 0.014 | 0.35 | 0.0055 | 0.00022 | 9.4 | 0.00040 | *ND* | 0.00013 | 0.00080 | <0.001 | <0.00001 | 0.015 | 0.034 | <0.00002 | 0.00019 | 0.020 | 0.0013 | 0.00016 | <0.001 | *ND* |
| *75th PCTL* | 8.9 | 98 | *ND* | 1.0 | *ND* | 3.1 | <0.0001 | <0.00001 | 1.76 | 0.0091 | 0.0076 | *ND* | <0.00002 | <0.00001 | 4.2 | <0.000003 | 0.00031 | <0.0005 | 0.00060 | 0.86 | 14 | 0.020 | 0.40 | 0.0059 | 0.00024 | 9.5 | 0.00070 | *ND* | 0.00020 | 0.0013 | <0.001 | <0.00001 | 0.019 | 0.042 | <0.00002 | 0.00032 | 0.023 | 0.0015 | 0.00021 | 0.0020 | *ND* |
| *95th PCTL* | 9.1 | 116 | *ND* | 1.5 | *ND* | 3.8 | <0.0001 | 0.000056 | 2.04 | 0.31 | 0.010 | *ND* | <0.00002 | <0.00001 | 4.2 | 0.000028 | 0.00048 | 0.00062 | 0.00084 | 1.3 | 17 | 0.023 | 0.46 | 0.0093 | 0.00037 | 12 | 0.00076 | *ND* | 0.00025 | 0.0017 | <0.001 | 0.00004 | 0.023 | 0.067 | <0.00002 | 0.00041 | 0.025 | 0.022 | 0.00025 | 0.0026 | *ND* |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 31 | 31 | 13 | 31 | 3 | 31 | 31 | 31 | 31 | 31 | 31 | 3 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 3 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 28 | 28 | 31 | 3 |
| *10th PCTL* | 7.7 | 85 | 26 | 0.50 | 0.060 | 0.70 | <0.0001 | <0.00001 | 0.060 | 0.00090 | 0.0068 | 0.012 | <0.00002 | <0.00001 | 3.8 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | <0.007 | 11 | <0.001 | 0.36 | 0.00042 | 0.00010 | 1.8 | <0.0001 | <0.003 | 0.000020 | 0.00050 | <0.001 | <0.00001 | 0.025 | 0.00020 | <0.00002 | 0.000053 | 0.00012 | 0.00054 | 0.0000037 | <0.001 | <0.002 |
| *25th PCTL* | 7.7 | 90 | 39 | 0.70 | 0.060 | 1.0 | <0.0001 | <0.00001 | 0.28 | 0.0021 | 0.0074 | 0.025 | <0.00002 | <0.00001 | 4.6 | <0.000003 | 0.000020 | <0.0005 | <0.0005 | 0.031 | 12 | 0.0020 | 0.46 | 0.00065 | 0.00018 | 2.5 | <0.0001 | <0.003 | 0.000035 | 0.00050 | <0.001 | <0.00001 | 0.038 | 0.00035 | <0.00002 | 0.000070 | 0.00030 | 0.00073 | 0.000019 | <0.001 | <0.002 |
| *Median* | 7.8 | 104 | 41 | 1.0 | 0.060 | 2.2 | <0.0001 | <0.00001 | 0.47 | 0.0044 | 0.0089 | 0.047 | <0.00002 | <0.00001 | 7.2 | <0.000003 | 0.000031 | <0.0005 | <0.0005 | 0.17 | 15 | 0.0040 | 0.73 | 0.0010 | 0.00023 | 4.2 | <0.0001 | <0.003 | 0.000070 | 0.00060 | <0.001 | <0.00001 | 0.083 | 0.0013 | <0.00002 | 0.00017 | 0.00050 | 0.00093 | 0.000033 | <0.001 | <0.002 |
| *75th PCTL* | 8.2 | 119 | 44 | 1.7 | 0.060 | 3.5 | <0.0001 | 0.00003 | 0.63 | 0.011 | 0.020 | 0.056 | <0.00002 | <0.00001 | 8.3 | <0.000003 | 0.000049 | <0.0005 | <0.0005 | 0.39 | 17 | 0.0065 | 0.90 | 0.0020 | 0.00033 | 5.6 | 0.00020 | 0.0040 | 0.00014 | 0.00085 | <0.001 | 0.000035 | 0.12 | 0.0035 | <0.00002 | 0.00031 | 0.0011 | 0.0016 | 0.000065 | <0.002 | <0.002 |
| *95th PCTL* | 8.8 | 351 | 46 | 7.0 | 0.060 | 98 | <0.0001 | 0.00005 | 1.2 | 0.020 | 0.026 | 0.062 | 0.000035 | 0.00004 | 45 | 0.000031 | 0.00011 | <0.0005 | 0.00070 | 0.94 | 20 | 0.012 | 1.5 | 0.0077 | 0.00048 | 11 | 0.00030 | 0.0048 | 0.00026 | 0.0014 | <0.001 | 0.000095 | 0.28 | 0.014 | 0.000035 | 0.00081 | 0.0021 | 0.0042 | 0.00024 | 0.0025 | <0.002 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 50 | 50 | 31 | 50 | 2 | 50 | 50 | 50 | 50 | 50 | 50 | 2 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 2 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 48 | 48 | 50 | 2 |
| *10th PCTL* | 7.8 | 74 | 34 | 0.50 | 0.69 | 1.3 | <0.0001 | <0.00001 | 1.1 | 0.022 | 0.0091 | 0.0030 | <0.00002 | <0.00001 | 2.5 | <0.000003 | 0.000067 | <0.0005 | <0.0005 | 0.15 | 9 | <0.001 | 0.29 | 0.0013 | 0.00021 | 6.0 | 0.00030 | 0.0033 | 0.000069 | 0.00060 | <0.001 | <0.00001 | 0.012 | 0.0074 | <0.00002 | 0.00016 | 0.0075 | 0.00052 | 0.000083 | <0.001 | <0.002 |
| *25th PCTL* | 7.9 | 81 | 36 | 0.70 | 0.70 | 1.4 | <0.0001 | <0.00001 | 1.3 | 0.032 | 0.011 | 0.0031 | <0.00002 | <0.00001 | 2.8 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | 0.20 | 10 | <0.001 | 0.36 | 0.0016 | 0.00030 | 6.6 | 0.00043 | 0.0038 | 0.00010 | 0.00060 | <0.001 | <0.00001 | 0.013 | 0.010 | <0.00002 | 0.00023 | 0.0095 | 0.00061 | 0.00012 | <0.001 | <0.002 |
| *Median* | 8.4 | 88 | 38 | 0.90 | 0.73 | 2.4 | <0.0001 | 0.00002 | 1.5 | 0.059 | 0.021 | 0.0031 | <0.00002 | <0.00001 | 3.4 | <0.000003 | 0.00015 | 0.00075 | <0.0005 | 0.31 | 11 | 0.0015 | 0.44 | 0.0024 | 0.00047 | 7.3 | 0.00070 | 0.0045 | 0.00018 | 0.00070 | <0.001 | 0.000040 | 0.015 | 0.015 | <0.00002 | 0.00037 | 0.011 | 0.00082 | 0.00016 | <0.001 | <0.002 |
| *75th PCTL* | 8.8 | 97 | 41 | 1.5 | 0.75 | 3.9 | <0.0001 | 0.00003 | 1.7 | 0.092 | 0.030 | 0.0031 | <0.00002 | 0.000018 | 3.8 | 0.0000040 | 0.00024 | 0.0012 | <0.0005 | 0.47 | 13 | 0.0020 | 0.52 | 0.0037 | 0.00087 | 8.9 | 0.00090 | 0.0053 | 0.00025 | 0.00088 | <0.001 | 0.000078 | 0.017 | 0.021 | <0.00002 | 0.00054 | 0.013 | 0.0012 | 0.00024 | 0.0020 | <0.002 |
| *95th PCTL* | 9.2 | 140 | 44 | 7.7 | 0.77 | 9.3 | <0.0001 | 0.00005 | 2.0 | 0.17 | 0.046 | 0.0032 | 0.0000255 | 0.000036 | 4.8 | 0.000028 | 0.00036 | 0.0023 | 0.00080 | 0.62 | 16 | 0.0044 | 0.69 | 0.0049 | 0.0029 | 18 | 0.0015 | 0.0059 | 0.00045 | 0.0011 | <0.001 | 0.00017 | 0.021 | 0.029 | <0.00002 | 0.0012 | 0.015 | 0.0039 | 0.00033 | 0.0030 | <0.002 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 0 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 7.9 | 83 | *ND* | 0.72 | *ND* | 1.0 | <0.0001 | <0.00001 | 0.57 | 0.0087 | 0.0069 | *ND* | <0.00002 | <0.00001 | 3.9 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.038 | 14 | 0.0018 | 0.44 | 0.0010 | 0.00026 | 2.5 | 0.00022 | *ND* | 0.000048 | 0.00072 | <0.001 | 0.000018 | 0.018 | 0.0015 | <0.00002 | 0.00010 | 0.00054 | 0.0010 | 0.000014 | <0.001 | *ND* |
| *25th PCTL* | 7.9 | 88 | *ND* | 0.90 | *ND* | 1.3 | <0.0001 | <0.00001 | 0.61 | 0.017 | 0.0071 | *ND* | <0.00002 | <0.00001 | 4.2 | <0.000003 | 0.000030 | <0.0005 | <0.0005 | 0.086 | 16 | 0.0030 | 0.51 | 0.0011 | 0.00033 | 3.0 | 0.00025 | *ND* | 0.000075 | 0.00075 | <0.001 | 0.000030 | 0.023 | 0.0032 | <0.00002 | 0.00011 | 0.00080 | 0.0014 | 0.000028 | <0.001 | *ND* |
| *Median* | 7.9 | 97 | *ND* | 1.2 | *ND* | 1.6 | <0.0001 | <0.00001 | 0.67 | 0.030 | 0.0073 | *ND* | <0.00002 | <0.00001 | 4.6 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | 0.16 | 19 | 0.0050 | 0.63 | 0.0012 | 0.00044 | 3.8 | 0.00030 | *ND* | 0.00012 | 0.00080 | <0.001 | 0.000050 | 0.032 | 0.0061 | <0.00002 | 0.00012 | 0.0012 | 0.0020 | 0.000050 | <0.001 | *ND* |
| *75th PCTL* | 8.0 | 119 | *ND* | 1.2 | *ND* | 3.9 | <0.0001 | <0.00001 | 1.1 | 0.076 | 0.0090 | *ND* | <0.00002 | <0.00001 | 6.4 | 0.0000050 | 0.000060 | <0.0005 | <0.0005 | 0.30 | 20 | 0.0090 | 0.89 | 0.0016 | 0.00051 | 5.3 | 0.00035 | *ND* | 0.00018 | 0.00095 | <0.001 | 0.000080 | 0.069 | 0.0070 | <0.00002 | 0.00020 | 0.0053 | 0.0029 | 0.000059 | 0.0025 | *ND* |
| *95th PCTL* | 8.0 | 136 | *ND* | 1.2 | *ND* | 5.7 | <0.0001 | <0.00001 | 1.4 | 0.11 | 0.010 | *ND* | <0.00002 | <0.00001 | 7.9 | 0.0000066 | 0.000073 | <0.0005 | <0.0005 | 0.42 | 20 | 0.012 | 1.1 | 0.0019 | 0.00056 | 6.5 | 0.00039 | *ND* | 0.00023 | 0.0011 | <0.001 | 0.00010 | 0.098 | 0.0076 | <0.00002 | 0.00026 | 0.0086 | 0.0037 | 0.000065 | 0.0037 | *ND* |

**Summary Statistics for Discovery Ore Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 5 | 5 | 0 | 5 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| *10th PCTL* | 7.7 | 110 | *ND* | 1.2 | *ND* | 3.1 | <0.0001 | <0.00001 | 0.24 | 0.020 | 0.0082 | *ND* | <0.00002 | <0.00001 | 7.1 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.022 | 12 | 0.0014 | 0.82 | 0.00053 | 0.00015 | 2.4 | <0.0001 | *ND* | 0.000074 | 0.00050 | <0.001 | <0.00001 | 0.069 | 0.00030 | <0.00002 | 0.000042 | 0.00014 | 0.00052 | 0.0000042 | <0.001 | *ND* |
| *25th PCTL* | 7.7 | 115 | *ND* | 1.2 | *ND* | 3.3 | <0.0001 | <0.00001 | 0.34 | 0.023 | 0.0088 | *ND* | <0.00002 | <0.00001 | 11 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | 0.032 | 13 | 0.0020 | 0.97 | 0.00054 | 0.00016 | 2.5 | <0.0001 | *ND* | 0.000080 | 0.00050 | <0.001 | <0.00001 | 0.12 | 0.00030 | <0.00002 | 0.000050 | 0.00016 | 0.00062 | 0.0000060 | <0.001 | *ND* |
| *Median* | 7.7 | 120 | *ND* | 1.5 | *ND* | 3.6 | <0.0001 | <0.00001 | 0.34 | 0.032 | 0.0089 | *ND* | <0.00002 | <0.00001 | 12 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | 0.066 | 15 | 0.0030 | 0.98 | 0.00056 | 0.00033 | 2.8 | <0.0001 | *ND* | 0.00012 | 0.00060 | <0.001 | <0.00001 | 0.12 | 0.00040 | <0.00002 | 0.000055 | 0.00017 | 0.0013 | 0.0000080 | <0.001 | *ND* |
| *75th PCTL* | 7.8 | 134 | *ND* | 1.6 | *ND* | 4.2 | <0.0001 | <0.00001 | 0.37 | 0.069 | 0.0091 | *ND* | <0.00002 | 0.00003 | 14 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.068 | 16 | 0.0030 | 1.3 | 0.0012 | 0.00033 | 2.9 | <0.0001 | *ND* | 0.00015 | 0.00070 | <0.001 | <0.00001 | 0.14 | 0.00080 | <0.00002 | 0.000058 | 0.00017 | 0.0014 | 0.0000090 | <0.001 | *ND* |
| *95th PCTL* | 7.9 | 169 | *ND* | 1.6 | *ND* | 13 | <0.0001 | 0.000042 | 0.43 | 0.64 | 0.0095 | *ND* | <0.00002 | 0.000038 | 17 | 0.0000046 | 0.000026 | <0.0005 | <0.0005 | 0.66 | 18 | 0.0046 | 1.6 | 0.0015 | 0.00033 | 3.4 | <0.0001 | *ND* | 0.00017 | 0.00094 | <0.001 | <0.00001 | 0.22 | 0.0034 | 0.000028 | 0.00014 | 0.00025 | 0.0036 | 0.000035 | <0.001 | *ND* |
| **Sedimentary (SE)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2.0 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| *Min* | 8.4 | 83 | 38.1 | 3.3 | *ND* | 1.0 | <0.0001 | 0.00002 | 1.6 | 0.058 | 0.021 | *ND* | <0.00002 | 0.000011 | 2.7 | 0.0000031 | 0.00014 | 0.00068 | <0.0005 | 0.34 | 11 | 0.0023 | 0.308 | 0.0029 | 0.00019 | 8.7 | 0.00044 | *ND* | 0.00015 | 0.00062 | <0.001 | 0.000034 | 0.013 | 0.018 | <0.00002 | 0.00051 | 0.011 | 0.0011 | 0.00017 | 0.0020 | *ND* |
| *Max* | 8.5 | 86 | 38.3 | 3.4 | *ND* | 1.2 | <0.0001 | 0.00002 | 1.7 | 0.071 | 0.022 | *ND* | <0.00002 | 0.0000125 | 2.7 | 0.0000033 | 0.00016 | 0.00080 | <0.0005 | 0.41 | 11 | 0.0028 | 0.319 | 0.0035 | 0.00020 | 8.9 | 0.00050 | *ND* | 0.00016 | 0.00065 | <0.001 | 0.000040 | 0.013 | 0.022 | <0.00002 | 0.00053 | 0.011 | 0.0011 | 0.00018 | 0.0020 | *ND* |

Notes: ND- no data

**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**

**Summary Statistics for F-Zone Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 7 | 7 | 3 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 2 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 2 |
| *10th PCTL* | 7.9 | 152 | 28 | 1.6 | 0.06 | 1.7 | <0.00001 | <0.00001 | 0.0020 | 0.00076 | 0.012 | 0.0079 | 0.0000082 | 0.0000070 | 14 | <0.000003 | 0.000037 | 0.000092 | 0.00020 | 0.0042 | 1.6 | <0.001 | 2.8 | 0.021 | 0.00011 | 1.0 | 0.00016 | 0.0074 | 0.000016 | 0.0014 | 0.00038 | <0.00001 | 0.023 | 0.000050 | 0.000012 | 0.000032 | <0.00003 | 0.00050 | 0.0000020 | <0.001 | <0.002 |
| *25th PCTL* | 7.9 | 157 | 33 | 2.2 | 0.06 | 3.6 | 0.000055 | <0.00001 | 0.0060 | 0.0012 | 0.016 | 0.0083 | 0.000015 | 0.0000085 | 20 | <0.000003 | 0.000068 | 0.00030 | 0.00035 | 0.0060 | 2.1 | <0.001 | 3.7 | 0.057 | 0.00011 | 1.5 | 0.00025 | 0.014 | <0.00002 | 0.0017 | 0.00071 | <0.00001 | 0.029 | 0.000075 | 0.000018 | 0.000061 | <0.00003 | 0.00064 | 0.0000020 | <0.001 | <0.002 |
| *Median* | 8.0 | 194 | 42 | 2.4 | 0.06 | 5.2 | <0.0001 | <0.00001 | 0.010 | 0.0026 | 0.023 | 0.0089 | <0.00002 | <0.00001 | 22 | <0.000003 | 0.000091 | <0.0005 | <0.0005 | 0.0070 | 4.0 | 0.0014 | 4.8 | 0.092 | 0.00014 | 5.0 | 0.00030 | 0.025 | 0.000060 | 0.0026 | <0.001 | <0.00001 | 0.036 | 0.00030 | <0.00002 | 0.000079 | 0.000080 | 0.0016 | 0.0000020 | <0.001 | <0.002 |
| *75th PCTL* | 8.1 | 229 | 59 | 5.0 | 0.06 | 21 | <0.0001 | 0.000030 | 0.035 | 0.033 | 0.034 | 0.0096 | <0.00002 | <0.00001 | 27 | <0.000003 | 0.00012 | <0.0005 | <0.0005 | 0.013 | 5.8 | 0.0025 | 6.1 | 0.18 | 0.00098 | 8.6 | 0.00050 | 0.036 | 0.00017 | 0.0030 | <0.001 | 0.000055 | 0.057 | 0.00030 | <0.00002 | 0.00015 | 0.00021 | 0.0017 | 0.0000020 | 0.0020 | <0.002 |
| *95th PCTL* | 8.2 | 306 | 73 | 9.8 | 0.06 | 71 | <0.0001 | 0.000050 | 0.40 | 0.075 | 0.048 | 0.010 | <0.00002 | 0.000017 | 38 | 0.000019 | 0.00020 | <0.0005 | <0.0005 | 0.023 | 14 | 0.0031 | 7.3 | 0.28 | 0.0024 | 12 | 0.00067 | 0.045 | 0.00034 | 0.0048 | <0.001 | 0.000087 | 0.074 | 0.00037 | <0.00002 | 0.00084 | 0.0011 | 0.0020 | 0.0000028 | 0.0020 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 64 | 64 | 52 | 64 | 2 | 64 | 64 | 64 | 64 | 64 | 64 | 2 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 2 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 62 | 62 | 64 | 2 |
| *10th PCTL* | 8.0 | 78 | 32 | 1.7 | 0.082 | 1.0 | <0.0001 | <0.00001 | 0.43 | 0.0010 | 0.0076 | 0.00086 | <0.00002 | <0.00001 | 3.6 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | 0.0020 | 1.5 | <0.001 | 0.37 | 0.00036 | 0.000070 | 6.7 | <0.0001 | 0.0032 | <0.00002 | 0.0012 | <0.001 | <0.00001 | 0.011 | <0.0001 | <0.00002 | 0.0000010 | 0.00061 | 0.00068 | <0.000001 | <0.001 | <0.002 |
| *25th PCTL* | 8.1 | 90 | 35 | 3.8 | 0.085 | 1.2 | <0.0001 | <0.00001 | 0.57 | 0.0016 | 0.010 | 0.0013 | <0.00002 | <0.00001 | 4.4 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.01 | 4.5 | <0.001 | 0.52 | 0.00047 | 0.000090 | 9.6 | <0.0001 | 0.0035 | <0.00002 | 0.0016 | <0.001 | <0.00001 | 0.014 | <0.0001 | <0.00002 | 0.0000020 | 0.0013 | 0.00093 | <0.000001 | <0.001 | <0.002 |
| *Median* | 8.3 | 107 | 42 | 5.5 | 0.090 | 1.8 | <0.0001 | <0.00001 | 0.73 | 0.0042 | 0.015 | 0.0019 | <0.00002 | <0.00001 | 5.6 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | <0.01 | 6.4 | <0.001 | 0.79 | 0.00077 | 0.00014 | 12 | <0.0001 | 0.0040 | <0.00002 | 0.0022 | <0.001 | <0.00001 | 0.018 | <0.0001 | <0.00002 | 0.0000070 | 0.0035 | 0.0011 | 0.0000020 | <0.001 | <0.002 |
| *75th PCTL* | 8.6 | 125 | 51 | 7.7 | 0.095 | 2.8 | <0.0001 | 0.000013 | 0.87 | 0.012 | 0.020 | 0.0026 | <0.00002 | <0.00001 | 7.0 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | <0.01 | 8.5 | <0.001 | 1.8 | 0.0013 | 0.00027 | 13 | 0.00020 | 0.0045 | 0.000070 | 0.0031 | <0.001 | 0.000013 | 0.027 | 0.00030 | <0.00002 | 0.000018 | 0.011 | 0.0015 | 0.0000050 | <0.001 | <0.002 |
| *95th PCTL* | 9.2 | 198 | 71 | 19 | 0.099 | 8.1 | <0.0001 | 0.000067 | 1.1 | 0.040 | 0.036 | 0.0031 | <0.00002 | 0.000027 | 11 | 0.0000077 | 0.00013 | <0.0005 | <0.0005 | 0.072 | 12 | 0.0020 | 5.5 | 0.0037 | 0.00045 | 19 | 0.00068 | 0.0049 | 0.00014 | 0.0039 | <0.001 | 0.000080 | 0.044 | 0.0019 | <0.00002 | 0.000079 | 0.021 | 0.0026 | 0.000020 | 0.0018 | <0.002 |

**Summary Statistics for F-Zone Ore Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 2 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 8.0 | 83 | 36 | 2.2 | *ND* | 1.2 | <0.0001 | 0.000012 | 0.13 | 0.0028 | 0.014 | *ND* | <0.00002 | <0.00001 | 6.8 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | 0.0084 | 3.0 | 0.0016 | 1.3 | 0.0045 | 0.000068 | 4.8 | 0.00016 | *ND* | <0.00002 | 0.0033 | <0.001 | <0.00001 | 0.021 | 0.00012 | <0.00002 | 0.0000058 | 0.00020 | 0.00046 | 0.0000012 | <0.001 | *ND* |
| *25th PCTL* | 8.0 | 108 | 44 | 2.3 | *ND* | 1.6 | <0.0001 | 0.000015 | 0.14 | 0.0044 | 0.016 | *ND* | <0.00002 | <0.00001 | 8.8 | <0.000003 | 0.000059 | <0.0005 | <0.0005 | 0.0090 | 5.2 | 0.0025 | 2.2 | 0.010 | 0.000095 | 5.5 | 0.00025 | *ND* | <0.00002 | 0.0034 | <0.001 | <0.00001 | 0.022 | 0.00015 | <0.00002 | 0.000013 | 0.00033 | 0.00060 | 0.0000015 | <0.001 | *ND* |
| *Median* | 8.1 | 150 | 58 | 2.5 | *ND* | 2.1 | <0.0001 | 0.000020 | 0.15 | 0.0070 | 0.019 | *ND* | <0.00002 | <0.00001 | 12 | <0.000003 | 0.000088 | <0.0005 | <0.0005 | <0.01 | 8.9 | 0.0040 | 3.7 | 0.020 | 0.00014 | 6.7 | 0.00040 | *ND* | <0.00002 | 0.0036 | <0.001 | <0.00001 | 0.022 | 0.00020 | <0.00002 | 0.000025 | 0.00054 | 0.00083 | 0.0000020 | <0.001 | *ND* |
| *75th PCTL* | 8.1 | 194 | 71 | 5.6 | *ND* | 3.3 | <0.0001 | 0.000050 | 0.41 | 0.11 | 0.019 | *ND* | <0.00002 | <0.00001 | 18 | 0.000078 | 0.00015 | <0.0005 | <0.0005 | <0.01 | 11 | 0.0050 | 5.5 | 0.059 | 0.00037 | 6.8 | 0.00065 | *ND* | 0.000050 | 0.0037 | <0.001 | 0.000020 | 0.031 | 0.00030 | <0.00002 | 0.000055 | 0.0021 | 0.00089 | 0.0000020 | <0.001 | *ND* |
| *95th PCTL* | 8.1 | 228 | 82 | 8.1 | *ND* | 4.3 | <0.0001 | 0.000074 | 0.61 | 0.19 | 0.020 | *ND* | <0.00002 | <0.00001 | 23 | 0.00014 | 0.00020 | <0.0005 | <0.0005 | <0.01 | 13 | 0.0058 | 6.9 | 0.091 | 0.00055 | 7.0 | 0.00085 | *ND* | 0.000074 | 0.0037 | <0.001 | 0.000028 | 0.039 | 0.00038 | <0.00002 | 0.000079 | 0.0033 | 0.00093 | 0.0000020 | <0.001 | *ND* |

Notes: ND- no data

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**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**

**Summary Statistics for Pump Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 6 | 6 | 2 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 4 | 6 | 2 |
| *10th PCTL* | 8.0 | 203 | 43 | 1.8 | 0.072 | 3.3 | <0.00001 | <0.00001 | 0.0020 | 0.00075 | 0.0078 | 0.0010 | 0.0000070 | 0.0000070 | 25 | <0.000003 | 0.000046 | 0.000080 | 0.00025 | <0.002 | 0.48 | 0.00075 | 6.3 | 0.016 | 0.00026 | 0.35 | 0.00015 | 0.0059 | 0.000010 | 0.00055 | 0.0005 | <0.00001 | 0.023 | 0.000050 | 0.0000050 | 0.0000095 | 0.000020 | 0.000053 | 0.0000013 | <0.001 | <0.002 |
| *25th PCTL* | 8.0 | 206 | 44 | 2.3 | 0.090 | 5.0 | 0.000033 | <0.00001 | 0.0073 | 0.0012 | 0.010 | 0.0011 | 0.000010 | 0.0000078 | 27 | <0.000003 | 0.000073 | 0.00019 | 0.00035 | <0.002 | 0.61 | <0.001 | 7.5 | 0.030 | 0.00036 | 0.39 | 0.00038 | 0.0073 | 0.000020 | 0.00075 | 0.00081 | <0.00001 | 0.027 | 0.000063 | 0.0000088 | 0.000021 | <0.00003 | 0.000058 | 0.0000018 | <0.001 | <0.002 |
| *Median* | 8.1 | 246 | 47 | 3.9 | 0.12 | 7.7 | <0.0001 | <0.00001 | 0.035 | 0.0015 | 0.017 | 0.0013 | <0.00002 | <0.00001 | 34 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | <0.002 | 0.71 | <0.001 | 9.3 | 0.062 | 0.00046 | 0.48 | 0.0010 | 0.0095 | 0.000060 | 0.00090 | <0.001 | 0.000015 | 0.030 | <0.0001 | <0.00002 | 0.000038 | <0.00003 | 0.00013 | 0.0000020 | <0.001 | <0.002 |
| *75th PCTL* | 8.2 | 292 | 49 | 8.0 | 0.15 | 20 | <0.0001 | 0.000040 | 0.088 | 0.0026 | 0.023 | 0.0014 | <0.00002 | <0.00001 | 41 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | 0.0058 | 0.95 | <0.001 | 11 | 0.080 | 0.00057 | 3.0 | 0.0013 | 0.012 | 0.000085 | 0.00098 | <0.001 | 0.000058 | 0.035 | <0.0001 | <0.00002 | 0.000047 | <0.00003 | 0.00021 | 0.0000023 | 0.0018 | <0.002 |
| *95th PCTL* | 8.4 | 481 | 51 | 15 | 0.17 | 118 | <0.0001 | 0.000050 | 0.12 | 0.0038 | 0.029 | 0.0016 | <0.00002 | 0.000018 | 63 | 0.000046 | 0.00023 | <0.0005 | <0.0005 | 0.0070 | 1.2 | 0.0013 | 12 | 0.16 | 0.00098 | 7.0 | 0.0016 | 0.014 | 0.000098 | 0.0013 | <0.001 | 0.000078 | 0.062 | <0.0001 | <0.00002 | 0.000070 | <0.00003 | 0.00022 | 0.0000029 | 0.0050 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 17 | 17 | 2 | 17 | 2 | 17 | 17 | 17 | 17 | 17 | 17 | 2 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 2 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 15 | 15 | 17 | 2 |
| *10th PCTL* | 7.8 | 67 | 44 | 0.52 | 0.062 | 0.62 | 0.000064 | <0.00001 | 0.30 | 0.00092 | 0.0041 | 0.0012 | 0.000015 | 0.0000088 | 4.6 | <0.000003 | 0.000013 | 0.00034 | 0.00046 | <0.002 | 2.4 | <0.001 | 0.69 | 0.00040 | 0.000080 | 3.5 | 0.00010 | 0.0033 | 0.000038 | 0.0019 | 0.00088 | <0.00001 | 0.0085 | 0.000080 | 0.000015 | <0.000001 | 0.00056 | 0.00058 | <0.000001 | <0.001 | <0.002 |
| *25th PCTL* | 7.9 | 70 | 47 | 0.70 | 0.065 | 1.2 | <0.0001 | <0.00001 | 0.43 | 0.0035 | 0.0099 | 0.0015 | <0.00002 | <0.00001 | 5.9 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | <0.002 | 3.8 | <0.001 | 0.84 | 0.00064 | 0.00010 | 4.1 | 0.00010 | 0.0038 | 0.000050 | 0.0024 | <0.001 | <0.00001 | 0.012 | <0.0001 | <0.00002 | <0.000001 | 0.00088 | 0.00075 | <0.000001 | <0.001 | <0.002 |
| *Median* | 8.1 | 87 | 51 | 0.80 | 0.070 | 1.4 | <0.0001 | <0.00001 | 0.63 | 0.0068 | 0.012 | 0.0019 | <0.00002 | <0.00001 | 7.7 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.0020 | 5.6 | <0.001 | 1.0 | 0.0013 | 0.00015 | 5.8 | 0.00020 | 0.0045 | 0.000060 | 0.0034 | <0.001 | <0.00001 | 0.017 | <0.0001 | <0.00002 | <0.000001 | 0.0013 | 0.00090 | <0.000001 | <0.001 | <0.002 |
| *75th PCTL* | 8.3 | 92 | 55 | 1.1 | 0.075 | 2.6 | <0.0001 | 0.000030 | 0.82 | 0.011 | 0.016 | 0.0024 | <0.00002 | <0.00001 | 8.6 | <0.000003 | 0.000023 | <0.0005 | <0.0005 | 0.0030 | 7.2 | <0.001 | 3.9 | 0.0016 | 0.00020 | 6.8 | 0.00030 | 0.0053 | 0.000090 | 0.0036 | <0.001 | 0.000020 | 0.020 | <0.0001 | <0.00002 | 0.0000020 | 0.0036 | 0.0012 | 0.0000015 | <0.001 | <0.002 |
| *95th PCTL* | 8.6 | 168 | 58 | 5.8 | 0.079 | 9.4 | <0.0001 | 0.000058 | 1.0 | 0.033 | 0.030 | 0.0028 | <0.00002 | <0.00001 | 12 | <0.000003 | 0.000089 | <0.0005 | 0.00054 | 0.0070 | 9.1 | 0.0023 | 5.3 | 0.0044 | 0.00050 | 14 | 0.0021 | 0.0059 | 0.00034 | 0.0053 | <0.001 | 0.000060 | 0.027 | 0.00042 | 0.000022 | 0.0000086 | 0.0066 | 0.0020 | 0.0000023 | 0.0028 | <0.002 |

**Summary Statistics for Pump Ore Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 0 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 8.0 | 145 | *ND* | 0.99 | *ND* | 1.8 | <0.0001 | <0.00001 | 0.019 | 0.025 | 0.013 | *ND* | <0.00002 | <0.00001 | 17 | <0.000003 | 0.000060 | <0.0005 | <0.0005 | <0.002 | 1.3 | <0.001 | 7.9 | 0.0025 | 0.00018 | 0.47 | 0.00019 | *ND* | 0.000063 | 0.0015 | <0.001 | <0.00001 | 0.020 | <0.0001 | <0.00002 | <0.000001 | <0.00003 | 0.000045 | 0.0000020 | <0.001 | *ND* |
| *25th PCTL* | 8.1 | 149 | *ND* | 1.1 | *ND* | 2.0 | <0.0001 | <0.00001 | 0.033 | 0.026 | 0.015 | *ND* | <0.00002 | <0.00001 | 20 | <0.000003 | 0.000074 | <0.0005 | <0.0005 | <0.002 | 1.6 | <0.001 | 8.3 | 0.0028 | 0.00026 | 0.52 | 0.00033 | *ND* | 0.000068 | 0.0018 | <0.001 | <0.00001 | 0.022 | <0.0001 | <0.00002 | <0.000001 | <0.00003 | 0.000068 | 0.0000020 | <0.001 | *ND* |
| *Median* | 8.2 | 220 | *ND* | 2.0 | *ND* | 6.6 | <0.0001 | <0.00001 | 0.15 | 0.081 | 0.018 | *ND* | <0.00002 | <0.00001 | 33 | <0.000003 | 0.00018 | <0.0005 | <0.0005 | <0.002 | 2.9 | <0.001 | 10 | 0.062 | 0.00039 | 0.55 | 0.0013 | *ND* | 0.000075 | 0.0024 | <0.001 | <0.00001 | 0.031 | 0.00015 | <0.00002 | 0.000039 | 0.000080 | 0.00081 | 0.0000020 | <0.001 | *ND* |
| *75th PCTL* | 8.3 | 293 | *ND* | 3.0 | *ND* | 13 | <0.0001 | <0.00001 | 0.30 | 0.15 | 0.020 | *ND* | <0.00002 | <0.00001 | 45 | <0.000003 | 0.00035 | <0.0005 | <0.0005 | 0.0028 | 4.3 | 0.0015 | 12 | 0.16 | 0.00048 | 1.6 | 0.0022 | *ND* | 0.000085 | 0.0035 | <0.001 | <0.00001 | 0.046 | 0.00020 | <0.00002 | 0.000077 | 0.00022 | 0.0025 | 0.0000023 | <0.001 | *ND* |
| *95th PCTL* | 8.4 | 306 | *ND* | 3.5 | *ND* | 16 | <0.0001 | <0.00001 | 0.41 | 0.18 | 0.021 | *ND* | <0.00002 | <0.00001 | 47 | <0.000003 | 0.00050 | <0.0005 | <0.0005 | 0.0046 | 4.9 | 0.0027 | 12 | 0.25 | 0.00052 | 4.1 | 0.0024 | *ND* | 0.000097 | 0.0055 | <0.001 | <0.00001 | 0.065 | 0.00020 | <0.00002 | 0.000079 | 0.00042 | 0.0047 | 0.0000029 | <0.001 | *ND* |

Notes: ND- no data

**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**
**Summary Statistics for Tiriganiaq Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | |
| n | 4 | 4 | 0 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 4 |
| 10th PCTL | 8.1 | 77 | ND | 0.80 | ND | 1.4 | <0.0001 | <0.00001 | 0.70 | 0.0051 | 0.0079 | ND | <0.00002 |
| 25th PCTL | 8.2 | 79 | ND | 0.80 | ND | 1.5 | <0.0001 | <0.00001 | 0.77 | 0.0053 | 0.0082 | ND | <0.00002 |
| Median | 8.7 | 84 | ND | 0.85 | ND | 1.6 | <0.0001 | <0.00001 | 0.85 | 0.0081 | 0.0087 | ND | <0.00002 |
| 75th PCTL | 9.3 | 90 | ND | 0.93 | ND | 1.8 | <0.0001 | <0.00001 | 0.96 | 0.013 | 0.0095 | ND | <0.00002 |
| 95th PCTL | 9.4 | 93 | ND | 0.99 | ND | 2.0 | <0.0001 | <0.00001 | 1.1 | 0.020 | 0.011 | ND | <0.00002 |
| **Iron Formation (IF)** | | | | | | | | | | | | | |
| n | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 |
| 10th PCTL | 8.0 | 107 | 35 | 2.6 | 0.067 | 0.96 | <0.00001 | 0.000018 | 0.013 | 0.00094 | 0.0096 | 0.0011 | 0.0000070 |
| 25th PCTL | 8.1 | 111 | 35 | 4.3 | 0.078 | 1.4 | <0.00001 | 0.000030 | 0.023 | 0.0021 | 0.014 | 0.002 | 0.0000070 |
| Median | 8.2 | 118 | 36 | 7.0 | 0.095 | 2.0 | <0.00001 | 0.000050 | 0.038 | 0.0039 | 0.021 | 0.0036 | 0.0000070 |
| 75th PCTL | 8.2 | 207 | 36 | 17 | 0.11 | 19 | 0.000055 | 0.000050 | 0.20 | 0.0057 | 0.032 | 0.0051 | 0.000014 |
| 95th PCTL | 8.2 | 279 | 36 | 24 | 0.13 | 33 | 0.000091 | 0.000050 | 0.34 | 0.0071 | 0.040 | 0.0064 | 0.000019 |
| **Sedimentary (SE)** | | | | | | | | | | | | | |
| n | 93 | 93 | 48 | 93 | 0 | 93 | 93 | 93 | 93 | 93 | 93 | 0 | 93 |
| 10th PCTL | 7.9 | 88 | 39 | 0.42 | ND | 1.4 | <0.0001 | <0.00001 | 0.65 | 0.014 | 0.0075 | ND | <0.00002 |
| 25th PCTL | 8.0 | 93 | 43 | 0.60 | ND | 1.8 | <0.0001 | <0.00001 | 0.78 | 0.026 | 0.0088 | ND | <0.00002 |
| Median | 8.2 | 100 | 45 | 1.0 | ND | 2.8 | <0.0001 | <0.00001 | 0.90 | 0.043 | 0.014 | ND | <0.00002 |
| 75th PCTL | 8.3 | 107 | 48 | 1.4 | ND | 4.6 | <0.0001 | <0.00001 | 0.99 | 0.068 | 0.024 | ND | <0.00002 |
| 95th PCTL | 8.5 | 125 | 56 | 3.6 | ND | 7.2 | <0.0001 | 0.000050 | 1.3 | 0.15 | 0.094 | ND | 0.000032 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | |
| n | 5 | 5 | 2 | 5 | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 5 |
| 10th PCTL | 8.1 | 92 | 51 | 0.44 | ND | 1.5 | <0.0001 | <0.00001 | 0.75 | 0.013 | 0.0080 | ND | <0.00002 |
| 25th PCTL | 8.2 | 107 | 51 | 0.50 | ND | 2.1 | <0.0001 | <0.00001 | 0.76 | 0.023 | 0.0089 | ND | <0.00002 |
| Median | 8.2 | 110 | 51 | 1.0 | ND | 2.3 | <0.0001 | <0.00001 | 0.87 | 0.035 | 0.014 | ND | <0.00002 |
| 75th PCTL | 8.3 | 113 | 51 | 3.4 | ND | 2.4 | <0.0001 | <0.00001 | 0.89 | 0.048 | 0.074 | ND | <0.00002 |
| 95th PCTL | 8.4 | 128 | 51 | 6.7 | ND | 4.0 | <0.0001 | 0.000018 | 0.99 | 0.12 | 0.093 | ND | 0.000028 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | |
| n | 9 | 9 | 8 | 9 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 9 |
| 10th PCTL | 8.1 | 88 | 39 | 1.1 | ND | 1.5 | <0.0001 | <0.00001 | 0.49 | 0.0081 | 0.010 | ND | <0.00002 |
| 25th PCTL | 8.2 | 97 | 48 | 1.1 | ND | 2.0 | <0.0001 | <0.00001 | 0.58 | 0.011 | 0.010 | ND | <0.00002 |
| Median | 8.2 | 109 | 56 | 1.3 | ND | 2.2 | <0.0001 | <0.00001 | 0.81 | 0.020 | 0.021 | ND | <0.00002 |
| 75th PCTL | 8.3 | 124 | 61 | 1.3 | ND | 4.2 | <0.0001 | <0.00001 | 0.88 | 0.060 | 0.087 | ND | <0.00002 |
| 95th PCTL | 8.3 | 146 | 66 | 2.4 | ND | 5.0 | <0.0001 | 0.000022 | 1.1 | 0.081 | 0.091 | ND | <0.00002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | |
| n | 13 | 13 | 7 | 13 | 0 | 13 | 13 | 13 | 13 | 13 | 13 | 0 | 13 |
| 10th PCTL | 8.0 | 80 | 44 | 0.50 | ND | 0.90 | <0.0001 | <0.00001 | 0.53 | 0.0012 | 0.0082 | ND | <0.00002 |
| 25th PCTL | 8.1 | 91 | 48 | 0.80 | ND | 1.0 | <0.0001 | <0.00001 | 0.61 | 0.0028 | 0.011 | ND | <0.00002 |
| Median | 8.2 | 100 | 77 | 1.0 | ND | 1.5 | <0.0001 | <0.00001 | 0.69 | 0.013 | 0.013 | ND | <0.00002 |
| 75th PCTL | 8.3 | 143 | 78 | 2.3 | ND | 2.0 | <0.0001 | <0.00001 | 0.90 | 0.025 | 0.015 | ND | <0.00002 |
| 95th PCTL | 8.4 | 256 | 98 | 16 | ND | 9.1 | <0.0001 | 0.000030 | 0.98 | 0.065 | 0.024 | ND | 0.000024 |
| **Underground** | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | |
| n | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 |
| Min | 8.0 | 69 | 31 | 2.1 | ND | 0.70 | <0.0001 | <0.00001 | 0.90 | 0.0013 | 0.035 | ND | <0.00002 |
| Max | 8.2 | 74 | 34 | 2.7 | ND | 0.90 | <0.0001 | <0.00001 | 0.97 | 0.0028 | 0.080 | ND | <0.00002 |
| **Iron Formation (IF)** | | | | | | | | | | | | | |
| n | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 |
| 10th PCTL | 8 | 115 | 50 | 1.6 | 0.17 | 2.2 | 0.000028 | 0.000018 | 0.18 | 0.0038 | 0.033 | 0.0015 | 0.0000096 |
| 25th PCTL | 8.1 | 116 | 50 | 1.7 | 0.17 | 2.4 | 0.000055 | 0.000030 | 0.23 | 0.0047 | 0.055 | 0.0015 | 0.000014 |
| Median | 8.1 | 117 | 52 | 1.8 | 0.17 | 2.6 | <0.0001 | 0.00005 | 0.32 | 0.0060 | 0.093 | 0.0015 | 0.000020 |
| 75th PCTL | 8.1 | 142 | 53 | 5.4 | 0.17 | 3.8 | <0.0001 | 0.000095 | 0.39 | 0.035 | 0.10 | 0.0015 | 0.000080 |
| 95th PCTL | 8.2 | 162 | 53 | 8.3 | 0.17 | 4.8 | <0.0001 | 0.00013 | 0.44 | 0.058 | 0.11 | 0.0015 | 0.00013 |
| **Sedimentary (SE)** | | | | | | | | | | | | | |
| n | 6 | 6 | 6 | 6 | 0 | 6 | 6 | 6 | 6 | 6 | 6 | 0 | 6 |
| 10th PCTL | 8.2 | 92 | 49 | 0.8 | ND | 0.60 | <0.0001 | <0.00001 | 0.42 | 0.022 | 0.021 | ND | <0.00002 |
| 25th PCTL | 8.2 | 99 | 51 | 1 | ND | 0.75 | <0.0001 | <0.00001 | 0.59 | 0.026 | 0.024 | ND | <0.00002 |
| Median | 8.2 | 111 | 54 | 1.3 | ND | 1.2 | <0.0001 | <0.00001 | 0.98 | 0.032 | 0.028 | ND | <0.00002 |
| 75th PCTL | 8.3 | 112 | 55 | 1.8 | ND | 2.6 | <0.0001 | <0.00001 | 1.1 | 0.042 | 0.11 | ND | <0.00002 |
| 95th PCTL | 8.5 | 121 | 58 | 1.8 | ND | 4.7 | <0.0001 | <0.00001 | 1.1 | 0.047 | 0.20 | ND | <0.00002 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | |
| n | 8 | 8 | 8 | 8 | 0 | 8 | 8 | 8 | 8 | 8 | 8 | 0 | 8 |
| 10th PCTL | 8.1 | 99 | 48 | 1.1 | ND | 0.74 | <0.0001 | <0.00001 | 0.40 | 0.015 | 0.022 | ND | <0.00002 |
| 25th PCTL | 8.1 | 103 | 49 | 1.5 | ND | 0.95 | <0.0001 | <0.00001 | 0.45 | 0.022 | 0.025 | ND | <0.00002 |
| Median | 8.2 | 109 | 51 | 1.7 | ND | 2.3 | <0.0001 | <0.00001 | 0.85 | 0.025 | 0.028 | ND | <0.00002 |
| 75th PCTL | 8.2 | 113 | 53 | 1.9 | ND | 4.0 | <0.0001 | <0.00001 | 0.90 | 0.030 | 0.15 | ND | <0.00002 |
| 95th PCTL | 8.3 | 131 | 58 | 6.7 | ND | 6.1 | <0.0001 | <0.00001 | 0.98 | 0.081 | 0.22 | ND | <0.00002 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | |
| n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Min | 8.3 | 94 | 36 | 1.0 | 0.060 | 2.0 | <0.00001 | <0.00005 | 0.28 | 0.0045 | 0.016 | 0.0010 | <0.000007 |
| Max | 8.4 | 109 | 37 | 1.0 | 0.16 | 5.0 | <0.00001 | <0.00005 | 0.35 | 0.021 | 0.029 | 0.0016 | <0.000007 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | |
| n | 12 | 12 | 12 | 12 | 0 | 12 | 12 | 12 | 12 | 12 | 12 | 0 | 12 |
| 10th PCTL | 7.9 | 86 | 40 | 0.51 | ND | 0.62 | <0.0001 | <0.00001 | 0.50 | 0.00051 | 0.0041 | ND | <0.00002 |
| 25th PCTL | 8.0 | 93 | 46 | 0.68 | ND | 0.80 | <0.0001 | <0.00001 | 0.53 | 0.00068 | 0.0046 | ND | <0.00002 |
| Median | 8.0 | 107 | 59 | 0.80 | ND | 0.95 | <0.0001 | 0.000020 | 0.63 | 0.0016 | 0.0090 | ND | <0.00002 |
| 75th PCTL | 8.1 | 128 | 71 | 0.93 | ND | 1.2 | <0.0001 | 0.000023 | 0.83 | 0.0043 | 0.012 | ND | <0.00002 |
| 95th PCTL | 8.3 | 183 | 99 | 1.4 | ND | 12 | <0.0001 | 0.000045 | 1.0 | 0.040 | 0.016 | ND | <0.00002 |

| Parameter | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| n | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 10th PCTL | <0.00001 | 3.6 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.012 | 8.8 | <0.001 | 0.33 | 0.00038 | 0.00018 | 5.8 | 0.00013 |
| 25th PCTL | <0.00001 | 3.9 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.023 | 9.0 | <0.001 | 0.38 | 0.00042 | 0.00031 | 6.9 | 0.00018 |
| Median | <0.00001 | 4.2 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | 0.040 | 9.2 | <0.001 | 0.42 | 0.00058 | 0.00047 | 7.5 | 0.00020 |
| 75th PCTL | <0.00001 | 4.5 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.097 | 11 | <0.001 | 0.44 | 0.00094 | 0.00055 | 8.2 | 0.00023 |
| 95th PCTL | <0.00001 | 4.7 | <0.000003 | 0.000057 | <0.0005 | <0.0005 | 0.21 | 15 | <0.001 | 0.45 | 0.0015 | 0.00056 | 9.8 | 0.00029 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 10th PCTL | 0.0000072 | 16 | <0.000003 | 0.0000052 | 0.000082 | <0.0002 | 0.0030 | 1.9 | 0.00052 | 2.9 | 0.0031 | 0.00018 | 1.4 | 0.00016 |
| 25th PCTL | 0.0000075 | 17 | <0.000003 | 0.0000055 | 0.000085 | <0.0002 | 0.0045 | 4.4 | 0.0007 | 2.9 | 0.0038 | 0.00022 | 2.3 | 0.00025 |
| Median | 0.0000080 | 20 | <0.000003 | 0.000006 | 0.000090 | <0.0002 | 0.0070 | 8.5 | 0.0010 | 3.0 | 0.0051 | 0.00028 | 3.9 | 0.00040 |
| 75th PCTL | 0.0000090 | 21 | 0.0000040 | 0.000027 | 0.00030 | 0.00035 | 0.0070 | 12 | 0.041 | 3.4 | 0.0055 | 0.00057 | 8.2 | 0.00050 |
| 95th PCTL | 0.0000098 | 22 | 0.0000048 | 0.000044 | 0.00046 | 0.00047 | 0.0070 | 14 | 0.072 | 3.8 | 0.0058 | 0.00080 | 12 | 0.00058 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| n | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 |
| 10th PCTL | <0.00001 | 6.8 | <0.000003 | 0.000030 | <0.0005 | <0.0005 | 0.0050 | 7.7 | <0.001 | 0.93 | 0.00058 | 0.00031 | 4.5 | <0.0001 |
| 25th PCTL | <0.00001 | 7.4 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.0080 | 8.4 | <0.001 | 1.2 | 0.00068 | 0.00041 | 5.0 | 0.00020 |
| Median | <0.00001 | 8.1 | <0.000003 | 0.000040 | <0.0005 | <0.0005 | 0.010 | 9.3 | <0.001 | 1.5 | 0.00085 | 0.00050 | 5.4 | 0.00030 |
| 75th PCTL | <0.00001 | 8.8 | <0.000003 | 0.000050 | <0.0005 | <0.0005 | 0.020 | 10 | <0.001 | 1.9 | 0.0011 | 0.00071 | 6.0 | 0.00050 |
| 95th PCTL | 0.000028 | 11 | 0.000036 | 0.000095 | <0.0005 | <0.0005 | 0.044 | 11 | 0.0020 | 2.5 | 0.0020 | 0.0011 | 8.1 | 0.00080 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| n | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 10th PCTL | <0.00001 | 7.0 | <0.000003 | 0.000028 | <0.0005 | <0.0005 | 0.0054 | 7.8 | <0.001 | 1.2 | 0.00069 | 0.00035 | 4.1 | 0.00020 |
| 25th PCTL | <0.00001 | 7.6 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.0090 | 8.6 | <0.001 | 1.3 | 0.00073 | 0.00041 | 5.0 | 0.00020 |
| Median | <0.00001 | 8.6 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.0090 | 11 | <0.001 | 1.9 | 0.00079 | 0.00054 | 5.1 | 0.00020 |
| 75th PCTL | <0.00001 | 11 | <0.000003 | 0.000053 | <0.0005 | <0.0005 | <0.01 | 11 | <0.001 | 2.0 | 0.0011 | 0.00094 | 5.9 | 0.00030 |
| 95th PCTL | 0.000018 | 12 | 0.000013 | 0.000063 | <0.0005 | <0.0005 | <0.01 | 12 | 0.0018 | 2.1 | 0.0015 | 0.00097 | 9.9 | 0.00054 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| n | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10th PCTL | <0.00001 | 8.4 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | <0.01 | 6.9 | <0.001 | 1.2 | 0.00099 | 0.00034 | 3.7 | 0.00028 |
| 25th PCTL | <0.00001 | 9.9 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | <0.01 | 7.4 | <0.001 | 1.3 | 0.0013 | 0.00038 | 5.3 | 0.00030 |
| Median | <0.00001 | 13 | <0.000003 | 0.000043 | <0.0005 | <0.0005 | <0.01 | 8.4 | <0.001 | 2.4 | 0.0017 | 0.00056 | 5.4 | 0.00030 |
| 75th PCTL | <0.00001 | 13 | 0.000004 | 0.000046 | <0.0005 | <0.0005 | <0.01 | 10 | 0.0020 | 2.6 | 0.0019 | 0.00059 | 5.5 | 0.00030 |
| 95th PCTL | <0.00001 | 15 | 0.0000096 | 0.000061 | <0.0005 | <0.0005 | 0.018 | 11 | 0.0020 | 3.2 | 0.0028 | 0.00075 | 5.8 | 0.00046 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| n | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 10th PCTL | <0.00001 | 9.6 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.0020 | 2.2 | <0.001 | 1.5 | 0.0020 | 0.000082 | 3.8 | <0.0001 |
| 25th PCTL | <0.00001 | 10 | <0.000003 | 0.000023 | <0.0005 | <0.0005 | 0.0020 | 2.5 | <0.001 | 1.9 | 0.0024 | 0.00009 | 5.0 | <0.0001 |
| Median | <0.00001 | 11 | <0.000003 | 0.000048 | <0.0005 | <0.0005 | <0.01 | 4.3 | <0.001 | 4.6 | 0.0035 | 0.00012 | 6.1 | 0.00040 |
| 75th PCTL | <0.00001 | 12 | <0.000003 | 0.000088 | <0.0005 | <0.0005 | <0.01 | 5.4 | 0.0030 | 6.0 | 0.0039 | 0.00019 | 7.3 | 0.00080 |
| 95th PCTL | 0.000020 | 20 | 0.000017 | 0.00013 | <0.0005 | <0.0005 | <0.01 | 7.1 | 0.0044 | 8.9 | 0.019 | 0.00051 | 17 | 0.0013 |
| **Underground** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Min | <0.00001 | 6.0 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | <0.01 | 3.0 | <0.001 | 0.75 | 0.00080 | 0.000060 | 5.4 | <0.0001 |
| Max | <0.00001 | 6.7 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.040 | 3.9 | <0.001 | 0.81 | 0.00084 | 0.00015 | 6.5 | <0.0001 |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| n | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 10th PCTL | 0.0000076 | 8.9 | <0.000003 | 0.000037 | 0.00016 | 0.00026 | 0.0076 | 2.1 | <0.001 | 1.4 | 0.00095 | 0.00017 | 2.1 | 0.00012 |
| 25th PCTL | 0.0000085 | 11 | <0.000003 | 0.000052 | 0.00029 | 0.00035 | 0.0085 | 3.7 | <0.001 | 1.5 | 0.0013 | 0.00019 | 2.1 | 0.00015 |
| Median | 0.000010 | 14 | <0.000003 | 0.000076 | <0.0005 | <0.0005 | <0.01 | 6.4 | <0.001 | 1.5 | 0.0020 | 0.00022 | 2.3 | 0.00020 |
| 75th PCTL | 0.000070 | 17 | 0.000067 | 0.00012 | <0.0005 | <0.0005 | <0.01 | 9.7 | 0.0014 | 2.0 | 0.0026 | 0.00099 | 6.7 | 0.00040 |
| 95th PCTL | 0.00012 | 19 | 0.00012 | 0.00015 | <0.0005 | <0.0005 | <0.01 | 12 | 0.0017 | 2.4 | 0.0030 | 0.0016 | 10 | 0.00056 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| n | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 10th PCTL | <0.00001 | 7.3 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | <0.01 | 8.5 | <0.001 | 1.4 | 0.00052 | 0.00017 | 4.7 | <0.0001 |
| 25th PCTL | <0.00001 | 7.7 | <0.000003 | 0.000040 | <0.0005 | <0.0005 | <0.01 | 9.6 | <0.001 | 1.5 | 0.00059 | 0.00027 | 5.2 | <0.0001 |
| Median | <0.00001 | 7.8 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | <0.01 | 10 | <0.001 | 1.8 | 0.00073 | 0.00038 | 6.2 | <0.0001 |
| 75th PCTL | <0.00001 | 7.9 | <0.000003 | 0.000065 | <0.0005 | <0.0005 | <0.01 | 12 | <0.001 | 1.9 | 0.00090 | 0.00047 | 7.1 | 0.00025 |
| 95th PCTL | <0.00001 | 8.5 | 0.0000075 | 0.000072 | <0.0005 | <0.0005 | 0.018 | 14 | 0.0018 | 2.3 | 0.00099 | 0.00052 | 10 | 0.00038 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| n | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 10th PCTL | <0.00001 | 6.5 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | <0.01 | 7.8 | <0.001 | 1.3 | 0.00057 | 0.00025 | 5.4 | <0.0001 |
| 25th PCTL | <0.00001 | 7.0 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | <0.01 | 8.8 | <0.001 | 1.5 | 0.00063 | 0.00043 | 6.1 | <0.0001 |
| Median | <0.00001 | 7.7 | <0.000003 | 0.000060 | <0.0005 | <0.0005 | <0.01 | 10 | <0.001 | 1.7 | 0.00071 | 0.00059 | 6.3 | 0.00020 |
| 75th PCTL | <0.00001 | 8.6 | <0.000003 | 0.00012 | <0.0005 | <0.0005 | 0.023 | 11 | <0.001 | 2.0 | 0.00080 | 0.00066 | 9.3 | 0.00060 |
| 95th PCTL | <0.00001 | 11 | 0.000012 | 0.00015 | 0.00063 | <0.0005 | 0.037 | 11 | <0.001 | 2.1 | 0.0010 | 0.00091 | 12 | 0.00097 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Min | <0.000007 | 7.0 | <0.000003 | 0.000011 | 0.000080 | <0.0002 | 0.0070 | 4.9 | 0.00090 | 0.70 | 0.0021 | 0.00031 | 5.5 | <0.0001 |
| Max | <0.000007 | 7.8 | 0.0000040 | 0.000013 | 0.00018 | 0.00030 | 0.011 | 12 | 0.0032 | 1.4 | 0.0023 | 0.0015 | 8.6 | <0.0001 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| n | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 10th PCTL | <0.00001 | 9.6 | <0.000003 | 0.000020 | <0.0005 | <0.0005 | <0.01 | 1.8 | <0.001 | 2.1 | 0.0021 | 0.000040 | 3.9 | <0.0001 |
| 25th PCTL | <0.00001 | 10 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | <0.01 | 2.5 | <0.001 | 2.3 | 0.0023 | 0.000040 | 4.2 | <0.0001 |
| Median | <0.00001 | 12 | <0.000003 | 0.000029 | <0.0005 | <0.0005 | <0.01 | 3.0 | 0.0020 | 4.2 | 0.0026 | 0.000060 | 5.0 | 0.00020 |
| 75th PCTL | <0.00001 | 14 | <0.000003 | 0.000040 | <0.0005 | <0.0005 | <0.01 | 4.9 | 0.0020 | 6.1 | 0.0045 | 0.000095 | 5.5 | 0.00020 |
| 95th PCTL | <0.00001 | 16 | 0.0000053 | 0.00019 | <0.0005 | <0.0005 | <0.01 | 9.7 | 0.0030 | 9.1 | 0.0063 | 0.00013 | 6.5 | 0.0015 |

| Parameter | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| n | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| 10th PCTL | ND | 0.000083 | 0.0033 | <0.001 | <0.00001 | 0.012 | 0.00073 | <0.00002 | 0.000013 | 0.0077 | 0.0016 | 0.0000016 | <0.001 | ND |
| 25th PCTL | ND | 0.000088 | 0.0037 | <0.001 | <0.00001 | 0.013 | 0.0012 | <0.00002 | 0.000015 | 0.014 | 0.0017 | 0.0000025 | <0.001 | ND |
| Median | ND | 0.000090 | 0.0042 | <0.001 | 0.000020 | 0.014 | 0.0018 | <0.00002 | 0.000020 | 0.019 | 0.0018 | 0.0000050 | <0.001 | ND |
| 75th PCTL | ND | 0.000090 | 0.0045 | <0.001 | 0.000043 | 0.017 | 0.0034 | <0.00002 | 0.000024 | 0.021 | 0.0027 | 0.0000083 | 0.0013 | ND |
| 95th PCTL | ND | 0.000090 | 0.0046 | <0.001 | 0.000073 | 0.022 | 0.0064 | <0.00002 | 0.000025 | 0.022 | 0.0045 | 0.000011 | 0.0019 | ND |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| n | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 2 |
| 10th PCTL | 0.023 | <0.00001 | 0.00094 | 0.000062 | 0.000020 | 0.14 | <0.00005 | <0.000005 | 0.0000036 | <0.00003 | 0.00027 | <0.000001 | 0.0012 | <0.002 |
| 25th PCTL | 0.048 | <0.00001 | 0.0010 | 0.000095 | 0.000035 | 0.15 | <0.00005 | <0.000005 | 0.0000045 | <0.00003 | 0.00027 | <0.000001 | 0.0015 | <0.002 |
| Median | 0.089 | <0.00001 | 0.0011 | 0.00015 | 0.000060 | 0.15 | <0.00005 | <0.000005 | 0.0000060 | <0.00003 | 0.00027 | <0.000001 | 0.002 | <0.002 |
| 75th PCTL | 0.13 | 0.000065 | 0.0013 | 0.00058 | 0.000060 | 0.41 | 0.000075 | 0.000013 | 0.000063 | 0.000035 | 0.00027 | <0.000001 | 0.002 | <0.002 |
| 95th PCTL | 0.16 | 0.00011 | 0.0015 | 0.00092 | 0.000060 | 0.61 | 0.000095 | 0.000019 | 0.00011 | 0.000039 | 0.00027 | <0.000001 | 0.002 | <0.002 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| n | 0 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 93 | 0 |
| 10th PCTL | ND | <0.00002 | 0.0024 | <0.001 | <0.00001 | 0.027 | <0.0001 | <0.00002 | 0.000062 | 0.0016 | 0.00031 | 0.000007 | <0.001 | ND |
| 25th PCTL | ND | 0.000040 | 0.0032 | <0.001 | <0.00001 | 0.029 | 0.00030 | <0.00002 | 0.000084 | 0.0022 | 0.00037 | 0.00001 | <0.001 | ND |
| Median | ND | 0.000060 | 0.0038 | <0.001 | <0.00001 | 0.032 | 0.00050 | <0.00002 | 0.00013 | 0.0028 | 0.00049 | 0.000015 | <0.001 | ND |
| 75th PCTL | ND | 0.000090 | 0.0043 | <0.001 | <0.00001 | 0.039 | 0.00090 | <0.00002 | 0.00018 | 0.0035 | 0.00067 | 0.000031 | <0.001 | ND |
| 95th PCTL | ND | 0.00017 | 0.0057 | <0.001 | 0.000080 | 0.055 | 0.0015 | 0.000024 | 0.00029 | 0.0044 | 0.0013 | 0.000055 | 0.0070 | ND |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| n | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| 10th PCTL | ND | 0.000024 | 0.0015 | <0.001 | <0.00001 | 0.027 | 0.00014 | <0.00002 | 0.000043 | 0.00032 | 0.00037 | 0.0000058 | <0.001 | ND |
| 25th PCTL | ND | 0.000030 | 0.0017 | <0.001 | <0.00001 | 0.032 | 0.00020 | <0.00002 | 0.000074 | 0.00050 | 0.00056 | 0.000007 | <0.001 | ND |
| Median | ND | 0.000070 | 0.0040 | <0.001 | 0.000030 | 0.037 | 0.00020 | <0.00002 | 0.00015 | 0.0026 | 0.00067 | 0.000019 | 0.005 | ND |
| 75th PCTL | ND | 0.000090 | 0.0044 | <0.001 | 0.000060 | 0.041 | 0.00060 | <0.00002 | 0.00015 | 0.0027 | 0.00068 | 0.000022 | 0.0060 | ND |
| 95th PCTL | ND | 0.000098 | 0.0046 | <0.001 | 0.00012 | 0.14 | 0.00068 | <0.00002 | 0.00016 | 0.0038 | 0.00069 | 0.000027 | 0.0092 | ND |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| n | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
| 10th PCTL | ND | 0.000028 | 0.0013 | <0.001 | <0.00001 | 0.036 | <0.0001 | <0.00002 | 0.000052 | 0.00026 | 0.00055 | 0.0000066 | <0.001 | ND |
| 25th PCTL | ND | 0.000030 | 0.0014 | <0.001 | 0.000030 | 0.044 | 0.00020 | <0.00002 | 0.000059 | 0.00031 | 0.00073 | 0.0000070 | <0.001 | ND |
| Median | ND | 0.000040 | 0.0019 | <0.001 | 0.000030 | 0.057 | 0.00020 | <0.00002 | 0.00015 | 0.00036 | 0.00080 | 0.000014 | <0.001 | ND |
| 75th PCTL | ND | 0.000050 | 0.0024 | <0.001 | 0.000040 | 0.08 | 0.00030 | <0.00002 | 0.00024 | 0.00092 | 0.0011 | 0.000017 | 0.011 | ND |
| 95th PCTL | ND | 0.000078 | 0.0029 | <0.001 | 0.000052 | 0.11 | 0.00076 | <0.00002 | 0.00033 | 0.0031 | 0.0013 | 0.000021 | 0.013 | ND |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| n | 0 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 0 |
| 10th PCTL | ND | <0.00002 | 0.00086 | <0.001 | <0.00001 | 0.025 | <0.0001 | <0.00002 | 0.0000010 | 0.00039 | 0.00037 | <0.000001 | <0.001 | ND |
| 25th PCTL | ND | <0.00002 | 0.0013 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | 0.0000030 | 0.00057 | 0.00048 | <0.000001 | <0.001 | ND |
| Median | ND | 0.000040 | 0.0017 | <0.001 | <0.00001 | 0.03 | <0.0001 | <0.00002 | 0.0000050 | 0.00066 | 0.00059 | 0.0000020 | <0.001 | ND |
| 75th PCTL | ND | 0.000050 | 0.0031 | <0.001 | 0.000070 | 0.046 | <0.0001 | <0.00002 | 0.000021 | 0.00081 | 0.00087 | 0.0000080 | <0.001 | ND |
| 95th PCTL | ND | 0.000070 | 0.0052 | <0.001 | 0.00014 | 0.076 | 0.00026 | 0.000024 | 0.000059 | 0.00096 | 0.0015 | 0.000019 | <0.001 | ND |
| **Underground** | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | |
| n | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| Min | ND | 0.000030 | 0.0020 | <0.001 | <0.00001 | 0.025 | <0.0001 | <0.00002 | 0.0000010 | 0.0016 | 0.0030 | 0.0000020 | <0.001 | ND |
| Max | ND | 0.000040 | 0.0029 | <0.001 | 0.00002 | 0.061 | 0.0012 | <0.00002 | 0.000013 | 0.0062 | 0.0052 | 0.0000050 | <0.001 | ND |
| **Iron Formation (IF)** | | | | | | | | | | | | | | |
| n | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 1 |
| 10th PCTL | <0.003 | <0.00002 | 0.00086 | 0.00062 | 0.000052 | 0.049 | 0.000060 | 0.0000080 | 0.000015 | 0.00012 | 0.00033 | 0.000021 | 0.0050 | <0.002 |
| 25th PCTL | <0.003 | <0.00002 | 0.00098 | 0.00077 | 0.000055 | 0.075 | 0.000075 | 0.000013 | 0.000019 | 0.00015 | 0.00037 | 0.000041 | 0.0095 | <0.002 |
| Median | <0.003 | <0.00002 | 0.0012 | <0.001 | 0.000060 | 0.12 | <0.0001 | 0.000020 | 0.000025 | 0.00019 | 0.00043 | 0.000075 | 0.017 | <0.002 |
| 75th PCTL | <0.003 | 0.000080 | 0.0016 | <0.001 | 0.000060 | 0.19 | <0.0001 | 0.000075 | 0.00010 | 0.00036 | 0.00049 | 0.00011 | 0.017 | <0.002 |
| 95th PCTL | <0.003 | 0.00013 | 0.0020 | <0.001 | 0.000060 | 0.25 | <0.0001 | 0.00012 | 0.00016 | 0.00049 | 0.00054 | 0.00014 | 0.017 | <0.002 |
| **Sedimentary (SE)** | | | | | | | | | | | | | | |
| n | 0 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 0 |
| 10th PCTL | ND | <0.00002 | 0.0028 | <0.001 | <0.00001 | 0.030 | 0.00020 | <0.00002 | 0.000045 | 0.0017 | 0.00051 | 0.000012 | <0.001 | ND |
| 25th PCTL | ND | 0.000025 | 0.0033 | <0.001 | <0.00001 | 0.035 | 0.00025 | <0.00002 | 0.000056 | 0.0019 | 0.00066 | 0.000016 | <0.001 | ND |
| Median | ND | 0.000050 | 0.0043 | <0.001 | 0.000015 | 0.048 | 0.00045 | <0.00002 | 0.000068 | 0.0021 | 0.00076 | 0.000024 | <0.001 | ND |
| 75th PCTL | ND | 0.000075 | 0.0052 | <0.001 | 0.000043 | 0.055 | 0.00058 | <0.00002 | 0.000077 | 0.0022 | 0.00089 | 0.000029 | 0.0025 | ND |
| 95th PCTL | ND | 0.000080 | 0.0059 | <0.001 | 0.000065 | 0.11 | 0.0011 | <0.00002 | 0.00010 | 0.0024 | 0.0017 | 0.000033 | 0.0053 | ND |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | |
| n | 0 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 0 |
| 10th PCTL | ND | <0.00002 | 0.0022 | <0.001 | <0.00001 | 0.023 | 0.00024 | <0.00002 | 0.000018 | 0.00095 | 0.00064 | 0.0000092 | <0.001 | ND |
| 25th PCTL | ND | 0.000035 | 0.0028 | <0.001 | <0.00001 | 0.025 | 0.0003 | <0.00002 | 0.000027 | 0.0013 | 0.00086 | 0.000013 | <0.001 | ND |
| Median | ND | 0.000060 | 0.0044 | <0.001 | <0.00001 | 0.043 | 0.00065 | <0.00002 | 0.000044 | 0.0020 | 0.00093 | 0.000024 | 0.0015 | ND |
| 75th PCTL | ND | 0.000073 | 0.0048 | <0.001 | 0.000053 | 0.055 | 0.0016 | <0.00002 | 0.000052 | 0.0022 | 0.0011 | 0.000031 | 0.0040 | ND |
| 95th PCTL | ND | 0.000087 | 0.0053 | <0.001 | 0.000067 | 0.15 | 0.0027 | <0.00002 | 0.000064 | 0.0024 | 0.0016 | 0.000054 | 0.0077 | ND |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | |
| n | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| Min | 0.0060 | <0.00001 | 0.00090 | 0.00013 | 0.000080 | 0.029 | <0.00005 | <0.000005 | 0.0000080 | 0.00065 | ND | ND | 0.0020 | <0.002 |
| Max | 0.010 | 0.000020 | 0.0016 | 0.00018 | 0.000090 | 0.063 | <0.00005 | <0.000005 | 0.000017 | 0.00068 | ND | ND | 0.0020 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | |
| n | 0 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 0 |
| 10th PCTL | ND | <0.00002 | 0.00060 | <0.001 | <0.00001 | 0.017 | <0.0001 | <0.00002 | 0.0000010 | 0.00047 | 0.00035 | <0.000001 | <0.001 | ND |
| 25th PCTL | ND | <0.00002 | 0.00068 | <0.001 | <0.00001 | 0.021 | <0.0001 | <0.00002 | 0.0000018 | 0.00051 | 0.00049 | 0.0000018 | <0.001 | ND |
| Median | ND | 0.000030 | 0.0011 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | 0.0000030 | 0.00061 | 0.00086 | 0.0000020 | <0.001 | ND |
| 75th PCTL | ND | 0.000030 | 0.0018 | <0.001 | <0.00001 | 0.034 | <0.0001 | <0.00002 | 0.0000060 | 0.00074 | 0.0015 | 0.0000020 | <0.001 | ND |
| 95th PCTL | ND | 0.000098 | 0.0075 | <0.001 | <0.00001 | 0.059 | <0.0001 | <0.00002 | 0.000028 | 0.0014 | 0.0019 | 0.0000044 | <0.001 | ND |

**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**

**Summary Statistics for Tiriganiaq Ore Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| *Min* | 8.1 | 284 | 46 | 20 | 0.12 | 29 | <0.00001 | <0.00005 | 0.087 | 0.0042 | 0.011 | 0.0067 | <0.000007 | <0.000007 | 26 | <0.000003 | 0.000036 | <0.00008 | <0.0005 | <0.007 | 9.1 | 0.0022 | 4.0 | 0.0098 | 0.00074 | 18 | 0.00020 | 0.011 | 0.00010 | <0.0009 | 0.00025 | 0.00029 | 0.12 | <0.00005 | <0.000005 | 0.000069 | 0.000090 | *ND* | *ND* | <0.002 | <0.002 |
| *Max* | 8.2 | 353 | 50 | 24 | 0.12 | 48 | <0.00001 | <0.00005 | 0.11 | 0.014 | 0.015 | 0.0071 | <0.000007 | <0.000007 | 30 | 0.0000040 | 0.000060 | 0.00020 | 0.0014 | 0.0080 | 12 | 0.0036 | 4.7 | 0.012 | 0.0014 | 22 | 0.00030 | 0.016 | 0.00037 | <0.0009 | 0.00031 | 0.00056 | 0.15 | 0.00026 | 0.0000060 | 0.000073 | 0.00018 | *ND* | *ND* | 0.0030 | <0.002 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 0 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 8.0 | 136 | *ND* | 0.90 | *ND* | 2.0 | <0.0001 | <0.00001 | 0.57 | 0.011 | 0.0086 | *ND* | <0.00002 | <0.00001 | 14 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.0032 | 8.7 | 0.0012 | 2.7 | 0.0022 | 0.00022 | 4.8 | 0.00016 | *ND* | 0.000028 | 0.0010 | <0.001 | <0.00001 | 0.045 | <0.0001 | <0.00002 | 0.000054 | 0.00012 | 0.00067 | 0.0000020 | <0.001 | *ND* |
| *25th PCTL* | 8.0 | 146 | *ND* | 1.1 | *ND* | 2.6 | <0.0001 | <0.00001 | 0.58 | 0.015 | 0.010 | *ND* | <0.00002 | <0.00001 | 15 | <0.000003 | 0.000046 | <0.0005 | <0.0005 | 0.0035 | 9.8 | 0.0015 | 3.1 | 0.0025 | 0.00030 | 5.1 | 0.00025 | *ND* | 0.000040 | 0.0011 | <0.001 | <0.00001 | 0.05 | <0.0001 | <0.00002 | 0.000058 | 0.00017 | 0.00079 | 0.0000020 | <0.001 | *ND* |
| *Median* | 8.0 | 162 | *ND* | 1.3 | *ND* | 3.4 | <0.0001 | <0.00001 | 0.60 | 0.022 | 0.012 | *ND* | <0.00002 | <0.00001 | 17 | <0.000003 | 0.000056 | <0.0005 | <0.0005 | 0.0040 | 12 | 0.0020 | 3.7 | 0.0031 | 0.00042 | 5.5 | 0.00040 | *ND* | 0.000060 | 0.0011 | <0.001 | <0.00001 | 0.057 | <0.0001 | <0.00002 | 0.000064 | 0.00024 | 0.00098 | 0.0000020 | <0.001 | *ND* |
| *75th PCTL* | 8.0 | 164 | *ND* | 1.4 | *ND* | 6.1 | <0.0001 | <0.00001 | 0.62 | 0.45 | 0.020 | *ND* | <0.00002 | <0.00001 | 17 | <0.000003 | 0.000068 | <0.0005 | 0.00065 | 0.0065 | 12 | 0.0025 | 3.9 | 0.0032 | 0.00097 | 6.4 | 0.00045 | *ND* | 0.00014 | 0.0037 | <0.001 | 0.00003 | 0.077 | 0.00015 | <0.00002 | 0.00015 | 0.00098 | 0.0011 | 0.0000020 | <0.001 | *ND* |
| *95th PCTL* | 8.0 | 165 | *ND* | 1.4 | *ND* | 8.2 | <0.0001 | <0.00001 | 0.64 | 0.79 | 0.026 | *ND* | <0.00002 | <0.00001 | 18 | <0.000003 | 0.000078 | <0.0005 | 0.00077 | 0.0085 | 12 | 0.0029 | 4.0 | 0.0033 | 0.0014 | 7.1 | 0.00049 | *ND* | 0.00020 | 0.0058 | <0.001 | 0.000046 | 0.093 | 0.00019 | <0.00002 | 0.00021 | 0.0016 | 0.0013 | 0.0000020 | <0.001 | *ND* |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| *Min* | 8.0 | 187 | 30 | 19 | 0.080 | 13 | <0.00001 | <0.00005 | 0.081 | 0.0091 | 0.013 | 0.0021 | <0.000007 | <0.000007 | 13 | <0.000003 | 0.0000060 | 0.00010 | 0.00020 | <0.007 | 8.0 | 0.0013 | 0.96 | 0.0043 | 0.00032 | 14 | 0.00050 | <0.003 | <0.00001 | <0.0009 | 0.00028 | <0.00006 | 0.088 | 0.000050 | <0.000005 | 0.000010 | 0.000090 | *ND* | *ND* | <0.002 | <0.002 |
| *Max* | 8.3 | 707 | 34 | 30 | 0.13 | 200 | <0.00001 | <0.00005 | 0.16 | 0.014 | 0.021 | 0.015 | <0.000007 | <0.000007 | 63 | 0.0000070 | 0.00010 | 0.00014 | 0.0009 | <0.007 | 25 | 0.0048 | 13 | 0.025 | 0.00071 | 25 | 0.00060 | <0.003 | <0.00001 | 0.0010 | 0.00055 | 0.00026 | 0.37 | 0.00021 | <0.000005 | 0.00016 | 0.00020 | *ND* | *ND* | <0.002 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 0 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 |
| *10th PCTL* | 8.0 | 185 | *ND* | 2.1 | *ND* | 2.4 | <0.0001 | <0.00001 | 0.54 | 0.14 | 0.010 | *ND* | <0.00002 | <0.00001 | 15 | <0.000003 | 0.00013 | <0.0005 | <0.0005 | <0.002 | 9.3 | 0.0030 | 8.1 | 0.0072 | 0.00035 | 6.2 | 0.0011 | *ND* | 0.000074 | 0.0017 | <0.001 | <0.00001 | 0.038 | <0.0001 | <0.00002 | 0.000019 | 0.00061 | 0.00057 | <0.000001 | <0.001 | *ND* |
| *25th PCTL* | 8.0 | 186 | *ND* | 2.4 | *ND* | 2.5 | <0.0001 | <0.00001 | 0.55 | 0.21 | 0.012 | *ND* | <0.00002 | <0.00001 | 15 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | <0.002 | 9.5 | 0.0030 | 8.1 | 0.0073 | 0.00044 | 6.3 | 0.0012 | *ND* | 0.000080 | 0.0022 | <0.001 | <0.00001 | 0.038 | <0.0001 | <0.00002 | 0.000019 | 0.00072 | 0.00064 | <0.000001 | <0.001 | *ND* |
| *Median* | 8.1 | 188 | *ND* | 2.8 | *ND* | 2.6 | <0.0001 | <0.00001 | 0.56 | 0.34 | 0.014 | *ND* | <0.00002 | <0.00001 | 16 | <0.000003 | 0.00016 | <0.0005 | <0.0005 | <0.002 | 9.7 | 0.0030 | 8.1 | 0.0074 | 0.00058 | 6.3 | 0.0013 | *ND* | 0.000090 | 0.0031 | <0.001 | <0.00001 | 0.039 | <0.0001 | <0.00002 | 0.000019 | 0.00091 | 0.00075 | <0.000001 | <0.001 | *ND* |
| *75th PCTL* | 8.1 | 190 | *ND* | 2.8 | *ND* | 2.9 | <0.0001 | <0.00001 | 0.60 | 0.51 | 0.016 | *ND* | <0.00002 | <0.00001 | 16 | <0.000003 | 0.00017 | <0.0005 | <0.0005 | <0.002 | 11 | 0.0035 | 8.4 | 0.0075 | 0.00062 | 7.3 | 0.0015 | *ND* | 0.000095 | 0.0051 | <0.001 | 0.000015 | 0.042 | 0.00015 | <0.00002 | 0.000031 | 0.0012 | 0.00091 | 0.0000015 | <0.001 | *ND* |
| *95th PCTL* | 8.1 | 192 | *ND* | 2.8 | *ND* | 3.1 | <0.0001 | <0.00001 | 0.62 | 0.65 | 0.017 | *ND* | <0.00002 | <0.00001 | 16 | <0.000003 | 0.00018 | <0.0005 | <0.0005 | <0.002 | 11 | 0.0039 | 8.7 | 0.0076 | 0.00065 | 8 | 0.0017 | *ND* | 0.000099 | 0.0066 | <0.001 | 0.000019 | 0.045 | 0.00019 | <0.00002 | 0.000040 | 0.0014 | 0.0010 | 0.0000019 | <0.001 | *ND* |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| *Min* | 7.9 | 269 | 44 | 7.0 | 0.060 | 48 | <0.00001 | <0.00005 | 0.0040 | 0.00030 | 0.017 | 0.0082 | <0.000007 | <0.000007 | 28 | <0.000003 | 0.000013 | <0.00008 | 0.00030 | <0.007 | 8.9 | 0.0030 | 4.3 | 0.0075 | 0.0016 | 4.7 | 0.00010 | <0.003 | <0.00001 | <0.0009 | 0.00052 | <0.00006 | 0.18 | <0.00005 | <0.000005 | 0.00011 | <0.00001 | *ND* | *ND* | <0.002 | <0.002 |
| *Max* | 8.1 | 942 | 45 | 15 | 0.12 | 330 | <0.00001 | <0.00005 | 0.079 | 0.0080 | 0.023 | 0.11 | <0.000007 | <0.000007 | 150 | <0.000003 | 0.000038 | <0.00008 | 0.00060 | <0.007 | 15 | 0.0035 | 15 | 0.088 | 0.0072 | 6.8 | 0.00070 | <0.003 | 0.000030 | <0.0009 | 0.0017 | <0.00006 | 2.7 | <0.00005 | <0.000005 | 0.00063 | 0.000020 | *ND* | *ND* | <0.002 | <0.002 |
| **Tiriganiaq Formation (TIRFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 8.3 | 208 | 38 | 12 | 0.18 | 24 | <0.00001 | <0.00005 | 0.13 | 0.29 | 0.015 | 0.0029 | <0.000007 | <0.000007 | 18 | <0.000003 | 0.000024 | 0.00010 | 0.00090 | <0.007 | 7.4 | 0.0023 | 3.8 | 0.0067 | 0.0049 | 12 | 0.0012 | <0.003 | 0.000030 | 0.0048 | 0.0015 | 0.00008 | 0.12 | <0.0001 | <0.000005 | 0.000039 | 0.00061 | *ND* | *ND* | <0.002 | <0.002 |
| **Upper Oxide Formation (UOFM)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 7.9 | 284 | 26 | 9.0 | 0.090 | 75 | <0.00001 | <0.00005 | 0.17 | 0.045 | 0.024 | 0.011 | <0.000007 | <0.000007 | 26 | 0.000022 | 0.000037 | <0.00008 | 0.0011 | <0.007 | 5.9 | 0.0046 | 7.1 | 0.015 | 0.0033 | 9.4 | 0.00020 | <0.003 | 0.0020 | 0.0013 | 0.0046 | <0.00006 | 0.22 | <0.00005 | 0.0000080 | 0.000061 | 0.000060 | *ND* | *ND* | <0.002 | <0.002 |
| **Upper Oxide Formation /Iron Formation (VO/IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 8.0 | 371 | 32 | 4.0 | 0.060 | 99 | <0.00001 | <0.00005 | 0.076 | 0.00090 | 0.013 | 0.0075 | <0.000007 | <0.000007 | 52 | <0.000003 | 0.0000090 | <0.00008 | 0.00040 | <0.007 | 9.2 | 0.0024 | 3.4 | 0.025 | 0.00086 | 3.0 | 0.00030 | <0.003 | <0.00001 | <0.0009 | 0.00041 | <0.00006 | 0.27 | <0.00005 | <0.000005 | 0.000059 | <0.00001 | *ND* | *ND* | <0.002 | <0.002 |

Notes: ND- no data

**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**

**Summary Statistics for Wesmeg Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Gabbro (GB)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 8.3 | 67 | *ND* | 0.70 | *ND* | 1.1 | <0.0001 | <0.00001 | 0.91 | 0.0079 | 0.011 | *ND* | <0.00002 | <0.00001 | 4.0 | <0.000003 | 0.000012 | <0.0005 | <0.0005 | 0.0030 | 3.7 | <0.001 | 0.37 | 0.00037 | 0.00010 | 8.3 | <0.0001 | *ND* | 0.000080 | 0.0043 | <0.001 | <0.00001 | 0.010 | <0.0002 | <0.00002 | 0.0000020 | 0.012 | 0.0027 | <0.000001 | <0.001 | *ND* |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 7.7 | 666 | 25 | 12 | 0.060 | 240 | <1E-05 | <0.00005 | 0.0050 | 0.00050 | 0.024 | 0.0055 | <0.000007 | <0.000007 | 93 | 0.00016 | 0.000089 | <0.00008 | 0.00060 | <0.007 | 1.5 | 0.0012 | 17 | 0.13 | 0.00084 | 5.1 | <0.0001 | 0.0030 | 0.000060 | <0.0009 | 0.0020 | 0.00014 | 0.079 | 0.00005 | <0.00002 | 0.000040 | 0.000010 | *ND* | *ND* | 0.019 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 43 | 43 | 1 | 43 | 1 | 43 | 43 | 43 | 43 | 43 | 43 | 1 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 1 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 42 | 42 | 43 | 1 |
| *10th PCTL* | 7.8 | 64 | 44 | 0.50 | 0.26 | 0.60 | <0.0001 | <0.00001 | 0.27 | 0.0013 | 0.0072 | 0.11 | <0.00002 | <0.00001 | 5.5 | <0.000003 | 0.000015 | <0.0005 | <0.0005 | <0.002 | 1.5 | <0.001 | 0.58 | 0.00029 | 0.000070 | 3.6 | <0.0001 | <0.003 | 0.000040 | 0.0015 | <0.001 | <0.00001 | 0.016 | <0.0001 | <0.00002 | <0.000001 | 0.00051 | 0.0012 | <0.000001 | <0.001 | <0.002 |
| *25th PCTL* | 7.9 | 81 | 44 | 0.75 | 0.26 | 0.75 | <0.0001 | <0.00001 | 0.39 | 0.0024 | 0.0082 | 0.11 | <0.00002 | <0.00001 | 6.3 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.002 | 2.4 | <0.001 | 0.90 | 0.00062 | 0.000090 | 4.1 | <0.0001 | <0.003 | 0.000050 | 0.0020 | <0.001 | <0.00001 | 0.02 | <0.0001 | <0.00002 | <0.000001 | 0.00062 | 0.0014 | <0.000001 | <0.001 | <0.002 |
| *Median* | 8.1 | 100 | 44 | 2.1 | 0.26 | 0.90 | <0.0001 | <0.00001 | 0.58 | 0.0042 | 0.011 | 0.11 | <0.00002 | <0.00001 | 8.6 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | <0.002 | 5.1 | <0.001 | 2.4 | 0.0011 | 0.00012 | 6.0 | <0.0001 | <0.003 | 0.000070 | 0.0027 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | <0.000001 | 0.0013 | 0.0017 | 0.000002 | <0.001 | <0.002 |
| *75th PCTL* | 8.2 | 126 | 44 | 3.2 | 0.26 | 1.5 | <0.0001 | <0.00001 | 0.72 | 0.016 | 0.013 | 0.11 | <0.00002 | <0.00001 | 10 | <0.000003 | 0.000052 | <0.0005 | <0.0005 | <0.002 | 6.5 | <0.001 | 5.6 | 0.0015 | 0.00019 | 7.6 | 0.00035 | <0.003 | 0.000085 | 0.0039 | <0.001 | <0.00001 | 0.038 | <0.0001 | <0.00002 | 0.0000020 | 0.0017 | 0.0028 | 0.000002 | <0.001 | <0.002 |
| *95th PCTL* | 8.8 | 190 | 44 | 12 | 0.26 | 2.5 | <0.0001 | <0.000029 | 0.90 | 0.11 | 0.016 | 0.11 | <0.00002 | 0.000019 | 13 | <0.000003 | 0.00014 | <0.0005 | 0.00059 | 0.0060 | 10 | <0.001 | 6.7 | 0.0026 | 0.00074 | 12 | 0.0024 | <0.003 | 0.00013 | 0.0049 | <0.001 | 0.000049 | 0.069 | 0.00029 | 0.000029 | 0.000012 | 0.0067 | 0.0043 | 0.000005 | 0.004 | <0.002 |
| **Ultramafics (UV)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 4 | 4 | 0 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 0 |
| *10th PCTL* | 7.8 | 97 | *ND* | 0.97 | *ND* | 0.52 | <0.0001 | <0.00001 | 0.051 | 0.0036 | 0.0095 | *ND* | <0.00002 | <0.00001 | 6.9 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | <0.002 | 1.8 | <0.001 | 2.4 | 0.00032 | 0.000063 | 5.4 | <0.0001 | *ND* | 0.000053 | 0.0013 | <0.001 | <0.00001 | 0.031 | <0.0001 | <0.00002 | <0.000001 | 0.00083 | 0.0012 | <0.000001 | <0.001 | *ND* |
| *25th PCTL* | 7.9 | 121 | *ND* | 1.4 | *ND* | 0.70 | <0.0001 | <0.00001 | 0.083 | 0.0037 | 0.012 | *ND* | <0.00002 | <0.00001 | 7.3 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | <0.002 | 2.4 | <0.001 | 3.5 | 0.00048 | 0.000068 | 5.5 | <0.0001 | *ND* | 0.000058 | 0.0014 | <0.001 | <0.00001 | 0.039 | <0.0001 | <0.00002 | <0.000001 | 0.00098 | 0.0012 | <0.000001 | <0.001 | *ND* |
| *Median* | 7.9 | 135 | *ND* | 2.7 | *ND* | 1.1 | <0.0001 | <0.00001 | 0.25 | 0.069 | 0.013 | *ND* | <0.00002 | <0.00001 | 7.6 | <0.000003 | 0.000063 | <0.0005 | <0.0005 | <0.002 | 3.8 | <0.001 | 4.9 | 0.00061 | 0.000095 | 7.4 | 0.00030 | *ND* | 0.000060 | 0.0026 | <0.001 | <0.00001 | 0.047 | <0.0001 | <0.00002 | <0.000001 | 0.0012 | 0.0020 | <0.000001 | <0.001 | *ND* |
| *75th PCTL* | 8.0 | 136 | *ND* | 4.6 | *ND* | 1.5 | <0.0001 | <0.00001 | 0.40 | 0.21 | 0.015 | *ND* | <0.00002 | <0.00001 | 8.1 | <0.000003 | 0.00010 | <0.0005 | <0.0005 | <0.002 | 5.7 | <0.001 | 6.0 | 0.00077 | 0.00013 | 9.5 | 0.00083 | *ND* | 0.000060 | 0.0041 | <0.001 | <0.00001 | 0.051 | <0.0001 | 0.000023 | 0.0000023 | 0.0014 | 0.0028 | 0.0000013 | <0.001 | *ND* |
| *95th PCTL* | 8.0 | 139 | *ND* | 6.4 | *ND* | 1.7 | <0.0001 | <0.00001 | 0.42 | 0.40 | 0.020 | *ND* | <0.00002 | <0.00001 | 9.0 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | <0.002 | 7.3 | <0.001 | 7.1 | 0.0010 | 0.00014 | 10 | 0.0016 | *ND* | 0.000060 | 0.0049 | <0.001 | <0.00001 | 0.052 | <0.0001 | 0.000029 | 0.0000053 | 0.0017 | 0.0029 | 0.0000019 | <0.001 | *ND* |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| *Min* | 7.7 | 417 | 25 | 4.0 | 0.060 | 130 | <1E-05 | <0.00005 | 0.0030 | 0.0014 | 0.014 | 0.0073 | <0.000007 | <0.000007 | 57 | 0.0000040 | 0.000024 | <0.00008 | <0.0002 | <0.007 | 4.2 | 0.0014 | 8.6 | 0.098 | 0.00042 | 1.6 | <0.0001 | <0.003 | <0.00001 | <0.0009 | 0.00050 | 0.000090 | 0.078 | 0.000050 | 0.0000070 | 0.000030 | 0.000010 | *ND* | *ND* | 0.0020 | <0.002 |
| *Max* | 7.8 | 733 | 33 | 5.0 | 0.060 | 310 | <1E-05 | <0.00005 | 0.0030 | 0.0058 | 0.037 | 0.027 | <0.000007 | 0.000022 | 110 | 0.000057 | 0.00015 | <0.00008 | 0.0013 | <0.007 | 7.0 | 0.0016 | 18 | 0.55 | 0.0038 | 2.7 | 0.00030 | <0.003 | 0.000030 | <0.0009 | 0.0017 | 0.00015 | 0.13 | 0.00016 | 0.000025 | 0.00017 | 0.000060 | *ND* | *ND* | 0.0070 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 8.1 | 220 | 46 | 23 | 0.070 | 6 | <1E-05 | <0.00005 | 0.13 | 0.021 | 0.010 | 0.00099 | 0.000008 | <0.000007 | 12 | <0.000003 | 0.000072 | <0.00008 | <0.0002 | <0.007 | 13 | 0.0028 | 4.6 | 0.0048 | 0.00037 | 15 | 0.00060 | <0.003 | 0.000070 | 0.0012 | 0.00074 | <0.0001 | 0.018 | 0.000050 | 0.000014 | 0.000011 | 0.00039 | *ND* | *ND* | 0.0020 | <0.002 |

**Summary Statistics for Wesmeg Ore Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 7.8 | 1050 | 25 | 40 | 0.060 | 380 | <1E-05 | <0.00005 | 0.018 | 0.00070 | 0.016 | 0.0035 | <0.000007 | <0.000007 | 160 | <0.000003 | 0.000066 | 0.00013 | 0.00070 | <0.007 | 0.25 | 0.0017 | 21 | 0.052 | 0.0015 | 12 | 0.00020 | <0.003 | <0.00001 | <0.0009 | 0.0034 | 0.00015 | 0.15 | 0.00009 | <0.000005 | 0.00016 | 0.000040 | *ND* | *ND* | <0.002 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| *Min* | 7.4 | 192 | 37 | 10 | 0.060 | 16 | <1E-05 | <0.00005 | 0.15 | 0.0053 | 0.012 | 0.0015 | <0.000007 | <0.000007 | 13 | <0.000003 | 0.000021 | <0.00008 | <0.0002 | <0.007 | 6.0 | 0.0021 | 2.1 | 0.0064 | 0.00087 | 11 | 0.00020 | 0.0040 | <0.00001 | 0.0012 | 0.00097 | 0.000060 | 0.025 | <5E-05 | <0.000005 | 0.0000020 | 0.00048 | *ND* | *ND* | <0.002 | <0.002 |
| *Max* | 8.2 | 198 | 39 | 15 | 0.060 | 20 | <1E-05 | <0.00005 | 0.16 | 0.032 | 0.017 | 0.0019 | <0.000007 | 0.000011 | 15 | <0.000003 | 0.000096 | 0.00069 | 0.0010 | 0.043 | 10 | 0.0027 | 4.8 | 0.0077 | 0.0016 | 11 | 0.0013 | 0.0050 | 0.0018 | 0.0014 | 0.0020 | 0.00023 | 0.026 | 0.00008 | <0.000005 | 0.0000060 | 0.00085 | *ND* | *ND* | <0.002 | <0.002 |
| **Ultramafic Volcanics (UV)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| *Value* | 8.5 | 187 | *ND* | 0.80 | *ND* | 0.8 | <0.0001 | <0.00001 | 0.31 | 0.0070 | 0.0071 | *ND* | <0.00002 | <0.00001 | 11 | <0.000003 | 0.000044 | 0.00050 | <0.0005 | <0.002 | 6.0 | <0.001 | 7.7 | 0.0012 | 0.00015 | 4.0 | <0.0001 | *ND* | 0.000020 | 0.0020 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | <0.000001 | 0.00071 | 0.0013 | <0.000001 | 0.001 | *ND* |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| *Min* | 7.6 | 852 | 25 | 6.0 | 0.060 | 360 | <1E-05 | <0.00005 | 0.0010 | 0.00030 | 0.027 | 0.0065 | <0.000007 | <0.000007 | 140 | 0.000092 | 0.00079 | <0.00008 | 0.00030 | <0.007 | 0.83 | 0.0026 | 12 | 0.27 | 0.00038 | 3.4 | 0.00060 | <0.003 | 0.000030 | <0.0009 | 0.0018 | 0.000070 | 0.16 | <5E-05 | <0.000005 | 0.000031 | 0.000010 | *ND* | *ND* | 0.026 | <0.002 |
| *Max* | 7.7 | 1442 | 28 | 13 | 0.060 | 680 | <1E-05 | <0.00005 | 0.0030 | 0.053 | 0.034 | 0.038 | <0.000007 | <0.000007 | 230 | 0.00066 | 0.00094 | <0.00008 | 0.00040 | <0.007 | 1.3 | 0.0026 | 50 | 1.6 | 0.0065 | 7.5 | 0.0011 | <0.003 | 0.0021 | 0.0017 | 0.016 | <0.0001 | 0.26 | <5E-05 | <0.000005 | 0.00067 | 0.000030 | *ND* | *ND* | 0.070 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Valuie* | 8.1 | 354 | 33 | 8.0 | 0.28 | 100 | <1E-05 | <0.00005 | 0.11 | 0.00050 | 0.0080 | 0.12 | <0.000007 | <0.000007 | 40 | <0.000003 | 0.000026 | 0.000090 | 0.0014 | <0.007 | 8.1 | 0.0058 | 5.9 | 0.023 | 0.00077 | 7.4 | 0.00020 | <0.003 | 0.000050 | 0.0013 | 0.0015 | 0.000070 | 0.91 | <5E-05 | <0.000005 | 0.000052 | 0.00044 | *ND* | *ND* | <0.002 | <0.002 |
| **Mafic Volcanics/Iron Formation (VO/IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 7.7 | 712 | 31 | 6.0 | 0.060 | 290 | <1E-05 | <0.00005 | 0.018 | 0.015 | 0.018 | 0.0032 | <0.000007 | 0.000039 | 130 | 0.000010 | 0.000072 | 0.000090 | 0.0026 | <0.007 | 0.95 | 0.0014 | 5.4 | 0.098 | 0.00026 | 1.8 | 0.00020 | 0.013 | 0.000020 | <0.0009 | 0.0012 | 0.00018 | 0.13 | <5E-05 | <0.000005 | 0.00026 | 0.000060 | *ND* | *ND* | 0.0030 | <0.002 |

Notes: ND- no data

**Appendix D-5: Summary Statistics for Shake Flask Extraction Results**

**Summary Statistics for Wesmeg North Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Open Pit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Iron Formation (IF)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 8.1 | 506 | 36 | 3.0 | 0.080 | 149 | <0.00001 | <0.00005 | 0.024 | 0.011 | 0.018 | 0.015 | <0.000007 | <0.000007 | 57.7 | 0.0000080 | 0.00018 | 0.00018 | <0.0002 | <0.007 | 8.0 | 0.0014 | 13 | 0.047 | 0.0047 | 3.4 | 0.0012 | <0.003 | 0.000020 | <0.0009 | 0.0013 | <0.00006 | 0.089 | <0.00005 | 0.000040 | 0.000043 | 0.000090 | *ND* | *ND* | <0.002 | <0.002 |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 3 | 3 |
| *10th PCTL* | 8.3 | 178 | 50 | 3.6 | 0.060 | 9.6 | <0.00001 | <0.00005 | 0.082 | 0.0048 | 0.0076 | 0.00057 | <0.000007 | <0.000007 | 9.2 | <0.000003 | 0.000025 | 0.000084 | <0.0002 | <0.007 | 3.5 | 0.0016 | 5.1 | 0.0042 | 0.00028 | 6.8 | 0.00030 | <0.003 | <0.00001 | 0.0010 | 0.00040 | <0.00006 | 0.0093 | <0.00005 | <0.000005 | <0.000002 | 0.00037 | *ND* | *ND* | <0.002 | <0.002 |
| *25th PCTL* | 8.4 | 180 | 51 | 4.5 | 0.060 | 11 | <0.00001 | <0.00005 | 0.10 | 0.011 | 0.010 | 0.00075 | <0.000007 | <0.000007 | 9.8 | <0.000003 | 0.000057 | 0.000090 | <0.0002 | <0.007 | 5.1 | 0.0017 | 5.5 | 0.0046 | 0.00035 | 9.5 | 0.00060 | <0.003 | <0.00001 | 0.0013 | 0.00043 | <0.00006 | 0.012 | <0.00005 | <0.000005 | <0.000002 | 0.00042 | *ND* | *ND* | <0.002 | <0.002 |
| *Median* | 8.4 | 183 | 52 | 6.0 | 0.060 | 12 | <0.00001 | <0.00005 | 0.14 | 0.022 | 0.014 | 0.0011 | <0.000007 | <0.000007 | 11 | <0.000003 | 0.00011 | 0.00010 | <0.0002 | <0.007 | 7.9 | 0.0018 | 6.1 | 0.0052 | 0.00046 | 14 | 0.0011 | <0.003 | <0.00001 | 0.0016 | 0.00047 | <0.00006 | 0.016 | <0.00005 | <0.000005 | <0.000002 | 0.00050 | *ND* | *ND* | <0.002 | <0.002 |
| *75th PCTL* | 8.5 | 206 | 54 | 15 | 0.065 | 13 | <0.00001 | <0.00005 | 0.15 | 0.035 | 0.018 | 0.0018 | <0.000007 | <0.000007 | 12 | <0.000003 | 0.00016 | 0.00011 | 0.00030 | <0.007 | 8.0 | 0.0019 | 6.9 | 0.0054 | 0.00057 | 17 | 0.0013 | <0.003 | <0.00001 | 0.0021 | 0.00073 | 0.000075 | 0.025 | <0.00005 | 0.0000090 | 0.0000035 | 0.00072 | *ND* | *ND* | <0.002 | <0.002 |
| *95th PCTL* | 8.5 | 224 | 55 | 21 | 0.069 | 14 | <0.00001 | <0.00005 | 0.15 | 0.046 | 0.0212 | 0.0024 | <0.000007 | <0.000007 | 12 | <0.000003 | 0.00020 | 0.00011 | 0.00038 | <0.007 | 8.1 | 0.0020 | 7.6 | 0.0055 | 0.00066 | 19 | 0.0014 | <0.003 | <0.00001 | 0.0025 | 0.00094 | 0.000087 | 0.033 | <0.00005 | 0.000012 | 0.0000047 | 0.00090 | *ND* | *ND* | <0.002 | <0.002 |
| **Underground** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Mafic Volcanics (VO)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *n* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| *Value* | 8.4 | 171 | 45 | 10 | 0.060 | 9.0 | <0.00001 | <0.00005 | 0.16 | 0.037 | 0.0060 | 0.00064 | <0.000007 | <0.000007 | 11 | <0.000003 | 0.000079 | 0.000080 | <0.0002 | <0.007 | 9.5 | 0.0025 | 4.3 | 0.0053 | 0.0064 | 11 | 0.00070 | 0.0040 | <0.00001 | 0.0016 | 0.0014 | 0.000080 | 0.017 | <0.00005 | <0.000005 | <0.000002 | 0.00053 | *ND* | *ND* | <0.002 | <0.002 |

Notes: ND- no data

**Appendix D-4: Summary Statistics for Shake Flask Extraction Results**
**Connate Water SFE Results for Waste Rock Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Connate Water (Influent)** | 7.7 | 75,008 | 22 | 36,000 | 0.08 | 2,553 | <0.00001 | <0.00005 | <0.001 | 0.017 | 1.1 | 0.18 | <0.000007 | 0.00036 | 1,920 | 0.0012 | 0.00010 | 0.015 | <0.0002 | <0.007 | 568 | 0.29 | 1,800 | 0.074 | 0.025 | 15,100 | 0.00010 | <0.003 | <0.00001 | <0.0009 | 0.0019 | <0.00006 | 51 | 0.00010 | <0.000005 | <0.000002 | 0.0045 | *ND* | *ND* | <0.002 | <0.002 |
| **Tiriganiaq UG** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Iron Formation (IF)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD258462* | 7.5 | 76,465 | 30 | 31,000 | 0.14 | 2,766 | <0.00001 | <0.00005 | 0.012 | 0.046 | 0.81 | 0.24 | <0.000007 | 0.0023 | 2,070 | 0.0013 | 0.0092 | 0.0013 | 0.0018 | 0.020 | 630 | 0.18 | 1,680 | 0.18 | 0.022 | 13,300 | 0.0226 | <0.003 | 0.00093 | 0.0047 | 0.00087 | 0.00081 | 44 | <0.00005 | 0.00023 | 0.0023 | 0.00086 | *ND* | *ND* | 0.0040 | <0.002 |
| ***Upper Oxide Formation (UOFM)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD199214* | 7.4 | 75,645 | 29 | 36,000 | 0.14 | 3,124 | <0.00001 | <0.00005 | 0.020 | 0.020 | 1.1 | 0.20 | <0.000007 | 0.0028 | 1,870 | 0.0016 | 0.0024 | 0.011 | 0.069 | <0.007 | 564 | 0.26 | 1,740 | 0.15 | 0.025 | 14,400 | 0.086 | 0.10 | <0.00001 | 0.0032 | 0.0023 | <0.00006 | 49 | 0.00060 | 0.00020 | 0.0011 | 0.0038 | *ND* | *ND* | 0.15 | <0.002 |
| *CAEXD211120* | 7.5 | 75,445 | 29 | 37,000 | 0.10 | 2,683 | <0.00001 | <0.00005 | 0.0050 | 0.019 | 1.1 | 0.27 | <0.000007 | 0.0004 | 1,850 | 0.0013 | 0.0020 | 0.013 | 0.00020 | <0.007 | 548 | 0.27 | 1,750 | 0.15 | 0.024 | 14,700 | 0.0026 | <0.003 | <0.00001 | <0.0009 | 0.00060 | <0.00006 | 49 | <0.00005 | <0.000005 | 0.0022 | 0.0055 | *ND* | *ND* | 0.0030 | <0.002 |
| **Wesmeg UG** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Iron Formation (IF)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD160927* | 7.1 | 76,143 | 23 | 34,000 | 0.11 | 2,867 | <0.00001 | <0.00005 | 0.018 | 0.018 | 0.71 | 0.19 | <0.000007 | 0.0014 | 1,960 | 0.0059 | 0.00070 | 0.0053 | 0.0089 | 0.10 | 594 | 0.16 | 1,550 | 1.53 | 0.013 | 13,200 | 0.055 | <0.003 | 0.00040 | 0.012 | 0.0013 | 0.0024 | 41 | <0.00005 | <0.000005 | 0.00080 | 0.0017 | *ND* | *ND* | 0.13 | <0.002 |
| *CAEXD163315* | 7.4 | 75,944 | 30 | 37,000 | 0.10 | 2,698 | <0.00001 | <0.00005 | <0.001 | 0.023 | 1.1 | 0.17 | <0.000007 | 0.0025 | 1,940 | 0.0010 | 0.00090 | 0.0096 | 0.014 | <0.007 | 550 | 0.27 | 1,770 | 0.58 | 0.026 | 14,500 | 0.011 | <0.003 | <0.00001 | 0.0012 | 0.0021 | <0.00006 | 49 | <0.00005 | <0.000005 | <0.000002 | 0.0034 | *ND* | *ND* | 0.026 | <0.002 |
| ***Mafic Volcanics (VO)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD178628* | 7.5 | 75,645 | 32 | 36,000 | 0.080 | 2,806 | <0.00001 | <0.00005 | <0.001 | 0.032 | 1.0 | 0.29 | <0.000007 | 0.0051 | 1,870 | 0.0013 | 0.0059 | 0.019 | 0.019 | <0.007 | 564 | 0.21 | 1,760 | 0.34 | 0.023 | 14,600 | 0.036 | <0.003 | <0.00001 | 0.012 | 0.0028 | <0.00006 | 49 | 0.0011 | 0.00060 | 0.00020 | 0.0066 | *ND* | *ND* | 0.056 | <0.002 |
| *CAEXD237685* | 7.4 | 76,465 | 31 | 34,000 | 0.080 | 2,659 | <0.00001 | 0.00022 | 0.013 | 0.032 | 0.84 | 0.20 | <0.000007 | 0.000040 | 2,180 | 0.0016 | 0.0029 | 0.0022 | 0.0050 | 0.010 | 647 | 0.18 | 1,630 | 0.20 | 0.037 | 13,600 | 0.016 | <0.003 | 0.00013 | 0.0025 | 0.0019 | 0.00138 | 45 | 0.000070 | 0.00012 | 0.00033 | 0.0012 | *ND* | *ND* | 0.006 | <0.002 |

**Connate Water SFE Results for Ore Samples**

| Parameter | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | pH units | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Tiriganiaq UG** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Iron Formation (IF)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD217732* | 7.5 | 76,465 | 30 | 33,000 | 0.12 | 2,802 | <0.00001 | 0.0001 | 0.020 | 0.023 | 0.73 | 0.24 | <0.000007 | 0.0037 | 2,030 | 0.0014 | 0.00068 | 0.0019 | 0.0031 | 0.030 | 600 | 0.18 | 1,630 | 0.16 | 0.028 | 13,300 | 0.00030 | <0.003 | 0.0015 | 0.0020 | 0.00079 | 0.0010 | 46 | 0.00012 | 0.00019 | 0.0015 | 0.00079 | *ND* | *ND* | 0.0040 | <0.002 |
| *M05-559A_832071* | 7.5 | 76,968 | 39 | 33,000 | 0.090 | 2,683 | <0.00001 | <0.00005 | 0.019 | 0.0043 | 1.2 | 0.27 | 0.0001 | 0.0022 | 2,050 | 0.0013 | 0.00040 | 0.0090 | 0.031 | <0.007 | 584 | 0.23 | 1,870 | 0.59 | 0.026 | 14,000 | 0.0038 | 0.10 | 0.00020 | 0.0014 | 0.0027 | 0.0012 | 51 | <0.00005 | <0.000005 | 0.0015 | 0.0020 | *ND* | *ND* | 0.044 | <0.002 |
| ***Tiriganiaq Formation (TIRFM)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *M05-548_824513* | 7.5 | 76,566 | 30 | 34,000 | 0.14 | 2,552 | <0.00001 | <0.00005 | 0.011 | 0.27 | 1.3 | 0.23 | 0.0001 | 0.0023 | 1,910 | 0.0032 | 0.0021 | 0.0063 | 0.0041 | <0.007 | 589 | 0.23 | 1,830 | 0.18 | 0.028 | 13,900 | 0.0060 | 0.10 | 0.0014 | 0.0077 | 0.0022 | 0.00080 | 48 | 0.00040 | <0.000005 | 0.00029 | 0.0032 | *ND* | *ND* | 0.019 | <0.002 |
| ***Upper Oxide Formation (UOFM)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD199207* | 7.4 | 75,744 | 29 | 36,000 | 0.12 | 2,743 | <0.00001 | 0.0079 | 0.0030 | 0.049 | 1.1 | 0.20 | <0.000007 | 0.0035 | 1,940 | 0.0051 | 0.0019 | 0.014 | 0.035 | <0.007 | 575 | 0.28 | 1,760 | 0.19 | 0.027 | 14,700 | 0.0030 | <0.003 | 0.43 | 0.0057 | 0.0040 | <0.00006 | 50 | <0.00005 | 0.00030 | 0.00060 | 0.0044 | *ND* | *ND* | 0.016 | <0.002 |
| *CAEXD217778* | 7.4 | 76,164 | 30 | 31,000 | 0.11 | 2,921 | <0.00001 | 0.00009 | 0.018 | 0.0022 | 0.75 | 0.27 | <0.000007 | 0.0011 | 2,260 | 0.0012 | 0.00077 | 0.0013 | 0.016 | 0.020 | 648 | 0.16 | 1,680 | 0.34 | 0.023 | 13,700 | 0.0012 | <0.003 | 0.00015 | <0.0009 | 0.00051 | 0.00044 | 46 | 0.000080 | 0.000060 | 0.00050 | 0.00059 | *ND* | *ND* | 0.0030 | <0.002 |
| **Wesmeg UG** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Iron Formation (IF)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD164147* | 7.3 | 75,944 | 28 | 36,000 | 0.08 | 3,288 | <0.00001 | 0.0009 | <0.001 | 0.012 | 0.98 | 0.15 | <0.000007 | 0.0066 | 2,050 | 0.029 | 0.0044 | 0.021 | <0.0002 | <0.007 | 551 | 0.28 | 1,810 | 3.67 | 0.014 | 14,500 | 0.0059 | 0.20 | <0.00001 | 0.013 | 0.0031 | <0.00006 | 50 | 0.00010 | <0.000005 | <0.000002 | 0.0087 | *ND* | *ND* | 0.54 | <0.002 |
| *CAEXD239740* | 7.4 | 76,566 | 27 | 34,000 | 0.070 | 3,136 | <0.00001 | 0.00023 | 0.0020 | 0.091 | 0.73 | 0.17 | <0.000007 | 0.0012 | 2,260 | 0.0078 | 0.0072 | 0.0017 | 0.0078 | 0.020 | 606 | 0.17 | 1,680 | 0.96 | 0.025 | 14,000 | 0.0035 | <0.003 | 0.13 | 0.0018 | 0.016 | 0.00061 | 45 | 0.000060 | 0.000040 | 0.0012 | 0.00052 | *ND* | *ND* | 0.46 | <0.002 |
| ***Mafic Volcanics (VO)*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *CAEXD161414* | 7.4 | 75,944 | 31 | 35,000 | 0.19 | 2,734 | <0.00001 | <0.00005 | <0.001 | 0.011 | 1.1 | 0.32 | <0.000007 | 0.0023 | 1,910 | 0.0016 | 0.0016 | 0.0076 | 0.0031 | <0.007 | 559 | 0.27 | 1,740 | 0.33 | 0.023 | 14,300 | 0.0023 | <0.003 | <0.00001 | <0.0009 | 0.0015 | <0.00006 | 50 | 0.00050 | <0.000005 | 0.00070 | 0.0035 | *ND* | *ND* | 0.0020 | <0.002 |
| *CAMLD105829* | 7.5 | 76,465 | 32 | 32,000 | 0.080 | 3,207 | <0.00001 | 0.00008 | 0.010 | 0.039 | 0.78 | 0.18 | <0.000007 | 0.0017 | 2,280 | 0.0035 | 0.0015 | 0.0013 | 0.043 | 0.020 | 616 | 0.18 | 1,680 | 0.67 | 0.019 | 13,800 | 0.0019 | <0.003 | 0.00050 | 0.0013 | 0.0017 | 0.00073 | 45 | <0.00005 | 0.000050 | 0.00092 | 0.00050 | *ND* | *ND* | 0.046 | <0.002 |

Notes: ND- no data

# APPENDIX D-6: MELIADINE EXTENSION DATABASE: STATIC TEST RESULTS

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| ML00-224-01 | ML00-224 | 101.5 | 110 | 2011 | Discovery | Ore | Iron Formation | NLJ | IF | | | Open Pit | | | | | | | | No mineralization for that hole in our database (Snowden Datamine Compilation 2009) |
| ML08-225-03 | ML08-225 | 169 | 178 | 2011 | Discovery | Ore | Iron Formation | NLJ | IF | | | Open Pit | 3 | 2 | 0.1 | | | | | Traces-10% PO, 1-3% PY and locally 1% AS (173.19-173.5m) |
| ML08-226-04 | ML08-226 | 168.5 | 174.5 | 2011 | Discovery | Ore | Iron Formation | NLJ | IF | | | Open Pit | | | | | | | | No mineralization for that hole in our database (Snowden Datamine Compilation 2009) |
| ML95-104-02 | ML95-104 | 177 | 187 | 2011 | Discovery | Ore | Iron Formation | NLJ | IF | | | Open Pit | 3.5 | 2 | 0.5 | | | 0.1 | | 2-6% PO, 1.5-3.5% PY between 180.3-185.3m, locally 0.1-2% AS (2% between 181.3-182.3m and 1% between 184.3-185.3m) and local traces CP. |
| ML95-84-01 | ML95-84 | 123 | 131 | 2011 | Discovery | Ore | Iron Formation | NLJ | IF | | | Open Pit | 3 | | 0.5 | | | 0.01 | | 0.5-6% PO and local traces AS-CP (2% AS at lower contact between 130.42-131.42m) |
| 6534-VRSP-002 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, Chlorite, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-006 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, chlorite | | Underground | | | | | | | | |
| 6534-VRSP-009 | | Composite | | 2020 | Discovery | Ore | | | IF | Spatial distribution, gold grade, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-014 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, Chlorite, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-001 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-004 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, chlorite | | Underground | | | | | | | | |
| 6534-VRSP-005 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-010 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, chlorite | | Underground | | | | | | | | |
| 6534-VRSP-013 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade | | Underground | | | | | | | | |
| 6534-VRSP-015 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, Chlorite, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-016 | | Composite | | 2020 | Discovery | Ore | | | IF | Chlorite, arsenopyrite | | Underground | | | | | | | | |
| 6534-VRSP-017 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, Chlorite, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-008 | | Composite | | 2020 | Discovery | Ore | | | IF | Spatial distribution, chlorite | | Underground | | | | | | | | |
| 6534-VRSP-012 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade | | Underground | | | | | | | | |
| 6534-VRSP-003 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, pyrrhotite | | Underground | | | | | | | | |
| 6534-VRSP-011 | | Composite | | 2020 | Discovery | Ore | | | IF | Gold grade, pyrrhotite | | Underground | | | | | | | | |
| ML08-238-03 | ML08-238 | 99 | 104 | 2009 | Discovery | Ore | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-236-2 | ML08-236 | 41 | 49 | 2009 | Discovery | Ore | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-226-01 | ML08-226 | 23 | 32 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | | | | | | | | No mineralization for that hole in our database (Snowden Datamine Compilation 2009) |
| ML08-241-03 | ML08-241 | 84 | 93 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-243-02 | ML08-243 | 136 | 144.5 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | 0.1 | | | | | | | |
| ML08-245-01 | ML08-245 | 44 | 53 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | | | | | | | | No mineralization described. |
| ML09-259-01 | ML09-259 | 11 | 20 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | 0.1 | 0.1 | | | | | | |
| ML95-104-01 | ML95-104 | 20 | 29 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | 1 | 0.3 | | | | 0.1 | | 0.1-2.2% PO, 0.1-0.5% PY and local 0.1-1% CP (1% CP between 21-22m) |
| ML95-105-02 | ML95-105 | 63 | 73 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | 0.1 | 0.1 | 0.5 | | | | | 70.16m). |
| ML95-117-02 | ML95-117 | 40 | 48.5 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | 1 | 0 | | | | 0.3 | | 0.1-3% PO (1-3% between 44.3-47m) and local traces CP |
| ML97-186-02 | ML97-186 | 120 | 129 | 2011 | Discovery | Waste | Gabbro | MG | GB | | | Open Pit | 0.1 | 0.1 | | | | | | |
| CAMLD264930 | M20-2987 | 13 | 15 | 2020 | Discovery | Waste | | MG | GB | Gabbro, 1% QV | | Open Pit | 0.5 | | | | | | | |
| CAMLD264931 | M20-2987 | 208 | 210 | 2020 | Discovery | Waste | | MG | GB | Gabbro, 1% QV | | Underground | 0.5 | | | | | | | |
| CAMLD264935 | M20-2987 | 215 | 216.3 | 2020 | Discovery | Waste | | MG | GB | Gabbro, 2% Carb veins, tr. Py | | Underground | 0.5 | | | | | | | |
| CAMLD264957 | M20-2988 | 160 | 161 | 2020 | Discovery | Waste | | MG | GB | Gabbro | | Underground | | | | | | | | |
| CAMLD264958 | M20-2988 | 165 | 166 | 2020 | Discovery | Waste | | MG | GB | Gabbro | | Underground | | | | | | | | |
| ML92-061-03 | ML92-061 | 75 | 81 | 2009 | Discovery | Waste | Iron Formation | LLM | IF | | | Open Pit | 0.5 | | 0.3 | | | | | |
| ML92-062-01 | ML92-062 | 20 | 25 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 0.01 | | | | | | | w Chl |
| ML92-062-02 | ML92-062 | 35 | 39.5 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-82-2 | ML95-82 | 43 | 46 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 3 | 0 | 0.1 | | | | | 2-6% PO, and local traces AS . |
| ML08-236-1 | ML08-236 | 23 | 27 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 3 | | 0.5 | | | | | 1-5% PO and locally 3% AS (23.8-24.1m) |
| ML90-09-1 | ML90-09 | 33 | 40 | 2009 | Discovery | Waste | Iron Formation | LLM | IF | | | Open Pit | 3.5 | 0.5 | 0.3 | | | 0.1 | YES | Traces-7%, partially replaced grun, Mt, and chl-hornblende bands, replacing As +/- Cp, local traces-1% PY, local VG |
| ML90-10-2 | ML90-10 | 33 | 41 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 3 | | 0.1 | | | | | 0.75-3.5% PO and locally traces AS (38.48-40.51m). |
| ML92-053-1 | ML92-053 | 105 | 112 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 1 | 0.1 | 0.1 | | | 0.1 | | tr-1% PO, locally up to 25% over 40cm, local 1-10cm sulphidized zones, traces AS <1mm, dominantly in SILICATE-OXIDE IF near bottom of unit; tr Cp + Py also |
| ML92-060-1 | ML92-060 | 42 | 49 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-93-03 | ML95-93 | 55 | 60 | 2009 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 5 | 1.5 | 0.1 | | 0 | 0.1 | | 2-12% PO, 0.5-2% PY and local traces AS. |
| ML08-225-01 | ML08-225 | 70 | 79 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 2.5 | 0.1 | | | | | | 1-5% PO and local traces PY |
| ML08-226-02 | ML08-226 | 36 | 45 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | | | | | | | | No mineralization described within this hole (missing info) |
| ML08-226-03 | ML08-226 | 144 | 153 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | | | | | | | | No mineralization for that hole in our database (Snowden Datamine Compilation 2009) |
| ML08-228-01 | ML08-228 | 26.5 | 35 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 0.75 | 0.3 | | | | | | 0.1-2% PO (1-2% between 29-32m) and traces PY (only locally 1% PY). |
| ML08-228-02 | ML08-228 | 79 | 87.5 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 1.75 | 0.3 | | | | | | 1-2% PO and traces PY (only locally 1% PY (81.72-82.45m & 86-86.7m)). |
| ML08-229-05 | ML08-229 | 234.5 | 243 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 3 | | 0.1 | | | | | 1-10% PO and local traces-1% AS (1% AS between 239.46-239.76m) |
| ML08-233-02 | ML08-233 | 74.5 | 83 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 0.3 | 0.1 | | | | | | Traces PO-PY (2% PO between 79-79.37m) |
| ML08-241-02 | ML08-241 | 42 | 51 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 1 | | | | | | | |
| ML08-243-01 | ML08-243 | 97.5 | 106 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 0.1 | | | | | | | |
| ML09-254-01 | ML09-254 | 84 | 93 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 2 | 0.5 | 0.5 | | | | | Traces-10% PO, local 1% PY (86.22-86.72m & 90.83-91.83m) and locally 3% AS (87.26-87.72m) |
| ML92062-01 | ML92062 | 17.5 | 26 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 0.01 | | | | | | | w Chl |
| ML95-117-01 | ML95-117 | 14 | 23 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 2 | 3 | 0.1 | | | 0.1 | | 0.2-4% PY, 1-3% PO, local traces AS-CP. |
| ML95-117-03 | ML95-117 | 61.5 | 71.5 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 3 | 0.5 | 0.1 | | | 0.1 | | 1.5-8% PO in IF but only 0.1% in Kwa, 1-2% PY concentrated at IF contact (62-63 and 67.9-68.6m), local traces AS-CP |
| ML95-82-01 | ML95-82 | 54 | 61.5 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 1 | 0.75 | | | | | | 0.5-3% PO. And 0.5-1% PY between 54.6-56.6m. |
| ML95-83-01 | ML95-83 | 22 | 31 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 1 | 0 | 0.1 | | | | | 0.1-3% PO and local traces AS but no mineralization described in the Kwa. |
| ML95-95-01 | ML95-95 | 20 | 29 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 3 | 0.1 | 0.1 | | | | | 2-7% PO and local traces PY-AS. |
| ML95-98-01 | ML95-98 | 9.5 | 17.5 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | 0.3 | 0.75 | | | | | | 0.01-0.5% PO, 0.2-1% PY. |
| ML97-186-01 | ML97-186 | 78 | 86 | 2011 | Discovery | Waste | Iron Formation | NLJ | IF | | | Open Pit | | 0.75 | | | | | | 0.1% PY (but 5% PY between 82.15-83.5m). |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| 163066 | M08-244 | 103.65 | 104.8 | 2020 | Discovery | Waste | | L | IF | | 5230 | Open Pit | 1 | | | | | | | |
| 163784 | DS09GT-03 | 69.75 | 70.75 | 2020 | Discovery | Waste | | L | IF | | | Open Pit | 0.1 | 0.1 | | | | | | |
| CAMLD264964 | M20-2995 | 21 | 22 | 2020 | Discovery | Waste | | Nlj | IF | | | Open Pit | | | | | | | | |
| CAMLD264965 | M20-2992 | 26.8 | 28.3 | 2020 | Discovery | Waste | | Nlj | IF | | | Open Pit | | | | | | | | |
| CAMLD264936 | M20-2994 | 4.7 | 6.5 | 2020 | Discovery | Waste | | NLJ | IF | Oxyde-facies IF with bands of cherts, local 3-5% PY 1% AS | | Open Pit | 4 | 1 | | | | | | local 3-5% PY and 1% AS |
| CAMLD264944 | M20-2999 | 33.1 | 34.1 | 2020 | Discovery | Waste | | NLJ | IF | Banded greenish NLJ with plurimm MG bands; cm bands of chert; folded | | Open Pit | 4 | | | | | | | |
| 162591 | M08-231 | 144.14 | 145.19 | 2020 | Discovery | Waste | | L | IF | | 5220 | Open Pit | 1 | | | | | | | |
| 162895 | M08-238 | 85.34 | 86.34 | 2020 | Discovery | Waste | | L | IF | | | Open Pit | 1 | | | | | | | |
| 162952 | M08-240 | 52 | 53 | 2020 | Discovery | Waste | | L | IF | | | Open Pit | 1 | | | | | | | |
| 163309 | M09-251 | 55.92 | 56.9 | 2020 | Discovery | Waste | | L | IF | | 5240 | Open Pit | 2 | 0.1 | 0.1 | | | | | |
| 163763 | DS09GT-03 | 54.5 | 55.58 | 2020 | Discovery | Waste | | L | IF | | 5230 | Open Pit | 1 | 0.1 | | | | | | |
| CAEXD301939 | M13-2156 | 22.4 | 23.4 | 2020 | Discovery | Waste | | Nlj | IF | | | Open Pit | 0.5 | | | | | | | Fine mineralization along foliation |
| CAEXD307379 | M13-2188 | 36 | 37 | 2020 | Discovery | Waste | | Nlj | IF | | | Open Pit | 0 | 0.5 | | | | | | dissem to local larger masses to 3-4cm with local fracture-fill, local wispy to dissem Po |
| CAEXD307381 | M13-2188 | 38 | 39 | 2020 | Discovery | Waste | | Nlj | IF | | | Open Pit | 0 | 0.5 | | | | | | dissem to local larger masses to 3-4cm with local fracture-fill, local wispy to dissem Po |
| CAMLD264960 | M20-2988 | 91.6 | 92.6 | 2020 | Discovery | Waste | | Nlj | IF | Chert Magnetite iron formation; Bands of MG with GN at the margins; bands of CL-AM. 10% QV. 1% PY and 2.5% PO. sample CAMLD272675 | | Open Pit | | | | | | | | |
| CAMLD264967 | M20-2991 | 14.2 | 16 | 2020 | Discovery | Waste | | Nlj | IF | | | Open Pit | | | | | | | | |
| CAMLD264939 | M20-3000 | 53.5 | 55 | 2020 | Discovery | Waste | | NLJ | IF | Banded greenish NLJ with plurimm MG bands | | Open Pit | 0.5 | | | | | | | 3% PO between 53.1-53.2m. |
| CAMLD264943 | M20-2999 | 27.2 | 28.2 | 2020 | Discovery | Waste | | LLM | IF | Very light gray chert banded with multicm bands of CL; MG bands near both contacts; QZ-Cl veining | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD298984 | M13-2190 | 144.6 | 145.7 | 2020 | Discovery | Waste | | Nlm | IF | | 5240 | Open Pit | 0.5 | 0.1 | | | | 0.1 | | +/-Py-Cp,***** 20% PO described between 143.5 and 144.8. NOT REALLY WASTE ROCK. |
| 162858 | M08-237 | 122.38 | 123.38 | 2020 | Discovery | Waste | | L | IF | | 5240 | Open Pit | 11 | 2 | 0.1 | | | | | 10-12% PO. |
| 163079 | M08-245 | 13.14 | 14.14 | 2020 | Discovery | Waste | | L | IF | | | Open Pit | | 2 | | | | | | |
| CAMLD264932 | M20-2987 | 265.1 | 266.1 | 2020 | Discovery | Waste | | NLJ | IF | Oxide-facies iron formation, weak to moderate chlorite alteration, 1% PY, 1% PO, same sample as CAMLD262999 | | Underground | 1 | 2 | | | | | | |
| CAMLD273962 | M20-2973 | 369 | 370 | 2020 | Discovery | Waste | | NLJ | IF | 30% mgt, 3% chert, 0.5-1% PO | | Underground | | | | | | | | No mineralization described. |
| CAEXD210903 | M12-1755 | 272.5 | 273.5 | 2020 | Discovery | Waste | | NLM | IF | | | Underground | | | 0.1 | | | | | trace f-m.g. As |
| CAMLD264947 | M20-2983 | 338.8 | 340.2 | 2020 | Discovery | Waste | | NLJ | IF | MG beds, strong grunerite-chlorite, mod QZ-CB-CL veining, 3% PO | | Underground | | | | | | | | |
| CAMLD264952 | M20-2986 | 292.8 | 293.8 | 2020 | Discovery | Waste | | Nlj | IF | Chert Magnetite iron formation; Strong CL-AM; moderate GN; 2% PO | | Underground | | | | | | | | |
| CAMLD264954 | M20-2985 | 255.9 | 257.2 | 2020 | Discovery | Waste | | LLM | IF | Chert Chlorite iron formation; QZ-CL veins; contains a dcm Kwa-s interval | | Underground | | | | | | | | |
| CAMLD264971 | M20-2979 | 304.5 | 306.5 | 2020 | Discovery | Waste | | Nlj | IF | | | Underground | | | | | | | | |
| CAMLD264941 | M20-2977 | 273.1 | 274.1 | 2020 | Discovery | Waste | | NLJ | IF | Banded greenish NLJ with plurimm MG bands | | Underground | | | | | | | | No mineralization described. |
| CAMLD264933 | M20-2984 | 489.4 | 490.4 | 2020 | Discovery | Waste | | NLJ | IF | Oxide-facies iron formation, weak chlorite-grunerite alteration, 1% po, 4% QV, sample CAMLD262197 | | Underground | 1 | | | | | | | |
| CAMLD264934 | M20-2984 | 490.4 | 491.6 | 2020 | Discovery | Waste | | LLM | IF | Chlorite-rich iron formation, trace PO, 15% QV, sample 262198 | | Underground | 1 | | | | | | | 0 |
| CAEXD305051 | M13-2141 | 251 | 252.4 | 2020 | Discovery | Waste | | Nlj | IF | | | Underground | 5 | | | | | | | 5% PO, masses, bands and in fractures |
| CAEXD307337 | M13-2184 | 215 | 215.8 | 2020 | Discovery | Waste | | Nlj | IF | | | Underground | 1 | | | | | | | wispy to dissem, local Py fracture-fill |
| CAMLD264950 | M20-2970 | 278.6 | 280.1 | 2020 | Discovery | Waste | | NLJ | IF | MG beds, strong grunerite-chlorite and weak amphibolitization | | Underground | | | | | | | | |
| CAMLD264955 | M20-2985 | 269.7 | 270.7 | 2020 | Discovery | Waste | | Nlj | IF | Chert Magnetite iron formation; Bands of MG with GN at the margins; bands of CL-AM | | Underground | | | | | | | | |
| CAMLD264946 | M20-2972 | 370.4 | 371.8 | 2020 | Discovery | Waste | | NLJ | IF | MG beds, strong grunerite, mod-strong chlorite, weak folding, 1% QV, 5% PO in the first 10 cm | | Underground | 3 | | | | | | | 20% PO between 370.4-370.6m |
| ML00-221-01 | ML00-221 | 25 | 30 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML00-221-02 | ML00-221 | 61 | 66 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML00-221-03 | ML00-221 | 88 | 93 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-238-04 | ML08-238 | 126 | 132.5 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML90-03-01 | ML90-03 | 17 | 24 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0 | 0.75 | 0.1 | | | | | 0 |
| ML90-03-02 | ML90-03 | 51 | 56 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0 | 0.75 | | | | | | |
| ML90-04-02 | ML90-04 | 35 | 40 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.25 | | | | | | | dissem/aggregated assoc w/ Qz +/- chl+ser veins |
| ML90-04-03 | ML90-04 | 84 | 89 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.75 | 0.75 | | | | | | local absent to trace (disseminated PY and stringer of PO). |
| ML90-07-01 | ML90-07 | 46 | 51 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | 0.1 | 0 | | | | | |
| ML90-08-01 | ML90-08 | 16 | 21 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | 0.1 | | | | | | |
| ML90-08-02 | ML90-08 | 53 | 58 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.75 | | | | | | |
| ML90-12-02 | ML90-12 | 80 | 84 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.75 | 0.75 | | | | | | Traces-1% PY-PO disseminated + rare late threads |
| ML92-061-01 | ML92-061 | 21 | 26 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | | | | | | | |
| ML92-061-02 | ML92-061 | 50 | 56 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML92-061-04 | ML92-061 | 109 | 114 | 2009 | Discovery | Waste | Greywacke/Siltstone | K | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML92-062-03 | ML92-062 | 50 | 55 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-82-1 | ML95-82 | 20 | 30 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | 0.1 | 0.01 | | | | | Local 1-2% PO (23.8-24.8 & 26.1-26.5m). Traces AS between 23.8-24.8m. |
| ML95-93-01 | ML95-93 | 22 | 26 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 1 | 0.1 | 0.1 | | | | | |
| ML95-93-02 | ML95-93 | 41 | 46 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | 0.1 | | | | 0.01 | | 0.1-0.5% PO |
| ML95-93-04 | ML95-93 | 84 | 89 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.2 | 1 | | | | | | |
| ML00-221-04 | ML00-221 | 162 | 168 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-236-3 | ML08-236 | 65 | 75 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML90-04-01 | ML90-04 | 10 | 15 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | | 0.3 | | | | | |
| ML90-09-2 | ML90-09 | 51 | 56 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 3 | 0.5 | 0 | | | | | 3.5% PO-PY |
| ML90-10-1 | ML90-10 | 11 | 18 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | 1 | 0.5 | | 0 | 0.1 | | |
| ML90-10-3 | ML90-10 | 56 | 64 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.75 | 0.5 | | | | 0.1 | | 0 |
| ML90-12-01 | ML90-12 | 24 | 29 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.3 | | | | | | + tr Py, irreg distributed as grains, rare thread +/- chl, +/- qz |
| ML90-14-2 | ML90-14 | 129 | 137 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.75 | 0.75 | 0.3 | | | | | |
| ML95-82-3 | ML95-82 | 65 | 74 | 2009 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | | | | | | |
| ML08-225-02 | ML08-225 | 104 | 115 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | No mineralization described. |
| ML08-230-01 | ML08-230 | 25 | 33 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.1 | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| ML08-232-01 | ML08-232 | 62 | 70 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.75 | 0.01 | | | | | Traces-1% PY. |
| ML08-233-01 | ML08-233 | 20 | 28 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.1 | | | | | | |
| ML08-240-01 | ML08-240 | 77 | 85 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-241-01 | ML08-241 | 26 | 34 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML08-245-02 | ML08-245 | 82.5 | 91 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML09-254-02 | ML09-254 | 100 | 108 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-105-03 | ML95-105 | 94 | 103 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-105-04 | ML95-105 | 138 | 147 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-107-03 | ML95-107 | 75.5 | 84.5 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | 0 | | | | | |
| ML95-113-01 | ML95-113 | 19 | 27.5 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-113-02 | ML95-113 | 71 | 79 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-120-01 | ML95-120 | 93 | 102 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.1 | 0.1 | | | | | |
| ML95-82-02 | ML95-82 | 68 | 74 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | | | | | | |
| ML95-83-02 | ML95-83 | 84 | 92 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| ML95-85-01 | ML95-85 | 141 | 150 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | 0.1 | 0.5 | | | | | 0.1% PY, traces PO (1.5-1.8% between 148.45-150.5m) and locally 1% AS (148.45-149.5m) |
| ML95-95-02 | ML95-95 | 55 | 64 | 2011 | Discovery | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | | 0.01 | | | | | |
| ML95-105-01 | ML95-105 | 25 | 34 | 2011 | Discovery | Waste | Iron Formation | KWA-S | SE | | | Open Pit | 0.2 | 0.2 | 0.2 | | | | | |
| CAMLD264942 | M20-2999 | 20 | 21.5 | 2020 | Discovery | Waste | | Kwa-s | SE | Greyish fine grained sediment with strong BO | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD301646 | M13-2142 | 5 | 6 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | 0.5 | | | | | | | Diss along foliation |
| CAMLD264928 | M20-2987 | 38.6 | 40.6 | 2020 | Discovery | Waste | | KWA-S | SE | Moderate biotite | | Open Pit | 0.5 | | 0 | | | | | |
| CAMLD264937 | M20-2994 | 12 | 13 | 2020 | Discovery | Waste | | KWA-S | SE | Greyish fine grained sed | | Open Pit | | | | | | | | No mineralization described. |
| CAMLD264938 | M20-3000 | 18 | 19 | 2020 | Discovery | Waste | | KWA-S | SE | Greyish fine grained sed | | Open Pit | | | | | | | | No mineralization described. |
| 163018 | M08-243 | 51.22 | 52.22 | 2020 | Discovery | Waste | | KWA | SE | | | Open Pit | | | | | | | | No mineralization described. |
| 163058 | M08-244 | 98 | 99 | 2020 | Discovery | Waste | | KWA | SE | | 5230 | Open Pit | | | | | | | | No mineralization described. |
| 163425 | M09-254 | 79.35 | 80.35 | 2020 | Discovery | Waste | | KWA | SE | | 5240 | Open Pit | | | | | | | | No mineralization described. |
| CAEXD298980 | M13-2190 | 141 | 142.5 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD300379 | M13-2163 | 154.5 | 155.8 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD300408 | M13-2163 | 179.4 | 180.5 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | 0.3 | | | | | | | At contact with Iron Formation |
| CAEXD301865 | M13-2153 | 28.8 | 29.8 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | 0.5 | | | | | | | Fine mineralization along foliation |
| CAEXD301964 | M13-2156 | 46.5 | 48 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD301979 | M13-2156 | 61.2 | 62.2 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | 0.5 | 0.1 | | | | | | Trace of Po (+\-Py) along foliation and associated to veining system |
| CAEXD302816 | M13-2161 | 8.5 | 9.7 | 2020 | Discovery | Waste | | Kwa-s | SE | | 5230 | Open Pit | | 0.5 | | | | | | 8.5m) |
| CAEXD302829 | M13-2161 | 21.4 | 22.9 | 2020 | Discovery | Waste | | Kwa | SE | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD302851 | M13-2161 | 42.7 | 44.2 | 2020 | Discovery | Waste | | Kwa | SE | | | Open Pit | 0.01 | | | | | | | tr mm po with minor mm qak veinlet |
| CAEXD305469 | M13-2149 | 44 | 45 | 2020 | Discovery | Waste | | Kwa-s | SE | | 5240 | Open Pit | | | | | | | | No mineralization described but at contact with Iron Formation with 10% PO and 10% PY |
| CAEXD305489 | M13-2149 | 60.4 | 61.4 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | No mineralization described but at contact with Iron Formation with 2% PO |
| CAEXD306783 | M13-2171 | 130.8 | 131.8 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD309001 | M13-2158 | 99.5 | 101 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | 0 | 0.5 | | | | | | Fine mineralization diss along foliation |
| CAEXD309016 | M13-2158 | 109.5 | 111 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | 0.1 | | | | | | | Trace to rare mineralization associated mainly to veining system |
| CAMLD264963 | M20-2995 | 15 | 16.5 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | |
| CAMLD264966 | M20-2992 | 12.5 | 14 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | |
| CAMLD264968 | M20-2991 | 28.5 | 30 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | |
| CAMLD264969 | M20-2991 | 25.5 | 27 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | |
| CAMLD264970 | M20-2991 | 5.7 | 7 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | |
| 163305 | M09-251 | 53.51 | 54.6 | 2020 | Discovery | Waste | | KWA | SE | | | Open Pit | 2 | 0.1 | 0.1 | | | | | |
| CAEXD305504 | M13-2149 | 90.9 | 92.4 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Open Pit | | | | | | | | No mineralization described. |
| CAMLD264927 | M20-2984 | 533.6 | 535.6 | 2020 | Discovery | Waste | | KWA-S | SE | Weak biotite | | Underground | 0 | | | | | | | No mineralization described. |
| CAMLD264951 | M20-2986 | 284.8 | 285.8 | 2020 | Discovery | Waste | | Kwa-s | SE | Medium gray fine grained sediment with moderate BO | | Underground | | | | | | | | |
| CAMLD264926 | M20-2984 | 525.4 | 527.4 | 2020 | Discovery | Waste | | KWA-S | SE | Weak chlorite | | Underground | 0.5 | | | | | | | 0 |
| CAMLD264929 | M20-2987 | 229.9 | 231.9 | 2020 | Discovery | Waste | | KWA-S | SE | Strong chlorite, moderate | | Underground | 0.5 | | | | | | | |
| CAMLD273963 | M20-2973 | 380 | 381.5 | 2020 | Discovery | Waste | | KWA-S | SE | Siltstone-graywacke, weak-mod biotite, local PO tr. | | Underground | | | | | | | | No mineralization described. |
| CAMLD264940 | M20-2977 | 265.2 | 266.7 | 2020 | Discovery | Waste | | Kwa-s | SE | Greyish fine grained sediment with moderate BO | | Underground | | | | | | | | No mineralization described. |
| CAMLD264945 | M20-2972 | 354.5 | 356 | 2020 | Discovery | Waste | | KWA-S | SE | Grey fine grained sediment with mod BO alt. | | Underground | | | | | | | | No mineralization described. |
| CAEXD207013 | M12-1760 | 349.5 | 351 | 2020 | Discovery | Waste | | KWA-S | SE | | 5240 | Underground | | | | | | | | No mineralization described. |
| CAEXD298919 | M13-2191 | 215.5 | 217 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Underground | 0.1 | | | | | | | |
| CAEXD306977 | M13-2174 | 252 | 253.5 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Underground | | | | | | | | No mineralization described. |
| CAEXD307472 | M13-2188 | 221.2 | 222.5 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Underground | 0.2 | 0.1 | 0.1 | | | | | common fine grained dissem Po with minor Py, local short intervals with higher content |
| CAEXD309452 | M13-2170 | 246 | 247.5 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Underground | 0.5 | | | | | | | Fine mineralization along foliation, +\- Py |
| CAMLD264948 | M20-2983 | 342.4 | 343.9 | 2020 | Discovery | Waste | | KWA-S | SE | Grey fine grained sediment with mod BO alt. and mm cross-cutting CB veinlets | | Underground | | | | | | | | |
| CAMLD264949 | M20-2970 | 270.3 | 271.8 | 2020 | Discovery | Waste | | KWA-S | SE | Grey fine grained sediment with mod BO alt. and mod QZ-CB-CL veining | | Underground | | | | | | | | |
| CAMLD264953 | M20-2985 | 238.7 | 240.2 | 2020 | Discovery | Waste | | Kwa-s | SE | Medium gray fine grained sediment; QZ-CL veins with strong BO atleration | | Underground | | | | | | | | |
| CAMLD264956 | M20-2985 | 273.4 | 274.4 | 2020 | Discovery | Waste | | Kwa-s | SE | Medium gray fines grained sediment; Weak CL alteration | | Underground | | | | | | | | |
| CAMLD264959 | M20-2988 | 200 | 201 | 2020 | Discovery | Waste | | Kwa-s | SE | (BO) veins with weak CL-BO alteration on veins margins. Local traces of PO within | | Underground | | | | | | | | |
| CAMLD264961 | M20-2988 | 233 | 234.5 | 2020 | Discovery | Waste | | Kwa-s | SE | Medium grey fine grained sediment. | | Underground | | | | | | | | |
| CAMLD264972 | M20-2979 | 221.5 | 223.3 | 2020 | Discovery | Waste | | Kwa-s | SE | | | Underground | | | | | | | | |
| ML95-107-01 | ML95-107 | 11 | 18 | 2011 | Discovery | Waste | Iron Formation | KS | TIRFM | | | Open Pit | 3 | 0.5 | | | | 0.1 | | 1-6% PO and 0.1-0.5% PY (2.5% PY between 11-12m). Locally 0.1% CP |
| ML95-107-02 | ML95-107 | 62.5 | 71 | 2011 | Discovery | Waste | Iron Formation | KS | TIRFM | | | Open Pit | 1 | 0.75 | 0.5 | 0 | | 0.5 | | traces CP (1% between 69.9-70.9m) |
| ML08-226-05 | ML08-226 | 192 | 200 | 2011 | Discovery | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | | | | | | | | No mineralization for that hole in our database (Snowden Datamine Compilation 2009) |
| M08-743-03 | M08-743 | 46 | 48 | 2009 | F-Zone | Ore | Iron Formation | NLJ | IF | | | Open Pit | 5 | | | | | | | |
| M08-748-03 | M08-748 | 85 | 95 | 2009 | F-Zone | Ore | Iron Formation | NLJ | IF | | | Open Pit | 6 | | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| M09-817-01 | M09-817 | 32 | 40 | 2011 | F-Zone | Ore | Iron Formation | LLM | IF | | | Open Pit | 5 | 0.6 | 0.3 | | | 0.01 | YES | VG between 32.36-32.92m. |
| CAEXD257967 | GT13-62 | 26.4 | 27.4 | 2020 | F-Zone | Ore | | L_Llm | IF | | 4120 | Open Pit | 3 | | 2 | | | 0.1 | | and often less abundant when abundant Asp |
| CAEXD265601 | M13-1991 | 152 | 153 | 2020 | F-Zone | Ore | | Llm | IF | | | Underground | 15 | | | | | | | 15-20% PO stringers, locally semi-massive |
| CAEXD290332 | M13-2069 | 130.7 | 132 | 2020 | F-Zone | Ore | | L_Ll | IF | | 4130 | Underground | 4 | | | | | | | 3-5% PO |
| CAEXD297489 | M13-2076 | 276.6 | 277.6 | 2020 | F-Zone | Ore | | L_Ll | IF | | 4120 | Underground | 5 | | 3 | | | | | to medium grained Asp. Minor local semi massive band. |
| CAEXD176520 | M12-1559 | 193 | 194 | 2020 | F-Zone | Ore | | L_LLM | IF | | 4130 | Underground | 1 | | | | | | | 5% Diss/patchy PO between 193-193.2m. |
| CAEXD302345 | M13-2128A | 309.7 | 310.7 | 2020 | F-Zone | Ore | | Llj | IF | | 4135 | Underground | 5 | | 4 | | | | | 5% PO mm wisps and blebs & 4% AS fine to coarse grained, angular; in qtz veins, chert and chlorite |
| CAEXD217369 | M12-1779 | 97.5 | 99 | 2020 | F-Zone | Ore | | MV | VO | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD290362 | M13-2069 | 149.9 | 150.7 | 2020 | F-Zone | Ore | | MV | VO | | 4110 | Underground | 5 | | | | | | | locally 80% semi massive |
| CAEXD293633 | M13-2057 | 301.5 | 302.6 | 2020 | F-Zone | Ore | | MV | VO | | | Underground | 0.01 | | | | | | | race Po found within qak veining |
| CAEXD293885 | M13-2107 | 520 | 521.1 | 2020 | F-Zone | Ore | | MV | VO | | | Underground | 0.5 | | | | | | | 1% PO between 520.7-521m. local blebs of Po with silicified qtz veins |
| CAEXD197112 | M12-1678 | 150.6 | 151.6 | 2020 | F-Zone | Ore | VO | MV/Llj | VO/IF | | 4130 | Underground | 10 | | 0.5 | | | | YES | f.g. As. VG between 151.42-151.44m. |
| CAEXD297585 | M13-2081 | 354.5 | 355.4 | 2020 | F-Zone | Ore | VO | MV/L_Llj | VO/IF | At L_Llj contact | 4135 | Underground | | | | | | | | No mineralization described. |
| CAEXD302054 | M13-2102 | 355.2 | 356.2 | 2020 | F-Zone | Ore | VO | MV/Llj | VO/IF | | | Underground | 3 | | | | | | | mm stringers predominantly near bottom of interval |
| M08-735-02 | M08-735 | 70 | 75 | 2009 | F-Zone | Waste | Mafic Volcanic | LL | IF | | | Open Pit | 0.5 | | 0.01 | | | 0.01 | | 0.01-0.1% PO (but 2% PO between 70.25-72.1m) and local traces AS-CP. |
| M09-802-02 | M09-802 | 65 | 73 | 2011 | F-Zone | Waste | Iron Formation | LLM | IF | | | Open Pit | 7 | 0.5 | 0.01 | | | | | 5-15% PO and local traces of AS-PY |
| M09-803-01 | M09-803 | 85 | 90 | 2011 | F-Zone | Waste | Iron Formation | LLM | IF | | | Open Pit | 10 | 0.1 | | | | 0.01 | | |
| M10-935-02 | M10-935 | 46 | 56 | 2011 | F-Zone | Waste | Iron Formation | NLJ | IF | | | Open Pit | 1 | 0.05 | 0.5 | | | | YES | 1-2% PO up to 48.75m than only traces. Local 5% AS (47.95-48.75m) and locally 1% PY (47.95-48.75m) |
| M98-248-01 | M98-248 | 88 | 97 | 2011 | F-Zone | Waste | Iron Formation | LL | IF | | | Open Pit | 10 | | | | 0.1 | | | 9-12% PO and locally 2% SP (89.13-89.25m) |
| CAEXD183497 | M12-1614 | 18 | 19 | 2020 | F-Zone | Waste | | L_LLJ | IF | | 4110 | Open Pit | | 1 | 0.2 | | | | | mixture of Py-Po, disseminated and aggregates locally, AS coarse-grained and spotty distruibution |
| CAEXD222666 | M12-1802 | 30.2 | 31.3 | 2020 | F-Zone | Waste | | LLJ | IF | | | Open Pit | 7 | 2 | | | | | | and probably predate the veining. Some pyrite masses in the iron formation and the veins. |
| CAEXD257975 | GT13-62 | 32.7 | 33.5 | 2020 | F-Zone | Waste | | L_Llm | IF | | | Open Pit | 2 | | | | | 0.5 | | and often less abundant when abundant Asp |
| CAEXD184497 | M12-1603 | 10.7 | 11.6 | 2020 | F-Zone | Waste | | LLJ | IF | | 4130 | Open Pit | 2 | | | | | | | as separate entries. |
| CAEXD176511 | M12-1559 | 184 | 185 | 2020 | F-Zone | Waste | | L_LLM | IF | | 4135 | Underground | 1 | | | | | 0.1 | | Variable, banded, patchy, pervasive. With Tr at 2% Py localy + Tr de Cp. |
| CAEXD185037 | M12-1596 | 69.9 | 70.9 | 2020 | F-Zone | Waste | | L_LL | IF | | 4120 | Underground | 10 | 0.5 | 3 | | | | | distributed, concentrated in bands up to 5% over 50cm, and traces PY. |
| CAEXD193892 | M12-1649 | 136.5 | 137.5 | 2020 | F-Zone | Waste | | LLM | IF | | 4130 | Underground | 3 | 0.5 | | | | | | 2-5% PO variably thoughout and traces to locally up to 1% PY. |
| CAEXD302349 | M13-2128A | 312.7 | 313.7 | 2020 | F-Zone | Waste | | Llj | IF | | 4135 | Underground | 5 | | | | | | | 5% PO mm wisps and blebs |
| GT09-07-01 | GT09-07 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| GT09-07-02 | GT09-07 | 30 | 35 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | | | 0 |
| M08-729-01 | M08-729 | 15 | 20 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.05 | | | | | | 0.01-0.1% PY |
| M08-729-02 | M08-729 | 36 | 41 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | 0.01 | | 0.01% PY-CP only between 40.15-40.75m. |
| M08-729-03 | M08-729 | 55 | 60 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | | | | | 0.01 | | |
| M08-729-04 | M08-729 | 74 | 79 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.01 | | | | | | |
| M08-729-06 | M08-729 | 117 | 122 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | | | |
| M08-734-01 | M08-734 | 15 | 20 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-734-02 | M08-734 | 28 | 32 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.5 | | | | | | |
| M08-734-03 | M08-734 | 54 | 60 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-734-04 | M08-734 | 41 | 45 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 1 | 1 | 0.1 | | | 0.01 | YES | PO, 15% PY, 0.5% AS and 0.01 CP). VG between 42.25-42.75m. |
| M08-735-01 | M08-735 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-735-03 | M08-735 | 56 | 62 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 2.5 | 0.3 | | | | | | 0.2-5% PO and 0.1-0.5% PY. |
| M08-740-01 | M08-740 | 16 | 21 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | | | | | | | |
| M08-740-02 | M08-740 | 36 | 41 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M08-740-03 | M08-740 | 52 | 56 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-740-04 | M08-740 | 106 | 111 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | | | |
| M08-740-05 | M08-740 | 122 | 126 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | 0.01 | | | | | Local traces of PO-AS (122.9-123.6) |
| M08-742-01 | M08-742 | 8.5 | 14.5 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.05 | | | | | | |
| M08-742-02 | M08-742 | 29 | 35 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | | | |
| M08-742-03 | M08-742 | 43 | 47 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | | | | | | | |
| M08-742-04 | M08-742 | 77 | 83 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-743-01 | M08-743 | 10 | 15 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.3 | 0.5 | | | | 0.01 | | |
| M08-743-02 | M08-743 | 39 | 44 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | | | | | | | |
| M08-743-04 | M08-743 | 56 | 62 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-747-01 | M08-747 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-747-02 | M08-747 | 39 | 45 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 2.5 | 3.5 | | | | | | 0.01% PO-PY (but 5% PO and 7% PY between 42.9-44.1m). |
| M08-747-03 | M08-747 | 65 | 70 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | | | | | | | |
| M08-748-01 | M08-748 | 36 | 41 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M08-748-02 | M08-748 | 57 | 62 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.01 | | | | 0.01 | | 1% PO between 55.1-60m |
| M08-750-01 | M08-750 | 8 | 14 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M08-750-02 | M08-750 | 28 | 33 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.1 | 0.01 | | | | | |
| M08-752-01 | M08-752 | 9 | 14 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | | | |
| M08-752-02 | M08-752 | 23 | 27 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.1 | 0.01 | | | 0.01 | | |
| M08-752-03 | M08-752 | 45 | 51 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | | | | | 0.01 | | |
| M08-755-01 | M08-755 | 19 | 24 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | | | |
| M08-755-02 | M08-755 | 30 | 37 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.01 | | | | | | 0.01% PY and 1% PO between 31.2-31.4m only. |
| M08-755-03 | M08-755 | 66 | 71 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | 0.01 | | |
| M09-798-01 | M09-798 | 12 | 17 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.2 | 0.1 | | | | | | |
| M09-798-02 | M09-798 | 17 | 22 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.2 | 0.1 | | | | | | |
| M09-816-01 | M09-816 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M09-816-02 | M09-816 | 30 | 35 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M09-855-01 | M09-855 | 15 | 20 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 3 | 3 | 0.1 | | | | | PY and 0.2-0.4% AS are observed. Only traces PO-PY+/-AS on each side. |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| M09-855-02 | M09-855 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | | | |
| M09-857-01 | M09-857 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M09-858-01 | M09-858 | 20 | 25 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M09-858-02 | M09-858 | 30 | 35 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.075 | | | | | | |
| M09-862-01 | M09-862 | 15 | 20 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.1 | 0.01 | | | | | |
| M09-866-01 | M09-866 | 10 | 15 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 1.5 | 0.3 | 0.01 | | | | | Traces PO-PY+/-AS (but 3% PO between 11.11-13.14m). AS mineralization starting at 13.14m. |
| M09-866-02 | M09-866 | 15 | 20 | 2009 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.3 | | 0.01 | | | | | |
| M08-733-01 | M08-733 | 62 | 71 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M08-733-02 | M08-733 | 180 | 189 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | | | | | | | |
| M09-802-01 | M09-802 | 35 | 44 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.5 | | | | | | |
| M09-817-02 | M09-817 | 45 | 53 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.2 | 0.3 | 0.01 | | | | | |
| M09-859-01 | M09-859 | 46 | 54.5 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | | 0.01 | | | 0.01 | | Rare traces of PO-AS (48.3-48.8m) and rare traces of CP (53.1-53.6m) |
| M10-933-01 | M10-933 | 34 | 42 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.1 | | | | | | Traces PO-PY (1% PO between 39.3-39.8m). |
| M10-935-01 | M10-935 | 20.5 | 29 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M98-275-01 | M98-275 | 25 | 33 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M98-275-02 | M98-275 | 80 | 89.5 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.3 | | | | | | |
| W94-76-01 | W94-76 | 13 | 22 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | 0.1 | | |
| W94-76-02 | W94-76 | 70.5 | 77 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| W94-82-01 | W94-82 | 46 | 55 | 2011 | F-Zone | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| CAMLD 262226 | M08-735 | 27 | 29 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | |
| CAMLD 262227 | M08-735 | 23 | 25 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | |
| CAMLD 262228 | M08-742 | 12 | 14 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | |
| CAMLD 262229 | M08-742 | 33 | 35 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | |
| CAMLD 262230 | M12-1585 | 15 | 17 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | |
| CAMLD 262231 | M12-1578 | 37 | 39 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | |
| CAEXD194259 | M12-1690 | 22 | 23 | 2020 | F-Zone | Waste | | MV | VO | | 4160 | Open Pit | 0.5 | | | | | | | Traces along the foliation. |
| CAEXD217371 | M12-1779 | 99 | 100.5 | 2020 | F-Zone | Waste | | MV | VO | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD291664 | M13-2070 | 322.3 | 323.8 | 2020 | F-Zone | Waste | | MV | VO | | | Underground | | | | | | | | No mineralization described. |
| CAEXD297486 | M13-2076 | 273.7 | 274.9 | 2020 | F-Zone | Waste | | MV | VO | | | Underground | 0.3 | | | | | | | 3% PO but only between 274.7-274.8m associated with cm quartz ank veins. |
| CAEXD297621 | M13-2081 | 389 | 390.5 | 2020 | F-Zone | Waste | | MV | VO | | | Underground | | | | | | | | No mineralization described. |
| CAEXD303511 | M13-2135 | 58.5 | 59.5 | 2020 | F-Zone | Waste | | MV | VO | | | Underground | | | | | | | | No mineralization described. |
| M97-122-03 | M97-122 | 160 | 169 | 2011 | Pump | Ore | Iron Formation | NLJ | IF | | | Open Pit | 2 | 0.1 | 0.5 | | | | | 0.1-3% PO. Local traces PY (2% PY betwen 168.73-169.36m). Local traces AS (3% AS between 164.66-165.58m). |
| M97-122-04 | M97-122 | 180 | 190 | 2011 | Pump | Ore | Iron Formation | NLJ | IF | | | Open Pit | 1.5 | 0 | 3 | 0.1 | | | YES | 1-2% PO (locally up to 5% between 185.9-186.6m). 4% AS between 181.9-187.87m. Local VG between 185.9-186.6m. |
| W94-65-01 | W94-65 | 14 | 20 | 2011 | Pump | Ore | Iron Formation | NLJ | IF | | | Open Pit | 5 | 0.5 | 0.75 | | | 0.5 | | 2-10% PO. Local AS (2% between 17-17.9m and 8% between 19.9-20.4m). Local traces-1% CP. |
| W94-65-02 | W94-65 | 21 | 26 | 2011 | Pump | Ore | Iron Formation | NLJ | IF | | | Open Pit | 2 | 1 | 1 | | | 0.5 | YES | 1-8% PO, 1-2% PY, traces CP, 0.1-8% AS and local VG (21.15-22 and 23-24m and 25-26m). |
| CAEXD262428 | M13-1982 | 25.1 | 26.2 | 2020 | Pump | Ore | | Llm | IF | | 3330 | Underground | 2 | 0.5 | 0.4 | | | | YES | VG in 4 places with As-Py in irregular qak veining, fine-med grained with local coarse As aligned along foliation often adjacent to qak veins, PO wispy lam to dissem to fracture-fill, locally common with Py |
| CAEXD267633 | M13-2094 | 34.9 | 36.1 | 2020 | Pump | Ore | | Ll | IF | | 3341 | Underground | 2 | 1 | 8 | | | 0.3 | | 8% AS with qv. 2% PO with qv, fr.fill/bleb. 1% PY with qv, also trace Cp |
| CAEXD290299 | M13-2065 | 55.1 | 56.1 | 2020 | Pump | Ore | | Ll | IF | | 3100 | Underground | 2 | | 1 | | | | YES | 2-3% PO and 1% AS (locally up to 7%). Local VG between 55.1-55.2m (local pin prick of vg near contact of As grain in chert band) |
| CAEXD265979 | M13-2089 | 48 | 49 | 2020 | Pump | Ore | | Ll | IF | | 3341 | Underground | | 2 | 5 | | | | | 1-2% fractures filling PY. 5% mg-cg euhedral AS, locally up to 40% <10cm |
| CAEXD300073 | M13-2110 | 55 | 56 | 2020 | Pump | Ore | | Llm | IF | | 3341 | Underground | 3 | 0.5 | | | 0.3 | 0.3 | YES | 3% PO wispy lam to dissem with common Py, trace to minor Cp and trace Sp. VG as pp in qtz with Po, in 3 places in small grouping |
| CAEXD294990 | M13-2116 | 46.5 | 48 | 2020 | Pump | Ore | | MV | VO | | 3402 | Open Pit | 0.5 | 0.3 | | | | | | Fine mineralization diss along foliation with minor py |
| CAEXD300063 | M13-2110 | 45.3 | 46.4 | 2020 | Pump | Ore | | MV | VO | | | Open Pit | 2 | 0.5 | 5 | | | | YES | 2% PO wispy lam to dissem to fracture-fill an net-texture vein filling with some Py. 5% AS fine-med grained As in or along veins with local coarse As. VG as small pp in irregular qak vein |
| CAEXD163438 | M12-1437 | 110 | 111 | 2020 | Pump | Ore | | MV | VO | | | Underground | 0.1 | 0.1 | 0.1 | | | | | 1% AS and 0.5% PO only between 110.4-110.6m. |
| CAEXD185368 | M12-1599 | 99.8 | 100.9 | 2020 | Pump | Ore | VO | MV/Llj | VO/IF | | | Underground | 5 | | 1 | | | | | 1-2% AS in bands and 5% PO in Iron formation. |
| CAEXD183956 | M12-1607 | 168.5 | 169.2 | 2020 | Pump | Ore | | M_MV/Llj | VO/IF | QV zone with 20cm Llj | | Underground | 0.5 | 1 | 2 | | | | | 2% AS fine to coarse-grained; content is variable but regular, may reach 5-10% locally. 1% PY but also bands, mixture of Py-Po |
| CAEXD295054 | M13-2121 | 170.6 | 171.7 | 2020 | Pump | Ore | VO | MV/Llj | VO/IF | | | Underground | 2 | | | | | | | 2% PO mm bands along foliation in Llj sub unit, fine mineralization |
| CAEXD289186 | M13-2020 | 213.5 | 214.8 | 2020 | Pump | Waste | | Mg | GB | | | Open Pit | 0.5 | | | | | | | To 1 % locally. |
| W94-55-01 | W94-55 | 16 | 23 | 2011 | Pump | Waste | Iron Formation | NLJ | IF | | | Open Pit | 6 | | 0.3 | 0 | | 0.75 | | 1.5-12% PO, local traces PY and traces-1% CP. |
| W94-57-02 | W94-57 | 26 | 36 | 2011 | Pump | Waste | Iron Formation | NLJ | IF | | | Open Pit | 7 | | 0.5 | | | | | 2-20% PO and local traces AS (up to 1% AS betwen 32.24-33.92m). |
| W94-57-03 | W94-57 | 43 | 50 | 2011 | Pump | Waste | Iron Formation | NLJ | IF | | | Open Pit | 6 | | | | | | | 2-25% PO |
| W94-73-02 | W94-73 | 60 | 69 | 2011 | Pump | Waste | Iron Formation | NLJ | IF | | | Open Pit | 4 | 0.1 | | | | 0.1 | | 2-5% PO, local traces PY-CP |
| CAEXD261887 | M13-1977 | 35 | 36 | 2020 | Pump | Waste | | Ll | IF | | | Open Pit | 1 | 1 | 0.5 | | | 0.1 | | tr-2%, Py-Po+/-Cp & trace to 1% AS |
| CAEXD262427 | M13-1982 | 24 | 25.1 | 2020 | Pump | Waste | | Llm | IF | | | Open Pit | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0.3% AS between 24-24.4m. |
| CAEXD300070 | M13-2110 | 52 | 53 | 2020 | Pump | Waste | | Llm | IF | | | Open Pit | 3 | 0.5 | | | 0.3 | 0.3 | | 3% PO wispy lam to dissem with common Py, trace to minor Cp and trace Sp |
| CAEXD267631 | M13-2094 | 33.8 | 34.9 | 2020 | Pump | Waste | | Ll | IF | | 3341 | Open Pit | 4 | 2 | 1 | | | 0.3 | | 2% PY with qak vning, also trace Cp. 4% PO with qak vning, blebby/fracture fill. 1% AS with qak vning, 1% at lower contact |
| CAEXD185456 | M12-1599 | 201 | 202 | 2020 | Pump | Waste | | L_LL | IF | | | Underground | 5 | | | | | | | Blebby PO |
| CAEXD289268 | M13-2020 | 414.8 | 416 | 2020 | Pump | Waste | | L_Llm | IF | | | Underground | 3 | | | | | | | Mainly ass with the contact zone. |
| M96-58-01 | M96-58 | 31.5 | 40 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M96-58-02 | M96-58 | 49 | 58 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.75 | | | | | | Local 1% PO (56.97-59.75m), local 6% PY (49.38-49.71m) |
| M96-58-03 | M96-58 | 75.5 | 84.5 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.3 | 0.1 | | | | | | Mineralization only described between 81.5-84.21m |
| M97-122-05 | M97-122 | 230 | 239 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| M97-123-04 | M97-123 | 121 | 130 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.5 | | | | | | 0.1-1% PO (1% up to 123.7m). 1% PY also up to 123.7m. |
| M97-153-02 | M97-153 | 67 | 76 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | 0.3 | | | | | |
| M98-184-01 | M98-184 | 14 | 22 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| M98-184-02 | M98-184 | 66 | 74.5 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.3 | | | 0 | 0 | 0.3 | | 1% PO-CP but only between 68.45-69.2m. |
| W94-57-01 | W94-57 | 8 | 16 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.5 | 0.1 | 0.1 | | | | | Locally up to 1% PO (8.3-9.3 and 14.5-15.5m). |
| W94-59-01 | W94-59 | 12 | 21 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.4 | | | | 0.01 | | |
| W94-65-03 | W94-65 | 48 | 57 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| W94-70-01 | W94-70 | 8 | 18 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.2 | | | | | | |
| W94-70-02 | W94-70 | 33 | 42 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.05 | | | | | | |
| W94-73-01 | W94-73 | 14 | 23 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.05 | | | | | | |
| W94-73-03 | W94-73 | 86 | 95 | 2011 | Pump | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| CAEXD289055 | M13-2015 | 48.5 | 50 | 2020 | Pump | Waste | | MV | VO | | | Open Pit | 1 | | | | | | | Diss in bedding. |
| CAEXD262395 | M13-1974 | 43.5 | 45 | 2020 | Pump | Waste | | MV | VO | | | Open Pit | 0.3 | | | | | | | |
| CAEXD296006 | M13-2122 | 9 | 10.1 | 2020 | Pump | Waste | | MV | VO | | | Open Pit | | | | | | | | No mineralization described |
| CAEXD198012 | M12-1630 | 250.5 | 252 | 2020 | Pump | Waste | | MV | VO | | 3340 | Underground | 2 | | 1.5 | | | | | Mineralization only described between 251.6-252m in association with iron formation (5-6% Po // to foliation and in disseminated clusters. 3-4% As medium to coarse grained |
| CAEXD163450 | M12-1437 | 121 | 122 | 2020 | Pump | Waste | | MV | VO | | 3310 | Underground | 0.01 | 0.1 | | | | | | Traces PY +/-PO |
| CAEXD183958 | M12-1607 | 170.5 | 171.5 | 2020 | Pump | Waste | | MV | VO | | | Underground | | 0.25 | | | | | | 2% PY as fracture filling and associated with veining. |
| CAEXD189574 | M12-1689 | 154.5 | 155.9 | 2020 | Pump | Waste | | MV | VO | | | Underground | 0.2 | | | | | | | minor dissem, 1% in local fracture-fill in veins |
| CAEXD250652 | M13-1889 | 301.2 | 302.4 | 2020 | Pump | Waste | | MV | VO | | | Underground | 0.2 | 0.2 | | | | | | minor dissem 1-2mm Py with local minor concentrations over 1-2cm, trace Po |
| CAEXD250738 | M13-1892 | 231 | 232.2 | 2020 | Pump | Waste | | MV | VO | | | Underground | | | | | | | | No mineralization described |
| CAEXD252314 | M13-1890 | 269.6 | 270.7 | 2020 | Pump | Waste | | MV | VO | | | Underground | 0.5 | 0.5 | | | | | | Mainly associated with veining. |
| CAEXD295053 | M13-2121 | 169.1 | 170.6 | 2020 | Pump | Waste | | MV | VO | | | Underground | 1 | 0.75 | 0.3 | | | | | Only traces PY starting at 169.7m. All mineralization within iron formation (1% PY as replacement of PO. 2% PO Mm bands along foliation in Llj sub unit, fine mineralization. 0.5% AS Mm grains diss, seems to be late) |
| CAEXD297112 | M13-2075 | 365 | 366.5 | 2020 | Pump | Waste | | MV | VO | | | Underground | | 0.5 | | | | | | Along foliation or in qtz-cc veining system |
| CAEXD213090 | M12-1759 | 80.25 | 81 | 2020 | Tiriganiaq | Ore | | N_NLJ | IF | | | Open Pit | 2 | | 0.75 | | | | | 1-2.5% PO and local 1.5% AS (80.6-80.75m) |
| CAEXD225690 | M12-1814 | 15 | 16 | 2020 | Tiriganiaq | Ore | | NLJ | IF | | 1100 | Open Pit | 0.1 | 1 | 0.25 | | | 0 | YES | PY 1% overall, up to 2% in some areas; ll to foliation as small, sub-mm to mm-scale laminae; also clustered. 0.1% PO Disseminated with some small stringers, mostly ll to foliation. also from 14.4-15.5m: 0.5% AS clustered and porphyroblastic (also disseminated in some areas). 1 VG occurence (15.1-15.3m). |
| M07-660_107032 | M07-660 | 101 | 102 | 2020 | Tiriganiaq | Ore | | NLJ | IF | | 1025 | Open Pit | 2 | 0.5 | 0.5 | | | 0.01 | | |
| CAEXD259501 | M13-1952 | 56 | 57 | 2020 | Tiriganiaq | Ore | | KSC-LJ | IF | | 1050 | Open Pit | 1 | 1 | 5 | | | | | 1-2% PO locally, fine grained. 1-2% PY locally fine to med grained. 5% AS coarse to med grained |
| CAEXD259500 | M13-1952 | 54.5 | 56 | 2020 | Tiriganiaq | Ore | | KSC-LJ | IF | | 1050 | Open Pit | 1 | 1 | | | | | | 1-2% PO locally, fine grained. 1-2% PY locally fine to med grained |
| M04-530A-05_338259 | M04-530A-05 | 351.9 | 352.8 | 2020 | Tiriganiaq | Ore | | N_NLJ | IF | | 1154 | Underground | 2 | 0.1 | 0.1 | 0.1 | | 0.1 | | |
| M05-556_824703 | M05-556 | 264.37 | 265.28 | 2020 | Tiriganiaq | Ore | | N_NLJ | IF | | 1251 | Underground | 3 | | 5 | | | | | |
| CAEXD175600 | M12-1589 | 257 | 258 | 2020 | Tiriganiaq | Ore | | NLJ | IF | | 1251 | Underground | 3 | | 5 | | | | YES | VG in 3 places, strong As mineralization disseminated in banding parallel zone 2-5cm across & mod to strong replacement of As by Po |
| CAEXD175614 | M12-1589 | 269.6 | 270.6 | 2020 | Tiriganiaq | Ore | | NLJ | IF | | | Underground | | | 3 | | | | | 3% fine to v. coarse grained As along cht/vein margin |
| CAEXD194549 | M12-1692 | 78 | 78.9 | 2020 | Tiriganiaq | Ore | | N_NLJ | IF | | | Underground | 10 | 5 | | | | | | PO massive band. |
| CAEXD206014 | M12-1731 | 208.9 | 210 | 2020 | Tiriganiaq | Ore | | NLJ | IF | | 1153 | Underground | | 1 | 2 | | | | | 2% PY local dissem, fracture fill. 2% AS local, mm-cm -scale dissem, |
| CAEXD213337 | M12-1759 | 668.1 | 669 | 2020 | Tiriganiaq | Ore | | N_NLJ | IF | | 650 | Underground | 3 | | | | | | | beddings+E334:V337V336H335:V337A335:V337 |
| CAEXD216432 | M12-1767 | 674 | 675.1 | 2020 | Tiriganiaq | Ore | | LLM | IF | | 650 | Underground | 5 | 0 | 5 | | 0.5 | | YES | 5% PO ribbons+/-local blebs; locally concentrated to ~15% over 10cm intervals, 6% AS between 673.7-674.7m m-c.g. As, mineralized Qak concentrated over interval. Local 2% SP (674.8-675.1m) and 1 VG occurrences (674.2-674.3m). |
| CAEXD217732 | M12-1770A | 513.7 | 514.7 | 2020 | Tiriganiaq | Ore | | K_KSC-LJ | IF | | 1252 | Underground | | | 0.2 | | | | | may reach 2-3 % locally, mediu-grained also |
| M05-559A_832071 | M05-559A | 414.36 | 415.36 | 2020 | Tiriganiaq | Ore | | NLJ | IF | | 1160 | Underground | | | 0.7 | | | | | |
| M05-564_832368 | M05-564 | 296.1 | 297.05 | 2020 | Tiriganiaq | Ore | | KWA-S | SE | | 1153 | Underground | 2 | | 2 | | | | | |
| M06-591-02 | M06-591 | 40 | 50 | 2011 | Tiriganiaq | Ore | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | | 0.5 | 0.1 | | | | YES | 0.1-1% PY, local 0.1% AS (1% between 41.49-42.12m) and 2 VG occurrences (40.45-41.49-39.28-40.45m). |
| M06-629-01 | M06-629 | 107 | 115 | 2011 | Tiriganiaq | Ore | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | 0.3 | 0.01 | 0.5 | | | | YES | 0.01-5% AS up to 111.61m, 0.01% PY (up to 2% between 110.87-111.61m), 0.01-1% PO and 3 VG occurrences (107-72-108.48, 109.66-110.2, 110.2-110.87m). |
| M99-417-01 | M99-417 | 124 | 136 | 2011 | Tiriganiaq | Ore | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | ?? | ?? | ?? | | | | YES | Mineralization described but no percentage. 5 VG occurrences. |
| CAEXD213028 | M12-1750 | 512 | 513 | 2020 | Tiriganiaq | Ore | | K_KS | TIRFM | | 1025 | Underground | 0.1 | | 0.5 | | | | | PO little and associated with veining. |
| M07-645_103186 | M07-645 | 383.4 | 384.15 | 2020 | Tiriganiaq | Ore | | Ks | TIRFM | | | Underground | 4 | 0.05 | 1.5 | | | | | 4% PO (described as AS but also other interval saying different and no PO for this interval so I presumed it is PO instead of AS). |
| M05-548_824513 | M05-548 | 574.26 | 575.2 | 2020 | Tiriganiaq | Ore | | K_KS | TIRFM | | 1015 | Underground | | | | | | | | No mineralization described. |
| M07-681_110260 | M07-681 | 118.65 | 119.4 | 2020 | Tiriganiaq | Ore | UOFM | KSC-QV | UOFM | Upper Contact of metric QV (original lithology unchanged) | 1050 | Open Pit | 1.75 | 1 | 0.75 | | | | | 1.5 and 2% PO described for the same interval. IDEM for AS (0.5-1%). |
| CAEXD308246 | M13-2187 | 54 | 55 | 2020 | Tiriganiaq | Ore | | Ksc-wa | UOFM | | | Open Pit | | | | | | | | No mineralization described. |
| M07-693_109898 | M07-693 | 67.5 | 68.5 | 2020 | Tiriganiaq | Ore | | K_KSC | UOFM | | 1100 | Open Pit | 0.1 | | 1 | | | | | |
| CAEXD199299 | M12-1717 | 518 | 519 | 2020 | Tiriganiaq | Ore | | KSC-WA | UOFM | | 1025 | Underground | | | | | | | | |
| CAEXD217788 | M12-1770A | 562 | 563 | 2020 | Tiriganiaq | Ore | | KSC-WA | UOFM | | | Underground | | | 0.1 | | | | | 0.2% AS but only between 562.75-562.9m. |
| CAEXD295099 | M13-2059A | 473 | 473.8 | 2020 | Tiriganiaq | Ore | | KSC-WA | UOFM | | 1075 | Underground | 1 | | | | | | | Fine mineralization along foliation |
| M05-559A_832081 | M05-559A | 421.93 | 422.47 | 2020 | Tiriganiaq | Ore | | Ksc | UOFM | | | Underground | 0.1 | 0.05 | 0.05 | | | | | |
| CAEXD199207 | M12-1717 | 407.2 | 408 | 2020 | Tiriganiaq | Ore | | KSC-WA | UOFM | | | Underground | 2.5 | | 10 | 1 | | 0.5 | | From 3-15% coarsely grained AS (avg 8-10%) with 3% Po-Cp and local GL (avg 1%). |
| CAEXD217778 | M12-1770A | 555.7 | 556.7 | 2020 | Tiriganiaq | Ore | UOFM | KSC-WA/Nlj | UOFM/IF | KSC-WA with 20cm Nlj | 1100 | Underground | 0.5 | 0.3 | 0.2 | | | | | AS associated with narrow quartz-ankerite vein and also fractures, with Po |
| M00-473-01 | M00-473 | 134 | 142 | 2011 | Tiriganiaq | Ore | Mafic Volcanic | M | VO | | | Open Pit | ?? | ?? | ?? | | | | | Mineralization described but no percentage. |
| M00-483-01 | M00-483 | 147 | 156 | 2011 | Tiriganiaq | Ore | Mafic Volcanic | M | VO | | | Open Pit | ?? | ?? | ?? | | ?? | | | Mineralization described but no percentage. |
| M00-490-01 | M00-490 | 181 | 189 | 2011 | Tiriganiaq | Ore | Mafic Volcanic | M | VO | | | Open Pit | ?? | ?? | ?? | ?? | ?? | | | Mineralization described but no percentage. |
| M08-731W1-01 | M08-731 | 330 | 335 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | MG | GB | | | Underground | 0.5 | | | | | 0.05 | | |
| GT08-04-01_2009 | GT08-04 | 112.5 | 118.5 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | MG | GB | | | Underground | | 0.05 | | | | | | |
| M05-561-02_2011 | M05-561 | 43.5 | 52.5 | 2011 | Tiriganiaq | Waste | Gabbro | MG | GB | | | Open Pit | | | | | | | | No mineralization described. |
| M06-592-03 | M06-592 | 124 | 132.5 | 2011 | Tiriganiaq | Waste | Gabbro | MG | GB | | | Open Pit | | | | | | | | No mineralization described. |
| M97-135-02 | M97-135 | 85 | 92 | 2011 | Tiriganiaq | Waste | Gabbro | MG | GB | | | Open Pit | | | | | | | | No mineralization described |
| M97-149-01 | M97-149 | 12.5 | 21 | 2011 | Tiriganiaq | Waste | Gabbro | MG | GB | | | Open Pit | | 0.1 | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| M99-280-01 | M99-280 | 189 | 197.25 | 2008 | Tiriganiaq | Waste | Iron Formation | NLJ | IF | | | Underground | ?? | | ?? | | | | | Mineralization described but no percentage. |
| M04-526-01 | M04-526 | 216 | 225.05 | 2008 | Tiriganiaq | Waste | Iron Formation | LLM | IF | | | Underground | 0.3 | 0.1 | 0.01 | | | | | |
| M03-508-02 | M03-508 | 93 | 101 | 2011 | Tiriganiaq | Waste | Iron Formation | NLJ | IF | | | Open Pit | ?? | ?? | ?? | ?? | | | | Mineralization described but no percentage. |
| M06-622_878029 | M06-622 | 45.2 | 46.02 | 2020 | Tiriganiaq | Waste | | NLJ | IF | | 1100 | Open Pit | 3 | 0.5 | | | | | | |
| CAEXD225689 | M12-1814 | 14 | 15 | 2020 | Tiriganiaq | Waste | | NLJ | IF | | 1100 | Open Pit | 0.1 | 1 | 0.3 | | | | | PY 1% overall, up to 2% in some areas; ll to foliation as small, sub-mm to mm-scale laminae; also clustered. 0.1% PO Disseminated with some small stringers, mostly ll to foliation. also from 14.4-15.5m: 0.5% AS clustered and porphyroblastic (also disseminated in some areas). |
| CAEXD249828 | M12-1882 | 44.8 | 46 | 2020 | Tiriganiaq | Waste | | KSC-LJ | IF | | 1087 | Open Pit | 0 | 0.5 | | | | | | Fine grains ass with Sc unit. |
| CAEXD259467 | M13-1952 | 13 | 14 | 2020 | Tiriganiaq | Waste | | Nlj | IF | | | Open Pit | 2 | 1 | | | | | | 1-3% PO fine grained locally. Trace to 1% PY locally fine grained |
| CAEXD259468 | M13-1952 | 14 | 15 | 2020 | Tiriganiaq | Waste | | Nlj | IF | | | Open Pit | 2 | 1 | 1 | | | | | 1-3% PO fine grained locally. Trace to 1% PY locally fine grained. 2% AS between 14-14.5m |
| M07-686_110546 | M07-686 | 90.7 | 91.55 | 2020 | Tiriganiaq | Waste | | NLJ | IF | | 1155 | Open Pit | 5 | 0.5 | | | | | | |
| M06-629_878207 | M06-629 | 78.5 | 79.36 | 2020 | Tiriganiaq | Waste | | NLJ | IF | | 1102 | Open Pit | 0.1 | | 0.01 | | | | | |
| CAEXD213087 | M12-1759 | 79 | 79.75 | 2020 | Tiriganiaq | Waste | | N_NLJ | IF | | | Open Pit | | | | | | | | No mineralization described by the logger for this interval. 5% PO and 1.5% AS starting at 79.75m. |
| CAEXD213334 | M12-1759 | 666.6 | 667.3 | 2020 | Tiriganiaq | Waste | | N_NLJ | IF | | 650 | Underground | 3 | | 0.1 | | | | | 3% PO patchy distibution, bands, massive and along fractures and beddings. Local 0.5% AS fine to medium-grained (667-667.1m) |
| CAEXD216429 | M12-1767 | 671.9 | 672.9 | 2020 | Tiriganiaq | Waste | | LLM | IF | | 650 | Underground | 5 | | 1 | | | | | 0.5 to 2% diss f-mg AS & PO ribbons+/-local blebs; locally concentrated to ~15% over 10cm intervals |
| CAEXD258462 | M13-1949 | 385 | 386.5 | 2020 | Tiriganiaq | Waste | | KSC-LJ | IF | | 1153 | Underground | | | | | | | | No mineralization described. |
| GT08-01-02 | GT08-01 | 25.16 | 29.3 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | 0.01 | | | | | |
| GT08-02-01_2008 | GT08-02 | 65.07 | 69.82 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.01 | 0.1 | 0.5 | | | | | |
| M00-474-05 | M00-474 | 20.53 | 24.6 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | ?? | ?? | | | | | | Mineralization described but no percentage. |
| M07-660-02_2008 | M07-660 | 55.86 | 59.92 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.05 | 0.1 | 0.5 | | | | | |
| M07-678-03 | M07-678 | 25.1 | 29.6 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | 0.1 | 0.5 | | | 0.01 | | loc. tr GL. |
| M07-704-01 | M07-704 | 41.38 | 45.55 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.05 | 0.3 | 0.05 | | | 0.01 | | |
| M07-705-01 | M07-705 | 45.76 | 50 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| M07-713-02 | M07-713 | 45.23 | 49.3 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.01 | | 0.01 | | | | | |
| M07-713-03 | M07-713 | 15.26 | 19.48 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.01 | | | | | | |
| M95-17-01 | M95-17 | 60.5 | 65.5 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | 0.1 | 0.1 | | | | | Local 2% PO (63.08-64.23m) |
| M95-17-02 | M95-17 | 30.39 | 34.7 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | 0.1 | 0.1 | | | | | Local 1% PO (33.87-34.4m) |
| M98-194-03 | M98-194 | 26.2 | 29.38 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 1.5 | | | | | | |
| M98-269-03 | M98-269 | 20 | 24.24 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M98-297-03 | M98-297 | 55.16 | 59.8 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M98-297-04 | M98-297 | 25.04 | 28.8 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M98-316-01_2008 | M98-316 | 25 | 29.4 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | 1.5 | | | | | 2-4% AS described between 28.32-30m only. Otherwise no mineralization described. |
| M99-340-03 | M99-340 | 26 | 29.55 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | 0 | | | | | Mineralization described but no percentage. |
| M99-341-02 | M99-341 | 30.25 | 34.6 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | 0 | | | | | Mineralization described but no percentage. |
| M99-345-02 | M99-345 | 35.7 | 39.72 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-346-02_2008 | M99-346 | 70.23 | 74.93 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-346-03 | M99-346 | 35.1 | 39.58 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-350-02 | M99-350 | 50.07 | 54.7 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | ?? | ?? | | | | | | Mineralization described but no percentage. |
| M99-350-03 | M99-350 | 25.15 | 27.92 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-403-02 | M99-403 | 70 | 74.6 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-403-04 | M99-403 | 25.33 | 29.3 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-404-01 | M99-404 | 100.6 | 104.95 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | | | PY described between 103.75-103.9m but no percentage. |
| M99-404-02 | M99-404 | 80.28 | 84.23 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-404-03 | M99-404 | 65.72 | 69.34 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-403-03 | M99-403 | 50.6 | 54.35 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | ?? | | | | | AS described between 53.53-54.15m but no percentage. |
| M99-404-04 | M99-404 | 30.19 | 34.3 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M07-645-01 | M07-645 | 250.36 | 259.97 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | | 0.05 | 0.05 | | | | | Mineralization only described between 254-257m. (0.01% PY-AS). |
| M99-327-01 | M99-327 | 195.04 | 205.17 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | ?? | | | | | | | Mineralization described but no percentage. |
| M04-533-01 | M04-533 | 380.18 | 389.64 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | 0.1 | 0.1 | 0.01 | | | | | Only local traces of AS (380.18-381.0m) |
| M00-476-01 | M00-476 | 32 | 37 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | ?? | ?? | | | | | | Mineralization described but no percentage. |
| M00-476-02 | M00-476 | 23 | 28 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | | | Mineralization described but no percentage. |
| M00-479-01 | M00-479 | 30 | 25 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | | | Mineralization described but no percentage. |
| M00-479-02 | M00-479 | 20 | 25 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | | | Mineralization described but no percentage. |
| M06-628-01 | M06-628 | 38 | 43 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.03 | 0.01 | | | | | | |
| M06-628-02 | M06-628 | 20 | 25 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.2 | 0.02 | | | | 0.01 | | |
| M07-660-01_2009 | M07-660 | 36 | 41 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.2 | | 0.01 | 0.01 | | | | |
| M07-660-02_2009 | M07-660 | 22 | 27 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | | | | | | | |
| M98-194-04 | M98-194 | 34 | 39 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 1.5 | | | | | | 1.5% PY (up to 17% between 38.48-38.55m). |
| M98-298-01 | M98-298 | 45 | 50 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | 0.75 | | | | | Mineralization described only between 37.45-39.00m. 0.5-2% AS and local 0.5% PY (38.16-38.48m) |
| M98-298-02 | M98-298 | 35 | 40 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M98-298-03 | M98-298 | 25 | 30 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0 | 0 | | | | | No mineralization described. |
| M99-341-03 | M99-341 | 20 | 25 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | 0 | | | | | Mineralization described but no percentage. |
| M99-345-01_2009 | M99-345 | 45 | 50 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-345-03 | M99-345 | 20 | 25 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-346-01 | M99-346 | 40 | 45 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-346-02_2009 | M99-346 | 30 | 35 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-385-01 | M99-385 | 36 | 41 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-386-01 | M99-386 | 39 | 44 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | ?? | ?? | ?? | | | | | Mineralization described but no percentage. |
| M99-386-02 | M99-386 | 27 | 32 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | ?? | ?? | | | | | | Mineralization described but no percentage. |
| M99-403-05 | M99-403 | 20 | 25 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| M99-404-05 | M99-404 | 40 | 45 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | | | PY described between 42.8-43.0m but no percentage. |
| M99-404-06 | M99-404 | 23 | 27 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-418-01 | M99-418 | 32 | 37 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M03-498-01 | M03-498 | 315 | 320 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | ?? | | | | | | | Mineralization described but no percentage. |
| M06-607-01 | M06-607 | 175 | 180 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | 0.3 | | | | | | | Up to 1% PO between 177.12-177.8m. |
| M08-731W1-02 | M08-731 | 350 | 355 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | 0.5 | | | | | 0.05 | | |
| M98-266-01 | M98-266 | 138 | 143 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Underground | | | | | | | | No mineralization described. |
| M03-508-01 | M03-508 | 44.5 | 53 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | | | PY described between 49.1-49.3m but no pourcentage. |
| M06-577-02 | M06-577 | 71 | 80 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described for that DDH. |
| M06-577-03 | M06-577 | 105 | 114 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described for that DDH. |
| M06-591-01 | M06-591 | 20.5 | 29 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | | | | | | |
| M06-608-01 | M06-608 | 27 | 35.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 1 | 1 | 0.01 | | | 0.01 | | |
| M06-608-02 | M06-608 | 75.5 | 84 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.05 | 0.05 | | | | 0.01 | | |
| M06-611-01 | M06-611 | 28 | 37 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | 0.5 | | | | | | Mineralization only described bewteen 28-30m (1% PY and 1% PO). |
| M06-611-02 | M06-611 | 121 | 130 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 1 | | | 0 | 0.01 | | |
| M06-625-01 | M06-625 | 15 | 24 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | | | | | | | |
| M06-625-02 | M06-625 | 49 | 57 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.01 | 0.01 | 0 | | | 0.01 | | |
| M06-631-01 | M06-631 | 17 | 24 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.01 | 0.01 | 0.03 | | | | | |
| M07-674-01 | M07-674 | 27 | 35.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M07-689-01 | M07-689 | 11 | 21 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.05 | 0.01 | | | 0.01 | | |
| M07-689-02 | M07-689 | 42 | 52 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.05 | 0.01 | | | 0.01 | | |
| M08-761-01 | M08-761 | 21 | 30 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | 0.2 | 0.1 | | | | | |
| M08-761-02 | M08-761 | 91 | 100 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.05 | 0.2 | 0.05 | | | 0.01 | | |
| M08-763-01 | M08-763 | 55.5 | 64 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.05 | 0.05 | 0.01 | | 0.01 | 0 | |
| M08-765-01 | M08-765 | 25 | 34 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.05 | 0.3 | | | | | | |
| M96-19-01 | M96-19 | 20 | 29 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.5 | | | | | | |
| M96-19-02 | M96-19 | 71.5 | 79 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | 0.1 | | | | | |
| M96-37-02 | M96-37 | 85.5 | 94 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.7 | | | | | | 0.5% PY (up to 1% PY between 84.3-87.3m). |
| M96-37-03 | M96-37 | 129 | 138 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.5 | | | | | | |
| M96-77-01 | M96-77 | 41 | 49.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.01 | | | | | | |
| M96-77-02 | M96-77 | 140 | 149 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.1 | | | | | | |
| M97-121-01 | M97-121 | 23 | 32 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.05 | 0.05 | | | | | | |
| M97-135-03 | M97-135 | 111 | 120 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.01 | | | | | | |
| M97-94A-01 | M97-94A | 75 | 84 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.1 | 0.1 | | | | | | |
| M97-94A-02 | M97-94A | 137 | 146 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.2 | | | | | | | 0.1-0.5% PO. |
| M97-95-01 | M97-95 | 51 | 59.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.01 | 0.1 | | | | | | |
| M98-201-04 | M98-201 | 166 | 175 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.5 | | 0.1 | | | | | Mineralization only described between 168.58-169.23m. 2-3% PO between 168.58-169.23m and 1% PY between 168.58-168.68m. |
| M98-208-01 | M98-208 | 58 | 67 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.3 | | 0.02 | | | | | Mineralization only described between 64.68-65.74m (0.1% PO and 2% PY). |
| M98-265-01 | M98-265 | 67 | 76 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | 0.2 | 0.3 | | | | | | |
| M98-317-01 | M98-317 | 61 | 70 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | 0.3 | | | | | | 0.2-1% PY between 62.55-62.77m only. Otherwise no mineralization described. |
| M99-336B-03 | M99-336B | 140 | 148 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M99-347-01 | M99-347 | 60 | 68 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-347-02 | M99-347 | 94 | 102.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | ?? | | | | ?? | | Mineralization described but no percentage. |
| M99-409-01 | M99-409 | 25 | 33.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-409-02 | M99-409 | 89 | 100 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-409-03 | M99-409 | 152 | 161 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described |
| M99-410-01 | M99-410 | 26 | 34 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M99-410-02 | M99-410 | 52 | 61 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M99-436-01 | M99-436 | 32.5 | 41 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M99-436-02 | M99-436 | 96.5 | 105 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KWA-S | SE | | | Open Pit | | | | | | | | No mineralization described. |
| M10-879-01 | M10-879 | 38 | 46.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | K | SE | | | Open Pit | 0.01 | 0.2 | 0.01 | | | | | |
| M10-887-01 | M10-887 | 17 | 24.5 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | K | SE | | | Open Pit | 0.01 | 0.01 | | | | | | |
| M07-704-02 | M07-704 | 25.09 | 25.28 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | | | | | | | | No mineralization described. |
| M07-710-02 | M07-710 | 26 | 29.71 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | 0.5 | | 0.01 | | | | | 0.05-0.2% PO (1% between 26.05-26.6m). |
| M07-711-01 | M07-711 | 25.3 | 29.7 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | 0.01 | | 0.01 | | | | | |
| M98-269-01 | M98-269 | 65.5 | 70 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | | | | | | | | No mineralization described. |
| M98-297-02 | M98-297 | 75.8 | 79.5 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | | | | | | | | No mineralization described. |
| M03-496-01 | M03-496 | 360.07 | 370.13 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 4.5 | 3.5 | 4.5 | 0.5 | | 0.25 | YES | 0.5% GL but local 2% GL (367.6-367.8m) and VG between 368.8-368.9m. |
| M06-604-01 | M06-604 | 335.56 | 344.42 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.1 | 0.01 | 0.01 | | | | | |
| M07-663-01 | M07-663 | 417.35 | 426.56 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.01 | 0.01 | 0.01 | | | | | |
| M07-663-02 | M07-663 | 350.7 | 357.24 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.5 | | 0.01 | | | | | |
| M07-649-01_2009 | M07-649 | 300 | 305 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.02 | 0.01 | 0.01 | | | | | |
| M07-672B-01 | M07-672 | 323 | 328 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.01 | 0.01 | 0.01 | | | 0.01 | | Mineralization only described between 325.16-325.31m. |
| M07-685-02 | M07-685 | 335 | 340 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.01 | | | | | 0.01 | | |
| M07-691-01 | M07-691 | 335 | 340 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.01 | 0.01 | 0.01 | | | | | |
| M08-769-01 | M08-769 | 451 | 456 | 2009 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Underground | 0.05 | 0.05 | 0.01 | | | | | |
| M97-95-02 | M97-95 | 102.5 | 111 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | 0.3 | | | | | | | Only one occurrences of PO (2% between 107-107.38m) |
| M98-270-01 | M98-270 | 92 | 100 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | | 0.01 | | | | | | 0 |
| M99-409-04 | M99-409 | 216 | 224 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KS | TIRFM | | | Open Pit | ?? | ?? | | | | | | PY-PO described between 220.97-221.87m but no percentage. |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| GT08-01-01 | GT08-01 | 50.2 | 54.4 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | 0.01 | 0.1 | | | | | | |
| M00-474-04 | M00-474 | 45.42 | 50 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | ?? | ?? | ?? | | | | | Mineralization described but no percentage. |
| M03-513-01 | M03-513 | 19.5 | 24.8 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | | | | | | No mineralization described |
| M07-660-01_2008 | M07-660 | 80.84 | 84.5 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | 0.3 | 0.5 | 0.3 | | | | | 1% AS. |
| M07-678-02 | M07-678 | 35.55 | 39.74 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | 0.01 | 0.01 | 0.01 | | | | | |
| M07-713-01 | M07-713 | 80.2 | 85.51 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | 0.01 | 0.03 | 0.3 | | | | YES | 1% AS but only between 85.05-86.35m. 3 VG occurrences (84.05-84.8m, 84.8-85.8m and 85.8-86.35m). |
| M98-194-02 | M98-194 | 55.45 | 58.6 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | 0.1 | | | | | 0.5% AS only between 54.75-54.83m. |
| M98-269-02 | M98-269 | 45.5 | 50 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | | | | | | No mineralization described. |
| M99-339-01 | M99-339 | 55.3 | 59.4 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | ?? | | | | | Mineralization described but no percentage. |
| M99-345-01_2008 | M99-345 | 80.6 | 84.8 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | ?? | ?? | | | YES | Mineralization described but no percentage. 3 VG occurrences (strange percentage: 50% 2% and 80%; probably amount of PP). |
| M99-349-01 | M99-349 | 65 | 69.55 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | 0.5 | 0.3 | 0.3 | | | | | 2 small with mineralization only. 67.35-67.42: 5% AS and 1% PO. 68.6-69.1m: 5% PO and 1% PY. |
| M99-349-02 | M99-349 | 40.2 | 44.87 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | | | | | | No mineralization described |
| M98-194-01 | M98-194 | 70 | 74.63 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | | | 0.05 | | | | | AS described between 72.76-73.04 but no pourcentage |
| M05-571A-01 | M05-571 | 435.4 | 444.96 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Underground | 0.01 | 0.01 | 0.01 | | | 0.01 | | |
| M06-623-01 | M06-623 | 63 | 72 | 2011 | Tiriganiaq | Waste | Greywacke/Siltstone | KSC-WA | UOFM | | | Open Pit | 0.3 | 0.05 | 0.01 | | | | | |
| CAEXD175471 | M12-1574A | 334 | 335 | 2020 | Tiriganiaq | Waste | | KSC-WA | UOFM | | | Underground | | | | | | | | No mineralization described. |
| CAEXD206190 | M12-1745 | 169.2 | 170.2 | 2020 | Tiriganiaq | Waste | | KSC-WA | UOFM | | | Underground | | | | | | | | No mineralization described. |
| CAEXD217787 | M12-1770A | 561 | 562 | 2020 | Tiriganiaq | Waste | | KSC-WA | UOFM | | | Underground | | | | | | | | No mineralization described. |
| CAEXD261351 | M13-1954 | 228.9 | 229.9 | 2020 | Tiriganiaq | Waste | | KSC-WA | UOFM | | | Underground | | | | | | | | No mineralization described. |
| CAEXD211120 | M12-1741 | 531.5 | 533 | 2020 | Tiriganiaq | Waste | | KSC-WA | UOFM | | | Underground | 0.3 | 0.1 | 0.1 | | | | | tr Po-As-Py |
| CAEXD199214 | M12-1717 | 412 | 413 | 2020 | Tiriganiaq | Waste | | KSC-WA | UOFM | | | Underground | 0.2 | | | | | | | |
| M00-474-02 | M00-474 | 80.3 | 84.82 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | M | VO | | | Open Pit | ?? | ?? | ?? | | | | | Mineralization described but no percentage. |
| M99-403-01 | M99-403 | 75 | 80 | 2008 | Tiriganiaq | Waste | Greywacke/Siltstone | M | VO | | | Open Pit | | | ?? | | | | | AS described between 75.67-76.7m but no percentage. |
| GT08-04-01_2008 | GT08-04 | 97.41 | 102.29 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.1 | | | | | | |
| GT08-04-03 | GT08-04 | 69.07 | 72.93 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | 5 | 2 | 2 | | | 0.01 | | |
| M00-474-01 | M00-474 | 110 | 114.46 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| M07-678-01 | M07-678 | 47.37 | 51.82 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.05 | 0.01 | | | | | |
| M98-297-01 | M98-297 | 111 | 114 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | 7 | 0.3 | 0.75 | | | | | 3-15% PO, 0.5% AS (up to 2% between 110.57-111.12m), only local 2% PY (113.29-113.49m). |
| M99-340-01 | M99-340 | 103 | 107.78 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | ?? | 0 | | | | | Mineralization described but no percentage. |
| GT08-04-02 | GT08-04 | 80.38 | 84.3 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M99-341-01 | M99-341 | 80.6 | 84.4 | 2008 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| GT08-02-01_2009 | GT08-02 | 112 | 118 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| M05-561-01 | M05-561 | 61 | 67 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | 2 | | | | | | 5% PY up to 63.03m than only 0.1% PY. |
| M05-561-02_2009 | M05-561 | 101 | 106 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | 0.1 | | | | | | |
| M05-564-01 | M05-564 | 366 | 372 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | | | | | | | No mineralization described. |
| M97-130-02 | M97-130 | 280 | 288 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | 0.2 | | | | | | |
| M97-134-01 | M97-134 | 305 | 309.5 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | 0.5 | | | | | | |
| M97-137-01 | M97-137 | 237 | 242 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | 0.75 | 0.75 | 1 | | | 0 | YES | 0.1-1% py, 0.1-2% PO, local 0.1-5% AS (2-5% between 215.75-217.45m). Local VG (215.75-216.6m). |
| M97-138-01 | M97-138 | 221.5 | 227.5 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | 0.1 | | | | | | |
| M97-139-01 | M97-139 | 142 | 149 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | 0.05 | 0.05 | | 0.01 | | | YES | 0.01-0.1% PO-PY. Traces VG-GL (143-57-144.72m). |
| M97-92-01 | M97-92 | 209 | 215 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | 0.15 | | | | | | 1% PY described but only between 210.57-211.6m. |
| M97-93-01 | M97-93 | 428.5 | 434.5 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | 0.01 | 0.1 | | | | | | |
| M98-318-01 | M98-318 | 100 | 105 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | ?? | | | | | | Some PY described between 104.76-104.9m but no percentage. |
| M05-536A-01 | M05-536 | 491 | 497 | 2009 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Underground | | | | | | | | M05-536 end at 99m. |
| M06-623-02 | M06-623 | 81 | 87 | 2011 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.03 | 0.1 | 0.01 | | | | | |
| M08-783-02 | M08-783 | 163 | 172 | 2011 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.3 | | | | | | |
| M97-95-03 | M97-95 | 213 | 222 | 2011 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.3 | 3.5 | 0 | 0.01 | | 0.01 | | 3-4% PY, 0.01% CP, local 0.5% PO, and local 0.1% GL. |
| M99-336B-04 | M99-336B | 249 | 258 | 2011 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described. |
| M99-345-01 | M99-345 | 109 | 117 | 2011 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| M99-409-05 | M99-409 | 224 | 234 | 2011 | Tiriganiaq | Waste | Mafic Volcanic | M | VO | | | Open Pit | | ?? | | | | | | PY described between 224.92-225.1m but no percentage. |
| CAEXD162003 | M12-1486 | 32.5 | 33.5 | 2020 | Wesmeg | Ore | | LLM | IF | | 740 | Open Pit | | 2 | 0 | | | | | Up to 5% locally, concentrated along contact of iron formation |
| CAEXD158752 | M12-1482 | 8.6 | 9.6 | 2020 | Wesmeg | Ore | | LLM | IF | | 625 | Underground | 0.5 | 2 | 0.4 | | 0.1 | 0.1 | YES | 2% PY but variable up to 10-15% over short intervals, fine grained dissem to wispy lam, minor Po, trace Cp-Sp, locally common fracture-fill Py also. 0.4% AS generally around qak veining, mm to 4-5mm, local concentrations to ~5-7% over 20cm. VG between 8.79-8.80m (VG as large pp in small As crystal with small pp on edge of crystal). |
| CAEXD173581 | M12-1536 | 230.2 | 231.2 | 2020 | Wesmeg | Ore | | LLM | IF | | 490 | Underground | 5 | | 1.5 | | 0.3 | 0.3 | | 5% wispy lam to dissem and fracture-fill, local Cp-Sp. 0.5% AS (229.7-234.2m) upper1.5m at ~1-2% fine-med grained As, lower portion <½% to trace |
| CAEXD159768 | M12-1510 | 263 | 264 | 2020 | Wesmeg | Ore | | LLM | IF | | 460 | Underground | 4 | | 3 | | | | | AS diss but locally concentrated proximal Qak veins; fine to locally coarse-grained more proximal veining & 6-8% PO in local Qak vein (between 263.5-263.8m) |
| CAEXD160930 | M12-1419 | 155 | 156 | 2020 | Wesmeg | Ore | | L_LLM | IF | | 440 | Underground | 5 | 2 | 5 | | | 0.5 | | up to 10% AS locally. |
| CAEXD163317 | M12-1433 | 215 | 216 | 2020 | Wesmeg | Ore | | LL | IF | | 435 | Underground | 0.1 | 0.05 | 4 | | | 0.05 | | 3-5%, fine to coarse As with increased veining |
| CAEXD239740 | M12-1826 | 359.7 | 360.8 | 2020 | Wesmeg | Ore | | L_LLJ | IF | | 600 | Underground | | | 8 | | | | YES | 7-10% As F/C G. diss in Q_Qak V ass with Ank/M |
| CAEXD164147 | M12-1427 | 138.5 | 139.5 | 2020 | Wesmeg | Ore | | LL | IF | | 450 | Underground | 8 | | | | | | | Laminated PO. |
| M96-51-01 | M96-51 | 10 | 20 | 2011 | Wesmeg | Ore | Mafic Volcanic | U | UV | | | Open Pit | 0.1 | 0.1 | 0.1 | | | | | |
| CAEXD154976 | M12-1386 | 19.4 | 20.6 | 2020 | Wesmeg | Ore | | MV | VO | | 440 | Open Pit | 0.3 | 0.1 | 0.3 | 0.05 | 0.05 | 0 | 0 | 0.3% fine-med grained As along and in veins and locally concentrated along foliation, local Sp-Gn, common Py with or near As. 0.3% PO dissem with minor concentrations along foliation, mostly mm to sub-mm with local cubes to 3-4mm |
| CAEXD260999 | M13-1995 | 84.3 | 85.8 | 2020 | Wesmeg | Ore | | MV | VO | | 235 | Open Pit | | 0.01 | | | | | | trace Py found in qtz-calcite veins |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| CAEXD159231 | M12-1499 | 24.5 | 26 | 2020 | Wesmeg | Ore | | MV | VO | | 740 | Open Pit | | 0.1 | | | | | | trace pyrite throughout and occasionally localized in 5-10cm bands of up to 2% pyrite |
| CAEXD239665 | M12-1826 | 279 | 280.5 | 2020 | WESMEG | Ore | | MV | VO | | 901 | Underground | 0.1 | | | | | | | Trace, fine to medium G., diss. |
| CAEXD161414 | M12-1436 | 173 | 174 | 2020 | Wesmeg | Ore | | MV | VO | | 430 | Underground | 0.5 | 1 | | | | | | 0.1-0.5% Py and Po in disseminations (from 173.6-173.9m: 3-4% SF including Py diss in chert bands, Po in replacement of As grains. Llj bands with Bio-alt.). |
| CAMLD105829 | M11-1026 | 141 | 142 | 2020 | WESMEG | Ore | VO | MV/Llj | VO/IF | | 901 | Underground | | | 8 | | | | YES | fine to coarse arsenopyrite in veins and chert-mag bands. 9 grains of VG pinprick to pinhead locallized in veins (141.3-141.5m). |
| M96-50-01 | M96-50 | 30 | 40 | 2011 | Wesmeg | Waste | Mafic Volcanic | MG | GB | | | Open Pit | 0.2 | | | | | | | |
| CAEXD155161 | M12-1398 | 65 | 66 | 2020 | Wesmeg | Waste | | LLM | IF | | 450 | Open Pit | 0.5 | 4 | 0.5 | | 0.3 | 0.3 | | 4% PY strong wispy to dissem Py with minor Po, trace CP-SP. 0.5% AS dissem 1-3mm As, locally to 1-2% over short intervals, often along vein margins |
| CAEXD160328 | M12-1393 | 18 | 19 | 2020 | Wesmeg | Waste | | L_LL | IF | | 460 | Open Pit | | 4 | | | | | | 3 à 5% irregular mm py stringers all unit long |
| CAEXD159101 | M12-1430 | 50 | 51.5 | 2020 | Wesmeg | Waste | | LLJ | IF | | 460 | Open Pit | 0.5 | 1 | | | | 0.5 | | 1% PY to 3% locally, irregular Py-stringers associated to small Graphitic bands. Traces PO (3% PO between 50.7-50.8m associated with graphitic band also). |
| CAEXD166544 | M12-1467 | 35 | 36 | 2020 | Wesmeg | Waste | | LL | IF | | | Open Pit | 0.3 | 1 | | | | 0.3 | | 0.5-2%, +/- Po-Cp |
| CAEXD156245 | M12-1403 | 87 | 88.3 | 2020 | Wesmeg | Waste | | L_LLJ | IF | | 0 | Underground | 3 | | | | | | | veins, diss. |
| CAEXD173583 | M12-1536 | 232.2 | 233.2 | 2020 | Wesmeg | Waste | | LLM | IF | | 490 | Underground | 5 | | 0.5 | | 0.3 | 0.3 | | 5% wispy lam to dissem and fracture-fill, local Cp-Sp. 0.5% AS (229.7-234.2m) upper1.5m at ~1-2% fine-med grained As, lower portion <½% to trace |
| CAEXD160927 | M12-1419 | 153 | 154 | 2020 | Wesmeg | Waste | | L_LLM | IF | | 440 | Underground | 5 | 2 | 5 | | | 0.5 | | up to 10% AS locally. |
| CAEXD163315 | M12-1433 | 214 | 215 | 2020 | Wesmeg | Waste | | LL | IF | | 435 | Underground | 0.1 | 0.05 | 4 | | | 0.05 | | 3-5%, fine to coarse As with increased veining |
| M11-1051-02 | M11-1051 | 89 | 99.5 | 2011 | Wesmeg | Waste | Mafic Volcanic | U | UV | | | Open Pit | | | | | | | | |
| M10-987-03 | M10-987 | 179 | 188 | 2011 | Wesmeg | Waste | Ultramafic | U | UV | | | Open Pit | | | | | | | | No mineralization described |
| M10-992-04 | M10-992 | 107 | 113 | 2011 | Wesmeg | Waste | Ultramafic | U | UV | | | Open Pit | | 0.05 | | | | | | |
| M10-994-05 | M10-994 | 15 | 24 | 2011 | Wesmeg | Waste | Ultramafic | U | UV | | | Open Pit | | 0.01 | | | | 0.01 | | |
| M04-519-01 | M04-519 | 40 | 48 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.5 | | | | | | |
| M04-519-02 | M04-519 | 70 | 79 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 1 | | | | | | |
| M04-519-03 | M04-519 | 101 | 110 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 1 | | | | | | |
| M04-519-04 | M04-519 | 127.5 | 136.5 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-981-01 | M10-981 | 17 | 27 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | 0.01 | | |
| M10-981-02 | M10-981 | 50 | 59 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.02 | 0.3 | | | | | | |
| M10-981-03 | M10-981 | 84.5 | 93 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | | | local 1.5% PY (86.7-87.2m) |
| M10-985-01 | M10-985 | 23 | 32 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0 | | | | 0.01 | | Mineralization only described between 22.95-28.7m. |
| M10-985-02 | M10-985 | 57 | 65 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.3 | | | | | | |
| M10-987-01 | M10-987 | 31.5 | 40 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-987-02 | M10-987 | 84 | 93 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.4 | 0.1 | | | | 0.3 | | |
| M10-987-04 | M10-987 | 215 | 223 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.01 | 0.01 | 0.01 | | | | | 0.2-0.5 PY-PO between 222.3-222.8m |
| M10-988-01 | M10-988 | 22 | 30 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-988-02 | M10-988 | 60 | 68 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.3 | | | | | | |
| M10-988-03 | M10-988 | 159.5 | 168 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.05 | | | | | | |
| M10-992-01 | M10-992 | 13.5 | 22 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-992-02 | M10-992 | 43.5 | 52.5 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-992-03 | M10-992 | 83 | 92 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | | | |
| M10-992-05 | M10-992 | 135 | 144 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.2 | | | | | | |
| M10-994-01 | M10-994 | 28 | 36.5 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-994-02 | M10-994 | 58 | 67 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.3 | | | | | | |
| M10-994-03 | M10-994 | 101 | 110 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.01 | | | | | | |
| M10-994-04 | M10-994 | 131.5 | 140 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.5 | | | | | | Local 2% PY (139.6-140.3m) |
| M10-998-01 | M10-998 | 10 | 19 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-998-02 | M10-998 | 36 | 45 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M10-998-03 | M10-998 | 71 | 80 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.02 | | | | | | |
| M10-998-04 | M10-998 | 97 | 106 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.4 | | | | | | |
| M10-998-05 | M10-998 | 191 | 200 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| M11-1042-01 | M11-1042 | 16 | 24.5 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.5 | | | | | YES | trace to 1% fine to coarse grained Py, +/- Po blebs +/- Cp (2-3% PY in IF between 17.5-17.7m). cluster of 5 very fine to fine pp VG in 3mm fol parallel qak vein (20.7-20.75)m. |
| M11-1042-02 | M11-1042 | 59 | 68 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | 0.1 | | | 0.05 | | |
| M11-1042-03 | M11-1042 | 99 | 107 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.1 | | | | | | fine to med grained Py, +/- Po |
| M11-1051-01 | M11-1051 | 51 | 59 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.3 | 1.5 | 0.3 | | | | | PY variable from trace to 2-3% over narrow intervals, often associated with Po, locally in narrow veins to 10% (over 1-2cm) (from 54-55m 5-10% Py as wispy to dissem to porous masses in chert-qtz veining, locally with 1-3mm dissem As |
| M95-11-01 | M95-11 | 40 | 47 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | | | |
| M95-12-01 | M95-12 | 41 | 50 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | | | | | | | No mineralization described |
| M95-22-01 | M95-22 | 11 | 20 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M95-22-02 | M95-22 | 71 | 80 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.1 | | | | | | |
| M96-51-02 | M96-51 | 40 | 50 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 0.3 | | | | | | |
| M96-51-03 | M96-51 | 73 | 82 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | | 2.5 | 1 | | | | | Only 0.1% PY up to 77.7m than 5% PY and 2% AS (just before IF start). |
| M97-111-04 | M97-111 | 186.5 | 195 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.05 | 0.02 | | | | 0.01 | | |
| M97-176-01 | M97-176 | 19 | 27.5 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.2 | | | | | | |
| M97-176-02 | M97-176 | 112 | 121 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | 0.1 | | | | | | |
| W94-48-01 | W94-48 | 15 | 20 | 2011 | Wesmeg | Waste | Mafic Volcanic | M | VO | | | Open Pit | 0.1 | | | | | | | |
| CAEXD164775 | M12-1474 | 31.2 | 32.2 | 2020 | Wesmeg | Waste | | MV | VO | | | Open Pit | | | | | | | | No mineralization described |
| CAEXD161143 | M12-1431 | 16 | 17 | 2020 | Wesmeg | Waste | | MV | VO | | 470 | Open Pit | 0.5 | 2 | | | | | | From 0.5 to 3% Po, Py. |
| CAEXD161417 | M12-1436 | 176 | 177 | 2020 | Wesmeg | Waste | | MV | VO | | 430 | Underground | 5 | 1 | 3 | | 0.3 | 0.3 | | 2-4% coarse grained As, 5-7% Po, Py, tr Cp and Tr Sp. |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | | | | | | | | | | | | | Visual Sulphide Records from Drilling Logs | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Borehole | Interval | | Year (analysis) | Deposit | Sample Type | 2014 FEIS Lithology | Lithology Code | Phase 2 Lithology Code | Additional Information | Zone | Sample Location | Pyrrhotite | Pyrite | Arsenopyrite | Galena | Sphalerite | Chalcopyrite | Visible Gold | Description |
| | | from (m) | to (m) | | | | | | | | | | Sulphide Content wt.% | | | | | | | |
| CAEXD253446 | M13-1909 | 160.7 | 161.7 | 2020 | Wesmeg | Waste | | M_Mv | VO | | | Underground | | | | | | | | No mineralization described |
| CAEXD255567 | M13-1922 | 248.8 | 249.8 | 2020 | Wesmeg | Waste | | MV | VO | | | Underground | | | | | | | | No mineralization described |
| CAEXD178628 | M12-1582 | 191.5 | 192.3 | 2020 | Wesmeg | Waste | | MV | VO | | 710 | Underground | | | | | | | | No mineralization described |
| CAEXD252985 | M13-1936 | 288 | 289 | 2020 | Wesmeg-North | Ore | | Ksc-lj | IF | | | Underground | | | 2 | | | | | 1-3% mg diss aspy |
| CAEXD252988 | M13-1936 | 291 | 292 | 2020 | Wesmeg-North | Ore | | Ksc-lj | IF | | | Underground | 0.5 | 2 | 0 | 0 | 0 | 0 | 0 | 1-3% mg diss aspy. Locally 3% PO mg band with AS (291.3-291.4m). |
| CAEXD292036 | M13-2041 | 9.5 | 11 | 2020 | Wesmeg-North | Ore | | MV | VO | | 925 | Open Pit | | 0.1 | | | | | | Locally traces to 1% disseminated in matrix |
| CAEXD292774 | M13-2103 | 67 | 68.1 | 2020 | Wesmeg-North | Ore | | MV | VO | | | Open Pit | | 1 | | | | | | variable from trace to 2-5% over narrow intervals, mostly mm to rarely 3-4mm |
| CAEXD296389 | M13-2113 | 22.8 | 24 | 2020 | Wesmeg-North | Ore | | MV | VO | | | Open Pit | | 0.1 | 0.5 | | | | | |
| CAEXD259422 | M13-1947 | 318 | 319 | 2020 | Wesmeg-North | Ore | | MV | VO | | 911 | Underground | | 1 | | | | | | fine to med grained, locally |
| CAEXD296880 | M13-2126 | 319 | 320 | 2020 | Wesmeg-North | Ore | | MV | VO | | | Underground | | | | | | | | No mineralization described. |
| CAEXD297926 | M13-2125 | 420 | 421 | 2020 | Wesmeg-North | Ore | | MV | VO | | 930 | Underground | | 0.1 | | | | | | Associated with quartz ank veins. |
| CAEXD237686 | M12-1864 | 258 | 259 | 2020 | Wesmeg-North | Ore | | MV | VO | | 920 | Underground | | | 2 | | | | | 2-3% fg-mg subm to autom As from 257.4-258.8m than traces-0.5% fg subm to autom AS locally from 258.8-265m. |
| CAEXD264580 | M13-2019 | 69.5 | 71 | 2020 | Wesmeg-North | Ore | | M | VO | | 911 | Underground | | 0.1 | | | | | | |
| CAEXD258556 | M13-1958 | 119 | 120 | 2020 | Wesmeg-North | Waste | | Mg | GB | | | Open Pit | | | | | | | | No mineralization described. |
| CAEXD299420 | M13-2112 | 279.6 | 280.6 | 2020 | Wesmeg-North | Waste | | Mg | GB | | 910 | Underground | | | | | | | | No mineralization described. |
| CAEXD299421 | M13-2112 | 280.6 | 281.3 | 2020 | Wesmeg-North | Waste | | Mg | GB | | 910 | Underground | | | | | | | | No mineralization described. |
| CAEXD254661 | M13-1908 | 254.9 | 255.7 | 2020 | Wesmeg-North | Waste | | Mg | GB | | | Underground | | 0.1 | | | | | | |
| CAEXD172407 | M12-1538 | 51 | 52 | 2020 | Wesmeg-North | Waste | | LL | IF | | 650 | Open Pit | | 2 | | | | | | 2-3% wispy to disseminate py locally through unit, strongest proximal to veining. |
| CAEXD264227 | M13-2014 | 108.6 | 109.6 | 2020 | Wesmeg-North | Waste | | LL | IF | | 650 | Open Pit | 0.5 | 0.5 | 1 | | | 0.1 | | trace to 2% AS , local cm bands of strong AS. 1% PY-PO+/-CP |
| CAEXD252980 | M13-1936 | 282.5 | 284 | 2020 | Wesmeg-North | Waste | | Ksc-lj | IF | | | Underground | | | 3 | | | | | cg disseminated aspy on the margins of an irregular cm white qz-ank vein |
| CAEXD252989 | M13-1936 | 292 | 293 | 2020 | Wesmeg-North | Waste | | Ksc-lj | IF | | | Underground | | 4 | | | | | | 2-5% mg diss AS. |
| CAEXD295855 | M13-2127 | 26.7 | 27.6 | 2020 | Wesmeg-North | Waste | | Kwa | SE | | | Underground | 0.3 | | | | | | | very patchy distribution, may reach 1-2 % locally |
| CAEXD295858 | M13-2127 | 28.5 | 29.5 | 2020 | Wesmeg-North | Waste | | Kwa | SE | | | Underground | 0.3 | | | | | | | fine to locally med grained |
| CAEXD244529 | M12-1884 | 47 | 48 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 0.5 | | | | | | 0.5% disseminated PY and along fractures, more abundant near veining, may reach 1-2 % locally |
| CAEXD253154 | M13-1893 | 12 | 13 | 2020 | Wesmeg-North | Waste | | MV | VO | | 925 | Open Pit | 0.3 | 1 | | 0.1 | | | | 72m). |
| CAEXD253583 | M13-1919 | 31.4 | 32.4 | 2020 | Wesmeg-North | Waste | | M_Mv | VO | | | Open Pit | | 2 | | | | | | 1-3% pyrite mineralization, mainly near the veins. |
| CAEXD254670 | M13-1915 | 13 | 14 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 0.1 | | | | | | |
| CAEXD264136 | M13-2014 | 12 | 13.5 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | 0.1 | 0.3 | 0.1 | 0.1 | | | | Only 0.1% PO-PY up to 13m than traces-0.5% AS+/-GL and 0.5-1% PY. |
| CAEXD264523 | M13-2019 | 17.9 | 19 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | 0.1 | 0.05 | | 0.05 | | | | trace to 0.5%, local net textured, local Py+/- Gn filling fractures in veins |
| CAEXD264637 | M13-2031 | 63 | 64.1 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 0.1 | | | | | | |
| CAEXD264747 | M13-2033 | 99.7 | 100.7 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 0.1 | | | | | | |
| CAEXD291131 | M13-2003 | 61.2 | 62.6 | 2020 | Wesmeg-North | Waste | | M_Mv | VO | | | Open Pit | | 0.2 | | | | | | very fine to fine grained in/along veining |
| CAEXD291533 | M13-2047 | 83.4 | 84.4 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 1 | | | | | | qtz-ak veins. |
| CAEXD307658 | M13-2008 | 12 | 13.5 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 0.2 | | | | | | |
| CAEXD224354 | M12-1794 | 88 | 89 | 2020 | Wesmeg-North | Waste | | MV | VO | | 930 | Open Pit | 0.2 | 1 | | | | | | |
| CAEXD250907 | M13-1901 | 16.7 | 18 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 1 | 1 | | | | | 1% AS local concentrations around qak veins to 3-5%, mostly fine-med grained, locally to 5-6mm, commonly narrow bladed crystals. 1% PY variable concentrations with local narrow bands to 5-7%, locally common with As |
| CAEXD296387 | M13-2113 | 20.4 | 21.6 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Open Pit | | 0.1 | | | | | | |
| CAEXD249125 | M12-1865 | 234 | 235.5 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Underground | 0.5 | 1 | | | | | | trace to 1% PY fine grained and traces fine grained PO. |
| CAEXD255700 | M13-1931 | 228 | 229.5 | 2020 | Wesmeg-North | Waste | | M_Mv | VO | | | Underground | 0.1 | 0.3 | | | | | | PO less common than Py, usually assoc w/ Qak. When present, trace up to 3% in veins w/ Py. PY in host rock + locally in/around Qak. When present, trace up to 3% in veins w/ Po |
| CAEXD261414 | M13-1954 | 358.6 | 359.8 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Underground | | | | | | | | No mineralization described. |
| CAEXD291470 | M13-2030A | 432 | 433.5 | 2020 | Wesmeg-North | Waste | | MV | VO | | | Underground | | 0.3 | | | | | | fine to locally med grained |
| CAEXD299369 | M13-2112 | 218 | 219.2 | 2020 | Wesmeg-North | Waste | | MV | VO | | 930 | Underground | | | | | | | | No mineralization described. |
| CAEXD264579 | M13-2019 | 68 | 69.5 | 2020 | Wesmeg-North | Waste | | M | VO | | 911 | Underground | | 0.1 | | | | | | |
| CAEXD264581 | M13-2019 | 71 | 72.5 | 2020 | Wesmeg-North | Waste | | M | VO | | 911 | Underground | | 0.1 | | | | | | |
| CAEXD237685 | M12-1864 | 257 | 258 | 2020 | Wesmeg-North | Waste | | MV | VO | | 920 | Underground | | | 2 | | | | | 2-3% fg-mg subm to autom As from 257.4-258.8m. |

**Notes:**
Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)
MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)
Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)
CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)
CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3)
Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method
NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP
NAG (Net Acid Generation) pH
*Adjustment to CaNP and AP calculated based on carbonate and sulphide mineralogy for each respective rock unit as defined in Chapter 5
**Based on classification criteria for waste rock and ore presented in Chapter 5.1

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| ML00-224-01 | 8.6 | | 0.47 | 0.25 | 21 | 0.5 | 20 | | | 21 | 1 | 0.08 | | 0.95 | 1 | 4.4 | 22 | 32 | 27 | 27 | | 0.83 | 0.65 | PAG |
| ML08-225-03 | 8.5 | | 0.53 | 0.27 | 22 | 0.53 | 21 | | | 22 | 1.2 | 0.44 | | 0.79 | 0.61 | 3.7 | 18 | 38 | 22 | 34 | | 0.88 | 0.57 | PAG |
| ML08-226-04 | 8.3 | | 0.043 | 0.021 | 1.7 | 0.042 | 1.7 | | | 1.8 | 1.4 | 0.69 | | 0.75 | 20 | 2 | 9.9 | 45 | 32 | 9.1 | | 0.2 | 0.039 | PAG |
| ML95-104-02 | 8.5 | | 0.16 | 0.051 | 4.2 | 0.1 | 4.1 | | | 4.2 | 0.57 | 0.19 | | 0.38 | 3.7 | 1.5 | 7.5 | 18 | 13 | 12 | | 0.64 | 0.23 | PAG |
| ML95-84-01 | 8.7 | | 0.28 | 0.17 | 14 | 0.35 | 14 | | | 14 | 1.1 | 0.13 | | 0.97 | 0.48 | 4.6 | 22 | 34 | 27 | 21 | | 0.61 | 0.42 | PAG |
| 6534-VRSP-002 | 7.4 | 2.6 | 0.095 | 0.07 | 5.8 | 0.14 | 5.6 | | | 5.8 | 1.5 | 0.05 | 0.5 | 1.4 | 6.3 | 6.3 | 31 | 46 | 43 | 6.9 | 15 | 0.15 | 0.12 | PAG |
| 6534-VRSP-006 | 6.9 | 2.5 | 0.083 | 0.07 | 5.8 | 0.14 | 5.6 | | | 5.8 | 2.2 | 0.06 | 0.31 | 2.1 | 17 | 8.9 | 43 | 69 | 69 | 5.7 | 14 | 0.083 | 0.084 | PAG |
| 6534-VRSP-009 | 8.3 | 3.4 | 0.31 | 0.28 | 23 | 0.56 | 23 | | | 23 | 1.3 | 0.02 | 0.49 | 1.2 | 8.2 | 5.3 | 26 | 39 | 39 | 24 | 34 | 0.62 | 0.59 | PAG |
| 6534-VRSP-014 | 8 | 3 | 0.13 | 0.06 | 5 | 0.12 | 4.8 | | | 5 | 0.8 | 0.08 | 0.34 | 0.72 | 5.5 | 3 | 15 | 25 | 23 | 7.1 | 14 | 0.28 | 0.2 | PAG |
| 6534-VRSP-001 | 8.5 | 2.5 | 0.13 | 0.1 | 8.3 | 0.2 | 8.1 | | | 8.3 | 3 | 0.01 | 0.16 | 3 | 4.6 | 14 | 66 | 93 | 85 | 11 | 20 | 0.12 | 0.089 | PAG |
| 6534-VRSP-004 | 7.1 | 2.9 | 0.094 | 0.07 | 5.8 | 0.14 | 5.6 | | | 5.8 | 1.4 | 0.14 | 0.24 | 1.3 | 13 | 5.3 | 26 | 45 | 43 | 9.5 | 15 | 0.21 | 0.13 | PAG |
| 6534-VRSP-005 | 8.1 | 2.9 | 0.1 | 0.09 | 7.5 | 0.18 | 7.3 | | | 7.4 | 1.6 | 0.05 | 0.28 | 1.5 | 19 | 5.8 | 28 | 49 | 53 | 11 | 20 | 0.21 | 0.15 | PAG |
| 6534-VRSP-010 | 7.6 | 3.9 | 0.13 | 0.06 | 5 | 0.12 | 4.8 | | | 5 | 0.61 | 0.12 | 0.1 | 0.49 | 0.25 | 2.3 | 11 | 19 | 14 | 8.9 | 17 | 0.46 | 0.26 | PAG |
| 6534-VRSP-013 | 8.2 | 2.9 | 0.37 | 0.34 | 28 | 0.67 | 27 | | | 28 | 2.1 | 0.05 | 0.43 | 2.1 | 3.2 | 9.6 | 47 | 67 | 60 | 30 | 41 | 0.45 | 0.42 | PAG |
| 6534-VRSP-015 | 8.1 | 2.4 | 0.25 | 0.2 | 17 | 0.4 | 16 | | | 17 | 3.5 | 0.02 | 0.19 | 3.5 | 4.9 | 16 | 80 | 110 | 100 | 16 | 23 | 0.14 | 0.15 | PAG |
| 6534-VRSP-016 | 8.4 | 2.6 | 0.37 | 0.24 | 20 | 0.48 | 19 | | | 20 | 2.9 | 0.02 | 0.41 | 2.8 | 19 | 12 | 58 | 89 | 89 | 18 | 27 | 0.2 | 0.22 | PAG |
| 6534-VRSP-017 | 8.5 | 2.8 | 0.11 | 0.08 | 6.7 | 0.16 | 6.4 | | | 6.6 | 1.5 | 0.01 | 0.22 | 1.5 | 9.7 | 6.3 | 31 | 47 | 47 | 8.1 | 17 | 0.17 | 0.14 | PAG |
| 6534-VRSP-008 | 8 | 4.6 | 0.28 | 0.25 | 21 | 0.5 | 20 | | | 21 | 1.1 | 0.04 | 0.3 | 1 | 0.91 | 4.9 | 24 | 34 | 30 | 23 | 31 | 0.67 | 0.61 | PAG |
| 6534-VRSP-012 | 8.6 | 5.9 | 0.38 | 0.37 | 31 | 0.73 | 30 | | | 31 | 0.73 | 0.01 | 0.14 | 0.72 | 4 | 3.1 | 15 | 23 | 22 | 34 | 43 | 1.5 | 1.3 | uncertain |
| 6534-VRSP-003 | 8.4 | 6 | 0.39 | 0.32 | 27 | 0.64 | 26 | | | 26 | 0.99 | 0.04 | 0.14 | 0.95 | 0.56 | 4.5 | 22 | 31 | 27 | 29 | 39 | 0.93 | 0.85 | PAG |
| 6534-VRSP-011 | 8 | 5.6 | 0.33 | 0.27 | 23 | 0.54 | 22 | | | 22 | 0.87 | 0.1 | 0.14 | 0.77 | 0.2 | 3.7 | 18 | 27 | 22 | 25 | 33 | 0.9 | 0.82 | PAG |
| ML08-238-03 | 10 | | 0.071 | 0.045 | 3.7 | | 3.8 | | | 3.8 | 0.069 | 0.04 | | 0.029 | 0.08 | 0.1 | 0.67 | 2.2 | 0.85 | 14 | | 6.5 | 1.8 | uncertain |
| ML08-236-2 | 9.7 | 7.8 | 0.095 | 0.075 | 6.1 | | 6.3 | | | 6.3 | 0.18 | 0.09 | | 0.086 | 0.077 | 0.31 | 2 | 5.5 | 2.4 | 13 | | 2.4 | 1.1 | uncertain |
| ML08-226-01 | 9.9 | | 0.008 | 0.0044 | 0.36 | | 0.37 | | | 0.37 | 0.079 | 0.06 | | 0.019 | 0.013 | 0.59 | | 2.5 | 0.6 | 15 | | 5.9 | 0.15 | uncertain |
| ML08-241-03 | 9.8 | | 0.51 | 0.43 | 35 | | 36 | | | 36 | 0.14 | 0.1 | | 0.039 | 0.019 | 1.2 | | 4.3 | 1.2 | 52 | | 12 | 8.2 | non-PAG |
| ML08-243-02 | 9.7 | | 0.31 | 0.24 | 20 | | 20 | | | 20 | 0.13 | 0.08 | | 0.052 | 0.01 | 1.6 | | 4.1 | 1.6 | 36 | | 8.6 | 4.8 | non-PAG |
| ML08-245-01 | 9.9 | | 0.063 | 0.035 | 2.8 | | 2.9 | | | 2.9 | 0.076 | 0.06 | | 0.016 | 0.025 | 0.49 | | 2.4 | 0.51 | 16 | | 6.7 | 1.2 | uncertain |
| ML09-259-01 | 10 | | 0.03 | 0.012 | 0.95 | | 0.97 | | | 0.97 | 0.11 | 0.06 | | 0.045 | 0.0056 | 1.4 | | 3.3 | 1.4 | 15 | | 4.4 | 0.29 | uncertain |
| ML95-104-01 | 9.9 | | 0.14 | 0.089 | 7.3 | | 7.5 | | | 7.5 | 0.15 | 0.11 | | 0.043 | 0.0027 | 1.3 | | 4.8 | 1.3 | 24 | | 5 | 1.6 | uncertain |
| ML95-105-02 | 9.5 | | 0.81 | 0.71 | 58 | | 59 | | | 59 | 0.22 | 0.15 | | 0.071 | 2.3 | 1 | | 6.9 | 3.4 | 71 | | 10 | 8.6 | non-PAG |
| ML95-117-02 | 9.9 | | 0.14 | 0.1 | 8.5 | | 8.7 | | | 8.7 | 0.079 | 0.05 | | 0.029 | 0.0085 | 0.9 | | 2.5 | 0.91 | 24 | | 9.6 | 3.5 | non-PAG |
| ML97-186-02 | 9.7 | | 0.18 | 0.15 | 12 | | 12 | | | 12 | 0.11 | 0.05 | | 0.055 | 0.025 | 1.7 | | 3.3 | 1.7 | 26 | | 8 | 3.7 | non-PAG |
| CAMLD264930 | 9.5 | 6.1 | 0.26 | 0.28 | 23 | | 23 | | | 23 | 0.14 | <0.01 | 0.08 | 0.13 | 0.043 | 4 | | 4.3 | 4 | 29 | | 6.7 | 5.4 | non-PAG |
| CAMLD264931 | 9.7 | 6 | 0.33 | 0.35 | 29 | | 29 | | | 29 | 0.082 | <0.01 | 0.07 | 0.072 | 0.0027 | 2.2 | | 2.6 | 2.3 | 37 | | 14 | 11 | non-PAG |
| CAMLD264935 | 9.4 | 5.7 | 0.23 | 0.24 | 20 | | 20 | | | 20 | 0.2 | <0.01 | 0.15 | 0.19 | 0.0027 | 6.1 | | 6.4 | 6.1 | 29 | | 4.5 | 3.1 | non-PAG |
| CAMLD264957 | 9.7 | 6 | 0.11 | 0.11 | 9.2 | | 9.2 | | | 9.2 | 0.17 | <0.01 | 0.09 | 0.16 | 0.011 | 4.9 | | 5.2 | 4.9 | 19 | | 3.7 | 1.8 | uncertain |
| CAMLD264958 | 9.7 | 5.9 | 0.14 | 0.11 | 9.2 | | 9.2 | | | 9.2 | 0.25 | <0.01 | 0.2 | 0.24 | 0.013 | 7.4 | | 7.8 | 7.4 | 19 | | 2.4 | 1.2 | uncertain |
| ML92-061-03 | 9.6 | | 0.37 | 0.3 | 24 | 0.59 | 24 | | | 24 | 0.13 | 0.02 | | 0.11 | 0.018 | 0.54 | 2.6 | 4.2 | 3.2 | 40 | | 9.6 | 5.8 | non-PAG |
| ML92-062-01 | 9.3 | | 0.21 | 0.16 | 13 | 0.31 | 13 | | | 13 | 0.19 | 0.04 | | 0.15 | 0.0037 | 0.71 | 3.5 | 5.9 | 4.2 | 22 | | 3.7 | 2.2 | non-PAG |
| ML92-062-02 | 9.9 | | 0.11 | 0.085 | 6.9 | 0.17 | 6.8 | | | 7 | 0.12 | 0.02 | | 0.097 | 0.035 | 0.46 | 2.2 | 3.7 | 2.7 | 1.7 | | 0.46 | 1.9 | uncertain |
| ML95-82-2 | 8.7 | 2.9 | 0.33 | 0.22 | 18 | 0.44 | 18 | | | 18 | 1.3 | 0.2 | | 1.1 | 0.027 | 5 | 24 | 39 | 29 | 27 | | 0.69 | 0.46 | PAG |
| ML08-236-1 | 9.7 | 10 | 0.43 | 0.35 | 28 | 0.69 | 28 | | | 29 | 0.25 | 0.09 | | 0.16 | 0.037 | 0.73 | 3.6 | 7.7 | 4.3 | 33 | | 4.3 | 3.8 | non-PAG |
| ML90-09-1 | 8.8 | 9.8 | 0.3 | 0.19 | 16 | 0.38 | 16 | | | 16 | 0.43 | 0.12 | | 0.31 | 0.26 | 1.4 | 7 | 13 | 8.7 | 29 | | 2.2 | 1.2 | uncertain |
| ML90-10-2 | 9 | 10 | 0.59 | 0.36 | 30 | 0.72 | 29 | | | 30 | 0.91 | 0.23 | | 0.68 | 0.093 | 3.2 | 16 | 28 | 19 | 48 | | 1.7 | 1.1 | uncertain |
| ML92-053-1 | 8.9 | 11 | 0.39 | 0.31 | 25 | 0.62 | 25 | | | 26 | 0.19 | 0.06 | | 0.13 | 0.051 | 0.61 | 3 | 5.9 | 3.6 | 37 | | 6.3 | 4.4 | non-PAG |
| ML92-060-1 | 9 | 9.3 | 0.24 | 0.16 | 13 | 0.32 | 13 | | | 13 | 0.42 | 0.11 | | 0.31 | 0.0053 | 1.5 | 7.2 | 13 | 8.7 | 27 | | 2 | 1 | uncertain |
| ML95-93-03 | 8.7 | 10 | 0.74 | 0.43 | 35 | 0.85 | 34 | | | 35 | 1.3 | <0.01 | | 1.3 | 0.029 | 5.9 | 29 | 39 | 35 | 53 | | 1.3 | 0.9 | uncertain |
| ML08-225-01 | 9.5 | | 0.13 | 0.06 | 4.9 | 0.12 | 4.9 | | | 5 | 0.44 | 0.18 | | 0.26 | 0.015 | 1.3 | 6.1 | 14 | 7.3 | 22 | | 1.6 | 0.36 | uncertain |
| ML08-226-02 | 9.1 | | 0.065 | 0.025 | 2 | 0.05 | 2 | | | 2.1 | 0.66 | 0.16 | | 0.5 | 0.0088 | 2.4 | 12 | 21 | 14 | 15 | | 0.7 | 0.099 | PAG |
| ML08-226-03 | 9 | | 0.17 | 0.08 | 6.5 | 0.16 | 6.4 | | | 6.6 | 0.48 | 0.19 | | 0.29 | 0.01 | 1.4 | 6.7 | 15 | 8.1 | 22 | | 1.5 | 0.44 | uncertain |
| ML08-228-01 | 9.7 | | 0.4 | 0.24 | 20 | 0.48 | 20 | | | 20 | 0.15 | 0.1 | | 0.052 | 0.056 | 0.24 | 1.2 | 4.8 | 1.5 | 36 | | 7.6 | 4.2 | non-PAG |
| ML08-228-02 | 8.7 | | 0.064 | 0.02 | 1.6 | 0.04 | 1.6 | | | 1.7 | 0.82 | 0.3 | | 0.52 | 0.015 | 2.5 | 12 | 26 | 14 | 11 | | 0.44 | 0.065 | PAG |
| ML08-229-05 | 9 | | 0.45 | 0.29 | 24 | 0.58 | 24 | | | 24 | 0.43 | 0.2 | | 0.23 | 0.029 | 1.1 | 5.2 | 13 | 6.3 | 35 | | 2.6 | 1.8 | uncertain |
| ML08-233-02 | 9.4 | | 0.18 | 0.11 | 9.4 | 0.23 | 9.2 | | | 9.5 | 0.23 | 0.11 | | 0.12 | 0.04 | 0.56 | 2.7 | 7.1 | 3.3 | 24 | | 3.4 | 1.3 | uncertain |
| ML08-241-02 | 8.9 | | 0.45 | 0.31 | 25 | 0.61 | 25 | | | 25 | 0.22 | 0.09 | | 0.13 | 0.013 | 0.61 | 3 | 6.8 | 3.6 | 35 | | 5.1 | 3.7 | non-PAG |
| ML08-243-01 | 9.4 | | 0.53 | 0.42 | 34 | 0.83 | 34 | | | 35 | 0.12 | 0.12 | | | 0.014 | | | 3.7 | 0.014 | 44 | | 12 | 9.3 | non-PAG |
| ML09-254-01 | 8.8 | | 0.31 | 0.17 | 14 | 0.34 | 14 | | | 14 | 0.67 | 0.39 | | 0.28 | 0.019 | 1.3 | 6.4 | 21 | 7.7 | 21 | | 1 | 0.68 | uncertain |
| ML92062-01 | 9.1 | | 0.46 | 0.32 | 26 | 0.64 | 26 | | | 27 | 0.26 | 0.17 | | 0.087 | 0.0043 | 0.41 | 2 | 8 | 2.4 | 38 | | 4.8 | 3.3 | non-PAG |
| ML95-117-01 | 9 | | 0.37 | 0.24 | 19 | 0.47 | 19 | | | 20 | 0.28 | 0.12 | | 0.16 | 0.021 | 0.74 | 3.6 | 8.7 | 4.4 | 29 | | 3.4 | 2.3 | non-PAG |
| ML95-117-03 | 9 | | 0.11 | 0.057 | 4.7 | 0.11 | 4.6 | | | 4.7 | 0.75 | 0.4 | | 0.35 | 0.15 | 1.7 | 8.1 | 24 | 9.9 | 14 | | 0.59 | 0.2 | PAG |
| ML95-82-01 | 8.8 | | 0.26 | 0.14 | 12 | 0.28 | 11 | | | 12 | 0.78 | 0.29 | | 0.49 | 0.83 | 2.2 | 11 | 24 | 14 | 22 | | 0.9 | 0.48 | PAG |
| ML95-83-01 | 9.2 | | 0.19 | 0.17 | 14 | 0.34 | 14 | | | 14 | 0.13 | 0.08 | | 0.045 | 0.0072 | 0.21 | 1 | 3.9 | 1.3 | 8.9 | | 2.3 | 3.7 | non-PAG |
| ML95-95-01 | 9 | | 0.48 | 0.32 | 26 | 0.64 | 26 | | | 27 | 0.37 | 0.09 | | 0.28 | 0.061 | 1.3 | 6.5 | 12 | 7.9 | 44 | | 3.8 | 2.3 | non-PAG |
| ML95-98-01 | 9.1 | | 0.16 | 0.067 | 5.5 | 0.13 | 5.4 | | | 5.6 | 0.6 | 0.15 | | 0.45 | 0.0043 | 2.1 | 10 | 19 | 13 | 23 | | 1.2 | 0.3 | uncertain |
| ML97-186-01 | 9 | | 0.41 | 0.33 | 27 | 0.65 | 26 | | | 27 | 0.24 | 0.07 | | 0.17 | 0.016 | 0.78 | 3.8 | 7.3 | 4.6 | 37 | | 5 | 3.7 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| 163066 | 7.9 | 3.9 | 0.076 | 0.04 | 3.3 | 0.079 | 3.2 | | | 3.3 | 0.48 | 0.01 | 0.07 | 0.47 | 0.0027 | 2.2 | 11 | 15 | 13 | 6 | 15 | 0.4 | 0.22 | PAG |
| 163784 | 8.1 | 4.5 | 0.053 | <0.01 | <0.8 | 0.02 | <0.81 | | | <0.83 | 0.23 | 0.02 | 0.1 | 0.21 | 0.13 | 0.98 | 4.8 | 7.2 | 5.9 | 5.1 | 18 | 0.71 | 0.12 | PAG |
| CAMLD264964 | 8.3 | 2.3 | 0.46 | 0.3 | 25 | 0.6 | 24 | | | 25 | 3.4 | 0.02 | 0.59 | 3.3 | 33 | 13 | 65 | 110 | 110 | 26 | 36 | 0.25 | 0.24 | PAG |
| CAMLD264965 | 8.5 | 2.6 | 0.079 | 0.07 | 5.8 | 0.14 | 5.6 | | | 5.8 | 1.7 | <0.01 | 0.41 | 1.7 | 12 | 7.2 | 35 | 54 | 54 | 7.4 | 18 | 0.14 | 0.11 | PAG |
| CAMLD264936 | 7.8 | 2.6 | 0.091 | 0.07 | 5.8 | 0.14 | 5.6 | | | 5.8 | 1.4 | 0.01 | 1.2 | 1.4 | 1.3 | 6.7 | 32 | 45 | 40 | 4.2 | 11 | 0.094 | 0.13 | PAG |
| CAMLD264944 | 8.8 | 2.8 | 0.065 | 0.06 | 5 | 0.12 | 4.8 | | | 5 | 0.99 | 0.03 | 0.16 | 0.96 | 0.0053 | 4.6 | 22 | 31 | 27 | 8.7 | 13 | 0.28 | 0.16 | PAG |
| 162591 | 8.3 | 5 | 0.094 | 0.02 | 1.7 | 0.04 | 1.6 | | | 1.7 | 0.19 | 0.02 | 0.08 | 0.17 | 0.024 | 0.82 | 4 | 6 | 4.8 | 4.2 | 14 | 0.7 | 0.27 | PAG |
| 162895 | 7.8 | 4.6 | 0.099 | 0.09 | 7.5 | 0.18 | 7.3 | | | 7.4 | 0.55 | 0.08 | 0.07 | 0.47 | 0.008 | 2.2 | 11 | 17 | 13 | 9.6 | 21 | 0.56 | 0.43 | PAG |
| 162952 | 8.2 | 6.3 | 0.5 | 0.51 | 43 | 1 | 41 | | | 42 | 0.33 | 0.04 | 0.05 | 0.29 | 0.0053 | 1.4 | 6.7 | 10 | 8.1 | 45 | 50 | 4.4 | 4.1 | non-PAG |
| 163309 | 8.2 | 6.2 | 0.76 | 0.76 | 63 | 1.5 | 61 | | | 63 | 0.34 | 0.03 | 0.04 | 0.31 | 0.2 | 1.5 | 7.1 | 11 | 8.8 | 66 | | 6.2 | 5.9 | non-PAG |
| 163763 | 8.5 | 5.8 | 0.1 | 0.1 | 8.3 | 0.2 | 8.1 | | | 8.3 | 0.15 | 0.03 | 0.03 | 0.12 | 0.0053 | 0.57 | 2.7 | 4.7 | 3.3 | 13 | 23 | 2.7 | 1.8 | uncertain |
| CAEXD301939 | 9.5 | 6.4 | 0.52 | 0.51 | 43 | 1 | 41 | | | 42 | 0.1 | <0.01 | 0.03 | 0.093 | 0.037 | 0.44 | 2.1 | 3.2 | 2.6 | 51 | 140 | 16 | 13 | non-PAG |
| CAEXD307379 | 9.5 | 6 | 0.22 | 0.23 | 19 | 0.46 | 19 | | | 19 | 0.25 | 0.02 | 0.19 | 0.23 | 0.47 | 1 | 5.1 | 7.7 | 6.6 | 23 | 34 | 3 | 2.5 | non-PAG |
| CAEXD307381 | 8.8 | 5.9 | 0.33 | 0.34 | 28 | 0.67 | 27 | | | 28 | 0.43 | 0.01 | 0.4 | 0.42 | 0.0053 | 2 | 9.7 | 13 | 12 | 36 | 49 | 2.7 | 2.1 | non-PAG |
| CAMLD264960 | 9.7 | 6.1 | 0.4 | 0.4 | 33 | 0.79 | 32 | | | 33 | 0.15 | 0.03 | 0.06 | 0.12 | 0.0053 | 0.57 | 2.7 | 4.7 | 3.3 | 33 | 46 | 7.1 | 7.1 | non-PAG |
| CAMLD264967 | 8.5 | 5.1 | 0.39 | 0.36 | 30 | 0.71 | 29 | | | 30 | 1.2 | <0.01 | 0.14 | 1.2 | 0.053 | 5.6 | 27 | 37 | 33 | 32 | 41 | 0.85 | 0.8 | PAG |
| CAMLD264939 | 8.5 | 6.1 | 0.59 | 0.55 | 46 | 1.1 | 44 | | | 45 | 0.16 | 0.02 | 0.04 | 0.14 | 0.04 | 0.66 | 3.2 | 5 | 3.9 | 46 | 53 | 9.2 | 9.1 | non-PAG |
| CAMLD264943 | 9 | 5.5 | 0.18 | 0.09 | 7.5 | 0.18 | 7.3 | | | 7.4 | 0.25 | <0.01 | 0.04 | 0.24 | 0.08 | 1.1 | 5.5 | 7.8 | 6.7 | 10 | 17 | 1.3 | 0.95 | uncertain |
| CAEXD298984 | 9.2 | 6.2 | 0.99 | 0.91 | 76 | 1.8 | 73 | | | 75 | 0.11 | <0.01 | 0.02 | 0.097 | 0.013 | 0.46 | 2.2 | 3.3 | 2.7 | 85 | 98 | 26 | 22 | non-PAG |
| 162858 | 7.7 | 2.4 | 0.67 | 0.63 | 53 | 1.3 | 51 | | | 52 | 6.2 | 0.06 | 0.16 | 6.1 | 4.9 | 29 | 140 | 190 | 170 | 56 | 65 | 0.29 | 0.27 | PAG |
| 163079 | 8.1 | 4.6 | 0.14 | 0.14 | 12 | 0.28 | 11 | | | 12 | 0.5 | 0.05 | 0.36 | 0.45 | 0.0053 | 2.2 | 10 | 16 | 13 | 12 | 23 | 0.79 | 0.74 | PAG |
| CAMLD264932 | 8.9 | 3 | 0.48 | 0.5 | 42 | 0.99 | 40 | | | 41 | 2.4 | 0.03 | 2.3 | 2.3 | 0.0027 | 11 | 54 | 74 | 65 | 44 | 51 | 0.59 | 0.56 | PAG |
| CAMLD273962 | 9 | 4.1 | 0.25 | 0.24 | 20 | 0.48 | 19 | | | 20 | 0.96 | 0.03 | 0.09 | 0.93 | 0.008 | 4.4 | 21 | 30 | 26 | 24 | 34 | 0.81 | 0.66 | PAG |
| CAEXD210903 | 8 | 3.7 | 0.51 | 0.1 | 8.3 | 0.2 | 8.1 | | | 8.3 | 0.6 | 0.03 | 0.13 | 0.57 | 0.23 | 2.7 | 13 | 19 | 16 | 11 | 21 | 0.6 | 0.44 | PAG |
| CAMLD264947 | 8.3 | 3.3 | 0.28 | 0.1 | 8.3 | 0.2 | 8.1 | | | 8.3 | 0.6 | 0.03 | 0.27 | 0.57 | 0.035 | 2.7 | 13 | 19 | 16 | 6.9 | 14 | 0.37 | 0.44 | PAG |
| CAMLD264952 | 8.6 | 4.3 | 0.067 | 0.07 | 5.8 | 0.14 | 5.6 | | | 5.8 | 0.35 | 0.04 | 0.03 | 0.31 | 0.088 | 1.5 | 7.1 | 11 | 8.7 | 7.9 | 17 | 0.72 | 0.53 | PAG |
| CAMLD264954 | 8.8 | 4.4 | 0.073 | 0.06 | 5 | 0.12 | 4.8 | | | 5 | 0.39 | <0.01 | 0.06 | 0.38 | 0.016 | 1.8 | 8.8 | 12 | 11 | 7.8 | 18 | 0.63 | 0.4 | PAG |
| CAMLD264971 | 9.8 | 3.7 | 0.35 | 0.16 | 13 | 0.32 | 13 | | | 13 | 0.7 | 0.02 | 0.22 | 0.68 | 3.3 | 3 | 14 | 22 | 21 | 11 | 22 | 0.51 | 0.61 | PAG |
| CAMLD264941 | 8.7 | 2.7 | 0.47 | 0.14 | 12 | 0.28 | 11 | | | 12 | 1.1 | 0.04 | 0.63 | 1.1 | 0.027 | 5.3 | 26 | 36 | 31 | 4 | 12 | 0.11 | 0.32 | PAG |
| CAMLD264933 | 8.9 | 6 | 1.7 | 0.65 | 54 | 1.3 | 52 | | | 54 | 0.62 | 0.06 | 0.07 | 0.56 | 0.096 | 2.7 | 13 | 19 | 16 | 59 | 72 | 3.1 | 2.8 | non-PAG |
| CAMLD264934 | 8.7 | 5.8 | 0.74 | 0.23 | 19 | 0.46 | 19 | | | 19 | 0.38 | <0.01 | 0.1 | 0.37 | 0.008 | 1.7 | 8.5 | 12 | 10 | 23 | 31 | 1.9 | 1.6 | uncertain |
| CAEXD305051 | 8.6 | 5.8 | 0.46 | 0.26 | 22 | 0.52 | 21 | | | 21 | 0.33 | 0.02 | 0.09 | 0.31 | 0.08 | 1.5 | 7.2 | 10 | 8.7 | 25 | 35 | 2.4 | 2.1 | non-PAG |
| CAEXD307337 | 8.8 | 5.9 | 0.21 | 0.21 | 18 | 0.42 | 17 | | | 17 | 0.27 | 0.03 | 0.08 | 0.24 | 0.019 | 1.1 | 5.5 | 8.4 | 6.7 | 21 | 28 | 2.5 | 2.1 | non-PAG |
| CAMLD264950 | 8.3 | 6.2 | 1.4 | 0.6 | 50 | 1.2 | 48 | | | 50 | 0.36 | 0.05 | 0.06 | 0.31 | 0.008 | 1.5 | 7.1 | 11 | 8.6 | 54 | 60 | 4.8 | 4.4 | non-PAG |
| CAMLD264955 | 9.1 | 6.1 | 0.27 | 0.28 | 23 | 0.56 | 23 | | | 23 | 0.13 | 0.03 | 0.01 | 0.1 | 0.0027 | 0.48 | 2.3 | 4.1 | 2.8 | 26 | 30 | 6.3 | 5.6 | non-PAG |
| CAMLD264946 | 8.7 | 5.7 | 0.27 | 0.26 | 22 | 0.52 | 21 | | | 21 | 0.49 | 0.03 | 0.05 | 0.46 | 0.029 | 2.2 | 10 | 15 | 13 | 23 | 28 | 1.5 | 1.4 | uncertain |
| ML00-221-01 | 9.9 | | 0.043 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.092 | 0.04 | | 0.052 | 0.75 | 0.15 | 0.96 | 2.9 | 1.9 | 9.2 | | 3.2 | 0.59 | uncertain |
| ML00-221-02 | 9.9 | | 0.047 | 0.028 | 2.3 | | 2.3 | | | 2.3 | 0.13 | 0.05 | | 0.082 | 0.083 | 0.29 | 1.9 | 4.1 | 2.3 | 10 | | 2.4 | 0.56 | uncertain |
| ML00-221-03 | 9.8 | | 0.071 | 0.043 | 3.5 | | 3.6 | | | 3.6 | 0.1 | 0.03 | | 0.07 | 0.13 | 0.25 | 1.6 | 3.1 | 2 | 8 | | 2.6 | 1.1 | uncertain |
| ML08-238-04 | 9.6 | | 0.048 | 0.028 | 2.3 | | 2.4 | | | 2.4 | 0.11 | 0.05 | | 0.055 | 0.096 | 0.19 | 1.3 | 3.3 | 1.6 | 9.7 | | 3 | 0.72 | uncertain |
| ML90-03-01 | 9.8 | | 0.046 | 0.026 | 2.1 | | 2.1 | | | 2.1 | 0.087 | 0.02 | | 0.067 | 0.43 | 0.22 | 1.4 | 2.7 | 2.1 | 9.3 | | 3.4 | 0.78 | uncertain |
| ML90-03-02 | 9.8 | | 0.12 | 0.089 | 7.3 | | 7.4 | | | 7.4 | 0.064 | 0.02 | | 0.044 | 0.043 | 0.16 | 1 | 2 | 1.2 | 13 | | 6.5 | 3.7 | non-PAG |
| ML90-04-02 | 9.7 | | 0.041 | 0.025 | 2.1 | | 2.1 | | | 2.1 | 0.11 | 0.04 | | 0.065 | 0.11 | 0.23 | 1.5 | 3.3 | 1.9 | 9 | | 2.7 | 0.65 | uncertain |
| ML90-04-03 | 9.8 | | 0.12 | 0.081 | 6.6 | | 6.8 | | | 6.8 | 0.19 | 0.07 | | 0.12 | 0.043 | 0.42 | 2.8 | 5.8 | 3.2 | 17 | | 2.9 | 1.2 | uncertain |
| ML90-07-01 | 10 | | 0.044 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.045 | 0.03 | | 0.015 | 0.043 | 0.052 | 0.34 | 1.4 | 0.44 | 14 | | 10 | 1.8 | uncertain |
| ML90-08-01 | 10 | | 0.16 | 0.081 | 6.6 | | 6.7 | | | 6.7 | 0.12 | 0.05 | | 0.073 | 0.043 | 0.26 | 1.7 | 3.8 | 2 | 9.4 | | 2.4 | 1.8 | uncertain |
| ML90-08-02 | 10 | | 0.18 | 0.13 | 11 | | 11 | | | 11 | 0.13 | 0.06 | | 0.07 | 0.14 | 0.25 | 1.6 | 4.1 | 2 | 22 | | 5.4 | 2.7 | non-PAG |
| ML90-12-02 | 9.7 | | 0.14 | 0.098 | 8 | | 8.2 | | | 8.2 | 0.14 | 0.05 | | 0.09 | 0.091 | 0.32 | 2.1 | 4.4 | 2.5 | 17 | | 3.9 | 1.9 | uncertain |
| ML92-061-01 | 9.7 | 4.5 | 0.055 | 0.038 | 3.1 | | 3.2 | | | 3.2 | 0.12 | 0.05 | | 0.074 | 0.13 | 0.26 | 1.7 | 3.9 | 2.1 | 7.3 | | 1.9 | 0.83 | PAG |
| ML92-061-02 | 9.6 | | 0.05 | 0.03 | 2.4 | | 2.5 | | | 2.5 | 0.097 | 0.03 | | 0.067 | 0.085 | 0.24 | 1.6 | 3 | 1.9 | 8.5 | | 2.8 | 0.81 | uncertain |
| ML92-061-04 | 9.8 | | 0.14 | 0.094 | 7.7 | | 7.9 | | | 7.9 | 0.14 | 0.05 | | 0.091 | 0.14 | 0.32 | 2.1 | 4.4 | 2.6 | 16 | | 3.6 | 1.8 | uncertain |
| ML92-062-03 | 10 | | 0.12 | 0.093 | 7.6 | | 7.8 | | | 7.8 | 0.093 | 0.04 | | 0.053 | 0.13 | 0.19 | 1.2 | 2.9 | 1.5 | 15 | | 5.2 | 2.7 | non-PAG |
| ML95-82-1 | 9.3 | 3.3 | 0.031 | 0.018 | 1.5 | | 1.5 | | | 1.5 | 0.25 | 0.12 | | 0.13 | 0.27 | 0.44 | 2.9 | 7.7 | 3.6 | 7.4 | | 0.96 | 0.19 | PAG |
| ML95-93-01 | 9.8 | | 0.11 | 0.055 | 4.5 | | 4.6 | | | 4.6 | 0.009 | <0.01 | | | 0.23 | | | 0.28 | 0.23 | 8.8 | | 31 | 16 | non-PAG |
| ML95-93-02 | 9.9 | 4.1 | 0.068 | 0.047 | 3.8 | | 3.9 | | | 3.9 | 0.14 | 0.03 | | 0.11 | 0.091 | 0.38 | 2.5 | 4.3 | 3 | 8.4 | | 2 | 0.92 | PAG |
| ML95-93-04 | 10 | | 0.2 | 0.16 | 13 | | 14 | | | 14 | 0.21 | 0.05 | | 0.16 | 0.0048 | 0.57 | 3.7 | 6.4 | 4.3 | 29 | | 4.5 | 2.1 | non-PAG |
| ML00-221-04 | 9.5 | 4.9 | 0.098 | 0.056 | 4.6 | | 4.7 | | | 4.7 | 0.14 | 0.04 | | 0.098 | 0.056 | 0.35 | 2.3 | 4.3 | 2.7 | 9.7 | | 2.2 | 1.1 | uncertain |
| ML08-236-3 | 9.5 | 7.5 | 0.12 | 0.087 | 7.1 | | 7.2 | | | 7.2 | 0.18 | 0.07 | | 0.11 | 0.091 | 0.41 | 2.7 | 5.7 | 3.2 | 14 | | 2.4 | 1.3 | uncertain |
| ML90-04-01 | 9.8 | 6.5 | 0.074 | 0.044 | 3.6 | | 3.6 | | | 3.6 | 0.17 | 0.06 | | 0.11 | 0.048 | 0.4 | 2.7 | 5.4 | 3.1 | 12 | | 2.2 | 0.68 | uncertain |
| ML90-09-2 | 9.9 | 9.9 | 0.21 | 0.18 | 14 | | 15 | | | 15 | 0.15 | 0.09 | | 0.055 | 0.024 | 0.2 | 1.3 | 4.5 | 1.5 | 24 | | 5.3 | 3.2 | non-PAG |
| ML90-10-1 | 9.9 | 7.3 | 0.079 | 0.049 | 4 | | 4.1 | | | 4.1 | 0.12 | 0.06 | | 0.056 | 0.096 | 0.2 | 1.3 | 3.6 | 1.6 | 11 | | 3 | 1.1 | uncertain |
| ML90-10-3 | 10 | 7.5 | 0.037 | 0.021 | 1.7 | | 1.8 | | | 1.8 | 0.038 | 0.01 | | 0.028 | 0.023 | 0.1 | 0.66 | 1.2 | 0.79 | 9.8 | | 8.3 | 1.5 | uncertain |
| ML90-12-01 | 9.9 | 6.4 | 0.063 | 0.033 | 2.7 | | 2.7 | | | 2.7 | 0.15 | 0.05 | | 0.1 | 0.29 | 0.36 | 2.4 | 4.8 | 3 | 9.2 | | 1.9 | 0.57 | uncertain |
| ML90-14-2 | 9.6 | 7.1 | 0.11 | 0.079 | 6.5 | | 6.6 | | | 6.6 | 0.15 | 0.06 | | 0.085 | 0.077 | 0.3 | 2 | 4.5 | 2.4 | 12 | | 2.6 | 1.5 | uncertain |
| ML95-82-3 | 9.8 | 10 | 0.21 | 0.18 | 14 | | 15 | | | 15 | 0.14 | 0.06 | | 0.078 | 0.2 | 0.27 | 1.8 | 4.3 | 2.3 | 23 | | 5.3 | 3.4 | non-PAG |
| ML08-225-02 | 9.5 | | 0.054 | 0.031 | 2.6 | | 2.6 | | | 2.6 | 0.12 | 0.07 | | 0.048 | 0.16 | 0.17 | 1.1 | 3.7 | 1.4 | 8.9 | | 2.4 | 0.71 | uncertain |
| ML08-230-01 | 9.4 | | 0.25 | 0.2 | 16 | | 17 | | | 17 | 0.13 | 0.1 | | 0.034 | 0.096 | 0.12 | 0.78 | 4.2 | 0.99 | 20 | | 4.8 | 3.9 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| ML08-232-01 | 9.6 | | 0.021 | 0.015 | 1.2 | | 1.3 | | | 1.3 | 0.15 | 0.15 | | | 0.21 | | | 4.6 | 0.21 | 8.1 | | 1.8 | 0.28 | uncertain |
| ML08-233-01 | 9.7 | | 0.13 | 0.078 | 6.4 | | 6.5 | | | 6.5 | 0.071 | 0.07 | | 0.001 | 0.027 | 0.0021 | 0.014 | 2.2 | 0.043 | 17 | | 7.6 | 2.9 | non-PAG |
| ML08-240-01 | 9.9 | | 0.13 | 0.1 | 8.2 | | 8.3 | | | 8.3 | 0.067 | 0.06 | | 0.007 | 0.051 | 0.022 | 0.15 | 2.1 | 0.22 | 16 | | 7.7 | 4 | non-PAG |
| ML08-241-01 | 9.7 | | 0.14 | 0.099 | 8.1 | | 8.2 | | | 8.2 | 0.13 | 0.11 | | 0.019 | 0.085 | 0.064 | 0.42 | 4 | 0.57 | 16 | | 4 | 2 | non-PAG |
| ML08-245-02 | 9.8 | | 0.05 | 0.027 | 2.2 | | 2.2 | | | 2.2 | 0.1 | 0.08 | | 0.023 | 0.1 | 0.078 | 0.51 | 3.2 | 0.69 | 8.7 | | 2.7 | 0.69 | uncertain |
| ML09-254-02 | 9.5 | | 0.27 | 0.22 | 18 | | 19 | | | 19 | 0.073 | 0.02 | | 0.053 | 0.029 | 0.19 | 1.3 | 2.3 | 1.5 | 23 | | 10 | 8.1 | non-PAG |
| ML95-105-03 | 9.5 | | 0.076 | 0.031 | 2.5 | | 2.6 | | | 2.6 | 0.25 | 0.19 | | 0.063 | 0.22 | 0.22 | 1.4 | 7.9 | 1.9 | 11 | | 1.3 | 0.32 | uncertain |
| ML95-105-04 | 10 | | 0.19 | 0.16 | 13 | | 13 | | | 13 | 0.033 | 0.03 | | 0.003 | 0.13 | 0.0033 | 0.022 | 1 | 0.16 | 27 | | 26 | 13 | non-PAG |
| ML95-107-03 | 9.7 | | 0.053 | 0.035 | 2.8 | | 2.9 | | | 2.9 | 0.13 | 0.13 | | | 0.35 | | | 3.9 | 0.35 | 9.9 | | 2.5 | 0.73 | uncertain |
| ML95-113-01 | 9.3 | | 0.074 | 0.053 | 4.3 | | 4.4 | | | 4.4 | 0.13 | 0.09 | | 0.044 | 0.061 | 0.16 | 1 | 4.2 | 1.3 | 8.7 | | 2.1 | 1.1 | uncertain |
| ML95-113-02 | 9.7 | | 0.2 | 0.16 | 13 | | 13 | | | 13 | 0.092 | 0.05 | | 0.042 | 0.023 | 0.15 | 1 | 2.9 | 1.2 | 22 | | 7.5 | 4.7 | non-PAG |
| ML95-120-01 | 9.5 | | 0.048 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.14 | 0.08 | | 0.062 | 0.22 | 0.21 | 1.4 | 4.4 | 1.8 | 10 | | 2.3 | 0.56 | uncertain |
| ML95-82-02 | 9.6 | | 0.16 | 0.12 | 10 | | 10 | | | 10 | 0.074 | 0.05 | | 0.024 | 0.051 | 0.084 | 0.56 | 2.3 | 0.69 | 19 | | 8.3 | 4.5 | non-PAG |
| ML95-83-02 | 9.8 | | 0.032 | 0.017 | 1.4 | | 1.5 | | | 1.5 | 0.14 | 0.06 | | 0.078 | 0.15 | 0.27 | 1.8 | 4.3 | 2.2 | 11 | | 2.5 | 0.34 | uncertain |
| ML95-85-01 | 9.9 | | 0.08 | 0.042 | 3.5 | | 3.5 | | | 3.5 | 0.26 | 0.14 | | 0.12 | 0.026 | 0.45 | 3 | 8.3 | 3.4 | 15 | | 1.9 | 0.43 | uncertain |
| ML95-95-02 | 9.7 | | 0.027 | 0.017 | 1.4 | | 1.5 | | | 1.5 | 0.096 | 0.07 | | 0.026 | 0.059 | 0.091 | 0.6 | 3 | 0.75 | 10 | | 3.3 | 0.48 | uncertain |
| ML95-105-01 | 8.8 | | 0.39 | 0.24 | 20 | | 20 | | | 20 | 0.3 | 0.12 | | 0.18 | 0.056 | 0.65 | 4.3 | 9.4 | 5 | 31 | | 3.3 | 2.2 | non-PAG |
| CAMLD264942 | 9.4 | 4.2 | 0.03 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.26 | <0.01 | 0.04 | 0.25 | 0.47 | 0.88 | 5.8 | 8.1 | 7.2 | 5.6 | 11 | 0.69 | 0.21 | PAG |
| CAEXD301646 | 8.8 | 4.1 | 0.045 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.23 | <0.01 | 0.14 | 0.22 | 0.085 | 0.78 | 5.2 | 7.1 | 6 | 6 | 14 | 0.85 | 0.35 | PAG |
| CAMLD264928 | 9.3 | 4.7 | 0.046 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.22 | <0.01 | 0.05 | 0.21 | 0.029 | 0.75 | 5 | 6.8 | 5.8 | 6.2 | 15 | 0.91 | 0.37 | PAG |
| CAMLD264937 | 9.8 | 5.3 | 0.034 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.077 | <0.01 | 0.02 | 0.067 | 0.013 | 0.24 | 1.6 | 2.4 | 1.9 | 6 | 13 | 2.5 | 1 | uncertain |
| CAMLD264938 | 9.6 | 4.8 | 0.067 | 0.05 | 4.2 | | 4.2 | | | 4.2 | 0.26 | <0.01 | 0.04 | 0.25 | 0.14 | 0.88 | 5.8 | 8 | 6.9 | 7.4 | 13 | 0.93 | 0.52 | PAG |
| 163018 | 8.4 | 6.4 | 0.12 | 0.12 | 10 | | 10 | | | 10 | 0.1 | <0.01 | 0.02 | 0.09 | 0.067 | 0.32 | 2.1 | 3.1 | 2.5 | 13 | 21 | 4 | 3.2 | non-PAG |
| 163058 | 9.5 | 5.3 | 0.048 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.008 | <0.01 | <0.01 | | 0.19 | | | 0.25 | 0.19 | 4.4 | 14 | 18 | 3.3 | non-PAG |
| 163425 | 9 | 5.7 | 0.033 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.023 | <0.01 | <0.01 | 0.013 | 0.093 | 0.042 | 0.28 | 0.72 | 0.41 | 6.5 | 16 | 9 | 2.3 | non-PAG |
| CAEXD298980 | 9.5 | 4.6 | 0.012 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.17 | <0.01 | 0.03 | 0.16 | 0.27 | 0.57 | 3.8 | 5.4 | 4.6 | 6 | 13 | 1.1 | 0.16 | uncertain |
| CAEXD300379 | 9.5 | 5.5 | 0.052 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.055 | <0.01 | 0.02 | 0.045 | 0.18 | 0.15 | 1 | 1.7 | 1.3 | 8.5 | 16 | 4.9 | 1.5 | uncertain |
| CAEXD300408 | 9.6 | 5.6 | 0.057 | 0.04 | 3.3 | | 3.3 | | | 3.3 | 0.11 | <0.01 | 0.02 | 0.097 | 0.075 | 0.35 | 2.3 | 3.3 | 2.7 | 11 | 22 | 3.4 | 1 | uncertain |
| CAEXD301865 | 9.5 | 5.9 | 0.063 | 0.05 | 4.2 | | 4.2 | | | 4.2 | 0.079 | <0.01 | 0.02 | 0.069 | 0.048 | 0.25 | 1.6 | 2.5 | 1.9 | 11 | 23 | 4.5 | 1.7 | uncertain |
| CAEXD301964 | 9.2 | 5.4 | 0.045 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.087 | <0.01 | 0.03 | 0.077 | 0.064 | 0.28 | 1.8 | 2.7 | 2.2 | 8.7 | 17 | 3.2 | 0.92 | uncertain |
| CAEXD301979 | 9.9 | 5.2 | 0.017 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.05 | <0.01 | 0.02 | 0.04 | 0.74 | 0.1 | 0.68 | 1.6 | 1.5 | 6.6 | 18 | 4.2 | 0.53 | uncertain |
| CAEXD302816 | 9.8 | 5.9 | 0.16 | 0.1 | 8.3 | | 8.3 | | | 8.3 | 0.12 | <0.01 | 0.03 | 0.11 | 0.011 | 0.41 | 2.7 | 3.9 | 3.2 | 13 | 24 | 3.4 | 2.2 | non-PAG |
| CAEXD302829 | 9.8 | 5.9 | 0.073 | 0.07 | 5.8 | | 5.8 | | | 5.8 | 0.16 | <0.01 | 0.04 | 0.15 | 0.16 | 0.54 | 3.6 | 5.1 | 4.3 | 9.7 | 20 | 1.9 | 1.2 | uncertain |
| CAEXD302851 | 9.6 | 6.1 | 0.093 | 0.07 | 5.8 | | 5.8 | | | 5.8 | 0.1 | <0.01 | 0.05 | 0.091 | 0.23 | 0.32 | 2.1 | 3.2 | 2.6 | 11 | 19 | 3.5 | 1.8 | uncertain |
| CAEXD305469 | 10 | 5.8 | 0.066 | 0.05 | 4.2 | | 4.2 | | | 4.2 | 0.01 | <0.01 | <0.01 | | 0.14 | | | 0.31 | 0.14 | 8.4 | 15 | 27 | 13 | non-PAG |
| CAEXD305489 | 9.7 | 5.8 | 0.07 | 0.06 | 5 | | 5 | | | 5 | 0.074 | <0.01 | 0.01 | 0.064 | 0.12 | 0.23 | 1.5 | 2.3 | 1.8 | 9.1 | 16 | 3.9 | 2.2 | non-PAG |
| CAEXD306783 | 10 | 5.9 | 0.07 | 0.06 | 5 | | 5 | | | 5 | 0.069 | <0.01 | 0.03 | 0.059 | 0.077 | 0.21 | 1.4 | 2.2 | 1.7 | 8.9 | 15 | 4.1 | 2.3 | non-PAG |
| CAEXD309001 | 9.3 | 5.1 | 0.014 | 0.01 | 0.83 | | 0.83 | | | 0.83 | 0.079 | <0.01 | 0.01 | 0.069 | 0.13 | 0.24 | 1.6 | 2.5 | 2 | 4.8 | 12 | 1.9 | 0.34 | uncertain |
| CAEXD309016 | 9.6 | 5.6 | 0.068 | 0.06 | 5 | | 5 | | | 5 | 0.16 | <0.01 | 0.03 | 0.15 | 0.16 | 0.52 | 3.5 | 4.9 | 4.2 | 11 | 19 | 2.2 | 1 | uncertain |
| CAMLD264963 | 9.4 | 4.7 | 0.035 | 0.04 | 3.3 | | 3.3 | | | 3.3 | 0.22 | <0.01 | 0.03 | 0.21 | 0.19 | 0.75 | 5 | 6.9 | 5.9 | 6.5 | 16 | 0.95 | 0.48 | PAG |
| CAMLD264966 | 9.6 | 5.9 | 0.12 | 0.13 | 11 | | 11 | | | 11 | 0.38 | <0.01 | 0.09 | 0.37 | 0.45 | 1.3 | 8.7 | 12 | 11 | 17 | 27 | 1.4 | 0.91 | uncertain |
| CAMLD264968 | 9.3 | 6 | 0.16 | 0.16 | 13 | | 13 | | | 13 | 0.081 | <0.01 | 0.02 | 0.071 | 0.13 | 0.25 | 1.7 | 2.5 | 2 | 18 | 24 | 7 | 5.3 | non-PAG |
| CAMLD264969 | 9.6 | 5.8 | 0.088 | 0.06 | 5 | | 5 | | | 5 | 0.03 | <0.01 | 0.01 | 0.02 | 0.056 | 0.069 | 0.46 | 0.94 | 0.58 | 9.5 | 19 | 10 | 5.3 | non-PAG |
| CAMLD264970 | 9.8 | 5.7 | 0.074 | 0.08 | 6.7 | | 6.7 | | | 6.7 | 0.058 | <0.01 | 0.01 | 0.048 | 0.41 | 0.15 | 1 | 1.8 | 1.6 | 12 | 20 | 6.7 | 3.7 | non-PAG |
| 163305 | 9.3 | 4.4 | 0.052 | 0.04 | 3.3 | | 3.3 | | | 3.3 | 0.34 | <0.01 | 0.02 | 0.33 | 0.95 | 1.1 | 7.5 | 11 | 9.6 | 7.2 | | 0.68 | 0.32 | PAG |
| CAEXD305504 | 9.5 | 5.6 | 0.038 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.073 | <0.01 | 0.03 | 0.063 | 0.33 | 0.21 | 1.4 | 2.3 | 1.9 | 7.1 | 17 | 3.1 | 0.73 | uncertain |
| CAMLD264927 | 9.3 | 4.4 | 0.063 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.25 | <0.01 | 0.03 | 0.24 | 0.013 | 0.85 | 5.6 | 7.7 | 6.5 | 6.9 | 15 | 0.9 | 0.22 | PAG |
| CAMLD264951 | 9.7 | 4.4 | 0.011 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.2 | <0.01 | 0.04 | 0.19 | 0.029 | 0.7 | 4.6 | 6.3 | 5.3 | 6 | 15 | 0.95 | 0.13 | PAG |
| CAMLD264926 | 8.9 | 4.7 | 0.045 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.15 | <0.01 | 0.03 | 0.14 | 0.064 | 0.51 | 3.3 | 4.7 | 3.9 | 6.4 | 13 | 1.4 | 0.18 | uncertain |
| CAMLD264929 | 9.4 | 4.8 | 0.026 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.12 | <0.01 | 0.05 | 0.11 | 0.29 | 0.4 | 2.6 | 3.9 | 3.3 | 6.6 | 13 | 1.7 | 0.43 | uncertain |
| CAMLD273963 | 9.9 | 5.4 | 0.054 | 0.04 | 3.3 | | 3.3 | | | 3.3 | 0.11 | <0.01 | 0.01 | 0.097 | 0.0053 | 0.35 | 2.3 | 3.3 | 2.7 | 6.1 | 16 | 1.8 | 1 | uncertain |
| CAMLD264940 | 9.6 | 4.6 | 0.032 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.26 | <0.01 | 0.05 | 0.25 | 0.032 | 0.91 | 6 | 8.1 | 6.9 | 7.1 | 12 | 0.87 | 0.31 | PAG |
| CAMLD264945 | 9.7 | 5.2 | 0.053 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.099 | <0.01 | 0.02 | 0.089 | 0.21 | 0.31 | 2.1 | 3.1 | 2.6 | 7 | 13 | 2.3 | 0.81 | uncertain |
| CAEXD207013 | 9.5 | 5.8 | 0.031 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.13 | <0.01 | 0.02 | 0.12 | 0.077 | 0.42 | 2.8 | 4 | 3.3 | 5.7 | 15 | 1.4 | 0.42 | uncertain |
| CAEXD298919 | 9.6 | 5.9 | 0.085 | 0.07 | 5.8 | | 5.8 | | | 5.8 | 0.11 | <0.01 | 0.05 | 0.1 | 0.42 | 0.35 | 2.3 | 3.6 | 3.1 | 13 | | 3.7 | 1.6 | uncertain |
| CAEXD306977 | 10 | 4.8 | 0.13 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.21 | <0.01 | 0.03 | 0.2 | 0.072 | 0.71 | 4.7 | 6.4 | 5.5 | 6.6 | 14 | 1 | 0.39 | uncertain |
| CAEXD307472 | 10 | 5.2 | 0.052 | 0.02 | 1.7 | | 1.7 | | | 1.7 | 0.11 | <0.01 | 0.03 | 0.1 | 0.97 | 0.32 | 2.1 | 3.6 | 3.4 | 6.8 | 16 | 1.9 | 0.47 | uncertain |
| CAEXD309452 | 9.8 | 4.6 | 0.024 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.14 | <0.01 | 0.03 | 0.13 | 0.088 | 0.48 | 3.2 | 4.5 | 3.7 | 6.5 | 12 | 1.5 | 0.19 | uncertain |
| CAMLD264948 | 9.6 | 6 | 0.16 | 0.17 | 14 | | 14 | | | 14 | 0.075 | <0.01 | 0.02 | 0.065 | 0.04 | 0.23 | 1.5 | 2.3 | 1.8 | 17 | 26 | 7.2 | 6 | non-PAG |
| CAMLD264949 | 9.6 | 5 | 0.013 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.082 | <0.01 | 0.02 | 0.072 | 0.32 | 0.24 | 1.6 | 2.6 | 2.2 | 5 | 15 | 2 | 0.33 | uncertain |
| CAMLD264953 | 9.8 | 5 | 0.033 | <0.01 | <0.8 | | <0.83 | | | <0.83 | 0.087 | <0.01 | 0.02 | 0.077 | 0.11 | 0.27 | 1.8 | 2.7 | 2.2 | 5.5 | 15 | 2 | 0.31 | uncertain |
| CAMLD264956 | 9.8 | 4.8 | 0.06 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.25 | <0.01 | 0.03 | 0.24 | 0.36 | 0.87 | 5.7 | 7.9 | 6.9 | 8 | 17 | 1 | 0.31 | uncertain |
| CAMLD264959 | 9.6 | 5.7 | 0.059 | 0.03 | 2.5 | | 2.5 | | | 2.5 | 0.07 | <0.01 | 0.02 | 0.06 | 0.34 | 0.2 | 1.3 | 2.2 | 1.9 | 6.4 | 17 | 2.9 | 1.1 | uncertain |
| CAMLD264961 | 10 | 6 | 0.06 | 0.07 | 5.8 | | 5.8 | | | 5.8 | 0.12 | <0.01 | 0.02 | 0.11 | 0.016 | 0.4 | 2.6 | 3.8 | 3.1 | 9.6 | 18 | 2.6 | 1.6 | uncertain |
| CAMLD264972 | 8.9 | 5.6 | 0.062 | 0.05 | 4.2 | | 4.2 | | | 4.2 | 0.12 | <0.01 | 0.02 | 0.11 | 0.043 | 0.4 | 2.7 | 3.8 | 3.1 | 15 | 20 | 4 | 1.1 | uncertain |
| ML95-107-01 | 9.6 | | 0.69 | 0.49 | 40 | 26 | 3.9 | | | 30 | 0.39 | 0.14 | | 0.25 | 0.0088 | 1.2 | 5.9 | 12 | 7.1 | 32 | | 2.6 | 2.5 | non-PAG |
| ML95-107-02 | 9.2 | | 0.7 | 0.5 | 41 | 27 | 4 | | | 31 | 0.42 | 0.18 | | 0.24 | 0.75 | 1.1 | 5.3 | 13 | 7.1 | 51 | | 3.9 | 2.4 | non-PAG |
| ML08-226-05 | 9.4 | | 0.16 | 0.11 | 9.1 | 6 | 0.89 | | | 6.9 | 0.1 | 0.09 | | 0.013 | 0.25 | 0.043 | 0.21 | 3.2 | 0.5 | 14 | | 4.3 | 2.1 | non-PAG |
| M08-743-03 | 8.6 | | 1.2 | 0.6 | 49 | 19 | 4.3 | | 3.4 | 26 | 2.2 | 1.1 | | 1.1 | 0.26 | 5.4 | 26 | 69 | 32 | 75 | | 1.1 | 0.38 | uncertain |
| M08-748-03 | 9 | | 2.1 | 1.9 | 150 | 58 | 13 | | 11 | 81 | 0.057 | 0.03 | | 0.027 | 0.029 | 0.13 | 0.61 | 1.8 | 0.77 | 170 | | 96 | 46 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| M09-817-01 | 8.8 | | 1.1 | 0.53 | 43 | 16 | 3.7 | | 3 | 23 | 1.4 | 0.44 | | 0.96 | 2.6 | 4.4 | 21 | 44 | 28 | 63 | | 1.4 | 0.53 | uncertain |
| CAEXD257967 | 8.4 | 5.6 | 0.76 | 0.74 | 62 | 23 | 5.2 | | 4.2 | 32 | 0.18 | <0.01 | 0.05 | 0.17 | 0.21 | 0.8 | 3.9 | 5.7 | 4.9 | 49 | 56 | 8.5 | 5.7 | non-PAG |
| CAEXD265601 | 7.7 | 2.6 | 1.1 | 1.1 | 88 | 33 | 7.4 | | 5.9 | 46 | 5.7 | 0.13 | 0.33 | 5.6 | 1.9 | 27 | 130 | 180 | 160 | 78 | 85 | 0.44 | 0.26 | PAG |
| CAEXD290332 | 7.9 | 3.3 | 0.78 | 0.69 | 58 | 21 | 4.9 | | 3.9 | 30 | 2.5 | 0.01 | 0.32 | 2.5 | 19 | 10 | 50 | 77 | 79 | 46 | 55 | 0.59 | 0.39 | PAG |
| CAEXD297489 | 8.1 | 2.5 | 1.8 | 1.7 | 150 | 54 | 12 | | 9.8 | 76 | 4.1 | 0.07 | 0.86 | 4 | 66 | 14 | 68 | 130 | 150 | 110 | | 0.91 | 0.6 | PAG |
| CAEXD176520 | 8 | 6.2 | 1.9 | 1.8 | 150 | 57 | 13 | | 10 | 80 | 1.5 | 0.04 | 0.35 | 1.5 | 0.66 | 6.9 | 33 | 47 | 41 | 71 | 84 | 1.5 | 1.7 | uncertain |
| CAEXD302345 | 8.4 | 7.9 | 3 | 3.1 | 250 | 95 | 22 | | 17 | 130 | 3.7 | 0.03 | 0.98 | 3.7 | 60 | 13 | 63 | 120 | 140 | 170 | 190 | 1.5 | 1.2 | uncertain |
| CAEXD217369 | 9.4 | 6 | 3.4 | 3.6 | 300 | | 290 | 5.8 | | 300 | 0.02 | <0.01 | <0.01 | 0.01 | 0.82 | | | 0.63 | 0.82 | 250 | | 390 | 470 | non-PAG |
| CAEXD290362 | 8.1 | 8.1 | 3.2 | 3.2 | 270 | | 260 | 5.3 | | 270 | 3.3 | 0.06 | 0.18 | 3.3 | 2.2 | 100 | | 100 | 100 | 210 | | 2 | 2.6 | non-PAG |
| CAEXD293633 | 9.9 | 6.5 | 2.4 | 2.4 | 200 | | 200 | 4 | | 200 | 0.15 | <0.01 | 0.03 | 0.14 | 0.31 | 4.2 | | 4.7 | 4.5 | 160 | 54 | 34 | 43 | non-PAG |
| CAEXD293885 | 8.4 | 6.1 | 0.65 | 0.66 | 55 | | 54 | 1.1 | | 55 | 0.23 | 0.02 | 0.08 | 0.21 | 0.024 | 6.5 | | 7.1 | 6.5 | 64 | | 8.9 | 7.7 | non-PAG |
| CAEXD197112 | 8 | 7.7 | 1.4 | 1.4 | 120 | | 110 | 2.3 | | 120 | 4 | 0.09 | 0.52 | 3.9 | 0.38 | 120 | | 130 | 120 | 83 | | 0.66 | 0.91 | PAG |
| CAEXD297585 | 7.6 | 5.9 | 0.4 | 0.12 | 10 | | 9.8 | 0.2 | | 10 | 1.7 | 0.08 | 0.59 | 1.7 | 12 | 46 | | 54 | 58 | 12 | | 0.22 | 0.18 | PAG |
| CAEXD302054 | 8.1 | 7.3 | 1.3 | 1.3 | 100 | | 100 | 2.1 | | 100 | 3 | 0.04 | 0.2 | 2.9 | 0.2 | 92 | | 93 | 92 | 92 | | 0.99 | 1.1 | uncertain |
| M08-735-02 | 9.2 | | 2.7 | 2.6 | 210 | 79 | 18 | | 14 | 110 | 0.18 | 0.07 | | 0.11 | 0.53 | 0.48 | 2.3 | 5.6 | 3.3 | 210 | | 38 | 20 | non-PAG |
| M09-802-02 | 8.4 | | 0.58 | 0.2 | 16 | 6.1 | 1.4 | | 1.1 | 8.5 | 2.6 | 0.74 | | 1.8 | 0.32 | 8.7 | 42 | 81 | 51 | 31 | | 0.38 | 0.11 | PAG |
| M09-803-01 | 8.5 | | 1.5 | 0.67 | 55 | 21 | 4.7 | | 3.8 | 29 | 2.8 | 0.25 | | 2.5 | 0.25 | 12 | 58 | 86 | 70 | 67 | | 0.78 | 0.34 | PAG |
| M10-935-02 | 8.6 | | 0.97 | 0.41 | 34 | 13 | 2.9 | | 2.3 | 18 | 1.3 | 0.49 | | 0.84 | 5.9 | 3.5 | 17 | 42 | 27 | 34 | | 0.81 | 0.43 | PAG |
| M98-248-01 | 8.5 | | 1.6 | 0.33 | 27 | 10 | 2.3 | | 1.8 | 14 | 3.2 | 1.5 | | 1.7 | 0.061 | 7.8 | 38 | 100 | 46 | 53 | | 0.53 | 0.14 | PAG |
| CAEXD183497 | 8.3 | 6.8 | 0.8 | 0.78 | 65 | 24 | 5.5 | | 4.4 | 34 | 1.8 | 0.02 | 0.09 | 1.7 | 1.1 | 8.2 | 40 | 55 | 49 | 48 | 55 | 0.87 | 0.62 | PAG |
| CAEXD222666 | 8.1 | 7.2 | 1.8 | 1.7 | 140 | 51 | 12 | | 9.4 | 73 | 2.2 | 0.05 | 0.51 | 2.1 | 0.74 | 10 | 49 | 68 | 60 | 110 | 120 | 1.7 | 1.1 | uncertain |
| CAEXD257975 | 8.1 | 6.3 | 2.2 | 2.2 | 190 | 69 | 16 | | 13 | 97 | 1.4 | 0.02 | 0.22 | 1.4 | 27 | 4.6 | 22 | 45 | 54 | 140 | 150 | 3.1 | 2.2 | non-PAG |
| CAEXD184497 | 8.3 | 6 | 0.85 | 0.83 | 69 | 26 | 5.9 | | 4.7 | 36 | 0.98 | 0.02 | 0.15 | 0.96 | 0.3 | 4.5 | 22 | 31 | 27 | 65 | 72 | 2.1 | 1.2 | uncertain |
| CAEXD176511 | 8 | 7.5 | 1.5 | 1.4 | 120 | 43 | 9.9 | | 7.9 | 61 | 1.4 | 0.04 | 0.29 | 1.3 | 1.6 | 6.3 | 30 | 43 | 38 | 78 | 88 | 1.8 | 1.4 | uncertain |
| CAEXD185037 | 8.3 | 5.5 | 0.55 | 0.53 | 44 | 16 | 3.7 | | 3 | 23 | 1 | <0.01 | 0.09 | 0.99 | 0.021 | 4.7 | 23 | 31 | 28 | 26 | 34 | 0.82 | 0.74 | PAG |
| CAEXD193892 | 8.7 | 6.1 | 0.49 | 0.48 | 40 | 15 | 3.4 | | 2.7 | 21 | 0.35 | <0.01 | 0.07 | 0.34 | 0.33 | 1.6 | 7.7 | 11 | 9.6 | 33 | 41 | 3.1 | 1.9 | uncertain |
| CAEXD302349 | 8.3 | 7.3 | 1.6 | 1.6 | 130 | 49 | 11 | | 8.9 | 69 | 2.4 | 0.02 | 0.1 | 2.4 | 1.2 | 11 | 54 | 74 | 66 | 97 | 100 | 1.3 | 0.92 | uncertain |
| GT09-07-01 | | | | | | | | | | | | | | | 0.01 | | | | 0.01 | | | | | |
| GT09-07-02 | | | | | | | | | | | | | | | 0.024 | | | | 0.024 | | | | | |
| M08-729-01 | 9.1 | | 1.8 | 1.6 | 130 | | 130 | 2.6 | | 130 | 0.28 | 0.05 | | 0.23 | 0.019 | 7.1 | | 8.7 | 7.1 | 150 | | 18 | 15 | non-PAG |
| M08-729-02 | 8.9 | | 1.9 | 1.7 | 140 | | 140 | 2.8 | | 140 | 0.047 | 0.02 | | 0.027 | 0.021 | 0.83 | | 1.5 | 0.85 | 160 | | 110 | 97 | non-PAG |
| M08-729-03 | 9.2 | | 2.2 | 2 | 170 | | 170 | 3.3 | | 170 | 0.086 | 0.02 | | 0.066 | 0.11 | 2 | | 2.7 | 2.1 | 190 | | 69 | 63 | non-PAG |
| M08-729-04 | 9.3 | | 1.6 | 1.4 | 120 | | 120 | 2.3 | | 120 | 0.19 | 0.06 | | 0.13 | 0.18 | 3.9 | | 5.9 | 4.1 | 130 | | 22 | 20 | non-PAG |
| M08-729-06 | 9.1 | | 2.4 | 2.2 | 180 | | 180 | 3.6 | | 180 | 0.078 | 0.01 | | 0.068 | 0.32 | 2 | | 2.4 | 2.3 | 190 | | 77 | 75 | non-PAG |
| M08-734-01 | 9.3 | | 1.5 | 1.5 | 120 | | 120 | 2.4 | | 120 | 0.11 | 0.04 | | 0.067 | 0.023 | 2.1 | | 3.3 | 2.1 | 130 | | 39 | 37 | non-PAG |
| M08-734-02 | 8.9 | | 2.1 | 1.9 | 160 | | 160 | 3.1 | | 160 | 0.33 | 0.08 | | 0.25 | 0.0099 | 7.9 | | 10 | 7.9 | 180 | | 17 | 15 | non-PAG |
| M08-734-03 | 9.1 | | 2.1 | 1.9 | 160 | | 160 | 3.1 | | 160 | 0.26 | 0.09 | | 0.17 | 0.032 | 5.3 | | 8.2 | 5.4 | 180 | | 22 | 20 | non-PAG |
| M08-734-04 | 9.1 | | 3.2 | 3 | 240 | | 240 | 4.9 | | 250 | 0.088 | 0.04 | | 0.048 | 0.23 | 1.4 | | 2.8 | 1.6 | 230 | | 82 | 90 | non-PAG |
| M08-735-01 | 9.4 | | 1.5 | 1.4 | 110 | | 110 | 2.3 | | 110 | 0.11 | 0.05 | | 0.056 | 0.075 | 1.7 | | 3.3 | 1.8 | 120 | | 37 | 35 | non-PAG |
| M08-735-03 | 9.1 | | 2.2 | 2.1 | 170 | | 170 | 3.5 | | 180 | 0.12 | 0.05 | | 0.074 | 0.075 | 2.3 | | 3.9 | 2.3 | 190 | | 49 | 46 | non-PAG |
| M08-740-01 | 9 | | 2.2 | 1.9 | 160 | | 160 | 3.1 | | 160 | 0.18 | 0.06 | | 0.12 | 0.18 | 3.5 | | 5.5 | 3.7 | 180 | | 33 | 29 | non-PAG |
| M08-740-02 | 9.2 | | 2.4 | 2.2 | 180 | | 180 | 3.5 | | 180 | 0.086 | 0.07 | | 0.016 | 0.37 | 0.31 | | 2.7 | 0.69 | 180 | | 67 | 67 | non-PAG |
| M08-740-03 | 9.4 | | 0.98 | 0.88 | 72 | | 72 | 1.4 | | 73 | 0.1 | 0.03 | | 0.073 | 0.0083 | 2.3 | | 3.2 | 2.3 | 86 | | 27 | 23 | non-PAG |
| M08-740-04 | 9.4 | | 2.8 | 2.6 | 210 | | 210 | 4.3 | | 220 | 0.065 | 0.04 | | 0.025 | 0.11 | 0.73 | | 2 | 0.83 | 220 | | 110 | 110 | non-PAG |
| M08-740-05 | 9.3 | | 2.5 | 2.3 | 190 | | 190 | 3.8 | | 190 | 0.1 | 0.05 | | 0.05 | 0.23 | 1.4 | | 3.1 | 1.7 | 220 | | 71 | 61 | non-PAG |
| M08-742-01 | 9.5 | | 1 | 0.94 | 77 | | 77 | 1.5 | | 79 | 0.13 | 0.08 | | 0.052 | 0.011 | 1.6 | | 4.1 | 1.6 | 93 | | 23 | 19 | non-PAG |
| M08-742-02 | 9.1 | | 1.5 | 1.4 | 110 | | 110 | 2.3 | | 120 | 0.21 | 0.1 | | 0.11 | 0.027 | 3.3 | | 6.5 | 3.4 | 130 | | 20 | 18 | non-PAG |
| M08-742-03 | 8.9 | | 2.3 | 2.2 | 180 | | 180 | 3.6 | | 180 | 0.051 | 0.03 | | 0.021 | 0.077 | 0.62 | | 1.6 | 0.69 | 180 | | 110 | 110 | non-PAG |
| M08-742-04 | 9 | | 2.4 | 2.3 | 190 | | 190 | 3.8 | | 190 | 0.086 | 0.04 | | 0.046 | 0.053 | 1.4 | | 2.7 | 1.5 | 200 | | 74 | 71 | non-PAG |
| M08-743-01 | 9.6 | | 0.62 | 0.56 | 46 | | 46 | 0.92 | | 47 | 0.1 | 0.04 | | 0.061 | 0.0056 | 1.9 | | 3.2 | 1.9 | 57 | | 18 | 15 | non-PAG |
| M08-743-02 | 9.2 | | 1.9 | 1.8 | 150 | | 150 | 3 | | 150 | 0.033 | 0.02 | | 0.013 | 0.2 | 0.31 | | 1 | 0.5 | 150 | | 150 | 150 | non-PAG |
| M08-743-04 | 9.7 | | 0.28 | 0.24 | 20 | | 20 | 0.4 | | 20 | 0.07 | 0.03 | | 0.04 | 0.013 | 1.2 | | 2.2 | 1.3 | 30 | | 14 | 9.3 | non-PAG |
| M08-747-01 | 9 | | 2.3 | 2.1 | 170 | | 170 | 3.4 | | 170 | 0.44 | 0.13 | | 0.31 | 0.0056 | 9.6 | | 14 | 9.6 | 190 | | 14 | 13 | non-PAG |
| M08-747-02 | 9.5 | | 0.71 | 0.59 | 48 | | 48 | 0.97 | | 49 | 0.53 | 0.26 | | 0.27 | 0.0085 | 8.5 | | 17 | 8.5 | 62 | | 3.7 | 2.9 | non-PAG |
| M08-747-03 | 8.9 | | 2.3 | 2 | 170 | | 170 | 3.3 | | 170 | 0.034 | 0.02 | | 0.014 | 0.0051 | 0.43 | | 1.1 | 0.44 | 190 | | 180 | 160 | non-PAG |
| M08-748-01 | 9.6 | | 0.68 | 0.59 | 48 | | 48 | 0.96 | | 49 | 0.21 | 0.06 | | 0.15 | 0.015 | 4.7 | | 6.6 | 4.7 | 68 | | 10 | 7.4 | non-PAG |
| M08-748-02 | 9.3 | | 2.3 | 2 | 160 | | 160 | 3.3 | | 170 | 0.57 | 0.12 | | 0.45 | 0.012 | 14 | | 18 | 14 | 200 | | 11 | 9.2 | non-PAG |
| M08-750-01 | 9.4 | | 2.5 | 2.5 | 200 | | 200 | 4.1 | | 210 | 0.16 | 0.06 | | 0.095 | 0.0075 | 3 | | 4.8 | 3 | 230 | | 47 | 43 | non-PAG |
| M08-750-02 | 8.9 | | 2.3 | 2.2 | 180 | | 180 | 3.6 | | 190 | 0.07 | 0.03 | | 0.04 | 0.27 | 1.1 | | 2.2 | 1.4 | 170 | | 77 | 85 | non-PAG |
| M08-752-01 | 9.3 | | 1.8 | 1.6 | 130 | | 130 | 2.5 | | 130 | 0.57 | 0.31 | | 0.26 | 0.0093 | 8 | | 18 | 8 | 150 | | 8.3 | 7.3 | non-PAG |
| M08-752-02 | 10 | | 0.14 | 0.099 | 8.1 | | 8.1 | 0.16 | | 8.2 | 0.11 | 0.07 | | 0.041 | 0.01 | 1.3 | | 3.5 | 1.3 | 20 | | 5.7 | 2.4 | non-PAG |
| M08-752-03 | 9.4 | | 2.1 | 1.9 | 150 | | 150 | 3.1 | | 160 | 0.074 | 0.04 | | 0.034 | 0.23 | 0.95 | | 2.3 | 1.2 | 160 | | 70 | 68 | non-PAG |
| M08-755-01 | 9.2 | | 1.3 | 1.1 | 93 | | 92 | 1.9 | | 94 | 0.016 | 0.02 | | | 0.008 | | | 0.5 | 0.008 | 110 | | 230 | 190 | non-PAG |
| M08-755-02 | 9.4 | | 1.4 | 1.3 | 110 | | 110 | 2.1 | | 110 | 0.042 | 0.03 | | 0.012 | 0.0059 | 0.37 | | 1.3 | 0.38 | 120 | | 94 | 82 | non-PAG |
| M08-755-03 | 9.1 | | 1.6 | 1.4 | 120 | | 120 | 2.3 | | 120 | 0.039 | 0.01 | | 0.029 | 0.043 | 0.88 | | 1.2 | 0.93 | 130 | | 100 | 97 | non-PAG |
| M09-798-01 | | | | | | | | | | | | | | | 0.011 | | | | 0.011 | | | | | |
| M09-798-02 | | | | | | | | | | | | | | | 0.011 | | | | 0.011 | | | | | |
| M09-816-01 | | | | | | | | | | | | | | | 0.0045 | | | | 0.0045 | | | | | |
| M09-816-02 | | | | | | | | | | | | | | | 0.0045 | | | | 0.0045 | | | | | |
| M09-855-01 | | | | | | | | | | | | | | | 0.59 | | | | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| M09-855-02 | | | | | | | | | | | | | | | 0.29 | | | | | | | | | |
| M09-857-01 | | | | | | | | | | | | | | | 0.016 | | | | 0.016 | | | | | |
| M09-858-01 | | | | | | | | | | | | | | | 0.0059 | | | | 0.0059 | | | | | |
| M09-858-02 | | | | | | | | | | | | | | | 0.0056 | | | | 0.0056 | | | | | |
| M09-862-01 | | | | | | | | | | | | | | | 0.035 | | | | 0.035 | | | | | |
| M09-866-01 | | | | | | | | | | | | | | | 0.088 | | | | 0.088 | | | | | |
| M09-866-02 | | | | | | | | | | | | | | | 0.1 | | | | 0.1 | | | | | |
| M08-733-01 | 8.9 | | 2.2 | 2.1 | 170 | | 170 | 3.4 | | 180 | 0.1 | 0.07 | | 0.033 | 0.04 | 1 | | 3.2 | 1.1 | 170 | | 53 | 54 | non-PAG |
| M08-733-02 | 9 | | 2.2 | 2 | 160 | | 160 | 3.3 | | 170 | 0.24 | 0.13 | | 0.11 | 0.017 | 3.3 | | 7.4 | 3.4 | 170 | | 23 | 23 | non-PAG |
| M09-802-01 | 8.9 | | 2.5 | 2.2 | 180 | | 180 | 3.6 | | 180 | 0.46 | 0.17 | | 0.29 | 0.0077 | 9 | | 14 | 9 | 190 | | 13 | 13 | non-PAG |
| M09-817-02 | 9 | | 2.6 | 2.6 | 210 | | 210 | 4.2 | | 220 | 0.093 | 0.07 | | 0.023 | 0.14 | 0.65 | | 2.9 | 0.79 | 190 | | 67 | 74 | non-PAG |
| M09-859-01 | 8.9 | | 3.2 | 2.8 | 230 | | 230 | 4.7 | | 240 | 0.43 | 0.22 | | 0.21 | 0.35 | 6.5 | | 14 | 6.8 | 210 | | 16 | 17 | non-PAG |
| M10-933-01 | 9 | | 2 | 1.7 | 140 | | 140 | 2.8 | | 140 | 0.46 | 0.22 | | 0.24 | 0.025 | 7.6 | | 15 | 7.6 | 150 | | 10 | 9.9 | non-PAG |
| M10-935-01 | 9.5 | | 0.34 | 0.24 | 20 | | 20 | 0.4 | | 20 | 0.059 | 0.04 | | 0.019 | 0.0091 | 0.59 | | 1.8 | 0.6 | 28 | | 15 | 11 | non-PAG |
| M98-275-01 | 8.9 | | 2.4 | 2.2 | 180 | | 180 | 3.5 | | 180 | 0.081 | 0.05 | | 0.031 | 0.053 | 0.94 | | 2.5 | 1 | 190 | | 73 | 71 | non-PAG |
| M98-275-02 | 8.8 | | 2.2 | 1.9 | 150 | | 150 | 3.1 | | 160 | 0.11 | 0.06 | | 0.053 | 0.017 | 1.6 | | 3.5 | 1.7 | 160 | | 45 | 45 | non-PAG |
| W94-76-01 | 9.2 | | 1.3 | 1.2 | 98 | | 98 | 2 | | 100 | 0.06 | 0.03 | | 0.03 | 0.0069 | 0.93 | | 1.9 | 0.94 | 99 | | 53 | 53 | non-PAG |
| W94-76-02 | 9.1 | | 0.89 | 0.7 | 57 | | 57 | 1.1 | | 58 | 0.1 | 0.08 | | 0.024 | 0.0091 | 0.75 | | 3.3 | 0.75 | 67 | | 21 | 18 | non-PAG |
| W94-82-01 | 9 | | 1.1 | 0.87 | 71 | | 71 | 1.4 | | 72 | 0.11 | 0.08 | | 0.028 | 0.0091 | 0.87 | | 3.4 | 0.88 | 80 | | 24 | 21 | non-PAG |
| CAMLD 262226 | 9.3 | 6.6 | 0.59 | 0.59 | 49 | | 48 | 0.97 | | 49 | 0.26 | <0.01 | 0.08 | 0.25 | 0.069 | 7.7 | | 8.1 | 7.8 | 52 | 57 | 6.4 | 6.1 | non-PAG |
| CAMLD 262227 | 9.2 | 6.8 | 1.4 | 1.3 | 110 | | 110 | 2.2 | | 110 | 0.13 | <0.01 | 0.03 | 0.12 | 0.056 | 3.6 | | 3.9 | 3.6 | 110 | 120 | 29 | 28 | non-PAG |
| CAMLD 262228 | 9.2 | 6.8 | 1 | 1 | 86 | | 84 | 1.7 | | 86 | 0.1 | <0.01 | 0.06 | 0.091 | 0.013 | 2.8 | | 3.2 | 2.9 | 91 | 97 | 29 | 27 | non-PAG |
| CAMLD 262229 | 9 | 6.8 | 2.1 | 2.1 | 170 | | 170 | 3.4 | | 170 | 0.21 | <0.01 | 0.06 | 0.2 | 0.059 | 6.2 | | 6.5 | 6.2 | 180 | 180 | 27 | 26 | non-PAG |
| CAMLD 262230 | 9.2 | 6.7 | 0.41 | 0.43 | 36 | | 35 | 0.71 | | 36 | 0.11 | <0.01 | 0.04 | 0.1 | 0.0053 | 3.1 | | 3.4 | 3.1 | 38 | 45 | 11 | 10 | non-PAG |
| CAMLD 262231 | 8.9 | 7 | 1.9 | 1.8 | 150 | | 150 | 3 | | 150 | 0.11 | <0.01 | 0.06 | 0.096 | 0.051 | 3 | | 3.3 | 3 | 160 | 170 | 48 | 46 | non-PAG |
| CAEXD194259 | 8.5 | 6.2 | 2.1 | 2.1 | 170 | | 170 | 3.4 | | 170 | 0.24 | 0.02 | 0.05 | 0.22 | 0.061 | 6.8 | | 7.4 | 6.8 | 170 | 94 | 23 | 23 | non-PAG |
| CAEXD217371 | 8.8 | 6 | 3.7 | 3.7 | 300 | | 300 | 6 | | 300 | 0.053 | <0.01 | 0.02 | 0.043 | 2.1 | 0.28 | | 1.7 | 2.4 | 260 | | 150 | 180 | non-PAG |
| CAEXD291664 | 8.8 | 6.3 | 1.8 | 1.7 | 140 | | 140 | 2.8 | | 140 | 0.049 | <0.01 | 0.01 | 0.039 | 0.12 | 1.2 | | 1.5 | 1.3 | 120 | | 81 | 94 | non-PAG |
| CAEXD297486 | 8.7 | 6.2 | 3.8 | 3.9 | 320 | | 320 | 6.3 | | 320 | 0.58 | <0.01 | 0.08 | 0.57 | 0.17 | 18 | | 18 | 18 | 270 | | 15 | 18 | non-PAG |
| CAEXD297621 | 9 | 6.9 | 2.1 | 2 | 170 | | 160 | 3.3 | | 170 | 0.25 | <0.01 | 0.04 | 0.24 | 0.21 | 7.4 | | 7.8 | 7.6 | 150 | | 19 | 21 | non-PAG |
| CAEXD303511 | 8.4 | 6.8 | 3.4 | 3.4 | 290 | | 280 | 5.6 | | 290 | 1.2 | 0.03 | 0.33 | 1.2 | 6.5 | 34 | | 39 | 41 | 260 | | 6.7 | 7.4 | non-PAG |
| M97-122-03 | 9 | | 3.1 | 2.6 | 210 | 80 | 18 | | 15 | 110 | 0.28 | 0.01 | | 0.27 | 0.29 | 1.2 | 6 | 8.7 | 7.6 | 180 | | 21 | 13 | non-PAG |
| M97-122-04 | 8.7 | | 1.8 | 1.2 | 100 | 38 | 8.7 | | 6.9 | 54 | 0.72 | 0.11 | | 0.61 | 1.3 | 2.8 | 14 | 22 | 18 | 100 | | 4.5 | 2.4 | non-PAG |
| W94-65-01 | 8.1 | | 1.5 | 0.69 | 57 | 21 | 4.9 | | 3.9 | 30 | 5.7 | 0.25 | | 5.4 | 27 | 24 | 120 | 180 | 170 | 51 | | 0.28 | 0.17 | PAG |
| W94-65-02 | 8.3 | | 2.8 | 1.6 | 130 | 48 | 11 | | 8.8 | 68 | 3.2 | 0.34 | | 2.8 | 12 | 13 | 61 | 99 | 85 | 130 | | 1.3 | 0.69 | uncertain |
| CAEXD262428 | 7.2 | 2.6 | 2.4 | 2.1 | 180 | 66 | 15 | | 12 | 93 | 2.9 | 0.08 | 2.2 | 2.8 | 17 | 12 | 59 | 91 | 88 | 22 | 32 | 0.24 | 1 | PAG |
| CAEXD267633 | 7.6 | 2.6 | 2.4 | 2.4 | 200 | 73 | 17 | | 13 | 100 | 2.9 | 0.03 | 1.2 | 2.8 | 68 | 8.3 | 40 | 90 | 120 | 41 | 54 | 0.46 | 1.1 | PAG |
| CAEXD290299 | 7.9 | 3.5 | 2.9 | 1.7 | 140 | 52 | 12 | | 9.6 | 74 | 5 | 0.04 | 0.24 | 4.9 | 1.2 | 23 | 110 | 160 | 140 | 110 | 120 | 0.68 | 0.48 | PAG |
| CAEXD265979 | 8.1 | 4.7 | 2.5 | 2.5 | 210 | 77 | 18 | | 14 | 110 | 2.5 | 0.01 | 1.3 | 2.5 | 110 | 3.6 | 18 | 80 | 130 | 83 | 88 | 1 | 1.4 | uncertain |
| CAEXD300073 | 8.3 | 7.9 | 2.2 | 2.2 | 190 | 69 | 16 | | 13 | 97 | 2.5 | 0.04 | 0.52 | 2.4 | 0.04 | 12 | 56 | 78 | 68 | 120 | 130 | 1.6 | 1.2 | uncertain |
| CAEXD294990 | 8.4 | 6.3 | 2.2 | 2.3 | 190 | | 190 | 3.8 | | 190 | 0.63 | <0.01 | 0.22 | 0.62 | 0.45 | 19 | | 20 | 20 | 150 | | 7.4 | 9.8 | non-PAG |
| CAEXD300063 | 8.7 | 8 | 2.8 | 2.9 | 240 | | 230 | 4.7 | | 240 | 1.9 | 0.03 | 0.3 | 1.8 | 13 | 51 | | 59 | 64 | 160 | | 2.8 | 4.1 | non-PAG |
| CAEXD163438 | 8.7 | 6.7 | 3.1 | 3.3 | 280 | | 270 | 5.5 | | 280 | 0.33 | <0.01 | 0.15 | 0.32 | 1.1 | 9.5 | | 10 | 11 | 190 | | 18 | 27 | non-PAG |
| CAEXD185368 | 8.3 | 3.6 | 1.9 | 1.7 | 140 | | 140 | 2.8 | | 140 | 4.8 | 0.06 | 1.5 | 4.7 | 13 | 140 | | 150 | 150 | 110 | | 0.7 | 0.95 | PAG |
| CAEXD183956 | 8.1 | 8 | 1.6 | 1.5 | 120 | | 120 | 2.4 | | 120 | 2.8 | 0.03 | 0.91 | 2.8 | 84 | 45 | | 88 | 130 | 87 | | 0.98 | 1.4 | uncertain |
| CAEXD295054 | 7.9 | 5.9 | 0.82 | 0.71 | 59 | | 58 | 1.2 | | 59 | 1.1 | 0.04 | 0.13 | 1 | 3.4 | 31 | | 34 | 34 | 43 | | 1.3 | 1.7 | uncertain |
| CAEXD289186 | 8.7 | 6.4 | 1.7 | 1.7 | 140 | | 140 | | | 140 | 0.019 | <0.01 | <0.01 | 0.009 | 0.39 | 0.085 | | 0.59 | 0.48 | 140 | | 240 | 230 | non-PAG |
| W94-55-01 | 8 | | 3.6 | 2.1 | 170 | 66 | 15 | | 12 | 93 | 1.5 | 0.28 | | 1.2 | 0.22 | 5.6 | 27 | 46 | 33 | 150 | | 3.3 | 2 | non-PAG |
| W94-57-02 | 8.3 | | 1.7 | 0.82 | 67 | 25 | 5.8 | | 4.6 | 36 | 1.6 | 1.4 | | 0.17 | 0.59 | 0.76 | 3.7 | 49 | 5.1 | 76 | | 1.5 | 0.72 | uncertain |
| W94-57-03 | 8.3 | | 3.8 | 1.8 | 140 | 55 | 12 | | 9.9 | 77 | 2.9 | 0.37 | | 2.5 | 0.29 | 12 | 58 | 91 | 71 | 110 | | 1.3 | 0.85 | uncertain |
| W94-73-02 | 8.2 | | 3.7 | 0.89 | 73 | 28 | 6.3 | | 5 | 39 | 2.3 | 0.27 | | 2 | 0.26 | 9.4 | 46 | 71 | 55 | 79 | | 1.1 | 0.55 | uncertain |
| CAEXD261887 | 7.6 | 7.3 | 2.5 | 2.3 | 190 | 71 | 16 | | 13 | 100 | 2 | 0.07 | 1.5 | 1.9 | 0.99 | 9 | 44 | 62 | 54 | 71 | 80 | 1.1 | 1.6 | uncertain |
| CAEXD262427 | 7.9 | 7.4 | 1.5 | 1.4 | 120 | 44 | 9.9 | | 8 | 62 | 2.3 | 0.04 | 1.6 | 2.3 | 2.6 | 10 | 51 | 72 | 64 | 81 | 88 | 1.1 | 0.86 | uncertain |
| CAEXD300070 | 8.6 | 6.3 | 2.4 | 2.5 | 200 | 76 | 17 | | 14 | 110 | 0.38 | 0.01 | 0.22 | 0.37 | 0.11 | 1.8 | 8.5 | 12 | 10 | 93 | 100 | 7.8 | 9 | non-PAG |
| CAEXD267631 | 8 | 8.7 | 4.2 | 4 | 330 | 120 | 28 | | 23 | 170 | 2.1 | 0.02 | 0.7 | 2 | 11 | 8.9 | 43 | 64 | 63 | 170 | 190 | 2.6 | 2.7 | non-PAG |
| CAEXD185456 | 8.3 | 6.2 | 1.9 | 1.8 | 150 | 56 | 13 | | 10 | 79 | 0.35 | <0.01 | 0.08 | 0.34 | 0.4 | 1.6 | 7.7 | 11 | 9.6 | 52 | 65 | 4.7 | 7.2 | non-PAG |
| CAEXD289268 | 8.4 | 6.3 | 2 | 1.9 | 160 | 59 | 13 | | 11 | 83 | 0.8 | <0.01 | 0.11 | 0.79 | 0.3 | 3.7 | 18 | 25 | 22 | 130 | 150 | 5.3 | 3.3 | non-PAG |
| M96-58-01 | 9 | | 1.4 | 1.3 | 110 | | 110 | 2.2 | | 110 | 0.14 | 0.06 | | 0.077 | 0.043 | 2.4 | | 4.3 | 2.4 | 110 | | 26 | 26 | non-PAG |
| M96-58-02 | 8.9 | | 1.7 | 1.5 | 120 | | 120 | 2.5 | | 130 | 0.16 | 0.05 | | 0.11 | 0.61 | 3.1 | | 4.9 | 3.7 | 130 | | 27 | 26 | non-PAG |
| M96-58-03 | 8.8 | | 1.8 | 1.7 | 140 | | 140 | 2.8 | | 140 | 0.1 | 0.02 | | 0.08 | 0.067 | 2.5 | | 3.1 | 2.5 | 140 | | 46 | 46 | non-PAG |
| M97-122-05 | 9 | | 2.2 | 2 | 170 | | 170 | 3.3 | | 170 | 0.13 | 0.03 | | 0.095 | 0.015 | 3 | | 3.9 | 3 | 160 | | 41 | 44 | non-PAG |
| M97-123-04 | 9 | | 2.5 | 2.3 | 190 | | 190 | 3.8 | | 200 | 0.072 | 0.04 | | 0.032 | 0.061 | 0.97 | | 2.3 | 1 | 170 | | 77 | 87 | non-PAG |
| M97-153-02 | 8.9 | | 3 | 2.8 | 230 | | 230 | 4.6 | | 230 | 0.15 | 0.07 | | 0.081 | 0.4 | 2.3 | | 4.7 | 2.7 | 210 | | 45 | 49 | non-PAG |
| M98-184-01 | 9 | | 2.1 | 1.9 | 160 | | 160 | 3.2 | | 160 | 0.041 | <0.01 | | 0.031 | 0.011 | 0.96 | | 1.3 | 0.97 | 160 | | 120 | 130 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| M98-184-02 | 9 | | 3.7 | 3.4 | 280 | | 280 | 5.6 | | 290 | 0.041 | <0.01 | | 0.031 | 0.13 | 0.9 | | 1.3 | 1 | 240 | | 190 | 220 | non-PAG |
| W94-57-01 | 8.8 | | 3 | 2.7 | 220 | | 220 | 4.4 | | 220 | 0.25 | 0.11 | | 0.14 | 0.23 | 4.3 | | 7.8 | 4.5 | 200 | | 26 | 28 | non-PAG |
| W94-59-01 | 9 | | 1 | 0.88 | 72 | | 72 | 1.4 | | 74 | 0.11 | 0.07 | | 0.04 | 0.067 | 1.2 | | 3.4 | 1.3 | 76 | | 22 | 21 | non-PAG |
| W94-65-03 | 8.9 | | 1.2 | 1 | 85 | | 85 | 1.7 | | 87 | 0.13 | 0.04 | | 0.085 | 0.25 | 2.5 | | 3.9 | 2.8 | 89 | | 23 | 22 | non-PAG |
| W94-70-01 | 8.9 | | 1.5 | 1.4 | 110 | | 110 | 2.3 | | 110 | 0.059 | 0.04 | | 0.019 | 0.077 | 0.56 | | 1.8 | 0.63 | 120 | | 63 | 62 | non-PAG |
| W94-70-02 | 8.8 | | 2.1 | 2 | 160 | | 160 | 3.3 | | 170 | 0.039 | 0.03 | | 0.009 | 0.021 | 0.27 | | 1.2 | 0.29 | 160 | | 130 | 140 | non-PAG |
| W94-73-01 | 8.8 | | 1.9 | 1.8 | 150 | | 150 | 3 | | 150 | 0.076 | 0.05 | | 0.026 | 0.045 | 0.79 | | 2.4 | 0.84 | 150 | | 61 | 63 | non-PAG |
| W94-73-03 | 8.8 | | 2.4 | 2.2 | 180 | | 180 | 3.7 | | 190 | 0.087 | 0.04 | | 0.047 | 0.018 | 1.5 | | 2.7 | 1.5 | 180 | | 67 | 69 | non-PAG |
| CAEXD289055 | 9.1 | 6.5 | 2.4 | 2.4 | 200 | | 200 | 4 | | 200 | 0.081 | <0.01 | 0.02 | 0.071 | 0.29 | 2.1 | | 2.5 | 2.4 | 180 | | 71 | 80 | non-PAG |
| CAEXD262395 | 9 | 6.4 | 2.9 | 3 | 250 | | 250 | 4.9 | | 250 | 0.091 | <0.01 | <0.01 | 0.081 | 0.12 | 2.5 | | 2.8 | 2.6 | 170 | | 60 | 88 | non-PAG |
| CAEXD296006 | 7.7 | 3.8 | 4.9 | 4.2 | 350 | | 340 | 6.9 | | 350 | 2.4 | 0.1 | 0.85 | 2.3 | 36 | 53 | | 74 | 89 | 63 | | 0.86 | 4.8 | PAG |
| CAEXD198012 | 8.9 | 3.6 | 3.7 | 3.7 | 310 | | 310 | 6.1 | | 310 | 0.28 | <0.01 | 0.05 | 0.27 | 0.38 | 8.3 | | 8.8 | 8.7 | 230 | | 26 | 35 | PAG |
| CAEXD163450 | 8.8 | 6.8 | 2.9 | 3 | 250 | | 240 | 4.9 | | 250 | 0.041 | <0.01 | <0.01 | 0.031 | 0.13 | 0.9 | | 1.3 | 1 | 200 | | 150 | 190 | non-PAG |
| CAEXD183958 | 8.7 | 6.5 | 2.2 | 2.2 | 190 | | 180 | 3.7 | | 190 | 0.15 | <0.01 | 0.03 | 0.14 | 0.28 | 4.3 | | 4.7 | 4.5 | 150 | | 31 | 40 | non-PAG |
| CAEXD189574 | 9.2 | 6.5 | 3.6 | 3.6 | 300 | | 300 | 6 | | 300 | 0.084 | <0.01 | 0.07 | 0.074 | 0.46 | 2.1 | | 2.6 | 2.5 | 230 | | 89 | 120 | non-PAG |
| CAEXD250652 | 8.8 | 5.9 | 2.9 | 3 | 250 | | 240 | 4.9 | | 250 | 0.086 | <0.01 | 0.02 | 0.076 | 0.18 | 2.3 | | 2.7 | 2.5 | 200 | | 76 | 92 | non-PAG |
| CAEXD250738 | 8.8 | 6.2 | 2.4 | 2.3 | 190 | | 190 | 3.8 | | 190 | 0.053 | <0.01 | 0.03 | 0.043 | 0.091 | 1.3 | | 1.7 | 1.4 | 170 | | 100 | 120 | non-PAG |
| CAEXD252314 | 8.5 | 6 | 0.01 | <0.01 | <0.8 | | <0.82 | 0.016 | | <0.83 | 0.014 | <0.01 | <0.01 | 0.004 | 0.15 | 0.049 | | 0.44 | 0.2 | 3.2 | | 7.3 | 1.9 | uncertain |
| CAEXD295053 | 8.2 | 6.2 | 1.6 | 1.5 | 120 | | 120 | 2.4 | | 120 | 1.2 | 0.02 | 0.21 | 1.1 | 2 | 35 | | 36 | 37 | 120 | | 3.2 | 3.3 | non-PAG |
| CAEXD297112 | 8.8 | 6.5 | 3.6 | 3.8 | 320 | | 310 | 6.2 | | 320 | 0.036 | <0.01 | 0.02 | 0.026 | 0.51 | 0.56 | | 1.1 | 1.1 | 270 | | 240 | 280 | non-PAG |
| CAEXD213090 | 7.4 | 3.7 | 2 | 1.9 | 160 | 38 | 69 | 7 | 5.1 | 120 | 4.9 | 0.09 | 0.54 | 4.8 | 18 | 21 | 100 | 150 | 140 | 45 | 56 | 0.3 | 0.79 | PAG |
| CAEXD225690 | 8.6 | 6.2 | 1.1 | 0.95 | 79 | 19 | 34 | 3.5 | 2.6 | 59 | 0.41 | <0.01 | 0.2 | 0.4 | 22 | 0.22 | 1.1 | 13 | 23 | 64 | 75 | 5 | 4.6 | non-PAG |
| M07-660_107032 | 8.3 | 7.8 | 1.6 | 1.5 | 120 | 30 | 53 | 5.4 | 3.9 | 92 | 1.9 | 0.12 | 1.5 | 1.8 | 5.4 | 8 | 39 | 59 | 52 | 72 | 130 | 1.2 | 1.6 | uncertain |
| CAEXD259501 | 8.5 | 5.9 | 0.8 | 0.79 | 66 | 16 | 28 | 2.9 | 2.1 | 49 | 0.78 | <0.01 | 0.53 | 0.77 | 31 | 1.3 | 6.4 | 24 | 39 | 48 | 58 | 2 | 2 | uncertain |
| CAEXD259500 | 8.3 | 6.1 | 1.1 | 1.1 | 90 | 22 | 39 | 3.9 | 2.9 | 67 | 0.7 | 0.01 | 0.62 | 0.69 | 0.73 | 3.2 | 16 | 22 | 20 | 74 | 79 | 3.4 | 3.1 | non-PAG |
| M04-530A-05_338259 | 8.2 | 3 | 1.8 | 1.7 | 140 | 34 | 62 | 6.2 | 4.6 | 110 | 4.9 | 0.06 | 0.14 | 4.8 | 1.7 | 23 | 110 | 150 | 140 | 100 | 110 | 0.65 | 0.7 | PAG |
| M05-556_824703 | 8.1 | 2.4 | 1.3 | 1.1 | 94 | 23 | 41 | 4.1 | 3 | 71 | 5.5 | 0.09 | 1.5 | 5.4 | 140 | 15 | 74 | 170 | 230 | 94 | 100 | 0.55 | 0.41 | PAG |
| CAEXD175600 | 8.4 | 6.3 | 1.2 | 0.97 | 81 | 19 | 35 | 3.5 | 2.6 | 61 | 4.1 | 0.48 | 0.76 | 3.6 | 69 | 12 | 58 | 130 | 140 | 76 | 89 | 0.59 | 0.47 | PAG |
| CAEXD175614 | 8.5 | 7.6 | 1.3 | 0.93 | 78 | 19 | 33 | 3.4 | 2.5 | 58 | 1 | 0.07 | 0.08 | 0.96 | 1.9 | 4.4 | 21 | 32 | 28 | 71 | 83 | 2.2 | 1.8 | uncertain |
| CAEXD194549 | 8 | 5.9 | 2.9 | 2.5 | 210 | 50 | 90 | 9.1 | 6.7 | 160 | 2.5 | 0.08 | 1.5 | 2.4 | 0.36 | 11 | 56 | 78 | 67 | 85 | | 1.1 | 2 | uncertain |
| CAEXD206014 | 8.1 | 6.2 | 1.1 | 0.79 | 66 | 16 | 28 | 2.9 | 2.1 | 49 | 0.75 | 0.06 | 0.27 | 0.69 | 11 | 2.4 | 12 | 24 | 25 | 64 | 73 | 2.7 | 2.1 | non-PAG |
| CAEXD213337 | 8 | 7 | 1.9 | 1.7 | 140 | 34 | 61 | 6.2 | 4.6 | 110 | 3 | 0.06 | 0.3 | 2.9 | 0.87 | 14 | 67 | 93 | 82 | 85 | 98 | 0.91 | 1.1 | uncertain |
| CAEXD216432 | 9.2 | 6.6 | 3.8 | 3.2 | 270 | 65 | 120 | 12 | 8.7 | 200 | 0.16 | <0.01 | 0.15 | 0.15 | 0.55 | 0.66 | 3.2 | 4.9 | 4.4 | 250 | 280 | 51 | 41 | non-PAG |
| CAEXD217732 | 8.8 | 6.5 | 1.9 | 1.7 | 150 | 35 | 63 | 6.3 | 4.7 | 110 | 1.4 | <0.01 | 0.54 | 1.4 | 54 | 2.7 | 13 | 45 | 70 | 100 | 110 | 2.3 | 2.4 | non-PAG |
| M05-559A_832071 | 8.3 | 7.6 | 1.9 | 1.8 | 150 | 37 | 66 | 6.7 | 4.9 | 110 | 3.2 | 0.11 | 0.09 | 3.1 | 0.12 | 15 | 72 | 100 | 87 | 100 | 110 | 1 | 1.1 | uncertain |
| M05-564_832368 | 8.5 | 6.3 | 1.1 | 0.99 | 83 | 31 | 37 | 3.4 | | 71 | 1 | 0.02 | 0.32 | 1 | 30 | 1.9 | 12 | 32 | 44 | 65 | 77 | 2 | 2.2 | non-PAG |
| M06-591-02 | 9 | | 1.1 | 0.78 | 63 | 42 | 6.3 | | | 48 | 0.15 | 0.08 | | 0.065 | 0.48 | 0.27 | 1.3 | 4.5 | 2.1 | 62 | | 14 | 11 | non-PAG |
| M06-629-01 | 8.8 | | 2.3 | 2 | 160 | 110 | 16 | | | 120 | 1.1 | 0.33 | | 0.75 | 19 | 2.1 | 10 | 34 | 31 | 140 | | 4.2 | 3.7 | non-PAG |
| M99-417-01 | 9.1 | | 1.4 | 0.98 | 80 | 53 | 7.9 | | | 61 | 0.49 | 0.2 | | 0.29 | 0.69 | 1.3 | 6.5 | 15 | 8.5 | 80 | | 5.2 | 4 | non-PAG |
| CAEXD213028 | 9.2 | 5.4 | 0.88 | 0.87 | 73 | 47 | 7 | | | 54 | 0.57 | <0.01 | 0.17 | 0.56 | 16 | 1.5 | 7.1 | 18 | 24 | 59 | | 3.3 | 3 | non-PAG |
| M07-645_103186 | 9.5 | 5.2 | 0.6 | 0.6 | 50 | 33 | 4.8 | | | 37 | 0.53 | <0.01 | 0.33 | 0.52 | 27 | 0.4 | 2 | 17 | 30 | 33 | | 2 | 2.3 | non-PAG |
| M05-548_824513 | 9 | 5.2 | 1.5 | 1.4 | 120 | 75 | 11 | | | 87 | 2.3 | <0.01 | 1.4 | 2.2 | 110 | 2.3 | 11 | 71 | 120 | 93 | | 1.3 | 1.2 | uncertain |
| M07-681_110260 | 8.1 | 3.3 | 0.71 | 0.7 | 58 | 35 | 10 | | | 45 | 2.3 | 0.08 | 0.92 | 2.2 | 13 | 9.5 | 46 | 71 | 68 | 40 | 62 | 0.56 | 0.63 | PAG |
| CAEXD308246 | 9.1 | 6.2 | 0.26 | 0.25 | 21 | 12 | 3.6 | | | 16 | 0.18 | <0.01 | 0.03 | 0.17 | 0.035 | 0.81 | 4 | 5.7 | 4.8 | 23 | | 4 | 2.8 | non-PAG |
| M07-693_109898 | 8.4 | 6.1 | 0.83 | 0.84 | 70 | 42 | 12 | | | 54 | 0.54 | 0.04 | 0.38 | 0.5 | 8.7 | 1.7 | 8.3 | 17 | 19 | 50 | | 3 | 3.2 | non-PAG |
| CAEXD199299 | 9.4 | 6 | 2.3 | 2.3 | 190 | 120 | 33 | | | 150 | 2 | <0.01 | 1.1 | 2 | 100 | 1.7 | 8.2 | 63 | 110 | 150 | | 2.4 | 2.4 | non-PAG |
| CAEXD217788 | 8.2 | 7.9 | 1.7 | 1.7 | 140 | 82 | 24 | | | 110 | 1.9 | 0.02 | 0.06 | 1.8 | 2 | 8.6 | 42 | 58 | 52 | 89 | | 1.5 | 1.8 | uncertain |
| CAEXD295099 | 8.4 | 6 | 1.2 | 1.2 | 97 | 58 | 17 | | | 74 | 0.34 | 0.02 | 0.07 | 0.32 | 1.9 | 1.4 | 6.8 | 11 | 10 | 78 | | 7.2 | 6.9 | non-PAG |
| M05-559A_832081 | 8.4 | 6.6 | 1.4 | 1.4 | 120 | 69 | 20 | | | 88 | 1.1 | 0.04 | 0.08 | 1 | 0.067 | 4.8 | 23 | 33 | 28 | 98 | | 3 | 2.7 | non-PAG |
| CAEXD199207 | 9 | 6.8 | 1.4 | 1.3 | 110 | 66 | 19 | | | 85 | 1.2 | <0.01 | 0.25 | 1.2 | 26 | 3.8 | 18 | 38 | 48 | 86 | | 2.2 | 2.2 | non-PAG |
| CAEXD217778 | 8.1 | 3.3 | 0.48 | 0.49 | 41 | 24 | 7 | | | 31 | 1.9 | 0.03 | 0.12 | 1.9 | 0.78 | 59 | | 61 | 60 | 32 | | 0.52 | 0.52 | PAG |
| M00-473-01 | 8.8 | | 4.2 | 3.7 | 310 | 100 | 170 | | | 270 | 0.98 | 0.94 | | 0.037 | 6.4 | | | 31 | 6.4 | 270 | | 8.9 | 8.9 | non-PAG |
| M00-483-01 | 9 | | 4.6 | 4 | 330 | 110 | 180 | | | 290 | 0.48 | 0.27 | | 0.21 | 4.8 | 4 | | 15 | 8.8 | 290 | | 19 | 20 | non-PAG |
| M00-490-01 | 9 | | 4.1 | 3.5 | 290 | 98 | 160 | | | 260 | 0.74 | 0.21 | | 0.53 | 15 | 8.8 | | 23 | 24 | 240 | | 10 | 11 | non-PAG |
| M08-731W1-01 | 8.6 | | 0.83 | 0.75 | 61 | | 63 | | | 63 | 0.12 | 0.05 | | 0.067 | 0.023 | 2.1 | | 3.7 | 2.1 | 72 | | 20 | 17 | non-PAG |
| GT08-04-01_2009 | 8.9 | | 1.8 | 1.7 | 140 | | 140 | | | 140 | 0.11 | 0.03 | | 0.079 | 0.035 | 2.5 | | 3.4 | 2.5 | 150 | | 43 | 42 | non-PAG |
| M05-561-02_2011 | 9.3 | | 0.89 | 0.81 | 66 | | 67 | | | 67 | 0.097 | 0.03 | | 0.067 | 0.18 | 2 | | 3 | 2.2 | 76 | | 25 | 22 | non-PAG |
| M06-592-03 | 9.5 | | 0.19 | 0.15 | 13 | | 13 | | | 13 | 0.091 | 0.08 | | 0.011 | 0.021 | 0.33 | | 2.8 | 0.35 | 23 | | 8.2 | 4.5 | non-PAG |
| M97-135-02 | 9.4 | | 0.26 | 0.22 | 18 | | 19 | | | 19 | 0.13 | 0.11 | | 0.015 | 0.032 | 0.45 | | 3.9 | 0.48 | 29 | | 7.4 | 4.7 | non-PAG |
| M97-149-01 | 9.5 | | 0.45 | 0.39 | 32 | | 32 | | | 32 | 0.2 | 0.11 | | 0.089 | 0.021 | 2.8 | | 6.2 | 2.8 | 41 | | 6.6 | 5.2 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| M99-280-01 | 8.8 | | 0.97 | 0.76 | 62 | 15 | 27 | 2.8 | 2 | 47 | 0.21 | 0.11 | | 0.1 | 0.4 | 0.46 | 2.2 | 6.7 | 3.1 | 49 | | 7.3 | 7.1 | non-PAG |
| M04-526-01 | 8.4 | 11 | 1.8 | 1.5 | 120 | 30 | 53 | 5.4 | 4 | 92 | 0.78 | 0.29 | | 0.49 | 0.56 | 2.3 | 11 | 25 | 14 | 120 | | 4.7 | 3.8 | non-PAG |
| M03-508-02 | 8.7 | | 1.6 | 1.3 | 110 | 27 | 48 | 4.8 | 3.6 | 83 | 0.16 | 0.03 | | 0.13 | 0.13 | 0.63 | 3 | 5.1 | 3.8 | 80 | | 16 | 16 | non-PAG |
| M06-622_878029 | 8.1 | 3.7 | 0.98 | 0.77 | 64 | 15 | 28 | 2.8 | 2.1 | 48 | 2.1 | 0.15 | 1.9 | 2 | 0.45 | 9.2 | 45 | 66 | 55 | 45 | 56 | 0.68 | 0.73 | PAG |
| CAEXD225689 | 8.4 | 6.5 | 1.2 | 0.88 | 73 | 18 | 32 | 3.2 | 2.4 | 55 | 0.36 | 0.04 | 0.11 | 0.32 | 2.4 | 1.3 | 6.4 | 11 | 10 | 72 | 79 | 6.4 | 4.9 | non-PAG |
| CAEXD249828 | 9 | 6.2 | 0.96 | 0.88 | 73 | 18 | 32 | 3.2 | 2.4 | 55 | 0.19 | <0.01 | 0.09 | 0.18 | 0.16 | 0.82 | 4 | 5.8 | 5 | 58 | 69 | 9.9 | 9.4 | non-PAG |
| CAEXD259467 | 8.3 | 6.7 | 1.7 | 1.3 | 110 | 26 | 46 | 4.7 | 3.4 | 80 | 0.059 | <0.01 | 0.02 | 0.049 | 0.83 | 0.17 | 0.82 | 1.8 | 1.8 | 81 | 81 | 44 | 43 | non-PAG |
| CAEXD259468 | 8.2 | 6.3 | 1.3 | 1 | 84 | 20 | 36 | 3.7 | 2.7 | 63 | 0.33 | 0.04 | 0.17 | 0.29 | 2.9 | 1.1 | 5.5 | 10 | 9.5 | 71 | 79 | 7 | 6.2 | non-PAG |
| M07-686_110546 | 8.2 | 5.8 | 0.95 | 0.64 | 53 | 13 | 23 | 2.3 | 1.7 | 40 | 0.75 | 0.07 | 0.18 | 0.68 | 0.24 | 3.2 | 16 | 24 | 19 | 45 | | 1.9 | 1.7 | uncertain |
| M06-629_878207 | 8.5 | 5.7 | 1.3 | 1 | 87 | 21 | 37 | 3.8 | 2.8 | 65 | 0.31 | 0.02 | 0.15 | 0.29 | 5.6 | 0.96 | 4.6 | 9.7 | 11 | 69 | 81 | 7.1 | 6.7 | non-PAG |
| CAEXD213087 | 7.9 | 6.9 | 3.3 | 3.3 | 270 | 66 | 120 | 12 | 8.8 | 210 | <0.005 | <0.01 | <0.01 | | 0.043 | | | 0.16 | 0.043 | 270 | 270 | 1700 | 1300 | non-PAG |
| CAEXD213334 | 7.9 | 7.6 | 2.8 | 2.5 | 210 | 51 | 91 | 9.2 | 6.8 | 160 | 2.3 | 0.03 | 0.07 | 2.3 | 3.3 | 11 | 52 | 73 | 66 | 83 | 92 | 1.1 | 2.2 | uncertain |
| CAEXD216429 | 8.3 | 7.4 | 2.8 | 2.6 | 220 | 53 | 94 | 9.6 | 7 | 160 | 1.2 | 0.02 | 0.09 | 1.2 | 1.3 | 5.6 | 27 | 38 | 34 | 140 | 160 | 3.7 | 4.3 | non-PAG |
| CAEXD258462 | 9.3 | 5.9 | 0.66 | 0.63 | 53 | 13 | 23 | 2.3 | 1.7 | 39 | 0.11 | <0.01 | 0.02 | 0.096 | 0.55 | 0.41 | 2 | 3.3 | 3 | 47 | 56 | 14 | 12 | non-PAG |
| GT08-01-02 | 9.1 | | 0.61 | 0.46 | 37 | 14 | 17 | 1.6 | | 33 | 0.2 | 0.11 | | 0.094 | 0.53 | 0.31 | 2.1 | 6.4 | 2.9 | 38 | | 5.9 | 5.1 | non-PAG |
| GT08-02-01_2008 | 9.1 | | 0.96 | 0.77 | 63 | 24 | 28 | 2.6 | | 55 | 0.17 | 0.09 | | 0.08 | 0.48 | 0.26 | 1.7 | 5.3 | 2.5 | 65 | | 12 | 10 | non-PAG |
| M00-474-05 | 9 | | 0.58 | 0.42 | 34 | 13 | 16 | 1.4 | | 30 | 0.26 | 0.09 | | 0.17 | 0.14 | 0.6 | 4 | 8 | 4.7 | 42 | | 5.2 | 3.7 | non-PAG |
| M07-660-02_2008 | 9.1 | | 0.51 | 0.41 | 34 | 13 | 15 | 1.4 | | 30 | 0.18 | 0.06 | | 0.12 | 0.11 | 0.44 | 2.9 | 5.7 | 3.5 | 41 | | 7.1 | 5.2 | non-PAG |
| M07-678-03 | 9 | | 0.74 | 0.65 | 53 | 20 | 24 | 2.2 | | 46 | 0.2 | 0.08 | | 0.12 | 3.2 | 0.25 | 1.7 | 6.3 | 5.1 | 46 | | 7.4 | 7.4 | non-PAG |
| M07-704-01 | 9.2 | | 0.98 | 0.84 | 68 | 26 | 31 | 2.9 | | 60 | 0.22 | 0.04 | | 0.18 | 0.4 | 0.63 | 4.2 | 6.9 | 5.2 | 65 | | 9.4 | 8.7 | non-PAG |
| M07-705-01 | 9.6 | | 0.72 | 0.58 | 48 | 18 | 21 | 2 | | 41 | 0.32 | 0.18 | | 0.14 | 0.029 | 0.51 | 3.4 | 10 | 3.9 | 50 | | 5 | 4.1 | non-PAG |
| M07-713-02 | 9.1 | | 0.49 | 0.38 | 31 | 12 | 14 | 1.3 | | 27 | 0.31 | 0.19 | | 0.12 | 0.16 | 0.41 | 2.7 | 9.5 | 3.3 | 36 | | 3.7 | 2.8 | non-PAG |
| M07-713-03 | | | | | | | | | | | | | | | 0.045 | | | | 0.045 | | | | | |
| M95-17-01 | 9.5 | | 0.46 | 0.37 | 30 | 12 | 14 | 1.3 | | 27 | 0.2 | 0.16 | | 0.039 | 0.085 | 0.14 | 0.9 | 6.2 | 1.1 | 30 | | 4.8 | 4.3 | non-PAG |
| M95-17-02 | 9.6 | | 0.46 | 0.35 | 28 | 11 | 13 | 1.2 | | 25 | 0.2 | 0.16 | | 0.035 | 0.099 | 0.12 | 0.8 | 6.1 | 1 | 32 | | 5.3 | 4.1 | non-PAG |
| M98-194-03 | 9.2 | | 0.5 | 0.38 | 31 | 12 | 14 | 1.3 | | 27 | 0.21 | 0.11 | | 0.1 | 0.26 | 0.36 | 2.4 | 6.7 | 3 | 35 | | 5.2 | 4.1 | non-PAG |
| M98-269-03 | 9.2 | | 0.64 | 0.53 | 44 | 17 | 20 | 1.8 | | 38 | 0.25 | 0.16 | | 0.089 | 0.083 | 0.32 | 2.1 | 7.8 | 2.5 | 48 | | 6.2 | 4.9 | non-PAG |
| M98-297-03 | | | | | | | | | | | | | | | 0.17 | | | | 0.17 | | | | | |
| M98-297-04 | 9.1 | | 0.41 | 0.32 | 26 | 9.8 | 12 | 1.1 | | 23 | 0.23 | 0.18 | | 0.054 | 0.072 | 0.19 | 1.3 | 7.3 | 1.5 | 30 | | 4.2 | 3.1 | non-PAG |
| M98-316-01_2008 | 9.5 | | 1 | 0.88 | 72 | 27 | 33 | 3 | | 63 | 0.39 | 0.22 | | 0.17 | 5.6 | 0.31 | 2 | 12 | 7.9 | 68 | | 5.5 | 5.1 | non-PAG |
| M99-340-03 | 9.5 | | 0.46 | 0.35 | 28 | 11 | 13 | 1.2 | | 25 | 0.21 | 0.15 | | 0.058 | 0.075 | 0.21 | 1.4 | 6.5 | 1.6 | 33 | | 5.1 | 3.8 | non-PAG |
| M99-341-02 | 9.3 | | 1.1 | 0.92 | 76 | 29 | 34 | 3.2 | | 66 | 0.39 | 0.1 | | 0.29 | 1.2 | 0.98 | 6.5 | 12 | 8.7 | 75 | | 6.2 | 5.4 | non-PAG |
| M99-345-02 | | | | | | | | | | | | | | | 0.048 | | | | 0.048 | | | | | |
| M99-346-02_2008 | 9.6 | | 0.49 | 0.37 | 30 | 12 | 14 | 1.3 | | 27 | 0.23 | 0.15 | | 0.082 | 0.19 | 0.29 | 1.9 | 7.3 | 2.4 | 32 | | 4.3 | 3.7 | non-PAG |
| M99-346-03 | | | | | | | | | | | | | | | 0.029 | | | | 0.029 | | | | | |
| M99-350-02 | 9.5 | | 0.54 | 0.42 | 34 | 13 | 16 | 1.4 | | 30 | 0.19 | 0.12 | | 0.067 | 0.069 | 0.24 | 1.6 | 5.8 | 1.9 | 31 | | 5.3 | 5.1 | non-PAG |
| M99-350-03 | | | | | | | | | | | | | | | 0.048 | | | | 0.048 | | | | | |
| M99-403-02 | 9.2 | | 1 | 0.85 | 69 | 26 | 31 | 2.9 | | 60 | 0.21 | 0.04 | | 0.17 | 2.4 | 0.46 | 3.1 | 6.4 | 5.9 | 64 | | 9.9 | 9.4 | non-PAG |
| M99-403-04 | 9.5 | | 0.7 | 0.56 | 46 | 17 | 21 | 1.9 | | 40 | 0.23 | 0.1 | | 0.13 | 0.048 | 0.48 | 3.2 | 7.3 | 3.7 | 49 | | 6.7 | 5.5 | non-PAG |
| M99-404-01 | 9.4 | | 0.87 | 0.75 | 61 | 23 | 28 | 2.6 | | 54 | 0.095 | 0.04 | | 0.055 | 0.056 | 0.2 | 1.3 | 3 | 1.6 | 60 | | 20 | 18 | non-PAG |
| M99-404-02 | 9.5 | | 0.73 | 0.58 | 47 | 18 | 21 | 2 | | 41 | 0.29 | 0.07 | | 0.22 | 0.67 | 0.77 | 5.1 | 9.1 | 6.5 | 49 | | 5.3 | 4.5 | non-PAG |
| M99-404-03 | | | | | | | | | | | | | | | 0.12 | | | | 0.12 | | | | | |
| M99-403-03 | 9.3 | 11 | 0.83 | 0.71 | 58 | 22 | 26 | 2.5 | | 51 | 0.13 | 0.06 | | 0.066 | 3.5 | 0.038 | 0.25 | 3.9 | 3.8 | 49 | | 12 | 13 | non-PAG |
| M99-404-04 | 9.5 | 11 | 0.52 | 0.43 | 35 | 13 | 16 | 1.5 | | 30 | 0.2 | 0.08 | | 0.12 | 0.25 | 0.41 | 2.7 | 6.2 | 3.4 | 37 | | 6 | 4.9 | non-PAG |
| M07-645-01 | 9.2 | | 0.54 | 0.42 | 35 | 13 | 16 | 1.5 | | 30 | 0.16 | 0.12 | | 0.043 | 0.37 | 0.13 | 0.89 | 5.1 | 1.4 | 36 | | 7.1 | 5.9 | non-PAG |
| M99-327-01 | 9.2 | | 0.87 | 0.7 | 57 | 22 | 26 | 2.4 | | 50 | 0.31 | 0.22 | | 0.09 | 0.12 | 0.32 | 2.1 | 9.7 | 2.6 | 56 | | 5.8 | 5.1 | non-PAG |
| M04-533-01 | 9.4 | 11 | 1.1 | 0.97 | 79 | 30 | 36 | 3.3 | | 69 | 0.18 | 0.11 | | 0.068 | 0.35 | 0.23 | 1.5 | 5.6 | 2.1 | 76 | | 14 | 12 | non-PAG |
| M00-476-01 | | | | | | | | | | | | | | | 0.08 | | | | 0.08 | | | | | |
| M00-476-02 | | | | | | | | | | | | | | | 0.096 | | | | 0.096 | | | | | |
| M00-479-01 | | | | | | | | | | | 0.029 | 0.02 | | 0.009 | 0.29 | 0.016 | 0.1 | 0.91 | 0.41 | | | | | |
| M00-479-02 | | | | | | | | | | | | | | | 0.15 | | | | 0.15 | | | | | |
| M06-628-01 | | | | | | | | | | | 0.27 | 0.08 | | 0.19 | 0.15 | 0.69 | 4.5 | 8.5 | 5.4 | | | | | |
| M06-628-02 | | | | | | | | | | | | | | | 0.099 | | | | 0.099 | | | | | |
| M07-660-01_2009 | | | | | | | | | | | | | | | 0.093 | | | | 0.093 | | | | | |
| M07-660-02_2009 | | | | | | | | | | | | | | | 0.083 | | | | 0.083 | | | | | |
| M98-194-04 | | | | | | | | | | | 0.18 | 0.09 | | 0.093 | 0.083 | 0.33 | 2.2 | 5.7 | 2.6 | | | | | |
| M98-298-01 | | | | | | | | | | | 0.18 | 0.05 | | 0.13 | 0.085 | 0.46 | 3 | 5.6 | 3.6 | | | | | |
| M98-298-02 | | | | | | | | | | | | | | | 0.88 | | | | 0.88 | | | | | |
| M98-298-03 | | | | | | | | | | | | | | | 0.04 | | | | 0.04 | | | | | |
| M99-341-03 | | | | | | | | | | | 0.15 | 0.08 | | 0.07 | 0.17 | 0.24 | 1.6 | 4.7 | 2 | | | | | |
| M99-345-01_2009 | | | | | | | | | | | 0.27 | 0.03 | | 0.24 | 0.12 | 0.87 | 5.8 | 8.5 | 6.8 | | | | | |
| M99-345-03 | | | | | | | | | | | | | | | 0.12 | | | | 0.12 | | | | | |
| M99-346-01 | | | | | | | | | | | | | | | 0.24 | | | | 0.24 | | | | | |
| M99-346-02_2009 | | | | | | | | | | | | | | | 0.17 | | | | 0.17 | | | | | |
| M99-385-01 | | | | | | | | | | | | | | | 0.1 | | | | 0.1 | | | | | |
| M99-386-01 | | | | | | | | | | | 0.27 | 0.11 | | 0.16 | 5.9 | 0.25 | 1.6 | 8.5 | 7.8 | | | | | |
| M99-386-02 | | | | | | | | | | | | | | | 0.083 | | | | 0.083 | | | | | |
| M99-403-05 | | | | | | | | | | | 0.2 | 0.07 | | 0.13 | 0.24 | 0.47 | 3.1 | 6.3 | 3.8 | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| M99-404-05 | | | | | | | | | | | | | | | 0.12 | | | | 0.12 | | | | | |
| M99-404-06 | | | | | | | | | | | 0.097 | 0.05 | | 0.047 | 0.32 | 0.15 | 1 | 3 | 1.5 | | | | | |
| M99-418-01 | | | | | | | | | | | | | | | 0.51 | | | | 0.51 | | | | | |
| M03-498-01 | 9 | | 1.1 | 0.92 | 76 | 29 | 34 | 3.2 | | 66 | 0.2 | 0.14 | | 0.061 | 0.64 | 0.18 | 1.2 | 6.3 | 2 | 78 | | 12 | 10 | non-PAG |
| M06-607-01 | 8.6 | | 0.49 | 0.41 | 33 | 13 | 15 | 1.4 | | 29 | 0.076 | 0.03 | | 0.046 | 0.32 | 0.15 | 0.98 | 2.4 | 1.5 | 35 | | 15 | 12 | non-PAG |
| M08-731W1-02 | 9.1 | | 1 | 0.87 | 71 | 27 | 32 | 3 | | 62 | 0.25 | <0.01 | | 0.24 | 0.14 | 0.85 | 5.6 | 7.7 | 6.6 | 74 | | 9.7 | 8.1 | non-PAG |
| M98-266-01 | 8.6 | | 0.76 | 0.63 | 51 | 19 | 23 | 2.2 | | 45 | 0.16 | 0.05 | | 0.11 | 0.2 | 0.4 | 2.6 | 5.1 | 3.2 | 55 | | 11 | 8.8 | non-PAG |
| M03-508-01 | 9.4 | | 0.62 | 0.51 | 42 | 16 | 19 | 1.8 | | 37 | 0.18 | 0.07 | | 0.11 | 0.16 | 0.4 | 2.6 | 5.7 | 3.2 | 44 | | 7.6 | 6.4 | non-PAG |
| M06-577-02 | 9.4 | | 0.64 | 0.53 | 43 | 16 | 19 | 1.8 | | 38 | 0.22 | 0.14 | | 0.081 | 0.12 | 0.29 | 1.9 | 6.9 | 2.3 | 43 | | 6.2 | 5.5 | non-PAG |
| M06-577-03 | 9.3 | | 0.67 | 0.5 | 41 | 16 | 19 | 1.7 | | 36 | 0.21 | 0.12 | | 0.094 | 0.16 | 0.33 | 2.2 | 6.7 | 2.7 | 44 | | 6.6 | 5.4 | non-PAG |
| M06-591-01 | 9 | | 0.59 | 0.42 | 35 | 13 | 16 | 1.5 | | 30 | 0.23 | 0.13 | | 0.1 | 0.088 | 0.37 | 2.4 | 7.3 | 2.9 | 38 | | 5.3 | 4.2 | non-PAG |
| M06-608-01 | 9.2 | | 0.56 | 0.43 | 35 | 13 | 16 | 1.5 | | 31 | 0.23 | 0.2 | | 0.025 | 0.04 | 0.089 | 0.59 | 7 | 0.71 | 40 | | 5.6 | 4.3 | non-PAG |
| M06-608-02 | 9.3 | | 0.58 | 0.45 | 37 | 14 | 17 | 1.6 | | 32 | 0.16 | 0.16 | | | 0.083 | | | 4.8 | 0.083 | 41 | | 8.4 | 6.7 | non-PAG |
| M06-611-01 | 9.3 | | 0.54 | 0.43 | 35 | 13 | 16 | 1.5 | | 31 | 0.15 | 0.14 | | 0.01 | 0.11 | 0.03 | 0.2 | 4.7 | 0.34 | 37 | | 7.9 | 6.6 | non-PAG |
| M06-611-02 | 9.2 | | 0.65 | 0.49 | 40 | 15 | 18 | 1.7 | | 35 | 0.17 | 0.17 | | 0.003 | 0.08 | 0.0063 | 0.041 | 5.4 | 0.13 | 43 | | 7.9 | 6.5 | non-PAG |
| M06-625-01 | 9.5 | | 0.76 | 0.61 | 50 | 19 | 22 | 2.1 | | 43 | 0.16 | 0.16 | | 0.002 | 0.29 | | | 5.1 | 0.29 | 48 | | 9.6 | 8.6 | non-PAG |
| M06-625-02 | 9.4 | | 0.47 | 0.32 | 26 | 9.8 | 12 | 1.1 | | 23 | 0.15 | 0.1 | | 0.054 | 0.15 | 0.19 | 1.2 | 4.8 | 1.6 | 34 | | 7 | 4.7 | non-PAG |
| M06-631-01 | 9.1 | | 0.72 | 0.49 | 40 | 15 | 18 | 1.7 | | 35 | 0.24 | 0.09 | | 0.15 | 0.13 | 0.55 | 3.6 | 7.6 | 4.3 | 41 | | 5.4 | 4.6 | non-PAG |
| M07-674-01 | 9.3 | | 0.8 | 0.62 | 51 | 19 | 23 | 2.1 | | 44 | 0.23 | 0.13 | | 0.1 | 0.13 | 0.37 | 2.4 | 7.3 | 2.9 | 52 | | 7.1 | 6.1 | non-PAG |
| M07-689-01 | 9.3 | | 0.35 | 0.25 | 20 | 7.6 | 9.1 | 0.85 | | 18 | 0.19 | 0.14 | | 0.052 | 0.083 | 0.18 | 1.2 | 6 | 1.5 | 25 | | 4.1 | 2.9 | non-PAG |
| M07-689-02 | 9.3 | | 0.48 | 0.3 | 24 | 9.2 | 11 | 1 | | 21 | 0.14 | 0.14 | | 0.002 | 0.15 | | | 4.4 | 0.15 | 30 | | 6.7 | 4.8 | non-PAG |
| M08-761-01 | 9.4 | | 0.6 | 0.44 | 36 | 14 | 16 | 1.5 | | 31 | 0.28 | 0.1 | | 0.18 | 0.16 | 0.66 | 4.4 | 8.9 | 5.2 | 40 | | 4.5 | 3.5 | non-PAG |
| M08-761-02 | 9.4 | | 0.67 | 0.53 | 44 | 17 | 20 | 1.8 | | 38 | 0.21 | 0.07 | | 0.14 | 0.051 | 0.5 | 3.3 | 6.5 | 3.8 | 44 | | 6.8 | 5.9 | non-PAG |
| M08-763-01 | 9.3 | | 0.97 | 0.82 | 67 | 25 | 30 | 2.8 | | 58 | 0.2 | 0.11 | | 0.093 | 0.64 | 0.3 | 2 | 6.3 | 2.9 | 62 | | 9.7 | 9.2 | non-PAG |
| M08-765-01 | 9.3 | | 0.73 | 0.58 | 48 | 18 | 22 | 2 | | 42 | 0.21 | 0.07 | | 0.14 | 0.19 | 0.48 | 3.2 | 6.4 | 3.9 | 48 | | 7.4 | 6.5 | non-PAG |
| M96-19-01 | 9.5 | | 0.81 | 0.63 | 52 | 20 | 23 | 2.2 | | 45 | 0.27 | 0.14 | | 0.13 | 0.61 | 0.42 | 2.8 | 8.3 | 3.8 | 53 | | 6.3 | 5.4 | non-PAG |
| M96-19-02 | 9.3 | | 0.63 | 0.49 | 40 | 15 | 18 | 1.7 | | 35 | 0.18 | 0.14 | | 0.043 | 0.29 | 0.14 | 0.92 | 5.7 | 1.4 | 42 | | 7.4 | 6.1 | non-PAG |
| M96-37-02 | 9.6 | | 0.73 | 0.54 | 44 | 17 | 20 | 1.9 | | 39 | 0.3 | 0.12 | | 0.18 | 0.16 | 0.63 | 4.2 | 9.3 | 5 | 48 | | 5.2 | 4.1 | non-PAG |
| M96-37-03 | 9.4 | | 0.46 | 0.32 | 26 | 10 | 12 | 1.1 | | 23 | 0.26 | 0.21 | | 0.045 | 0.096 | 0.16 | 1 | 8 | 1.3 | 34 | | 4.2 | 2.9 | non-PAG |
| M96-77-01 | 9.4 | | 0.55 | 0.45 | 37 | 14 | 17 | 1.5 | | 32 | 0.17 | 0.11 | | 0.057 | 0.12 | 0.2 | 1.3 | 5.2 | 1.6 | 38 | | 7.3 | 6.1 | non-PAG |
| M96-77-02 | 9.4 | | 0.72 | 0.57 | 46 | 18 | 21 | 2 | | 40 | 0.34 | 0.3 | | 0.042 | 0.26 | 0.14 | 0.91 | 11 | 1.3 | 47 | | 4.4 | 3.8 | non-PAG |
| M97-121-01 | 9.5 | | 0.64 | 0.49 | 40 | 15 | 18 | 1.7 | | 35 | 0.21 | 0.03 | | 0.18 | 0.035 | 0.64 | 4.3 | 6.5 | 4.9 | 41 | | 6.4 | 5.3 | non-PAG |
| M97-135-03 | 9.5 | | 0.66 | 0.52 | 42 | 16 | 19 | 1.8 | | 37 | 0.27 | 0.16 | | 0.11 | 0.08 | 0.39 | 2.6 | 8.4 | 3 | 43 | | 5.1 | 4.4 | non-PAG |
| M97-94A-01 | 9.5 | | 0.82 | 0.65 | 53 | 20 | 24 | 2.2 | | 46 | 0.17 | 0.17 | | | 0.26 | | | 5.3 | 0.26 | 52 | | 9.9 | 8.8 | non-PAG |
| M97-94A-02 | 9.5 | | 0.6 | 0.45 | 37 | 14 | 17 | 1.5 | | 32 | 0.22 | 0.13 | | 0.085 | 0.85 | 0.26 | 1.7 | 6.7 | 2.8 | 38 | | 5.6 | 4.8 | non-PAG |
| M97-95-01 | 9.4 | | 0.67 | 0.55 | 45 | 17 | 20 | 1.9 | | 40 | 0.2 | 0.12 | | 0.083 | 0.048 | 0.3 | 2 | 6.3 | 2.3 | 47 | | 7.3 | 6.2 | non-PAG |
| M98-201-04 | 9.6 | | 0.64 | 0.51 | 41 | 16 | 19 | 1.7 | | 36 | 0.16 | 0.15 | | 0.008 | 0.053 | 0.026 | 0.17 | 4.9 | 0.25 | 43 | | 8.8 | 7.3 | non-PAG |
| M98-208-01 | 9.5 | | 0.51 | 0.41 | 33 | 13 | 15 | 1.4 | | 29 | 0.28 | 0.11 | | 0.17 | 0.064 | 0.61 | 4.1 | 8.8 | 4.7 | 38 | | 4.3 | 3.3 | non-PAG |
| M98-265-01 | 9.6 | | 0.73 | 0.57 | 47 | 18 | 21 | 2 | | 41 | 0.16 | 0.08 | | 0.084 | 0.26 | 0.29 | 1.9 | 5.1 | 2.5 | 47 | | 9.2 | 7.9 | non-PAG |
| M98-317-01 | 9.1 | | 1.1 | 0.85 | 70 | 26 | 31 | 2.9 | | 61 | 0.32 | 0.09 | | 0.23 | 0.023 | 0.83 | 5.5 | 10 | 6.4 | 67 | | 6.7 | 6.1 | non-PAG |
| M99-336B-03 | 9.5 | | 0.79 | 0.61 | 50 | 19 | 23 | 2.1 | | 43 | 0.19 | 0.07 | | 0.12 | 0.29 | 0.43 | 2.9 | 6.1 | 3.6 | 51 | | 8.3 | 7.2 | non-PAG |
| M99-347-01 | 9 | | 0.78 | 0.62 | 51 | 19 | 23 | 2.1 | | 44 | 0.2 | 0.14 | | 0.062 | 0.77 | 0.18 | 1.2 | 6.3 | 2.1 | 49 | | 7.8 | 7 | non-PAG |
| M99-347-02 | 9.3 | | 0.84 | 0.63 | 51 | 19 | 23 | 2.2 | | 45 | 0.23 | 0.11 | | 0.12 | 0.15 | 0.43 | 2.9 | 7.3 | 3.5 | 55 | | 7.6 | 6.2 | non-PAG |
| M99-409-01 | 9.2 | | 0.52 | 0.37 | 30 | 11 | 14 | 1.3 | | 26 | 0.19 | 0.14 | | 0.046 | 0.08 | 0.16 | 1.1 | 5.8 | 1.3 | 37 | | 6.4 | 4.5 | non-PAG |
| M99-409-02 | 9.4 | | 0.73 | 0.55 | 45 | 17 | 20 | 1.9 | | 39 | 0.15 | 0.07 | | 0.078 | 0.083 | 0.28 | 1.8 | 4.6 | 2.2 | 48 | | 10 | 8.5 | non-PAG |
| M99-409-03 | 9.5 | | 0.5 | 0.36 | 29 | 11 | 13 | 1.2 | | 25 | 0.12 | 0.1 | | 0.024 | 0.29 | 0.07 | 0.46 | 3.9 | 0.83 | 34 | | 8.9 | 6.6 | non-PAG |
| M99-410-01 | 9.4 | | 0.59 | 0.41 | 34 | 13 | 15 | 1.4 | | 30 | 0.18 | 0.08 | | 0.1 | 0.12 | 0.36 | 2.4 | 5.7 | 2.9 | 41 | | 7.2 | 5.2 | non-PAG |
| M99-410-02 | 9.4 | | 0.59 | 0.41 | 33 | 13 | 15 | 1.4 | | 29 | 0.18 | 0.15 | | 0.034 | 0.14 | 0.12 | 0.76 | 5.8 | 1 | 40 | | 7 | 5.1 | non-PAG |
| M99-436-01 | 9.5 | | 0.6 | 0.46 | 37 | 14 | 17 | 1.6 | | 33 | 0.18 | 0.1 | | 0.081 | 0.08 | 0.29 | 1.9 | 5.7 | 2.3 | 41 | | 7.2 | 5.7 | non-PAG |
| M99-436-02 | 9.3 | | 0.57 | 0.38 | 31 | 12 | 14 | 1.3 | | 27 | 0.16 | 0.07 | | 0.085 | 0.13 | 0.3 | 2 | 4.8 | 2.4 | 39 | | 8 | 5.7 | non-PAG |
| M10-879-01 | 9.6 | | 0.73 | 0.58 | 47 | 18 | 21 | 2 | | 41 | 0.28 | 0.08 | | 0.2 | 0.053 | 0.74 | 4.9 | 8.9 | 5.7 | 48 | | 5.5 | 4.6 | non-PAG |
| M10-887-01 | 9.5 | | 0.82 | 0.65 | 53 | 20 | 24 | 2.3 | | 47 | 0.31 | 0.09 | | 0.22 | 0.067 | 0.78 | 5.2 | 9.6 | 6 | 51 | | 5.4 | 4.9 | non-PAG |
| M07-704-02 | 9.4 | | 0.6 | 0.5 | 41 | 27 | 4 | | | 31 | 0.18 | 0.12 | | 0.057 | 0.72 | 0.22 | 1 | 5.5 | 2 | 41 | | 7.4 | 5.6 | non-PAG |
| M07-710-02 | 9.2 | | 1.1 | 0.96 | 78 | 52 | 7.8 | | | 60 | 0.061 | 0.01 | | 0.051 | 0.19 | 0.23 | 1.1 | 1.9 | 1.5 | 82 | | 43 | 31 | non-PAG |
| M07-711-01 | 8.8 | | 1 | 0.88 | 72 | 48 | 7.1 | | | 55 | 0.2 | 0.08 | | 0.12 | 0.51 | 0.51 | 2.5 | 6.1 | 3.5 | 74 | | 12 | 8.9 | non-PAG |
| M98-269-01 | 8.9 | | 0.94 | 0.79 | 64 | 43 | 6.3 | | | 49 | 0.1 | 0.04 | | 0.061 | 0.91 | 0.22 | 1.1 | 3.2 | 2.2 | 62 | | 19 | 16 | non-PAG |
| M98-297-02 | 9.2 | | 0.64 | 0.56 | 46 | 30 | 4.5 | | | 35 | 0.05 | <0.01 | | 0.04 | 0.067 | 0.18 | 0.9 | 1.6 | 1.1 | 48 | | 31 | 22 | non-PAG |
| M03-496-01 | 8.7 | | 1.8 | 0.78 | 64 | 42 | 6.3 | | | 49 | 0.82 | 0.25 | | 0.57 | 0.53 | 2.7 | 13 | 26 | 16 | 66 | | 2.6 | 1.9 | uncertain |
| M06-604-01 | 9.2 | | 0.38 | 0.29 | 24 | 16 | 2.3 | | | 18 | 0.07 | 0.05 | | 0.02 | 0.11 | 0.087 | 0.42 | 2.2 | 0.62 | 20 | | 9.1 | 8.3 | non-PAG |
| M07-663-01 | 9.2 | | 0.61 | 0.46 | 38 | 25 | 3.7 | | | 29 | 0.31 | 0.19 | | 0.12 | 4 | 0.28 | 1.3 | 9.8 | 5.6 | 36 | | 3.7 | 2.9 | non-PAG |
| M07-663-02 | 9.1 | | 0.68 | 0.57 | 47 | 31 | 4.6 | | | 36 | 0.11 | 0.07 | | 0.04 | 0.29 | 0.17 | 0.81 | 3.4 | 1.3 | 44 | | 13 | 10 | non-PAG |
| M07-649-01_2009 | 8.6 | | 0.89 | 0.75 | 61 | 41 | 6 | | | 47 | 0.18 | 0.08 | | 0.098 | 0.75 | 0.41 | 2 | 5.6 | 3.1 | 60 | | 11 | 8.4 | non-PAG |
| M07-672B-01 | 8.6 | | 0.44 | 0.33 | 27 | 18 | 2.7 | | | 21 | 0.092 | 0.04 | | 0.052 | 0.11 | 0.24 | 1.2 | 2.9 | 1.5 | 29 | | 10 | 7.2 | non-PAG |
| M07-685-02 | 8.7 | | 0.54 | 0.42 | 34 | 23 | 3.4 | | | 26 | 0.17 | 0.13 | | 0.039 | 0.4 | 0.15 | 0.75 | 5.3 | 1.3 | 37 | | 7.1 | 5 | non-PAG |
| M07-691-01 | 8.7 | | 0.37 | 0.29 | 24 | 16 | 2.4 | | | 18 | 0.14 | 0.08 | | 0.06 | 0.13 | 0.28 | 1.3 | 4.4 | 1.7 | 30 | | 6.7 | 4.2 | non-PAG |
| M08-769-01 | 8.2 | | 1.2 | 1.1 | 86 | 57 | 8.5 | | | 66 | 0.11 | 0.07 | | 0.039 | 0.069 | 0.18 | 0.87 | 3.4 | 1.1 | 89 | | 26 | 19 | non-PAG |
| M97-95-02 | 9.4 | | 0.83 | 0.61 | 50 | 33 | 4.9 | | | 38 | 0.26 | 0.19 | | 0.071 | 0.32 | 0.31 | 1.5 | 8.2 | 2.2 | 49 | | 6 | 4.7 | non-PAG |
| M98-270-01 | 9.5 | | 0.59 | 0.46 | 38 | 25 | 3.7 | | | 29 | 0.21 | 0.18 | | 0.031 | 0.23 | 0.13 | 0.63 | 6.6 | 0.99 | 40 | | 6.1 | 4.3 | non-PAG |
| M99-409-04 | 9 | | 1 | 0.84 | 69 | 46 | 6.8 | | | 52 | 0.33 | 0.16 | | 0.17 | 0.43 | 0.77 | 3.7 | 10 | 4.9 | 66 | | 6.4 | 5.1 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| GT08-01-01 | 9.3 | | 0.65 | 0.46 | 38 | 23 | 6.7 | | | 30 | 0.15 | 0.06 | | 0.086 | 0.045 | 0.41 | 2 | 4.6 | 2.4 | 42 | | 9.2 | 6.5 | non-PAG |
| M00-474-04 | 9.2 | | 1 | 0.89 | 73 | 44 | 13 | | | 57 | 0.087 | 0.04 | | 0.047 | 0.24 | 0.21 | 1 | 2.7 | 1.4 | 75 | | 27 | 21 | non-PAG |
| M03-513-01 | 9.4 | | 0.85 | 0.69 | 56 | 34 | 9.9 | | | 44 | 0.19 | 0.09 | | 0.1 | 0.064 | 0.48 | 2.3 | 6 | 2.9 | 55 | | 9.2 | 7.3 | non-PAG |
| M07-660-01_2008 | 8.9 | | 1.1 | 0.94 | 76 | 46 | 13 | | | 60 | 0.24 | 0.13 | | 0.11 | 0.061 | 0.53 | 2.6 | 7.6 | 3.2 | 75 | | 9.9 | 7.9 | non-PAG |
| M07-678-02 | 9 | | 1.3 | 1.1 | 93 | 57 | 16 | | | 73 | 0.17 | 0.07 | | 0.096 | 0.64 | 0.41 | 2 | 5.2 | 3 | 87 | | 17 | 14 | non-PAG |
| M07-713-01 | 9 | | 1 | 0.83 | 68 | 41 | 12 | | | 53 | 0.15 | 0.09 | | 0.058 | 0.35 | 0.25 | 1.2 | 4.6 | 1.8 | 62 | | 13 | 11 | non-PAG |
| M98-194-02 | 8.9 | | 0.99 | 0.82 | 67 | 41 | 12 | | | 53 | 0.15 | 0.07 | | 0.083 | 0.22 | 0.38 | 1.8 | 4.8 | 2.4 | 66 | | 14 | 11 | non-PAG |
| M98-269-02 | 9.1 | | 0.73 | 0.67 | 54 | 33 | 9.6 | | | 43 | 0.065 | 0.06 | | 0.005 | 0.048 | 0.02 | 0.098 | 2 | 0.17 | 56 | | 27 | 21 | non-PAG |
| M99-339-01 | 9.2 | | 0.85 | 0.66 | 54 | 33 | 9.5 | | | 42 | 0.19 | 0.1 | | 0.092 | 1.4 | 0.33 | 1.6 | 6 | 3.4 | 100 | | 17 | 7.1 | non-PAG |
| M99-345-01_2008 | 9 | | 1.1 | 0.94 | 77 | 47 | 13 | | | 60 | 0.34 | 0.15 | | 0.19 | 2.3 | 0.72 | 3.5 | 11 | 6.5 | 71 | | 6.7 | 5.7 | non-PAG |
| M99-349-01 | 9.2 | | 0.92 | 0.65 | 53 | 32 | 9.3 | | | 41 | 0.66 | 0.38 | | 0.28 | 0.85 | 1.3 | 6.1 | 21 | 8.2 | 58 | | 2.8 | 2 | non-PAG |
| M99-349-02 | 9.1 | | 1.4 | 1.1 | 90 | 55 | 16 | | | 71 | 0.11 | 0.03 | | 0.083 | 0.13 | 0.38 | 1.9 | 3.5 | 2.4 | 86 | | 24 | 20 | non-PAG |
| M98-194-01 | 8.9 | 10 | 1.2 | 1 | 82 | 50 | 14 | | | 65 | 0.23 | 0.11 | | 0.12 | 2.2 | 0.42 | 2 | 7.3 | 4.6 | 75 | | 10 | 8.9 | non-PAG |
| M05-571A-01 | 9.3 | | 0.8 | 0.62 | 51 | 31 | 8.9 | | | 40 | 0.087 | 0.05 | | 0.037 | 1 | 0.099 | 0.48 | 2.7 | 1.6 | 54 | | 20 | 15 | non-PAG |
| M06-623-01 | 9.2 | | 0.81 | 0.65 | 53 | 32 | 9.3 | | | 42 | 0.046 | 0.05 | | | 0.072 | | | 1.4 | 0.072 | 51 | | 35 | 29 | non-PAG |
| CAEXD175471 | 9.4 | 2.7 | 0.84 | 0.85 | 71 | 42 | 12 | | | 54 | 0.082 | <0.01 | 0.02 | 0.072 | 0.15 | 0.33 | 1.6 | 2.6 | 2.1 | 56 | | 22 | 21 | PAG |
| CAEXD206190 | 8.4 | 6.2 | 0.95 | 0.93 | 78 | 46 | 13 | | | 60 | 0.35 | 0.02 | 0.02 | 0.33 | 0.093 | 1.6 | 7.6 | 11 | 9.2 | 56 | | 5.1 | 5.4 | non-PAG |
| CAEXD217787 | 9.2 | 6 | 1.1 | 1.1 | 93 | 56 | 16 | | | 72 | 0.1 | <0.01 | 0.02 | 0.092 | 0.14 | 0.43 | 2.1 | 3.2 | 2.6 | 68 | | 21 | 22 | non-PAG |
| CAEXD261351 | 8.8 | 6.1 | 4.1 | 4 | 330 | 200 | 57 | | | 250 | 0.31 | <0.01 | 0.19 | 0.3 | 0.36 | 1.4 | 6.7 | 9.6 | 8.5 | 260 | | 27 | 26 | non-PAG |
| CAEXD211120 | 9.3 | 6.3 | 0.69 | 0.69 | 58 | 34 | 9.9 | | | 44 | 0.047 | <0.01 | <0.01 | 0.037 | 0.024 | 0.17 | 0.84 | 1.5 | 1 | 56 | | 38 | 30 | non-PAG |
| CAEXD199214 | 9.3 | 6.3 | 0.68 | 0.67 | 56 | 33 | 9.6 | | | 43 | 0.089 | <0.01 | 0.02 | 0.079 | 1.8 | 0.24 | 1.2 | 2.8 | 3.2 | 43 | | 15 | 15 | non-PAG |
| M00-474-02 | 9 | | 3.9 | 3.7 | 300 | 100 | 170 | | | 270 | 0.4 | 0.16 | | 0.24 | 5.6 | 4.6 | | 12 | 10 | 390 | | 32 | 21 | non-PAG |
| M99-403-01 | 9 | | 3.3 | 3.1 | 260 | 87 | 140 | | | 230 | 0.55 | 0.18 | | 0.37 | 3.5 | 9.9 | | 17 | 13 | 240 | | 14 | 13 | non-PAG |
| GT08-04-01_2008 | 8.9 | | 2.5 | 2.4 | 200 | 67 | 110 | | | 180 | 0.36 | 0.17 | | 0.19 | 0.083 | 6 | | 11 | 6.1 | 200 | | 18 | 15 | non-PAG |
| GT08-04-03 | 8.4 | | 4.1 | 3.6 | 290 | 99 | 160 | | | 260 | 3.2 | 0.8 | | 2.4 | 21 | 65 | | 100 | 87 | 280 | | 2.8 | 2.6 | non-PAG |
| M00-474-01 | 9 | | 3.1 | 3 | 250 | 84 | 140 | | | 220 | 0.12 | 0.02 | | 0.1 | 0.17 | 3.1 | | 3.8 | 3.3 | 250 | | 65 | 57 | non-PAG |
| M07-678-01 | 8.8 | | 3.5 | 3.3 | 270 | 91 | 150 | | | 240 | 0.1 | 0.05 | | 0.051 | 0.32 | 1.4 | | 3.2 | 1.8 | 250 | | 78 | 76 | non-PAG |
| M98-297-01 | 8.8 | | 3.9 | 3.8 | 310 | 100 | 170 | | | 270 | 0.46 | 0.19 | | 0.27 | 2.7 | 7 | | 14 | 9.7 | 360 | | 25 | 19 | non-PAG |
| M99-340-01 | 9 | | 3.5 | 3.2 | 260 | 88 | 140 | | | 230 | 0.33 | 0.19 | | 0.14 | 0.19 | 4.2 | | 10 | 4.4 | 200 | | 19 | 23 | non-PAG |
| GT08-04-02 | 9 | 11 | 3.9 | 3.9 | 320 | 110 | 170 | | | 280 | 0.049 | 0.02 | | 0.029 | 0.24 | 0.78 | | 1.5 | 1 | 290 | | 190 | 180 | non-PAG |
| M99-341-01 | 9 | 11 | 4 | 3.6 | 300 | 100 | 160 | | | 260 | 0.55 | 0.36 | | 0.19 | 0.67 | 5.5 | | 17 | 6.1 | 280 | | 17 | 15 | non-PAG |
| GT08-02-01_2009 | 8.7 | | 2.2 | 2.1 | 170 | 57 | 93 | | | 150 | 0.19 | 0.05 | | 0.14 | 0.024 | 4.4 | | 6 | 4.4 | 180 | | 30 | 25 | non-PAG |
| M05-561-01 | 8.7 | | 2.3 | 2.1 | 170 | 58 | 94 | | | 150 | 0.099 | 0.04 | | 0.059 | 0.0099 | 1.8 | | 3.1 | 1.8 | 180 | | 59 | 49 | non-PAG |
| M05-561-02_2009 | 8.9 | | 3.4 | 3 | 250 | 83 | 140 | | | 220 | 0.074 | 0.03 | | 0.044 | 0.04 | 1.4 | | 2.3 | 1.4 | 250 | | 110 | 95 | non-PAG |
| M05-564-01 | 8.9 | | 2.3 | 2.2 | 180 | 62 | 100 | | | 160 | 0.064 | 0.01 | | 0.054 | 0.008 | 1.7 | | 2 | 1.7 | 190 | | 94 | 81 | non-PAG |
| M97-130-02 | 8.8 | | 3.6 | 3.1 | 250 | 86 | 140 | | | 230 | 0.51 | 0.29 | | 0.22 | 0.017 | 6.8 | | 16 | 6.9 | 260 | | 16 | 14 | non-PAG |
| M97-134-01 | 8.7 | | 2.9 | 2.8 | 230 | 76 | 120 | | | 200 | 0.18 | 0.09 | | 0.088 | 0.026 | 2.7 | | 5.6 | 2.8 | 230 | | 42 | 36 | non-PAG |
| M97-137-01 | 8.8 | | 3.3 | 3 | 250 | 83 | 140 | | | 220 | 0.11 | 0.06 | | 0.045 | 0.011 | 1.4 | | 3.3 | 1.4 | 260 | | 79 | 67 | non-PAG |
| M97-138-01 | 8.7 | | 2.7 | 2.6 | 210 | 72 | 120 | | | 190 | 0.098 | 0.05 | | 0.048 | 0.043 | 1.5 | | 3.1 | 1.5 | 220 | | 71 | 62 | non-PAG |
| M97-139-01 | 8.9 | | 4.7 | 4.3 | 350 | 120 | 190 | | | 310 | 0.44 | 0.16 | | 0.28 | 0.77 | 8.3 | | 14 | 9.1 | 320 | | 23 | 23 | non-PAG |
| M97-92-01 | 8.8 | | 2.8 | 2.7 | 220 | 75 | 120 | | | 200 | 0.13 | 0.05 | | 0.075 | 0.043 | 2.3 | | 3.9 | 2.4 | 220 | | 57 | 51 | non-PAG |
| M97-93-01 | 8.6 | | 2.6 | 2.4 | 200 | 66 | 110 | | | 170 | 0.16 | 0.05 | | 0.11 | 0.16 | 3.2 | | 4.8 | 3.4 | 200 | | 40 | 36 | non-PAG |
| M98-318-01 | 8.9 | | 3.4 | 3 | 250 | 83 | 140 | | | 220 | 0.39 | 0.18 | | 0.21 | 0.02 | 6.6 | | 12 | 6.6 | 260 | | 21 | 18 | non-PAG |
| M05-536A-01 | 8.7 | 12 | 3.4 | 3.2 | 260 | 89 | 150 | | | 240 | 0.25 | 0.07 | | 0.18 | 0.23 | 5.6 | | 7.9 | 5.8 | 250 | | 32 | 30 | non-PAG |
| M06-623-02 | 8.9 | | 3.4 | 3.3 | 270 | 92 | 150 | | | 240 | 0.15 | 0.1 | | 0.051 | 0.012 | 1.6 | | 4.7 | 1.6 | 250 | | 54 | 51 | non-PAG |
| M08-783-02 | 9.1 | | 4.2 | 4 | 330 | 110 | 180 | | | 290 | 0.23 | 0.08 | | 0.15 | 0.067 | 4.7 | | 7.3 | 4.8 | 290 | | 40 | 40 | non-PAG |
| M97-95-03 | 8.8 | | 3 | 2.9 | 240 | 79 | 130 | | | 210 | 0.23 | 0.08 | | 0.15 | 0.021 | 4.6 | | 7.1 | 4.6 | 230 | | 32 | 29 | non-PAG |
| M99-336B-04 | 9 | | 3 | 2.8 | 230 | 76 | 120 | | | 200 | 0.35 | 0.07 | | 0.28 | 0.075 | 8.7 | | 11 | 8.8 | 230 | | 21 | 18 | non-PAG |
| M99-345-01 | 9.2 | | 3.4 | 3.2 | 260 | 88 | 140 | | | 230 | 0.25 | 0.07 | | 0.18 | 0.13 | 5.5 | | 7.7 | 5.6 | 230 | | 30 | 30 | non-PAG |
| M99-409-05 | 9.1 | | 2.4 | 2.2 | 180 | 61 | 99 | | | 160 | 0.28 | 0.18 | | 0.1 | 0.45 | 3 | | 8.9 | 3.5 | 170 | | 20 | 18 | non-PAG |
| CAEXD162003 | 7.8 | 7.6 | 1.6 | 1.5 | 120 | 29 | 53 | 5.3 | 3.9 | 91 | 2 | 0.09 | 1.7 | 1.9 | 2.8 | 8.8 | 43 | 62 | 54 | 70 | 81 | 1.1 | 1.5 | uncertain |
| CAEXD158752 | 7.8 | 2.8 | 5.1 | 3.5 | 290 | 70 | 130 | 13 | 9.4 | 220 | 4.8 | 0.05 | 4.3 | 4.7 | 50 | 19 | 90 | 150 | 160 | 37 | 51 | 0.25 | 1.5 | PAG |
| CAEXD173581 | 7.9 | 2.9 | 1.7 | 1.6 | 130 | 31 | 56 | 5.7 | 4.2 | 97 | 3.3 | 0.04 | 0.45 | 3.3 | 40 | 13 | 61 | 100 | 110 | 52 | 61 | 0.5 | 0.94 | PAG |
| CAEXD159768 | 8.1 | 6.4 | 2.9 | 2.6 | 220 | 52 | 94 | 9.5 | 7 | 160 | 2.4 | 0.04 | 0.2 | 2.4 | 8.4 | 11 | 52 | 76 | 72 | 79 | 88 | 1 | 2.1 | uncertain |
| CAEXD160930 | 8.1 | 7.8 | 2.3 | 2.3 | 190 | 45 | 81 | 8.2 | 6.1 | 140 | 2.8 | 0.03 | 0.43 | 2.8 | 27 | 11 | 53 | 87 | 91 | 100 | 130 | 1.2 | 1.6 | uncertain |
| CAEXD163317 | 8.2 | 8.7 | 3.6 | 3.5 | 290 | 70 | 120 | 13 | 9.3 | 220 | 2 | 0.01 | 0.7 | 1.9 | 48 | 5.6 | 27 | 61 | 81 | 130 | 160 | 2.1 | 3.5 | non-PAG |
| CAEXD239740 | 7.7 | 2.5 | 0.98 | 0.99 | 83 | 20 | 36 | 3.6 | 2.7 | 62 | 4.7 | 0.06 | 1.3 | 4.6 | 97 | 14 | 70 | 150 | 180 | 58 | 67 | 0.4 | 0.42 | PAG |
| CAEXD164147 | 7.2 | 4.8 | 2.5 | 1.9 | 160 | 38 | 68 | 6.9 | 5.1 | 120 | 3.4 | 0.18 | 0.94 | 3.2 | 1.1 | 15 | 74 | 110 | 90 | 55 | 69 | 0.52 | 1.1 | uncertain |
| M96-51-01 | 9.1 | | 4.4 | 4.2 | 340 | 110 | 190 | | | 300 | 0.13 | 0.07 | | 0.063 | 0.11 | 1.9 | | 4.2 | 2 | 300 | | 71 | 73 | non-PAG |
| CAEXD154976 | 8.3 | 7.2 | 3 | 3 | 250 | 81 | 130 | | | 210 | 1.4 | 0.03 | 0.87 | 1.3 | 15 | 34 | | 43 | 49 | 91 | | 2.1 | 5 | non-PAG |
| CAEXD260999 | 8.8 | 6.3 | 2.3 | 2.3 | 190 | 64 | 100 | | | 170 | 0.23 | <0.01 | 0.05 | 0.22 | 0.14 | 6.8 | | 7.2 | 7 | 180 | | 25 | 23 | non-PAG |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| CAEXD159231 | 8.8 | 6.8 | 3.5 | 3.5 | 290 | 97 | 160 | | | 250 | 0.21 | <0.01 | 0.16 | 0.2 | 1.2 | 5.7 | | 6.6 | 6.8 | 220 | | 34 | 39 | non-PAG |
| CAEXD239665 | 8.8 | 5.8 | 3.2 | 3.3 | 280 | 91 | 150 | | | 240 | 0.29 | <0.01 | 0.29 | 0.28 | 0.2 | 8.7 | | 9.1 | 8.9 | 220 | | 24 | 26 | non-PAG |
| CAEXD161414 | 7.6 | 6.8 | 3.4 | 3.4 | 290 | 95 | 150 | | | 250 | 0.24 | <0.01 | 0.08 | 0.23 | 0.19 | 7.2 | | 7.6 | 7.4 | 230 | | 30 | 33 | non-PAG |
| CAMLD105829 | 8.1 | 4.2 | 1.9 | 1.9 | 160 | 52 | 84 | | | 140 | 5.2 | 0.06 | 1.3 | 5.2 | 89 | 120 | | 160 | 210 | 130 | | 0.8 | 0.83 | PAG |
| M96-50-01 | 9.3 | | 1.3 | 1.2 | 97 | | 99 | | | 99 | 0.084 | 0.07 | | 0.014 | 0.064 | 0.41 | | 2.6 | 0.47 | 100 | | 38 | 38 | non-PAG |
| CAEXD155161 | 7.5 | 3.7 | 2.3 | 2 | 170 | 40 | 71 | 7.2 | 5.3 | 120 | 2 | 0.06 | 1.1 | 1.9 | 0.54 | 9.2 | 45 | 63 | 54 | 40 | 52 | 0.64 | 2 | PAG |
| CAEXD160328 | 7.1 | 2.9 | 2.8 | 2.5 | 210 | 51 | 91 | 9.3 | 6.8 | 160 | 2.7 | 0.08 | 2.4 | 2.6 | 1.5 | 12 | 59 | 84 | 73 | 55 | 84 | 0.65 | 1.9 | PAG |
| CAEXD159101 | 7.8 | 7.3 | 4.1 | 3.4 | 290 | 69 | 120 | 13 | 9.2 | 210 | 1.4 | 0.03 | 0.9 | 1.4 | 2.3 | 6.3 | 31 | 44 | 39 | 51 | 69 | 1.2 | 4.9 | uncertain |
| CAEXD166544 | 7.6 | 3.4 | 3.5 | 2.9 | 240 | 58 | 100 | 11 | 7.8 | 180 | 1.8 | 0.03 | 1.7 | 1.8 | 0.39 | 8.6 | 42 | 58 | 51 | 34 | 43 | 0.6 | 3.1 | PAG |
| CAEXD156245 | 8.1 | 8.7 | 3.2 | 3 | 250 | 61 | 110 | 11 | 8.2 | 190 | 3 | 0.03 | 2.2 | 3 | 14 | 13 | 63 | 93 | 90 | 150 | 160 | 1.6 | 2 | uncertain |
| CAEXD173583 | 8.9 | 6.6 | 3.4 | 3.3 | 280 | 67 | 120 | 12 | 8.9 | 210 | 1 | <0.01 | 0.18 | 1 | 6 | 4.4 | 22 | 33 | 32 | 210 | 230 | 6.3 | 6.4 | non-PAG |
| CAEXD160927 | 8 | 6.5 | 2.7 | 2.4 | 200 | 47 | 85 | 8.6 | 6.3 | 150 | 1.9 | 0.04 | 0.07 | 1.8 | 2.7 | 8.5 | 41 | 58 | 52 | 56 | 70 | 0.96 | 2.5 | uncertain |
| CAEXD163315 | 8.2 | 8.7 | 3.4 | 3.3 | 270 | 66 | 120 | 12 | 8.8 | 200 | 2.2 | 0.02 | 1.4 | 2.2 | 25 | 8.7 | 42 | 70 | 75 | 100 | 120 | 1.4 | 2.9 | uncertain |
| M11-1051-02 | 9.2 | | 2.6 | 1.9 | 160 | 53 | 86 | | | 140 | 0.061 | 0.04 | | 0.021 | 0.53 | 0.39 | | 1.9 | 0.92 | 150 | | 81 | 73 | non-PAG |
| M10-987-03 | 9.2 | | 3.7 | 2 | 160 | 55 | 89 | | | 140 | 0.053 | 0.04 | | 0.013 | 0.45 | 0.18 | | 1.7 | 0.63 | 140 | | 83 | 87 | non-PAG |
| M10-992-04 | 9 | | 2.8 | 2.7 | 220 | 76 | 120 | | | 200 | 0.073 | 0.02 | | 0.053 | 0.099 | 1.6 | | 2.3 | 1.7 | 210 | | 92 | 87 | non-PAG |
| M10-994-05 | 9.1 | | 3.4 | 3.3 | 270 | 92 | 150 | | | 240 | 0.066 | 0.03 | | 0.036 | 0.043 | 1.1 | | 2.1 | 1.1 | 240 | | 120 | 120 | non-PAG |
| M04-519-01 | 9 | | 4.2 | 3.8 | 310 | 110 | 170 | | | 280 | 0.24 | 0.08 | | 0.16 | 0.013 | 4.8 | | 7.3 | 4.9 | 280 | | 38 | 38 | non-PAG |
| M04-519-02 | 9 | | 3.6 | 3.4 | 280 | 93 | 150 | | | 250 | 0.12 | 0.03 | | 0.092 | 0.1 | 2.8 | | 3.8 | 2.9 | 240 | | 63 | 64 | non-PAG |
| M04-519-03 | 8.9 | | 4.4 | 4 | 330 | 110 | 180 | | | 290 | 0.2 | 0.04 | | 0.16 | 0.19 | 4.9 | | 6.3 | 5.1 | 300 | | 48 | 47 | non-PAG |
| M04-519-04 | 8.8 | | 2.4 | 2.2 | 180 | 60 | 97 | | | 160 | 0.24 | 0.06 | | 0.18 | 0.11 | 5.4 | | 7.4 | 5.6 | 170 | | 23 | 21 | non-PAG |
| M10-981-01 | 9 | | 2.2 | 2 | 160 | 55 | 90 | | | 140 | 0.11 | 0.06 | | 0.053 | 0.014 | 1.6 | | 3.5 | 1.7 | 160 | | 46 | 41 | non-PAG |
| M10-981-02 | 8.9 | | 2.4 | 2.2 | 180 | 62 | 100 | | | 160 | 0.25 | 0.07 | | 0.18 | 0.0085 | 5.6 | | 7.8 | 5.6 | 170 | | 22 | 21 | non-PAG |
| M10-981-03 | 8.9 | | 2.4 | 2.2 | 180 | 61 | 99 | | | 160 | 0.18 | 0.07 | | 0.11 | 0.056 | 3.3 | | 5.5 | 3.4 | 170 | | 30 | 29 | non-PAG |
| M10-985-01 | 9.3 | | 0.58 | 0.44 | 36 | 12 | 20 | | | 32 | 0.18 | 0.14 | | 0.044 | 0.059 | 1.3 | | 5.8 | 1.4 | 41 | | 7.2 | 5.5 | non-PAG |
| M10-985-02 | 9.1 | | 0.78 | 0.6 | 49 | 17 | 27 | | | 43 | 0.095 | 0.04 | | 0.055 | 0.059 | 1.7 | | 3 | 1.7 | 55 | | 18 | 15 | non-PAG |
| M10-987-01 | 8.8 | | 3.7 | 3.5 | 290 | 98 | 160 | | | 260 | 0.14 | 0.05 | | 0.088 | 0.51 | 2.5 | | 4.3 | 3 | 250 | | 59 | 60 | non-PAG |
| M10-987-02 | 8.9 | | 3.2 | 3 | 240 | 82 | 130 | | | 210 | 0.2 | 0.06 | | 0.14 | 0.4 | 4.1 | | 6.2 | 4.5 | 210 | | 34 | 35 | non-PAG |
| M10-987-04 | 8.9 | | 1.9 | 1.8 | 140 | 49 | 79 | | | 130 | 0.14 | 0.03 | | 0.11 | 0.091 | 3.4 | | 4.4 | 3.5 | 140 | | 31 | 29 | non-PAG |
| M10-988-01 | 8.9 | | 2 | 1.9 | 160 | 53 | 87 | | | 140 | 0.1 | 0.07 | | 0.032 | 0.064 | 0.97 | | 3.2 | 1 | 150 | | 48 | 44 | non-PAG |
| M10-988-02 | 8.8 | | 2.5 | 2.4 | 200 | 67 | 110 | | | 180 | 0.063 | 0.02 | | 0.043 | 0.093 | 1.3 | | 2 | 1.4 | 190 | | 97 | 90 | non-PAG |
| M10-988-03 | 9 | | 1 | 0.95 | 78 | 26 | 43 | | | 69 | 0.076 | 0.08 | | | 0.04 | | | 2.4 | 0.04 | 78 | | 33 | 29 | non-PAG |
| M10-992-01 | 8.9 | | 1.6 | 1.6 | 130 | 43 | 70 | | | 110 | 0.11 | 0.04 | | 0.068 | 0.032 | 2.1 | | 3.4 | 2.1 | 130 | | 37 | 33 | non-PAG |
| M10-992-02 | 9.1 | | 2.5 | 2.3 | 190 | 65 | 110 | | | 170 | 0.1 | 0.07 | | 0.031 | 0.059 | 0.94 | | 3.2 | 1 | 180 | | 57 | 54 | non-PAG |
| M10-992-03 | 9.2 | | 3.3 | 3.2 | 260 | 89 | 150 | | | 240 | 0.031 | 0.03 | | 0.001 | 0.029 | 0.017 | | 0.97 | 0.046 | 220 | | 230 | 240 | non-PAG |
| M10-992-05 | 9.1 | | 2.5 | 2.3 | 190 | 65 | 110 | | | 170 | 0.12 | 0.04 | | 0.076 | 0.11 | 2.3 | | 3.6 | 2.4 | 180 | | 49 | 47 | non-PAG |
| M10-994-01 | 9.1 | | 2.6 | 2.5 | 210 | 70 | 110 | | | 180 | 0.063 | 0.03 | | 0.033 | 0.045 | 1 | | 2 | 1.1 | 190 | | 98 | 94 | non-PAG |
| M10-994-02 | 9.4 | | 2.3 | 2.1 | 170 | 59 | 96 | | | 160 | 0.27 | 0.07 | | 0.2 | 0.16 | 6.1 | | 8.4 | 6.3 | 170 | | 20 | 19 | non-PAG |
| M10-994-03 | 9.1 | | 3 | 2.7 | 220 | 75 | 120 | | | 200 | 0.094 | 0.05 | | 0.044 | 0.12 | 1.3 | | 2.9 | 1.4 | 200 | | 69 | 67 | non-PAG |
| M10-994-04 | 9.3 | | 0.7 | 0.63 | 51 | 17 | 28 | | | 45 | 0.076 | 0.04 | | 0.036 | 0.085 | 1.1 | | 2.4 | 1.2 | 62 | | 26 | 19 | non-PAG |
| M10-998-01 | 9.1 | | 1.3 | 1.2 | 99 | 33 | 54 | | | 88 | 0.11 | 0.03 | | 0.084 | 0.064 | 2.6 | | 3.6 | 2.7 | 100 | | 29 | 25 | non-PAG |
| M10-998-02 | 9.4 | | 1.7 | 1.7 | 140 | 46 | 74 | | | 120 | 0.095 | 0.04 | | 0.055 | 0.035 | 1.7 | | 3 | 1.7 | 140 | | 47 | 40 | non-PAG |
| M10-998-03 | 9.2 | | 2.4 | 2.3 | 190 | 64 | 100 | | | 170 | 0.091 | 0.04 | | 0.051 | 0.075 | 1.6 | | 2.8 | 1.6 | 170 | | 60 | 59 | non-PAG |
| M10-998-04 | 8.9 | | 2.6 | 2.4 | 200 | 67 | 110 | | | 180 | 0.083 | 0.04 | | 0.043 | 0.024 | 1.3 | | 2.6 | 1.4 | 180 | | 71 | 68 | non-PAG |
| M10-998-05 | 9 | | 4.6 | 4.4 | 360 | 120 | 200 | | | 320 | 0.015 | 0.01 | | 0.005 | 0.56 | | | 0.47 | 0.56 | 310 | | 670 | 680 | non-PAG |
| M11-1042-01 | 9 | | 3.1 | 3.1 | 250 | 84 | 140 | | | 220 | 0.068 | <0.01 | | 0.058 | 0.18 | 1.7 | | 2.1 | 1.9 | 210 | | 100 | 100 | non-PAG |
| M11-1042-02 | 9.1 | | 2.6 | 2.2 | 180 | 61 | 100 | | | 160 | 0.12 | 0.02 | | 0.1 | 1.9 | 2.2 | | 3.8 | 4.2 | 160 | | 42 | 42 | non-PAG |
| M11-1042-03 | 9.3 | | 3 | 2.5 | 210 | 70 | 110 | | | 180 | 0.081 | 0.03 | | 0.051 | 0.19 | 1.5 | | 2.5 | 1.7 | 190 | | 75 | 73 | non-PAG |
| M11-1051-01 | 9.1 | | 3.7 | 3.4 | 280 | 94 | 150 | | | 250 | 0.061 | 0.01 | | 0.051 | 0.51 | 1.3 | | 1.9 | 1.8 | 240 | | 130 | 130 | non-PAG |
| M95-11-01 | 8.9 | | 2.9 | 2.8 | 230 | 77 | 130 | | | 200 | 0.2 | 0.08 | | 0.12 | 0.051 | 3.8 | | 6.3 | 3.8 | 210 | | 34 | 32 | non-PAG |
| M95-12-01 | 9 | | 2.2 | 2.1 | 170 | 59 | 95 | | | 150 | 0.078 | 0.02 | | 0.058 | 0.048 | 1.8 | | 2.4 | 1.8 | 170 | | 71 | 63 | non-PAG |
| M95-22-01 | 8.9 | | 3.2 | 3 | 250 | 84 | 140 | | | 220 | 0.081 | 0.04 | | 0.041 | 0.067 | 1.2 | | 2.5 | 1.3 | 230 | | 89 | 87 | non-PAG |
| M95-22-02 | 9.1 | | 2 | 1.9 | 150 | 52 | 85 | | | 140 | 0.21 | 0.04 | | 0.17 | 0.011 | 5.4 | | 6.7 | 5.4 | 160 | | 24 | 21 | non-PAG |
| M96-51-02 | 9 | | 2.8 | 2.5 | 200 | 68 | 110 | | | 180 | 0.26 | 0.09 | | 0.17 | 0.18 | 5.2 | | 8.1 | 5.4 | 180 | | 22 | 22 | non-PAG |
| M96-51-03 | 8.9 | | 2.9 | 2.7 | 220 | 75 | 120 | | | 200 | 0.11 | 0.04 | | 0.065 | 0.99 | 1.5 | | 3.3 | 2.5 | 200 | | 62 | 60 | non-PAG |
| M97-111-04 | 8.9 | | 1.8 | 1.7 | 140 | 48 | 78 | | | 130 | 0.054 | 0.03 | | 0.024 | 0.016 | 0.74 | | 1.7 | 0.76 | 140 | | 84 | 75 | non-PAG |
| M97-176-01 | 8.8 | | 2.9 | 2.8 | 230 | 76 | 120 | | | 200 | 0.11 | 0.05 | | 0.06 | 0.048 | 1.9 | | 3.4 | 1.9 | 210 | | 61 | 58 | non-PAG |
| M97-176-02 | 9 | | 1.8 | 1.7 | 140 | 48 | 78 | | | 130 | 0.07 | 0.03 | | 0.04 | 0.013 | 1.2 | | 2.2 | 1.3 | 140 | | 65 | 58 | non-PAG |
| W94-48-01 | 9.1 | | 0.77 | 0.71 | 58 | 20 | 32 | | | 52 | 0.097 | 0.03 | | 0.067 | 0.032 | 2.1 | | 3 | 2.1 | 65 | | 21 | 17 | non-PAG |
| CAEXD164775 | 8.7 | 6.8 | 3.1 | 3.2 | 260 | 87 | 140 | | | 230 | 0.058 | <0.01 | 0.03 | 0.048 | 0.34 | 1.3 | | 1.8 | 1.7 | 48 | | 26 | 130 | non-PAG |
| CAEXD161143 | 9 | 6.4 | 3.8 | 3.8 | 320 | 110 | 170 | | | 280 | 0.27 | <0.01 | 0.06 | 0.26 | 0.46 | 7.9 | | 8.4 | 8.4 | 240 | | 28 | 33 | non-PAG |
| CAEXD161417 | 8.1 | 7.6 | 2.1 | 2.1 | 170 | 57 | 94 | | | 150 | 3.3 | 0.05 | 0.2 | 3.2 | 1.4 | 100 | | 100 | 100 | 130 | | 1.2 | 1.5 | uncertain |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Acid Base Accounting | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Paste pH | NAG pH | Total Carbon | Total Inorganic Carbon | CaNP | Ankerite NP* | Calcite NP* | Dolomite NP* | Siderite NP* | CaNP-adj | Total-S | Sulphate-S | Sulphide-S | Sulphide-S (by difference) | Arsenopyrite-AP* | Pyrite-AP* | Pyrrhotite-AP* | MAP | Site Specific AP | Modified-NP | Modified-NP (with siderite correction) | NPR | NPR | ARD Designation** |
| | s.u. | s.u. | wt.% | wt.% | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | wt.% | wt.% | wt.% | wt.% | AP-Arsenopyrite | AP-Pyrite | AP-Pyrrhotite | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | kg $CaCO_3$/t | Mod-NP/MAP | CaNP-adj/MAP | |
| CAEXD253446 | 9.2 | 6.1 | 3.2 | 3.3 | 280 | 92 | 150 | | | 240 | 0.15 | <0.01 | 0.1 | 0.14 | 6 | 1.4 | | 4.8 | 7.4 | 200 | | 43 | 51 | non-PAG |
| CAEXD255567 | 9 | 6.3 | 3 | 3 | 250 | 84 | 140 | | | 220 | 0.067 | <0.01 | 0.05 | 0.057 | 0.77 | 1.4 | | 2.1 | 2.2 | 210 | | 99 | 110 | non-PAG |
| CAEXD178628 | 8.9 | 6.3 | 2.9 | 2.9 | 250 | 81 | 130 | | | 210 | 0.045 | <0.01 | 0.03 | 0.035 | 0.34 | 0.92 | | 1.4 | 1.3 | 200 | | 140 | 150 | non-PAG |
| CAEXD252985 | 9 | 5.8 | 0.6 | 0.62 | 52 | 12 | 22 | 2.3 | 1.7 | 39 | 0.22 | <0.01 | 0.1 | 0.21 | 6.1 | 0.53 | 2.6 | 6.8 | 9.2 | 37 | 51 | 5.4 | 5.7 | non-PAG |
| CAEXD252988 | 8.8 | 6 | 0.66 | 0.65 | 54 | 13 | 23 | 2.4 | 1.7 | 41 | 0.45 | <0.01 | 0.07 | 0.44 | 5 | 1.7 | 8.3 | 14 | 15 | 40 | 51 | 2.9 | 2.9 | non-PAG |
| CAEXD292036 | 9 | 6.6 | 3.7 | 3.8 | 320 | 100 | 170 | | | 270 | 0.099 | <0.01 | 0.09 | 0.089 | 0.088 | 2.7 | | 3.1 | 2.8 | 250 | | 81 | 89 | non-PAG |
| CAEXD292774 | 8.6 | 6.7 | 3.6 | 3.7 | 310 | 100 | 170 | | | 270 | 0.79 | <0.01 | 0.68 | 0.78 | 0.069 | 24 | | 25 | 24 | 250 | | 10 | 11 | non-PAG |
| CAEXD296389 | 7.9 | 6.5 | 4.6 | 4.7 | 390 | 130 | 210 | | | 340 | 0.36 | <0.01 | 0.3 | 0.35 | 4.5 | 8.7 | | 11 | 13 | 330 | | 29 | 30 | non-PAG |
| CAEXD259422 | 9 | 6.3 | 4.3 | 4.4 | 360 | 120 | 200 | | | 320 | 0.42 | <0.01 | 0.32 | 0.41 | 1.5 | 12 | | 13 | 13 | 270 | | 21 | 24 | non-PAG |
| CAEXD296880 | 8.9 | 6.5 | 3.6 | 3.7 | 310 | 100 | 170 | | | 270 | 0.4 | <0.01 | 0.33 | 0.39 | 0.26 | 12 | | 13 | 12 | 250 | | 20 | 21 | non-PAG |
| CAEXD297926 | 9.2 | 6.6 | 3.8 | 3.9 | 330 | 110 | 180 | | | 280 | 0.49 | <0.01 | 0.38 | 0.48 | 0.53 | 15 | | 15 | 15 | 260 | | 17 | 19 | non-PAG |
| CAEXD237686 | 9 | 5.7 | 4 | 4 | 330 | 110 | 180 | | | 290 | 0.43 | <0.01 | 0.37 | 0.42 | 4.1 | 11 | | 14 | 15 | 250 | | 19 | 21 | non-PAG |
| CAEXD264580 | 8.8 | 6.3 | 3.3 | 3.4 | 280 | 93 | 150 | | | 240 | 0.36 | <0.01 | 0.38 | 0.35 | 0.51 | 11 | | 11 | 11 | 210 | | 19 | 22 | non-PAG |
| CAEXD258556 | 8.8 | 6.2 | 2 | 1.9 | 160 | | 160 | | | 160 | 0.19 | <0.01 | 0.11 | 0.18 | 0.59 | 5.5 | | 6.1 | 6 | 130 | | 22 | 26 | non-PAG |
| CAEXD299420 | 8.6 | 7 | 1.6 | 1.6 | 130 | | 130 | | | 130 | 0.11 | <0.01 | 0.07 | 0.1 | 0.17 | 3.1 | | 3.5 | 3.3 | 130 | | 37 | 37 | non-PAG |
| CAEXD299421 | 8.7 | 6.8 | 1.7 | 1.6 | 130 | | 130 | | | 130 | 0.15 | <0.01 | 0.05 | 0.14 | 0.21 | 4.3 | | 4.8 | 4.5 | 130 | | 27 | 28 | non-PAG |
| CAEXD254661 | 8.8 | 6.6 | 3.7 | 3.7 | 310 | | 310 | | | 310 | 0.029 | <0.01 | 0.01 | 0.019 | 0.94 | 0.12 | | 0.91 | 1.1 | 240 | | 270 | 340 | non-PAG |
| CAEXD172407 | 8.1 | 8.4 | 3 | 2.8 | 240 | 57 | 100 | 10 | 7.6 | 180 | 1.1 | 0.01 | 0.92 | 1.1 | 0.71 | 5.2 | 25 | 35 | 31 | 87 | 100 | 2.5 | 5.1 | non-PAG |
| CAEXD264227 | 8.3 | 8.3 | 3.4 | 3.1 | 260 | 63 | 110 | 11 | 8.4 | 200 | 2 | 0.04 | 1.5 | 1.9 | 16 | 8 | 39 | 62 | 62 | 140 | 150 | 2.3 | 3.2 | non-PAG |
| CAEXD252980 | 9.3 | 6 | 1.4 | 1.4 | 110 | 27 | 49 | 4.9 | 3.6 | 84 | 0.36 | <0.01 | 0.14 | 0.35 | 13 | 0.65 | 3.2 | 11 | 17 | 86 | 99 | 7.7 | 7.6 | non-PAG |
| CAEXD252989 | 9.1 | 6 | 1 | 0.99 | 83 | 20 | 36 | 3.6 | 2.7 | 62 | 0.45 | <0.01 | 0.1 | 0.44 | 11 | 1.3 | 6.1 | 14 | 18 | 57 | 72 | 4.1 | 4.4 | non-PAG |
| CAEXD295855 | 7.8 | 8.1 | 2.2 | 2.1 | 180 | 65 | 78 | 7.2 | | 150 | 2.4 | 0.05 | 0.3 | 2.3 | 0.008 | 8.5 | 56 | 75 | 65 | 140 | | 1.9 | 2 | uncertain |
| CAEXD295858 | 7.9 | 7.4 | 1.4 | 1.3 | 110 | 41 | 49 | 4.5 | | 94 | 1.7 | 0.03 | 0.26 | 1.6 | 0.019 | 5.9 | 39 | 52 | 45 | 81 | | 1.6 | 1.8 | uncertain |
| CAEXD244529 | 9 | 5.9 | 3.9 | 4.1 | 340 | 110 | 180 | | | 290 | 0.23 | <0.01 | 0.23 | 0.22 | 0.13 | 6.7 | | 7.1 | 6.9 | 270 | | 38 | 41 | non-PAG |
| CAEXD253154 | 8.9 | 6.5 | 4.4 | 4.3 | 360 | 120 | 200 | | | 320 | 0.28 | <0.01 | 0.18 | 0.27 | 0.13 | 8.5 | | 8.9 | 8.6 | 270 | | 30 | 36 | non-PAG |
| CAEXD253583 | 9.2 | 6.3 | 4.4 | 4.4 | 370 | 120 | 200 | | | 320 | 0.26 | <0.01 | 0.26 | 0.25 | 0.22 | 7.6 | | 8 | 7.8 | 270 | | 34 | 40 | non-PAG |
| CAEXD254670 | 9.1 | 6 | 3.8 | 3.9 | 320 | 110 | 170 | | | 280 | 0.16 | <0.01 | 0.16 | 0.15 | 0.51 | 4.5 | | 5 | 5 | 240 | | 48 | 56 | non-PAG |
| CAEXD264136 | 8.9 | 6.5 | 4.3 | 4.4 | 360 | 120 | 200 | | | 320 | 0.16 | <0.01 | 0.13 | 0.15 | 0.12 | 4.7 | | 5.1 | 4.8 | 280 | | 56 | 62 | non-PAG |
| CAEXD264523 | 8.9 | 6.4 | 3.9 | 3.9 | 320 | 110 | 170 | | | 280 | 0.38 | <0.01 | 0.21 | 0.37 | 0.46 | 11 | | 12 | 12 | 240 | | 20 | 23 | non-PAG |
| CAEXD264637 | 8.6 | 6.4 | 4.3 | 4.3 | 360 | 120 | 190 | | | 310 | 0.45 | <0.01 | 0.22 | 0.44 | 2.3 | 12 | | 14 | 15 | 280 | | 20 | 23 | non-PAG |
| CAEXD264747 | 8.8 | 6.4 | 3.1 | 3 | 250 | 82 | 130 | | | 210 | 0.2 | <0.01 | 0.09 | 0.19 | 0.14 | 5.9 | | 6.3 | 6 | 210 | | 33 | 34 | non-PAG |
| CAEXD291131 | 8.9 | 6.1 | 3.3 | 3.5 | 290 | 95 | 160 | | | 250 | 0.23 | <0.01 | 0.22 | 0.22 | 0.061 | 6.7 | | 7.1 | 6.8 | 240 | | 34 | 35 | non-PAG |
| CAEXD291533 | 8.9 | 6.4 | 3.6 | 3.7 | 310 | 100 | 170 | | | 270 | 0.12 | <0.01 | 0.11 | 0.11 | 0.083 | 3.5 | | 3.9 | 3.6 | 260 | | 67 | 69 | non-PAG |
| CAEXD307658 | 9.3 | 6.9 | 4.1 | 4.1 | 340 | 110 | 190 | | | 300 | 0.091 | <0.01 | 0.09 | 0.081 | 0.14 | 2.5 | | 2.8 | 2.6 | 280 | | 99 | 110 | non-PAG |
| CAEXD224354 | 9.2 | 6.4 | 3.8 | 3.9 | 320 | 110 | 170 | | | 280 | 0.22 | <0.01 | 0.2 | 0.21 | 0.013 | 6.6 | | 7 | 6.7 | 250 | | 36 | 40 | non-PAG |
| CAEXD250907 | 9 | 6 | 4.3 | 4.5 | 370 | 120 | 200 | | | 320 | 0.2 | <0.01 | 0.07 | 0.19 | 3.5 | 4.1 | | 6.1 | 7.6 | 250 | | 40 | 53 | non-PAG |
| CAEXD296387 | 8.6 | 6.6 | 4.1 | 4.1 | 340 | 110 | 190 | | | 300 | 0.27 | <0.01 | 0.25 | 0.26 | 0.4 | 8 | | 8.5 | 8.4 | 270 | | 32 | 35 | non-PAG |
| CAEXD249125 | 9 | 6 | 2.8 | 3 | 250 | 84 | 140 | | | 220 | 0.066 | <0.01 | 0.03 | 0.056 | 0.21 | 1.6 | | 2.1 | 1.9 | 210 | | 100 | 110 | non-PAG |
| CAEXD255700 | 9 | 6.4 | 3.7 | 3.7 | 310 | 100 | 170 | | | 270 | 0.13 | <0.01 | 0.14 | 0.12 | 0.048 | 3.9 | | 4.2 | 3.9 | 230 | | 55 | 65 | non-PAG |
| CAEXD261414 | 8.4 | 6.3 | 2.1 | 2 | 170 | 55 | 90 | | | 150 | 0.85 | 0.02 | 0.35 | 0.83 | 0.0053 | 26 | | 27 | 26 | 160 | | 6 | 5.5 | non-PAG |
| CAEXD291470 | 8.5 | 6.5 | 2.5 | 2.6 | 220 | 72 | 120 | | | 190 | 0.16 | <0.01 | 0.12 | 0.15 | 0.35 | 4.5 | | 5 | 4.8 | 210 | | 42 | 38 | non-PAG |
| CAEXD299369 | 9.1 | 7 | 2.9 | 3.1 | 260 | 85 | 140 | | | 220 | 0.14 | <0.01 | 0.12 | 0.13 | 0.024 | 4 | | 4.3 | 4 | 220 | | 51 | 52 | non-PAG |
| CAEXD264579 | 8.8 | 6.5 | 2.3 | 2.3 | 190 | 64 | 100 | | | 170 | 0.13 | <0.01 | 0.12 | 0.12 | 0.032 | 3.8 | | 4.1 | 3.8 | 180 | | 43 | 41 | non-PAG |
| CAEXD264581 | 8.9 | 6.4 | 2.5 | 2.6 | 220 | 71 | 120 | | | 190 | 0.1 | <0.01 | 0.09 | 0.09 | 0.048 | 2.8 | | 3.1 | 2.8 | 180 | | 57 | 60 | non-PAG |
| CAEXD237685 | 9 | 5.6 | 3.3 | 3.3 | 270 | 91 | 150 | | | 240 | 0.48 | <0.01 | 0.37 | 0.47 | 6.2 | 12 | | 15 | 18 | 220 | | 15 | 16 | non-PAG |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3)

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

*Adjustment to CaNP and AP calculated based on carbonate and sulphide mineralogy for each respective rock unit as defined in Chapter 5

**Based on classification criteria for waste rock and ore presented in Chapter 5.1

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| ML00-224-01 | 54 | 5.6 | 33 | 1.7 | 2.9 | 0.47 | 0.67 | 0.15 | 0.2 | 0.05 | <0.01 | <0.01 | 0.93 | 99 | | 29,000 | 390 | 0.29 | 260 | 0.47 | 0.54 | 21,000 | 0.17 | 4.4 | 130 | 13 | 240,000 | 0.1 | 5,700 | 14 | 9200 | 360 |
| ML08-225-03 | 47 | 5.4 | 40 | 1.5 | 3 | 0.56 | 0.5 | 0.14 | 0.22 | 0.06 | <0.01 | <0.01 | 0.65 | 99 | | 27,000 | 230 | 23 | 300 | 0.59 | 0.24 | 21,000 | 0.17 | 4.8 | 110 | 16 | 290,000 | 0.1 | 4,700 | 13 | 8600 | 350 |
| ML08-226-04 | 65 | 4.6 | 24 | 1.4 | 1.5 | 0.38 | 0.39 | 0.1 | 0.13 | 0.03 | 0.03 | <0.01 | 0.58 | 98 | | 24,000 | 7,500 | 1.4 | 130 | 0.29 | 2.1 | 12,000 | 0.2 | 3.6 | 210 | 19 | 170,000 | 0.1 | 3,600 | 8 | 6300 | 210 |
| ML95-104-02 | 61 | 6.2 | 27 | 1.6 | 2.1 | 1 | 0.59 | 0.18 | 0.16 | 0.04 | 0.02 | <0.01 | 0.53 | 100 | | 31,000 | 1,400 | 0.12 | 380 | 0.57 | 0.1 | 15,000 | 0.29 | 4 | 160 | 6.7 | 190,000 | 0.1 | 5,300 | 15 | 8600 | 280 |
| ML95-84-01 | 59 | 6.2 | 28 | 1.5 | 2.3 | 0.89 | 0.69 | 0.17 | 0.17 | 0.04 | 0.02 | <0.01 | 1 | 100 | | 33,000 | 180 | 1.7 | 330 | 0.71 | 0.26 | 18,000 | 0.22 | 5.2 | 170 | 24 | 190,000 | 0.1 | 6,700 | 17 | 9100 | 270 |
| 6534-VRSP-002 | 66 | 5.1 | 23 | 1.3 | 2.2 | 0.48 | 0.49 | 0.12 | 0.12 | 0.04 | <0.01 | | 1.1 | 100 | 0.37 | 13,000 | 2,400 | 2.3 | 140 | <0.1 | 0.85 | 6,000 | 0.07 | 4.3 | 39 | 47 | 90,000 | 0.05 | 3,200 | 9 | 3,100 | 89 |
| 6534-VRSP-006 | 54 | 6.4 | 31 | 1.7 | 3 | 0.63 | 0.61 | 0.17 | 0.18 | 0.04 | <0.01 | | 1 | 99 | 1.3 | 15,000 | 6,200 | 4.6 | 130 | <0.1 | 0.84 | 6,900 | 0.11 | 5 | 31 | 57 | 130,000 | 0.02 | 3,700 | 11 | 3,700 | 91 |
| 6534-VRSP-009 | 52 | 5.6 | 36 | 1.9 | 3.5 | 0.46 | 0.52 | 0.12 | 0.18 | 0.04 | <0.01 | | 0.66 | 100 | 0.24 | 16,000 | 3,100 | 4.6 | 190 | <0.1 | 0.74 | 14,000 | 0.07 | 3 | 21 | 24 | 150,000 | 0.01 | 3,500 | 14 | 4,100 | 91 |
| 6534-VRSP-014 | 53 | 5.9 | 37 | 1.7 | 2.3 | 0.82 | 0.64 | 0.15 | 0.21 | 0.05 | <0.01 | | 0.44 | 100 | 0.14 | 13,000 | 2,100 | 1.5 | 240 | <0.1 | 0.63 | 6,600 | 0.03 | 4.1 | 58 | 17 | 260,000 | 0.01 | 4,400 | 15 | 3,500 | 100 |
| 6534-VRSP-001 | 59 | 7.4 | 26 | 1.6 | 2.8 | 0.83 | 1 | 0.17 | 0.16 | 0.04 | 0.02 | | 1.4 | 100 | 0.17 | 18,000 | 1,700 | 1.3 | 260 | <0.1 | 1.5 | 8,400 | 0.06 | 5 | 65 | 78 | 120,000 | 0.01 | 7,100 | 22 | 5,000 | 140 |
| 6534-VRSP-004 | 53 | 4.6 | 37 | 1.5 | 2.3 | 0.36 | 0.33 | 0.12 | 0.19 | 0.04 | <0.01 | | 1.1 | 100 | 0.22 | 15,000 | 4,700 | 3.2 | 180 | <0.1 | 0.42 | 8,400 | 0.05 | 3.4 | 10 | 38 | 260,000 | 0.01 | 2,400 | 6 | 3,200 | 100 |
| 6534-VRSP-005 | 60 | 7.1 | 26 | 1.6 | 2.5 | 0.64 | 0.79 | 0.18 | 0.15 | 0.04 | <0.01 | | 1.1 | 100 | 0.32 | 22,000 | 7,000 | 5.4 | 230 | <0.1 | 1.1 | 8,800 | 0.08 | 6.9 | 24 | 44 | 120,000 | 0.01 | 5,800 | 17 | 5,500 | 190 |
| 6534-VRSP-010 | 55 | 6.1 | 33 | 1.6 | 2.1 | 1.2 | 0.68 | 0.15 | 0.18 | 0.04 | <0.01 | | 0.34 | 100 | 0.09 | 13,000 | 95 | 0.56 | 210 | <0.1 | 0.4 | 7,800 | 0.03 | 4.3 | 19 | 14 | 150,000 | 0.01 | 4,000 | 11 | 3,400 | 120 |
| 6534-VRSP-013 | 56 | 9.5 | 24 | 1.9 | 3.6 | 0.96 | 1.6 | 0.29 | 0.18 | 0.06 | <0.01 | | 2.6 | 100 | 0.39 | 23,000 | 1,200 | 7.5 | 260 | 0.2 | 0.31 | 16,000 | 0.1 | 10 | 36 | 74 | 120,000 | 0.02 | 8,600 | 27 | 8000 | 280 |
| 6534-VRSP-015 | 54 | 5.2 | 33 | 1.5 | 2.8 | 0.27 | 0.43 | 0.1 | 0.19 | 0.05 | <0.01 | | 1.9 | 100 | 0.59 | 17,000 | 1,800 | 19 | 120 | <0.1 | 0.33 | 11,000 | 0.11 | 3.5 | 11 | 120 | 240,000 | 0.01 | 2,600 | 10 | 3,900 | 150 |
| 6534-VRSP-016 | 55 | 7.6 | 30 | 1.8 | 2.8 | 0.93 | 0.7 | 0.21 | 0.18 | 0.05 | <0.01 | | 2 | 100 | 0.52 | 20,000 | 7,100 | 5.4 | 230 | <0.1 | 0.69 | 11,000 | 0.13 | 9.5 | 28 | 82 | 140,000 | 0.18 | 4,300 | 18 | 6,000 | 180 |
| 6534-VRSP-017 | 65 | 4.8 | 25 | 1.3 | 2 | 0.38 | 0.52 | 0.1 | 0.14 | 0.04 | <0.01 | | 0.59 | 100 | 0.25 | 16,000 | 3,600 | 2.3 | 210 | <0.1 | 2.7 | 7,500 | 0.07 | 2.9 | 14 | 34 | 110,000 | 0.02 | 4,200 | 12 | 3,600 | 110 |
| 6534-VRSP-008 | 59 | 8.6 | 25 | 1.8 | 3 | 1.7 | 0.99 | 0.29 | 0.15 | 0.05 | <0.01 | | 1 | 100 | 0.25 | 13,000 | 340 | 5.4 | 110 | <0.1 | 0.19 | 12,000 | 0.08 | 11 | 51 | 49 | 120,000 | 0.01 | 4,000 | 20 | 6,200 | 150 |
| 6534-VRSP-012 | 55 | 7.1 | 26 | 1.6 | 3.6 | 0.53 | 1.1 | 0.26 | 0.14 | 0.05 | 0.02 | | 0.77 | 96 | 0.23 | 19,000 | 1,500 | 2.3 | 180 | 0.2 | 0.3 | 17,000 | 0.15 | 7.5 | 44 | 23 | 130,000 | 0.01 | 5,200 | 20 | 5700 | 180 |
| 6534-VRSP-003 | 59 | 9.4 | 23 | 2 | 3.4 | 0.51 | 1.6 | 0.27 | 0.17 | 0.05 | 0.02 | | 1.6 | 100 | 0.12 | 29,000 | 210 | 0.54 | 280 | 0.3 | 0.11 | 16,000 | 0.08 | 8.1 | 77 | 23 | 120,000 | 0.01 | 9,400 | 32 | 8600 | 240 |
| 6534-VRSP-011 | 55 | 5.9 | 32 | 1.6 | 3.5 | 0.75 | 0.35 | 0.13 | 0.2 | 0.04 | <0.01 | | 0.87 | 100 | 0.12 | 17,000 | 74 | 1.7 | 170 | 0.2 | 0.28 | 17,000 | 0.12 | 3.2 | 12 | 25 | 230,000 | 0.01 | 2,400 | 10 | 4100 | 140 |
| ML08-238-03 | 64 | 16 | 7.6 | 2.3 | 2.9 | 4 | 2.1 | 0.57 | 0.14 | 0.04 | 0.03 | 0.02 | 1.2 | 100 | 0.08 | 89,000 | 30 | | 590 | 1 | 0.1 | 21,000 | 0.25 | 14 | 130 | 31 | 54,000 | | 21,000 | 41 | 15000 | 440 |
| ML08-236-2 | 62 | 17 | 7.7 | 2.5 | 2.9 | 3.1 | 2.8 | 0.57 | 0.14 | 0.06 | 0.02 | 0.02 | 1.4 | 100 | 0.46 | 88,000 | 29 | | 650 | 1.1 | 0.16 | 20,000 | 0.21 | 14 | 130 | 41 | 53,000 | | 23,000 | 42 | 15000 | 430 |
| ML08-226-01 | 49 | 16 | 16 | 4.6 | 8.1 | 3.4 | 1.3 | 2.2 | 0.33 | 0.2 | <0.01 | 0.05 | 0.7 | 100 | | 82,000 | 5 | 0.3 | 390 | 0.72 | 0.09 | 62,000 | 0.17 | 42 | 76 | 24 | 120,000 | 0.1 | 13,000 | 26 | 27000 | 1,200 |
| ML08-241-03 | 45 | 16 | 16 | 3.7 | 7.6 | 3.5 | 2.3 | 2.9 | 0.5 | 0.2 | <0.01 | 0.04 | 1.7 | 100 | | 84,000 | 7 | 0.09 | 710 | 0.89 | 0.09 | 55,000 | 0.54 | 30 | 63 | 27 | 120,000 | 0.1 | 22,000 | 44 | 22000 | 1,200 |
| ML08-243-02 | 49 | 16 | 16 | 2.9 | 8.2 | 3.7 | 1 | 2.7 | 0.58 | 0.2 | <0.01 | 0.02 | 1.1 | 100 | | 82,000 | 4 | 0.09 | 420 | 1 | 0.09 | 60,000 | 0.39 | 28 | 61 | 49 | 110,000 | 0.1 | 10,000 | 28 | 17000 | 1,200 |
| ML08-245-01 | 49 | 16 | 15 | 4.1 | 8.3 | 3.3 | 1.1 | 2.1 | 0.34 | 0.19 | <0.01 | 0.04 | 0.87 | 100 | | 87,000 | 9 | 0.08 | 390 | 0.75 | 0.09 | 60,000 | 0.22 | 37 | 81 | 34 | 110,000 | 0.1 | 11,000 | 27 | 24000 | 1,200 |
| ML09-259-01 | 49 | 16 | 15 | 3.7 | 8.3 | 3.1 | 1.2 | 2.4 | 0.36 | 0.19 | <0.01 | 0.04 | 0.5 | 100 | | 80,000 | 2 | 0.07 | 420 | 0.72 | 0.09 | 62,000 | 0.23 | 37 | 81 | 53 | 110,000 | 0.1 | 12,000 | 25 | 22000 | 1,100 |
| ML95-104-01 | 51 | 14 | 16 | 2.9 | 8.4 | 2.9 | 1.2 | 2.3 | 0.51 | 0.18 | <0.01 | 0.03 | 0.74 | 100 | | 73,000 | 1 | 0.08 | 430 | 1.2 | 0.09 | 59,000 | 0.33 | 29 | 100 | 45 | 110,000 | 0.1 | 11,000 | 28 | 17000 | 1,100 |
| ML95-105-02 | 48 | 15 | 15 | 3.1 | 8.3 | 3.2 | 1.9 | 2.6 | 0.47 | 0.2 | <0.01 | 0.04 | 2.4 | 100 | | 77,000 | 880 | 0.08 | 700 | 0.96 | 0.09 | 60,000 | 0.7 | 28 | 65 | 45 | 110,000 | 0.1 | 18,000 | 36 | 18000 | 1,100 |
| ML95-117-02 | 49 | 16 | 16 | 3.9 | 8.1 | 3.2 | 1.2 | 2.5 | 0.46 | 0.2 | <0.01 | 0.05 | 0.72 | 100 | | 85,000 | 3 | 0.07 | 380 | 0.92 | 0.09 | 59,000 | 0.25 | 34 | 72 | 18 | 120,000 | 0.1 | 11,000 | 28 | 24000 | 1,200 |
| ML97-186-02 | 48 | 16 | 15 | 3.8 | 8.7 | 3.4 | 1.1 | 2.1 | 0.38 | 0.19 | <0.01 | 0.04 | 0.97 | 100 | | 89,000 | 9 | 0.05 | 380 | 0.81 | 0.09 | 65,000 | 0.2 | 33 | 74 | 40 | 110,000 | 0.1 | 11,000 | 29 | 24000 | 1,200 |
| CAMLD264930 | 51 | 15 | 14 | 4.8 | 8.1 | 2.9 | 0.86 | 1.3 | 0.14 | 0.18 | <0.01 | | 1.3 | 100 | 0.12 | 18,000 | 16 | | 93 | <0.1 | 0.04 | 17,000 | 0.05 | 37 | 50 | 85 | 38,000 | 0.01 | 5,000 | 34 | 13,000 | 390 |
| CAMLD264931 | 44 | 15 | 16 | 4 | 8.2 | 3.2 | 1.2 | 2.5 | 0.32 | 0.19 | <0.01 | | 1.6 | 96 | 0.03 | 17,000 | 1 | | 170 | 0.2 | 0.02 | 22,000 | 0.03 | 29 | 53 | 43 | 43,000 | <0.01 | 4,400 | 34 | 11000 | 370 |
| CAMLD264935 | | | | | | | | | | | | | | | 0.06 | 13,000 | 1 | | 41 | 0.2 | 0.05 | 20,000 | 0.05 | 22 | 40 | 46 | 34,000 | <0.01 | 1,500 | 14 | 6700 | 320 |
| CAMLD264957 | 49 | 15 | 16 | 4.8 | 7.8 | 3.2 | 0.95 | 2.2 | 0.34 | 0.19 | <0.01 | | 0.69 | 100 | 0.04 | 19,000 | 4 | | 250 | <0.1 | 0.02 | 17,000 | 0.04 | 30 | 49 | 51 | 42,000 | <0.01 | 6,800 | 40 | 13,000 | 410 |
| CAMLD264958 | 49 | 16 | 15 | 3.7 | 8.7 | 2.9 | 0.83 | 2.3 | 0.39 | 0.18 | <0.01 | | 0.88 | 100 | 0.06 | 18,000 | 5 | | 230 | 0.2 | 0.02 | 18,000 | 0.03 | 33 | 64 | 67 | 44,000 | <0.01 | 5,800 | 37 | 11000 | 390 |
| ML92-061-03 | 49 | 5.1 | 39 | 1.4 | 2.7 | 1.7 | 0.63 | 0.13 | 0.2 | 0.02 | <0.01 | <0.01 | 0.3 | 100 | 0.09 | 26,000 | 7 | | 420 | 0.79 | 0.09 | 18,000 | 0.16 | 3.4 | 70 | 6 | 240,000 | | 5,700 | 12 | 8100 | 210 |
| ML92-062-01 | 47 | 3.5 | 45 | 1.8 | 2.5 | 0.94 | 0.16 | 0.08 | 0.24 | 0.03 | 0.02 | <0.01 | 0.61 | 100 | 0.03 | 18,000 | 1 | | 150 | 0.42 | 0.09 | 18,000 | 0.15 | 2.8 | 84 | 6 | 280,000 | | 1,600 | 6 | 11000 | 290 |
| ML92-062-02 | 61 | 12 | 19 | 1.9 | 2.3 | 2 | 2.1 | 0.29 | 0.12 | 0.01 | <0.01 | <0.01 | 0.8 | 100 | 0.03 | 65,000 | 13 | | 1,400 | 2 | 0.17 | 16,000 | 0.22 | 9 | 130 | 6 | 130,000 | | 20,000 | 58 | 12000 | 190 |
| ML95-82-2 | 53 | 3 | 39 | 1.7 | 3 | 0.28 | 0.28 | 0.06 | 0.26 | 0.09 | <0.01 | <0.01 | 0.93 | 99 | 0.52 | 14,000 | 10 | | 100 | 0.37 | 0.3 | 18,000 | 0.21 | 2.3 | 68 | 25 | 220,000 | | 2,300 | 7 | 8800 | 630 |
| ML08-236-1 | 63 | 7.7 | 21 | 1.5 | 3.1 | 0.4 | 1.8 | 0.19 | 0.15 | 0.05 | 0.03 | <0.01 | 1 | 100 | 0.28 | 40,000 | 14 | | 720 | 1.3 | 0.22 | 21,000 | 0.17 | 3.9 | 130 | 2 | 140,000 | | 15,000 | 23 | 8600 | 330 |
| ML90-09-1 | 49 | 4 | 42 | 1.5 | 3.1 | 0.3 | 0.24 | 0.09 | 0.27 | 0.04 | 0.02 | <0.01 | 0.18 | 100 | 2.1 | 21,000 | 96 | | 81 | 0.24 | 0.2 | 21,000 | 0.25 | 3.7 | 99 | 1 | 260,000 | | 2,100 | 6 | 9100 | 350 |
| ML90-10-2 | 58 | 6.4 | 26 | 0.99 | 3.9 | 0.36 | 1.2 | 0.2 | 0.17 | 0.05 | 0.02 | <0.01 | 1.1 | 98 | 0.34 | 32,000 | 35 | | 410 | 0.82 | 0.11 | 26,000 | 0.2 | 6 | 130 | 18 | 170,000 | | 9,900 | 20 | 5600 | 380 |
| ML92-053-1 | 49 | 3.6 | 42 | 1.6 | 3.4 | 0.14 | 0.14 | 0.09 | 0.22 | 0.03 | 0.02 | <0.01 | 0.44 | 100 | 0.26 | 18,000 | 19 | | 75 | 0.34 | 0.09 | 23,000 | 0.24 | 2.9 | 99 | 5 | 260,000 | | 1,200 | 6 | 9000 | 250 |
| ML92-060-1 | 49 | 3.1 | 43 | 1.8 | 2.3 | 0.52 | 0.31 | 0.08 | 0.2 | 0.04 | 0.02 | <0.01 | 0.47 | 99 | 0.28 | 16,000 | 2 | | 160 | 0.42 | 0.09 | 16,000 | 0.12 | 3 | 91 | 5 | 270,000 | | 2,700 | 5 | 10000 | 310 |
| ML95-93-03 | 56 | 2.3 | 35 | 0.93 | 3.3 | 0.08 | 0.25 | 0.11 | 0.21 | 0.05 | 0.02 | <0.01 | 0.87 | 98 | 0.03 | 12,000 | 11 | | 72 | 0.15 | 0.19 | 24,000 | 0.26 | 3.3 | 190 | 31 | 220,000 | | 2,300 | 8 | 5300 | 330 |
| ML08-225-01 | 55 | 7.7 | 30 | 1.7 | 2.6 | 1.6 | 1.2 | 0.15 | 0.18 | 0.05 | <0.01 | <0.01 | 0.42 | 100 | | 37,000 | 6 | 0.05 | 610 | 1.2 | 0.09 | 18,000 | 0.1 | 4.3 | 110 | 6 | 200,000 | 0.1 | 11,000 | 18 | 9200 | 310 |
| ML08-226-02 | 51 | 3.5 | 41 | 1.7 | 2.3 | 0.78 | 0.44 | 0.08 | 0.22 | 0.05 | 0.02 | <0.01 | 0.2 | 100 | | 18,000 | 3 | 0.12 | 150 | 0.88 | 0.1 | 17,000 | 0.02 | 3.5 | 140 | 4.6 | 310,000 | 0.1 | 4,200 | 9 | 9600 | 270 |
| ML08-226-03 | 51 | 5 | 37 | 1.8 | 2.6 | 0.69 | 0.59 | 0.13 | 0.23 | 0.05 | 0.02 | <0.01 | 0.14 | 99 | | 26,000 | 4 | 0.29 | 300 | 0.64 | 0.09 | 19,000 | 0.21 | 4.2 | 140 | 8.9 | 280,000 | 0.1 | 5,400 | 13 | 10000 | 320 |
| ML08-228-01 | 55 | 6.9 | 31 | 1.5 | 1.5 | 2.1 | 1.4 | 0.17 | 0.18 | 0.04 | 0.02 | <0.01 | 0.73 | 100 | | 34,000 | 21 | 0.07 | 410 | 0.96 | 0.09 | 11,000 | 0.13 | 4.9 | 130 | 4 | 220,000 | 0.1 | 13,000 | 24 | 8200 | 250 |
| ML08-228-02 | 50 | 2.3 | 45 | 1.5 | 2.3 | 0.16 | 0.21 | 0.05 | 0.22 | 0.06 | <0.01 | <0.01 | 0.56 | 100 | | 13,000 | 6 | 0.07 | 96 | 0.84 | 0.09 | 16,000 | <0.02 | 3.5 | 150 | 10 | 320,000 | 0.1 | 2,600 | 5 | 8100 | 380 |
| ML08-229-05 | 52 | 4.9 | 35 | 2 | 3.3 | 0.7 | 0.52 | 0.12 | 0.15 | 0.06 | <0.01 | <0.01 | 0.01 | 99 | | 25,000 | 11 | 0.08 | 310 | 0.71 | 0.09 | 24,000 | 0.19 | 3.6 | 130 | 3.8 | 260,000 | 0.1 | 4,600 | 15 | 12000 | 330 |
| ML08-233-02 | 52 | 6.4 | 36 | 1.6 | 2 | 2 | 0.82 | 0.16 | 0.23 | 0.04 | <0.01 | <0.01 | 0.28 | 100 | | 33,000 | 15 | 0.08 | 580 | 0.99 | 0.09 | 15,000 | 0.18 | 4.2 | 100 | 6.6 | 250,000 | 0.1 | 7,600 | 24 | 9200 | 260 |
| ML08-241-02 | 55 | 7 | 30 | 1.7 | 3.2 | 0.68 | 0.88 | 0.18 | 0.18 | 0.06 | 0.02 | <0.01 | 1.2 | 100 | | 35,000 | 5 | 0.06 | 390 | 0.96 | 0.13 | 23,000 | 0.22 | 4.8 | 150 | 5 | 230,000 | 0.1 | 7,800 | 15 | 9200 | 390 |
| ML08-243-01 | 48 | 5.9 | 38 | 1.4 | 2.8 | 1.2 | 1 | 0.16 | 0.2 | 0.04 | <0.01 | <0.01 | 0.96 | 99 | | 31,000 | 5 | 0.06 | 480 | 1.4 | 0.09 | 20,000 | 0.19 | 4.1 | 110 | 3 | 270,000 | 0.1 | 9,300 | 21 | 8100 | 260 |
| ML09-254-01 | 51 | 6.9 | 35 | 1.7 | 2.4 | 1.6 | 0.86 | 0.18 | 0.24 | 0.05 | <0.01 | <0.01 | 0.26 | 100 | | 35,000 | 7 | 0.22 | 310 | 0.67 | 0.39 | 17,000 | 0.22 | 5.6 | 120 | 14 | 260,000 | 0.1 | 7,900 | 17 | 9300 | 320 |
| ML92062-01 | 53 | 4.3 | 35 | 1.4 | 3.1 | 0.93 | 0.59 | 0.11 | 0.24 | 0.05 | 0.02 | <0.01 | 0.19 | 99 | | 22,000 | 2 | 0.06 | 370 | 0.79 | 0.09 | 22,000 | 0.22 | 4.7 | 160 | 17 | 260,000 | 0.1 | 5,400 | 10 | 7700 | 250 |
| ML95-117-01 | 52 | 6.3 | 35 | 1.6 | 2.3 | 0.99 | 0.78 | 0.18 | 0.17 | 0.05 | <0.01 | <0.01 | 0.56 | 100 | | 34,000 | 8 | 0.05 | 290 | 0.73 | 0.09 | 17,000 | 0.13 | 4.8 | 130 | 14 | 240,000 | 0.1 | 7,700 | 13 | 9900 | 340 |
| ML95-117-03 | 60 | 9.7 | 20 | 1.9 | 3.2 | 1.5 | 0.92 | 0.33 | 0.15 | 0.05 | 0.02 | <0.01 | 1.3 | 100 | | 53,000 | 57 | 0.06 | 280 | 0.64 | 0.18 | 24,000 | 0.22 | 8.8 | 160 | 31 | 150,000 | 0.1 | 9,100 | 16 | 11000 | 360 |
| ML95-82-01 | 56 | 7.5 | 28 | 1.9 | 2.4 | 0.87 | 0.94 | 0.2 | 0.19 | 0.05 | <0.01 | <0.01 | 1.5 | 100 | | 40,000 | 310 | 0.3 | 390 | 0.76 | 0.23 | 19,000 | 0.22 | 6.5 | 170 | 33 | 190,000 | 0.1 | 9,200 | 18 | 11000 | 330 |
| ML95-83-01 | 59 | 9.3 | 24 | 1.5 | 1.7 | 0.69 | 2.1 | 0.23 | 0.16 | 0.04 | <0.01 | <0.01 | 0.62 | 100 | | 49,000 | 3 | 0.06 | 1,100 | 1.7 | 0.09 | 13,000 | 0.15 | 5.4 | 120 | 3.4 | 170,000 | 0.1 | 20,000 | 32 | 9000 | 250 |
| ML95-95-01 | 52 | 7 | 32 | 1.8 | 3.7 | 0.8 | 1.2 | 0.18 | 0.14 | 0.06 | 0.02 | 0.02 | 0.76 | 99 | | 37,000 | 23 | 0.65 | 650 | 0.97 | 0.23 | 27,000 | 0.39 | 5 | 130 | 5.7 | 200,000 | 0.1 | 12,000 | 21 | 11000 | 380 |
| ML95-98-01 | 55 | 5.4 | 34 | 1.6 | 2.2 | 1.4 | 0.68 | 0.11 | 0.19 | 0.04 | 0.02 | <0.01 | 0.46 | 100 | | 29,000 | 2 | 0.03 | 240 | 1.1 | 0.09 | 16,000 | 0.06 | 3.7 | 150 | 7.4 | 260,000 | 0.1 | 6,600 | 16 | 9700 | 260 |
| ML97-186-01 | 55 | 5.6 | 32 | 1.6 | 2.3 | 0.89 | 1 | 0.13 | 0.16 | 0.03 | 0.02 | <0.01 | 1.2 | 99 | | 30,000 | 6 | 0.03 | 420 | 0.81 | 0.12 | 17,000 | 0.15 | 4.3 | 150 | 9.5 | 230,000 | 0.1 | 10,000 | 19 | 9800 | 220 |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| 163066 | 60 | 11 | 22 | 2 | 3.6 | 0.92 | 0.59 | 0.18 | 0.09 | 0.04 | <0.01 | | 1.4 | 100 | 0.03 | 30,000 | 1 | 0.03 | 340 | <0.1 | 0.05 | 8,100 | 0.08 | 2.5 | 13 | 14 | 91,000 | 0.01 | 3,800 | 20 | 7,000 | 120 |
| 163784 | 61 | 12 | 19 | 2 | 2.4 | 1.8 | 2.2 | 0.27 | 0.1 | 0.04 | <0.01 | | 0.53 | 100 | 0.13 | 27,000 | 50 | 0.28 | 860 | 0.3 | 0.68 | 3,700 | 0.02 | 6.2 | 16 | 5.4 | 94,000 | 0.02 | 16,000 | 53 | 8500 | 140 |
| CAMLD264964 | 48 | 3.7 | 41 | 1.7 | 2.9 | 0.39 | 0.28 | 0.09 | 0.21 | 0.06 | 0.02 | | 1.2 | 99 | 0.22 | 10,000 | 12,000 | | 94 | <0.1 | 2.5 | 14,000 | 0.1 | 3.3 | 59 | 150 | 290,000 | 0.01 | 1,800 | 6 | 2,600 | 83 |
| CAMLD264965 | 60 | 7 | 25 | 1.6 | 2.7 | 0.98 | 0.74 | 0.18 | 0.18 | 0.04 | 0.02 | | 0.85 | 100 | 0.17 | 18,000 | 4,500 | | 270 | <0.1 | 3 | 7,600 | 0.1 | 5.4 | 92 | 51 | 110,000 | 0.74 | 5,400 | 16 | 4,900 | 120 |
| CAMLD264936 | 48 | 8.8 | 34 | 2 | 4.2 | 0.85 | 1.1 | 0.2 | 0.21 | 0.07 | <0.01 | | 0.95 | 100 | 0.13 | 17,000 | 500 | | 350 | <0.1 | 0.62 | 7,700 | 0.05 | 6.8 | 49 | 57 | 110,000 | 0.01 | 6,000 | 18 | 3,800 | 120 |
| CAMLD264944 | 51 | 3.5 | 38 | 1.5 | 1.5 | 1.4 | 0.1 | 0.09 | 0.26 | 0.04 | <0.01 | | 0.84 | 96 | 0.09 | 2,700 | 2 | | 61 | <0.1 | 0.29 | 6,000 | 0.01 | 2.5 | 55 | 25 | 270,000 | 0.01 | 600 | 1 | 600 | 29 |
| 162591 | 55 | 7.2 | 32 | 1.8 | 1.6 | 2 | 0.47 | 0.16 | 0.14 | 0.04 | <0.01 | | 0.14 | 100 | 0.04 | 13,000 | 9 | 0.05 | 560 | 0.2 | 0.11 | 4,000 | 0.01 | 3.2 | 13 | 1.5 | 120,000 | <0.01 | 3,600 | 14 | 4400 | 64 |
| 162895 | 51 | 4.2 | 38 | 1.8 | 3.4 | 0.45 | 0.13 | 0.1 | 0.21 | 0.04 | <0.01 | | 0.48 | 99 | 0.05 | 9,500 | 3 | 0.18 | 82 | 0.2 | 0.2 | 12,000 | 0.07 | 1.6 | 6 | 13 | 270,000 | <0.01 | 600 | 2 | 2000 | 54 |
| 162952 | 48 | 2.6 | 42 | 1.6 | 4 | 0.28 | 0.09 | 0.06 | 0.19 | 0.04 | <0.01 | | 0.21 | 99 | 0.06 | 7,500 | 2 | 0.03 | 97 | 0.2 | 0.1 | 22,000 | 0.09 | 1.4 | 2 | 3.2 | 300,000 | <0.01 | 500 | 2 | 1800 | 78 |
| 163309 | 79 | 3.4 | 10 | 1.4 | 4.4 | 0.06 | 0.9 | 0.27 | 0.05 | 0.05 | <0.01 | | 2.4 | 100 | 0.05 | 14,000 | 76 | 0.34 | 220 | <0.1 | 0.67 | 28,000 | 0.15 | 3.6 | 33 | 9.5 | 46,000 | 0.02 | 6,100 | 19 | 5,100 | 220 |
| 163763 | 47 | 3.1 | 47 | 1.8 | 1.8 | 0.76 | 0.26 | 0.09 | 0.26 | 0.03 | <0.01 | | 1.1 | 100 | 0.07 | 6,500 | 2 | 0.18 | 260 | 0.2 | 0.07 | 8,100 | 0.02 | 1.7 | 6 | 0.5 | 340,000 | <0.01 | 1,900 | 3 | 1800 | 48 |
| CAEXD301939 | 65 | 12 | 13 | 1.6 | 4 | 0.9 | 3.1 | 0.23 | 0.09 | 0.04 | <0.01 | | 2.5 | 100 | 0.03 | 23,000 | 14 | 0.03 | 310 | 0.6 | 0.05 | 23,000 | 0.26 | 5 | 12 | 1.6 | 71,000 | 0.03 | 11,000 | 37 | 7300 | 230 |
| CAEXD307379 | 56 | 8.4 | 25 | 1.6 | 1.4 | 2.8 | 1.3 | 0.16 | 0.12 | 0.02 | <0.01 | | 0.7 | 97 | 0.09 | 17,000 | 180 | 0.03 | 290 | 0.3 | 0.2 | 7,700 | 0.01 | 3.5 | 9 | 0.5 | 180,000 | <0.01 | 11,000 | 27 | 9500 | 170 |
| CAEXD307381 | 54 | 5.6 | 32 | 1.5 | 1.9 | 1.6 | 1.1 | 0.12 | 0.24 | 0.04 | <0.01 | | 0.38 | 98 | 0.06 | 15,000 | 2 | 0.03 | 290 | 0.4 | 0.1 | 13,000 | 0.01 | 6 | 33 | 9.6 | 230,000 | <0.01 | 9,400 | 25 | 8200 | 260 |
| CAMLD264960 | 53 | 6.4 | 30 | 1.5 | 1.5 | 1.8 | 1.6 | 0.14 | 0.2 | 0.03 | 0.02 | | 0.8 | 97 | 0.08 | 18,000 | 2 | | 380 | 0.6 | 0.09 | 11,000 | 0.05 | 4.8 | 93 | 12 | 210,000 | <0.01 | 14,000 | 41 | 8900 | 240 |
| CAMLD264967 | 53 | 3.8 | 34 | 1.7 | 3.8 | 0.36 | 0.33 | 0.09 | 0.22 | 0.04 | 0.02 | | -0.2 | 97 | 0.21 | 8,400 | 20 | | 110 | <0.1 | 0.56 | 17,000 | 0.07 | 2.3 | 64 | 40 | 120,000 | <0.01 | 1,800 | 6 | 2,100 | 66 |
| CAMLD264939 | 45 | 1.8 | 42 | 1.1 | 4.1 | 0.11 | 0.08 | 0.05 | 0.21 | 0.03 | <0.01 | | 0.03 | 95 | 0.04 | 3,100 | 15 | | 27 | <0.1 | 0.29 | 21,000 | 0.09 | 0.7 | 38 | 0.5 | 300,000 | <0.01 | 300 | 1 | 600 | 63 |
| CAMLD264943 | 62 | 7.7 | 20 | 1.6 | 2.2 | 0.46 | 0.72 | 0.18 | 0.1 | 0.04 | 0.02 | | 1.1 | 96 | 0.02 | 28,000 | 30 | | 300 | <0.1 | 0.06 | 6,200 | 0.04 | 5.3 | 78 | 4.9 | 89,000 | <0.01 | 5,400 | 21 | 6,200 | 130 |
| CAEXD298984 | 62 | 5.2 | 17 | 1.6 | 5.2 | 0.11 | 0.97 | 0.13 | 0.13 | 0.06 | <0.01 | | 3.8 | 96 | 0.06 | 23,000 | 5 | 0.03 | 170 | 0.2 | 0.22 | 35,000 | 0.18 | 3.2 | 41 | 0.5 | 93,000 | <0.01 | 8,000 | 25 | 6800 | 300 |
| 162858 | 56 | 3.7 | 32 | 1.7 | 4.6 | 0.08 | 0.44 | 0.09 | 0.23 | 0.07 | <0.01 | | 2.3 | 100 | 0.52 | 13,000 | 1,800 | 1.1 | 87 | <0.1 | 0.68 | 26,000 | 0.24 | 8.4 | 7 | 160 | 150,000 | 0.01 | 2,900 | 8 | 3,400 | 180 |
| 163079 | 53 | 4.5 | 36 | 1.8 | 2.6 | 0.35 | 0.48 | 0.09 | 0.17 | 0.05 | <0.01 | | 0.26 | 99 | 0.05 | 14,000 | 2 | 0.01 | 200 | 0.2 | 0.06 | 9,800 | 0.01 | 2.7 | 6 | 7.3 | 260,000 | <0.01 | 3,700 | 9 | 5300 | 150 |
| CAMLD264932 | 44 | 9.2 | 30 | 2.3 | 5.9 | 0.77 | 0.16 | 0.22 | 0.14 | 0.06 | <0.01 | | 2.5 | 96 | 0.17 | 25,000 | 1 | | 19 | <0.1 | 0.11 | 22,000 | 0.11 | 4.4 | 53 | 47 | 130,000 | 0.01 | 400 | 9 | 8,000 | 190 |
| CAMLD273962 | 55 | 6.4 | 32 | 1.7 | 3.5 | 1.3 | 0.47 | 0.16 | 0.19 | 0.04 | <0.01 | | 0.11 | 100 | 0.12 | 12,000 | 3 | | 510 | 0.2 | 0.16 | 13,000 | 0.04 | 4 | 56 | 35 | 150,000 | 0.01 | 3,600 | 14 | 3400 | 100 |
| CAEXD210903 | 56 | 3.8 | 35 | 1.2 | 1.8 | 0.38 | 0.4 | 0.17 | 0.21 | 0.04 | <0.01 | | 0.24 | 100 | 0.14 | 12,000 | 85 | 0.65 | 140 | <0.1 | 0.17 | 7,100 | 0.03 | 3.6 | 41 | 7 | 250,000 | 0.01 | 3,100 | 10 | 2,500 | 63 |
| CAMLD264947 | 52 | 4.5 | 37 | 1.8 | 2.1 | 0.39 | 0.29 | 0.16 | 0.23 | 0.05 | 0.02 | | 0.12 | 98 | 0.17 | 12,000 | 13 | | 87 | <0.1 | 0.49 | 6,500 | 0.05 | 2.8 | 78 | 18 | 140,000 | 0.01 | 2,000 | 6 | 2,900 | 71 |
| CAMLD264952 | 48 | 4.3 | 40 | 1.9 | 3.3 | 0.37 | 0.17 | 0.1 | 0.17 | 0.04 | <0.01 | | -0.91 | 98 | 0.06 | 8,900 | 33 | | 31 | <0.1 | 0.06 | 10,000 | 0.07 | 2.6 | 57 | 12 | 280,000 | 0.01 | 700 | 3 | 1,900 | 52 |
| CAMLD264954 | 65 | 8.1 | 17 | 1.7 | 2.2 | 0.61 | 0.65 | 0.27 | 0.16 | 0.03 | 0.02 | | 1.4 | 97 | 0.02 | 24,000 | 6 | | 300 | <0.1 | 0.14 | 5,500 | 0.04 | 5 | 93 | 14 | 72,000 | 0.01 | 3,900 | 18 | 6,600 | 120 |
| CAMLD264971 | 50 | 6 | 35 | 2 | 2.3 | 0.89 | 0.78 | 0.15 | 0.19 | 0.05 | <0.01 | | 0.13 | 98 | 0.21 | 13,000 | 1,200 | | 260 | <0.1 | 1.3 | 9,200 | 0.05 | 5 | 54 | 18 | 140,000 | 0.01 | 4,700 | 15 | 4,000 | 100 |
| CAMLD264941 | 49 | 4.7 | 40 | 1.7 | 2.1 | 0.95 | 0.3 | 0.12 | 0.2 | 0.05 | 0.02 | | 0.57 | 99 | 0.48 | 9,700 | 10 | | 140 | <0.1 | 0.19 | 5,600 | 0.03 | 2.3 | 59 | 18 | 290,000 | 0.01 | 2,100 | 4 | 2,400 | 89 |
| CAMLD264933 | 43 | 2.8 | 45 | 1.3 | 4.2 | 0.07 | 0.64 | 0.07 | 0.19 | 0.06 | <0.01 | | 0.86 | 99 | 0.16 | 9,700 | 36 | | 130 | <0.1 | 0.7 | 23,000 | 0.08 | 2.6 | 41 | 7.1 | 320,000 | <0.01 | 5,100 | 12 | 2,300 | 120 |
| CAMLD264934 | 48 | 7.8 | 33 | 2.2 | 3.6 | 0.4 | 0.79 | 0.21 | 0.19 | 0.06 | <0.01 | | 0.9 | 97 | 0.17 | 26,000 | 3 | | 240 | 0.3 | 0.72 | 13,000 | 0.05 | 5.9 | 51 | 8.4 | 120,000 | <0.01 | 5,300 | 23 | 6200 | 130 |
| CAEXD305051 | 52 | 5.2 | 36 | 1.8 | 3.8 | 0.34 | 0.6 | 0.17 | 0.21 | 0.04 | <0.01 | | 0.29 | 100 | <0.01 | 14,000 | 30 | 0.75 | 140 | <0.1 | 0.04 | 14,000 | 0.06 | 2.3 | 26 | 5.2 | 150,000 | <0.01 | 4,400 | 14 | 3,500 | 110 |
| CAEXD307337 | 48 | 4.3 | 43 | 1.7 | 2.7 | 1 | 0.24 | 0.12 | 0.2 | 0.05 | <0.01 | | 0.61 | 100 | 0.04 | 6,900 | 7 | 0.03 | 58 | <0.1 | 0.08 | 11,000 | 0.06 | 2.1 | 22 | 3 | 310,000 | <0.01 | 1,500 | 4 | 1,700 | 62 |
| CAMLD264950 | 47 | 1.4 | 45 | 1 | 3.8 | 0.09 | 0.11 | 0.04 | 0.22 | 0.05 | <0.01 | | 0.72 | 99 | 0.36 | 3,700 | 3 | | 14 | <0.1 | 0.24 | 24,000 | 0.08 | 1.3 | 62 | 8.5 | 320,000 | <0.01 | 600 | 1 | 800 | 90 |
| CAMLD264955 | 52 | 4.6 | 39 | 1.4 | 2.5 | 1.4 | 0.09 | 0.11 | 0.17 | 0.03 | <0.01 | | -0.045 | 100 | 0.04 | 7,700 | 1 | | 81 | <0.1 | 0.2 | 13,000 | 0.1 | 1.7 | 57 | 6.9 | 280,000 | <0.01 | 400 | 3 | 2,500 | 70 |
| CAMLD264946 | 48 | 1.9 | 45 | 1.7 | 2.7 | 0.14 | 0.09 | 0.05 | 0.2 | 0.04 | <0.01 | | 1.1 | 98 | 0.04 | 4,500 | 11 | | 37 | <0.1 | 0.04 | 13,000 | 0.08 | 0.8 | 47 | 6.3 | 320,000 | <0.01 | 400 | 1 | 1,000 | 46 |
| ML00-221-01 | 64 | 17 | 5.9 | 2.6 | 1.8 | 3.6 | 2.5 | 0.65 | 0.12 | 0.04 | 0.02 | 0.02 | 2 | 100 | 0.09 | 94,000 | 280 | | 660 | 1 | 0.14 | 13,000 | 0.26 | 17 | 170 | 45 | 42,000 | | 22,000 | 40 | 16000 | 350 |
| ML00-221-02 | 66 | 16 | 5.5 | 2.4 | 1.5 | 3.6 | 2.2 | 0.61 | 0.12 | 0.03 | 0.03 | <0.01 | 1.9 | 100 | 0.04 | 89,000 | 31 | | 480 | 0.95 | 0.17 | 11,000 | 0.22 | 17 | 220 | 50 | 39,000 | | 21,000 | 34 | 15000 | 320 |
| ML00-221-03 | 66 | 17 | 5.6 | 2.6 | 1.2 | 3.7 | 2.1 | 0.6 | 0.11 | 0.02 | 0.03 | 0.02 | 2.2 | 100 | 0.04 | 87,000 | 48 | | 540 | 0.92 | 0.14 | 7,900 | 0.22 | 17 | 160 | 42 | 39,000 | | 20,000 | 34 | 16000 | 290 |
| ML08-238-04 | 63 | 17 | 7.2 | 2.6 | 1.7 | 3.3 | 2.6 | 0.65 | 0.12 | 0.03 | 0.03 | 0.03 | 2.4 | 100 | 0.1 | 94,000 | 36 | | 580 | 1.1 | 0.22 | 12,000 | 0.27 | 17 | 160 | 45 | 51,000 | | 24,000 | 43 | 16000 | 340 |
| ML90-03-01 | 61 | 18 | 6.8 | 3 | 1.6 | 3.2 | 2.7 | 0.68 | 0.12 | 0.04 | 0.04 | 0.03 | 2.4 | 100 | 0.36 | 98,000 | 160 | | 680 | 1.3 | 0.2 | 11,000 | 0.3 | 21 | 170 | 42 | 49,000 | | 25,000 | 44 | 19000 | 380 |
| ML90-03-02 | 63 | 16 | 7.9 | 2.3 | 2.5 | 3.3 | 2.3 | 0.51 | 0.13 | 0.04 | 0.02 | 0.02 | 1.9 | 100 | 0.3 | 90,000 | 16 | | 570 | 0.96 | 0.15 | 18,000 | 0.24 | 12 | 140 | 35 | 56,000 | | 22,000 | 45 | 15000 | 350 |
| ML90-04-02 | 66 | 17 | 5.8 | 2.3 | 1.5 | 3.5 | 2.3 | 0.61 | 0.11 | 0.03 | 0.02 | 0.02 | 2.1 | 100 | 0.34 | 92,000 | 43 | | 650 | 0.99 | 0.14 | 11,000 | 0.33 | 18 | 170 | 49 | 42,000 | | 23,000 | 36 | 15000 | 330 |
| ML90-04-03 | 64 | 16 | 7.2 | 2.5 | 2.8 | 4.3 | 1.6 | 0.57 | 0.15 | 0.04 | 0.02 | <0.01 | 1.7 | 100 | 0.27 | 85,000 | 16 | | 490 | 0.83 | 0.1 | 19,000 | 0.22 | 13 | 110 | 36 | 50,000 | | 15,000 | 36 | 15000 | 320 |
| ML90-07-01 | 64 | 16 | 6.8 | 2.5 | 3.1 | 3.9 | 2 | 0.55 | 0.16 | 0.04 | 0.02 | 0.03 | 1.1 | 100 | 0.06 | 82,000 | 16 | | 580 | 0.94 | 0.09 | 21,000 | 0.26 | 12 | 150 | 20 | 44,000 | | 18,000 | 35 | 14000 | 370 |
| ML90-08-01 | 67 | 16 | 5.1 | 2 | 1.5 | 4.1 | 2 | 0.56 | 0.12 | 0.04 | 0.04 | 0.02 | 1.6 | 100 | 0.11 | 85,000 | 16 | | 570 | 0.88 | 0.11 | 11,000 | 0.26 | 16 | 160 | 55 | 37,000 | | 19,000 | 31 | 12000 | 290 |
| ML90-08-02 | 62 | 17 | 6.6 | 2.3 | 3.2 | 3.9 | 2.5 | 0.56 | 0.14 | 0.04 | 0.02 | 0.02 | 1.6 | 100 | 0.11 | 87,000 | 53 | | 560 | 0.93 | 0.11 | 22,000 | 0.25 | 15 | 120 | 40 | 44,000 | | 21,000 | 42 | 13000 | 430 |
| ML90-12-02 | 62 | 16 | 8.6 | 2.1 | 2.7 | 2.9 | 2.8 | 0.52 | 0.14 | 0.04 | 0.02 | 0.02 | 2.1 | 100 | 0.51 | 91,000 | 34 | | 670 | 1.2 | 0.44 | 21,000 | 0.4 | 14 | 130 | 79 | 63,000 | | 27,000 | 49 | 14000 | 430 |
| ML92-061-01 | 64 | 18 | 6.4 | 2.9 | 1.6 | 3.3 | 2.5 | 0.66 | 0.12 | 0.03 | 0.03 | 0.03 | 2.2 | 100 | 0.05 | 91,000 | 49 | | 530 | 0.98 | 0.18 | 11,000 | 0.24 | 18 | 170 | 48 | 43,000 | | 22,000 | 40 | 17000 | 380 |
| ML92-061-02 | 64 | 17 | 6 | 2.8 | 1.4 | 3.1 | 2.5 | 0.64 | 0.12 | 0.06 | 0.03 | 0.02 | 2.4 | 100 | 0.03 | 89,000 | 32 | | 570 | 0.93 | 0.17 | 9,400 | 0.23 | 20 | 180 | 43 | 41,000 | | 21,000 | 34 | 16000 | 330 |
| ML92-061-04 | 63 | 16 | 7.1 | 2.3 | 2.8 | 4.1 | 2.1 | 0.58 | 0.13 | 0.04 | <0.01 | 0.02 | 1.7 | 100 | 0.01 | 90,000 | 53 | | 570 | 0.93 | 0.23 | 20,000 | 0.26 | 16 | 120 | 30 | 50,000 | | 20,000 | 41 | 15000 | 360 |
| ML92-062-03 | 64 | 17 | 6.7 | 2.2 | 2.9 | 3.5 | 2.7 | 0.53 | 0.13 | 0.03 | <0.01 | 0.02 | 1.5 | 100 | 0.04 | 93,000 | 48 | | 740 | 1 | 0.17 | 22,000 | 0.26 | 14 | 110 | 43 | 49,000 | | 25,000 | 44 | 14000 | 350 |
| ML95-82-1 | 63 | 17 | 6.1 | 2.7 | 1.4 | 3 | 2.7 | 0.63 | 0.12 | 0.05 | 0.02 | 0.02 | 2.1 | 99 | 0.59 | 92,000 | 100 | | 660 | 1.1 | 0.16 | 9,600 | 0.25 | 18 | 140 | 50 | 44,000 | | 23,000 | 39 | 17000 | 340 |
| ML95-93-01 | 60 | 19 | 7.4 | 3.1 | 1.2 | 2.7 | 3 | 0.73 | 0.13 | 0.04 | 0.03 | 0.03 | 2.8 | 100 | 0.3 | 96,000 | 85 | | 650 | 1.2 | 0.18 | 8,400 | 0.25 | 20 | 170 | 56 | 50,000 | | 26,000 | 37 | 18000 | 340 |
| ML95-93-02 | 63 | 17 | 7.5 | 2.7 | 1.6 | 3.1 | 2.3 | 0.64 | 0.13 | 0.04 | 0.03 | 0.02 | 2.2 | 100 | 0.19 | 91,000 | 34 | | 600 | 0.99 | 0.11 | 11,000 | 0.26 | 19 | 160 | 52 | 53,000 | | 22,000 | 38 | 17000 | 370 |
| ML95-93-04 | 63 | 15 | 8.2 | 2.4 | 3.2 | 4.2 | 1.6 | 0.55 | 0.14 | 0.05 | 0.02 | 0.02 | 1.8 | 100 | 0.17 | 83,000 | 2 | | 500 | 0.89 | 0.15 | 23,000 | 0.29 | 16 | 150 | 30 | 59,000 | | 15,000 | 38 | 15000 | 510 |
| ML00-221-04 | 60 | 18 | 8.7 | 3 | 1.4 | 2.4 | 2.7 | 0.74 | 0.13 | 0.03 | 0.02 | 0.02 | 3.1 | 100 | 0.05 | 92,000 | 21 | | 540 | 0.94 | 0.17 | 9,300 | 0.27 | 18 | 130 | 46 | 57,000 | | 23,000 | 43 | 17000 | 330 |
| ML08-236-3 | 61 | 17 | 7.8 | 2.8 | 2.7 | 3.2 | 2.2 | 0.62 | 0.11 | 0.06 | 0.03 | 0.02 | 2.2 | 100 | 0.43 | 89,000 | 34 | | 520 | 1.1 | 0.23 | 18,000 | 0.23 | 17 | 170 | 44 | 55,000 | | 20,000 | 44 | 17000 | 410 |
| ML90-04-01 | 65 | 17 | 5.7 | 2.4 | 1.7 | 3.6 | 2.3 | 0.64 | 0.12 | 0.04 | 0.03 | 0.02 | 2 | 100 | 0.36 | 92,000 | 18 | | 550 | 0.98 | 0.25 | 12,000 | 0.31 | 18 | 210 | 54 | 40,000 | | 22,000 | 37 | 15000 | 360 |
| ML90-09-2 | 63 | 16 | 6.3 | 2.3 | 3.1 | 4.3 | 2.3 | 0.55 | 0.15 | 0.06 | 0.02 | 0.02 | 1.7 | 100 | 0.49 | 84,000 | 9 | | 540 | 1 | 0.13 | 21,000 | 0.26 | 13 | 120 | 23 | 43,000 | | 19,000 | 40 | 14000 | 410 |
| ML90-10-1 | 67 | 16 | 4.7 | 2.3 | 1.4 | 3.6 | 2.2 | 0.48 | 0.1 | 0.04 | 0.03 | 0.02 | 1.8 | 99 | 0.47 | 84,000 | 36 | | 550 | 0.97 | 0.18 | 9,800 | 0.16 | 16 | 160 | 31 | 36,000 | | 20,000 | 35 | 14000 | 270 |
| ML90-10-3 | 65 | 16 | 6.7 | 2.3 | 2.1 | 3.1 | 2.5 | 0.46 | 0.11 | 0.05 | 0.02 | <0.01 | 1.4 | 99 | 0.41 | 78,000 | 9 | | 560 | 1.1 | 0.15 | 14,000 | 0.18 | 12 | 120 | 18 | 45,000 | | 20,000 | 45 | 13000 | 320 |
| ML90-12-01 | 66 | 16 | 6.3 | 2.4 | 1.6 | 3.1 | 2.4 | 0.61 | 0.12 | 0.03 | 0.03 | 0.02 | 1.9 | 100 | 0.05 | 87,000 | 110 | | 650 | 0.91 | 0.19 | 11,000 | 0.19 | 18 | 160 | 84 | 44,000 | | 21,000 | 35 | 15000 | 320 |
| ML90-14-2 | 62 | 17 | 7.8 | 2.5 | 2.9 | 3.2 | 2.3 | 0.57 | 0.12 | 0.06 | 0.02 | 0.02 | 1.6 | 100 | 0.43 | 89,000 | 29 | | 650 | 1.1 | 0.18 | 20,000 | 0.24 | 15 | 140 | 39 | 55,000 | | 19,000 | 44 | 15000 | 400 |
| ML95-82-3 | 66 | 15 | 6.7 | 2.3 | 3.3 | 3.9 | 1.9 | 0.51 | 0.14 | 0.06 | 0.02 | 0.02 | 1.5 | 100 | 3.3 | 75,000 | 74 | | 520 | 0.99 | 0.37 | 21,000 | 0.35 | 13 | 140 | 39 | 43,000 | | 16,000 | 33 | 13000 | 430 |
| ML08-225-02 | 62 | 18 | 6.4 | 2.8 | 1.6 | 3.2 | 2.8 | 0.66 | 0.12 | 0.05 | 0.02 | 0.02 | 2.4 | 100 | | 94,000 | 60 | 0.08 | 610 | 1.1 | 0.35 | 12,000 | 0.36 | 20 | 200 | 37 | 48,000 | 0.1 | 27,000 | 40 | 17000 | 350 |
| ML08-230-01 | 61 | 18 | 6.8 | 2.9 | 2.1 | 2.9 | 2.4 | 0.64 | 0.13 | 0.06 | 0.03 | 0.02 | 3.2 | 100 | | 91,000 | 36 | 0.06 | 510 | 1.2 | 0.1 | 15,000 | 0.31 | 18 | 220 | 37 | 48,000 | 0.1 | 22,000 | 45 | 17000 | 400 |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| ML08-232-01 | 63 | 18 | 6.1 | 2.6 | 1.4 | 3.4 | 2.5 | 0.67 | 0.13 | 0.06 | 0.03 | 0.02 | 2.2 | 100 | | 89,000 | 77 | 0.05 | 600 | 1 | 0.1 | 10,000 | 0.33 | 18 | 200 | 44 | 42,000 | 0.1 | 23,000 | 35 | 14000 | 320 |
| ML08-233-01 | 64 | 16 | 7.4 | 2.3 | 2.8 | 3.6 | 1.8 | 0.55 | 0.13 | 0.05 | 0.02 | 0.02 | 1.7 | 100 | | 84,000 | 10 | 0.06 | 520 | 0.93 | 0.09 | 20,000 | 0.3 | 14 | 140 | 25 | 53,000 | 0.1 | 17,000 | 33 | 14000 | 370 |
| ML08-240-01 | 63 | 17 | 7.6 | 2.4 | 2.9 | 4.2 | 2 | 0.58 | 0.12 | 0.05 | 0.02 | <0.01 | 1.6 | 100 | | 86,000 | 19 | 0.06 | 500 | 0.92 | 0.2 | 21,000 | 0.34 | 17 | 150 | 40 | 55,000 | 0.1 | 19,000 | 36 | 14000 | 390 |
| ML08-241-01 | 60 | 17 | 10 | 2.7 | 3 | 3 | 2.1 | 0.62 | 0.14 | 0.05 | 0.02 | 0.02 | 1.9 | 100 | | 87,000 | 32 | 0.06 | 560 | 1 | 0.09 | 22,000 | 0.28 | 16 | 150 | 42 | 72,000 | 0.1 | 20,000 | 36 | 15000 | 380 |
| ML08-245-02 | 68 | 16 | 5.4 | 2.3 | 1.5 | 3.4 | 2.1 | 0.55 | 0.11 | 0.05 | 0.02 | 0.02 | 1.7 | 100 | | 79,000 | 38 | 0.05 | 440 | 0.92 | 0.18 | 12,000 | 0.36 | 17 | 190 | 51 | 40,000 | 0.1 | 20,000 | 30 | 13000 | 320 |
| ML09-254-02 | 62 | 16 | 6.8 | 2.4 | 3.1 | 4 | 2 | 0.54 | 0.14 | 0.05 | 0.02 | <0.01 | 2.1 | 100 | | 84,000 | 11 | 0.05 | 550 | 1 | 0.09 | 22,000 | 0.32 | 14 | 140 | 37 | 49,000 | 0.1 | 19,000 | 38 | 14000 | 360 |
| ML95-105-03 | 65 | 17 | 6.2 | 2.7 | 1.7 | 3.2 | 2.5 | 0.61 | 0.12 | 0.04 | 0.02 | 0.02 | 2 | 100 | | 88,000 | 83 | 0.05 | 590 | 0.97 | 0.15 | 13,000 | 0.3 | 18 | 180 | 73 | 45,000 | 0.1 | 24,000 | 32 | 16000 | 320 |
| ML95-105-04 | 63 | 17 | 6.6 | 2.5 | 3.1 | 4.9 | 1.8 | 0.56 | 0.15 | 0.06 | 0.02 | <0.01 | 1.2 | 100 | | 86,000 | 49 | 0.06 | 540 | 0.99 | 0.09 | 23,000 | 0.4 | 14 | 140 | 24 | 47,000 | 0.1 | 17,000 | 40 | 14000 | 370 |
| ML95-107-03 | 63 | 18 | 6.8 | 2.9 | 1.6 | 2.9 | 2.7 | 0.66 | 0.12 | 0.05 | 0.03 | 0.03 | 2.1 | 100 | | 89,000 | 130 | 0.05 | 570 | 1 | 0.14 | 12,000 | 0.34 | 19 | 170 | 35 | 48,000 | 0.1 | 25,000 | 29 | 16000 | 310 |
| ML95-113-01 | 64 | 18 | 5.7 | 2.7 | 1.2 | 2.9 | 2.7 | 0.62 | 0.11 | 0.05 | 0.02 | <0.01 | 2.5 | 100 | | 93,000 | 23 | 0.05 | 680 | 1.1 | 0.1 | 8,600 | 0.36 | 16 | 170 | 44 | 40,000 | 0.1 | 26,000 | 39 | 16000 | 280 |
| ML95-113-02 | 62 | 16 | 8 | 2.4 | 3.3 | 3.2 | 2.1 | 0.59 | 0.15 | 0.06 | 0.02 | 0.02 | 1.9 | 100 | | 89,000 | 9 | 0.07 | 580 | 1.2 | 0.13 | 25,000 | 0.34 | 15 | 150 | 52 | 59,000 | 0.1 | 21,000 | 38 | 15000 | 380 |
| ML95-120-01 | 64 | 17 | 5.8 | 2.6 | 1.4 | 3.6 | 2.1 | 0.62 | 0.12 | 0.05 | 0.02 | 0.02 | 2.4 | 100 | | 90,000 | 83 | 0.04 | 470 | 1 | 0.26 | 10,000 | 0.29 | 17 | 180 | 48 | 43,000 | 0.1 | 21,000 | 32 | 16000 | 320 |
| ML95-82-02 | 67 | 14 | 6.7 | 2.3 | 2.8 | 3.6 | 1.8 | 0.5 | 0.12 | 0.04 | 0.02 | <0.01 | 1.8 | 100 | | 77,000 | 19 | 0.04 | 500 | 0.95 | 0.09 | 20,000 | 0.23 | 12 | 170 | 24 | 49,000 | 0.1 | 18,000 | 35 | 14000 | 350 |
| ML95-83-02 | 66 | 15 | 7.3 | 2.4 | 2.3 | 3.3 | 2.2 | 0.51 | 0.14 | 0.03 | 0.02 | 0.02 | 1.5 | 100 | | 81,000 | 56 | 0.04 | 530 | 1 | 0.14 | 17,000 | 0.25 | 14 | 140 | 38 | 54,000 | 0.1 | 22,000 | 39 | 14000 | 280 |
| ML95-85-01 | 64 | 16 | 7 | 2.3 | 2.8 | 3.9 | 2.1 | 0.53 | 0.15 | 0.04 | 0.02 | 0.02 | 2 | 100 | | 93,000 | 10 | 0.06 | 550 | 1.1 | 0.14 | 22,000 | 0.3 | 14 | 150 | 42 | 55,000 | 0.1 | 22,000 | 38 | 15000 | 340 |
| ML95-95-02 | 62 | 17 | 8.1 | 2.5 | 2.1 | 3.7 | 2.2 | 0.6 | 0.12 | 0.05 | 0.02 | 0.02 | 1.9 | 100 | | 94,000 | 22 | 0.04 | 600 | 1 | 0.12 | 17,000 | 0.3 | 15 | 150 | 43 | 61,000 | 0.1 | 23,000 | 36 | 16000 | 350 |
| ML95-105-01 | 53 | 5.3 | 36 | 1.7 | 2.4 | 0.54 | 0.6 | 0.11 | 0.21 | 0.05 | 0.02 | <0.01 | 0.79 | 100 | | 27,000 | 21 | 0.22 | 380 | 0.84 | 0.14 | 17,000 | 0.22 | 3.6 | 160 | 7.5 | 250,000 | 0.1 | 5,400 | 13 | 9700 | 350 |
| CAMLD264942 | 64 | 16 | 6.4 | 2.4 | 1.6 | 3.4 | 2.4 | 0.63 | 0.11 | 0.05 | 0.03 | | 1.7 | 99 | 0.08 | 21,000 | 180 | | 120 | <0.1 | 0.21 | 2,500 | 0.08 | 23 | 120 | 53 | 38,000 | 0.01 | 6,600 | 38 | 13,000 | 270 |
| CAEXD301646 | 65 | 16 | 7.5 | 2.3 | 1.9 | 2.7 | 2.6 | 0.61 | 0.12 | 0.04 | 0.03 | | 1.7 | 100 | 0.05 | 22,000 | 32 | 0.03 | 150 | <0.1 | 0.12 | 1,900 | 0.07 | 22 | 100 | 12 | 48,000 | 0.01 | 9,900 | 44 | 13,000 | 220 |
| CAMLD264928 | 64 | 16 | 5.6 | 2.4 | 1.5 | 3.3 | 1.9 | 0.58 | 0.11 | 0.05 | 0.03 | | 2 | 98 | 0.07 | 21,000 | 11 | | 69 | <0.1 | 0.15 | 2,300 | 0.06 | 21 | 130 | 48 | 36,000 | <0.01 | 4,400 | 39 | 14,000 | 250 |
| CAMLD264937 | 66 | 15 | 5.4 | 2 | 2.3 | 3.7 | 2.5 | 0.41 | 0.11 | 0.03 | 0.02 | | 1.3 | 100 | 0.03 | 22,000 | 5 | | 320 | <0.1 | 0.07 | 2,600 | 0.02 | 10 | 84 | 25 | 36,000 | <0.01 | 15,000 | 42 | 12,000 | 250 |
| CAMLD264938 | 64 | 16 | 6.5 | 2.1 | 2.1 | 3.7 | 2 | 0.55 | 0.11 | 0.05 | 0.03 | | 1.4 | 98 | 0.07 | 19,000 | 52 | | 180 | <0.1 | 0.2 | 3,300 | 0.03 | 20 | 110 | 40 | 41,000 | <0.01 | 8,600 | 35 | 12,000 | 280 |
| 163018 | 65 | 16 | 6.5 | 2.2 | 1.9 | 2.7 | 2.6 | 0.58 | 0.09 | 0.04 | 0.02 | | 2.4 | 100 | 0.07 | 25,000 | 25 | 0.01 | 170 | 0.2 | 0.23 | 6,600 | 0.06 | 20 | 77 | 36 | 42,000 | <0.01 | 8,900 | 37 | 13000 | 240 |
| 163058 | 60 | 18 | 8.3 | 2.6 | 2.1 | 2.5 | 3.4 | 0.69 | 0.11 | 0.04 | 0.03 | | 1.6 | 100 | 0.05 | 28,000 | 73 | 0.01 | 310 | <0.1 | 0.03 | 1,700 | 0.31 | 25 | 110 | 13 | 52,000 | <0.01 | 16,000 | 54 | 15,000 | 250 |
| 163425 | 62 | 18 | 7.1 | 2.9 | 1.9 | 1.8 | 3.5 | 0.71 | 0.12 | 0.05 | 0.03 | | 2.3 | 100 | 0.05 | 27,000 | 35 | 0.02 | 130 | <0.1 | 0.08 | 4,700 | 0.05 | 12 | 94 | 43 | 44,000 | <0.01 | 7,900 | 53 | 15,000 | 270 |
| CAEXD298980 | 64 | 17 | 5.9 | 2.4 | 1.6 | 3.6 | 2.4 | 0.64 | 0.12 | 0.05 | 0.02 | | 1.6 | 99 | 0.12 | 22,000 | 100 | 0.03 | 150 | <0.1 | 0.24 | 1,700 | 0.1 | 23 | 95 | 57 | 39,000 | <0.01 | 9,600 | 41 | 14,000 | 260 |
| CAEXD300379 | 67 | 16 | 5.6 | 2.1 | 1.6 | 3.9 | 1.9 | 0.53 | 0.09 | 0.05 | 0.02 | | 1.4 | 99 | 0.06 | 20,000 | 68 | 0.03 | 150 | <0.1 | 0.1 | 2,300 | 0.03 | 20 | 90 | 26 | 37,000 | <0.01 | 7,100 | 40 | 12,000 | 260 |
| CAEXD300408 | 62 | 16 | 8.3 | 2.2 | 2.6 | 3.2 | 2.9 | 0.54 | 0.13 | 0.05 | 0.02 | | 1.1 | 99 | 0.1 | 29,000 | 28 | 0.03 | 560 | <0.1 | 0.2 | 4,500 | 0.09 | 18 | 87 | 31 | 54,000 | <0.01 | 18,000 | 70 | 13,000 | 350 |
| CAEXD301865 | 62 | 16 | 9 | 2.2 | 3 | 2.6 | 3.1 | 0.45 | 0.13 | 0.05 | 0.02 | | 1.1 | 99 | 0.07 | 29,000 | 18 | 0.03 | 680 | 0.2 | 0.21 | 4,800 | 0.08 | 15 | 89 | 22 | 60,000 | <0.01 | 17,000 | 58 | 12000 | 350 |
| CAEXD301964 | 63 | 16 | 6.4 | 2.5 | 3 | 3.5 | 2.3 | 0.55 | 0.14 | 0.05 | <0.01 | | 0.8 | 98 | 0.32 | 24,000 | 24 | 0.03 | 390 | <0.1 | 0.13 | 3,200 | 0.04 | 17 | 75 | 33 | 43,000 | <0.01 | 16,000 | 42 | 14,000 | 300 |
| CAEXD301979 | 63 | 16 | 7.9 | 2.2 | 3.1 | 2.9 | 2.7 | 0.5 | 0.14 | 0.06 | 0.02 | | 0.76 | 99 | 0.09 | 29,000 | 280 | 0.03 | 460 | <0.1 | 0.13 | 3,300 | 0.09 | 17 | 100 | 21 | 53,000 | <0.01 | 19,000 | 56 | 12,000 | 390 |
| CAEXD302816 | 65 | 14 | 11 | 1.9 | 2.5 | 2 | 3.1 | 0.3 | 0.09 | 0.05 | <0.01 | | 1 | 100 | 0.05 | 25,000 | 4 | 0.03 | 800 | 0.2 | 0.1 | 5,500 | 0.05 | 8.1 | 38 | 6 | 65,000 | <0.01 | 18,000 | 55 | 9300 | 290 |
| CAEXD302829 | 63 | 15 | 8.2 | 2.2 | 2.7 | 3 | 2.4 | 0.46 | 0.11 | 0.06 | <0.01 | | 1.1 | 98 | 0.13 | 29,000 | 60 | 0.03 | 330 | <0.1 | 0.88 | 4,300 | 0.1 | 14 | 69 | 32 | 58,000 | <0.01 | 18,000 | 52 | 13,000 | 410 |
| CAEXD302851 | 64 | 16 | 7.2 | 2.3 | 3.2 | 3.8 | 2 | 0.51 | 0.13 | 0.06 | 0.02 | | 1.4 | 100 | 0.09 | 24,000 | 86 | 0.03 | 310 | <0.1 | 0.17 | 5,800 | 0.05 | 15 | 91 | 31 | 48,000 | <0.01 | 11,000 | 51 | 14,000 | 350 |
| CAEXD305469 | 66 | 16 | 5.5 | 2.1 | 2.8 | 3.3 | 2.4 | 0.55 | 0.1 | 0.05 | 0.03 | | 0.9 | 100 | 0.12 | 21,000 | 52 | 0.03 | 410 | <0.1 | 0.17 | 3,500 | 0.25 | 21 | 120 | 23 | 36,000 | <0.01 | 14,000 | 47 | 12,000 | 270 |
| CAEXD305489 | 65 | 16 | 7.7 | 2.1 | 2.8 | 2.6 | 3 | 0.49 | 0.12 | 0.05 | <0.01 | | 0.88 | 100 | 0.07 | 27,000 | 45 | 0.03 | 530 | <0.1 | 0.14 | 4,300 | 0.05 | 14 | 69 | 22 | 53,000 | <0.01 | 19,000 | 57 | 12,000 | 330 |
| CAEXD306783 | 65 | 16 | 5.8 | 2 | 2.6 | 3.5 | 2.6 | 0.46 | 0.13 | 0.04 | <0.01 | | 1.1 | 99 | 0.07 | 22,000 | 29 | 0.03 | 250 | <0.1 | 0.13 | 3,900 | 0.04 | 15 | 68 | 26 | 38,000 | <0.01 | 14,000 | 46 | 12,000 | 270 |
| CAEXD309001 | 63 | 18 | 6.5 | 2.4 | 2.1 | 3.3 | 2.7 | 0.66 | 0.1 | 0.04 | 0.02 | | 1.4 | 100 | 0.08 | 23,000 | 50 | 0.03 | 220 | <0.1 | 0.15 | 1,800 | 0.05 | 23 | 100 | 30 | 41,000 | <0.01 | 12,000 | 38 | 13,000 | 240 |
| CAEXD309016 | 61 | 16 | 7.3 | 2.3 | 2.7 | 3.1 | 2.3 | 0.53 | 0.13 | 0.06 | 0.02 | | 1.3 | 96 | 0.09 | 26,000 | 61 | 0.03 | 280 | <0.1 | 0.21 | 4,400 | 0.08 | 18 | 79 | 38 | 50,000 | <0.01 | 14,000 | 44 | 13,000 | 360 |
| CAMLD264963 | 65 | 16 | 6.6 | 2.5 | 1.5 | 3 | 2.2 | 0.61 | 0.13 | 0.05 | 0.03 | | 1.9 | 99 | 0.08 | 22,000 | 71 | | 100 | <0.1 | 0.16 | 2,600 | 0.05 | 19 | 130 | 45 | 41,000 | <0.01 | 5,300 | 41 | 14,000 | 280 |
| CAMLD264966 | 61 | 15 | 10 | 2.6 | 2.9 | 2.7 | 2.3 | 0.52 | 0.15 | 0.07 | 0.02 | | 1.4 | 98 | 0.14 | 32,000 | 170 | | 410 | <0.1 | 0.16 | 6,300 | 0.07 | 20 | 140 | 95 | 69,000 | <0.01 | 17,000 | 57 | 16,000 | 500 |
| CAMLD264968 | 65 | 16 | 6.6 | 2 | 3 | 3.6 | 2.5 | 0.53 | 0.14 | 0.05 | 0.02 | | 1.7 | 100 | 0.06 | 21,000 | 47 | | 160 | <0.1 | 0.12 | 7,900 | 0.07 | 16 | 110 | 27 | 43,000 | <0.01 | 5,900 | 44 | 12,000 | 360 |
| CAMLD264969 | 63 | 17 | 6.5 | 2 | 2.8 | 3 | 3.1 | 0.46 | 0.12 | 0.05 | 0.02 | | 1.6 | 99 | 0.07 | 22,000 | 21 | | 320 | 0.2 | 0.16 | 5,700 | 0.08 | 14 | 100 | 18 | 44,000 | <0.01 | 10,000 | 58 | 12000 | 340 |
| CAMLD264970 | 63 | 15 | 5.6 | 2.2 | 2.3 | 0.35 | 4.3 | 0.38 | 0.07 | 0.04 | 0.02 | | 2 | 95 | 0.07 | 32,000 | 150 | | 350 | 1.1 | 0.24 | 13,000 | 0.06 | 14 | 77 | 25 | 36,000 | <0.01 | 16,000 | 51 | 12000 | 260 |
| 163305 | 68 | 15 | 5.3 | 2 | 2 | 0.57 | 3.6 | 0.35 | 0.09 | 0.04 | <0.01 | | 1.8 | 98 | 0.09 | 27,000 | 360 | 0.03 | 240 | 0.4 | 0.21 | 10,000 | 0.05 | 9.9 | 34 | 22 | 34,000 | 0.01 | 12,000 | 39 | 10000 | 260 |
| CAEXD305504 | 64 | 15 | 8.3 | 2.3 | 2.9 | 2.5 | 2.5 | 0.5 | 0.12 | 0.06 | <0.01 | | 1.5 | 100 | 0.06 | 27,000 | 120 | 0.03 | 300 | <0.1 | 0.15 | 5,200 | 0.04 | 15 | 68 | 22 | 56,000 | <0.01 | 11,000 | 53 | 13,000 | 370 |
| CAMLD264927 | 60 | 18 | 7.9 | 2.8 | 2.1 | 2.9 | 2.2 | 0.67 | 0.11 | 0.06 | 0.03 | | 2 | 99 | 0.1 | 29,000 | 5 | | 160 | <0.1 | 0.16 | 2,100 | 0.06 | 26 | 130 | 57 | 53,000 | 0.01 | 9,100 | 58 | 17,000 | 340 |
| CAMLD264951 | 64 | 16 | 5.6 | 2.2 | 1.5 | 3.9 | 2 | 0.58 | 0.1 | 0.05 | 0.03 | | 1.3 | 97 | 0.11 | 20,000 | 11 | | 190 | <0.1 | 0.14 | 1,700 | 0.06 | 20 | 140 | 49 | 36,000 | 0.01 | 9,100 | 40 | 13,000 | 260 |
| CAMLD264926 | 58 | 17 | 9.2 | 3.1 | 2.2 | 2.5 | 2 | 0.72 | 0.12 | 0.06 | 0.03 | | 2.4 | 98 | 0.09 | 29,000 | 24 | | 82 | <0.1 | 0.31 | 3,000 | 0.11 | 31 | 130 | 51 | 55,000 | <0.01 | 3,600 | 44 | 17,000 | 290 |
| CAMLD264929 | 63 | 17 | 6.3 | 2.7 | 1.5 | 2.6 | 2.8 | 0.64 | 0.1 | 0.05 | 0.03 | | 2.2 | 99 | 0.05 | 22,000 | 110 | | 81 | <0.1 | 0.1 | 2,200 | 0.04 | 23 | 110 | 39 | 39,000 | <0.01 | 5,700 | 39 | 15,000 | 230 |
| CAMLD273963 | 67 | 16 | 5.1 | 1.8 | 2.7 | 3.7 | 2.3 | 0.44 | 0.12 | 0.04 | <0.01 | | 0.76 | 100 | 0.05 | 20,000 | 2 | | 320 | <0.1 | 0.29 | 3,000 | 0.05 | 12 | 74 | 32 | 33,000 | <0.01 | 15,000 | 36 | 11,000 | 280 |
| CAMLD264940 | 66 | 16 | 5.4 | 2.1 | 1.7 | 3.9 | 2.2 | 0.58 | 0.1 | 0.05 | 0.03 | | 2.1 | 99 | 0.29 | 19,000 | 12 | | 190 | <0.1 | 0.18 | 2,500 | 0.23 | 21 | 140 | 74 | 34,000 | <0.01 | 8,100 | 38 | 12,000 | 250 |
| CAMLD264945 | 61 | 17 | 7.5 | 2.5 | 1.9 | 2.5 | 3.1 | 0.64 | 0.12 | 0.05 | 0.03 | | 1.6 | 98 | 0.06 | 26,000 | 80 | | 240 | <0.1 | 0.13 | 2,900 | 0.03 | 23 | 120 | 29 | 46,000 | <0.01 | 13,000 | 42 | 14,000 | 270 |
| CAEXD207013 | 65 | 17 | 6.2 | 2.5 | 1.7 | 3.1 | 2.7 | 0.63 | 0.11 | 0.05 | 0.03 | | 1.7 | 100 | 0.21 | 22,000 | 29 | 0.02 | 150 | <0.1 | 0.16 | 2,100 | 0.19 | 21 | 100 | 49 | 38,000 | <0.01 | 9,200 | 43 | 14,000 | 270 |
| CAEXD298919 | 64 | 16 | 6.6 | 2.4 | 2.7 | 3.8 | 2.2 | 0.53 | 0.14 | 0.05 | <0.01 | | 1.6 | 100 | 0.07 | 21,000 | 160 | 0.03 | 150 | <0.1 | 0.31 | 5,700 | 0.07 | 17 | 67 | 34 | 44,000 | <0.01 | 6,000 | 43 | 14,000 | 310 |
| CAEXD306977 | 66 | 16 | 5.2 | 2.1 | 1.9 | 4.2 | 1.8 | 0.55 | 0.11 | 0.05 | 0.02 | | 1.3 | 98 | 0.1 | 19,000 | 27 | 0.03 | 210 | <0.1 | 0.18 | 2,400 | 0.07 | 21 | 99 | 42 | 34,000 | <0.01 | 9,100 | 38 | 12,000 | 250 |
| CAEXD307472 | 66 | 16 | 6.8 | 1.9 | 2.9 | 1.4 | 3.5 | 0.45 | 0.11 | 0.05 | <0.01 | | 1.2 | 100 | 0.06 | 32,000 | 360 | 0.03 | 380 | 0.4 | 0.43 | 9,100 | 0.03 | 14 | 55 | 31 | 43,000 | <0.01 | 17,000 | 45 | 10000 | 320 |
| CAEXD309452 | 65 | 16 | 8.3 | 2.4 | 2.8 | 2.8 | 2.5 | 0.56 | 0.13 | 0.06 | 0.02 | | 1.3 | 100 | 0.08 | 28,000 | 33 | 0.03 | 270 | <0.1 | 0.32 | 3,100 | 0.06 | 18 | 97 | 36 | 56,000 | <0.01 | 15,000 | 46 | 14,000 | 360 |
| CAMLD264948 | 63 | 16 | 5.4 | 1.7 | 2.9 | 4.5 | 1.9 | 0.46 | 0.13 | 0.06 | 0.03 | | 1.4 | 97 | 0.1 | 18,000 | 15 | | 210 | <0.1 | 0.18 | 7,600 | 0.1 | 13 | 120 | 39 | 36,000 | <0.01 | 8,200 | 43 | 10,000 | 370 |
| CAMLD264949 | 65 | 17 | 6 | 2.5 | 1.6 | 3 | 2.7 | 0.64 | 0.12 | 0.05 | 0.03 | | 1.7 | 100 | 0.1 | 22,000 | 120 | | 130 | <0.1 | 0.66 | 1,700 | 0.08 | 23 | 120 | 31 | 37,000 | <0.01 | 9,000 | 43 | 14,000 | 270 |
| CAMLD264953 | 61 | 18 | 7.1 | 2.7 | 1.8 | 3.1 | 3.1 | 0.71 | 0.14 | 0.06 | 0.04 | | 1.5 | 99 | 0.06 | 27,000 | 40 | | 270 | <0.1 | 0.11 | 2,000 | 0.04 | 25 | 150 | 32 | 47,000 | <0.01 | 15,000 | 54 | 16,000 | 340 |
| CAMLD264956 | 64 | 15 | 9.6 | 2.2 | 2.4 | 2.9 | 2.3 | 0.46 | 0.14 | 0.05 | 0.03 | | 0.98 | 99 | 0.09 | 32,000 | 130 | | 470 | <0.1 | 0.16 | 2,800 | 0.06 | 15 | 110 | 47 | 66,000 | <0.01 | 18,000 | 54 | 14,000 | 390 |
| CAMLD264959 | 61 | 17 | 6.1 | 2.7 | 1.7 | 3.1 | 2.6 | 0.65 | 0.12 | 0.05 | 0.03 | | 1.9 | 97 | 0.08 | 24,000 | 130 | | 170 | <0.1 | 0.09 | 2,200 | 0.07 | 22 | 120 | 39 | 39,000 | <0.01 | 8,700 | 39 | 16,000 | 280 |
| CAMLD264961 | 65 | 15 | 4.6 | 1.9 | 2.5 | 3.7 | 2 | 0.41 | 0.11 | 0.04 | 0.02 | | 0.84 | 96 | 0.05 | 19,000 | 6 | | 310 | <0.1 | 0.11 | 3,500 | 0.05 | 11 | 80 | 25 | 30,000 | <0.01 | 12,000 | 41 | 11,000 | 230 |
| CAMLD264972 | 63 | 16 | 7.7 | 2.4 | 2.6 | 3.3 | 2.2 | 0.58 | 0.12 | 0.05 | 0.02 | | 1.4 | 100 | 0.07 | 26,000 | 16 | | 290 | <0.1 | 0.08 | 3,500 | 0.07 | 20 | 130 | 35 | 50,000 | <0.01 | 13,000 | 46 | 14,000 | 340 |
| ML95-107-01 | 53 | 5.8 | 34 | 1.8 | 1.9 | 0.51 | 1.6 | 0.15 | 0.18 | 0.04 | <0.01 | <0.01 | 0.42 | 100 | | 30,000 | 3 | 0.05 | 460 | 1 | 0.09 | 14,000 | 0.21 | 4.9 | 120 | 3.7 | 260,000 | 0.1 | 15,000 | 23 | 10000 | 260 |
| ML95-107-02 | 55 | 9.1 | 25 | 1.9 | 3.1 | 1.2 | 1.9 | 0.22 | 0.18 | 0.06 | <0.01 | <0.01 | 1.9 | 99 | | 46,000 | 280 | 0.05 | 660 | 1.4 | 0.12 | 22,000 | 0.23 | 7.2 | 130 | 27 | 170,000 | 0.1 | 18,000 | 31 | 11000 | 360 |
| ML08-226-05 | 61 | 18 | 8.2 | 3.1 | 2 | 2.8 | 2.3 | 0.71 | 0.15 | 0.06 | 0.02 | 0.02 | 2.7 | 100 | | 94,000 | 95 | 0.07 | 480 | 1.1 | 0.26 | 14,000 | 0.41 | 20 | 180 | 33 | 60,000 | 0.1 | 22,000 | 48 | 19000 | 400 |
| M08-743-03 | 73 | 2.8 | 13 | 1.8 | 3.1 | 0.4 | 0.3 | 0.13 | 0.05 | 0.51 | 0.04 | <0.01 | 2.9 | 98 | 0.6 | 15,000 | 96 | | 29 | 0.19 | 0.27 | 22,000 | 1.4 | 15 | 240 | 70 | 91,000 | | 2,600 | 7 | 11000 | 3,500 |
| M08-748-03 | 45 | 14 | 10 | 6.8 | 11 | 2 | 0.05 | 0.74 | 0.05 | 0.21 | 0.06 | 0.05 | 11 | 100 | <0.01 | 73,000 | 11 | | 9 | 0.22 | 0.09 | 76,000 | 0.02 | 45 | 330 | 88 | 70,000 | | 500 | 38 | 40000 | 1,200 |

**Appendix D-5: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M09-817-01 | 66 | 4.3 | 18 | 3 | 3.1 | 0.52 | 0.73 | 0.19 | 0.04 | 0.55 | 0.03 | <0.01 | 2.1 | 98 | | 21,000 | 970 | 1.6 | 110 | 0.31 | 0.11 | 22,000 | 0.81 | 17 | 200 | 130 | 120,000 | 0.1 | 6,500 | 17 | 17000 | 3,500 |
| CAEXD257967 | 67 | 1.1 | 2.7 | 0.82 | 2 | 0.45 | 0.1 | 0.05 | <0.01 | 0.06 | 0.02 | | 2.6 | 77 | <0.01 | 2,300 | 78 | 2.7 | 9 | <0.1 | 0.11 | 14,000 | 0.09 | 3.4 | 84 | 6.7 | 19,000 | <0.01 | 500 | 3 | 4,600 | 470 |
| CAEXD265601 | 53 | 1.7 | 30 | 2.7 | 4.7 | 0.04 | 0.01 | 0.05 | 0.07 | 0.22 | <0.01 | | 2 | 95 | 0.32 | 9,100 | 710 | 6.2 | 16 | <0.1 | 0.4 | 32,000 | 1.9 | 25 | 7 | 680 | 130,000 | 0.01 | 100 | 1 | 3,900 | 710 |
| CAEXD290332 | 53 | 6.6 | 27 | 3.2 | 2.4 | 0.37 | 0.47 | 0.17 | 0.07 | 0.22 | 0.02 | | 3.2 | 96 | 0.54 | 27,000 | 7,100 | 2.9 | 29 | 0.2 | 0.65 | 16,000 | 1.5 | 21 | 31 | 110 | 140,000 | 0.02 | 2,100 | 13 | 11000 | 870 |
| CAEXD297489 | 56 | 0.85 | 23 | 3.1 | 5.6 | 0.07 | 0.08 | 0.02 | <0.01 | 0.75 | <0.01 | | 4.2 | 94 | 1.5 | 3,700 | 25,000 | 8.6 | 19 | <0.1 | 2.2 | 36,000 | 0.69 | 23 | 8 | 250 | 100,000 | 0.01 | 700 | 1 | 7,500 | 3,400 |
| CAEXD176520 | 63 | 2.5 | 19 | 2.1 | 3.4 | 0.04 | 0.13 | 0.06 | 0.04 | 0.28 | <0.01 | | 5 | 96 | 0.25 | 11,000 | 250 | 2.1 | 16 | <0.1 | 0.04 | 21,000 | 0.27 | 5.5 | 39 | 50 | 110,000 | <0.01 | 600 | 10 | 9,900 | 1,800 |
| CAEXD302345 | 58 | 0.61 | 16 | 2.5 | 7.9 | 0.03 | 0.02 | <0.01 | <0.01 | 0.41 | <0.01 | | 5.2 | 91 | 0.45 | 2,800 | 22,000 | 4.9 | 13 | <0.1 | 1.1 | 50,000 | 0.28 | 12 | 10 | 150 | 110,000 | <0.01 | 200 | 2 | 14,000 | 3,000 |
| CAEXD217369 | 39 | 13 | 8.9 | 11 | 9.4 | 0.54 | 1.8 | 0.4 | 0.03 | 0.12 | 0.08 | | 16 | 100 | 0.04 | 33,000 | 310 | 7.3 | 74 | 0.2 | 0.13 | 65,000 | 0.13 | 52 | 320 | 31 | 53,000 | <0.01 | 2,400 | 55 | 59000 | 1,000 |
| CAEXD290362 | 42 | 9 | 18 | 4.8 | 10 | 1.6 | 1.1 | 0.38 | <0.01 | 0.43 | 0.02 | | 6.7 | 94 | 0.28 | 22,000 | 830 | 2.2 | 180 | 0.2 | 2.3 | 62,000 | 0.29 | 43 | 110 | 180 | 110,000 | <0.01 | 8,900 | 27 | 27000 | 3,100 |
| CAEXD293633 | 44 | 13 | 12 | 4.2 | 6.7 | 4.4 | 1.1 | 1 | 0.1 | 0.17 | <0.01 | | 9.4 | 95 | 0.06 | 26,000 | 120 | 2.6 | 170 | 0.3 | 0.12 | 47,000 | 0.2 | 47 | 58 | 48 | 78,000 | 0.02 | 9,500 | 34 | 25000 | 1,300 |
| CAEXD293885 | 52 | 13 | 15 | 3.2 | 5.7 | 2.9 | 0.49 | 1.6 | 0.23 | 0.15 | <0.01 | | 3 | 97 | 0.33 | 26,000 | 9 | 13 | 190 | <0.1 | 0.05 | 25,000 | 0.09 | 46 | 29 | 120 | 77,000 | <0.01 | 3,600 | 28 | 16,000 | 730 |
| CAEXD197112 | 62 | 0.93 | 20 | 2 | 4.1 | 0.02 | 0.11 | 0.02 | 0.02 | 0.37 | 0.02 | | 2.7 | 92 | 1.7 | 3,900 | 140 | 4.7 | 21 | <0.1 | 0.84 | 26,000 | 0.55 | 8 | 47 | 380 | 110,000 | <0.01 | 600 | 1 | 7,000 | 2,100 |
| CAEXD297585 | 53 | 5.8 | 32 | 1.9 | 2.7 | 0.98 | 0.57 | 0.2 | 0.19 | 0.05 | <0.01 | | 1 | 98 | 1 | 12,000 | 4,500 | 5.1 | 200 | <0.1 | 0.4 | 8,500 | 0.05 | 4.3 | 32 | 25 | 130,000 | <0.01 | 3,400 | 10 | 3,200 | 88 |
| CAEXD302054 | 62 | 1.9 | 21 | 2 | 5.3 | 0.03 | 0.02 | 0.07 | 0.05 | 0.29 | <0.01 | | 1.8 | 94 | 3.5 | 9,300 | 76 | 2 | 14 | <0.1 | 0.27 | 35,000 | 1.6 | 9.3 | 28 | 180 | 100,000 | <0.01 | 200 | 4 | 4,900 | 1,200 |
| M08-735-02 | 42 | 14 | 12 | 6.1 | 10 | 1.4 | 1.5 | 0.88 | 0.07 | 0.23 | 0.04 | 0.05 | 12 | 100 | 0.1 | 74,000 | 200 | | 230 | 0.36 | 0.09 | 70,000 | 0.39 | 44 | 210 | 120 | 82,000 | | 14,000 | 33 | 36000 | 1,400 |
| M09-802-02 | 76 | 1.2 | 17 | 1.5 | 1.2 | 0.06 | 0.01 | 0.03 | 0.05 | 0.37 | 0.02 | <0.01 | 1.9 | 99 | | 5,700 | 120 | 0.02 | 9 | 0.25 | 0.09 | 8,500 | 0.23 | 8.4 | 210 | 77 | 120,000 | 0.1 | 160 | 2 | 8400 | 2,600 |
| M09-803-01 | 62 | 0.88 | 27 | 2.3 | 2.8 | 0.06 | 0.02 | 0.05 | 0.15 | 0.5 | <0.01 | <0.01 | 2.4 | 98 | | 4,400 | 95 | 0.08 | 4 | 0.31 | 0.11 | 20,000 | 0.51 | 7.8 | 140 | 110 | 180,000 | 0.1 | 180 | 2 | 13000 | 3,400 |
| M10-935-02 | 81 | 0.43 | 14 | 1.1 | 1.4 | 0.06 | 0.04 | 0.02 | 0.07 | 0.41 | 0.02 | <0.01 | 2.3 | 100 | | 2,400 | 2,200 | 0.27 | 10 | 0.12 | 0.15 | 10,000 | 0.17 | 7.1 | 240 | 110 | 97,000 | 0.1 | 340 | 2 | 5600 | 2,900 |
| M98-248-01 | 74 | 0.44 | 15 | 1.4 | 1.8 | 0.12 | 0.04 | <0.01 | 0.06 | 0.55 | 0.02 | <0.01 | 4.2 | 98 | | 2,300 | 23 | 0.02 | 6 | 0.2 | 0.19 | 13,000 | 0.62 | 7.9 | 230 | 78 | 110,000 | 0.1 | 360 | 2 | 7800 | 3,800 |
| CAEXD183497 | 69 | 0.55 | 25 | 2.2 | 2.5 | 0.05 | 0.04 | 0.05 | 0.07 | 0.52 | <0.01 | | 1.3 | 100 | 0.42 | 2,500 | 430 | 0.08 | 14 | <0.1 | 0.08 | 18,000 | 0.34 | 4.4 | 9 | 71 | 95,000 | 0.07 | 300 | 1 | 2,700 | 1,500 |
| CAEXD222666 | 66 | 0.74 | 14 | 0.91 | 6.6 | 0.04 | 0.07 | 0.03 | 0.1 | 0.41 | <0.01 | | 3.2 | 92 | 0.16 | 3,600 | 280 | 0.06 | 30 | <0.1 | 0.37 | 43,000 | 0.06 | 6 | 42 | 120 | 84,000 | <0.01 | 600 | 1 | 3,500 | 2,500 |
| CAEXD257975 | 50 | 2.2 | 29 | 3.1 | 6.1 | 0.07 | 0.17 | 0.06 | 0.06 | 0.21 | <0.01 | | 6.3 | 97 | 0.16 | 11,000 | 10,000 | 0.26 | 27 | 0.2 | 1.2 | 42,000 | 0.22 | 14 | 25 | 62 | 200,000 | <0.01 | 1,400 | 4 | 12000 | 1,300 |
| CAEXD184497 | 66 | 1.5 | 23 | 2.3 | 4 | 0.04 | 0.08 | 0.03 | 0.04 | 0.36 | <0.01 | | 1.2 | 99 | 0.17 | 6,700 | 110 | 0.02 | 20 | 0.2 | 0.05 | 25,000 | 1.6 | 2.9 | 6 | 70 | 83,000 | 0.01 | 700 | 2 | 3200 | 1,000 |
| CAEXD176511 | 63 | 1.7 | 21 | 2.8 | 3.5 | 0.04 | 0.06 | 0.06 | 0.02 | 0.54 | <0.01 | | 3.2 | 96 | 0.06 | 8,600 | 620 | 0.33 | 13 | <0.1 | 0.09 | 23,000 | 0.96 | 5.8 | 54 | 91 | 91,000 | <0.01 | 400 | 2 | 9,000 | 2,300 |
| CAEXD185037 | 68 | 0.22 | 7.3 | 0.78 | 1.1 | 0.03 | 0.01 | 0.01 | 0.02 | 0.24 | 0.03 | | 1.4 | 79 | 0.03 | 1,100 | 8 | 0.23 | 5 | <0.1 | 0.02 | 7,700 | 0.07 | 2.2 | 90 | 32 | 42,000 | <0.01 | 100 | 1 | 2,600 | 1,300 |
| CAEXD193892 | 86 | 0.37 | 10 | 1.3 | 1.8 | 0.04 | 0.03 | <0.01 | <0.01 | 0.35 | 0.03 | | 0.85 | 100 | 0.06 | 1,700 | 130 | 0.24 | 6 | <0.1 | 0.02 | 12,000 | 0.26 | 2.8 | 100 | 28 | 27,000 | <0.01 | 300 | 1 | 1,700 | 1,100 |
| CAEXD302349 | 62 | 0.45 | 22 | 2.7 | 4.6 | 0.07 | 0.04 | 0.02 | 0.06 | 0.89 | <0.01 | | 2.3 | 95 | 0.08 | 1,900 | 470 | 0.98 | 11 | <0.1 | 0.29 | 32,000 | 0.62 | 6.5 | 30 | 330 | 82,000 | 0.01 | 300 | 1 | 5,200 | 3,400 |
| GT09-07-01 | 48 | 14 | 11 | 5.2 | 10 | 2.6 | 0.19 | 0.98 | 0.08 | 0.19 | 0.03 | 0.05 | 6.2 | 98 | 0.09 | 76,000 | 4 | | 59 | 0.26 | 0.09 | 68,000 | 0.13 | 42 | 170 | 100 | 71,000 | | 2,000 | 29 | 32000 | 1,100 |
| GT09-07-02 | 43 | 12 | 11 | 5.2 | 13 | 1.9 | 0.5 | 1.2 | 0.2 | 0.25 | 0.03 | 0.04 | 9.4 | 98 | 0.36 | 50,000 | 9 | | 64 | 0.54 | 0.09 | 77,000 | 0.34 | 34 | 170 | 59 | 68,000 | | 4,800 | 48 | 25000 | 1,700 |
| M08-729-01 | 44 | 15 | 10 | 5.9 | 11 | 2.2 | 0.44 | 0.98 | 0.1 | 0.24 | 0.05 | 0.06 | 8.9 | 99 | <0.01 | 79,000 | 7 | | 98 | 0.27 | 0.09 | 77,000 | 0.09 | 49 | 260 | 160 | 71,000 | | 4,000 | 55 | 35000 | 1,300 |
| M08-729-02 | 45 | 14 | 9.6 | 6.1 | 11 | 2 | 0.13 | 0.89 | 0.1 | 0.24 | 0.05 | 0.05 | 10 | 100 | 0.12 | 73,000 | 8 | | 57 | 0.23 | 0.09 | 74,000 | 0.09 | 38 | 260 | 100 | 65,000 | | 1,200 | 49 | 35000 | 1,500 |
| M08-729-03 | 44 | 14 | 11 | 5.1 | 12 | 1.7 | 0.6 | 1 | 0.07 | 0.25 | 0.05 | 0.06 | 11 | 100 | <0.01 | 76,000 | 40 | | 220 | 0.24 | 0.09 | 79,000 | 0.14 | 46 | 260 | 84 | 76,000 | | 5,500 | 46 | 31000 | 1,400 |
| M08-729-04 | 51 | 16 | 8.3 | 4.4 | 8.1 | 2.6 | 0.73 | 1 | 0.08 | 0.2 | 0.04 | 0.06 | 7.7 | 100 | 0.12 | 90,000 | 68 | | 130 | 0.28 | 0.09 | 58,000 | 0.13 | 41 | 190 | 110 | 61,000 | | 6,700 | 46 | 27000 | 1,100 |
| M08-729-06 | 43 | 14 | 12 | 6.1 | 8.9 | 3.2 | 0.44 | 0.83 | 0.07 | 0.2 | 0.04 | 0.05 | 11 | 100 | 0.02 | 75,000 | 120 | | 64 | 0.43 | 0.09 | 61,000 | 0.07 | 43 | 230 | 81 | 82,000 | | 4,000 | 43 | 37000 | 1,200 |
| M08-734-01 | 47 | 15 | 11 | 5.5 | 9.9 | 2.7 | 0.2 | 1 | 0.09 | 0.19 | 0.04 | 0.06 | 8.3 | 100 | 0.14 | 78,000 | 9 | | 47 | 0.25 | 0.09 | 65,000 | 1.4 | 40 | 160 | 150 | 75,000 | | 1,900 | 21 | 32000 | 1,100 |
| M08-734-02 | 43 | 13 | 14 | 6.8 | 11 | 0.9 | 0.33 | 0.92 | 0.12 | 0.3 | 0.03 | 0.05 | 11 | 99 | 0.14 | 67,000 | 4 | | 110 | 0.32 | 0.09 | 71,000 | 2 | 34 | 150 | 91 | 95,000 | | 3,000 | 46 | 40000 | 1,800 |
| M08-734-03 | 43 | 14 | 12 | 6.3 | 10 | 2.6 | 0.32 | 0.86 | 0.07 | 0.19 | 0.04 | 0.05 | 10 | 100 | 0.08 | 71,000 | 12 | | 41 | 0.23 | 0.09 | 65,000 | 0.53 | 42 | 200 | 120 | 77,000 | | 2,900 | 37 | 35000 | 1,100 |
| M08-734-04 | 43 | 12 | 11 | 7.6 | 9.1 | 1.6 | 0.68 | 0.58 | 0.05 | 0.19 | 0.04 | 0.04 | 14 | 100 | 0.23 | 69,000 | 86 | | 68 | 0.26 | 0.09 | 63,000 | 0.59 | 41 | 200 | 190 | 75,000 | | 6,200 | 30 | 46000 | 1,100 |
| M08-735-01 | 50 | 15 | 9.5 | 4.1 | 9.1 | 1.9 | 0.96 | 1.1 | 0.1 | 0.19 | 0.03 | 0.06 | 7.4 | 100 | 0.15 | 81,000 | 28 | | 140 | 0.29 | 0.09 | 60,000 | 0.63 | 41 | 160 | 140 | 66,000 | | 8,600 | 27 | 24000 | 1,100 |
| M08-735-03 | 44 | 13 | 12 | 5.5 | 11 | 2.8 | 0.41 | 0.87 | 0.06 | 0.21 | 0.04 | 0.05 | 11 | 100 | 0.06 | 72,000 | 28 | | 69 | 0.26 | 0.09 | 74,000 | 0.3 | 40 | 190 | 110 | 80,000 | | 3,800 | 28 | 32000 | 1,200 |
| M08-740-01 | 44 | 14 | 12 | 4.3 | 11 | 1.7 | 0.34 | 0.88 | 0.06 | 0.31 | 0.05 | 0.05 | 10 | 99 | <0.01 | 78,000 | 68 | | 66 | 0.23 | 0.09 | 78,000 | 0.05 | 47 | 260 | 87 | 83,000 | | 3,100 | 38 | 26000 | 1,800 |
| M08-740-02 | 43 | 16 | 8.3 | 6.7 | 9.9 | 2.6 | 0.25 | 0.54 | 0.04 | 0.15 | 0.08 | 0.05 | 11 | 100 | <0.01 | 90,000 | 140 | | 84 | 0.17 | 0.15 | 68,000 | <0.02 | 53 | 420 | 46 | 58,000 | | 2,400 | 51 | 40000 | 880 |
| M08-740-03 | 50 | 14 | 11 | 5.5 | 9.9 | 2.5 | 0.28 | 0.93 | 0.07 | 0.16 | 0.04 | 0.06 | 5.7 | 100 | <0.01 | 76,000 | 3 | | 120 | 0.2 | 0.09 | 66,000 | <0.02 | 40 | 180 | 100 | 72,000 | | 2,600 | 30 | 32000 | 910 |
| M08-740-04 | 42 | 13 | 11 | 5.5 | 11 | 3.1 | 0.68 | 0.83 | 0.06 | 0.23 | 0.04 | 0.05 | 12 | 99 | 0.12 | 63,000 | 40 | | 64 | 0.29 | 0.09 | 64,000 | 0.16 | 38 | 200 | 84 | 70,000 | | 5,400 | 39 | 29000 | 1,300 |
| M08-740-05 | 42 | 13 | 10 | 6.8 | 12 | 1.8 | 0.96 | 0.79 | 0.06 | 0.27 | 0.04 | 0.05 | 12 | 99 | 0.05 | 69,000 | 87 | | 140 | 0.37 | 0.09 | 81,000 | 0.12 | 50 | 230 | 110 | 70,000 | | 8,700 | 49 | 40000 | 1,600 |
| M08-742-01 | 53 | 15 | 8.8 | 4.6 | 7.8 | 3.6 | 0.64 | 0.96 | 0.08 | 0.16 | 0.04 | 0.06 | 5.6 | 100 | 0.07 | 81,000 | 4 | | 120 | 0.21 | 0.09 | 50,000 | 0.38 | 42 | 210 | 110 | 60,000 | | 5,700 | 15 | 26000 | 940 |
| M08-742-02 | 47 | 14 | 12 | 6.5 | 8.9 | 1.9 | 0.4 | 0.92 | 0.08 | 0.2 | 0.03 | 0.05 | 8.2 | 99 | 0.08 | 74,000 | 10 | | 74 | 0.2 | 0.09 | 60,000 | 0.32 | 41 | 150 | 140 | 80,000 | | 3,600 | 26 | 38000 | 1,200 |
| M08-742-03 | 46 | 13 | 12 | 6.3 | 9 | 2 | 0.52 | 0.99 | 0.12 | 0.17 | 0.03 | 0.04 | 11 | 100 | 0.19 | 68,000 | 29 | | 68 | 0.37 | 0.09 | 60,000 | 0.43 | 37 | 170 | 62 | 77,000 | | 4,700 | 37 | 37000 | 1,100 |
| M08-742-04 | 43 | 14 | 10 | 6.7 | 10 | 2.1 | 0.48 | 0.71 | 0.05 | 0.18 | 0.04 | 0.04 | 12 | 99 | 0.08 | 74,000 | 20 | | 33 | 0.33 | 0.09 | 71,000 | 0.19 | 42 | 190 | 110 | 72,000 | | 4,400 | 49 | 40000 | 1,100 |
| M08-743-01 | 49 | 14 | 13 | 6.4 | 11 | 2.2 | 0.23 | 0.99 | 0.1 | 0.2 | 0.03 | 0.05 | 4 | 100 | 0.11 | 74,000 | 2 | | 45 | 0.31 | 0.09 | 70,000 | 0.24 | 42 | 140 | 100 | 88,000 | | 2,000 | 18 | 37000 | 1,100 |
| M08-743-02 | 48 | 16 | 8 | 6 | 9 | 3 | 0.66 | 0.82 | 0.06 | 0.18 | 0.04 | 0.05 | 9.3 | 100 | 0.19 | 80,000 | 74 | | 79 | 0.24 | 0.09 | 56,000 | 0.19 | 44 | 210 | 120 | 52,000 | | 5,700 | 43 | 33000 | 990 |
| M08-743-04 | 49 | 15 | 12 | 7.2 | 9.6 | 2.6 | 0.3 | 0.99 | 0.09 | 0.21 | 0.05 | 0.06 | 2.7 | 100 | 0.24 | 83,000 | 5 | | 110 | 0.35 | 0.09 | 66,000 | 0.55 | 51 | 240 | 120 | 85,000 | | 2,800 | 24 | 44000 | 1,200 |
| M08-747-01 | 42 | 14 | 12 | 4.6 | 14 | 1.9 | 0.13 | 0.89 | 0.07 | 0.33 | 0.06 | 0.06 | 9.9 | 99 | <0.01 | 71,000 | 2 | | 79 | 0.26 | 0.09 | 93,000 | 0.18 | 49 | 300 | 120 | 76,000 | | 1,200 | 25 | 26000 | 1,900 |
| M08-747-02 | 49 | 13 | 11 | 8.1 | 11 | 2.6 | 0.15 | 0.56 | 0.04 | 0.19 | 0.06 | 0.04 | 4.2 | 100 | <0.01 | 74,000 | 3 | | 52 | 0.14 | 0.09 | 76,000 | 0.29 | 43 | 360 | 92 | 77,000 | | 1,400 | 24 | 49000 | 1,100 |
| M08-747-03 | 42 | 13 | 11 | 8 | 11 | 1.9 | 0.1 | 0.6 | 0.04 | 0.17 | 0.03 | 0.03 | 12 | 100 | <0.01 | 72,000 | 2 | | 3 | 0.17 | 0.09 | 71,000 | <0.02 | 47 | 190 | 90 | 73,000 | | 890 | 54 | 47000 | 1,000 |
| M08-748-01 | 49 | 14 | 13 | 5.4 | 8.4 | 2.4 | 0.95 | 1.1 | 0.14 | 0.18 | 0.02 | 0.04 | 4.4 | 100 | 0.09 | 77,000 | 6 | | 320 | 0.55 | 0.09 | 57,000 | 0.07 | 49 | 140 | 110 | 91,000 | | 8,400 | 41 | 31000 | 1,100 |
| M08-748-02 | 43 | 12 | 13 | 6 | 12 | 1.5 | 0.53 | 0.71 | 0.07 | 0.26 | 0.05 | 0.04 | 10 | 99 | <0.01 | 65,000 | 4 | | 130 | 0.34 | 0.09 | 82,000 | 0.13 | 39 | 280 | 88 | 90,000 | | 4,800 | 42 | 36000 | 1,500 |
| M08-750-01 | 43 | 12 | 9.8 | 5.6 | 12 | 2.9 | 1 | 0.82 | 0.09 | 0.21 | 0.03 | 0.05 | 12 | 100 | 0.18 | 67,000 | 3 | | 170 | 0.46 | 0.09 | 81,000 | 0.34 | 37 | 140 | 64 | 69,000 | | 9,400 | 38 | 33000 | 1,200 |
| M08-750-02 | 45 | 14 | 13 | 4.5 | 7.4 | 3.4 | 1.1 | 1.1 | 0.13 | 0.18 | 0.02 | 0.04 | 10 | 100 | 0.47 | 69,000 | 100 | | 220 | 0.8 | 0.09 | 47,000 | 0.58 | 43 | 64 | 97 | 85,000 | | 9,500 | 25 | 26000 | 1,000 |
| M08-752-01 | 45 | 13 | 10 | 6.4 | 13 | 2.5 | 0.35 | 0.73 | 0.06 | 0.23 | 0.06 | 0.05 | 7.5 | 99 | <0.01 | 72,000 | 4 | | 100 | 0.25 | 0.09 | 90,000 | 0.03 | 41 | 280 | 110 | 72,000 | | 3,200 | 26 | 38000 | 1,200 |
| M08-752-02 | 54 | 13 | 15 | 4.1 | 7.3 | 2.4 | 1.2 | 1.6 | 0.23 | 0.19 | <0.01 | 0.05 | 1.3 | 100 | 0.09 | 65,000 | 4 | | 510 | 0.79 | 0.09 | 45,000 | 0.13 | 39 | 77 | 90 | 95,000 | | 9,800 | 32 | 22000 | 980 |
| M08-752-03 | 47 | 13 | 12 | 5.7 | 7.7 | 2.5 | 0.87 | 1 | 0.12 | 0.19 | 0.03 | 0.05 | 10 | 100 | 0.2 | 70,000 | 87 | | 140 | 0.53 | 0.09 | 51,000 | 0.18 | 46 | 150 | 110 | 83,000 | | 7,600 | 41 | 34000 | 1,100 |
| M08-755-01 | 47 | 14 | 12 | 5.7 | 11 | 2.1 | 0.37 | 0.94 | 0.07 | 0.21 | 0.04 | 0.05 | 6.6 | 100 | 0.1 | 78,000 | 3 | | 140 | 0.28 | 0.09 | 80,000 | 0.14 | 47 | 210 | 100 | 82,000 | | 3,500 | 27 | 35000 | 1,300 |
| M08-755-02 | 47 | 13 | 12 | 5.7 | 12 | 1.4 | 0.51 | 0.93 | 0.11 | 0.24 | 0.03 | 0.05 | 7.3 | 100 | <0.01 | 73,000 | 2 | | 210 | 0.44 | 0.09 | 86,000 | 0.08 | 41 | 170 | 95 | 82,000 | | 4,700 | 30 | 35000 | 1,400 |
| M08-755-03 | 45 | 13 | 11 | 7.8 | 10 | 2.4 | 0.05 | 0.75 | 0.05 | 0.17 | 0.05 | 0.05 | 8.6 | 100 | 0.03 | 71,000 | 16 | | 11 | 0.24 | 0.09 | 67,000 | 0.09 | 46 | 260 | 110 | 77,000 | | 480 | 43 | 45000 | 950 |
| M09-798-01 | 51 | 15 | 15 | 4.7 | 8.8 | 2.5 | 0.93 | 1.3 | 0.16 | 0.19 | <0.01 | 0.04 | 0.86 | 100 | 0.27 | 77,000 | 4 | | 320 | 0.73 | 0.09 | 57,000 | 0.28 | 47 | 72 | 120 | 93,000 | | 9,100 | 23 | 28000 | 1,200 |
| M09-798-02 | 51 | 15 | 14 | 5.2 | 9 | 2.8 | 0.66 | 1.1 | 0.13 | 0.18 | 0.02 | 0.03 | 1.1 | 100 | 0.22 | 78,000 | 4 | | 200 | 0.66 | 0.09 | 57,000 | 0.17 | 45 | 110 | 110 | 87,000 | | 6,300 | 22 | 29000 | 1,100 |
| M09-816-01 | 47 | 13 | 11 | 5.1 | 14 | 1.8 | 0.08 | 0.86 | 0.07 | 0.22 | 0.03 | 0.05 | 5.5 | 99 | 0.12 | 69,000 | 2 | | 49 | 0.27 | 0.09 | 88,000 | 0.14 | 40 | 160 | 91 | 72,000 | | 850 | 14 | 30000 | 1,300 |
| M09-816-02 | 48 | 13 | 12 | 6.2 | 12 | 2 | 0.23 | 0.9 | 0.08 | 0.19 | 0.03 | 0.05 | 3.5 | 98 | 0.15 | 64,000 | 2 | | 88 | 0.4 | 0.09 | 75,000 | 0.1 | 41 | 170 | 110 | 73,000 | | 2,300 | 16 | 34000 | 1,100 |
| M09-855-01 | 43 | 11 | 18 | 4 | 8.9 | 1 | 0.67 | 0.65 | 0.06 | 0.43 | 0.03 | 0.03 | 4.6 | 93 | 0.53 | 55,000 | 220 | | 120 | 0.57 | 0.16 | 56,000 | 1.2 | 53 | 180 | 330 | 110,000 | | 6,300 | 27 | 23000 | 2,800 |

**Appendix D-5: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M09-855-02 | 44 | 13 | 11 | 5.9 | 9.8 | 2.1 | 0.38 | 0.78 | 0.07 | 0.27 | 0.05 | 0.04 | 10 | 97 | 0.27 | 24,000 | 110 | | 74 | 0.55 | 0.09 | 61,000 | 0.29 | 44 | 290 | 86 | 72,000 | | 3,500 | 45 | 19000 | 1,900 |
| M09-857-01 | 47 | 13 | 9.9 | 5.5 | 11 | 2.7 | 0.7 | 0.9 | 0.09 | 0.21 | 0.04 | 0.04 | 7.3 | 98 | 0.17 | 64,000 | 6 | | 170 | 0.37 | 0.09 | 64,000 | 0.24 | 40 | 150 | 110 | 61,000 | | 6,500 | 34 | 30000 | 1,200 |
| M09-858-01 | 48 | 14 | 9.9 | 5.8 | 13 | 2.4 | 0.14 | 0.91 | 0.07 | 0.2 | 0.04 | 0.05 | 3.4 | 98 | 0.11 | 66,000 | 2 | | 110 | 0.31 | 0.09 | 84,000 | 0.1 | 40 | 160 | 94 | 64,000 | | 1,400 | 15 | 32000 | 1,300 |
| M09-858-02 | 48 | 13 | 11 | 5.6 | 13 | 2.3 | 0.12 | 0.89 | 0.07 | 0.2 | 0.04 | 0.05 | 4 | 98 | 0.13 | 66,000 | 2 | | 49 | 0.33 | 0.09 | 77,000 | 0.11 | 36 | 160 | 98 | 70,000 | | 1,200 | 20 | 31000 | 1,200 |
| M09-862-01 | 43 | 12 | 11 | 6.2 | 11 | 2.2 | 0.41 | 0.83 | 0.07 | 0.19 | 0.03 | 0.04 | 9.7 | 97 | 0.17 | 63,000 | 13 | | 89 | 0.31 | 0.09 | 70,000 | 0.19 | 41 | 150 | 83 | 74,000 | | 4,100 | 41 | 36000 | 1,200 |
| M09-866-01 | 40 | 11 | 15 | 5.1 | 12 | 0.35 | 0.75 | 0.88 | 0.12 | 0.35 | 0.03 | 0.04 | 9.9 | 96 | 0.35 | 57,000 | 33 | | 200 | 0.49 | 0.09 | 79,000 | 0.54 | 37 | 140 | 130 | 98,000 | | 7,400 | 40 | 30000 | 2,200 |
| M09-866-02 | 43 | 12 | 11 | 5.2 | 12 | 1.8 | 0.56 | 1 | 0.15 | 0.28 | 0.04 | 0.04 | 12 | 98 | 0.36 | 59,000 | 39 | | 190 | 0.63 | 0.09 | 75,000 | 0.32 | 34 | 150 | 62 | 70,000 | | 5,300 | 35 | 30000 | 1,700 |
| M08-733-01 | 45 | 14 | 11 | 4.2 | 12 | 2 | 0.36 | 0.85 | 0.06 | 0.32 | 0.04 | 0.05 | 9.8 | 100 | | 73,000 | 15 | 0.02 | 110 | 0.24 | 0.09 | 86,000 | 0.18 | 42 | 220 | 83 | 78,000 | 0.1 | 3,500 | 31 | 24000 | 1,700 |
| M08-733-02 | 45 | 14 | 11 | 5.3 | 11 | 2.5 | 0.42 | 0.81 | 0.06 | 0.23 | 0.04 | 0.04 | 9.2 | 100 | | 71,000 | 7 | 0.02 | 170 | 0.23 | 0.09 | 79,000 | 0.19 | 42 | 200 | 110 | 77,000 | 0.1 | 4,100 | 33 | 30000 | 1,200 |
| M09-802-01 | 42 | 12 | 12 | 6.7 | 14 | 1.6 | 0.28 | 0.58 | 0.05 | 0.25 | 0.07 | 0.04 | 10 | 99 | | 62,000 | 3 | 0.02 | 140 | 0.22 | 0.09 | 97,000 | 0.53 | 42 | 360 | 100 | 84,000 | 0.1 | 2,700 | 34 | 38000 | 1,400 |
| M09-817-02 | 44 | 12 | 11 | 7.6 | 11 | 1.3 | 0.27 | 0.67 | 0.05 | 0.18 | 0.04 | 0.04 | 12 | 100 | | 59,000 | 52 | 0.04 | 71 | 0.28 | 0.09 | 75,000 | 0.2 | 44 | 250 | 80 | 75,000 | 0.1 | 2,700 | 47 | 41000 | 1,000 |
| M09-859-01 | 40 | 13 | 13 | 6.8 | 9.9 | 1.8 | 0.33 | 0.68 | 0.05 | 0.29 | 0.04 | 0.04 | 13 | 99 | | 67,000 | 130 | 0.03 | 40 | 0.28 | 0.09 | 69,000 | 0.21 | 44 | 230 | 100 | 90,000 | 0.1 | 3,300 | 39 | 38000 | 1,600 |
| M10-933-01 | 47 | 12 | 12 | 5.4 | 13 | 1.4 | 0.28 | 0.76 | 0.07 | 0.22 | 0.03 | 0.04 | 8.1 | 100 | | 61,000 | 9 | 0.02 | 60 | 0.19 | 0.09 | 89,000 | 0.39 | 38 | 170 | 170 | 79,000 | 0.1 | 2,700 | 20 | 30000 | 1,200 |
| M10-935-01 | 51 | 15 | 11 | 6.9 | 11 | 2.4 | 0.08 | 0.96 | 0.07 | 0.18 | 0.02 | 0.06 | 2.7 | 100 | | 72,000 | 3 | 0.02 | 52 | 0.24 | 0.09 | 78,000 | 0.12 | 42 | 170 | 89 | 81,000 | 0.1 | 1,000 | 18 | 38000 | 980 |
| M98-275-01 | 44 | 14 | 11 | 5.5 | 11 | 2.6 | 0.21 | 1 | 0.07 | 0.2 | 0.03 | 0.05 | 11 | 100 | | 69,000 | 20 | 0.02 | 61 | 0.28 | 0.09 | 78,000 | 0.13 | 40 | 200 | 89 | 78,000 | 0.1 | 2,000 | 39 | 31000 | 1,100 |
| M98-275-02 | 46 | 14 | 11 | 4.9 | 12 | 1.9 | 0.13 | 0.94 | 0.06 | 0.25 | 0.04 | 0.06 | 9.4 | 100 | | 68,000 | 6 | 0.02 | 28 | 0.23 | 0.09 | 80,000 | 0.18 | 42 | 220 | 95 | 72,000 | 0.1 | 1,200 | 31 | 27000 | 1,300 |
| W94-76-01 | 48 | 14 | 11 | 6.2 | 12 | 2.1 | 0.14 | 0.92 | 0.09 | 0.2 | 0.03 | 0.05 | 6.2 | 100 | | 69,000 | 3 | 0.07 | 46 | 0.26 | 0.09 | 81,000 | 0.22 | 41 | 170 | 96 | 79,000 | 0.1 | 1,300 | 24 | 36000 | 1,100 |
| W94-76-02 | 47 | 15 | 12 | 8.1 | 8.9 | 2.1 | 0.12 | 0.88 | 0.08 | 0.27 | 0.05 | 0.05 | 5.5 | 100 | | 62,000 | 3 | 0.07 | 14 | 0.25 | 0.09 | 61,000 | 0.12 | 44 | 230 | 110 | 84,000 | 0.1 | 1,000 | 31 | 41000 | 1,500 |
| W94-82-01 | 48 | 16 | 11 | 5.4 | 12 | 2 | 0.06 | 0.73 | 0.04 | 0.25 | 0.03 | 0.05 | 5.4 | 100 | | 77,000 | 3 | 0.06 | 14 | 0.17 | 0.09 | 85,000 | 0.12 | 49 | 200 | 110 | 74,000 | 0.1 | 490 | 26 | 30000 | 1,300 |
| CAMLD 262226 | 59 | 16 | 3.9 | 1.8 | 5.6 | 3.2 | 1 | 1 | 0.08 | 0.1 | 0.04 | | 3.2 | 95 | 0.06 | 16,000 | 26 | | 25 | <0.1 | 0.05 | 21,000 | 0.09 | 41 | 180 | 140 | 25,000 | <0.01 | 1,900 | 27 | 11,000 | 610 |
| CAMLD 262227 | 51 | 15 | 8.3 | 4.2 | 8.5 | 1.6 | 0.77 | 0.98 | 0.09 | 0.17 | 0.04 | | 7.5 | 98 | 0.05 | 43,000 | 21 | | 34 | <0.1 | 0.02 | 49,000 | 0.1 | 45 | 200 | 120 | 53,000 | <0.01 | 2,200 | 46 | 26,000 | 1,000 |
| CAMLD 262228 | 53 | 16 | 7.5 | 3.7 | 6.8 | 5.1 | 0.25 | 1 | 0.08 | 0.14 | 0.04 | | 5.7 | 99 | 0.02 | 26,000 | 5 | | 37 | <0.1 | 0.02 | 37,000 | 0.14 | 49 | 220 | 110 | 47,000 | <0.01 | 1,300 | 25 | 22,000 | 820 |
| CAMLD 262229 | 45 | 13 | 11 | 6.1 | 10 | 1.2 | 0.84 | 0.79 | 0.07 | 0.23 | 0.03 | | 10 | 97 | 0.1 | 48,000 | 22 | | 150 | <0.1 | 0.07 | 65,000 | 0.24 | 40 | 180 | 92 | 72,000 | <0.01 | 7,100 | 59 | 40,000 | 1,600 |
| CAMLD 262230 | 46 | 13 | 11 | 6.6 | 11 | 1.5 | 0.06 | 0.79 | 0.06 | 0.17 | 0.04 | | 3.3 | 94 | 0.03 | 20,000 | 2 | | 5 | <0.1 | 0.02 | 24,000 | 0.07 | 25 | 120 | 99 | 34,000 | <0.01 | 100 | 14 | 17,000 | 540 |
| CAMLD 262231 | 43 | 13 | 10 | 6.8 | 9.3 | 1.7 | 0.47 | 0.68 | 0.05 | 0.15 | 0.04 | | 10 | 96 | 0.04 | 45,000 | 19 | | 54 | <0.1 | 0.02 | 59,000 | 0.1 | 51 | 230 | 120 | 66,000 | <0.01 | 4,000 | 66 | 43,000 | 960 |
| CAEXD194259 | 45 | 13 | 12 | 4.3 | 10 | 3.2 | 0.26 | 1 | 0.1 | 0.23 | 0.03 | | 9.6 | 99 | 0.05 | 38,000 | 23 | 0.02 | 68 | <0.1 | 0.12 | 65,000 | 0.09 | 53 | 180 | 130 | 76,000 | <0.01 | 1,800 | 48 | 27,000 | 1,600 |
| CAEXD217371 | 35 | 8.7 | 9.8 | 16 | 8.7 | 0.01 | 0.01 | 0.32 | 0.02 | 0.14 | 0.23 | | 18 | 97 | 0.07 | 38,000 | 800 | 0.02 | 7 | <0.1 | 0.11 | 61,000 | 0.14 | 78 | 1300 | 67 | 56,000 | <0.01 | 100 | 31 | 83,000 | 1,100 |
| CAEXD291664 | 44 | 14 | 16 | 4.9 | 6.1 | 2.8 | 0.17 | 1.2 | 0.13 | 0.29 | <0.01 | | 8.9 | 98 | 0.13 | 45,000 | 46 | 0.03 | 26 | <0.1 | 0.03 | 39,000 | 0.16 | 49 | 47 | 94 | 100,000 | <0.01 | 1,200 | 42 | 30,000 | 2,000 |
| CAEXD297486 | 41 | 10 | 12 | 5 | 14 | 1.1 | 1.4 | 0.68 | 0.07 | 0.3 | 0.02 | | 14 | 100 | 0.06 | 31,000 | 62 | 0.03 | 100 | 0.2 | 0.04 | 88,000 | 0.82 | 36 | 110 | 75 | 79,000 | 0.05 | 8,200 | 41 | 29000 | 2,200 |
| CAEXD297621 | 46 | 16 | 9.8 | 5.5 | 8.9 | 3.1 | 0.41 | 0.76 | 0.05 | 0.19 | 0.04 | | 9 | 99 | 0.07 | 35,000 | 80 | 0.03 | 33 | <0.1 | 0.02 | 48,000 | 0.13 | 51 | 240 | 120 | 63,000 | <0.01 | 3,300 | 55 | 33,000 | 1,300 |
| CAEXD303511 | 40 | 9.3 | 16 | 4.5 | 12 | 0.33 | 0.88 | 0.8 | 0.12 | 0.34 | 0.02 | | 12 | 97 | 0.46 | 36,000 | 2,400 | 0.29 | 45 | 0.2 | 0.5 | 83,000 | 2.2 | 39 | 92 | 360 | 110,000 | <0.01 | 2,700 | 33 | 27000 | 2,600 |
| M97-122-03 | 45 | 13 | 13 | 5.3 | 8.8 | 1.9 | 0.62 | 0.93 | 0.09 | 0.19 | 0.03 | 0.05 | 12 | 100 | | 64,000 | 110 | 0.03 | 90 | 0.48 | 0.09 | 61,000 | 0.34 | 42 | 180 | 86 | 87,000 | 0.1 | 5,700 | 36 | 30000 | 1,100 |
| M97-122-04 | 48 | 8.6 | 25 | 6.2 | 3.5 | 0.1 | 0.45 | 0.42 | 0.09 | 0.16 | <0.01 | 0.02 | 6.8 | 99 | | 42,000 | 480 | 0.88 | 120 | 0.41 | 0.09 | 24,000 | 0.78 | 32 | 140 | 84 | 160,000 | 0.1 | 4,100 | 36 | 34000 | 1,000 |
| W94-65-01 | 56 | 2.9 | 29 | 2.8 | 2.1 | 0.1 | 0.02 | 0.1 | 0.08 | 0.29 | <0.01 | <0.01 | 5.9 | 99 | | 13,000 | 10,000 | 1.3 | 10 | 0.4 | 0.7 | 15,000 | 5.4 | 66 | 110 | 650 | 200,000 | 0.1 | 96 | 3 | 14000 | 2,000 |
| W94-65-02 | 60 | 1.2 | 22 | 2.2 | 5.1 | 0.05 | 0.01 | 0.05 | 0.05 | 0.32 | <0.01 | <0.01 | 5.2 | 95 | | 5,900 | 4,500 | 0.44 | 3 | 0.23 | 0.31 | 37,000 | 2.5 | 29 | 150 | 260 | 150,000 | 0.1 | 68 | 2 | 11000 | 2,300 |
| CAEXD262428 | 55 | 3 | 27 | 2.7 | 0.95 | 0.06 | 0.05 | 0.09 | 0.09 | 0.17 | <0.01 | | 10 | 99 | 0.31 | 15,000 | 6,500 | 9.9 | 21 | <0.1 | 0.18 | 6,100 | 0.9 | 27 | 5 | 250 | 190,000 | 0.02 | 100 | 10 | 15,000 | 1,300 |
| CAEXD267633 | 62 | 1.1 | 20 | 1.5 | 1.6 | 0.01 | <0.01 | 0.03 | 0.02 | 0.39 | <0.01 | | 8.6 | 96 | 1.5 | 5,800 | 26,000 | 9.1 | 13 | <0.1 | 0.25 | 10,000 | 1.2 | 21 | 7 | 120 | 130,000 | 0.01 | 100 | 3 | 9,000 | 2,900 |
| CAEXD290299 | 48 | 5.2 | 21 | 2.2 | 5.2 | 0.17 | 0.35 | 0.35 | 0.15 | 0.3 | 0.02 | | 5.8 | 89 | 1.1 | 21,000 | 450 | 28 | 21 | 0.2 | 0.76 | 34,000 | 0.84 | 52 | 92 | 670 | 130,000 | 0.02 | 1,100 | 11 | 12000 | 2,100 |
| CAEXD265979 | 63 | 0.57 | 17 | 1.4 | 3.3 | <0.01 | <0.01 | 0.02 | 0.02 | 0.32 | <0.01 | | 8 | 94 | 1.2 | 3,000 | 42,000 | 6.1 | 11 | <0.1 | 0.22 | 21,000 | 0.12 | 8.8 | 7 | 31 | 110,000 | <0.01 | 100 | 1 | 7,700 | 2,400 |
| CAEXD300073 | 66 | 1.4 | 15 | 1.8 | 4.9 | 0.58 | 0.02 | 0.02 | 0.03 | 0.34 | <0.01 | | 4.7 | 95 | 2.5 | 2,600 | 15 | 17 | 11 | <0.1 | 0.09 | 34,000 | 0.7 | 5.7 | 12 | 170 | 100,000 | 0.02 | 100 | 3 | 11,000 | 2,500 |
| CAEXD294990 | 57 | 9 | 8.9 | 2.5 | 6 | 1.4 | 1.4 | 0.54 | 0.06 | 0.2 | 0.03 | | 8.2 | 96 | 0.28 | 9,900 | 170 | 1.7 | 17 | 0.2 | 0.14 | 40,000 | 0.29 | 34 | 72 | 95 | 53,000 | <0.01 | 1,000 | 18 | 13000 | 1,500 |
| CAEXD300063 | 55 | 4.7 | 15 | 2.9 | 7.1 | 1 | 0.27 | 0.34 | 0.06 | 0.23 | <0.01 | | 7.9 | 94 | 5.4 | 13,000 | 4,700 | 5.6 | 14 | <0.1 | 0.14 | 47,000 | 0.56 | 35 | 29 | 170 | 92,000 | 0.01 | 300 | 12 | 17,000 | 1,700 |
| CAEXD163438 | 44 | 11 | 13 | 6.2 | 8.3 | 2.9 | 0.42 | 0.48 | 0.01 | 0.17 | 0.03 | | 12 | 99 | 0.36 | 28,000 | 400 | 5.4 | 30 | <0.1 | 0.41 | 55,000 | 0.28 | 41 | 150 | 32 | 79,000 | <0.01 | 1,500 | 37 | 37,000 | 1,100 |
| CAEXD185368 | 56 | 6.1 | 18 | 2.2 | 4.9 | 1.1 | 0.65 | 0.34 | 0.03 | 0.29 | 0.02 | | 5.8 | 96 | 0.55 | 13,000 | 5,000 | 4 | 26 | <0.1 | 1.5 | 34,000 | 0.25 | 52 | 54 | 570 | 120,000 | 0.01 | 1,400 | 16 | 11,000 | 2,000 |
| CAEXD183956 | 55 | 5.3 | 20 | 2.6 | 3.9 | 0.02 | 0.03 | 0.33 | 0.12 | 0.15 | <0.01 | | 6.3 | 94 | 0.68 | 30,000 | 31,000 | 4.4 | 15 | <0.1 | 0.31 | 27,000 | 0.12 | 66 | 23 | 36 | 130,000 | <0.01 | 100 | 25 | 16,000 | 1,200 |
| CAEXD295054 | 65 | 3.3 | 22 | 2.1 | 2.3 | 0.03 | 0.02 | 0.08 | 0.03 | 0.59 | <0.01 | | 2.4 | 97 | 0.11 | 17,000 | 1,300 | 2.3 | 11 | <0.1 | 0.09 | 15,000 | 0.17 | 12 | 32 | 160 | 110,000 | <0.01 | 100 | 5 | 7,200 | 2,100 |
| CAEXD289186 | 42 | 15 | 13 | 8.3 | 7.2 | 0.11 | 1.9 | 0.61 | 0.04 | 0.16 | 0.03 | | 11 | 99 | 0.01 | 55,000 | 150 | 0.03 | 76 | 0.4 | 0.02 | 48,000 | 0.04 | 55 | 160 | 14 | 77,000 | <0.01 | 4,700 | 76 | 46000 | 1,100 |
| W94-55-01 | 48 | 3.2 | 27 | 3.2 | 6.5 | 0.08 | 0.05 | 0.13 | 0.1 | 0.2 | <0.01 | <0.01 | 8.6 | 97 | | 15,000 | 81 | 0.07 | 30 | 0.58 | 0.09 | 43,000 | 0.73 | 17 | 99 | 170 | 170,000 | 0.1 | 460 | 5 | 18000 | 1,300 |
| W94-57-02 | 59 | 4.8 | 22 | 2.4 | 3.2 | 0.05 | 0.07 | 0.46 | 0.16 | 0.18 | <0.01 | <0.01 | 4.9 | 98 | | 23,000 | 220 | 0.14 | 12 | 0.5 | 0.09 | 22,000 | 1.1 | 26 | 120 | 260 | 150,000 | 0.1 | 610 | 11 | 13000 | 1,200 |
| W94-57-03 | 53 | 3 | 24 | 2.3 | 4.6 | 0.07 | 0.01 | 0.12 | 0.12 | 0.3 | 0.02 | <0.01 | 7.5 | 96 | | 14,000 | 110 | 0.12 | 1 | 0.39 | 0.29 | 35,000 | 3.3 | 26 | 130 | 670 | 170,000 | 0.1 | 66 | 3 | 13000 | 2,200 |
| W94-73-02 | 54 | 2.5 | 24 | 2.7 | 3.1 | 0.14 | 0.01 | 0.1 | 0.11 | 0.32 | <0.01 | <0.01 | 9.3 | 97 | | 12,000 | 96 | 0.06 | 2 | 0.45 | 0.15 | 22,000 | 1.2 | 17 | 130 | 100 | 160,000 | 0.1 | 130 | 8 | 15000 | 2,300 |
| CAEXD261887 | 54 | 3.7 | 20 | 3.5 | 2.8 | 0.01 | 0.04 | 0.17 | 0.08 | 0.33 | <0.01 | | 8.6 | 93 | 0.1 | 20,000 | 370 | 0.54 | 17 | <0.1 | 0.07 | 19,000 | 0.83 | 11 | 43 | 280 | 130,000 | 0.01 | 100 | 17 | 21,000 | 2,400 |
| CAEXD262427 | 60 | 5.5 | 18 | 4 | 3.5 | 0.03 | 0.02 | 0.23 | 0.1 | 0.11 | <0.01 | | 6 | 98 | 0.22 | 30,000 | 970 | 0.03 | 16 | 0.2 | 0.06 | 23,000 | 0.3 | 17 | 25 | 110 | 120,000 | 0.01 | 100 | 15 | 24000 | 830 |
| CAEXD300070 | 68 | 0.23 | 17 | 1.3 | 4 | 0.02 | 0.03 | <0.01 | 0.04 | 0.25 | <0.01 | | 7.2 | 98 | 0.06 | 800 | 43 | 0.12 | 12 | <0.1 | 0.02 | 27,000 | 0.12 | 2.7 | 8 | 20 | 110,000 | <0.01 | 100 | 1 | 7,400 | 1,900 |
| CAEXD267631 | 55 | 0.86 | 19 | 2.1 | 8.1 | 0.01 | <0.01 | 0.04 | 0.06 | 0.51 | <0.01 | | 10 | 95 | 0.11 | 4,700 | 4,000 | 0.29 | 12 | <0.1 | 0.23 | 53,000 | 1.4 | 79 | 7 | 160 | 120,000 | <0.01 | 100 | 2 | 12,000 | 3,800 |
| CAEXD185456 | 64 | 4.6 | 19 | 2.4 | 2.2 | 0.02 | 0.05 | 0.1 | 0.04 | 0.24 | <0.01 | | 6.8 | 99 | 0.05 | 23,000 | 150 | 0.02 | 12 | <0.1 | 0.03 | 14,000 | 0.07 | 2.3 | 23 | 14 | 120,000 | <0.01 | 100 | 30 | 14,000 | 1,700 |
| CAEXD289268 | 60 | 6 | 13 | 4.2 | 5.8 | 0.51 | 0.39 | 0.34 | 0.09 | 0.25 | 0.04 | | 6.8 | 97 | 0.1 | 24,000 | 110 | 0.5 | 35 | <0.1 | 0.2 | 39,000 | 0.19 | 30 | 200 | 130 | 82,000 | 0.01 | 1,800 | 24 | 25,000 | 1,600 |
| M96-58-01 | 46 | 16 | 12 | 5.3 | 9 | 2.1 | 0.37 | 1.1 | 0.09 | 0.25 | 0.03 | 0.06 | 7.7 | 100 | | 76,000 | 16 | 0.05 | 76 | 0.26 | 0.09 | 62,000 | 0.26 | 46 | 220 | 72 | 80,000 | 0.1 | 3,400 | 39 | 29000 | 1,400 |
| M96-58-02 | 44 | 14 | 13 | 6.9 | 9.3 | 1.4 | 0.34 | 0.91 | 0.09 | 0.21 | 0.03 | 0.05 | 8.9 | 100 | | 66,000 | 230 | 0.06 | 75 | 0.31 | 0.09 | 64,000 | 0.16 | 45 | 180 | 64 | 91,000 | 0.1 | 3,300 | 46 | 37000 | 1,200 |
| M96-58-03 | 45 | 14 | 12 | 5.6 | 11 | 1.5 | 0.21 | 0.74 | 0.06 | 0.25 | 0.04 | 0.04 | 9.1 | 100 | | 69,000 | 25 | 0.06 | 53 | 0.17 | 0.09 | 76,000 | 0.17 | 45 | 200 | 120 | 79,000 | 0.1 | 3,000 | 33 | 30000 | 1,400 |
| M97-122-05 | 46 | 14 | 11 | 4.8 | 8.9 | 3.5 | 0.39 | 1 | 0.07 | 0.23 | 0.04 | 0.05 | 9.5 | 100 | | 71,000 | 6 | 0.04 | 37 | 0.36 | 0.09 | 62,000 | 0.18 | 38 | 210 | 82 | 76,000 | 0.1 | 3,600 | 36 | 27000 | 1,200 |
| M97-123-04 | 44 | 13 | 12 | 6.1 | 9.5 | 2 | 0.53 | 0.95 | 0.08 | 0.18 | 0.02 | 0.04 | 11 | 100 | | 65,000 | 23 | 0.04 | 66 | 0.38 | 0.09 | 67,000 | 0.22 | 40 | 170 | 89 | 85,000 | 0.1 | 5,000 | 38 | 34000 | 970 |
| M97-153-02 | 45 | 12 | 9.7 | 5.2 | 12 | 1.5 | 0.83 | 0.64 | 0.05 | 0.22 | 0.04 | 0.04 | 12 | 100 | | 59,000 | 150 | 0.03 | 93 | 0.34 | 0.09 | 87,000 | 0.21 | 38 | 210 | 84 | 67,000 | 0.1 | 7,700 | 30 | 29000 | 1,300 |
| M98-184-01 | 50 | 14 | 7.3 | 4.4 | 10 | 2.1 | 1.2 | 0.56 | 0.09 | 0.14 | <0.01 | 0.02 | 9.8 | 100 | | 68,000 | 4 | 0.03 | 190 | 0.47 | 0.09 | 70,000 | 0.28 | 22 | 120 | 45 | 49,000 | 0.1 | 10,000 | 32 | 24000 | 940 |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M98-184-02 | 41 | 13 | 10 | 5.9 | 9.8 | 3.5 | 0.68 | 0.99 | 0.1 | 0.19 | 0.04 | 0.05 | 14 | 100 | | 65,000 | 49 | 0.04 | 84 | 0.39 | 0.09 | 69,000 | 0.29 | 37 | 160 | 92 | 71,000 | 0.1 | 6,300 | 27 | 33000 | 1,000 |
| W94-57-01 | 42 | 13 | 13 | 6.9 | 9 | 0.96 | 1.3 | 0.86 | 0.1 | 0.23 | 0.06 | 0.04 | 12 | 100 | | 65,000 | 85 | 0.08 | 190 | 0.71 | 0.22 | 63,000 | 0.24 | 54 | 310 | 85 | 89,000 | 0.1 | 12,000 | 52 | 39000 | 1,400 |
| W94-59-01 | 48 | 15 | 12 | 6.9 | 8.9 | 2.8 | 0.09 | 0.81 | 0.06 | 0.22 | 0.04 | 0.05 | 6 | 100 | | 69,000 | 25 | 0.07 | 22 | 0.25 | 0.09 | 65,000 | 0.16 | 49 | 220 | 120 | 84,000 | 0.1 | 760 | 32 | 37000 | 1,300 |
| W94-65-03 | 48 | 14 | 13 | 6.3 | 10 | 1.9 | 0.06 | 1.1 | 0.1 | 0.19 | 0.03 | 0.06 | 6.5 | 100 | | 64,000 | 93 | 0.06 | 15 | 0.35 | 0.09 | 74,000 | 0.17 | 48 | 200 | 120 | 92,000 | 0.1 | 490 | 32 | 34000 | 1,200 |
| W94-70-01 | 47 | 14 | 11 | 6.1 | 10 | 1.9 | 0.2 | 0.79 | 0.06 | 0.22 | 0.03 | 0.04 | 8.1 | 100 | | 66,000 | 29 | 0.06 | 41 | 0.24 | 0.09 | 75,000 | 0.1 | 44 | 200 | 96 | 75,000 | 0.1 | 1,600 | 36 | 32000 | 1,300 |
| W94-70-02 | 46 | 13 | 12 | 6.2 | 11 | 1.8 | 0.04 | 0.93 | 0.08 | 0.17 | 0.03 | 0.05 | 10 | 100 | | 59,000 | 8 | 0.05 | 6 | 0.33 | 0.09 | 78,000 | 0.13 | 43 | 170 | 110 | 82,000 | 0.1 | 360 | 47 | 34000 | 1,100 |
| W94-73-01 | 45 | 13 | 11 | 5.9 | 13 | 1.8 | 0.08 | 0.95 | 0.08 | 0.21 | 0.03 | 0.04 | 8.7 | 100 | | 66,000 | 17 | 0.06 | 23 | 0.32 | 0.09 | 92,000 | 0.12 | 46 | 200 | 110 | 77,000 | 0.1 | 760 | 34 | 34000 | 1,300 |
| W94-73-03 | 44 | 14 | 13 | 4.9 | 11 | 2.2 | 0.28 | 0.97 | 0.07 | 0.36 | 0.03 | 0.05 | 11 | 100 | | 66,000 | 7 | 0.05 | 37 | 0.29 | 0.09 | 74,000 | 0.2 | 41 | 210 | 76 | 85,000 | 0.1 | 2,500 | 41 | 26000 | 2,100 |
| CAEXD289055 | 47 | 13 | 9.4 | 4.7 | 9.7 | 3 | 0.99 | 0.89 | 0.07 | 0.21 | 0.05 | | 10 | 99 | 0.09 | 29,000 | 110 | 0.03 | 110 | <0.1 | 0.02 | 56,000 | 0.17 | 54 | 320 | 110 | 57,000 | <0.01 | 6,900 | 47 | 28,000 | 1,400 |
| CAEXD262395 | 44 | 12 | 11 | 5.7 | 8.8 | 2.9 | 0.54 | 0.91 | 0.09 | 0.17 | 0.03 | | 12 | 99 | 0.1 | 30,000 | 46 | 0.03 | 15 | <0.1 | 0.02 | 55,000 | 0.34 | 42 | 180 | 94 | 73,000 | <0.01 | 800 | 44 | 36,000 | 1,200 |
| CAEXD296006 | 42 | 0.78 | 31 | 2.6 | 2.5 | 0.01 | 0.02 | 0.03 | 0.09 | 0.36 | <0.01 | | 15 | 94 | 0.53 | 3,800 | 14,000 | 0.03 | 20 | <0.1 | 2.6 | 16,000 | 4.5 | 15 | 7 | 180 | 220,000 | 0.01 | 100 | 1 | 15,000 | 2,500 |
| CAEXD198012 | 41 | 11 | 14 | 5.1 | 11 | 1.9 | 1 | 0.8 | 0.1 | 0.28 | 0.03 | | 14 | 100 | 0.14 | 27,000 | 140 | 0.02 | 48 | <0.1 | 0.03 | 68,000 | 0.79 | 46 | 140 | 160 | 89,000 | 0.01 | 4,900 | 38 | 31,000 | 1,900 |
| CAEXD163450 | 42 | 14 | 10 | 8.1 | 8.6 | 2 | 0.68 | 0.56 | 0.04 | 0.16 | 0.03 | | 13 | 99 | 0.12 | 35,000 | 48 | 0.02 | 17 | <0.1 | 0.02 | 51,000 | 0.08 | 56 | 150 | 90 | 64,000 | <0.01 | 500 | 61 | 50,000 | 1,100 |
| CAEXD183958 | 44 | 13 | 16 | 4.9 | 6.2 | 3 | 0.57 | 1.4 | 0.14 | 0.21 | <0.01 | | 10 | 100 | 0.26 | 37,000 | 110 | 0.02 | 39 | <0.1 | 0.04 | 39,000 | 0.41 | 63 | 38 | 110 | 94,000 | <0.01 | 900 | 44 | 29,000 | 1,300 |
| CAEXD189574 | 49 | 10 | 8.3 | 3.9 | 9.7 | 4.5 | 0.49 | 0.62 | 0.02 | 0.19 | 0.02 | | 13 | 100 | 0.03 | 10,000 | 170 | 0.02 | 30 | <0.1 | 0.43 | 65,000 | 0.37 | 33 | 79 | 8.6 | 53,000 | <0.01 | 1,400 | 17 | 24,000 | 1,400 |
| CAEXD250652 | 42 | 14 | 10 | 8.1 | 9.5 | 1.8 | 0.73 | 0.52 | 0.03 | 0.16 | 0.03 | | 14 | 100 | 0.12 | 37,000 | 67 | 0.03 | 19 | <0.1 | 0.02 | 58,000 | 0.14 | 49 | 150 | 92 | 63,000 | <0.01 | 1,700 | 47 | 48,000 | 1,100 |
| CAEXD250738 | 42 | 14 | 12 | 7.7 | 8.5 | 2.6 | 0.55 | 0.64 | 0.04 | 0.16 | 0.03 | | 12 | 100 | 0.07 | 47,000 | 34 | 0.03 | 84 | <0.1 | 0.02 | 56,000 | 0.13 | 54 | 190 | 92 | 74,000 | <0.01 | 4,000 | 71 | 48,000 | 1,200 |
| CAEXD252314 | 54 | 17 | 15 | 7.2 | 0.06 | 0.11 | 1.6 | 1.1 | <0.01 | 0.13 | 0.05 | | 5 | 100 | 0.12 | 59,000 | 57 | 0.025 | 28 | 0.2 | 0.02 | 200 | 0.03 | 54 | 260 | 90 | 89,000 | <0.01 | 1,100 | 76 | 45000 | 710 |
| CAEXD295053 | 58 | 8.5 | 13 | 2.3 | 6.5 | 0.1 | 0.81 | 0.58 | 0.15 | 0.25 | 0.03 | | 5.5 | 96 | 0.21 | 32,000 | 750 | 0.33 | 31 | <0.1 | 0.13 | 45,000 | 2.2 | 52 | 180 | 370 | 83,000 | <0.01 | 1,400 | 28 | 13,000 | 1,700 |
| CAEXD297112 | 39 | 10 | 11 | 9.7 | 10 | 1.8 | 0.38 | 0.66 | 0.05 | 0.18 | 0.09 | | 16 | 100 | 0.09 | 36,000 | 190 | 0.03 | 44 | <0.1 | 0.02 | 66,000 | 0.09 | 65 | 560 | 47 | 66,000 | <0.01 | 2,900 | 50 | 61,000 | 1,300 |
| CAEXD213090 | 55 | 2.3 | 29 | 0.95 | 2.7 | 0.01 | <0.01 | 0.06 | 0.24 | 0.08 | <0.01 | | 8 | 99 | 0.24 | 12,000 | 6,800 | 3.9 | 18 | <0.1 | 0.39 | 18,000 | 0.21 | 16 | 4 | 310 | 210,000 | 0.01 | 100 | 2 | 5,100 | 570 |
| CAEXD225690 | 58 | 8.3 | 19 | 1.8 | 3.2 | 0.07 | 1.1 | 0.2 | 0.11 | 0.04 | <0.01 | | 4.4 | 96 | 0.31 | 28,000 | 8,200 | 5.5 | 69 | <0.1 | 0.33 | 23,000 | 0.07 | 8.9 | 12 | 1.4 | 110,000 | <0.01 | 1,800 | 17 | 10,000 | 250 |
| M07-660_107032 | 50 | 5.4 | 31 | 1.2 | 3.7 | 1.1 | 0.31 | 0.16 | 0.21 | 0.05 | <0.01 | | 5.5 | 99 | 1.3 | 16,000 | 2,000 | 10 | 120 | 0.2 | 0.67 | 26,000 | 0.06 | 5.9 | 16 | 140 | 220,000 | <0.01 | 1,200 | 9 | 6500 | 370 |
| CAEXD259501 | 60 | 13 | 13 | 1.5 | 2.5 | 3.1 | 1.3 | 0.37 | 0.14 | 0.05 | <0.01 | | 4.1 | 99 | 0.1 | 24,000 | 12,000 | 6.4 | 57 | <0.1 | 0.18 | 17,000 | 0.09 | 17 | 18 | 16 | 78,000 | <0.01 | 1,500 | 21 | 8,800 | 350 |
| CAEXD259500 | 60 | 13 | 10 | 1.2 | 3.8 | 3.6 | 1.4 | 0.34 | 0.1 | 0.05 | <0.01 | | 4.2 | 98 | 0.36 | 17,000 | 270 | 7 | 57 | <0.1 | 0.13 | 26,000 | 0.09 | 13 | 16 | 82 | 65,000 | <0.01 | 1,600 | 16 | 6,800 | 370 |
| M04-530A-05_338259 | 51 | 7.5 | 24 | 1.3 | 4.8 | 3 | 0.55 | 0.18 | 0.17 | 0.08 | <0.01 | | 4.7 | 97 | 1.7 | 9,600 | 630 | 3.5 | 120 | 0.2 | 0.91 | 33,000 | 0.52 | 6.7 | 14 | 98 | 170,000 | 0.02 | 2,200 | 8 | 7400 | 570 |
| M05-556_824703 | 45 | 2.8 | 30 | 1.3 | 5.7 | 0.01 | 0.22 | 0.07 | 0.25 | 0.06 | <0.01 | | 6.2 | 92 | 2.7 | 16,000 | 51,000 | 15 | 110 | 0.3 | 2.6 | 39,000 | 0.23 | 3.5 | 5 | 91 | 220,000 | 0.01 | 1,900 | 3 | 4800 | 340 |
| CAEXD175600 | 47 | 4.2 | 30 | 1.5 | 4.8 | 0.01 | 0.61 | 0.13 | 0.2 | 0.06 | <0.01 | | 4.1 | 93 | 1.5 | 20,000 | 26,000 | 42 | 140 | 0.4 | 0.44 | 30,000 | 0.07 | 6.6 | 11 | 91 | 220,000 | 0.02 | 3,900 | 7 | 5500 | 290 |
| CAEXD175614 | 47 | 5 | 32 | 1.8 | 4.1 | 0.06 | 0.31 | 0.13 | 0.14 | 0.04 | <0.01 | | 2.9 | 93 | 0.07 | 27,000 | 690 | 1.8 | 190 | 0.4 | 0.08 | 27,000 | 0.09 | 3.9 | 11 | 38 | 230,000 | <0.01 | 2,300 | 9 | 8700 | 270 |
| CAEXD194549 | 47 | 2.7 | 27 | 0.87 | 5.1 | 0.21 | 0.13 | 0.08 | 0.14 | 0.09 | <0.01 | | 7.1 | 90 | 0.05 | 11,000 | 140 | 2.1 | 23 | <0.1 | 0.21 | 33,000 | 0.14 | 6.5 | 10 | 120 | 190,000 | <0.01 | 200 | 7 | 4,200 | 700 |
| CAEXD206014 | 51 | 4.7 | 27 | 1.2 | 3.6 | 0.02 | 0.28 | 0.11 | 0.17 | 0.04 | <0.01 | | 3 | 92 | 0.3 | 23,000 | 4,200 | 4.6 | 52 | 0.3 | 0.09 | 27,000 | 0.05 | 3.7 | 7 | 14 | 190,000 | <0.01 | 700 | 7 | 5900 | 260 |
| CAEXD213337 | 58 | 3.2 | 23 | 2.3 | 4.1 | 0.01 | 0.14 | 0.13 | 0.09 | 0.19 | <0.01 | | 4.3 | 95 | 0.37 | 16,000 | 330 | 8.9 | 72 | 0.3 | 0.25 | 27,000 | 2.6 | 15 | 17 | 450 | 140,000 | <0.01 | 1,100 | 3 | 12000 | 1,300 |
| CAEXD216432 | 40 | 13 | 8.3 | 6.7 | 10 | 1.6 | 2.2 | 0.66 | 0.04 | 0.14 | 0.03 | | 15 | 99 | 0.09 | 19,000 | 210 | 5.6 | 20 | 0.2 | 0.03 | 65,000 | 0.13 | 48 | 70 | 93 | 55,000 | <0.01 | 1,400 | 36 | 38000 | 1,100 |
| CAEXD217732 | 47 | 15 | 15 | 1.8 | 4.9 | 1.5 | 3.4 | 0.28 | 0.06 | 0.04 | <0.01 | | 6.4 | 94 | 1.2 | 22,000 | 20,000 | 4.8 | 140 | 0.4 | 0.57 | 35,000 | 0.26 | 8.2 | 14 | 13 | 99,000 | 0.06 | 6,400 | 21 | 10000 | 330 |
| M05-559A_832071 | 49 | 3 | 35 | 1.4 | 5.6 | 0.91 | 0.2 | 0.17 | 0.21 | 0.1 | <0.01 | | 2.9 | 98 | 0.28 | 8,300 | 44 | 3.8 | 140 | 0.3 | 0.15 | 35,000 | 0.17 | 3.5 | 10 | 61 | 250,000 | 0.04 | 1,000 | 3 | 6400 | 740 |
| M05-564_832368 | 60 | 10 | 21 | 2 | 4.7 | 0.95 | 1.1 | 0.26 | 0.2 | 0.05 | <0.01 | | 4.7 | 100 | 0.13 | 41,000 | 11,000 | 9 | 160 | 0.4 | 0.12 | 25,000 | 0.09 | 6.6 | 20 | 18 | 140,000 | 0.01 | 6,500 | 36 | 10000 | 300 |
| M06-591-02 | 58 | 13 | 15 | 1.4 | 2.8 | 3 | 1.7 | 0.3 | 0.13 | 0.04 | <0.01 | <0.01 | 4.6 | 100 | | 63,000 | 180 | 0.04 | 430 | 1.1 | 0.09 | 20,000 | 0.16 | 7.6 | 81 | 7 | 100,000 | 0.1 | 15,000 | 20 | 7900 | 330 |
| M06-629-01 | 50 | 15 | 9.2 | 3 | 7 | 1.3 | 2.5 | 0.72 | 0.12 | 0.11 | 0.04 | 0.03 | 8.2 | 97 | | 76,000 | 7,000 | 0.79 | 390 | 1.1 | 0.54 | 47,000 | 0.17 | 34 | 190 | 88 | 63,000 | 0.1 | 22,000 | 33 | 16000 | 660 |
| M99-417-01 | 59 | 12 | 14 | 1.5 | 3.4 | 2.6 | 1.8 | 0.38 | 0.17 | 0.05 | <0.01 | <0.01 | 4.9 | 100 | | 58,000 | 260 | 1.8 | 570 | 1.1 | 0.09 | 24,000 | 0.18 | 6.9 | 120 | 21 | 94,000 | 0.1 | 17,000 | 18 | 7700 | 310 |
| CAEXD213028 | 61 | 13 | 5.4 | 2.3 | 2.5 | 3.7 | 2.1 | 0.5 | 0.07 | 0.05 | 0.02 | | 3.8 | 95 | 1 | 11,000 | 5,900 | 9.7 | 53 | <0.1 | 0.5 | 17,000 | 0.14 | 20 | 38 | 43 | 35,000 | <0.01 | 1,800 | 14 | 11,000 | 380 |
| M07-645_103186 | 55 | 16 | 7.9 | 2.8 | 1.6 | 4.1 | 2 | 0.65 | 0.09 | 0.05 | 0.02 | | 3.9 | 95 | 0.2 | 20,000 | 10,000 | 2.5 | 41 | 0.2 | 0.28 | 12,000 | 0.1 | 24 | 62 | 49 | 51,000 | <0.01 | 1,700 | 22 | 16000 | 340 |
| M05-548_824513 | 42 | 16 | 11 | 2.9 | 4.3 | 5.8 | 2 | 0.63 | 0.04 | 0.07 | 0.02 | | 6.6 | 91 | 0.63 | 16,000 | 41,000 | 6.6 | 60 | 0.2 | 0.82 | 28,000 | 0.36 | 21 | 54 | 31 | 74,000 | <0.01 | 2,800 | 20 | 16000 | 480 |
| M07-681_110260 | 57 | 12 | 16 | 2.1 | 2.1 | 2.7 | 1.6 | 0.35 | 0.12 | 0.05 | <0.01 | | 4.4 | 99 | 0.5 | 29,000 | 4,700 | 9 | 140 | 0.2 | 0.34 | 14,000 | 0.27 | 13 | 27 | 93 | 100,000 | 0.02 | 8,200 | 29 | 12000 | 350 |
| CAEXD308246 | 61 | 16 | 11 | 2.6 | 1.5 | 2.1 | 1.9 | 0.56 | 0.13 | 0.05 | 0.02 | | 3.4 | 100 | 0.1 | 33,000 | 13 | 15 | 45 | <0.1 | 0.18 | 9,300 | 0.08 | 14 | 78 | 25 | 66,000 | <0.01 | 1,100 | 46 | 15,000 | 340 |
| M07-693_109898 | 59 | 14 | 11 | 1.5 | 2.6 | 2.8 | 2.1 | 0.37 | 0.12 | 0.04 | <0.01 | | 5 | 99 | 0.47 | 21,000 | 3,200 | 1.7 | 91 | <0.1 | 0.04 | 17,000 | 0.16 | 10 | 20 | 19 | 68,000 | <0.01 | 4,400 | 23 | 7,800 | 320 |
| CAEXD199299 | 41 | 17 | 9.2 | 2.7 | 5.8 | 4.8 | 2.8 | 0.72 | 0.03 | 0.09 | 0.02 | | 8.7 | 92 | 1.5 | 4,600 | 39,000 | 9.5 | 53 | 0.2 | 0.91 | 42,000 | 0.31 | 25 | 15 | 4.1 | 58,000 | <0.01 | 2,300 | 4 | 15000 | 670 |
| CAEXD217788 | 49 | 8.8 | 23 | 1.9 | 4.8 | 2 | 0.29 | 0.26 | 0.16 | 0.05 | <0.01 | | 5.1 | 95 | 0.5 | 33,000 | 740 | 3 | 66 | 0.2 | 0.33 | 32,000 | 0.1 | 6.5 | 23 | 53 | 160,000 | <0.01 | 1,800 | 25 | 10000 | 400 |
| CAEXD295099 | 57 | 11 | 15 | 1.4 | 4.4 | 2.8 | 0.98 | 0.28 | 0.09 | 0.05 | <0.01 | | 4.9 | 98 | 0.06 | 23,000 | 710 | 1.7 | 66 | 0.2 | 0.15 | 30,000 | 0.08 | 7.4 | 15 | 18 | 100,000 | <0.01 | 1,400 | 24 | 7300 | 360 |
| M05-559A_832081 | 59 | 4.7 | 24 | 1.3 | 5.6 | 0.23 | 0.5 | 0.18 | 0.16 | 0.12 | <0.01 | | 3.8 | 100 | 0.8 | 18,000 | 25 | 5.5 | 200 | 0.4 | 1.6 | 37,000 | 0.22 | 6.6 | 17 | 32 | 150,000 | 0.02 | 2,500 | 15 | 6200 | 790 |
| CAEXD199207 | 58 | 13 | 7.8 | 1.8 | 4 | 5.9 | 1.3 | 0.34 | 0.15 | 0.04 | <0.01 | | 5.2 | 97 | 0.98 | 9,400 | 9,800 | 2.9 | 99 | 0.2 | 1.8 | 26,000 | 0.33 | 13 | 22 | 47 | 53,000 | 0.13 | 3,900 | 11 | 9400 | 320 |
| CAEXD217778 | 57 | 10 | 22 | 1.9 | 1.9 | 0.59 | 1.5 | 0.31 | 0.14 | 0.05 | <0.01 | | 3.6 | 99 | 0.6 | 32,000 | 290 | 5.3 | 87 | 0.2 | 0.35 | 12,000 | 0.06 | 8.6 | 19 | 110 | 140,000 | 0.01 | 3,300 | 25 | 8800 | 360 |
| M00-473-01 | 44 | 12 | 9.2 | 3.9 | 12 | 1.2 | 1.7 | 0.75 | 0.06 | 0.26 | 0.03 | 0.04 | 14 | 97 | | 58,000 | 2,400 | 1.3 | 340 | 0.62 | 0.19 | 79,000 | 1.7 | 39 | 180 | 110 | 62,000 | 0.1 | 15,000 | 30 | 21000 | 1,500 |
| M00-483-01 | 41 | 13 | 9.2 | 3.5 | 12 | 1.3 | 2.5 | 0.78 | 0.06 | 0.26 | 0.03 | 0.05 | 15 | 99 | | 63,000 | 1,800 | 0.32 | 270 | 0.95 | 0.09 | 83,000 | 0.35 | 37 | 170 | 93 | 63,000 | 0.1 | 22,000 | 17 | 19000 | 1,600 |
| M00-490-01 | 45 | 13 | 8.6 | 3.7 | 10 | 2.3 | 1.9 | 0.71 | 0.09 | 0.2 | 0.02 | 0.03 | 12 | 97 | | 64,000 | 5,700 | 110 | 220 | 0.96 | 0.27 | 72,000 | 1.2 | 39 | 180 | 73 | 60,000 | 0.1 | 18,000 | 17 | 20000 | 1,200 |
| M08-731W1-01 | 50 | 12 | 15 | 4.9 | 9.2 | 2.3 | 0.2 | 1.2 | 0.15 | 0.22 | 0.02 | 0.06 | 4.6 | 100 | 0.21 | 62,000 | 9 | | 130 | 0.39 | 0.09 | 58,000 | 0.26 | 46 | 60 | 99 | 96,000 | | 2,200 | 22 | 27000 | 1,300 |
| GT08-04-01_2009 | 44 | 14 | 12 | 6.7 | 10 | 1.8 | 0.19 | 0.77 | 0.05 | 0.2 | 0.03 | 0.05 | 10 | 100 | 0.78 | 77,000 | 13 | | 87 | 0.25 | 0.09 | 73,000 | 0.56 | 43 | 160 | 120 | 85,000 | | 1,800 | 37 | 41000 | 1,100 |
| M05-561-02_2011 | 49 | 13 | 16 | 4.1 | 7 | 2.1 | 1.3 | 1.6 | 0.21 | 0.19 | <0.01 | 0.03 | 5 | 100 | | 68,000 | 68 | 0.07 | 400 | 0.93 | 0.09 | 49,000 | 0.31 | 55 | 81 | 130 | 110,000 | 0.1 | 12,000 | 36 | 24000 | 1,100 |
| M06-592-03 | 51 | 14 | 13 | 5.4 | 9.3 | 2.5 | 0.56 | 1.1 | 0.11 | 0.19 | <0.01 | 0.06 | 2.5 | 100 | | 68,000 | 8 | 0.05 | 110 | 0.41 | 0.09 | 61,000 | 0.15 | 40 | 84 | 69 | 88,000 | 0.1 | 5,000 | 28 | 28000 | 1,100 |
| M97-135-02 | 52 | 14 | 13 | 5.4 | 9.3 | 2.3 | 0.49 | 1.1 | 0.11 | 0.19 | <0.01 | 0.05 | 3 | 100 | | 70,000 | 12 | 0.04 | 91 | 0.36 | 0.09 | 64,000 | 0.21 | 37 | 95 | 81 | 90,000 | 0.1 | 4,500 | 22 | 30000 | 1,000 |
| M97-149-01 | 51 | 14 | 13 | 5.3 | 9.3 | 2.5 | 0.45 | 1.1 | 0.1 | 0.19 | <0.01 | 0.05 | 3.4 | 100 | | 71,000 | 8 | 0.04 | 90 | 0.34 | 0.09 | 65,000 | 0.19 | 40 | 90 | 99 | 90,000 | 0.1 | 4,200 | 24 | 30000 | 1,000 |

**Appendix D-6: Meliadine Extension Database: Static Test Results**
**Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M99-280-01 | 50 | 5.9 | 36 | 1.6 | 3.2 | 0.04 | 0.59 | 0.16 | 0.19 | 0.05 | <0.01 | <0.01 | 2.5 | 100 | 0.13 | 31,000 | 150 | | 200 | 0.67 | 0.09 | 21,000 | 0.13 | 4.4 | 77 | 11 | 230,000 | 0.1 | 5,900 | 5 | 8900 | 310 |
| M04-526-01 | 55 | 5.6 | 24 | 1.3 | 6.7 | <0.01 | 0.15 | 0.13 | 0.17 | 0.06 | <0.01 | <0.01 | 5.5 | 99 | 0.16 | 30,000 | 210 | | 66 | 0.36 | 0.13 | 46,000 | 0.15 | 6.4 | 25 | 31 | 160,000 | 0.1 | 1,600 | 4 | 7300 | 330 |
| M03-508-02 | 56 | 8 | 24 | 1.4 | 4.1 | 0.26 | 1.1 | 0.23 | 0.16 | 0.05 | <0.01 | <0.01 | 5.4 | 100 | | 39,000 | 47 | 0.23 | 360 | 0.93 | 0.09 | 29,000 | 0.15 | 6.9 | 100 | 7.6 | 160,000 | 0.1 | 10,000 | 18 | 7900 | 430 |
| M06-622_878029 | 51 | 5.7 | 33 | 1.5 | 2.4 | 0.24 | 0.9 | 0.15 | 0.17 | 0.04 | <0.01 | | 3.8 | 99 | 0.32 | 20,000 | 170 | 1.2 | 170 | 0.3 | 0.45 | 16,000 | 0.08 | 4.1 | 18 | 23 | 230,000 | 0.03 | 3,400 | 15 | 8000 | 280 |
| CAEXD225689 | 50 | 4.5 | 37 | 1.3 | 4.8 | 0.04 | 0.26 | 0.1 | 0.17 | 0.05 | <0.01 | | 2.9 | 100 | 0.01 | 19,000 | 910 | 0.34 | 38 | 0.2 | 0.05 | 29,000 | 0.05 | 2.6 | 10 | 6.7 | 260,000 | <0.01 | 600 | 10 | 4300 | 210 |
| CAEXD249828 | 62 | 14 | 8.7 | 1.5 | 2.8 | 2.2 | 2.6 | 0.32 | 0.13 | 0.03 | <0.01 | | 4.6 | 98 | 0.61 | 16,000 | 61 | 0.35 | 250 | 0.2 | 1 | 18,000 | 0.12 | 9.1 | 8 | 25 | 50,000 | <0.01 | 4,100 | 14 | 7900 | 240 |
| CAEXD259467 | 45 | 4.7 | 39 | 1.4 | 4.1 | 0.01 | 0.14 | 0.11 | 0.14 | 0.07 | <0.01 | | 5.2 | 100 | 0.28 | 25,000 | 310 | 0.2 | 50 | 0.3 | 0.06 | 27,000 | 0.12 | 4.8 | 12 | 0.5 | 280,000 | <0.01 | 1,200 | 10 | 7800 | 500 |
| CAEXD259468 | 53 | 4.1 | 33 | 1.3 | 3.9 | 0.01 | 0.17 | 0.1 | 0.16 | 0.06 | <0.01 | | 3.8 | 100 | 0.08 | 22,000 | 1,100 | 0.46 | 58 | 0.3 | 0.07 | 27,000 | 0.09 | 3.8 | 11 | 7.2 | 240,000 | <0.01 | 1,500 | 7 | 6700 | 450 |
| M07-686_110546 | 46 | 4.5 | 37 | 1.7 | 3.9 | 0.03 | 0.08 | 0.15 | 0.22 | 0.05 | <0.01 | | 1.3 | 95 | 0.03 | 24,000 | 90 | 0.02 | 34 | 0.4 | 0.1 | 24,000 | 0.11 | 2.7 | 10 | 16 | 260,000 | <0.01 | 500 | 11 | 6700 | 280 |
| M06-629_878207 | 53 | 8.3 | 23 | 1.5 | 3.7 | 0.2 | 1.8 | 0.22 | 0.14 | 0.05 | <0.01 | | 4.1 | 96 | 0.19 | 23,000 | 2,100 | 0.03 | 150 | 0.6 | 0.12 | 27,000 | 0.06 | 6.3 | 13 | 1.8 | 160,000 | <0.01 | 5,200 | 14 | 7700 | 330 |
| CAEXD213087 | 63 | 2.7 | 6.6 | 0.72 | 15 | 0.02 | 0.01 | 0.01 | 0.04 | 0.11 | <0.01 | | 13 | 100 | <0.01 | 14,000 | 16 | 0.02 | 9 | <0.1 | 0.02 | 100,000 | 0.41 | 1.6 | 4 | 0.5 | 42,000 | <0.01 | 100 | 8 | 4,100 | 880 |
| CAEXD213334 | 60 | 1.3 | 22 | 1.7 | 3.8 | 0.01 | 0.07 | 0.05 | 0.06 | 0.22 | <0.01 | | 6.8 | 96 | 0.22 | 7,500 | 1,200 | 0.56 | 38 | 0.2 | 0.2 | 25,000 | 1.9 | 20 | 19 | 140 | 150,000 | <0.01 | 600 | 1 | 9200 | 1,700 |
| CAEXD216429 | 53 | 3.3 | 18 | 7.2 | 5.7 | 0.02 | 0.12 | 0.23 | 0.06 | 0.28 | 0.07 | | 8.5 | 96 | 0.18 | 18,000 | 490 | 0.02 | 49 | 0.3 | 0.14 | 38,000 | 1.8 | 34 | 370 | 140 | 110,000 | <0.01 | 1,100 | 3 | 33000 | 2,000 |
| CAEXD258462 | 62 | 15 | 5 | 2.4 | 2 | 3.3 | 2.4 | 0.54 | 0.1 | 0.04 | 0.02 | | 4 | 97 | 0.23 | 16,000 | 210 | 0.02 | 53 | 0.2 | 0.5 | 14,000 | 0.08 | 19 | 44 | 40 | 34,000 | <0.01 | 1,900 | 24 | 13000 | 310 |
| GT08-01-02 | 66 | 15 | 4.6 | 2 | 1.7 | 3.8 | 2 | 0.53 | 0.1 | 0.04 | <0.01 | 0.02 | 3.5 | 99 | 0.3 | 80,000 | 200 | | 670 | 0.95 | 0.09 | 11,000 | 0.23 | 16 | 100 | 33 | 32,000 | 0.1 | 21,000 | 22 | 11000 | 220 |
| GT08-02-01_2008 | 62 | 15 | 7.4 | 1.6 | 2.8 | 4.1 | 2 | 0.44 | 0.1 | 0.05 | <0.01 | 0.02 | 4.6 | 100 | 0.27 | 77,000 | 180 | | 450 | 0.97 | 0.09 | 19,000 | 0.28 | 12 | 41 | 29 | 50,000 | 0.1 | 20,000 | 16 | 9000 | 330 |
| M00-474-05 | 62 | 16 | 6.4 | 2.3 | 2.2 | 2.6 | 2.6 | 0.6 | 0.12 | 0.05 | 0.03 | 0.02 | 3.8 | 98 | 0.35 | 85,000 | 51 | | 710 | 1 | 0.11 | 15,000 | 0.25 | 17 | 110 | 43 | 46,000 | 0.1 | 26,000 | 35 | 14000 | 360 |
| M07-660-02_2008 | 59 | 16 | 8.6 | 2.8 | 2.4 | 2.2 | 2.5 | 0.68 | 0.15 | 0.06 | 0.02 | 0.02 | 4.3 | 99 | 0.08 | 85,000 | 40 | | 710 | 1.1 | 0.15 | 16,000 | 0.22 | 26 | 120 | 38 | 58,000 | 0.1 | 25,000 | 38 | 16000 | 380 |
| M07-678-03 | 65 | 15 | 6 | 1.2 | 2 | 4.2 | 2 | 0.29 | 0.09 | 0.03 | <0.01 | <0.01 | 3.7 | 99 | 0.06 | 75,000 | 1,200 | | 440 | 1 | 0.09 | 14,000 | 0.18 | 4.8 | 17 | 26 | 41,000 | 0.1 | 20,000 | 15 | 6500 | 180 |
| M07-704-01 | 58 | 17 | 6.8 | 2.5 | 3.5 | 2.3 | 2.9 | 0.63 | 0.13 | 0.08 | 0.02 | 0.02 | 5.5 | 99 | 0.4 | 85,000 | 150 | | 730 | 1.2 | 0.24 | 23,000 | 0.31 | 20 | 110 | 50 | 45,000 | 0.1 | 29,000 | 32 | 14000 | 490 |
| M07-705-01 | 66 | 14 | 4.8 | 1.8 | 2.4 | 3.2 | 2.3 | 0.54 | 0.12 | 0.04 | 0.02 | 0.02 | 3.9 | 99 | 0.51 | 73,000 | 11 | | 750 | 0.98 | 0.25 | 16,000 | 0.25 | 18 | 110 | 31 | 32,000 | 0.1 | 23,000 | 23 | 9600 | 280 |
| M07-713-02 | 60 | 16 | 8.3 | 2.8 | 1.6 | 2.5 | 2.6 | 0.65 | 0.14 | 0.05 | 0.02 | 0.02 | 3.8 | 99 | 0.13 | 84,000 | 61 | | 620 | 1 | 0.18 | 10,000 | 0.22 | 21 | 130 | 52 | 55,000 | 0.1 | 26,000 | 34 | 16000 | 320 |
| M07-713-03 | 67 | 15 | 4.7 | 2 | 1.9 | 3.5 | 2 | 0.54 | 0.11 | 0.04 | 0.02 | 0.02 | 3.3 | 100 | 0.36 | 69,000 | 17 | | 760 | 0.88 | 0.09 | 11,000 | 0.23 | 17 | 100 | 38 | 29,000 | | 18,000 | 29 | 10000 | 220 |
| M95-17-01 | 63 | 16 | 6.8 | 2.5 | 1.9 | 2.4 | 2.4 | 0.58 | 0.12 | 0.05 | 0.02 | 0.03 | 3.7 | 99 | 0.37 | 89,000 | 32 | | 790 | 1 | 0.2 | 13,000 | 0.27 | 19 | 120 | 47 | 51,000 | 0.1 | 25,000 | 40 | 16000 | 310 |
| M95-17-02 | 64 | 16 | 5.2 | 2.4 | 1.7 | 3.1 | 2.2 | 0.6 | 0.12 | 0.05 | 0.02 | 0.02 | 3.4 | 99 | 0.41 | 82,000 | 37 | | 580 | 0.9 | 0.33 | 11,000 | 0.27 | 17 | 120 | 44 | 36,000 | 0.1 | 22,000 | 35 | 14000 | 310 |
| M98-194-03 | 61 | 16 | 6.8 | 2.6 | 1.6 | 2.3 | 2.9 | 0.62 | 0.13 | 0.04 | <0.01 | 0.02 | 4.2 | 99 | 0.06 | 86,000 | 99 | | 2,000 | 1.2 | 0.12 | 11,000 | 0.22 | 17 | 110 | 46 | 47,000 | 0.1 | 29,000 | 38 | 16000 | 310 |
| M98-269-03 | 62 | 16 | 6.5 | 2.3 | 2.6 | 3.2 | 2.2 | 0.58 | 0.13 | 0.05 | 0.02 | 0.02 | 4 | 99 | 0.09 | 77,000 | 31 | | 560 | 0.9 | 0.14 | 16,000 | 0.2 | 16 | 110 | 28 | 43,000 | 0.1 | 21,000 | 29 | 13000 | 290 |
| M98-297-03 | 62 | 17 | 6.9 | 2.5 | 1.6 | 2.5 | 2.6 | 0.61 | 0.12 | 0.04 | 0.02 | 0.02 | 3.7 | 99 | 0.38 | 79,000 | 62 | | 750 | 1.1 | 0.1 | 9,800 | 0.22 | 16 | 110 | 42 | 45,000 | | 24,000 | 35 | 14000 | 270 |
| M98-297-04 | 62 | 17 | 6.4 | 2.8 | 1.7 | 2.4 | 2.5 | 0.66 | 0.13 | 0.04 | 0.02 | 0.02 | 3.7 | 99 | 0.11 | 83,000 | 27 | | 820 | 0.92 | 0.15 | 11,000 | 0.23 | 19 | 120 | 37 | 42,000 | 0.1 | 25,000 | 40 | 16000 | 290 |
| M98-316-01_2008 | 64 | 14 | 4.8 | 1.9 | 2.6 | 3.3 | 2.3 | 0.52 | 0.09 | 0.05 | 0.02 | 0.02 | 4.6 | 98 | 0.5 | 75,000 | 2,100 | | 550 | 1 | 0.37 | 18,000 | 0.28 | 17 | 110 | 47 | 33,000 | 0.1 | 24,000 | 14 | 10000 | 320 |
| M99-340-03 | 65 | 16 | 5.2 | 2.3 | 1.9 | 3.2 | 2.2 | 0.57 | 0.11 | 0.05 | <0.01 | 0.02 | 3.5 | 100 | 0.38 | 83,000 | 28 | | 820 | 0.98 | 0.15 | 13,000 | 0.26 | 18 | 120 | 49 | 36,000 | 0.1 | 23,000 | 36 | 13000 | 290 |
| M99-341-02 | 63 | 15 | 4.9 | 1.8 | 3.2 | 3.8 | 2.2 | 0.58 | 0.17 | 0.05 | <0.01 | 0.02 | 4.7 | 99 | 0.36 | 78,000 | 460 | | 580 | 0.98 | 0.17 | 22,000 | 0.3 | 16 | 95 | 33 | 35,000 | 0.1 | 23,000 | 17 | 11000 | 360 |
| M99-345-02 | 65 | 16 | 5.1 | 2.2 | 1.9 | 3.3 | 2.2 | 0.57 | 0.12 | 0.04 | 0.02 | 0.02 | 3.7 | 100 | 0.43 | 75,000 | 18 | | 730 | 0.95 | 0.11 | 12,000 | 0.61 | 19 | 150 | 130 | 35,000 | | 21,000 | 34 | 12000 | 280 |
| M99-346-02_2008 | 64 | 16 | 5.7 | 2.5 | 1.6 | 3 | 2.5 | 0.61 | 0.12 | 0.05 | 0.02 | 0.02 | 3.8 | 100 | 0.35 | 85,000 | 70 | | 570 | 0.93 | 0.11 | 11,000 | 0.25 | 21 | 120 | 45 | 40,000 | 0.1 | 25,000 | 36 | 15000 | 290 |
| M99-346-03 | 65 | 15 | 4.6 | 1.9 | 2 | 3.5 | 2 | 0.54 | 0.11 | 0.04 | 0.03 | 0.02 | 3.7 | 99 | 0.36 | 74,000 | 11 | | 720 | 0.95 | 0.13 | 13,000 | 0.26 | 17 | 160 | 43 | 31,000 | | 20,000 | 25 | 11000 | 280 |
| M99-350-02 | 63 | 16 | 5.7 | 2.4 | 1.7 | 2.6 | 2.8 | 0.6 | 0.13 | 0.04 | 0.02 | 0.03 | 3.9 | 99 | 0.32 | 89,000 | 26 | | 720 | 1 | 0.14 | 12,000 | 0.23 | 17 | 120 | 29 | 42,000 | 0.1 | 29,000 | 32 | 15000 | 280 |
| M99-350-03 | 64 | 16 | 5.6 | 2.4 | 1.8 | 3.2 | 2.2 | 0.6 | 0.11 | 0.04 | 0.02 | 0.02 | 3.7 | 100 | 0.38 | 73,000 | 18 | | 620 | 0.9 | 0.14 | 10,000 | 0.24 | 17 | 110 | 36 | 34,000 | | 20,000 | 35 | 12000 | 260 |
| M99-403-02 | 61 | 14 | 8.1 | 1.7 | 2.8 | 4.1 | 1.5 | 0.43 | 0.11 | 0.05 | <0.01 | <0.01 | 4.6 | 98 | 0.24 | 78,000 | 900 | | 460 | 1 | 0.09 | 19,000 | 0.18 | 9.6 | 56 | 17 | 58,000 | 0.1 | 16,000 | 16 | 10000 | 320 |
| M99-403-04 | 65 | 16 | 5.4 | 1.9 | 2.6 | 3.3 | 2.5 | 0.59 | 0.12 | 0.04 | 0.02 | 0.02 | 4.1 | 100 | 0.36 | 85,000 | 18 | | 570 | 0.91 | 0.09 | 18,000 | 0.24 | 19 | 130 | 50 | 39,000 | 0.1 | 26,000 | 30 | 12000 | 250 |
| M99-404-01 | 62 | 15 | 7.3 | 1.3 | 3.4 | 3.9 | 1.9 | 0.42 | 0.09 | 0.04 | <0.01 | <0.01 | 4.3 | 100 | 0.28 | 76,000 | 21 | | 430 | 0.83 | 0.09 | 23,000 | 0.21 | 9.4 | 33 | 23 | 51,000 | 0.1 | 19,000 | 22 | 7600 | 270 |
| M99-404-02 | 65 | 15 | 5.8 | 2 | 2.2 | 3.4 | 2.2 | 0.57 | 0.12 | 0.04 | 0.02 | 0.02 | 3.9 | 100 | 0.41 | 78,000 | 250 | | 520 | 0.95 | 0.17 | 15,000 | 0.26 | 18 | 130 | 50 | 40,000 | 0.1 | 22,000 | 22 | 11000 | 270 |
| M99-404-03 | 67 | 15 | 4.7 | 2 | 1.6 | 4.1 | 1.7 | 0.55 | 0.11 | 0.04 | 0.02 | <0.01 | 3.2 | 100 | 0.36 | 72,000 | 46 | | 580 | 0.87 | 0.09 | 9,700 | 0.24 | 16 | 110 | 39 | 30,000 | | 16,000 | 29 | 11000 | 270 |
| M99-403-03 | 62 | 13 | 10 | 1.7 | 2.4 | 2.4 | 2 | 0.34 | 0.09 | 0.04 | <0.01 | <0.01 | 4.5 | 99 | 0.3 | 73,000 | 1,300 | | 450 | 0.98 | 0.09 | 16,000 | 0.19 | 7.6 | 34 | 13 | 71,000 | 0.1 | 20,000 | 26 | 11000 | 250 |
| M99-404-04 | 62 | 17 | 6 | 2.6 | 2.1 | 2.9 | 2.5 | 0.64 | 0.13 | 0.05 | 0.02 | 0.02 | 3.8 | 99 | 0.39 | 89,000 | 95 | | 610 | 0.95 | 0.2 | 14,000 | 0.3 | 19 | 130 | 47 | 43,000 | 0.1 | 25,000 | 40 | 16000 | 340 |
| M07-645-01 | 61 | 17 | 6.6 | 2.8 | 1.6 | 2.7 | 2.6 | 0.69 | 0.13 | 0.05 | 0.02 | 0.02 | 4.1 | 100 | 0.39 | 89,000 | 140 | | 620 | 1 | 0.19 | 11,000 | 0.12 | 20 | 130 | 54 | 45,000 | 0.1 | 27,000 | 41 | 16000 | 310 |
| M99-327-01 | 64 | 15 | 5.6 | 2.2 | 2.3 | 2.7 | 2.6 | 0.55 | 0.11 | 0.05 | 0.02 | 0.02 | 4.3 | 99 | 0.4 | 80,000 | 44 | | 570 | 1.1 | 0.2 | 16,000 | 0.09 | 17 | 120 | 70 | 40,000 | 0.1 | 27,000 | 26 | 12000 | 310 |
| M04-533-01 | 55 | 17 | 8.1 | 3.3 | 2.9 | 2.4 | 3.8 | 0.72 | 0.18 | 0.07 | 0.02 | 0.03 | 5.4 | 98 | 0.58 | 89,000 | 130 | | 3,100 | 3.5 | 0.54 | 20,000 | 0.22 | 23 | 130 | 43 | 58,000 | 0.1 | 37,000 | 40 | 19000 | 480 |
| M00-476-01 | 65 | 16 | 5.7 | 2.5 | 1.3 | 2.8 | 2.2 | 0.6 | 0.11 | 0.04 | 0.03 | 0.02 | 3.5 | 100 | 0.35 | 79,000 | 30 | | 670 | 0.96 | 0.13 | 8,100 | 0.26 | 19 | 170 | 48 | 39,000 | | 22,000 | 37 | 14000 | 280 |
| M00-476-02 | 63 | 17 | 5.8 | 2.5 | 1.4 | 3 | 2.4 | 0.63 | 0.13 | 0.05 | 0.03 | 0.02 | 3.7 | 100 | 0.34 | 81,000 | 36 | | 550 | 0.98 | 0.09 | 9,000 | 0.25 | 21 | 160 | 45 | 39,000 | | 23,000 | 35 | 14000 | 300 |
| M00-479-01 | 65 | 15 | 6.9 | 2.3 | 1.5 | 2.9 | 1.9 | 0.55 | 0.12 | 0.05 | 0.03 | <0.01 | 4 | 100 | 0.38 | 74,000 | 110 | | 750 | 0.92 | 0.21 | 9,300 | 0.24 | 15 | 150 | 29 | 45,000 | | 19,000 | 34 | 13000 | 320 |
| M00-479-02 | 61 | 17 | 6.3 | 2.7 | 1.9 | 2.5 | 2.8 | 0.69 | 0.12 | 0.06 | 0.03 | 0.02 | 4.4 | 100 | 0.43 | 81,000 | 58 | | 740 | 1.2 | 0.21 | 12,000 | 0.27 | 19 | 150 | 52 | 41,000 | | 26,000 | 36 | 15000 | 360 |
| M06-628-01 | 64 | 16 | 6.1 | 2.3 | 1.8 | 2.9 | 2.4 | 0.59 | 0.12 | 0.05 | 0.02 | 0.02 | 3.7 | 100 | 0.39 | 78,000 | 57 | | 970 | 1.1 | 0.09 | 12,000 | 0.24 | 18 | 140 | 77 | 41,000 | | 23,000 | 31 | 14000 | 310 |
| M06-628-02 | 61 | 16 | 6.4 | 2.6 | 2.7 | 2.4 | 2.6 | 0.67 | 0.31 | 0.06 | 0.02 | 0.02 | 4.7 | 99 | 0.83 | 80,000 | 37 | | 2,100 | 1.6 | 0.6 | 17,000 | 0.55 | 19 | 150 | 39 | 44,000 | | 25,000 | 38 | 15000 | 410 |
| M07-660-01_2009 | 64 | 17 | 5.3 | 2.2 | 1.7 | 3.3 | 2.3 | 0.61 | 0.11 | 0.05 | 0.03 | 0.02 | 3.6 | 99 | 0.45 | 81,000 | 35 | | 770 | 1.1 | 0.16 | 11,000 | 0.33 | 17 | 140 | 44 | 37,000 | | 21,000 | 32 | 13000 | 290 |
| M07-660-02_2009 | 65 | 17 | 5.8 | 2.6 | 1.3 | 3.1 | 2.3 | 0.62 | 0.12 | 0.05 | 0.02 | 0.02 | 3.4 | 100 | 0.38 | 79,000 | 31 | | 730 | 1.1 | 0.09 | 8,300 | 0.28 | 18 | 140 | 40 | 40,000 | | 21,000 | 38 | 15000 | 270 |
| M98-194-04 | 64 | 15 | 5.5 | 2.1 | 1.8 | 3.4 | 2.2 | 0.55 | 0.11 | 0.04 | 0.03 | <0.01 | 3.8 | 99 | 0.48 | 76,000 | 31 | | 830 | 1 | 0.15 | 12,000 | 0.35 | 16 | 140 | 41 | 37,000 | | 21,000 | 23 | 12000 | 270 |
| M98-298-01 | 63 | 17 | 6.1 | 2.6 | 1.5 | 2.9 | 2.4 | 0.62 | 0.11 | 0.05 | 0.03 | 0.02 | 3.5 | 100 | 0.39 | 80,000 | 32 | | 830 | 0.94 | 0.38 | 10,000 | 0.23 | 21 | 150 | 43 | 41,000 | | 23,000 | 36 | 14000 | 300 |
| M98-298-02 | 63 | 15 | 5.6 | 2.4 | 3 | 2.9 | 2.2 | 0.56 | 0.11 | 0.07 | 0.02 | 0.02 | 5 | 100 | 0.32 | 80,000 | 330 | | 610 | 1 | 0.12 | 21,000 | 0.27 | 18 | 140 | 40 | 39,000 | | 22,000 | 31 | 14000 | 460 |
| M98-298-03 | 67 | 15 | 4.9 | 2.1 | 1.7 | 3.5 | 2 | 0.56 | 0.11 | 0.04 | 0.03 | <0.01 | 3.3 | 100 | 0.36 | 77,000 | 15 | | 800 | 0.89 | 0.09 | 11,000 | 0.25 | 17 | 150 | 42 | 33,000 | | 20,000 | 32 | 12000 | 270 |
| M99-341-03 | 63 | 17 | 7.8 | 2.6 | 1.4 | 2.5 | 2.3 | 0.65 | 0.14 | 0.05 | 0.03 | 0.02 | 3.6 | 100 | 0.31 | 78,000 | 64 | | 560 | 1 | 0.09 | 9,000 | 0.22 | 18 | 150 | 37 | 52,000 | | 21,000 | 38 | 15000 | 320 |
| M99-345-01_2009 | 64 | 15 | 5.1 | 2.1 | 2 | 3.5 | 1.9 | 0.58 | 0.11 | 0.04 | 0.03 | 0.02 | 3.6 | 99 | 0.37 | 74,000 | 44 | | 730 | 0.89 | 0.11 | 13,000 | 0.27 | 19 | 170 | 48 | 35,000 | | 19,000 | 32 | 12000 | 310 |
| M99-345-03 | 62 | 14 | 5.9 | 2.2 | 4.2 | 2.6 | 2 | 0.54 | 0.12 | 0.08 | 0.02 | 0.02 | 5.4 | 100 | 0.3 | 71,000 | 46 | | 600 | 0.86 | 0.12 | 26,000 | 0.29 | 18 | 150 | 43 | 41,000 | | 19,000 | 32 | 13000 | 530 |
| M99-346-01 | 63 | 17 | 6 | 2.6 | 1.3 | 2.8 | 2.6 | 0.67 | 0.11 | 0.04 | 0.02 | 0.02 | 4 | 100 | 0.31 | 81,000 | 91 | | 610 | 1 | 0.09 | 8,400 | 0.23 | 20 | 140 | 42 | 40,000 | | 24,000 | 35 | 14000 | 290 |
| M99-346-02_2009 | 66 | 15 | 4.6 | 1.9 | 2.3 | 3.6 | 1.9 | 0.54 | 0.1 | 0.05 | 0.03 | 0.02 | 3.9 | 100 | 0.37 | 71,000 | 64 | | 690 | 0.91 | 0.13 | 14,000 | 0.31 | 18 | 170 | 45 | 31,000 | | 18,000 | 23 | 10000 | 310 |
| M99-385-01 | 63 | 17 | 5.9 | 2.5 | 1.5 | 2.8 | 2.4 | 0.63 | 0.11 | 0.06 | 0.03 | 0.02 | 3.9 | 100 | 0.34 | 76,000 | 39 | | 600 | 0.99 | 0.09 | 7,200 | 0.27 | 20 | 150 | 39 | 38,000 | | 22,000 | 35 | 14000 | 330 |
| M99-386-01 | 64 | 15 | 5.4 | 2.2 | 1.9 | 3.1 | 2.3 | 0.54 | 0.1 | 0.05 | 0.03 | <0.01 | 4.1 | 99 | 0.39 | 75,000 | 2,200 | | 780 | 1.2 | 0.16 | 12,000 | 0.27 | 18 | 160 | 73 | 37,000 | | 22,000 | 28 | 13000 | 300 |
| M99-386-02 | 65 | 16 | 5.6 | 2.3 | 1.2 | 3.2 | 2.3 | 0.61 | 0.12 | 0.04 | 0.03 | 0.02 | 3.5 | 100 | 0.43 | 78,000 | 31 | | 870 | 1 | 0.13 | 7,900 | 0.28 | 20 | 170 | 72 | 38,000 | | 22,000 | 36 | 14000 | 290 |
| M99-403-05 | 61 | 16 | 7 | 2.5 | 2.6 | 2.7 | 2.2 | 0.6 | 0.15 | 0.06 | 0.03 | 0.02 | 4.3 | 99 | 0.43 | 75,000 | 89 | | 620 | 1.1 | 0.34 | 17,000 | 0.25 | 18 | 160 | 37 | 47,000 | | 21,000 | 36 | 14000 | 410 |

**Appendix D-6: Meliadine Extension Database: Static Test**
**Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M99-404-05 | 64 | 16 | 6.2 | 2.4 | 1.7 | 2.9 | 2.2 | 0.58 | 0.13 | 0.04 | 0.02 | <0.01 | 3.6 | 100 | 0.4 | 79,000 | 45 | | 830 | 1.1 | 0.09 | 11,000 | 0.28 | 22 | 150 | 54 | 42,000 | | 22,000 | 38 | 14000 | 290 |
| M99-404-06 | 64 | 17 | 5.5 | 2.5 | 1.2 | 2.9 | 2.4 | 0.61 | 0.12 | 0.03 | 0.02 | 0.02 | 3.9 | 100 | 0.33 | 80,000 | 120 | | 730 | 1 | 0.09 | 7,900 | 0.27 | 19 | 130 | 41 | 37,000 | | 23,000 | 35 | 14000 | 250 |
| M99-418-01 | 63 | 17 | 5.8 | 2.5 | 1.4 | 2.7 | 2.7 | 0.63 | 0.12 | 0.05 | 0.03 | 0.02 | 3.8 | 99 | 1.2 | 80,000 | 190 | | 880 | 1.2 | 0.33 | 8,900 | 0.38 | 20 | 150 | 56 | 39,000 | | 25,000 | 35 | 14000 | 330 |
| M03-498-01 | 61 | 16 | 5.5 | 1.5 | 3.6 | 4.6 | 2.2 | 0.46 | 0.09 | 0.04 | <0.01 | <0.01 | 4.3 | 99 | 0.28 | 77,000 | 240 | | 620 | 0.89 | 0.09 | 23,000 | 0.18 | 12 | 44 | 24 | 36,000 | | 21,000 | 18 | 7600 | 280 |
| M06-607-01 | 62 | 16 | 7.5 | 2.6 | 1.5 | 2.8 | 2.2 | 0.6 | 0.12 | 0.05 | 0.02 | 0.02 | 3.5 | 99 | 0.38 | 72,000 | 120 | | 510 | 1 | 0.09 | 8,900 | 0.24 | 19 | 120 | 22 | 45,000 | | 20,000 | 37 | 13000 | 300 |
| M08-731W1-02 | 59 | 17 | 6.2 | 2.6 | 3.3 | 2.7 | 2.7 | 0.65 | 0.15 | 0.06 | 0.02 | 0.02 | 5.4 | 99 | 0.37 | 80,000 | 53 | | 670 | 0.98 | 0.25 | 21,000 | 0.23 | 20 | 97 | 61 | 41,000 | | 26,000 | 26 | 14000 | 370 |
| M98-266-01 | 60 | 17 | 6.6 | 2.9 | 2.3 | 2.1 | 3 | 0.66 | 0.13 | 0.06 | 0.02 | 0.02 | 4.7 | 100 | 0.66 | 84,000 | 75 | | 700 | 1.1 | 0.18 | 15,000 | 0.24 | 22 | 130 | 51 | 44,000 | | 29,000 | 34 | 16000 | 360 |
| M03-508-01 | 65 | 15 | 4.8 | 2.1 | 2.4 | 3.2 | 2.1 | 0.54 | 0.11 | 0.05 | 0.02 | 0.03 | 3.8 | 99 | | 74,000 | 59 | 0.8 | 630 | 0.98 | 0.11 | 16,000 | 0.22 | 17 | 160 | 33 | 32,000 | 0.1 | 18,000 | 30 | 11000 | 320 |
| M06-577-02 | 61 | 18 | 6.2 | 2.8 | 1.9 | 3.1 | 2.4 | 0.65 | 0.12 | 0.05 | 0.02 | 0.02 | 4.3 | 100 | | 89,000 | 46 | 0.03 | 710 | 1.1 | 0.09 | 13,000 | 0.25 | 22 | 160 | 49 | 43,000 | 0.1 | 22,000 | 41 | 16000 | 320 |
| M06-577-03 | 60 | 18 | 6.6 | 2.9 | 1.7 | 2.6 | 3 | 0.69 | 0.13 | 0.05 | 0.03 | 0.03 | 4.5 | 100 | | 91,000 | 59 | 0.04 | 660 | 1.2 | 0.1 | 12,000 | 0.24 | 22 | 170 | 39 | 46,000 | 0.1 | 27,000 | 39 | 16000 | 340 |
| M06-591-01 | 62 | 17 | 6.5 | 2.5 | 1.6 | 3.2 | 2.5 | 0.64 | 0.13 | 0.04 | 0.03 | 0.02 | 3.9 | 100 | | 84,000 | 33 | 0.04 | 610 | 1.1 | 0.11 | 11,000 | 0.62 | 20 | 170 | 51 | 45,000 | 0.1 | 22,000 | 35 | 14000 | 270 |
| M06-608-01 | 63 | 17 | 5.6 | 2.5 | 1.9 | 3.1 | 2.3 | 0.61 | 0.11 | 0.06 | 0.02 | 0.02 | 4 | 100 | | 85,000 | 15 | 0.02 | 590 | 1 | 0.19 | 12,000 | 0.24 | 18 | 160 | 48 | 37,000 | 0.1 | 22,000 | 37 | 14000 | 350 |
| M06-608-02 | 63 | 17 | 5.8 | 2.5 | 1.7 | 2.9 | 2.4 | 0.6 | 0.11 | 0.05 | 0.02 | 0.02 | 4.1 | 100 | | 80,000 | 31 | 0.03 | 610 | 1.2 | 0.09 | 12,000 | 0.21 | 19 | 160 | 35 | 38,000 | 0.1 | 21,000 | 37 | 14000 | 360 |
| M06-611-01 | 67 | 16 | 4.9 | 2.1 | 1.6 | 3.2 | 2.1 | 0.54 | 0.11 | 0.04 | <0.01 | 0.02 | 3.8 | 100 | | 76,000 | 43 | 0.02 | 700 | 1 | 0.09 | 11,000 | 0.21 | 16 | 160 | 35 | 33,000 | 0.1 | 18,000 | 63 | 12000 | 270 |
| M06-611-02 | 63 | 17 | 5.7 | 2.4 | 1.8 | 2.7 | 2.6 | 0.61 | 0.12 | 0.04 | <0.01 | 0.02 | 4.4 | 100 | | 82,000 | 30 | 0.03 | 740 | 1.2 | 0.12 | 12,000 | 0.2 | 16 | 190 | 41 | 39,000 | 0.1 | 23,000 | 32 | 13000 | 270 |
| M06-625-01 | 64 | 16 | 5.5 | 2.3 | 1.9 | 2.9 | 2.3 | 0.57 | 0.11 | 0.04 | 0.02 | 0.02 | 4.4 | 100 | | 78,000 | 110 | 0.07 | 620 | 1 | 0.12 | 13,000 | 0.22 | 19 | 170 | 43 | 38,000 | 0.1 | 21,000 | 32 | 13000 | 310 |
| M06-625-02 | 62 | 17 | 6.4 | 2.7 | 1.3 | 2.7 | 2.6 | 0.63 | 0.12 | 0.04 | 0.02 | 0.02 | 4.1 | 99 | | 79,000 | 57 | 0.02 | 1,000 | 1.1 | 0.09 | 8,000 | 0.22 | 17 | 170 | 42 | 41,000 | 0.1 | 21,000 | 41 | 15000 | 300 |
| M06-631-01 | 60 | 18 | 6.9 | 2.8 | 1.6 | 2.7 | 2.7 | 0.65 | 0.12 | 0.04 | 0.03 | <0.01 | 4.5 | 100 | | 82,000 | 49 | 0.03 | 750 | 1.3 | 0.22 | 11,000 | 0.24 | 21 | 170 | 45 | 44,000 | 0.1 | 23,000 | 40 | 15000 | 290 |
| M07-674-01 | 62 | 16 | 5.9 | 2.6 | 2.1 | 3 | 2.3 | 0.61 | 0.11 | 0.06 | 0.03 | 0.02 | 4.5 | 99 | | 80,000 | 50 | 0.02 | 600 | 1.1 | 0.91 | 14,000 | 0.32 | 19 | 160 | 54 | 40,000 | 0.1 | 21,000 | 32 | 14000 | 370 |
| M07-689-01 | 61 | 18 | 6.7 | 3 | 1.3 | 2.7 | 2.6 | 0.68 | 0.12 | 0.05 | 0.02 | 0.03 | 3.7 | 100 | | 84,000 | 31 | 0.02 | 550 | 1.2 | 0.19 | 8,000 | 0.26 | 20 | 160 | 49 | 43,000 | 0.1 | 22,000 | 43 | 16000 | 310 |
| M07-689-02 | 57 | 21 | 6.7 | 3 | 1.7 | 2.1 | 3.6 | 0.73 | 0.14 | 0.06 | 0.02 | 0.03 | 4.3 | 100 | | 99,000 | 58 | 0.03 | 750 | 1.4 | 0.15 | 12,000 | 0.31 | 22 | 160 | 46 | 45,000 | 0.1 | 32,000 | 45 | 17000 | 370 |
| M08-761-01 | 62 | 17 | 5.9 | 2.4 | 1.6 | 3.7 | 2.3 | 0.64 | 0.12 | 0.04 | 0.02 | 0.02 | 4 | 100 | | 84,000 | 61 | 0.06 | 660 | 1.1 | 0.11 | 11,000 | 0.3 | 20 | 170 | 39 | 40,000 | 0.1 | 20,000 | 34 | 14000 | 260 |
| M08-761-02 | 66 | 15 | 4.8 | 2.1 | 1.8 | 3.2 | 2.3 | 0.51 | 0.1 | 0.03 | 0.02 | 0.02 | 3.9 | 100 | | 74,000 | 19 | 0.03 | 720 | 1.1 | 0.09 | 12,000 | 0.23 | 16 | 160 | 28 | 32,000 | 0.1 | 21,000 | 27 | 11000 | 230 |
| M08-763-01 | 62 | 16 | 5.8 | 2.5 | 2.4 | 3.2 | 2.6 | 0.62 | 0.16 | 0.05 | 0.02 | <0.01 | 4.8 | 100 | | 79,000 | 240 | 0.03 | 620 | 1.4 | 0.09 | 16,000 | 0.34 | 18 | 150 | 37 | 39,000 | 0.1 | 22,000 | 29 | 14000 | 360 |
| M08-765-01 | 66 | 15 | 4.7 | 2 | 2.1 | 3 | 2.2 | 0.51 | 0.1 | 0.04 | 0.02 | <0.01 | 4 | 100 | | 73,000 | 72 | 0.02 | 600 | 1 | 0.09 | 14,000 | 0.25 | 16 | 160 | 41 | 31,000 | 0.1 | 19,000 | 26 | 11000 | 290 |
| M96-19-01 | 64 | 15 | 5.1 | 2.1 | 2 | 3.5 | 2.1 | 0.56 | 0.11 | 0.05 | 0.02 | 0.02 | 4.1 | 99 | | 62,000 | 230 | 0.02 | 500 | 0.96 | 0.13 | 12,000 | 0.23 | 15 | 140 | 40 | 28,000 | 0.1 | 16,000 | 22 | 10000 | 260 |
| M96-19-02 | 64 | 16 | 5.5 | 2.4 | 1.8 | 3.1 | 2.4 | 0.59 | 0.12 | 0.05 | 0.02 | 0.03 | 4.1 | 100 | | 81,000 | 110 | 0.02 | 810 | 1.2 | 0.21 | 13,000 | 0.22 | 17 | 150 | 41 | 37,000 | 0.1 | 21,000 | 36 | 14000 | 360 |
| M96-37-02 | 66 | 15 | 4.6 | 2 | 2 | 3.3 | 2 | 0.52 | 0.11 | 0.04 | 0.03 | <0.01 | 3.9 | 99 | | 74,000 | 60 | 0.02 | 680 | 1 | 0.2 | 14,000 | 0.25 | 18 | 190 | 78 | 31,000 | 0.1 | 18,000 | 25 | 11000 | 280 |
| M96-37-03 | 65 | 16 | 5.3 | 2.3 | 1.5 | 3.4 | 2 | 0.58 | 0.12 | 0.04 | 0.02 | 0.02 | 3.5 | 100 | | 79,000 | 36 | 0.02 | 630 | 1.1 | 0.23 | 11,000 | 0.21 | 17 | 170 | 60 | 36,000 | 0.1 | 18,000 | 33 | 13000 | 280 |
| M96-77-01 | 62 | 17 | 6 | 2.7 | 1.9 | 2.5 | 2.4 | 0.63 | 0.12 | 0.05 | 0.02 | 0.02 | 4.2 | 99 | | 86,000 | 45 | 0.04 | 540 | 0.99 | 0.14 | 14,000 | 0.28 | 17 | 180 | 45 | 42,000 | 0.1 | 23,000 | 35 | 16000 | 310 |
| M96-77-02 | 61 | 17 | 6.3 | 2.6 | 1.8 | 3 | 2.5 | 0.66 | 0.12 | 0.05 | 0.02 | 0.02 | 4.3 | 99 | | 87,000 | 98 | 0.03 | 760 | 1.2 | 0.35 | 13,000 | 0.34 | 20 | 170 | 55 | 44,000 | 0.1 | 24,000 | 32 | 15000 | 340 |
| M97-121-01 | 66 | 15 | 4.8 | 2 | 1.9 | 3.1 | 2.3 | 0.55 | 0.11 | 0.04 | 0.03 | 0.02 | 3.7 | 100 | | 77,000 | 13 | 0.04 | 570 | 0.89 | 0.14 | 13,000 | 0.26 | 15 | 180 | 43 | 33,000 | 0.1 | 22,000 | 25 | 11000 | 230 |
| M97-135-03 | 65 | 15 | 5.1 | 2.2 | 1.8 | 3.3 | 2.1 | 0.54 | 0.11 | 0.05 | 0.03 | <0.01 | 3.8 | 100 | | 77,000 | 30 | 0.02 | 580 | 0.93 | 0.12 | 13,000 | 0.28 | 17 | 180 | 40 | 35,000 | 0.1 | 19,000 | 26 | 12000 | 280 |
| M97-94A-01 | 64 | 16 | 5.2 | 2.4 | 2 | 3.1 | 2.2 | 0.55 | 0.1 | 0.05 | 0.02 | 0.02 | 4.3 | 100 | | 76,000 | 99 | 0.02 | 510 | 0.96 | 0.18 | 14,000 | 0.28 | 17 | 160 | 45 | 35,000 | 0.1 | 20,000 | 27 | 13000 | 350 |
| M97-94A-02 | 64 | 16 | 6 | 2.3 | 1.5 | 3 | 2.6 | 0.6 | 0.12 | 0.04 | 0.02 | 0.02 | 3.7 | 100 | | 82,000 | 320 | 0.31 | 610 | 0.96 | 0.18 | 11,000 | 0.26 | 17 | 180 | 43 | 42,000 | 0.1 | 24,000 | 27 | 13000 | 250 |
| M97-95-01 | 63 | 16 | 5.4 | 2.4 | 2.4 | 3.2 | 2.1 | 0.6 | 0.11 | 0.05 | 0.02 | <0.01 | 4.2 | 100 | | 81,000 | 18 | 0.03 | 560 | 0.87 | 0.12 | 17,000 | 0.3 | 16 | 170 | 33 | 37,000 | 0.1 | 19,000 | 34 | 13000 | 340 |
| M98-201-04 | 66 | 16 | 5 | 2 | 2.1 | 3 | 2.3 | 0.54 | 0.1 | 0.03 | <0.01 | 0.02 | 3.9 | 100 | | 78,000 | 20 | 0.02 | 640 | 0.92 | 0.16 | 15,000 | 0.25 | 16 | 170 | 44 | 35,000 | 0.1 | 21,000 | 27 | 11000 | 250 |
| M98-208-01 | 65 | 16 | 5 | 2.2 | 2.1 | 3.1 | 2.2 | 0.55 | 0.11 | 0.04 | 0.02 | 0.02 | 3.6 | 99 | | 80,000 | 24 | 0.03 | 560 | 0.96 | 0.2 | 16,000 | 0.24 | 19 | 180 | 51 | 36,000 | 0.1 | 20,000 | 31 | 13000 | 300 |
| M98-265-01 | 67 | 15 | 4.8 | 2.2 | 1.9 | 3.1 | 2 | 0.52 | 0.1 | 0.04 | 0.02 | 0.02 | 4.1 | 100 | | 77,000 | 99 | 0.02 | 630 | 0.92 | 0.66 | 14,000 | 0.29 | 15 | 180 | 37 | 34,000 | 0.1 | 19,000 | 27 | 13000 | 300 |
| M98-317-01 | 55 | 11 | 20 | 1.6 | 3 | 2.4 | 1.5 | 0.31 | 0.16 | 0.05 | <0.01 | <0.01 | 4.3 | 100 | | 55,000 | 9 | 0.04 | 420 | 0.93 | 0.1 | 21,000 | 0.16 | 7.3 | 93 | 15 | 130,000 | 0.1 | 13,000 | 19 | 8600 | 300 |
| M99-336B-03 | 61 | 17 | 5.8 | 2.5 | 2 | 2.9 | 2.7 | 0.65 | 0.12 | 0.05 | 0.03 | 0.02 | 4.5 | 99 | | 87,000 | 110 | 0.02 | 770 | 1 | 0.18 | 15,000 | 0.32 | 18 | 190 | 45 | 40,000 | 0.1 | 25,000 | 31 | 14000 | 330 |
| M99-347-01 | 62 | 17 | 5.9 | 2.6 | 2 | 3 | 2.5 | 0.66 | 0.12 | 0.05 | 0.03 | 0.02 | 4.3 | 100 | | 85,000 | 290 | 0.04 | 780 | 1.1 | 0.13 | 15,000 | 0.29 | 19 | 170 | 45 | 41,000 | 0.1 | 23,000 | 33 | 15000 | 320 |
| M99-347-02 | 63 | 16 | 5.6 | 2.5 | 2.5 | 3 | 2.3 | 0.58 | 0.12 | 0.05 | 0.02 | 0.03 | 4.5 | 100 | | 80,000 | 56 | 0.09 | 560 | 1.1 | 0.32 | 18,000 | 0.25 | 18 | 160 | 63 | 39,000 | 0.1 | 21,000 | 34 | 14000 | 360 |
| M99-409-01 | 67 | 15 | 4.7 | 2.1 | 1.9 | 3.1 | 2.1 | 0.51 | 0.1 | 0.03 | 0.02 | 0.02 | 3.4 | 100 | | 75,000 | 30 | 0.02 | 540 | 0.95 | 0.14 | 13,000 | 0.24 | 15 | 170 | 43 | 32,000 | 0.1 | 19,000 | 27 | 12000 | 260 |
| M99-409-02 | 63 | 16 | 5.4 | 2.4 | 1.9 | 3.4 | 2.2 | 0.58 | 0.11 | 0.05 | 0.03 | 0.02 | 4.2 | 100 | | 80,000 | 31 | 0.02 | 700 | 0.97 | 0.22 | 14,000 | 0.29 | 17 | 160 | 45 | 37,000 | 0.1 | 20,000 | 29 | 13000 | 300 |
| M99-409-03 | 65 | 16 | 5.3 | 2.3 | 1.3 | 3.2 | 2.3 | 0.57 | 0.12 | 0.04 | 0.02 | 0.02 | 3.5 | 99 | | 81,000 | 110 | 0.02 | 560 | 0.98 | 0.09 | 10,000 | 0.26 | 16 | 180 | 40 | 37,000 | 0.1 | 21,000 | 31 | 13000 | 240 |
| M99-410-01 | 62 | 17 | 5.8 | 2.5 | 1.8 | 2.8 | 2.6 | 0.64 | 0.12 | 0.05 | 0.02 | 0.02 | 3.9 | 99 | | 83,000 | 44 | 0.02 | 590 | 1.1 | 0.11 | 13,000 | 0.29 | 19 | 170 | 52 | 39,000 | 0.1 | 23,000 | 37 | 14000 | 310 |
| M99-410-02 | 64 | 17 | 5.8 | 2.5 | 1.6 | 2.9 | 2.5 | 0.6 | 0.11 | 0.04 | 0.03 | 0.02 | 4 | 100 | | 82,000 | 52 | 0.02 | 650 | 1.1 | 0.14 | 12,000 | 0.26 | 19 | 180 | 47 | 40,000 | 0.1 | 23,000 | 34 | 14000 | 290 |
| M99-436-01 | 65 | 16 | 5.3 | 2.3 | 1.7 | 3.5 | 2.1 | 0.57 | 0.11 | 0.04 | 0.02 | 0.02 | 3.6 | 100 | | 79,000 | 30 | 0.02 | 630 | 0.98 | 0.21 | 12,000 | 0.25 | 17 | 180 | 36 | 36,000 | 0.1 | 19,000 | 29 | 13000 | 260 |
| M99-436-02 | 62 | 17 | 6.2 | 2.7 | 1.6 | 2.8 | 2.5 | 0.64 | 0.13 | 0.05 | 0.03 | 0.02 | 4 | 100 | | 81,000 | 49 | 0.02 | 570 | 1 | 0.17 | 10,000 | 0.32 | 18 | 170 | 47 | 41,000 | 0.1 | 23,000 | 38 | 15000 | 290 |
| M10-879-01 | 66 | 15 | 4.6 | 1.9 | 2.1 | 3.4 | 1.9 | 0.52 | 0.1 | 0.04 | 0.02 | <0.01 | 3.9 | 99 | | 73,000 | 20 | 0.02 | 570 | 1 | 0.12 | 15,000 | 0.31 | 17 | 180 | 52 | 32,000 | 0.1 | 17,000 | 29 | 10000 | 320 |
| M10-887-01 | 65 | 15 | 5.2 | 2 | 1.9 | 2.8 | 2.5 | 0.55 | 0.1 | 0.05 | 0.02 | <0.01 | 4.2 | 99 | | 74,000 | 25 | 0.02 | 600 | 1.1 | 0.15 | 13,000 | 0.28 | 20 | 180 | 43 | 35,000 | 0.1 | 22,000 | 24 | 11000 | 330 |
| M07-704-02 | 62 | 16 | 5.6 | 2.3 | 1.7 | 2.7 | 2.7 | 0.61 | 0.12 | 0.04 | 0.02 | 0.02 | 4.1 | 99 | 0.66 | 84,000 | 270 | | 670 | 1 | 0.31 | 11,000 | 0.27 | 19 | 120 | 50 | 38,000 | 0.1 | 27,000 | 31 | 13000 | 280 |
| M07-710-02 | 61 | 13 | 8.8 | 1.1 | 4.4 | 3.4 | 1.5 | 0.31 | 0.13 | 0.04 | <0.01 | <0.01 | 5.3 | 99 | 0.23 | 75,000 | 71 | | 420 | 0.92 | 0.09 | 32,000 | 0.17 | 6.7 | 24 | 24 | 66,000 | 0.1 | 16,000 | 21 | 7400 | 280 |
| M07-711-01 | 60 | 12 | 13 | 1.4 | 3.6 | 2.3 | 1.5 | 0.28 | 0.1 | 0.04 | <0.01 | <0.01 | 4.7 | 99 | 0.09 | 61,000 | 190 | | 340 | 0.66 | 0.11 | 23,000 | 0.17 | 6 | 21 | 27 | 86,000 | 0.1 | 14,000 | 20 | 7500 | 320 |
| M98-269-01 | 61 | 15 | 7.8 | 1.5 | 2.6 | 3.8 | 2.1 | 0.4 | 0.1 | 0.05 | <0.01 | <0.01 | 4.7 | 99 | 0.07 | 75,000 | 340 | | 520 | 1.1 | 0.09 | 17,000 | 0.25 | 8 | 50 | 97 | 52,000 | 0.1 | 21,000 | 17 | 8300 | 330 |
| M98-297-02 | 64 | 15 | 6.6 | 1.1 | 2.6 | 4.1 | 2 | 0.34 | 0.11 | 0.03 | <0.01 | <0.01 | 3.6 | 100 | 0.09 | 76,000 | 25 | | 540 | 0.91 | 0.11 | 17,000 | 0.15 | 6.6 | 24 | 18 | 44,000 | 0.1 | 20,000 | 18 | 6600 | 230 |
| M03-496-01 | 56 | 10 | 17 | 1.5 | 3.1 | 1.6 | 1.7 | 0.29 | 0.13 | 0.05 | <0.01 | <0.01 | 6.3 | 97 | 0.52 | 54,000 | 200 | | 460 | 0.92 | 0.09 | 21,000 | 0.07 | 8.1 | 35 | 27 | 110,000 | 0.1 | 17,000 | 19 | 8400 | 340 |
| M06-604-01 | 61 | 18 | 6.9 | 2.8 | 1.1 | 3.1 | 2.7 | 0.69 | 0.13 | 0.04 | 0.02 | 0.03 | 3.8 | 100 | 0.37 | 98,000 | 41 | | 570 | 1.1 | 0.21 | 7,600 | 0.24 | 20 | 120 | 43 | 50,000 | 0.1 | 29,000 | 33 | 17000 | 280 |
| M07-663-01 | 59 | 17 | 8.8 | 2.8 | 1.7 | 2.6 | 2.7 | 0.7 | 0.13 | 0.06 | 0.02 | 0.02 | 4.2 | 99 | 0.37 | 85,000 | 1,500 | | 720 | 1.2 | 0.15 | 11,000 | 0.16 | 20 | 120 | 63 | 59,000 | 0.1 | 27,000 | 34 | 16000 | 360 |
| M07-663-02 | 58 | 17 | 7.7 | 2.7 | 1.8 | 2.3 | 3 | 0.72 | 0.12 | 0.04 | 0.02 | 0.03 | 4.7 | 98 | 0.45 | 88,000 | 110 | | 1,600 | 1.6 | 0.3 | 12,000 | 0.15 | 20 | 130 | 41 | 52,000 | 0.1 | 30,000 | 39 | 15000 | 300 |
| M07-649-01_2009 | 60 | 16 | 7.9 | 2.5 | 2.3 | 2.6 | 2.6 | 0.56 | 0.12 | 0.04 | 0.02 | 0.02 | 4.7 | 99 | 0.31 | 77,000 | 280 | | 620 | 1.1 | 0.09 | 15,000 | 0.26 | 18 | 92 | 44 | 53,000 | | 24,000 | 26 | 14000 | 290 |
| M07-672B-01 | 60 | 18 | 8.4 | 2.9 | 1.2 | 2.5 | 2.8 | 0.73 | 0.13 | 0.04 | 0.02 | 0.02 | 3.6 | 100 | 0.37 | 73,000 | 43 | | 490 | 1 | 0.09 | 6,700 | 0.24 | 21 | 120 | 27 | 48,000 | | 22,000 | 31 | 13000 | 260 |
| M07-685-02 | 60 | 17 | 7 | 2.9 | 1.5 | 3 | 2.6 | 0.71 | 0.12 | 0.06 | 0.02 | 0.02 | 3.7 | 99 | 0.43 | 80,000 | 150 | | 490 | 1 | 0.16 | 9,000 | 0.3 | 22 | 130 | 47 | 45,000 | | 23,000 | 31 | 15000 | 350 |
| M07-691-01 | 62 | 17 | 6.5 | 2.7 | 1.1 | 3.3 | 2.4 | 0.63 | 0.12 | 0.04 | 0.02 | 0.02 | 3.2 | 99 | 0.37 | 74,000 | 47 | | 450 | 0.94 | 0.11 | 6,100 | 0.24 | 18 | 99 | 43 | 38,000 | | 21,000 | 28 | 13000 | 250 |
| M08-769-01 | 59 | 13 | 9.9 | 1.4 | 4.6 | 3.7 | 1.3 | 0.34 | 0.1 | 0.05 | <0.01 | <0.01 | 5.5 | 100 | 0.22 | 62,000 | 26 | | 400 | 0.89 | 0.09 | 28,000 | 0.17 | 8.2 | 79 | 22 | 62,000 | | 12,000 | 19 | 7400 | 350 |
| M97-95-02 | 62 | 17 | 5.8 | 2.2 | 1.9 | 2.8 | 2.8 | 0.58 | 0.11 | 0.04 | 0.02 | 0.02 | 4.3 | 99 | | 84,000 | 120 | 0.02 | 710 | 1.1 | 0.16 | 14,000 | 0.25 | 18 | 160 | 44 | 40,000 | 0.1 | 26,000 | 27 | 13000 | 250 |
| M98-270-01 | 65 | 16 | 5.2 | 2.3 | 1.9 | 3.2 | 2.3 | 0.6 | 0.11 | 0.04 | 0.02 | 0.02 | 3.8 | 100 | | 81,000 | 85 | 0.02 | 540 | 1 | 0.12 | 14,000 | 0.27 | 17 | 170 | 45 | 36,000 | 0.1 | 21,000 | 32 | 13000 | 290 |
| M99-409-04 | 60 | 15 | 10 | 2.4 | 2.9 | 2.1 | 1.9 | 0.51 | 0.16 | 0.05 | 0.02 | <0.01 | 5.2 | 99 | | 73,000 | 160 | 0.06 | 440 | 1 | 0.19 | 20,000 | 0.24 | 14 | 140 | 45 | 70,000 | 0.1 | 18,000 | 26 | 14000 | 340 |

**Appendix D-6: Meliadine Extension Database: Static Test**
**Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| GT08-01-01 | 66 | 15 | 5.1 | 2 | 1.9 | 3.4 | 2.2 | 0.51 | 0.1 | 0.04 | <0.01 | 0.02 | 3.8 | 100 | 0.38 | 80,000 | 17 | | 790 | 0.93 | 0.23 | 13,000 | 0.25 | 17 | 94 | 42 | 36,000 | 0.1 | 22,000 | 22 | 11000 | 260 |
| M00-474-04 | 62 | 13 | 8.9 | 1.1 | 3.9 | 3.6 | 1.3 | 0.27 | 0.08 | 0.04 | <0.01 | <0.01 | 4.4 | 98 | 0.21 | 69,000 | 89 | | 360 | 0.82 | 0.09 | 27,000 | 0.16 | 7.5 | 21 | 28 | 64,000 | 0.1 | 13,000 | 20 | 7100 | 280 |
| M03-513-01 | 63 | 15 | 5.7 | 2 | 2.2 | 3.1 | 2.6 | 0.57 | 0.11 | 0.04 | 0.02 | 0.02 | 4.4 | 99 | 0.33 | 82,000 | 24 | | 610 | 0.97 | 0.09 | 16,000 | 0.23 | 18 | 120 | 36 | 41,000 | 0.1 | 28,000 | 22 | 12000 | 310 |
| M07-660-01_2008 | 65 | 13 | 5.5 | 1.2 | 3.3 | 3.4 | 2.3 | 0.38 | 0.1 | 0.04 | <0.01 | <0.01 | 4.6 | 99 | 0.1 | 71,000 | 23 | | 1,500 | 1.2 | 0.09 | 23,000 | 0.18 | 7.2 | 30 | 21 | 40,000 | 0.1 | 23,000 | 18 | 7100 | 280 |
| M07-678-02 | 61 | 14 | 8.6 | 1.8 | 3.6 | 3.6 | 2.2 | 0.45 | 0.12 | 0.05 | <0.01 | 0.02 | 5.6 | 100 | 0.07 | 72,000 | 240 | | 620 | 1.1 | 0.09 | 24,000 | 0.33 | 12 | 70 | 200 | 58,000 | 0.1 | 21,000 | 14 | 10000 | 350 |
| M07-713-01 | 63 | 15 | 7.6 | 1.4 | 2.6 | 3.5 | 2.3 | 0.39 | 0.08 | 0.04 | <0.01 | <0.01 | 4.7 | 100 | 0.09 | 71,000 | 130 | | 600 | 1.1 | 0.09 | 16,000 | 0.19 | 9.2 | 47 | 62 | 49,000 | 0.1 | 22,000 | 16 | 7600 | 280 |
| M98-194-02 | 65 | 13 | 8.2 | 1 | 3.1 | 3.2 | 1.9 | 0.31 | 0.09 | 0.04 | <0.01 | <0.01 | 4.4 | 100 | 0.13 | 63,000 | 83 | | 650 | 0.94 | 0.09 | 20,000 | 0.16 | 5.9 | 27 | 20 | 54,000 | 0.1 | 18,000 | 15 | 5600 | 290 |
| M98-269-02 | 61 | 13 | 11 | 1.3 | 3.2 | 2.9 | 1.7 | 0.26 | 0.1 | 0.03 | <0.01 | <0.01 | 4.2 | 98 | 0.12 | 68,000 | 18 | | 390 | 0.92 | 0.09 | 22,000 | 0.15 | 6.9 | 19 | 20 | 77,000 | 0.1 | 17,000 | 26 | 7500 | 250 |
| M99-339-01 | 64 | 13 | 9.5 | 1.6 | 2.3 | 2.9 | 1.6 | 0.35 | 0.11 | 0.04 | <0.01 | <0.01 | 4.3 | 100 | 0.31 | 71,000 | 540 | | 390 | 0.91 | 0.41 | 16,000 | 0.18 | 9.2 | 40 | 21 | 68,000 | 0.1 | 17,000 | 26 | 9900 | 260 |
| M99-345-01_2008 | 61 | 15 | 6.7 | 1.5 | 2.9 | 3.7 | 2.4 | 0.41 | 0.08 | 0.06 | <0.01 | <0.01 | 5 | 99 | 0.33 | 78,000 | 860 | | 550 | 1 | 0.33 | 20,000 | 0.16 | 8.6 | 33 | 17 | 48,000 | 0.1 | 24,000 | 20 | 8600 | 400 |
| M99-349-01 | 61 | 14 | 9 | 1.6 | 2.6 | 4.1 | 1.6 | 0.4 | 0.13 | 0.04 | <0.01 | <0.01 | 3.9 | 99 | 0.26 | 73,000 | 320 | | 390 | 0.76 | 0.09 | 17,000 | 0.18 | 10 | 36 | 47 | 61,000 | 0.1 | 15,000 | 17 | 9700 | 270 |
| M99-349-02 | 60 | 14 | 7.8 | 1.3 | 3.8 | 3.5 | 2.2 | 0.4 | 0.16 | 0.05 | <0.01 | <0.01 | 5.9 | 99 | 0.22 | 73,000 | 50 | | 580 | 0.99 | 0.09 | 25,000 | 0.19 | 7.1 | 20 | 16 | 54,000 | 0.1 | 22,000 | 15 | 7800 | 330 |
| M98-194-01 | 63 | 14 | 8.3 | 1.3 | 3.2 | 4.1 | 1.8 | 0.35 | 0.11 | 0.04 | <0.01 | <0.01 | 5 | 100 | 0.09 | 67,000 | 830 | | 710 | 1 | 0.09 | 20,000 | 0.2 | 8 | 33 | 22 | 53,000 | 0.1 | 17,000 | 15 | 7200 | 270 |
| M05-571A-01 | 61 | 15 | 7.8 | 2 | 2.5 | 2.3 | 2.7 | 0.46 | 0.11 | 0.04 | <0.01 | <0.01 | 4.6 | 99 | 0.25 | 82,000 | 380 | | 710 | 1.4 | 0.09 | 17,000 | 0.21 | 13 | 63 | 22 | 55,000 | 0.1 | 28,000 | 28 | 12000 | 300 |
| M06-623-01 | 63 | 16 | 6.6 | 1.6 | 2.4 | 3.6 | 2.1 | 0.4 | 0.09 | 0.03 | <0.01 | <0.01 | 4.5 | 100 | | 78,000 | 27 | 0.03 | 610 | 1.1 | 0.09 | 17,000 | 0.14 | 11 | 110 | 33 | 46,000 | 0.1 | 19,000 | 27 | 8900 | 220 |
| CAEXD175471 | 61 | 15 | 5.8 | 1.5 | 3 | 5.3 | 1.8 | 0.43 | 0.08 | 0.04 | <0.01 | | 4.1 | 98 | 0.03 | 13,000 | 55 | 0.02 | 58 | <0.1 | 0.03 | 20,000 | 0.15 | 11 | 15 | 15 | 38,000 | 0.01 | 2,400 | 15 | 7,600 | 310 |
| CAEXD206190 | 58 | 14 | 10 | 1.8 | 2.9 | 4.5 | 1.3 | 0.4 | 0.08 | 0.04 | <0.01 | | 4.3 | 98 | 0.04 | 22,000 | 35 | 0.02 | 55 | <0.1 | 0.14 | 19,000 | 0.04 | 12 | 20 | 61 | 70,000 | <0.01 | 1,500 | 22 | 9,600 | 280 |
| CAEXD217787 | 59 | 14 | 7.6 | 1.5 | 3.3 | 4.4 | 1.9 | 0.38 | 0.09 | 0.03 | <0.01 | | 4.9 | 96 | 0.03 | 15,000 | 54 | 0.1 | 120 | 0.2 | 0.06 | 23,000 | 0.06 | 9.5 | 12 | 16 | 52,000 | <0.01 | 3,700 | 17 | 7800 | 270 |
| CAEXD261351 | 40 | 11 | 9.8 | 5.7 | 12 | 1.1 | 1.7 | 0.64 | 0.03 | 0.16 | 0.02 | | 16 | 98 | 0.24 | 21,000 | 140 | 0.03 | 22 | <0.1 | 0.04 | 77,000 | 0.16 | 38 | 77 | 110 | 67,000 | <0.01 | 1,300 | 30 | 33,000 | 1,200 |
| CAEXD211120 | 62 | 15 | 7.4 | 1.6 | 3.5 | 4.6 | 1.5 | 0.41 | 0.08 | 0.04 | <0.01 | | 4 | 99 | 0.03 | 20,000 | 9 | 0.02 | 62 | <0.1 | 0.05 | 22,000 | 0.05 | 11 | 13 | 12 | 47,000 | <0.01 | 1,500 | 25 | 8,000 | 260 |
| CAEXD199214 | 59 | 15 | 7.7 | 2 | 2.2 | 3.3 | 2.4 | 0.41 | 0.09 | 0.04 | <0.01 | | 4.1 | 96 | 0.08 | 20,000 | 670 | 0.02 | 83 | 0.2 | 0.19 | 14,000 | 0.09 | 12 | 23 | 10 | 50,000 | <0.01 | 4,100 | 24 | 11000 | 300 |
| M00-474-02 | 41 | 12 | 10 | 4.5 | 11 | 1.6 | 1.4 | 0.79 | 0.07 | 0.26 | 0.02 | 0.04 | 15 | 98 | 0.23 | 71,000 | 2,100 | | 330 | 0.53 | 0.09 | 79,000 | 0.24 | 33 | 150 | 130 | 75,000 | 0.1 | 15,000 | 37 | 28000 | 1,800 |
| M99-403-01 | 48 | 11 | 9.7 | 3.4 | 9.6 | 0.9 | 1.9 | 0.64 | 0.08 | 0.17 | 0.02 | 0.04 | 13 | 98 | 0.16 | 64,000 | 1,300 | | 370 | 0.67 | 0.09 | 67,000 | 0.49 | 27 | 140 | 76 | 71,000 | 0.1 | 20,000 | 22 | 21000 | 1,100 |
| GT08-04-01_2008 | 43 | 13 | 12 | 4.5 | 12 | 2.4 | 0.26 | 0.89 | 0.06 | 0.22 | 0.02 | 0.05 | 11 | 100 | 0.15 | 70,000 | 31 | | 34 | 0.24 | 0.09 | 77,000 | 0.2 | 40 | 140 | 110 | 79,000 | 0.1 | 2,900 | 56 | 25000 | 1,400 |
| GT08-04-03 | 34 | 11 | 16 | 3.6 | 13 | 1.1 | 1.3 | 0.61 | 0.07 | 0.53 | 0.02 | 0.04 | 14 | 95 | 0.49 | 54,000 | 8,000 | | 250 | 0.61 | 0.28 | 80,000 | 1.3 | 52 | 110 | 280 | 110,000 | 0.1 | 13,000 | 26 | 18000 | 3,200 |
| M00-474-01 | 41 | 13 | 10 | 3.7 | 14 | 2.7 | 0.43 | 0.75 | 0.05 | 0.29 | 0.02 | 0.05 | 14 | 99 | 0.15 | 70,000 | 65 | | 160 | 0.19 | 0.09 | 99,000 | 0.14 | 45 | 160 | 130 | 74,000 | 0.1 | 4,700 | 45 | 23000 | 1,900 |
| M07-678-01 | 42 | 12 | 11 | 5.9 | 9.4 | 1.8 | 0.75 | 0.78 | 0.06 | 0.17 | 0.02 | 0.05 | 15 | 99 | 0.13 | 61,000 | 120 | | 100 | 0.33 | 0.09 | 60,000 | 0.15 | 36 | 110 | 100 | 72,000 | 0.1 | 7,200 | 46 | 32000 | 960 |
| M98-297-01 | 39 | 13 | 9.5 | 3.8 | 12 | 1.5 | 2 | 0.86 | 0.07 | 0.29 | 0.03 | 0.05 | 15 | 98 | 0.11 | 69,000 | 1,000 | | 430 | 0.61 | 0.09 | 80,000 | 0.27 | 37 | 150 | 81 | 64,000 | 0.1 | 20,000 | 26 | 22000 | 1,700 |
| M99-340-01 | 43 | 13 | 9.9 | 3.9 | 11 | 1.9 | 1.3 | 0.86 | 0.08 | 0.2 | 0.03 | 0.05 | 14 | 100 | 0.14 | 67,000 | 73 | | 170 | 0.43 | 0.09 | 68,000 | 0.15 | 36 | 180 | 68 | 64,000 | 0.1 | 14,000 | 47 | 21000 | 1,200 |
| GT08-04-02 | 43 | 12 | 8.3 | 4 | 13 | 1.8 | 1 | 0.71 | 0.06 | 0.24 | 0.02 | 0.04 | 16 | 100 | 0.14 | 63,000 | 91 | | 140 | 0.4 | 0.09 | 86,000 | 0.17 | 31 | 150 | 67 | 57,000 | 0.1 | 11,000 | 34 | 22000 | 1,500 |
| M99-341-01 | 41 | 12 | 10 | 4.4 | 12 | 1.4 | 1.4 | 0.82 | 0.08 | 0.18 | 0.03 | 0.04 | 15 | 99 | 0.24 | 66,000 | 250 | | 120 | 0.5 | 0.09 | 79,000 | 0.12 | 41 | 170 | 62 | 72,000 | 0.1 | 14,000 | 36 | 27000 | 1,100 |
| GT08-02-01_2009 | 44 | 14 | 12 | 4 | 12 | 2.5 | 0.06 | 0.96 | 0.07 | 0.23 | 0.03 | 0.06 | 10 | 100 | 0.07 | 76,000 | 9 | | 8 | 0.25 | 0.09 | 80,000 | 0.72 | 45 | 140 | 97 | 84,000 | | 640 | 40 | 24000 | 1,300 |
| M05-561-01 | 44 | 14 | 11 | 6.1 | 9.9 | 1.7 | 0.86 | 0.73 | 0.05 | 0.2 | 0.03 | 0.05 | 12 | 100 | 0.1 | 74,000 | 4 | | 93 | 0.33 | 0.09 | 64,000 | 0.09 | 40 | 150 | 64 | 72,000 | | 7,500 | 70 | 34000 | 1,300 |
| M05-561-02_2009 | 42 | 13 | 10 | 5.1 | 12 | 2.3 | 0.92 | 0.64 | 0.04 | 0.24 | 0.04 | 0.05 | 14 | 100 | 0.17 | 68,000 | 15 | | 120 | 0.32 | 0.09 | 80,000 | 0.15 | 44 | 200 | 130 | 68,000 | | 8,400 | 46 | 30000 | 1,600 |
| M05-564-01 | 44 | 15 | 10 | 4 | 12 | 2.5 | 0.29 | 0.91 | 0.06 | 0.23 | 0.04 | 0.05 | 11 | 100 | 0.09 | 81,000 | 3 | | 55 | 0.31 | 0.09 | 82,000 | 0.19 | 41 | 180 | 83 | 69,000 | | 2,600 | 52 | 24000 | 1,400 |
| M97-130-02 | 42 | 12 | 10 | 5.5 | 12 | 2.1 | 0.46 | 0.68 | 0.07 | 0.21 | 0.03 | 0.04 | 14 | 99 | 0.12 | 70,000 | 6 | | 87 | 0.23 | 0.09 | 85,000 | 0.12 | 48 | 170 | 120 | 74,000 | | 4,500 | 53 | 35000 | 1,400 |
| M97-134-01 | 43 | 13 | 10 | 4.4 | 14 | 1.8 | 0.37 | 0.78 | 0.06 | 0.26 | 0.03 | 0.05 | 13 | 100 | 0.2 | 70,000 | 10 | | 90 | 0.23 | 0.09 | 91,000 | 0.16 | 48 | 170 | 140 | 67,000 | | 3,300 | 65 | 26000 | 1,600 |
| M97-137-01 | 41 | 13 | 9.1 | 3.7 | 15 | 2.3 | 0.71 | 0.81 | 0.06 | 0.24 | 0.03 | 0.05 | 14 | 100 | 0.11 | 71,000 | 4 | | 170 | 0.34 | 0.09 | 98,000 | 0.1 | 39 | 190 | 90 | 62,000 | | 6,400 | 54 | 21000 | 1,600 |
| M97-138-01 | 43 | 13 | 11 | 4.2 | 13 | 1.9 | 0.48 | 0.77 | 0.05 | 0.26 | 0.03 | 0.05 | 12 | 100 | 0.19 | 72,000 | 16 | | 53 | 0.25 | 0.09 | 87,000 | 0.23 | 47 | 170 | 120 | 74,000 | | 4,400 | 40 | 25000 | 1,500 |
| M97-139-01 | 37 | 13 | 9.8 | 4.8 | 12 | 1.8 | 2.4 | 0.69 | 0.05 | 0.25 | 0.03 | 0.05 | 17 | 99 | 0.64 | 68,000 | 290 | | 290 | 0.77 | 0.29 | 83,000 | 0.69 | 46 | 140 | 170 | 69,000 | | 21,000 | 9 | 29000 | 1,500 |
| M97-92-01 | 44 | 13 | 9.4 | 4.7 | 11 | 3.2 | 0.55 | 0.68 | 0.08 | 0.22 | 0.03 | 0.04 | 13 | 100 | 0.11 | 68,000 | 16 | | 140 | 0.3 | 0.09 | 73,000 | 0.24 | 38 | 150 | 110 | 64,000 | | 5,000 | 37 | 27000 | 1,400 |
| M97-93-01 | 43 | 14 | 13 | 4.1 | 10 | 2.5 | 0.53 | 0.97 | 0.08 | 0.29 | 0.03 | 0.06 | 11 | 100 | 0.17 | 75,000 | 61 | | 72 | 0.26 | 0.09 | 68,000 | 0.18 | 42 | 140 | 100 | 86,000 | | 4,800 | 35 | 24000 | 1,700 |
| M98-318-01 | 41 | 13 | 10 | 4.2 | 13 | 1.8 | 0.66 | 0.83 | 0.07 | 0.28 | 0.04 | 0.05 | 14 | 99 | 0.2 | 66,000 | 8 | | 86 | 0.3 | 0.09 | 83,000 | 0.2 | 41 | 200 | 130 | 66,000 | | 5,700 | 67 | 23000 | 1,800 |
| M05-536A-01 | 39 | 13 | 11 | 4.8 | 12 | 1.7 | 1.2 | 0.82 | 0.06 | 0.24 | 0.03 | 0.05 | 14 | 99 | 0.21 | 72,000 | 86 | | 140 | 0.43 | 0.09 | 83,000 | 0.27 | 42 | 150 | 110 | 78,000 | | 11,000 | 32 | 29000 | 1,300 |
| M06-623-02 | 40 | 13 | 10 | 4.3 | 14 | 1.9 | 0.62 | 0.79 | 0.06 | 0.24 | 0.03 | 0.05 | 14 | 100 | | 67,000 | 5 | 0.04 | 1,100 | 0.42 | 0.09 | 100,000 | 0.07 | 40 | 170 | 83 | 73,000 | 0.1 | 5,700 | 51 | 25000 | 1,400 |
| M08-783-02 | 38 | 13 | 10 | 4 | 15 | 1.4 | 0.86 | 0.8 | 0.06 | 0.28 | 0.02 | 0.04 | 16 | 99 | | 63,000 | 25 | 0.03 | 170 | 0.41 | 0.09 | 110,000 | 0.22 | 43 | 160 | 140 | 71,000 | 0.1 | 8,000 | 56 | 23000 | 1,800 |
| M97-95-03 | 43 | 13 | 11 | 4.8 | 13 | 2.5 | 0.41 | 0.76 | 0.07 | 0.23 | 0.03 | 0.04 | 12 | 100 | | 65,000 | 8 | 0.07 | 70 | 0.3 | 0.09 | 91,000 | 0.14 | 43 | 160 | 110 | 74,000 | 0.1 | 3,800 | 45 | 27000 | 1,300 |
| M99-336B-04 | 42 | 14 | 9.7 | 3.4 | 15 | 2.3 | 0.35 | 0.84 | 0.07 | 0.36 | 0.03 | 0.04 | 12 | 99 | | 67,000 | 28 | 0.02 | 41 | 0.28 | 0.09 | 100,000 | 0.21 | 42 | 180 | 110 | 65,000 | 0.1 | 3,400 | 43 | 19000 | 2,000 |
| M99-345-01 | 43 | 14 | 9.3 | 3.8 | 12 | 1.8 | 1.1 | 0.88 | 0.07 | 0.21 | 0.03 | 0.05 | 14 | 100 | | 67,000 | 47 | 0.05 | 130 | 0.39 | 0.09 | 80,000 | 0.16 | 37 | 190 | 87 | 61,000 | 0.1 | 10,000 | 52 | 20000 | 1,100 |
| M99-409-05 | 46 | 15 | 10 | 4.1 | 9.5 | 2.1 | 1 | 0.94 | 0.09 | 0.18 | 0.02 | 0.05 | 10 | 99 | | 74,000 | 170 | 0.03 | 180 | 0.42 | 0.09 | 66,000 | 0.33 | 37 | 170 | 68 | 72,000 | 0.1 | 10,000 | 56 | 23000 | 930 |
| CAEXD162003 | 58 | 4.7 | 20 | 3.6 | 3.3 | 0.03 | 0.09 | 0.48 | 0.09 | 0.1 | <0.01 | | 5.9 | 96 | 0.67 | 25,000 | 1,000 | 12 | 20 | <0.1 | 0.1 | 22,000 | 0.14 | 21 | 20 | 190 | 140,000 | <0.01 | 200 | 14 | 21,000 | 760 |
| CAEXD158752 | 36 | 2 | 38 | 3.6 | 1.8 | 0.03 | 0.05 | 0.09 | 0.12 | 0.78 | <0.01 | | 18 | 100 | 0.5 | 9,900 | 19,000 | 3.1 | 43 | 0.2 | 0.56 | 12,000 | 0.35 | 40 | 25 | 790 | 270,000 | 0.01 | 400 | 4 | 21000 | 5,700 |
| CAEXD173581 | 49 | 3 | 22 | 1.9 | 2.3 | 0.02 | 0.01 | 0.19 | 0.05 | 0.32 | <0.01 | | 6.7 | 85 | 2.9 | 15,000 | 15,000 | 5.5 | 16 | <0.1 | 0.53 | 16,000 | 5.9 | 35 | 42 | 420 | 140,000 | 0.01 | 100 | 1 | 10,000 | 2,400 |
| CAEXD159768 | 63 | 0.84 | 19 | 1.8 | 2.5 | 0.01 | 0.06 | 0.03 | 0.01 | 0.39 | <0.01 | | 8.2 | 95 | 0.55 | 4,200 | 3,200 | 6.5 | 39 | <0.1 | 0.31 | 19,000 | 2 | 15 | 14 | 250 | 130,000 | <0.01 | 500 | 1 | 12,000 | 3,100 |
| CAEXD160930 | 65 | 1.3 | 15 | 1.8 | 4 | 0.05 | 0.17 | 0.05 | 0.02 | 0.34 | <0.01 | | 6 | 94 | 0.9 | 6,300 | 10,000 | 2.9 | 47 | <0.1 | 0.41 | 29,000 | 1.6 | 38 | 19 | 230 | 110,000 | <0.01 | 1,300 | 4 | 12,000 | 2,800 |
| CAEXD163317 | 59 | 0.6 | 18 | 2 | 5.6 | <0.01 | 0.03 | 0.01 | <0.01 | 0.35 | <0.01 | | 8.7 | 94 | 1.5 | 3,000 | 18,000 | 6.3 | 15 | <0.1 | 0.21 | 40,000 | 0.94 | 27 | 11 | 150 | 120,000 | <0.01 | 100 | 2 | 13,000 | 2,800 |
| CAEXD239740 | 69 | 0.85 | 14 | 1 | 2.6 | 0.01 | 0.01 | 0.03 | <0.01 | 0.13 | <0.01 | | 6 | 94 | 4.3 | 4,600 | 37,000 | 19 | 18 | <0.1 | 3.5 | 18,000 | 1.2 | 81 | 15 | 320 | 100,000 | 0.02 | 100 | 2 | 6,100 | 1,000 |
| CAEXD164147 | 63 | 1.8 | 19 | 1.7 | 2.6 | 0.03 | 0.15 | 0.06 | 0.06 | 0.49 | <0.01 | | 7.9 | 96 | 0.43 | 7,900 | 410 | 3.6 | 23 | <0.1 | 0.32 | 18,000 | 3.4 | 20 | 13 | 450 | 130,000 | 0.01 | 300 | 4 | 10,000 | 3,900 |
| M96-51-01 | 40 | 11 | 10 | 7.1 | 11 | 2.4 | 0.9 | 0.64 | 0.04 | 0.2 | 0.05 | 0.04 | 17 | 100 | | 54,000 | 40 | 0.13 | 120 | 0.51 | 0.09 | 75,000 | 0.16 | 43 | 290 | 97 | 70,000 | 0.1 | 8,300 | 26 | 39000 | 1,200 |
| CAEXD154976 | 56 | 0.67 | 16 | 1.8 | 3.8 | 0.01 | 0.03 | 0.02 | <0.01 | 0.37 | <0.01 | | 8.4 | 87 | 1.3 | 3,100 | 5,500 | 6.5 | 13 | <0.1 | 2.3 | 28,000 | 1.6 | 11 | 10 | 100 | 110,000 | <0.01 | 100 | 1 | 11,000 | 3,000 |
| CAEXD260999 | 47 | 13 | 11 | 3.9 | 11 | 2 | 1.2 | 1.2 | 0.21 | 0.21 | 0.02 | | 10 | 100 | 0.07 | 33,000 | 52 | 5.8 | 68 | <0.1 | 0.05 | 72,000 | 0.18 | 36 | 130 | 68 | 64,000 | <0.01 | 4,900 | 46 | 23,000 | 1,500 |

**Appendix D-6: Meliadine Extension Database: Static Test**
**Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| CAEXD159231 | 45 | 11 | 12 | 5.8 | 9 | 2.2 | 1 | 1.4 | 0.12 | 0.15 | 0.02 | | 14 | 100 | 0.23 | 22,000 | 440 | 5.1 | 27 | <0.1 | 0.07 | 62,000 | 0.18 | 38 | 68 | 130 | 74,000 | <0.01 | 1,000 | 29 | 35,000 | 1,200 |
| CAEXD239665 | 44 | 12 | 11 | 5.5 | 11 | 2.5 | 0.95 | 0.83 | 0.06 | 0.21 | 0.04 | | 13 | 100 | 0.12 | 26,000 | 74 | 8.8 | 13 | <0.1 | 0.14 | 75,000 | 0.18 | 47 | 190 | 91 | 64,000 | 0.02 | 700 | 36 | 32,000 | 1,500 |
| CAEXD161414 | 46 | 12 | 11 | 6.8 | 9.3 | 2.7 | 0.9 | 1 | 0.06 | 0.22 | 0.02 | | 14 | 100 | 0.12 | 23,000 | 71 | 2.3 | 20 | <0.1 | 0.02 | 61,000 | 0.2 | 55 | 71 | 190 | 66,000 | <0.01 | 900 | 34 | 39,000 | 1,600 |
| CAMLD105829 | 48 | 3.8 | 27 | 1.6 | 7.1 | 0.1 | 0.14 | 0.46 | 0.08 | 0.11 | <0.01 | | 5.2 | 94 | 2.9 | 17,000 | 34,000 | 15 | 24 | 0.2 | 0.83 | 45,000 | 1.1 | 33 | 14 | 630 | 190,000 | 0.05 | 200 | 12 | 8700 | 810 |
| M96-50-01 | 46 | 15 | 12 | 5.5 | 11 | 2.9 | 0.15 | 0.97 | 0.08 | 0.22 | 0.03 | 0.04 | 7 | 100 | | 75,000 | 24 | 0.04 | 30 | 0.25 | 0.09 | 75,000 | 0.12 | 46 | 160 | 67 | 85,000 | 0.1 | 1,400 | 20 | 30000 | 1,200 |
| CAEXD155161 | 56 | 1.3 | 17 | 1.1 | 2 | 0.01 | 0.04 | 0.06 | 0.1 | 0.26 | <0.01 | | 7.2 | 85 | 0.2 | 6,600 | 200 | 0.02 | 32 | <0.1 | 0.2 | 14,000 | 3.9 | 11 | 14 | 140 | 120,000 | 0.01 | 200 | 3 | 5,700 | 2,100 |
| CAEXD160328 | 48 | 0.19 | 21 | 1.4 | 1.3 | 0.01 | 0.02 | <0.01 | <0.01 | 0.5 | <0.01 | | 10 | 83 | 0.18 | 700 | 580 | 0.33 | 20 | <0.1 | 0.1 | 8,600 | 0.3 | 8.5 | 4 | 160 | 140,000 | 0.01 | 100 | 1 | 7,500 | 3,900 |
| CAEXD159101 | 45 | 1.1 | 25 | 2.2 | 2.1 | 0.01 | 0.03 | 0.03 | 0.05 | 0.35 | <0.01 | | 12 | 87 | 0.07 | 5,400 | 860 | 0.02 | 26 | <0.1 | 0.18 | 14,000 | 1.5 | 10 | 5 | 130 | 180,000 | <0.01 | 300 | 2 | 13,000 | 2,800 |
| CAEXD166544 | 47 | 1.5 | 23 | 1.9 | 1.5 | 0.01 | <0.01 | 0.05 | 0.09 | 0.28 | <0.01 | | 11 | 86 | 0.15 | 8,300 | 150 | 0.14 | 19 | <0.1 | 0.19 | 10,000 | 2.4 | 9.1 | 3 | 160 | 160,000 | 0.01 | 100 | 2 | 12,000 | 2,200 |
| CAEXD156245 | 58 | 2.2 | 17 | 2.5 | 6.4 | 0.09 | 0.15 | 0.16 | <0.01 | 0.35 | <0.01 | | 7.9 | 95 | 0.56 | 9,100 | 5,400 | 0.83 | 30 | 0.2 | 0.6 | 40,000 | 2.2 | 11 | 58 | 250 | 110,000 | <0.01 | 800 | 5 | 14000 | 2,500 |
| CAEXD173583 | 50 | 4.1 | 15 | 9 | 7.6 | 0.01 | <0.01 | 0.24 | 0.01 | 0.33 | 0.09 | | 12 | 98 | 0.2 | 21,000 | 2,300 | 0.14 | 10 | 0.2 | 0.21 | 49,000 | 0.42 | 63 | 570 | 190 | 92,000 | 0.01 | 100 | 4 | 42000 | 2,400 |
| CAEXD160927 | 64 | 1.6 | 19 | 2 | 2.2 | 0.04 | 0.09 | 0.08 | 0.07 | 0.47 | <0.01 | | 8 | 98 | 0.23 | 7,800 | 1,000 | 0.02 | 33 | 0.2 | 0.21 | 15,000 | 2.1 | 14 | 10 | 230 | 130,000 | <0.01 | 700 | 4 | 12000 | 3,500 |
| CAEXD163315 | 54 | 1.2 | 21 | 2.2 | 4.7 | 0.01 | 0.06 | 0.02 | 0.02 | 0.36 | <0.01 | | 9 | 92 | 0.11 | 5,400 | 9,200 | 0.81 | 22 | <0.1 | 0.1 | 29,000 | 0.11 | 14 | 12 | 110 | 130,000 | <0.01 | 500 | 5 | 12,000 | 2,500 |
| M11-1051-02 | 43 | 9.8 | 12 | 13 | 8.4 | 1.2 | 0.2 | 0.71 | 0.05 | 0.2 | 0.16 | 0.03 | 12 | 100 | | 46,000 | 200 | 0.05 | 68 | 0.49 | 0.09 | 63,000 | 0.18 | 76 | 990 | 75 | 88,000 | 0.1 | 2,100 | 21 | 73000 | 1,300 |
| M10-987-03 | 36 | 5.2 | 14 | 23 | 4.1 | 0.06 | 0.01 | 0.46 | 0.03 | 0.2 | 0.32 | 0.03 | 17 | 100 | | 26,000 | 170 | 0.06 | 9 | 0.75 | 0.09 | 31,000 | 0.13 | 100 | 1900 | 45 | 110,000 | 0.1 | 130 | 15 | 130000 | 1,300 |
| M10-992-04 | 43 | 10 | 13 | 7.3 | 11 | 1.8 | 0.02 | 0.93 | 0.07 | 0.26 | 0.04 | 0.04 | 13 | 100 | | 36,000 | 37 | 0.04 | 7 | 0.3 | 0.09 | 84,000 | 0.13 | 48 | 310 | 180 | 94,000 | 0.1 | 230 | 26 | 38000 | 1,700 |
| M10-994-05 | 42 | 13 | 9.5 | 7 | 10 | 2.4 | 0.66 | 0.55 | 0.04 | 0.16 | 0.05 | 0.03 | 14 | 100 | | 66,000 | 16 | 0.07 | 100 | 0.31 | 0.09 | 74,000 | 0.13 | 37 | 260 | 48 | 67,000 | 0.1 | 6,300 | 42 | 40000 | 910 |
| M04-519-01 | 39 | 13 | 10 | 7.1 | 11 | 2.2 | 0.66 | 0.52 | 0.04 | 0.19 | 0.02 | 0.03 | 16 | 100 | | 50,000 | 5 | 0.04 | 70 | 0.3 | 0.09 | 82,000 | 0.13 | 40 | 150 | 82 | 74,000 | 0.1 | 6,500 | 50 | 35000 | 1,200 |
| M04-519-02 | 41 | 14 | 11 | 7.6 | 8.6 | 2.3 | 0.93 | 0.59 | 0.04 | 0.15 | 0.02 | 0.04 | 15 | 100 | | 52,000 | 39 | 0.06 | 110 | 0.33 | 0.09 | 59,000 | 0.12 | 39 | 180 | 75 | 75,000 | 0.1 | 8,600 | 40 | 36000 | 950 |
| M04-519-03 | 41 | 9.3 | 12 | 6.5 | 11 | 1.8 | 0.71 | 0.84 | 0.07 | 0.23 | 0.05 | 0.04 | 17 | 100 | | 47,000 | 70 | 0.17 | 77 | 0.46 | 0.09 | 83,000 | 0.19 | 47 | 300 | 150 | 85,000 | 0.1 | 7,000 | 24 | 38000 | 1,400 |
| M04-519-04 | 46 | 12 | 14 | 4.2 | 8.3 | 2.8 | 0.53 | 1.6 | 0.14 | 0.25 | <0.01 | 0.06 | 10 | 100 | | 55,000 | 43 | 0.08 | 72 | 0.44 | 0.09 | 56,000 | 0.19 | 37 | 94 | 79 | 93,000 | 0.1 | 4,700 | 26 | 22000 | 1,400 |
| M10-981-01 | 46 | 12 | 14 | 5.1 | 8.5 | 2.7 | 0.41 | 1.7 | 0.16 | 0.19 | <0.01 | 0.07 | 9.7 | 100 | | 61,000 | 5 | 0.07 | 180 | 0.66 | 0.09 | 61,000 | 0.28 | 37 | 80 | 130 | 98,000 | 0.1 | 4,100 | 24 | 30000 | 1,000 |
| M10-981-02 | 46 | 13 | 13 | 5.1 | 9 | 2.6 | 0.54 | 1.2 | 0.13 | 0.18 | 0.02 | 0.05 | 10 | 100 | | 69,000 | 3 | 0.07 | 150 | 0.45 | 0.09 | 66,000 | 0.2 | 36 | 180 | 130 | 95,000 | 0.1 | 5,500 | 31 | 30000 | 1,100 |
| M10-981-03 | 45 | 13 | 13 | 5.1 | 8.2 | 2.5 | 0.64 | 1.7 | 0.2 | 0.25 | <0.01 | 0.07 | 11 | 100 | | 44,000 | 21 | 0.06 | 290 | 0.77 | 0.09 | 60,000 | 0.44 | 40 | 72 | 170 | 96,000 | 0.1 | 5,600 | 33 | 24000 | 1,800 |
| M10-985-01 | 63 | 17 | 5.6 | 2.5 | 2 | 3.3 | 2.1 | 0.62 | 0.12 | 0.05 | 0.02 | 0.02 | 4.1 | 100 | | 90,000 | 22 | 0.04 | 680 | 0.9 | 0.09 | 15,000 | 0.31 | 18 | 160 | 53 | 42,000 | 0.1 | 21,000 | 34 | 15000 | 350 |
| M10-985-02 | 56 | 15 | 12 | 3.4 | 3.2 | 1.7 | 1.9 | 0.82 | 0.14 | 0.09 | 0.02 | 0.03 | 5.4 | 100 | | 80,000 | 22 | 0.04 | 490 | 0.92 | 0.09 | 23,000 | 0.24 | 21 | 130 | 21 | 90,000 | 0.1 | 19,000 | 39 | 20000 | 580 |
| M10-987-01 | 41 | 9.6 | 12 | 7 | 12 | 1.5 | 0.16 | 0.86 | 0.06 | 0.26 | 0.05 | 0.04 | 15 | 100 | | 39,000 | 190 | 0.05 | 49 | 0.26 | 0.09 | 74,000 | 0.18 | 48 | 310 | 130 | 79,000 | 0.1 | 1,500 | 33 | 34000 | 1,600 |
| M10-987-02 | 44 | 12 | 11 | 6.2 | 9.3 | 2 | 0.82 | 0.8 | 0.09 | 0.17 | 0.03 | 0.04 | 13 | 100 | | 66,000 | 150 | 0.04 | 120 | 0.35 | 0.09 | 70,000 | 0.19 | 37 | 240 | 110 | 84,000 | 0.1 | 8,300 | 37 | 38000 | 1,000 |
| M10-987-04 | 45 | 12 | 14 | 5.6 | 10 | 2 | 0.08 | 1.3 | 0.12 | 0.19 | 0.03 | 0.06 | 9.1 | 100 | | 51,000 | 34 | 0.05 | 20 | 0.38 | 0.09 | 74,000 | 0.18 | 37 | 200 | 87 | 110,000 | 0.1 | 860 | 30 | 28000 | 1,200 |
| M10-988-01 | 43 | 12 | 15 | 7.7 | 9.1 | 1.7 | 0.07 | 0.97 | 0.07 | 0.25 | 0.03 | 0.06 | 11 | 100 | | 28,000 | 24 | 0.04 | 11 | 0.34 | 0.09 | 57,000 | 0.15 | 47 | 260 | 150 | 93,000 | 0.1 | 620 | 34 | 29000 | 1,600 |
| M10-988-02 | 45 | 12 | 12 | 4.6 | 11 | 2.6 | 0.12 | 1.2 | 0.12 | 0.29 | 0.02 | 0.05 | 11 | 100 | | 64,000 | 35 | 0.07 | 29 | 0.43 | 0.09 | 82,000 | 0.2 | 37 | 140 | 130 | 88,000 | 0.1 | 1,200 | 32 | 27000 | 1,700 |
| M10-988-03 | 46 | 15 | 11 | 6.7 | 12 | 1.9 | 0.03 | 0.93 | 0.07 | 0.19 | 0.04 | 0.05 | 6.9 | 100 | | 57,000 | 15 | 0.04 | 5 | 0.29 | 0.09 | 85,000 | 0.1 | 40 | 230 | 100 | 83,000 | 0.1 | 320 | 28 | 30000 | 1,200 |
| M10-992-01 | 45 | 15 | 11 | 5.5 | 12 | 1.6 | 0.11 | 0.67 | 0.05 | 0.23 | 0.02 | 0.04 | 8.9 | 100 | | 67,000 | 12 | 0.07 | 9 | 0.17 | 0.09 | 83,000 | 0.06 | 45 | 190 | 110 | 80,000 | 0.1 | 940 | 29 | 29000 | 1,400 |
| M10-992-02 | 45 | 14 | 11 | 4.9 | 11 | 3.1 | 0.13 | 0.63 | 0.05 | 0.23 | 0.02 | <0.01 | 8.9 | 99 | | 73,000 | 22 | 0.06 | 14 | 0.23 | 0.09 | 83,000 | 0.1 | 42 | 170 | 96 | 79,000 | 0.1 | 1,300 | 37 | 28000 | 1,300 |
| M10-992-03 | 41 | 14 | 9.7 | 8.4 | 9.8 | 1.8 | 0.43 | 0.47 | 0.03 | 0.15 | 0.03 | 0.03 | 15 | 100 | | 33,000 | 11 | 0.03 | 41 | 0.29 | 0.09 | 64,000 | 0.11 | 45 | 230 | 55 | 63,000 | 0.1 | 3,800 | 58 | 32000 | 1,100 |
| M10-992-05 | 45 | 12 | 13 | 5 | 9.3 | 3 | 0.23 | 1.3 | 0.14 | 0.26 | 0.02 | 0.05 | 11 | 100 | | 65,000 | 40 | 0.06 | 33 | 0.43 | 0.09 | 68,000 | 0.22 | 36 | 110 | 150 | 95,000 | 0.1 | 2,400 | 28 | 30000 | 1,500 |
| M10-994-01 | 44 | 9.9 | 13 | 8.2 | 11 | 1.6 | 0.02 | 0.9 | 0.12 | 0.22 | 0.07 | 0.05 | 12 | 100 | | 53,000 | 17 | 0.05 | 3 | 0.22 | 0.09 | 78,000 | 0.17 | 45 | 390 | 120 | 93,000 | 0.1 | 220 | 29 | 49000 | 1,200 |
| M10-994-02 | 46 | 13 | 12 | 5.1 | 8.2 | 3.2 | 0.71 | 1.1 | 0.12 | 0.2 | 0.02 | 0.04 | 9.8 | 100 | | 69,000 | 61 | 0.04 | 170 | 0.59 | 0.09 | 61,000 | 0.23 | 43 | 110 | 84 | 92,000 | 0.1 | 7,200 | 31 | 30000 | 1,200 |
| M10-994-03 | 44 | 13 | 11 | 5.3 | 11 | 2.3 | 0.81 | 0.78 | 0.07 | 0.18 | 0.03 | 0.04 | 13 | 100 | | 68,000 | 44 | 0.1 | 87 | 0.44 | 0.09 | 80,000 | 0.14 | 35 | 180 | 79 | 82,000 | 0.1 | 8,000 | 33 | 32000 | 1,100 |
| M10-994-04 | 47 | 15 | 12 | 7.2 | 10 | 1.9 | 0.18 | 0.93 | 0.07 | 0.17 | 0.05 | 0.04 | 5.6 | 100 | | 71,000 | 32 | 0.09 | 31 | 0.26 | 0.09 | 69,000 | 0.14 | 45 | 210 | 90 | 84,000 | 0.1 | 1,700 | 27 | 43000 | 1,000 |
| M10-998-01 | 47 | 14 | 13 | 5.9 | 8.9 | 2.1 | 0.08 | 1.5 | 0.13 | 0.18 | 0.02 | 0.07 | 7.6 | 100 | | 67,000 | 24 | 0.06 | 12 | 0.35 | 0.09 | 63,000 | 0.16 | 42 | 170 | 99 | 92,000 | 0.1 | 740 | 29 | 33000 | 1,000 |
| M10-998-02 | 47 | 12 | 14 | 5.4 | 8.2 | 2.7 | 0.67 | 2 | 0.2 | 0.18 | <0.01 | 0.06 | 8.3 | 100 | | 62,000 | 13 | 0.1 | 160 | 0.6 | 0.09 | 59,000 | 0.39 | 40 | 64 | 140 | 100,000 | 0.1 | 6,400 | 31 | 31000 | 1,100 |
| M10-998-03 | 45 | 14 | 11 | 5.8 | 8.4 | 2.5 | 1.1 | 0.99 | 0.08 | 0.2 | 0.03 | 0.05 | 11 | 100 | | 78,000 | 28 | 0.05 | 180 | 0.56 | 0.09 | 64,000 | 0.28 | 46 | 210 | 110 | 81,000 | 0.1 | 12,000 | 42 | 36000 | 1,200 |
| M10-998-04 | 47 | 12 | 11 | 4.9 | 10 | 2.1 | 0.51 | 0.87 | 0.07 | 0.22 | 0.04 | 0.04 | 11 | 100 | | 60,000 | 9 | 0.05 | 100 | 0.39 | 0.09 | 71,000 | 0.2 | 38 | 260 | 100 | 75,000 | 0.1 | 4,700 | 43 | 28000 | 1,300 |
| M10-998-05 | 40 | 6.7 | 10 | 13 | 11 | 0.35 | 0.04 | 0.49 | 0.04 | 0.19 | 0.2 | 0.03 | 19 | 100 | | 33,000 | 210 | 0.04 | 10 | 0.25 | 0.09 | 78,000 | 0.23 | 63 | 1100 | 31 | 72,000 | 0.1 | 360 | 23 | 70000 | 1,100 |
| M11-1042-01 | 41 | 13 | 12 | 7 | 8.9 | 1.7 | 1.1 | 0.8 | 0.06 | 0.17 | 0.03 | 0.04 | 14 | 100 | | 65,000 | 66 | 0.06 | 190 | 0.4 | 0.09 | 61,000 | 0.18 | 40 | 190 | 75 | 83,000 | 0.1 | 9,700 | 43 | 39000 | 970 |
| M11-1042-02 | 43 | 12 | 13 | 9.6 | 6.6 | 2 | 1.2 | 0.82 | 0.7 | 0.15 | 0.09 | 0.03 | 11 | 99 | | 57,000 | 730 | 0.08 | 1,300 | 1.9 | 0.09 | 46,000 | 0.42 | 82 | 540 | 320 | 87,000 | 0.1 | 11,000 | 33 | 54000 | 930 |
| M11-1042-03 | 42 | 7.8 | 13 | 16 | 6.1 | 1.2 | 0.07 | 0.72 | 0.07 | 0.18 | 0.16 | 0.03 | 14 | 100 | | 31,000 | 70 | 0.05 | 31 | 0.53 | 0.09 | 42,000 | 0.23 | 77 | 960 | 54 | 86,000 | 0.1 | 720 | 24 | 82000 | 1,200 |
| M11-1051-01 | 44 | 12 | 10 | 6.5 | 8.5 | 2.1 | 1.4 | 0.74 | 0.07 | 0.16 | 0.03 | 0.04 | 15 | 100 | | 60,000 | 190 | 0.05 | 230 | 0.46 | 0.09 | 59,000 | 0.2 | 39 | 210 | 77 | 68,000 | 0.1 | 13,000 | 29 | 36000 | 930 |
| M95-11-01 | 43 | 12 | 12 | 4.7 | 12 | 2.2 | 0.35 | 1.1 | 0.1 | 0.28 | 0.03 | 0.04 | 12 | 100 | | 58,000 | 19 | 0.12 | 99 | 0.48 | 0.09 | 83,000 | 0.35 | 34 | 150 | 110 | 83,000 | 0.1 | 3,200 | 34 | 26000 | 1,600 |
| M95-12-01 | 46 | 12 | 12 | 4.5 | 9.8 | 2.3 | 0.7 | 1.5 | 0.23 | 0.23 | 0.02 | 0.04 | 10 | 100 | | 62,000 | 18 | 0.06 | 140 | 0.69 | 0.09 | 69,000 | 0.43 | 36 | 130 | 48 | 86,000 | 0.1 | 6,600 | 33 | 25000 | 1,300 |
| M95-22-01 | 42 | 12 | 11 | 5.7 | 12 | 1.9 | 0.6 | 0.87 | 0.07 | 0.22 | 0.04 | 0.04 | 14 | 100 | | 64,000 | 25 | 0.04 | 510 | 0.43 | 0.09 | 85,000 | 0.24 | 43 | 270 | 97 | 76,000 | 0.1 | 5,800 | 41 | 33000 | 1,300 |
| M95-22-02 | 45 | 13 | 12 | 6.2 | 9.6 | 2.6 | 0.42 | 1.1 | 0.1 | 0.21 | 0.05 | 0.04 | 9.8 | 100 | | 66,000 | 4 | 0.04 | 140 | 0.42 | 0.09 | 66,000 | 0.19 | 43 | 240 | 95 | 80,000 | 0.1 | 3,900 | 39 | 35000 | 1,200 |
| M96-51-02 | 44 | 13 | 13 | 5.8 | 7.8 | 3.3 | 0.4 | 1.5 | 0.15 | 0.21 | <0.01 | 0.04 | 11 | 100 | | 64,000 | 66 | 0.09 | 87 | 0.49 | 0.09 | 55,000 | 0.29 | 43 | 68 | 190 | 89,000 | 0.1 | 3,800 | 33 | 32000 | 1,300 |
| M96-51-03 | 42 | 13 | 12 | 5.9 | 11 | 2.1 | 0.74 | 0.87 | 0.07 | 0.2 | 0.03 | 0.04 | 13 | 100 | | 67,000 | 370 | 0.06 | 98 | 0.4 | 0.09 | 76,000 | 0.18 | 45 | 210 | 79 | 79,000 | 0.1 | 6,900 | 41 | 33000 | 1,200 |
| M97-111-04 | 46 | 13 | 12 | 7.3 | 9.1 | 1.6 | 0.2 | 0.91 | 0.07 | 0.17 | 0.04 | 0.04 | 10 | 100 | | 64,000 | 6 | 0.06 | 65 | 0.25 | 0.09 | 63,000 | 0.16 | 43 | 300 | 99 | 80,000 | 0.1 | 1,900 | 42 | 41000 | 1,000 |
| M97-176-01 | 43 | 10 | 13 | 7.8 | 11 | 1.2 | 0.07 | 0.88 | 0.06 | 0.26 | 0.06 | 0.04 | 13 | 100 | | 55,000 | 18 | 0.09 | 25 | 0.25 | 0.09 | 85,000 | 0.21 | 50 | 330 | 180 | 100,000 | 0.1 | 780 | 35 | 48000 | 1,500 |
| M97-176-02 | 44 | 14 | 12 | 7 | 9.4 | 2.4 | 0.26 | 0.9 | 0.06 | 0.17 | 0.03 | 0.04 | 9.9 | 100 | | 70,000 | 5 | 0.06 | 40 | 0.23 | 0.09 | 65,000 | 0.11 | 41 | 180 | 55 | 79,000 | 0.1 | 2,400 | 41 | 39000 | 940 |
| W94-48-01 | 48 | 14 | 14 | 5.7 | 9.7 | 2 | 0.1 | 1.4 | 0.13 | 0.2 | 0.02 | 0.05 | 5.4 | 100 | | 56,000 | 12 | 0.07 | 25 | 0.49 | 0.09 | 65,000 | 0.14 | 42 | 160 | 120 | 90,000 | 0.1 | 920 | 20 | 27000 | 1,200 |
| CAEXD164775 | 42 | 14 | 11 | 4.8 | 13 | 1.2 | 1.8 | 0.82 | 0.06 | 0.19 | 0.03 | | 14 | 100 | 0.07 | 32,000 | 130 | 0.02 | 25 | <0.1 | 0.02 | 88,000 | 0.45 | 42 | 110 | 69 | 66,000 | 0.01 | 1,300 | 38 | 28,000 | 1,400 |
| CAEXD161143 | 41 | 13 | 11 | 5.4 | 10 | 0.61 | 3.3 | 0.9 | 0.53 | 0.17 | 0.03 | | 14 | 100 | 0.3 | 12,000 | 170 | 0.02 | 760 | 0.3 | 0.36 | 68,000 | 0.34 | 39 | 39 | 86 | 59,000 | 0.18 | 3,800 | 14 | 29000 | 1,300 |
| CAEXD161417 | 63 | 4.6 | 17 | 2 | 6.1 | 0.1 | 0.47 | 0.25 | 0.1 | 0.16 | <0.01 | | 3.9 | 98 | 2.9 | 15,000 | 510 | 0.8 | 44 | <0.1 | 4 | 39,000 | 3.7 | 16 | 17 | 190 | 110,000 | <0.01 | 600 | 8 | 11,000 | 1,200 |

**Appendix D-6: Meliadine Extension Database: Static Test**
**Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Whole Rock Analysis | | | | | | | | | | | | | | Elemental Abundance | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Sum | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li | Mg | Mn |
| | % | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| CAEXD253446 | 44 | 14 | 11 | 5.2 | 8.6 | 0.28 | 3.1 | 0.85 | 0.05 | 0.17 | 0.03 | | 14 | 100 | 0.08 | 19,000 | 2,200 | 0.43 | 38 | 0.3 | 0.06 | 58,000 | 0.21 | 48 | 66 | 72 | 65,000 | <0.01 | 2,000 | 30 | 30000 | 1,300 |
| CAEXD255567 | 43 | 15 | 9.9 | 6.2 | 9.2 | 1.9 | 2.1 | 0.84 | 0.06 | 0.14 | 0.03 | | 13 | 100 | 0.06 | 26,000 | 290 | 0.03 | 34 | 0.2 | 0.02 | 61,000 | 0.09 | 45 | 110 | 82 | 59,000 | <0.01 | 1,800 | 48 | 36000 | 950 |
| CAEXD178628 | 43 | 16 | 12 | 5.2 | 10 | 1.7 | 1.9 | 0.88 | 0.06 | 0.17 | 0.03 | | 13 | 100 | 0.06 | 32,000 | 130 | 0.02 | 34 | 0.2 | 0.02 | 65,000 | 0.17 | 51 | 130 | 91 | 70,000 | <0.01 | 1,500 | 55 | 31000 | 1,200 |
| CAEXD252985 | 57 | 14 | 12 | 2.3 | 1.8 | 2.5 | 1.5 | 0.44 | 0.12 | 0.05 | <0.01 | | 4.2 | 96 | 0.29 | 30,000 | 2,300 | 1.8 | 51 | 0.2 | 0.2 | 12,000 | 0.07 | 14 | 52 | 18 | 84,000 | <0.01 | 1,400 | 32 | 13000 | 330 |
| CAEXD252988 | 60 | 13 | 13 | 2.3 | 1.9 | 2.3 | 1.6 | 0.41 | 0.14 | 0.05 | <0.01 | | 4.1 | 98 | 0.1 | 29,000 | 1,900 | 8.9 | 60 | 0.2 | 0.28 | 13,000 | 0.08 | 16 | 48 | 47 | 85,000 | <0.01 | 1,500 | 27 | 13000 | 340 |
| CAEXD292036 | 40 | 13 | 11 | 6.1 | 11 | 2.1 | 0.67 | 0.71 | 0.05 | 0.19 | 0.03 | | 16 | 100 | 0.08 | 29,000 | 33 | 1.9 | 11 | <0.1 | 0.02 | 73,000 | 0.1 | 46 | 170 | 120 | 72,000 | <0.01 | 600 | 48 | 38,000 | 1,500 |
| CAEXD292774 | 44 | 12 | 11 | 5.1 | 9.3 | 3.9 | 0.65 | 0.79 | 0.06 | 0.23 | <0.01 | | 13 | 100 | 0.57 | 17,000 | 26 | 1.9 | 16 | <0.1 | 0.08 | 64,000 | 0.21 | 41 | 32 | 140 | 73,000 | <0.01 | 600 | 21 | 32,000 | 1,800 |
| CAEXD296389 | 41 | 6.7 | 10 | 9.4 | 11 | 0.85 | 0.66 | 0.61 | 0.02 | 0.16 | 0.14 | | 18 | 99 | 0.21 | 21,000 | 1,700 | 2.6 | 32 | 0.3 | 0.13 | 74,000 | 0.13 | 57 | 710 | 110 | 68,000 | <0.01 | 1,800 | 26 | 55000 | 1,200 |
| CAEXD259422 | 41 | 8.8 | 11 | 6 | 11 | 2 | 1 | 0.81 | 0.07 | 0.21 | 0.04 | | 16 | 98 | 0.33 | 17,000 | 550 | 14 | 30 | <0.1 | 0.35 | 73,000 | 0.19 | 48 | 130 | 150 | 71,000 | <0.01 | 1,100 | 22 | 37,000 | 1,600 |
| CAEXD296880 | 42 | 13 | 10 | 5.3 | 9.8 | 3.6 | 1.1 | 0.67 | 0.04 | 0.19 | 0.03 | | 14 | 100 | 0.09 | 18,000 | 99 | 2 | 16 | <0.1 | 0.08 | 64,000 | 0.13 | 51 | 110 | 110 | 66,000 | <0.01 | 800 | 41 | 32,000 | 1,400 |
| CAEXD297926 | 42 | 12 | 10 | 4.5 | 11 | 1.6 | 2 | 0.64 | 0.04 | 0.26 | 0.02 | | 15 | 100 | 0.18 | 15,000 | 200 | 7.4 | 21 | <0.1 | 0.07 | 71,000 | 0.18 | 46 | 58 | 96 | 62,000 | 0.02 | 1,100 | 21 | 27,000 | 1,900 |
| CAEXD237686 | 48 | 11 | 9 | 4.4 | 11 | 2.4 | 1.6 | 0.59 | 0.04 | 0.17 | 0.03 | | 14 | 100 | 0.17 | 8,200 | 1,500 | 3.3 | 24 | <0.1 | 0.21 | 72,000 | 0.13 | 41 | 51 | 110 | 55,000 | <0.01 | 1,300 | 12 | 26,000 | 1,400 |
| CAEXD264580 | 45 | 12 | 13 | 5.2 | 11 | 2.5 | 0.96 | 0.83 | 0.07 | 0.22 | <0.01 | | 13 | 100 | 0.18 | 27,000 | 190 | 8.8 | 17 | <0.1 | 0.16 | 73,000 | 0.13 | 45 | 21 | 100 | 78,000 | <0.01 | 900 | 33 | 30,000 | 1,600 |
| CAEXD258556 | 46 | 13 | 14 | 3.8 | 6.4 | 2.5 | 1.2 | 1.5 | 0.18 | 0.16 | <0.01 | | 8.6 | 98 | 0.35 | 32,000 | 220 | 0.03 | 110 | 0.2 | 0.05 | 43,000 | 0.23 | 53 | 48 | 160 | 90,000 | 0.02 | 3,600 | 31 | 23000 | 1,100 |
| CAEXD299420 | 46 | 13 | 15 | 3.9 | 7.3 | 3.4 | 0.07 | 1.5 | 0.21 | 0.17 | <0.01 | | 8.3 | 98 | 0.1 | 38,000 | 62 | 0.06 | 20 | 0.3 | 0.03 | 49,000 | 0.13 | 56 | 61 | 120 | 92,000 | 0.03 | 300 | 46 | 24000 | 1,100 |
| CAEXD299421 | 46 | 13 | 15 | 4 | 6.7 | 3.3 | 0.21 | 1.6 | 0.21 | 0.16 | <0.01 | | 8.3 | 98 | 0.1 | 39,000 | 80 | 0.08 | 28 | 0.2 | 0.04 | 45,000 | 0.11 | 55 | 61 | 120 | 92,000 | 0.09 | 300 | 44 | 24000 | 1,000 |
| CAEXD254661 | 40 | 8.6 | 13 | 13 | 9.1 | 0.02 | 0.2 | 0.73 | 0.05 | 0.18 | 0.19 | | 17 | 100 | 0.08 | 40,000 | 350 | 0.03 | 20 | 0.6 | 0.03 | 57,000 | 0.11 | 71 | 1000 | 52 | 80,000 | <0.01 | 200 | 26 | 74000 | 1,300 |
| CAEXD172407 | 54 | 0.65 | 16 | 1.6 | 3.4 | <0.01 | 0.05 | 0.03 | 0.05 | 0.29 | <0.01 | | 8.5 | 84 | 0.16 | 3,100 | 270 | 0.48 | 25 | <0.1 | 0.04 | 23,000 | 1.8 | 6.1 | 16 | 84 | 100,000 | 0.03 | 300 | 1 | 8,800 | 2,200 |
| CAEXD264227 | 50 | 2.5 | 23 | 4.1 | 5.3 | 0.01 | 0.18 | 0.18 | 0.05 | 0.33 | 0.02 | | 9.6 | 95 | 0.2 | 12,000 | 5,900 | 1.5 | 39 | <0.1 | 0.12 | 36,000 | 1 | 17 | 82 | 190 | 150,000 | <0.01 | 1,300 | 8 | 24,000 | 2,600 |
| CAEXD252980 | 58 | 14 | 7.3 | 2.5 | 3.5 | 2 | 2.6 | 0.52 | 0.08 | 0.05 | 0.02 | | 6 | 97 | 0.1 | 15,000 | 4,900 | 0.44 | 45 | <0.1 | 0.19 | 24,000 | 0.35 | 19 | 32 | 36 | 46,000 | <0.01 | 1,900 | 20 | 14,000 | 400 |
| CAEXD252989 | 61 | 12 | 10 | 2.3 | 2.7 | 2.4 | 1.6 | 0.39 | 0.14 | 0.05 | <0.01 | | 4.7 | 98 | 0.29 | 22,000 | 4,100 | 0.51 | 70 | 0.2 | 0.56 | 18,000 | 0.15 | 13 | 43 | 36 | 69,000 | <0.01 | 2,300 | 23 | 13000 | 360 |
| CAEXD295855 | 48 | 3.2 | 24 | 1 | 8.2 | 0.17 | 0.06 | 0.1 | 0.18 | 0.1 | <0.01 | | 4.3 | 89 | 0.15 | 15,000 | 3 | 0.6 | 18 | <0.1 | 0.32 | 53,000 | 0.16 | 4.8 | 15 | 140 | 150,000 | <0.01 | 100 | 4 | 5,300 | 680 |
| CAEXD295858 | 56 | 6.9 | 22 | 2.1 | 4.3 | 0.01 | <0.01 | 0.22 | 0.12 | 0.08 | <0.01 | | 4.7 | 96 | 0.05 | 37,000 | 7 | 0.03 | 14 | <0.1 | 0.16 | 29,000 | 0.09 | 9.9 | 44 | 110 | 140,000 | <0.01 | 100 | 14 | 12,000 | 580 |
| CAEXD244529 | 40 | 12 | 9.3 | 5.2 | 12 | 3.1 | 0.6 | 0.64 | 0.04 | 0.17 | 0.03 | | 16 | 99 | 0.18 | 22,000 | 48 | 0.02 | 13 | <0.1 | 0.02 | 80,000 | 0.07 | 40 | 150 | 110 | 63,000 | <0.01 | 500 | 45 | 31,000 | 1,300 |
| CAEXD253154 | 40 | 8.7 | 13 | 6.3 | 11 | 1.8 | 0.8 | 0.81 | 0.09 | 0.27 | 0.05 | | 17 | 99 | 0.1 | 21,000 | 49 | 0.18 | 30 | 0.2 | 0.02 | 72,000 | 0.15 | 47 | 210 | 140 | 82,000 | <0.01 | 900 | 20 | 39000 | 2,000 |
| CAEXD253583 | 41 | 12 | 9.5 | 5.5 | 12 | 1.3 | 1.8 | 0.65 | 0.04 | 0.17 | 0.03 | | 17 | 100 | 0.13 | 16,000 | 82 | 0.29 | 19 | <0.1 | 0.03 | 79,000 | 0.13 | 42 | 85 | 120 | 65,000 | <0.01 | 1,300 | 35 | 34,000 | 1,300 |
| CAEXD254670 | 41 | 14 | 8.6 | 6.3 | 9.7 | 1.4 | 2.2 | 0.65 | 0.04 | 0.14 | 0.03 | | 15 | 100 | 0.09 | 18,000 | 190 | 0.03 | 18 | 0.2 | 0.06 | 63,000 | 0.13 | 59 | 79 | 92 | 56,000 | <0.01 | 1,200 | 37 | 37000 | 1,000 |
| CAEXD264136 | 41 | 8.6 | 11 | 6.4 | 11 | 1.2 | 0.55 | 0.75 | 0.05 | 0.26 | 0.05 | | 17 | 99 | 0.15 | 25,000 | 44 | 0.03 | 14 | <0.1 | 0.02 | 77,000 | 0.14 | 49 | 240 | 170 | 78,000 | <0.01 | 500 | 45 | 40,000 | 2,000 |
| CAEXD264523 | 41 | 11 | 11 | 5.4 | 9.6 | 2.9 | 0.82 | 1 | 0.08 | 0.24 | <0.01 | | 15 | 97 | 0.19 | 18,000 | 170 | 0.03 | 24 | <0.1 | 0.02 | 65,000 | 0.23 | 48 | 61 | 190 | 70,000 | <0.01 | 900 | 26 | 34,000 | 1,800 |
| CAEXD264637 | 41 | 9 | 13 | 6.3 | 11 | 1.2 | 1.1 | 0.75 | 0.07 | 0.33 | 0.04 | | 17 | 99 | 0.17 | 23,000 | 850 | 0.19 | 24 | <0.1 | 0.02 | 74,000 | 0.19 | 46 | 160 | 180 | 86,000 | <0.01 | 900 | 33 | 39,000 | 2,500 |
| CAEXD264747 | 44 | 12 | 11 | 4.7 | 10 | 2.8 | 0.92 | 0.85 | 0.07 | 0.21 | <0.01 | | 13 | 100 | 0.14 | 25,000 | 51 | 0.08 | 15 | <0.1 | 0.02 | 68,000 | 0.17 | 38 | 18 | 120 | 69,000 | <0.01 | 900 | 31 | 29,000 | 1,600 |
| CAEXD291131 | 42 | 13 | 11 | 6.3 | 10 | 2.2 | 0.97 | 0.72 | 0.08 | 0.16 | 0.04 | | 15 | 100 | 0.07 | 31,000 | 23 | 0.36 | 15 | <0.1 | 0.02 | 70,000 | 0.1 | 45 | 180 | 84 | 71,000 | <0.01 | 800 | 54 | 38,000 | 1,200 |
| CAEXD291533 | 41 | 12 | 9.9 | 5.7 | 11 | 1.3 | 1.4 | 0.66 | 0.04 | 0.16 | 0.03 | | 16 | 99 | 0.18 | 28,000 | 31 | 0.06 | 13 | <0.1 | 0.04 | 77,000 | 0.13 | 41 | 140 | 95 | 68,000 | <0.01 | 1,000 | 48 | 35,000 | 1,300 |
| CAEXD307658 | 39 | 11 | 9.8 | 5.7 | 13 | 1.8 | 0.68 | 0.63 | 0.03 | 0.2 | 0.03 | | 17 | 99 | 0.08 | 26,000 | 54 | 0.03 | 13 | <0.1 | 0.02 | 82,000 | 0.11 | 38 | 140 | 110 | 68,000 | <0.01 | 500 | 43 | 35,000 | 1,500 |
| CAEXD224354 | 43 | 13 | 11 | 6.9 | 11 | 1.6 | 0.59 | 0.69 | 0.04 | 0.17 | 0.03 | | 16 | 100 | 0.07 | 25,000 | 5 | 0.06 | 13 | <0.1 | 0.02 | 65,000 | 0.09 | 43 | 150 | 110 | 69,000 | <0.01 | 500 | 57 | 41,000 | 1,200 |
| CAEXD250907 | 40 | 9 | 11 | 6.4 | 11 | 1.9 | 0.92 | 0.8 | 0.07 | 0.21 | 0.06 | | 17 | 99 | 0.15 | 17,000 | 1,300 | 0.96 | 23 | <0.1 | 0.02 | 71,000 | 0.13 | 49 | 220 | 120 | 71,000 | <0.01 | 1,100 | 19 | 38,000 | 1,500 |
| CAEXD296387 | 39 | 9.1 | 13 | 6.9 | 10 | 1.2 | 1 | 0.86 | 0.06 | 0.25 | 0.05 | | 16 | 99 | 0.11 | 27,000 | 150 | 0.28 | 40 | 0.2 | 0.02 | 71,000 | 0.1 | 54 | 230 | 160 | 86,000 | <0.01 | 1,500 | 36 | 43000 | 1,900 |
| CAEXD249125 | 43 | 12 | 9.4 | 6.4 | 9.8 | 2.4 | 0.94 | 0.68 | 0.05 | 0.16 | 0.03 | | 13 | 98 | 0.09 | 30,000 | 79 | 0.14 | 32 | <0.1 | 0.02 | 63,000 | 0.14 | 42 | 130 | 110 | 55,000 | <0.01 | 1,800 | 34 | 36,000 | 1,100 |
| CAEXD255700 | 42 | 12 | 10 | 5.9 | 10 | 2.6 | 0.62 | 0.72 | 0.05 | 0.18 | 0.04 | | 15 | 100 | 0.08 | 22,000 | 18 | 0.06 | 12 | <0.1 | 0.03 | 63,000 | 0.12 | 45 | 170 | 110 | 68,000 | <0.01 | 500 | 42 | 37,000 | 1,400 |
| CAEXD261414 | 47 | 11 | 12 | 4.3 | 8.7 | 2.4 | 1.2 | 1.5 | 1.1 | 0.16 | <0.01 | | 7.5 | 97 | 0.21 | 28,000 | 2 | 0.03 | 940 | 0.3 | 0.2 | 57,000 | 0.17 | 37 | 37 | 180 | 72,000 | 0.06 | 5,500 | 38 | 26000 | 1,100 |
| CAEXD291470 | 43 | 13 | 10 | 5 | 12 | 2.3 | 0.48 | 0.66 | 0.04 | 0.2 | 0.03 | | 12 | 99 | 0.24 | 37,000 | 130 | 0.14 | 12 | <0.1 | 0.04 | 79,000 | 0.11 | 43 | 190 | 190 | 64,000 | <0.01 | 400 | 66 | 29,000 | 1,400 |
| CAEXD299369 | 42 | 13 | 11 | 4.7 | 11 | 2.2 | 1.1 | 0.69 | 0.04 | 0.23 | 0.03 | | 13 | 98 | 0.09 | 32,000 | 9 | 0.06 | 18 | <0.1 | 0.02 | 71,000 | 0.11 | 44 | 100 | 120 | 67,000 | <0.01 | 800 | 55 | 28,000 | 1,700 |
| CAEXD264579 | 47 | 13 | 12 | 6.3 | 9.4 | 2.3 | 0.35 | 0.86 | 0.07 | 0.17 | <0.01 | | 11 | 100 | 0.02 | 39,000 | 12 | 0.46 | 14 | 0.3 | 0.02 | 60,000 | 0.08 | 47 | 43 | 110 | 74,000 | <0.01 | 300 | 61 | 36000 | 1,200 |
| CAEXD264581 | 45 | 13 | 13 | 7.1 | 7.4 | 1.7 | 0.85 | 1 | 0.08 | 0.16 | <0.01 | | 12 | 100 | 0.13 | 39,000 | 18 | 0.02 | 13 | 0.2 | 0.02 | 47,000 | 0.07 | 43 | 14 | 120 | 82,000 | <0.01 | 600 | 60 | 42000 | 1,100 |
| CAEXD237685 | 55 | 8.6 | 7.5 | 4.2 | 8.6 | 0.4 | 1.7 | 0.46 | 0.03 | 0.13 | 0.03 | | 12 | 99 | 0.23 | 10,000 | 2,300 | 0.97 | 13 | 0.2 | 0.12 | 58,000 | 0.16 | 32 | 52 | 96 | 49,000 | <0.01 | 1,400 | 17 | 25000 | 1,000 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3)

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

*Adjustment to CaNP and AP calculated based on carbonate and sulphide mineralogy for each respective rock unit as defined in Chapter 5

**Based on classification criteria for waste rock and ore presented in Chapter 5.1

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML00-224-01 | 0.7 | 2,700 | 11 | 6.2 | 0.8 | <0.7 | <0.5 | 220 | 890 | 0.09 | 0.89 | 20 | 6.5 | 47 | 7.9 | 120 | | 1.2 | | 3.6 | <0.0001 | <0.00001 | 0.34 | 0.032 | 0.0088 | | <0.00002 | <0.00001 |
| ML08-225-03 | 1 | 3,600 | 12 | 6.3 | 0.8 | <0.7 | <0.5 | 240 | 890 | 0.12 | 0.67 | 22 | 6.2 | 52 | 7.8 | 120 | | 1.5 | | 3.3 | <0.0001 | <0.00001 | 0.37 | 0.018 | 0.0091 | | <0.00002 | <0.00001 |
| ML08-226-04 | 2.8 | 2,400 | 8.5 | 8.6 | 1.6 | <0.7 | <0.5 | 170 | 590 | 0.14 | 0.72 | 12 | 4.6 | 52 | 7.6 | 110 | | 1.6 | | 3 | <0.0001 | <0.00001 | 0.44 | 0.79 | 0.0096 | | <0.00002 | 0.00004 |
| ML95-104-02 | 4.3 | 6,200 | 11 | 6.8 | 0.8 | <0.7 | <0.5 | 110 | 1,200 | 0.13 | 0.94 | 19 | 5.9 | 51 | 7.7 | 180 | | 1.6 | | 15 | <0.0001 | <0.00001 | 0.18 | 0.069 | 0.0078 | | <0.00002 | <0.00001 |
| ML95-84-01 | 4.1 | 6,100 | 15 | 12 | 0.8 | <0.7 | <0.5 | 300 | 1,100 | 0.16 | 0.76 | 23 | 6.4 | 62 | 7.7 | 130 | | 1.2 | | 4.2 | <0.0001 | 0.00005 | 0.34 | 0.023 | 0.0089 | | <0.00002 | 0.00003 |
| 6534-VRSP-002 | 0.76 | 500 | 9 | 2.4 | 0.42 | <1 | <0.3 | 72 | 500 | 0.12 | 0.42 | 18 | 2.5 | 20 | | | | | | | | | | | | | | |
| 6534-VRSP-006 | 1.3 | 600 | 10 | 3.2 | 0.86 | <1 | <0.3 | 51 | 600 | 0.16 | 0.65 | 23 | 3.4 | 28 | | | | | | | | | | | | | | |
| 6534-VRSP-009 | 0.93 | 600 | 6 | 2.7 | 1.2 | <1 | <0.3 | 110 | 500 | 0.13 | 1.5 | 18 | 4.6 | 21 | | | | | | | | | | | | | | |
| 6534-VRSP-014 | 2 | 600 | 11 | 5 | 0.97 | <1 | <0.3 | 65 | 600 | 0.16 | 0.78 | 21 | 4.1 | 23 | | | | | | | | | | | | | | |
| 6534-VRSP-001 | 1.9 | 700 | 14 | 4.6 | 0.09 | <1 | 0.3 | 65 | 800 | 0.24 | 0.54 | 21 | 4 | 33 | | | | | | | | | | | | | | |
| 6534-VRSP-004 | 1.1 | 600 | 6 | 2.6 | 1.5 | <1 | <0.3 | 77 | 400 | 0.09 | 0.55 | 15 | 3.9 | 23 | | | | | | | | | | | | | | |
| 6534-VRSP-005 | 2 | 900 | 14 | 3.6 | 1.5 | <1 | <0.3 | 100 | 800 | 0.17 | 0.56 | 29 | 4.4 | 38 | | | | | | | | | | | | | | |
| 6534-VRSP-010 | 1.5 | 1,000 | 10 | 4.4 | 0.07 | <1 | <0.3 | 86 | 600 | 0.15 | 0.85 | 19 | 4.6 | 23 | | | | | | | | | | | | | | |
| 6534-VRSP-013 | 1.3 | 1,000 | 27 | 4.7 | 0.22 | <1 | 0.4 | 130 | 1,100 | 0.25 | 0.87 | 35 | 6 | 45 | | | | | | | | | | | | | | |
| 6534-VRSP-015 | 1.5 | 600 | 7 | 2.4 | 0.16 | 1 | <0.3 | 92 | 400 | 0.07 | 0.49 | 16 | 3.9 | 31 | | | | | | | | | | | | | | |
| 6534-VRSP-016 | 1.8 | 600 | 19 | 2.9 | 1.9 | 2 | <0.3 | 90 | 700 | 0.14 | 0.99 | 27 | 4.3 | 38 | | | | | | | | | | | | | | |
| 6534-VRSP-017 | 4 | 700 | 7 | 9.1 | 0.68 | <1 | <0.3 | 66 | 400 | 0.17 | 2 | 16 | 3.3 | 28 | | | | | | | | | | | | | | |
| 6534-VRSP-008 | 0.88 | 500 | 27 | 2.3 | 0.06 | <1 | <0.3 | 110 | 700 | 0.14 | 1.1 | 33 | 4.2 | 33 | | | | | | | | | | | | | | |
| 6534-VRSP-012 | 1.5 | 700 | 19 | 2.9 | 0.21 | <1 | 0.3 | 130 | 800 | 0.16 | 0.72 | 29 | 4.4 | 36 | | | | | | | | | | | | | | |
| 6534-VRSP-003 | 2.1 | 800 | 23 | 3.9 | 0.07 | <1 | <0.5 | 100 | 1,100 | 0.28 | 1.8 | 38 | 6 | 48 | | | | | | | | | | | | | | |
| 6534-VRSP-011 | 0.64 | 1,000 | 5 | 3.8 | 0.07 | <1 | <0.3 | 150 | 400 | 0.08 | 0.54 | 13 | 4.7 | 24 | | | | | | | | | | | | | | |
| ML08-238-03 | 1.3 | 27,000 | 49 | 9.1 | 0.8 | <0.7 | 1.8 | 330 | 3,800 | 0.4 | 1.8 | 87 | 8.9 | 76 | 9.3 | 81 | 38 | 3.2 | | 0.8 | <0.0001 | 0.00002 | 1.9 | 0.14 | 0.021 | | <0.00002 | <0.00001 |
| ML08-236-2 | 3.1 | 21,000 | 45 | 11 | 0.8 | <0.7 | 1.7 | 240 | 3,600 | 0.41 | 1.9 | 90 | 9.9 | 74 | 8.3 | 100 | 39 | 4.1 | | 2.5 | <0.0001 | 0.00002 | 1.6 | 0.049 | 0.024 | | <0.00002 | 0.00002 |
| ML08-226-01 | 0.8 | 24,000 | 49 | 5.9 | 0.8 | <0.7 | 1.3 | 300 | 13,000 | 0.23 | 0.55 | 190 | 23 | 170 | 9.2 | 83 | | 1 | | 1.1 | <0.0001 | 0.00008 | 2 | 0.0084 | 0.0076 | | <0.00002 | <0.00001 |
| ML08-241-03 | 1.3 | 24,000 | 24 | 12 | 0.8 | <0.7 | 1.1 | 310 | 18,000 | 0.45 | 1 | 200 | 34 | 170 | 9.1 | 120 | | 1.3 | | 3.1 | <0.0001 | <0.00001 | 1.4 | 0.019 | 0.012 | | <0.00002 | <0.00001 |
| ML08-243-02 | 1 | 26,000 | 17 | 9.9 | 0.8 | <0.7 | 1.5 | 300 | 17,000 | 0.23 | 1 | 140 | 39 | 140 | 8.9 | 85 | | 0.9 | | 2.1 | <0.0001 | <0.00001 | 1.3 | 0.0057 | 0.0059 | | <0.00002 | <0.00001 |
| ML08-245-01 | 2.1 | 23,000 | 41 | 11 | 0.8 | <0.7 | 1 | 290 | 13,000 | 0.19 | 0.59 | 180 | 25 | 150 | 8.7 | 93 | | 0.8 | | 2.1 | <0.0001 | <0.00001 | 1.8 | 0.0091 | 0.008 | | <0.00002 | <0.00001 |
| ML09-259-01 | 0.8 | 22,000 | 32 | 5.9 | 0.8 | <0.7 | <0.9 | 270 | 15,000 | 0.22 | 0.66 | 200 | 26 | 170 | 7.9 | 84 | | 1.7 | | 1.2 | <0.0001 | <0.00001 | 2.1 | 0.0048 | 0.0064 | | <0.00002 | <0.00001 |
| ML95-104-01 | 1.3 | 19,000 | 21 | 8.5 | 0.8 | <0.7 | 1.8 | 320 | 14,000 | 0.28 | 1.1 | 110 | 40 | 120 | 8.3 | 85 | | 0.5 | | 1.3 | <0.0001 | 0.00002 | 1.4 | 0.0033 | 0.0051 | | <0.00002 | <0.00001 |
| ML95-105-02 | 2.3 | 23,000 | 20 | 11 | 0.8 | <0.7 | 1.2 | 260 | 16,000 | 0.27 | 1.5 | 160 | 33 | 150 | 8 | 110 | | 0.7 | | 3.9 | <0.0001 | <0.00001 | 1 | 0.5 | 0.0065 | | <0.00002 | <0.00001 |
| ML95-117-02 | 1.1 | 23,000 | 32 | 9.3 | 0.8 | <0.7 | 1.3 | 310 | 16,000 | 0.23 | 0.68 | 170 | 31 | 150 | 8.1 | 82 | | 0.4 | | 0.6 | <0.0001 | <0.00001 | 1.4 | 0.0071 | 0.0049 | | <0.00002 | <0.00001 |
| ML97-186-02 | 2.2 | 25,000 | 35 | 11 | 0.8 | <0.7 | 1.7 | 320 | 14,000 | 0.2 | 0.64 | 160 | 26 | 150 | 8 | 98 | | 0.5 | | 3.6 | <0.0001 | <0.00001 | 1.3 | 0.0078 | 0.0065 | | <0.00002 | <0.00001 |
| CAMLD264930 | 1.3 | 1,200 | 68 | 2.3 | 0.12 | <1 | <0.3 | 33 | 1,500 | 0.37 | 1.3 | 61 | 8.4 | 52 | | | | | | | | | | | | | | |
| CAMLD264931 | 1.3 | 1,400 | 30 | 1.9 | 0.11 | <1 | <0.3 | 39 | 2,400 | 0.19 | 0.43 | 110 | 15 | 68 | | | | | | | | | | | | | | |
| CAMLD264935 | 1.5 | 1,600 | 17 | 2.5 | 0.21 | <1 | 0.4 | 36 | 1,800 | 0.07 | 0.82 | 76 | 18 | 46 | | | | | | | | | | | | | | |
| CAMLD264957 | 0.98 | 1,600 | 43 | 1.1 | 0.08 | <1 | <0.3 | 23 | 2,200 | 0.23 | 0.45 | 79 | 14 | 70 | | | | | | | | | | | | | | |
| CAMLD264958 | 1.3 | 1,600 | 35 | 1.6 | 0.26 | <1 | <0.3 | 34 | 2,200 | 0.19 | 0.38 | 80 | 15 | 68 | | | | | | | | | | | | | | |
| ML92-061-03 | 1.3 | 11,000 | 12 | 4.2 | 0.8 | <0.7 | <0.5 | 290 | 810 | 0.2 | 0.66 | 16 | 5.5 | 36 | 9.1 | 89 | 43 | 0.5 | | 0.6 | <0.0001 | 0.00003 | 0.38 | 0.0044 | 0.021 | | <0.00002 | 0.00002 |
| ML92-062-01 | 2.6 | 6,500 | 8.6 | 3.2 | 0.8 | <0.7 | <0.5 | 250 | 510 | 0.04 | 0.33 | 12 | 5.9 | 39 | 8.2 | 86 | 36 | 1.7 | | 2.2 | <0.0001 | 0.00003 | 0.16 | 0.0013 | 0.04 | | <0.00002 | <0.00001 |
| ML92-062-02 | 1 | 15,000 | 25 | 39 | 0.8 | <0.7 | 1.8 | 930 | 1,900 | 0.51 | 1.3 | 37 | 7.4 | 67 | 9 | 85 | 41 | 1.2 | | 0.8 | <0.0001 | 0.00002 | 1.9 | 0.009 | 0.025 | | <0.00002 | <0.00001 |
| ML95-82-2 | 2.4 | 1,900 | 6.4 | 5.5 | 0.8 | <0.7 | <0.5 | 270 | 330 | 0.06 | 0.65 | 9 | 8 | 53 | 7.7 | 140 | 46 | 0.6 | | 3.5 | <0.0001 | 0.00003 | 0.06 | 0.0025 | 0.016 | | 0.00003 | 0.00003 |
| ML08-236-1 | 1.4 | 2,700 | 12 | 8.8 | 0.8 | <0.7 | 1.6 | 280 | 1,200 | 0.34 | 1.3 | 22 | 6.3 | 40 | 8.6 | 100 | 44 | 1.9 | | 0.6 | <0.0001 | 0.00004 | 1 | 0.012 | 0.021 | | 0.00004 | 0.00005 |
| ML90-09-1 | 3.5 | 2,000 | 9 | 3.4 | 0.8 | <0.7 | <0.5 | 230 | 570 | 0.07 | 0.45 | 16 | 6.2 | 78 | 7.8 | 98 | 41 | 0.7 | | 1 | <0.0001 | 0.00004 | 0.43 | 0.021 | 0.019 | | 0.00003 | 0.00003 |
| ML90-10-2 | 1.2 | 2,200 | 19 | 6 | 0.8 | <0.7 | 0.5 | 260 | 1,300 | 0.19 | 1.4 | 28 | 6.6 | 41 | 7.9 | 120 | 45 | 1 | | 3.4 | <0.0001 | 0.00025 | 0.56 | 0.0059 | 0.023 | | 0.00022 | 0.00025 |
| ML92-053-1 | 1.1 | 910 | 8 | 2.7 | 0.8 | <0.7 | <0.5 | 220 | 560 | 0.03 | 0.4 | 14 | 5.7 | 42 | 7.9 | 87 | 39 | 0.9 | | 0.9 | <0.0001 | <0.00001 | 0.46 | 0.0047 | 0.017 | | <0.00002 | <0.00001 |
| ML92-060-1 | 3.3 | 3,500 | 7.7 | 3.2 | 0.8 | <0.7 | <0.5 | 210 | 500 | 0.08 | 0.46 | 17 | 6.3 | 41 | 7.8 | 160 | 47 | 1.6 | | 4.6 | <0.0001 | 0.00003 | 0.14 | 0.0009 | 0.016 | | <0.00002 | <0.00001 |
| ML95-93-03 | 0.7 | 250 | 14 | 3.4 | 0.8 | <0.7 | 0.6 | 140 | 700 | 0.08 | 0.46 | 9 | 6.1 | 58 | 7.8 | 120 | 43 | 1.2 | | 2.1 | <0.0001 | 0.00003 | 0.22 | 0.0014 | 0.021 | | <0.00002 | <0.00001 |
| ML08-225-01 | 2.4 | 9,500 | 10 | 3.4 | 0.8 | 1.1 | <0.5 | 220 | 880 | 0.2 | 0.86 | 19 | 6 | 24 | 8.3 | 94 | | 1 | | 1 | <0.0001 | <0.00001 | 0.82 | 0.02 | 0.0086 | | <0.00002 | <0.00001 |
| ML08-226-02 | 0.8 | 5,200 | 8.8 | 2.5 | 0.8 | <0.7 | <0.5 | 110 | 540 | 0.12 | 0.43 | 15 | 5.7 | 36 | 7.7 | 100 | | 0.7 | | 2.9 | <0.0001 | <0.00001 | 0.47 | 0.0032 | 0.0049 | | <0.00002 | <0.00001 |
| ML08-226-03 | 3.8 | 4,400 | 11 | 4.1 | 0.8 | <0.7 | <0.5 | 230 | 770 | 0.14 | 0.63 | 16 | 7.2 | 46 | 7.8 | 97 | | 0.7 | | 1.1 | <0.0001 | <0.00001 | 0.52 | 0.0026 | 0.0068 | | <0.00002 | <0.00001 |
| ML08-228-01 | 0.7 | 13,000 | 13 | 4.9 | 0.8 | <0.7 | <0.5 | 93 | 1,000 | 0.25 | 1 | 25 | 5.5 | 42 | 8.3 | 100 | | 0.4 | | 0.6 | <0.0001 | <0.00001 | 0.55 | 0.011 | 0.0055 | | <0.00002 | <0.00001 |
| ML08-228-02 | 3.4 | 1,600 | 7.2 | 1.7 | 0.8 | <0.7 | 0.6 | 55 | 340 | 0.05 | 0.4 | 8 | 5.4 | 36 | 7.5 | 89 | | 0.7 | | 2.6 | <0.0001 | 0.00004 | 0.2 | 0.0008 | 0.0057 | | <0.00002 | 0.00003 |
| ML08-229-05 | 0.8 | 4,400 | 11 | 5.6 | 0.8 | <0.7 | <0.5 | 340 | 720 | 0.12 | 0.68 | 16 | 6.9 | 52 | 8.2 | 82 | | 0.5 | | 0.9 | <0.0001 | <0.00001 | 0.34 | 0.019 | 0.0075 | | <0.00002 | <0.00001 |
| ML08-233-02 | 0.5 | 13,000 | 12 | 7.4 | 0.8 | <0.7 | <0.5 | 360 | 1,000 | 0.28 | 0.92 | 24 | 7.2 | 54 | 8.2 | 110 | | 1.3 | | 2.9 | <0.0001 | <0.00001 | 0.49 | 0.011 | 0.0073 | | <0.00002 | <0.00001 |
| ML08-241-02 | 4.5 | 4,300 | 13 | 7.3 | 1.2 | <0.7 | 0.7 | 420 | 1,100 | 0.14 | 1.1 | 27 | 7.5 | 49 | 8.1 | 110 | | 2.6 | | 2.1 | <0.0001 | <0.00001 | 0.83 | 0.0015 | 0.0085 | | <0.00002 | <0.00001 |
| ML08-243-01 | 3.4 | 8,100 | 11 | 10 | 0.8 | <0.7 | 1.2 | 600 | 1,000 | 0.24 | 0.96 | 23 | 6.9 | 43 | 8.5 | 110 | | 2.1 | | 1.4 | <0.0001 | <0.00001 | 0.63 | 0.0021 | 0.012 | | <0.00002 | <0.00001 |
| ML09-254-01 | 3.2 | 10,000 | 14 | 6.6 | 0.8 | <0.7 | <0.5 | 250 | 1,100 | 0.16 | 1.2 | 27 | 8.2 | 51 | 7.7 | 140 | | 2.6 | | 5 | <0.0001 | <0.00001 | 0.55 | 0.0064 | 0.0099 | | <0.00002 | <0.00001 |
| ML92062-01 | 3.9 | 6,000 | 11 | 6.3 | 0.8 | <0.7 | <0.5 | 350 | 740 | 0.13 | 0.55 | 16 | 6.7 | 34 | 7.8 | 100 | | 1.2 | | 2 | <0.0001 | 0.00002 | 0.38 | 0.0033 | 0.0077 | | <0.00002 | <0.00001 |
| ML95-117-01 | 3.3 | 6,600 | 13 | 4 | 0.8 | <0.7 | <0.5 | 210 | 1,200 | 0.14 | 0.63 | 25 | 6.4 | 46 | 7.8 | 110 | | 0.7 | | 3.8 | <0.0001 | <0.00001 | 0.44 | 0.0035 | 0.0089 | | <0.00002 | <0.00001 |
| ML95-117-03 | 4.1 | 10,000 | 28 | 5.1 | 0.8 | <0.7 | 1.1 | 230 | 2,200 | 0.16 | 1.3 | 51 | 8.7 | 68 | 7.6 | 78 | | 1 | | 2.6 | <0.0001 | <0.00001 | 0.63 | 0.017 | 0.0068 | | <0.00002 | <0.00001 |
| ML95-82-01 | 4 | 5,800 | 18 | 5.9 | 0.8 | <0.7 | <0.5 | 240 | 1,300 | 0.19 | 1 | 31 | 8.2 | 64 | 7.7 | 110 | | 0.6 | | 2.7 | <0.0001 | <0.00001 | 0.71 | 0.012 | 0.0068 | | <0.00002 | <0.00001 |
| ML95-83-01 | 3.2 | 4,800 | 14 | 6.8 | 0.8 | <0.7 | <0.5 | 200 | 1,500 | 0.41 | 1.1 | 29 | 7 | 45 | 7.5 | 58 | | 0.5 | | 0.7 | <0.0001 | <0.00001 | 1.4 | 0.0045 | 0.0083 | | <0.00002 | <0.00001 |
| ML95-95-01 | 3.7 | 5,500 | 14 | 7.3 | 0.8 | <0.7 | <0.5 | 240 | 1,200 | 0.24 | 1 | 27 | 6.4 | 61 | 7.9 | 91 | | 0.6 | | 1.1 | <0.0001 | <0.00001 | 0.95 | 0.026 | 0.0072 | | <0.00002 | <0.00001 |
| ML95-98-01 | 3.7 | 9,400 | 9.4 | 4.4 | 0.8 | <0.7 | <0.5 | 290 | 660 | 0.23 | 0.63 | 17 | 5.7 | 33 | 7.7 | 130 | | 0.8 | | 6.3 | <0.0001 | <0.00001 | 0.45 | 0.002 | 0.0083 | | <0.00002 | <0.00001 |
| ML97-186-01 | 0.9 | 6,000 | 12 | 38 | 0.8 | <0.7 | <0.5 | 220 | 860 | 0.29 | 1.1 | 19 | 23 | 54 | 7.9 | 140 | | 1.2 | | 11 | <0.0001 | <0.00001 | 0.49 | 0.0063 | 0.0089 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| 163066 | 0.56 | 700 | 8 | 3 | <0.05 | <1 | <0.3 | 43 | 700 | 0.13 | 0.53 | 32 | 2.7 | 41 | | | | | | | | | | | | | | |
| 163784 | 1.4 | 800 | 15 | 3.6 | <0.05 | <1 | <0.9 | 32 | 1,500 | 0.56 | 1.3 | 40 | 4.7 | 40 | | | | | | | | | | | | | | |
| CAMLD264964 | 1.2 | 500 | 17 | 2.8 | 3.7 | <1 | <0.3 | 140 | 300 | 0.08 | 0.28 | 17 | 4.2 | 16 | | | | | | | | | | | | | | |
| CAMLD264965 | 1.6 | 700 | 19 | 6.5 | 0.46 | <1 | <0.3 | 47 | 800 | 0.21 | 0.64 | 26 | 4 | 34 | | | | | | | | | | | | | | |
| CAMLD264936 | 3 | 800 | 15 | 3.8 | 0.42 | <1 | <0.3 | 69 | 800 | 0.24 | 0.71 | 27 | 4 | 28 | | | | | | | | | | | | | | |
| CAMLD264944 | 1.4 | 500 | 8 | 2.2 | 0.54 | <1 | <0.3 | 85 | 300 | 0.03 | 0.4 | 13 | 4.4 | 8 | | | | | | | | | | | | | | |
| 162591 | 0.51 | 600 | 9 | 7.1 | <0.05 | <1 | 0.3 | 37 | 600 | 0.12 | 0.62 | 37 | 3 | 23 | | | | | | | | | | | | | | |
| 162895 | 0.26 | 1,000 | 4 | 3 | <0.05 | <1 | <0.3 | 120 | 300 | 0.02 | 0.34 | 13 | 3.4 | 11 | | | | | | | | | | | | | | |
| 162952 | 0.36 | 600 | 2 | 3.8 | <0.05 | <1 | <0.3 | 320 | 200 | 0.02 | 0.18 | 12 | 3.6 | 10 | | | | | | | | | | | | | | |
| 163309 | 4.3 | 300 | 12 | 4.5 | 0.05 | <1 | 0.4 | 130 | 800 | 0.2 | 4.5 | 16 | 5.7 | 24 | | | | | | | | | | | | | | |
| 163763 | 0.08 | 600 | 4 | 2.1 | <0.05 | <1 | <0.3 | 86 | 500 | 0.07 | 0.33 | 21 | 4.4 | 11 | | | | | | | | | | | | | | |
| CAEXD301939 | 1.4 | 1,200 | 11 | 9 | <0.05 | <1 | 0.6 | 150 | 900 | 0.43 | 1.9 | 22 | 5.7 | 31 | | | | | | | | | | | | | | |
| CAEXD307379 | 0.31 | 700 | 6 | 1.7 | 0.09 | <1 | 0.6 | 22 | 900 | 0.21 | 1.3 | 21 | 3.4 | 29 | | | | | | | | | | | | | | |
| CAEXD307381 | 0.73 | 400 | 9 | 1.6 | 0.07 | <1 | <0.5 | 46 | 700 | 0.22 | 0.47 | 22 | 4.3 | 28 | | | | | | | | | | | | | | |
| CAMLD264960 | 1.6 | 500 | 24 | 5.6 | 0.08 | <1 | <0.5 | 85 | 800 | 0.36 | 0.52 | 28 | 4.2 | 38 | | | | | | | | | | | | | | |
| CAMLD264967 | 2.4 | 600 | 12 | 2.8 | <0.05 | <1 | <0.3 | 190 | 300 | 0.06 | 0.33 | 13 | 3.6 | 12 | | | | | | | | | | | | | | |
| CAMLD264939 | 1.2 | 300 | 2 | 2.9 | 0.39 | <1 | <0.3 | 250 | 100 | 0.02 | 0.12 | 4 | 3 | 16 | | | | | | | | | | | | | | |
| CAMLD264943 | 1.4 | 400 | 14 | 6.3 | 0.26 | <1 | <0.3 | 43 | 600 | 0.17 | 0.4 | 22 | 2.7 | 45 | | | | | | | | | | | | | | |
| CAEXD298984 | 0.57 | 500 | 6 | 5.2 | <0.05 | <1 | 0.4 | 250 | 600 | 0.24 | 0.53 | 15 | 3.8 | 40 | 8.6 | 110 | 40 | 4 | <0.06 | 3 | <0.00001 | <0.00005 | 0.01 | 0.0005 | 0.027 | 0.0029 | <0.000007 | <0.000007 |
| 162858 | 1.2 | 300 | 7 | 4.2 | 0.16 | 3 | 0.6 | 120 | 300 | 0.11 | 0.58 | 15 | 5.1 | 30 | 7.8 | 580 | 23 | 12 | <0.06 | 210 | <0.00001 | <0.00005 | 0.008 | 0.0029 | 0.023 | 0.047 | <0.000007 | <0.000007 |
| 163079 | 0.54 | 700 | 4 | 3.4 | 0.09 | <1 | <0.3 | 81 | 400 | 0.23 | 0.27 | 18 | 3.3 | 24 | 7.8 | 550 | 22 | 10 | <0.06 | 190 | <0.00001 | <0.00005 | 0.037 | <0.0002 | 0.016 | 0.064 | <0.000007 | <0.000007 |
| CAMLD264932 | 1.3 | 1,000 | 13 | 1.7 | 0.11 | <1 | <0.3 | 130 | 300 | 0.04 | 1.4 | 40 | 30 | 34 | | | | | | | | | | | | | | |
| CAMLD273962 | 0.92 | 700 | 10 | 3.4 | 0.53 | <1 | <0.3 | 130 | 600 | 0.16 | 1.1 | 20 | 4.5 | 18 | | | | | | | | | | | | | | |
| CAEXD210903 | 0.87 | 400 | 11 | 5.9 | <0.05 | <1 | <0.3 | 90 | 500 | 0.13 | 0.73 | 14 | 2.9 | 17 | | | | | | | | | | | | | | |
| CAMLD264947 | 2.6 | 600 | 16 | 25 | 0.07 | <1 | <0.3 | 53 | 500 | 0.12 | 1.9 | 22 | 4.6 | 22 | | | | | | | | | | | | | | |
| CAMLD264952 | 1.1 | 800 | 15 | 2 | 0.06 | <1 | <0.3 | 300 | 300 | 0.02 | 0.33 | 19 | 2.8 | 13 | | | | | | | | | | | | | | |
| CAMLD264954 | 1.5 | 400 | 20 | 1.5 | <0.05 | <1 | <0.3 | 31 | 700 | 0.16 | 0.86 | 29 | 4 | 46 | | | | | | | | | | | | | | |
| CAMLD264971 | 1.3 | 600 | 17 | 13 | 0.12 | <1 | <0.3 | 98 | 600 | 0.18 | 0.54 | 23 | 4 | 21 | | | | | | | | | | | | | | |
| CAMLD264941 | 1.3 | 800 | 7 | 5.4 | 0.45 | <1 | <0.3 | 47 | 400 | 0.09 | 0.96 | 14 | 4.1 | 18 | | | | | | | | | | | | | | |
| CAMLD264933 | 1.5 | 300 | 5 | 5.2 | 0.19 | <1 | <0.3 | 200 | 300 | 0.15 | 0.29 | 13 | 4 | 18 | | | | | | | | | | | | | | |
| CAMLD264934 | 1.6 | 400 | 13 | 5.6 | 0.1 | <1 | <0.3 | 190 | 700 | 0.16 | 0.58 | 25 | 3.8 | 32 | | | | | | | | | | | | | | |
| CAEXD305051 | 0.74 | 600 | 8 | 2.5 | <0.05 | <1 | <0.3 | 110 | 700 | 0.14 | 0.62 | 16 | 3.8 | 20 | | | | | | | | | | | | | | |
| CAEXD307337 | 0.25 | 500 | 5 | 2.8 | <0.05 | <1 | <0.3 | 120 | 400 | 0.05 | 0.32 | 20 | 3.2 | 10 | | | | | | | | | | | | | | |
| CAMLD264950 | 1.5 | 300 | 17 | 4.9 | 0.06 | <1 | <0.3 | 290 | 200 | 0.02 | 0.27 | 13 | 4.2 | 10 | | | | | | | | | | | | | | |
| CAMLD264955 | 0.99 | 600 | 15 | 2 | <0.05 | <1 | <0.3 | 120 | 300 | 0.02 | 0.43 | 21 | 3.5 | 15 | | | | | | | | | | | | | | |
| CAMLD264946 | 0.83 | 400 | 2 | 2.8 | 0.26 | <1 | <0.3 | 310 | 200 | 0.02 | 0.17 | 7 | 3 | 8 | | | | | | | | | | | | | | |
| ML00-221-01 | 3.1 | 24,000 | 67 | 12 | 0.8 | <0.7 | <0.9 | 300 | 4,200 | 0.43 | 1.8 | 98 | 8.3 | 94 | 9.1 | 88 | 43 | 2.2 | | 1.9 | <0.0001 | 0.00002 | 2 | 0.35 | 0.034 | | <0.00002 | <0.00001 |
| ML00-221-02 | 1.7 | 24,000 | 63 | 11 | 0.8 | <0.7 | 1.6 | 290 | 3,900 | 0.42 | 1.9 | 87 | 7.1 | 88 | 8.9 | 79 | 34 | 1.6 | | 3.1 | <0.0001 | 0.00002 | 1.5 | 0.06 | 0.026 | | <0.00002 | 0.00002 |
| ML00-221-03 | 2 | 24,000 | 65 | 8.6 | 0.8 | <0.7 | 1.5 | 290 | 3,700 | 0.36 | 1.7 | 93 | 7.4 | 77 | 8.5 | 86 | 38 | 2 | | 3.6 | <0.0001 | 0.00002 | 1.9 | 0.06 | 0.032 | | <0.00002 | 0.00002 |
| ML08-238-04 | 1.3 | 24,000 | 66 | 12 | 0.8 | <0.7 | 1.6 | 240 | 4,100 | 0.53 | 1.9 | 100 | 9.2 | 86 | 8.7 | 110 | 41 | 8.4 | | 2.7 | <0.0001 | 0.00002 | 2 | 0.064 | 0.044 | | <0.00002 | <0.00001 |
| ML90-03-01 | 5 | 24,000 | 69 | 12 | 0.8 | <0.7 | 1.4 | 340 | 4,600 | 0.56 | 2 | 110 | 8.7 | 98 | 8.8 | 84 | 41 | 0.9 | | 2.5 | <0.0001 | 0.00003 | 2.1 | 0.12 | 0.046 | | <0.00002 | 0.00003 |
| ML90-03-02 | 1.3 | 25,000 | 39 | 9.9 | 0.8 | <0.7 | 1 | 290 | 3,500 | 0.33 | 1.5 | 73 | 8 | 86 | 9 | 84 | 42 | 1.3 | | 1.3 | <0.0001 | <0.00001 | 1.7 | 0.058 | 0.032 | | <0.00002 | <0.00001 |
| ML90-04-02 | 1.9 | 26,000 | 58 | 12 | 0.8 | <0.7 | 1.2 | 310 | 4,100 | 0.43 | 1.8 | 91 | 7.7 | 93 | 8.5 | 70 | 34 | 0.8 | | 3 | <0.0001 | 0.00004 | 1.7 | 0.057 | 0.028 | | 0.00008 | 0.00005 |
| ML90-04-03 | 0.7 | 29,000 | 39 | 9.3 | 0.8 | <0.7 | 0.8 | 300 | 3,700 | 0.22 | 1.3 | 78 | 8.4 | 76 | 9 | 94 | 45 | 1.4 | | 4.1 | <0.0001 | 0.00002 | 1.3 | 0.025 | 0.038 | | <0.00002 | <0.00001 |
| ML90-07-01 | 0.7 | 25,000 | 44 | 8.5 | 0.8 | <0.7 | 1.3 | 320 | 3,300 | 0.29 | 1.5 | 76 | 8.7 | 64 | 9.2 | 73 | 36 | 0.7 | | 0.7 | <0.0001 | 0.00002 | 1.4 | 0.048 | 0.045 | | <0.00002 | <0.00001 |
| ML90-08-01 | 1.5 | 28,000 | 51 | 12 | 0.8 | <0.7 | 1.4 | 260 | 3,600 | 0.3 | 1.6 | 78 | 7.2 | 77 | 8.8 | 70 | 31 | 1.2 | | 2.8 | <0.0001 | <0.00001 | 1.2 | 0.019 | 0.023 | | <0.00002 | <0.00001 |
| ML90-08-02 | 2.5 | 25,000 | 46 | 7.3 | 0.8 | <0.7 | 1.2 | 290 | 3,500 | 0.36 | 1.4 | 79 | 8.8 | 59 | 9.3 | 78 | 40 | 0.9 | | 1.7 | <0.0001 | <0.00001 | 1.5 | 0.087 | 0.023 | | <0.00002 | <0.00001 |
| ML90-12-02 | 3.2 | 23,000 | 42 | 11 | 0.8 | <0.7 | 1.5 | 310 | 3,500 | 0.51 | 1.8 | 80 | 10 | 92 | 8.6 | 70 | 35 | 1 | | 1.4 | <0.0001 | 0.00002 | 1.5 | 0.038 | 0.021 | | <0.00002 | <0.00001 |
| ML92-061-01 | 2.6 | 23,000 | 71 | 9.4 | 0.8 | <0.7 | 1.2 | 300 | 4,100 | 0.45 | 1.7 | 100 | 8 | 92 | 8.6 | 79 | 36 | 0.7 | | 3.1 | <0.0001 | 0.00002 | 1.8 | 0.076 | 0.028 | | <0.00002 | 0.00002 |
| ML92-061-02 | 1.5 | 21,000 | 67 | 8.3 | 0.8 | <0.7 | 1.1 | 260 | 4,000 | 0.42 | 1.7 | 97 | 7.4 | 82 | 8.1 | 80 | 33 | 0.9 | | 5.5 | <0.0001 | 0.00002 | 1.6 | 0.029 | 0.027 | | <0.00002 | 0.00002 |
| ML92-061-04 | 1 | 29,000 | 51 | 11 | 0.8 | <0.7 | 1.3 | 290 | 3,700 | 0.32 | 1.5 | 84 | 8.5 | 75 | 8.9 | 74 | 38 | 0.6 | | 1.1 | <0.0001 | 0.00003 | 1.7 | 0.082 | 0.021 | | 0.00003 | 0.00002 |
| ML92-062-03 | 2.5 | 26,000 | 43 | 9.8 | 0.8 | <0.7 | 1.3 | 300 | 3,500 | 0.44 | 1.7 | 75 | 9 | 73 | 9.2 | 85 | 42 | 0.9 | | 1.2 | <0.0001 | 0.00003 | 1.9 | 0.044 | 0.025 | | <0.00002 | <0.00001 |
| ML95-82-1 | 1.8 | 21,000 | 62 | 11 | 0.8 | <0.7 | 1.2 | 270 | 4,000 | 0.47 | 2.5 | 100 | 8.3 | 87 | 7.9 | 86 | 36 | 0.5 | | 4.6 | <0.0001 | 0.00002 | 1.4 | 0.12 | 0.023 | | <0.00002 | <0.00001 |
| ML95-93-01 | 1.8 | 20,000 | 79 | 8.5 | 0.8 | <0.7 | 1.6 | 230 | 4,600 | 0.43 | 1.8 | 120 | 9 | 96 | 8.3 | 84 | 41 | 2.8 | | 1.3 | <0.0001 | 0.00004 | 2 | 0.18 | 0.13 | | <0.00002 | 0.00002 |
| ML95-93-02 | 2.6 | 23,000 | 72 | 11 | 0.8 | <0.7 | 1.4 | 260 | 4,200 | 0.39 | 1.6 | 100 | 8.2 | 110 | 8.8 | 77 | 37 | 0.9 | | 1.3 | <0.0001 | 0.00002 | 1.7 | 0.07 | 0.048 | | <0.00002 | 0.00002 |
| ML95-93-04 | 1.4 | 29,000 | 50 | 7.7 | 0.8 | <0.7 | 1.6 | 310 | 3,600 | 0.31 | 2.4 | 85 | 9.2 | 79 | 9.1 | 93 | 40 | 0.8 | | 2.2 | <0.0001 | 0.00003 | 1.4 | 0.0038 | 0.021 | | <0.00002 | <0.00001 |
| ML00-221-04 | 1.4 | 16,000 | 66 | 12 | 0.8 | <0.7 | 1.3 | 170 | 4,500 | 0.42 | 1.7 | 110 | 8.1 | 99 | 8.2 | 84 | 37 | 2.2 | | 1.8 | <0.0001 | <0.00001 | 1.9 | 0.027 | 0.032 | | <0.00002 | <0.00001 |
| ML08-236-3 | 1.5 | 22,000 | 54 | 16 | 0.8 | <0.7 | 1 | 260 | 3,900 | 0.4 | 1.8 | 110 | 8.6 | 87 | 8.5 | 120 | 43 | 6.9 | | 2.9 | <0.0001 | 0.00002 | 1.4 | 0.033 | 0.029 | | <0.00002 | <0.00001 |
| ML90-04-01 | 1.5 | 25,000 | 58 | 16 | 0.8 | <0.7 | 1.2 | 320 | 4,200 | 0.41 | 1.9 | 93 | 7.6 | 86 | 8.4 | 85 | 35 | 0.8 | | 6.2 | <0.0001 | 0.00003 | 1.7 | 0.047 | 0.03 | | <0.00002 | 0.00003 |
| ML90-09-2 | 3 | 27,000 | 40 | 7.9 | 0.8 | <0.7 | 0.7 | 320 | 3,300 | 0.4 | 3.7 | 82 | 11 | 61 | 8.8 | 97 | 44 | 1 | | 1.7 | <0.0001 | 0.00003 | 1.2 | 0.023 | 0.02 | | <0.00002 | <0.00001 |
| ML90-10-1 | 3.8 | 24,000 | 49 | 9.4 | 0.8 | <0.7 | 0.8 | 250 | 3,100 | 0.42 | 2.9 | 77 | 9 | 71 | 7.9 | 95 | 40 | 0.7 | | 3.5 | <0.0001 | 0.00002 | 0.97 | 0.16 | 0.032 | | <0.00002 | 0.00017 |
| ML90-10-3 | 1.5 | 21,000 | 36 | 9.7 | 0.8 | <0.7 | <0.9 | 250 | 2,700 | 0.45 | 1.6 | 66 | 7.3 | 69 | 8.5 | 85 | 40 | 0.6 | | 1 | <0.0001 | 0.00006 | 1.6 | 0.024 | 0.019 | | 0.00003 | 0.00004 |
| ML90-12-01 | 1.3 | 23,000 | 59 | 10 | 0.8 | <0.7 | 1.2 | 240 | 3,900 | 0.38 | 2.4 | 88 | 9.1 | 93 | 9 | 76 | 37 | 0.9 | | 1.8 | <0.0001 | 0.00002 | 1.8 | 0.24 | 0.028 | | <0.00002 | <0.00001 |
| ML90-14-2 | 1.4 | 22,000 | 46 | 10 | 0.8 | <0.7 | 1 | 290 | 3,700 | 0.38 | 1.8 | 94 | 9 | 76 | 8.2 | 87 | 34 | 0.5 | | 3.5 | <0.0001 | 0.00002 | 1.4 | 0.06 | 0.019 | | <0.00002 | <0.00001 |
| ML95-82-3 | 0.7 | 24,000 | 44 | 8.6 | 0.8 | <0.7 | 1 | 310 | 3,000 | 0.31 | 2 | 80 | 7.8 | 62 | 8.8 | 89 | 41 | 0.6 | | 1.6 | <0.0001 | 0.00007 | 1.2 | 0.16 | 0.021 | | <0.00002 | 0.00003 |
| ML08-225-02 | 1.6 | 23,000 | 64 | 16 | 0.8 | <0.7 | 0.6 | 280 | 4,200 | 0.65 | 2.2 | 100 | 8.8 | 98 | 7.9 | 92 | | 1.4 | | 3.7 | <0.0001 | <0.00001 | 1.4 | 0.093 | 0.011 | | <0.00002 | <0.00001 |
| ML08-230-01 | 3.3 | 20,000 | 64 | 10 | 0.8 | <0.7 | 0.6 | 260 | 4,000 | 0.46 | 2.7 | 100 | 9.1 | 86 | 8.3 | 150 | | 3.8 | | 8.5 | <0.0001 | <0.00001 | 1.4 | 0.12 | 0.031 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML08-232-01 | 1.5 | 23,000 | 61 | 11 | 0.8 | <0.7 | <0.9 | 300 | 4,100 | 0.44 | 2.1 | 100 | 8 | 88 | 8 | 73 | | 1.3 | | 1.4 | <0.0001 | <0.00001 | 2.2 | 0.13 | 0.014 | | <0.00002 | <0.00001 |
| ML08-233-01 | 2.2 | 25,000 | 43 | 10 | 0.8 | <0.7 | 0.6 | 300 | 3,500 | 0.29 | 1.7 | 85 | 9.7 | 74 | 7.8 | 93 | | 1.5 | | 1.3 | <0.0001 | <0.00001 | 1.2 | 0.022 | 0.014 | | <0.00002 | <0.00001 |
| ML08-240-01 | 2.4 | 30,000 | 49 | 15 | 0.8 | <0.7 | 0.5 | 310 | 3,600 | 0.37 | 1.6 | 86 | 8.9 | 95 | 8.1 | 94 | | 1.3 | | 1.3 | <0.0001 | <0.00001 | 1.6 | 0.047 | 0.0092 | | <0.00002 | <0.00001 |
| ML08-241-01 | 1.4 | 20,000 | 49 | 11 | 0.8 | <0.7 | <0.5 | 310 | 3,900 | 0.34 | 2.8 | 99 | 8.8 | 84 | 8 | 100 | | 1.9 | | 2.1 | <0.0001 | <0.00001 | 1.5 | 0.04 | 0.012 | | <0.00002 | <0.00001 |
| ML08-245-02 | 1.3 | 24,000 | 54 | 10 | 0.8 | <0.7 | 0.6 | 260 | 3,500 | 0.42 | 2.6 | 83 | 7.2 | 110 | 7.9 | 80 | | 0.7 | | 1.3 | <0.0001 | <0.00001 | 2 | 0.073 | 0.0083 | | <0.00002 | <0.00001 |
| ML09-254-02 | 0.8 | 28,000 | 41 | 8.9 | 0.8 | <0.7 | 0.6 | 290 | 3,400 | 0.31 | 2.4 | 80 | 8.6 | 72 | 7.9 | 100 | | 2.2 | | 2 | <0.0001 | <0.00001 | 1.2 | 0.055 | 0.014 | | <0.00002 | <0.00001 |
| ML95-105-03 | 1.5 | 22,000 | 59 | 9.3 | 0.8 | <0.7 | <0.9 | 300 | 3,900 | 0.45 | 4.1 | 95 | 8.3 | 84 | 7.8 | 100 | | 0.8 | | 6 | <0.0001 | <0.00001 | 1.4 | 0.061 | 0.0099 | | <0.00002 | <0.00001 |
| ML95-105-04 | 2.4 | 35,000 | 35 | 7.5 | 0.8 | <0.7 | 0.8 | 340 | 3,500 | 0.32 | 1.4 | 77 | 9 | 64 | 8.8 | 89 | | 0.3 | | 0.6 | <0.0001 | <0.00001 | 1.9 | 0.12 | 0.0052 | | <0.00002 | <0.00001 |
| ML95-107-03 | 1.4 | 20,000 | 59 | 9.8 | 0.8 | <0.7 | <0.5 | 320 | 4,100 | 0.45 | 2.5 | 100 | 8.4 | 97 | 7.8 | 92 | | 0.7 | | 4.6 | <0.0001 | <0.00001 | 1.5 | 0.11 | 0.0093 | | <0.00002 | <0.00001 |
| ML95-113-01 | 3 | 21,000 | 52 | 11 | 0.8 | <0.7 | <0.9 | 280 | 3,800 | 0.42 | 2.3 | 94 | 8.3 | 85 | 7.7 | 100 | | 0.5 | | 10 | <0.0001 | <0.00001 | 1.1 | 0.047 | 0.011 | | <0.00002 | <0.00001 |
| ML95-113-02 | 1 | 23,000 | 46 | 9.8 | 0.8 | <0.7 | 1.1 | 310 | 3,900 | 0.36 | 1.5 | 91 | 9.9 | 78 | 8 | 97 | | 1 | | 1.5 | <0.0001 | <0.00001 | 1.3 | 0.019 | 0.0094 | | <0.00002 | <0.00001 |
| ML95-120-01 | 1.4 | 26,000 | 58 | 9.4 | 0.8 | <0.7 | 1.1 | 260 | 4,000 | 0.4 | 1.8 | 95 | 8.2 | 85 | 7.7 | 83 | | 0.8 | | 7.1 | <0.0001 | <0.00001 | 1.2 | 0.079 | 0.0093 | | <0.00002 | <0.00001 |
| ML95-82-02 | 0.8 | 27,000 | 37 | 7.9 | 0.8 | <0.7 | <0.9 | 280 | 3,200 | 0.3 | 1.5 | 75 | 8.4 | 74 | 8.1 | 94 | | 1.2 | | 3.2 | <0.0001 | <0.00001 | 1.1 | 0.034 | 0.011 | | <0.00002 | <0.00001 |
| ML95-83-02 | 1.3 | 24,000 | 41 | 8.7 | 0.8 | <0.7 | 1.2 | 250 | 3,300 | 0.37 | 2.3 | 78 | 9.8 | 85 | 7.7 | 97 | | 0.5 | | 4.9 | <0.0001 | <0.00001 | 1.4 | 0.11 | 0.0046 | | <0.00002 | <0.00001 |
| ML95-85-01 | 0.9 | 30,000 | 39 | 9.9 | 0.8 | <0.7 | 1.3 | 330 | 3,600 | 0.35 | 1.9 | 78 | 9.1 | 79 | 7.9 | 90 | | 0.4 | | 1.5 | <0.0001 | 0.00003 | 1.5 | 0.028 | 0.0041 | | <0.00002 | <0.00001 |
| ML95-95-02 | 1 | 28,000 | 48 | 16 | 0.8 | <0.7 | <0.9 | 270 | 4,000 | 0.37 | 1.6 | 94 | 9.2 | 88 | 7.8 | 86 | | 0.6 | | 1.5 | <0.0001 | <0.00001 | 1.7 | 0.06 | 0.012 | | <0.00002 | <0.00001 |
| ML95-105-01 | 0.8 | 3,400 | 8.3 | 6.1 | 0.8 | <0.7 | <0.5 | 240 | 640 | 0.11 | 0.66 | 13 | 6.7 | 49 | 7.7 | 130 | | 1.1 | | 4 | <0.0001 | 0.00003 | 0.54 | 0.0016 | 0.0051 | | <0.00002 | <0.00001 |
| CAMLD264942 | 1.9 | 600 | 70 | 3.8 | 0.23 | <1 | <0.3 | 11 | 1,200 | 0.23 | 2.2 | 56 | 5.5 | 84 | | | | | | | | | | | | | | |
| CAEXD301646 | 1.5 | 500 | 63 | 4.3 | <0.05 | <1 | <0.5 | 11 | 1,700 | 0.4 | 1.5 | 65 | 6.3 | 61 | | | | | | | | | | | | | | |
| CAMLD264928 | 1.8 | 500 | 68 | 3.9 | <0.05 | <1 | <0.3 | 14 | 800 | 0.19 | 1.7 | 49 | 4.8 | 77 | | | | | | | | | | | | | | |
| CAMLD264937 | 1.5 | 900 | 29 | 1.7 | 0.27 | <1 | 0.6 | 15 | 1,900 | 0.38 | 0.74 | 45 | 4.6 | 56 | | | | | | | | | | | | | | |
| CAMLD264938 | 1.8 | 700 | 57 | 2.6 | 0.14 | <1 | 0.4 | 16 | 1,300 | 0.26 | 1 | 59 | 4.8 | 65 | | | | | | | | | | | | | | |
| 163018 | 1.5 | 900 | 62 | 4.1 | <0.05 | <1 | 0.4 | 24 | 1,400 | 0.26 | 1.3 | 56 | 4.7 | 68 | | | | | | | | | | | | | | |
| 163058 | 1.6 | 600 | 75 | 2.2 | <0.05 | <1 | 0.6 | 13 | 2,300 | 0.55 | 1.1 | 87 | 8.2 | 71 | | | | | | | | | | | | | | |
| 163425 | 0.66 | 800 | 75 | 1.9 | <0.05 | <1 | <0.3 | 35 | 1,700 | 0.13 | 0.45 | 66 | 3.1 | 72 | | | | | | | | | | | | | | |
| CAEXD298980 | 1.8 | 500 | 66 | 2 | <0.05 | <1 | 0.4 | 10 | 1,500 | 0.35 | 1.5 | 64 | 6.7 | 77 | | | | | | | | | | | | | | |
| CAEXD300379 | 1 | 600 | 57 | 1.6 | <0.05 | <1 | 0.4 | 13 | 1,300 | 0.24 | 1.7 | 55 | 5 | 65 | | | | | | | | | | | | | | |
| CAEXD300408 | 1.2 | 1,000 | 51 | 2.2 | <0.05 | <1 | 0.8 | 29 | 2,600 | 0.5 | 1.2 | 86 | 5.9 | 57 | | | | | | | | | | | | | | |
| CAEXD301865 | 0.85 | 900 | 39 | 9.5 | 0.07 | <1 | 1 | 25 | 2,200 | 0.45 | 0.93 | 69 | 6.9 | 66 | | | | | | | | | | | | | | |
| CAEXD301964 | 0.74 | 600 | 45 | 1.6 | <0.05 | <1 | 0.8 | 13 | 2,400 | 0.34 | 0.8 | 81 | 5.8 | 65 | | | | | | | | | | | | | | |
| CAEXD301979 | 1.7 | 900 | 47 | 4.6 | <0.05 | <1 | <0.9 | 30 | 2,600 | 0.51 | 0.94 | 86 | 7.3 | 55 | | | | | | | | | | | | | | |
| CAEXD302816 | 1.2 | 700 | 19 | 4.5 | <0.05 | <1 | 0.8 | 27 | 1,600 | 0.58 | 1.2 | 37 | 5.9 | 40 | | | | | | | | | | | | | | |
| CAEXD302829 | 0.89 | 800 | 42 | 2.4 | <0.05 | <1 | 0.8 | 12 | 2,400 | 0.38 | 0.65 | 71 | 5.4 | 79 | | | | | | | | | | | | | | |
| CAEXD302851 | 0.9 | 900 | 44 | 3 | 0.06 | <1 | <0.9 | 16 | 2,400 | 0.25 | 0.67 | 84 | 5.7 | 60 | | | | | | | | | | | | | | |
| CAEXD305469 | 1.2 | 600 | 56 | 15 | 0.08 | <1 | 0.8 | 16 | 2,100 | 0.41 | 1 | 75 | 6.2 | 90 | | | | | | | | | | | | | | |
| CAEXD305489 | 0.96 | 700 | 42 | 2.1 | <0.05 | <1 | 0.8 | 20 | 2,500 | 0.51 | 0.83 | 68 | 6.1 | 55 | | | | | | | | | | | | | | |
| CAEXD306783 | 1.8 | 500 | 38 | 1.8 | <0.05 | <1 | <0.5 | 14 | 2,000 | 0.43 | 3.2 | 60 | 4.6 | 49 | | | | | | | | | | | | | | |
| CAEXD309001 | 1.3 | 500 | 69 | 1.9 | <0.05 | <1 | <0.5 | 10 | 1,800 | 0.39 | 0.98 | 73 | 5.9 | 56 | | | | | | | | | | | | | | |
| CAEXD309016 | 1.1 | 600 | 51 | 1.7 | <0.05 | <1 | 0.7 | 12 | 2,100 | 0.36 | 0.98 | 77 | 7.2 | 65 | | | | | | | | | | | | | | |
| CAMLD264963 | 1.7 | 400 | 69 | 2.1 | <0.05 | <1 | <0.3 | 12 | 1,000 | 0.19 | 0.96 | 55 | 4.6 | 78 | | | | | | | | | | | | | | |
| CAMLD264966 | 1.3 | 600 | 66 | 2.7 | <0.05 | <1 | 0.7 | 16 | 2,500 | 0.39 | 0.9 | 100 | 7.5 | 100 | | | | | | | | | | | | | | |
| CAMLD264968 | 3.3 | 500 | 49 | 3.2 | <0.05 | <1 | <0.5 | 23 | 1,500 | 0.16 | 1.2 | 71 | 6.2 | 67 | | | | | | | | | | | | | | |
| CAMLD264969 | 3.7 | 600 | 41 | 4.1 | <0.05 | <1 | 0.6 | 29 | 2,100 | 0.29 | 1.1 | 62 | 6.9 | 53 | | | | | | | | | | | | | | |
| CAMLD264970 | 2.5 | 1,100 | 34 | 12 | <0.05 | <1 | <0.5 | 150 | 1,500 | 0.57 | 1.4 | 30 | 7.4 | 63 | | | | | | | | | | | | | | |
| 163305 | 1.3 | 1,400 | 23 | 7.7 | 0.06 | <1 | 0.4 | 100 | 1,200 | 0.44 | 1.1 | 21 | 5.8 | 58 | 8.2 | 200 | 37 | 15 | 0.77 | 12 | <0.00001 | <0.00005 | 0.29 | 0.032 | 0.013 | 0.003 | <0.000007 | <0.000007 |
| CAEXD305504 | 1.2 | 1,000 | 44 | 4 | <0.05 | <1 | <0.9 | 30 | 2,400 | 0.31 | 1.5 | 76 | 7.4 | 54 | 8.4 | 200 | 37 | 21 | 0.68 | 12 | <0.00001 | <0.00005 | 0.31 | 0.016 | 0.027 | 0.0032 | <0.000007 | <0.000007 |
| CAMLD264927 | 1.7 | 600 | 70 | 2.3 | <0.05 | <1 | <0.5 | 12 | 1,300 | 0.35 | 1.3 | 84 | 4.4 | 94 | | | | | | | | | | | | | | |
| CAMLD264951 | 2 | 500 | 65 | 3 | <0.05 | <1 | 0.4 | 11 | 1,500 | 0.29 | 1.2 | 62 | 6.2 | 89 | | | | | | | | | | | | | | |
| CAMLD264926 | 1.6 | 500 | 77 | 2.3 | <0.05 | <1 | 0.3 | 12 | 1,000 | 0.16 | 0.85 | 77 | 6.6 | 83 | | | | | | | | | | | | | | |
| CAMLD264929 | 1.8 | 400 | 75 | 1.8 | 0.06 | <1 | <0.3 | 13 | 1,000 | 0.24 | 1 | 51 | 5.5 | 77 | | | | | | | | | | | | | | |
| CAMLD273963 | 1.2 | 800 | 31 | 1.2 | 0.06 | <1 | 0.6 | 13 | 1,900 | 0.37 | 0.82 | 50 | 5.7 | 47 | | | | | | | | | | | | | | |
| CAMLD264940 | 2.1 | 700 | 64 | 37 | 0.25 | <1 | 0.3 | 15 | 1,400 | 0.26 | 1.1 | 55 | 4.9 | 110 | | | | | | | | | | | | | | |
| CAMLD264945 | 1.9 | 600 | 72 | 2.5 | 0.1 | <1 | 0.4 | 24 | 1,700 | 0.44 | 4.1 | 65 | 7.2 | 78 | | | | | | | | | | | | | | |
| CAEXD207013 | 1.4 | 400 | 68 | 12 | 0.07 | <1 | 0.3 | 10 | 1,400 | 0.33 | 1.1 | 60 | 3.6 | 100 | | | | | | | | | | | | | | |
| CAEXD298919 | 1.1 | 700 | 45 | 4.2 | <0.05 | <1 | 0.7 | 26 | 1,900 | 0.17 | 1.1 | 78 | 6.1 | 65 | | | | | | | | | | | | | | |
| CAEXD306977 | 1.1 | 600 | 54 | 2.9 | <0.05 | <1 | <0.5 | 12 | 1,600 | 0.28 | 1.3 | 64 | 5.1 | 72 | | | | | | | | | | | | | | |
| CAEXD307472 | 0.89 | 2,000 | 37 | 5.5 | <0.05 | <1 | <0.5 | 69 | 2,200 | 0.51 | 0.79 | 51 | 6.3 | 48 | | | | | | | | | | | | | | |
| CAEXD309452 | 0.8 | 600 | 56 | 2.2 | <0.05 | <1 | <0.9 | 14 | 2,400 | 0.38 | 0.95 | 88 | 8.2 | 77 | | | | | | | | | | | | | | |
| CAMLD264948 | 1.5 | 600 | 38 | 2.3 | <0.05 | <1 | 0.7 | 20 | 1,700 | 0.22 | 0.82 | 69 | 6.4 | 50 | | | | | | | | | | | | | | |
| CAMLD264949 | 1.8 | 400 | 70 | 5.7 | 0.06 | <1 | <0.3 | 9 | 1,400 | 0.34 | 1.1 | 59 | 6.9 | 75 | | | | | | | | | | | | | | |
| CAMLD264953 | 2.5 | 500 | 78 | 2.2 | <0.05 | <1 | <0.5 | 18 | 2,000 | 0.47 | 1.4 | 77 | 9.5 | 76 | | | | | | | | | | | | | | |
| CAMLD264956 | 1.2 | 700 | 51 | 1.9 | <0.05 | <1 | 0.8 | 13 | 2,200 | 0.42 | 0.54 | 86 | 5.4 | 92 | | | | | | | | | | | | | | |
| CAMLD264959 | 2 | 500 | 77 | 2.5 | <0.05 | <1 | <0.3 | 14 | 1,200 | 0.34 | 2.9 | 65 | 5.1 | 76 | | | | | | | | | | | | | | |
| CAMLD264961 | 1.3 | 700 | 30 | 1.2 | <0.05 | <1 | <0.5 | 13 | 1,700 | 0.31 | 0.69 | 47 | 4.4 | 49 | | | | | | | | | | | | | | |
| CAMLD264972 | 1.3 | 500 | 56 | 2 | <0.05 | <1 | 0.6 | 14 | 1,900 | 0.29 | 0.65 | 84 | 5.9 | 74 | | | | | | | | | | | | | | |
| ML95-107-01 | 1 | 3,300 | 12 | 7.5 | 0.8 | <0.7 | <0.5 | 150 | 930 | 0.29 | 0.74 | 22 | 6.1 | 48 | 7.9 | 97 | | 0.6 | | 1.6 | <0.0001 | <0.00001 | 0.67 | 0.0034 | 0.0068 | | <0.00002 | <0.00001 |
| ML95-107-02 | 3.2 | 7,500 | 15 | 8.1 | 0.8 | <0.7 | <0.5 | 370 | 1,400 | 0.3 | 1 | 31 | 7.1 | 54 | 7.9 | 140 | | 1.2 | | 6.2 | <0.0001 | <0.00001 | 0.55 | 0.03 | 0.0073 | | <0.00002 | <0.00001 |
| ML08-226-05 | 2.6 | 20,000 | 72 | 14 | 0.8 | <0.7 | 0.7 | 190 | 4,500 | 0.44 | 2.1 | 110 | 8.9 | 100 | 8 | 79 | | 1.2 | | 0.9 | <0.0001 | <0.00001 | 1.5 | 0.12 | 0.011 | | <0.00002 | <0.00001 |
| M08-743-03 | 4.4 | 2,700 | 34 | 4.8 | 0.8 | 1.5 | 1.3 | 30 | 840 | 0.22 | 0.19 | 37 | 3.4 | 170 | 8.1 | 240 | 85 | 8.7 | | 4.5 | <0.0001 | 0.00008 | 0.15 | 0.007 | 0.019 | | <0.00002 | <0.00001 |
| M08-748-03 | 1.1 | 14,000 | 110 | 3.3 | 0.9 | 1.6 | 1.5 | 130 | 4,300 | 0.02 | 0.061 | 250 | 12 | 81 | 7.9 | 66 | 30 | 2.5 | | 1 | <0.0001 | 0.00002 | 0.66 | 0.0018 | 0.02 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M09-817-01 | 0.8 | 3,200 | 43 | 4.9 | 1.4 | 0.9 | 0.8 | 49 | 1,200 | 0.39 | 0.35 | 54 | 4.2 | 240 | 8.1 | 150 | | 2.1 | | 2.1 | <0.0001 | <0.00001 | 0.13 | 0.21 | 0.013 | | <0.00002 | <0.00001 |
| CAEXD257967 | 1.9 | 200 | 13 | 1.1 | 0.09 | <1 | <0.3 | 34 | 100 | 0.04 | 0.09 | 14 | 0.53 | 22 | | | | | | | | | | | | | | |
| CAEXD265601 | 0.77 | 100 | 17 | 3.2 | 1.1 | 5 | <0.5 | 33 | 100 | 0.02 | 0.17 | 13 | 4.5 | 360 | | | | | | | | | | | | | | |
| CAEXD290332 | 1.8 | 200 | 12 | 8.7 | 1.4 | 2 | 1.5 | 33 | 300 | 0.37 | 0.89 | 20 | 7 | 500 | | | | | | | | | | | | | | |
| CAEXD297489 | 1.3 | 100 | 13 | 6.5 | 6 | 3 | <0.3 | 110 | 100 | 0.08 | 0.7 | 18 | 3.5 | 200 | | | | | | | | | | | | | | |
| CAEXD176520 | 0.34 | 100 | 7 | 1.2 | 0.39 | 1 | 0.4 | 16 | 100 | 0.06 | 0.3 | 9 | 3 | 120 | | | | | | | | | | | | | | |
| CAEXD302345 | 2.4 | 100 | 14 | 6.9 | 10 | 5 | <0.3 | 160 | 100 | 0.02 | 0.22 | 16 | 1.8 | 46 | | | | | | | | | | | | | | |
| CAEXD217369 | 0.17 | 1,200 | 200 | 2.3 | 0.09 | <1 | <0.3 | 68 | 300 | 0.18 | 0.11 | 68 | 3.2 | 69 | | | | | | | | | | | | | | |
| CAEXD290362 | 7 | 600 | 75 | 3.6 | 0.15 | 2 | 1.9 | 130 | 1,000 | 0.53 | 0.21 | 120 | 3.9 | 98 | | | | | | | | | | | | | | |
| CAEXD293633 | 0.64 | 800 | 69 | 5.6 | 0.08 | <1 | 1.5 | 130 | 1,700 | 0.52 | 0.35 | 180 | 6.6 | 120 | | | | | | | | | | | | | | |
| CAEXD293885 | 1.1 | 800 | 38 | 2.5 | <0.05 | <1 | 0.4 | 23 | 1,400 | 0.23 | 0.86 | 160 | 17 | 110 | | | | | | | | | | | | | | |
| CAEXD197112 | 0.51 | 100 | 15 | 2.6 | 0.47 | 2 | <0.3 | 75 | 100 | 0.07 | 0.19 | 10 | 2.5 | 110 | | | | | | | | | | | | | | |
| CAEXD297585 | 1.2 | 600 | 8 | 8.8 | 1.1 | <1 | <0.3 | 87 | 500 | 0.12 | 0.63 | 18 | 4.4 | 19 | | | | | | | | | | | | | | |
| CAEXD302054 | 0.28 | 100 | 13 | 1 | 0.42 | 3 | <0.3 | 29 | 100 | 0.02 | <0.05 | 17 | 3 | 240 | | | | | | | | | | | | | | |
| M08-735-02 | 0.9 | 10,000 | 130 | 5.5 | 0.8 | 0.9 | <0.9 | 110 | 5,300 | 0.44 | 0.2 | 190 | 6.5 | 100 | 8.3 | 150 | 77 | 2.9 | | 0.9 | <0.0001 | <0.00001 | 0.55 | 0.059 | 0.017 | | <0.00002 | <0.00001 |
| M09-802-02 | 0.8 | 210 | 12 | 2.5 | 0.8 | <0.7 | 0.6 | 10 | 200 | 0.02 | 0.5 | 3 | 3 | 170 | 8 | 200 | | 2.2 | | 5.4 | <0.0001 | <0.00001 | 0.03 | 0.0026 | 0.015 | | <0.00002 | <0.00001 |
| M09-803-01 | 3.4 | 180 | 14 | 3.8 | 1.1 | 0.8 | 1.1 | 20 | 290 | 0.02 | 0.23 | 7 | 4.1 | 260 | 8 | 190 | | 2.2 | | 2.2 | <0.0001 | <0.00001 | 0.04 | 0.0014 | 0.024 | | <0.00002 | <0.00001 |
| M10-935-02 | 1.3 | 280 | 10 | 2.2 | 1.3 | 1.2 | <0.9 | 13 | 100 | 0.02 | 0.29 | 1 | 2.4 | 67 | 8 | 160 | | 2.4 | | 5.2 | <0.0001 | <0.00001 | 0.01 | 0.082 | 0.023 | | <0.00002 | <0.00001 |
| M98-248-01 | 0.6 | 550 | 11 | 5.7 | 0.8 | 0.7 | <0.9 | 13 | 110 | 0.02 | 0.1 | 2 | 2.5 | 250 | 7.9 | 150 | | 0.8 | | 5 | <0.0001 | <0.00001 | 0.01 | 0.0004 | 0.0075 | | <0.00002 | 0.00002 |
| CAEXD183497 | 1.2 | 100 | 4 | 2.6 | 3 | <1 | <0.5 | 15 | 100 | 0.03 | 0.11 | 8 | 2.3 | 63 | | | | | | | | | | | | | | |
| CAEXD222666 | 1.8 | 200 | 8 | 2.2 | 0.53 | 1 | 1.1 | 27 | 100 | 0.05 | 0.59 | 11 | 5.3 | 21 | | | | | | | | | | | | | | |
| CAEXD257975 | 0.53 | 100 | 11 | 2.6 | 4.5 | 1 | 0.7 | 78 | 200 | 0.1 | 0.09 | 46 | 2.5 | 66 | 8.1 | 260 | 42 | 11 | <0.06 | 36 | <0.00001 | <0.00005 | 0.002 | 0.0081 | 0.044 | 0.0077 | <0.000007 | <0.000007 |
| CAEXD184497 | 0.8 | 100 | 3 | 3.2 | 0.59 | <1 | 0.7 | 38 | 100 | 0.05 | 0.3 | 21 | 3.4 | 240 | 7.8 | 330 | 24 | 7 | <0.06 | 86 | <0.00001 | <0.00005 | 0.002 | 0.001 | 0.05 | 0.01 | 0.000009 | <0.000007 |
| CAEXD176511 | 0.94 | 200 | 10 | 2.1 | 0.6 | <1 | 0.3 | 34 | 100 | 0.03 | 0.14 | 23 | 2.9 | 200 | | | | | | | | | | | | | | |
| CAEXD185037 | 3.6 | 100 | 5 | 0.9 | 0.34 | <1 | <0.3 | 13 | 100 | 0.02 | 0.15 | 4 | 1.2 | 20 | | | | | | | | | | | | | | |
| CAEXD193892 | 3.5 | 100 | 4 | 2 | 0.58 | <1 | <0.3 | 23 | 100 | 0.02 | 0.15 | 5 | 1.7 | 35 | | | | | | | | | | | | | | |
| CAEXD302349 | 0.55 | 100 | 9 | 5.6 | 1.1 | <1 | 0.4 | 59 | 100 | 0.02 | 0.08 | 25 | 3.6 | 100 | | | | | | | | | | | | | | |
| GT09-07-01 | 0.2 | 19,000 | 60 | 1.2 | 0.8 | <0.7 | 1 | 93 | 6,100 | 0.05 | 0.18 | 230 | 16 | 95 | 8.2 | 110 | 32 | 12 | | 1.8 | <0.0001 | <0.00001 | 0.89 | 0.0007 | 0.041 | | <0.00002 | <0.00001 |
| GT09-07-02 | 0.6 | 13,000 | 69 | 3.4 | 2.2 | <0.7 | 1.6 | 98 | 6,800 | 0.16 | 0.37 | 200 | 20 | 100 | 8.3 | 110 | 38 | 8 | | 1.2 | <0.0001 | <0.00001 | 0.87 | 0.0016 | 0.0098 | | <0.00002 | <0.00001 |
| M08-729-01 | 1 | 15,000 | 110 | 2.8 | 1.3 | <0.7 | <0.9 | 140 | 5,900 | 0.12 | 0.11 | 300 | 16 | 95 | 8.2 | 99 | 37 | 6 | | 2.3 | <0.0001 | <0.00001 | 0.87 | 0.0024 | 0.016 | | <0.00002 | <0.00001 |
| M08-729-02 | 0.8 | 14,000 | 84 | 1.6 | 0.8 | <0.7 | 0.6 | 120 | 5,600 | 0.02 | 0.2 | 260 | 14 | 78 | 8 | 90 | 32 | 7.7 | | 1.5 | <0.0001 | <0.00001 | 0.83 | 0.0026 | 0.018 | | <0.00002 | <0.00001 |
| M08-729-03 | 1 | 12,000 | 87 | 1.6 | 0.8 | 1.4 | 3.1 | 62 | 5,800 | 0.19 | 0.002 | 290 | 15 | 130 | 8.2 | 110 | 43 | 6 | | 3.4 | <0.0001 | <0.00001 | 1.1 | 0.0098 | 0.024 | | <0.00002 | <0.00001 |
| M08-729-04 | 1 | 19,000 | 78 | 6.1 | 0.8 | 3.2 | 1.2 | 110 | 5,900 | 0.33 | 0.16 | 290 | 6.7 | 90 | 8.1 | 100 | 47 | 2.5 | | 1.3 | <0.0001 | 0.00004 | 0.75 | 0.062 | 0.019 | | <0.00002 | <0.00001 |
| M08-729-06 | 0.8 | 22,000 | 110 | 4.5 | 0.8 | 2 | 0.8 | 130 | 4,800 | 0.12 | 0.42 | 240 | 7.4 | 110 | 8 | 110 | 53 | 2.2 | | 0.8 | <0.0001 | 0.00002 | 0.5 | 0.041 | 0.0094 | | <0.00002 | <0.00001 |
| M08-734-01 | 1 | 19,000 | 76 | 3.3 | 0.8 | <0.7 | 1 | 110 | 6,400 | 0.05 | 0.21 | 230 | 18 | 110 | 8.3 | 100 | 45 | 4.5 | | 2 | <0.0001 | 0.00007 | 1.1 | 0.012 | 0.019 | | <0.00002 | 0.00004 |
| M08-734-02 | 0.9 | 6,300 | 75 | 3.2 | 0.8 | <0.7 | 2.3 | 53 | 5,700 | 0.14 | 0.37 | 190 | 22 | 170 | 8 | 110 | 45 | 6.3 | | 1.8 | <0.0001 | 0.00002 | 1 | 0.001 | 0.013 | | <0.00002 | 0.00003 |
| M08-734-03 | 0.6 | 18,000 | 120 | 3.6 | 0.9 | <0.7 | 0.8 | 120 | 5,100 | 0.09 | 0.34 | 200 | 12 | 96 | 8.1 | 130 | 46 | 5 | | 8.6 | <0.0001 | 0.00003 | 0.75 | 0.013 | 0.015 | | <0.00002 | <0.00001 |
| M08-734-04 | 1.2 | 11,000 | 140 | 6.1 | 0.8 | <0.7 | 0.5 | 120 | 3,100 | 0.11 | 0.16 | 150 | 4 | 110 | 8.3 | 170 | 84 | 4 | | 1 | <0.0001 | <0.00001 | 0.41 | 0.023 | 0.02 | | <0.00002 | <0.00001 |
| M08-735-01 | 0.9 | 13,000 | 76 | 2.4 | 0.8 | <0.7 | 1 | 88 | 6,400 | 0.4 | 0.43 | 230 | 14 | 98 | 8.7 | 140 | 60 | 6.4 | | 3.2 | <0.0001 | <0.00001 | 1.5 | 0.019 | 0.037 | | <0.00002 | <0.00001 |
| M08-735-03 | 0.5 | 20,000 | 100 | 2.7 | 0.8 | <0.7 | 1.1 | 100 | 5,300 | 0.12 | 0.28 | 210 | 13 | 100 | 8.2 | 120 | 44 | 9.7 | | 2.3 | <0.0001 | <0.00001 | 0.97 | 0.01 | 0.016 | | <0.00002 | <0.00001 |
| M08-740-01 | 0.7 | 12,000 | 120 | 3.5 | 0.8 | 1.5 | <0.5 | 92 | 5,100 | 0.07 | 0.22 | 270 | 10 | 90 | 8.1 | 120 | 40 | 10 | | 1.8 | <0.0001 | 0.00014 | 1.1 | 0.022 | 0.024 | | <0.00002 | <0.00001 |
| M08-740-02 | 0.9 | 18,000 | 130 | 5.1 | 0.8 | <0.7 | <0.5 | 140 | 1,700 | 0.06 | 0.006 | 230 | 4.8 | 73 | 8 | 120 | 54 | 5.9 | | 0.9 | <0.0001 | 0.00002 | 0.53 | 0.072 | 0.018 | | <0.00002 | <0.00001 |
| M08-740-03 | 0.9 | 17,000 | 55 | 1.5 | 0.8 | 0.7 | 3.1 | 110 | 5,400 | 0.18 | 0.13 | 290 | 16 | 82 | 8.7 | 80 | 32 | 5.2 | | 1.7 | <0.0001 | <0.00001 | 0.72 | 0.0025 | 0.014 | | <0.00002 | <0.00001 |
| M08-740-04 | 0.8 | 19,000 | 87 | 3.4 | 0.8 | 0.9 | 0.7 | 110 | 4,100 | 0.21 | 0.21 | 210 | 7.3 | 110 | 8.1 | 130 | 57 | 5.3 | | 0.9 | <0.0001 | <0.00001 | 0.47 | 0.017 | 0.0081 | | <0.00002 | <0.00001 |
| M08-740-05 | 0.8 | 12,000 | 96 | 5.8 | 0.8 | 1.1 | 1.7 | 130 | 4,300 | 0.4 | 0.17 | 240 | 9.1 | 100 | 8.5 | 120 | 42 | 7.8 | | 2.5 | <0.0001 | 0.00002 | 0.85 | 0.037 | 0.017 | | <0.00002 | <0.00001 |
| M08-742-01 | 0.8 | 24,000 | 84 | 2.7 | 0.8 | 1.3 | 1 | 99 | 5,800 | 0.26 | 0.17 | 230 | 14 | 88 | 8.3 | 110 | 41 | 7.4 | | 3.4 | <0.0001 | <0.00001 | 1.1 | 0.0022 | 0.018 | | <0.00002 | <0.00001 |
| M08-742-02 | 0.7 | 13,000 | 71 | 4.1 | 0.8 | <0.7 | 1.1 | 86 | 5,700 | 0.14 | 0.18 | 210 | 14 | 110 | 8.1 | 110 | 44 | 7.4 | | 1.5 | <0.0001 | <0.00001 | 0.99 | 0.0014 | 0.014 | | <0.00002 | <0.00001 |
| M08-742-03 | 0.4 | 14,000 | 67 | 6.8 | 1.2 | <0.7 | 1.1 | 97 | 5,900 | 0.25 | 0.28 | 200 | 11 | 120 | 8.1 | 140 | 65 | 5 | | 1.6 | <0.0001 | <0.00001 | 0.51 | 0.0052 | 0.013 | | <0.00002 | <0.00001 |
| M08-742-04 | 0.9 | 15,000 | 120 | 6.1 | 0.8 | 0.8 | 1.2 | 130 | 4,200 | 0.19 | 0.13 | 180 | 9.6 | 90 | 8.2 | 140 | 61 | 7.1 | | 1.2 | <0.0001 | <0.00001 | 0.61 | 0.0023 | 0.018 | | <0.00002 | <0.00001 |
| M08-743-01 | 1.1 | 15,000 | 59 | 3 | 0.8 | <0.7 | <0.9 | 130 | 6,100 | 0.07 | 0.41 | 190 | 17 | 110 | 9.1 | 110 | 43 | 6.5 | | 2.6 | <0.0001 | <0.00001 | 0.87 | 0.0038 | 0.018 | | <0.00002 | <0.00001 |
| M08-743-02 | 0.9 | 20,000 | 110 | 2.4 | 0.8 | <0.7 | 0.6 | 91 | 3,800 | 0.42 | 0.09 | 190 | 6.2 | 76 | 8.2 | 120 | 50 | 5.6 | | 1.1 | <0.0001 | <0.00001 | 0.67 | 0.021 | 0.018 | | <0.00002 | <0.00001 |
| M08-743-04 | 1.3 | 19,000 | 110 | 2.9 | 1.1 | <0.7 | <0.5 | 130 | 6,500 | 0.14 | 0.4 | 200 | 16 | 110 | 9.2 | 110 | 49 | 3.9 | | 1.1 | <0.0001 | <0.00001 | 0.9 | 0.018 | 0.032 | | <0.00002 | <0.00001 |
| M08-747-01 | 1 | 12,000 | 140 | 3.4 | 0.8 | 2.1 | 2.1 | 93 | 5,000 | 0.08 | 0.025 | 260 | 16 | 180 | 8 | 110 | 34 | 7.1 | | 3.3 | <0.0001 | <0.00001 | 0.79 | 0.0007 | 0.0093 | | <0.00002 | <0.00001 |
| M08-747-02 | 0.9 | 19,000 | 110 | 3 | 1.8 | 2.6 | 15 | 110 | 3,400 | 0.06 | 0.15 | 210 | 12 | 170 | 8.3 | 93 | 30 | 3.8 | | 2.8 | <0.0001 | 0.00007 | 0.44 | 0.0022 | 0.01 | | <0.00002 | <0.00001 |
| M08-747-03 | 0.5 | 13,000 | 150 | 2.4 | 1.5 | 1.8 | 2 | 120 | 3,400 | 0.02 | 0.002 | 200 | 10 | 73 | 8.1 | 75 | 35 | 3.9 | | 0.7 | <0.0001 | <0.00001 | 0.63 | 0.0007 | 0.0066 | | <0.00002 | <0.00001 |
| M08-748-01 | 1.3 | 16,000 | 81 | 7.7 | 1 | 1.4 | 1.5 | 200 | 6,500 | 0.79 | 1 | 210 | 17 | 110 | 8.7 | 100 | 40 | 5.6 | | 2 | <0.0001 | <0.00001 | 0.99 | 0.0031 | 0.024 | | <0.00002 | <0.00001 |
| M08-748-02 | 1.1 | 11,000 | 86 | 3.8 | 1.6 | 0.8 | 2.2 | 140 | 4,200 | 0.29 | 0.083 | 220 | 12 | 180 | 7.7 | 120 | 38 | 5.7 | | 3.7 | <0.0001 | <0.00001 | 0.73 | 0.0007 | 0.011 | | <0.00002 | <0.00001 |
| M08-750-01 | 0.9 | 21,000 | 51 | 3.8 | 0.8 | <0.7 | 0.5 | 190 | 5,100 | 0.41 | 0.18 | 180 | 12 | 87 | 8.3 | 100 | 46 | 4 | | 1.6 | <0.0001 | <0.00001 | 0.86 | 0.0013 | 0.0085 | | <0.00002 | <0.00001 |
| M08-750-02 | 1.4 | 23,000 | 88 | 10 | 0.8 | <0.7 | 0.7 | 150 | 6,700 | 0.37 | 1.2 | 150 | 9.7 | 200 | 8.3 | 180 | 82 | 7.5 | | 1 | <0.0001 | 0.00009 | 0.49 | 0.016 | 0.021 | | 0.00004 | 0.00004 |
| M08-752-01 | 0.8 | 18,000 | 85 | 6.3 | 0.8 | 1.8 | 1.2 | 170 | 4,300 | 0.16 | 0.11 | 230 | 13 | 110 | 8.2 | 130 | 33 | 12 | | 5.2 | <0.0001 | <0.00001 | 0.55 | 0.0073 | 0.013 | | <0.00002 | <0.00001 |
| M08-752-02 | 1.8 | 15,000 | 34 | 9.4 | 0.9 | 0.7 | 1.1 | 170 | 8,700 | 0.9 | 1.3 | 210 | 20 | 130 | 8.5 | 100 | 41 | 2.5 | | 5.7 | <0.0001 | <0.00001 | 0.64 | 0.0053 | 0.25 | | <0.00002 | <0.00001 |
| M08-752-03 | 1.3 | 17,000 | 91 | 11 | 0.8 | 1.4 | 1.9 | 130 | 5,700 | 0.35 | 0.56 | 220 | 8.6 | 110 | 8 | 120 | 54 | 5.2 | | 0.8 | <0.0001 | <0.00001 | 0.49 | 0.025 | 0.016 | | <0.00002 | <0.00001 |
| M08-755-01 | 1.3 | 15,000 | 64 | 2.5 | 0.8 | 0.9 | 1.9 | 100 | 5,700 | 0.17 | 0.2 | 290 | 17 | 110 | 8.8 | 77 | 32 | 4.1 | | 1.2 | <0.0001 | 0.00002 | 0.83 | 0.0043 | 0.0075 | | <0.00002 | <0.00001 |
| M08-755-02 | 1.4 | 9,900 | 60 | 5.9 | 0.8 | 1.1 | 2.3 | 110 | 5,600 | 0.34 | 0.23 | 250 | 22 | 160 | 8.5 | 88 | 36 | 4.6 | | 1.8 | <0.0001 | <0.00001 | 0.87 | 0.0017 | 0.012 | | <0.00002 | <0.00001 |
| M08-755-03 | 0.7 | 16,000 | 96 | 4.8 | 0.9 | 1.5 | 0.6 | 120 | 4,300 | 0.02 | 0.002 | 240 | 11 | 81 | 8.3 | 72 | 35 | 2.9 | | 1 | <0.0001 | 0.00002 | 0.61 | 0.004 | 0.024 | | <0.00002 | <0.00001 |
| M09-798-01 | 0.8 | 18,000 | 67 | 7.6 | 1 | <0.7 | 1.8 | 210 | 8,200 | 0.44 | 1.1 | 190 | 19 | 120 | 9.4 | 120 | 37 | 9 | | 1.8 | <0.0001 | <0.00001 | 1.2 | 0.0075 | 0.018 | | <0.00002 | <0.00001 |
| M09-798-02 | 0.6 | 19,000 | 76 | 6 | 1.1 | <0.7 | 1.3 | 260 | 6,600 | 0.27 | 0.87 | 180 | 16 | 110 | 9.2 | 96 | 38 | 4.5 | | 1.3 | <0.0001 | <0.00001 | 1 | 0.0076 | 0.026 | | <0.00002 | <0.00001 |
| M09-816-01 | 0.3 | 13,000 | 57 | 2.3 | 0.8 | <0.7 | 1.1 | 110 | 5,400 | 0.02 | 0.18 | 200 | 16 | 92 | 8.7 | 84 | 29 | 8.2 | | 1.8 | <0.0001 | <0.00001 | 0.71 | 0.001 | 0.01 | | <0.00002 | <0.00001 |
| M09-816-02 | 1.1 | 14,000 | 57 | 32 | 5.6 | <0.7 | 2.2 | 180 | 5,500 | 0.02 | 0.27 | 210 | 17 | 76 | 9.2 | 85 | 29 | 5.3 | | 2.8 | <0.0001 | <0.00001 | 0.62 | 0.0013 | 0.022 | | <0.00002 | <0.00001 |
| M09-855-01 | 1.3 | 7,000 | 86 | 9.5 | 11 | 1.7 | 6.3 | 68 | 3,900 | 0.39 | 0.43 | 140 | 9.9 | 540 | 8.1 | 270 | 59 | 23 | | 10 | <0.0001 | 0.00005 | 0.4 | 0.0049 | 0.022 | | <0.00002 | 0.00003 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M09-855-02 | 0.4 | 14,000 | 89 | 5.7 | 0.8 | <0.7 | 0.6 | 120 | 4,200 | 0.12 | 0.14 | 220 | 3.7 | 140 | 8.5 | 190 | 77 | 13 | | 2.5 | <0.0001 | <0.00001 | 0.37 | 0.019 | 0.013 | | <0.00002 | <0.00001 |
| M09-857-01 | 0.2 | 17,000 | 56 | 4.4 | 0.8 | <0.7 | 1 | 110 | 5,200 | 0.19 | 0.39 | 200 | 13 | 110 | 8.7 | 170 | 42 | 20 | | 4.6 | <0.0001 | <0.00001 | 0.8 | 0.01 | 0.024 | | <0.00002 | <0.00001 |
| M09-858-01 | 0.3 | 17,000 | 57 | 2.5 | 0.8 | <0.7 | 1.4 | 160 | 5,600 | 0.02 | 0.2 | 220 | 15 | 90 | 9.5 | 85 | 34 | 4.4 | | 1.5 | <0.0001 | <0.00001 | 0.65 | 0.0012 | 0.088 | | <0.00002 | <0.00001 |
| M09-858-02 | 0.4 | 15,000 | 49 | 3.8 | 0.8 | <0.7 | 0.6 | 210 | 5,300 | 0.02 | 0.21 | 210 | 17 | 71 | 9.5 | 87 | 32 | 6.8 | | 1.4 | <0.0001 | <0.00001 | 0.7 | 0.0012 | 0.014 | | <0.00002 | <0.00001 |
| M09-862-01 | 0.2 | 15,000 | 53 | 3.6 | 0.8 | <0.7 | 1.3 | 90 | 4,900 | 0.09 | 0.19 | 200 | 11 | 97 | 8.1 | 110 | 40 | 8.6 | | 1 | <0.0001 | <0.00001 | 0.67 | 0.0005 | 0.01 | | <0.00002 | <0.00001 |
| M09-866-01 | 0.5 | 2,400 | 63 | 4.9 | 0.8 | <0.7 | 2.4 | 40 | 5,300 | 0.27 | 0.28 | 170 | 13 | 230 | 8.4 | 200 | 61 | 17 | | 3.1 | <0.0001 | <0.00001 | 0.65 | 0.0011 | 0.025 | | <0.00002 | <0.00001 |
| M09-866-02 | 0.4 | 12,000 | 67 | 4.9 | 0.8 | <0.7 | 1.3 | 91 | 6,000 | 0.16 | 0.26 | 180 | 16 | 120 | 8.4 | 160 | 66 | 10 | | 1.3 | <0.0001 | <0.00001 | 0.53 | 0.0065 | 0.017 | | <0.00002 | <0.00001 |
| M08-733-01 | 1.2 | 14,000 | 110 | 1.9 | 0.8 | <0.7 | <0.5 | 110 | 5,300 | 0.03 | 0.31 | 180 | 16 | 89 | 8.3 | 100 | | 3.7 | | 3.2 | <0.0001 | <0.00001 | 1 | 0.0061 | 0.02 | | <0.00002 | <0.00001 |
| M08-733-02 | 0.2 | 17,000 | 110 | 3.4 | 0.8 | <0.7 | 0.8 | 110 | 5,000 | 0.03 | 0.076 | 180 | 13 | 130 | 8.3 | 88 | | 1.5 | | 1.6 | <0.0001 | <0.00001 | 0.84 | 0.0025 | 0.006 | | <0.00002 | <0.00001 |
| M09-802-01 | 1.1 | 11,000 | 130 | 3.7 | 0.8 | <0.7 | 1.1 | 83 | 3,700 | 0.11 | 0.18 | 150 | 13 | 210 | 8.1 | 87 | | 2.2 | | 1.8 | <0.0001 | <0.00001 | 0.68 | 0.0009 | 0.0077 | | <0.00002 | <0.00001 |
| M09-817-02 | 1.3 | 8,700 | 120 | 4.2 | 0.8 | <0.7 | <0.5 | 99 | 4,000 | 0.03 | 0.049 | 170 | 8.7 | 83 | 8 | 100 | | 1.5 | | 0.6 | <0.0001 | <0.00001 | 0.42 | 0.0096 | 0.0072 | | <0.00002 | <0.00001 |
| M09-859-01 | 1.4 | 12,000 | 110 | 5.8 | 0.8 | <0.7 | <0.9 | 100 | 3,900 | 0.05 | 0.12 | 160 | 5.3 | 170 | 8.2 | 150 | | 2.9 | | 1.4 | <0.0001 | 0.00002 | 0.37 | 0.012 | 0.011 | | <0.00002 | <0.00001 |
| M10-933-01 | 0.3 | 9,200 | 61 | 8.6 | 0.8 | <0.7 | 0.6 | 100 | 4,600 | 0.02 | 0.23 | 170 | 14 | 130 | 8.4 | 96 | | 3.2 | | 2.4 | <0.0001 | <0.00001 | 0.74 | 0.005 | 0.014 | | <0.00002 | <0.00001 |
| M10-935-01 | 0.2 | 17,000 | 58 | 1.6 | 0.8 | <0.7 | 0.6 | 92 | 6,300 | 0.02 | 0.19 | 200 | 15 | 110 | 9.1 | 79 | | 2.4 | | 1.1 | <0.0001 | <0.00001 | 0.63 | 0.006 | 0.011 | | <0.00002 | <0.00001 |
| M98-275-01 | 0.2 | 18,000 | 91 | 1.8 | 0.8 | <0.7 | <0.5 | 93 | 6,300 | 0.02 | 0.11 | 200 | 17 | 93 | 8.2 | 77 | | 0.7 | | 2.3 | <0.0001 | <0.00001 | 0.79 | 0.0038 | 0.0049 | | <0.00002 | <0.00001 |
| M98-275-02 | 0.2 | 13,000 | 87 | 3.5 | 0.8 | <0.7 | 0.7 | 99 | 5,700 | 0.02 | 0.059 | 190 | 16 | 84 | 8.1 | 74 | | 1.2 | | 2.1 | <0.0001 | <0.00001 | 0.82 | 0.0012 | 0.0057 | | <0.00002 | <0.00001 |
| W94-76-01 | 0.2 | 14,000 | 55 | 1.7 | 0.8 | <0.7 | 0.6 | 110 | 5,700 | 0.04 | 0.19 | 190 | 18 | 94 | 9 | 65 | | 0.7 | | 1.4 | <0.0001 | <0.00001 | 0.59 | 0.0019 | 0.0074 | | <0.00002 | <0.00001 |
| W94-76-02 | 0.2 | 13,000 | 100 | 3.2 | 0.8 | <0.7 | 0.7 | 91 | 5,200 | 0.02 | 0.22 | 210 | 15 | 110 | 8.2 | 92 | | 0.8 | | 8.5 | <0.0001 | <0.00001 | 0.57 | 0.0027 | 0.01 | | <0.00002 | <0.00001 |
| W94-82-01 | 0.2 | 13,000 | 120 | 0.87 | 1.2 | <0.7 | <0.5 | 98 | 4,200 | 0.02 | 0.062 | 180 | 13 | 75 | 8.9 | 56 | | 1.4 | | 1.2 | <0.0001 | <0.00001 | 0.77 | 0.002 | 0.0086 | | <0.00002 | <0.00001 |
| CAMLD 262226 | 0.93 | 900 | 78 | 0.7 | 0.14 | <1 | <0.3 | 14 | 800 | 0.24 | 0.14 | 140 | 6.1 | 52 | | | | | | | | | | | | | | |
| CAMLD 262227 | 0.62 | 2,300 | 71 | 2.3 | 0.06 | <1 | <0.3 | 38 | 1,000 | 0.23 | 0.13 | 210 | 10 | 89 | | | | | | | | | | | | | | |
| CAMLD 262228 | 0.4 | 600 | 85 | 0.9 | 0.13 | <1 | 0.3 | 19 | 2,200 | 0.07 | 0.08 | 210 | 7.4 | 90 | | | | | | | | | | | | | | |
| CAMLD 262229 | 0.51 | 600 | 62 | 2.7 | 0.09 | <1 | 0.7 | 18 | 1,400 | 0.4 | <0.05 | 240 | 9.2 | 120 | | | | | | | | | | | | | | |
| CAMLD 262230 | 0.44 | 700 | 50 | 0.9 | 0.58 | <1 | <0.3 | 15 | 2,300 | 0.02 | 0.05 | 57 | 3.7 | 42 | | | | | | | | | | | | | | |
| CAMLD 262231 | 0.24 | 400 | 110 | 0.6 | 0.15 | <1 | 0.3 | 21 | 1,100 | 0.26 | 0.06 | 220 | 12 | 69 | | | | | | | | | | | | | | |
| CAEXD194259 | 0.43 | 400 | 84 | 2.9 | 0.15 | <1 | <0.5 | 66 | 800 | 0.15 | 0.29 | 220 | 15 | 92 | 8 | 290 | 34 | 19 | 0.1 | 50 | <0.00001 | <0.00005 | 0.2 | 0.0012 | 0.014 | 0.0032 | <0.000007 | <0.000007 |
| CAEXD217371 | 0.26 | 200 | 460 | 2.2 | 0.09 | <1 | <0.3 | 120 | 100 | <0.02 | <0.05 | 110 | 1.9 | 70 | 8.1 | 200 | 37 | 28 | 0.08 | 3 | <0.00001 | <0.00005 | 0.025 | 0.16 | 0.019 | 0.0006 | <0.000007 | <0.000007 |
| CAEXD291664 | 0.6 | 500 | 79 | 5.1 | 0.15 | <1 | 1 | 51 | 1,000 | 0.05 | 0.36 | 200 | 8.9 | 280 | | | | | | | | | | | | | | |
| CAEXD297486 | 0.37 | 600 | 46 | 2.3 | 0.09 | <1 | 0.8 | 150 | 1,200 | 0.39 | 0.08 | 160 | 7.9 | 190 | | | | | | | | | | | | | | |
| CAEXD297621 | 0.27 | 700 | 120 | 1.6 | 0.15 | <1 | 0.4 | 20 | 900 | 0.2 | 0.1 | 240 | 7.5 | 74 | | | | | | | | | | | | | | |
| CAEXD303511 | 1.1 | 200 | 58 | 85 | 0.55 | 2 | 1 | 86 | 500 | 0.15 | 0.09 | 120 | 7.5 | 390 | | | | | | | | | | | | | | |
| M97-122-03 | 0.3 | 12,000 | 81 | 5.7 | 1.8 | <0.7 | 0.5 | 88 | 5,400 | 0.22 | 0.13 | 180 | 5.3 | 150 | 8.4 | 150 | | 1.2 | | 1.6 | <0.0001 | <0.00001 | 0.44 | 0.024 | 0.012 | | <0.00002 | <0.00001 |
| M97-122-04 | 0.6 | 420 | 68 | 3.7 | 1.6 | 0.7 | 1 | 21 | 2,400 | 0.3 | 0.35 | 110 | 4 | 530 | 8.2 | 140 | | 0.9 | | 2.1 | <0.0001 | <0.00001 | 0.25 | 0.026 | 0.016 | | <0.00002 | <0.00001 |
| W94-65-01 | 3 | 140 | 45 | 7 | 5 | 3.7 | <0.9 | 11 | 620 | 0.02 | 0.42 | 28 | 4.4 | 2,200 | 7.9 | 310 | | 3.6 | | 17 | <0.0001 | <0.00001 | 0.01 | 0.18 | 0.021 | | <0.00002 | <0.00001 |
| W94-65-02 | 2.6 | 40 | 27 | 4.4 | 2.6 | <1 | <0.5 | 43 | 300 | 0.02 | 0.21 | 13 | 3.5 | 1,000 | 8.2 | 290 | | 2.8 | | 11 | <0.0001 | <0.00001 | 0.04 | 0.14 | 0.02 | | <0.00002 | <0.00001 |
| CAEXD262428 | 0.8 | 100 | 13 | 1.7 | 1.8 | 2 | <0.9 | 6 | 100 | <0.02 | 0.61 | 12 | 3.3 | 330 | | | | | | | | | | | | | | |
| CAEXD267633 | 1.1 | 100 | 13 | 3 | 10 | 4 | <0.3 | 9 | 100 | 0.02 | 0.05 | 14 | 1.1 | 350 | | | | | | | | | | | | | | |
| CAEXD290299 | 2.9 | 200 | 54 | 7.9 | 0.4 | 7 | 1.9 | 16 | 400 | 0.25 | 0.39 | 38 | 4.5 | 320 | | | | | | | | | | | | | | |
| CAEXD265979 | 0.67 | 100 | 5 | 3.4 | 17 | 4 | <0.3 | 16 | 100 | 0.02 | 0.06 | 5 | 2 | 47 | | | | | | | | | | | | | | |
| CAEXD300073 | 0.85 | 300 | 14 | 3.6 | 0.2 | 2 | <0.3 | 62 | 100 | <0.02 | 0.08 | 37 | 2.1 | 88 | | | | | | | | | | | | | | |
| CAEXD294990 | 1.3 | 300 | 71 | 24 | 0.15 | <1 | <0.3 | 46 | 400 | 0.05 | 0.1 | 31 | 2.3 | 77 | | | | | | | | | | | | | | |
| CAEXD300063 | 0.86 | 200 | 43 | 3.5 | 1.3 | 1 | <0.3 | 59 | 100 | 0.03 | 0.1 | 38 | 2.9 | 140 | | | | | | | | | | | | | | |
| CAEXD163438 | 1.1 | 300 | 110 | 3.6 | 0.12 | <1 | <0.5 | 73 | 400 | 0.23 | 0.08 | 140 | 2.2 | 180 | | | | | | | | | | | | | | |
| CAEXD185368 | 2.5 | 200 | 60 | 5.3 | 1.8 | 4 | <0.3 | 31 | 200 | 0.12 | 0.45 | 51 | 3.5 | 64 | | | | | | | | | | | | | | |
| CAEXD183956 | 2.2 | 100 | 46 | 4.4 | 4.4 | 3 | <0.5 | 29 | 100 | 0.02 | 0.35 | 81 | 2.7 | 180 | | | | | | | | | | | | | | |
| CAEXD295054 | 2.5 | 100 | 18 | 1.2 | 1.2 | 1 | 0.3 | 20 | 100 | 0.02 | 0.59 | 50 | 2.2 | 100 | | | | | | | | | | | | | | |
| CAEXD289186 | 0.48 | 400 | 150 | 1.6 | 0.06 | <1 | <0.3 | 25 | 700 | 0.41 | 0.54 | 120 | 7.2 | 130 | | | | | | | | | | | | | | |
| W94-55-01 | 1 | 88 | 22 | 4 | 1.3 | <0.7 | 2.5 | 20 | 770 | 0.07 | 0.27 | 29 | 5 | 460 | 8.1 | 200 | | 2.2 | | 2.1 | <0.0001 | <0.00001 | 0.1 | 0.0018 | 0.016 | | <0.00002 | <0.00001 |
| W94-57-02 | 1 | 150 | 37 | 11 | 0.8 | 1.4 | 0.8 | 17 | 2,700 | 0.03 | 0.49 | 66 | 5.6 | 570 | 8 | 200 | | 2.7 | | 4.4 | <0.0001 | <0.00001 | 0.13 | 0.0041 | 0.019 | | <0.00002 | <0.00001 |
| W94-57-03 | 2.2 | 48 | 23 | 13 | 1.2 | 0.9 | 1.3 | 22 | 700 | 0.02 | 0.45 | 22 | 4.7 | 1,700 | 8 | 300 | | 5 | | 8.4 | <0.0001 | <0.00001 | 0.05 | 0.0012 | 0.024 | | <0.00002 | <0.00001 |
| W94-73-02 | 2.5 | 540 | 23 | 10 | 0.8 | <1 | <0.5 | 15 | 500 | 0.02 | 0.35 | 24 | 5.5 | 620 | 8 | 280 | | 1.3 | | 6.9 | <0.0001 | <0.00001 | 0.02 | 0.0012 | 0.0086 | | <0.00002 | 0.00002 |
| CAEXD261887 | 0.33 | 100 | 31 | 1.6 | 0.19 | 1 | 0.6 | 21 | 200 | 0.02 | 0.12 | 46 | 1.6 | 390 | | | | | | | | | | | | | | |
| CAEXD262427 | 0.6 | 100 | 19 | 5.1 | 0.59 | <1 | 1.4 | 26 | 200 | 0.05 | 0.17 | 37 | 3 | 180 | | | | | | | | | | | | | | |
| CAEXD300070 | 0.19 | 100 | 4 | 1.5 | 0.13 | <1 | <0.3 | 21 | 100 | 0.02 | 0.05 | 3 | 1.4 | 45 | 8.5 | 210 | 51 | 9 | 0.18 | 24 | <0.00001 | <0.00005 | 0.001 | 0.0003 | 0.031 | 0.00092 | <0.000007 | <0.000007 |
| CAEXD267631 | 1.2 | 100 | 15 | 3.8 | 1.7 | 2 | <0.3 | 33 | 100 | 0.02 | 0.05 | 7 | 3.1 | 340 | 8.2 | 540 | 42 | 17 | <0.06 | 150 | <0.00001 | <0.00005 | 0.003 | 0.0029 | 0.007 | 0.0016 | <0.000007 | <0.000007 |
| CAEXD185456 | 3.1 | 100 | 7 | 1.2 | 0.06 | <1 | 0.4 | 13 | 100 | 0.02 | 0.59 | 5 | 3.1 | 150 | | | | | | | | | | | | | | |
| CAEXD289268 | 1.1 | 200 | 110 | 2.7 | 0.05 | <1 | 0.6 | 67 | 400 | 0.12 | 0.19 | 85 | 4.5 | 83 | | | | | | | | | | | | | | |
| M96-58-01 | 0.4 | 14,000 | 100 | 2.4 | 1.3 | <0.7 | 1.4 | 100 | 6,700 | 0.1 | 0.15 | 230 | 17 | 110 | 8.3 | 90 | | 1.1 | | 4.2 | <0.0001 | <0.00001 | 0.85 | 0.0028 | 0.012 | | <0.00002 | <0.00001 |
| M96-58-02 | 0.3 | 8,900 | 67 | 4.9 | 1.5 | <1 | <0.5 | 94 | 5,400 | 0.1 | 0.17 | 210 | 14 | 140 | 8.3 | 78 | | 1 | | 1.4 | <0.0001 | <0.00001 | 0.88 | 0.0088 | 0.016 | | <0.00002 | <0.00001 |
| M96-58-03 | 0.3 | 9,500 | 110 | 1.6 | 1.4 | <0.7 | <0.5 | 86 | 4,300 | 0.08 | 0.13 | 190 | 13 | 110 | 8 | 68 | | 0.8 | | 5.8 | <0.0001 | <0.00001 | 0.82 | 0.0088 | 0.012 | | <0.00002 | <0.00001 |
| M97-122-05 | 0.2 | 24,000 | 79 | 3.2 | 0.8 | <0.7 | <0.5 | 78 | 6,100 | 0.13 | 0.056 | 200 | 8.6 | 92 | 8.1 | 87 | | 0.4 | | 1.4 | <0.0001 | <0.00001 | 0.67 | 0.001 | 0.0041 | | <0.00002 | <0.00001 |
| M97-123-04 | 0.3 | 13,000 | 70 | 3.9 | 1.1 | <0.7 | 0.5 | 130 | 5,800 | 0.26 | 0.12 | 200 | 12 | 110 | 8.2 | 110 | | 0.4 | | 0.7 | <0.0001 | <0.00001 | 0.43 | 0.0035 | 0.0052 | | <0.00002 | <0.00001 |
| M97-153-02 | 0.3 | 10,000 | 90 | 13 | 1.4 | <0.7 | <0.5 | 100 | 3,800 | 0.29 | 0.081 | 170 | 9.2 | 71 | 8.2 | 70 | | 1.9 | | 1.2 | <0.0001 | <0.00001 | 0.54 | 0.026 | 0.019 | | <0.00002 | <0.00001 |
| M98-184-01 | 0.3 | 13,000 | 83 | 2.2 | 0.8 | 0.8 | 0.6 | 110 | 3,000 | 0.08 | 0.65 | 96 | 9.1 | 64 | 9.2 | 92 | | 0.6 | | 1.3 | <0.0001 | <0.00001 | 0.99 | 0.011 | 0.027 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M98-184-02 | 0.3 | 24,000 | 72 | 6.4 | 0.8 | <0.7 | <0.5 | 110 | 5,600 | 0.23 | 0.19 | 190 | 6.7 | 110 | 7.9 | 87 | | 0.6 | | 0.5 | <0.0001 | 0.00009 | 0.39 | 0.011 | 0.004 | | <0.00002 | <0.00001 |
| W94-57-01 | 1 | 6,000 | 170 | 320 | 0.9 | <0.7 | <0.5 | 80 | 4,800 | 0.5 | 0.18 | 180 | 6.8 | 130 | 7.7 | 130 | | 0.9 | | 2.3 | <0.0001 | <0.00001 | 0.39 | 0.028 | 0.013 | | <0.00002 | <0.00001 |
| W94-59-01 | 0.4 | 17,000 | 120 | 1.9 | 1 | <0.7 | <0.5 | 84 | 5,000 | 0.02 | 0.11 | 190 | 14 | 160 | 8.1 | 76 | | 0.9 | | 1 | <0.0001 | <0.00001 | 0.67 | 0.0086 | 0.015 | | <0.00002 | <0.00001 |
| W94-65-03 | 0.4 | 11,000 | 86 | 1.6 | 0.9 | <0.7 | <0.5 | 88 | 6,700 | 0.02 | 0.18 | 210 | 21 | 140 | 7.9 | 69 | | 0.7 | | 2.6 | <0.0001 | <0.00001 | 0.59 | 0.0068 | 0.039 | | <0.00002 | <0.00001 |
| W94-70-01 | 0.3 | 11,000 | 110 | 2.5 | 1.1 | <0.7 | <0.5 | 90 | 4,600 | 0.05 | 0.1 | 180 | 12 | 100 | 7.9 | 75 | | 0.7 | | 2.2 | <0.0001 | <0.00001 | 0.53 | 0.0057 | 0.018 | | <0.00002 | <0.00001 |
| W94-70-02 | 0.4 | 11,000 | 74 | 2.5 | 0.9 | <0.7 | <0.5 | 83 | 5,700 | 0.02 | 0.12 | 200 | 19 | 110 | 7.8 | 65 | | 0.7 | | 0.5 | <0.0001 | 0.00003 | 0.73 | 0.0008 | 0.012 | | <0.00002 | <0.00001 |
| W94-73-01 | 0.7 | 12,000 | 94 | 1.9 | 0.9 | <0.7 | <0.5 | 98 | 6,000 | 0.02 | 0.14 | 200 | 18 | 110 | 7.8 | 64 | | 0.7 | | 1.4 | <0.0001 | 0.00003 | 0.63 | 0.0038 | 0.0099 | | <0.00002 | <0.00001 |
| W94-73-03 | 0.3 | 14,000 | 91 | 4.7 | 0.8 | <0.7 | <0.5 | 54 | 5,800 | 0.11 | 0.059 | 200 | 15 | 120 | 8.1 | 87 | | 1.4 | | 1.8 | <0.0001 | <0.00001 | 1.1 | 0.0008 | 0.0033 | | <0.00002 | <0.00001 |
| CAEXD289055 | 0.25 | 500 | 150 | 1.9 | 0.11 | <1 | <0.5 | 24 | 1,400 | 0.68 | 0.05 | 210 | 6.4 | 79 | | | | | | | | | | | | | | |
| CAEXD262395 | 0.22 | 500 | 74 | 2.9 | 0.13 | <1 | <0.3 | 39 | 1,000 | 0.06 | 0.09 | 190 | 3.4 | 120 | 8.5 | 160 | 59 | 4 | 0.08 | 6 | <0.00001 | <0.00005 | 0.16 | 0.0063 | 0.012 | 0.00097 | <0.000007 | <0.000007 |
| CAEXD296006 | 14 | 100 | 12 | 20 | 4.1 | 2 | 0.7 | 24 | 100 | 0.03 | 0.19 | 6 | 2.5 | 1,300 | 8.5 | 200 | 43 | 13 | 0.06 | 23 | <0.00001 | <0.00005 | 0.14 | 0.05 | 0.013 | 0.0029 | <0.000007 | <0.000007 |
| CAEXD198012 | 0.74 | 300 | 65 | 2.6 | 0.15 | <1 | 0.4 | 50 | 900 | 0.31 | 0.16 | 160 | 4.3 | 170 | | | | | | | | | | | | | | |
| CAEXD163450 | 0.05 | 300 | 160 | 1.7 | 0.12 | <1 | <0.3 | 26 | 300 | 0.05 | 0.05 | 120 | 2.2 | 66 | | | | | | | | | | | | | | |
| CAEXD183958 | 0.8 | 400 | 91 | 22 | 0.13 | <1 | 0.4 | 44 | 900 | 0.2 | 0.55 | 150 | 5.3 | 240 | | | | | | | | | | | | | | |
| CAEXD189574 | 1.2 | 500 | 40 | 4.1 | 0.11 | <1 | <0.5 | 77 | 400 | 0.09 | 0.82 | 76 | 3 | 80 | | | | | | | | | | | | | | |
| CAEXD250652 | 0.05 | 400 | 170 | 3.2 | 0.15 | <1 | <0.3 | 27 | 400 | 0.21 | 0.05 | 130 | 2.8 | 66 | | | | | | | | | | | | | | |
| CAEXD250738 | 0.21 | 300 | 150 | 2.2 | 0.14 | <1 | 0.4 | 40 | 900 | 0.22 | 0.05 | 210 | 5.3 | 90 | | | | | | | | | | | | | | |
| CAEXD252314 | 0.53 | 200 | 140 | 0.5 | 0.18 | <1 | <0.3 | 2 | 700 | 0.06 | 0.05 | 160 | 1.6 | 110 | | | | | | | | | | | | | | |
| CAEXD295053 | 1.8 | 300 | 96 | 2.6 | 0.29 | 2 | 0.4 | 34 | 300 | 0.19 | 0.05 | 100 | 9 | 310 | | | | | | | | | | | | | | |
| CAEXD297112 | 0.23 | 300 | 310 | 3.7 | 0.15 | <1 | 0.4 | 130 | 700 | 0.17 | 0.12 | 170 | 3 | 95 | | | | | | | | | | | | | | |
| CAEXD213090 | 0.52 | 100 | 10 | 1.9 | 1.1 | 1 | <0.3 | 83 | 100 | 0.02 | 0.11 | 12 | 3.3 | 30 | | | | | | | | | | | | | | |
| CAEXD225690 | 1.5 | 200 | 13 | 8.5 | 0.56 | <1 | <0.3 | 190 | 200 | 0.08 | 0.8 | 16 | 4.3 | 39 | | | | | | | | | | | | | | |
| M07-660_107032 | 1.6 | 400 | 11 | 39 | 0.36 | <1 | <0.3 | 190 | 300 | 0.06 | 0.39 | 23 | 4 | 41 | | | | | | | | | | | | | | |
| CAEXD259501 | 0.79 | 400 | 20 | 6.4 | 0.81 | 2 | <0.3 | 94 | 100 | 0.05 | 0.42 | 21 | 3.3 | 69 | 8.2 | 280 | 50 | 20 | 0.12 | 29 | <0.00001 | <0.00005 | 0.11 | 0.014 | 0.015 | 0.0067 | <0.000007 | <0.000007 |
| CAEXD259500 | 1.9 | 600 | 21 | 6.2 | 0.07 | <1 | <0.3 | 130 | 200 | 0.05 | 0.46 | 17 | 3.3 | 50 | 8.1 | 350 | 46 | 24 | 0.12 | 48 | <0.00001 | <0.00005 | 0.087 | 0.0042 | 0.011 | 0.0071 | <0.000007 | <0.000007 |
| M04-530A-05_338259 | 2.4 | 500 | 15 | 370 | 0.25 | <1 | <0.3 | 220 | 400 | 0.11 | 0.42 | 22 | 3.1 | 86 | | | | | | | | | | | | | | |
| M05-556_824703 | 31 | 100 | 6 | 380 | 13 | 2 | <0.3 | 250 | 300 | 0.14 | 0.7 | 22 | 6.5 | 37 | | | | | | | | | | | | | | |
| CAEXD175600 | 1.8 | 100 | 11 | 14 | 1.6 | 1 | <0.3 | 170 | 400 | 0.19 | 0.29 | 19 | 4.3 | 26 | | | | | | | | | | | | | | |
| CAEXD175614 | 0.95 | 100 | 8 | 6.3 | 0.37 | <1 | <0.3 | 250 | 500 | 0.12 | 0.82 | 22 | 4.4 | 57 | | | | | | | | | | | | | | |
| CAEXD194549 | 1.6 | 200 | 10 | 3.3 | 0.11 | <1 | <0.3 | 99 | 100 | 0.02 | 0.14 | 12 | 3.4 | 22 | | | | | | | | | | | | | | |
| CAEXD206014 | 0.66 | 100 | 6 | 7 | 0.33 | <1 | <0.3 | 170 | 200 | 0.06 | 0.36 | 17 | 4.3 | 37 | | | | | | | | | | | | | | |
| CAEXD213337 | 2.5 | 100 | 28 | 25 | 0.24 | 3 | 1.9 | 34 | 300 | 0.1 | 0.25 | 24 | 2.7 | 880 | | | | | | | | | | | | | | |
| CAEXD216432 | 0.4 | 400 | 120 | 2.8 | 0.17 | <1 | <0.3 | 50 | 100 | 0.03 | 0.16 | 47 | 1.9 | 72 | | | | | | | | | | | | | | |
| CAEXD217732 | 13 | 200 | 21 | 76 | 3.6 | 1 | <0.3 | 170 | 600 | 0.44 | 1 | 20 | 3.7 | 72 | 8.1 | 270 | 45 | 7 | 0.12 | 48 | <0.00001 | <0.00005 | 0.079 | 0.008 | 0.017 | 0.0082 | <0.000007 | <0.000007 |
| M05-559A_832071 | 6.8 | 200 | 6 | 94 | 0.29 | <1 | <0.3 | 630 | 300 | 0.05 | 1.8 | 86 | 5.3 | 120 | 7.9 | 940 | 44 | 15 | <0.06 | 330 | <0.00001 | <0.00005 | 0.004 | 0.0003 | 0.023 | 0.11 | <0.000007 | <0.000007 |
| M05-564_832368 | 0.9 | 100 | 15 | 7.8 | 2.1 | <1 | 0.4 | 120 | 1,000 | 0.23 | 0.42 | 36 | 4.5 | 60 | | | | | | | | | | | | | | |
| M06-591-02 | 1.1 | 19,000 | 17 | 18 | 0.8 | <0.7 | 0.6 | 270 | 1,900 | 0.24 | 1 | 37 | 4.8 | 53 | 8 | 130 | | 1.3 | | 1.7 | <0.0001 | <0.00001 | 0.6 | 0.0082 | 0.012 | | <0.00002 | <0.00001 |
| M06-629-01 | 1.6 | 8,000 | 83 | 27 | 4.2 | <0.7 | 1.1 | 190 | 2,600 | 0.72 | 1.1 | 140 | 7.8 | 62 | 8.1 | 160 | | 1.4 | | 8.7 | <0.0001 | <0.00001 | 0.64 | 0.88 | 0.028 | | <0.00002 | <0.00001 |
| M99-417-01 | 0.9 | 17,000 | 17 | 9.8 | 0.8 | <0.7 | 1.5 | 290 | 2,300 | 0.22 | 0.98 | 42 | 5.4 | 61 | 7.9 | 170 | | 0.8 | | 3.4 | <0.0001 | <0.00001 | 0.56 | 0.022 | 0.0077 | | <0.00002 | <0.00001 |
| CAEXD213028 | 3.1 | 400 | 62 | 50 | 0.91 | <1 | <0.3 | 86 | 100 | 0.07 | 0.72 | 21 | 2.5 | 54 | | | | | | | | | | | | | | |
| M07-645_103186 | 1.2 | 500 | 76 | 7.3 | 3 | <1 | <0.3 | 50 | 100 | 0.06 | 0.47 | 40 | 2.7 | 91 | | | | | | | | | | | | | | |
| M05-548_824513 | 3.4 | 500 | 69 | 66 | 11 | 2 | <0.3 | 130 | 200 | 0.16 | 0.48 | 43 | 3.9 | 77 | 8.3 | 210 | 38 | 12 | 0.18 | 24 | <0.00001 | <0.00005 | 0.13 | 0.29 | 0.015 | 0.0029 | <0.000007 | 0.000007 |
| M07-681_110260 | 4.2 | 400 | 24 | 43 | 0.54 | 1 | 0.3 | 78 | 1,200 | 0.46 | 0.51 | 41 | 2.5 | 91 | | | | | | | | | | | | | | |
| CAEXD308246 | 0.9 | 400 | 61 | 9.1 | 0.07 | <1 | <0.3 | 62 | 300 | 0.02 | 0.73 | 41 | 4.4 | 81 | 8.3 | 190 | 30 | 19 | 0.08 | 13 | <0.00001 | <0.00005 | 0.16 | 0.0091 | 0.021 | 0.0021 | <0.000007 | <0.000007 |
| M07-693_109898 | 0.67 | 400 | 24 | 14 | 0.54 | <1 | <0.3 | 110 | 500 | 0.22 | 0.52 | 23 | 2.9 | 61 | 8 | 710 | 34 | 30 | 0.13 | 200 | <0.00001 | <0.00005 | 0.081 | 0.014 | 0.013 | 0.015 | <0.000007 | <0.000007 |
| CAEXD199299 | 3 | 300 | 85 | 110 | 8 | 4 | <0.3 | 190 | 100 | 0.08 | 0.64 | 13 | 3.2 | 29 | | | | | | | | | | | | | | |
| CAEXD217788 | 0.76 | 300 | 17 | 6.5 | 0.11 | <1 | 0.3 | 290 | 500 | 0.08 | 0.46 | 38 | 3.9 | 62 | | | | | | | | | | | | | | |
| CAEXD295099 | 0.73 | 400 | 16 | 4.4 | 0.18 | <1 | <0.3 | 250 | 200 | 0.05 | 0.3 | 24 | 3.8 | 54 | | | | | | | | | | | | | | |
| M05-559A_832081 | 29 | 200 | 13 | 600 | 0.17 | 1 | <0.3 | 460 | 500 | 0.16 | 2.9 | 71 | 7 | 80 | | | | | | | | | | | | | | |
| CAEXD199207 | 6.3 | 600 | 31 | 510 | 1.3 | 1 | <0.3 | 150 | 500 | 0.21 | 0.65 | 24 | 4.5 | 43 | 7.9 | 280 | 26 | 9 | 0.09 | 75 | <0.00001 | <0.00005 | 0.17 | 0.045 | 0.024 | 0.011 | <0.000007 | <0.000007 |
| CAEXD217778 | 0.85 | 200 | 19 | 6.5 | 0.12 | <1 | <0.3 | 77 | 500 | 0.24 | 0.39 | 29 | 3.5 | 74 | 8 | 370 | 32 | 4 | <0.06 | 99 | <0.00001 | <0.00005 | 0.076 | 0.0009 | 0.013 | 0.0075 | <0.000007 | <0.000007 |
| M00-473-01 | 1.5 | 7,100 | 92 | 17 | 0.8 | <0.7 | 0.5 | 160 | 2,000 | 0.64 | 0.21 | 160 | 7.2 | 640 | 8.1 | 190 | | 2.8 | | 3.2 | <0.0001 | <0.00001 | 0.56 | 0.34 | 0.017 | | <0.00002 | <0.00001 |
| M00-483-01 | 0.6 | 8,200 | 88 | 17 | 0.8 | <0.7 | <0.5 | 160 | 4,000 | 0.83 | 0.36 | 170 | 9.6 | 110 | 8 | 180 | | 1.9 | | 2.3 | <0.0001 | <0.00001 | 0.53 | 0.09 | 0.014 | | <0.00002 | <0.00001 |
| M00-490-01 | 8.8 | 15,000 | 90 | 130 | 1.9 | <0.7 | <0.5 | 220 | 3,100 | 0.71 | 0.51 | 150 | 4.9 | 310 | 8.1 | 190 | | 2.8 | | 2.6 | <0.0001 | <0.00001 | 0.63 | 0.69 | 0.0095 | | <0.00002 | <0.00001 |
| M08-731W1-01 | 0.4 | 15,000 | 68 | 14 | 0.9 | <0.7 | 0.5 | 320 | 7,900 | 0.04 | 0.23 | 260 | 21 | 120 | 8.2 | 69 | 31 | 2.1 | | 0.7 | <0.0001 | <0.00001 | 0.97 | 0.0013 | 0.035 | | <0.00002 | <0.00001 |
| GT08-04-01_2009 | 0.5 | 14,000 | 150 | 2.7 | 0.9 | <0.7 | 1 | 140 | 5,000 | 0.09 | 0.056 | 200 | 14 | 88 | 8 | 74 | 34 | 2.7 | | 0.9 | <0.0001 | <0.00001 | 0.9 | 0.0028 | 0.08 | | <0.00002 | <0.00001 |
| M05-561-02_2011 | 1.2 | 14,000 | 90 | 11 | 1 | <0.7 | 1.2 | 220 | 9,700 | 0.47 | 1.4 | 150 | 22 | 130 | 8.2 | 94 | | 0.8 | | 1.7 | <0.0001 | <0.00001 | 1.2 | 0.021 | 0.011 | | <0.00002 | <0.00001 |
| M06-592-03 | 0.4 | 15,000 | 47 | 8.2 | 0.8 | <0.7 | <0.5 | 240 | 6,500 | 0.2 | 0.23 | 210 | 18 | 88 | 8.1 | 76 | | 1 | | 1.3 | <0.0001 | <0.00001 | 0.9 | 0.0054 | 0.0077 | | <0.00002 | <0.00001 |
| M97-135-02 | 1.6 | 15,000 | 47 | 8.7 | 1.1 | <0.7 | 0.7 | 260 | 6,600 | 0.14 | 0.23 | 200 | 18 | 93 | 9.3 | 80 | | 0.8 | | 2.1 | <0.0001 | <0.00001 | 0.66 | 0.011 | 0.0083 | | <0.00002 | <0.00001 |
| M97-149-01 | 0.4 | 17,000 | 47 | 7 | 1.1 | <0.7 | <0.9 | 230 | 6,800 | 0.12 | 0.19 | 200 | 19 | 91 | 9.5 | 88 | | 0.9 | | 1.5 | <0.0001 | <0.00001 | 0.8 | 0.0049 | 0.009 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M99-280-01 | 0.8 | 330 | 15 | 7.3 | 0.8 | <0.7 | <0.9 | 150 | 790 | 0.12 | 0.71 | 19 | 5.5 | 41 | 8 | 110 | 52 | 1.5 | | 2.1 | <0.0001 | <0.00001 | 0.45 | 0.0033 | 0.11 | | <0.00002 | <0.00001 |
| M04-526-01 | 0.4 | 62 | 13 | 11 | 0.8 | 0.7 | <0.9 | 270 | 690 | 0.04 | 0.55 | 16 | 6 | 41 | 8.1 | 120 | 53 | 1.8 | | 2.6 | <0.0001 | 0.00014 | 0.32 | 0.006 | 0.093 | | 0.00014 | 0.00013 |
| M03-508-02 | 1 | 1,600 | 19 | 6.7 | 0.8 | <0.7 | <0.5 | 240 | 1,300 | 0.17 | 0.69 | 33 | 5.1 | 41 | 7.9 | 100 | | 1.5 | | 0.7 | <0.0001 | <0.00001 | 0.37 | 0.0039 | 0.0067 | | <0.00002 | <0.00001 |
| M06-622_878029 | 13 | 200 | 10 | 210 | 0.59 | <1 | <0.3 | 150 | 400 | 0.18 | 0.64 | 48 | 4.1 | 38 | | | | | | | | | | | | | | |
| CAEXD225689 | 1.7 | 200 | 5 | 6.2 | 0.31 | <1 | <0.3 | 260 | 100 | 0.03 | 0.8 | 12 | 5.1 | 27 | | | | | | | | | | | | | | |
| CAEXD249828 | 1.1 | 300 | 16 | 730 | 0.19 | <1 | <0.3 | 200 | 400 | 0.22 | 0.6 | 11 | 3.4 | 54 | | | | | | | | | | | | | | |
| CAEXD259467 | 1 | 100 | 8 | 3.5 | 0.12 | <1 | <0.3 | 210 | 400 | 0.04 | 0.37 | 17 | 4.6 | 35 | | | | | | | | | | | | | | |
| CAEXD259468 | 0.67 | 100 | 6 | 4.1 | 0.14 | <1 | <0.3 | 200 | 400 | 0.06 | 0.32 | 16 | 5.8 | 32 | | | | | | | | | | | | | | |
| M07-686_110546 | 0.7 | 200 | 6 | 6.7 | 0.11 | <1 | <0.3 | 230 | 200 | 0.04 | 0.32 | 16 | 3.9 | 70 | | | | | | | | | | | | | | |
| M06-629_878207 | 1.3 | 200 | 12 | 5.5 | 0.23 | <1 | 0.3 | 100 | 500 | 0.29 | 0.85 | 19 | 4.8 | 58 | 8.2 | 300 | 35 | 26 | 0.13 | 36 | <0.00001 | <0.00005 | 0.038 | 0.0074 | 0.021 | 0.0067 | <0.000007 | 0.000008 |
| CAEXD213087 | 0.19 | 100 | 2 | 8.8 | <0.05 | <1 | <0.3 | 440 | 100 | 0.02 | 0.05 | 15 | 8.2 | 27 | 8.2 | 120 | 36 | 7 | <0.06 | 2 | <0.00001 | <0.00005 | 0.007 | <0.0002 | 0.042 | 0.00043 | <0.000007 | <0.000007 |
| CAEXD213334 | 2.4 | 100 | 9 | 9.8 | 0.28 | 3 | 1.9 | 23 | 100 | 0.04 | 0.24 | 10 | 2.5 | 650 | | | | | | | | | | | | | | |
| CAEXD216429 | 1.1 | 100 | 170 | 17 | 0.31 | 2 | 1.8 | 51 | 300 | 0.08 | 0.16 | 59 | 2.7 | 660 | | | | | | | | | | | | | | |
| CAEXD258462 | 1.2 | 600 | 63 | 36 | 0.15 | <1 | <0.3 | 60 | 200 | 0.05 | 0.64 | 21 | 3.6 | 66 | 8.2 | 170 | 49 | 9 | 0.17 | 5 | <0.00001 | <0.00005 | 0.15 | 0.063 | 0.018 | 0.0015 | <0.000007 | <0.000007 |
| GT08-01-02 | 1.2 | 24,000 | 52 | 11 | 0.8 | <0.7 | <0.9 | 350 | 1,400 | 0.42 | 1.5 | 71 | 6.6 | 63 | 8.1 | 200 | 48 | 33 | | 4.6 | <0.0001 | 0.00008 | 0.54 | 0.083 | 0.1 | | 0.00008 | 0.00007 |
| GT08-02-01_2008 | 0.7 | 26,000 | 31 | 16 | 0.8 | <0.7 | <0.9 | 240 | 2,200 | 0.31 | 1.3 | 52 | 6.3 | 75 | 8.3 | 180 | 57 | 20 | | 5.2 | <0.0001 | 0.00005 | 0.56 | 0.021 | 0.097 | | 0.00006 | 0.00005 |
| M00-474-05 | 1.2 | 17,000 | 56 | 31 | 0.8 | <0.7 | 1 | 290 | 2,400 | 0.42 | 1.7 | 91 | 7.8 | 71 | 8.2 | 99 | 39 | 0.8 | | 7.2 | <0.0001 | <0.00001 | 1.2 | 0.067 | 0.0066 | | <0.00002 | <0.00001 |
| M07-660-02_2008 | 0.9 | 14,000 | 70 | 6.6 | 0.8 | <0.7 | <0.9 | 260 | 3,000 | 0.41 | 1.6 | 100 | 8.4 | 69 | 8.3 | 120 | 56 | 1.5 | | 2 | <0.0001 | <0.00001 | 1.3 | 0.0082 | 0.012 | | <0.00002 | <0.00001 |
| M07-678-03 | 1.5 | 20,000 | 8.7 | 17 | 0.8 | <0.7 | <0.9 | 250 | 1,400 | 0.3 | 0.86 | 32 | 3.7 | 45 | | | | | | | | | | | | | | |
| M07-704-01 | 1.5 | 15,000 | 64 | 17 | 0.8 | <0.7 | <0.9 | 360 | 2,300 | 0.54 | 2.1 | 97 | 8.2 | 82 | 8.3 | 140 | 50 | 5.9 | | 5.4 | <0.0001 | <0.00001 | 0.87 | 0.12 | 0.089 | | <0.00002 | <0.00001 |
| M07-705-01 | 1.6 | 18,000 | 56 | 29 | 0.8 | <0.7 | <0.9 | 370 | 2,500 | 0.45 | 1.9 | 73 | 7.8 | 64 | | | | | | | | | | | | | | |
| M07-713-02 | 0.8 | 16,000 | 66 | 9.6 | 0.8 | <0.7 | <0.9 | 220 | 2,800 | 0.46 | 2.1 | 100 | 7.3 | 72 | 8.3 | 93 | 42 | 3.4 | | 1.2 | <0.0001 | <0.00001 | 1.2 | 0.0093 | 0.012 | | <0.00002 | <0.00001 |
| M07-713-03 | 1 | 19,000 | 52 | 12 | 0.8 | <0.7 | 0.7 | 320 | 960 | 0.37 | 1.6 | 68 | 6.4 | 67 | 8.1 | 99 | 44 | 3.4 | | 2.5 | <0.0001 | <0.00001 | 1.6 | 0.033 | 0.026 | | <0.00002 | <0.00001 |
| M95-17-01 | 1.2 | 16,000 | 58 | 11 | 0.8 | <0.7 | <0.9 | 260 | 1,400 | 0.4 | 1.6 | 88 | 6.8 | 75 | 8.2 | 100 | 45 | 0.8 | | 4.2 | <0.0001 | <0.00001 | 0.83 | 0.019 | 0.17 | | <0.00002 | <0.00001 |
| M95-17-02 | 1.2 | 19,000 | 58 | 14 | 0.8 | <0.7 | <0.9 | 290 | 790 | 0.38 | 1.5 | 84 | 6.8 | 69 | 8 | 100 | 44 | 0.6 | | 5.7 | <0.0001 | <0.00001 | 0.6 | 0.032 | 0.17 | | <0.00002 | <0.00001 |
| M98-194-03 | 0.9 | 15,000 | 59 | 15 | 0.8 | <0.7 | <0.9 | 360 | 2,600 | 0.51 | 1.5 | 93 | 7.5 | 75 | 8.5 | 150 | 79 | 1.1 | | 3.2 | <0.0001 | <0.00001 | 1.1 | 0.15 | 0.011 | | <0.00002 | <0.00001 |
| M98-269-03 | 1 | 19,000 | 58 | 9.7 | 0.8 | <0.7 | <0.9 | 290 | 2,200 | 0.37 | 1.4 | 84 | 7.3 | 57 | 8.4 | 90 | 38 | 0.6 | | 5 | <0.0001 | <0.00001 | 1.3 | 0.011 | 0.0069 | | <0.00002 | <0.00001 |
| M98-297-03 | 1.3 | 16,000 | 66 | 9.2 | 0.8 | <0.7 | 1.1 | 260 | 2,500 | 0.48 | 1.7 | 92 | 6.3 | 76 | 8 | 98 | 45 | 0.8 | | 3.2 | <0.0001 | <0.00001 | 1.1 | 0.033 | 0.019 | | <0.00002 | <0.00001 |
| M98-297-04 | 1.3 | 15,000 | 67 | 15 | 0.8 | <0.7 | <0.9 | 270 | 770 | 0.44 | 1.6 | 89 | 7 | 84 | 8.1 | 100 | 35 | 0.6 | | 12 | <0.0001 | <0.00001 | 1.2 | 0.012 | 0.0085 | | <0.00002 | <0.00001 |
| M98-316-01_2008 | 2.4 | 20,000 | 55 | 15 | 1 | <0.7 | <0.9 | 270 | 2,500 | 0.46 | 1.8 | 75 | 7.5 | 58 | | | | | | | | | | | | | | |
| M99-340-03 | 1.2 | 19,000 | 56 | 13 | 0.8 | <0.7 | <0.9 | 370 | 1,000 | 0.45 | 1.9 | 84 | 9 | 83 | 8.2 | 92 | 43 | 0.4 | | 3.1 | <0.0001 | <0.00001 | 0.88 | 0.22 | 0.092 | | <0.00002 | <0.00001 |
| M99-341-02 | 0.8 | 22,000 | 41 | 8.7 | 0.8 | <0.7 | <0.9 | 330 | 2,600 | 0.4 | 1.9 | 77 | 7.8 | 55 | 8.4 | 120 | 53 | 0.6 | | 3.6 | <0.0001 | <0.00001 | 0.64 | 0.17 | 0.085 | | <0.00002 | <0.00001 |
| M99-345-02 | 1.8 | 19,000 | 58 | 17 | 0.8 | <0.7 | 1.1 | 300 | 990 | 0.35 | 1.6 | 79 | 7.9 | 150 | 8 | 87 | 39 | 1.8 | | 1.4 | <0.0001 | 0.00003 | 0.92 | 0.035 | 0.022 | | <0.00002 | <0.00001 |
| M99-346-02_2008 | 1.2 | 19,000 | 59 | 11 | 0.8 | <0.7 | <0.9 | 250 | 1,200 | 0.44 | 1.6 | 90 | 7.4 | 70 | 8 | 110 | 49 | 0.8 | | 5 | <0.0001 | <0.00001 | 0.45 | 0.032 | 0.22 | | <0.00002 | <0.00001 |
| M99-346-03 | 1.2 | 20,000 | 54 | 14 | 0.8 | <0.7 | 0.8 | 330 | 1,300 | 0.37 | 1.6 | 73 | 8 | 74 | 8.3 | 88 | 45 | 0.8 | | 0.9 | <0.0001 | 0.00002 | 0.88 | 0.012 | 0.019 | | <0.00002 | <0.00001 |
| M99-350-02 | 1.3 | 18,000 | 57 | 7.4 | 0.8 | <0.7 | <0.9 | 270 | 1,800 | 0.45 | 1.5 | 93 | 7.1 | 60 | 8.2 | 100 | 45 | 1 | | 3.1 | <0.0001 | <0.00001 | 1.3 | 0.0093 | 0.0086 | | <0.00002 | <0.00001 |
| M99-350-03 | 1.2 | 18,000 | 57 | 9.4 | 0.8 | <0.7 | 0.6 | 260 | 820 | 0.38 | 1.6 | 81 | 7 | 68 | 8.3 | 88 | 47 | 1 | | 1.7 | <0.0001 | <0.00001 | 2.3 | 0.011 | 0.026 | | <0.00002 | <0.00001 |
| M99-403-02 | 0.7 | 18,000 | 27 | 16 | 0.8 | <0.7 | <0.9 | 160 | 2,000 | 0.33 | 1.3 | 56 | 6.9 | 54 | 8.2 | 120 | 56 | 1.4 | | 2.6 | <0.0001 | 0.00016 | 0.57 | 0.071 | 0.074 | | 0.00016 | 0.00014 |
| M99-403-04 | 1.5 | 21,000 | 57 | 13 | 0.8 | <0.7 | <0.9 | 250 | 2,800 | 0.46 | 1.8 | 87 | 7.3 | 56 | | | | | | | | | | | | | | |
| M99-404-01 | 0.5 | 19,000 | 19 | 5.6 | 0.8 | <0.7 | <0.9 | 290 | 2,200 | 0.26 | 0.92 | 43 | 6 | 50 | | | | | | | | | | | | | | |
| M99-404-02 | 0.9 | 20,000 | 53 | 9.4 | 0.8 | <0.7 | <0.9 | 250 | 2,600 | 0.36 | 1.7 | 80 | 7.1 | 52 | | | | | | | | | | | | | | |
| M99-404-03 | 1.4 | 21,000 | 53 | 9 | 0.8 | <0.7 | <0.9 | 300 | 1,000 | 0.31 | 1.6 | 69 | 6.2 | 78 | 8.2 | 85 | 53 | 0.6 | | 1.8 | <0.0001 | <0.00001 | 1.2 | 0.031 | 0.02 | | <0.00002 | <0.00001 |
| M99-403-03 | 0.6 | 16,000 | 19 | 8.8 | 0.8 | <0.7 | <0.9 | 190 | 1,700 | 0.28 | 1.1 | 43 | 5.2 | 55 | 8.2 | 120 | 55 | 1.2 | | 1.8 | <0.0001 | 0.00004 | 0.68 | 0.051 | 0.086 | | 0.00006 | 0.00004 |
| M99-404-04 | 1 | 19,000 | 60 | 14 | 0.8 | <0.7 | <0.9 | 280 | 930 | 0.44 | 1.6 | 94 | 7.3 | 77 | 8.2 | 92 | 42 | 0.7 | | 3.8 | <0.0001 | 0.00004 | 0.94 | 0.033 | 0.08 | | 0.00005 | 0.00004 |
| M07-645-01 | 1.5 | 17,000 | 71 | 13 | 0.8 | <0.7 | <0.9 | 310 | 2,200 | 0.5 | 1.9 | 110 | 8.5 | 89 | 8.2 | 110 | 50 | 1.8 | | 5.3 | <0.0001 | <0.00001 | 0.37 | 0.026 | 0.22 | | <0.00002 | <0.00001 |
| M99-327-01 | 1.1 | 17,000 | 69 | 11 | 0.8 | <0.7 | <0.9 | 260 | 2,600 | 0.52 | 1.6 | 87 | 7.8 | 62 | | | | | | | | | | | | | | |
| M04-533-01 | 1.2 | 16,000 | 81 | 130 | 0.8 | <0.7 | <0.9 | 690 | 3,700 | 1.2 | 1.9 | 120 | 11 | 130 | 8.2 | 120 | 59 | 1 | | 3 | <0.0001 | <0.00001 | 0.46 | 0.043 | 0.14 | | <0.00002 | <0.00001 |
| M00-476-01 | 1.4 | 19,000 | 67 | 12 | 0.8 | <0.7 | 0.7 | 250 | 1,300 | 0.39 | 1.6 | 89 | 6.7 | 84 | 8.1 | 90 | 44 | 1.4 | | 2.1 | <0.0001 | 0.00005 | 1 | 0.059 | 0.029 | | <0.00002 | <0.00001 |
| M00-476-02 | 1.4 | 20,000 | 68 | 11 | 0.8 | <0.7 | 0.8 | 240 | 1,100 | 0.39 | 1.7 | 92 | 7 | 83 | 8.3 | 93 | 46 | 1.8 | | 3.2 | <0.0001 | <0.00001 | 0.91 | 0.057 | 0.028 | | <0.00002 | <0.00001 |
| M00-479-01 | 1.2 | 19,000 | 56 | 19 | 0.8 | <0.7 | 0.6 | 280 | 2,200 | 0.33 | 1.4 | 78 | 6.1 | 74 | 8 | 97 | 43 | 0.8 | | 4.8 | <0.0001 | <0.00001 | 0.69 | 0.027 | 0.023 | | <0.00002 | <0.00001 |
| M00-479-02 | 2.4 | 16,000 | 72 | 17 | 0.8 | <0.7 | 1.1 | 260 | 1,400 | 0.49 | 2.1 | 99 | 7.3 | 82 | 8.1 | 99 | 46 | 1 | | 4.3 | <0.0001 | <0.00001 | 0.84 | 0.064 | 0.027 | | <0.00002 | <0.00001 |
| M06-628-01 | 1.5 | 19,000 | 66 | 22 | 0.8 | <0.7 | 0.6 | 340 | 2,500 | 0.4 | 1.7 | 89 | 6.6 | 79 | 8.3 | 100 | 46 | 3.4 | | 2.9 | <0.0001 | <0.00001 | 0.99 | 0.029 | 0.023 | | <0.00002 | <0.00001 |
| M06-628-02 | 1.3 | 16,000 | 73 | 42 | 0.8 | <1 | 0.8 | 430 | 2,600 | 0.71 | 1.8 | 95 | 10 | 90 | 8.3 | 110 | 50 | 3.5 | | 3 | <0.0001 | <0.00001 | 0.89 | 0.017 | 0.03 | | <0.00002 | <0.00001 |
| M07-660-01_2009 | 1.3 | 19,000 | 57 | 15 | 0.8 | <0.7 | 0.8 | 310 | 1,300 | 0.46 | 1.9 | 88 | 6.4 | 75 | 8.1 | 100 | 45 | 3.7 | | 2.1 | <0.0001 | <0.00001 | 1 | 0.022 | 0.026 | | <0.00002 | <0.00001 |
| M07-660-02_2009 | 1.7 | 19,000 | 65 | 10 | 0.8 | <0.7 | 0.8 | 270 | 1,000 | 0.39 | 1.6 | 90 | 6.2 | 94 | 8.1 | 100 | 45 | 3.7 | | 2 | <0.0001 | <0.00001 | 0.99 | 0.02 | 0.029 | | <0.00002 | <0.00001 |
| M98-194-04 | 1.1 | 19,000 | 59 | 8.3 | 0.8 | <0.7 | 0.7 | 270 | 3,300 | 0.43 | 1.6 | 79 | 6.4 | 77 | 8.4 | 100 | 52 | 1.6 | | 2.5 | <0.0001 | <0.00001 | 0.88 | 0.043 | 0.038 | | <0.00002 | <0.00001 |
| M98-298-01 | 1.5 | 18,000 | 65 | 13 | 0.8 | <0.7 | <0.5 | 280 | 1,400 | 0.39 | 1.5 | 91 | 7.4 | 87 | 8.2 | 84 | 42 | 0.8 | | 1 | <0.0001 | <0.00001 | 1.3 | 0.022 | 0.022 | | <0.00002 | <0.00001 |
| M98-298-02 | 1.5 | 20,000 | 64 | 15 | 1.1 | <0.7 | 1.2 | 330 | 1,700 | 0.39 | 1.5 | 86 | 7 | 76 | 8.3 | 99 | 47 | 1.2 | | 2 | <0.0001 | <0.00001 | 1 | 0.052 | 0.018 | | <0.00002 | <0.00001 |
| M98-298-03 | 1.1 | 21,000 | 56 | 13 | 0.8 | <0.7 | 1.3 | 350 | 930 | 0.33 | 1.7 | 74 | 7.4 | 74 | 8.3 | 85 | 40 | 1.1 | | 1.4 | <0.0001 | <0.00001 | 1.1 | 0.014 | 0.019 | | <0.00002 | <0.00001 |
| M99-341-03 | 1.3 | 16,000 | 71 | 6.7 | 0.8 | <0.7 | 1 | 240 | 3,700 | 0.35 | 1.6 | 99 | 6.9 | 80 | 8 | 88 | 39 | 1.4 | | 3.2 | <0.0001 | 0.00002 | 0.96 | 0.22 | 0.021 | | <0.00002 | <0.00001 |
| M99-345-01_2009 | 1.3 | 20,000 | 59 | 10 | 0.8 | <0.7 | 0.8 | 340 | 1,100 | 0.32 | 1.7 | 79 | 6.9 | 72 | 8.1 | 86 | 38 | 1.3 | | 4.8 | <0.0001 | 0.00003 | 0.88 | 0.06 | 0.021 | | <0.00002 | <0.00001 |
| M99-345-03 | 1.3 | 16,000 | 61 | 12 | 0.8 | <0.7 | 0.7 | 310 | 1,100 | 0.33 | 1.5 | 81 | 6.3 | 79 | 8 | 110 | 46 | 1.6 | | 6 | <0.0001 | 0.00002 | 0.8 | 0.026 | 0.026 | | <0.00002 | <0.00001 |
| M99-346-01 | 1.5 | 17,000 | 69 | 11 | 1.2 | <0.7 | 1.5 | 270 | 1,500 | 0.46 | 1.6 | 99 | 6.6 | 92 | 8.1 | 110 | 48 | 1.1 | | 3.5 | <0.0001 | <0.00001 | 0.76 | 0.035 | 0.025 | | <0.00002 | <0.00001 |
| M99-346-02_2009 | 1.4 | 21,000 | 58 | 17 | 0.8 | <0.7 | 1.2 | 360 | 1,300 | 0.31 | 1.7 | 69 | 7.1 | 89 | 8.2 | 98 | 47 | 1.1 | | 1.3 | <0.0001 | 0.00002 | 0.93 | 0.085 | 0.018 | | <0.00002 | <0.00001 |
| M99-385-01 | 1.4 | 17,000 | 66 | 12 | 0.8 | <0.7 | 0.7 | 250 | 1,200 | 0.42 | 1.7 | 91 | 6.4 | 80 | 8 | 96 | 44 | 1.4 | | 2.8 | <0.0001 | <0.00001 | 0.85 | 0.041 | 0.023 | | <0.00002 | <0.00001 |
| M99-386-01 | 2.2 | 20,000 | 59 | 27 | 1 | <0.7 | 1 | 290 | 2,500 | 0.45 | 1.5 | 78 | 6.7 | 87 | 8.1 | 110 | 47 | 2.8 | | 3.5 | <0.0001 | 0.00006 | 0.64 | 0.65 | 0.026 | | <0.00002 | 0.00002 |
| M99-386-02 | 1.3 | 20,000 | 61 | 12 | 0.8 | <0.7 | <0.9 | 300 | 1,200 | 0.4 | 1.7 | 85 | 7.8 | 97 | 8.1 | 80 | 41 | 1.5 | | 1.4 | <0.0001 | 0.00004 | 0.93 | 0.047 | 0.022 | | <0.00002 | <0.00001 |
| M99-403-05 | 1.7 | 17,000 | 71 | 32 | 0.8 | <0.7 | 1.1 | 290 | 3,500 | 0.37 | 1.6 | 97 | 8.6 | 77 | 8.1 | 99 | 43 | 1.4 | | 4.6 | <0.0001 | <0.00001 | 0.76 | 0.022 | 0.018 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M99-404-05 | 1.4 | 19,000 | 64 | 13 | 0.8 | <0.7 | 0.7 | 300 | 1,100 | 0.39 | 1.7 | 85 | 7 | 93 | 8 | 99 | 44 | 1.2 | | 3.5 | <0.0001 | <0.00001 | 1.1 | 0.011 | 0.024 | | <0.00002 | <0.00001 |
| M99-404-06 | 1.5 | 19,000 | 65 | 9.4 | 0.8 | <0.7 | 1.4 | 260 | 1,100 | 0.4 | 1.7 | 90 | 6.4 | 84 | 8.2 | 96 | 46 | 0.9 | | 1.7 | <0.0001 | <0.00001 | 0.8 | 0.086 | 0.023 | | <0.00002 | <0.00001 |
| M99-418-01 | 1.4 | 17,000 | 67 | 14 | 0.8 | <0.7 | 0.6 | 280 | 1,200 | 0.59 | 1.7 | 95 | 6.7 | 88 | 8.4 | 100 | 48 | 1 | | 2.9 | <0.0001 | <0.00001 | 0.94 | 0.074 | 0.024 | | <0.00002 | <0.00001 |
| M03-498-01 | 0.4 | 25,000 | 34 | 9.2 | 0.8 | <0.7 | <0.5 | 460 | 2,800 | 0.3 | 1 | 54 | 5.7 | 55 | 8.6 | 95 | 54 | 0.6 | | 0.5 | <0.0001 | <0.00001 | 0.98 | 0.048 | 0.019 | | <0.00002 | <0.00001 |
| M06-607-01 | 1.2 | 16,000 | 73 | 11 | 0.8 | <0.7 | 1 | 220 | 3,100 | 0.38 | 1.6 | 94 | 6.3 | 82 | 8.4 | 89 | 47 | 1.8 | | 0.7 | <0.0001 | <0.00001 | 1.1 | 0.037 | 0.029 | | <0.00002 | <0.00001 |
| M08-731W1-02 | 1 | 18,000 | 63 | 12 | 0.8 | <0.7 | 1.3 | 290 | 3,400 | 0.47 | 1.7 | 110 | 8.2 | 73 | 8.2 | 110 | 54 | 1.6 | | 0.9 | <0.0001 | <0.00001 | 1.2 | 0.018 | 0.023 | | <0.00002 | <0.00001 |
| M98-266-01 | 1.4 | 14,000 | 77 | 18 | 0.8 | <0.7 | 1.1 | 260 | 2,400 | 0.5 | 1.7 | 110 | 7.3 | 90 | 8.2 | 110 | 55 | 1 | | 1.4 | <0.0001 | <0.00001 | 0.98 | 0.026 | 0.028 | | <0.00002 | <0.00001 |
| M03-508-01 | 1.4 | 20,000 | 53 | 9.9 | 0.8 | <0.7 | <0.5 | 310 | 1,600 | 0.31 | 1.5 | 78 | 7 | 74 | 8.1 | 76 | | 0.4 | | 1.6 | <0.0001 | <0.00001 | 0.94 | 0.041 | 0.0075 | | <0.00002 | <0.00001 |
| M06-577-02 | 1.4 | 20,000 | 67 | 14 | 0.8 | <0.7 | <0.5 | 310 | 1,900 | 0.43 | 1.8 | 100 | 6.8 | 96 | 7.9 | 110 | | 1.3 | | 4.4 | <0.0001 | <0.00001 | 0.98 | 0.017 | 0.013 | | <0.00002 | <0.00001 |
| M06-577-03 | 1.6 | 17,000 | 71 | 12 | 0.8 | <0.7 | <0.9 | 250 | 3,500 | 0.52 | 1.8 | 110 | 6.6 | 93 | 8 | 130 | | 1.2 | | 5.9 | <0.0001 | <0.00001 | 0.75 | 0.029 | 0.02 | | <0.00002 | <0.00001 |
| M06-591-01 | 1.6 | 20,000 | 69 | 44 | 0.8 | <0.7 | <0.9 | 230 | 3,300 | 0.41 | 1.8 | 99 | 6.5 | 130 | 7.9 | 120 | | 1.1 | | 5.7 | <0.0001 | <0.00001 | 0.77 | 0.038 | 0.012 | | <0.00002 | <0.00001 |
| M06-608-01 | 1.5 | 22,000 | 60 | 23 | 0.8 | <0.7 | 0.5 | 310 | 1,000 | 0.4 | 1.6 | 94 | 6.5 | 74 | 8.3 | 89 | | 0.4 | | 2.7 | <0.0001 | <0.00001 | 0.99 | 0.018 | 0.0076 | | <0.00002 | <0.00001 |
| M06-608-02 | 1.6 | 18,000 | 60 | 12 | 0.8 | <0.7 | 0.8 | 270 | 1,600 | 0.45 | 1.7 | 91 | 6.5 | 82 | 6.1 | 1 | | 0.8 | | 2.1 | <0.0001 | <0.00001 | 0.93 | 0.024 | 0.0086 | | <0.00002 | <0.00001 |
| M06-611-01 | 1.5 | 21,000 | 52 | 12 | 0.8 | 0.8 | <0.5 | 320 | 1,100 | 0.37 | 1.6 | 78 | 6.3 | 70 | 8.6 | 97 | | 0.7 | | 2.6 | <0.0001 | <0.00001 | 0.9 | 0.062 | 0.0074 | | <0.00002 | <0.00001 |
| M06-611-02 | 1.7 | 18,000 | 65 | 8.8 | 0.8 | <0.7 | <0.9 | 280 | 2,200 | 0.46 | 1.8 | 92 | 6.6 | 70 | 8.3 | 100 | | 1 | | 3.3 | <0.0001 | <0.00001 | 0.98 | 0.08 | 0.011 | | <0.00002 | <0.00001 |
| M06-625-01 | 1.2 | 18,000 | 59 | 9.1 | 0.8 | <0.7 | 0.8 | 270 | 1,800 | 0.42 | 1.7 | 87 | 6.7 | 74 | 8.2 | 110 | | 1.3 | | 1.6 | <0.0001 | <0.00001 | 0.93 | 0.069 | 0.01 | | <0.00002 | <0.00001 |
| M06-625-02 | 1.6 | 17,000 | 62 | 13 | 0.8 | <0.7 | 0.6 | 300 | 1,900 | 0.44 | 1.7 | 98 | 6.9 | 86 | 8.4 | 92 | | 1.3 | | 1.3 | <0.0001 | <0.00001 | 0.78 | 0.048 | 0.011 | | <0.00002 | <0.00001 |
| M06-631-01 | 1.6 | 17,000 | 67 | 11 | 0.8 | <0.7 | <0.5 | 270 | 2,100 | 0.49 | 1.8 | 99 | 6.7 | 82 | 8.1 | 120 | | 1.1 | | 7.3 | <0.0001 | <0.00001 | 0.64 | 0.039 | 0.018 | | <0.00002 | <0.00001 |
| M07-674-01 | 1.3 | 19,000 | 60 | 59 | 0.8 | <0.7 | <0.5 | 320 | 1,100 | 0.43 | 1.6 | 92 | 6.4 | 86 | 8.3 | 98 | | 0.7 | | 1.3 | <0.0001 | <0.00001 | 0.88 | 0.038 | 0.0087 | | <0.00002 | <0.00001 |
| M07-689-01 | 1.4 | 17,000 | 69 | 9.7 | 0.8 | <0.7 | <0.5 | 280 | 1,500 | 0.41 | 1.8 | 100 | 8.1 | 88 | 8.4 | 93 | | 2.4 | | 2 | <0.0001 | <0.00001 | 1.1 | 0.047 | 0.012 | | <0.00002 | <0.00001 |
| M07-689-02 | 1.6 | 13,000 | 70 | 13 | 0.8 | <0.7 | <0.5 | 290 | 2,000 | 0.6 | 2.1 | 120 | 10 | 91 | 8.3 | 89 | | 2.4 | | 1.1 | <0.0001 | <0.00001 | 1.7 | 0.05 | 0.013 | | <0.00002 | <0.00001 |
| M08-761-01 | 1.4 | 24,000 | 62 | 10 | 0.8 | <0.7 | 0.6 | 310 | 2,300 | 0.44 | 1.8 | 96 | 6.9 | 95 | 8.2 | 100 | | 1.1 | | 2.3 | <0.0001 | <0.00001 | 0.82 | 0.057 | 0.0097 | | <0.00002 | <0.00001 |
| M08-761-02 | 1.3 | 20,000 | 49 | 8.6 | 0.8 | <0.7 | 0.6 | 300 | 1,900 | 0.46 | 1.5 | 75 | 6.1 | 64 | 8.6 | 98 | | 1.1 | | 2.8 | <0.0001 | <0.00001 | 0.92 | 0.047 | 0.0081 | | <0.00002 | <0.00001 |
| M08-763-01 | 1.5 | 20,000 | 53 | 17 | 0.8 | <0.7 | 0.7 | 360 | 3,100 | 0.48 | 1.8 | 92 | 6.3 | 87 | 8.5 | 110 | | 1.2 | | 1.7 | <0.0001 | <0.00001 | 0.89 | 0.092 | 0.0089 | | <0.00002 | <0.00001 |
| M08-765-01 | 1.2 | 19,000 | 49 | 12 | 0.8 | <1 | 0.7 | 320 | 1,700 | 0.39 | 1.5 | 73 | 6.4 | 71 | 8 | 100 | | 2.2 | | 2.1 | <0.0001 | <0.00001 | 0.81 | 0.085 | 0.0088 | | <0.00002 | <0.00001 |
| M96-19-01 | 1.2 | 18,000 | 46 | 22 | 0.8 | <0.7 | 0.6 | 250 | 2,000 | 0.34 | 1.5 | 67 | 5.4 | 68 | 8.1 | 110 | | 0.6 | | 2.4 | <0.0001 | <0.00001 | 0.73 | 0.12 | 0.0093 | | <0.00002 | <0.00001 |
| M96-19-02 | 1.2 | 20,000 | 52 | 23 | 0.8 | <0.7 | 0.5 | 330 | 1,500 | 0.42 | 1.7 | 86 | 6.5 | 83 | 7.9 | 110 | | 0.5 | | 6.2 | <0.0001 | <0.00001 | 0.85 | 0.13 | 0.0086 | | <0.00002 | <0.00001 |
| M96-37-02 | 1.4 | 21,000 | 50 | 20 | 0.8 | <0.7 | 1.3 | 360 | 1,500 | 0.36 | 1.8 | 69 | 6.6 | 70 | 8 | 110 | | 0.5 | | 6 | <0.0001 | <0.00001 | 0.73 | 0.058 | 0.0072 | | <0.00002 | <0.00001 |
| M96-37-03 | 1.4 | 21,000 | 55 | 21 | 0.8 | 1.2 | 1 | 320 | 930 | 0.36 | 1.7 | 81 | 6.4 | 81 | 7.8 | 110 | | 0.4 | | 11 | <0.0001 | <0.00001 | 0.84 | 0.031 | 0.0067 | | <0.00002 | <0.00001 |
| M96-77-01 | 2.8 | 17,000 | 61 | 13 | 0.8 | <0.7 | <0.9 | 290 | 1,200 | 0.36 | 1.7 | 97 | 7.3 | 92 | 7.8 | 110 | | 0.5 | | 6.1 | <0.0001 | <0.00001 | 0.87 | 0.081 | 0.015 | | <0.00002 | <0.00001 |
| M96-77-02 | 1.8 | 20,000 | 63 | 110 | 0.8 | <0.7 | 1 | 320 | 2,000 | 0.45 | 1.9 | 100 | 7.2 | 96 | 7.9 | 120 | | 0.7 | | 2 | <0.0001 | <0.00001 | 0.85 | 0.045 | 0.0093 | | <0.00002 | <0.00001 |
| M97-121-01 | 2.9 | 21,000 | 48 | 11 | 0.8 | <0.7 | 1.2 | 270 | 2,800 | 0.33 | 1.9 | 80 | 6.6 | 59 | 8.6 | 94 | | 0.4 | | 2.1 | <0.0001 | 0.00005 | 0.99 | 0.015 | 0.008 | | <0.00002 | <0.00001 |
| M97-135-03 | 3 | 22,000 | 51 | 12 | 0.8 | <0.7 | 0.8 | 310 | 1,600 | 0.32 | 1.6 | 77 | 6.4 | 76 | 8.3 | 95 | | 0.4 | | 4.6 | <0.0001 | <0.00001 | 0.92 | 0.069 | 0.007 | | <0.00002 | <0.00001 |
| M97-94A-01 | 1.2 | 20,000 | 54 | 15 | 0.8 | <0.7 | 0.7 | 300 | 2,400 | 0.34 | 1.6 | 82 | 6.5 | 71 | 8.4 | 100 | | 1.1 | | 2.7 | <0.0001 | <0.00001 | 0.77 | 0.064 | 0.012 | | <0.00002 | <0.00001 |
| M97-94A-02 | 2.8 | 20,000 | 57 | 8.8 | 0.8 | <0.7 | <0.9 | 270 | 3,400 | 0.37 | 1.7 | 90 | 6.6 | 73 | 8.3 | 98 | | 0.4 | | 1.8 | <0.0001 | <0.00001 | 0.91 | 0.077 | 0.008 | | <0.00002 | <0.00001 |
| M97-95-01 | 1.4 | 21,000 | 54 | 9.8 | 0.8 | <0.7 | <0.9 | 330 | 1,300 | 0.29 | 1.6 | 85 | 7.3 | 78 | 8.6 | 89 | | 0.5 | | 2.1 | <0.0001 | <0.00001 | 0.9 | 0.019 | 0.0095 | | <0.00002 | <0.00001 |
| M98-201-04 | 1.3 | 20,000 | 53 | 8 | 0.8 | <0.7 | <0.9 | 300 | 2,600 | 0.31 | 1.6 | 80 | 6.4 | 53 | 7.9 | 82 | | 0.4 | | 1 | <0.0001 | <0.00001 | 1 | 0.035 | 0.01 | | <0.00002 | <0.00001 |
| M98-208-01 | 2.9 | 22,000 | 54 | 9.1 | 0.8 | <0.7 | 0.8 | 280 | 2,300 | 0.3 | 1.8 | 82 | 8.2 | 63 | 7.8 | 89 | | 0.6 | | 2.3 | <0.0001 | <0.00001 | 0.98 | 0.026 | 0.022 | | <0.00002 | <0.00001 |
| M98-265-01 | 3.3 | 21,000 | 51 | 38 | 0.8 | <0.7 | <0.9 | 320 | 1,500 | 0.32 | 1.5 | 76 | 6.4 | 77 | 7.8 | 92 | | 0.8 | | 3.4 | <0.0001 | <0.00001 | 0.73 | 0.068 | 0.0087 | | <0.00002 | <0.00001 |
| M98-317-01 | 0.8 | 15,000 | 17 | 6 | 0.8 | <0.7 | 0.6 | 230 | 1,800 | 0.15 | 0.95 | 44 | 5.4 | 57 | 8 | 120 | | 1 | | 1.8 | <0.0001 | <0.00001 | 0.57 | 0.0022 | 0.007 | | <0.00002 | <0.00001 |
| M99-336B-03 | 2.9 | 20,000 | 57 | 18 | 0.8 | <0.7 | <0.9 | 340 | 2,600 | 0.43 | 1.8 | 98 | 7.1 | 88 | 8 | 110 | | 0.5 | | 2 | <0.0001 | <0.00001 | 1.1 | 0.066 | 0.0094 | | <0.00002 | <0.00001 |
| M99-347-01 | 2.6 | 20,000 | 61 | 13 | 0.8 | <0.7 | 0.7 | 330 | 1,400 | 0.39 | 1.9 | 97 | 6.4 | 90 | 8 | 120 | | 0.5 | | 9.2 | <0.0001 | <0.00001 | 0.71 | 0.14 | 0.0086 | | <0.00002 | <0.00001 |
| M99-347-02 | 2.1 | 20,000 | 60 | 19 | 0.8 | <0.7 | 1.4 | 280 | 1,300 | 0.34 | 1.8 | 87 | 7.3 | 74 | 8.1 | 98 | | 0.6 | | 1.4 | <0.0001 | <0.00001 | 0.93 | 0.029 | 0.0072 | | <0.00002 | <0.00001 |
| M99-409-01 | 2.8 | 21,000 | 50 | 9.1 | 0.8 | <0.7 | <0.5 | 300 | 1,500 | 0.25 | 1.5 | 72 | 6.2 | 70 | 7.7 | 110 | | 0.6 | | 7 | <0.0001 | <0.00001 | 0.75 | 0.064 | 0.009 | | <0.00002 | <0.00001 |
| M99-409-02 | 1.3 | 23,000 | 55 | 19 | 0.8 | <0.7 | 0.6 | 310 | 1,200 | 0.31 | 1.5 | 84 | 6.3 | 82 | 8 | 110 | | 0.8 | | 3.6 | <0.0001 | <0.00001 | 0.63 | 0.071 | 0.011 | | <0.00002 | <0.00001 |
| M99-409-03 | 3.1 | 22,000 | 55 | 14 | 0.8 | <0.7 | 0.8 | 260 | 2,000 | 0.34 | 1.7 | 83 | 6.4 | 81 | 8.2 | 96 | | 0.4 | | 1.4 | <0.0001 | <0.00001 | 1 | 0.058 | 0.0086 | | <0.00002 | <0.00001 |
| M99-410-01 | 1.5 | 19,000 | 61 | 18 | 0.8 | <0.7 | <0.9 | 280 | 1,300 | 0.38 | 1.8 | 94 | 6.6 | 80 | 7.9 | 110 | | 0.5 | | 7.5 | <0.0001 | <0.00001 | 0.92 | 0.029 | 0.0091 | | <0.00002 | <0.00001 |
| M99-410-02 | 3.2 | 19,000 | 61 | 17 | 0.8 | <0.7 | 0.6 | 290 | 2,000 | 0.4 | 1.8 | 90 | 6.3 | 80 | 7.9 | 100 | | 0.5 | | 3.5 | <0.0001 | <0.00001 | 0.92 | 0.049 | 0.016 | | <0.00002 | <0.00001 |
| M99-436-01 | 2.8 | 23,000 | 63 | 56 | 0.8 | <0.7 | 0.8 | 330 | 1,700 | 0.3 | 1.6 | 81 | 6.4 | 77 | 8.3 | 99 | | 0.4 | | 1.9 | <0.0001 | <0.00001 | 0.79 | 0.043 | 0.0066 | | <0.00002 | <0.00001 |
| M99-436-02 | 1.4 | 18,000 | 62 | 13 | 0.8 | <0.7 | 0.7 | 240 | 1,400 | 0.37 | 1.9 | 97 | 6.5 | 83 | 8.2 | 110 | | 0.7 | | 5.4 | <0.0001 | <0.00001 | 0.8 | 0.07 | 0.0093 | | <0.00002 | <0.00001 |
| M10-879-01 | 1.1 | 22,000 | 50 | 11 | 0.8 | <0.7 | 0.6 | 350 | 1,100 | 0.35 | 1.8 | 72 | 6.7 | 82 | 8.3 | 100 | | 1 | | 1.8 | <0.0001 | 0.00002 | 0.78 | 0.046 | 0.0076 | | <0.00002 | <0.00001 |
| M10-887-01 | 1.2 | 18,000 | 55 | 12 | 0.8 | <0.7 | 0.5 | 250 | 2,800 | 0.43 | 1.8 | 82 | 6.5 | 66 | 8.1 | 120 | | 1.9 | | 1.6 | <0.0001 | <0.00001 | 0.79 | 0.039 | 0.014 | | <0.00002 | <0.00001 |
| M07-704-02 | 1.4 | 17,000 | 66 | 14 | 0.8 | <0.7 | <0.9 | 310 | 1,900 | 0.53 | 1.8 | 94 | 7.4 | 81 | 8.3 | 130 | 51 | 7.5 | | 4.4 | <0.0001 | <0.00001 | 0.76 | 0.14 | 0.098 | | <0.00002 | <0.00001 |
| M07-710-02 | 0.8 | 21,000 | 13 | 8.6 | 0.8 | <0.7 | <0.9 | 520 | 1,600 | 0.2 | 0.86 | 30 | 5.8 | 43 | 8.2 | 110 | 51 | 3.4 | | 2.4 | <0.0001 | 0.00002 | 0.74 | 0.0067 | 0.074 | | 0.00003 | 0.00002 |
| M07-711-01 | 0.7 | 13,000 | 13 | 5.6 | 0.8 | <0.7 | <0.9 | 290 | 1,500 | 0.19 | 0.66 | 31 | 4.7 | 51 | | | | | | | | | | | | | | |
| M98-269-01 | 0.4 | 20,000 | 21 | 9.5 | 0.8 | <0.7 | <0.9 | 200 | 2,000 | 0.3 | 1.1 | 43 | 6.3 | 61 | | | | | | | | | | | | | | |
| M98-297-02 | 0.7 | 18,000 | 13 | 8.2 | 0.8 | <0.7 | <0.9 | 370 | 1,600 | 0.26 | 0.82 | 36 | 4.7 | 45 | | | | | | | | | | | | | | |
| M03-496-01 | 0.5 | 9,900 | 22 | 22 | 0.8 | <0.7 | <0.9 | 220 | 1,400 | 0.31 | 1 | 37 | 6 | 64 | | | | | | | | | | | | | | |
| M06-604-01 | 1.4 | 21,000 | 70 | 14 | 0.8 | <0.7 | 1.3 | 230 | 3,000 | 0.46 | 1.8 | 110 | 8.1 | 85 | 8.1 | 110 | 48 | 1.8 | | 6.3 | <0.0001 | <0.00001 | 0.27 | 0.029 | 0.26 | | <0.00002 | <0.00001 |
| M07-663-01 | 1.4 | 16,000 | 69 | 8.7 | 0.9 | <0.7 | <0.9 | 210 | 3,300 | 0.47 | 1.7 | 110 | 9.5 | 86 | 8.2 | 110 | 52 | 1.6 | | 3.4 | <0.0001 | <0.00001 | 0.45 | 0.11 | 0.17 | | <0.00002 | <0.00001 |
| M07-663-02 | 1.3 | 15,000 | 71 | 36 | 0.8 | <0.7 | <0.9 | 310 | 3,500 | 0.57 | 1.8 | 120 | 8.8 | 90 | 8.2 | 140 | 51 | 9 | | 5.6 | <0.0001 | <0.00001 | 0.45 | 0.026 | 0.15 | | <0.00002 | <0.00001 |
| M07-649-01_2009 | 0.9 | 17,000 | 63 | 8.3 | 0.8 | <0.7 | 0.7 | 230 | 3,600 | 0.39 | 1.4 | 94 | 6.7 | 73 | 8.4 | 100 | 55 | 1.1 | | 0.6 | <0.0001 | <0.00001 | 0.81 | 0.033 | 0.025 | | <0.00002 | <0.00001 |
| M07-672B-01 | 1.2 | 14,000 | 73 | 11 | 0.8 | <0.7 | 0.8 | 150 | 3,800 | 0.41 | 1.5 | 110 | 6.1 | 77 | 8.2 | 100 | 50 | 2.3 | | 1 | <0.0001 | <0.00001 | 1 | 0.024 | 0.025 | | <0.00002 | <0.00001 |
| M07-685-02 | 1.4 | 18,000 | 79 | 12 | 0.8 | <0.7 | 1.1 | 190 | 3,800 | 0.44 | 1.7 | 110 | 6.7 | 84 | 8.1 | 110 | 49 | 1.8 | | 3.5 | <0.0001 | <0.00001 | 0.89 | 0.023 | 0.028 | | <0.00002 | <0.00001 |
| M07-691-01 | 1.1 | 18,000 | 65 | 10 | 0.8 | <0.7 | 0.6 | 190 | 3,100 | 0.39 | 1.6 | 91 | 5.5 | 75 | 8.2 | 94 | 48 | 1.6 | | 0.8 | <0.0001 | <0.00001 | 0.94 | 0.02 | 0.027 | | <0.00002 | <0.00001 |
| M08-769-01 | 0.4 | 19,000 | 23 | 11 | 0.8 | <0.7 | <0.9 | 420 | 2,100 | 0.19 | 0.73 | 37 | 5.5 | 46 | 8.2 | 110 | 59 | 1.1 | | 1.2 | <0.0001 | <0.00001 | 0.89 | 0.0047 | 0.016 | | <0.00002 | <0.00001 |
| M97-95-02 | 2.9 | 19,000 | 53 | 12 | 0.8 | <0.7 | 0.8 | 320 | 3,200 | 0.4 | 1.7 | 89 | 6.2 | 64 | 8.4 | 110 | | 0.4 | | 1.1 | <0.0001 | <0.00001 | 1 | 0.035 | 0.0089 | | <0.00002 | <0.00001 |
| M98-270-01 | 1.3 | 21,000 | 56 | 10 | 0.8 | <0.7 | 0.8 | 290 | 1,100 | 0.34 | 1.7 | 85 | 6.4 | 73 | 8.1 | 82 | | 0.5 | | 2.1 | <0.0001 | <0.00001 | 0.89 | 0.048 | 0.0074 | | <0.00002 | <0.00001 |
| M99-409-04 | 1.3 | 14,000 | 46 | 11 | 0.8 | <0.7 | <0.9 | 150 | 2,400 | 0.38 | 1.5 | 78 | 8.7 | 76 | 8.2 | 110 | | 1 | | 2.3 | <0.0001 | <0.00001 | 0.87 | 0.023 | 0.014 | | <0.00002 | <0.00001 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| GT08-01-01 | 1.4 | 21,000 | 53 | 19 | 0.8 | <0.7 | 1 | 460 | 1,900 | 0.45 | 1.6 | 68 | 7.3 | 65 | | | | | | | | | | | | | | |
| M00-474-04 | 0.6 | 16,000 | 12 | 7.8 | 0.8 | <0.7 | <0.9 | 370 | 1,400 | 0.18 | 0.61 | 33 | 4.1 | 42 | 8.3 | 88 | 39 | 1.1 | | 2 | <0.0001 | <0.00001 | 0.71 | 0.0092 | 0.08 | | <0.00002 | <0.00001 |
| M03-513-01 | 1.6 | 19,000 | 61 | 8.6 | 0.8 | <0.7 | <0.9 | 270 | 2,800 | 0.53 | 1.7 | 85 | 8.1 | 67 | | | | | | | | | | | | | | |
| M07-660-01_2008 | 0.7 | 21,000 | 16 | 14 | 0.8 | <0.7 | <0.9 | 360 | 1,900 | 0.38 | 0.99 | 40 | 5.9 | 39 | | | | | | | | | | | | | | |
| M07-678-02 | 0.7 | 18,000 | 34 | 13 | 0.8 | <0.7 | 1.9 | 260 | 1,900 | 0.48 | 1.2 | 54 | 6.3 | 64 | | | | | | | | | | | | | | |
| M07-713-01 | 0.5 | 18,000 | 21 | 23 | 0.8 | <0.7 | <0.9 | 210 | 1,900 | 0.32 | 0.9 | 40 | 4.6 | 45 | 8.3 | 120 | 58 | 2.9 | | 1.2 | <0.0001 | <0.00001 | 0.87 | 0.02 | 0.01 | | <0.00002 | <0.00001 |
| M98-194-02 | 0.4 | 16,000 | 12 | 7.8 | 0.8 | <0.7 | <0.9 | 290 | 1,600 | 0.27 | 0.65 | 32 | 4.3 | 36 | 8.1 | 100 | 51 | 1.3 | | 1.6 | <0.0001 | <0.00001 | 0.81 | 0.011 | 0.0091 | | <0.00002 | <0.00001 |
| M98-269-02 | 0.7 | 14,000 | 9.7 | 5.9 | 0.8 | <0.7 | <0.9 | 330 | 1,300 | 0.27 | 0.77 | 27 | 4.3 | 47 | | | | | | | | | | | | | | |
| M99-339-01 | 0.6 | 16,000 | 25 | 43 | 0.8 | <0.7 | <0.9 | 190 | 1,800 | 0.27 | 1.3 | 44 | 5.3 | 70 | 8.2 | 120 | 61 | 1.3 | | 2.2 | <0.0001 | <0.00001 | 0.58 | 0.028 | 0.089 | | <0.00002 | <0.00001 |
| M99-345-01_2008 | 0.7 | 23,000 | 18 | 45 | 0.8 | <0.7 | <0.9 | 210 | 2,000 | 0.36 | 1.3 | 45 | 6.2 | 43 | 8.1 | 86 | 38 | 1.3 | | 4.8 | <0.0001 | 0.00003 | 0.88 | 0.06 | 0.021 | | <0.00002 | <0.00001 |
| M99-349-01 | 1 | 20,000 | 19 | 17 | 0.8 | <0.7 | <0.9 | 240 | 1,900 | 0.27 | 1.1 | 45 | 5.3 | 92 | 8.2 | 150 | 61 | 1 | | 5.2 | <0.0001 | <0.00001 | 0.5 | 0.017 | 0.087 | | <0.00002 | <0.00001 |
| M99-349-02 | 0.5 | 19,000 | 11 | 8.7 | 0.8 | <0.7 | <0.9 | 450 | 1,900 | 0.32 | 1.1 | 40 | 5.7 | 39 | 8.3 | 150 | 68 | 1.7 | | 4.2 | <0.0001 | <0.00001 | 0.47 | 0.0037 | 0.092 | | <0.00002 | <0.00001 |
| M98-194-01 | 0.6 | 19,000 | 18 | 11 | 0.8 | <0.7 | <0.9 | 310 | 1,700 | 0.3 | 0.92 | 38 | 5.3 | 47 | 8.2 | 110 | 54 | 1.2 | | 3.2 | <0.0001 | <0.00001 | 0.95 | 0.07 | 0.01 | | <0.00002 | <0.00001 |
| M05-571A-01 | 0.9 | 15,000 | 41 | 8.4 | 0.8 | <0.7 | <0.9 | 220 | 2,200 | 0.47 | 1.8 | 66 | 7.1 | 56 | | | | | | | | | | | | | | |
| M06-623-01 | 1.2 | 24,000 | 31 | 6 | 0.8 | <0.7 | 1.1 | 330 | 2,300 | 0.34 | 1 | 56 | 4.7 | 49 | 8.3 | 97 | | 1.1 | | 2 | <0.0001 | <0.00001 | 1.1 | 0.088 | 0.014 | | <0.00002 | <0.00001 |
| CAEXD175471 | 0.3 | 600 | 22 | 5.3 | 0.06 | <1 | <0.3 | 100 | 400 | 0.1 | 0.38 | 15 | 3 | 56 | | | | | | | | | | | | | | |
| CAEXD206190 | 0.47 | 600 | 24 | 3.5 | <0.05 | <1 | <0.3 | 140 | 300 | 0.04 | 0.32 | 23 | 2.8 | 88 | | | | | | | | | | | | | | |
| CAEXD217787 | 0.35 | 500 | 18 | 4 | 0.09 | <1 | <0.3 | 150 | 500 | 0.16 | 0.28 | 16 | 2.8 | 50 | | | | | | | | | | | | | | |
| CAEXD261351 | 0.59 | 300 | 100 | 4.2 | 0.64 | <1 | <0.3 | 98 | 100 | 0.04 | 0.05 | 69 | 3.9 | 65 | | | | | | | | | | | | | | |
| CAEXD211120 | 0.29 | 600 | 18 | 3.6 | 0.13 | <1 | <0.3 | 140 | 300 | 0.03 | 0.42 | 18 | 3.7 | 57 | 8.3 | 94 | 36 | 1 | <0.06 | 2 | <0.00001 | <0.00005 | 0.28 | 0.0045 | 0.016 | 0.001 | <0.000007 | <0.000007 |
| CAEXD199214 | 1.6 | 300 | 35 | 23 | 0.17 | <1 | <0.3 | 78 | 500 | 0.27 | 0.67 | 23 | 3.6 | 62 | 8.4 | 110 | 37 | <1 | 0.16 | 5 | <0.00001 | <0.00005 | 0.35 | 0.021 | 0.029 | 0.0016 | <0.000007 | <0.000007 |
| M00-474-02 | 0.5 | 11,000 | 74 | 18 | 0.8 | <0.7 | 1.6 | 160 | 2,400 | 0.53 | 0.17 | 210 | 7 | 130 | | | | | | | | | | | | | | |
| M99-403-01 | 0.3 | 6,000 | 70 | 69 | 0.8 | <0.7 | <0.9 | 170 | 2,800 | 0.68 | 0.51 | 160 | 6.5 | 170 | | | | | | | | | | | | | | |
| GT08-04-01_2008 | 1 | 16,000 | 96 | 3.3 | 0.8 | <0.7 | <0.9 | 110 | 2,800 | 0.09 | 0.077 | 220 | 8 | 100 | | | | | | | | | | | | | | |
| GT08-04-03 | 4 | 6,500 | 88 | 28 | 1.4 | 3.1 | <0.9 | 140 | 1,800 | 0.58 | 0.64 | 140 | 6.2 | 410 | 8.3 | 360 | 110 | 23 | | 19 | <0.0001 | 0.00002 | 0.21 | 0.11 | 0.028 | | <0.00002 | 0.00002 |
| M00-474-01 | 0.2 | 18,000 | 120 | 4.2 | 0.8 | <0.7 | <0.9 | 96 | 2,800 | 0.12 | 0.051 | 210 | 9.1 | 82 | 8.2 | 77 | 40 | 0.8 | | 0.7 | <0.0001 | <0.00001 | 1 | 0.011 | 0.011 | | <0.00002 | <0.00001 |
| M07-678-01 | 0.2 | 11,000 | 80 | 9.3 | 0.8 | <0.7 | <0.9 | 170 | 1,200 | 0.24 | 0.095 | 160 | 4.2 | 89 | 8.2 | 100 | 50 | 2.3 | | 0.9 | <0.0001 | <0.00001 | 0.51 | 0.021 | 0.01 | | <0.00002 | <0.00001 |
| M98-297-01 | 0.2 | 9,700 | 95 | 16 | 0.8 | <0.7 | <0.9 | 160 | 2,300 | 0.69 | 0.15 | 180 | 8.1 | 100 | | | | | | | | | | | | | | |
| M99-340-01 | 0.4 | 12,000 | 95 | 7.5 | 0.8 | <0.7 | <0.9 | 160 | 3,000 | 0.55 | 0.1 | 220 | 6.5 | 110 | 8.4 | 140 | 77 | 0.5 | | 1.2 | <0.0001 | <0.00001 | 0.65 | 0.013 | 0.011 | | <0.00002 | <0.00001 |
| GT08-04-02 | 0.2 | 11,000 | 87 | 7.4 | 0.8 | <0.7 | <0.9 | 120 | 1,900 | 0.36 | 0.092 | 190 | 5.3 | 64 | 8.4 | 190 | 78 | 11 | | 2.5 | <0.0001 | 0.00003 | 0.69 | 0.033 | 0.021 | | 0.00003 | 0.00002 |
| M99-341-01 | 0.5 | 8,800 | 85 | 11 | 0.8 | <0.7 | <0.9 | 180 | 2,500 | 0.52 | 0.19 | 190 | 5.6 | 99 | 8.4 | 160 | 77 | 1 | | 1.7 | <0.0001 | <0.00001 | 0.64 | 0.025 | 0.014 | | <0.00002 | <0.00001 |
| GT08-02-01_2009 | 0.5 | 18,000 | 110 | 2.6 | 1 | <0.7 | 0.7 | 130 | 5,200 | 0.07 | 0.11 | 220 | 16 | 100 | 8 | 96 | 46 | 3.5 | | 0.9 | <0.0001 | <0.00001 | 0.93 | 0.0009 | 0.013 | | <0.00002 | <0.00001 |
| M05-561-01 | 0.6 | 11,000 | 110 | 4.3 | 0.8 | <0.7 | 1.6 | 130 | 1,100 | 0.2 | 0.044 | 240 | 8.8 | 80 | 8 | 87 | 44 | 1.4 | | 2.2 | <0.0001 | 0.00002 | 0.7 | 0.0005 | 0.011 | | <0.00002 | <0.00001 |
| M05-561-02_2009 | 1.1 | 16,000 | 110 | 5.1 | 0.8 | <0.7 | 1.3 | 100 | 2,500 | 0.31 | 0.071 | 230 | 6.2 | 79 | 8 | 110 | 60 | 1.3 | | 0.8 | <0.0001 | 0.00005 | 0.54 | 0.0032 | 0.014 | | <0.00002 | <0.00001 |
| M05-564-01 | 0.5 | 18,000 | 110 | 4.2 | 0.8 | <0.7 | 0.8 | 140 | 4,600 | 0.1 | 0.063 | 210 | 15 | 91 | 8 | 73 | 39 | 0.8 | | 1.1 | <0.0001 | <0.00001 | 1.2 | 0.0003 | 0.0033 | | <0.00002 | <0.00001 |
| M97-130-02 | 0.9 | 16,000 | 110 | 3.9 | 0.8 | <0.7 | 1.3 | 98 | 1,100 | 0.13 | 0.038 | 220 | 4.4 | 81 | 7.9 | 130 | 69 | 0.6 | | 0.9 | <0.0001 | 0.00002 | 0.49 | 0.0008 | 0.0071 | | <0.00002 | <0.00001 |
| M97-134-01 | 0.6 | 12,000 | 120 | 3.8 | 0.8 | <0.7 | 2.1 | 130 | 1,200 | 0.1 | 0.048 | 240 | 9.1 | 95 | 7.6 | 110 | 32 | 0.4 | | 25 | <0.0001 | <0.00001 | 0.85 | 0.0006 | 0.004 | | <0.00002 | <0.00001 |
| M97-137-01 | 0.6 | 16,000 | 94 | 4.4 | 0.8 | <0.7 | 3.4 | 110 | 3,700 | 0.26 | 0.052 | 240 | 9.3 | 83 | 7.9 | 86 | 47 | 0.5 | | 0.6 | <0.0001 | 0.00003 | 0.91 | 0.0007 | 0.014 | | <0.00002 | <0.00001 |
| M97-138-01 | 0.6 | 14,000 | 150 | 3.2 | 0.8 | <0.7 | 1 | 120 | 4,100 | 0.14 | 0.053 | 200 | 12 | 87 | 8 | 95 | 51 | 0.7 | | 0.6 | <0.0001 | <0.00001 | 0.82 | 0.0024 | 0.0046 | | <0.00002 | <0.00001 |
| M97-139-01 | 0.7 | 13,000 | 120 | 410 | 0.9 | <0.7 | <0.9 | 150 | 3,700 | 0.66 | 0.26 | 190 | 3.1 | 67 | 8.4 | 220 | 120 | 0.8 | | 1 | <0.0001 | 0.00002 | 0.5 | 0.071 | 0.012 | | <0.00002 | <0.00001 |
| M97-92-01 | 0.6 | 21,000 | 110 | 2.8 | 0.8 | 0.9 | 1.2 | 140 | 2,600 | 0.13 | 0.31 | 170 | 7.7 | 78 | 8 | 110 | 58 | 0.8 | | 0.8 | <0.0001 | <0.00001 | 0.67 | 0.0032 | 0.0072 | | <0.00002 | <0.00001 |
| M97-93-01 | 0.8 | 18,000 | 110 | 6.2 | 0.8 | <0.7 | 1.1 | 89 | 5,600 | 0.17 | 0.06 | 220 | 6.3 | 120 | 8.1 | 140 | 75 | 0.8 | | 1 | <0.0001 | <0.00001 | 0.55 | 0.0077 | 0.0045 | | <0.00002 | <0.00001 |
| M98-318-01 | 1.1 | 12,000 | 98 | 5.1 | 0.8 | <0.7 | <0.9 | 130 | 2,100 | 0.26 | 0.076 | 250 | 5.9 | 100 | 8.1 | 110 | 61 | 0.8 | | 1.5 | <0.0001 | 0.00004 | 0.58 | 0.0008 | 0.018 | | <0.00002 | <0.00001 |
| M05-536A-01 | 0.5 | 12,000 | 120 | 9.9 | 0.8 | <0.7 | 0.8 | 110 | 4,600 | 0.31 | 0.056 | 210 | 6.4 | 110 | 8.2 | 160 | 84 | 1.4 | | 0.8 | <0.0001 | 0.00002 | 0.51 | 0.014 | 0.012 | | <0.00002 | <0.00001 |
| M06-623-02 | 0.5 | 12,000 | 96 | 13 | 0.8 | 0.7 | <0.5 | 230 | 2,100 | 0.16 | 0.11 | 160 | 12 | 92 | 8.1 | 91 | | 1 | | 2 | <0.0001 | <0.00001 | 0.69 | 0.0011 | 0.0077 | | <0.00002 | <0.00001 |
| M08-783-02 | 0.4 | 9,100 | 95 | 7.2 | 0.8 | 0.8 | <0.5 | 140 | 4,100 | 0.32 | 0.14 | 180 | 9.8 | 110 | 8.3 | 130 | | 1.6 | | 1.1 | <0.0001 | 0.00003 | 0.61 | 0.0028 | 0.013 | | <0.00002 | <0.00001 |
| M97-95-03 | 0.2 | 16,000 | 100 | 2 | 0.8 | <0.7 | <0.5 | 99 | 2,900 | 0.04 | 0.079 | 170 | 12 | 73 | 8.3 | 78 | | 0.5 | | 1 | <0.0001 | <0.00001 | 0.75 | 0.0016 | 0.0038 | | <0.00002 | <0.00001 |
| M99-336B-04 | 0.3 | 15,000 | 97 | 4.7 | 0.8 | <0.7 | <0.5 | 110 | 4,400 | 0.05 | 0.18 | 180 | 15 | 110 | 8.1 | 88 | | 1.9 | | 1.8 | <0.0001 | <0.00001 | 0.96 | 0.0037 | 0.015 | | <0.00002 | <0.00001 |
| M99-345-01 | 1.8 | 11,000 | 97 | 5.4 | 0.8 | <0.7 | 0.5 | 160 | 3,100 | 0.32 | 0.085 | 170 | 7.9 | 86 | 8.1 | 140 | | 0.5 | | 1.5 | <0.0001 | <0.00001 | 0.6 | 0.025 | 0.011 | | <0.00002 | <0.00001 |
| M99-409-05 | 1.4 | 14,000 | 88 | 7.1 | 0.8 | <0.7 | 0.6 | 140 | 2,900 | 0.26 | 0.33 | 180 | 9.5 | 130 | 7.9 | 92 | | 1 | | 2 | <0.0001 | <0.00001 | 0.9 | 0.017 | 0.017 | | <0.00002 | <0.00001 |
| CAEXD162003 | 1.2 | 200 | 26 | 11 | 0.24 | 2 | <0.9 | 33 | 300 | 0.02 | 0.33 | 89 | 3.1 | 110 | 7.8 | 1,100 | 25 | 40 | <0.06 | 380 | <0.00001 | <0.00005 | 0.018 | 0.0007 | 0.016 | 0.0035 | <0.000007 | <0.000007 |
| CAEXD158752 | 1.8 | 100 | 39 | 4.9 | 4.7 | 4 | 1.3 | 14 | 100 | 0.04 | 0.18 | 22 | 3.3 | 250 | | | | | | | | | | | | | | |
| CAEXD173581 | 2 | 100 | 23 | 4.8 | 3.2 | 3 | 0.7 | 20 | 100 | 0.02 | 0.5 | 26 | 2.5 | 1,300 | | | | | | | | | | | | | | |
| CAEXD159768 | 5.7 | 100 | 15 | 9.5 | 0.32 | 2 | 1.6 | 46 | 100 | 0.07 | 0.12 | 10 | 1.7 | 770 | | | | | | | | | | | | | | |
| CAEXD160930 | 20 | 100 | 19 | 77 | 2.2 | 3 | 1.1 | 52 | 200 | 0.12 | 0.27 | 24 | 1.7 | 410 | | | | | | | | | | | | | | |
| CAEXD163317 | 2 | 100 | 9 | 3.9 | 6.4 | 2 | <0.3 | 51 | 100 | 0.02 | 2.6 | 9 | 2.5 | 310 | | | | | | | | | | | | | | |
| CAEXD239740 | 18 | 100 | 26 | 560 | 9.4 | 6 | <0.3 | 37 | 100 | 0.02 | 0.39 | 15 | 1 | 460 | 7.7 | 850 | 28 | 13 | <0.06 | 360 | <0.00001 | <0.00005 | <0.001 | 0.053 | 0.034 | 0.038 | <0.000007 | <0.000007 |
| CAEXD164147 | 2.1 | 100 | 30 | 8.2 | 0.34 | 3 | <0.9 | 14 | 100 | 0.1 | 0.2 | 11 | 2.1 | 1,400 | 7.6 | 1,400 | 25 | 6 | <0.06 | 680 | <0.00001 | <0.00005 | 0.003 | 0.0003 | 0.027 | 0.0065 | <0.000007 | <0.000007 |
| M96-51-01 | 1.1 | 16,000 | 96 | 4.2 | 2.2 | <0.7 | 0.5 | 120 | 2,600 | 0.21 | 0.19 | 160 | 4.1 | 79 | 8.5 | 190 | | 0.8 | | 0.8 | <0.0001 | <0.00001 | 0.31 | 0.007 | 0.0071 | | <0.00002 | <0.00001 |
| CAEXD154976 | 49 | 100 | 13 | 28 | 1.2 | 2 | <0.3 | 50 | 100 | 0.02 | 0.45 | 13 | 1.5 | 380 | | | | | | | | | | | | | | |
| CAEXD260999 | 0.83 | 400 | 79 | 9.7 | 0.07 | <1 | 0.7 | 36 | 1,200 | 0.2 | 0.06 | 160 | 10 | 91 | 7.4 | 190 | 39 | 10 | <0.06 | 20 | <0.00001 | <0.00005 | 0.16 | 0.0053 | 0.017 | 0.0015 | <0.000007 | <0.000007 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CAEXD159231 | 0.74 | 300 | 110 | 5.6 | 0.27 | <1 | <0.3 | 89 | 500 | 0.03 | 0.16 | 110 | 3.8 | 97 | 8.2 | 200 | 37 | 15 | 0.06 | 16 | <0.00001 | <0.00005 | 0.15 | 0.032 | 0.012 | 0.0019 | <0.000007 | 0.000011 |
| CAEXD239665 | 0.23 | 300 | 110 | 6.6 | 0.59 | <1 | <0.3 | 91 | 500 | 0.03 | <0.05 | 110 | 5.8 | 82 | | | | | | | | | | | | | | |
| CAEXD161414 | 0.18 | 400 | 94 | 2.2 | 0.25 | <1 | <0.3 | 59 | 700 | 0.03 | 0.05 | 140 | 2.6 | 100 | 8.1 | 350 | 33 | 8 | 0.28 | 100 | <0.00001 | <0.00005 | 0.11 | 0.0005 | 0.008 | 0.12 | <0.000007 | 0.000007 |
| CAMLD105829 | 2.6 | 100 | 25 | 71 | 7.6 | 4 | 0.4 | 49 | 100 | 0.02 | 0.31 | 66 | 3.7 | 280 | 7.7 | 710 | 31 | 6 | <0.06 | 290 | <0.00001 | <0.00005 | 0.018 | 0.015 | 0.018 | 0.0032 | <0.000007 | 0.000039 |
| M96-50-01 | 0.3 | 20,000 | 110 | 2.9 | 3.9 | <0.7 | <0.9 | 140 | 6,000 | 0.04 | 0.23 | 200 | 16 | 99 | 8.3 | 67 | | 0.7 | | 1.1 | <0.0001 | <0.00001 | 0.91 | 0.0079 | 0.011 | | <0.00002 | <0.00001 |
| CAEXD155161 | 2.1 | 100 | 12 | 4.7 | 0.44 | 2 | 1.9 | 10 | 100 | 0.05 | 0.15 | 10 | 2.3 | 1,400 | | | | | | | | | | | | | | |
| CAEXD160328 | 1.9 | 100 | 15 | 9.6 | 0.32 | 1 | 0.4 | 12 | 100 | 0.03 | 0.35 | 6 | 1.2 | 140 | | | | | | | | | | | | | | |
| CAEXD159101 | 1 | 100 | 11 | 2.4 | 0.35 | 1 | 1.1 | 16 | 100 | 0.03 | 0.14 | 10 | 2.1 | 690 | | | | | | | | | | | | | | |
| CAEXD166544 | 0.62 | 100 | 13 | 3.7 | 0.19 | 2 | 0.8 | 8 | 100 | 0.04 | 0.17 | 9 | 2.6 | 830 | 7.7 | 670 | 25 | 12 | <0.06 | 240 | <0.00001 | <0.00005 | 0.005 | 0.0005 | 0.024 | 0.0055 | <0.000007 | <0.000007 |
| CAEXD156245 | 34 | 100 | 24 | 11 | 0.84 | 2 | 0.7 | 85 | 200 | 0.12 | 0.27 | 43 | 2 | 620 | | | | | | | | | | | | | | |
| CAEXD173583 | 2.8 | 100 | 310 | 17 | 0.4 | 1 | 0.6 | 120 | 100 | 0.02 | 0.34 | 72 | 2.8 | 240 | | | | | | | | | | | | | | |
| CAEXD160927 | 1.3 | 100 | 11 | 23 | 0.22 | 2 | 1.3 | 21 | 200 | 0.11 | 0.45 | 13 | 2.5 | 630 | 7.7 | 730 | 25 | 5 | <0.06 | 310 | <0.00001 | <0.00005 | 0.003 | 0.0014 | 0.014 | 0.027 | <0.000007 | 0.000022 |
| CAEXD163315 | 2.1 | 100 | 11 | 2.5 | 2 | 3 | <0.3 | 39 | 100 | 0.03 | <0.05 | 12 | 1.9 | 87 | 7.8 | 420 | 33 | 4 | <0.06 | 130 | <0.00001 | <0.00005 | 0.003 | 0.0058 | 0.037 | 0.0073 | <0.000007 | <0.000007 |
| M11-1051-02 | 0.4 | 8,000 | 470 | 3.2 | 19 | <0.7 | <0.9 | 150 | 4,700 | 0.07 | 0.52 | 160 | 11 | 120 | 7.8 | 140 | | 6.9 | | 1.7 | <0.0001 | <0.00001 | 0.1 | 0.45 | 0.013 | | <0.00002 | <0.00001 |
| M10-987-03 | 0.1 | 210 | 860 | 4.1 | 1.2 | <0.7 | <0.5 | 75 | 3,000 | 0.02 | 0.81 | 98 | 2.5 | 110 | 8 | 130 | | 0.7 | | 0.4 | <0.0001 | <0.00001 | 0.03 | 0.13 | 0.013 | | <0.00002 | <0.00001 |
| M10-992-04 | 0.2 | 12,000 | 120 | 1.9 | 0.8 | 0.8 | 0.6 | 87 | 6,100 | 0.02 | 0.11 | 210 | 8.8 | 100 | 7.9 | 81 | | 1.6 | | 0.8 | <0.0001 | <0.00001 | 0.42 | 0.0038 | 0.008 | | <0.00002 | <0.00001 |
| M10-994-05 | 0.2 | 17,000 | 77 | 7.5 | 0.8 | <0.7 | <0.5 | 120 | 1,100 | 0.16 | 0.13 | 150 | 5.7 | 71 | 8 | 140 | | 3.8 | | 1.4 | <0.0001 | <0.00001 | 0.39 | 0.0035 | 0.021 | | <0.00002 | <0.00001 |
| M04-519-01 | 0.1 | 14,000 | 110 | 3.4 | 0.8 | <0.7 | <0.5 | 100 | 1,200 | 0.16 | 0.073 | 150 | 3.1 | 78 | 7.9 | 130 | | 2.3 | | 0.8 | <0.0001 | <0.00001 | 0.42 | 0.0009 | 0.013 | | <0.00002 | <0.00001 |
| M04-519-02 | 0.2 | 15,000 | 93 | 3.2 | 0.8 | <0.7 | <0.5 | 75 | 1,600 | 0.24 | 0.049 | 170 | 2.4 | 96 | 8 | 120 | | 0.5 | | 0.3 | <0.0001 | <0.00001 | 0.43 | 0.0095 | 0.0079 | | <0.00002 | <0.00001 |
| M04-519-03 | 0.6 | 12,000 | 96 | 4.2 | 0.8 | <0.7 | <0.5 | 110 | 5,200 | 0.18 | 0.27 | 180 | 4.2 | 90 | 8.1 | 160 | | 0.7 | | 0.6 | <0.0001 | <0.00001 | 0.33 | 0.017 | 0.021 | | <0.00002 | <0.00001 |
| M04-519-04 | 0.3 | 17,000 | 40 | 2.3 | 1 | <0.7 | 0.7 | 77 | 9,400 | 0.14 | 0.14 | 240 | 7.8 | 110 | 8 | 110 | | 0.7 | | 0.9 | <0.0001 | <0.00001 | 0.59 | 0.003 | 0.012 | | <0.00002 | <0.00001 |
| M10-981-01 | 0.5 | 18,000 | 51 | 3.3 | 0.8 | <0.7 | <0.9 | 140 | 11,000 | 0.19 | 0.23 | 260 | 16 | 130 | 7.9 | 110 | | 4 | | 2.3 | <0.0001 | <0.00001 | 0.6 | 0.0014 | 0.013 | | <0.00002 | <0.00001 |
| M10-981-02 | 0.4 | 18,000 | 65 | 2.5 | 0.8 | <0.7 | 0.6 | 100 | 7,500 | 0.13 | 0.43 | 200 | 14 | 110 | 7.9 | 100 | | 2 | | 1 | <0.0001 | <0.00001 | 0.6 | 0.0007 | 0.0097 | | <0.00002 | <0.00001 |
| M10-981-03 | 0.3 | 17,000 | 62 | 3.7 | 0.8 | <0.7 | <0.5 | 83 | 11,000 | 0.18 | 0.37 | 300 | 11 | 180 | 7.8 | 120 | | 3.9 | | 0.9 | <0.0001 | <0.00001 | 0.56 | 0.005 | 0.011 | | <0.00002 | 0.00002 |
| M10-985-01 | 1.5 | 23,000 | 56 | 14 | 0.8 | <0.7 | 0.7 | 390 | 1,200 | 0.36 | 1.4 | 89 | 7 | 91 | 8.1 | 130 | | 5.6 | | 7.4 | <0.0001 | 0.00003 | 0.9 | 0.023 | 0.013 | | <0.00002 | 0.00004 |
| M10-985-02 | 1 | 12,000 | 51 | 4.1 | 0.8 | <0.7 | 0.7 | 160 | 5,200 | 0.27 | 1 | 150 | 9.9 | 99 | 8.1 | 94 | | 3.1 | | 0.8 | <0.0001 | <0.00001 | 1.1 | 0.015 | 0.012 | | <0.00002 | <0.00001 |
| M10-987-01 | 0.4 | 8,600 | 110 | 2.4 | 0.8 | <0.7 | 0.7 | 120 | 4,700 | 0.05 | 0.08 | 190 | 5.2 | 84 | 7.9 | 120 | | 1.8 | | 0.7 | <0.0001 | <0.00001 | 0.34 | 0.016 | 0.0078 | | <0.00002 | <0.00001 |
| M10-987-02 | 0.3 | 14,000 | 88 | 3.5 | 0.8 | <0.7 | <0.5 | 120 | 2,900 | 0.23 | 0.23 | 160 | 6 | 110 | 8 | 150 | | 3 | | 1.9 | <0.0001 | <0.00001 | 0.41 | 0.011 | 0.0095 | | <0.00002 | <0.00001 |
| M10-987-04 | 0.3 | 13,000 | 66 | 2.1 | 1.4 | <0.7 | 0.6 | 94 | 8,700 | 0.02 | 0.14 | 270 | 19 | 110 | 7.9 | 81 | | 2.6 | | 0.8 | <0.0001 | <0.00001 | 0.68 | 0.0034 | 0.012 | | <0.00002 | <0.00001 |
| M10-988-01 | 0.2 | 10,000 | 100 | 1.7 | 0.8 | <0.7 | 0.6 | 69 | 5,400 | 0.06 | 0.15 | 240 | 8.6 | 130 | 8 | 80 | | 2.6 | | 0.9 | <0.0001 | <0.00001 | 0.66 | 0.0021 | 0.014 | | <0.00002 | <0.00001 |
| M10-988-02 | 0.3 | 18,000 | 64 | 1.7 | 0.9 | <0.7 | 0.6 | 110 | 7,500 | 0.02 | 0.16 | 200 | 18 | 96 | 8.2 | 76 | | 1.7 | | 0.8 | <0.0001 | <0.00001 | 0.86 | 0.0038 | 0.0071 | | <0.00002 | <0.00001 |
| M10-988-03 | 0.2 | 12,000 | 110 | 1.2 | 2 | <0.7 | <0.5 | 100 | 6,100 | 0.02 | 0.095 | 240 | 13 | 95 | 8.4 | 63 | | 2.2 | | 1 | <0.0001 | <0.00001 | 0.73 | 0.0034 | 0.014 | | <0.00002 | <0.00001 |
| M10-992-01 | 0.1 | 10,000 | 90 | 1.9 | 1.1 | <0.7 | <0.5 | 130 | 4,200 | 0.02 | 0.069 | 190 | 12 | 79 | 8.2 | 79 | | 4.7 | | 1.5 | <0.0001 | <0.00001 | 0.87 | 0.0028 | 0.013 | | <0.00002 | <0.00001 |
| M10-992-02 | 0.2 | 22,000 | 81 | 1.4 | 0.8 | <0.7 | <0.5 | 82 | 3,400 | 0.02 | 0.069 | 170 | 9.1 | 78 | 8.2 | 94 | | 3.9 | | 1.1 | <0.0001 | <0.00001 | 0.65 | 0.0028 | 0.011 | | <0.00002 | <0.00001 |
| M10-992-03 | 0.1 | 11,000 | 140 | 9.1 | 0.8 | <0.7 | <0.5 | 92 | 750 | 0.09 | 0.049 | 150 | 2.7 | 60 | 8.2 | 120 | | 2.1 | | 0.3 | <0.0001 | <0.00001 | 0.39 | 0.0013 | 0.0096 | | <0.00002 | <0.00001 |
| M10-992-05 | 0.4 | 21,000 | 56 | 2.1 | 0.8 | <0.7 | 0.8 | 95 | 8,500 | 0.04 | 0.17 | 200 | 14 | 120 | 7.9 | 100 | | 0.8 | | 0.7 | <0.0001 | <0.00001 | 0.47 | 0.0042 | 0.0071 | | <0.00002 | <0.00001 |
| M10-994-01 | 0.2 | 11,000 | 110 | 2.4 | 0.8 | <0.7 | <0.5 | 100 | 5,600 | 0.02 | 0.16 | 190 | 9.5 | 100 | 7.9 | 88 | | 2.4 | | 0.6 | <0.0001 | <0.00001 | 0.25 | 0.0022 | 0.0078 | | <0.00002 | <0.00001 |
| M10-994-02 | 0.4 | 23,000 | 62 | 3.5 | 0.8 | <0.7 | 0.5 | 120 | 7,100 | 0.17 | 0.49 | 180 | 10 | 110 | 8.2 | 120 | | 2.1 | | 1.7 | <0.0001 | <0.00001 | 0.52 | 0.018 | 0.0083 | | <0.00002 | <0.00001 |
| M10-994-03 | 0.4 | 16,000 | 81 | 4.9 | 0.8 | <0.7 | 0.7 | 81 | 4,900 | 0.28 | 0.23 | 170 | 10 | 93 | 8.1 | 110 | | 1 | | 0.6 | <0.0001 | <0.00001 | 0.56 | 0.016 | 0.0094 | | <0.00002 | <0.00001 |
| M10-994-04 | 0.3 | 12,000 | 110 | 2.2 | 1.8 | <0.7 | 0.6 | 110 | 5,900 | 0.06 | 0.092 | 220 | 17 | 92 | 8.9 | 82 | | 1.7 | | 0.7 | <0.0001 | <0.00001 | 0.8 | 0.01 | 0.014 | | <0.00002 | <0.00001 |
| M10-998-01 | 0.3 | 14,000 | 63 | 1.7 | 2.1 | <0.7 | 0.8 | 110 | 9,500 | 0.02 | 0.16 | 280 | 23 | 100 | 8.5 | 70 | | 3.3 | | 1.4 | <0.0001 | <0.00001 | 0.83 | 0.0035 | 0.015 | | <0.00002 | <0.00001 |
| M10-998-02 | 0.5 | 18,000 | 60 | 4.5 | 1 | <0.7 | 1.1 | 150 | 12,000 | 0.32 | 0.36 | 300 | 21 | 110 | 9.2 | 88 | | 2.6 | | 1.5 | <0.0001 | <0.00001 | 0.83 | 0.003 | 0.015 | | <0.00002 | <0.00001 |
| M10-998-03 | 0.3 | 18,000 | 120 | 5.6 | 0.8 | <0.7 | 1.2 | 87 | 5,500 | 0.47 | 0.17 | 220 | 10 | 130 | 7.8 | 97 | | 1.2 | | 0.8 | <0.0001 | <0.00001 | 0.59 | 0.0075 | 0.011 | | <0.00002 | <0.00001 |
| M10-998-04 | 0.3 | 13,000 | 100 | 4.9 | 0.8 | <0.7 | 0.7 | 95 | 5,300 | 0.26 | 0.15 | 180 | 14 | 99 | 8.1 | 100 | | 2 | | 0.6 | <0.0001 | <0.00001 | 0.6 | 0.0022 | 0.0092 | | <0.00002 | <0.00001 |
| M10-998-05 | 0.3 | 2,200 | 330 | 8.2 | 0.8 | <0.7 | <0.5 | 130 | 2,200 | 0.03 | 0.15 | 120 | 3.7 | 110 | 8.6 | 160 | | 2.1 | | 0.8 | <0.0001 | <0.00001 | 0.06 | 0.41 | 0.0083 | | <0.00002 | <0.00001 |
| M11-1042-01 | 0.3 | 11,000 | 96 | 1.7 | 0.8 | <0.7 | <0.5 | 70 | 2,900 | 0.32 | 0.15 | 180 | 4.6 | 110 | 8.3 | 190 | | 13 | | 1.6 | <0.0001 | <0.00001 | 0.38 | 0.021 | 0.018 | | <0.00002 | <0.00001 |
| M11-1042-02 | 0.6 | 14,000 | 500 | 8.1 | 140 | <0.7 | 1.7 | 360 | 5,000 | 0.51 | 1.1 | 150 | 11 | 190 | 8.1 | 210 | | 12 | | 2.2 | <0.0001 | <0.00001 | 0.24 | 0.43 | 0.012 | | <0.00002 | 0.00002 |
| M11-1042-03 | 0.3 | 7,500 | 470 | 4.9 | 47 | <0.7 | 0.7 | 97 | 4,100 | 0.03 | 0.35 | 140 | 3.5 | 180 | 8.2 | 140 | | 9.7 | | 1.3 | <0.0001 | <0.00001 | 0.04 | 0.05 | 0.012 | | <0.00002 | <0.00001 |
| M11-1051-01 | 0.4 | 14,000 | 100 | 2.3 | 39 | <0.7 | 0.6 | 88 | 3,200 | 0.36 | 0.21 | 160 | 4 | 85 | 6.1 | 3 | | 12 | | 1.8 | <0.0001 | <0.00001 | 0.38 | 0.12 | 0.015 | | <0.00002 | <0.00001 |
| M95-11-01 | 0.4 | 14,000 | 74 | 3.4 | 5.9 | <0.7 | 0.8 | 180 | 6,500 | 0.07 | 0.2 | 190 | 16 | 100 | 7.8 | 87 | | 0.4 | | 0.8 | <0.0001 | <0.00001 | 0.58 | 0.0025 | 0.005 | | <0.00002 | <0.00001 |
| M95-12-01 | 0.6 | 15,000 | 66 | 3.3 | 4.1 | <0.7 | 1.6 | 110 | 9,000 | 0.22 | 0.55 | 190 | 24 | 110 | 7.8 | 150 | | 0.7 | | 1.1 | <0.0001 | <0.00001 | 0.86 | 0.0055 | 0.0078 | | <0.00002 | <0.00001 |
| M95-22-01 | 0.3 | 13,000 | 120 | 7.3 | 3.2 | <0.7 | 0.7 | 140 | 4,500 | 0.2 | 0.15 | 180 | 13 | 110 | 6.8 | 1 | | 1.4 | | 1.4 | <0.0001 | <0.00001 | 0.5 | 0.0092 | 0.01 | | <0.00002 | <0.00001 |
| M95-22-02 | 0.3 | 17,000 | 110 | 3.7 | 2.8 | <0.7 | 1.1 | 110 | 6,700 | 0.21 | 0.2 | 200 | 20 | 110 | 7.9 | 67 | | 0.4 | | 1 | <0.0001 | <0.00001 | 0.84 | 0.0009 | 0.008 | | <0.00002 | <0.00001 |
| M96-51-02 | 0.5 | 22,000 | 65 | 3.5 | 2.9 | <0.7 | 1.1 | 99 | 8,600 | 0.11 | 0.39 | 240 | 8.7 | 110 | 7.9 | 130 | | 0.9 | | 1 | <0.0001 | 0.00007 | 0.33 | 0.013 | 0.0068 | | <0.00002 | <0.00001 |
| M96-51-03 | 0.2 | 14,000 | 110 | 3.2 | 2.6 | <0.7 | <0.5 | 130 | 5,200 | 0.17 | 0.12 | 200 | 11 | 86 | 8.3 | 100 | | 0.5 | | 0.8 | <0.0001 | 0.00002 | 0.44 | 0.04 | 0.015 | | <0.00002 | <0.00001 |
| M97-111-04 | 0.3 | 10,000 | 110 | 1.5 | 1.9 | 0.8 | 0.8 | 95 | 5,100 | 0.04 | 0.1 | 190 | 14 | 86 | 8 | 47 | | 0.2 | | 0.3 | <0.0001 | <0.00001 | 0.7 | 0.0014 | 0.0046 | | <0.00002 | <0.00001 |
| M97-176-01 | 0.2 | 8,500 | 130 | 2.9 | 1.5 | <0.7 | 0.5 | 92 | 6,000 | 0.05 | 0.16 | 190 | 9.3 | 110 | 8.6 | 88 | | 0.4 | | 0.7 | <0.0001 | <0.00001 | 0.33 | 0.0022 | 0.016 | | <0.00002 | <0.00001 |
| M97-176-02 | 0.2 | 15,000 | 110 | 1.9 | 1.3 | <0.7 | <0.5 | 78 | 5,500 | 0.06 | 0.088 | 200 | 16 | 88 | 8.7 | 72 | | 0.5 | | 2.5 | <0.0001 | <0.00001 | 0.94 | 0.001 | 0.015 | | <0.00002 | <0.00001 |
| W94-48-01 | 0.4 | 13,000 | 72 | 2.2 | 2.3 | <0.7 | 0.8 | 190 | 8,500 | 0.03 | 0.23 | 240 | 23 | 120 | 8.9 | 62 | | 0.5 | | 1.4 | <0.0001 | <0.00001 | 0.61 | 0.0025 | 0.01 | | <0.00002 | <0.00001 |
| CAEXD164775 | 0.5 | 300 | 110 | 6.5 | 0.27 | <1 | <0.3 | 71 | 400 | 0.07 | 0.27 | 94 | 7.8 | 110 | | | | | | | | | | | | | | |
| CAEXD161143 | 2 | 200 | 99 | 73 | 0.32 | <1 | <0.3 | 1,300 | 500 | 0.37 | 1.4 | 36 | 9.9 | 150 | 8.2 | 230 | 44 | 15 | 0.26 | 22 | <0.00001 | <0.00005 | 0.085 | 0.033 | 0.008 | 0.11 | <0.000007 | <0.000007 |
| CAEXD161417 | 2.2 | 100 | 21 | 1800 | 0.66 | 4 | <0.3 | 63 | 200 | 0.04 | 0.29 | 30 | 4.1 | 210 | | | | | | | | | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Elemental Abundance | | | | | | | | | | | | | | Shake Flask Extraction | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn | pH | Conductivity | Alkalinity | Cl | F | $SO_4$ | D-Hg | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Bi |
| | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | s.u. | µS/cm | mg/L as $CaCO_3$ | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CAEXD253446 | 0.49 | 200 | 110 | 5.5 | 0.37 | <1 | <0.3 | 63 | 100 | 0.07 | 0.05 | 54 | 2.7 | 140 | | | | | | | | | | | | | | |
| CAEXD255567 | 0.19 | 300 | 110 | 1.1 | 0.21 | <1 | <0.3 | 72 | 400 | 0.06 | 0.05 | 74 | 4.3 | 68 | | | | | | | | | | | | | | |
| CAEXD178628 | 0.25 | 400 | 110 | 7.9 | 0.29 | <1 | <0.3 | 44 | 600 | 0.06 | 0.07 | 110 | 4.9 | 100 | 8.1 | 220 | 46 | 23 | 0.07 | 6 | <0.00001 | <0.00005 | 0.13 | 0.021 | 0.01 | 0.00099 | 0.000008 | <0.000007 |
| CAEXD252985 | 0.97 | 400 | 44 | 4 | 0.51 | <1 | <0.3 | 160 | 200 | 0.04 | 0.45 | 43 | 3.4 | 62 | | | | | | | | | | | | | | |
| CAEXD252988 | 0.99 | 400 | 42 | 7.7 | 0.29 | <1 | <0.3 | 180 | 200 | 0.05 | 0.58 | 37 | 4.2 | 66 | | | | | | | | | | | | | | |
| CAEXD292036 | 0.21 | 500 | 97 | 1 | <0.05 | <1 | <0.3 | 50 | 100 | 0.02 | 0.09 | 130 | 2.6 | 69 | | | | | | | | | | | | | | |
| CAEXD292774 | 0.45 | 500 | 57 | 3.2 | 0.29 | <1 | <0.3 | 100 | 600 | 0.03 | 0.36 | 97 | 2.6 | 93 | | | | | | | | | | | | | | |
| CAEXD296389 | 0.71 | 200 | 240 | 6.5 | 0.45 | <1 | <0.3 | 190 | 300 | 0.16 | 0.13 | 110 | 2.2 | 74 | | | | | | | | | | | | | | |
| CAEXD259422 | 1.3 | 300 | 100 | 18 | 0.28 | <1 | <0.3 | 100 | 300 | 0.04 | <0.05 | 80 | 2.8 | 100 | | | | | | | | | | | | | | |
| CAEXD296880 | 0.21 | 500 | 97 | 1.9 | 0.1 | <1 | <0.3 | 93 | 300 | 0.02 | 0.19 | 86 | 2.2 | 70 | | | | | | | | | | | | | | |
| CAEXD297926 | 1.2 | 300 | 99 | 1.9 | 0.14 | <1 | <0.3 | 56 | 200 | 0.03 | 0.05 | 51 | 2.8 | 44 | | | | | | | | | | | | | | |
| CAEXD237686 | 0.85 | 400 | 85 | 3.7 | 0.4 | <1 | <0.3 | 87 | 100 | 0.03 | 0.1 | 33 | 2.2 | 54 | | | | | | | | | | | | | | |
| CAEXD264580 | 0.41 | 300 | 39 | 4 | 0.49 | <1 | <0.3 | 94 | 500 | 0.03 | 0.14 | 120 | 4.8 | 96 | | | | | | | | | | | | | | |
| CAEXD258556 | 0.87 | 400 | 74 | 7.3 | 0.19 | <1 | <0.3 | 96 | 1,100 | 0.19 | 0.58 | 110 | 9.1 | 130 | | | | | | | | | | | | | | |
| CAEXD299420 | 0.77 | 400 | 81 | 6.1 | 0.06 | <1 | 0.6 | 110 | 800 | 0.03 | 0.77 | 170 | 14 | 120 | | | | | | | | | | | | | | |
| CAEXD299421 | 0.93 | 400 | 80 | 4.6 | 0.09 | <1 | 0.3 | 84 | 800 | 0.02 | 0.62 | 170 | 10 | 120 | | | | | | | | | | | | | | |
| CAEXD254661 | 0.38 | 100 | 300 | 4.9 | 0.14 | <1 | <0.5 | 80 | 200 | 0.02 | 0.05 | 150 | 2 | 170 | | | | | | | | | | | | | | |
| CAEXD172407 | 4.3 | 100 | 8 | 2.9 | 0.13 | <1 | 1 | 23 | 100 | 0.03 | 0.1 | 6 | 2.2 | 1,000 | | | | | | | | | | | | | | |
| CAEXD264227 | 5.3 | 100 | 45 | 6.6 | 1 | 2 | 0.8 | 54 | 200 | 0.13 | 0.11 | 40 | 2.3 | 360 | 8.1 | 510 | 36 | 3 | 0.08 | 150 | <0.00001 | <0.00005 | 0.024 | 0.011 | 0.018 | 0.015 | <0.000007 | <0.000007 |
| CAEXD252980 | 2.3 | 400 | 56 | 23 | 1.1 | <1 | <0.3 | 130 | 100 | 0.05 | 0.55 | 22 | 3.1 | 53 | | | | | | | | | | | | | | |
| CAEXD252989 | 2.6 | 400 | 40 | 110 | 1.2 | <1 | <0.3 | 230 | 200 | 0.17 | 0.83 | 33 | 4.3 | 74 | | | | | | | | | | | | | | |
| CAEXD295855 | 0.84 | 100 | 10 | 6.6 | 0.12 | <1 | <0.3 | 320 | 100 | 0.02 | 0.2 | 17 | 4.2 | 21 | | | | | | | | | | | | | | |
| CAEXD295858 | 1 | 100 | 26 | 2.5 | 0.1 | <1 | <0.3 | 160 | 300 | 0.02 | 0.33 | 42 | 3.4 | 41 | | | | | | | | | | | | | | |
| CAEXD244529 | 0.16 | 500 | 89 | 1.8 | 0.05 | <1 | <0.3 | 50 | 200 | 0.02 | 0.05 | 110 | 3.7 | 59 | | | | | | | | | | | | | | |
| CAEXD253154 | 0.54 | 300 | 120 | 3.4 | 0.19 | <1 | <0.3 | 120 | 500 | 0.04 | 0.12 | 110 | 2.5 | 89 | | | | | | | | | | | | | | |
| CAEXD253583 | 0.23 | 500 | 95 | 3.3 | 0.18 | <1 | <0.3 | 77 | 100 | 0.03 | 0.05 | 51 | 2.9 | 62 | | | | | | | | | | | | | | |
| CAEXD254670 | 0.46 | 300 | 130 | 3 | 0.14 | <1 | <0.3 | 53 | 100 | 0.03 | 0.15 | 46 | 2 | 68 | | | | | | | | | | | | | | |
| CAEXD264136 | 0.24 | 300 | 120 | 3.6 | <0.05 | <1 | <0.3 | 56 | 200 | 0.02 | 0.08 | 120 | 2.5 | 78 | | | | | | | | | | | | | | |
| CAEXD264523 | 0.33 | 400 | 78 | 2.6 | 0.17 | <1 | <0.3 | 73 | 400 | 0.03 | 0.06 | 110 | 2.5 | 92 | | | | | | | | | | | | | | |
| CAEXD264637 | 0.26 | 300 | 110 | 16 | 0.19 | <1 | <0.3 | 86 | 300 | 0.04 | 0.08 | 88 | 3.9 | 82 | | | | | | | | | | | | | | |
| CAEXD264747 | 0.18 | 500 | 36 | 4.5 | 0.32 | <1 | <0.3 | 98 | 700 | 0.03 | 0.05 | 120 | 4.1 | 95 | | | | | | | | | | | | | | |
| CAEXD291131 | 0.27 | 300 | 95 | 3 | <0.05 | <1 | <0.3 | 64 | 100 | 0.02 | 0.05 | 130 | 3.5 | 64 | | | | | | | | | | | | | | |
| CAEXD291533 | 0.14 | 400 | 97 | 18 | 0.07 | <1 | <0.3 | 44 | 100 | 0.03 | 0.05 | 98 | 3.7 | 70 | | | | | | | | | | | | | | |
| CAEXD307658 | 0.16 | 500 | 87 | 1.8 | <0.05 | <1 | <0.3 | 42 | 100 | 0.02 | 0.05 | 100 | 3.4 | 66 | | | | | | | | | | | | | | |
| CAEXD224354 | <0.05 | 700 | 99 | 1.3 | 0.11 | <1 | <0.3 | 30 | 100 | 0.02 | 0.05 | 110 | 2.7 | 64 | 8.4 | 180 | 52 | 6 | <0.06 | 9 | <0.00001 | <0.00005 | 0.15 | 0.0006 | 0.006 | 0.00045 | <0.000007 | <0.000007 |
| CAEXD250907 | 0.69 | 300 | 130 | 4.8 | 0.4 | <1 | <0.3 | 97 | 300 | 0.07 | 0.08 | 91 | 2.3 | 72 | 8.3 | 180 | 55 | 3 | <0.06 | 14 | <0.00001 | <0.00005 | 0.14 | 0.049 | 0.014 | 0.0011 | <0.000007 | <0.000007 |
| CAEXD296387 | 0.25 | 300 | 120 | 1.9 | 0.22 | <1 | <0.3 | 110 | 600 | 0.09 | 0.08 | 120 | 2.8 | 86 | 8.6 | 230 | 49 | 23 | 0.07 | 12 | <0.00001 | <0.00005 | 0.068 | 0.022 | 0.022 | 0.0025 | <0.000007 | <0.000007 |
| CAEXD249125 | 0.37 | 300 | 97 | 4.8 | 0.37 | <1 | <0.3 | 71 | 600 | 0.08 | 0.05 | 120 | 4 | 62 | | | | | | | | | | | | | | |
| CAEXD255700 | 0.19 | 500 | 95 | 1.3 | 0.13 | <1 | <0.3 | 43 | 300 | 0.02 | 0.05 | 120 | 2.1 | 67 | | | | | | | | | | | | | | |
| CAEXD261414 | 0.53 | 400 | 57 | 37 | 0.37 | <1 | 0.7 | 820 | 1,500 | 0.3 | 0.35 | 200 | 15 | 93 | | | | | | | | | | | | | | |
| CAEXD291470 | 0.25 | 300 | 100 | 3.6 | 0.05 | <1 | <0.3 | 110 | 200 | 0.02 | 0.05 | 170 | 7.9 | 63 | | | | | | | | | | | | | | |
| CAEXD299369 | 0.13 | 300 | 110 | 1.3 | <0.05 | <1 | <0.3 | 41 | 600 | 0.02 | 0.05 | 140 | 4.9 | 67 | | | | | | | | | | | | | | |
| CAEXD264579 | 0.65 | 300 | 42 | 2.4 | 0.17 | <1 | <0.3 | 160 | 600 | 0.02 | 0.07 | 200 | 6.1 | 79 | | | | | | | | | | | | | | |
| CAEXD264581 | 0.44 | 300 | 30 | 1.7 | 0.38 | <1 | <0.3 | 51 | 600 | 0.02 | 0.11 | 160 | 3.3 | 80 | | | | | | | | | | | | | | |
| CAEXD237685 | 0.92 | 300 | 67 | 3.2 | 0.59 | <1 | <0.3 | 41 | 100 | 0.03 | 0.05 | 29 | 2 | 48 | 8.4 | 170 | 45 | 10 | <0.06 | 9 | <0.00001 | <0.00005 | 0.16 | 0.037 | 0.006 | 0.00064 | <0.000007 | <0.000007 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3)

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

*Adjustment to CaNP and AP calculated based on carbonate and sulphide mineralogy for each respective rock unit as defined in Chapter 5

**Based on classification criteria for waste rock and ore presented in Chapter 5.1

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML00-224-01 | 14 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | 0.032 | 11 | <0.001 | 1.3 | 0.00054 | 0.00016 | 2.3 | <0.0001 | | 0.00007 | 0.0005 | <0.001 | <0.00001 | 0.14 | 0.0003 | <0.00002 | 0.00005 | 0.00017 | 0.0014 | 0.000006 | <0.001 | |
| ML08-225-03 | 12 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.016 | 13 | 0.002 | 0.98 | 0.00053 | 0.00015 | 2.8 | <0.0001 | | 0.00008 | 0.0005 | <0.001 | <0.00001 | 0.12 | 0.0003 | <0.00002 | 0.000036 | 0.00017 | 0.0013 | 0.000003 | <0.001 | |
| ML08-226-04 | 4.8 | 0.000005 | 0.000024 | <0.0005 | <0.0005 | 0.81 | 18 | 0.003 | 0.71 | 0.0015 | 0.00033 | 2.5 | <0.0001 | | 0.00015 | 0.001 | <0.001 | <0.00001 | 0.035 | 0.004 | <0.00002 | 0.000058 | 0.00027 | 0.0042 | 0.000042 | <0.001 | |
| ML95-104-02 | 18 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | 0.066 | 16 | 0.005 | 1.7 | 0.0012 | 0.00033 | 2.9 | <0.0001 | | 0.00012 | 0.0006 | <0.001 | <0.00001 | 0.24 | 0.0008 | <0.00002 | 0.00016 | 0.00016 | 0.00062 | 0.000008 | <0.001 | |
| ML95-84-01 | 11 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | 0.068 | 15 | 0.003 | 0.97 | 0.00056 | 0.00033 | 3.6 | <0.0001 | | 0.00017 | 0.0007 | <0.001 | <0.00001 | 0.12 | 0.0004 | 0.00003 | 0.000055 | 0.00013 | 0.00046 | 0.000009 | <0.001 | |
| 6534-VRSP-002 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-006 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-009 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-014 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-001 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-004 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-005 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-013 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-015 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-016 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-017 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-008 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-012 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-003 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6534-VRSP-011 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ML08-238-03 | 2.7 | <0.000003 | 0.00027 | 0.0014 | <0.0005 | 0.78 | 10 | 0.005 | 0.38 | 0.0069 | 0.00018 | 8.6 | 0.0008 | | 0.00021 | 0.0008 | <0.001 | 0.00003 | 0.016 | 0.038 | <0.00002 | 0.00063 | 0.011 | 0.001 | 0.00027 | 0.002 | |
| ML08-236-2 | 2.9 | 0.000004 | 0.00012 | 0.0006 | <0.0005 | 0.29 | 13 | 0.002 | 0.3 | 0.0024 | 0.00026 | 9.8 | 0.0004 | | 0.00014 | 0.0006 | <0.001 | 0.00007 | 0.012 | 0.016 | <0.00002 | 0.0005 | 0.011 | 0.0013 | 0.00016 | 0.002 | |
| ML08-226-01 | 1.9 | <0.000003 | 0.00042 | <0.0005 | 0.0006 | 1.2 | 12 | 0.013 | 0.46 | 0.007 | 0.00021 | 9.4 | 0.0007 | | 0.00025 | 0.0013 | <0.001 | <0.00001 | 0.0067 | 0.042 | <0.00002 | 0.00014 | 0.023 | 0.036 | 0.00012 | 0.002 | |
| ML08-241-03 | 2.4 | <0.000003 | 0.00015 | <0.0005 | <0.0005 | 0.41 | 17 | 0.02 | 0.27 | 0.0032 | 0.00041 | 12 | 0.0004 | | 0.00016 | 0.0006 | <0.001 | <0.00001 | 0.015 | 0.024 | <0.00002 | 0.00039 | 0.024 | 0.0015 | 0.00027 | <0.001 | |
| ML08-243-02 | 4.3 | <0.000003 | 0.000025 | <0.0005 | <0.0005 | 0.038 | 9.9 | 0.014 | 0.25 | 0.00051 | 0.00015 | 7.6 | 0.0002 | | 0.00003 | 0.0006 | <0.001 | <0.00001 | 0.019 | 0.0026 | <0.00002 | 0.00019 | 0.015 | 0.0019 | 0.000018 | <0.001 | |
| ML08-245-01 | 2.4 | <0.000003 | 0.00031 | <0.0005 | <0.0005 | 0.86 | 11 | 0.012 | 0.39 | 0.0059 | 0.00022 | 12 | 0.0008 | | 0.00013 | 0.0008 | <0.001 | <0.00001 | 0.0088 | 0.036 | <0.00002 | 0.00027 | 0.023 | 0.00098 | 0.00021 | <0.001 | |
| ML09-259-01 | 2.9 | <0.000003 | 0.00051 | 0.0007 | <0.0005 | 1.3 | 11 | 0.017 | 0.45 | 0.011 | 0.00021 | 9.5 | 0.0007 | | 0.00012 | 0.0017 | <0.001 | <0.00001 | 0.011 | 0.083 | <0.00002 | 0.00019 | 0.026 | 0.0012 | 0.00023 | 0.002 | |
| ML95-104-01 | 4.2 | <0.000003 | 0.00026 | <0.0005 | 0.001 | 0.58 | 14 | 0.025 | 0.35 | 0.0059 | 0.00022 | 6.1 | 0.0004 | | 0.00025 | 0.0016 | <0.001 | 0.00006 | 0.016 | 0.044 | <0.00002 | 0.00019 | 0.016 | 0.0013 | 0.00016 | 0.003 | |
| ML95-105-02 | 4 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.019 | 17 | 0.021 | 0.35 | 0.00067 | 0.00032 | 5.4 | 0.0002 | | 0.00008 | 0.0008 | <0.001 | <0.00001 | 0.024 | 0.0012 | <0.00002 | 0.00042 | 0.017 | 0.0012 | 0.000028 | <0.001 | |
| ML95-117-02 | 3.5 | <0.000003 | 0.00017 | <0.0005 | <0.0005 | 0.38 | 12 | 0.007 | 0.3 | 0.0041 | 0.00016 | 7.2 | 0.0003 | | 0.00011 | 0.0007 | <0.001 | <0.00001 | 0.013 | 0.025 | <0.00002 | 0.00015 | 0.02 | 0.0013 | 0.000089 | <0.001 | |
| ML97-186-02 | 4.2 | 0.000044 | 0.0002 | <0.0005 | 0.0006 | 0.56 | 12 | 0.013 | 0.4 | 0.0055 | 0.00024 | 9.4 | 0.0005 | | 0.0002 | 0.0011 | <0.001 | <0.00001 | 0.022 | 0.034 | <0.00002 | 0.00032 | 0.019 | 0.00084 | 0.00016 | <0.001 | |
| CAMLD264930 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264931 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264935 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264957 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264958 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ML92-061-03 | 4.5 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.23 | 13 | 0.004 | 0.45 | 0.00077 | 0.00009 | 5.7 | <0.0001 | | 0.00004 | 0.0006 | <0.001 | 0.00006 | 0.064 | 0.0013 | 0.00003 | 0.00019 | 0.00064 | 0.00071 | 0.000023 | <0.001 | |
| ML92-062-01 | 7.2 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | 0.41 | 6 | 0.002 | 1.1 | 0.0017 | 0.00018 | 5.3 | <0.0001 | | 0.00003 | 0.0006 | <0.001 | <0.00001 | 0.092 | 0.0013 | <0.00002 | 0.00011 | 0.00036 | 0.00074 | 0.000026 | <0.001 | |
| ML92-062-02 | 2.5 | <0.000003 | 0.00013 | <0.0005 | <0.0005 | 1.1 | 17 | 0.007 | 0.35 | 0.0023 | 0.00017 | 4.6 | 0.0003 | | 0.00064 | 0.0006 | <0.001 | 0.00007 | 0.032 | 0.02 | <0.00002 | 0.00019 | 0.0029 | 0.0005 | 0.00013 | <0.001 | |
| ML95-82-2 | 12 | 0.000028 | 0.000069 | <0.0005 | <0.0005 | 0.13 | 18 | 0.01 | 0.97 | 0.0011 | 0.00022 | 1.5 | <0.0001 | | 0.00005 | 0.0006 | <0.001 | 0.00003 | 0.14 | 0.0005 | 0.00003 | 0.00033 | 0.00023 | 0.00074 | 0.000035 | <0.001 | |
| ML08-236-1 | 3.8 | 0.000033 | 0.000064 | <0.0005 | <0.0005 | 0.17 | 16 | 0.003 | 0.29 | 0.001 | 0.00036 | 6.7 | <0.0001 | | 0.00009 | 0.0008 | <0.001 | 0.00004 | 0.033 | 0.0026 | 0.00004 | 0.001 | 0.0021 | 0.0016 | 0.000073 | 0.003 | |
| ML90-09-1 | 8.4 | 0.000021 | 0.00006 | <0.0005 | <0.0005 | 0.1 | 12 | <0.001 | 0.64 | 0.00064 | 0.00031 | 1.8 | <0.0001 | | 0.00003 | 0.0006 | <0.001 | 0.00002 | 0.13 | 0.0005 | <0.00002 | 0.000062 | 0.0003 | 0.00066 | 0.000027 | <0.001 | |
| ML90-10-2 | 9.6 | 0.00023 | 0.00024 | <0.0005 | <0.0005 | 0.01 | 14 | 0.003 | 0.79 | 0.00096 | 0.00049 | 4.2 | 0.0003 | | 0.00021 | 0.0005 | <0.001 | 0.00002 | 0.09 | 0.0003 | 0.00022 | 0.00052 | 0.00076 | 0.0012 | 0.00021 | <0.001 | |
| ML92-053-1 | 8.1 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.04 | 9.5 | <0.001 | 0.77 | 0.00033 | 0.00021 | 1.7 | <0.0001 | | 0.00005 | 0.0007 | <0.001 | 0.00002 | 0.13 | 0.0002 | <0.00002 | 0.000033 | 0.00029 | 0.00079 | 0.000007 | 0.003 | |
| ML92-060-1 | 9.2 | <0.000003 | 0.000032 | <0.0005 | <0.0005 | 0.36 | 21 | 0.002 | 1.2 | 0.0014 | 0.00023 | 5.4 | <0.0001 | | 0.00003 | 0.0007 | <0.001 | 0.00005 | 0.11 | 0.001 | <0.00002 | 0.000085 | 0.00023 | 0.00068 | 0.00002 | 0.002 | |
| ML95-93-03 | 13 | <0.000003 | 0.000055 | <0.0005 | <0.0005 | 0.02 | 11 | 0.003 | 0.85 | 0.00068 | 0.00011 | 1.8 | 0.0002 | | <0.00002 | 0.0007 | <0.001 | 0.00003 | 0.11 | 0.0002 | <0.00002 | 0.000061 | 0.0001 | 0.0011 | 0.000003 | 0.002 | |
| ML08-225-01 | 3.7 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.32 | 16 | 0.007 | 0.39 | 0.0014 | 0.00025 | 5.3 | <0.0001 | | 0.00014 | 0.0014 | <0.001 | <0.00001 | 0.021 | 0.0044 | <0.00002 | 0.00072 | 0.0018 | 0.00087 | 0.000042 | <0.001 | |
| ML08-226-02 | 5.6 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | 0.82 | 14 | 0.006 | 0.91 | 0.0033 | 0.0001 | 4 | 0.0002 | | 0.0002 | 0.0014 | <0.001 | 0.00003 | 0.024 | 0.0084 | <0.00002 | 0.00014 | 0.0007 | 0.0048 | 0.00009 | <0.001 | |
| ML08-226-03 | 4.5 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.68 | 17 | 0.005 | 0.46 | 0.0012 | 0.0001 | 3 | <0.0001 | | 0.00011 | 0.0005 | <0.001 | <0.00001 | 0.05 | 0.0035 | <0.00002 | 0.000068 | 0.00046 | 0.013 | 0.000034 | <0.001 | |
| ML08-228-01 | 4.8 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.15 | 20 | 0.009 | 0.73 | 0.00097 | 0.0002 | 4.3 | <0.0001 | | 0.00013 | 0.0009 | <0.001 | <0.00001 | 0.025 | 0.0034 | <0.00002 | 0.00021 | 0.0011 | 0.003 | 0.000032 | <0.001 | |
| ML08-228-02 | 7.6 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | 0.72 | 12 | 0.009 | 0.98 | 0.0022 | 0.00009 | 2.2 | <0.0001 | | 0.00011 | 0.0012 | <0.001 | <0.00001 | 0.036 | 0.0019 | <0.00002 | 0.00017 | 0.00013 | 0.00085 | 0.00004 | <0.001 | |
| ML08-229-05 | 5.6 | <0.000003 | 0.000007 | <0.0005 | <0.0005 | 0.026 | 11 | 0.003 | 0.55 | 0.00019 | 0.00011 | 2.1 | <0.0001 | | 0.00007 | 0.0005 | <0.001 | <0.00001 | 0.13 | 0.0003 | <0.00002 | 0.000024 | 0.0005 | 0.00077 | 0.000004 | <0.001 | |
| ML08-233-02 | 3.8 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | 0.21 | 15 | 0.024 | 0.36 | 0.00066 | 0.00012 | 6.8 | <0.0001 | | 0.00011 | 0.0005 | <0.001 | <0.00001 | 0.044 | 0.0019 | <0.00002 | 0.00023 | 0.0011 | 0.0029 | 0.000021 | <0.001 | |
| ML08-241-02 | 6.9 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.007 | 17 | <0.001 | 0.64 | 0.00049 | 0.00023 | 4.5 | <0.0001 | | <0.00002 | 0.0005 | <0.001 | <0.00001 | 0.19 | 0.0003 | <0.00002 | 0.000053 | 0.00032 | 0.0019 | 0.000003 | <0.001 | |
| ML08-243-01 | 3.9 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.036 | 13 | 0.002 | 0.46 | 0.00028 | 0.00022 | 13 | <0.0001 | | <0.00002 | 0.0008 | <0.001 | <0.00001 | 0.093 | 0.0004 | <0.00002 | 0.000072 | 0.00082 | 0.00098 | 0.000018 | <0.001 | |
| ML09-254-01 | 7.5 | <0.000003 | 0.000054 | <0.0005 | <0.0005 | 0.41 | 15 | 0.005 | 0.76 | 0.0016 | 0.00034 | 7.5 | 0.0004 | | 0.00007 | 0.0005 | <0.001 | <0.00001 | 0.068 | 0.0054 | <0.00002 | 0.00051 | 0.00089 | 0.00043 | 0.000062 | <0.001 | |
| ML92062-01 | 5.6 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | 0.12 | 17 | 0.004 | 0.5 | 0.00048 | 0.00024 | 3.4 | <0.0001 | | 0.00011 | 0.0006 | <0.001 | <0.00001 | 0.087 | 0.0011 | <0.00002 | 0.00017 | 0.001 | 0.0013 | 0.000019 | <0.001 | |
| ML95-117-01 | 8.1 | <0.000003 | 0.000031 | <0.0005 | <0.0005 | 0.025 | 14 | 0.002 | 0.81 | 0.00053 | 0.00019 | 2.7 | <0.0001 | | 0.00007 | 0.0006 | <0.001 | <0.00001 | 0.073 | 0.0004 | <0.00002 | 0.000091 | 0.00031 | 0.0012 | 0.000003 | <0.001 | |
| ML95-117-03 | 8.2 | <0.000003 | 0.000031 | <0.0005 | <0.0005 | 0.24 | 8.3 | <0.001 | 0.75 | 0.001 | 0.00041 | 3.2 | 0.0003 | | 0.00013 | 0.0005 | <0.001 | <0.00001 | 0.061 | 0.003 | <0.00002 | 0.000097 | 0.00087 | 0.0018 | 0.000046 | <0.001 | |
| ML95-82-01 | 7.6 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.1 | 15 | <0.001 | 0.62 | 0.00042 | 0.00026 | 2.9 | <0.0001 | | 0.00004 | 0.0005 | <0.001 | <0.00001 | 0.083 | 0.0008 | <0.00002 | 0.000053 | 0.00033 | 0.00075 | 0.000012 | <0.001 | |
| ML95-83-01 | 1 | <0.000003 | 0.000095 | <0.0005 | <0.0005 | 1.2 | 16 | 0.009 | 0.31 | 0.0033 | 0.00027 | 2.3 | 0.0003 | | 0.00029 | 0.0004 | <0.001 | <0.00001 | 0.0051 | 0.022 | <0.00002 | 0.00032 | 0.0021 | 0.00054 | 0.00026 | <0.001 | |
| ML95-95-01 | 4.7 | <0.000003 | 0.000023 | <0.0005 | 0.0006 | 0.19 | 20 | 0.005 | 0.36 | 0.00088 | 0.00033 | 2.2 | <0.0001 | | 0.00023 | 0.0005 | <0.001 | 0.00004 | 0.038 | 0.0025 | <0.00002 | 0.0003 | 0.0016 | 0.0012 | 0.000037 | 0.002 | |
| ML95-98-01 | 7.5 | <0.000003 | 0.000034 | <0.0005 | <0.0005 | 0.47 | 20 | 0.013 | 0.96 | 0.0025 | 0.0002 | 4.1 | <0.0001 | | 0.00017 | 0.0014 | <0.001 | <0.00001 | 0.038 | 0.0057 | <0.00002 | 0.0003 | 0.00043 | 0.0016 | 0.000085 | <0.001 | |
| ML97-186-01 | 5.8 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.35 | 14 | 0.003 | 0.9 | 0.0014 | 0.00066 | 18 | 0.0003 | | 0.00023 | 0.0008 | <0.001 | <0.00001 | 0.09 | 0.004 | <0.00002 | 0.0007 | 0.0013 | 0.00054 | 0.00088 | 0.002 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| 163066 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163784 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264964 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264965 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264936 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264944 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 162591 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 162895 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 162952 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163309 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163763 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD301939 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD307379 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD307381 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264960 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264967 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264939 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264943 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD298984 | 9.5 | <0.000003 | 0.000004 | <0.00008 | <0.0002 | <0.007 | 11 | 0.0043 | 0.54 | 0.0023 | 0.00046 | 4.4 | <0.0001 | 0.005 | <0.00001 | <0.0009 | <0.00004 | 0.00007 | 0.14 | <0.00005 | 0.000007 | 0.000054 | 0.00012 | | | <0.002 | <0.002 |
| 162858 | 86 | 0.000003 | 0.000014 | 0.00021 | 0.0009 | <0.007 | 15 | 0.004 | 1.9 | 0.012 | 0.00033 | 7.7 | 0.0002 | <0.003 | <0.00001 | <0.0009 | 0.00024 | 0.00014 | 0.38 | <0.00005 | 0.000027 | 0.0009 | 0.00011 | | | <0.002 | <0.002 |
| 163079 | 78 | <0.000003 | 0.00002 | 0.0002 | 0.0008 | <0.007 | 12 | 0.0036 | 3.5 | 0.016 | 0.00043 | 9.4 | 0.0002 | <0.003 | 0.00006 | <0.0009 | 0.00009 | 0.00012 | 0.76 | <0.00005 | 0.000026 | 0.00016 | 0.00004 | | | <0.002 | <0.002 |
| CAMLD264932 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD273962 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD210903 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264947 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264952 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264954 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264971 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264941 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264933 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264934 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD305051 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD307337 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264950 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264955 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264946 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ML00-221-01 | 2.4 | <0.000003 | 0.00028 | 0.0018 | <0.0005 | 0.48 | 11 | <0.001 | 0.44 | 0.0046 | 0.00043 | 11 | 0.001 | | 0.00023 | 0.0008 | <0.001 | 0.00007 | 0.012 | 0.023 | <0.00002 | 0.00021 | 0.015 | 0.00088 | 0.00018 | 0.002 | |
| ML00-221-02 | 3.4 | <0.000003 | 0.00026 | 0.0017 | 0.0006 | 0.34 | 8.7 | 0.002 | 0.49 | 0.0037 | 0.00047 | 8 | 0.0015 | | 0.00031 | 0.0008 | <0.001 | 0.00009 | 0.017 | 0.019 | <0.00002 | 0.00044 | 0.012 | 0.0008 | 0.00019 | 0.002 | |
| ML00-221-03 | 3.1 | <0.000003 | 0.00032 | 0.0022 | <0.0005 | 0.44 | 11 | 0.002 | 0.54 | 0.0037 | 0.00069 | 8.2 | 0.0013 | | 0.00031 | 0.0008 | <0.001 | 0.00011 | 0.015 | 0.029 | <0.00002 | 0.00031 | 0.014 | 0.0014 | 0.00026 | 0.002 | |
| ML08-238-04 | 2.8 | <0.000003 | 0.0003 | 0.0019 | <0.0005 | 0.63 | 10 | <0.001 | 0.49 | 0.004 | 0.00073 | 14 | 0.001 | | 0.00025 | 0.0007 | <0.001 | 0.00005 | 0.017 | 0.026 | <0.00002 | 0.00023 | 0.014 | 0.00083 | 0.00019 | 0.002 | |
| ML90-03-01 | 2.8 | <0.000003 | 0.00034 | 0.0023 | 0.0008 | 0.6 | 14 | 0.002 | 0.59 | 0.0046 | 0.00086 | 7 | 0.0015 | | 0.00027 | 0.0012 | <0.001 | 0.00009 | 0.013 | 0.029 | <0.00002 | 0.00034 | 0.014 | 0.00081 | 0.00031 | 0.002 | |
| ML90-03-02 | 3.7 | <0.000003 | 0.00016 | 0.0008 | <0.0005 | 0.53 | 11 | <0.001 | 0.47 | 0.0039 | 0.00095 | 8.1 | 0.0006 | | 0.00014 | 0.001 | <0.001 | 0.00003 | 0.015 | 0.017 | <0.00002 | 0.00017 | 0.0094 | 0.00048 | 0.00012 | <0.001 | |
| ML90-04-02 | 3.4 | 0.000013 | 0.00032 | 0.0021 | <0.0005 | 0.38 | 7 | <0.001 | 0.5 | 0.0038 | 0.00021 | 7.3 | 0.0011 | | 0.00023 | 0.0008 | <0.001 | 0.00006 | 0.014 | 0.026 | <0.00002 | 0.00035 | 0.013 | 0.00053 | 0.00019 | 0.002 | |
| ML90-04-03 | 3.7 | <0.000003 | 0.00019 | 0.001 | <0.0005 | 0.48 | 11 | <0.001 | 0.51 | 0.0032 | 0.00033 | 10 | 0.0008 | | 0.00013 | 0.0008 | <0.001 | 0.00004 | 0.02 | 0.021 | <0.00002 | 0.00016 | 0.015 | 0.00057 | 0.00013 | <0.001 | |
| ML90-07-01 | 2.5 | <0.000003 | 0.00012 | <0.0005 | <0.0005 | 0.22 | 10 | 0.003 | 0.24 | 0.0022 | 0.00014 | 6.5 | 0.0004 | | 0.00005 | 0.0005 | <0.001 | 0.00002 | 0.014 | 0.012 | <0.00002 | 0.00043 | 0.011 | 0.0011 | 0.00015 | <0.001 | |
| ML90-08-01 | 3.2 | <0.000003 | 0.00011 | 0.0007 | <0.0005 | 0.15 | 6.7 | 0.003 | 0.36 | 0.0015 | 0.00018 | 7.7 | 0.0004 | | 0.0001 | 0.0006 | <0.001 | 0.00004 | 0.016 | 0.0086 | <0.00002 | 0.00033 | 0.011 | 0.00053 | 0.000058 | <0.001 | |
| ML90-08-02 | 3.7 | <0.000003 | 0.00012 | <0.0005 | <0.0005 | 0.2 | 11 | 0.002 | 0.28 | 0.0022 | 0.00015 | 6.8 | 0.0006 | | 0.00006 | 0.0006 | <0.001 | 0.00004 | 0.014 | 0.012 | <0.00002 | 0.00045 | 0.012 | 0.00068 | 0.000085 | <0.001 | |
| ML90-12-02 | 4.1 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | 0.36 | 7.7 | <0.001 | 0.38 | 0.0028 | 0.00023 | 6.2 | 0.0004 | | 0.00008 | 0.0006 | <0.001 | 0.00002 | 0.017 | 0.011 | <0.00002 | 0.0002 | 0.0076 | 0.00042 | 0.000089 | <0.001 | |
| ML92-061-01 | 3.4 | 0.000005 | 0.00039 | 0.0023 | 0.0007 | 0.55 | 11 | 0.002 | 0.63 | 0.0049 | 0.00047 | 6.6 | 0.0015 | | 0.00021 | 0.0006 | <0.001 | 0.00005 | 0.016 | 0.029 | <0.00002 | 0.00027 | 0.011 | 0.0013 | 0.00034 | 0.003 | |
| ML92-061-02 | 4 | <0.000003 | 0.00025 | 0.0018 | <0.0005 | 0.35 | 10 | <0.001 | 0.61 | 0.0033 | 0.00036 | 5.9 | 0.0012 | | 0.00016 | 0.0008 | <0.001 | 0.00005 | 0.017 | 0.021 | <0.00002 | 0.00018 | 0.011 | 0.00088 | 0.00015 | 0.002 | |
| ML92-061-04 | 3.4 | <0.000003 | 0.00025 | 0.0012 | <0.0005 | 0.5 | 9.2 | 0.002 | 0.39 | 0.0039 | 0.00023 | 7 | 0.0007 | | 0.00014 | 0.0006 | <0.001 | 0.00006 | 0.013 | 0.027 | <0.00002 | 0.00025 | 0.013 | 0.00053 | 0.00015 | 0.002 | |
| ML92-062-03 | 2.8 | <0.000003 | 0.00025 | 0.0011 | <0.0005 | 0.69 | 11 | 0.003 | 0.4 | 0.0061 | 0.0005 | 8.4 | 0.0007 | | 0.00022 | 0.0006 | <0.001 | 0.00003 | 0.012 | 0.034 | <0.00002 | 0.00038 | 0.014 | 0.00054 | 0.00025 | 0.002 | |
| ML95-82-1 | 3.5 | <0.000003 | 0.00017 | 0.001 | <0.0005 | 0.23 | 12 | <0.001 | 0.52 | 0.002 | 0.00065 | 6.6 | 0.0007 | | 0.00027 | 0.0009 | <0.001 | 0.00004 | 0.015 | 0.015 | <0.00002 | 0.00054 | 0.011 | 0.00081 | 0.00018 | 0.002 | |
| ML95-93-01 | 2.5 | 0.000006 | 0.00065 | 0.003 | 0.0008 | 0.78 | 10 | 0.002 | 0.59 | 0.0053 | 0.00064 | 10 | 0.0019 | | 0.00045 | 0.0012 | <0.001 | 0.00011 | 0.013 | 0.027 | <0.00002 | 0.00023 | 0.012 | 0.018 | 0.0004 | 0.005 | |
| ML95-93-02 | 2.9 | <0.000003 | 0.00019 | 0.0012 | <0.0005 | 0.31 | 11 | <0.001 | 0.38 | 0.0023 | 0.00042 | 6.7 | 0.0005 | | 0.00015 | 0.0009 | <0.001 | 0.00006 | 0.014 | 0.014 | <0.00002 | 0.00023 | 0.012 | 0.0017 | 0.00014 | 0.002 | |
| ML95-93-04 | 3.7 | <0.000003 | 0.00017 | 0.0007 | <0.0005 | 0.41 | 11 | 0.003 | 0.35 | 0.0034 | 0.00021 | 9 | 0.0004 | | 0.00017 | 0.0007 | <0.001 | 0.00008 | 0.02 | 0.017 | <0.00002 | 0.0012 | 0.01 | 0.0017 | 0.00022 | 0.002 | |
| ML00-221-04 | 3.9 | <0.000003 | 0.00022 | 0.0015 | <0.0005 | 0.42 | 9.8 | <0.001 | 0.52 | 0.0025 | 0.00048 | 7.9 | 0.0008 | | 0.00023 | 0.0009 | <0.001 | 0.0001 | 0.017 | 0.02 | <0.00002 | 0.00013 | 0.0089 | 0.00075 | 0.00015 | 0.002 | |
| ML08-236-3 | 3.9 | <0.000003 | 0.000063 | <0.0005 | <0.0005 | 0.16 | 9.7 | <0.001 | 0.4 | 0.0012 | 0.00058 | 13 | 0.0002 | | 0.00014 | 0.0007 | <0.001 | <0.00001 | 0.016 | 0.009 | <0.00002 | 0.00015 | 0.0084 | 0.0045 | 0.000065 | <0.001 | |
| ML90-04-01 | 4.4 | 0.000006 | 0.00038 | 0.002 | <0.0005 | 0.47 | 11 | 0.003 | 0.64 | 0.0048 | 0.00036 | 6.7 | 0.0015 | | 0.00043 | 0.0009 | <0.001 | 0.00006 | 0.017 | 0.021 | <0.00002 | 0.0004 | 0.012 | 0.00046 | 0.0002 | 0.002 | |
| ML90-09-2 | 3.6 | 0.000009 | 0.000085 | <0.0005 | <0.0005 | 0.16 | 12 | 0.003 | 0.28 | 0.0016 | 0.0013 | 8.7 | 0.0003 | | 0.0001 | 0.0007 | <0.001 | 0.00007 | 0.018 | 0.01 | <0.00002 | 0.0013 | 0.015 | 0.00079 | 0.00025 | <0.001 | |
| ML90-10-1 | 4.2 | 0.000005 | 0.00015 | <0.0005 | <0.0005 | 0.16 | 10 | 0.002 | 0.58 | 0.0015 | 0.0048 | 8 | 0.0007 | | 0.00012 | 0.0008 | <0.001 | 0.00006 | 0.021 | 0.0098 | <0.00002 | 0.0012 | 0.0087 | 0.0015 | 0.00025 | <0.001 | |
| ML90-10-3 | 2.5 | 0.000031 | 0.00014 | <0.0005 | <0.0005 | 0.31 | 14 | <0.001 | 0.28 | 0.0024 | 0.00042 | 6.1 | 0.0004 | | 0.00014 | 0.0007 | <0.001 | 0.00009 | 0.012 | 0.017 | 0.00004 | 0.0005 | 0.01 | 0.00084 | 0.0002 | <0.001 | |
| ML90-12-01 | 3.3 | <0.000003 | 0.0002 | 0.0012 | <0.0005 | 0.33 | 10 | 0.003 | 0.41 | 0.0026 | 0.0014 | 7.3 | 0.0008 | | 0.00011 | 0.0007 | <0.001 | 0.00006 | 0.015 | 0.015 | <0.00002 | 0.00068 | 0.013 | 0.0006 | 0.00024 | <0.001 | |
| ML90-14-2 | 4.1 | <0.000003 | 0.00015 | 0.0006 | <0.0005 | 0.29 | 10 | <0.001 | 0.44 | 0.0022 | 0.00039 | 6.6 | 0.0005 | | 0.0001 | 0.0005 | <0.001 | 0.00009 | 0.019 | 0.017 | <0.00002 | 0.00029 | 0.0087 | 0.00072 | 0.00013 | <0.001 | |
| ML95-82-3 | 3.3 | 0.000041 | 0.00011 | <0.0005 | 0.0006 | 0.23 | 11 | <0.001 | 0.29 | 0.0021 | 0.00032 | 8 | 0.0003 | | 0.00013 | 0.0022 | <0.001 | 0.00004 | 0.015 | 0.013 | <0.00002 | 0.0012 | 0.013 | 0.00068 | 0.00012 | <0.001 | |
| ML08-225-02 | 2.7 | 0.000011 | 0.000099 | 0.0006 | <0.0005 | 0.18 | 13 | <0.001 | 0.4 | 0.0013 | 0.00029 | 6.9 | 0.0005 | | 0.00019 | 0.0008 | <0.001 | <0.00001 | 0.013 | 0.0079 | <0.00002 | 0.00024 | 0.01 | 0.0013 | 0.000079 | <0.001 | |
| ML08-230-01 | 3.1 | 0.000025 | 0.00012 | 0.0006 | <0.0005 | 0.24 | 13 | <0.001 | 0.52 | 0.0018 | 0.0026 | 22 | 0.0007 | | 0.00025 | 0.001 | <0.001 | <0.00001 | 0.014 | 0.0063 | <0.00002 | 0.00022 | 0.0089 | 0.00092 | 0.00014 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML08-232-01 | 1.6 | 0.000016 | 0.00022 | 0.0011 | <0.0005 | 0.46 | 12 | <0.001 | 0.41 | 0.0024 | 0.00039 | 7.4 | 0.0008 | | 0.00029 | 0.0006 | <0.001 | <0.00001 | 0.009 | 0.012 | <0.00002 | 0.00044 | 0.012 | 0.00067 | 0.00018 | <0.001 | |
| ML08-233-01 | 3.1 | <0.000003 | 0.000068 | <0.0005 | <0.0005 | 0.17 | 13 | <0.001 | 0.31 | 0.0015 | 0.00032 | 7.2 | 0.0002 | | 0.00006 | 0.0006 | <0.001 | <0.00001 | 0.011 | 0.009 | <0.00002 | 0.00055 | 0.012 | 0.00093 | 0.00011 | <0.001 | |
| ML08-240-01 | 2.6 | <0.000003 | 0.00011 | 0.0006 | <0.0005 | 0.29 | 14 | 0.002 | 0.27 | 0.0023 | 0.00031 | 8.5 | 0.0005 | | 0.00021 | 0.0005 | <0.001 | <0.00001 | 0.013 | 0.014 | <0.00002 | 0.00049 | 0.014 | 0.0028 | 0.00013 | <0.001 | |
| ML08-241-01 | 3.5 | <0.000003 | 0.00006 | <0.0005 | <0.0005 | 0.2 | 14 | <0.001 | 0.33 | 0.0012 | 0.0017 | 9.7 | 0.0003 | | 0.00006 | 0.0007 | <0.001 | <0.00001 | 0.017 | 0.0065 | <0.00002 | 0.00044 | 0.0073 | 0.001 | 0.00005 | <0.001 | |
| ML08-245-02 | 2.5 | 0.000004 | 0.00028 | 0.0018 | <0.0005 | 0.55 | 13 | 0.002 | 0.49 | 0.0043 | 0.00087 | 7 | 0.0016 | | 0.00045 | 0.0006 | <0.001 | <0.00001 | 0.012 | 0.023 | <0.00002 | 0.00071 | 0.013 | 0.00061 | 0.0002 | 0.002 | |
| ML09-254-02 | 3.4 | <0.000003 | 0.000088 | <0.0005 | <0.0005 | 0.23 | 10 | <0.001 | 0.38 | 0.0017 | 0.00082 | 12 | 0.0006 | | 0.0001 | 0.0006 | <0.001 | <0.00001 | 0.018 | 0.011 | <0.00002 | 0.00055 | 0.014 | 0.00064 | 0.000089 | <0.001 | |
| ML95-105-03 | 4.5 | 0.000004 | 0.00017 | 0.0011 | 0.015 | 0.3 | 14 | <0.001 | 0.73 | 0.0024 | 0.0043 | 6.8 | 0.0011 | | 0.0038 | 0.0007 | <0.001 | 0.00078 | 0.024 | 0.018 | <0.00002 | 0.00083 | 0.0096 | 0.00082 | 0.00023 | 0.015 | |
| ML95-105-04 | 2.3 | 0.000004 | 0.00021 | 0.0009 | <0.0005 | 0.55 | 17 | 0.017 | 0.31 | 0.0049 | 0.00029 | 10 | 0.0007 | | 0.00027 | 0.0006 | <0.001 | 0.00002 | 0.013 | 0.025 | <0.00002 | 0.00053 | 0.015 | 0.0021 | 0.00028 | 0.002 | |
| ML95-107-03 | 3.1 | 0.000004 | 0.00014 | 0.0009 | <0.0005 | 0.26 | 14 | <0.001 | 0.52 | 0.0021 | 0.0014 | 6.4 | 0.0009 | | 0.00021 | 0.0009 | <0.001 | <0.00001 | 0.017 | 0.013 | <0.00002 | 0.00042 | 0.0096 | 0.00097 | 0.00024 | <0.001 | |
| ML95-113-01 | 5.5 | <0.000003 | 0.000085 | 0.0006 | <0.0005 | 0.13 | 12 | <0.001 | 0.8 | 0.0014 | 0.0013 | 5.7 | 0.0009 | | 0.00019 | 0.001 | <0.001 | 0.00003 | 0.02 | 0.0075 | <0.00002 | 0.00025 | 0.0061 | 0.00061 | 0.00014 | <0.001 | |
| ML95-113-02 | 3.5 | <0.000003 | 0.000067 | <0.0005 | <0.0005 | 0.14 | 15 | 0.002 | 0.32 | 0.0012 | 0.0003 | 6.1 | 0.0003 | | 0.00012 | 0.0006 | <0.001 | <0.00001 | 0.016 | 0.0079 | <0.00002 | 0.00056 | 0.011 | 0.00095 | 0.00009 | <0.001 | |
| ML95-120-01 | 4.5 | <0.000003 | 0.000095 | 0.0008 | <0.0005 | 0.16 | 12 | <0.001 | 0.59 | 0.0013 | 0.0007 | 6.4 | 0.0007 | | 0.0001 | 0.0006 | <0.001 | <0.00001 | 0.016 | 0.0096 | <0.00002 | 0.00017 | 0.008 | 0.0018 | 0.00012 | <0.001 | |
| ML95-82-02 | 2.9 | <0.000003 | 0.0001 | 0.0006 | 0.0034 | 0.32 | 13 | <0.001 | 0.39 | 0.0025 | 0.00047 | 11 | 0.0005 | | 0.0011 | 0.0006 | <0.001 | 0.00019 | 0.015 | 0.016 | <0.00002 | 0.00034 | 0.015 | 0.00044 | 0.00015 | 0.003 | |
| ML95-83-02 | 3 | <0.000003 | 0.00016 | 0.0007 | <0.0005 | 0.43 | 17 | 0.004 | 0.44 | 0.0029 | 0.0033 | 5.8 | 0.0007 | | 0.00023 | 0.0006 | <0.001 | <0.00001 | 0.013 | 0.022 | <0.00002 | 0.00066 | 0.011 | 0.00048 | 0.0004 | <0.001 | |
| ML95-85-01 | 3 | <0.000003 | 0.00011 | 0.0006 | <0.0005 | 0.31 | 16 | 0.004 | 0.31 | 0.0027 | 0.00028 | 5.6 | 0.0006 | | 0.00021 | 0.0006 | <0.001 | 0.00009 | 0.013 | 0.016 | <0.00002 | 0.00089 | 0.012 | 0.00076 | 0.00025 | 0.003 | |
| ML95-95-02 | 2.4 | 0.000085 | 0.0002 | 0.0012 | <0.0005 | 0.49 | 14 | 0.002 | 0.36 | 0.0037 | 0.00028 | 6 | 0.0007 | | 0.00036 | 0.0006 | <0.001 | 0.00004 | 0.012 | 0.023 | <0.00002 | 0.00039 | 0.014 | 0.001 | 0.00031 | 0.002 | |
| ML95-105-01 | 9.5 | <0.000003 | 0.000013 | <0.0005 | <0.0005 | 0.033 | 20 | 0.002 | 0.92 | 0.00047 | 0.00016 | 2.4 | <0.0001 | | 0.00007 | 0.0007 | <0.001 | <0.00001 | 0.11 | 0.0003 | <0.00002 | 0.000024 | 0.00007 | 0.006 | 0.000006 | <0.001 | |
| CAMLD264942 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD301646 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264928 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264937 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264938 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163018 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163058 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163425 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD298980 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD300379 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD300408 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD301865 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD301964 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD301979 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD302816 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD302829 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD302851 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD305469 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD305489 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD306783 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD309001 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD309016 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264963 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264966 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264968 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264969 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264970 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 163305 | 3.8 | <0.000003 | 0.000011 | 0.0001 | 0.0003 | 0.022 | 10 | 0.011 | 0.5 | 0.0016 | 0.0014 | 27 | 0.0001 | 0.006 | 0.00008 | <0.0009 | 0.00054 | 0.00016 | 0.019 | 0.0015 | <0.000005 | 0.000039 | 0.00098 | | | <0.002 | <0.002 |
| CAEXD305504 | 5.1 | <0.000003 | 0.000016 | 0.0003 | 0.0005 | 0.058 | 9.2 | 0.0048 | 0.6 | 0.001 | 0.0011 | 25 | 0.0005 | <0.003 | 0.00005 | <0.0009 | 0.00041 | 0.00018 | 0.022 | 0.0051 | <0.000005 | 0.000025 | 0.0017 | | | <0.002 | <0.002 |
| CAMLD264927 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264951 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264926 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264929 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD273963 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264940 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264945 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD207013 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD298919 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD306977 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD307472 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD309452 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264948 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264949 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264953 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264956 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264959 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264961 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD264972 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ML95-107-01 | 4.6 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | 0.44 | 20 | 0.013 | 0.63 | 0.002 | 0.00021 | 2.2 | 0.0003 | | 0.00024 | 0.0011 | <0.001 | 0.00005 | 0.032 | 0.0078 | <0.00002 | 0.00028 | 0.0012 | 0.00077 | 0.000067 | 0.004 | |
| ML95-107-02 | 8.3 | <0.000003 | 0.000015 | <0.0005 | <0.0005 | 0.007 | 19 | 0.005 | 1.2 | 0.00089 | 0.00057 | 3.8 | 0.0002 | | 0.00003 | 0.0007 | <0.001 | 0.00011 | 0.11 | 0.0003 | <0.00002 | 0.000092 | 0.00037 | 0.002 | 0.000005 | <0.001 | |
| ML08-226-05 | 3.7 | 0.000007 | 0.000076 | <0.0005 | <0.0005 | 0.16 | 13 | <0.001 | 0.39 | 0.0012 | 0.00044 | 6.8 | 0.0004 | | 0.00012 | 0.0008 | <0.001 | <0.00001 | 0.015 | 0.0061 | <0.00002 | 0.00012 | 0.0094 | 0.0038 | 0.00005 | <0.001 | |
| M08-743-03 | 24 | 0.00015 | 0.00021 | <0.0005 | <0.0005 | 0.01 | 8.9 | 0.004 | 7.3 | 0.099 | 0.00059 | 7 | 0.0009 | | 0.00008 | 0.0032 | <0.001 | 0.00003 | 0.04 | 0.0002 | <0.00002 | 0.000085 | 0.00011 | 0.00037 | 0.000002 | <0.001 | |
| M08-748-03 | 5.5 | <0.000003 | 0.00003 | <0.0005 | <0.0005 | 0.01 | 1.5 | <0.001 | 0.69 | 0.00053 | 0.00005 | 6.7 | <0.0001 | | <0.00002 | 0.0036 | <0.001 | <0.00001 | 0.021 | <0.0001 | <0.00002 | <0.000001 | 0.0036 | 0.00083 | <0.000001 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M09-817-01 | 12 | <0.000003 | 0.000088 | <0.0005 | <0.0005 | 0.008 | 13 | 0.006 | 3.7 | 0.02 | 0.00014 | 4.4 | 0.0004 | | <0.00002 | 0.0037 | <0.001 | <0.00001 | 0.022 | 0.0004 | <0.00002 | 0.000025 | 0.00054 | 0.00094 | 0.000002 | <0.001 | |
| CAEXD257967 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD265601 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD290332 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD297489 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD176520 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD302345 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD217369 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD290362 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD293633 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD293885 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD197112 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD297585 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD302054 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M08-735-02 | 7 | <0.000003 | 0.000047 | <0.0005 | <0.0005 | 0.01 | 17 | 0.002 | 3 | 0.0012 | 0.00011 | 12 | 0.0003 | | 0.00023 | 0.0032 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | 0.000005 | 0.0015 | 0.0021 | 0.000002 | <0.001 | |
| M09-802-02 | 28 | <0.000003 | 0.00023 | <0.0005 | <0.0005 | 0.003 | 1.5 | <0.001 | 5.9 | 0.25 | 0.0001 | 1.7 | 0.0006 | | 0.00006 | 0.0055 | <0.001 | 0.00003 | 0.034 | 0.0003 | <0.00002 | 0.000079 | <0.00003 | 0.00041 | 0.000002 | 0.002 | |
| M09-803-01 | 26 | <0.000003 | 0.000091 | <0.0005 | <0.0005 | 0.005 | 1.6 | <0.001 | 7.6 | 0.092 | 0.00014 | 1.2 | 0.0002 | | <0.00002 | 0.0018 | <0.001 | <0.00001 | 0.036 | 0.0003 | <0.00002 | 0.00005 | <0.00003 | 0.0016 | 0.000002 | <0.001 | |
| M10-935-02 | 19 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | 0.026 | 2.5 | <0.001 | 4.3 | 0.11 | 0.00043 | 5 | 0.0003 | | <0.00002 | 0.0026 | <0.001 | <0.00001 | 0.048 | 0.0004 | <0.00002 | 0.0011 | 0.00021 | 0.0017 | 0.000002 | <0.001 | |
| M98-248-01 | 22 | <0.000003 | 0.000093 | <0.0005 | <0.0005 | 0.016 | 4.1 | 0.003 | 6.3 | 0.29 | 0.00011 | 0.74 | 0.0004 | | 0.0001 | 0.0016 | <0.001 | <0.00001 | 0.024 | 0.0003 | <0.00002 | 0.000071 | <0.00003 | 0.00064 | 0.000003 | <0.001 | |
| CAEXD183497 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD222666 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD257975 | 22 | <0.000003 | 0.000088 | 0.0001 | <0.0002 | <0.007 | 4 | 0.0014 | 4.8 | 0.035 | 0.0015 | 12 | 0.0007 | 0.047 | <0.00001 | 0.0028 | 0.00031 | 0.00009 | 0.078 | <0.00005 | 0.000008 | 0.00012 | 0.00021 | | | <0.002 | <0.002 |
| CAEXD184497 | 42 | 0.000026 | 0.000023 | <0.00008 | <0.0002 | <0.007 | 7.6 | 0.0031 | 2.5 | 0.078 | 0.0028 | 5.7 | <0.0001 | <0.003 | 0.00038 | 0.0012 | 0.00042 | 0.00008 | 0.066 | <0.00005 | 0.000015 | 0.00019 | 0.00008 | | | 0.002 | <0.002 |
| CAEXD176511 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD185037 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD193892 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD302349 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GT09-07-01 | 5.5 | <0.000003 | 0.000006 | <0.0005 | <0.0005 | 0.01 | 3.9 | <0.001 | 0.82 | 0.00049 | 0.00013 | 13 | <0.0001 | | <0.00002 | 0.0011 | <0.001 | <0.00001 | 0.018 | 0.0002 | <0.00002 | <0.000001 | 0.0039 | 0.00096 | <0.000001 | <0.001 | |
| GT09-07-02 | 6.3 | <0.000003 | 0.000007 | <0.0005 | <0.0005 | 0.01 | 9.1 | <0.001 | 0.99 | 0.0011 | 0.00015 | 9.8 | 0.0002 | | <0.00002 | 0.0017 | <0.001 | <0.00001 | 0.022 | <0.0001 | <0.00002 | <0.000001 | 0.0015 | 0.0013 | <0.000001 | <0.001 | |
| M08-729-01 | 4.5 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.01 | 8.5 | <0.001 | 0.47 | 0.00044 | 0.00032 | 10 | <0.0001 | | <0.00002 | 0.0031 | <0.001 | <0.00001 | 0.015 | 0.0002 | <0.00002 | 0.000003 | 0.0054 | 0.0012 | <0.000001 | <0.001 | |
| M08-729-02 | 5 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.01 | 4.9 | <0.001 | 0.52 | 0.00038 | 0.00007 | 9.6 | <0.0001 | | <0.00002 | 0.0018 | <0.001 | <0.00001 | 0.014 | <0.0001 | <0.00002 | <0.000001 | 0.004 | 0.0016 | <0.000001 | <0.001 | |
| M08-729-03 | 4.5 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | 0.01 | 8.7 | <0.001 | 0.5 | 0.00071 | 0.00032 | 13 | <0.0001 | | <0.00002 | 0.002 | <0.001 | 0.00002 | 0.011 | <0.0001 | <0.00002 | <0.000001 | 0.0034 | 0.001 | <0.000001 | <0.001 | |
| M08-729-04 | 5.9 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.01 | 6.3 | 0.002 | 1.4 | 0.0015 | 0.00009 | 9.8 | 0.0012 | | <0.00002 | 0.0027 | <0.001 | <0.00001 | 0.016 | 0.0002 | <0.00002 | 0.000011 | 0.0063 | 0.00095 | <0.000001 | <0.001 | |
| M08-729-06 | 7.4 | <0.000003 | 0.000043 | <0.0005 | <0.0005 | 0.01 | 8.5 | <0.001 | 2.3 | 0.0009 | 0.00015 | 7.4 | 0.001 | | <0.00002 | 0.0035 | <0.001 | <0.00001 | 0.031 | <0.0001 | <0.00002 | 0.000003 | 0.0014 | 0.0013 | 0.000006 | <0.001 | |
| M08-734-01 | 3.9 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.01 | 4.6 | <0.001 | 0.48 | 0.00031 | 0.00028 | 14 | <0.0001 | | 0.00006 | 0.0027 | <0.001 | 0.00003 | 0.012 | <0.0001 | <0.00002 | 0.000023 | 0.0074 | 0.00092 | 0.000003 | <0.001 | |
| M08-734-02 | 6.7 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.01 | 7.5 | <0.001 | 0.99 | 0.00075 | 0.00018 | 10 | <0.0001 | | 0.00008 | 0.0017 | <0.001 | 0.00003 | 0.016 | <0.0001 | <0.00002 | 0.000017 | 0.0011 | 0.001 | 0.000003 | <0.001 | |
| M08-734-03 | 7.1 | <0.000003 | 0.000026 | <0.0005 | <0.0005 | 0.01 | 7.7 | <0.001 | 1.1 | 0.00079 | 0.00046 | 14 | <0.0001 | | 0.00005 | 0.0045 | <0.001 | <0.00001 | 0.027 | <0.0001 | <0.00002 | 0.000013 | 0.0019 | 0.0027 | 0.000002 | <0.001 | |
| M08-734-04 | 10 | <0.000003 | 0.000045 | <0.0005 | <0.0005 | 0.01 | 7.9 | <0.001 | 5.9 | 0.00069 | 0.00023 | 12 | 0.0002 | | 0.00008 | 0.0018 | <0.001 | <0.00001 | 0.019 | <0.0001 | <0.00002 | 0.000084 | 0.00074 | 0.0021 | <0.000001 | <0.001 | |
| M08-735-01 | 3 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | 0.01 | 8.9 | <0.001 | 0.37 | 0.00039 | 0.0003 | 20 | <0.0001 | | 0.00014 | 0.0033 | <0.001 | <0.00001 | 0.013 | <0.0001 | <0.00002 | 0.000014 | 0.011 | 0.0014 | 0.000004 | <0.001 | |
| M08-735-03 | 5.9 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.01 | 6.6 | <0.001 | 0.81 | 0.00066 | 0.00022 | 13 | <0.0001 | | 0.00022 | 0.0024 | <0.001 | 0.00003 | 0.022 | 0.0002 | <0.00002 | 0.000006 | 0.0026 | 0.0015 | 0.000003 | <0.001 | |
| M08-740-01 | 6.2 | <0.000003 | 0.00003 | <0.0005 | <0.0005 | 0.01 | 5.2 | <0.001 | 0.68 | 0.0013 | 0.00007 | 13 | 0.0002 | | <0.00002 | 0.0014 | <0.001 | <0.00001 | 0.016 | <0.0001 | <0.00002 | 0.000008 | 0.0019 | 0.0015 | 0.000005 | <0.001 | |
| M08-740-02 | 6.6 | <0.000003 | 0.000053 | <0.0005 | <0.0005 | 0.01 | 3.7 | <0.001 | 2.7 | 0.00047 | 0.00006 | 12 | 0.0003 | | <0.00002 | 0.0016 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | <0.000001 | 0.0017 | 0.00062 | <0.000001 | <0.001 | |
| M08-740-03 | 3.8 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.01 | 3.1 | <0.001 | 0.4 | 0.00026 | 0.00005 | 10 | <0.0001 | | <0.00002 | 0.0019 | <0.001 | <0.00001 | 0.012 | 0.0003 | <0.00002 | 0.000006 | 0.017 | 0.001 | <0.000001 | <0.001 | |
| M08-740-04 | 7.7 | <0.000003 | 0.000053 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 2.8 | 0.0012 | 0.00012 | 9 | 0.0006 | | <0.00002 | 0.0033 | <0.001 | <0.00001 | 0.03 | <0.0001 | <0.00002 | 0.000008 | 0.0011 | 0.0011 | <0.000001 | <0.001 | |
| M08-740-05 | 3.6 | <0.000003 | 0.000025 | <0.0005 | <0.0005 | 0.01 | 10 | <0.001 | 0.43 | 0.00052 | 0.00025 | 14 | 0.0002 | | <0.00002 | 0.002 | <0.001 | <0.00001 | 0.016 | <0.0001 | <0.00002 | 0.000006 | 0.005 | 0.00083 | 0.000008 | <0.001 | |
| M08-742-01 | 4.4 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | 0.01 | 7.4 | <0.001 | 0.48 | 0.00035 | 0.00013 | 13 | <0.0001 | | 0.00018 | 0.0024 | <0.001 | <0.00001 | 0.016 | 0.0004 | <0.00002 | 0.00005 | 0.011 | 0.002 | 0.000002 | <0.001 | |
| M08-742-02 | 5.6 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.01 | 9.3 | <0.001 | 0.81 | 0.00046 | 0.00009 | 12 | <0.0001 | | 0.00014 | 0.0026 | <0.001 | <0.00001 | 0.014 | 0.0002 | <0.00002 | 0.000002 | 0.0025 | 0.00065 | 0.000002 | <0.001 | |
| M08-742-03 | 7.6 | <0.000003 | 0.000026 | <0.0005 | <0.0005 | 0.01 | 8 | <0.001 | 3.1 | 0.00085 | 0.00013 | 12 | <0.0001 | | 0.00012 | 0.0075 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | 0.000003 | 0.0011 | 0.0012 | 0.000002 | <0.001 | |
| M08-742-04 | 6 | <0.000003 | 0.000029 | <0.0005 | <0.0005 | 0.01 | 9.7 | <0.001 | 2 | 0.00059 | 0.00014 | 14 | <0.0001 | | 0.0001 | 0.0024 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | 0.000002 | 0.0011 | 0.0027 | 0.000002 | <0.001 | |
| M08-743-01 | 3.2 | <0.000003 | 0.000023 | <0.0005 | <0.0005 | 0.01 | 4.9 | <0.001 | 0.33 | 0.00038 | 0.00017 | 15 | <0.0001 | | 0.00008 | 0.0032 | <0.001 | 0.00038 | 0.0093 | 0.0005 | <0.00002 | 0.000023 | 0.021 | 0.0018 | 0.000003 | <0.001 | |
| M08-743-02 | 5.9 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.01 | 8.1 | <0.001 | 1.5 | 0.0007 | 0.00007 | 12 | <0.0001 | | 0.00008 | 0.0039 | <0.001 | <0.00001 | 0.015 | <0.0001 | <0.00002 | 0.000002 | 0.0035 | 0.0011 | 0.000002 | <0.001 | |
| M08-743-04 | 2.7 | <0.000003 | 0.000055 | <0.0005 | <0.0005 | 0.08 | 3.8 | <0.001 | 0.28 | 0.0017 | 0.00018 | 17 | 0.0002 | | 0.00009 | 0.0058 | <0.001 | 0.00002 | 0.0068 | 0.0021 | <0.00002 | 0.000033 | 0.036 | 0.0013 | 0.00001 | <0.001 | |
| M08-747-01 | 7.9 | <0.000003 | 0.000055 | <0.0005 | <0.0005 | 0.01 | 4.9 | <0.001 | 0.97 | 0.0028 | 0.00007 | 9.5 | 0.0002 | | <0.00002 | 0.0014 | <0.001 | <0.00001 | 0.025 | <0.0001 | <0.00002 | <0.000001 | 0.002 | 0.00057 | <0.000001 | <0.001 | |
| M08-747-02 | 5.6 | 0.000004 | 0.000034 | <0.0005 | <0.0005 | 0.01 | 4.3 | <0.001 | 0.79 | 0.00061 | 0.00005 | 9.4 | <0.0001 | | <0.00002 | 0.0022 | <0.001 | <0.00001 | 0.017 | 0.0003 | <0.00002 | 0.000013 | 0.011 | 0.0013 | 0.000007 | <0.001 | |
| M08-747-03 | 5.5 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.01 | 4.4 | <0.001 | 0.72 | 0.00032 | 0.00003 | 6.9 | <0.0001 | | <0.00002 | 0.0036 | <0.001 | 0.00003 | 0.023 | <0.0001 | <0.00002 | <0.000001 | 0.0018 | 0.00095 | <0.000001 | <0.001 | |
| M08-748-01 | 3 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.01 | 8.2 | <0.001 | 0.28 | 0.00025 | 0.00012 | 13 | <0.0001 | | <0.00002 | 0.0033 | <0.001 | 0.00003 | 0.024 | 0.0003 | <0.00002 | 0.000014 | 0.014 | 0.00082 | <0.000001 | <0.001 | |
| M08-748-02 | 6.5 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 0.9 | 0.001 | 0.00006 | 9.7 | <0.0001 | | <0.00002 | 0.0017 | <0.001 | <0.00001 | 0.03 | <0.0001 | <0.00002 | <0.000001 | 0.0011 | 0.00089 | <0.000001 | <0.001 | |
| M08-750-01 | 5 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.01 | 12 | <0.001 | 0.71 | 0.00068 | 0.00009 | 7.6 | <0.0001 | | 0.00008 | 0.0015 | <0.001 | 0.00003 | 0.04 | <0.0001 | <0.00002 | 0.000002 | 0.0036 | 0.0019 | 0.000002 | <0.001 | |
| M08-750-02 | 11 | 0.000026 | 0.00007 | <0.0005 | <0.0005 | 0.01 | 13 | <0.001 | 4.8 | 0.0019 | 0.00039 | 12 | 0.0002 | | 0.00007 | 0.0025 | <0.001 | 0.00002 | 0.044 | <0.0001 | 0.00006 | 0.000035 | 0.00058 | 0.0014 | 0.000026 | <0.001 | |
| M08-752-01 | 5.3 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | 0.01 | 4.6 | <0.001 | 0.79 | 0.00067 | 0.0002 | 17 | <0.0001 | | <0.00002 | 0.0026 | <0.001 | <0.00001 | 0.02 | <0.0001 | <0.00002 | 0.000008 | 0.0072 | 0.0014 | <0.000001 | <0.001 | |
| M08-752-02 | 3.3 | <0.000003 | 0.00032 | 0.001 | <0.0005 | 0.7 | 5.4 | 0.004 | 0.44 | 0.0061 | 0.00016 | 15 | 0.0005 | | 0.00011 | 0.0037 | <0.001 | 0.00003 | 0.029 | 0.022 | <0.00002 | 0.0002 | 0.029 | 0.001 | 0.00011 | 0.005 | |
| M08-752-03 | 6.9 | <0.000003 | 0.000034 | <0.0005 | <0.0005 | 0.01 | 9.1 | <0.001 | 2.5 | 0.00083 | 0.00012 | 10 | 0.0002 | | <0.00002 | 0.0015 | <0.001 | <0.00001 | 0.029 | 0.0002 | <0.00002 | 0.000004 | 0.0014 | 0.0032 | <0.000001 | <0.001 | |
| M08-755-01 | 3.9 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.01 | 5.9 | <0.001 | 0.35 | 0.00037 | 0.0001 | 8.6 | <0.0001 | | <0.00002 | 0.0016 | <0.001 | <0.00001 | 0.008 | 0.0004 | <0.00002 | 0.000011 | 0.017 | 0.0022 | <0.000001 | <0.001 | |
| M08-755-02 | 3.6 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | 0.01 | 8.2 | <0.001 | 0.38 | 0.00045 | 0.00014 | 9.8 | <0.0001 | | 0.00003 | 0.0016 | <0.001 | <0.00001 | 0.011 | 0.0003 | <0.00002 | 0.000003 | 0.0084 | 0.001 | <0.000001 | <0.001 | |
| M08-755-03 | 4.4 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | 0.01 | 1.4 | <0.001 | 0.61 | 0.00022 | 0.00008 | 9.9 | <0.0001 | | <0.00002 | 0.0033 | <0.001 | <0.00001 | 0.018 | <0.0001 | <0.00002 | 0.000002 | 0.0058 | 0.0011 | <0.000001 | <0.001 | |
| M09-798-01 | 3.6 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | 0.25 | 10 | 0.008 | 0.36 | 0.0033 | 0.00033 | 14 | 0.0004 | | 0.00006 | 0.0029 | <0.001 | <0.00001 | 0.017 | 0.011 | <0.00002 | 0.00014 | 0.02 | 0.0011 | 0.000038 | <0.001 | |
| M09-798-02 | 3.4 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | 0.16 | 8.3 | 0.002 | 0.35 | 0.0024 | 0.00018 | 12 | 0.0003 | | 0.00005 | 0.0038 | <0.001 | 0.00008 | 0.013 | 0.0061 | <0.00002 | 0.000047 | 0.019 | 0.001 | 0.00002 | <0.001 | |
| M09-816-01 | 5.7 | 0.000014 | 0.00003 | <0.0005 | <0.0005 | 0.01 | 1.3 | <0.001 | 0.86 | 0.00079 | 0.00013 | 9.7 | 0.0002 | | 0.00005 | 0.0011 | <0.001 | <0.00001 | 0.016 | 0.0002 | <0.00002 | 0.000019 | 0.0064 | 0.0037 | 0.000017 | <0.001 | |
| M09-816-02 | 4.8 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.01 | 4.5 | <0.001 | 0.65 | 0.00085 | 0.0003 | 9.5 | <0.0001 | | 0.00006 | 0.001 | <0.001 | <0.00001 | 0.073 | 0.0003 | <0.00002 | 0.000008 | 0.012 | 0.0014 | 0.000008 | <0.001 | |
| M09-855-01 | 18 | 0.000011 | 0.00008 | <0.0005 | <0.0005 | 0.01 | 13 | 0.002 | 5.1 | 0.012 | 0.00028 | 20 | 0.0006 | | 0.00005 | 0.0009 | <0.001 | <0.00001 | 0.065 | <0.0001 | <0.00002 | 0.000022 | 0.00011 | 0.0014 | 0.000019 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M09-855-02 | 12 | 0.000006 | 0.000061 | <0.0005 | <0.0005 | 0.01 | 5.5 | 0.002 | 8.3 | 0.0029 | 0.00022 | 13 | 0.0006 | | 0.00003 | 0.0024 | <0.001 | <0.00001 | 0.035 | <0.0001 | <0.00002 | 0.000025 | 0.00045 | 0.0017 | 0.000011 | <0.001 | |
| M09-857-01 | 4.5 | 0.000008 | 0.000031 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 0.72 | 0.00047 | 0.00041 | 23 | 0.0003 | | 0.00005 | 0.0012 | <0.001 | <0.00001 | 0.019 | 0.0002 | <0.00002 | 0.000022 | 0.0036 | 0.0015 | 0.000017 | <0.001 | |
| M09-858-01 | 3.9 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.01 | 1.5 | <0.001 | 0.62 | 0.00049 | 0.00031 | 12 | <0.0001 | | 0.00004 | 0.0013 | <0.001 | <0.00001 | 0.013 | 0.0004 | <0.00002 | 0.000009 | 0.02 | 0.0011 | 0.00001 | <0.001 | |
| M09-858-02 | 4.2 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | 0.01 | 1.6 | <0.001 | 0.58 | 0.00028 | 0.00008 | 13 | 0.0002 | | 0.00004 | 0.0012 | <0.001 | <0.00001 | 0.016 | 0.0003 | <0.00002 | 0.000011 | 0.016 | 0.0007 | 0.000015 | <0.001 | |
| M09-862-01 | 7.3 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | 0.01 | 6.3 | <0.001 | 1.7 | 0.00078 | 0.00013 | 10 | <0.0001 | | <0.00002 | 0.0012 | <0.001 | <0.00001 | 0.03 | <0.0001 | <0.00002 | 0.000005 | 0.0009 | 0.0011 | 0.000002 | <0.001 | |
| M09-866-01 | 9.5 | <0.000003 | 0.000011 | <0.0005 | <0.0005 | 0.01 | 13 | <0.001 | 2.6 | 0.0038 | 0.0005 | 19 | 0.0002 | | <0.00002 | 0.0012 | <0.001 | 0.00002 | 0.022 | <0.0001 | <0.00002 | <0.000001 | 0.00021 | 0.00076 | <0.000001 | <0.001 | |
| M09-866-02 | 9.9 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | 0.01 | 7.7 | <0.001 | 5.2 | 0.0028 | 0.00019 | 13 | 0.0003 | | <0.00002 | 0.0028 | <0.001 | <0.00001 | 0.021 | <0.0001 | <0.00002 | <0.000001 | 0.00045 | 0.0011 | <0.000001 | <0.001 | |
| M08-733-01 | 5.2 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | <0.002 | 6.4 | <0.001 | 0.61 | 0.0012 | 0.00032 | 12 | <0.0001 | | <0.00002 | 0.0017 | <0.001 | <0.00001 | 0.014 | <0.0001 | <0.00002 | 0.000045 | 0.0029 | 0.0009 | <0.000001 | <0.001 | |
| M08-733-02 | 5.1 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.002 | 8.3 | <0.001 | 0.63 | 0.00079 | 0.00012 | 5.9 | <0.0001 | | <0.00002 | 0.0022 | <0.001 | <0.00001 | 0.015 | 0.0003 | <0.00002 | <0.000001 | 0.0036 | 0.00089 | 0.000002 | <0.001 | |
| M09-802-01 | 6.3 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.002 | 7.7 | <0.001 | 0.88 | 0.0008 | 0.00007 | 5.9 | <0.0001 | | <0.00002 | 0.0023 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | 0.000008 | 0.002 | 0.0023 | <0.000001 | <0.001 | |
| M09-817-02 | 8 | <0.000003 | 0.000031 | <0.0005 | <0.0005 | <0.002 | 7 | <0.001 | 2.9 | 0.001 | 0.00006 | 4.4 | <0.0001 | | <0.00002 | 0.0033 | <0.001 | <0.00001 | 0.029 | <0.0001 | <0.00002 | <0.000001 | 0.00069 | 0.0013 | 0.000002 | <0.001 | |
| M09-859-01 | 11 | <0.000003 | 0.00013 | <0.0005 | <0.0005 | <0.002 | 4.8 | <0.001 | 6.7 | 0.0032 | 0.00031 | 9 | 0.0007 | | <0.00002 | 0.0021 | <0.001 | <0.00001 | 0.031 | <0.0001 | <0.00002 | 0.000003 | 0.00033 | 0.0024 | <0.000001 | <0.001 | |
| M10-933-01 | 4.3 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | <0.002 | 5.3 | <0.001 | 0.6 | 0.00053 | 0.00016 | 12 | <0.0001 | | <0.00002 | 0.002 | <0.001 | <0.00001 | 0.018 | 0.0003 | <0.00002 | 0.000006 | 0.007 | 0.0011 | <0.000001 | <0.001 | |
| M10-935-01 | 3.8 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.025 | 1 | <0.001 | 0.51 | 0.00047 | 0.00013 | 12 | <0.0001 | | <0.00002 | 0.0023 | <0.001 | <0.00001 | 0.009 | 0.0011 | <0.00002 | 0.00001 | 0.027 | 0.00068 | 0.000005 | <0.001 | |
| M98-275-01 | 6.7 | <0.000003 | 0.000012 | <0.0005 | <0.0005 | <0.002 | 5.4 | <0.001 | 0.89 | 0.0023 | 0.00011 | 3.7 | <0.0001 | | 0.00004 | 0.0022 | <0.001 | <0.00001 | 0.02 | <0.0001 | <0.00002 | <0.000001 | 0.0022 | 0.00084 | 0.000003 | <0.001 | |
| M98-275-02 | 7 | <0.000003 | 0.000011 | <0.0005 | <0.0005 | <0.002 | 5.2 | <0.001 | 0.9 | 0.0015 | 0.00007 | 4 | <0.0001 | | 0.00007 | 0.0022 | <0.001 | <0.00001 | 0.017 | <0.0001 | <0.00002 | <0.000001 | 0.0025 | 0.00059 | <0.000001 | <0.001 | |
| W94-76-01 | 4.7 | <0.000003 | 0.000008 | <0.0005 | 0.0048 | 0.004 | 3.2 | <0.001 | 0.63 | 0.0012 | 0.00014 | 6.7 | <0.0001 | | 0.0012 | 0.0027 | <0.001 | 0.0002 | 0.011 | <0.0001 | <0.00002 | 0.000011 | 0.011 | 0.00096 | 0.000002 | 0.004 | |
| W94-76-02 | 4.9 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.007 | 1.5 | <0.001 | 0.69 | 0.0005 | 0.00026 | 14 | <0.0001 | | 0.00008 | 0.0033 | <0.001 | <0.00001 | 0.01 | 0.0005 | <0.00002 | 0.00012 | 0.011 | 0.00068 | 0.000004 | <0.001 | |
| W94-82-01 | 5.2 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | 0.008 | 0.27 | <0.001 | 0.61 | 0.00059 | 0.00007 | 6.4 | <0.0001 | | 0.00005 | 0.0039 | <0.001 | <0.00001 | 0.0077 | 0.0003 | <0.00002 | 0.000003 | 0.013 | 0.00042 | <0.000001 | <0.001 | |
| CAMLD 262226 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD 262227 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD 262228 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD 262229 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD 262230 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAMLD 262231 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD194259 | 27 | <0.000003 | 0.000029 | <0.00008 | 0.0007 | <0.007 | 5 | 0.0062 | 3.6 | 0.013 | 0.00059 | 16 | <0.0001 | 0.005 | 0.00002 | <0.0009 | 0.00092 | 0.0001 | 0.06 | <0.00005 | 0.00001 | 0.000019 | 0.00056 | | | <0.002 | <0.002 |
| CAEXD217371 | 11 | <0.000003 | 0.00014 | 0.0012 | <0.0002 | <0.007 | 1.5 | 0.0006 | 5.6 | 0.0021 | 0.00093 | 18 | 0.0048 | <0.003 | <0.00001 | 0.001 | 0.00023 | 0.00008 | 0.03 | <0.00005 | 0.000008 | <0.000002 | 0.00075 | | | <0.002 | <0.002 |
| CAEXD291664 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD297486 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD297621 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD303511 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M97-122-03 | 15 | <0.000003 | 0.000082 | <0.0005 | <0.0005 | <0.002 | 5.1 | 0.003 | 7.7 | 0.003 | 0.00012 | 4.7 | 0.0004 | | 0.00007 | 0.006 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | <0.000001 | 0.00047 | 0.0053 | 0.000002 | <0.001 | |
| M97-122-04 | 22 | <0.000003 | 0.00005 | <0.0005 | <0.0005 | <0.002 | 4 | <0.001 | 8.5 | 0.0023 | 0.00031 | 0.54 | <0.0001 | | 0.0001 | 0.0027 | <0.001 | <0.00001 | 0.019 | <0.0001 | <0.00002 | <0.000001 | 0.00013 | 0.0015 | 0.000002 | <0.001 | |
| W94-65-01 | 44 | <0.000003 | 0.00054 | <0.0005 | <0.0005 | 0.005 | 1.2 | <0.001 | 12 | 0.27 | 0.00046 | 0.44 | 0.0025 | | 0.00008 | 0.0013 | <0.001 | <0.00001 | 0.039 | 0.0002 | <0.00002 | 0.000076 | <0.00003 | <0.00003 | 0.000002 | <0.001 | |
| W94-65-02 | 47 | <0.000003 | 0.00028 | <0.0005 | <0.0005 | <0.002 | 1.7 | <0.001 | 12 | 0.12 | 0.00053 | 0.55 | 0.0021 | | 0.00006 | 0.002 | <0.001 | <0.00001 | 0.069 | 0.0002 | <0.00002 | 0.000079 | <0.00003 | 0.00008 | 0.000003 | <0.001 | |
| CAEXD262428 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD267633 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD290299 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD265979 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD300073 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD294990 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD300063 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD163438 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD185368 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD183956 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD295054 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD289186 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W94-55-01 | 24 | <0.000003 | 0.00007 | <0.0005 | <0.0005 | <0.002 | 1.2 | <0.001 | 8.9 | 0.011 | 0.00016 | 0.44 | 0.0009 | | 0.0001 | 0.0014 | <0.001 | <0.00001 | 0.019 | <0.0001 | <0.00002 | 0.000004 | <0.00003 | 0.00022 | <0.000001 | <0.001 | |
| W94-57-02 | 29 | <0.000003 | 0.00008 | <0.0005 | <0.0005 | <0.002 | 1 | <0.001 | 7.1 | 0.021 | 0.00036 | 0.51 | 0.001 | | 0.00009 | 0.0007 | <0.001 | <0.00001 | 0.029 | <0.0001 | <0.00002 | 0.000015 | <0.00003 | 0.0002 | 0.000002 | <0.001 | |
| W94-57-03 | 40 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | <0.002 | 0.79 | <0.001 | 12 | 0.068 | 0.00058 | 0.37 | 0.0016 | | 0.00007 | 0.001 | <0.001 | 0.00002 | 0.036 | <0.0001 | <0.00002 | 0.000077 | <0.00003 | 0.00006 | 0.000003 | <0.001 | |
| W94-73-02 | 41 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | <0.002 | 0.35 | <0.001 | 12 | 0.083 | 0.00055 | 0.33 | 0.0014 | | 0.00005 | 0.0004 | <0.001 | <0.00001 | 0.027 | <0.0001 | <0.00002 | 0.000039 | <0.00003 | 0.00005 | 0.000002 | <0.001 | |
| CAEXD261887 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD262427 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD300070 | 26 | <0.000003 | 0.000022 | <0.00008 | <0.0002 | <0.007 | 0.64 | 0.0005 | 5.6 | 0.057 | 0.00037 | 3.8 | 0.0001 | 0.014 | <0.00001 | <0.0009 | 0.00017 | 0.00007 | 0.031 | <0.00005 | <0.000005 | 0.000037 | 0.00003 | | | <0.002 | <0.002 |
| CAEXD267631 | 70 | 0.00006 | 0.00025 | <0.00008 | 0.0003 | <0.007 | 0.6 | 0.0014 | 9.7 | 0.19 | 0.0011 | 8.1 | 0.0002 | 0.005 | 0.00001 | <0.0009 | 0.00075 | 0.00008 | 0.07 | <0.00005 | <0.000005 | 0.000049 | 0.00001 | | | 0.006 | <0.002 |
| CAEXD185456 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD289268 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M96-58-01 | 8.1 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | <0.002 | 7.2 | <0.001 | 1 | 0.0013 | 0.00019 | 5.9 | <0.0001 | | 0.00005 | 0.0036 | <0.001 | <0.00001 | 0.015 | 0.0002 | <0.00002 | <0.000001 | 0.0022 | 0.0009 | <0.000001 | <0.001 | |
| M96-58-02 | 5.9 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | <0.002 | 6.5 | <0.001 | 0.84 | 0.0004 | 0.00011 | 6.6 | <0.0001 | | 0.00007 | 0.0028 | <0.001 | <0.00001 | 0.014 | <0.0001 | <0.00002 | <0.000001 | 0.0021 | 0.0011 | <0.000001 | <0.001 | |
| M96-58-03 | 8.6 | <0.000003 | 0.000023 | <0.0005 | 0.0007 | <0.002 | 5.6 | <0.001 | 1.1 | 0.0013 | 0.00011 | 3.5 | <0.0001 | | 0.00024 | 0.0034 | <0.001 | <0.00001 | 0.018 | <0.0001 | <0.00002 | <0.000001 | 0.0018 | 0.00076 | 0.000002 | <0.001 | |
| M97-122-05 | 8.1 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.002 | 6.3 | <0.001 | 1.8 | 0.0015 | 0.00008 | 5.5 | <0.0001 | | 0.00005 | 0.0032 | <0.001 | <0.00001 | 0.02 | <0.0001 | <0.00002 | <0.000001 | 0.0012 | 0.0022 | 0.000002 | <0.001 | |
| M97-123-04 | 9.5 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | <0.002 | 8.4 | <0.001 | 3.9 | 0.0012 | 0.0001 | 4.1 | <0.0001 | | 0.00005 | 0.0036 | <0.001 | <0.00001 | 0.03 | <0.0001 | <0.00002 | <0.000001 | 0.00066 | 0.0018 | 0.000002 | <0.001 | |
| M97-153-02 | 7.7 | <0.000003 | 0.000029 | <0.0005 | <0.0005 | <0.002 | 8.5 | <0.001 | 2.5 | 0.0014 | 0.00018 | 5 | 0.0002 | | 0.00005 | 0.0034 | <0.001 | <0.00001 | 0.019 | <0.0001 | <0.00002 | <0.000001 | 0.0013 | 0.0019 | <0.000001 | <0.001 | |
| M98-184-01 | 2.9 | <0.000003 | 0.00001 | <0.0005 | <0.0005 | <0.002 | 8.8 | <0.001 | 0.34 | 0.00035 | 0.00013 | 13 | <0.0001 | | 0.0001 | 0.0014 | <0.001 | <0.00001 | 0.0075 | 0.0003 | <0.00002 | 0.000007 | 0.0065 | 0.00063 | <0.000001 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M98-184-02 | 10 | <0.000003 | 0.000057 | <0.0005 | <0.0005 | 0.003 | 5.4 | 0.002 | 6.5 | 0.0016 | 0.00015 | 5.8 | 0.0006 | | 0.00007 | 0.0024 | <0.001 | 0.00002 | 0.02 | <0.0001 | 0.00003 | 0.000005 | 0.0011 | 0.0012 | <0.000001 | <0.001 | |
| W94-57-01 | 12 | <0.000003 | 0.000063 | <0.0005 | <0.0005 | <0.002 | 11 | <0.001 | 5 | 0.0019 | 0.00026 | 2.4 | 0.0012 | | 0.00013 | 0.0066 | <0.001 | 0.00002 | 0.027 | <0.0001 | <0.00002 | <0.000001 | 0.00036 | 0.0012 | <0.000001 | <0.001 | |
| W94-59-01 | 3.6 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | 0.007 | 2.5 | <0.001 | 0.5 | 0.00064 | 0.0002 | 10 | 0.0002 | | 0.00006 | 0.005 | <0.001 | <0.00001 | 0.0071 | 0.0005 | <0.00002 | <0.000001 | 0.0074 | 0.00073 | 0.000003 | <0.001 | |
| W94-65-03 | 5.7 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | 0.006 | 2.3 | <0.001 | 0.88 | 0.0014 | 0.00017 | 6.8 | 0.002 | | 0.00076 | 0.0027 | <0.001 | <0.00001 | 0.012 | 0.0004 | <0.00002 | 0.000008 | 0.0046 | 0.00054 | <0.000001 | 0.006 | |
| W94-70-01 | 5.2 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | <0.002 | 4.1 | <0.001 | 0.82 | 0.00063 | 0.00024 | 5.8 | 0.0002 | | 0.00009 | 0.0038 | <0.001 | <0.00001 | 0.013 | <0.0001 | <0.00002 | <0.000001 | 0.0036 | 0.00084 | <0.000001 | <0.001 | |
| W94-70-02 | 6.9 | <0.000003 | 0.000015 | <0.0005 | <0.0005 | <0.002 | 2.5 | <0.001 | 0.95 | 0.0004 | 0.00008 | 4 | 0.0002 | | 0.00005 | 0.0035 | <0.001 | <0.00001 | 0.019 | <0.0001 | <0.00002 | <0.000001 | 0.0013 | 0.0009 | <0.000001 | <0.001 | |
| W94-73-01 | 6.4 | <0.000003 | 0.000013 | <0.0005 | <0.0005 | <0.002 | 1.7 | <0.001 | 0.84 | 0.00075 | 0.00008 | 5.2 | 0.0002 | | 0.00007 | 0.0035 | <0.001 | <0.00001 | 0.017 | <0.0001 | <0.00002 | <0.000001 | 0.005 | 0.00049 | <0.000001 | <0.001 | |
| W94-73-03 | 8.4 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | <0.002 | 6.5 | <0.001 | 1 | 0.0023 | 0.0001 | 3.5 | 0.0003 | | 0.00006 | 0.0022 | <0.001 | 0.00002 | 0.012 | <0.0001 | <0.00002 | 0.000002 | 0.00084 | 0.00095 | <0.000001 | <0.001 | |
| CAEXD289055 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD262395 | 7.6 | <0.000003 | 0.000013 | 0.00009 | 0.0003 | <0.007 | 3.8 | 0.0011 | 4.4 | 0.0034 | 0.00044 | 16 | 0.0003 | 0.006 | 0.00002 | 0.002 | 0.00069 | <0.00006 | 0.0091 | <0.00005 | <0.000005 | <0.000002 | 0.00088 | | | <0.002 | <0.002 |
| CAEXD296006 | 13 | <0.000003 | 0.00019 | <0.00008 | 0.0004 | <0.007 | 4.6 | 0.0035 | 4.9 | 0.0085 | 0.00074 | 14 | 0.0025 | <0.003 | <0.00001 | 0.0017 | 0.0006 | <0.00006 | 0.023 | <0.00005 | 0.000007 | 0.000011 | 0.0004 | | | <0.002 | <0.002 |
| CAEXD198012 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD163450 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD183958 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD189574 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD250652 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD250738 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD252314 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD295053 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD297112 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD213090 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD225690 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-660_107032 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD259501 | 30 | 0.000004 | 0.000036 | 0.0002 | 0.0014 | 0.008 | 9.1 | 0.0022 | 4 | 0.012 | 0.0014 | 18 | 0.0002 | 0.016 | 0.00037 | <0.0009 | 0.00025 | 0.00056 | 0.12 | 0.00026 | <0.000005 | 0.000073 | 0.00018 | | | 0.003 | <0.002 |
| CAEXD259500 | 26 | <0.000003 | 0.00006 | <0.00008 | 0.0005 | <0.007 | 12 | 0.0036 | 4.7 | 0.0098 | 0.00074 | 22 | 0.0003 | 0.011 | 0.0001 | <0.0009 | 0.00031 | 0.00029 | 0.15 | <0.00005 | 0.000006 | 0.000069 | 0.00009 | | | <0.002 | <0.002 |
| M04-530A-05_338259 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M05-556_824703 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD175600 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD175614 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD194549 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD206014 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD213337 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD216432 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD217732 | 28 | <0.000003 | 0.000013 | <0.00008 | 0.0006 | <0.007 | 15 | 0.003 | 4.3 | 0.0075 | 0.0072 | 6.8 | <0.0001 | <0.003 | <0.00001 | <0.0009 | 0.00052 | <0.00006 | 0.18 | <0.00005 | <0.000005 | 0.00011 | 0.00002 | | | <0.002 | <0.002 |
| M05-559A_832071 | 150 | 0.000003 | 0.000038 | <0.00008 | 0.0003 | <0.007 | 8.9 | 0.0035 | 15 | 0.088 | 0.0016 | 4.7 | 0.0007 | <0.003 | 0.00003 | <0.0009 | 0.0017 | <0.00006 | 2.7 | <0.00005 | 0.000005 | 0.00063 | <0.00001 | | | <0.002 | <0.002 |
| M05-564_832368 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M06-591-02 | 14 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.009 | 8 | <0.001 | 2.5 | 0.002 | 0.00042 | 5.5 | 0.0005 | | 0.00006 | 0.001 | <0.001 | <0.00001 | 0.057 | <0.0001 | <0.00002 | 0.000064 | 0.00009 | 0.00059 | 0.000002 | <0.001 | |
| M06-629-01 | 17 | <0.000003 | 0.00008 | <0.0005 | 0.0008 | 0.003 | 12 | 0.002 | 4.1 | 0.0031 | 0.0015 | 7.3 | 0.0004 | | 0.00021 | 0.0063 | <0.001 | 0.00005 | 0.042 | <0.0001 | <0.00002 | 0.000052 | 0.0017 | 0.00098 | 0.000002 | <0.001 | |
| M99-417-01 | 18 | <0.000003 | 0.000056 | <0.0005 | <0.0005 | 0.004 | 13 | 0.003 | 3.7 | 0.0033 | 0.00017 | 4.7 | <0.0001 | | <0.00002 | 0.0011 | <0.001 | <0.00001 | 0.097 | 0.0002 | <0.00002 | 0.00023 | 0.00024 | 0.0013 | 0.000002 | <0.001 | |
| CAEXD213028 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-645_103186 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M05-548_824513 | 18 | 0.000003 | 0.000024 | 0.0001 | 0.0009 | <0.007 | 7.4 | 0.0023 | 3.8 | 0.0067 | 0.0049 | 12 | 0.0012 | <0.003 | 0.00003 | 0.0048 | 0.0015 | 0.00008 | 0.12 | 0.0001 | <0.000005 | 0.000039 | 0.00061 | | | <0.002 | <0.002 |
| M07-681_110260 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD308246 | 13 | 0.000003 | 0.000006 | 0.00014 | 0.0002 | <0.007 | 8 | 0.0013 | 0.96 | 0.0043 | 0.00071 | 14 | 0.0006 | <0.003 | 0.00001 | 0.001 | 0.00028 | 0.00026 | 0.088 | 0.00021 | <0.000005 | 0.00001 | 0.0002 | | | <0.002 | <0.002 |
| M07-693_109898 | 63 | 0.000007 | 0.0001 | 0.0001 | 0.0009 | <0.007 | 25 | 0.0048 | 13 | 0.025 | 0.00032 | 25 | 0.0005 | <0.003 | <0.00001 | <0.0009 | 0.00055 | <0.00006 | 0.37 | <0.00005 | <0.000005 | 0.00016 | 0.00009 | | | <0.002 | <0.002 |
| CAEXD199299 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD217788 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD295099 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M05-559A_832081 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD199207 | 26 | 0.000022 | 0.000037 | <0.00008 | 0.0011 | <0.007 | 5.9 | 0.0046 | 7.1 | 0.015 | 0.0033 | 9.4 | 0.0002 | <0.003 | 0.002 | 0.0013 | 0.0046 | <0.00006 | 0.22 | <0.00005 | 0.000008 | 0.000061 | 0.00006 | | | <0.002 | <0.002 |
| CAEXD217778 | 52 | 0.000003 | 0.000009 | 0.00008 | 0.0004 | <0.007 | 9.2 | 0.0024 | 3.4 | 0.025 | 0.00086 | 3 | 0.0003 | <0.003 | <0.00001 | <0.0009 | 0.00041 | <0.00006 | 0.27 | <0.00005 | <0.000005 | 0.000059 | <0.00001 | | | <0.002 | <0.002 |
| M00-473-01 | 16 | <0.000003 | 0.00012 | <0.0005 | <0.0005 | <0.002 | 9.2 | 0.004 | 8.1 | 0.0076 | 0.00066 | 8.2 | 0.0011 | | 0.00009 | 0.0031 | <0.001 | 0.00002 | 0.039 | <0.0001 | <0.00002 | 0.000019 | 0.00091 | 0.00052 | 0.000002 | <0.001 | |
| M00-483-01 | 15 | <0.000003 | 0.00016 | <0.0005 | <0.0005 | <0.002 | 12 | 0.003 | 8.1 | 0.0074 | 0.00029 | 6.2 | 0.0013 | | 0.00007 | 0.0013 | <0.001 | <0.00001 | 0.037 | <0.0001 | <0.00002 | 0.000019 | 0.00053 | 0.0011 | <0.000001 | <0.001 | |
| M00-490-01 | 16 | <0.000003 | 0.00019 | <0.0005 | <0.0005 | <0.002 | 9.7 | 0.003 | 8.7 | 0.0071 | 0.00058 | 6.3 | 0.0017 | | 0.0001 | 0.007 | <0.001 | <0.00001 | 0.045 | 0.0002 | <0.00002 | 0.000042 | 0.0014 | 0.00075 | <0.000001 | <0.001 | |
| M08-731W1-01 | 6 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.04 | 3.9 | <0.001 | 0.75 | 0.00084 | 0.00015 | 6.5 | <0.0001 | | 0.00003 | 0.0029 | <0.001 | <0.00001 | 0.061 | 0.0012 | <0.00002 | <0.000001 | 0.0062 | 0.003 | 0.000005 | <0.001 | |
| GT08-04-01_2009 | 6.7 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | 0.01 | 3 | <0.001 | 0.81 | 0.0008 | 0.00006 | 5.4 | <0.0001 | | 0.00004 | 0.002 | <0.001 | 0.00002 | 0.025 | <0.0001 | <0.00002 | 0.000013 | 0.0016 | 0.0052 | 0.000002 | <0.001 | |
| M05-561-02_2011 | 4.4 | <0.000003 | 0.000013 | <0.0005 | <0.0005 | 0.004 | 16 | <0.001 | 0.46 | 0.00035 | 0.00056 | 5.1 | 0.0002 | | 0.00008 | 0.0045 | <0.001 | <0.00001 | 0.023 | 0.0004 | <0.00002 | 0.000016 | 0.0034 | 0.0049 | <0.000001 | <0.001 | |
| M06-592-03 | 4.8 | <0.000003 | 0.000062 | <0.0005 | <0.0005 | 0.24 | 8.6 | <0.001 | 0.43 | 0.0016 | 0.0001 | 7.4 | 0.0003 | | 0.00009 | 0.003 | <0.001 | 0.00003 | 0.013 | 0.0071 | <0.00002 | 0.000025 | 0.022 | 0.0017 | 0.000012 | 0.002 | |
| M97-135-02 | 4.1 | <0.000003 | 0.000029 | <0.0005 | <0.0005 | 0.05 | 9.2 | <0.001 | 0.4 | 0.00071 | 0.00055 | 7.6 | <0.0001 | | 0.00009 | 0.0039 | <0.001 | 0.00008 | 0.014 | 0.0021 | <0.00002 | 0.000024 | 0.02 | 0.0016 | 0.000007 | <0.001 | |
| M97-149-01 | 3.4 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.029 | 9.2 | <0.001 | 0.31 | 0.00044 | 0.00038 | 10 | 0.0002 | | 0.00009 | 0.0046 | <0.001 | <0.00001 | 0.012 | 0.0015 | <0.00002 | 0.000011 | 0.018 | 0.002 | 0.000003 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M99-280-01 | 14 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | 0.01 | 6.4 | <0.001 | 1.4 | 0.0007 | 0.00022 | 2.3 | <0.0001 | | <0.00002 | 0.0012 | <0.001 | 0.00005 | 0.12 | <0.0001 | <0.00002 | 0.000025 | 0.0001 | 0.00055 | 0.000007 | 0.017 | |
| M04-526-01 | 19 | 0.00013 | 0.00016 | <0.0005 | <0.0005 | 0.01 | 1 | <0.001 | 1.5 | 0.002 | 0.00016 | 2 | 0.0002 | | 0.00014 | 0.00079 | <0.001 | 0.00006 | 0.27 | <0.0001 | 0.00013 | 0.00018 | 0.00019 | 0.00031 | 0.00014 | 0.017 | |
| M03-508-02 | 20 | 0.000005 | 0.000048 | <0.0005 | <0.0005 | <0.002 | 8.5 | <0.001 | 2.8 | 0.0026 | 0.00016 | 0.73 | 0.0006 | | 0.00012 | 0.0011 | <0.001 | <0.00001 | 0.15 | <0.0001 | <0.00002 | 0.000006 | <0.00003 | 0.00027 | <0.000001 | <0.001 | |
| M06-622_878029 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD225689 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD249828 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD259467 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD259468 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-686_110546 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M06-629_878207 | 22 | <0.000003 | 0.000006 | 0.00009 | 0.0002 | <0.007 | 15 | 0.08 | 3.9 | 0.0051 | 0.00086 | 13 | 0.0004 | 0.17 | <0.00001 | 0.0015 | 0.00015 | <0.00006 | 0.14 | <0.00005 | <0.000005 | 0.00012 | 0.00004 | | | <0.002 | <0.002 |
| CAEXD213087 | 15 | <0.000003 | 0.000005 | <0.00008 | <0.0002 | <0.007 | 0.3 | 0.0004 | 3 | 0.0059 | 0.00028 | 3.9 | <0.0001 | 0.007 | <0.00001 | <0.0009 | <0.00004 | <0.00006 | 0.66 | <0.00005 | <0.000005 | 0.000003 | 0.00003 | | | <0.002 | <0.002 |
| CAEXD213334 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD216429 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD258462 | 7.5 | <0.000003 | 0.000076 | <0.00008 | <0.0002 | <0.007 | 13 | 0.0018 | 2.5 | 0.0032 | 0.0018 | 11 | 0.0006 | <0.003 | 0.00002 | 0.0021 | 0.00053 | <0.00006 | 0.031 | <0.00005 | 0.000005 | 0.000012 | 0.00052 | | | <0.002 | <0.002 |
| GT08-01-02 | 11 | 0.000067 | 0.00017 | <0.0005 | <0.0005 | 0.01 | 11 | 0.003 | 3.2 | 0.002 | 0.0006 | 19 | 0.0012 | | 0.00009 | 0.0029 | <0.001 | 0.00006 | 0.071 | 0.0006 | 0.00007 | 0.00023 | 0.0024 | 0.0076 | 0.000077 | 0.007 | |
| GT08-02-01_2008 | 10 | 0.000042 | 0.000092 | <0.0005 | <0.0005 | 0.01 | 11 | 0.002 | 2.7 | 0.002 | 0.00072 | 17 | 0.0006 | | 0.00011 | 0.0009 | <0.001 | 0.00011 | 0.053 | 0.0004 | 0.00005 | 0.00012 | 0.00058 | 0.0009 | 0.000056 | 0.008 | |
| M00-474-05 | 9.7 | <0.000003 | 0.00004 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 1.2 | 0.00097 | 0.0006 | 3.6 | 0.0006 | | 0.00004 | 0.0035 | <0.001 | <0.00001 | 0.042 | 0.0004 | <0.00002 | 0.00019 | 0.0024 | 0.00052 | 0.00001 | <0.001 | |
| M07-660-02_2008 | 7.9 | <0.000003 | 0.00004 | <0.0005 | <0.0005 | 0.01 | 9.4 | <0.001 | 0.81 | 0.00052 | 0.0005 | 3.4 | 0.0003 | | <0.00002 | 0.0046 | <0.001 | 0.00003 | 0.039 | 0.0002 | <0.00002 | 0.00013 | 0.0017 | 0.00066 | 0.000007 | <0.001 | |
| M07-678-03 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-704-01 | 8.4 | 0.000008 | 0.000052 | <0.0005 | <0.0005 | 0.01 | 11 | 0.002 | 1.5 | 0.002 | 0.0029 | 10 | 0.0008 | | 0.00005 | 0.0042 | <0.001 | 0.00007 | 0.049 | 0.0004 | <0.00002 | 0.00016 | 0.0022 | 0.00064 | 0.000023 | 0.006 | |
| M07-705-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-713-02 | 7.1 | <0.000003 | 0.00003 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 1.4 | 0.0005 | 0.0005 | 4.7 | 0.0002 | | 0.00076 | 0.0044 | <0.001 | 0.00003 | 0.028 | 0.0005 | <0.00002 | 0.00011 | 0.0017 | 0.0005 | 0.000009 | <0.001 | |
| M07-713-03 | 6.8 | <0.000003 | 0.000032 | <0.0005 | <0.0005 | 0.02 | 9.1 | <0.001 | 0.97 | 0.00072 | 0.00059 | 7.6 | <0.0001 | | 0.00005 | 0.002 | <0.001 | <0.00001 | 0.038 | 0.0009 | <0.00002 | 0.00013 | 0.0034 | 0.00047 | 0.000036 | <0.001 | |
| M95-17-01 | 8.5 | <0.000003 | 0.00005 | <0.0005 | <0.0005 | 0.01 | 7.1 | <0.001 | 1 | 0.00098 | 0.00061 | 6.6 | 0.0004 | | <0.00002 | 0.0034 | <0.001 | 0.00009 | 0.052 | 0.0005 | <0.00002 | 0.000099 | 0.0018 | 0.0011 | 0.000014 | 0.007 | |
| M95-17-02 | 7.8 | <0.000003 | 0.000057 | <0.0005 | <0.0005 | 0.01 | 6.6 | 0.002 | 1.2 | 0.0012 | 0.00059 | 7.4 | 0.0004 | | 0.00004 | 0.004 | <0.001 | 0.00004 | 0.05 | 0.0002 | <0.00002 | 0.00017 | 0.0036 | 0.0068 | 0.00002 | 0.007 | |
| M98-194-03 | 8.7 | <0.000003 | 0.000047 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 1.5 | 0.00069 | 0.0014 | 3.2 | 0.0013 | | 0.00004 | 0.0063 | <0.001 | 0.0003 | 0.052 | <0.0001 | <0.00002 | 0.00029 | 0.0026 | 0.00097 | 0.000007 | <0.001 | |
| M98-269-03 | 8.4 | <0.000003 | 0.00003 | <0.0005 | <0.0005 | 0.02 | 9.3 | <0.001 | 1 | 0.00053 | 0.00046 | 3.8 | 0.0004 | | <0.00002 | 0.003 | <0.001 | <0.00001 | 0.04 | 0.0006 | <0.00002 | 0.000071 | 0.0026 | 0.00048 | 0.000006 | <0.001 | |
| M98-297-03 | 7.7 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.02 | 11 | <0.001 | 1.2 | 0.00064 | 0.00052 | 4.6 | <0.0001 | | 0.00003 | 0.0048 | <0.001 | <0.00001 | 0.035 | 0.0011 | <0.00002 | 0.000066 | 0.0022 | 0.00039 | 0.000027 | <0.001 | |
| M98-297-04 | 9.7 | <0.000003 | 0.000028 | <0.0005 | <0.0005 | 0.01 | 9.9 | <0.001 | 1.1 | 0.00059 | 0.00094 | 3.8 | 0.0004 | | 0.00003 | 0.0027 | <0.001 | <0.00001 | 0.039 | 0.0004 | <0.00002 | 0.000044 | 0.0025 | 0.00037 | 0.000006 | <0.001 | |
| M98-316-01_2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-340-03 | 8.1 | <0.000003 | 0.000052 | <0.0005 | <0.0005 | 0.01 | 7.6 | 0.002 | 1.1 | 0.0011 | 0.00087 | 5.4 | 0.0008 | | 0.00003 | 0.0049 | <0.001 | 0.00004 | 0.042 | 0.0006 | <0.00002 | 0.0005 | 0.0045 | 0.00046 | 0.000025 | 0.005 | |
| M99-341-02 | 10 | <0.000003 | 0.000065 | <0.0005 | <0.0005 | 0.01 | 7.7 | 0.002 | 2.5 | 0.0019 | 0.00047 | 6 | 0.0008 | | 0.00004 | 0.0041 | <0.001 | 0.00004 | 0.048 | <0.0001 | <0.00002 | 0.00088 | 0.0033 | 0.00068 | 0.000009 | 0.006 | |
| M99-345-02 | 6.7 | 0.00003 | 0.000039 | <0.0005 | <0.0005 | 0.02 | 8.5 | <0.001 | 0.89 | 0.00085 | 0.00062 | 5.5 | <0.0001 | | 0.00005 | 0.0022 | <0.001 | <0.00001 | 0.031 | 0.0008 | <0.00002 | 0.00012 | 0.0036 | 0.00055 | 0.00006 | <0.001 | |
| M99-346-02_2008 | 7.8 | <0.000003 | 0.000078 | <0.0005 | 0.0009 | 0.02 | 7.8 | 0.002 | 1.4 | 0.0012 | 0.00049 | 8.1 | 0.0005 | | 0.00006 | 0.0053 | <0.001 | 0.00035 | 0.049 | 0.0008 | <0.00002 | 0.00014 | 0.0029 | 0.00044 | 0.000029 | 0.011 | |
| M99-346-03 | 6.9 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.02 | 7.4 | <0.001 | 1.2 | 0.002 | 0.00022 | 5.8 | <0.0001 | | 0.00005 | 0.0024 | <0.001 | <0.00001 | 0.029 | 0.0008 | <0.00002 | 0.00021 | 0.0039 | 0.00029 | 0.00003 | <0.001 | |
| M99-350-02 | 8 | <0.000003 | 0.000032 | <0.0005 | <0.0005 | 0.03 | 12 | <0.001 | 1.5 | 0.00069 | 0.00051 | 3.9 | 0.0004 | | <0.00002 | 0.003 | <0.001 | <0.00001 | 0.029 | 0.001 | <0.00002 | 0.0001 | 0.0026 | 0.00041 | 0.000025 | <0.001 | |
| M99-350-03 | 7.8 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.01 | 9.7 | <0.001 | 0.93 | 0.00054 | 0.00042 | 5.1 | <0.0001 | | <0.00002 | 0.0038 | <0.001 | <0.00001 | 0.034 | 0.0004 | <0.00002 | 0.00009 | 0.0029 | 0.00042 | 0.00002 | <0.001 | |
| M99-403-02 | 11 | 0.00014 | 0.00018 | <0.0005 | <0.0005 | 0.01 | 7.5 | <0.001 | 2.5 | 0.0019 | 0.00083 | 6.2 | 0.0006 | | 0.00017 | 0.0012 | <0.001 | 0.00004 | 0.041 | 0.0004 | 0.00014 | 0.00022 | 0.00066 | 0.0011 | 0.00015 | 0.009 | |
| M99-403-04 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-404-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-404-02 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-404-03 | 7.1 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | 0.02 | 8 | <0.001 | 1.2 | 0.00078 | 0.00029 | 6.1 | <0.0001 | | 0.00004 | 0.0036 | <0.001 | <0.00001 | 0.031 | 0.0014 | <0.00002 | 0.00013 | 0.0037 | 0.00035 | 0.000028 | <0.001 | |
| M99-403-03 | 11 | 0.000041 | 0.000072 | <0.0005 | <0.0005 | 0.01 | 8.2 | <0.001 | 2 | 0.0014 | 0.00059 | 4.8 | 0.0003 | | 0.00005 | 0.0014 | <0.001 | 0.00006 | 0.068 | <0.0001 | 0.00004 | 0.00007 | 0.00037 | 0.00082 | 0.00005 | 0.01 | |
| M99-404-04 | 8.2 | 0.000032 | 0.000083 | <0.0005 | <0.0005 | 0.01 | 8.7 | <0.001 | 1.3 | 0.0013 | 0.00047 | 5.1 | 0.0006 | | 0.00008 | 0.0036 | <0.001 | 0.00008 | 0.039 | 0.0005 | 0.00003 | 0.0002 | 0.003 | 0.00035 | 0.00005 | 0.006 | |
| M07-645-01 | 7 | <0.000003 | 0.000071 | <0.0005 | <0.0005 | 0.01 | 7.4 | <0.001 | 1.4 | 0.00055 | 0.0005 | 11 | 0.0004 | | 0.00004 | 0.0055 | <0.001 | 0.00005 | 0.055 | 0.0004 | <0.00002 | 0.000078 | 0.0024 | 0.00066 | 0.000029 | 0.003 | |
| M99-327-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M04-533-01 | 7.7 | <0.000003 | 0.000072 | <0.0005 | <0.0005 | 0.01 | 14 | 0.002 | 2 | 0.00096 | 0.00039 | 7.2 | 0.0003 | | 0.00008 | 0.0027 | <0.001 | 0.00007 | 0.13 | 0.0002 | <0.00002 | 0.000072 | 0.0023 | 0.0019 | 0.000015 | 0.006 | |
| M00-476-01 | 6.6 | 0.000014 | 0.000044 | <0.0005 | <0.0005 | 0.04 | 9 | <0.001 | 1.1 | 0.00073 | 0.00085 | 5.7 | 0.0002 | | 0.00008 | 0.0053 | <0.001 | <0.00001 | 0.027 | 0.0015 | <0.00002 | 0.000071 | 0.0035 | 0.00034 | 0.000038 | <0.001 | |
| M00-476-02 | 7.4 | <0.000003 | 0.000078 | <0.0005 | <0.0005 | 0.03 | 9.1 | <0.001 | 1.5 | 0.00064 | 0.0007 | 5.9 | 0.0002 | | 0.00006 | 0.0043 | <0.001 | <0.00001 | 0.027 | 0.0009 | <0.00002 | 0.0001 | 0.0026 | 0.00044 | 0.000054 | <0.001 | |
| M00-479-01 | 9.2 | <0.000003 | 0.000099 | <0.0005 | <0.0005 | 0.07 | 6.2 | <0.001 | 1.7 | 0.0023 | 0.001 | 4.5 | 0.0003 | | 0.00016 | 0.0012 | <0.001 | <0.00001 | 0.037 | 0.0021 | <0.00002 | 0.000053 | 0.0011 | 0.0013 | 0.000043 | <0.001 | |
| M00-479-02 | 8.8 | 0.000012 | 0.000046 | <0.0005 | <0.0005 | 0.02 | 10 | <0.001 | 1.7 | 0.00096 | 0.0011 | 4.7 | 0.0003 | | 0.00007 | 0.0045 | <0.001 | <0.00001 | 0.037 | 0.0006 | <0.00002 | 0.00013 | 0.0021 | 0.00051 | 0.000031 | <0.001 | |
| M06-628-01 | 7.6 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.01 | 10 | <0.001 | 1.3 | 0.00076 | 0.00092 | 6.6 | <0.0001 | | 0.00005 | 0.0057 | <0.001 | <0.00001 | 0.042 | 0.0009 | <0.00002 | 0.000062 | 0.0021 | 0.00095 | 0.00002 | <0.001 | |
| M06-628-02 | 9.4 | <0.000003 | 0.000032 | <0.0005 | <0.0005 | 0.01 | 10 | <0.001 | 1.9 | 0.0014 | 0.00046 | 5.8 | <0.0001 | | <0.00002 | 0.0044 | <0.001 | <0.00001 | 0.067 | 0.0004 | <0.00002 | 0.000058 | 0.0015 | 0.00067 | 0.000012 | <0.001 | |
| M07-660-01_2009 | 7 | 0.000009 | 0.000039 | <0.0005 | <0.0005 | 0.03 | 9.6 | <0.001 | 1.2 | 0.00069 | 0.00049 | 8.1 | <0.0001 | | 0.00004 | 0.004 | <0.001 | <0.00001 | 0.034 | 0.0014 | <0.00002 | 0.00012 | 0.0033 | 0.00025 | 0.00004 | <0.001 | |
| M07-660-02_2009 | 7.3 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.03 | 9.1 | <0.001 | 1.3 | 0.00087 | 0.00046 | 8.1 | <0.0001 | | 0.00005 | 0.005 | <0.001 | <0.00001 | 0.034 | 0.0008 | <0.00002 | 0.000071 | 0.0027 | 0.00033 | 0.000035 | <0.001 | |
| M98-194-04 | 8.8 | <0.000003 | 0.000052 | <0.0005 | 0.0006 | 0.02 | 9.9 | <0.001 | 2 | 0.0011 | 0.00045 | 6.5 | 0.0002 | | 0.00004 | 0.0045 | <0.001 | <0.00001 | 0.039 | 0.0013 | <0.00002 | 0.00016 | 0.0028 | 0.00058 | 0.000031 | <0.001 | |
| M98-298-01 | 6.1 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | 0.05 | 8.7 | <0.001 | 0.8 | 0.00062 | 0.00031 | 5.3 | 0.0002 | | 0.00006 | 0.0039 | <0.001 | <0.00001 | 0.025 | 0.0022 | <0.00002 | 0.000067 | 0.0038 | 0.00019 | 0.000046 | <0.001 | |
| M98-298-02 | 8.3 | <0.000003 | 0.00006 | <0.0005 | <0.0005 | 0.01 | 9.2 | <0.001 | 1.6 | 0.001 | 0.0004 | 4.5 | 0.0002 | | <0.00002 | 0.0039 | <0.001 | <0.00001 | 0.043 | 0.0004 | <0.00002 | 0.000092 | 0.0021 | 0.00044 | 0.000012 | <0.001 | |
| M98-298-03 | 6.7 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.03 | 7.1 | <0.001 | 0.81 | 0.0013 | 0.00031 | 5.8 | 0.0002 | | 0.00006 | 0.0034 | <0.001 | <0.00001 | 0.031 | 0.0009 | <0.00002 | 0.00018 | 0.0045 | 0.00033 | 0.000045 | <0.001 | |
| M99-341-03 | 7.5 | <0.000003 | 0.00033 | <0.0005 | <0.0005 | 0.03 | 9.1 | <0.001 | 0.75 | 0.00048 | 0.0016 | 4.5 | 0.0006 | | 0.00006 | 0.006 | <0.001 | <0.00001 | 0.031 | 0.0014 | <0.00002 | 0.00012 | 0.0029 | 0.00075 | 0.000042 | <0.001 | |
| M99-345-01_2009 | 7.8 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.02 | 7.1 | <0.001 | 0.85 | 0.0025 | 0.00071 | 5.3 | 0.0003 | | 0.00004 | 0.0031 | <0.001 | <0.00001 | 0.037 | 0.001 | <0.00002 | 0.00014 | 0.0037 | 0.00039 | 0.000024 | <0.001 | |
| M99-345-03 | 10 | <0.000003 | 0.000049 | <0.0005 | <0.0005 | 0.01 | 7.8 | <0.001 | 1.4 | 0.0017 | 0.00087 | 4.9 | 0.0005 | | 0.00003 | 0.004 | <0.001 | <0.00001 | 0.058 | 0.0003 | <0.00002 | 0.000081 | 0.0013 | 0.00044 | 0.000008 | 0.002 | |
| M99-346-01 | 7.7 | <0.000003 | 0.00006 | <0.0005 | <0.0005 | 0.02 | 10 | <0.001 | 2.1 | 0.0017 | 0.00084 | 5.1 | 0.0005 | | 0.00005 | 0.0051 | <0.001 | <0.00001 | 0.03 | 0.0016 | <0.00002 | 0.000059 | 0.0019 | 0.00046 | 0.000034 | <0.001 | |
| M99-346-02_2009 | 8 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | 0.02 | 7.9 | <0.001 | 1.5 | 0.00082 | 0.00054 | 5.7 | 0.0006 | | 0.00006 | 0.0035 | <0.001 | <0.00001 | 0.035 | 0.001 | <0.00002 | 0.0003 | 0.0039 | 0.00049 | 0.000048 | <0.001 | |
| M99-385-01 | 7.1 | <0.000003 | 0.000051 | <0.0005 | <0.0005 | 0.02 | 9.6 | <0.001 | 1.3 | 0.0023 | 0.00074 | 5.2 | 0.0003 | | 0.00007 | 0.0042 | <0.001 | 0.00002 | 0.027 | 0.0009 | <0.00002 | 0.00007 | 0.0024 | 0.00041 | 0.00003 | <0.001 | |
| M99-386-01 | 8.6 | 0.000052 | 0.00008 | <0.0005 | <0.0005 | 0.04 | 9.6 | <0.001 | 2.2 | 0.0021 | 0.0012 | 6 | 0.0007 | | 0.00018 | 0.0032 | <0.001 | 0.00002 | 0.037 | 0.0026 | <0.00002 | 0.00018 | 0.0026 | 0.00086 | 0.000036 | <0.001 | |
| M99-386-02 | 6.8 | <0.000003 | 0.000045 | <0.0005 | <0.0005 | 0.06 | 8.4 | <0.001 | 1 | 0.0018 | 0.00035 | 5.2 | 0.0002 | | 0.00013 | 0.0024 | <0.001 | <0.00001 | 0.03 | 0.0024 | <0.00002 | 0.00014 | 0.0031 | 0.00035 | 0.000073 | <0.001 | |
| M99-403-05 | 7.7 | 0.000012 | 0.000031 | <0.0005 | <0.0005 | 0.01 | 8.9 | <0.001 | 1.3 | 0.00072 | 0.00047 | 5.7 | 0.0002 | | 0.00004 | 0.0032 | <0.001 | <0.00001 | 0.037 | 0.0005 | <0.00002 | 0.000059 | 0.0019 | 0.00043 | 0.000013 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M99-404-05 | 8.2 | <0.000003 | 0.000046 | <0.0005 | <0.0005 | 0.02 | 8.7 | <0.001 | 1.2 | 0.00054 | 0.00041 | 5.2 | 0.0003 | | 0.00004 | 0.0036 | <0.001 | <0.00001 | 0.036 | 0.0006 | <0.00002 | 0.000063 | 0.002 | 0.00033 | 0.000022 | <0.001 | |
| M99-404-06 | 7.3 | <0.000003 | 0.000047 | <0.0005 | <0.0005 | 0.01 | 8.4 | <0.001 | 1.7 | 0.001 | 0.00054 | 5.2 | 0.0003 | | <0.00002 | 0.0036 | <0.001 | <0.00001 | 0.029 | 0.0004 | <0.00002 | 0.000095 | 0.0027 | 0.0013 | 0.000012 | <0.001 | |
| M99-418-01 | 7.7 | <0.000003 | 0.000052 | <0.0005 | <0.0005 | 0.02 | 11 | <0.001 | 1.6 | 0.00064 | 0.00073 | 5.4 | <0.0001 | | 0.00005 | 0.0043 | <0.001 | <0.00001 | 0.036 | 0.0015 | <0.00002 | 0.000085 | 0.0026 | 0.00025 | 0.000034 | <0.001 | |
| M03-498-01 | 7.8 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.01 | 9.6 | <0.001 | 1.6 | 0.001 | 0.0001 | 5.6 | <0.0001 | | <0.00002 | 0.003 | <0.001 | <0.00001 | 0.055 | 0.0002 | <0.00002 | 0.00011 | 0.0016 | 0.00067 | 0.000008 | <0.001 | |
| M06-607-01 | 7.8 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.02 | 9.9 | <0.001 | 1.4 | 0.00049 | 0.00052 | 5.1 | <0.0001 | | 0.00006 | 0.0041 | <0.001 | <0.00001 | 0.028 | 0.0013 | <0.00002 | 0.000036 | 0.0019 | 0.00084 | 0.000034 | <0.001 | |
| M08-731W1-02 | 8.7 | <0.000003 | 0.00003 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 2.4 | 0.00073 | 0.00024 | 6.8 | <0.0001 | | <0.00002 | 0.0061 | <0.001 | <0.00001 | 0.04 | 0.0005 | <0.00002 | 0.000063 | 0.0022 | 0.00091 | 0.00002 | <0.001 | |
| M98-266-01 | 8 | 0.000009 | 0.000047 | <0.0005 | <0.0005 | 0.01 | 12 | <0.001 | 1.9 | 0.00072 | 0.00037 | 4.4 | <0.0001 | | 0.00008 | 0.0044 | <0.001 | 0.00002 | 0.033 | 0.0006 | <0.00002 | 0.000054 | 0.002 | 0.00036 | 0.000027 | <0.001 | |
| M03-508-01 | 7 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.004 | 7.6 | <0.001 | 1.1 | 0.00077 | 0.0004 | 5.6 | 0.0003 | | <0.00002 | 0.0049 | <0.001 | <0.00001 | 0.029 | <0.0001 | <0.00002 | 0.00015 | 0.0041 | 0.00023 | 0.000004 | <0.001 | |
| M06-577-02 | 8.7 | 0.000017 | 0.000031 | <0.0005 | <0.0005 | 0.008 | 11 | <0.001 | 1.8 | 0.0006 | 0.00048 | 6.1 | 0.0004 | | 0.00007 | 0.0057 | <0.001 | <0.00001 | 0.036 | 0.0002 | <0.00002 | 0.000072 | 0.0021 | 0.00049 | 0.00001 | <0.001 | |
| M06-577-03 | 9.1 | 0.000009 | 0.000041 | <0.0005 | <0.0005 | 0.005 | 11 | <0.001 | 2.5 | 0.0009 | 0.00075 | 4.8 | 0.0006 | | 0.00008 | 0.0045 | <0.001 | <0.00001 | 0.029 | 0.0005 | <0.00002 | 0.000056 | 0.0016 | 0.00052 | 0.000005 | <0.001 | |
| M06-591-01 | 9.6 | 0.000008 | 0.000044 | <0.0005 | <0.0005 | 0.009 | 11 | <0.001 | 2.2 | 0.00087 | 0.00073 | 5.7 | 0.0007 | | 0.00007 | 0.0046 | <0.001 | <0.00001 | 0.032 | 0.0006 | <0.00002 | 0.000081 | 0.0016 | 0.00074 | 0.00001 | <0.001 | |
| M06-608-01 | 7.5 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.013 | 8.5 | <0.001 | 1.2 | 0.00065 | 0.0003 | 5.3 | 0.0003 | | 0.00017 | 0.0035 | <0.001 | <0.00001 | 0.029 | 0.0002 | <0.00002 | 0.000092 | 0.0035 | 0.00039 | 0.000009 | <0.001 | |
| M06-608-02 | 7 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.011 | 9.3 | <0.001 | 1.3 | 0.00067 | 0.00025 | 5.2 | 0.0002 | | 0.00009 | 0.0039 | <0.001 | <0.00001 | 0.025 | 0.0004 | <0.00002 | 0.000085 | 0.0031 | 0.00037 | 0.000021 | <0.001 | |
| M06-611-01 | 8 | <0.000003 | 0.000053 | <0.0005 | <0.0005 | 0.015 | 8.7 | <0.001 | 1.6 | 0.00065 | 0.00035 | 6.1 | 0.0003 | | 0.00009 | 0.0029 | <0.001 | <0.00001 | 0.03 | 0.0006 | <0.00002 | 0.00018 | 0.0036 | 0.0005 | 0.000031 | <0.001 | |
| M06-611-02 | 8 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.007 | 11 | <0.001 | 1.5 | 0.00058 | 0.00064 | 5.2 | 0.0002 | | 0.00006 | 0.0043 | <0.001 | <0.00001 | 0.03 | 0.0002 | <0.00002 | 0.00011 | 0.0033 | 0.0013 | 0.000011 | <0.001 | |
| M06-625-01 | 8.5 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.005 | 11 | <0.001 | 1.9 | 0.00068 | 0.00048 | 6.1 | 0.0002 | | 0.00009 | 0.0029 | <0.001 | <0.00001 | 0.03 | 0.0002 | <0.00002 | 0.00017 | 0.003 | 0.00048 | 0.000013 | <0.001 | |
| M06-625-02 | 6.3 | <0.000003 | 0.000031 | <0.0005 | <0.0005 | 0.012 | 9.3 | <0.001 | 1.7 | 0.00065 | 0.00044 | 5.7 | 0.0002 | | 0.00009 | 0.0025 | <0.001 | <0.00001 | 0.029 | 0.0005 | <0.00002 | 0.000044 | 0.0025 | 0.0011 | 0.000014 | <0.001 | |
| M06-631-01 | 8.3 | <0.000003 | 0.00004 | <0.0005 | <0.0005 | 0.004 | 9.9 | <0.001 | 2 | 0.00074 | 0.0011 | 5.3 | 0.0003 | | 0.00006 | 0.0038 | <0.001 | <0.00001 | 0.027 | 0.0003 | <0.00002 | 0.00005 | 0.0013 | 0.0012 | 0.000009 | <0.001 | |
| M07-674-01 | 8.7 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.003 | 9.7 | <0.001 | 2 | 0.0008 | 0.00039 | 6 | 0.0003 | | 0.00007 | 0.0048 | <0.001 | 0.00003 | 0.036 | <0.0001 | <0.00002 | 0.000062 | 0.0023 | 0.00063 | 0.000007 | <0.001 | |
| M07-689-01 | 5.5 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | 0.079 | 8.7 | <0.001 | 0.74 | 0.0011 | 0.0007 | 5.8 | 0.0003 | | 0.00014 | 0.004 | <0.001 | <0.00001 | 0.02 | 0.0009 | <0.00002 | 0.000098 | 0.0044 | 0.00035 | 0.000025 | <0.001 | |
| M07-689-02 | 5.9 | <0.000003 | 0.000026 | <0.0005 | <0.0005 | 0.023 | 13 | <0.001 | 0.5 | 0.00035 | 0.00058 | 5.9 | 0.0002 | | 0.00011 | 0.0041 | <0.001 | <0.00001 | 0.021 | 0.0006 | <0.00002 | 0.000089 | 0.0058 | 0.0004 | 0.000015 | <0.001 | |
| M08-761-01 | 7.8 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.007 | 8.9 | <0.001 | 1.8 | 0.00055 | 0.00032 | 7.5 | 0.0008 | | 0.00007 | 0.0039 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | 0.00019 | 0.0034 | 0.00045 | 0.000014 | <0.001 | |
| M08-761-02 | 7.6 | <0.000003 | 0.000028 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 1.6 | 0.00061 | 0.00024 | 6.3 | 0.0002 | | 0.00008 | 0.0038 | <0.001 | <0.00001 | 0.029 | 0.0004 | <0.00002 | 0.0002 | 0.004 | 0.00034 | 0.000011 | <0.001 | |
| M08-763-01 | 9.3 | <0.000003 | 0.000038 | <0.0005 | <0.0005 | 0.004 | 12 | <0.001 | 2.4 | 0.00076 | 0.00037 | 5.3 | 0.0004 | | 0.00013 | 0.0043 | <0.001 | 0.00002 | 0.041 | 0.0003 | <0.00002 | 0.00016 | 0.0026 | 0.001 | 0.000005 | <0.001 | |
| M08-765-01 | 7.7 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.007 | 8.4 | <0.001 | 1.6 | 0.00083 | 0.00034 | 7.1 | 0.0008 | | 0.00007 | 0.0032 | <0.001 | <0.00001 | 0.031 | 0.0003 | <0.00002 | 0.00024 | 0.0041 | 0.0005 | 0.000007 | <0.001 | |
| M96-19-01 | 8.1 | <0.000003 | 0.00005 | <0.0005 | 0.0009 | 0.012 | 8.1 | <0.001 | 1.9 | 0.00095 | 0.00043 | 5.5 | 0.0005 | | 0.00012 | 0.0027 | <0.001 | 0.00008 | 0.026 | 0.0003 | <0.00002 | 0.00025 | 0.0035 | 0.00074 | 0.000019 | <0.001 | |
| M96-19-02 | 9.2 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.018 | 9.4 | <0.001 | 1.7 | 0.001 | 0.00095 | 5.5 | 0.0006 | | 0.00022 | 0.0023 | <0.001 | <0.00001 | 0.042 | 0.0008 | <0.00002 | 0.00014 | 0.0028 | 0.00042 | 0.000014 | <0.001 | |
| M96-37-02 | 9 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.007 | 8.5 | <0.001 | 2 | 0.001 | 0.00056 | 5.3 | 0.0004 | | 0.0001 | 0.0029 | <0.001 | <0.00001 | 0.039 | 0.0003 | <0.00002 | 0.00023 | 0.0029 | 0.0021 | 0.000008 | <0.001 | |
| M96-37-03 | 11 | <0.000003 | 0.000034 | <0.0005 | <0.0005 | 0.011 | 8.6 | <0.001 | 1.7 | 0.00099 | 0.00066 | 5.4 | 0.0004 | | 0.0001 | 0.0037 | <0.001 | <0.00001 | 0.04 | 0.0003 | <0.00002 | 0.00012 | 0.0025 | 0.00055 | 0.000008 | <0.001 | |
| M96-77-01 | 8.7 | <0.000003 | 0.000029 | <0.0005 | <0.0005 | 0.008 | 9.8 | <0.001 | 1.4 | 0.00081 | 0.00068 | 4.6 | 0.0004 | | 0.00011 | 0.0043 | <0.001 | <0.00001 | 0.033 | 0.0003 | <0.00002 | 0.000072 | 0.0028 | 0.00054 | 0.000014 | <0.001 | |
| M96-77-02 | 9.2 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.008 | 11 | <0.001 | 2.3 | 0.00092 | 0.00071 | 5.5 | 0.0002 | | 0.00025 | 0.0061 | <0.001 | <0.00001 | 0.036 | 0.0005 | <0.00002 | 0.000084 | 0.0019 | 0.00061 | 0.000012 | <0.001 | |
| M97-121-01 | 8.2 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.015 | 9.8 | <0.001 | 1.5 | 0.00066 | 0.00036 | 5.3 | 0.0004 | | 0.00011 | 0.0038 | <0.001 | 0.00002 | 0.027 | 0.0008 | <0.00002 | 0.0004 | 0.0043 | 0.00063 | 0.000019 | <0.001 | |
| M97-135-03 | 8.2 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | 0.016 | 9 | <0.001 | 1.7 | 0.00075 | 0.00033 | 5.8 | 0.0004 | | 0.00008 | 0.0032 | <0.001 | <0.00001 | 0.029 | 0.0004 | <0.00002 | 0.0002 | 0.0042 | 0.00061 | 0.000011 | <0.001 | |
| M97-94A-01 | 8.4 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.008 | 11 | <0.001 | 2.2 | 0.00075 | 0.00048 | 6.1 | 0.0003 | | 0.00008 | 0.0035 | <0.001 | <0.00001 | 0.03 | 0.0002 | <0.00002 | 0.00014 | 0.0031 | 0.00054 | 0.000014 | <0.001 | |
| M97-94A-02 | 8.3 | <0.000003 | 0.00005 | <0.0005 | 0.0006 | 0.023 | 10 | <0.001 | 1.9 | 0.00069 | 0.00042 | 4.7 | 0.0005 | | 0.00016 | 0.0035 | <0.001 | <0.00001 | 0.027 | 0.001 | <0.00002 | 0.00015 | 0.0028 | 0.00084 | 0.000012 | <0.001 | |
| M97-95-01 | 6.7 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | 0.006 | 7.8 | <0.001 | 0.94 | 0.00073 | 0.00028 | 5.3 | <0.0001 | | 0.00006 | 0.0039 | <0.001 | <0.00001 | 0.027 | 0.0002 | <0.00002 | 0.00012 | 0.0037 | 0.00027 | 0.000009 | <0.001 | |
| M98-201-04 | 7.3 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | 0.015 | 9.3 | <0.001 | 1.1 | 0.00057 | 0.0003 | 5.2 | 0.0003 | | 0.00013 | 0.0037 | <0.001 | <0.00001 | 0.026 | 0.0006 | <0.00002 | 0.00018 | 0.0044 | 0.00037 | 0.000009 | <0.001 | |
| M98-208-01 | 7 | <0.000003 | 0.000015 | <0.0005 | <0.0005 | 0.007 | 8.6 | <0.001 | 0.74 | 0.00066 | 0.00046 | 5.6 | <0.0001 | | 0.00008 | 0.0031 | <0.001 | <0.00001 | 0.026 | 0.0002 | <0.00002 | 0.00016 | 0.0048 | 0.00029 | 0.000013 | <0.001 | |
| M98-265-01 | 8.9 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.007 | 8.4 | <0.001 | 2.1 | 0.00092 | 0.00053 | 5.7 | 0.0004 | | 0.00017 | 0.004 | <0.001 | <0.00001 | 0.035 | <0.0001 | <0.00002 | 0.00012 | 0.0027 | 0.00025 | 0.000011 | <0.001 | |
| M98-317-01 | 14 | <0.000003 | 0.000023 | <0.0005 | <0.0005 | 0.003 | 8.7 | <0.001 | 3 | 0.0014 | 0.00021 | 4.8 | <0.0001 | | 0.00006 | 0.0007 | <0.001 | <0.00001 | 0.074 | <0.0001 | <0.00002 | 0.000015 | 0.00017 | 0.00037 | 0.000002 | <0.001 | |
| M99-336B-03 | 8.4 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.014 | 12 | <0.001 | 1.8 | 0.00073 | 0.00033 | 5.3 | <0.0001 | | 0.00007 | 0.0044 | <0.001 | <0.00001 | 0.034 | 0.0007 | <0.00002 | 0.0002 | 0.0038 | 0.00053 | 0.000018 | <0.001 | |
| M99-347-01 | 11 | <0.000003 | 0.000052 | <0.0005 | <0.0005 | 0.003 | 9.9 | <0.001 | 2.5 | 0.0012 | 0.0013 | 5 | 0.0006 | | 0.00006 | 0.0037 | <0.001 | <0.00001 | 0.041 | <0.0001 | <0.00002 | 0.00021 | 0.0023 | 0.00069 | 0.000006 | <0.001 | |
| M99-347-02 | 9 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.004 | 9.5 | <0.001 | 1.9 | 0.00093 | 0.00047 | 5 | 0.0003 | | 0.00009 | 0.0038 | <0.001 | <0.00001 | 0.032 | <0.0001 | <0.00002 | 0.00014 | 0.0026 | 0.00048 | 0.00001 | <0.001 | |
| M99-409-01 | 8.3 | <0.000003 | 0.00004 | <0.0005 | <0.0005 | 0.006 | 8.3 | <0.001 | 1.2 | 0.0009 | 0.00048 | 5 | 0.0004 | | 0.00007 | 0.0035 | <0.001 | <0.00001 | 0.032 | 0.0004 | <0.00002 | 0.00022 | 0.0036 | 0.0004 | 0.00002 | <0.001 | |
| M99-409-02 | 7.4 | <0.000003 | 0.000043 | <0.0005 | <0.0005 | 0.005 | 7.8 | <0.001 | 1.7 | 0.00085 | 0.00055 | 5.9 | 0.0003 | | 0.00005 | 0.0024 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | 0.00013 | 0.003 | 0.00054 | 0.000011 | <0.001 | |
| M99-409-03 | 7.1 | <0.000003 | 0.000058 | <0.0005 | <0.0005 | 0.059 | 9.8 | <0.001 | 1.7 | 0.0011 | 0.00041 | 5.1 | 0.0003 | | 0.00007 | 0.0042 | <0.001 | <0.00001 | 0.024 | 0.0014 | <0.00002 | 0.00017 | 0.0034 | 0.00061 | 0.000035 | <0.001 | |
| M99-410-01 | 9 | <0.000003 | 0.000038 | <0.0005 | <0.0005 | 0.004 | 9.8 | <0.001 | 1.5 | 0.00092 | 0.00076 | 4.6 | 0.0003 | | <0.00002 | 0.0037 | <0.001 | <0.00001 | 0.031 | 0.0003 | <0.00002 | 0.00012 | 0.0027 | 0.00026 | 0.000008 | <0.001 | |
| M99-410-02 | 8.1 | <0.000003 | 0.000043 | <0.0005 | <0.0005 | 0.008 | 10 | <0.001 | 1.5 | 0.00068 | 0.00071 | 4.9 | 0.0003 | | 0.00004 | 0.004 | <0.001 | <0.00001 | 0.031 | 0.0004 | <0.00002 | 0.00014 | 0.003 | 0.0003 | 0.000009 | <0.001 | |
| M99-436-01 | 7.7 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.009 | 8.2 | <0.001 | 1.7 | 0.00069 | 0.00032 | 6.1 | 0.0002 | | 0.00011 | 0.0034 | <0.001 | <0.00001 | 0.029 | 0.0006 | <0.00002 | 0.00015 | 0.0031 | 0.00048 | 0.000039 | <0.001 | |
| M99-436-02 | 9.3 | <0.000003 | 0.000049 | <0.0005 | <0.0005 | 0.011 | 9.8 | <0.001 | 2 | 0.00097 | 0.00085 | 4.5 | 0.0005 | | 0.00005 | 0.0035 | <0.001 | <0.00001 | 0.029 | 0.0009 | <0.00002 | 0.00013 | 0.0022 | 0.00084 | 0.000014 | <0.001 | |
| M10-879-01 | 6.7 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.007 | 7.7 | <0.001 | 1.3 | 0.0011 | 0.00031 | 6.5 | 0.0002 | | 0.00003 | 0.0027 | <0.001 | <0.00001 | 0.03 | 0.0005 | <0.00002 | 0.00028 | 0.0036 | 0.00037 | 0.000015 | <0.001 | |
| M10-887-01 | 7.9 | <0.000003 | 0.000048 | <0.0005 | <0.0005 | 0.012 | 11 | <0.001 | 2.1 | 0.0012 | 0.00048 | 6.6 | 0.0003 | | <0.00002 | 0.006 | <0.001 | <0.00001 | 0.026 | 0.0009 | <0.00002 | 0.00028 | 0.0029 | 0.00054 | 0.000028 | <0.001 | |
| M07-704-02 | 7.6 | <0.000003 | 0.000065 | <0.0005 | <0.0005 | 0.01 | 11 | 0.002 | 2.1 | 0.0011 | 0.00098 | 11 | 0.0006 | | 0.00003 | 0.0044 | <0.001 | 0.00003 | 0.041 | 0.0007 | <0.00002 | 0.00015 | 0.0026 | 0.00069 | 0.000022 | 0.006 | |
| M07-710-02 | 12 | 0.000016 | 0.000053 | <0.0005 | <0.0005 | 0.01 | 7.3 | <0.001 | 1.3 | 0.0017 | 0.00041 | 5.9 | 0.0003 | | 0.00009 | 0.0017 | <0.001 | 0.00013 | 0.16 | <0.0001 | <0.00002 | 0.000074 | 0.0002 | 0.00067 | 0.000028 | 0.01 | |
| M07-711-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M98-269-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M98-297-02 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M03-496-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M06-604-01 | 7 | <0.000003 | 0.000071 | 0.0007 | <0.0005 | 0.01 | 6.1 | <0.001 | 1.3 | 0.0005 | 0.00094 | 12 | 0.0003 | | 0.00008 | 0.0044 | <0.001 | 0.00006 | 0.054 | 0.0007 | <0.00002 | 0.000069 | 0.0023 | 0.00091 | 0.000029 | 0.003 | |
| M07-663-01 | 8.2 | <0.000003 | 0.00015 | <0.0005 | <0.0005 | 0.01 | 8.5 | <0.001 | 1.5 | 0.00081 | 0.00057 | 8.5 | 0.0009 | | 0.00007 | 0.0043 | <0.001 | 0.00005 | 0.053 | 0.0003 | <0.00002 | 0.000056 | 0.002 | 0.0012 | 0.00002 | 0.007 | |
| M07-663-02 | 8.8 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | 0.01 | 10 | <0.001 | 2.2 | 0.00079 | 0.0006 | 12 | 0.001 | | 0.00005 | 0.0029 | <0.001 | 0.00007 | 0.059 | 0.0003 | <0.00002 | 0.000051 | 0.0014 | 0.0019 | 0.000014 | 0.008 | |
| M07-649-01_2009 | 8.5 | <0.000003 | 0.000028 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 2 | 0.0006 | 0.0003 | 4.6 | <0.0001 | | <0.00002 | 0.0025 | <0.001 | <0.00001 | 0.032 | 0.0006 | <0.00002 | 0.000019 | 0.0013 | 0.0009 | 0.000011 | <0.001 | |
| M07-672B-01 | 6.8 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | 0.03 | 12 | <0.001 | 1.4 | 0.00064 | 0.00085 | 5.8 | <0.0001 | | 0.00004 | 0.0048 | <0.001 | <0.00001 | 0.022 | 0.002 | <0.00002 | 0.00003 | 0.0019 | 0.0011 | 0.000027 | <0.001 | |
| M07-685-02 | 7.1 | 0.000017 | 0.00012 | <0.0005 | <0.0005 | 0.02 | 11 | <0.001 | 1.7 | 0.00066 | 0.0006 | 6.2 | 0.0005 | | 0.00007 | 0.0055 | <0.001 | <0.00001 | 0.026 | 0.0015 | <0.00002 | 0.000045 | 0.0021 | 0.00094 | 0.000035 | <0.001 | |
| M07-691-01 | 5.9 | <0.000003 | 0.000041 | <0.0005 | <0.0005 | 0.04 | 10 | <0.001 | 1.6 | 0.00075 | 0.00047 | 6.4 | <0.0001 | | 0.00009 | 0.0048 | <0.001 | <0.00001 | 0.023 | 0.0031 | <0.00002 | 0.000042 | 0.0024 | 0.00072 | 0.000064 | <0.001 | |
| M08-769-01 | 12 | <0.000003 | 0.000049 | <0.0005 | <0.0005 | 0.01 | 9 | <0.001 | 2 | 0.0011 | 0.00012 | 6.2 | <0.0001 | | <0.00002 | 0.0016 | <0.001 | <0.00001 | 0.2 | <0.0001 | <0.00002 | 0.000014 | 0.00026 | 0.00045 | 0.000005 | 0.002 | |
| M97-95-02 | 8.6 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.009 | 13 | <0.001 | 1.9 | 0.00073 | 0.00054 | 5 | 0.0002 | | 0.0001 | 0.0046 | <0.001 | 0.00006 | 0.032 | 0.0006 | <0.00002 | 0.00016 | 0.0027 | 0.00056 | 0.000019 | 0.005 | |
| M98-270-01 | 6.7 | <0.000003 | 0.000025 | <0.0005 | <0.0005 | 0.009 | 8.6 | <0.001 | 1.1 | 0.00066 | 0.00031 | 5.1 | 0.0002 | | 0.00007 | 0.004 | <0.001 | <0.00001 | 0.023 | 0.0002 | <0.00002 | 0.00015 | 0.004 | 0.00024 | 0.000007 | <0.001 | |
| M99-409-04 | 11 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.003 | 11 | <0.001 | 2 | 0.00079 | 0.00094 | 3.5 | 0.0002 | | <0.00002 | 0.0014 | <0.001 | <0.00001 | 0.037 | 0.0002 | <0.00002 | 0.000023 | 0.0005 | 0.00068 | 0.000005 | <0.001 | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| GT08-01-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M00-474-04 | 9.9 | 0.000006 | 0.000039 | <0.0005 | <0.0005 | 0.01 | 6.2 | <0.001 | 1.2 | 0.0015 | 0.00038 | 5.9 | 0.0003 | | 0.00003 | 0.0014 | <0.001 | 0.00006 | 0.1 | 0.0003 | <0.00002 | 0.000059 | 0.00031 | 0.00059 | 0.000014 | 0.009 | |
| M03-513-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-660-01_2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-678-02 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M07-713-01 | 11 | <0.000003 | 0.000042 | <0.0005 | <0.0005 | 0.01 | 11 | <0.001 | 2.4 | 0.0011 | 0.00035 | 5.3 | 0.0004 | | 0.00004 | 0.0019 | <0.001 | 0.00003 | 0.044 | 0.0002 | <0.00002 | 0.00024 | 0.00052 | 0.0008 | 0.000007 | <0.001 | |
| M98-194-02 | 13 | <0.000003 | 0.000043 | <0.0005 | <0.0005 | 0.01 | 8.2 | <0.001 | 1.9 | 0.0018 | 0.00043 | 3.5 | 0.0003 | | 0.00006 | 0.0012 | <0.001 | 0.00003 | 0.08 | <0.0001 | <0.00002 | 0.00024 | 0.00033 | 0.00073 | 0.000005 | <0.001 | |
| M98-269-02 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-339-01 | 13 | <0.000003 | 0.000043 | <0.0005 | <0.0005 | 0.01 | 7.4 | 0.002 | 2.6 | 0.0013 | 0.00058 | 5.5 | 0.0003 | | 0.00005 | 0.0016 | <0.001 | 0.00003 | 0.053 | 0.0002 | <0.00002 | 0.000052 | 0.00036 | 0.00079 | 0.000017 | 0.011 | |
| M99-345-01_2008 | 7.8 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | 0.02 | 7.1 | <0.001 | 0.85 | 0.0025 | 0.00071 | 5.3 | 0.0003 | | 0.00004 | 0.0031 | <0.001 | <0.00001 | 0.037 | 0.001 | <0.00002 | 0.00014 | 0.0037 | 0.00039 | 0.000024 | <0.001 | |
| M99-349-01 | 15 | 0.000012 | 0.000053 | <0.0005 | <0.0005 | 0.01 | 8.4 | 0.002 | 3 | 0.0017 | 0.00032 | 5.4 | 0.0002 | | 0.00003 | 0.0021 | <0.001 | 0.00003 | 0.057 | 0.0002 | <0.00002 | 0.000051 | 0.00025 | 0.0011 | 0.000016 | 0.013 | |
| M99-349-02 | 14 | <0.000003 | 0.000046 | <0.0005 | <0.0005 | 0.01 | 10 | 0.002 | 3.2 | 0.0029 | 0.00077 | 5.8 | 0.0003 | | <0.00002 | 0.0024 | <0.001 | 0.00004 | 0.12 | 0.0003 | <0.00002 | 0.00015 | 0.00026 | 0.00096 | 0.000017 | 0.013 | |
| M98-194-01 | 13 | 0.000004 | 0.000067 | <0.0005 | <0.0005 | 0.01 | 9.7 | 0.002 | 2.4 | 0.0019 | 0.00059 | 3.8 | 0.0005 | | 0.00004 | 0.0013 | <0.001 | 0.00004 | 0.057 | <0.0001 | <0.00002 | 0.0004 | 0.00092 | 0.0011 | 0.000007 | <0.001 | |
| M05-571A-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M06-623-01 | 8.5 | <0.000003 | 0.000046 | <0.0005 | <0.0005 | 0.015 | 11 | <0.001 | 1.3 | 0.0005 | 0.00056 | 5.4 | 0.0003 | | 0.00009 | 0.0027 | <0.001 | <0.00001 | 0.036 | 0.0004 | <0.00002 | 0.00016 | 0.0023 | 0.0014 | 0.000009 | <0.001 | |
| CAEXD175471 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD206190 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD217787 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD261351 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD211120 | 7.8 | <0.000003 | 0.000013 | 0.00018 | 0.0003 | 0.011 | 4.9 | 0.0009 | 0.7 | 0.0023 | 0.00031 | 8.6 | <0.0001 | 0.01 | <0.00001 | 0.0016 | 0.00013 | 0.00009 | 0.063 | <0.00005 | <0.000005 | 0.000008 | 0.00068 | | | <0.002 | <0.002 |
| CAEXD199214 | 7 | 0.000004 | 0.000011 | <0.00008 | <0.0002 | <0.007 | 12 | 0.0032 | 1.4 | 0.0021 | 0.0015 | 5.5 | 0.0001 | 0.006 | 0.00002 | <0.0009 | 0.00018 | 0.00008 | 0.029 | <0.00005 | <0.000005 | 0.000017 | 0.00065 | | | <0.002 | <0.002 |
| M00-474-02 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-403-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GT08-04-01_2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GT08-04-03 | 31 | 0.000014 | 0.00016 | <0.0005 | <0.0005 | 0.01 | 8.8 | 0.005 | 10 | 0.04 | 0.00066 | 18 | 0.0015 | | 0.00004 | 0.004 | <0.001 | 0.0001 | 0.058 | 0.0005 | <0.00002 | 0.000084 | 0.0003 | 0.00071 | 0.000015 | <0.001 | |
| M00-474-01 | 9.8 | 0.000006 | 0.000048 | <0.0005 | <0.0005 | 0.01 | 2.2 | <0.001 | 1.5 | 0.0042 | 0.00009 | 3 | 0.0005 | | <0.00002 | 0.0017 | <0.001 | 0.00011 | 0.03 | <0.0001 | <0.00002 | 0.000021 | 0.00078 | 0.00053 | 0.000011 | <0.001 | |
| M07-678-01 | 12 | <0.000003 | 0.0001 | <0.0005 | <0.0005 | 0.01 | 3.7 | <0.001 | 7.9 | 0.0018 | 0.00012 | 7.3 | 0.0011 | | 0.00003 | 0.0011 | <0.001 | 0.00018 | 0.035 | <0.0001 | <0.00002 | 0.000042 | 0.00052 | 0.00035 | 0.000003 | <0.001 | |
| M98-297-01 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M99-340-01 | 13 | <0.000003 | 0.000059 | <0.0005 | <0.0005 | 0.01 | 5.8 | 0.003 | 6 | 0.0037 | 0.00015 | 6.1 | 0.0004 | | <0.00002 | 0.0052 | <0.001 | 0.00003 | 0.028 | <0.0001 | <0.00002 | 0.000018 | 0.0006 | 0.00053 | 0.000008 | <0.001 | |
| GT08-04-02 | 11 | 0.000021 | 0.00011 | <0.0005 | <0.0005 | 0.01 | 4.5 | 0.004 | 5.8 | 0.0039 | 0.00041 | 17 | 0.0011 | | 0.00005 | 0.0026 | <0.001 | 0.00007 | 0.021 | <0.0001 | 0.00003 | 0.000039 | 0.00091 | 0.00087 | 0.000024 | <0.001 | |
| M99-341-01 | 14 | <0.000003 | 0.000088 | <0.0005 | <0.0005 | 0.01 | 6 | 0.003 | 6.7 | 0.0035 | 0.00033 | 6.7 | 0.0008 | | <0.00002 | 0.0051 | <0.001 | 0.00002 | 0.03 | <0.0001 | <0.00002 | 0.000021 | 0.00066 | 0.00059 | 0.000003 | <0.001 | |
| GT08-02-01_2009 | 11 | <0.000003 | 0.000023 | <0.0005 | <0.0005 | 0.01 | 0.58 | <0.001 | 1.9 | 0.0024 | 0.00006 | 5.3 | <0.0001 | | 0.00004 | 0.0017 | <0.001 | <0.00001 | 0.046 | <0.0001 | <0.00002 | <0.000001 | 0.00065 | 0.00047 | <0.000001 | <0.001 | |
| M05-561-01 | 9.5 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.01 | 4.5 | 0.002 | 2.2 | 0.0018 | 0.00006 | 4.7 | <0.0001 | | <0.00002 | 0.0006 | <0.001 | <0.00001 | 0.051 | <0.0001 | <0.00002 | <0.000001 | 0.00061 | 0.00088 | <0.000001 | <0.001 | |
| M05-561-02_2009 | 11 | <0.000003 | 0.000032 | <0.0005 | <0.0005 | 0.01 | 6.2 | <0.001 | 4.8 | 0.0021 | 0.00014 | 6.3 | 0.0002 | | 0.00004 | 0.0015 | <0.001 | <0.00001 | 0.022 | <0.0001 | <0.00002 | 0.000022 | 0.00051 | 0.00083 | 0.000003 | <0.001 | |
| M05-564-01 | 8 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.01 | 1.1 | 0.002 | 1.1 | 0.0021 | 0.00004 | 5.1 | <0.0001 | | 0.00003 | 0.0007 | <0.001 | <0.00001 | 0.018 | <0.0001 | <0.00002 | 0.000003 | 0.002 | 0.00035 | 0.000002 | <0.001 | |
| M97-130-02 | 12 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.01 | 2.1 | 0.002 | 7.2 | 0.0023 | 0.00005 | 5.2 | 0.0002 | | <0.00002 | 0.0006 | <0.001 | <0.00001 | 0.017 | <0.0001 | <0.00002 | <0.000001 | 0.00047 | 0.00036 | <0.000001 | <0.001 | |
| M97-134-01 | 17 | <0.000003 | 0.000025 | <0.0005 | <0.0005 | 0.01 | 1.8 | 0.002 | 2.4 | 0.0054 | 0.00004 | 3.2 | 0.0002 | | <0.00002 | 0.0004 | <0.001 | <0.00001 | 0.07 | <0.0001 | <0.00002 | <0.000001 | 0.00077 | 0.00031 | 0.000002 | <0.001 | |
| M97-137-01 | 10 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | 0.01 | 2.9 | 0.002 | 2.1 | 0.0026 | 0.00004 | 4.9 | 0.0002 | | <0.00002 | 0.0012 | <0.001 | <0.00001 | 0.017 | <0.0001 | <0.00002 | 0.000004 | 0.00087 | 0.00064 | 0.000002 | <0.001 | |
| M97-138-01 | 11 | <0.000003 | 0.00003 | <0.0005 | <0.0005 | 0.01 | 2.9 | <0.001 | 2.4 | 0.0027 | 0.00006 | 3.9 | <0.0001 | | 0.00003 | 0.0012 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | 0.000002 | 0.0006 | 0.00099 | 0.000002 | <0.001 | |
| M97-139-01 | 16 | 0.000008 | 0.00034 | <0.0005 | <0.0005 | 0.01 | 13 | <0.001 | 12 | 0.0074 | 0.00013 | 5.5 | 0.0028 | | 0.00017 | 0.013 | <0.001 | <0.00001 | 0.032 | <0.0001 | <0.00002 | 0.000035 | 0.00073 | 0.0018 | 0.000006 | <0.001 | |
| M97-92-01 | 11 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | 0.01 | 3.5 | <0.001 | 3.7 | 0.0024 | 0.00008 | 4.2 | <0.0001 | | 0.00003 | 0.0007 | <0.001 | <0.00001 | 0.039 | <0.0001 | <0.00002 | 0.000009 | 0.00068 | 0.0014 | 0.000002 | <0.001 | |
| M97-93-01 | 14 | <0.000003 | 0.000054 | <0.0005 | <0.0005 | 0.01 | 3.1 | 0.003 | 5.7 | 0.0047 | 0.00004 | 5.6 | 0.0002 | | <0.00002 | 0.0025 | <0.001 | <0.00001 | 0.025 | <0.0001 | <0.00002 | 0.000003 | 0.00056 | 0.0017 | 0.000002 | <0.001 | |
| M98-318-01 | 13 | <0.000003 | 0.000028 | <0.0005 | <0.0005 | 0.01 | 2.7 | 0.003 | 4.8 | 0.0045 | 0.00009 | 6.8 | 0.0002 | | 0.00003 | 0.0009 | <0.001 | <0.00001 | 0.03 | <0.0001 | <0.00002 | 0.000005 | 0.00038 | 0.00053 | 0.000002 | <0.001 | |
| M05-536A-01 | 14 | <0.000003 | 0.000075 | <0.0005 | <0.0005 | 0.01 | 7.4 | 0.002 | 7 | 0.0035 | 0.00011 | 4.1 | 0.0004 | | 0.00003 | 0.0031 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | 0.000002 | 0.0005 | 0.002 | <0.000001 | <0.001 | |
| M06-623-02 | 9.1 | <0.000003 | 0.000021 | <0.0005 | <0.0005 | <0.002 | 3.3 | <0.001 | 1.9 | 0.002 | 0.00012 | 4.1 | <0.0001 | | 0.00006 | 0.0006 | <0.001 | <0.00001 | 0.095 | <0.0001 | <0.00002 | 0.000003 | 0.00057 | 0.00073 | <0.000001 | <0.001 | |
| M08-783-02 | 12 | <0.000003 | 0.000036 | <0.0005 | <0.0005 | <0.002 | 4.3 | 0.002 | 4.6 | 0.0036 | 0.00009 | 6.9 | <0.0001 | | <0.00002 | 0.0019 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | 0.000004 | 0.00036 | 0.00093 | <0.000001 | <0.001 | |
| M97-95-03 | 9.5 | <0.000003 | 0.000023 | <0.0005 | <0.0005 | <0.002 | 2.3 | <0.001 | 1.9 | 0.0026 | 0.00008 | 3.8 | <0.0001 | | 0.00005 | 0.0008 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | 0.000005 | 0.00078 | 0.0023 | 0.000002 | <0.001 | |
| M99-336B-04 | 10 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | <0.002 | 2.5 | <0.001 | 1.3 | 0.0045 | 0.00011 | 5 | <0.0001 | | 0.00007 | 0.0031 | <0.001 | <0.00001 | 0.037 | <0.0001 | <0.00002 | <0.000001 | 0.001 | 0.00091 | <0.000001 | <0.001 | |
| M99-345-01 | 12 | <0.000003 | 0.000067 | <0.0005 | <0.0005 | <0.002 | 5.4 | 0.003 | 4.8 | 0.0033 | 0.00015 | 8.9 | 0.0004 | | 0.00007 | 0.0013 | <0.001 | <0.00001 | 0.025 | <0.0001 | <0.00002 | 0.000004 | 0.00081 | 0.00048 | <0.000001 | <0.001 | |
| M99-409-05 | 10 | <0.000003 | 0.000035 | <0.0005 | <0.0005 | <0.002 | 4.3 | <0.001 | 1.7 | 0.002 | 0.00019 | 5.4 | <0.0001 | | <0.00002 | 0.0015 | <0.001 | <0.00001 | 0.063 | <0.0001 | <0.00002 | <0.000001 | 0.00094 | 0.00023 | <0.000001 | <0.001 | |
| CAEXD162003 | 160 | <0.000003 | 0.000066 | 0.00013 | 0.0007 | <0.007 | 0.25 | 0.0017 | 21 | 0.052 | 0.0015 | 12 | 0.0002 | <0.003 | <0.00001 | <0.0009 | 0.0034 | 0.00015 | 0.15 | 0.00009 | <0.000005 | 0.00016 | 0.00004 | | | <0.002 | <0.002 |
| CAEXD158752 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD173581 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD159768 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD160930 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD163317 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD239740 | 140 | 0.000092 | 0.00094 | <0.00008 | 0.0004 | <0.007 | 0.83 | 0.0026 | 12 | 0.27 | 0.0065 | 7.5 | 0.0006 | <0.003 | 0.0021 | 0.0017 | 0.016 | 0.0001 | 0.26 | <0.00005 | <0.000005 | 0.00067 | 0.00003 | | | 0.026 | <0.002 |
| CAEXD164147 | 230 | 0.00066 | 0.00079 | <0.00008 | 0.0003 | <0.007 | 1.3 | 0.0026 | 50 | 1.6 | 0.00038 | 3.4 | 0.0011 | <0.003 | 0.00003 | <0.0009 | 0.0018 | 0.00007 | 0.16 | <0.00005 | 0.000005 | 0.000031 | 0.00001 | | | 0.07 | <0.002 |
| M96-51-01 | 11 | <0.000003 | 0.000044 | <0.0005 | <0.0005 | <0.002 | 6 | <0.001 | 7.7 | 0.0012 | 0.00015 | 4 | <0.0001 | | <0.00002 | 0.002 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | <0.000001 | 0.00071 | 0.0013 | <0.000001 | <0.001 | |
| CAEXD154976 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD260999 | 15 | <0.000003 | 0.000021 | <0.00008 | <0.0002 | <0.007 | 10 | 0.0027 | 2.1 | 0.0077 | 0.00087 | 11 | 0.0002 | 0.005 | 0.00001 | 0.0012 | 0.00097 | <0.00006 | 0.026 | <0.00005 | <0.000005 | <0.000002 | 0.00048 | | | <0.002 | <0.002 |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CAEXD159231 | 13 | <0.000003 | 0.000096 | 0.00069 | 0.001 | 0.043 | 6 | 0.0021 | 4.8 | 0.0064 | 0.0016 | 11 | 0.0013 | 0.004 | 0.0018 | 0.0014 | 0.002 | 0.00023 | 0.025 | 0.00008 | <0.000005 | 0.000006 | 0.00085 | | | <0.002 | <0.002 |
| CAEXD239665 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD161414 | 40 | <0.000003 | 0.000026 | 0.00009 | 0.0014 | <0.007 | 8.1 | 0.0058 | 5.9 | 0.023 | 0.00077 | 7.4 | 0.0002 | <0.003 | 0.00005 | 0.0013 | 0.0015 | 0.00007 | 0.91 | <0.00005 | <0.000005 | 0.000052 | 0.00044 | | | <0.002 | <0.002 |
| CAMLD105829 | 130 | 0.00001 | 0.000072 | 0.00009 | 0.0026 | <0.007 | 0.95 | 0.0014 | 5.4 | 0.098 | 0.00026 | 1.8 | 0.0002 | 0.013 | 0.00002 | <0.0009 | 0.0012 | 0.00018 | 0.13 | <0.00005 | <0.000005 | 0.00026 | 0.00006 | | | 0.003 | <0.002 |
| M96-50-01 | 4 | <0.000003 | 0.000012 | <0.0005 | <0.0005 | 0.003 | 3.7 | <0.001 | 0.37 | 0.00037 | 0.0001 | 8.3 | <0.0001 | | 0.00008 | 0.0043 | <0.001 | <0.00001 | 0.01 | 0.0002 | <0.00002 | 0.000002 | 0.012 | 0.0027 | <0.000001 | <0.001 | |
| CAEXD155161 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD160328 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD159101 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD166544 | 93 | 0.00016 | 0.000089 | <0.00008 | 0.0006 | <0.007 | 1.5 | 0.0012 | 17 | 0.13 | 0.00084 | 5.1 | <0.0001 | <0.003 | 0.00006 | <0.0009 | 0.002 | 0.00014 | 0.079 | <0.00005 | 0.00002 | 0.00004 | 0.00001 | | | 0.019 | <0.002 |
| CAEXD156245 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD173583 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD160927 | 110 | 0.000057 | 0.00015 | <0.00008 | 0.0013 | <0.007 | 7 | 0.0016 | 18 | 0.55 | 0.00042 | 1.6 | 0.0003 | <0.003 | <0.00001 | <0.0009 | 0.0017 | 0.00015 | 0.13 | <0.00005 | 0.000025 | 0.00017 | 0.00001 | | | 0.007 | <0.002 |
| CAEXD163315 | 57 | 0.000004 | 0.000024 | <0.00008 | 0.0002 | <0.007 | 4.2 | 0.0014 | 8.6 | 0.098 | 0.0038 | 2.7 | <0.0001 | <0.003 | 0.00003 | <0.0009 | 0.0005 | 0.00009 | 0.078 | 0.00016 | 0.000007 | 0.00003 | 0.00006 | | | <0.002 | <0.002 |
| M11-1051-02 | 7.6 | <0.000003 | 0.00011 | <0.0005 | <0.0005 | <0.002 | 7.8 | <0.001 | 5.6 | 0.00056 | 0.00014 | 9.2 | 0.0018 | | 0.00006 | 0.0037 | <0.001 | <0.00001 | 0.05 | <0.0001 | <0.00002 | <0.000001 | 0.0018 | 0.003 | <0.000001 | <0.001 | |
| M10-987-03 | 9.2 | <0.000003 | 0.000097 | <0.0005 | <0.0005 | <0.002 | 2.7 | <0.001 | 7.3 | 0.00022 | 0.00006 | 5.6 | 0.0005 | | 0.00005 | 0.0051 | <0.001 | <0.00001 | 0.052 | <0.0001 | 0.00003 | 0.000006 | 0.0012 | 0.0027 | <0.000001 | <0.001 | |
| M10-992-04 | 6.6 | <0.000003 | 0.000028 | <0.0005 | <0.0005 | <0.002 | 1.5 | <0.001 | 1.6 | 0.0011 | 0.00007 | 5.3 | <0.0001 | | 0.00006 | 0.0012 | <0.001 | <0.00001 | 0.043 | <0.0001 | <0.00002 | <0.000001 | 0.0011 | 0.0012 | 0.000002 | <0.001 | |
| M10-994-05 | 7.7 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | <0.002 | 5 | <0.001 | 4.2 | 0.00066 | 0.00012 | 10 | <0.0001 | | 0.00006 | 0.0014 | <0.001 | <0.00001 | 0.027 | <0.0001 | <0.00002 | <0.000001 | 0.00072 | 0.0012 | <0.000001 | <0.001 | |
| M04-519-01 | 10 | <0.000003 | 0.000026 | <0.0005 | <0.0005 | <0.002 | 4.1 | 0.002 | 6.3 | 0.0015 | 0.00008 | 7.3 | 0.0004 | | 0.00006 | 0.0011 | <0.001 | <0.00001 | 0.021 | <0.0001 | <0.00002 | <0.000001 | 0.0005 | 0.0004 | 0.000002 | 0.004 | |
| M04-519-02 | 11 | <0.000003 | 0.000034 | <0.0005 | <0.0005 | <0.002 | 5.2 | <0.001 | 5.7 | 0.00054 | 0.00007 | 4.2 | 0.0004 | | 0.00004 | 0.0019 | <0.001 | <0.00001 | 0.014 | <0.0001 | <0.00002 | <0.000001 | 0.00065 | 0.00056 | <0.000001 | <0.001 | |
| M04-519-03 | 14 | <0.000003 | 0.000082 | <0.0005 | <0.0005 | <0.002 | 5.9 | <0.001 | 10 | 0.0026 | 0.00034 | 3.2 | 0.001 | | 0.00011 | 0.0046 | <0.001 | <0.00001 | 0.036 | <0.0001 | <0.00002 | <0.000001 | 0.00053 | 0.0013 | 0.000002 | 0.005 | |
| M04-519-04 | 10 | <0.000003 | 0.000032 | <0.0005 | <0.0005 | <0.002 | 6 | <0.001 | 2.8 | 0.0031 | 0.00019 | 3.9 | 0.0004 | | 0.00005 | 0.0039 | <0.001 | <0.00001 | 0.033 | <0.0001 | <0.00002 | 0.000002 | 0.00073 | 0.0019 | 0.000002 | <0.001 | |
| M10-981-01 | 6.5 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | <0.002 | 6.4 | <0.001 | 1.5 | 0.00082 | 0.00071 | 8.3 | 0.0002 | | 0.00004 | 0.0018 | <0.001 | <0.00001 | 0.038 | <0.0001 | <0.00002 | <0.000001 | 0.0015 | 0.0027 | 0.000003 | <0.001 | |
| M10-981-02 | 8.7 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | <0.002 | 3.5 | <0.001 | 2.5 | 0.001 | 0.00029 | 6.8 | 0.0003 | | 0.00005 | 0.0027 | <0.001 | <0.00001 | 0.028 | <0.0001 | <0.00002 | <0.000001 | 0.0007 | 0.0013 | 0.000002 | <0.001 | |
| M10-981-03 | 10 | <0.000003 | 0.000048 | <0.0005 | <0.0005 | <0.002 | 5.3 | <0.001 | 3.2 | 0.0025 | 0.00031 | 6.9 | <0.0001 | | 0.0001 | 0.0035 | <0.001 | <0.00001 | 0.034 | <0.0001 | 0.00003 | 0.000012 | 0.00069 | 0.0008 | 0.000003 | <0.001 | |
| M10-985-01 | 8.6 | <0.000003 | 0.0001 | 0.0023 | 0.0025 | 0.036 | 8.7 | <0.001 | 1.5 | 0.0014 | 0.00074 | 8.8 | 0.0025 | | 0.00086 | 0.0049 | <0.001 | 0.00088 | 0.045 | 0.0003 | <0.00002 | 0.000081 | 0.0022 | 0.00037 | 0.000014 | 0.01 | |
| M10-985-02 | 6.4 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | 0.006 | 8.1 | <0.001 | 0.6 | 0.00041 | 0.00028 | 5.4 | 0.0002 | | 0.00006 | 0.0036 | <0.001 | <0.00001 | 0.022 | 0.0002 | <0.00002 | 0.000009 | 0.0017 | 0.0031 | 0.00001 | <0.001 | |
| M10-987-01 | 11 | <0.000003 | 0.000037 | <0.0005 | <0.0005 | <0.002 | 2.2 | <0.001 | 5.8 | 0.0014 | 0.00013 | 3.6 | <0.0001 | | 0.00007 | 0.0021 | <0.001 | <0.00001 | 0.064 | <0.0001 | <0.00002 | <0.000001 | 0.00039 | 0.0017 | <0.000001 | <0.001 | |
| M10-987-02 | 12 | <0.000003 | 0.000049 | <0.0005 | <0.0005 | <0.002 | 5.1 | <0.001 | 5.7 | 0.0018 | 0.00011 | 4.9 | <0.0001 | | 0.00005 | 0.0015 | <0.001 | <0.00001 | 0.043 | <0.0001 | <0.00002 | <0.000001 | 0.00039 | 0.0036 | <0.000001 | <0.001 | |
| M10-987-04 | 7.1 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | <0.002 | 2.8 | <0.001 | 1.2 | 0.00074 | 0.00011 | 5.7 | <0.0001 | | 0.00006 | 0.0026 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | <0.000001 | 0.0014 | 0.0043 | <0.000001 | <0.001 | |
| M10-988-01 | 5.8 | <0.000003 | 0.000014 | <0.0005 | <0.0005 | <0.002 | 3.3 | <0.001 | 0.9 | 0.00058 | 0.0001 | 7.2 | <0.0001 | | 0.00005 | 0.0018 | <0.001 | <0.00001 | 0.031 | <0.0001 | 0.00003 | <0.000001 | 0.0014 | 0.0017 | <0.000001 | <0.001 | |
| M10-988-02 | 7.3 | <0.000003 | 0.000017 | <0.0005 | <0.0005 | <0.002 | 1.5 | <0.001 | 0.91 | 0.0013 | 0.00005 | 6 | <0.0001 | | 0.00007 | 0.003 | <0.001 | <0.00001 | 0.035 | <0.0001 | <0.00002 | <0.000001 | 0.0014 | 0.0028 | 0.000002 | <0.001 | |
| M10-988-03 | 4.9 | <0.000003 | 0.000012 | <0.0005 | <0.0005 | 0.004 | 1.3 | <0.001 | 0.55 | 0.00034 | 0.00007 | 6.1 | <0.0001 | | 0.00006 | 0.0048 | <0.001 | <0.00001 | 0.013 | <0.0001 | <0.00002 | <0.000001 | 0.0069 | 0.0028 | <0.000001 | <0.001 | |
| M10-992-01 | 5.8 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.002 | 1.3 | <0.001 | 0.6 | 0.00065 | 0.00007 | 7.6 | <0.0001 | | 0.00006 | 0.0025 | <0.001 | 0.00002 | 0.016 | 0.0002 | <0.00002 | <0.000001 | 0.0034 | 0.0024 | <0.000001 | <0.001 | |
| M10-992-02 | 5.9 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | <0.002 | 1.2 | <0.001 | 1.2 | 0.0012 | 0.0002 | 9.6 | <0.0001 | | 0.00008 | 0.0014 | <0.001 | <0.00001 | 0.016 | <0.0001 | <0.00002 | <0.000001 | 0.0015 | 0.0035 | <0.000001 | <0.001 | |
| M10-992-03 | 9.4 | <0.000003 | 0.000085 | <0.0005 | <0.0005 | <0.002 | 2.8 | <0.001 | 5.1 | 0.00057 | 0.00006 | 6.2 | 0.0003 | | 0.00008 | 0.0008 | <0.001 | <0.00001 | 0.015 | <0.0001 | <0.00002 | <0.000001 | 0.00045 | 0.0016 | 0.000002 | <0.001 | |
| M10-992-05 | 8.3 | <0.000003 | 0.000033 | <0.0005 | <0.0005 | 0.003 | 1.5 | <0.001 | 2.5 | 0.0021 | 0.00011 | 6 | <0.0001 | | 0.00008 | 0.0026 | <0.001 | <0.00001 | 0.037 | <0.0001 | <0.00002 | <0.000001 | 0.00065 | 0.0013 | 0.000004 | <0.001 | |
| M10-994-01 | 6.3 | <0.000003 | 0.000015 | <0.0005 | <0.0005 | <0.002 | 0.8 | <0.001 | 2.1 | 0.00065 | 0.00009 | 6.9 | <0.0001 | | 0.00007 | 0.0015 | <0.001 | <0.00001 | 0.043 | <0.0001 | <0.00002 | <0.000001 | 0.0011 | 0.0046 | <0.000001 | <0.001 | |
| M10-994-02 | 6.3 | <0.000003 | 0.000024 | <0.0005 | <0.0005 | <0.002 | 8.7 | <0.001 | 2 | 0.0011 | 0.00031 | 11 | <0.0001 | | 0.00004 | 0.0028 | <0.001 | <0.00001 | 0.034 | 0.0002 | <0.00002 | <0.000001 | 0.0014 | 0.0019 | 0.000002 | <0.001 | |
| M10-994-03 | 9 | <0.000003 | 0.00012 | <0.0005 | <0.0005 | <0.002 | 6.4 | <0.001 | 3 | 0.0014 | 0.00012 | 5.6 | 0.001 | | 0.00007 | 0.0025 | <0.001 | <0.00001 | 0.021 | <0.0001 | <0.00002 | <0.000001 | 0.00059 | 0.0028 | <0.000001 | <0.001 | |
| M10-994-04 | 3 | <0.000003 | 0.000039 | <0.0005 | <0.0005 | 0.006 | 5.3 | <0.001 | 0.27 | 0.00026 | 0.00017 | 8.3 | 0.0003 | | 0.00009 | 0.0044 | <0.001 | <0.00001 | 0.0087 | 0.0003 | <0.00002 | 0.000003 | 0.011 | 0.0028 | 0.000005 | <0.001 | |
| M10-998-01 | 5.3 | <0.000003 | 0.000019 | <0.0005 | <0.0005 | 0.003 | 3.6 | <0.001 | 0.53 | 0.00026 | 0.00007 | 7.4 | <0.0001 | | 0.00004 | 0.0043 | <0.001 | <0.00001 | 0.016 | 0.0002 | <0.00002 | <0.000001 | 0.0046 | 0.002 | <0.000001 | <0.001 | |
| M10-998-02 | 3.6 | <0.000003 | 0.000009 | <0.0005 | <0.0005 | <0.002 | 10 | <0.001 | 0.38 | 0.00024 | 0.00013 | 7.8 | <0.0001 | | 0.00004 | 0.003 | <0.001 | <0.00001 | 0.028 | 0.0002 | <0.00002 | <0.000001 | 0.0048 | 0.0017 | 0.000002 | <0.001 | |
| M10-998-03 | 6.7 | <0.000003 | 0.000052 | <0.0005 | <0.0005 | <0.002 | 7.9 | <0.001 | 2 | 0.0012 | 0.00018 | 7.5 | 0.0002 | | 0.00007 | 0.0032 | <0.001 | <0.00001 | 0.016 | <0.0001 | <0.00002 | 0.000005 | 0.0014 | 0.0013 | 0.000004 | <0.001 | |
| M10-998-04 | 9.1 | <0.000003 | 0.000026 | <0.0005 | <0.0005 | <0.002 | 3.3 | <0.001 | 2.4 | 0.0017 | 0.00008 | 5.2 | <0.0001 | | 0.00008 | 0.0023 | <0.001 | <0.00001 | 0.024 | <0.0001 | <0.00002 | <0.000001 | 0.00054 | 0.0012 | 0.000002 | <0.001 | |
| M10-998-05 | 9.7 | <0.000003 | 0.00022 | <0.0005 | <0.0005 | <0.002 | 2.4 | <0.001 | 11 | 0.00089 | 0.0001 | 4 | 0.0032 | | 0.00008 | 0.0023 | <0.001 | <0.00001 | 0.069 | <0.0001 | 0.00005 | <0.000001 | 0.0011 | 0.0044 | <0.000001 | <0.001 | |
| M11-1042-01 | 10 | <0.000003 | 0.000051 | <0.0005 | <0.0005 | <0.002 | 7.3 | <0.001 | 6.2 | 0.0013 | 0.00009 | 15 | <0.0001 | | 0.00005 | 0.0016 | <0.001 | <0.00001 | 0.025 | <0.0001 | <0.00002 | <0.000001 | 0.00054 | 0.0014 | <0.000001 | <0.001 | |
| M11-1042-02 | 14 | 0.000005 | 0.00012 | <0.0005 | <0.0005 | <0.002 | 10 | <0.001 | 6.4 | 0.00088 | 0.00077 | 12 | 0.0031 | | 0.00006 | 0.0051 | <0.001 | <0.00001 | 0.081 | <0.0001 | <0.00002 | 0.000006 | 0.0017 | 0.0017 | 0.000002 | <0.001 | |
| M11-1042-03 | 10 | <0.000003 | 0.000065 | <0.0005 | <0.0005 | <0.002 | 5.2 | <0.001 | 5.7 | 0.00026 | 0.00015 | 13 | 0.0005 | | 0.00013 | 0.0022 | <0.001 | 0.00002 | 0.041 | <0.0001 | <0.00002 | 0.000002 | 0.0018 | 0.0017 | <0.000001 | <0.001 | |
| M11-1051-01 | 11 | <0.000003 | 0.00014 | <0.0005 | <0.0005 | <0.002 | 8.6 | <0.001 | 6.8 | 0.0012 | 0.00017 | 12 | 0.0011 | | 0.00011 | 0.0027 | <0.001 | 0.00004 | 0.02 | <0.0001 | <0.00002 | <0.000001 | 0.0013 | 0.0021 | 0.000002 | <0.001 | |
| M95-11-01 | 8.4 | <0.000003 | 0.000022 | <0.0005 | <0.0005 | <0.002 | 1.8 | <0.001 | 1.7 | 0.0023 | 0.00009 | 3.6 | <0.0001 | | 0.00009 | 0.0037 | <0.001 | 0.00002 | 0.046 | <0.0001 | <0.00002 | <0.000001 | 0.00069 | 0.0023 | 0.000002 | <0.001 | |
| M95-12-01 | 6.1 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | <0.002 | 6.5 | <0.001 | 0.66 | 0.00085 | 0.00017 | 3.9 | <0.0001 | | 0.00005 | 0.0049 | <0.001 | <0.00001 | 0.024 | <0.0001 | <0.00002 | 0.000002 | 0.002 | 0.0036 | 0.000004 | <0.001 | |
| M95-22-01 | 10 | <0.000003 | 0.000033 | <0.0005 | 0.0006 | <0.002 | 4.8 | <0.001 | 3.4 | 0.0017 | 0.00011 | 3.7 | 0.0002 | | 0.00011 | 0.0031 | <0.001 | <0.00001 | 0.037 | <0.0001 | <0.00002 | <0.000001 | 0.00053 | 0.0014 | <0.000001 | <0.001 | |
| M95-22-02 | 6.8 | <0.000003 | 0.000018 | <0.0005 | <0.0005 | <0.002 | 5.3 | <0.001 | 0.81 | 0.001 | 0.00012 | 3.5 | <0.0001 | | 0.00013 | 0.002 | <0.001 | 0.00005 | 0.028 | <0.0001 | <0.00002 | 0.000011 | 0.0017 | 0.0016 | 0.000002 | 0.004 | |
| M96-51-02 | 11 | <0.000003 | 0.000056 | <0.0005 | <0.0005 | <0.002 | 2 | <0.001 | 5.9 | 0.0021 | 0.00018 | 6 | 0.0002 | | 0.0001 | 0.0067 | <0.001 | 0.00002 | 0.03 | <0.0001 | <0.00002 | 0.000002 | 0.00086 | 0.0017 | 0.000003 | 0.002 | |
| M96-51-03 | 8.6 | <0.000003 | 0.000034 | <0.0005 | <0.0005 | <0.002 | 5.2 | <0.001 | 3 | 0.0015 | 0.00011 | 4 | 0.0003 | | 0.00008 | 0.0047 | <0.001 | <0.00001 | 0.026 | <0.0001 | <0.00002 | <0.000001 | 0.0008 | 0.0013 | <0.000001 | <0.001 | |
| M97-111-04 | 7.2 | <0.000003 | 0.00002 | <0.0005 | <0.0005 | <0.002 | 2.4 | <0.001 | 0.96 | 0.00075 | 0.00007 | 2.7 | <0.0001 | | 0.00007 | 0.002 | <0.001 | 0.00002 | 0.026 | <0.0001 | <0.00002 | 0.000007 | 0.0014 | 0.0017 | <0.000001 | <0.001 | |
| M97-176-01 | 10 | <0.000003 | 0.000027 | <0.0005 | <0.0005 | <0.002 | 1.7 | <0.001 | 3.7 | 0.0015 | 0.00011 | 2.7 | <0.0001 | | 0.00007 | 0.0025 | <0.001 | <0.00001 | 0.054 | <0.0001 | <0.00002 | <0.000001 | 0.00053 | 0.0013 | <0.000001 | <0.001 | |
| M97-176-02 | 5.4 | <0.000003 | 0.000011 | <0.0005 | <0.0005 | <0.002 | 8.1 | <0.001 | 0.57 | 0.00034 | 0.00011 | 4.8 | <0.0001 | | 0.00009 | 0.0039 | <0.001 | <0.00001 | 0.016 | <0.0001 | <0.00002 | <0.000001 | 0.0026 | 0.0031 | 0.000003 | <0.001 | |
| W94-48-01 | 5.7 | <0.000003 | 0.000016 | <0.0005 | <0.0005 | 0.003 | 3.1 | <0.001 | 0.65 | 0.00028 | 0.00014 | 4.9 | <0.0001 | | 0.00005 | 0.0045 | <0.001 | <0.00001 | 0.018 | 0.0004 | <0.00002 | <0.000001 | 0.0077 | 0.0026 | 0.000002 | <0.001 | |
| CAEXD164775 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD161143 | 15 | <0.000003 | 0.00022 | 0.0001 | 0.0016 | <0.007 | 19 | 0.0048 | 5.5 | 0.0067 | 0.0021 | 7.5 | 0.001 | 0.003 | 0.00003 | <0.0009 | 0.0013 | 0.00013 | 0.49 | <0.00005 | 0.000016 | 0.00011 | 0.00038 | | | <0.002 | <0.002 |
| CAEXD161417 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Appendix D-6: Meliadine Extension Database: Static Test Results Static Test Results for Waste Rock and Ore Samples**

| Drill Core Information | Shake Flask Extraction | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-K | D-Li | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sn | D-Sr | D-Ti | D-Tl | D-U | D-V | D-W | D-Y | D-Zn | D-Zr |
| | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CAEXD253446 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD255567 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD178628 | 12 | <0.000003 | 0.000072 | <0.00008 | <0.0002 | <0.007 | 13 | 0.0028 | 4.6 | 0.0048 | 0.00037 | 15 | 0.0006 | <0.003 | 0.00007 | 0.0012 | 0.00074 | 0.0001 | 0.018 | <0.00005 | 0.000014 | 0.000011 | 0.00039 | | | <0.002 | <0.002 |
| CAEXD252985 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD252988 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD292036 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD292774 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD296389 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD259422 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD296880 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD297926 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD237686 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264580 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD258556 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD299420 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD299421 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD254661 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD172407 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264227 | 58 | 0.000008 | 0.00018 | 0.00018 | <0.0002 | <0.007 | 8 | 0.0014 | 13 | 0.047 | 0.0047 | 3.4 | 0.0012 | <0.003 | 0.00002 | <0.0009 | 0.0013 | <0.00006 | 0.089 | <0.00005 | 0.00004 | 0.000043 | 0.00009 | | | <0.002 | <0.002 |
| CAEXD252980 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD252989 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD295855 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD295858 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD244529 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD253154 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD253583 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD254670 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264136 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264523 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264637 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264747 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD291131 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD291533 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD307658 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD224354 | 8.8 | <0.000003 | <0.000004 | 0.0001 | <0.0002 | <0.007 | 2.4 | 0.002 | 4.9 | 0.0039 | 0.00068 | 19 | <0.0001 | <0.003 | <0.00001 | <0.0009 | 0.00038 | 0.00009 | 0.0076 | <0.00005 | <0.000005 | <0.000002 | 0.0005 | | | <0.002 | <0.002 |
| CAEXD250907 | 11 | <0.000003 | 0.00021 | 0.00011 | <0.0002 | <0.007 | 7.9 | 0.0015 | 7.8 | 0.0052 | 0.00046 | 5 | 0.0014 | <0.003 | <0.00001 | 0.0026 | 0.00099 | <0.00006 | 0.016 | <0.00005 | <0.000005 | 0.000005 | 0.00094 | | | <0.002 | <0.002 |
| CAEXD296387 | 12 | <0.000003 | 0.00011 | <0.00008 | 0.0004 | <0.007 | 8.2 | 0.0018 | 6.1 | 0.0055 | 0.00024 | 14 | 0.0011 | <0.003 | <0.00001 | 0.0016 | 0.00047 | <0.00006 | 0.034 | <0.00005 | 0.000013 | 0.000002 | 0.00034 | | | <0.002 | <0.002 |
| CAEXD249125 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD255700 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD261414 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD291470 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD299369 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264579 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD264581 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAEXD237685 | 11 | <0.000003 | 0.000079 | <0.00008 | 0.0002 | <0.007 | 9.5 | 0.0025 | 4.3 | 0.0053 | 0.0064 | 11 | 0.0007 | 0.004 | <0.00001 | 0.0016 | 0.0014 | 0.00008 | 0.017 | <0.00005 | <0.000005 | <0.000002 | 0.00053 | | | <0.002 | <0.002 |

**Notes:**

Sulphide-S is calculated by difference (Total-S wt.% – Sulphate-S wt.%)

MAP: Maximum Acid Potential is calculated from Total-S content (Total-S wt.% x 31.25)

Site-Specific AP is calculated from sulphide-S multiplied by the relative composition of pyrrhotite, pyrite and arsenopyrite as determined from XRD, TIMA and ICP-MS results for each rock unit (described in Section 5.2.1.2)

CaNP: Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content (%C wt.% x 100.09/12.01 x 10)

CaNP-adj: Adjusted Carbonate Neutralization Potential is calculated from Total Inorganic Carbon content multiplied by the relative composition and NP contribution of ankerite, calcite, dolomite and siderite as determined from XRD analysis for each rock unit (described in Section 5.2.2.3)

Modified-NP (Neutralization Potential) was determined by the Lawrence and Wang (1996) method

NPR: Net Potential Ratio is calculated by taking the ratio of CaNP-adj/MAP and Modified-NP/MAP

NAG (Net Acid Generation) pH

*Adjustment to CaNP and AP calculated based on carbonate and sulphide mineralogy for each respective rock unit as defined in Chapter 5

**Based on classification criteria for waste rock and ore presented in Chapter 5.1

# *Appendix E: Salinity Rinse Test Results*

APPENDIX E-1: WATER QUALITY RESULTS

APPENDIX E-2: POREWATER CHEMISTRY

AGNICO EAGLE

# APPENDIX E-1: WATER QUALITY RESULTS

**Appendix E-1: Water Quality Results**
**pH, Conductivity and TDS Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | TDS Load |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/kg |
| Pit-1-1 | 18-Sep-2020 | VA20B6473-001 | UG Waste Rock | D-P3 | 0.2 | 8.4 | 180 | 125 | 56 |
| Pit-1-2 | 18-Sep-2020 | VA20B6473-002 | UG Waste Rock | D-P3 | 0.2 | 8.9 | 137 | 99 | 31 |
| Pit-1-3 | 18-Sep-2020 | VA20B6473-003 | UG Waste Rock | D-P3 | 0.2 | 9.0 | 129 | 92 | 25 |
| Pit-2-1 | 18-Sep-2020 | VA20B6473-004 | UG Waste Rock | D-P3 | 0.2 | 8.8 | 146 | 99 | 30 |
| Pit-2-2 | 18-Sep-2020 | VA20B6473-005 | UG Waste Rock | D-P3 | 0.2 | 8.9 | 129 | 83 | 15 |
| Pit-2-3 | 18-Sep-2020 | VA20B6473-006 | UG Waste Rock | D-P3 | 0.2 | 8.9 | 127 | 88 | 20 |
| Pit-3-1 | 18-Sep-2020 | VA20B6473-007 | UG Waste Rock | D-P3 | 0.2 | 8.8 | 137 | 95 | 26 |
| Pit-3-2 | 18-Sep-2020 | VA20B6473-008 | UG Waste Rock | D-P3 | 0.2 | 8.8 | 129 | 89 | 21 |
| Pit-3-3 | 18-Sep-2020 | VA20B6473-009 | UG Waste Rock | D-P3 | 0.2 | 8.9 | 125 | 89 | 21 |
| Pit-4-1 | 18-Sep-2020 | VA20B6473-010 | UG Waste Rock | D-P1 | 0.2 | 8.8 | 182 | 125 | 55 |
| Pit-4-2 | 18-Sep-2020 | VA20B6473-011 | UG Waste Rock | D-P1 | 0.2 | 8.9 | 147 | 96 | 28 |
| Pit-4-3 | 18-Sep-2020 | VA20B6473-012 | UG Waste Rock | D-P1 | 0.2 | 9.0 | 133 | 91 | 23 |
| Pit-5-1 | 18-Sep-2020 | VA20B6473-013 | UG Waste Rock | D-P1 | 0.2 | 8.9 | 151 | 110 | 41 |
| Pit-5-2 | 18-Sep-2020 | VA20B6473-014 | UG Waste Rock | D-P1 | 0.2 | 9.0 | 138 | 103 | 35 |
| Pit-5-3 | 18-Sep-2020 | VA20B6473-015 | UG Waste Rock | D-P1 | 0.2 | 8.4 | 135 | 91 | 23 |
| Pit-5-1-Dup | 18-Sep-2020 | VA20B6473-016 | UG Waste Rock | D-P1 | 0.2 | 8.9 | 155 | 127 | 57 |
| Pit-5-2-Dup | 18-Sep-2020 | VA20B6473-017 | UG Waste Rock | D-P1 | 0.2 | 9.0 | 134 | 93 | 26 |
| Pit-5-3-Dup | 18-Sep-2020 | VA20B6473-018 | UG Waste Rock | D-P1 | 0.2 | 9.0 | 130 | 97 | 29 |
| Pit-6-1 | 18-Sep-2020 | VA20B6473-019 | UG Waste Rock | D-P1 | 0.2 | 8.8 | 160 | 100 | 31 |
| Pit-6-2 | 18-Sep-2020 | VA20B6473-020 | UG Waste Rock | D-P1 | 0.2 | 9.0 | 133 | 75 | 8 |
| Pit-6-3 | 18-Sep-2020 | VA20B6473-021 | UG Waste Rock | D-P1 | 0.2 | 8.0 | 126 | 82 | 14 |
| Pit-7-1 | 18-Sep-2020 | VA20B6473-022 | UG Waste Rock | Berm 1 | 0.2 | 8.8 | 184 | 122 | 53 |
| Pit-7-2 | 18-Sep-2020 | VA20B6473-023 | UG Waste Rock | Berm 1 | 0.2 | 9.0 | 149 | 103 | 35 |
| Pit-7-3 | 18-Sep-2020 | VA20B6473-024 | UG Waste Rock | Berm 1 | 0.2 | 9.0 | 128 | 92 | 24 |
| Pit-8-1 | 18-Sep-2020 | VA20B6473-025 | UG Waste Rock | Berm 1 | 0.2 | 8.9 | 143 | 108 | 38 |
| Pit-8-2 | 18-Sep-2020 | VA20B6473-026 | UG Waste Rock | Berm 1 | 0.2 | 8.9 | 129 | 96 | 29 |
| Pit-8-3 | 18-Sep-2020 | VA20B6473-027 | UG Waste Rock | Berm 1 | 0.2 | 9.0 | 123 | 90 | 23 |
| Pit-9-1 | 18-Sep-2020 | VA20B6473-028 | UG Waste Rock | Paste Plant Ramp | 0.3 | 8.9 | 139 | 106 | 37 |
| Pit-9-2 | 18-Sep-2020 | VA20B6473-029 | UG Waste Rock | Paste Plant Ramp | 0.3 | 9.0 | 127 | 93 | 26 |
| Pit-9-3 | 18-Sep-2020 | VA20B6473-030 | UG Waste Rock | Paste Plant Ramp | 0.3 | 9.0 | 123 | 88 | 20 |
| Pit-10-1 | 18-Sep-2020 | VA20B6473-031 | UG Waste Rock | Paste Plant Ramp | 0.3 | 8.8 | 217 | 137 | 66 |
| Pit-10-2 | 18-Sep-2020 | VA20B6473-032 | UG Waste Rock | Paste Plant Ramp | 0.3 | 8.9 | 173 | 109 | 42 |
| Pit-10-3 | 18-Sep-2020 | VA20B6473-033 | UG Waste Rock | Paste Plant Ramp | 0.3 | 9.0 | 151 | 85 | 18 |
| Pit-10-1-DUP | 18-Sep-2020 | VA20B6473-034 | UG Waste Rock | Paste Plant Ramp | 0.3 | 8.8 | 215 | 133 | 62 |
| Pit-10-2-DUP | 18-Sep-2020 | VA20B6473-035 | UG Waste Rock | Paste Plant Ramp | 0.3 | 8.8 | 187 | 119 | 57 |
| Pit-10-3-DUP | 18-Sep-2020 | VA20B6473-036 | UG Waste Rock | Paste Plant Ramp | 0.3 | 9.0 | 165 | 106 | 39 |
| Pit-11-1 | 19-Sep-2020 | VA20B6473-037 | UG Waste Rock | Church Pad | 0.3 | 8.9 | 164 | 118 | 49 |
| Pit-11-2 | 19-Sep-2020 | VA20B6473-038 | UG Waste Rock | Church Pad | 0.3 | 9.0 | 136 | 98 | 31 |
| Pit-11-3 | 19-Sep-2020 | VA20B6473-039 | UG Waste Rock | Church Pad | 0.3 | 9.0 | 132 | 90 | 22 |
| Pit-12-1 | 19-Sep-2020 | VA20B6473-040 | UG Waste Rock | TSF | 0.3 | 8.8 | 186 | 134 | 67 |
| Pit-12-2 | 19-Sep-2020 | VA20B6473-042 | UG Waste Rock | TSF | 0.3 | 9.0 | 147 | 99 | 32 |
| Pit-12-3 | 19-Sep-2020 | VA20B6473-043 | UG Waste Rock | TSF | 0.3 | 9.0 | 132 | 82 | 15 |
| Pit-13-1 | 19-Sep-2020 | VA20B6473-044 | UG Waste Rock | TSF | 0.3 | 8.8 | 164 | 98 | 30 |
| Pit-13-2 | 19-Sep-2020 | VA20B6473-045 | UG Waste Rock | TSF | 0.3 | 9.0 | 138 | 86 | 19 |
| Pit-13-3 | 19-Sep-2020 | VA20B6473-046 | UG Waste Rock | TSF | 0.3 | 9.1 | 127 | 83 | 15 |
| Pit-14-1 | 19-Sep-2020 | VA20B6473-047 | UG Waste Rock | Industrial Pad | 0.2 | 8.8 | 194 | 203 | 134 |
| Pit-14-2 | 19-Sep-2020 | VA20B6473-048 | UG Waste Rock | Industrial Pad | 0.2 | 8.9 | 177 | 305 | 237 |
| Pit-14-3 | 19-Sep-2020 | VA20B6473-049 | UG Waste Rock | Industrial Pad | 0.2 | 8.9 | 127 | 316 | 248 |
| Pit-15-1 | 19-Sep-2020 | VA20B6473-050 | UG Waste Rock | Industrial Pad | 0.2 | 8.8 | 149 | 113 | 44 |
| Pit-15-2 | 19-Sep-2020 | VA20B6473-051 | UG Waste Rock | Industrial Pad | 0.2 | 9.0 | 140 | 92 | 25 |
| Pit-15-3 | 19-Sep-2020 | VA20B6473-052 | UG Waste Rock | Industrial Pad | 0.2 | 9.3 | 127 | 94 | 26 |
| Pit-16-1 | 19-Sep-2020 | VA20B6473-053 | UG Waste Rock | Low Grade Ore | 0 (surface) | 8.7 | 541 | 310 | 206 |
| Pit-16-2 | 19-Sep-2020 | VA20B6473-054 | UG Waste Rock | Low Grade Ore | 0 (surface) | 9.0 | 195 | 142 | 75 |
| Pit-16-3 | 19-Sep-2020 | VA20B6473-055 | UG Waste Rock | Low Grade Ore | 0 (surface) | 9.0 | 125 | 100 | 33 |
| Pit-16-1-Dup | 19-Sep-2020 | VA20B6473-056 | UG Waste Rock | Low Grade Ore | 0 (surface) | 8.7 | 488 | 296 | 217 |
| Pit-16-2-Dup | 19-Sep-2020 | VA20B6473-057 | UG Waste Rock | Low Grade Ore | 0 (surface) | 9.0 | 151 | 108 | 40 |

**Appendix E-1: Water Quality Results**
**pH, Conductivity and TDS Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | TDS Load |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/kg |
| Pit-16-3-Dup | 19-Sep-2020 | VA20B6473-058 | UG Waste Rock | Low Grade Ore | 0 (surface) | 9.0 | 114 | 90 | 22 |
| Pit-17-1 | 19-Sep-2020 | VA20B6473-059 | UG Waste Rock | Low Grade Ore | 0 (surface) | 8.5 | 223 | 1,190 | 1,055 |
| Pit-17-2 | 19-Sep-2020 | VA20B6473-060 | UG Waste Rock | Low Grade Ore | 0 (surface) | 8.8 | 179 | 516 | 449 |
| Pit-17-3 | 19-Sep-2020 | VA20B6473-061 | UG Waste Rock | Low Grade Ore | 0 (surface) | 9.0 | 237 | 174 | 107 |
| Pit-18-1 | 20-Sep-2020 | VA20B6473-063 | UG Waste Rock | Ore Pad | 0.3 | 8.0 | 541 | 353 | 286 |
| Pit-18-2 | 20-Sep-2020 | VA20B6473-064 | UG Waste Rock | Ore Pad | 0.3 | 8.6 | 205 | 132 | 65 |
| Pit-18-3 | 20-Sep-2020 | VA20B6473-065 | UG Waste Rock | Ore Pad | 0.3 | 8.7 | 155 | 97 | 30 |
| Pit-19-1 | 20-Sep-2020 | VA20B6473-066 | UG Waste Rock | Ore Pad | 1 | 8.0 | 1,543 | 1,010 | 933 |
| Pit-19-2 | 20-Sep-2020 | VA20B6473-067 | UG Waste Rock | Ore Pad | 1 | 8.5 | 376 | 241 | 174 |
| Pit-19-3 | 20-Sep-2020 | VA20B6473-068 | UG Waste Rock | Ore Pad | 1 | 8.8 | 199 | 131 | 63 |
| Pit-Blank-1 | 19-Sep-2020 | VA20B6473-041 | Blank | | | | | 72 | |
| Pit-Blank-2 | 19-Sep-2020 | VA20B6473-062 | Blank | | | | | 63 | |
| Tiri0.1-P1-4_R1 | 06-Jan-2021 | VA21A0327-001 | Overburden | Tiri01 Pitwalls | 4 | 8.6 | 3,590 | 1,890 | 1,519 |
| Tiri0.1-P1-4_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 8.7 | 1,830 | 1,010 | 918 |
| Tiri0.1-P1-4_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 8.8 | 1,075 | 617 | 568 |
| Tiri0.1-P1-4.5_R1 | 06-Jan-2021 | VA21A0327-002 | Overburden | Tiri01 Pitwalls | 4.5 | 8.7 | 3,360 | 1,740 | 1,453 |
| Tiri0.1-P1-4.5_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4.5 | 8.8 | 2,065 | 1,133 | 1,033 |
| Tiri0.1-P1-4.5_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4.5 | 8.9 | 1,247 | 706 | 622 |
| Tiri0.1-P1-5_R1 | 06-Jan-2021 | VA21A0327-003 | Overburden | Tiri01 Pitwalls | 5 | 8.5 | 2,680 | 1,430 | 1,165 |
| Tiri0.1-P1-5_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 5 | 8.6 | 1,770 | 979 | 821 |
| Tiri0.1-P1-5_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 5 | 8.8 | 786 | 466 | 429 |
| Tiri0.1-P1-5DUP_R1 | 06-Jan-2021 | VA21A0327-004 | Overburden | Tiri01 Pitwalls | 5 | 8.5 | 2,680 | 727 | 592 |
| Tiri0.1-P2-3_R1 | 06-Jan-2021 | VA21A0327-005 | Overburden | Tiri01 Pitwalls | 3 | 8.7 | 1,434 | 727 | 609 |
| Tiri0.1-P2-3_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 3 | 8.7 | 1,118 | 639 | 549 |
| Tiri0.1-P2-3_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 3 | 8.8 | 678 | 410 | 401 |
| Tiri0.1-P2-3.5_R1 | 06-Jan-2021 | VA21A0327-006 | Overburden | Tiri01 Pitwalls | 3.5 | 8.6 | 2,550 | 1,340 | 1,060 |
| Tiri0.1-P2-3.5_R2 | 06-Jan-2021 | VA21A0327-007 | Overburden | Tiri01 Pitwalls | 3.5 | 8.6 | 1,590 | 860 | 744 |
| Tiri0.1-P2-3.5_R3 | 06-Jan-2021 | VA21A0327-008 | Overburden | Tiri01 Pitwalls | 3.5 | 8.7 | 940 | 565 | 515 |
| Tiri0.1-P2-4_R1 | 06-Jan-2021 | VA21A0327-009 | Overburden | Tiri01 Pitwalls | 4 | 8.4 | 2,990 | 1,580 | 1,190 |
| Tiri0.1-P2-4_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 8.6 | 1,520 | 849 | 800 |
| Tiri0.1-P2-4_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 8.8 | 734 | 439 | 414 |
| Tiri0.1-P3-4_R1 | 06-Jan-2021 | VA21A0327-010 | Overburden | Tiri01 Pitwalls | 4 | 8.6 | 5,060 | 2,640 | 2,162 |
| Tiri0.1-P3-4_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 8.8 | 2,501 | 1,360 | 1,125 |
| Tiri0.1-P3-4_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 9.0 | 1,025 | 591 | 562 |
| Tiri0.1-P3-4.5_R1 | 06-Jan-2021 | VA21A0327-011 | Overburden | Tiri01 Pitwalls | 4.5 | 8.4 | 7,240 | 3,940 | 2,999 |
| Tiri0.1-P3-4.5_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4.5 | 8.6 | 3,530 | 1,896 | 1,472 |
| Tiri0.1-P3-4.5_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4.5 | 8.8 | 1,797 | 993 | 901 |
| Tiri0.1-P3-5_R1 | 06-Jan-2021 | VA21A0327-012 | Overburden | Tiri01 Pitwalls | 5 | 8.6 | 4,110 | 2,260 | 1,782 |
| Tiri0.1-P3-5_R2 | 06-Jan-2021 | VA21A0327-013 | Overburden | Tiri01 Pitwalls | 5 | 8.7 | 1,864 | 956 | 789 |
| Tiri0.1-P3-5_R3 | 06-Jan-2021 | VA21A0327-014 | Overburden | Tiri01 Pitwalls | 5 | 8.9 | 859 | 472 | 447 |
| Tiri0.1-P4-5_R1 | 06-Jan-2021 | VA21A0327-015 | Overburden | Tiri01 Pitwalls | 5 | 8.3 | 3,280 | 1,890 | 1,271 |
| Tiri0.1-P4-5_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 5 | 8.4 | 1,857 | 1,024 | 908 |
| Tiri0.1-P4-5_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 5 | 8.6 | 1,022 | 589 | 569 |
| Tiri0.1-P4-5.5_R1 | 06-Jan-2021 | VA21A0327-016 | Overburden | Tiri01 Pitwalls | 5.5 | 8.5 | 5,330 | 2,900 | 1,988 |
| Tiri0.1-P4-5.5_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 5.5 | 8.7 | 2,693 | 1,460 | 1,266 |
| Tiri0.1-P4-5.5_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 5.5 | 8.9 | 1,241 | 703 | 662 |
| Tiri0.1-P4-6_R1 | 06-Jan-2021 | VA21A0327-017 | Overburden | Tiri01 Pitwalls | 6 | 8.5 | 4,620 | 2,360 | 1,940 |
| Tiri0.1-P4-6_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 6 | 8.7 | 2,256 | 1,232 | 1,117 |
| Tiri0.1-P4-6_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 6 | 8.8 | 1,072 | 615 | 581 |
| Tiri0.1-P5-4_R1 | 06-Jan-2021 | VA21A0327-018 | Overburden | Tiri01 Pitwalls | 4 | 9.0 | 1,909 | 995 | 760 |
| Tiri0.1-P5-4_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 9.3 | 960 | 557 | 408 |
| Tiri0.1-P5-4_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 4 | 9.5 | 429 | 280 | 283 |
| Tiri0.1-P5-6_R1 | 06-Jan-2021 | VA21A0327-019 | Overburden | Tiri01 Pitwalls | 6 | 8.8 | 4,520 | 2,410 | 1,734 |
| Tiri0.1-P5-6_R2 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 6 | 9.1 | 2,024 | 1,111 | 892 |
| Tiri0.1-P5-6_R3 | 06-Jan-2021 | | Overburden | Tiri01 Pitwalls | 6 | 9.4 | 895 | 523 | 514 |
| Tiri0.1-P5-6.5_R1 | 06-Jan-2021 | VA21A0327-020 | Overburden | Tiri01 Pitwalls | 6.5 | 8.7 | 4,320 | 2,240 | 1,646 |
| Tiri0.1-P5-6.5_R2 | 06-Jan-2021 | VA21A0327-021 | Overburden | Tiri01 Pitwalls | 6.5 | 9.1 | 1,793 | 910 | 776 |
| Tiri0.1-P5-6.5_R3 | 06-Jan-2021 | VA21A0327-022 | Overburden | Tiri01 Pitwalls | 6.5 | 9.4 | 787 | 386 | 351 |
| OVB-01_R1 | 06-Jan-2021 | VA21A0327-023 | Overburden | Tiri01 Cutting Piles | 0-8.3 | 8.7 | 1,622 | 932 | 709 |

**Appendix E-1: Water Quality Results**
**pH, Conductivity and TDS Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | TDS Load |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/kg |
| OVB-01_R2 | 06-Jan-2021 | | Overburden | Tiri01 Cutting Piles | 0-8.3 | 8.9 | 802 | 475 | 461 |
| OVB-01_R3 | 06-Jan-2021 | | Overburden | Tiri01 Cutting Piles | 0-8.3 | 9.2 | 417 | 274 | 266 |
| OVB-02_R1 | 07-Jan-2021 | VA21A0327-024 | Overburden | Tiri01 Cutting Piles | 0-8.6 | 9.0 | 2,420 | 1,380 | 1,181 |
| OVB-02_R2 | 07-Jan-2021 | | Overburden | Tiri01 Cutting Piles | 0-8.6 | 9.2 | 866 | 508 | 471 |
| OVB-02_R3 | 07-Jan-2021 | | Overburden | Tiri01 Cutting Piles | 0-8.6 | 9.5 | 337 | 232 | 230 |
| OVB-02DUP_R1 | 07-Jan-2021 | VA21A0327-025 | Overburden | Tiri01 Cutting Piles | 0-8.6 | 9.0 | 2,420 | 1,410 | 1,207 |
| OVB-03_R1 | 07-Jan-2021 | VA21A0327-026 | Overburden | Tiri01 Cutting Piles | 0-8 | 9.4 | 1,685 | 948 | 780 |
| OVB-03_R2 | 07-Jan-2021 | VA21A0327-027 | Overburden | Tiri01 Cutting Piles | 0-8 | 9.5 | 778 | 542 | 483 |
| OVB-03_R3 | 07-Jan-2021 | VA21A0327-028 | Overburden | Tiri01 Cutting Piles | 0-8 | 9.9 | 339 | 295 | 280 |
| OVB-04_R1 | 07-Jan-2021 | VA21A0327-029 | Overburden | Tiri01 Cutting Piles | 0-7.6 | 9.1 | 1,535 | 883 | 690 |
| OVB-04_R2 | 07-Jan-2021 | | Overburden | Tiri01 Cutting Piles | 0-7.6 | 9.7 | 582 | 360 | 334 |
| OVB-04_R3 | 07-Jan-2021 | | Overburden | Tiri01 Cutting Piles | 0-7.6 | 9.8 | 229 | 176 | 179 |
| TP-4 0.5_R1 | 07-Jan-2021 | VA21A0327-030 | UG Waste Rock | Low Grade Ore | 1 | 8.8 | 3,150 | 1,720 | 1,414 |
| TP-4 0.5_R2 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 1 | 9.1 | 964 | 559 | 461 |
| TP-4 0.5_R3 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 1 | 9.5 | 376 | 252 | 289 |
| TP-4 1.0_R1 | 07-Jan-2021 | VA21A0327-031 | UG Waste Rock | Low Grade Ore | 2 | 8.6 | 4,170 | 2,250 | 1,890 |
| TP-4 1.0_R2 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 2 | 9.1 | 1,035 | 596 | 411 |
| TP-4 1.0_R3 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 2 | 9.4 | 424 | 277 | 346 |
| TP-4 1.0DUP_R1 | 07-Jan-2021 | VA21A0327-032 | UG Waste Rock | Low Grade Ore | 2 | 8.6 | 4,280 | 2,260 | 1,898 |
| TP-4 1.0DUP_R2 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 2 | 9.0 | 1,089 | 624 | 483 |
| TP-4 1.0DUP_R3 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 2 | 9.3 | 425 | 278 | 301 |
| TP-4 1.5_R1 | 07-Jan-2021 | VA21A0327-033 | UG Waste Rock | Low Grade Ore | 3 | 8.6 | 3,700 | 1,980 | 1,609 |
| TP-4 1.5_R2 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 3 | 9.0 | 1,123 | 642 | 603 |
| TP-4 1.5_R3 | 07-Jan-2021 | | UG Waste Rock | Low Grade Ore | 3 | 9.4 | 470 | 301 | 308 |
| TP-4 2.0_R1 | 07-Jan-2021 | VA21A0327-034 | UG Waste Rock | Low Grade Ore | 4 | 8.7 | 3,230 | 1,660 | 1,377 |
| TP-4 2.0_R2 | 07-Jan-2021 | VA21A0327-035 | UG Waste Rock | Low Grade Ore | 4 | 9.1 | 882 | 469 | 443 |
| TP-4 2.0_R3 | 07-Jan-2021 | VA21A0327-036 | UG Waste Rock | Low Grade Ore | 4 | 9.5 | 284 | 186 | 201 |
| DI_Blank | 07-Jan-2021 | VA21A0327-037 | Blank | | | 5.9 | 1 | 10 | |
| Tiri0.1-P6-8_R1 | 24-Feb-2021 | VA21A3468-004 | Overburden | Tiri01 Pitwalls | 8 | 9.0 | 2,450 | 1,300 | 1,118 |
| Tiri0.1-P6-8_R2 | 24-Feb-2021 | VA21A3468-005 | Overburden | Tiri01 Pitwalls | 8 | 9.2 | 1,302 | 692 | 800 |
| Tiri0.1-P6-8_R3 | 24-Feb-2021 | VA21A3468-006 | Overburden | Tiri01 Pitwalls | 8 | 9.6 | 480 | 638 | 853 |
| Tiri0.1-P6-9_R1 | 24-Feb-2021 | VA21A3468-007 | Overburden | Tiri01 Pitwalls | 9 | 8.8 | 1,390 | 794 | 709 |
| Tiri0.1-P6-9_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 9 | 9.3 | 436 | 284 | 349 |
| Tiri0.1-P6-9_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 9 | 9.8 | 144 | 132 | 166 |
| Tiri0.1-P7-0-2_R1 | 24-Feb-2021 | VA21A3468-008 | Overburden | Tiri01 Pitwalls | 0-2 | 8.8 | 477 | 403 | 206 |
| Tiri0.1-P7-0-2_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 0-2 | 9.1 | 157 | 138 | 144 |
| Tiri0.1-P7-0-2_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 0-2 | 9.4 | 67 | 91 | 92 |
| Tiri0.1-P7-0-2DUP_R1 | 24-Feb-2021 | VA21A3468-009 | Overburden | Tiri01 Pitwalls | 0-2 | 8.8 | 477 | 1,520 | 776 |
| Tiri0.1-P7-3-5_R1 | 24-Feb-2021 | VA21A3468-010 | Overburden | Tiri01 Pitwalls | 3-5 | 8.9 | 2,524 | 1,520 | 1,665 |
| Tiri0.1-P7-3-5_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 3-5 | 9.3 | 788 | 467 | 547 |
| Tiri0.1-P7-3-5_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 3-5 | 9.7 | 258 | 191 | 209 |
| Tiri0.1-P8-0-2_R1 | 24-Feb-2021 | VA21A3468-011 | Overburden | Tiri01 Pitwalls | 0-2 | 8.6 | 577 | 371 | 385 |
| Tiri0.1-P8-0-2_R2 | 24-Feb-2021 | VA21A3468-012 | Overburden | Tiri01 Pitwalls | 0-2 | 9.0 | 118 | 65 | 70 |
| Tiri0.1-P8-0-2_R3 | 24-Feb-2021 | VA21A3468-013 | Overburden | Tiri01 Pitwalls | 0-2 | 9.3 | 39 | 29 | 32 |
| Tiri0.1-P8-3-5_R1 | 24-Feb-2021 | VA21A3468-014 | Overburden | Tiri01 Pitwalls | 3-5 | 8.9 | 2,371 | 1,210 | 1,234 |
| Tiri0.1-P8-3-5_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 3-5 | 9.2 | 931 | 542 | 595 |
| Tiri0.1-P8-3-5_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 3-5 | 9.5 | 349 | 238 | 298 |
| Tiri0.1-P9-1.5_R1 | 24-Feb-2021 | VA21A3468-015 | Overburden | Tiri01 Pitwalls | 1.5 | 7.5 | 68 | 53 | 47 |
| Tiri0.1-P9-1.5_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 1.5 | 7.6 | 26 | 70 | 76 |
| Tiri0.1-P9-1.5_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 1.5 | 7.9 | 12 | 63 | 69 |
| Tiri0.1-P9-1.5DUP_R1 | 24-Feb-2021 | VA21A3468-016 | Overburden | Tiri01 Pitwalls | 1.5 | 7.5 | 60 | 50 | 45 |
| Tiri0.1-P9-1.5DUP_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 1.5 | 7.7 | 23 | 68 | 72 |
| Tiri0.1-P9-1.5DUP_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 1.5 | 7.9 | 11 | 62 | 66 |
| Tiri0.1-P9-5_R1 | 24-Feb-2021 | VA21A3468-017 | Overburden | Tiri01 Pitwalls | 5 | 8.2 | 542 | 294 | 393 |
| Tiri0.1-P9-5_R2 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 5 | 8.8 | 166 | 143 | 170 |
| Tiri0.1-P9-5_R3 | 24-Feb-2021 | | Overburden | Tiri01 Pitwalls | 5 | 9.0 | 70 | 93 | 106 |
| Tiri0.1-P9-9.5_R1 | 24-Feb-2021 | VA21A3468-018 | Overburden | Tiri01 Pitwalls | 9.5 | 8.7 | 1,886 | 983 | 1,312 |
| Tiri0.1-P9-9.5_R2 | 24-Feb-2021 | VA21A3468-019 | Overburden | Tiri01 Pitwalls | 9.5 | 9.4 | 314 | 178 | 201 |
| Tiri0.1-P9-9.5_R3 | 24-Feb-2021 | VA21A3468-020 | Overburden | Tiri01 Pitwalls | 9.5 | 9.9 | 80 | 48 | 56 |

**Appendix E-1: Water Quality Results**
**pH, Conductivity and TDS Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | TDS Load |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/kg |
| DI Water (Blank) | 24-Feb-2021 | VA21A3468-021 | Blank | | | 5.9 | 1 | 46 | |
| GT21-81-1R1 | 19-Apr-2021 | VA21A7370-001 | Overburden | Discovery | 1 | 7.7 | 39,100 | 595 | 1,065 |
| GT21-81-1R2 | 19-Apr-2021 | | Overburden | Discovery | 1 | 7.8 | 15,640 | | |
| GT21-81-1R3 | 19-Apr-2021 | | Overburden | Discovery | 1 | 8.0 | 7,280 | | |
| GT21-81-3R1 | 19-Apr-2021 | VA21A7370-002 | Overburden | Discovery | 3 | 8.7 | 554 | 376 | 371 |
| GT21-81-3R2 | 19-Apr-2021 | | Overburden | Discovery | 3 | 8.9 | 292 | 209 | 233 |
| GT21-81-3R3 | 19-Apr-2021 | | Overburden | Discovery | 3 | 9.2 | 174 | 147 | 162 |
| GT21-81-3DUPR1 | 19-Apr-2021 | VA21A7370-003 | Overburden | Discovery | 3 | 8.6 | 586 | 407 | 400 |
| GT21-81-3DUPR2 | 19-Apr-2021 | | Overburden | Discovery | 3 | 8.9 | 306 | 216 | 239 |
| GT21-81-3DUPR3 | 19-Apr-2021 | | Overburden | Discovery | 3 | 9.2 | 174 | 147 | 163 |
| GT21-81-5R1 | 19-Apr-2021 | VA21A7370-004 | Overburden | Discovery | 5 | 9.2 | 1,646 | 990 | 958 |
| GT21-81-5R2 | 19-Apr-2021 | | Overburden | Discovery | 5 | 9.6 | 385 | 257 | 287 |
| GT21-81-5R3 | 19-Apr-2021 | | Overburden | Discovery | 5 | 9.9 | 132 | 125 | 139 |
| GT21-81-7R1 | 19-Apr-2021 | VA21A7370-005 | Overburden | Discovery | 7 | 9.1 | 1,659 | 929 | 940 |
| GT21-81-7R2 | 19-Apr-2021 | | Overburden | Discovery | 7 | 9.7 | 384 | 257 | 272 |
| GT21-81-7R3 | 19-Apr-2021 | | Overburden | Discovery | 7 | 10.0 | 125 | 122 | 127 |
| GT21-81-10R1 | 19-Apr-2021 | VA21A7370-006 | Overburden | Discovery | 10 | 9.7 | 693 | 519 | 504 |
| GT21-81-10R2 | 19-Apr-2021 | | Overburden | Discovery | 10 | 9.9 | 249 | 186 | 186 |
| GT21-81-10R3 | 19-Apr-2021 | | Overburden | Discovery | 10 | 9.9 | 115 | 116 | 117 |
| GT21-88-1.5R1 | 19-Apr-2021 | | Overburden | Discovery | 1.5 | 8.9 | 404 | 267 | 260 |
| GT21-88-1.5R2 | 19-Apr-2021 | | Overburden | Discovery | 1.5 | 9.4 | 127 | 123 | 132 |
| GT21-88-1.5R3 | 19-Apr-2021 | | Overburden | Discovery | 1.5 | 9.7 | 58 | 87 | 94 |
| GT21-88-2.5R1 | 19-Apr-2021 | | Overburden | Discovery | 2.5 | 8.9 | 812 | 480 | 440 |
| GT21-88-2.5R2 | 19-Apr-2021 | | Overburden | Discovery | 2.5 | 9.4 | 246 | 184 | 205 |
| GT21-88-2.5R3 | 19-Apr-2021 | | Overburden | Discovery | 2.5 | 9.7 | 90 | 103 | 107 |
| GT21-88-3.5R1 | 19-Apr-2021 | | Overburden | Discovery | 3.5 | 9.5 | 548 | 342 | 295 |
| GT21-88-3.5R2 | 19-Apr-2021 | | Overburden | Discovery | 3.5 | 9.9 | 175 | 148 | 152 |
| GT21-88-3.5R3 | 19-Apr-2021 | | Overburden | Discovery | 3.5 | 9.9 | 82 | 99 | 102 |
| GT21-88-4.5R1 | 19-Apr-2021 | | Overburden | Discovery | 4.5 | 9.7 | 572 | 355 | 287 |
| GT21-88-4.5R2 | 19-Apr-2021 | | Overburden | Discovery | 4.5 | 9.9 | 202 | 162 | 167 |
| GT21-88-4.5R3 | 19-Apr-2021 | | Overburden | Discovery | 4.5 | 10.0 | 93 | 105 | 108 |
| GT21-91-1R1 | 19-Apr-2021 | VA21A7370-007 | Overburden | Discovery | 1 | 7.5 | 53 | 74 | 82 |
| GT21-91-1R2 | 19-Apr-2021 | VA21A7370-009 | Overburden | Discovery | 1 | 7.6 | 26 | 37 | 42 |
| GT21-91-1R3 | 19-Apr-2021 | VA21A7370-011 | Overburden | Discovery | 1 | 7.6 | 17 | 26 | 29 |
| GT21-91-2R1 | 19-Apr-2021 | VA21A7370-008 | Overburden | Discovery | 2 | 8.5 | 177 | 146 | 161 |
| GT21-91-2R2 | 19-Apr-2021 | VA21A7370-010 | Overburden | Discovery | 2 | 8.6 | 129 | 108 | 127 |
| GT21-91-2R3 | 19-Apr-2021 | VA21A7370-012 | Overburden | Discovery | 2 | 8.9 | 76 | 73 | 85 |
| GT21-91-3R1 | 19-Apr-2021 | | Overburden | Discovery | 3 | 9.2 | 390 | 260 | 255 |
| GT21-91-3R2 | 19-Apr-2021 | | Overburden | Discovery | 3 | 9.6 | 131 | 125 | 134 |
| GT21-91-3R3 | 19-Apr-2021 | | Overburden | Discovery | 3 | 9.8 | 70 | 93 | 98 |
| GT21-91-4.5R1 | 19-Apr-2021 | | Overburden | Discovery | 4.5 | 9.5 | 278 | 201 | 196 |
| GT21-91-4.5R2 | 19-Apr-2021 | | Overburden | Discovery | 4.5 | 9.8 | 110 | 114 | 130 |
| GT21-91-4.5R3 | 19-Apr-2021 | | Overburden | Discovery | 4.5 | 9.9 | 60 | 88 | 97 |
| GT21-08-1R1 | 19-Apr-2021 | | Overburden | WRSF3 | 0-1 | 7.7 | 109 | 114 | 114 |
| GT21-08-1R2 | 19-Apr-2021 | | Overburden | WRSF3 | 0-2 | 7.9 | 51 | 83 | 99 |
| GT21-08-1R3 | 19-Apr-2021 | | Overburden | WRSF3 | 0-3 | 8.1 | 26 | 70 | 81 |
| GT21-08-2R1 | 19-Apr-2021 | | Overburden | WRSF3 | 2-3 | 9.2 | 943 | 548 | 501 |
| GT21-08-2R2 | 19-Apr-2021 | | Overburden | WRSF3 | 2-4 | 9.8 | 245 | 184 | 194 |
| GT21-08-2R3 | 19-Apr-2021 | | Overburden | WRSF3 | 2-5 | 10.0 | 97 | 107 | 113 |
| GT21-08-4R1 | 20-Apr-2021 | | Overburden | WRSF3 | 4-5 | 9.4 | 1,371 | 771 | 780 |
| GT21-08-4R2 | 20-Apr-2021 | | Overburden | WRSF3 | 4-6 | 9.8 | 324 | 225 | 253 |
| GT21-08-4R3 | 20-Apr-2021 | | Overburden | WRSF3 | 4-7 | 10.0 | 117 | 118 | 123 |
| GT21-08-BedrockR1 | 20-Apr-2021 | | Bedrock | WRSF3 | 3-6 | 9.8 | 421 | 276 | 196 |
| GT21-08-BedrockR2 | 20-Apr-2021 | | Bedrock | WRSF3 | 3-7 | 9.9 | 206 | 164 | 170 |
| GT21-08-BedrockR3 | 20-Apr-2021 | | Bedrock | WRSF3 | 3-8 | 10.0 | 101 | 109 | 110 |
| GT21-11-2R1 | 20-Apr-2021 | VA21A7370-013 | Overburden | WRSF3 | 2 | 9.1 | 1,124 | 709 | 641 |
| GT21-11-2R2 | 20-Apr-2021 | VA21A7370-017 | Overburden | WRSF3 | 2 | 9.6 | 344 | 313 | 372 |
| GT21-11-2R3 | 20-Apr-2021 | VA21A7370-019 | Overburden | WRSF3 | 2 | 9.9 | 98 | 120 | 125 |
| GT21-11-4R1 | 20-Apr-2021 | VA21A7370-014 | Overburden | WRSF3 | 4 | 9.3 | 1,628 | 894 | 912 |

**Appendix E-1: Water Quality Results**
**pH, Conductivity and TDS Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | TDS Load |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/kg |
| GT21-11-4R2 | 20-Apr-2021 | | Overburden | WRSF3 | 4 | 9.8 | 438 | 285 | 314 |
| GT21-11-4R3 | 20-Apr-2021 | | Overburden | WRSF3 | 4 | 10.0 | 129 | 124 | 130 |
| GT21-11-6R1 | 20-Apr-2021 | VA21A7370-015 | Overburden | WRSF3 | 6 | 9.5 | 497 | 331 | 278 |
| GT21-11-6R2 | 20-Apr-2021 | | Overburden | WRSF3 | 6 | 9.9 | 187 | 154 | 159 |
| GT21-11-6R3 | 20-Apr-2021 | | Overburden | WRSF3 | 6 | 10.0 | 87 | 102 | 106 |
| GT21-11-8R1 | 20-Apr-2021 | VA21A7370-016 | Overburden | WRSF3 | 8 | 9.6 | 241 | 153 | 154 |
| GT21-11-8R2 | 20-Apr-2021 | | Overburden | WRSF3 | 8 | 9.8 | 102 | 110 | 120 |
| GT21-11-8R3 | 20-Apr-2021 | | Overburden | WRSF3 | 8 | 10.0 | 63 | 89 | 99 |
| GT21-25R1 | 20-Apr-2021 | VA21A7370-021 | Overburden | Pump | 0-10.4* | 8.7 | 546 | 341 | 358 |
| GT21-25R2 | 20-Apr-2021 | VA21A7370-022 | Overburden | Pump | 0-10.4* | 9.1 | 219 | 171 | 192 |
| GT21-25R3 | 20-Apr-2021 | VA21A7370-023 | Overburden | Pump | 0-10.4* | 9.4 | 107 | 112 | 127 |
| GT21-27R1 | 20-Apr-2021 | | Overburden | Pump | 0-10.2* | 9.3 | 1,168 | 665 | 614 |
| GT21-27R2 | 20-Apr-2021 | | Overburden | Pump | 0-10.2* | 9.8 | 302 | 214 | 228 |
| GT21-27R3 | 20-Apr-2021 | | Overburden | Pump | 0-10.2* | 10.1 | 109 | 113 | 120 |
| GT21-33R1 | 20-Apr-2021 | | Overburden | Pump | 0-12.4* | 9.1 | 498 | 316 | 315 |
| GT21-33R2 | 20-Apr-2021 | | Overburden | Pump | 0-12.4* | 9.6 | 176 | 148 | 160 |
| GT21-33R3 | 20-Apr-2021 | | Overburden | Pump | 0-12.4* | 9.8 | 80 | 98 | 109 |
| GT21-34R1 | 20-Apr-2021 | | Overburden | Pump | 0-7.6* | 9.1 | 778 | 462 | 446 |
| GT21-34R2 | 20-Apr-2021 | | Overburden | Pump | 0-7.6* | 9.4 | 332 | 230 | 265 |
| GT21-34R3 | 20-Apr-2021 | | Overburden | Pump | 0-7.6* | 9.8 | 126 | 122 | 133 |
| GT21-35R1 | 20-Apr-2021 | | Overburden | Wesmeg | 0-9* | 9.9 | 185 | 153 | 135 |
| GT21-35R2 | 20-Apr-2021 | | Overburden | Wesmeg | 0-9* | 10.0 | 98 | 108 | 110 |
| GT21-35R3 | 20-Apr-2021 | | Overburden | Wesmeg | 0-9* | 10.1 | 68 | 92 | 94 |
| GT21-36R1 | 20-Apr-2021 | VA21A7370-024 | Overburden | F-Zone | 0-7.3* | 8.8 | 797 | 572 | 571 |
| GT21-36DUPR1 | 20-Apr-2021 | VA21A7370-025 | Overburden | F-Zone | 0-7.3* | 8.8 | 797 | 576 | 0 |
| GT21-36R2 | 20-Apr-2021 | VA21A7370-026 | Overburden | F-Zone | 0-7.3* | 9.2 | 287 | 250 | 268 |
| GT21-36R3 | 20-Apr-2021 | VA21A7370-027 | Overburden | F-Zone | 0-7.3* | 9.6 | 142 | 136 | 147 |
| GT21-39R1 | 20-Apr-2021 | | Overburden | F-Zone | 0-8.5* | 9.6 | 839 | 494 | 466 |
| GT21-39R2 | 20-Apr-2021 | | Overburden | F-Zone | 0-8.5* | 10.0 | 248 | 186 | 191 |
| GT21-39R3 | 20-Apr-2021 | | Overburden | F-Zone | 0-8.5* | 10.1 | 102 | 110 | 114 |
| GT21-40R1 | 20-Apr-2021 | | Overburden | F-Zone | 0-7.3* | 9.3 | 1,502 | 839 | 849 |
| GT21-40R2 | 20-Apr-2021 | | Overburden | F-Zone | 0-7.3* | 9.8 | 374 | 251 | 274 |
| GT21-40R3 | 20-Apr-2021 | | Overburden | F-Zone | 0-7.3* | 10.1 | 126 | 122 | 131 |
| GT21-43R1 | 20-Apr-2021 | | Overburden | F-Zone | 0-11.4* | 9.4 | 717 | 430 | 418 |
| GT21-43R2 | 20-Apr-2021 | | Overburden | F-Zone | 0-11.4* | 9.8 | 199 | 160 | 168 |
| GT21-43R3 | 20-Apr-2021 | | Overburden | F-Zone | 0-11.4* | 10.1 | 81 | 99 | 105 |
| Tiri0.1-P10-10R1 | 20-Apr-2021 | VA21A7591-001 | Overburden | Tiri01 Pitwalls | 10 | 8.9 | 2,340 | 1,420 | 1,603 |
| Tiri0.1-P10-10R2 | 20-Apr-2021 | VA21A7591-002 | Overburden | Tiri01 Pitwalls | 10 | 9.4 | 942 | 798 | 917 |
| Tiri0.1-P10-10R3 | 20-Apr-2021 | VA21A7591-003 | Overburden | Tiri01 Pitwalls | 10 | 9.7 | 335 | 275 | 300 |
| Tiri0.1-P10-11R1 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 11 | 8.9 | 3,240 | 1,745 | 1,715 |
| Tiri0.1-P10-11R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 11 | 9.2 | 1,372 | 772 | 863 |
| Tiri0.1-P10-11R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 11 | 9.7 | 485 | 309 | 345 |
| Tiri0.1-P10-12R1 | 21-Apr-2021 | VA21A7591-004 | Overburden | Tiri01 Pitwalls | 12 | 8.8 | 4,260 | 2,330 | 2,381 |
| Tiri0.1-P10-12R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 12 | 9.2 | 1,599 | 890 | 986 |
| Tiri0.1-P10-12R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 12 | 9.6 | 571 | 354 | 386 |
| Tiri0.1-P10-13R1 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 13 | 8.9 | 3,920 | 2,100 | 2,284 |
| Tiri0.1-P10-13R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 13 | 9.2 | 1,580 | 880 | 948 |
| Tiri0.1-P10-13R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 13 | 9.6 | 566 | 352 | 387 |
| Tiri0.1-P10-14R1 | 21-Apr-2021 | VA21A7591-005 | Overburden | Tiri01 Pitwalls | 14 | 8.9 | 3,550 | 1,910 | 1,995 |
| Tiri0.1-P10-14R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 14 | 9.2 | 1,413 | 793 | 849 |
| Tiri0.1-P10-14R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 14 | 9.6 | 532 | 334 | 367 |
| Tiri0.1-P10-15R1 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 15 | 8.9 | 4,030 | 2,157 | 2,307 |
| Tiri0.1-P10-15R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 15 | 9.2 | 1,524 | 851 | 908 |
| Tiri0.1-P10-15R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 15 | 9.5 | 572 | 355 | 389 |
| Tiri0.1-P10-16R1 | 21-Apr-2021 | VA21A7591-006 | Overburden | Tiri01 Pitwalls | 16 | 8.7 | 4,810 | 2,810 | 2,921 |
| Tiri0.1-P10-16R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 16 | 8.9 | 2,911 | 1,574 | 1,795 |
| Tiri0.1-P10-16R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 16 | 9.3 | 1,434 | 804 | 908 |
| Tiri0.1-P10-17R1 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 17 | 8.8 | 2,988 | 1,614 | 1,630 |
| Tiri0.1-P10-17R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 17 | 9.2 | 1,505 | 841 | 932 |

**Appendix E-1: Water Quality Results**
**pH, Conductivity and TDS Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | TDS Load |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/kg |
| Tiri0.1-P10-17R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 17 | 9.5 | 593 | 366 | 398 |
| Tiri0.1-P10-18R1 | 21-Apr-2021 | VA21A7591-007 | Overburden | Tiri01 Pitwalls | 18 | 8.9 | 2,444 | 1,330 | 1,297 |
| Tiri0.1-P10-18R2 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 18 | 9.3 | 909 | 530 | 579 |
| Tiri0.1-P10-18R3 | 21-Apr-2021 | | Overburden | Tiri01 Pitwalls | 18 | 9.7 | 297 | 211 | 230 |
| Tiri0.1-P10-19R1 | 22-Apr-2021 | | Overburden | Tiri01 Pitwalls | 19 | 8.7 | 3,170 | 1,709 | 1,760 |
| Tiri0.1-P10-19R2 | 22-Apr-2021 | | Overburden | Tiri01 Pitwalls | 19 | 9.3 | 920 | 536 | 588 |
| Tiri0.1-P10-19R3 | 22-Apr-2021 | | Overburden | Tiri01 Pitwalls | 19 | 9.7 | 304 | 215 | 238 |
| Tiri0.1-P10-20R1 | 22-Apr-2021 | VA21A7591-008 | Overburden | Tiri01 Pitwalls | 20 | 7.9 | 2,720 | 1,590 | 1,499 |
| Tiri0.1-P10-20R2 | 22-Apr-2021 | | Overburden | Tiri01 Pitwalls | 20 | 8.2 | 1,026 | 591 | 633 |
| Tiri0.1-P10-20R3 | 22-Apr-2021 | | Overburden | Tiri01 Pitwalls | 20 | 8.7 | 283 | 204 | 221 |
| SP4WR01R1 | 22-Apr-2021 | VA21A7591-009 | UG Waste Rock | SP4 | 0 (surface) | 9.6 | 615 | 350 | 328 |
| SP4WR01R2 | 22-Apr-2021 | | UG Waste Rock | SP4 | 0 (surface) | 9.9 | 197 | 159 | 164 |
| SP4WR01R3 | 22-Apr-2021 | | UG Waste Rock | SP4 | 0 (surface) | 10.1 | 80 | 98 | 101 |
| SP4WR02R1 | 22-Apr-2021 | VA21A7591-010 | UG Waste Rock | SP4 | 0 (surface) | 9.7 | 73 | 59 | 54 |
| SP4WR02R2 | 22-Apr-2021 | VA21A7591-011 | UG Waste Rock | SP4 | 0 (surface) | 10.0 | 47 | 45 | 47 |
| SP4WR02R3 | 22-Apr-2021 | VA21A7591-012 | UG Waste Rock | SP4 | 0 (surface) | 10.0 | 41 | 37 | 38 |
| WRSF1_01R1 | 22-Apr-2021 | VA21A7591-013 | UG Waste Rock | WRSF1 | 0 (surface) | 9.4 | 423 | 252 | 238 |
| WRSF1_01R2 | 22-Apr-2021 | | UG Waste Rock | WRSF1 | 0 (surface) | 9.9 | 136 | 128 | 131 |
| WRSF1_01R3 | 22-Apr-2021 | | UG Waste Rock | WRSF1 | 0 (surface) | 10.0 | 64 | 90 | 93 |
| WRSF1_02R1 | 22-Apr-2021 | VA21A7591-014 | UG Waste Rock | WRSF1 | 0 (surface) | 9.6 | 290 | 194 | 191 |
| WRSF1_02R2 | 22-Apr-2021 | VA21A7591-015 | UG Waste Rock | WRSF1 | 0 (surface) | 9.9 | 82 | 74 | 77 |
| WRSF1_02R3 | 22-Apr-2021 | VA21A7591-016 | UG Waste Rock | WRSF1 | 0 (surface) | 10.0 | 47 | 51 | 51 |
| WRSF3_01R1 | 22-Apr-2021 | VA21A7591-017 | UG Waste Rock | WRSF3 | 0 (surface) | 8.7 | 831 | 532 | 474 |
| WRSF3_01R2 | 22-Apr-2021 | | UG Waste Rock | WRSF3 | 0 (surface) | 9.3 | 188 | 154 | 158 |
| WRSF3_01R3 | 22-Apr-2021 | | UG Waste Rock | WRSF3 | 0 (surface) | 9.7 | 70 | 93 | 97 |
| WRSF3_02R1 | 22-Apr-2021 | VA21A7591-018 | UG Waste Rock | WRSF3 | 0 (surface) | 9.5 | 242 | 184 | 174 |
| WRSF3_02R2 | 22-Apr-2021 | | UG Waste Rock | WRSF3 | 0 (surface) | 9.9 | 90 | 104 | 107 |
| WRSF3_02R3 | 22-Apr-2021 | | UG Waste Rock | WRSF3 | 0 (surface) | 10.0 | 49 | 82 | 85 |
| DI Water (blank)R1 | 22-Apr-2021 | | Blank | | | 6.1 | 1 | 10 | |

**Notes:**
*Entire RC drill core depth interval provided for F-Zone, Pump and Wesmeg samples.
TDS values were calculated by linear regression using the conductivity measurement for rinse samples not showing ALS samples IDs

**Appendix E-1: Water Quality Results**
**Analytical Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/ Facility | Depth of Sample Collection (m) | Total Alkalinity (as $CaCO_3$) | Alkalinity, Hydroxide (as $CaCO_3$) | Alkalinity, Carbonate (as $CaCO_3$) | Alkalinity, Bicarbonate (as $CaCO_3$) | Br | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N | D-Al | D-Sb | D-As | D-Ba | D-Be | D-Bi | D-B | D-Cd | D-Ca | D-Cs | D-Cr | D-Co | D-Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Tiri0.1-P1-4_R1 | 07-Jan-2021 | VA21A0327-001 | Overburden | Tiri01 Pitwalls | 4 | 18.6 | | | | | 885 | | 354 | <0.005 | <0.1 | <0.02 | 0.0071 | <0.0001 | 0.00483 | 0.00482 | <0.000025 | <0.000025 | 0.101 | <0.000025 | 63.5 | 0.0000549 | <0.0005 | 0.00138 | <0.00025 |
| Tiri0.1-P1-4.5_R1 | 07-Jan-2021 | VA21A0327-002 | Overburden | Tiri01 Pitwalls | 4.5 | 17.4 | | | | | 819 | | 317 | <0.005 | 0.306 | 0.0797 | 0.0114 | 0.000097 | 0.00375 | 0.00566 | <0.00001 | <0.00001 | 0.1 | <0.00001 | 55.3 | 0.0000408 | <0.0002 | 0.000931 | 0.000581 |
| Tiri0.1-P1-5_R1 | 07-Jan-2021 | VA21A0327-003 | Overburden | Tiri01 Pitwalls | 5 | 34.4 | | | | | 521 | | 301 | 26.4 | 37 | 1.93 | 0.0217 | 0.000338 | 0.00403 | 0.0126 | <0.00001 | <0.00001 | 0.0919 | <0.00001 | 61 | 0.000355 | <0.0002 | 0.00722 | 0.000836 |
| Tiri0.1-P1-5DUP_R1 | 07-Jan-2021 | VA21A0327-004 | Overburden | Tiri01 Pitwalls | 5 | 37.1 | | | | | 524 | | 304 | 26.3 | 37.3 | 1.9 | 0.0202 | 0.000357 | 0.00418 | 0.0131 | <0.00001 | <0.00001 | 0.097 | <0.00001 | 63.3 | 0.000405 | <0.0002 | 0.00735 | 0.00102 |
| Tiri0.1-P2-3_R1 | 07-Jan-2021 | VA21A0327-005 | Overburden | Tiri01 Pitwalls | 3 | 17.4 | | | | | 296 | | 192 | 2.69 | 3.46 | 0.591 | 0.0158 | 0.000094 | 0.0035 | 0.00392 | <0.00001 | <0.00001 | 0.0509 | <0.00001 | 49.2 | 0.0000282 | 0.0003 | 0.00137 | 0.000304 |
| Tiri0.1-P2-3.5_R1 | 07-Jan-2021 | VA21A0327-006 | Overburden | Tiri01 Pitwalls | 3.5 | 18.7 | | | | | 557 | | 303 | 1.9 | 2.56 | 0.889 | 0.009 | 0.000074 | 0.00301 | 0.00484 | <0.00001 | <0.00001 | 0.0796 | <0.00001 | 76.2 | 0.0000325 | <0.0002 | 0.00147 | 0.000519 |
| Tiri0.1-P2-3.5_R2 | 07-Jan-2021 | VA21A0327-007 | Overburden | Tiri01 Pitwalls | 3.5 | 18.2 | | | | | 312 | | 256 | 1.21 | 1.45 | 0.468 | 0.0105 | 0.000073 | 0.00343 | 0.00507 | <0.00001 | <0.00001 | 0.0508 | <0.00001 | 69.5 | 0.0000263 | <0.0002 | 0.000862 | 0.00015 |
| Tiri0.1-P2-3.5_R3 | 07-Jan-2021 | VA21A0327-008 | Overburden | Tiri01 Pitwalls | 3.5 | 16 | | | | | 159 | | 204 | 0.739 | 0.803 | 0.252 | 0.0166 | 0.000059 | 0.00346 | 0.00386 | <0.00001 | <0.00001 | 0.0321 | <0.00001 | 59.1 | 0.0000209 | <0.0002 | 0.000479 | <0.0001 |
| Tiri0.1-P2-4_R1 | 07-Jan-2021 | VA21A0327-009 | Overburden | Tiri01 Pitwalls | 4 | 20.8 | | | | | 664 | | 370 | 3.34 | 4.31 | 1.28 | 0.007 | 0.000102 | 0.00337 | 0.00626 | <0.000025 | <0.000025 | 0.0854 | <0.000025 | 85.8 | 0.0000492 | <0.0005 | 0.00196 | <0.00025 |
| Tiri0.1-P3-4_R1 | 07-Jan-2021 | VA21A0327-010 | Overburden | Tiri01 Pitwalls | 4 | 19.5 | | | | | 1270 | | 428 | 0.0391 | <0.1 | 0.216 | 0.0122 | <0.0002 | 0.00224 | 0.00633 | <0.00005 | <0.00005 | 0.0755 | <0.00005 | 38.3 | <0.00005 | <0.001 | 0.000999 | <0.0005 |
| Tiri0.1-P3-4.5_R1 | 07-Jan-2021 | VA21A0327-011 | Overburden | Tiri01 Pitwalls | 4.5 | 28.3 | | | | | 1920 | | 551 | 0.0082 | <0.25 | 0.188 | <0.01 | <0.0002 | 0.0016 | 0.00804 | <0.00005 | <0.00005 | 0.118 | <0.00005 | 78.2 | <0.00005 | <0.001 | 0.00145 | 0.00104 |
| Tiri0.1-P3-5_R1 | 07-Jan-2021 | VA21A0327-012 | Overburden | Tiri01 Pitwalls | 5 | 21.6 | | | | | 986 | | 417 | 0.477 | 0.895 | 0.407 | 0.0111 | <0.0001 | 0.00249 | 0.00676 | <0.000025 | <0.000025 | 0.0829 | <0.000025 | 77.2 | 0.000048 | <0.0005 | 0.001 | 0.000565 |
| Tiri0.1-P3-5_R2 | 07-Jan-2021 | VA21A0327-013 | Overburden | Tiri01 Pitwalls | 5 | 17.9 | | | | | 397 | | 245 | 0.238 | 0.395 | 0.176 | 0.0144 | 0.000066 | 0.00226 | 0.00386 | <0.00001 | <0.00001 | 0.0485 | <0.00001 | 52.8 | 0.0000212 | <0.0002 | 0.000357 | 0.000278 |
| Tiri0.1-P3-5_R3 | 07-Jan-2021 | VA21A0327-014 | Overburden | Tiri01 Pitwalls | 5 | 16.7 | | | | | 152 | | 142 | 0.122 | 0.135 | 0.071 | 0.0215 | 0.000051 | 0.00226 | 0.00229 | <0.00001 | <0.00001 | 0.0271 | <0.00001 | 33.7 | 0.0000173 | <0.0002 | 0.00016 | 0.000134 |
| Tiri0.1-P4-5_R1 | 07-Jan-2021 | VA21A0327-015 | Overburden | Tiri01 Pitwalls | 5 | 34.3 | | | | | 484 | | 520 | 56.5 | 73 | 0.776 | 0.0112 | 0.000052 | 0.005 | 0.0186 | <0.00001 | <0.00001 | 0.0679 | <0.00001 | 168 | 0.000249 | <0.0002 | 0.0051 | 0.000657 |
| Tiri0.1-P4-5.5_R1 | 07-Jan-2021 | VA21A0327-016 | Overburden | Tiri01 Pitwalls | 5.5 | 19.8 | | | | | 1060 | | 947 | 2.34 | 2.28 | 0.866 | 0.0151 | <0.0002 | 0.00726 | 0.013 | <0.00005 | <0.00005 | 0.073 | <0.00005 | 90.9 | 0.0000589 | <0.001 | 0.00362 | <0.0005 |
| Tiri0.1-P4-6_R1 | 07-Jan-2021 | VA21A0327-017 | Overburden | Tiri01 Pitwalls | 6 | 18.8 | | | | | 1070 | | 592 | 0.0088 | 0.332 | 0.0743 | 0.0092 | <0.0001 | 0.00567 | 0.00904 | <0.000025 | <0.000025 | 0.0577 | <0.000025 | 71.4 | 0.0000272 | <0.0005 | 0.000781 | <0.00025 |
| Tiri0.1-P5-4_R1 | 07-Jan-2021 | VA21A0327-018 | Overburden | Tiri01 Pitwalls | 4 | 23.9 | | | | | 482 | | 167 | 0.349 | 0.296 | 0.0703 | 0.0385 | 0.00035 | 0.0213 | 0.00271 | <0.00001 | <0.00001 | 0.109 | <0.00001 | 31 | 0.0000928 | <0.0002 | 0.00043 | 0.000861 |
| Tiri0.1-P5-6_R1 | 07-Jan-2021 | VA21A0327-019 | Overburden | Tiri01 Pitwalls | 6 | 27.6 | | | | | 953 | | 730 | <0.005 | <0.1 | <0.02 | 0.0259 | 0.000423 | 0.0136 | 0.00589 | <0.00005 | <0.00005 | 0.0892 | <0.00005 | 45.2 | 0.000189 | <0.001 | 0.000459 | <0.0005 |
| Tiri0.1-P5-6.5_R1 | 07-Jan-2021 | VA21A0327-020 | Overburden | Tiri01 Pitwalls | 6.5 | 22.2 | | | | | 975 | | 560 | 0.172 | 0.434 | 0.272 | 0.0202 | 0.000336 | 0.0102 | 0.00611 | <0.000025 | <0.000025 | 0.0905 | <0.000025 | 64.7 | 0.000139 | <0.0005 | 0.000644 | 0.000286 |
| Tiri0.1-P5-6.5_R2 | 07-Jan-2021 | VA21A0327-021 | Overburden | Tiri01 Pitwalls | 6.5 | 20.8 | | | | | 380 | | 232 | 0.0865 | 0.192 | 0.112 | 0.032 | 0.000196 | 0.0113 | 0.00334 | <0.00001 | <0.00001 | 0.0417 | <0.00001 | 27.9 | 0.0000591 | <0.0002 | 0.000186 | 0.000244 |
| Tiri0.1-P5-6.5_R3 | 07-Jan-2021 | VA21A0327-022 | Overburden | Tiri01 Pitwalls | 6.5 | 20.3 | | | | | 153 | | 103 | 0.0522 | 0.0768 | 0.0426 | 0.0495 | 0.000126 | 0.0122 | 0.00174 | <0.00001 | <0.00001 | 0.0222 | <0.00001 | 13.8 | 0.0000337 | <0.0002 | 0.00006 | 0.000194 |
| OVB-01_R1 | 07-Jan-2021 | VA21A0327-023 | Overburden | Tiri01 Cutting Piles | 0-8.3 | 12.9 | | | | | 295 | | 295 | 0.009 | 0.0603 | <0.01 | 0.0469 | 0.000348 | 0.00641 | 0.0239 | <0.00001 | <0.00001 | 0.0177 | <0.00001 | 66 | 0.0000418 | <0.0002 | 0.000301 | 0.000404 |
| OVB-02_R1 | 07-Jan-2021 | VA21A0327-024 | Overburden | Tiri01 Cutting Piles | 0-8.6 | 28.3 | | | | | 550 | | 293 | 0.0096 | <0.1 | <0.02 | 0.0546 | 0.000503 | 0.0132 | 0.0173 | <0.000025 | <0.000025 | 0.0725 | <0.000025 | 50 | 0.0000568 | <0.0005 | 0.00037 | 0.000371 |
| OVB-02DUP_R1 | 07-Jan-2021 | VA21A0327-025 | Overburden | Tiri01 Cutting Piles | 0-8.6 | 31 | | | | | 545 | | 291 | <0.005 | <0.1 | <0.02 | 0.0572 | 0.000526 | 0.0128 | 0.0207 | <0.00001 | <0.00001 | 0.0779 | <0.00001 | 56.2 | 0.0000608 | <0.0002 | 0.000358 | 0.000239 |
| OVB-03_R1 | 07-Jan-2021 | VA21A0327-026 | Overburden | Tiri01 Cutting Piles | 0-8 | 28.5 | | | | | 385 | | 178 | <0.005 | 0.789 | <0.01 | 0.0705 | 0.000446 | 0.0155 | 0.0142 | <0.00001 | <0.00001 | 0.0612 | <0.00001 | 25.8 | 0.0000529 | 0.00041 | 0.000153 | 0.000834 |
| OVB-03_R2 | 07-Jan-2021 | VA21A0327-027 | Overburden | Tiri01 Cutting Piles | 0-8 | 24.3 | | | | | 166 | | 80.8 | <0.005 | 0.337 | <0.005 | 0.115 | 0.000339 | 0.0175 | 0.00632 | <0.00001 | <0.00001 | 0.0351 | <0.00001 | 12.3 | 0.000031 | <0.0002 | 0.0000511 | 0.000276 |
| OVB-03_R3 | 07-Jan-2021 | VA21A0327-028 | Overburden | Tiri01 Cutting Piles | 0-8 | 27.7 | | | | | 61.7 | | 32.3 | 0.0095 | 0.12 | 0.0015 | 0.201 | 0.000212 | 0.0146 | 0.00284 | <0.00001 | <0.00001 | 0.0179 | <0.00001 | 6.31 | 0.0000186 | <0.0002 | 0.0000637 | 0.000191 |
| OVB-04_R1 | 07-Jan-2021 | VA21A0327-029 | Overburden | Tiri01 Cutting Piles | 0-7.6 | 26.8 | | | | | 349 | | 152 | 0.0057 | <0.025 | <0.005 | 0.0789 | 0.000073 | 0.0278 | 0.0122 | <0.00001 | <0.00001 | 0.0637 | <0.00001 | 26.2 | 0.0000639 | <0.0002 | 0.000178 | 0.000544 |
| TP-4 0.5_R1 | 07-Jan-2021 | VA21A0327-030 | UG Waste Rock | Low Grade Ore | 1 | 38.9 | | | | | 739 | | 140 | 33.4 | 50.9 | 0.0742 | 0.0556 | 0.00128 | 0.022 | 0.029 | <0.000025 | <0.000025 | 0.669 | 0.000043 | 78.3 | 0.0208 | <0.0005 | 0.00126 | 0.00122 |
| TP-4 1.0_R1 | 07-Jan-2021 | VA21A0327-031 | UG Waste Rock | Low Grade Ore | 2 | 44.8 | | | | | 1010 | | 150 | 47.5 | 69.9 | 0.311 | 0.0485 | 0.00188 | 0.0298 | 0.0392 | <0.000025 | <0.000025 | 0.887 | 0.0000387 | 89.2 | 0.0309 | <0.0005 | 0.00264 | 0.00149 |
| TP-4 1.0DUP_R1 | 07-Jan-2021 | VA21A0327-032 | UG Waste Rock | Low Grade Ore | 2 | 45.7 | | | | | 1040 | | 153 | 48.5 | 71.7 | 0.333 | 0.0487 | 0.00181 | 0.0295 | 0.0396 | <0.000025 | <0.000025 | 0.91 | 0.0000322 | 94.1 | 0.031 | <0.0005 | 0.00264 | 0.00147 |
| TP-4 1.5_R1 | 07-Jan-2021 | VA21A0327-033 | UG Waste Rock | Low Grade Ore | 3 | 43.3 | | | | | 881 | | 140 | 42.6 | 65 | 0.211 | 0.0484 | 0.00104 | 0.019 | 0.0374 | <0.000025 | <0.000025 | 0.942 | <0.000025 | 80.5 | 0.0218 | <0.0005 | 0.00164 | 0.000983 |
| TP-4 2.0_R1 | 07-Jan-2021 | VA21A0327-034 | UG Waste Rock | Low Grade Ore | 4 | 43.6 | | | | | 755 | | 110 | 39.1 | 59.2 | 0.222 | 0.0529 | 0.00107 | 0.0234 | 0.0341 | <0.000025 | <0.000025 | 0.84 | <0.000025 | 68.4 | 0.022 | <0.0005 | 0.00185 | 0.000911 |
| TP-4 2.0_R2 | 07-Jan-2021 | VA21A0327-035 | UG Waste Rock | Low Grade Ore | 4 | 35.7 | | | | | 188 | | 29 | 11.1 | 14.7 | 0.0536 | 0.0853 | 0.000674 | 0.0265 | 0.00731 | <0.00001 | <0.00001 | 0.286 | <0.00001 | 22.3 | 0.00625 | <0.0002 | 0.000365 | 0.000303 |
| TP-4 2.0_R3 | 07-Jan-2021 | VA21A0327-036 | UG Waste Rock | Low Grade Ore | 4 | 28.2 | | | | | 52.6 | | 9.33 | 3.68 | 4.11 | 0.0145 | 0.129 | 0.000427 | 0.0297 | 0.00227 | <0.00001 | <0.00001 | 0.117 | <0.00001 | 9.92 | 0.00184 | 0.00022 | 0.000118 | 0.000295 |
| DI_Blank | 07-Jan-2021 | VA21A0327-037 | Blank | | | 1.8 | | | | | <0.5 | | <0.3 | <0.005 | <0.005 | <0.001 | <0.001 | <0.00002 | <0.00002 | <0.00002 | <0.000005 | <0.000005 | <0.005 | <0.000005 | <0.01 | <0.000005 | <0.0001 | <0.000005 | <0.00005 |
| Tiri0.1-P6-8_R1 | 24-Feb-2021 | VA21A3468-004 | Overburden | Tiri01 Pitwalls | 8 | 29.8 | | | | 2.11 | 623 | <0.4 | 154 | 1.33 | 1.3 | 0.984 | 0.0348 | 0.000717 | 0.0133 | 0.00485 | <0.000025 | <0.000025 | 0.169 | <0.000025 | 25.2 | 0.000118 | <0.0005 | 0.00195 | 0.000383 |
| Tiri0.1-P6-8_R2 | 24-Feb-2021 | VA21A3468-005 | Overburden | Tiri01 Pitwalls | 8 | 26.9 | | | | 1.08 | 318 | 0.26 | 81.2 | 0.794 | 0.684 | 0.499 | 0.0524 | 0.000519 | 0.0161 | 0.00439 | <0.00001 | <0.00001 | 0.1 | <0.00001 | 14 | 0.000061 | <0.0002 | 0.000998 | 0.000253 |
| Tiri0.1-P6-8_R3 | 24-Feb-2021 | VA21A3468-006 | Overburden | Tiri01 Pitwalls | 8 | 31.8 | | | | 0.37 | 109 | 0.14 | 29.6 | 0.403 | 0.233 | 0.169 | 0.108 | 0.000279 | 0.0169 | 0.00199 | <0.00001 | <0.00001 | 0.0438 | <0.00001 | 6.27 | 0.0000242 | <0.0002 | 0.000362 | 0.000211 |
| Tiri0.1-P6-9_R1 | 24-Feb-2021 | VA21A3468-007 | Overburden | Tiri01 Pitwalls | 9 | 36.7 | | | | 1.13 | 324 | 0.372 | 83.6 | 3.06 | 4.22 | 0.537 | 0.0457 | 0.000707 | 0.0147 | 0.00547 | <0.00001 | <0.00001 | 0.105 | <0.00001 | 19.2 | 0.000041 | <0.0002 | 0.00101 | 0.000518 |
| Tiri0.1-P7-0-2_R1 | 24-Feb-2021 | VA21A3468-008 | Overburden | Tiri01 Pitwalls | 0-2 | 26.2 | | | | 0.642 | 96.5 | 0.153 | 36.2 | 0.245 | 1.94 | 1.01 | 0.033 | 0.000053 | 0.00422 | 0.00903 | <0.00001 | <0.00001 | 0.0128 | <0.00001 | 31.4 | 0.0000175 | <0.0002 | 0.000574 | 0.000853 |
| Tiri0.1-P7-0-2DUP_R1 | 24-Feb-2021 | VA21A3468-009 | Overburden | Tiri01 Pitwalls | 0-2 | 26.6 | | | | 0.653 | 96.9 | 0.148 | 36.5 | 0.245 | 1.95 | 1.02 | 0.0324 | 0.000054 | 0.00414 | 0.00906 | <0.00001 | <0.00001 | 0.0118 | <0.00001 | 31.8 | 0.0000201 | <0.0002 | 0.000537 | 0.000877 |
| Tiri0.1-P7-3-5_R1 | 25-Feb-2021 | VA21A3468-010 | Overburden | Tiri01 Pitwalls | 3-5 | 30.9 | | | | 2.25 | 631 | <0.4 | 216 | 0.64 | 1.8 | 1.06 | 0.0301 | 0.000652 | 0.0128 | 0.00717 | <0.000025 | <0.000025 | 0.165 | <0.000025 | 35.8 | 0.0000431 | <0.0005 | 0.00074 | 0.000764 |
| Tiri0.1-P8-0-2_R1 | 25-Feb-2021 | VA21A3468-011 | Overburden | Tiri01 Pitwalls | 0-2 | 26.3 | | | | 0.449 | 110 | 0.047 | 32 | 1.07 | 9.24 | 1.93 | 0.186 | 0.000067 | 0.0072 | 0.0329 | <0.00001 | <0.00001 | 0.0154 | <0.00001 | 33.4 | 0.0000174 | <0.0002 | 0.0024 | 0.00301 |
| Tiri0.1-P8-0-2_R2 | 25-Feb-2021 | VA21A3468-012 | Overburden | Tiri01 Pitwalls | 0-2 | 20.8 | | | | 0.075 | 19 | 0.034 | 6.38 | 0.34 | 1.6 | 0.319 | 0.316 | <0.00004 | 0.00845 | 0.0065 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 6.37 | 0.0000159 | 0.00024 | 0.000643 | 0.0024 |
| Tiri0.1-P8-0-2_R3 | 25-Feb-2021 | VA21A3468-013 | Overburden | Tiri01 Pitwalls | 0-2 | 14.9 | | | | <0.05 | 3.66 | 0.025 | 1.54 | 0.154 | 0.31 | 0.0605 | 0.368 | <0.00004 | 0.0105 | 0.00458 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 2.22 | 0.0000252 | 0.00035 | 0.000567 | 0.00289 |
| Tiri0.1-P8-3-5_R1 | 24-Feb-2021 | VA21A3468-014 | Overburden | Tiri01 Pitwalls | 3-5 | 38.3 | | | | 1.91 | 568 | <0.4 | 95 | 11.7 | 19.4 | 3.14 | 0.0399 | 0.000698 | 0.0105 | 0.0121 | <0.00001 | <0.00001 | 0.18 | <0.00001 | 27.9 | 0.000092 | <0.0002 | 0.0138 | 0.000982 |
| Tiri0.1-P9-1.5_R1 | 25-Feb-2021 | VA21A3468-015 | Overburden | Tiri01 Pitwalls | 1.5 | 11.9 | | | | <0.05 | 7.41 | 0.07 | 10.3 | 0.222 | 0.892 | 0.112 | 0.494 | <0.00004 | 0.00701 | 0.0268 | 0.0000102 | <0.00001 | <0.01 | <0.00001 | 4.84 | 0.0000482 | 0.00068 | 0.00113 | 0.00515 |
| Tiri0.1-P9-1.5DUP_R1 | 25-Feb-2021 | VA21A3468-016 | Overburden | Tiri01 Pitwalls | 1.5 | 12.7 | | | | <0.05 | 6.13 | 0.073 | 9.28 | 0.175 | 0.711 | 0.0648 | 0.573 | <0.00004 | 0.00791 | 0.0278 | 0.0000127 | <0.00001 | <0.01 | 0.0000115 | 4.16 | 0.000052 | 0.00079 | 0.00124 | 0.0056 |
| Tiri0.1-P9-5_R1 | 25-Feb-2021 | VA21A3468-017 | Overburden | Tiri01 Pitwalls | 5 | 46.2 | | | | 0.352 | 94.2 | 0.226 | 57.3 | 0.403 | 2.44 | 0.027 | 0.0846 | 0.000108 | 0.00429 | 0.0291 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 32.8 | <0.00001 | <0.0002 | 0.00335 | 0.00223 |
| Tiri0.1-P9-9.5_R1 | 25-Feb-2021 | VA21A3468-018 | Overburden | Tiri01 Pitwalls | 9.5 | 37.1 | | | | 1.63 | 470 | 0.405 | 106 | 1.01 | 2.35 | 0.276 | 0.0392 | 0.000572 | 0.00894 | 0.00766 | <0.00001 | <0.00001 | 0.0643 | <0.00001 | 29.5 | 0.0000156 | <0.0002 | 0.0024 | 0.000883 |
| Tiri0.1-P9-9.5_R2 | 25-Feb-2021 | VA21A3468-019 | Overburden | Tiri01 Pitwalls | 9.5 | 43.4 | | | | 0.242 | 68 | 0.146 | 17 | 0.262 | 0.34 | 0.0396 | 0.154 | 0.000203 | 0.0104 | 0.00161 | <0.00001 | <0.00001 | 0.0164 | <0.00001 | 6.22 | <0.00001 | <0.0002 | 0.000393 | 0.000392 |
| Tiri0.1-P9-9.5_R3 | 25-Feb-2021 | VA21A3468-020 | Overburden | Tiri01 Pitwalls | 9.5 | 34.8 | | | | <0.05 | 8.82 | 0.06 | 2.71 | 0.104 | 0.0463 | 0.005 | 0.328 | 0.000092 | 0.00804 | 0.00209 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 3.16 | 0.0000182 | 0.00041 | 0.000211 | 0.000524 |
| DI Water (Blank) | 25-Feb-2021 | VA21A3468-021 | Blank | | | <1 | | | | <0.05 | <0.5 | <0.02 | <0.3 | <0.005 | <0.005 | <0.001 | <0.001 | <0.00002 | <0.00002 | 0.000051 | <0.000005 | <0.000005 | <0.005 | <0.000005 | <0.01 | <0.000005 | <0.0001 | <0.000005 | <0.00005 |
| GT21-81-1R1 | 19-Apr-2021 | VA21A7370-001 | Overburden | Discovery | 1 | 40.3 | <1 | <1 | 40.3 | <0.05 | 2.36 | 0.682 | 7.82 | 0.0278 | 0.0094 | <0.001 | 0.744 | 0.000045 | 0.00697 | 0.0112 | 0.0000198 | 0.0000257 | <0.005 | 0.0000083 | 0.579 | 0.0000661 | 0.00184 | 0.00126 | 0.0165 |

**Appendix E-1: Water Quality Results**
**Analytical Results for Rinse Test Water**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location/ Facility | Depth of Sample Collection (m) | Total Alkalinity (as $CaCO_3$) | Alkalinity, Hydroxide (as $CaCO_3$) | Alkalinity, Carbonate (as $CaCO_3$) | Alkalinity, Bicarbonate (as $CaCO_3$) | Br | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N | D-Al | D-Sb | D-As | D-Ba | D-Be | D-Bi | D-B | D-Cd | D-Ca | D-Cs | D-Cr | D-Co | D-Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| GT21-81-3R1 | 19-Apr-2021 | VA21A7370-002 | Overburden | Discovery | 3 | 24.4 | <1 | <1 | 24.4 | 0.17 | 44.5 | 0.761 | 176 | <0.005 | <0.005 | <0.001 | 0.0349 | 0.00033 | 0.00134 | 0.0116 | <0.000005 | <0.000005 | 0.0059 | <0.00001 | 56.5 | 0.0000053 | <0.0001 | 0.000499 | 0.0011 |
| GT21-81-3DUPR1 | 19-Apr-2021 | VA21A7370-003 | Overburden | Discovery | 3 | 23.1 | <1 | <1 | 23.1 | 0.189 | 48.4 | 0.808 | 190 | <0.005 | 0.0138 | 0.0038 | 0.0352 | 0.00035 | 0.00138 | 0.0118 | <0.000005 | <0.000005 | 0.0065 | <0.00001 | 60.4 | 0.0000053 | <0.0001 | 0.000505 | 0.00127 |
| GT21-81-5R1 | 19-Apr-2021 | VA21A7370-004 | Overburden | Discovery | 5 | 35 | <1 | <1 | 35 | 1.39 | 417 | 0.776 | 94.7 | 0.0845 | 1.18 | <0.01 | 0.0806 | 0.000541 | 0.00456 | 0.0182 | <0.000005 | <0.000005 | 0.118 | <0.00001 | 14.2 | 0.0000601 | <0.0001 | 0.0001 | 0.000292 |
| GT21-81-7R1 | 19-Apr-2021 | VA21A7370-005 | Overburden | Discovery | 7 | 29.6 | <1 | <1 | 29.6 | 1.44 | 420 | 0.391 | 122 | 0.0107 | 0.0989 | <0.01 | 0.104 | 0.000768 | 0.0095 | 0.0122 | <0.000005 | <0.000005 | 0.17 | <0.00001 | 13.8 | 0.0000748 | <0.0001 | 0.000121 | 0.00026 |
| GT21-81-10R1 | 19-Apr-2021 | VA21A7370-006 | Overburden | Discovery | 10 | 43.6 | <1 | 4.2 | 39.4 | 0.532 | 162 | 0.206 | 34.5 | 0.0372 | 0.0898 | <0.005 | 0.25 | 0.000468 | 0.00535 | 0.00942 | <0.000005 | <0.000005 | 0.0281 | <0.000005 | 5.04 | 0.0000919 | 0.0001 | 0.0000593 | 0.000215 |
| GT21-91-1R1 | 19-Apr-2021 | VA21A7370-007 | Overburden | Discovery | 1 | 86.1 | <1 | <1 | 86.1 | <0.05 | 2.02 | 0.35 | 8.07 | 0.288 | 0.0396 | 0.0013 | 0.0292 | 0.000230 | 0.00136 | 0.0168 | <0.000002 | 0.0000017 | <0.005 | 0.0000054 | 3.91 | <0.000005 | 0.000098 | 0.000560 | 0.00602 |
| GT21-91-2R1 | 19-Apr-2021 | VA21A7370-008 | Overburden | Discovery | 2 | 142 | <1 | <1 | 142 | 0.07 | 13.8 | 1.11 | 39.2 | 0.049 | 0.0083 | 0.0018 | 0.00851 | 0.000180 | 0.000914 | 0.0752 | <0.000002 | <0.000001 | 0.0208 | 0.0000033 | 28.5 | <0.000005 | 0.000104 | 0.000272 | 0.00380 |
| GT21-91-1R2 | 19-Apr-2021 | VA21A7370-009 | Overburden | Discovery | 1 | 37.1 | <1 | <1 | 37.1 | <0.05 | 0.97 | 0.313 | 3.07 | 0.23 | 0.0201 | 0.0014 | 0.0473 | 0.000194 | 0.00137 | 0.0102 | 0.0000031 | 0.0000022 | <0.005 | 0.0000050 | 2.33 | <0.000005 | 0.000120 | 0.000422 | 0.00507 |
| GT21-91-2R2 | 19-Apr-2021 | VA21A7370-010 | Overburden | Discovery | 2 | 132 | <1 | 2.2 | 130 | <0.05 | 6.75 | 0.992 | 21.8 | 0.156 | 0.0072 | <0.001 | 0.0108 | 0.000159 | 0.000859 | 0.0582 | <0.000002 | <0.000001 | 0.0130 | 0.0000033 | 19.3 | <0.000005 | 0.000092 | 0.000161 | 0.00271 |
| GT21-91-1R3 | 19-Apr-2021 | VA21A7370-011 | Overburden | Discovery | 1 | 25.7 | <1 | <1 | 25.7 | <0.05 | <0.5 | 0.283 | 1.55 | 0.154 | 0.0164 | 0.0014 | 0.0276 | 0.000115 | 0.000937 | 0.00773 | <0.000002 | 0.0000011 | <0.005 | 0.0000074 | 1.72 | <0.000005 | 0.000077 | 0.000351 | 0.00404 |
| GT21-91-2R3 | 19-Apr-2021 | VA21A7370-012 | Overburden | Discovery | 2 | 73.9 | <1 | 3.4 | 70.5 | <0.05 | 2.52 | 0.732 | 10.7 | 0.155 | 0.0494 | 0.0052 | 0.0118 | 0.000144 | 0.000683 | 0.0372 | <0.000002 | <0.000001 | 0.0080 | 0.0000033 | 12.1 | <0.000005 | 0.000080 | 0.000108 | 0.00189 |
| GT21-11-2R1 | 20-Apr-2021 | VA21A7370-013 | Overburden | WRSF3 | 2 | 30 | <1 | <1 | 30 | 0.896 | 262 | 0.605 | 95.6 | <0.005 | <0.025 | <0.005 | 0.0672 | 0.000302 | 0.00462 | 0.0124 | <0.000005 | <0.000005 | 0.0733 | <0.00001 | 19.3 | 0.0000054 | <0.0001 | 0.000308 | 0.00151 |
| GT21-11-4R1 | 20-Apr-2021 | VA21A7370-014 | Overburden | WRSF3 | 4 | 33.3 | <1 | <1 | 33.3 | 1.23 | 386 | 0.409 | 142 | <0.005 | <0.05 | <0.01 | 0.0999 | 0.0012 | 0.0158 | 0.0107 | <0.000005 | <0.000005 | 0.131 | <0.000015 | 17.8 | 0.0000289 | <0.0001 | 0.000173 | 0.000433 |
| GT21-11-6R1 | 20-Apr-2021 | VA21A7370-015 | Overburden | WRSF3 | 6 | 43.3 | <1 | 6.4 | 36.9 | 0.394 | 110 | 0.103 | 28.2 | <0.005 | <0.005 | <0.001 | 0.252 | 0.000913 | 0.00127 | 0.0026 | <0.000005 | <0.000005 | 0.0373 | <0.000005 | 7.02 | 0.0000674 | <0.0001 | 0.0000233 | 0.000181 |
| GT21-11-8R1 | 20-Apr-2021 | VA21A7370-016 | Overburden | WRSF3 | 8 | 65.1 | <1 | 10.6 | 54.5 | 0.157 | 40.3 | 0.065 | 14.1 | <0.005 | 0.0103 | <0.001 | 0.313 | 0.000828 | 0.000659 | 0.00118 | <0.000005 | <0.000005 | 0.0271 | <0.000005 | 4.91 | 0.000117 | <0.0001 | 0.00001 | 0.000093 |
| GT21-11-2R2 | 20-Apr-2021 | VA21A7370-017 | Overburden | WRSF3 | 2 | 72.4 | <1 | 7.8 | 64.6 | 0.24 | 68.2 | 0.365 | 28.3 | 0.0203 | <0.005 | <0.001 | 0.143 | 0.000184 | 0.0072 | 0.00604 | <0.000005 | <0.000005 | 0.0315 | <0.000005 | 6.91 | <0.000005 | <0.0001 | 0.0000946 | 0.000588 |
| GT21-11-2R3 | 20-Apr-2021 | VA21A7370-019 | Overburden | WRSF3 | 2 | 61.8 | <1 | 11 | 50.8 | <0.05 | 11.2 | 0.13 | 5.77 | 0.0156 | 0.015 | 0.0019 | 0.257 | 0.000085 | 0.00715 | 0.004 | <0.000005 | <0.000005 | 0.0113 | <0.000005 | 3.51 | 0.0000089 | 0.00013 | 0.000133 | 0.000385 |
| GT21-25R1 | 20-Apr-2021 | VA21A7370-021 | Overburden | Pump | 0-10.4* | 241 | <1 | <1 | 241 | 0.371 | 109 | 0.498 | 46.1 | 0.0325 | <0.005 | <0.001 | 0.12 | 0.00025 | 0.00517 | 0.0158 | <0.000005 | 0.0000052 | 0.0106 | <0.00001 | 22.7 | <0.000005 | 0.00022 | 0.000157 | 0.00331 |
| GT21-25R2 | 20-Apr-2021 | VA21A7370-022 | Overburden | Pump | 0-10.4* | 159 | <1 | 6.6 | 152 | 0.099 | 32.8 | 0.369 | 15.3 | 0.0272 | 0.0084 | 0.0021 | 0.305 | 0.000161 | 0.00566 | 0.00774 | <0.000005 | 0.0000069 | 0.0075 | <0.00001 | 8.46 | 0.0000172 | 0.00044 | 0.000218 | 0.00303 |
| GT21-25R3 | 20-Apr-2021 | VA21A7370-023 | Overburden | Pump | 0-10.4* | 102 | <1 | 8 | 94.2 | <0.05 | 10 | 0.262 | 5.5 | 0.0277 | <0.005 | <0.001 | 0.402 | 0.000108 | 0.00547 | 0.00628 | 0.0000064 | 0.0000068 | 0.0059 | <0.000005 | 4.89 | 0.0000221 | 0.00056 | 0.000271 | 0.00275 |
| GT21-36R1 | 20-Apr-2021 | VA21A7370-024 | Overburden | F-Zone | 0-7.3* | 64.7 | <1 | <1 | 64.7 | 0.388 | 40.3 | 0.305 | 310 | 0.049 | <0.025 | <0.005 | 0.0703 | 0.000333 | 0.00121 | 0.0161 | <0.000005 | <0.000005 | 0.0278 | <0.00003 | 72.2 | 0.0000336 | <0.0001 | 0.000362 | 0.00129 |
| GT21-36DUPR1 | 20-Apr-2021 | VA21A7370-025 | Overburden | F-Zone | 0-7.3* | 74.5 | <1 | <1 | 74.5 | 0.376 | 40.3 | 0.306 | 310 | 0.0493 | <0.025 | <0.005 | 0.0688 | 0.000336 | 0.00122 | 0.0164 | <0.000005 | <0.000005 | 0.0277 | <0.00003 | 74.6 | 0.0000343 | <0.0001 | 0.00036 | 0.00133 |
| GT21-36R2 | 20-Apr-2021 | VA21A7370-026 | Overburden | F-Zone | 0-7.3* | 109 | <1 | 3 | 106 | 0.083 | 8.24 | 0.186 | 97.5 | 0.0628 | <0.005 | <0.001 | 0.137 | 0.000179 | 0.00092 | 0.00904 | <0.000005 | <0.000005 | 0.0116 | <0.00001 | 27.8 | 0.0000181 | <0.0001 | 0.000084 | 0.000506 |
| GT21-36R3 | 20-Apr-2021 | VA21A7370-027 | Overburden | F-Zone | 0-7.3* | 214 | <1 | 10.8 | 204 | <0.05 | 1.8 | 0.119 | 42.9 | 0.0578 | 0.0066 | 0.0014 | 0.215 | 0.00011 | 0.000996 | 0.00449 | <0.000005 | <0.000005 | 0.0056 | <0.000005 | 15.6 | 0.0000112 | <0.0001 | 0.0000554 | 0.000318 |
| Tiri0.1-P10-10R1 | 21-Apr-2021 | VA21A7591-001 | Overburden | Tiri01 Pitwalls | 10 | 35.7 | <1 | <1 | 35.7 | 2.05 | 632 | 0.327 | 125 | 0.161 | 0.532 | <0.01 | 0.0422 | 0.000774 | 0.0184 | 0.00395 | <0.00001 | <0.00001 | 0.0351 | <0.00001 | 25.2 | 0.0000834 | 0.00034 | 0.000419 | 0.000341 |
| Tiri0.1-P10-10R2 | 21-Apr-2021 | VA21A7591-002 | Overburden | Tiri01 Pitwalls | 10 | 30.2 | <1 | <1 | 30.2 | 0.738 | 239 | 0.177 | 49.4 | 0.0812 | 0.281 | <0.005 | 0.0694 | 0.000406 | 0.0177 | 0.00182 | <0.00001 | <0.00001 | 0.0162 | <0.00001 | 11.3 | 0.0000379 | <0.0002 | 0.000143 | 0.0002 |
| Tiri0.1-P10-10R3 | 21-Apr-2021 | VA21A7591-003 | Overburden | Tiri01 Pitwalls | 10 | 70.7 | <1 | 6.6 | 64.1 | 0.239 | 75.5 | 0.118 | 18 | 0.0509 | 0.0714 | 0.0024 | 0.151 | 0.000202 | 0.0169 | 0.00125 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 5.42 | 0.0000195 | <0.0002 | 0.0000864 | 0.000474 |
| Tiri0.1-P10-12R1 | 21-Apr-2021 | VA21A7591-004 | Overburden | Tiri01 Pitwalls | 12 | 24.3 | <1 | <1 | 24.3 | 3.8 | 1200 | <0.4 | 268 | 0.297 | 0.651 | 0.171 | 0.0398 | 0.000536 | 0.0215 | 0.0057 | <0.000025 | <0.000025 | 0.0318 | 0.0000628 | 60.8 | 0.000122 | <0.0005 | 0.000791 | 0.00209 |
| Tiri0.1-P10-14R1 | 21-Apr-2021 | VA21A7591-005 | Overburden | Tiri01 Pitwalls | 14 | 24.9 | <1 | <1 | 24.9 | 3.14 | 1010 | <0.4 | 204 | 0.971 | 2.36 | 0.556 | 0.0468 | 0.000528 | 0.0287 | 0.00545 | <0.000025 | <0.000025 | 0.0403 | 0.0000335 | 49.6 | 0.000153 | <0.0005 | 0.000944 | 0.00147 |
| Tiri0.1-P10-16R1 | 21-Apr-2021 | VA21A7591-006 | Overburden | Tiri01 Pitwalls | 16 | 32.8 | <1 | <1 | 32.8 | 4.59 | 1430 | 0.44 | 220 | 1.26 | 2.56 | 0.772 | 0.0274 | 0.00034 | 0.0193 | 0.00777 | <0.000025 | <0.000025 | 0.0272 | 0.000034 | 66.6 | 0.000101 | <0.0005 | 0.000744 | 0.000809 |
| Tiri0.1-P10-18R1 | 21-Apr-2021 | VA21A7591-007 | Overburden | Tiri01 Pitwalls | 18 | 21.5 | <1 | <1 | 21.5 | 1.97 | 640 | 0.32 | 161 | 0.183 | 1.08 | 0.0967 | 0.0422 | 0.000677 | 0.0125 | 0.00616 | <0.00001 | <0.00001 | 0.044 | 0.0000173 | 45.6 | 0.0000957 | <0.0002 | 0.00044 | 0.00138 |
| Tiri0.1-P10-20R1 | 22-Apr-2021 | VA21A7591-008 | Overburden | Tiri01 Pitwalls | 20 | 8.8 | <1 | <1 | 8.8 | 1.97 | 693 | <0.4 | 271 | 0.681 | 1.18 | <0.02 | 0.0109 | 0.000627 | 0.055 | 0.0104 | <0.000025 | <0.000025 | 0.103 | <0.000025 | 58.7 | 0.00194 | <0.0005 | 0.00056 | 0.000384 |
| SP4WR01R1 | 22-Apr-2021 | VA21A7591-009 | UG Waste Rock | SP4 | 0 (surface) | 30.3 | <1 | <1 | 30.3 | 0.373 | 124 | 0.089 | 58.6 | 0.167 | 1.89 | 0.0522 | 0.214 | 0.000597 | 0.00656 | 0.00516 | <0.00001 | <0.00001 | 0.301 | <0.00001 | 12.4 | 0.00015 | <0.0002 | 0.0000903 | 0.000427 |
| SP4WR02R1 | 22-Apr-2021 | VA21A7591-010 | UG Waste Rock | SP4 | 0 (surface) | 28.1 | <1 | <1 | 28.1 | <0.05 | 1.39 | 0.026 | 11.8 | 0.0224 | 0.0316 | 0.0155 | 0.222 | 0.000731 | 0.0308 | 0.00194 | <0.00001 | <0.00001 | 0.0738 | <0.00001 | 8.16 | 0.0000608 | <0.0002 | 0.0000451 | 0.000342 |
| SP4WR02R2 | 22-Apr-2021 | VA21A7591-011 | UG Waste Rock | SP4 | 0 (surface) | 28.9 | <1 | <1 | 28.9 | <0.05 | <0.5 | <0.02 | 2.33 | 0.0098 | 0.0068 | 0.0026 | 0.197 | 0.000305 | 0.0219 | 0.00128 | <0.00001 | <0.00001 | 0.0233 | <0.00001 | 5.62 | 0.0000329 | <0.0002 | 0.000039 | 0.000221 |
| SP4WR02R3 | 22-Apr-2021 | VA21A7591-012 | UG Waste Rock | SP4 | 0 (surface) | 27.1 | <1 | <1 | 27.1 | <0.05 | <0.5 | <0.02 | 0.57 | 0.0065 | 0.0051 | 0.0019 | 0.16 | 0.000161 | 0.0163 | 0.00116 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 4.99 | 0.0000237 | <0.0002 | 0.000032 | 0.000222 |
| WRSF1_01R1 | 22-Apr-2021 | VA21A7591-013 | UG Waste Rock | WRSF1 | 0 (surface) | 27.6 | <1 | <1 | 27.6 | 0.197 | 67.3 | 0.08 | 61.8 | 1.19 | 2.62 | 0.0982 | 0.242 | 0.00239 | 0.00478 | 0.0038 | <0.00001 | <0.00001 | 0.0204 | <0.00001 | 16.5 | 0.000516 | <0.0002 | 0.000739 | 0.000462 |
| WRSF1_02R1 | 22-Apr-2021 | VA21A7591-014 | UG Waste Rock | WRSF1 | 0 (surface) | 29.6 | <1 | <1 | 29.6 | 0.136 | 46.9 | 0.064 | 30.1 | 0.846 | 1.8 | 0.0731 | 0.26 | 0.00242 | 0.00533 | 0.00176 | <0.00001 | <0.00001 | 0.0153 | <0.00001 | 9.96 | 0.000304 | <0.0002 | 0.000426 | 0.000253 |
| WRSF1_02R2 | 22-Apr-2021 | VA21A7591-015 | UG Waste Rock | WRSF1 | 0 (surface) | 37.9 | <1 | 3.8 | 34.1 | <0.05 | 6.03 | 0.029 | 6.67 | 0.212 | 0.237 | 0.0094 | 0.301 | 0.00126 | 0.00481 | 0.000734 | <0.00001 | <0.00001 | <0.01 | <0.00001 | 5.71 | 0.0000757 | <0.0002 | 0.000071 | 0.000212 |
| WRSF1_02R3 | 22-Apr-2021 | VA21A7591-016 | UG Waste Rock | WRSF1 | 0 (surface) | 30.2 | <1 | <1 | 30.2 | <0.05 | 0.96 | <0.02 | 1.51 | 0.0778 | 0.0381 | 0.0028 | 0.27 | 0.00065 | 0.00392 | 0.000605 | <0.00001 | <0.00001 | <0.01 | 0.0000222 | 5.24 | 0.0000399 | <0.0002 | 0.0000783 | 0.00029 |
| WRSF3_01R1 | 22-Apr-2021 | VA21A7591-017 | UG Waste Rock | WRSF3 | 0 (surface) | 36.6 | <1 | <1 | 36.6 | 0.274 | 95.6 | <0.1 | 44.9 | 22.1 | 42 | 0.0462 | 0.104 | 0.000349 | 0.00175 | 0.014 | <0.00001 | <0.00001 | 0.0653 | <0.00001 | 36 | 0.00144 | <0.0002 | 0.00358 | 0.000606 |
| WRSF3_02R1 | 22-Apr-2021 | VA21A7591-018 | UG Waste Rock | WRSF3 | 0 (surface) | 27.9 | <1 | <1 | 27.9 | <0.05 | 23.1 | 0.056 | 50.2 | 0.791 | 1.15 | 0.0395 | 0.247 | 0.00281 | 0.0133 | 0.00245 | <0.00001 | <0.00001 | 0.0189 | <0.00001 | 14.1 | 0.000142 | <0.0002 | 0.000383 | 0.000422 |
| DI Water | 22-Apr-2021 | VA21A7591-019 | | | | <1 | <1 | <1 | <1 | <0.05 | <0.5 | <0.02 | <0.3 | <0.005 | <0.005 | <0.001 | <0.001 | <0.00002 | <0.00002 | <0.00002 | <0.000005 | <0.000005 | <0.005 | <0.000005 | <0.01 | <0.000005 | <0.0001 | <0.000005 | <0.00005 |

**Notes:**

*Entire RC drill core depth interval provided for F-Zone and Pump samples.

**Appendix E-1: Water Quality Results**
**Analytical Results for Rinse Test Water**

| Client Sample ID | Date Sampled | D-Ga | D-Fe | D-La | D-Pb | D-Li | D-Mg | D-Mn | D-Mo | D-Ni | D-Nb | D-P | D-K | D-Rh | D-Ru | D-Se | D-Si | D-Ag | D-Na | D-Sr | D-S | D-Ta | D-Te | D-Tl | D-Th | D-Sn | D-Ti | D-W | D-U | D-V | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Tiri0.1-P1-4_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | <0.00005 | 0.0184 | 76.5 | 0.213 | 0.000478 | 0.00506 | <0.0005 | <0.25 | 30.3 | <0.000025 | 0.00699 | 0.000525 | 0.713 | <0.000025 | 506 | 0.471 | 130 | <0.0005 | <0.0001 | 0.0000633 | <0.000025 | <0.0001 | <0.00025 | <0.00005 | 0.00207 | <0.00025 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P1-4.5_R1 | 07-Jan-2021 | <0.0001 | 0.0042 | 0.000033 | 0.000035 | 0.0151 | 69.1 | 0.146 | 0.000668 | 0.00604 | <0.0002 | <0.1 | 30.8 | <0.00001 | 0.00787 | 0.000684 | 0.696 | <0.00001 | 479 | 0.395 | 122 | <0.0002 | <0.00004 | 0.000104 | <0.00001 | <0.00004 | <0.0001 | 0.000056 | 0.00169 | 0.000173 | <0.00001 | 0.00115 | <0.00002 |
| Tiri0.1-P1-5_R1 | 07-Jan-2021 | <0.0001 | 0.0623 | 0.000089 | 0.000045 | 0.00699 | 45.5 | 0.134 | 0.000775 | 0.00714 | <0.0002 | <0.1 | 31.9 | <0.00001 | 0.0208 | 0.000634 | 0.692 | <0.00001 | 326 | 0.36 | 112 | <0.0002 | <0.00004 | 0.00021 | <0.00001 | <0.00004 | <0.0001 | 0.00006 | 0.00422 | 0.000224 | 0.0000301 | <0.001 | <0.00002 |
| Tiri0.1-P1-5DUP_R1 | 07-Jan-2021 | <0.0001 | 0.0612 | 0.000093 | <0.00002 | 0.00714 | 45.7 | 0.134 | 0.000842 | 0.0072 | <0.0002 | <0.1 | 32.2 | <0.00001 | 0.0209 | 0.000512 | 0.678 | <0.00001 | 333 | 0.384 | 114 | <0.0002 | <0.00004 | 0.000209 | <0.00001 | <0.00004 | <0.0001 | 0.000061 | 0.0041 | 0.000218 | 0.0000287 | <0.001 | <0.00002 |
| Tiri0.1-P2-3_R1 | 07-Jan-2021 | <0.0001 | 0.0076 | 0.000027 | <0.00002 | 0.00758 | 25.5 | 0.0694 | 0.001 | 0.00414 | <0.0002 | <0.1 | 16 | <0.00001 | 0.00405 | 0.000584 | 0.585 | <0.00001 | 172 | 0.246 | 68.5 | <0.0002 | <0.00004 | 0.0000694 | <0.00001 | <0.00004 | <0.0001 | 0.00015 | 0.00141 | 0.000143 | <0.00001 | <0.001 | 0.000027 |
| Tiri0.1-P2-3.5_R1 | 07-Jan-2021 | <0.0001 | 0.0042 | 0.000038 | 0.000035 | 0.0167 | 46.2 | 0.166 | 0.000716 | 0.00388 | <0.0002 | <0.1 | 28.1 | <0.00001 | 0.00461 | 0.000573 | 0.775 | <0.00001 | 328 | 0.436 | 113 | <0.0002 | <0.00004 | 0.0000667 | <0.00001 | <0.00004 | <0.0001 | 0.000068 | 0.00225 | <0.0001 | 0.0000115 | <0.001 | 0.000046 |
| Tiri0.1-P2-3.5_R2 | 07-Jan-2021 | <0.0001 | 0.0042 | 0.000025 | <0.00002 | 0.00957 | 29.9 | 0.11 | 0.000766 | 0.00207 | <0.0002 | <0.1 | 16.5 | <0.00001 | 0.00327 | 0.000335 | 0.9 | <0.00001 | 195 | 0.354 | 96 | <0.0002 | <0.00004 | 0.0000441 | <0.00001 | <0.00004 | <0.00015 | 0.000066 | 0.00192 | <0.0001 | <0.00001 | <0.001 | 0.000099 |
| Tiri0.1-P2-3.5_R3 | 07-Jan-2021 | <0.0001 | 0.0056 | 0.00002 | <0.00002 | 0.00622 | 17 | 0.0651 | 0.000601 | 0.00116 | <0.0002 | <0.1 | 10.6 | <0.00001 | 0.00221 | 0.00031 | 0.872 | <0.00001 | 99.7 | 0.245 | 74.4 | <0.0002 | <0.00004 | 0.000028 | <0.00001 | <0.00004 | <0.0001 | 0.000061 | 0.00132 | 0.000112 | 0.0000124 | <0.001 | <0.00002 |
| Tiri0.1-P2-4_R1 | 07-Jan-2021 | <0.00025 | 0.0066 | <0.00005 | <0.00005 | 0.0157 | 58.6 | 0.197 | 0.000689 | 0.00562 | <0.0005 | <0.25 | 29.7 | <0.000025 | 0.00556 | 0.00078 | 0.899 | <0.000025 | 403 | 0.553 | 137 | <0.0005 | <0.0001 | 0.0000761 | <0.000025 | <0.0001 | <0.00025 | 0.000063 | 0.00244 | <0.00025 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P3-4_R1 | 07-Jan-2021 | <0.0005 | 0.0129 | <0.0001 | <0.0001 | 0.0227 | 107 | 0.116 | 0.00185 | 0.00206 | <0.001 | <0.5 | 40.1 | <0.00005 | 0.00334 | <0.0004 | <0.5 | <0.00005 | 793 | 0.579 | 157 | <0.001 | <0.0002 | <0.00005 | <0.00005 | <0.0002 | <0.0005 | <0.0001 | 0.00106 | <0.0005 | <0.00005 | <0.005 | <0.0001 |
| Tiri0.1-P3-4.5_R1 | 07-Jan-2021 | <0.0005 | <0.01 | <0.0001 | <0.0001 | 0.0399 | 161 | 0.236 | 0.00284 | 0.00348 | <0.001 | <0.5 | 61.9 | <0.00005 | 0.00487 | <0.0004 | 0.678 | <0.00005 | 1100 | 0.959 | 217 | <0.001 | <0.0002 | <0.00005 | <0.00005 | <0.0002 | <0.0005 | <0.0001 | 0.00266 | <0.0005 | <0.00005 | <0.005 | <0.0001 |
| Tiri0.1-P3-5_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | <0.00005 | 0.0154 | 88.9 | 0.172 | 0.00206 | 0.00567 | <0.0005 | <0.25 | 37.6 | <0.000025 | 0.00689 | 0.000691 | 0.707 | <0.000025 | 616 | 0.593 | 160 | <0.0005 | <0.0001 | 0.0000885 | <0.000025 | <0.0001 | <0.00025 | 0.000065 | 0.00202 | <0.00025 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P3-5_R2 | 07-Jan-2021 | <0.0001 | <0.002 | 0.000025 | <0.00002 | 0.0087 | 36.6 | 0.0695 | 0.00167 | 0.00182 | <0.0002 | <0.1 | 17.5 | <0.00001 | 0.00352 | 0.000276 | 0.686 | <0.00001 | 248 | 0.295 | 89.8 | <0.0002 | <0.00004 | 0.0000439 | <0.00001 | <0.00004 | <0.0001 | 0.00005 | 0.0011 | <0.0001 | <0.00001 | <0.001 | <0.00002 |
| Tiri0.1-P3-5_R3 | 07-Jan-2021 | <0.0001 | <0.002 | <0.00002 | <0.00002 | 0.00496 | 15.8 | 0.0303 | 0.00109 | 0.000771 | <0.0002 | <0.1 | 9.12 | <0.00001 | 0.00204 | 0.0002 | 0.647 | <0.00001 | 101 | 0.149 | 52.2 | <0.0002 | <0.00004 | 0.0000238 | <0.00001 | <0.00004 | <0.0001 | 0.000063 | 0.000621 | 0.000101 | <0.00001 | <0.001 | 0.000039 |
| Tiri0.1-P4-5_R1 | 07-Jan-2021 | <0.0001 | 0.012 | 0.000069 | <0.00002 | 0.0168 | 53 | 0.106 | 0.000984 | 0.00256 | <0.0002 | <0.1 | 42.5 | <0.00001 | 0.0256 | 0.0003 | 0.99 | <0.00001 | 315 | 0.731 | 201 | <0.0002 | <0.00004 | 0.0000942 | <0.00001 | <0.00004 | <0.0001 | 0.000059 | 0.00532 | 0.0001 | 0.0000155 | <0.001 | <0.00002 |
| Tiri0.1-P4-5.5_R1 | 07-Jan-2021 | <0.0005 | 0.0143 | <0.0001 | <0.0001 | 0.0154 | 100 | 0.131 | 0.00207 | 0.00384 | <0.001 | <0.5 | 40 | <0.00005 | 0.00839 | 0.00115 | 0.882 | <0.00005 | 893 | 0.816 | 368 | <0.001 | <0.0002 | <0.00005 | <0.00005 | <0.0002 | <0.0005 | <0.0001 | 0.00338 | <0.0005 | <0.00005 | <0.005 | <0.0001 |
| Tiri0.1-P4-6_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | <0.00005 | 0.0155 | 92.6 | 0.184 | 0.000597 | 0.00248 | <0.0005 | <0.25 | 32.8 | <0.000025 | 0.0031 | 0.000614 | 0.752 | <0.000025 | 716 | 0.774 | 217 | <0.0005 | <0.0001 | <0.000025 | <0.000025 | <0.0001 | <0.00025 | 0.000443 | 0.00208 | <0.00025 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P5-4_R1 | 07-Jan-2021 | 0.000253 | 0.0043 | 0.000034 | 0.000021 | 0.00461 | 36.7 | 0.0321 | 0.00155 | 0.00456 | <0.0002 | <0.1 | 20.7 | <0.00001 | 0.00748 | 0.00105 | 0.831 | <0.00001 | 279 | 0.199 | 60.7 | <0.0002 | <0.00004 | 0.0000944 | <0.00001 | <0.00004 | 0.000102 | 0.000093 | 0.0011 | 0.000758 | 0.0000165 | <0.001 | <0.00002 |
| Tiri0.1-P5-6_R1 | 07-Jan-2021 | <0.0005 | <0.01 | <0.0001 | <0.0001 | <0.005 | 73.8 | 0.0965 | 0.00134 | 0.0112 | <0.001 | <0.5 | 31.3 | <0.00005 | 0.0139 | 0.00148 | 0.707 | <0.00005 | 747 | 0.389 | 268 | <0.001 | <0.0002 | 0.000127 | <0.00005 | <0.0002 | <0.0005 | <0.0001 | 0.00513 | 0.00071 | <0.00005 | <0.005 | <0.0001 |
| Tiri0.1-P5-6.5_R1 | 07-Jan-2021 | <0.00025 | <0.005 | 0.000069 | <0.00005 | 0.00584 | 79.2 | 0.128 | 0.00128 | 0.0112 | <0.0005 | <0.25 | 31.4 | <0.000025 | 0.0112 | 0.00145 | 0.822 | <0.000025 | 669 | 0.477 | 211 | <0.0005 | <0.0001 | 0.000129 | <0.000025 | <0.0001 | <0.00025 | 0.00011 | 0.00346 | 0.000456 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P5-6.5_R2 | 07-Jan-2021 | 0.000163 | 0.0052 | 0.000029 | <0.00002 | 0.00304 | 29.3 | 0.0368 | 0.000657 | 0.00304 | <0.0002 | <0.1 | 13.8 | <0.00001 | 0.0051 | 0.000733 | 0.789 | 0.000471 | 270 | 0.177 | 84 | <0.0002 | <0.00004 | 0.0000538 | <0.00001 | <0.00004 | <0.0001 | 0.000075 | 0.00113 | 0.000578 | 0.0000146 | <0.001 | 0.00008 |
| Tiri0.1-P5-6.5_R3 | 07-Jan-2021 | 0.000199 | 0.005 | <0.00002 | 0.000026 | 0.00182 | 11.9 | 0.0128 | 0.000317 | 0.00106 | <0.0002 | <0.1 | 6.8 | <0.00001 | 0.00278 | 0.000386 | 0.704 | 0.000471 | 109 | 0.0749 | 37.4 | <0.0002 | <0.00004 | 0.0000262 | <0.00001 | <0.00004 | <0.00015 | 0.000054 | 0.000371 | 0.000712 | <0.00001 | <0.001 | 0.000027 |
| OVB-01_R1 | 07-Jan-2021 | 0.00021 | 0.0037 | 0.000027 | <0.00002 | 0.00833 | 30.8 | 0.0313 | 0.0116 | 0.00139 | <0.0002 | <0.1 | 32.3 | 0.0000175 | 0.0116 | 0.000594 | 0.815 | 0.000402 | 192 | 0.356 | 121 | <0.0002 | <0.00004 | 0.0000252 | <0.00001 | <0.00004 | <0.00015 | 0.0034 | 0.00303 | 0.00036 | <0.00001 | <0.001 | <0.00002 |
| OVB-02_R1 | 07-Jan-2021 | 0.000328 | <0.005 | <0.00005 | <0.00005 | 0.00634 | 39.4 | 0.044 | 0.0138 | 0.00236 | <0.0005 | <0.25 | 34.2 | <0.000025 | 0.0125 | 0.00109 | 0.998 | <0.000025 | 353 | 0.289 | 101 | <0.0005 | <0.0001 | 0.0000414 | <0.000025 | <0.0001 | <0.00025 | 0.00143 | 0.00223 | 0.000568 | <0.000025 | <0.0025 | <0.00005 |
| OVB-02DUP_R1 | 07-Jan-2021 | 0.000328 | 0.0027 | 0.000032 | <0.00002 | 0.00706 | 42.7 | 0.0468 | 0.0157 | 0.00232 | <0.0002 | <0.1 | 37.5 | 0.0000182 | 0.0128 | 0.00119 | 0.943 | <0.00001 | 366 | 0.312 | 111 | <0.0002 | <0.00004 | 0.0000502 | <0.00001 | <0.00004 | 0.000104 | 0.00144 | 0.0024 | 0.00057 | 0.0000266 | <0.001 | <0.00002 |
| OVB-03_R1 | 07-Jan-2021 | 0.000387 | 0.0112 | 0.000025 | 0.000029 | 0.00476 | 25.8 | 0.0237 | 0.0198 | 0.00172 | <0.0002 | <0.1 | 26 | 0.000014 | 0.00989 | 0.000593 | 0.903 | <0.00001 | 253 | 0.189 | 67.7 | <0.0002 | <0.00004 | 0.0000526 | <0.00001 | <0.00004 | 0.000179 | 0.00111 | 0.00178 | 0.000827 | 0.0000151 | <0.001 | <0.00002 |
| OVB-03_R2 | 07-Jan-2021 | 0.00041 | 0.0053 | <0.00002 | <0.00002 | 0.00275 | 10.9 | 0.00878 | 0.0105 | 0.000593 | <0.0002 | <0.1 | 13.5 | <0.00001 | 0.00528 | 0.000284 | 0.961 | <0.00001 | 112 | 0.0925 | 29.1 | <0.0002 | <0.00004 | 0.0000265 | <0.00001 | <0.00004 | 0.000246 | 0.000966 | 0.000442 | 0.00102 | 0.0000137 | <0.001 | <0.00002 |
| OVB-03_R3 | 07-Jan-2021 | 0.000283 | 0.0228 | 0.000038 | 0.000047 | 0.00161 | 4.01 | 0.00329 | 0.00435 | 0.000375 | <0.0002 | <0.1 | 6.32 | <0.00001 | 0.00289 | 0.000103 | 0.969 | <0.00001 | 43.5 | 0.0388 | 11.8 | <0.0002 | <0.00004 | 0.0000131 | <0.00001 | <0.00004 | 0.000878 | 0.000623 | 0.000109 | 0.0011 | 0.0000277 | <0.001 | 0.000042 |
| OVB-04_R1 | 07-Jan-2021 | 0.000322 | 0.0059 | 0.000023 | 0.000036 | 0.00487 | 26.6 | 0.0191 | 0.0135 | 0.00144 | <0.0002 | <0.1 | 30.9 | 0.0000122 | 0.0109 | 0.000805 | 1 | <0.00001 | 219 | 0.176 | 59.5 | <0.0002 | <0.00004 | 0.0000486 | <0.00001 | <0.00004 | 0.000116 | 0.00165 | 0.0015 | 0.00112 | 0.000016 | <0.001 | <0.00002 |
| TP-4 0.5_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | 0.000076 | 0.00665 | 46 | 0.0765 | 0.00403 | 0.00543 | <0.0005 | <0.25 | 34.6 | <0.000025 | 0.0627 | 0.00227 | <0.25 | <0.000025 | 424 | 1.19 | 56.7 | <0.0005 | <0.0001 | 0.000095 | <0.000025 | <0.0001 | <0.00025 | 0.000363 | 0.000573 | 0.000265 | <0.000025 | <0.0025 | <0.00005 |
| TP-4 1.0_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | 0.000057 | 0.0075 | 56.4 | 0.0848 | 0.00708 | 0.00918 | <0.0005 | <0.25 | 40.1 | 0.000026 | 0.0853 | 0.00194 | 0.308 | <0.000025 | 574 | 1.74 | 57.5 | <0.0005 | 0.00012 | 0.000139 | <0.000025 | <0.0001 | <0.00025 | 0.000453 | 0.000786 | 0.000353 | <0.000025 | <0.0025 | <0.00005 |
| TP-4 1.0DUP_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | <0.00005 | 0.00759 | 57 | 0.0874 | 0.00691 | 0.0095 | <0.0005 | <0.25 | 41.6 | <0.000025 | 0.0854 | 0.0023 | 0.287 | <0.000025 | 577 | 1.73 | 59.7 | <0.0005 | <0.0001 | 0.000134 | <0.000025 | <0.0001 | <0.00025 | 0.00043 | 0.000783 | 0.000316 | <0.000025 | <0.0025 | <0.00005 |
| TP-4 1.5_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | <0.00005 | 0.00558 | 49 | 0.0702 | 0.00528 | 0.00626 | <0.0005 | <0.25 | 34.3 | <0.000025 | 0.07 | 0.00121 | 0.267 | <0.000025 | 485 | 1.36 | 54 | <0.0005 | <0.0001 | 0.000075 | <0.000025 | <0.0001 | <0.00025 | 0.000297 | 0.000655 | <0.00025 | <0.000025 | <0.0025 | <0.00005 |
| TP-4 2.0_R1 | 07-Jan-2021 | <0.00025 | <0.005 | <0.00005 | <0.00005 | 0.00499 | 41.8 | 0.0635 | 0.00512 | 0.00659 | <0.0005 | <0.25 | 31.3 | <0.000025 | 0.066 | 0.000958 | <0.25 | <0.000025 | 433 | 1.22 | 43.8 | <0.0005 | <0.0001 | 0.0000726 | <0.000025 | <0.0001 | <0.00025 | 0.00027 | 0.000541 | 0.000296 | <0.000025 | <0.0025 | <0.00005 |
| TP-4 2.0_R2 | 07-Jan-2021 | <0.0001 | <0.002 | <0.00002 | 0.000028 | 0.00248 | 9.85 | 0.016 | 0.00176 | 0.00116 | <0.0002 | <0.1 | 8.5 | <0.00001 | 0.0191 | 0.000402 | 0.26 | <0.00001 | 110 | 0.324 | 11.5 | <0.0002 | <0.00004 | 0.000021 | <0.00001 | <0.00004 | <0.0001 | 0.000259 | 0.0000737 | 0.000222 | <0.00001 | <0.001 | 0.000063 |
| TP-4 2.0_R3 | 07-Jan-2021 | 0.000101 | 0.006 | <0.00002 | 0.000087 | 0.00133 | 3.23 | 0.00517 | 0.000786 | 0.000492 | <0.0002 | <0.1 | 3.33 | <0.00001 | 0.00698 | 0.000211 | 0.26 | <0.00001 | 34 | 0.0996 | 3.18 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.00015 | 0.000173 | 0.0000168 | 0.000292 | 0.0000163 | <0.001 | 0.000102 |
| DI_Blank | 07-Jan-2021 | <0.00005 | <0.001 | <0.00001 | <0.00001 | <0.0005 | <0.004 | <0.00005 | <0.00005 | <0.00005 | <0.0001 | <0.05 | <0.02 | <0.000005 | <0.000005 | <0.00004 | <0.05 | <0.000005 | <0.02 | <0.00002 | <0.5 | <0.0001 | <0.00002 | <0.000005 | <0.000005 | <0.00002 | <0.00005 | <0.00001 | <0.000001 | <0.00005 | <0.000005 | <0.0005 | <0.00001 |
| Tiri0.1-P6-8_R1 | 24-Feb-2021 | <0.00025 | 0.0096 | <0.00005 | <0.00005 | 0.00449 | 37.3 | 0.0272 | 0.00193 | 0.00478 | <0.0005 | <0.25 | 26.4 | <0.000025 | 0.00779 | 0.000792 | 1.03 | <0.000025 | 418 | 0.209 | 58.6 | <0.0005 | <0.0001 | 0.000111 | <0.000025 | <0.0001 | <0.00025 | 0.000697 | 0.00118 | 0.00142 | 0.0000333 | <0.0025 | <0.00005 |
| Tiri0.1-P6-8_R2 | 24-Feb-2021 | 0.000324 | 0.0063 | 0.000022 | <0.00002 | 0.00269 | 18.3 | 0.0118 | 0.00107 | 0.00194 | <0.0002 | <0.1 | 14.9 | <0.00001 | 0.00458 | 0.000518 | 1.1 | <0.00001 | 225 | 0.104 | 30.6 | <0.0002 | <0.00004 | 0.0000619 | <0.00001 | <0.00004 | <0.0001 | 0.000555 | 0.000405 | 0.00167 | 0.0000143 | <0.001 | <0.00002 |
| Tiri0.1-P6-8_R3 | 24-Feb-2021 | 0.000364 | 0.0159 | 0.000024 | 0.000032 | 0.00132 | 6.17 | 0.00383 | 0.000411 | 0.000664 | <0.0002 | <0.1 | 6.72 | <0.00001 | 0.00206 | 0.000406 | 0.957 | <0.00001 | 79.9 | 0.0384 | 10.5 | <0.0002 | <0.00004 | 0.0000274 | <0.00001 | <0.00004 | 0.000518 | 0.000304 | 0.000111 | 0.00207 | 0.0000256 | <0.001 | 0.000041 |
| Tiri0.1-P6-9_R1 | 24-Feb-2021 | 0.000233 | 0.007 | 0.000052 | 0.00003 | 0.00522 | 17.8 | 0.0239 | 0.00421 | 0.00339 | <0.0002 | <0.1 | 17.9 | <0.00001 | 0.00509 | 0.000304 | 1.09 | <0.00001 | 232 | 0.146 | 31.9 | <0.0002 | <0.00004 | 0.0000662 | <0.00001 | <0.00004 | 0.000171 | 0.00337 | 0.000864 | 0.000893 | 0.0000258 | <0.001 | 0.000023 |
| Tiri0.1-P7-0-2_R1 | 24-Feb-2021 | <0.0001 | 0.0186 | 0.000038 | 0.000028 | 0.00318 | 9 | 0.0143 | 0.00065 | 0.00128 | <0.0002 | <0.1 | 6.59 | <0.00001 | 0.00242 | 0.000176 | 0.417 | <0.00001 | 40.6 | 0.149 | 12.6 | <0.0002 | <0.00004 | 0.0000184 | <0.00001 | <0.00004 | 0.000179 | 0.000039 | 0.000325 | 0.000194 | 0.0000157 | <0.001 | <0.00002 |
| Tiri0.1-P7-0-2DUP_R1 | 24-Feb-2021 | <0.0001 | 0.0183 | 0.000044 | 0.000028 | 0.00314 | 8.95 | 0.0144 | 0.000681 | 0.00128 | <0.0002 | <0.1 | 6.52 | <0.00001 | 0.00249 | 0.000192 | 0.407 | <0.00001 | 39.4 | 0.148 | 12.4 | <0.0002 | <0.00004 | 0.0000188 | <0.00001 | <0.00004 | 0.000141 | 0.000026 | 0.000329 | 0.000182 | 0.0000182 | <0.001 | <0.00002 |
| Tiri0.1-P7-3-5_R1 | 25-Feb-2021 | <0.00025 | 0.0248 | <0.00005 | <0.00005 | 0.00572 | 40.1 | 0.0416 | 0.0038 | 0.00508 | <0.0005 | <0.25 | 25.9 | <0.000025 | 0.00395 | 0.000564 | 1.04 | <0.000025 | 453 | 0.252 | 78.2 | <0.0005 | <0.0001 | 0.0000831 | <0.000025 | <0.0001 | <0.00025 | 0.000131 | 0.00179 | 0.000968 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P8-0-2_R1 | 25-Feb-2021 | 0.000116 | 0.101 | 0.000352 | 0.000157 | <0.001 | 9.18 | 0.015 | 0.00147 | 0.00127 | <0.0002 | <0.1 | 4.43 | <0.00001 | 0.0014 | 0.000092 | 0.412 | <0.00001 | 55 | 0.176 | 11.4 | <0.0002 | <0.00004 | 0.000012 | 0.0000705 | <0.00004 | 0.00144 | 0.000066 | 0.000121 | 0.000289 | 0.0000758 | <0.001 | 0.000133 |
| Tiri0.1-P8-0-2_R2 | 25-Feb-2021 | <0.0001 | 0.153 | 0.000402 | 0.000221 | <0.001 | 1.39 | 0.00541 | 0.000665 | 0.000908 | <0.0002 | <0.1 | 1.45 | <0.00001 | 0.000658 | <0.00008 | 0.385 | <0.00001 | 12.9 | 0.0313 | 1.94 | <0.0002 | <0.00004 | <0.00001 | 0.0000776 | <0.00004 | 0.00362 | 0.000048 | 0.0000637 | 0.000507 | 0.0000809 | <0.001 | 0.000217 |
| Tiri0.1-P8-0-2_R3 | 25-Feb-2021 | 0.000147 | 0.27 | 0.000666 | 0.000418 | <0.001 | 0.463 | 0.00621 | 0.000326 | 0.00114 | <0.0002 | <0.1 | 0.672 | <0.00001 | 0.000512 | <0.00008 | 0.444 | <0.00001 | 4.24 | 0.0106 | <1 | <0.0002 | <0.00004 | <0.00001 | 0.0000993 | <0.00004 | 0.00513 | 0.000043 | 0.0000475 | 0.000604 | 0.000131 | 0.00122 | 0.000307 |
| Tiri0.1-P8-3-5_R1 | 24-Feb-2021 | 0.000272 | 0.123 | 0.000045 | <0.00002 | 0.00426 | 35.3 | 0.0275 | 0.00248 | 0.0046 | <0.0002 | <0.1 | 28.4 | <0.00001 | 0.00957 | 0.000552 | 1.1 | <0.00001 | 378 | 0.218 | 46.5 | <0.0002 | <0.00004 | 0.000131 | <0.00001 | <0.00004 | <0.0001 | 0.000168 | 0.00103 | 0.00148 | 0.0000305 | <0.001 | <0.00002 |
| Tiri0.1-P9-1.5_R1 | 25-Feb-2021 | 0.000163 | 0.432 | 0.000713 | 0.000475 | 0.00185 | 1.2 | 0.0243 | 0.000258 | 0.00352 | <0.0002 | <0.1 | 1.88 | <0.00001 | 0.00132 | <0.00008 | 1.46 | 0.000015 | 4.75 | 0.027 | 3.44 | <0.0002 | <0.00004 | 0.0000129 | 0.0000982 | <0.00004 | 0.0113 | <0.00002 | 0.0000348 | 0.000771 | 0.000157 | 0.00218 | 0.000371 |
| Tiri0.1-P9-1.5DUP_R1 | 25-Feb-2021 | 0.000194 | 0.5 | 0.000865 | 0.000576 | 0.00174 | 1.04 | 0.0273 | 0.00025 | 0.00396 | <0.0002 | <0.1 | 1.42 | <0.00001 | 0.00132 | <0.00008 | 1.55 | 0.0000156 | 4.36 | 0.0243 | 2.94 | <0.0002 | <0.00004 | 0.0000134 | 0.000113 | <0.00004 | 0.0136 | <0.00002 | 0.0000428 | 0.000834 | 0.000178 | 0.00252 | 0.000859 |
| Tiri0.1-P9-5_R1 | 25-Feb-2021 | <0.0001 | 0.0446 | 0.000208 | 0.000087 | 0.00333 | 10 | 0.148 | 0.00145 | 0.00251 | <0.0002 | <0.1 | 5.11 | <0.00001 | 0.000346 | 0.000119 | 0.68 | <0.00001 | 52.9 | 0.153 | 20.7 | <0.0002 | <0.00004 | <0.00001 | 0.0000429 | <0.00004 | 0.00103 | 0.000057 | 0.000729 | 0.000206 | 0.0000388 | <0.001 | 0.000084 |
| Tiri0.1-P9-9.5_R1 | 25-Feb-2021 | 0.000158 | 0.0109 | 0.000048 | <0.00002 | 0.00643 | 31.7 | 0.0625 | 0.00381 | 0.00306 | <0.0002 | <0.1 | 20 | <0.00001 | 0.00204 | 0.000243 | 1.06 | <0.00001 | 308 | 0.185 | 42.2 | <0.0002 | <0.00004 | 0.0000363 | <0.00001 | <0.00004 | <0.0001 | 0.000113 | 0.001 | 0.000486 | 0.0000202 | <0.001 | <0.00002 |
| Tiri0.1-P9-9.5_R2 | 25-Feb-2021 | 0.000206 | 0.0429 | 0.000066 | 0.000068 | 0.0017 | 4.22 | 0.00699 | 0.000941 | 0.000596 | <0.0002 | <0.1 | 4.64 | <0.00001 | 0.000624 | 0.000158 | 0.702 | <0.00001 | 50.2 | 0.0276 | 6.15 | <0.0002 | <0.00004 | <0.00001 | 0.0000193 | <0.00004 | 0.00145 | 0.000055 | 0.000109 | 0.000838 | 0.0000369 | <0.001 | 0.000127 |
| Tiri0.1-P9-9.5_R3 | 25-Feb-2021 | 0.000179 | 0.175 | 0.000237 | 0.000204 | <0.001 | 1.21 | 0.00544 | 0.000331 | 0.000616 | <0.0002 | <0.1 | 1.51 | <0.00001 | 0.000539 | <0.00008 | 0.699 | <0.00001 | 9.15 | 0.0105 | <1 | <0.0002 | <0.00004 | <0.00001 | 0.0000896 | <0.00004 | 0.00637 | 0.000043 | 0.0000591 | 0.00095 | 0.0000561 | 0.00102 | 0.000417 |
| DI Water (Blank) | 25-Feb-2021 | <0.00005 | <0.001 | <0.00001 | <0.00001 | <0.0005 | <0.004 | <0.00005 | <0.00005 | <0.00005 | <0.0001 | <0.05 | <0.02 | <0.000005 | <0.000005 | <0.00004 | <0.05 | <0.000005 | <0.02 | <0.00002 | <0.5 | <0.0001 | <0.00002 | <0.000005 | <0.000005 | <0.00002 | <0.00005 | <0.00001 | <0.000001 | <0.00005 | <0.000005 | <0.0005 | <0.00001 |
| GT21-81-1R1 | 19-Apr-2021 | 0.000568 | 1.35 | 0.00469 | 0.000809 | 0.00196 | 0.274 | 0.0115 | 0.00272 | 0.00819 | 0.00016 | <0.05 | 2.89 | <0.000005 | 0.0011 | 0.000095 | 3.5 | 0.0000076 | 5.47 | 0.00394 | 2.7 | <0.0001 | <0.00002 | 0.0000118 | 0.000941 | 0.000023 | 0.0348 | 0.000514 | 0.000232 | 0.00227 | 0.000966 | 0.00311 | 0.00182 |

**Appendix E-1: Water Quality Results**
**Analytical Results for Rinse Test Water**

| Client Sample ID | Date Sampled | D-Ga | D-Fe | D-La | D-Pb | D-Li | D-Mg | D-Mn | D-Mo | D-Ni | D-Nb | D-P | D-K | D-Rh | D-Ru | D-Se | D-Si | D-Ag | D-Na | D-Sr | D-S | D-Ta | D-Te | D-Tl | D-Th | D-Sn | D-Ti | D-W | D-U | D-V | D-Y | D-Zn | D-Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| GT21-81-3R1 | 19-Apr-2021 | 0.000196 | 0.0044 | 0.000065 | <0.00001 | 0.00724 | 11.9 | 0.0512 | 0.0107 | 0.00691 | <0.0001 | <0.05 | 9.43 | 0.0000115 | 0.000756 | 0.000304 | 1.03 | <0.000005 | 20.6 | 0.18 | 62.2 | <0.0001 | 0.000024 | 0.0000154 | 0.0000098 | <0.00002 | 0.000265 | 0.00071 | 0.00312 | 0.000229 | 0.000023 | <0.0005 | 0.000035 |
| GT21-81-3DUPR1 | 19-Apr-2021 | 0.000172 | 0.0034 | 0.000061 | <0.00001 | 0.00752 | 12.8 | 0.0536 | 0.0116 | 0.00747 | <0.0001 | <0.05 | 9.84 | 0.0000112 | 0.000793 | 0.000283 | 1.07 | <0.000005 | 22.8 | 0.195 | 69.9 | <0.0001 | <0.00002 | 0.0000167 | 0.0000128 | <0.00002 | 0.000209 | 0.000772 | 0.00336 | 0.000228 | 0.0000233 | <0.0005 | 0.000044 |
| GT21-81-5R1 | 19-Apr-2021 | 0.000496 | 0.0045 | 0.000035 | <0.00001 | 0.00602 | 33.4 | 0.0158 | 0.0222 | 0.00147 | <0.0001 | <0.05 | 25.2 | 0.0000197 | 0.00771 | 0.00049 | 1.02 | <0.000005 | 236 | 0.103 | 49.8 | <0.0001 | <0.00002 | 0.0000678 | 0.0000052 | <0.00002 | 0.000248 | 0.00314 | 0.00102 | 0.00134 | 0.0000348 | <0.0005 | 0.000017 |
| GT21-81-7R1 | 19-Apr-2021 | 0.000459 | 0.0085 | 0.000059 | 0.000023 | 0.00524 | 22.4 | 0.0146 | 0.0136 | 0.00147 | <0.0001 | <0.05 | 24.7 | 0.000006 | 0.00842 | 0.000471 | 1.04 | <0.000005 | 261 | 0.113 | 46 | <0.0001 | <0.00002 | 0.0000579 | <0.000005 | <0.00002 | 0.000397 | 0.00365 | 0.000725 | 0.00166 | 0.0000366 | <0.0005 | 0.000021 |
| GT21-81-10R1 | 19-Apr-2021 | 0.000497 | 0.0327 | 0.000087 | 0.000036 | 0.00758 | 3.36 | 0.00343 | 0.00656 | 0.000481 | <0.0001 | <0.05 | 19.6 | 0.0000074 | 0.00769 | 0.000631 | 0.789 | <0.000005 | 111 | 0.0433 | 23.7 | <0.0001 | <0.00002 | 0.0000169 | 0.0000235 | <0.00002 | 0.00148 | 0.00109 | 0.00017 | 0.00144 | 0.0000454 | <0.0005 | 0.000285 |
| GT21-91-1R1 | 19-Apr-2021 | <0.00005 | 0.0278 | 0.00128 | 0.0000362 | 0.00113 | 0.918 | 0.0833 | 0.0106 | 0.00518 | <0.0001 | <0.01 | 3.43 | <0.000005 | 0.000409 | 0.000226 | 3.66 | <0.000002 | 3.87 | 0.0211 | 2.65 | <0.0001 | <0.00001 | 0.0000025 | 0.0000466 | <0.00001 | 0.00132 | 0.000418 | 0.0000654 | 0.000370 | 0.000285 | 0.00031 | 0.000165 |
| GT21-91-2R1 | 19-Apr-2021 | 0.000052 | 0.00062 | 0.000125 | <0.000005 | 0.00773 | 7.89 | 0.0801 | 0.0232 | 0.00271 | <0.0001 | <0.01 | 7.49 | <0.000005 | 0.000325 | 0.000758 | 4.54 | <0.000002 | 9.74 | 0.183 | 15.7 | <0.0001 | <0.00001 | <0.000001 | <0.000005 | 0.000015 | <0.00005 | 0.00412 | 0.0113 | 0.000342 | 0.000069 | 0.00010 | 0.000047 |
| GT21-91-1R2 | 19-Apr-2021 | <0.00005 | 0.0465 | 0.00113 | 0.0000386 | 0.00089 | 0.545 | 0.0584 | 0.00803 | 0.00354 | <0.0001 | <0.01 | 2.46 | <0.000005 | 0.000338 | 0.000170 | 2.99 | <0.000002 | 1.99 | 0.0133 | 1.14 | <0.0001 | <0.00001 | 0.0000020 | 0.0000560 | <0.00001 | 0.00196 | 0.000430 | 0.0000535 | 0.000386 | 0.000294 | 0.00019 | 0.000203 |
| GT21-91-2R2 | 19-Apr-2021 | 0.000061 | 0.00078 | 0.000089 | <0.000005 | 0.00566 | 4.83 | 0.0453 | 0.0157 | 0.00173 | <0.0001 | <0.01 | 5.31 | <0.000005 | 0.000271 | 0.000415 | 3.85 | <0.000002 | 5.55 | 0.125 | 8.02 | <0.0001 | <0.00001 | <0.000001 | <0.000005 | <0.00001 | <0.00005 | 0.00432 | 0.00561 | 0.000340 | 0.000032 | 0.00025 | 0.000035 |
| GT21-91-1R3 | 19-Apr-2021 | <0.00005 | 0.0233 | 0.000896 | 0.0000302 | 0.00074 | 0.381 | 0.0446 | 0.00572 | 0.00295 | <0.0001 | <0.01 | 1.85 | <0.000005 | 0.000251 | 0.000138 | 2.37 | <0.000002 | 1.26 | 0.00955 | 0.52 | <0.0001 | <0.00001 | 0.0000012 | 0.0000289 | <0.00001 | 0.000998 | 0.000313 | 0.0000446 | 0.000288 | 0.000276 | 0.00067 | 0.000121 |
| GT21-91-2R3 | 19-Apr-2021 | 0.000066 | 0.00093 | 0.000070 | <0.000005 | 0.00418 | 3.07 | 0.0335 | 0.00970 | 0.00122 | <0.0001 | <0.01 | 3.81 | <0.000005 | 0.000264 | 0.000266 | 3.33 | <0.000002 | 2.91 | 0.0769 | 3.81 | <0.0001 | <0.00001 | <0.000001 | <0.000005 | 0.000018 | 0.000063 | 0.00332 | 0.00202 | 0.000307 | 0.000027 | 0.00202 | 0.000026 |
| GT21-11-2R1 | 20-Apr-2021 | 0.000317 | 0.0014 | 0.000013 | 0.000019 | 0.0113 | 24.2 | 0.0231 | 0.0145 | 0.00224 | <0.0001 | <0.05 | 19.9 | 0.0000105 | 0.00189 | 0.000586 | 0.761 | <0.000005 | 144 | 0.177 | 36.9 | <0.0001 | <0.00002 | 0.0000207 | <0.000005 | <0.00002 | 0.000102 | 0.000646 | 0.00132 | 0.000512 | 0.0000123 | <0.0005 | 0.000015 |
| GT21-11-4R1 | 20-Apr-2021 | 0.000408 | 0.0013 | 0.000016 | 0.000014 | 0.00586 | 21.7 | 0.0144 | 0.022 | 0.000877 | <0.0001 | <0.05 | 25.6 | 0.0000144 | 0.00742 | 0.000659 | 0.883 | <0.000005 | 247 | 0.138 | 54.9 | <0.0001 | <0.00002 | 0.0000373 | <0.000005 | <0.00002 | 0.000098 | 0.00192 | 0.000875 | 0.00112 | 0.0000134 | <0.0005 | 0.000029 |
| GT21-11-6R1 | 20-Apr-2021 | 0.000376 | 0.0046 | <0.00001 | <0.00001 | 0.00218 | 4.55 | 0.00315 | 0.00594 | 0.000104 | <0.0001 | 0.266 | 8.8 | 0.0000062 | 0.00204 | 0.000201 | 0.493 | <0.000005 | 73.7 | 0.031 | 12.9 | <0.0001 | <0.00002 | 0.0000082 | <0.000005 | <0.00002 | 0.000249 | 0.000433 | 0.0000119 | 0.000812 | 0.0000097 | <0.0005 | <0.00001 |
| GT21-11-8R1 | 20-Apr-2021 | 0.000343 | 0.0035 | <0.00001 | <0.00001 | 0.00131 | 2.49 | 0.00239 | 0.00462 | 0.000067 | <0.0001 | <0.05 | 4.95 | <0.000005 | 0.00184 | 0.00024 | 0.461 | <0.000005 | 32.7 | 0.0201 | 4.91 | <0.0001 | <0.00002 | <0.000005 | <0.000005 | <0.00002 | 0.000204 | 0.000373 | 0.0000046 | 0.0011 | <0.000005 | <0.0005 | <0.00001 |
| GT21-11-2R2 | 20-Apr-2021 | 0.000385 | 0.009 | 0.000031 | 0.00003 | 0.00502 | 6.41 | 0.00635 | 0.00464 | 0.000672 | <0.0001 | <0.05 | 7.66 | <0.000005 | 0.00104 | 0.000412 | 0.798 | <0.000005 | 41.7 | 0.0662 | 9.9 | <0.0001 | <0.00002 | 0.0000084 | 0.000009 | <0.00002 | 0.000431 | 0.000454 | 0.000308 | 0.000888 | 0.0000207 | <0.0005 | 0.000114 |
| GT21-11-2R3 | 20-Apr-2021 | 0.000301 | 0.0584 | 0.000137 | 0.000139 | 0.00214 | 1.9 | 0.00368 | 0.00104 | 0.00052 | <0.0001 | <0.05 | 3.13 | <0.000005 | 0.000976 | 0.000225 | 0.762 | <0.000005 | 8.63 | 0.0268 | 1.85 | <0.0001 | <0.00002 | <0.000005 | 0.00004 | <0.00002 | 0.00239 | 0.0002 | 0.0000989 | 0.00106 | 0.0000401 | <0.0005 | 0.000241 |
| GT21-25R1 | 20-Apr-2021 | 0.000166 | 0.111 | 0.000714 | 0.000115 | 0.00573 | 3.36 | 0.013 | 0.0138 | 0.00166 | <0.0001 | <0.05 | 5.12 | 0.0000278 | 0.000462 | 0.000225 | 1.62 | <0.000005 | 68.7 | 0.158 | 16.1 | <0.0001 | <0.00002 | <0.000005 | 0.000166 | <0.00002 | 0.00381 | 0.000498 | 0.00087 | 0.00101 | 0.000124 | 0.0005 | 0.000395 |
| GT21-25R2 | 20-Apr-2021 | 0.000268 | 0.22 | 0.000804 | 0.000169 | 0.00305 | 1.19 | 0.00746 | 0.00926 | 0.0014 | <0.0001 | <0.05 | 2.68 | 0.0000101 | 0.000582 | 0.000142 | 1.43 | 0.0000051 | 27.8 | 0.0555 | 5.14 | <0.0001 | <0.00002 | <0.000005 | 0.000208 | <0.00002 | 0.00828 | 0.00053 | 0.000641 | 0.00148 | 0.000136 | 0.00085 | 0.000569 |
| GT21-25R3 | 20-Apr-2021 | 0.000282 | 0.269 | 0.000753 | 0.000191 | 0.00207 | 0.704 | 0.00668 | 0.006 | 0.00128 | <0.0001 | <0.05 | 2.24 | <0.000005 | 0.000682 | 0.000129 | 1.31 | <0.000005 | 13.5 | 0.032 | 1.82 | <0.0001 | <0.00002 | <0.000005 | 0.000209 | <0.00002 | 0.0102 | 0.00048 | 0.000507 | 0.0017 | 0.000128 | 0.00096 | 0.000748 |
| GT21-36R1 | 20-Apr-2021 | 0.00032 | 0.0035 | 0.000023 | <0.00001 | 0.017 | 22.2 | 0.0651 | 0.0828 | 0.00308 | <0.0001 | <0.05 | 16.2 | 0.000108 | 0.00586 | 0.000443 | 0.704 | <0.000005 | 36.3 | 0.279 | 111 | <0.0001 | 0.000026 | 0.0000138 | <0.000005 | <0.00002 | <0.0002 | 0.000594 | 0.00424 | 0.000653 | 0.0000209 | <0.0005 | 0.000042 |
| GT21-36DUPR1 | 20-Apr-2021 | 0.000301 | 0.002 | 0.000012 | <0.00001 | 0.017 | 22.2 | 0.0648 | 0.0843 | 0.00301 | <0.0001 | <0.05 | 16.1 | 0.000117 | 0.00587 | 0.000487 | 0.709 | <0.000005 | 36.7 | 0.282 | 114 | <0.0001 | 0.000034 | 0.0000141 | <0.000005 | <0.00002 | <0.00015 | 0.000588 | 0.00411 | 0.000658 | 0.0000118 | <0.0005 | 0.000016 |
| GT21-36R2 | 20-Apr-2021 | 0.000341 | 0.0065 | 0.000024 | 0.000011 | 0.00688 | 6.32 | 0.0153 | 0.0258 | 0.000912 | <0.0001 | <0.05 | 6.17 | 0.0000222 | 0.00328 | 0.000227 | 0.554 | <0.000005 | 9.01 | 0.103 | 34.2 | <0.0001 | <0.00002 | 0.0000068 | <0.000005 | <0.00002 | <0.0003 | 0.000407 | 0.00117 | 0.00101 | 0.0000128 | <0.0005 | 0.00002 |
| GT21-36R3 | 20-Apr-2021 | 0.000259 | 0.0293 | 0.000077 | 0.000033 | 0.00346 | 2.49 | 0.00654 | 0.00951 | 0.000436 | <0.0001 | <0.05 | 3.29 | 0.0000054 | 0.00221 | 0.000138 | 0.552 | <0.000005 | 2.83 | 0.0555 | 14.3 | <0.0001 | <0.00002 | <0.000005 | 0.0000226 | <0.00002 | 0.00129 | 0.000317 | 0.000484 | 0.00152 | 0.0000296 | <0.0005 | 0.000118 |
| Tiri0.1-P10-10R1 | 21-Apr-2021 | 0.000213 | 0.0078 | 0.000049 | 0.00005 | 0.00839 | 36.6 | 0.0308 | 0.00507 | 0.00401 | <0.0002 | <0.1 | 23.6 | <0.00001 | 0.00734 | 0.00043 | 1.12 | <0.00001 | 428 | 0.224 | 50.1 | <0.0002 | <0.00004 | 0.0000649 | <0.00001 | <0.00004 | 0.000206 | 0.00013 | 0.000923 | 0.0011 | 0.0000369 | <0.0025 | <0.00002 |
| Tiri0.1-P10-10R2 | 21-Apr-2021 | 0.000252 | 0.0069 | 0.000024 | 0.00004 | 0.00405 | 13.2 | 0.00926 | 0.00204 | 0.00108 | <0.0002 | <0.1 | 10 | <0.00001 | 0.0034 | 0.000218 | 0.868 | <0.00001 | 166 | 0.0744 | 19.1 | <0.0002 | <0.00004 | 0.0000332 | <0.00001 | <0.00004 | 0.000216 | 0.000083 | 0.000176 | 0.0012 | 0.000029 | <0.001 | 0.000022 |
| Tiri0.1-P10-10R3 | 21-Apr-2021 | 0.000194 | 0.04 | 0.000044 | 0.000094 | 0.002 | 4.09 | 0.00364 | 0.000714 | 0.000519 | <0.0002 | <0.1 | 4.29 | <0.00001 | 0.0016 | 0.000172 | 0.795 | <0.00001 | 53.3 | 0.0269 | 6.34 | <0.0002 | <0.00004 | 0.0000129 | 0.0000114 | <0.00004 | 0.00134 | 0.000055 | 0.0000532 | 0.00135 | 0.0000324 | <0.001 | 0.000109 |
| Tiri0.1-P10-12R1 | 21-Apr-2021 | <0.00025 | <0.005 | 0.000062 | 0.000174 | 0.00711 | 75.2 | 0.0735 | 0.00825 | 0.00857 | <0.0005 | <0.25 | 33.1 | <0.000025 | 0.0103 | 0.00072 | 0.966 | <0.000025 | 766 | 0.509 | 103 | <0.0005 | <0.0001 | 0.000147 | <0.000025 | <0.0001 | <0.00025 | 0.000076 | 0.000777 | 0.000708 | 0.0000274 | 0.00385 | <0.00005 |
| Tiri0.1-P10-14R1 | 21-Apr-2021 | 0.000292 | 0.0083 | 0.000062 | 0.000163 | 0.00637 | 61.8 | 0.0562 | 0.00565 | 0.00712 | <0.0005 | <0.25 | 29.8 | <0.000025 | 0.0102 | 0.000799 | 0.942 | <0.000025 | 623 | 0.42 | 74.5 | <0.0005 | <0.0001 | 0.000159 | <0.000025 | <0.0001 | 0.000412 | 0.000105 | 0.000819 | 0.00124 | 0.0000307 | <0.0025 | <0.00005 |
| Tiri0.1-P10-16R1 | 21-Apr-2021 | <0.00025 | <0.005 | 0.000068 | <0.00005 | 0.0121 | 83.2 | 0.0992 | 0.00541 | 0.0045 | <0.0005 | <0.25 | 41.4 | <0.000025 | 0.0114 | 0.000609 | 1.25 | <0.000025 | 863 | 0.652 | 84.4 | <0.0005 | <0.0001 | 0.000174 | <0.000025 | <0.0001 | <0.00025 | 0.000169 | 0.000677 | 0.00161 | <0.000025 | <0.0025 | <0.00005 |
| Tiri0.1-P10-18R1 | 21-Apr-2021 | 0.000231 | <0.002 | 0.00003 | 0.000022 | 0.00881 | 41.7 | 0.0873 | 0.00367 | 0.0045 | <0.0002 | <0.1 | 27.2 | <0.00001 | 0.00974 | 0.0012 | 0.851 | <0.00001 | 440 | 0.361 | 66.6 | <0.0002 | <0.00004 | 0.0000914 | <0.00001 | <0.00004 | 0.000113 | 0.000131 | 0.000554 | 0.000778 | 0.0000243 | <0.001 | <0.00002 |
| Tiri0.1-P10-20R1 | 22-Apr-2021 | <0.00025 | <0.005 | <0.00005 | 0.000207 | 0.0118 | 48.7 | 0.268 | 0.00195 | 0.0047 | <0.0005 | <0.25 | 29.2 | <0.000025 | 0.0146 | 0.00325 | 0.563 | <0.000025 | 420 | 0.429 | 96.2 | <0.0005 | <0.0001 | 0.000031 | <0.000025 | <0.0001 | <0.00025 | 0.000059 | 0.000039 | <0.00025 | <0.000025 | <0.0025 | <0.00005 |
| SP4WR01R1 | 22-Apr-2021 | 0.00035 | 0.0042 | <0.00002 | 0.000027 | 0.0015 | 5.61 | 0.00308 | 0.00264 | 0.000241 | <0.0002 | <0.1 | 14.5 | 0.0000113 | 0.00994 | 0.000456 | 0.418 | <0.00001 | 99.2 | 0.104 | 22.2 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000158 | 0.00004 | 0.000115 | 0.000217 | 0.00001 | 0.00572 | 0.000043 |
| SP4WR02R1 | 22-Apr-2021 | 0.000172 | 0.0144 | <0.00002 | 0.000189 | <0.001 | 1.22 | 0.00222 | 0.000574 | 0.000256 | <0.0002 | <0.1 | 3 | <0.00001 | 0.00215 | 0.000468 | 0.493 | <0.00001 | 2.57 | 0.0492 | 4.3 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000337 | 0.000027 | 0.000157 | 0.000206 | 0.0000143 | <0.001 | 0.000107 |
| SP4WR02R2 | 22-Apr-2021 | 0.000109 | 0.0224 | 0.000034 | 0.000249 | <0.001 | 0.556 | 0.00176 | 0.000157 | 0.000163 | <0.0002 | <0.1 | 1.12 | <0.00001 | 0.00114 | 0.000138 | 0.362 | <0.00001 | 0.631 | 0.0311 | <1 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000537 | <0.00002 | 0.0000474 | 0.000188 | <0.00001 | 0.00595 | 0.000218 |
| SP4WR02R3 | 22-Apr-2021 | <0.0001 | 0.0231 | 0.000033 | 0.000274 | <0.001 | 0.348 | 0.00177 | <0.0001 | 0.000206 | <0.0002 | <0.1 | 0.733 | <0.00001 | 0.00105 | <0.00008 | 0.277 | <0.00001 | 0.25 | 0.0273 | <1 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000537 | <0.00002 | 0.0000255 | 0.000149 | 0.0000122 | <0.001 | 0.000121 |
| WRSF1_01R1 | 22-Apr-2021 | 0.000318 | 0.0258 | <0.00002 | 0.000036 | 0.00262 | 5.94 | 0.0112 | 0.0027 | 0.00091 | <0.0002 | <0.1 | 14.2 | 0.0000144 | 0.0152 | 0.000636 | 0.42 | <0.00001 | 52.8 | 0.0731 | 23.1 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000121 | 0.000024 | 0.000265 | 0.00033 | <0.00001 | <0.001 | 0.000042 |
| WRSF1_02R1 | 22-Apr-2021 | 0.000327 | 0.0098 | <0.00002 | 0.000034 | 0.00277 | 3.7 | 0.00704 | 0.00332 | 0.000327 | <0.0002 | <0.1 | 9.57 | <0.00001 | 0.00995 | 0.000354 | 0.383 | <0.00001 | 35.6 | 0.043 | 11 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000102 | 0.000032 | 0.000157 | 0.000372 | 0.0000112 | <0.001 | 0.000091 |
| WRSF1_02R2 | 22-Apr-2021 | 0.000233 | 0.0066 | 0.000029 | 0.00004 | 0.00123 | 1.07 | 0.00299 | 0.000769 | 0.000149 | <0.0002 | <0.1 | 2.74 | <0.00001 | 0.00278 | 0.000132 | 0.422 | <0.00001 | 5.89 | 0.0178 | 2.12 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000178 | 0.000022 | 0.0000328 | 0.000375 | 0.0000102 | <0.001 | 0.000227 |
| WRSF1_02R3 | 22-Apr-2021 | 0.000121 | 0.0109 | 0.000046 | 0.000033 | <0.001 | 0.586 | 0.00317 | 0.00021 | 0.000323 | <0.0002 | <0.1 | 1.14 | <0.00001 | 0.00117 | <0.00008 | 0.34 | <0.00001 | 1.33 | 0.0153 | <1 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000199 | <0.00002 | 0.0000148 | 0.0003 | 0.0000147 | 0.00224 | 0.000087 |
| WRSF3_01R1 | 22-Apr-2021 | 0.000213 | 0.0227 | <0.00002 | 0.000021 | 0.00454 | 12.3 | 0.0484 | 0.00342 | 0.0016 | <0.0002 | <0.1 | 16.9 | 0.0000145 | 0.0365 | 0.000363 | 0.274 | <0.00001 | 70.9 | 0.229 | 17.6 | <0.0002 | <0.00004 | 0.0000285 | <0.00001 | <0.00004 | <0.0001 | 0.000041 | 0.000466 | <0.0001 | <0.00001 | 0.00128 | <0.00002 |
| WRSF3_02R1 | 22-Apr-2021 | 0.00028 | 0.011 | <0.00002 | 0.000033 | 0.00269 | 4.73 | 0.00638 | 0.00176 | 0.000678 | <0.0002 | <0.1 | 8.74 | <0.00001 | 0.011 | 0.000516 | 0.423 | <0.00001 | 19.9 | 0.0618 | 18.2 | <0.0002 | <0.00004 | <0.00001 | <0.00001 | <0.00004 | 0.000158 | 0.000092 | 0.000451 | 0.000276 | 0.0000109 | <0.001 | 0.000085 |
| DI Water | 22-Apr-2021 | <0.00005 | <0.001 | <0.00001 | <0.00001 | <0.0005 | <0.004 | 0.000117 | <0.00005 | <0.00005 | <0.0001 | <0.05 | <0.02 | <0.000005 | <0.000005 | <0.00004 | <0.05 | <0.000005 | <0.02 | <0.00002 | <0.5 | <0.0001 | <0.00002 | <0.000005 | <0.000005 | <0.00002 | <0.00005 | <0.00001 | <0.000001 | <0.00005 | <0.000005 | <0.0005 | <0.00001 |

**Notes:**

*Entire RC drill core depth interval provided for F-Zone and Pump samples.

# APPENDIX E-2: POREWATER CHEMISTRY

**Appendix E-2: Porewater Chemistry**

| Client Sample ID | Date Sampled | ALS Sample ID | Sample Type | Location /Facility | Depth of Sample Collection (m) | pH | Conductivity | TDS | Br | Cl | F | $SO_4$ | $NH_3$-N | $NO_3$-N | $NO_2$-N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | pH units | µS/cm | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Tiri01-P9-5_PW | 23-Feb-2021 | VA21A3468-002 | Overburden | Tiri01 Pitwalls | 5 | 7.64 | 3,700 | 2,420 | 3.16 | 846 | *<0.4* | 437 | 2.42 | 23 | 0.856 |
| Tiri01-P6-9_PW | 23-Feb-2021 | VA21A3468-001 | Overburden | Tiri01 Pitwalls | 9 | 7.84 | 11,520 | 6,550 | 10.9 | 3180 | 1.22 | 740 | 21.2 | 42.1 | 6.04 |
| Tiri01-P9-9.5_PW | 23-Feb-2021 | VA21A3468-003 | Overburden | Tiri01 Pitwalls | 9.5 | 7.88 | 16,200 | 10,000 | 17.4 | 5000 | *<2* | 981 | 9.18 | 25.2 | 4.69 |
| GT21-25_PW | 15-Apr-2021 | VA21A7078-002 | Overburden | Pump | 0-10.4 | 7.84 | 3,500 | 2,160 | | | | | | | |
| GT21-91-1_PW | 15-Apr-2021 | VA21A7078-003 | Overburden | Discovery | 1 | 7.02 | 332 | 192 | | | | | | | |
| GT21-91-2_PW | 15-Apr-2021 | VA21A7078-005 | Overburden | Discovery | 2 | 7.64 | 1,326 | 1030* | | | | | | | |
| SP4WR02_PW | 15-Apr-2021 | VA21A7078-001 | Waste Rock | SP4 | 0 (surface) | 8.15 | 755 | 444 | *<0.25* | 52 | 0.242 | 152 | 0.824 | 1.02 | 0.0936 |
| WRSF102_PW | 15-Apr-2021 | VA21A7078-004 | Waste Rock | WRSF1 | 0 (surface) | | | | | | | | | | |

| Client Sample ID | Date Sampled | D-Al | D-Sb | D-As | D-Ba | D-Be | D-Bi | D-B | D-Cd | D-Ca | D-Ce | D-Cr | D-Co | D-Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Tiri01-P9-5_PW | 23-Feb-2021 | 0.0276 | 0.000382 | 0.00667 | 0.146 | *<0.00001* | *<0.00001* | 0.0158 | 0.000144 | 268 | 0.0000141 | *<0.0002* | 0.0311 | 0.00531 |
| Tiri01-P6-9_PW | 23-Feb-2021 | *<0.02* | 0.00387 | 0.0234 | 0.0661 | *<0.0001* | *<0.0001* | 0.9 | 0.000132 | 184 | 0.000308 | *<0.002* | 0.0131 | 0.00374 |
| Tiri01-P9-9.5_PW | 23-Feb-2021 | *<0.02* | 0.00329 | 0.0284 | 0.112 | *<0.0001* | *<0.0001* | 0.492 | 0.000311 | 330 | 0.000121 | *<0.002* | 0.0328 | 0.00532 |
| GT21-25_PW | 15-Apr-2021 | | | | | | | | | | | | | |
| GT21-91-1_PW | 15-Apr-2021 | 0.0386 | 0.000177 | 0.00201 | 0.0812 | *<0.000005* | *<0.000005* | 0.0198 | 0.0000152 | 26.2 | 0.000006 | 0.00018 | 0.000888 | 0.00927 |
| GT21-91-2_PW | 15-Apr-2021 | 0.0107 | 0.000365 | 0.00424 | 0.0788 | *<0.000005* | *<0.000005* | 0.0935 | 0.0000415 | 113 | 0.0000057 | 0.00016 | 0.00156 | 0.0112 |
| SP4WR02_PW | 15-Apr-2021 | 0.0547 | 0.00995 | 0.0499 | 0.0262 | *<0.000005* | *<0.000005* | 1.85 | *<0.00001* | 38.6 | 0.00108 | *<0.0001* | 0.000675 | 0.00139 |
| WRSF102_PW | 15-Apr-2021 | 0.0915 | 0.0363 | 0.0168 | 0.109 | *<0.000025* | *<0.000025* | 0.395 | *<0.000025* | 84.6 | 0.00819 | *<0.0005* | 0.0119 | 0.000785 |

| Client Sample ID | Date Sampled | D-La | D-Pb | D-Li | D-Mg | D-Mn | D-Mo | D-Ni | D-Nb | D-P | D-K | D-Rh | D-Ru | D-Se |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Tiri01-P9-5_PW | 23-Feb-2021 | 0.000158 | 0.000028 | 0.0136 | 98.8 | 1.78 | 0.00489 | 0.0198 | *<0.0002* | *<0.1* | 24 | 0.0000261 | 0.00184 | 0.000803 |
| Tiri01-P6-9_PW | 23-Feb-2021 | *<0.0002* | *<0.0002* | 0.0254 | 223 | 0.276 | 0.0357 | 0.062 | *<0.002* | *<1* | 133 | *<0.0001* | 0.0369 | 0.0015 |
| Tiri01-P9-9.5_PW | 23-Feb-2021 | *<0.0002* | *<0.0002* | 0.0324 | 414 | 0.788 | 0.0322 | 0.0522 | *<0.002* | *<1* | 174 | *<0.0001* | 0.0212 | 0.00367 |
| GT21-25_PW | 15-Apr-2021 | | | | | | | | | | | | | |
| GT21-91-1_PW | 15-Apr-2021 | 0.000738 | 0.000039 | 0.00272 | 4.96 | 0.214 | 0.0173 | 0.00894 | *<0.0001* | 0.062 | 9.85 | 0.0000275 | 0.00123 | 0.000426 |
| GT21-91-2_PW | 15-Apr-2021 | 0.000293 | 0.000014 | 0.029 | 41.6 | 0.472 | 0.0177 | 0.0104 | *<0.0001* | *<0.05* | 24.7 | 0.0000305 | 0.00194 | 0.00216 |
| SP4WR02_PW | 15-Apr-2021 | *<0.00001* | 0.000562 | 0.00278 | 15.9 | 0.0176 | 0.0172 | 0.00496 | *<0.0001* | *<0.05* | 28.8 | 0.0000216 | 0.0234 | 0.00226 |
| WRSF102_PW | 15-Apr-2021 | *<0.00005* | 0.000054 | 0.0105 | 76.6 | 0.0546 | 0.0862 | 0.017 | *<0.0005* | *<0.25* | 147 | 0.00011 | 0.162 | 0.00284 |

| Client Sample ID | Date Sampled | D-Na | D-Sr | D-S | D-Ta | D-Te | D-Tl | D-Th | D-Sn | D-Ti | D-W | D-U | D-V | D-Y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Tiri01-P9-5_PW | 23-Feb-2021 | 364 | 1.22 | 163 | *<0.0002* | 0.000141 | 0.0000506 | *<0.00001* | *<0.00004* | *<0.00015* | 0.00012 | 0.00914 | 0.000233 | 0.0000417 |
| Tiri01-P6-9_PW | 23-Feb-2021 | 2250 | 1.97 | 296 | *<0.002* | *<0.0004* | 0.000584 | *<0.0001* | *<0.0004* | *<0.001* | 0.0299 | 0.0226 | 0.00153 | *<0.0001* |
| Tiri01-P9-9.5_PW | 23-Feb-2021 | 3300 | 2.66 | 436 | *<0.002* | *<0.0004* | 0.000385 | *<0.0001* | *<0.0004* | *<0.001* | 0.000524 | 0.0276 | *<0.001* | *<0.0001* |
| GT21-25_PW | 15-Apr-2021 | | | | | | | | | | | | | |
| GT21-91-1_PW | 15-Apr-2021 | 22.5 | 0.121 | 19.1 | *<0.0001* | *<0.00002* | 0.0000053 | 0.0000362 | 0.000026 | 0.00132 | 0.00108 | 0.00213 | 0.000676 | 0.000214 |
| GT21-91-2_PW | 15-Apr-2021 | 67.8 | 0.584 | 97.1 | *<0.0001* | 0.000034 | 0.0000078 | *<0.000005* | 0.000035 | 0.000193 | 0.00327 | 0.0519 | 0.000454 | 0.000194 |
| SP4WR02_PW | 15-Apr-2021 | 70.6 | 0.432 | 53.1 | *<0.0001* | *<0.00002* | 0.0000176 | *<0.000005* | 0.000034 | 0.000084 | 0.00033 | 0.0107 | 0.00023 | 0.0000135 |
| WRSF102_PW | 15-Apr-2021 | 765 | 1.29 | 213 | *<0.0005* | *<0.0001* | 0.0000495 | *<0.000025* | *<0.0001* | 0.000275 | 0.000724 | 0.0241 | 0.000774 | 0.0000458 |

**Notes:**
Entire RC drill core depth interval provided for GT21-25_PW sample.
*TDS calculated using correlation between Ca, Mg and Na and TDS observed in overburden samples

# *Appendix F: Water Quality Survey Results*

AGNICO EAGLE

| Client Sample ID | Date Sampled | ALS Sample ID | Field pH | pH | Conductivity | TDS | Total Alkalinity (as $CaCO_3$) | Alkalinity, Hydroxide (as $CaCO_3$) | Alkalinity, Carbonate (as $CaCO_3$) | Alkalinity, Bicarbonate (as $CaCO_3$) | Br | Cl | F | $SO_4$ | Total Ammonia (as N) | $NH_3$-N | $NO_3$-N | $NO_2$-N | T-CN | WAD-CN | DOC | D-Al | D-Sb | D-As | D-Ba | D-Be |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | pH units | pH units | mS/cm | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| WRSF1 Seep | 15-Aug-2020 | VA20B3243-002 | | 8.15 | | 3,440 | 197 | <1 | <1 | 197 | 4.72 | 1,240 | 0.623 | 602 | | 0.174 | 3.18 | 0.0538 | | | 27.8 | 0.0191 | 0.00133 | 0.102 | 0.171 | <0.00001 |
| DP1-Seep-37 | 18-Sep-2020 | VA20B6478-002 | | 7.78 | | 7,100 | 81.8 | <1 | <1 | 81.8 | 17 | 3,670 | <1 | 522 | 5.21 | | 37.9 | 0.261 | <0.005 | <0.005 | 18.9 | <0.01 | 0.000536 | 0.00525 | 0.18 | <0.00005 |
| DP1-Seep-37 | 16-Oct-2020 | VA20B9192-007 | 7.02 | | 7.0 | 4,468* | | | | | 11.9 | 2,560 | <2 | 378 | | 3.87 | 24 | <0.1 | <0.005 | <0.005 | 15 | 0.0082 | <0.0005 | 0.00512 | 0.119 | <0.0001 |
| DP1-Seep-37 | 22-Oct-2020 | VA20C0088-006 | 7.18 | 7.55 | 12.5 | 9,030 | 116 | <1 | <1 | 116 | 19.5 | 4,240 | <1 | 603 | | 4.85 | 40 | 0.272 | <0.01 | <0.01 | 23.8 | 0.0078 | 0.00069 | 0.00736 | 0.199 | <0.000025 |
| DP3-Seep-36 | 18-Sep-2020 | VA20B6478-001 | | 7.82 | | 3,310 | 165 | <1 | <1 | 165 | 6.39 | 1,300 | <0.4 | 298 | 5.96 | | 12 | 1.23 | <0.005 | <0.005 | 14.7 | 0.005 | 0.000444 | 0.00536 | 0.115 | <0.000025 |
| DP3-Seep-36 | 16-Oct-2020 | VA20B9192-006 | 6.93 | | 5.0 | 3,179* | | | | | 7.56 | 1,680 | <2 | 384 | | 5.97 | 17.3 | 0.316 | <0.005 | <0.005 | 13.3 | 0.0077 | 0.00031 | 0.00864 | 0.0964 | <0.00004 |
| IP-Seep-39 | 27-Sep-2020 | VA20B7021-006 | 7.34 | 7.76 | 6.4 | 3,660 | 314 | <1 | <1 | 314 | 5.71 | 1,410 | <1 | 512 | 26.5 | 28.3 | 38.7 | 1.89 | 0.0083 | <0.005 | 10.5 | 0.0085 | 0.00206 | 0.0219 | 0.0497 | <0.000025 |
| IP-Seep-39 | 16-Oct-2020 | VA20B9192-008 | 6.83 | | 4.6 | 3,251* | | | | | 5.78 | 1,460 | <2 | 536 | | 29.4 | 37.7 | 1.82 | 0.0071 | <0.005 | 9.97 | 0.014 | 0.00244 | 0.0336 | 0.0654 | <0.0001 |
| OP-Seep-38 | 18-Sep-2020 | VA20B6478-004 | | 7.89 | | 1,090 | 64.6 | <1 | <1 | 64.6 | 1.45 | 310 | <0.1 | 118 | 0.555 | | 6.08 | 0.095 | <0.005 | <0.005 | 4.59 | 0.0264 | 0.000695 | 0.0104 | 0.0463 | <0.00001 |
| Ore Pad Seep | 15-Aug-2020 | VA20B3243-001 | | 7.43 | | 35,800 | 109 | <1 | <1 | 109 | 50.6 | 14,600 | <2 | 2,600 | | 126 | 371 | 3.97 | | | 23.8 | 0.0716 | 0.0184 | 0.575 | 0.313 | <0.0001 |
| TSF-Seep-31 | 04-Aug-2020 | VA20B2427-001 | 7.73 | 7.83 | 8.1 | 5,870 | 226 | <1 | <1 | 226 | 8.04 | 2,340 | <1 | 670 | | 22.1 | 16.3 | 0.339 | <0.005 | <0.005 | 27.2 | 0.0421 | 0.00105 | 0.177 | 0.21 | <0.00005 |
| TSF-Seep-31 | 18-Sep-2020 | VA20B6478-003 | | 7.61 | | 9,640 | 119 | <1 | <1 | 119 | 41.4 | 9,200 | 50.8 | 6,100 | 40.5 | | 234 | 24.9 | 0.0232 | 0.0139 | 19.1 | <0.01 | 0.000447 | 0.0562 | 0.171 | <0.00005 |
| TSF-Seep-31 | 27-Sep-2020 | VA20B7021-001 | 7.45 | 7.84 | 16.8 | 14,800 | 251 | <1 | <1 | 251 | 16.1 | 4,620 | <2 | 1,260 | 61.6 | 64.2 | 86.7 | 0.657 | 0.008 | <0.005 | 20.9 | <0.01 | 0.000701 | 0.182 | 0.146 | <0.00005 |
| TSF-Seep-31 | 16-Oct-2020 | VA20B9192-001 | 6.79 | | 17.4 | 11,504* | | | | | 21.4 | 5,970 | <2 | 1,400 | | 48.9 | 174 | 0.381 | 0.039 | <0.01 | 20.7 | 0.0207 | <0.001 | 0.106 | 0.215 | <0.0002 |
| TSF-Seep-31 | 22-Oct-2020 | VA20C0088-001 | 6.19 | 7.69 | 25.8 | 16,600 | 320 | <1 | <1 | 320 | 21.8 | 6,320 | <2 | 1,640 | | 115 | 136 | 1.07 | 0.0167 | <0.01 | 24.1 | <0.02 | 0.000548 | 0.0144 | 0.192 | <0.0001 |
| TSF-Seep-32 | 04-Aug-2020 | VA20B2427-002 | 6.88 | 7.42 | >20 | 39,200 | 349 | <1 | <1 | 349 | 61.8 | 17,800 | <2 | 2,900 | | 484 | 869 | 0.728 | 0.319 | <0.1 | 81 | <0.1 | 0.00477 | 0.156 | 0.268 | <0.0005 |
| TSF-Seep-32 | 27-Sep-2020 | VA20B7021-002 | 7.51 | 7.69 | 16.1 | 9,360 | 206 | <1 | <1 | 206 | 14 | 4,110 | <2 | 1,340 | 83.4 | 89.6 | 136 | <0.1 | 0.0688 | 0.0264 | 32.7 | 0.0186 | 0.00166 | 0.18 | 0.247 | <0.00005 |
| TSF-Seep-32 | 16-Oct-2020 | VA20B9192-002 | 6.87 | | 13.4 | 8,615* | | | | | 15.1 | 4,240 | <2 | 1,340 | | 88.3 | 161 | 0.624 | 0.0876 | 0.0253 | 32.4 | 0.0159 | 0.00156 | 0.154 | 0.183 | <0.0002 |
| TSF-Seep-32 | 22-Oct-2020 | VA20C0088-002 | 6.42 | 7.36 | 45.0 | 28,200 | 555 | <1 | <1 | 555 | 36.8 | 11,200 | <2 | 4,180 | | 265 | 388 | 0.147 | 0.209 | 0.0108 | 121 | <0.05 | 0.00492 | 0.345 | 0.485 | <0.00025 |
| TSF-Seep-33 | 04-Aug-2020 | VA20B2427-003 | 7.16 | 7.58 | >20 | 22,900 | 279 | <1 | <1 | 279 | 37.3 | 10,700 | <2 | 1,860 | | 240 | 389 | <0.1 | 0.151 | 0.0101 | 32.3 | <0.1 | 0.00253 | 0.0643 | 0.279 | <0.0005 |
| TSF-Seep-33 | 27-Sep-2020 | VA20B7021-003 | 7.25 | 7.57 | 42.1 | 23,400 | 250 | <1 | <1 | 250 | 41.3 | 12,000 | <2 | 2,450 | 263 | 301 | 497 | 0.795 | 0.306 | 0.0566 | 52 | <0.05 | 0.0066 | 0.0633 | 0.257 | 0.000615 |
| TSF-Seep-33 | 16-Oct-2020 | VA20B9192-003 | 7.04 | | 19.9 | 11,832* | | | | | 19 | 5,630 | <2 | 1,520 | | 134 | 214 | 0.531 | 0.138 | 0.0203 | 36 | 0.0105 | 0.00211 | 0.14 | 0.203 | <0.0002 |
| TSF-Seep-33 | 22-Oct-2020 | VA20C0088-003 | 6.58 | 7.28 | 51.6 | 35,300 | 405 | <1 | <1 | 405 | 48.5 | 14,300 | <2 | 3,030 | | 361 | 579 | 0.519 | 0.342 | 0.032 | 81.2 | <0.05 | 0.00282 | 0.11 | 0.346 | <0.00025 |
| TSF-Seep-34 | 04-Aug-2020 | VA20B2427-004 | 7.05 | 7.72 | >20 | 29,700 | 341 | <1 | <1 | 341 | 52.5 | 15,000 | <2 | 2,590 | | 475 | 680 | 1.39 | 0.14 | <0.01 | 43.8 | <0.05 | 0.00569 | 0.0419 | 0.363 | <0.00025 |
| TSF-Seep-34 | 27-Sep-2020 | VA20B7021-004 | 7.12 | 7.47 | 53.1 | 31,000 | 199 | <1 | <1 | 199 | 52.8 | 15,000 | <2 | 2,410 | 420 | 447 | 729 | 4.25 | 0.337 | 0.0474 | 37.1 | <0.05 | 0.00279 | 0.00464 | 0.329 | <0.00025 |
| TSF-Seep-34 | 16-Oct-2020 | VA20B9192-004 | 7.27 | | | 19,653* | | | | | 40.2 | 10,500 | <2 | 1,740 | | 304 | 485 | 2.51 | 0.167 | 0.0237 | 24.9 | <0.02 | <0.002 | 0.0146 | 0.228 | <0.0004 |
| TSF-Seep-34 | 22-Oct-2020 | VA20C0088-004 | 6.66 | 7.4 | 50.4 | 36,100 | 261 | <1 | <1 | 261 | 48.7 | 13,800 | <2 | 2,260 | | 445 | 641 | 2.36 | 0.266 | 0.0372 | 40.6 | <0.05 | 0.00289 | 0.00972 | 0.349 | <0.00025 |
| TSF-Seep-35 | 04-Aug-2020 | VA20B2427-005 | 7.69 | 7.41 | 11.8 | 8,760 | 180 | <1 | <1 | 180 | 12 | 3,450 | <1 | 1,080 | | 22.3 | 0.499 | 3.7 | 0.0461 | 0.0147 | 28.4 | <0.02 | 0.00216 | 0.0957 | 0.307 | <0.0001 |
| TSF-Seep-35 | 27-Sep-2020 | VA20B7021-005 | 7.35 | 7.69 | 20.1 | 11,500 | 212 | <1 | <1 | 212 | 18.2 | 5,360 | <2 | 1,150 | 104 | 113 | 152 | 0.571 | 0.0335 | 0.0124 | 21.1 | <0.01 | 0.00194 | 0.0541 | 0.249 | <0.00005 |
| TSF-Seep-35 | 16-Oct-2020 | VA20B9192-005 | 7.12 | | 12.1 | 7,764* | | | | | 13.7 | 3,820 | <2 | 1,040 | | 64.9 | 95.3 | 0.321 | 0.0174 | <0.01 | 15.4 | 0.0121 | 0.00172 | 0.0597 | 0.174 | <0.0002 |
| TSF-Seep-35 | 22-Oct-2020 | VA20C0088-005 | 6.99 | 7.49 | 19.7 | 13,300 | 277 | <1 | <1 | 277 | 21 | 5,910 | <2 | 1,450 | | 98.7 | 143 | 0.683 | 0.0121 | <0.01 | 22.3 | <0.01 | 0.00209 | 0.0886 | 0.252 | <0.00005 |

**Notes:**

*TDS calculated using the AEM equation: TDS = (0.22 x $HCO_3$ as $CaCO_3$) + Cl + $SO_4$ + Na + K + Ca + Mg + (0.23 x$NO_3$-N)

| Client Sample ID | Date Sampled | D-Bi | D-B | D-Cd | D-Ca | D-Cs | D-Cr | D-Co | D-Cu | D-Ga | D-Fe | D-La | D-Pb | D-Li | D-Mg | D-Mn | D-Mo | D-Ni | D-Nb | D-P | D-K | D-Rh | D-Ru | D-Se | D-Si | D-Ag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| WRSF1 Seep | 15-Aug-2020 | *<0.00001* | 1.05 | *<0.000025* | 312 | 0.000043 | | 0.0021 | 0.00777 | *<0.0001* | 0.0219 | 0.00004 | 0.000284 | 0.0619 | 124 | 0.166 | 0.0261 | 0.017 | *<0.0002* | *<0.1* | 39.9 | 0.0000584 | 0.00683 | 0.000642 | 3.88 | *<0.00001* |
| DP1-Seep-37 | 18-Sep-2020 | *<0.00005* | 0.576 | 0.000322 | 896 | 0.000424 | *<0.001* | 0.00784 | 0.00449 | *<0.0005* | 0.0567 | 0.000164 | 0.000177 | 0.553 | 173 | 1.5 | 0.00372 | 0.0221 | *<0.001* | *<0.5* | 73.4 | *<0.00005* | 0.0318 | 0.000403 | 1.8 | *<0.00005* |
| DP1-Seep-37 | 16-Oct-2020 | *<0.00025* | 0.381 | 0.000216 | 621 | 0.000298 | | 0.00525 | 0.00354 | | *<0.05* | | *<0.00025* | 0.363 | 122 | 1.13 | 0.00336 | 0.0139 | | *<0.25* | 49.4 | | 0.0253 | *<0.00025* | 1.09 | *<0.00005* |
| DP1-Seep-37 | 22-Oct-2020 | *<0.000025* | 0.678 | 0.000426 | 1040 | 0.000527 | | 0.00811 | 0.00534 | *<0.00025* | 0.07 | 0.000186 | 0.00028 | 0.564 | 199 | 1.93 | 0.00506 | 0.0252 | *<0.0005* | *<0.25* | 87 | 0.0000414 | 0.0412 | 0.000342 | 1.33 | *<0.000025* |
| DP3-Seep-36 | 18-Sep-2020 | *<0.000025* | 0.569 | 0.000193 | 407 | 0.000296 | *<0.0005* | 0.00661 | 0.00667 | *<0.00025* | 0.0087 | 0.000123 | 0.00014 | 0.316 | 80.5 | 1.21 | 0.0035 | 0.0316 | *<0.0005* | *<0.25* | 40 | *<0.000025* | 0.0199 | 0.000532 | 1.81 | *<0.000025* |
| DP3-Seep-36 | 16-Oct-2020 | *<0.0001* | 0.486 | 0.000307 | 493 | 0.000224 | | 0.0026 | 0.00611 | | *<0.02* | | *<0.0001* | 0.347 | 95.7 | 0.654 | 0.00279 | 0.0255 | | *<0.1* | 42.6 | | 0.0177 | 0.000249 | 2.24 | 0.000025 |
| IP-Seep-39 | 27-Sep-2020 | *<0.000025* | 1.31 | 0.000115 | 406 | 0.00138 | | 0.0167 | 0.00346 | *<0.00025* | 0.0463 | *<0.00005* | 0.000433 | 0.105 | 107 | 3.44 | 0.00856 | 0.0425 | *<0.0005* | *<0.25* | 47.3 | 0.0000404 | 0.0248 | 0.00387 | 4.99 | *<0.000025* |
| IP-Seep-39 | 16-Oct-2020 | *<0.00025* | 1.29 | 0.000196 | 385 | 0.00165 | | 0.0243 | 0.00584 | | *<0.05* | | 0.000939 | 0.0977 | 120 | 4.08 | 0.00958 | 0.0781 | | *<0.25* | 51.8 | | 0.0307 | 0.00353 | 4.59 | *<0.00005* |
| OP-Seep-38 | 18-Sep-2020 | *<0.00001* | 0.245 | 0.0000115 | 114 | 0.0000762 | *<0.0002* | 0.000397 | 0.0015 | 0.000116 | 0.0022 | *<0.00002* | 0.000044 | 0.0467 | 27.5 | 0.102 | 0.00415 | 0.00162 | *<0.0002* | *<0.1* | 20.4 | *<0.00001* | 0.00828 | 0.00029 | 1.24 | *<0.00001* |
| Ore Pad Seep | 15-Aug-2020 | *<0.0001* | 4.79 | *<0.0001* | 1920 | 0.0276 | | 0.00562 | 0.0306 | *<0.001* | 0.0965 | *<0.0002* | 0.000299 | 0.106 | 626 | 0.0764 | 0.218 | 0.0175 | *<0.002* | *<1* | 514 | 0.000179 | 0.6 | 0.00736 | 2.79 | 0.000111 |
| TSF-Seep-31 | 04-Aug-2020 | *<0.00005* | 0.257 | 0.000312 | 435 | 0.00039 | | 0.0195 | 0.0146 | *<0.0005* | 0.199 | 0.000202 | 0.000921 | 0.0139 | 147 | 2.95 | 0.0059 | 0.0284 | *<0.001* | *<0.5* | 71.2 | 0.0000668 | 0.0257 | 0.00342 | 0.559 | *<0.00005* |
| TSF-Seep-31 | 18-Sep-2020 | *<0.00005* | 0.692 | 0.000762 | 750 | 0.000134 | *<0.001* | 0.0289 | 0.00439 | *<0.0005* | 0.0255 | 0.000666 | 0.000398 | 0.0164 | 264 | 2.26 | 0.0013 | 0.0227 | *<0.001* | *<0.5* | 90.9 | 0.0000553 | 0.0222 | 0.014 | 2.48 | *<0.00005* |
| TSF-Seep-31 | 27-Sep-2020 | *<0.00005* | 0.533 | 0.000507 | 881 | 0.000171 | | 0.03 | 0.00527 | *<0.0005* | 0.168 | 0.000182 | 0.00121 | 0.026 | 274 | 4.91 | 0.00155 | 0.0151 | *<0.001* | *<0.5* | 99.1 | 0.0000674 | 0.0304 | 0.0142 | 1.7 | *<0.00005* |
| TSF-Seep-31 | 16-Oct-2020 | *<0.0005* | 0.788 | 0.00161 | 1130 | 0.000111 | | 0.041 | 0.00543 | | *<0.1* | | 0.000706 | 0.0193 | 346 | 2.98 | 0.00158 | 0.0343 | | *<0.5* | 109 | | 0.019 | 0.0204 | 2.7 | 0.000102 |
| TSF-Seep-31 | 22-Oct-2020 | *<0.0001* | 0.651 | 0.000993 | 1160 | 0.000253 | | 0.0701 | 0.00428 | *<0.001* | 0.0963 | 0.000748 | 0.00095 | 0.0354 | 439 | 7.04 | 0.00103 | 0.0228 | *<0.002* | *<1* | 157 | *<0.0001* | 0.0418 | 0.0238 | 3.38 | *<0.0001* |
| TSF-Seep-32 | 04-Aug-2020 | *<0.0005* | 6.18 | 0.00185 | 1570 | 0.00355 | | 0.0703 | 0.019 | *<0.005* | *<0.1* | *<0.001* | 0.0094 | *<0.05* | 1060 | 10.8 | 0.0228 | 0.136 | *<0.01* | *<5* | 482 | *<0.0005* | 0.399 | 0.0192 | *<5* | *<0.0005* |
| TSF-Seep-32 | 27-Sep-2020 | *<0.00005* | 1.38 | 0.000208 | 716 | 0.00022 | | 0.0209 | 0.00707 | *<0.0005* | 0.0538 | 0.000238 | 0.000499 | 0.0166 | 225 | 3.63 | 0.0138 | 0.0307 | *<0.001* | *<0.5* | 123 | 0.0000633 | 0.0518 | 0.00783 | 1.55 | *<0.00005* |
| TSF-Seep-32 | 16-Oct-2020 | *<0.0005* | 1.09 | 0.00061 | 653 | 0.000438 | | 0.025 | 0.0163 | | *<0.1* | | *<0.0005* | 0.0158 | 221 | 2.82 | 0.0129 | 0.0364 | | *<0.5* | 115 | | 0.0611 | 0.00704 | 2.72 | 0.000152 |
| TSF-Seep-32 | 22-Oct-2020 | *<0.00025* | 2.98 | *<0.00025* | 1800 | 0.000588 | | 0.0919 | 0.00829 | *<0.0025* | 0.398 | 0.000825 | 0.00155 | 0.0424 | 654 | 9.94 | 0.042 | 0.078 | *<0.005* | *<2.5* | 327 | *<0.00025* | 0.149 | 0.027 | 6.2 | 0.000301 |
| TSF-Seep-33 | 04-Aug-2020 | *<0.0005* | 2.94 | 0.00131 | 1060 | 0.00189 | | 0.0787 | 0.0177 | *<0.005* | 1.01 | *<0.001* | 0.0144 | *<0.05* | 752 | 14 | 0.0154 | 0.117 | *<0.01* | *<5* | 288 | *<0.0005* | 0.208 | 0.00995 | *<5* | *<0.0005* |
| TSF-Seep-33 | 27-Sep-2020 | 0.00468 | 3.84 | 0.00181 | 1320 | 0.00211 | | 0.0704 | 0.0106 | *<0.0025* | 0.475 | 0.000736 | 0.00392 | 0.0393 | 782 | 11.4 | 0.0142 | 0.133 | *<0.005* | *<2.5* | 332 | 0.000706 | 0.2 | 0.0128 | 3.12 | *<0.00025* |
| TSF-Seep-33 | 16-Oct-2020 | *<0.0005* | 2.15 | 0.00103 | 855 | 0.000867 | | 0.0375 | 0.0142 | | *<0.1* | | 0.00191 | 0.0202 | 400 | 6.58 | 0.0141 | 0.0658 | | *<0.5* | 179 | | 0.118 | 0.00665 | 3 | *<0.0001* |
| TSF-Seep-33 | 22-Oct-2020 | *<0.00025* | 4.81 | 0.00128 | 1670 | 0.00178 | | 0.109 | 0.00627 | *<0.0025* | 0.894 | *<0.0005* | 0.00476 | 0.0449 | 1020 | 16.1 | 0.0148 | 0.192 | *<0.005* | *<2.5* | 437 | *<0.00025* | 0.268 | 0.013 | 4.35 | *<0.00025* |
| TSF-Seep-34 | 04-Aug-2020 | *<0.00025* | 4.38 | 0.00213 | 1320 | 0.00316 | | 0.0489 | 0.0215 | *<0.0025* | 0.122 | *<0.0005* | *<0.0005* | 0.0453 | 954 | 4.67 | 0.0379 | 0.17 | *<0.005* | *<2.5* | 449 | *<0.00025* | 0.411 | 0.0185 | *<2.5* | *<0.00025* |
| TSF-Seep-34 | 27-Sep-2020 | *<0.00025* | 5.46 | 0.00122 | 1390 | 0.00323 | | 0.071 | 0.00573 | *<0.0025* | 0.799 | *<0.0005* | *<0.0005* | 0.0478 | 993 | 6.71 | 0.0108 | 0.132 | *<0.005* | *<2.5* | 430 | *<0.00025* | 0.335 | 0.0121 | *<2.5* | *<0.00025* |
| TSF-Seep-34 | 16-Oct-2020 | *<0.001* | 3.48 | 0.000888 | 998 | 0.00182 | | 0.046 | 0.009 | | 0.482 | | 0.00128 | 0.0297 | 677 | 4.85 | 0.0076 | 0.0792 | | *<1* | 288 | | 0.249 | 0.00888 | 2.26 | *<0.0002* |
| TSF-Seep-34 | 22-Oct-2020 | *<0.00025* | 5.45 | 0.00152 | 1500 | 0.00282 | | 0.0721 | 0.0121 | *<0.0025* | 0.785 | *<0.0005* | 0.000844 | 0.0472 | 1050 | 7.52 | 0.0101 | 0.137 | *<0.005* | *<2.5* | 444 | *<0.00025* | 0.363 | 0.0109 | 3.2 | *<0.00025* |
| TSF-Seep-35 | 04-Aug-2020 | *<0.0001* | 1.72 | *<0.0001* | 596 | 0.000467 | | 0.00767 | 0.0133 | *<0.001* | 0.281 | *<0.0002* | 0.000234 | 0.0566 | 227 | 1.33 | 0.0294 | 0.0161 | *<0.002* | *<1* | 96 | *<0.0001* | 0.0468 | 0.000992 | 1.94 | *<0.0001* |
| TSF-Seep-35 | 27-Sep-2020 | *<0.00005* | 1.74 | 0.000363 | 868 | 0.00142 | | 0.0286 | 0.00715 | *<0.0005* | 0.282 | *<0.0001* | 0.00105 | 0.0381 | 286 | 4.88 | 0.00839 | 0.0268 | *<0.001* | *<0.5* | 131 | 0.0000601 | 0.1 | 0.00397 | 2.97 | *<0.00005* |
| TSF-Seep-35 | 16-Oct-2020 | *<0.0005* | 1.19 | 0.000393 | 657 | 0.000694 | | 0.0274 | 0.00714 | | *<0.1* | | 0.000576 | 0.0284 | 233 | 4.11 | 0.00702 | 0.0229 | | *<0.5* | 102 | | 0.0635 | 0.0066 | 2.66 | *<0.0001* |
| TSF-Seep-35 | 22-Oct-2020 | *<0.00005* | 1.63 | 0.000606 | 971 | 0.00115 | | 0.033 | 0.00905 | *<0.0005* | 0.144 | 0.000114 | 0.00106 | 0.0406 | 320 | 6.16 | 0.00909 | 0.0326 | *<0.001* | *<0.5* | 146 | 0.0000818 | 0.0942 | 0.00596 | 3.26 | *<0.00005* |

**Notes:**

*TDS calculated using the AEM equation: TDS = (0.22 x $HCO_3$ as $CaCO_3$) + Cl + $SO_4$ + Na + K + Ca + Mg + (0.23 x$NO_3$-N)

| Client Sample ID | Date Sampled | D-Na | D-Sr | D-S | D-Ta | D-Te | D-Tl | D-Th | D-Sn | D-Ti | D-W | D-U | D-V | D-Y | D-Zn | D-Zr | Ferrous Iron, Dissolved [Fe II] | Arsenate, Dissolved [As V] | Arsenite, Dissolved [As III] | Arsenobetaine, Dissolved [AsB], (as As) | Dimethylarsinic acid, Dissolved [DMA], (as As) | Monomethylarsonic Acid, Dissolved [MMA], (as As) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| WRSF1 Seep | 15-Aug-2020 | 573 | 2.52 | 232 | <0.0002 | 0.000096 | 0.0000316 | 0.0000142 | 0.0001 | <0.00045 | 0.000645 | 0.0281 | 0.00069 | 0.0000363 | <0.001 | 0.000526 | 0.025 | 92.6 | 2.08 | <1 | 0.69 | 0.58 |
| DP1-Seep-37 | 18-Sep-2020 | 1090 | 17.2 | 183 | <0.001 | 0.00116 | 0.000129 | <0.00005 | <0.0002 | <0.0005 | <0.0001 | 0.00552 | <0.0005 | 0.0000778 | 0.0196 | 0.000145 | 0.021 | <3.26 | 0.374 | <0.05 | 0.504 | <3.26 |
| DP1-Seep-37 | 16-Oct-2020 | 732 | 10.8 | 127 | | <0.001 | 0.000071 | <0.0005 | <0.0005 | <0.0015 | <0.0005 | 0.00426 | <0.0025 | | 0.0172 | <0.0015 | 0.048 | 3.41 | 0.13 | <0.25 | 0.602 | <0.1 |
| DP1-Seep-37 | 22-Oct-2020 | 1210 | 19.5 | 203 | <0.0005 | 0.00158 | 0.00014 | <0.000025 | <0.0001 | 0.00026 | 0.000067 | 0.00622 | <0.00025 | 0.0000756 | 0.0472 | 0.000179 | 0.086 | | | | | |
| DP3-Seep-36 | 18-Sep-2020 | 400 | 9.69 | 111 | <0.0005 | 0.00062 | 0.0000784 | <0.000025 | <0.0001 | <0.00025 | <0.00005 | 0.00838 | <0.00025 | 0.0000663 | 0.00579 | 0.00015 | <0.02 | 0.469 | 3.36 | <0.05 | 0.358 | 0.082 |
| DP3-Seep-36 | 16-Oct-2020 | 480 | 10.6 | 128 | | 0.00059 | 0.000066 | <0.0002 | <0.0002 | <0.0006 | <0.0002 | 0.0103 | <0.001 | | 0.0144 | <0.0006 | <0.02 | 6.8 | 0.181 | <0.1 | 0.406 | <0.16 |
| IP-Seep-39 | 27-Sep-2020 | 593 | 6.27 | 198 | <0.0005 | 0.000333 | 0.00007 | <0.000025 | <0.0001 | <0.00025 | 0.000182 | 0.00542 | 0.000423 | 0.0000487 | 0.00973 | 0.000454 | 0.039 | 19.6 | 0.994 | <0.25 | 0.837 | <0.1 |
| IP-Seep-39 | 16-Oct-2020 | 690 | 6.25 | 200 | | <0.001 | 0.000088 | <0.0005 | <0.0005 | <0.0015 | <0.0005 | 0.00713 | <0.0025 | | 0.0115 | <0.0015 | 0.03 | 23.9 | 5.27 | <0.25 | 0.928 | <0.1 |
| OP-Seep-38 | 18-Sep-2020 | 98.2 | 2.71 | 47.8 | <0.0002 | 0.000173 | 0.0000203 | <0.00001 | <0.00004 | <0.0001 | 0.000822 | 0.00055 | 0.000163 | <0.00001 | <0.001 | <0.00002 | <0.02 | 8.92 | 1.13 | <0.1 | 0.197 | <0.06 |
| Ore Pad Seep | 15-Aug-2020 | 7840 | 24.8 | 998 | <0.002 | 0.00107 | 0.000142 | <0.0001 | <0.0004 | <0.001 | 0.0188 | 0.00293 | 0.00125 | <0.0001 | <0.01 | <0.0002 | <0.02 | 421 | 152 | <7.5 | <3 | 4.31 |
| TSF-Seep-31 | 04-Aug-2020 | 1130 | 2.73 | 244 | <0.001 | <0.0002 | 0.0000705 | <0.00005 | <0.0002 | <0.0005 | 0.000216 | 0.00342 | <0.0005 | 0.000111 | <0.005 | 0.000275 | 0.195 | 194 | <1 | <2.5 | <1 | <2.2 |
| TSF-Seep-31 | 18-Sep-2020 | 1990 | 4.85 | 420 | <0.001 | 0.000369 | 0.0000576 | <0.00005 | <0.0002 | <0.0005 | <0.0001 | 0.00362 | <0.0005 | 0.000144 | 0.0119 | 0.000208 | 0.032 | 54.6 | 1.3 | <1 | 0.637 | <0.4 |
| TSF-Seep-31 | 27-Sep-2020 | 1890 | 5.82 | 470 | <0.001 | 0.000374 | 0.0000816 | <0.00005 | <0.0002 | 0.000545 | <0.0001 | 0.00401 | 0.00077 | 0.0000767 | 0.00667 | 0.000166 | 0.129 | 186 | 1.03 | <2.5 | <1 | <1 |
| TSF-Seep-31 | 16-Oct-2020 | 2510 | 6.12 | 492 | | <0.002 | <0.0001 | <0.001 | <0.001 | <0.003 | <0.001 | 0.00541 | <0.005 | | 0.0154 | <0.003 | 0.037 | 99.4 | 1.01 | <1.5 | <0.6 | <0.64 |
| TSF-Seep-31 | 22-Oct-2020 | 3150 | 8.6 | 632 | <0.002 | 0.00131 | 0.000109 | <0.0001 | <0.0004 | <0.001 | <0.0002 | 0.00428 | <0.001 | 0.000122 | 0.0154 | <0.0002 | 0.072 | | | | | |
| TSF-Seep-32 | 04-Aug-2020 | 9740 | 22.1 | 1120 | <0.01 | <0.002 | 0.000525 | <0.0005 | <0.002 | <0.005 | <0.001 | 0.0631 | <0.005 | <0.0005 | <0.05 | 0.00332 | 0.058 | 181 | <1 | <2.5 | 5.37 | <1.6 |
| TSF-Seep-32 | 27-Sep-2020 | 2000 | 6.06 | 532 | <0.001 | 0.000311 | 0.0000651 | <0.00005 | <0.0002 | 0.000524 | <0.0001 | 0.0204 | 0.000808 | 0.0000763 | 0.00571 | 0.000429 | 0.069 | 188 | <1 | <2.5 | 2.54 | <1 |
| TSF-Seep-32 | 16-Oct-2020 | 2010 | 5.71 | 499 | | <0.002 | <0.0001 | <0.001 | <0.001 | <0.003 | <0.001 | 0.0175 | <0.005 | | <0.01 | <0.003 | 0.043 | 141 | 1.59 | <2.5 | 1.55 | <1.2 |
| TSF-Seep-32 | 22-Oct-2020 | 6070 | 16 | 1670 | <0.005 | 0.00197 | <0.00025 | <0.00025 | <0.001 | <0.0025 | <0.0005 | 0.0713 | <0.0025 | <0.00025 | 0.0388 | <0.0005 | 0.441 | | | | | |
| TSF-Seep-33 | 04-Aug-2020 | 5650 | 12.9 | 696 | <0.01 | <0.002 | <0.0005 | <0.0005 | <0.002 | <0.005 | <0.001 | 0.0377 | <0.005 | <0.0005 | <0.05 | <0.001 | 0.434 | 60.9 | <0.4 | <1 | 4.42 | 0.532 |
| TSF-Seep-33 | 27-Sep-2020 | 5700 | 14.8 | 951 | <0.005 | 0.0013 | 0.00534 | 0.000274 | 0.00241 | <0.0025 | 0.000735 | 0.0415 | 0.00465 | 0.00048 | 0.033 | 0.000565 | 0.287 | 56.8 | <0.4 | <1 | 1.47 | <0.4 |
| TSF-Seep-33 | 16-Oct-2020 | 3200 | 8.34 | 659 | | <0.002 | 0.000185 | <0.001 | <0.001 | <0.003 | <0.001 | 0.0281 | <0.005 | | 0.023 | <0.003 | 0.106 | 130 | <1 | <2.5 | 2.13 | <1 |
| TSF-Seep-33 | 22-Oct-2020 | 8020 | 19.4 | 1270 | <0.005 | 0.00189 | 0.000278 | <0.00025 | <0.001 | <0.0025 | <0.0005 | 0.0615 | <0.0025 | <0.00025 | 0.0729 | <0.0005 | 0.576 | | | | | |
| TSF-Seep-34 | 04-Aug-2020 | 7890 | 17.2 | 932 | <0.005 | <0.001 | <0.00025 | <0.00025 | <0.001 | <0.0025 | <0.0005 | 0.0528 | <0.0025 | <0.00025 | <0.025 | <0.0005 | 0.112 | 41.1 | 0.869 | <0.5 | 1.72 | <1 |
| TSF-Seep-34 | 27-Sep-2020 | 7440 | 18.9 | 974 | <0.005 | 0.00166 | <0.00025 | <0.00025 | <0.001 | <0.0025 | <0.0005 | 0.0204 | <0.0025 | <0.00025 | <0.025 | <0.0005 | 0.088 | <1.7 | <0.18 | <0.25 | 0.996 | <0.24 |
| TSF-Seep-34 | 16-Oct-2020 | 5340 | 12.8 | 675 | | <0.004 | <0.0002 | <0.002 | <0.002 | <0.006 | <0.002 | 0.0162 | <0.01 | | <0.02 | <0.006 | 0.099 | 11.5 | 0.221 | <0.5 | 0.892 | <0.4 |
| TSF-Seep-34 | 22-Oct-2020 | 8000 | 19.9 | 941 | <0.005 | 0.00225 | <0.00025 | <0.00025 | <0.001 | <0.0025 | <0.0005 | 0.0253 | <0.0025 | <0.00025 | 0.039 | <0.0005 | 0.127 | | | | | |
| TSF-Seep-35 | 04-Aug-2020 | 1850 | 6.61 | 392 | <0.002 | <0.0004 | <0.0001 | <0.0001 | <0.0004 | <0.001 | 0.000946 | 0.00966 | <0.001 | <0.0001 | <0.01 | 0.000258 | 0.028 | 41 | 41.4 | <0.5 | 3 | <0.72 |
| TSF-Seep-35 | 27-Sep-2020 | 2430 | 8.77 | 451 | <0.001 | 0.0005 | 0.0000825 | <0.00005 | <0.0002 | <0.0005 | 0.00026 | 0.00882 | 0.000563 | 0.0000505 | 0.0134 | 0.00112 | 0.13 | 54.1 | 0.61 | <1 | 0.826 | <0.4 |
| TSF-Seep-35 | 16-Oct-2020 | 1890 | 6.36 | 406 | | <0.002 | <0.0001 | <0.001 | <0.001 | <0.003 | <0.001 | 0.00983 | <0.005 | | <0.01 | <0.003 | 0.067 | 55 | <0.4 | <1 | 0.689 | <0.44 |
| TSF-Seep-35 | 22-Oct-2020 | 2620 | 9.77 | 527 | <0.001 | 0.000736 | 0.0000918 | <0.00005 | <0.0002 | <0.0005 | 0.000257 | 0.0132 | <0.0005 | <0.00005 | 0.0145 | 0.000196 | 0.159 | | | | | |

**Notes:**

*TDS calculated using the AEM equation: TDS = (0.22 x HCO$_3$ as $CaCO_3$) + Cl + $SO_4$ + Na + K + Ca + Mg + (0.23 x$NO_3$-N)

# *Appendix G: Geochemical Source Terms*

APPENDIX G-1: VALIDATION OF CALIBRATED GOLDSIM MODEL PREDICTIONS

APPENDIX G-2: SOURCE TERMS

AGNICO EAGLE

# APPENDIX G-1: VALIDATION OF CALIBRATED GOLDSIM MODEL PREDICTIONS

# Appendix G-1: Validation of Calibrated GoldSim Model Predictions

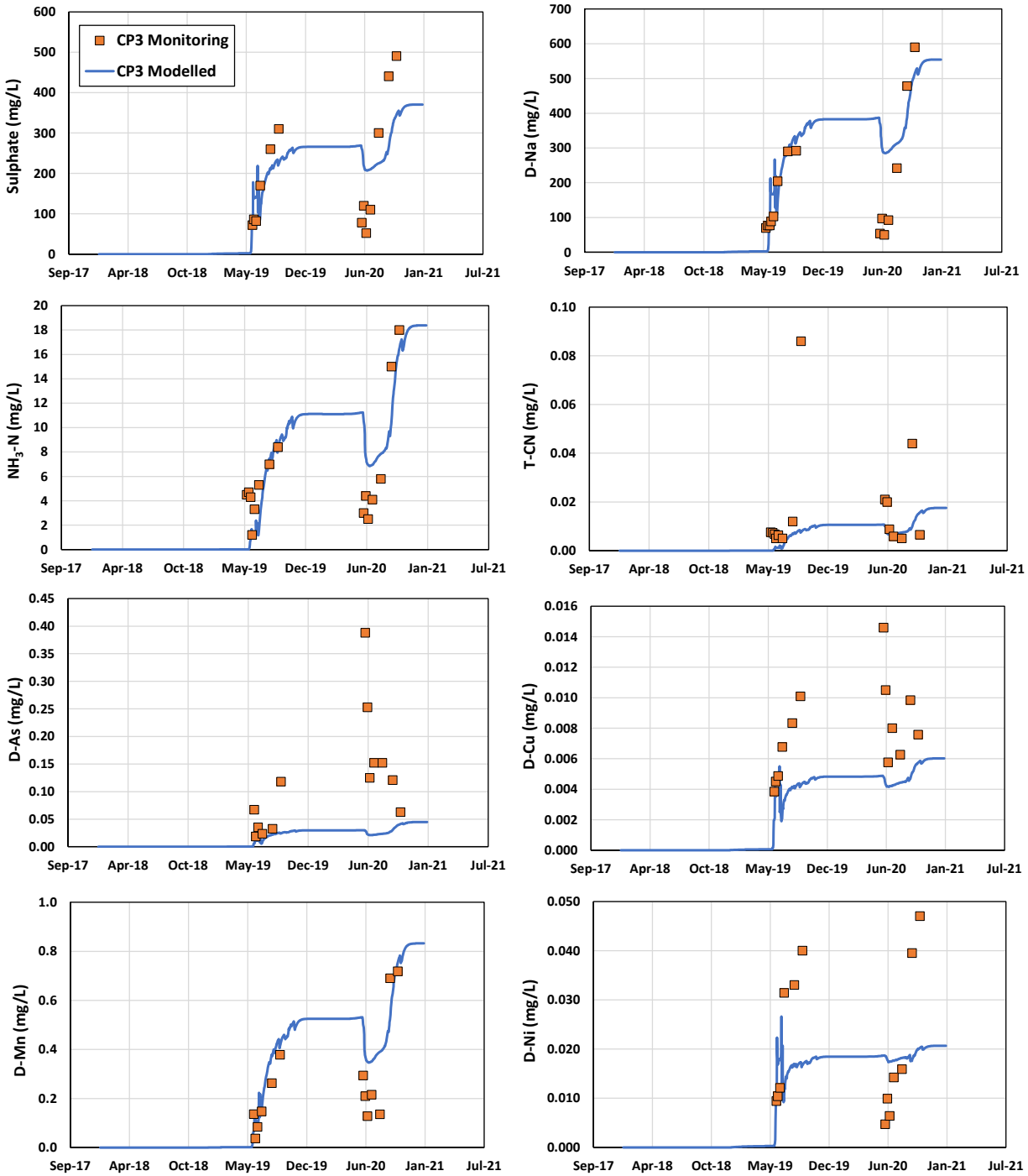


**Figure 1: Validation of calibrated GoldSim model predictions for CP3.**

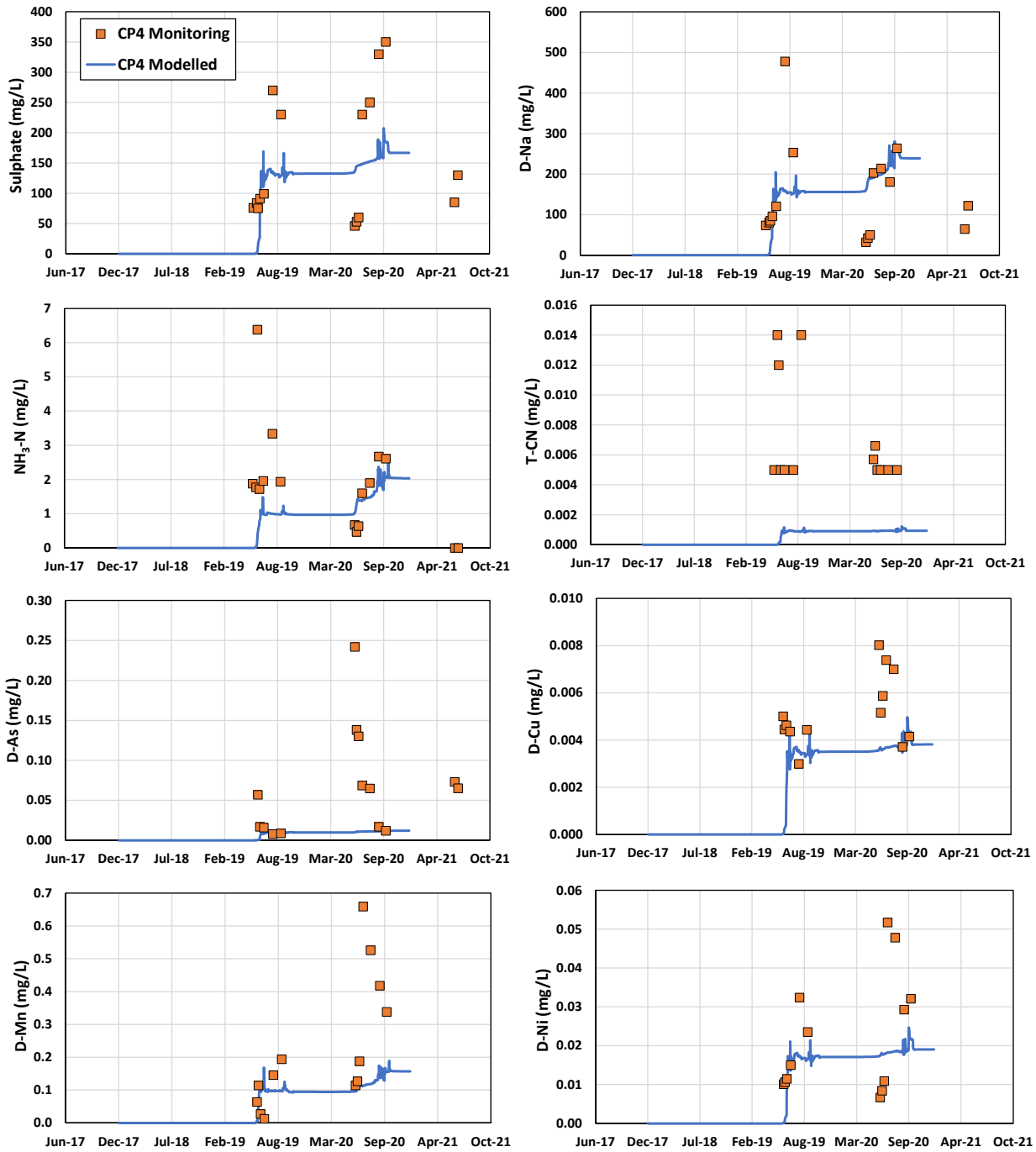


**Figure 2: Validation of calibrated GoldSim model predictions for CP4.**

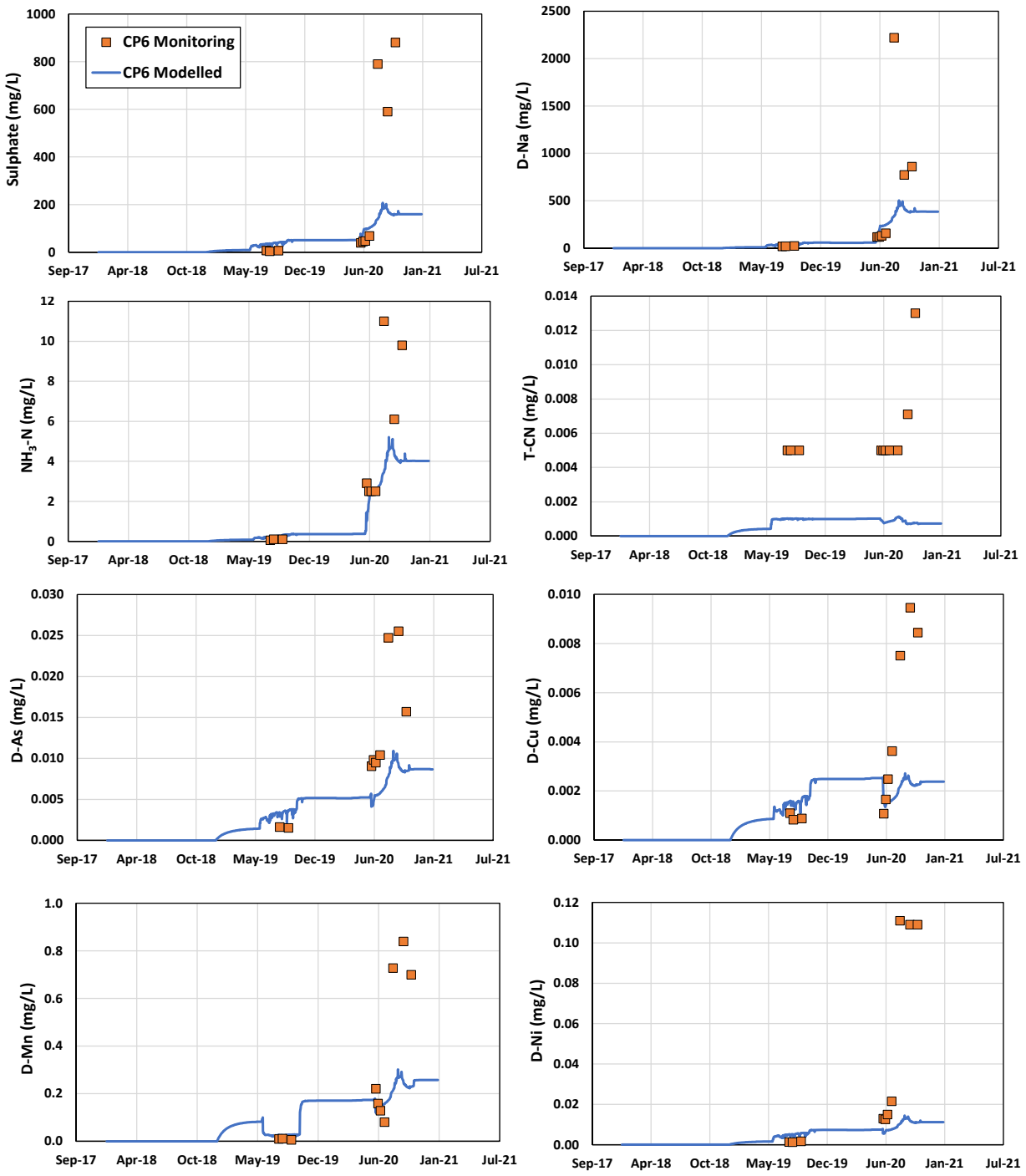


**Figure 3: Validation of calibrated GoldSim model predictions for CP6.**

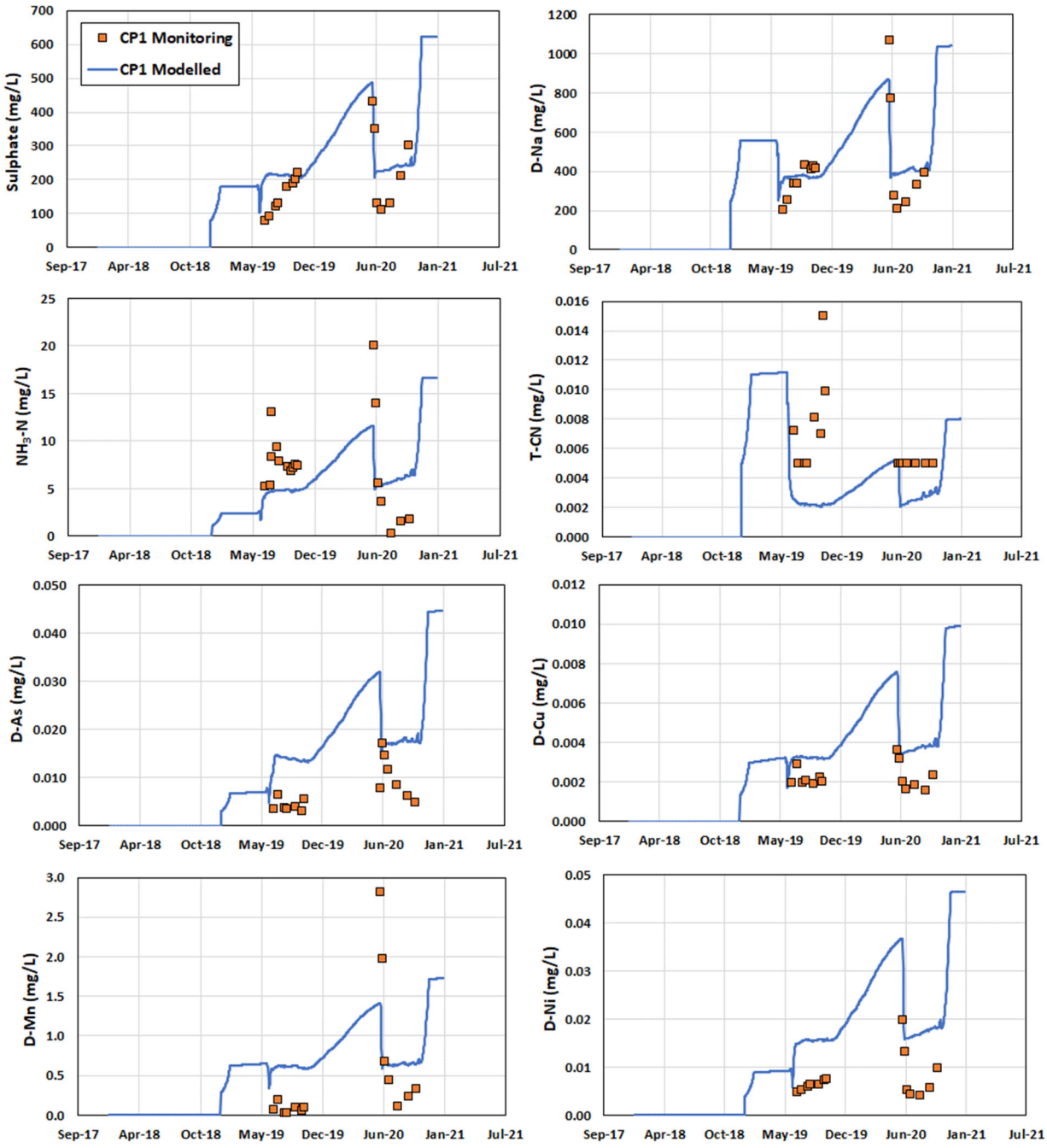


**Figure 4: Validation of calibrated GoldSim model predictions at CP1.**

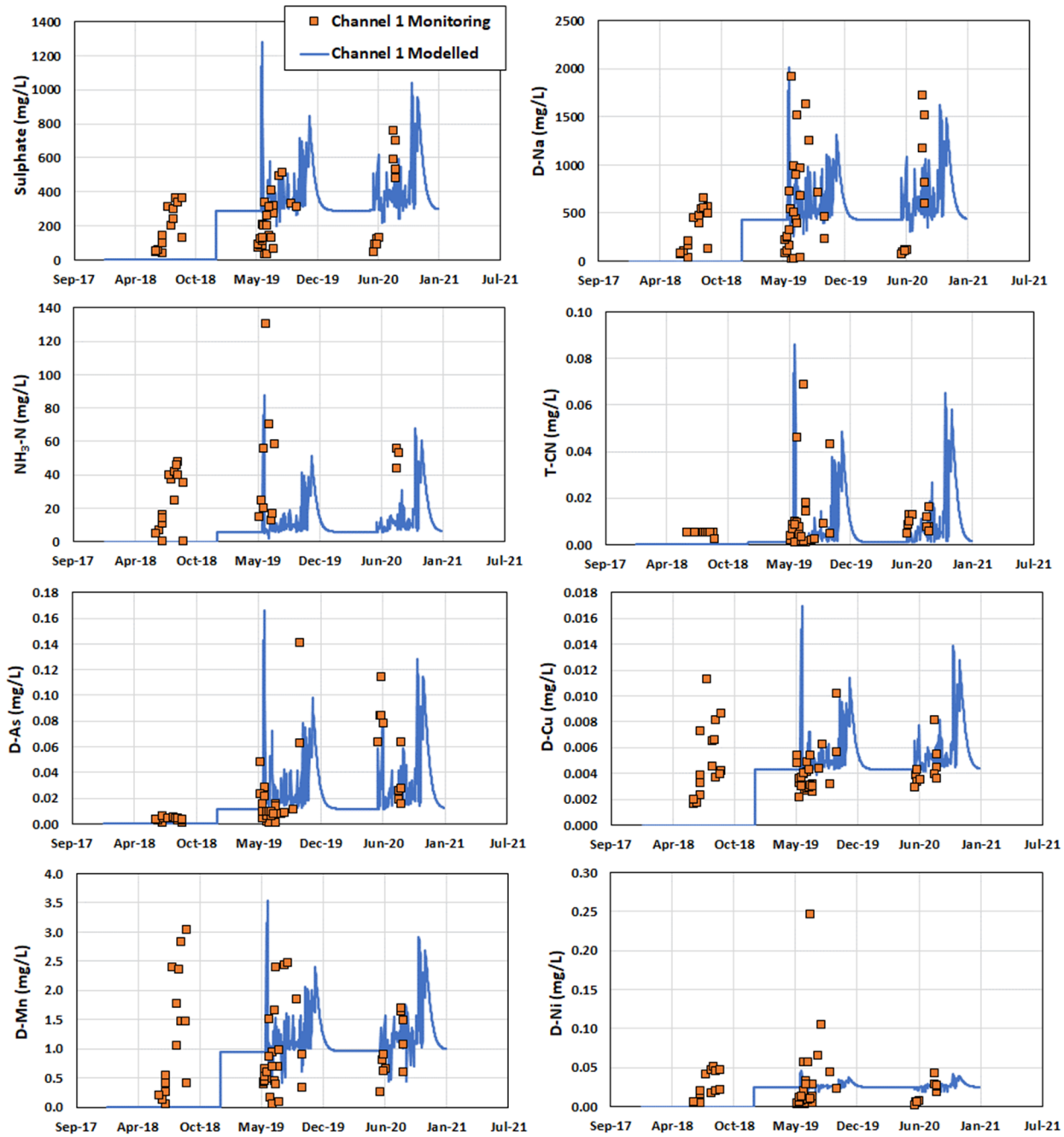


**Figure 5:** **Validation of calibrated GoldSim model predictions at Channel 1. Channel 1 monitoring data plotted in this figure includes sampling of upstream culverts 'Culvert 2 and Culvert 3' as well as the Channel 2 tributary.**

# APPENDIX G-2: SOURCE TERMS

**Appendix G-2: Source Terms**

**Calibrated Source Terms**

| Facility | Time Period | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Disturbed Footprint | Jan-2019 to Dec-2020 | 782 | 0.878 | 0.993 | 0.0271 | 427 | 0.117 | 155 | | 0.001 | 0.0000277 | 0.0133 | 0.0662 | 0.393 | 0.0709 | 0.000141 | 152 | 0.0000478 | 0.00339 | 0.00138 | 0.00507 | 0.02 | 0.0000291 | 12 | 26.2 | 0.233 | 0.0154 | 140 | 0.0233 | 0.0903 | 0.000337 | 0.0028 | 0.000252 | 1.82 | 0.000002 | 0.00424 | 0.00706 | 0.00693 |
| Mine Facilities | Jan-2019 to Dec-2020 | 5,180 | 18.3 | 28.1 | 0.465 | 3,160 | 0.756 | 603 | 0.001 | 0.001 | 0.00002 | 0.0376 | 0.0499 | 1.31 | 0.18 | 0.0000405 | 320 | 0.0000976 | 0.0118 | 0.001 | 0.00667 | 0.0237 | 0.00001 | 87 | 173 | 1.07 | 0.0261 | 1,090 | 0.0425 | 0.0276 | 0.0002 | 0.00995 | 0.00353 | 4.77 | 0.000014 | 0.0241 | 0.0025 | 0.005 |
| Ore Pad | Jan-2019 to Dec-2020 | 6,260 | 23.7 | 45.3 | 0.64 | 3,730 | 0.819 | 703 | | 0.001 | 0.0000246 | 0.0393 | 0.195 | 1.48 | 0.187 | 0.0000435 | 400 | 0.0000977 | 0.0115 | 0.00095 | 0.00787 | 0.0273 | 0.00001 | 108 | 196 | 1.02 | 0.0357 | 1,430 | 0.0413 | 0.0762 | 0.000205 | 0.0104 | 0.00372 | 5.77 | 0.0000668 | 0.023 | 0.00244 | 0.00525 |
| TSF Surface Runoff | Jan-2019 to Dec-2020 | 6,480 | 22.3 | 14.7 | 0.714 | 3,340 | 0.346 | 1,000 | 0.00952 | 0.005 | 0.00005 | 0.0399 | 0.178 | 0.505 | 0.169 | 0.0001 | 580 | 0.000291 | 0.0183 | 0.001 | 0.0121 | 0.0892 | 0.00001 | 88.9 | 219 | 2.17 | 0.00565 | 1,780 | 0.016 | 0.0171 | 0.00063 | 0.000951 | 0.00318 | 4.64 | 0.0000692 | 0.0036 | 0.005 | 0.0065 |
| TSF Infiltration | Jan-2019 to Dec-2020 | 8,520 | 94 | 166 | 0.239 | 4,380 | 0.104 | 1,360 | 0.0926 | 0.0102 | 0.000105 | 0.0916 | 0.178 | 1.46 | 0.206 | 0.0002 | 730 | 0.000286 | 0.0263 | 0.001 | 0.018 | 0.161 | 0.00001 | 129 | 243 | 3.73 | 0.0135 | 2,130 | 0.048 | 0.0143 | 0.00063 | 0.0022 | 0.00712 | 6.29 | 0.000109 | 0.0178 | 0.005 | 0.011 |
| WRSF1 | Jan-2020 to Dec-2020 | 6,160 | 19 | 30 | 0.996 | 3,510 | 0.767 | 694 | | | 0.00002 | 0.0379 | 0.0447 | 1.21 | 0.172 | 0.0000413 | 274 | 0.0000906 | 0.0147 | 0.001 | 0.00776 | 0.0237 | 0.0001 | 101 | 213 | 0.939 | 0.0284 | 1,570 | 0.0472 | 0.0349 | 0.0002 | 0.00849 | 0.00356 | 3.81 | 0.000014 | 0.0308 | 0.00227 | 0.005 |
| WRSF3 - 2019 | Jan-2019 to Dec-2019 | 9,280 | 21.2 | 36 | 2.68 | 4,640 | 0.8 | 981 | 0.001 | 0.001 | 0.00002 | 0.0386 | 0.0284 | 0.9 | 0.146 | 0.000044 | 126 | 0.0000685 | 0.0239 | 0.001 | 0.0112 | 0.0237 | 0.0001 | 146 | 341 | 0.532 | 0.0357 | 3,100 | 0.062 | 0.0581 | 0.0002 | 0.00387 | 0.00367 | 0.74 | 0.000014 | 0.0519 | 0.00153 | 0.005 |
| WRSF3 - 2020 | Jan-2020 to Dec-2020 | 6,960 | 19.6 | 31.5 | 1.42 | 3,800 | 0.775 | 767 | 0.001 | 0.001 | 0.00002 | 0.0381 | 0.0406 | 1.13 | 0.165 | 0.000042 | 236 | 0.000085 | 0.0171 | 0.001 | 0.00863 | 0.0237 | 0.0001 | 113 | 246 | 0.836 | 0.0303 | 1,960 | 0.051 | 0.0408 | 0.0002 | 0.00731 | 0.00359 | 3.03 | 0.000014 | 0.0361 | 0.00208 | 0.005 |
| CP5 | Jan-19 | 13,700 | 48 | 83.1 | 0.731 | 9,500 | 0.1 | 810 | 0.01 | 0.01 | 0.00002 | 0.03 | 0.0044 | 0.79 | 0.338 | 0.001 | 1520 | 0.00061 | 0.0017 | 0.01 | 0.0092 | 0.057 | 0.00001 | 155 | 403 | 0.172 | 0.01 | 2,660 | 0.043 | 0.047 | 0.002 | 0.005 | 0.001 | 30.7 | 0.00033 | 0.0087 | 0.05 | 0.05 |
| CP5 | Feb-19 | 13,700 | 48 | 83.1 | 0.731 | 9,500 | 0.1 | 810 | 0.01 | 0.01 | 0.00002 | 0.03 | 0.0044 | 0.79 | 0.338 | 0.001 | 1520 | 0.00061 | 0.0017 | 0.01 | 0.0092 | 0.057 | 0.00001 | 155 | 403 | 0.172 | 0.01 | 2,660 | 0.043 | 0.047 | 0.002 | 0.005 | 0.001 | 30.7 | 0.00033 | 0.0087 | 0.05 | 0.05 |
| CP5 | Mar-19 | 13,700 | 48 | 83.1 | 0.731 | 9,500 | 0.1 | 810 | 0.01 | 0.01 | 0.00002 | 0.03 | 0.0044 | 0.79 | 0.338 | 0.001 | 1520 | 0.00061 | 0.0017 | 0.01 | 0.0092 | 0.057 | 0.00001 | 155 | 403 | 0.172 | 0.01 | 2,660 | 0.043 | 0.047 | 0.002 | 0.005 | 0.001 | 30.7 | 0.00033 | 0.0087 | 0.05 | 0.05 |
| CP5 | Apr-19 | 13,700 | 48 | 83.1 | 0.731 | 9,500 | 0.1 | 810 | 0.01 | 0.01 | 0.00002 | 0.03 | 0.0044 | 0.79 | 0.338 | 0.001 | 1520 | 0.00061 | 0.0017 | 0.01 | 0.0092 | 0.057 | 0.00001 | 155 | 403 | 0.172 | 0.01 | 2,660 | 0.043 | 0.047 | 0.002 | 0.005 | 0.001 | 30.7 | 0.00033 | 0.0087 | 0.05 | 0.05 |
| CP5 | May-19 | 910 | 7.2 | 6.5 | 0.093 | 520 | 0.1 | 130 | 0.005 | 0.005 | 0.00002 | 0.0214 | 0.00373 | 0.111 | 0.0516 | 0.0001 | 144 | 0.000072 | 0.00036 | 0.001 | 0.00285 | 0.0336 | 0.00001 | 12.3 | 28.6 | 0.0736 | 0.0013 | 185 | 0.0062 | 0.049 | 0.00024 | 0.0005 | 0.0001 | 2.57 | 0.000033 | 0.00087 | 0.005 | 0.0051 |
| CP5 | Jun-19 | 2,020 | 9.63 | 11.3 | 0.111 | 1,270 | 0.1 | 213 | 0.005 | 0.005 | 0.00002 | 0.0173 | 0.00299 | 0.209 | 0.0776 | 0.0002 | 286 | 0.000116 | 0.00153 | 0.002 | 0.00316 | 0.035 | 0.00001 | 25.5 | 61.6 | 0.129 | 0.00233 | 406 | 0.0145 | 0.0263 | 0.0004 | 0.001 | 0.0002 | 5.74 | 0.0000527 | 0.00192 | 0.01 | 0.01 |
| CP5 | Jul-19 | 4,440 | 16 | 18.5 | 0.255 | 2,800 | 0.1 | 350 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00307 | 0.44 | 0.151 | 0.0005 | 670 | 0.000238 | 0.003 | 0.005 | 0.0041 | 0.042 | 0.00001 | 60.5 | 157 | 0.231 | 0.005 | 1,020 | 0.034 | 0.034 | 0.001 | 0.0025 | 0.0005 | 16 | 0.000112 | 0.00574 | 0.025 | 0.025 |
| CP5 | Aug-19 | 3,230 | 12 | 28.3 | 0.551 | 2,100 | 0.11 | 250 | 0.005 | 0.005 | 0.00002 | 0.0071 | 0.00316 | 0.42 | 0.118 | 0.0002 | 404 | 0.000098 | 0.00183 | 0.002 | 0.00348 | 0.053 | 0.00001 | 42.6 | 105 | 0.0819 | 0.004 | 676 | 0.0193 | 0.07 | 0.0004 | 0.001 | 0.00022 | 9.75 | 0.000092 | 0.00357 | 0.01 | 0.01 |
| CP5 | Sep-19 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Oct-19 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Nov-19 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Dec-19 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Jan-20 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Feb-20 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Mar-20 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | Apr-20 | 3,100 | 11 | 22.4 | 0.339 | 1,900 | 0.1 | 310 | 0.005 | 0.005 | 0.00002 | 0.015 | 0.00256 | 0.395 | 0.115 | 0.0005 | 474 | 0.000162 | 0.0017 | 0.005 | 0.004 | 0.101 | 0.00001 | 41.9 | 113 | 0.0916 | 0.005 | 683 | 0.0226 | 0.04 | 0.001 | 0.0025 | 0.0005 | 7.74 | 0.000088 | 0.00349 | 0.025 | 0.025 |
| CP5 | May-20 | 601 | 4.5 | 6.02 | 0.126 | 347 | 0.1 | 64 | 0.005 | 0.005 | 0.00002 | 0.0105 | 0.0131 | 0.132 | 0.0307 | 0.000133 | 95.4 | 0.0000283 | 0.00068 | 0.00133 | 0.00279 | 0.0278 | 0.00001 | 9.71 | 21 | 0.166 | 0.00213 | 129 | 0.00677 | 0.0597 | 0.00028 | 0.000667 | 0.000137 | 1.59 | 0.0000243 | 0.00103 | 0.00667 | 0.00667 |
| CP5 | Jun-20 | 601 | 4.5 | 6.02 | 0.126 | 347 | 0.1 | 64 | 0.005 | 0.005 | 0.00002 | 0.0105 | 0.0131 | 0.132 | 0.0307 | 0.000133 | 95.4 | 0.0000283 | 0.00068 | 0.00133 | 0.00279 | 0.0278 | 0.00001 | 9.71 | 21 | 0.166 | 0.00213 | 129 | 0.00677 | 0.0597 | 0.00028 | 0.000667 | 0.000137 | 1.59 | 0.0000243 | 0.00103 | 0.00667 | 0.00667 |
| CP5 | Jul-20 | 1,860 | 7.65 | 15.5 | 0.587 | 1,140 | 0.1 | 170 | 0.005 | 0.005 | 0.00002 | 0.0103 | 0.00456 | 0.351 | 0.0794 | 0.0003 | 270 | 0.000051 | 0.00109 | 0.003 | 0.00304 | 0.0266 | 0.00001 | 28.9 | 65.2 | 0.165 | 0.0049 | 409 | 0.0146 | 0.02 | 0.0006 | 0.00159 | 0.000375 | 5.22 | 0.000069 | 0.00302 | 0.015 | 0.015 |
| CP5 | Aug-20 | 4,220 | 8.6 | 36.8 | 1.03 | 2,700 | 0.11 | 330 | 0.025 | 0.025 | 0.00002 | 0.015 | 0.0044 | 0.632 | 0.184 | 0.0005 | 600 | 0.000132 | 0.0018 | 0.005 | 0.0046 | 0.027 | 0.00001 | 64.1 | 142 | 0.342 | 0.0076 | 922 | 0.0268 | 0.02 | 0.001 | 0.0025 | 0.00053 | 13.4 | 0.00013 | 0.00582 | 0.025 | 0.025 |
| CP5 | Sep-20 | 3,690 | 8.5 | 28.8 | 0.654 | 2,300 | 0.15 | 380 | 0.0091 | 0.0091 | 0.00002 | 0.016 | 0.00452 | 0.532 | 0.14 | 0.0005 | 526 | 0.000218 | 0.0029 | 0.005 | 0.004 | 0.053 | 0.00001 | 51.3 | 121 | 0.507 | 0.005 | 781 | 0.0286 | 0.02 | 0.001 | 0.0025 | 0.0005 | 9.54 | 0.000094 | 0.0049 | 0.025 | 0.037 |
| CP5 | Oct-20 | 3,930 | 15 | 38.1 | 0.526 | 2,300 | 0.11 | 470 | 0.02 | 0.02 | 0.00002 | 0.015 | 0.00468 | 0.865 | 0.13 | 0.0005 | 518 | 0.000157 | 0.0025 | 0.005 | 0.0035 | 0.041 | 0.00001 | 61.3 | 147 | 0.458 | 0.0069 | 874 | 0.0416 | 0.02 | 0.001 | 0.0025 | 0.00083 | 9.29 | 0.000086 | 0.0101 | 0.025 | 0.025 |
| CP5 | Nov-20 | 3,930 | 15 | 38.1 | 0.526 | 2,300 | 0.11 | 470 | 0.02 | 0.02 | 0.00002 | 0.015 | 0.00468 | 0.865 | 0.13 | 0.0005 | 518 | 0.000157 | 0.0025 | 0.005 | 0.0035 | 0.041 | 0.00001 | 61.3 | 147 | 0.458 | 0.0069 | 874 | 0.0416 | 0.02 | 0.001 | 0.0025 | 0.00083 | 9.29 | 0.000086 | 0.0101 | 0.025 | 0.025 |
| CP5 | Dec-20 | 3,930 | 15 | 38.1 | 0.526 | 2,300 | 0.11 | 470 | 0.02 | 0.02 | 0.00002 | 0.015 | 0.00468 | 0.865 | 0.13 | 0.0005 | 518 | 0.000157 | 0.0025 | 0.005 | 0.0035 | 0.041 | 0.00001 | 61.3 | 147 | 0.458 | 0.0069 | 874 | 0.0416 | 0.02 | 0.001 | 0.0025 | 0.00083 | 9.29 | 0.000086 | 0.0101 | 0.025 | 0.025 |
| CP1 Initial | Jan-19 | 1,290 | 1.1 | 4.59 | 0.269 | 860 | 0 | 81 | 0.005 | 0.001 | 0.00002 | 0.17 | 0.00299 | 0.237 | 0.174 | | 252 | 0.00001 | | 0.001 | 0.00132 | 0.12 | 0.00001 | 22.8 | 48.2 | 0.28 | 0.0041 | 252 | 0.004 | 0.14 | 0.0002 | 0.0005 | 0.0001 | 4.9 | 0.00001 | 0.0013 | 0.005 | 0.005 |

**Notes:**

TDS = (0.22 x $HCO_3$ as $CaCO_3$)+ Cl + $SO_4$ + Na + K + Ca + Mg + (0.2259 x $NO_3$-N)

**Appendix G-2: Source Terms**
**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 4,000 | 18.3 | 28.1 | 0.465 | 1,800 | 0.756 | 654 | | | 0.00000375 | 0.0366 | 0.033 | 1.31 | 0.166 | 0.0000332 | 143 | 0.000261 | 0.00904 | 0.00131 | 0.0068 | 0.0291 | 0.0001 | 88 | 77.5 | 0.499 | 0.0196 | 1,180 | 0.0372 | 0.00499 | 0.000217 | 0.00934 | 0.00366 | 4.19 | 0.0000117 | 0.0228 | 0.00218 | 0.00514 | 0.01 |
| **2021** | 3,930 | 18.3 | 28.1 | 0.465 | 1,770 | 0.756 | 643 | | | 0.00000454 | 0.0362 | 0.032 | 1.31 | 0.158 | 0.0000321 | 141 | 0.000258 | 0.00858 | 0.00133 | 0.00725 | 0.0298 | 0.0001 | 84.2 | 76.1 | 0.498 | 0.0188 | 1,160 | 0.0387 | 0.00498 | 0.00021 | 0.00935 | 0.00364 | 4.06 | 0.0000112 | 0.0217 | 0.00232 | 0.00523 | 0.01 |
| **2022** | 3,520 | 18.3 | 28.1 | 0.465 | 1,580 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 1,040 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2023** | 3,190 | 16 | 24.6 | 0.407 | 1,380 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 908 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2024** | 2,900 | 14 | 21.5 | 0.355 | 1,210 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 793 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2025** | 2,640 | 12.2 | 18.8 | 0.311 | 1,060 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 693 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2026** | 2,420 | 10.7 | 16.4 | 0.272 | 922 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 606 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2027** | 2,230 | 9.33 | 14.4 | 0.237 | 806 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 530 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2028** | 2,060 | 8.16 | 12.6 | 0.207 | 705 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 463 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2029** | 1,910 | 7.13 | 11 | 0.181 | 616 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 405 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2030** | 1,780 | 6.23 | 9.59 | 0.158 | 538 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 354 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2031** | 1,660 | 5.45 | 8.38 | 0.139 | 471 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 309 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2032** | 1,560 | 4.76 | 7.33 | 0.121 | 411 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 270 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2033** | 1,480 | 4.16 | 6.4 | 0.106 | 360 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 236 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2034** | 1,400 | 3.64 | 5.6 | 0.0925 | 314 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 207 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2035** | 1,340 | 3.18 | 4.89 | 0.0809 | 275 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 181 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2036** | 1,280 | 2.78 | 4.28 | 0.0707 | 240 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 158 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2037** | 1,230 | 2.43 | 3.74 | 0.0618 | 210 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 138 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2038** | 1,180 | 2.12 | 3.27 | 0.054 | 183 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 121 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2039** | 1,140 | 1.86 | 2.86 | 0.0472 | 160 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 105 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2040** | 1,110 | 1.62 | 2.5 | 0.0413 | 140 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 92 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2041** | 1,080 | 1.42 | 2.18 | 0.0361 | 122 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 81 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2042** | 1,050 | 1.24 | 1.91 | 0.0315 | 107 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 70 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2043** | 1,030 | 1.08 | 1.67 | 0.0275 | 94 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 62 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2044** | 1,020 | 0.947 | 1.46 | 0.0241 | 93 | 0.749 | 569 | | | 0.00000606 | 0.0363 | 0.0295 | 1.3 | 0.147 | 0.0000307 | 125 | 0.000255 | 0.00792 | 0.00144 | 0.00826 | 0.0288 | 0.000099 | 79.4 | 67.4 | 0.493 | 0.0175 | 61 | 0.0433 | 0.00493 | 0.000196 | 0.00953 | 0.00355 | 3.85 | 0.0000107 | 0.0203 | 0.00266 | 0.00545 | 0.0099 |
| **2045** | 1,010 | 0.828 | 1.27 | 0.021 | 92 | 0.742 | 563 | | | 0.000006 | 0.036 | 0.0292 | 1.28 | 0.146 | 0.0000304 | 123 | 0.000252 | 0.00784 | 0.00143 | 0.00818 | 0.0286 | 0.0000981 | 78.7 | 66.7 | 0.488 | 0.0173 | 60 | 0.0429 | 0.00488 | 0.000194 | 0.00944 | 0.00351 | 3.81 | 0.0000106 | 0.0201 | 0.00263 | 0.00539 | 0.00981 |
| **2046** | 1,000 | 0.723 | 1.11 | 0.0184 | 91 | 0.734 | 558 | | | 0.00000594 | 0.0356 | 0.0289 | 1.27 | 0.144 | 0.0000301 | 122 | 0.00025 | 0.00776 | 0.00141 | 0.0081 | 0.0283 | 0.0000971 | 77.9 | 66.1 | 0.484 | 0.0172 | 60 | 0.0425 | 0.00484 | 0.000193 | 0.00935 | 0.00348 | 3.77 | 0.0000105 | 0.0199 | 0.00261 | 0.00534 | 0.00971 |
| **2047** | 992 | 0.632 | 0.973 | 0.0161 | 90 | 0.727 | 552 | | | 0.00000588 | 0.0353 | 0.0286 | 1.26 | 0.143 | 0.0000298 | 121 | 0.000247 | 0.00768 | 0.0014 | 0.00802 | 0.028 | 0.0000961 | 77.1 | 65.4 | 0.479 | 0.017 | 59 | 0.0421 | 0.00479 | 0.000191 | 0.00925 | 0.00344 | 3.73 | 0.0000104 | 0.0197 | 0.00258 | 0.00529 | 0.00961 |
| **2048** | 982 | 0.553 | 0.85 | 0.0141 | 89 | 0.719 | 546 | | | 0.00000582 | 0.0349 | 0.0283 | 1.25 | 0.141 | 0.0000295 | 120 | 0.000245 | 0.00761 | 0.00139 | 0.00794 | 0.0277 | 0.0000951 | 76.3 | 64.7 | 0.474 | 0.0168 | 59 | 0.0416 | 0.00474 | 0.000189 | 0.00916 | 0.00341 | 3.69 | 0.0000103 | 0.0195 | 0.00256 | 0.00523 | 0.00951 |
| **2049** | 972 | 0.483 | 0.743 | 0.0123 | 88 | 0.712 | 541 | | | 0.00000576 | 0.0346 | 0.028 | 1.23 | 0.14 | 0.0000292 | 119 | 0.000242 | 0.00753 | 0.00137 | 0.00786 | 0.0274 | 0.0000942 | 75.5 | 64.1 | 0.469 | 0.0166 | 58 | 0.0412 | 0.00469 | 0.000187 | 0.00906 | 0.00337 | 3.66 | 0.0000101 | 0.0193 | 0.00253 | 0.00518 | 0.00942 |
| **2050** | 961 | 0.422 | 0.65 | 0.0107 | 87 | 0.705 | 535 | | | 0.0000057 | 0.0342 | 0.0277 | 1.22 | 0.139 | 0.0000289 | 117 | 0.00024 | 0.00745 | 0.00136 | 0.00778 | 0.0271 | 0.0000932 | 74.8 | 63.4 | 0.464 | 0.0165 | 57 | 0.0408 | 0.00464 | 0.000185 | 0.00897 | 0.00334 | 3.62 | 0.00001 | 0.0191 | 0.0025 | 0.00513 | 0.00932 |
| **2051** | 951 | 0.369 | 0.568 | 0.00939 | 86 | 0.697 | 530 | | | 0.00000564 | 0.0338 | 0.0274 | 1.21 | 0.137 | 0.0000286 | 116 | 0.000237 | 0.00737 | 0.00134 | 0.00769 | 0.0269 | 0.0000922 | 74 | 62.7 | 0.459 | 0.0163 | 57 | 0.0404 | 0.00459 | 0.000183 | 0.00888 | 0.00331 | 3.58 | 0.00000994 | 0.0189 | 0.00248 | 0.00507 | 0.00922 |
| **2052** | 941 | 0.323 | 0.496 | 0.0082 | 85 | 0.69 | 524 | | | 0.00000558 | 0.0335 | 0.0271 | 1.2 | 0.136 | 0.0000283 | 115 | 0.000235 | 0.00729 | 0.00133 | 0.00761 | 0.0266 | 0.0000912 | 73.2 | 62.1 | 0.454 | 0.0161 | 56 | 0.0399 | 0.00454 | 0.000181 | 0.00878 | 0.00327 | 3.54 | 0.00000983 | 0.0187 | 0.00245 | 0.00502 | 0.00912 |
| **2053** | 931 | 0.282 | 0.434 | 0.00717 | 85 | 0.683 | 519 | | | 0.00000552 | 0.0331 | 0.0269 | 1.18 | 0.134 | 0.000028 | 114 | 0.000232 | 0.00722 | 0.00131 | 0.00753 | 0.0263 | 0.0000903 | 72.4 | 61.4 | 0.45 | 0.0159 | 56 | 0.0395 | 0.0045 | 0.000179 | 0.00869 | 0.00324 | 3.51 | 0.00000973 | 0.0185 | 0.00243 | 0.00496 | 0.00903 |
| **2054** | 921 | 0.246 | 0.379 | 0.00627 | 84 | 0.675 | 513 | | | 0.00000546 | 0.0328 | 0.0266 | 1.17 | 0.133 | 0.0000277 | 112 | 0.00023 | 0.00714 | 0.0013 | 0.00745 | 0.026 | 0.0000893 | 71.6 | 60.8 | 0.445 | 0.0158 | 55 | 0.0391 | 0.00445 | 0.000177 | 0.0086 | 0.0032 | 3.47 | 0.00000962 | 0.0183 | 0.0024 | 0.00491 | 0.00893 |
| **2055** | 911 | 0.215 | 0.331 | 0.00548 | 83 | 0.668 | 507 | | | 0.0000054 | 0.0324 | 0.0263 | 1.16 | 0.131 | 0.0000274 | 111 | 0.000227 | 0.00706 | 0.00129 | 0.00737 | 0.0257 | 0.0000883 | 70.9 | 60.1 | 0.44 | 0.0156 | 54 | 0.0386 | 0.0044 | 0.000175 | 0.0085 | 0.00317 | 3.43 | 0.00000952 | 0.0181 | 0.00237 | 0.00486 | 0.00883 |
| **2056** | 901 | 0.188 | 0.29 | 0.00479 | 82 | 0.661 | 502 | | | 0.00000534 | 0.0321 | 0.026 | 1.14 | 0.13 | 0.0000271 | 110 | 0.000225 | 0.00698 | 0.00127 | 0.00729 | 0.0254 | 0.0000873 | 70.1 | 59.4 | 0.435 | 0.0154 | 54 | 0.0382 | 0.00435 | 0.000173 | 0.00841 | 0.00313 | 3.39 | 0.00000941 | 0.0179 | 0.00235 | 0.0048 | 0.00873 |
| **2057** | 891 | 0.165 | 0.253 | 0.00419 | 81 | 0.653 | 496 | | | 0.00000528 | 0.0317 | 0.0257 | 1.13 | 0.128 | 0.0000268 | 109 | 0.000222 | 0.00691 | 0.00126 | 0.00721 | 0.0252 | 0.0000864 | 69.3 | 58.8 | 0.43 | 0.0153 | 53 | 0.0378 | 0.0043 | 0.000171 | 0.00831 | 0.0031 | 3.35 | 0.00000931 | 0.0177 | 0.00232 | 0.00475 | 0.00864 |
| **2058** | 881 | 0.144 | 0.221 | 0.00366 | 80 | 0.646 | 491 | | | 0.00000522 | 0.0313 | 0.0254 | 1.12 | 0.127 | 0.0000265 | 108 | 0.00022 | 0.00683 | 0.00124 | 0.00713 | 0.0249 | 0.0000854 | 68.5 | 58.1 | 0.425 | 0.0151 | 53 | 0.0374 | 0.00425 | 0.000169 | 0.00822 | 0.00306 | 3.32 | 0.0000092 | 0.0175 | 0.00229 | 0.0047 | 0.00854 |
| **2059** | 871 | 0.126 | 0.193 | 0.0032 | 79 | 0.638 | 485 | | | 0.00000516 | 0.031 | 0.0251 | 1.11 | 0.126 | 0.0000262 | 106 | 0.000217 | 0.00675 | 0.00123 | 0.00704 | 0.0246 | 0.0000844 | 67.7 | 57.4 | 0.421 | 0.0149 | 52 | 0.0369 | 0.00421 | 0.000167 | 0.00813 | 0.00303 | 3.28 | 0.0000091 | 0.0173 | 0.00227 | 0.00464 | 0.00844 |
| **2060** | 861 | 0.11 | 0.169 | 0.0028 | 78 | 0.631 | 479 | | | 0.0000051 | 0.0306 | 0.0248 | 1.09 | 0.124 | 0.0000259 | 105 | 0.000215 | 0.00667 | 0.00121 | 0.00696 | 0.0243 | 0.0000834 | 66.9 | 56.8 | 0.416 | 0.0147 | 51 | 0.0365 | 0.00416 | 0.000165 | 0.00803 | 0.00299 | 3.24 | 0.00000899 | 0.0171 | 0.00224 | 0.00459 | 0.00834 |
| **2061** | 851 | 0.0961 | 0.148 | 0.00244 | 77 | 0.624 | 474 | | | 0.00000505 | 0.0303 | 0.0245 | 1.08 | 0.123 | 0.0000256 | 104 | 0.000212 | 0.00659 | 0.0012 | 0.00688 | 0.024 | 0.0000825 | 66.2 | 56.1 | 0.411 | 0.0146 | 51 | 0.0361 | 0.00411 | 0.000164 | 0.00794 | 0.00296 | 3.2 | 0.00000889 | 0.0169 | 0.00222 | 0.00454 | 0.00825 |
| **2062** | 841 | 0.084 | 0.129 | 0.00214 | 76 | 0.616 | 468 | | | 0.00000499 | 0.0299 | 0.0242 | 1.07 | 0.121 | 0.0000253 | 103 | 0.00021 | 0.00652 | 0.00119 | 0.0068 | 0.0237 | 0.0000815 | 65.4 | 55.5 | 0.406 | 0.0144 | 50 | 0.0357 | 0.00406 | 0.000162 | 0.00784 | 0.00292 | 3.16 | 0.00000878 | 0.0167 | 0.00219 | 0.00448 | 0.00815 |
| **2063** | 831 | 0.0734 | 0.113 | 0.00187 | 75 | 0.609 | 463 | | | 0.00000493 | 0.0295 | 0.024 | 1.05 | 0.12 | 0.0000249 | 101 | 0.000207 | 0.00644 | 0.00117 | 0.00672 | 0.0234 | 0.0000805 | 64.6 | 54.8 | 0.401 | 0.0142 | 50 | 0.0352 | 0.00401 | 0.00016 | 0.00775 | 0.00289 | 3.13 | 0.00000868 | 0.0165 | 0.00216 | 0.00443 | 0.00805 |
| **2064** | 821 | 0.0642 | 0.0987 | 0.00163 | 74 | 0.602 | 457 | | | 0.00000487 | 0.0292 | 0.0237 | 1.04 | 0.118 | 0.0000246 | 100 | 0.000205 | 0.00636 | 0.00116 | 0.00664 | 0.0232 | 0.0000795 | 63.8 | 54.1 | 0.396 | 0.0141 | 49 | 0.0348 | 0.00396 | 0.000158 | 0.00766 | 0.00285 | 3.09 | 0.00000857 | 0.0163 | 0.00214 | 0.00438 | 0.00795 |
| **2065** | 811 | 0.0561 | 0.0863 | 0.00143 | 74 | 0.594 | 451 | | | 0.00000481 | 0.0288 | 0.0234 | 1.03 | 0.117 | 0.0000243 | 99 | 0.000202 | 0.00628 | 0.00114 | 0.00656 | 0.0229 | 0.0000786 | 63 | 53.5 | 0.391 | 0.0139 | 48 | 0.0344 | 0.00391 | 0.000156 | 0.00756 | 0.00282 | 3.05 | 0.00000847 | 0.0161 | 0.00211 | 0.00432 | 0.00786 |
| **2066** | 801 | 0.049 | 0.0754 | 0.00125 | 73 | 0.587 | 446 | | | 0.00000475 | 0.0285 | 0.0231 | 1.02 | 0.115 | 0.000024 | 97.7 | 0.0002 | 0.0062 | 0.00113 | 0.00647 | 0.0226 | 0.0000776 | 62.3 | 52.8 | 0.387 | 0.0137 | 48 | 0.034 | 0.00387 | 0.000154 | 0.00747 | 0.00278 | 3.01 | 0.00000836 | 0.0159 | 0.00208 | 0.00427 | 0.00776 |
| **2067** | 791 | 0.0428 | 0.0659 | 0.00109 | 72 | 0.579 | 440 | | | 0.00000469 | 0.0281 | 0.0228 | 1 | 0.114 | 0.0000237 | 96.5 | 0.000197 | 0.00613 | 0.00112 | 0.00639 | 0.0223 | 0.0000766 | 61.5 | 52.1 | 0.382 | 0.0135 | 47 | 0.0335 | 0.00382 | 0.000152 | 0.00738 | 0.00275 | 2.98 | 0.00000826 | 0.0157 | 0.00206 | 0.00421 | 0.00766 |
| **2068** | 781 | 0.0374 | 0.0576 | 0.000952 | 71 | 0.572 | 435 | | | 0.00000463 | 0.0278 | 0.0225 | 0.991 | 0.113 | 0.0000234 | 95.3 | 0.000195 | 0.00605 | 0.0011 | 0.00631 | 0.022 | 0.0000756 | 60.7 | 51.5 | 0.377 | 0.0134 | 47 | 0.0331 | 0.00377 | 0.00015 | 0.00728 | 0.00271 | 2.94 | 0.00000815 | 0.0155 | 0.00203 | 0.00416 | 0.00756 |
| **2069** | 770 | 0.0327 | 0.0504 | 0.000832 | 70 | 0.565 | 429 | | | 0.00000457 | 0.0274 | 0.0222 | 0.978 | 0.111 | 0.0000231 | 94.1 | 0.000192 | 0.00597 | 0.00109 | 0.00623 | 0.0217 | 0.0000747 | 59.9 | 50.8 | 0.372 | 0.0132 | 46 | 0.0327 | 0.00372 | 0.000148 | 0.00719 | 0.00268 | 2.9 | 0.00000805 | 0.0153 | 0.00201 | 0.00411 | 0.00747 |
| **2070** | 760 | 0.0286 | 0.044 | 0.000728 | 69 | 0.557 | 423 | | | 0.00000451 | 0.027 | 0.0219 | 0.965 | 0.11 | 0.0000228 | 92.8 | 0.00019 | 0.00589 | 0.00107 | 0.00615 | 0.0215 | 0.0000737 | 59.1 | 50.1 | 0.367 | 0.013 | 45 | 0.0323 | 0.00367 | 0.000146 | 0.00709 | 0.00264 | 2.86 | 0.00000794 | 0.0151 | 0.00198 | 0.00405 | 0.00737 |
| **2071** | 750 | 0.025 | 0.0385 | 0.000636 | 68 | 0.55 | 418 | | | 0.00000445 | 0.0267 | 0.0216 | 0.953 | 0.108 | 0.0000225 | 91.6 | 0.000187 | 0.00581 | 0.00106 | 0.00607 | 0.0212 | 0.0000727 | 58.3 | 49.5 | 0.362 | 0.0129 | 45 | 0.0318 | 0.00362 | 0.000144 | 0.007 | 0.00261 | 2.82 | 0.00000784 | 0.0149 | 0.00195 | 0.004 | 0.00727 |
| **2072** | 740 | 0.0219 | 0.0336 | 0.000556 | 67 | 0.543 | 412 | | | 0.00000439 | 0.0263 | 0.0213 | 0.94 | 0.107 | 0.0000222 | 90.4 | 0.000185 | 0.00574 | 0.00104 | 0.00599 | 0.0209 | 0.0000717 | 57.6 | 48.8 | 0.357 | 0.0127 | 44 | 0.0314 | 0.00357 | 0.000142 | 0.00691 | 0.00257 | 2.79 | 0.00000773 | 0.0147 | 0.00193 | 0.00395 | 0.00717 |
| **2073** | 730 | 0.0191 | 0.0294 | 0.000486 | 66 | 0.535 | 407 | | | 0.00000433 | 0.026 | 0.0211 | 0.927 | 0.105 | 0.0000219 | 89.1 | 0.000182 | 0.00566 | 0.00103 | 0.00591 | 0.0206 | 0.0000708 | 56.8 | 48.2 | 0.353 | 0.0125 | 44 | 0.031 | 0.00353 | 0.00014 | 0.00681 | 0.00254 | 2.75 | 0.00000763 | 0.0145 | 0.0019 | 0.00389 | 0.00708 |
| **2074** | 720 | 0.0167 | 0.0257 | 0.000425 | 65 | 0.528 | 401 | | | 0.00000427 | 0.0256 | 0.0208 | 0.914 | 0.104 | 0.0000216 | 87.9 | 0.00018 | 0.00558 | 0.00102 | 0.00582 | 0.0203 | 0.0000698 | 56 | 47.5 | 0.348 | 0.0123 | 43 | 0.0305 | 0.00348 | 0.000138 | 0.00672 | 0.0025 | 2.71 | 0.00000752 | 0.0143 | 0.00188 | 0.00384 | 0.00698 |
| **2075** | 710 | 0.0146 | 0.0225 | 0.000371 | 64 | 0.521 | 395 | | | 0.00000421 | 0.0253 | 0.0205 | 0.902 | 0.102 | 0.0000213 | 86.7 | 0.000177 | 0.0055 | 0.001 | 0.00574 | 0.02 | 0.0000688 | 55.2 | 46.8 | 0.343 | 0.0122 | 42 | 0.0301 | 0.00343 | 0.000137 | 0.00663 | 0.00247 | 2.67 | 0.00000742 | 0.0141 | 0.00185 | 0.00379 | 0.00688 |
| **2076** | 700 | 0.0128 | 0.0196 | 0.000324 | 64 | 0.513 | 390 | | | 0.00000415 | 0.0249 | 0.0202 | 0.889 | 0.101 | 0.000021 | 85.5 | 0.000175 | 0.00543 | 0.000988 | 0.00566 | 0.0198 | 0.0000679 | 54.4 | 46.2 | 0.338 | 0.012 | 42 | 0.0297 | 0.00338 | 0.000135 | 0.00653 | 0.00243 | 2.64 | 0.00000731 | 0.0139 | 0.00182 | 0.00373 | 0.00679 |
| **2077** | 690 | 0.0112 | 0.0172 | 0.000284 | 63 | 0.506 | 384 | | | 0.00000409 | 0.0245 | 0.0199 | 0.876 | 0.0995 | 0.0000207 | 84.2 | 0.000172 | 0.00535 | 0.000974 | 0.00558 | 0.0195 | 0.0000669 | 53.7 | 45.5 | 0.333 | 0.0118 | 41 | 0.0293 | 0.00333 | 0.000133 | 0.00644 | 0.0024 | 2.6 | 0.00000721 | 0.0137 | 0.0018 | 0.00368 | 0.00669 |
| **2078** | 680 | 0.00975 | 0.015 | 0.000248 | 62 | 0.498 | 379 | | | 0.00000403 | 0.0242 | 0.0196 | 0.863 | 0.098 | 0.0000204 | 83 | 0.00017 | 0.00527 | 0.00096 | 0.0055 | 0.0192 | 0.0000659 | 52.9 | 44.8 | 0.328 | 0.0116 | 41 | 0.0288 | 0.00328 | 0.000131 | 0.00634 | 0.00236 | 2.56 | 0.0000071 | 0.0135 | 0.00177 | 0.00363 | 0.00659 |
| **2079** | 670 | 0.00852 | 0.0131 | 0.000217 | 61 | 0.491 | 373 | | | 0.00000397 | 0.0238 | 0.0193 | 0.851 | 0.0966 | 0.0000201 | 81.8 | 0.000167 | 0.00519 | 0.000945 | 0.00542 | 0.0189 | 0.0000649 | 52.1 | 44.2 | 0.323 | 0.0115 | 40 | 0.0284 | 0.00323 | 0.000129 | 0.00625 | 0.00233 | 2.52 | 0.000007 | 0.0133 | 0.00174 | 0.00357 | 0.00649 |
| **2080** | 660 | 0.00745 | 0.0115 | 0.000189 | 60 | 0.484 | 367 | | | 0.00000391 | 0.0235 | 0.019 | 0.838 | 0.0951 | 0.0000198 | 80.6 | 0.000165 | 0.00511 | 0.000931 | 0.00534 | 0.0186 | 0.000064 | 51.3 | 43.5 | 0.319 | 0.0113 | 39 | 0.028 | 0.00319 | 0.000127 | 0.00616 | 0.00229 | 2.48 | 0.00000689 | 0.0131 | 0.00172 | 0.00352 | 0.0064 |
| **2081** | 650 | 0.00651 | 0.01 | 0.000166 | 59 | 0.476 | 362 | | | 0.00000385 | 0.0231 | 0.0187 | 0.825 | 0.0937 | 0.0000195 | 79.3 | 0.000162 | 0.00504 | 0.000917 | 0.00526 | 0.0183 | 0.000063 | 50.5 | 42.9 | 0.314 | 0.0111 | 39 | 0.0276 | 0.00314 | 0.000125 | 0.00606 | 0.00226 | 2.45 | 0.00000679 | 0.0129 | 0.00169 | 0.00346 | 0.0063 |
| **2082** | 640 | 0.00569 | 0.00875 | 0.000145 | 58 | 0.469 | 356 | | | 0.00000379 | 0.0228 | 0.0184 | 0.812 | 0.0922 | 0.0000192 | 78.1 | 0.000159 | 0.00496 | 0.000903 | 0.00517 | 0.0181 | 0.000062 | 49.7 | 42.2 | 0.309 | 0.011 | 38 | 0.0271 | 0.00309 | 0.000123 | 0.00597 | 0.00222 | 2.41 | 0.00000668 | 0.0127 | 0.00167 | 0.00341 | 0.0062 |
| **2083** | 630 | 0.00497 | 0.00765 | 0.000126 | 57 | 0.462 | 351 | | | 0.00000373 | 0.0224 | 0.0182 | 0.8 | 0.0908 | 0.0000189 | 76.9 | 0.000157 | 0.00488 | 0.000889 | 0.00509 | 0.0178 | 0.000061 | 49 | 41.5 | 0.304 | 0.0108 | 38 | 0.0267 | 0.00304 | 0.000121 | 0.00588 | 0.00219 | 2.37 | 0.00000658 | 0.0125 | 0.00164 | 0.00336 | 0.0061 |
| **2084** | 620 | 0.00435 | 0.00669 | 0.000111 | 56 | 0.454 | 345 | | | 0.00000367 | 0.022 | 0.0179 | 0.787 | 0.0893 | 0.0000186 | 75.6 | 0.000154 | 0.0048 | 0.000874 | 0.00501 | 0.0175 | 0.0000601 | 48.2 | 40.9 | 0.299 | 0.0106 | 37 | 0.0263 | 0.00299 | 0.000119 | 0.00578 | 0.00215 | 2.33 | 0.00000647 | 0.0123 | 0.00161 | 0.0033 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 610 | 0.0038 | 0.00585 | 0.0000966 | 55 | 0.447 | 339 | | | 0.00000361 | 0.0217 | 0.0176 | 0.774 | 0.0879 | 0.0000183 | 74.4 | 0.000152 | 0.00472 | 0.00086 | 0.00493 | 0.0172 | 0.0000591 | 47.4 | 40.2 | 0.294 | 0.0104 | 36 | 0.0259 | 0.00294 | 0.000117 | 0.00569 | 0.00212 | 2.29 | 0.00000637 | 0.0121 | 0.00159 | 0.00325 | 0.00591 |
| **2086** | 600 | 0.00332 | 0.00511 | 0.0000845 | 54 | 0.44 | 334 | | | 0.00000356 | 0.0213 | 0.0173 | 0.761 | 0.0864 | 0.000018 | 73.2 | 0.000149 | 0.00465 | 0.000846 | 0.00485 | 0.0169 | 0.0000581 | 46.6 | 39.5 | 0.289 | 0.0103 | 36 | 0.0254 | 0.00289 | 0.000115 | 0.00559 | 0.00208 | 2.26 | 0.00000626 | 0.0119 | 0.00156 | 0.0032 | 0.00581 |
| **2087** | 590 | 0.0029 | 0.00447 | 0.0000738 | 54 | 0.432 | 328 | | | 0.0000035 | 0.021 | 0.017 | 0.748 | 0.085 | 0.0000177 | 72 | 0.000147 | 0.00457 | 0.000832 | 0.00477 | 0.0166 | 0.0000571 | 45.8 | 38.9 | 0.285 | 0.0101 | 35 | 0.025 | 0.00285 | 0.000113 | 0.0055 | 0.00205 | 2.22 | 0.00000616 | 0.0117 | 0.00154 | 0.00314 | 0.00571 |
| **2088** | 580 | 0.00254 | 0.0039 | 0.0000645 | 53 | 0.425 | 323 | | | 0.00000344 | 0.0206 | 0.0167 | 0.736 | 0.0835 | 0.0000174 | 70.7 | 0.000144 | 0.00449 | 0.000818 | 0.00469 | 0.0164 | 0.0000562 | 45.1 | 38.2 | 0.28 | 0.00992 | 35 | 0.0246 | 0.0028 | 0.000111 | 0.00541 | 0.00201 | 2.18 | 0.00000605 | 0.0115 | 0.00151 | 0.00309 | 0.00562 |
| **2089** | 569 | 0.00222 | 0.00341 | 0.0000564 | 52 | 0.417 | 317 | | | 0.00000338 | 0.0203 | 0.0164 | 0.723 | 0.0821 | 0.0000171 | 69.5 | 0.000142 | 0.00441 | 0.000803 | 0.00461 | 0.0161 | 0.0000552 | 44.3 | 37.6 | 0.275 | 0.00975 | 34 | 0.0242 | 0.00275 | 0.000109 | 0.00531 | 0.00198 | 2.14 | 0.00000595 | 0.0113 | 0.00148 | 0.00304 | 0.00552 |
| **2090** | 559 | 0.00194 | 0.00298 | 0.0000493 | 51 | 0.41 | 311 | | | 0.00000332 | 0.0199 | 0.0161 | 0.71 | 0.0806 | 0.0000168 | 68.3 | 0.000139 | 0.00433 | 0.000789 | 0.00452 | 0.0158 | 0.0000542 | 43.5 | 36.9 | 0.27 | 0.00958 | 33 | 0.0237 | 0.0027 | 0.000108 | 0.00522 | 0.00194 | 2.11 | 0.00000584 | 0.0111 | 0.00146 | 0.00298 | 0.00542 |
| **2091** | 549 | 0.00169 | 0.00261 | 0.0000431 | 50 | 0.403 | 306 | | | 0.00000326 | 0.0195 | 0.0158 | 0.697 | 0.0792 | 0.0000165 | 67.1 | 0.000137 | 0.00426 | 0.000775 | 0.00444 | 0.0155 | 0.0000532 | 42.7 | 36.2 | 0.265 | 0.00941 | 33 | 0.0233 | 0.00265 | 0.000106 | 0.00513 | 0.00191 | 2.07 | 0.00000574 | 0.0109 | 0.00143 | 0.00293 | 0.00532 |
| **2092** | 539 | 0.00148 | 0.00228 | 0.0000377 | 49 | 0.395 | 300 | | | 0.0000032 | 0.0192 | 0.0155 | 0.685 | 0.0777 | 0.0000162 | 65.8 | 0.000134 | 0.00418 | 0.000761 | 0.00436 | 0.0152 | 0.0000523 | 41.9 | 35.6 | 0.26 | 0.00924 | 32 | 0.0229 | 0.0026 | 0.000104 | 0.00503 | 0.00187 | 2.03 | 0.00000563 | 0.0107 | 0.0014 | 0.00287 | 0.00523 |
| **2093** | 529 | 0.00129 | 0.00199 | 0.0000329 | 48 | 0.388 | 295 | | | 0.00000314 | 0.0188 | 0.0153 | 0.672 | 0.0763 | 0.0000159 | 64.6 | 0.000132 | 0.0041 | 0.000747 | 0.00428 | 0.0149 | 0.0000513 | 41.2 | 34.9 | 0.256 | 0.00906 | 32 | 0.0224 | 0.00256 | 0.000102 | 0.00494 | 0.00184 | 1.99 | 0.00000553 | 0.0105 | 0.00138 | 0.00282 | 0.00513 |
| **2094** | 519 | 0.00113 | 0.00174 | 0.0000288 | 47 | 0.381 | 289 | | | 0.00000308 | 0.0185 | 0.015 | 0.659 | 0.0748 | 0.0000156 | 63.4 | 0.000129 | 0.00402 | 0.000733 | 0.0042 | 0.0147 | 0.0000503 | 40.4 | 34.2 | 0.251 | 0.00889 | 31 | 0.022 | 0.00251 | 0.0000998 | 0.00484 | 0.0018 | 1.95 | 0.00000542 | 0.0103 | 0.00135 | 0.00277 | 0.00503 |
| **2095** | 509 | 0.000989 | 0.00152 | 0.0000252 | 46 | 0.373 | 283 | | | 0.00000302 | 0.0181 | 0.0147 | 0.646 | 0.0734 | 0.0000153 | 62.1 | 0.000127 | 0.00395 | 0.000718 | 0.00412 | 0.0144 | 0.0000493 | 39.6 | 33.6 | 0.246 | 0.00872 | 30 | 0.0216 | 0.00246 | 0.0000979 | 0.00475 | 0.00177 | 1.92 | 0.00000532 | 0.0101 | 0.00133 | 0.00271 | 0.00493 |
| **2096** | 499 | 0.000864 | 0.00133 | 0.000022 | 45 | 0.366 | 278 | | | 0.00000296 | 0.0178 | 0.0144 | 0.634 | 0.0719 | 0.000015 | 60.9 | 0.000124 | 0.00387 | 0.000704 | 0.00404 | 0.0141 | 0.0000484 | 38.8 | 32.9 | 0.241 | 0.00855 | 30 | 0.0212 | 0.00241 | 0.0000959 | 0.00466 | 0.00173 | 1.88 | 0.00000521 | 0.00989 | 0.0013 | 0.00266 | 0.00484 |
| **2097** | 489 | 0.000756 | 0.00116 | 0.0000192 | 44 | 0.358 | 272 | | | 0.0000029 | 0.0174 | 0.0141 | 0.621 | 0.0705 | 0.0000147 | 59.7 | 0.000122 | 0.00379 | 0.00069 | 0.00395 | 0.0138 | 0.0000474 | 38 | 32.3 | 0.236 | 0.00838 | 29 | 0.0207 | 0.00236 | 0.000094 | 0.00456 | 0.0017 | 1.84 | 0.00000511 | 0.00969 | 0.00127 | 0.00261 | 0.00474 |
| **2098** | 479 | 0.00066 | 0.00102 | 0.0000168 | 43 | 0.351 | 267 | | | 0.00000284 | 0.017 | 0.0138 | 0.608 | 0.069 | 0.0000144 | 58.5 | 0.000119 | 0.00371 | 0.000676 | 0.00387 | 0.0135 | 0.0000464 | 37.2 | 31.6 | 0.231 | 0.0082 | 29 | 0.0203 | 0.00231 | 0.0000921 | 0.00447 | 0.00166 | 1.8 | 0.000005 | 0.00949 | 0.00125 | 0.00255 | 0.00464 |
| **2099** | 469 | 0.000577 | 0.000888 | 0.0000147 | 43 | 0.344 | 261 | | | 0.00000278 | 0.0167 | 0.0135 | 0.595 | 0.0676 | 0.0000141 | 57.2 | 0.000117 | 0.00363 | 0.000662 | 0.00379 | 0.0132 | 0.0000454 | 36.5 | 30.9 | 0.226 | 0.00803 | 28 | 0.0199 | 0.00226 | 0.0000901 | 0.00437 | 0.00163 | 1.76 | 0.0000049 | 0.00929 | 0.00122 | 0.0025 | 0.00454 |
| **2100** | 459 | 0.000505 | 0.000776 | 0.0000128 | 42 | 0.336 | 255 | | | 0.00000272 | 0.0163 | 0.0132 | 0.583 | 0.0661 | 0.0000138 | 56 | 0.000114 | 0.00356 | 0.000647 | 0.00371 | 0.013 | 0.0000445 | 35.7 | 30.3 | 0.222 | 0.00786 | 27 | 0.0195 | 0.00222 | 0.0000882 | 0.00428 | 0.00159 | 1.73 | 0.00000479 | 0.0091 | 0.00119 | 0.00245 | 0.00445 |
| **2101** | 449 | 0.000441 | 0.000679 | 0.0000112 | 41 | 0.329 | 250 | | | 0.00000266 | 0.016 | 0.0129 | 0.57 | 0.0647 | 0.0000135 | 54.8 | 0.000112 | 0.00348 | 0.000633 | 0.00363 | 0.0127 | 0.0000435 | 34.9 | 29.6 | 0.217 | 0.00769 | 27 | 0.019 | 0.00217 | 0.0000863 | 0.00419 | 0.00156 | 1.69 | 0.00000469 | 0.0089 | 0.00117 | 0.00239 | 0.00435 |
| **2102** | 439 | 0.000386 | 0.000593 | 0.0000098 | 40 | 0.322 | 244 | | | 0.0000026 | 0.0156 | 0.0127 | 0.557 | 0.0632 | 0.0000132 | 53.6 | 0.000109 | 0.0034 | 0.000619 | 0.00355 | 0.0124 | 0.0000425 | 34.1 | 28.9 | 0.212 | 0.00751 | 26 | 0.0186 | 0.00212 | 0.0000843 | 0.00409 | 0.00152 | 1.65 | 0.00000458 | 0.0087 | 0.00114 | 0.00234 | 0.00425 |
| **2103** | 429 | 0.000337 | 0.000518 | 0.00000857 | 39 | 0.314 | 239 | | | 0.00000254 | 0.0152 | 0.0124 | 0.544 | 0.0618 | 0.0000129 | 52.3 | 0.000107 | 0.00332 | 0.000605 | 0.00347 | 0.0121 | 0.0000415 | 33.3 | 28.3 | 0.207 | 0.00734 | 26 | 0.0182 | 0.00207 | 0.0000824 | 0.004 | 0.00149 | 1.61 | 0.00000448 | 0.0085 | 0.00112 | 0.00229 | 0.00415 |
| **2104** | 419 | 0.000295 | 0.000453 | 0.00000749 | 38 | 0.307 | 233 | | | 0.00000248 | 0.0149 | 0.0121 | 0.532 | 0.0603 | 0.0000126 | 51.1 | 0.000104 | 0.00324 | 0.000591 | 0.00339 | 0.0118 | 0.0000406 | 32.6 | 27.6 | 0.202 | 0.00717 | 25 | 0.0178 | 0.00202 | 0.0000805 | 0.00391 | 0.00145 | 1.58 | 0.00000437 | 0.0083 | 0.00109 | 0.00223 | 0.00406 |
| **2105** | 409 | 0.000257 | 0.000396 | 0.00000655 | 37 | 0.3 | 227 | | | 0.00000242 | 0.0145 | 0.0118 | 0.519 | 0.0589 | 0.0000123 | 49.9 | 0.000102 | 0.00317 | 0.000577 | 0.0033 | 0.0115 | 0.0000396 | 31.8 | 26.9 | 0.197 | 0.007 | 24 | 0.0173 | 0.00197 | 0.0000785 | 0.00381 | 0.00142 | 1.54 | 0.00000427 | 0.0081 | 0.00106 | 0.00218 | 0.00396 |
| **2106** | 399 | 0.000225 | 0.000346 | 0.00000572 | 36 | 0.292 | 222 | | | 0.00000236 | 0.0142 | 0.0115 | 0.506 | 0.0574 | 0.000012 | 48.7 | 0.0000994 | 0.00309 | 0.000562 | 0.00322 | 0.0112 | 0.0000386 | 31 | 26.3 | 0.192 | 0.00683 | 24 | 0.0169 | 0.00192 | 0.0000766 | 0.00372 | 0.00138 | 1.5 | 0.00000416 | 0.0079 | 0.00104 | 0.00212 | 0.00386 |
| **2107** | 389 | 0.000197 | 0.000303 | 0.000005 | 35 | 0.285 | 216 | | | 0.0000023 | 0.0138 | 0.0112 | 0.493 | 0.056 | 0.0000117 | 47.4 | 0.0000969 | 0.00301 | 0.000548 | 0.00314 | 0.011 | 0.0000377 | 30.2 | 25.6 | 0.188 | 0.00665 | 23 | 0.0165 | 0.00188 | 0.0000747 | 0.00362 | 0.00135 | 1.46 | 0.00000406 | 0.0077 | 0.00101 | 0.00207 | 0.00377 |
| **2108** | 378 | 0.000172 | 0.000264 | 0.00000437 | 34 | 0.277 | 211 | | | 0.00000224 | 0.0135 | 0.0109 | 0.48 | 0.0546 | 0.0000114 | 46.2 | 0.0000943 | 0.00293 | 0.000534 | 0.00306 | 0.0107 | 0.0000367 | 29.4 | 25 | 0.183 | 0.00648 | 23 | 0.0161 | 0.00183 | 0.0000727 | 0.00353 | 0.00131 | 1.42 | 0.00000395 | 0.0075 | 0.000986 | 0.00202 | 0.00367 |
| **2109** | 368 | 0.00015 | 0.000231 | 0.00000382 | 33 | 0.27 | 205 | | | 0.00000218 | 0.0131 | 0.0106 | 0.468 | 0.0531 | 0.0000111 | 45 | 0.0000918 | 0.00285 | 0.00052 | 0.00298 | 0.0104 | 0.0000357 | 28.6 | 24.3 | 0.178 | 0.00631 | 22 | 0.0156 | 0.00178 | 0.0000708 | 0.00344 | 0.00128 | 1.39 | 0.00000385 | 0.0073 | 0.000959 | 0.00196 | 0.00357 |
| **2110** | 358 | 0.000131 | 0.000202 | 0.00000334 | 33 | 0.263 | 200 | | | 0.00000212 | 0.0127 | 0.0103 | 0.455 | 0.0517 | 0.0000108 | 43.7 | 0.0000893 | 0.00278 | 0.000506 | 0.0029 | 0.0101 | 0.0000347 | 27.9 | 23.6 | 0.173 | 0.00614 | 21 | 0.0152 | 0.00173 | 0.0000689 | 0.00334 | 0.00124 | 1.35 | 0.00000374 | 0.0071 | 0.000933 | 0.00191 | 0.00347 |
| **2111** | 348 | 0.000115 | 0.000177 | 0.00000292 | 32 | 0.255 | 194 | | | 0.00000207 | 0.0124 | 0.01 | 0.442 | 0.0502 | 0.0000105 | 42.5 | 0.0000868 | 0.0027 | 0.000491 | 0.00282 | 0.00983 | 0.0000338 | 27.1 | 23 | 0.168 | 0.00596 | 21 | 0.0148 | 0.00168 | 0.0000669 | 0.00325 | 0.00121 | 1.31 | 0.00000364 | 0.0069 | 0.000907 | 0.00186 | 0.00338 |
| **2112** | 338 | 0.0001 | 0.000154 | 0.00000255 | 31 | 0.248 | 188 | | | 0.00000201 | 0.012 | 0.00975 | 0.429 | 0.0488 | 0.0000102 | 41.3 | 0.0000843 | 0.00262 | 0.000477 | 0.00274 | 0.00955 | 0.0000328 | 26.3 | 22.3 | 0.163 | 0.00579 | 20 | 0.0143 | 0.00163 | 0.000065 | 0.00316 | 0.00118 | 1.27 | 0.00000353 | 0.0067 | 0.000881 | 0.0018 | 0.00328 |
| **2113** | 328 | 0.0000877 | 0.000135 | 0.00000223 | 30 | 0.241 | 183 | | | 0.00000195 | 0.0117 | 0.00946 | 0.417 | 0.0473 | 0.00000986 | 40.1 | 0.0000818 | 0.00254 | 0.000463 | 0.00265 | 0.00926 | 0.0000318 | 25.5 | 21.6 | 0.158 | 0.00562 | 20 | 0.0139 | 0.00158 | 0.0000631 | 0.00306 | 0.00114 | 1.24 | 0.00000343 | 0.00651 | 0.000855 | 0.00175 | 0.00318 |
| **2114** | 318 | 0.0000767 | 0.000118 | 0.00000195 | 29 | 0.233 | 177 | | | 0.00000189 | 0.0113 | 0.00917 | 0.404 | 0.0459 | 0.00000955 | 38.8 | 0.0000793 | 0.00247 | 0.000449 | 0.00257 | 0.00898 | 0.0000308 | 24.7 | 21 | 0.154 | 0.00545 | 19 | 0.0135 | 0.00154 | 0.0000611 | 0.00297 | 0.00111 | 1.2 | 0.00000332 | 0.00631 | 0.000828 | 0.0017 | 0.00308 |
| **2115** | 308 | 0.000067 | 0.000103 | 0.0000017 | 28 | 0.226 | 172 | | | 0.00000183 | 0.011 | 0.00888 | 0.391 | 0.0444 | 0.00000925 | 37.6 | 0.0000768 | 0.00239 | 0.000435 | 0.00249 | 0.0087 | 0.0000299 | 24 | 20.3 | 0.149 | 0.00528 | 18 | 0.0131 | 0.00149 | 0.0000592 | 0.00287 | 0.00107 | 1.16 | 0.00000322 | 0.00611 | 0.000802 | 0.00164 | 0.00299 |
| **2116** | 298 | 0.0000586 | 0.0000901 | 0.00000149 | 27 | 0.218 | 166 | | | 0.00000177 | 0.0106 | 0.00859 | 0.378 | 0.043 | 0.00000895 | 36.4 | 0.0000743 | 0.00231 | 0.000421 | 0.00241 | 0.00841 | 0.0000289 | 23.2 | 19.7 | 0.144 | 0.0051 | 18 | 0.0126 | 0.00144 | 0.0000573 | 0.00278 | 0.00104 | 1.12 | 0.00000311 | 0.00591 | 0.000776 | 0.00159 | 0.00289 |
| **2117** | 288 | 0.0000512 | 0.0000788 | 0.0000013 | 26 | 0.211 | 160 | | | 0.00000171 | 0.0102 | 0.0083 | 0.366 | 0.0415 | 0.00000865 | 35.2 | 0.0000718 | 0.00223 | 0.000406 | 0.00233 | 0.00813 | 0.0000279 | 22.4 | 19 | 0.139 | 0.00493 | 17 | 0.0122 | 0.00139 | 0.0000554 | 0.00269 | 0.001 | 1.08 | 0.00000301 | 0.00571 | 0.00075 | 0.00154 | 0.00279 |
| **2118** | 278 | 0.0000447 | 0.0000688 | 0.00000114 | 25 | 0.204 | 155 | | | 0.00000165 | 0.00989 | 0.00801 | 0.353 | 0.0401 | 0.00000835 | 33.9 | 0.0000693 | 0.00215 | 0.000392 | 0.00225 | 0.00784 | 0.0000269 | 21.6 | 18.3 | 0.134 | 0.00476 | 17 | 0.0118 | 0.00134 | 0.0000534 | 0.00259 | 0.000965 | 1.05 | 0.0000029 | 0.00551 | 0.000724 | 0.00148 | 0.00269 |
| **2119** | 268 | 0.0000391 | 0.0000602 | 0.000000995 | 24 | 0.196 | 149 | | | 0.00000159 | 0.00953 | 0.00772 | 0.34 | 0.0386 | 0.00000804 | 32.7 | 0.0000668 | 0.00208 | 0.000378 | 0.00217 | 0.00756 | 0.000026 | 20.8 | 17.7 | 0.129 | 0.00459 | 16 | 0.0114 | 0.00129 | 0.0000515 | 0.0025 | 0.000931 | 1.01 | 0.0000028 | 0.00531 | 0.000698 | 0.00143 | 0.0026 |
| **2120** | 258 | 0.0000342 | 0.0000526 | 0.000000869 | 23 | 0.189 | 144 | | | 0.00000153 | 0.00917 | 0.00743 | 0.327 | 0.0372 | 0.00000774 | 31.5 | 0.0000643 | 0.002 | 0.000364 | 0.00209 | 0.00728 | 0.000025 | 20 | 17 | 0.124 | 0.00442 | 15 | 0.0109 | 0.00124 | 0.0000496 | 0.00241 | 0.000896 | 0.97 | 0.00000269 | 0.00511 | 0.000671 | 0.00137 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF1 Ext** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | 3,420 | 18.3 | 28.1 | 0.465 | 1,540 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 1,010 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2027** | 3,320 | 18.3 | 28.1 | 0.465 | 1,500 | 0.756 | 546 | | | 0.0000129 | 0.0334 | 0.0224 | 1.31 | 0.0819 | 0.0000214 | 120 | 0.000228 | 0.00395 | 0.00156 | 0.012 | 0.0377 | 0.0001 | 46.9 | 64.6 | 0.499 | 0.0115 | 986 | 0.0551 | 0.00499 | 0.000135 | 0.00979 | 0.0036 | 2.9 | 0.00000686 | 0.0108 | 0.00381 | 0.00622 | 0.01 |
| **2028** | 2,840 | 18.3 | 28.1 | 0.465 | 1,280 | 0.756 | 466 | | | 0.0000158 | 0.0334 | 0.0183 | 1.31 | 0.0611 | 0.0000187 | 102 | 0.000225 | 0.00285 | 0.00183 | 0.0139 | 0.038 | 0.0001 | 37.3 | 55.3 | 0.5 | 0.00944 | 843 | 0.066 | 0.005 | 0.000112 | 0.0101 | 0.00355 | 2.49 | 0.00000574 | 0.0083 | 0.00444 | 0.00675 | 0.01 |
| **2029** | 2,800 | 18.3 | 28.1 | 0.465 | 1,260 | 0.756 | 459 | | | 0.0000163 | 0.0332 | 0.0182 | 1.31 | 0.0563 | 0.0000181 | 101 | 0.000222 | 0.00249 | 0.00184 | 0.0142 | 0.0385 | 0.0001 | 35.1 | 54.4 | 0.5 | 0.00883 | 830 | 0.0666 | 0.005 | 0.000106 | 0.0101 | 0.00354 | 2.41 | 0.00000543 | 0.00753 | 0.00451 | 0.00679 | 0.01 |
| **2030** | 2,820 | 18.3 | 28.1 | 0.465 | 1,280 | 0.756 | 464 | | | 0.0000165 | 0.0329 | 0.0182 | 1.31 | 0.0532 | 0.0000176 | 102 | 0.000219 | 0.00221 | 0.00179 | 0.0142 | 0.0392 | 0.0001 | 33.4 | 55 | 0.5 | 0.0084 | 839 | 0.0658 | 0.005 | 0.000103 | 0.0101 | 0.00355 | 2.38 | 0.00000521 | 0.00689 | 0.00452 | 0.00676 | 0.01 |
| **2031** | 4,050 | 18.3 | 28.1 | 0.465 | 1,850 | 0.756 | 671 | | | 0.0000126 | 0.031 | 0.0258 | 1.31 | 0.0695 | 0.0000196 | 147 | 0.00022 | 0.00337 | 0.00141 | 0.0116 | 0.0423 | 0.0001 | 40.5 | 79.5 | 0.498 | 0.0112 | 1,210 | 0.0512 | 0.00498 | 0.000125 | 0.00923 | 0.00371 | 2.78 | 0.00000596 | 0.00927 | 0.00357 | 0.00605 | 0.01 |
| **2032** | 4,330 | 18.3 | 28.1 | 0.465 | 1,980 | 0.756 | 721 | | | 0.0000159 | 0.0283 | 0.0205 | 1.31 | 0.0331 | 0.000014 | 158 | 0.000203 | 0.00152 | 0.00147 | 0.0133 | 0.0481 | 0.0001 | 21.5 | 85.4 | 0.499 | 0.00844 | 1,300 | 0.0572 | 0.00499 | 0.0000926 | 0.00897 | 0.00378 | 2.17 | 0.00000377 | 0.00435 | 0.00408 | 0.00644 | 0.01 |
| **2033** | 2,880 | 18.3 | 28.1 | 0.465 | 1,270 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 837 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2034** | 2,610 | 16 | 24.6 | 0.407 | 1,110 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 732 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2035** | 2,380 | 14 | 21.5 | 0.355 | 973 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 639 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2036** | 2,170 | 12.2 | 18.8 | 0.311 | 851 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 559 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2037** | 1,990 | 10.7 | 16.4 | 0.272 | 743 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 489 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2038** | 1,830 | 9.33 | 14.4 | 0.237 | 650 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 427 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2039** | 1,700 | 8.16 | 12.6 | 0.207 | 568 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 373 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2040** | 1,580 | 7.13 | 11 | 0.181 | 496 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 326 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2041** | 1,470 | 6.23 | 9.59 | 0.158 | 434 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 285 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2042** | 1,380 | 5.45 | 8.38 | 0.139 | 379 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 249 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2043** | 1,300 | 4.76 | 7.33 | 0.121 | 332 | 0.756 | 463 | | | 0.00000336 | 0.0371 | 0.0393 | 1.31 | 0.188 | 0.0000369 | 102 | 0.00021 | 0.00607 | 0.000446 | 0.00422 | 0.0279 | 0.0001 | 95.7 | 54.8 | 0.5 | 0.0124 | 218 | 0.0155 | 0.005 | 0.000228 | 0.00995 | 0.00353 | 4.69 | 0.0000117 | 0.0184 | 0.00124 | 0.00352 | 0.01 |
| **2044** | 1,290 | 4.16 | 6.4 | 0.106 | 328 | 0.749 | 459 | | | 0.00000332 | 0.0368 | 0.0389 | 1.3 | 0.186 | 0.0000366 | 101 | 0.000208 | 0.00601 | 0.000442 | 0.00418 | 0.0276 | 0.000099 | 94.8 | 54.3 | 0.495 | 0.0123 | 216 | 0.0154 | 0.00495 | 0.000225 | 0.00985 | 0.0035 | 4.64 | 0.0000115 | 0.0182 | 0.00123 | 0.00349 | 0.0099 |
| **2045** | 1,270 | 3.64 | 5.6 | 0.0925 | 325 | 0.742 | 454 | | | 0.00000329 | 0.0364 | 0.0385 | 1.28 | 0.184 | 0.0000362 | 99.5 | 0.000206 | 0.00595 | 0.000438 | 0.00414 | 0.0274 | 0.0000981 | 93.8 | 53.8 | 0.49 | 0.0122 | 214 | 0.0152 | 0.0049 | 0.000223 | 0.00976 | 0.00346 | 4.6 | 0.0000114 | 0.018 | 0.00122 | 0.00345 | 0.00981 |
| **2046** | 1,260 | 3.18 | 4.89 | 0.0809 | 322 | 0.734 | 449 | | | 0.00000326 | 0.0361 | 0.0381 | 1.27 | 0.183 | 0.0000359 | 98.5 | 0.000204 | 0.00589 | 0.000433 | 0.0041 | 0.0271 | 0.0000971 | 92.9 | 53.2 | 0.485 | 0.012 | 211 | 0.0151 | 0.00485 | 0.000221 | 0.00966 | 0.00343 | 4.55 | 0.0000113 | 0.0178 | 0.0012 | 0.00342 | 0.00971 |
| **2047** | 1,250 | 2.78 | 4.28 | 0.0707 | 319 | 0.727 | 445 | | | 0.00000323 | 0.0357 | 0.0378 | 1.26 | 0.181 | 0.0000355 | 97.6 | 0.000202 | 0.00583 | 0.000429 | 0.00406 | 0.0268 | 0.0000961 | 92 | 52.7 | 0.481 | 0.0119 | 209 | 0.0149 | 0.00481 | 0.000219 | 0.00956 | 0.00339 | 4.51 | 0.0000112 | 0.0177 | 0.00119 | 0.00338 | 0.00961 |
| **2048** | 1,230 | 2.43 | 3.74 | 0.0618 | 315 | 0.719 | 440 | | | 0.00000319 | 0.0353 | 0.0374 | 1.25 | 0.179 | 0.0000351 | 96.6 | 0.0002 | 0.00577 | 0.000425 | 0.00402 | 0.0265 | 0.0000951 | 91 | 52.2 | 0.476 | 0.0118 | 207 | 0.0148 | 0.00476 | 0.000217 | 0.00947 | 0.00336 | 4.46 | 0.0000111 | 0.0175 | 0.00118 | 0.00335 | 0.00951 |
| **2049** | 1,220 | 2.12 | 3.27 | 0.054 | 312 | 0.712 | 436 | | | 0.00000316 | 0.035 | 0.037 | 1.23 | 0.177 | 0.0000348 | 95.6 | 0.000198 | 0.00571 | 0.00042 | 0.00398 | 0.0263 | 0.0000942 | 90.1 | 51.6 | 0.471 | 0.0117 | 205 | 0.0146 | 0.00471 | 0.000214 | 0.00937 | 0.00332 | 4.42 | 0.000011 | 0.0173 | 0.00117 | 0.00332 | 0.00942 |
| **2050** | 1,210 | 1.86 | 2.86 | 0.0472 | 309 | 0.705 | 431 | | | 0.00000313 | 0.0346 | 0.0366 | 1.22 | 0.175 | 0.0000344 | 94.6 | 0.000196 | 0.00565 | 0.000416 | 0.00393 | 0.026 | 0.0000932 | 89.2 | 51.1 | 0.466 | 0.0116 | 203 | 0.0145 | 0.00466 | 0.000212 | 0.00927 | 0.00329 | 4.37 | 0.0000109 | 0.0171 | 0.00116 | 0.00328 | 0.00932 |
| **2051** | 1,200 | 1.62 | 2.5 | 0.0413 | 306 | 0.697 | 427 | | | 0.0000031 | 0.0342 | 0.0362 | 1.21 | 0.173 | 0.0000341 | 93.6 | 0.000194 | 0.00559 | 0.000412 | 0.00389 | 0.0257 | 0.0000922 | 88.2 | 50.6 | 0.461 | 0.0114 | 201 | 0.0143 | 0.00461 | 0.00021 | 0.00917 | 0.00325 | 4.32 | 0.0000107 | 0.0169 | 0.00114 | 0.00325 | 0.00922 |
| **2052** | 1,180 | 1.42 | 2.18 | 0.0361 | 302 | 0.69 | 422 | | | 0.00000306 | 0.0339 | 0.0358 | 1.2 | 0.172 | 0.0000337 | 92.6 | 0.000192 | 0.00554 | 0.000407 | 0.00385 | 0.0255 | 0.0000912 | 87.3 | 50 | 0.456 | 0.0113 | 199 | 0.0142 | 0.00456 | 0.000208 | 0.00908 | 0.00322 | 4.28 | 0.0000106 | 0.0168 | 0.00113 | 0.00321 | 0.00912 |
| **2053** | 1,170 | 1.24 | 1.91 | 0.0315 | 299 | 0.683 | 418 | | | 0.00000303 | 0.0335 | 0.0355 | 1.18 | 0.17 | 0.0000333 | 91.6 | 0.00019 | 0.00548 | 0.000403 | 0.00381 | 0.0252 | 0.0000903 | 86.4 | 49.5 | 0.451 | 0.0112 | 197 | 0.014 | 0.00451 | 0.000205 | 0.00898 | 0.00319 | 4.23 | 0.0000105 | 0.0166 | 0.00112 | 0.00318 | 0.00903 |
| **2054** | 1,160 | 1.08 | 1.67 | 0.0275 | 296 | 0.675 | 413 | | | 0.000003 | 0.0332 | 0.0351 | 1.17 | 0.168 | 0.000033 | 90.6 | 0.000187 | 0.00542 | 0.000399 | 0.00377 | 0.0249 | 0.0000893 | 85.4 | 49 | 0.446 | 0.0111 | 195 | 0.0139 | 0.00446 | 0.000203 | 0.00888 | 0.00315 | 4.19 | 0.0000104 | 0.0164 | 0.00111 | 0.00314 | 0.00893 |
| **2055** | 1,150 | 0.947 | 1.46 | 0.0241 | 293 | 0.668 | 409 | | | 0.00000296 | 0.0328 | 0.0347 | 1.16 | 0.166 | 0.0000326 | 89.6 | 0.000185 | 0.00536 | 0.000394 | 0.00373 | 0.0246 | 0.0000883 | 84.5 | 48.4 | 0.442 | 0.011 | 192 | 0.0137 | 0.00442 | 0.000201 | 0.00879 | 0.00312 | 4.14 | 0.0000103 | 0.0162 | 0.0011 | 0.00311 | 0.00883 |
| **2056** | 1,130 | 0.828 | 1.27 | 0.021 | 290 | 0.661 | 404 | | | 0.00000293 | 0.0324 | 0.0343 | 1.14 | 0.164 | 0.0000323 | 88.7 | 0.000183 | 0.0053 | 0.00039 | 0.00369 | 0.0244 | 0.0000873 | 83.6 | 47.9 | 0.437 | 0.0108 | 190 | 0.0136 | 0.00437 | 0.000199 | 0.00869 | 0.00308 | 4.1 | 0.0000102 | 0.016 | 0.00108 | 0.00308 | 0.00873 |
| **2057** | 1,120 | 0.723 | 1.11 | 0.0184 | 286 | 0.653 | 400 | | | 0.0000029 | 0.0321 | 0.0339 | 1.13 | 0.162 | 0.0000319 | 87.7 | 0.000181 | 0.00524 | 0.000386 | 0.00365 | 0.0241 | 0.0000864 | 82.6 | 47.4 | 0.432 | 0.0107 | 188 | 0.0134 | 0.00432 | 0.000197 | 0.00859 | 0.00305 | 4.05 | 0.0000101 | 0.0159 | 0.00107 | 0.00304 | 0.00864 |
| **2058** | 1,110 | 0.632 | 0.973 | 0.0161 | 283 | 0.646 | 395 | | | 0.00000287 | 0.0317 | 0.0335 | 1.12 | 0.161 | 0.0000315 | 86.7 | 0.000179 | 0.00518 | 0.000381 | 0.00361 | 0.0238 | 0.0000854 | 81.7 | 46.8 | 0.427 | 0.0106 | 186 | 0.0133 | 0.00427 | 0.000194 | 0.0085 | 0.00301 | 4 | 0.00000995 | 0.0157 | 0.00106 | 0.00301 | 0.00854 |
| **2059** | 1,100 | 0.553 | 0.85 | 0.0141 | 280 | 0.638 | 391 | | | 0.00000283 | 0.0313 | 0.0332 | 1.11 | 0.159 | 0.0000312 | 85.7 | 0.000177 | 0.00512 | 0.000377 | 0.00356 | 0.0236 | 0.0000844 | 80.8 | 46.3 | 0.422 | 0.0105 | 184 | 0.0131 | 0.00422 | 0.000192 | 0.0084 | 0.00298 | 3.96 | 0.00000984 | 0.0155 | 0.00105 | 0.00297 | 0.00844 |
| **2060** | 1,080 | 0.483 | 0.743 | 0.0123 | 277 | 0.631 | 386 | | | 0.0000028 | 0.031 | 0.0328 | 1.09 | 0.157 | 0.0000308 | 84.7 | 0.000175 | 0.00506 | 0.000373 | 0.00352 | 0.0233 | 0.0000834 | 79.8 | 45.8 | 0.417 | 0.0104 | 182 | 0.013 | 0.00417 | 0.00019 | 0.0083 | 0.00295 | 3.91 | 0.00000972 | 0.0153 | 0.00104 | 0.00294 | 0.00834 |
| **2061** | 1,070 | 0.422 | 0.65 | 0.0107 | 273 | 0.624 | 382 | | | 0.00000277 | 0.0306 | 0.0324 | 1.08 | 0.155 | 0.0000305 | 83.7 | 0.000173 | 0.005 | 0.000368 | 0.00348 | 0.023 | 0.0000825 | 78.9 | 45.2 | 0.412 | 0.0102 | 180 | 0.0128 | 0.00412 | 0.000188 | 0.00821 | 0.00291 | 3.87 | 0.00000961 | 0.0152 | 0.00102 | 0.0029 | 0.00825 |
| **2062** | 1,060 | 0.369 | 0.568 | 0.00939 | 270 | 0.616 | 377 | | | 0.00000274 | 0.0303 | 0.032 | 1.07 | 0.153 | 0.0000301 | 82.7 | 0.000171 | 0.00494 | 0.000364 | 0.00344 | 0.0227 | 0.0000815 | 78 | 44.7 | 0.407 | 0.0101 | 178 | 0.0127 | 0.00407 | 0.000185 | 0.00811 | 0.00288 | 3.82 | 0.00000949 | 0.015 | 0.00101 | 0.00287 | 0.00815 |
| **2063** | 1,050 | 0.323 | 0.496 | 0.0082 | 267 | 0.609 | 373 | | | 0.0000027 | 0.0299 | 0.0316 | 1.05 | 0.151 | 0.0000297 | 81.7 | 0.000169 | 0.00489 | 0.000359 | 0.0034 | 0.0225 | 0.0000805 | 77 | 44.2 | 0.403 | 0.00999 | 175 | 0.0125 | 0.00403 | 0.000183 | 0.00801 | 0.00284 | 3.78 | 0.00000938 | 0.0148 | 0.000999 | 0.00284 | 0.00805 |
| **2064** | 1,030 | 0.282 | 0.434 | 0.00717 | 264 | 0.602 | 368 | | | 0.00000267 | 0.0295 | 0.0312 | 1.04 | 0.15 | 0.0000294 | 80.7 | 0.000167 | 0.00483 | 0.000355 | 0.00336 | 0.0222 | 0.0000795 | 76.1 | 43.6 | 0.398 | 0.00987 | 173 | 0.0123 | 0.00398 | 0.000181 | 0.00791 | 0.00281 | 3.73 | 0.00000927 | 0.0146 | 0.000987 | 0.0028 | 0.00795 |
| **2065** | 1,020 | 0.246 | 0.379 | 0.00627 | 260 | 0.594 | 364 | | | 0.00000264 | 0.0292 | 0.0309 | 1.03 | 0.148 | 0.000029 | 79.8 | 0.000165 | 0.00477 | 0.000351 | 0.00332 | 0.0219 | 0.0000786 | 75.2 | 43.1 | 0.393 | 0.00975 | 171 | 0.0122 | 0.00393 | 0.000179 | 0.00782 | 0.00277 | 3.68 | 0.00000915 | 0.0144 | 0.000975 | 0.00277 | 0.00786 |
| **2066** | 1,010 | 0.215 | 0.331 | 0.00548 | 257 | 0.587 | 359 | | | 0.0000026 | 0.0288 | 0.0305 | 1.02 | 0.146 | 0.0000287 | 78.8 | 0.000163 | 0.00471 | 0.000346 | 0.00328 | 0.0217 | 0.0000776 | 74.2 | 42.6 | 0.388 | 0.00963 | 169 | 0.012 | 0.00388 | 0.000177 | 0.00772 | 0.00274 | 3.64 | 0.00000904 | 0.0143 | 0.000963 | 0.00273 | 0.00776 |
| **2067** | 995 | 0.188 | 0.29 | 0.00479 | 254 | 0.579 | 355 | | | 0.00000257 | 0.0285 | 0.0301 | 1 | 0.144 | 0.0000283 | 77.8 | 0.000161 | 0.00465 | 0.000342 | 0.00324 | 0.0214 | 0.0000766 | 73.3 | 42 | 0.383 | 0.00951 | 167 | 0.0119 | 0.00383 | 0.000174 | 0.00762 | 0.0027 | 3.59 | 0.00000893 | 0.0141 | 0.000951 | 0.0027 | 0.00766 |
| **2068** | 982 | 0.165 | 0.253 | 0.00419 | 251 | 0.572 | 350 | | | 0.00000254 | 0.0281 | 0.0297 | 0.991 | 0.142 | 0.0000279 | 76.8 | 0.000159 | 0.00459 | 0.000338 | 0.00319 | 0.0211 | 0.0000756 | 72.4 | 41.5 | 0.378 | 0.00939 | 165 | 0.0117 | 0.00378 | 0.000172 | 0.00753 | 0.00267 | 3.55 | 0.00000881 | 0.0139 | 0.000939 | 0.00266 | 0.00756 |
| **2069** | 969 | 0.144 | 0.221 | 0.00366 | 248 | 0.565 | 346 | | | 0.00000251 | 0.0277 | 0.0293 | 0.978 | 0.14 | 0.0000276 | 75.8 | 0.000157 | 0.00453 | 0.000333 | 0.00315 | 0.0208 | 0.0000747 | 71.4 | 41 | 0.373 | 0.00926 | 163 | 0.0116 | 0.00373 | 0.00017 | 0.00743 | 0.00264 | 3.5 | 0.0000087 | 0.0137 | 0.000927 | 0.00263 | 0.00747 |
| **2070** | 957 | 0.126 | 0.193 | 0.0032 | 244 | 0.557 | 341 | | | 0.00000247 | 0.0274 | 0.029 | 0.965 | 0.139 | 0.0000272 | 74.8 | 0.000155 | 0.00447 | 0.000329 | 0.00311 | 0.0206 | 0.0000737 | 70.5 | 40.4 | 0.368 | 0.00914 | 161 | 0.0114 | 0.00368 | 0.000168 | 0.00733 | 0.0026 | 3.46 | 0.00000859 | 0.0135 | 0.000915 | 0.0026 | 0.00737 |
| **2071** | 944 | 0.11 | 0.169 | 0.0028 | 241 | 0.55 | 337 | | | 0.00000244 | 0.027 | 0.0286 | 0.953 | 0.137 | 0.0000269 | 73.8 | 0.000153 | 0.00441 | 0.000325 | 0.00307 | 0.0203 | 0.0000727 | 69.6 | 39.9 | 0.364 | 0.00902 | 158 | 0.0113 | 0.00364 | 0.000166 | 0.00724 | 0.00257 | 3.41 | 0.00000847 | 0.0134 | 0.000903 | 0.00256 | 0.00727 |
| **2072** | 931 | 0.0961 | 0.148 | 0.00244 | 238 | 0.543 | 332 | | | 0.00000241 | 0.0266 | 0.0282 | 0.94 | 0.135 | 0.0000265 | 72.8 | 0.000151 | 0.00435 | 0.00032 | 0.00303 | 0.02 | 0.0000717 | 68.7 | 39.4 | 0.359 | 0.0089 | 156 | 0.0111 | 0.00359 | 0.000163 | 0.00714 | 0.00253 | 3.36 | 0.00000836 | 0.0132 | 0.000891 | 0.00253 | 0.00717 |
| **2073** | 919 | 0.084 | 0.129 | 0.00214 | 235 | 0.535 | 328 | | | 0.00000238 | 0.0263 | 0.0278 | 0.927 | 0.133 | 0.0000261 | 71.8 | 0.000149 | 0.00429 | 0.000316 | 0.00299 | 0.0197 | 0.0000708 | 67.7 | 38.8 | 0.354 | 0.00878 | 154 | 0.011 | 0.00354 | 0.000161 | 0.00704 | 0.0025 | 3.32 | 0.00000825 | 0.013 | 0.000878 | 0.00249 | 0.00708 |
| **2074** | 906 | 0.0734 | 0.113 | 0.00187 | 231 | 0.528 | 323 | | | 0.00000234 | 0.0259 | 0.0274 | 0.914 | 0.131 | 0.0000258 | 70.9 | 0.000147 | 0.00423 | 0.000312 | 0.00295 | 0.0195 | 0.0000698 | 66.8 | 38.3 | 0.349 | 0.00866 | 152 | 0.0108 | 0.00349 | 0.000159 | 0.00695 | 0.00246 | 3.27 | 0.00000813 | 0.0128 | 0.000866 | 0.00246 | 0.00698 |
| **2075** | 893 | 0.0642 | 0.0987 | 0.00163 | 228 | 0.521 | 319 | | | 0.00000231 | 0.0256 | 0.027 | 0.902 | 0.129 | 0.0000254 | 69.9 | 0.000145 | 0.00418 | 0.000307 | 0.00291 | 0.0192 | 0.0000688 | 65.9 | 37.7 | 0.344 | 0.00854 | 150 | 0.0107 | 0.00344 | 0.000157 | 0.00685 | 0.00243 | 3.23 | 0.00000802 | 0.0126 | 0.000854 | 0.00242 | 0.00688 |
| **2076** | 881 | 0.0561 | 0.0863 | 0.00143 | 225 | 0.513 | 314 | | | 0.00000228 | 0.0252 | 0.0267 | 0.889 | 0.128 | 0.0000251 | 68.9 | 0.000142 | 0.00412 | 0.000303 | 0.00287 | 0.0189 | 0.0000679 | 64.9 | 37.2 | 0.339 | 0.00842 | 148 | 0.0105 | 0.00339 | 0.000154 | 0.00675 | 0.0024 | 3.18 | 0.00000791 | 0.0125 | 0.000842 | 0.00239 | 0.00679 |
| **2077** | 868 | 0.049 | 0.0754 | 0.00125 | 222 | 0.506 | 310 | | | 0.00000225 | 0.0248 | 0.0263 | 0.876 | 0.126 | 0.0000247 | 67.9 | 0.00014 | 0.00406 | 0.000299 | 0.00282 | 0.0187 | 0.0000669 | 64 | 36.7 | 0.334 | 0.0083 | 146 | 0.0104 | 0.00334 | 0.000152 | 0.00665 | 0.00236 | 3.14 | 0.00000779 | 0.0123 | 0.00083 | 0.00236 | 0.00669 |
| **2078** | 856 | 0.0428 | 0.0659 | 0.00109 | 218 | 0.498 | 305 | | | 0.00000221 | 0.0245 | 0.0259 | 0.863 | 0.124 | 0.0000243 | 66.9 | 0.000138 | 0.004 | 0.000294 | 0.00278 | 0.0184 | 0.0000659 | 63.1 | 36.1 | 0.33 | 0.00818 | 144 | 0.0102 | 0.0033 | 0.00015 | 0.00656 | 0.00233 | 3.09 | 0.00000768 | 0.0121 | 0.000818 | 0.00232 | 0.00659 |
| **2079** | 843 | 0.0374 | 0.0576 | 0.000952 | 215 | 0.491 | 301 | | | 0.00000218 | 0.0241 | 0.0255 | 0.851 | 0.122 | 0.000024 | 65.9 | 0.000136 | 0.00394 | 0.00029 | 0.00274 | 0.0181 | 0.0000649 | 62.1 | 35.6 | 0.325 | 0.00806 | 141 | 0.0101 | 0.00325 | 0.000148 | 0.00646 | 0.00229 | 3.05 | 0.00000757 | 0.0119 | 0.000806 | 0.00229 | 0.00649 |
| **2080** | 830 | 0.0327 | 0.0504 | 0.000832 | 212 | 0.484 | 296 | | | 0.00000215 | 0.0238 | 0.0251 | 0.838 | 0.12 | 0.0000236 | 64.9 | 0.000134 | 0.00388 | 0.000286 | 0.0027 | 0.0178 | 0.000064 | 61.2 | 35.1 | 0.32 | 0.00794 | 139 | 0.00993 | 0.0032 | 0.000146 | 0.00636 | 0.00226 | 3 | 0.00000745 | 0.0118 | 0.000794 | 0.00225 | 0.0064 |
| **2081** | 818 | 0.0286 | 0.044 | 0.000728 | 209 | 0.476 | 292 | | | 0.00000211 | 0.0234 | 0.0247 | 0.825 | 0.118 | 0.0000233 | 63.9 | 0.000132 | 0.00382 | 0.000281 | 0.00266 | 0.0176 | 0.000063 | 60.3 | 34.5 | 0.315 | 0.00781 | 137 | 0.00978 | 0.00315 | 0.000143 | 0.00627 | 0.00222 | 2.95 | 0.00000734 | 0.0116 | 0.000782 | 0.00222 | 0.0063 |
| **2082** | 805 | 0.025 | 0.0385 | 0.000636 | 206 | 0.469 | 287 | | | 0.00000208 | 0.023 | 0.0244 | 0.812 | 0.117 | 0.0000229 | 62.9 | 0.00013 | 0.00376 | 0.000277 | 0.00262 | 0.0173 | 0.000062 | 59.3 | 34 | 0.31 | 0.00769 | 135 | 0.00963 | 0.0031 | 0.000141 | 0.00617 | 0.00219 | 2.91 | 0.00000722 | 0.0114 | 0.000077 | 0.00218 | 0.0062 |
| **2083** | 792 | 0.0219 | 0.0336 | 0.000556 | 202 | 0.462 | 283 | | | 0.00000205 | 0.0227 | 0.024 | 0.8 | 0.115 | 0.0000226 | 62 | 0.000128 | 0.0037 | 0.000272 | 0.00258 | 0.017 | 0.000061 | 58.4 | 33.5 | 0.305 | 0.00757 | 133 | 0.00948 | 0.00305 | 0.000139 | 0.00607 | 0.00215 | 2.86 | 0.00000711 | 0.0112 | 0.000758 | 0.00215 | 0.0061 |
| **2084** | 780 | 0.0191 | 0.0294 | 0.000486 | 199 | 0.454 | 278 | | | 0.00000202 | 0.0223 | 0.0236 | 0.787 | 0.113 | 0.0000222 | 61 | 0.000126 | 0.00364 | 0.000268 | 0.00254 | 0.0168 | 0.0000601 | 57.5 | 32.9 | 0.3 | 0.00745 | 131 | 0.00932 | 0.003 | 0.000137 | 0.00598 | 0.00212 | 2.82 | 0.000007 | 0.011 | 0.000745 | 0.00211 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 767 | 0.0167 | 0.0257 | 0.000425 | 196 | 0.447 | 274 | | | 0.00000198 | 0.0219 | 0.0232 | 0.774 | 0.111 | 0.0000218 | 60 | 0.000124 | 0.00358 | 0.000264 | 0.0025 | 0.0165 | 0.0000591 | 56.5 | 32.4 | 0.295 | 0.00733 | 129 | 0.00917 | 0.00295 | 0.000134 | 0.00588 | 0.00209 | 2.77 | 0.00000688 | 0.0109 | 0.000733 | 0.00208 | 0.00591 |
| **2086** | 754 | 0.0146 | 0.0225 | 0.000371 | 193 | 0.44 | 269 | | | 0.00000195 | 0.0216 | 0.0228 | 0.761 | 0.109 | 0.0000215 | 59 | 0.000122 | 0.00353 | 0.000259 | 0.00245 | 0.0162 | 0.0000581 | 55.6 | 31.9 | 0.291 | 0.00721 | 127 | 0.00902 | 0.00291 | 0.000132 | 0.00578 | 0.00205 | 2.73 | 0.00000677 | 0.0107 | 0.000721 | 0.00205 | 0.00581 |
| **2087** | 742 | 0.0128 | 0.0196 | 0.000324 | 189 | 0.432 | 265 | | | 0.00000192 | 0.0212 | 0.0224 | 0.748 | 0.107 | 0.0000211 | 58 | 0.00012 | 0.00347 | 0.000255 | 0.00241 | 0.0159 | 0.0000571 | 54.7 | 31.3 | 0.286 | 0.00709 | 124 | 0.00887 | 0.00286 | 0.00013 | 0.00568 | 0.00202 | 2.68 | 0.00000666 | 0.0105 | 0.000709 | 0.00201 | 0.00571 |
| **2088** | 729 | 0.0112 | 0.0172 | 0.000284 | 186 | 0.425 | 260 | | | 0.00000189 | 0.0209 | 0.0221 | 0.736 | 0.106 | 0.0000208 | 57 | 0.000118 | 0.00341 | 0.000251 | 0.00237 | 0.0157 | 0.0000562 | 53.7 | 30.8 | 0.281 | 0.00697 | 122 | 0.00872 | 0.00281 | 0.000128 | 0.00559 | 0.00198 | 2.63 | 0.00000654 | 0.0103 | 0.000697 | 0.00198 | 0.00562 |
| **2089** | 716 | 0.00975 | 0.015 | 0.000248 | 183 | 0.417 | 256 | | | 0.00000185 | 0.0205 | 0.0217 | 0.723 | 0.104 | 0.0000204 | 56 | 0.000116 | 0.00335 | 0.000246 | 0.00233 | 0.0154 | 0.0000552 | 52.8 | 30.3 | 0.276 | 0.00685 | 120 | 0.00857 | 0.00276 | 0.000126 | 0.00549 | 0.00195 | 2.59 | 0.00000643 | 0.0101 | 0.000685 | 0.00194 | 0.00552 |
| **2090** | 704 | 0.00852 | 0.0131 | 0.000217 | 180 | 0.41 | 251 | | | 0.00000182 | 0.0201 | 0.0213 | 0.71 | 0.102 | 0.00002 | 55 | 0.000114 | 0.00329 | 0.000242 | 0.00229 | 0.0151 | 0.0000542 | 51.9 | 29.7 | 0.271 | 0.00673 | 118 | 0.00842 | 0.00271 | 0.000123 | 0.00539 | 0.00191 | 2.54 | 0.00000632 | 0.00996 | 0.000673 | 0.00191 | 0.00542 |
| **2091** | 691 | 0.00745 | 0.0115 | 0.000189 | 176 | 0.403 | 247 | | | 0.00000179 | 0.0198 | 0.0209 | 0.697 | 0.1 | 0.0000197 | 54 | 0.000112 | 0.00323 | 0.000238 | 0.00225 | 0.0149 | 0.0000532 | 50.9 | 29.2 | 0.266 | 0.00661 | 116 | 0.00827 | 0.00266 | 0.000121 | 0.0053 | 0.00188 | 2.5 | 0.0000062 | 0.00978 | 0.000661 | 0.00187 | 0.00532 |
| **2092** | 678 | 0.00651 | 0.01 | 0.000166 | 173 | 0.395 | 242 | | | 0.00000175 | 0.0194 | 0.0205 | 0.685 | 0.0983 | 0.0000193 | 53.1 | 0.00011 | 0.00317 | 0.000233 | 0.00221 | 0.0146 | 0.0000523 | 50 | 28.7 | 0.261 | 0.00648 | 114 | 0.00811 | 0.00261 | 0.000119 | 0.0052 | 0.00184 | 2.45 | 0.00000609 | 0.0096 | 0.000649 | 0.00184 | 0.00523 |
| **2093** | 666 | 0.00569 | 0.00875 | 0.000145 | 170 | 0.388 | 237 | | | 0.00000172 | 0.019 | 0.0201 | 0.672 | 0.0964 | 0.000019 | 52.1 | 0.000108 | 0.00311 | 0.000229 | 0.00217 | 0.0143 | 0.0000513 | 49.1 | 28.1 | 0.256 | 0.00636 | 112 | 0.00796 | 0.00256 | 0.000117 | 0.0051 | 0.00181 | 2.41 | 0.00000598 | 0.00942 | 0.000637 | 0.00181 | 0.00513 |
| **2094** | 653 | 0.00497 | 0.00765 | 0.000126 | 167 | 0.381 | 233 | | | 0.00000169 | 0.0187 | 0.0198 | 0.659 | 0.0946 | 0.0000186 | 51.1 | 0.000106 | 0.00305 | 0.000225 | 0.00212 | 0.014 | 0.0000503 | 48.1 | 27.6 | 0.252 | 0.00624 | 110 | 0.00781 | 0.00252 | 0.000115 | 0.00501 | 0.00178 | 2.36 | 0.00000586 | 0.00925 | 0.000625 | 0.00177 | 0.00503 |
| **2095** | 641 | 0.00435 | 0.00669 | 0.000111 | 164 | 0.373 | 228 | | | 0.00000166 | 0.0183 | 0.0194 | 0.646 | 0.0928 | 0.0000182 | 50.1 | 0.000104 | 0.00299 | 0.00022 | 0.00208 | 0.0138 | 0.0000493 | 47.2 | 27.1 | 0.247 | 0.00612 | 107 | 0.00766 | 0.00247 | 0.000112 | 0.00491 | 0.00174 | 2.31 | 0.00000575 | 0.00907 | 0.000612 | 0.00174 | 0.00493 |
| **2096** | 628 | 0.0038 | 0.00585 | 0.0000966 | 160 | 0.366 | 224 | | | 0.00000162 | 0.018 | 0.019 | 0.634 | 0.0909 | 0.0000179 | 49.1 | 0.000102 | 0.00293 | 0.000216 | 0.00204 | 0.0135 | 0.0000484 | 46.3 | 26.5 | 0.242 | 0.006 | 105 | 0.00751 | 0.00242 | 0.00011 | 0.00481 | 0.00171 | 2.27 | 0.00000564 | 0.00889 | 0.0006 | 0.0017 | 0.00484 |
| **2097** | 615 | 0.00332 | 0.00511 | 0.0000845 | 157 | 0.358 | 219 | | | 0.00000159 | 0.0176 | 0.0186 | 0.621 | 0.0891 | 0.0000175 | 48.1 | 0.0000995 | 0.00288 | 0.000212 | 0.002 | 0.0132 | 0.0000474 | 45.3 | 26 | 0.237 | 0.00588 | 103 | 0.00736 | 0.00237 | 0.000108 | 0.00472 | 0.00167 | 2.22 | 0.00000552 | 0.00871 | 0.000588 | 0.00167 | 0.00474 |
| **2098** | 603 | 0.0029 | 0.00447 | 0.0000738 | 154 | 0.351 | 215 | | | 0.00000156 | 0.0172 | 0.0182 | 0.608 | 0.0873 | 0.0000172 | 47.1 | 0.0000975 | 0.00282 | 0.000207 | 0.00196 | 0.013 | 0.0000464 | 44.4 | 25.5 | 0.232 | 0.00576 | 101 | 0.00721 | 0.00232 | 0.000106 | 0.00462 | 0.00164 | 2.18 | 0.00000541 | 0.00853 | 0.000576 | 0.00163 | 0.00464 |
| **2099** | 590 | 0.00254 | 0.0039 | 0.0000645 | 151 | 0.344 | 210 | | | 0.00000153 | 0.0169 | 0.0179 | 0.595 | 0.0855 | 0.0000168 | 46.1 | 0.0000954 | 0.00276 | 0.000203 | 0.00192 | 0.0127 | 0.0000454 | 43.5 | 24.9 | 0.227 | 0.00564 | 99 | 0.00706 | 0.00227 | 0.000103 | 0.00452 | 0.0016 | 2.13 | 0.0000053 | 0.00835 | 0.000564 | 0.0016 | 0.00454 |
| **2100** | 577 | 0.00222 | 0.00341 | 0.0000564 | 147 | 0.336 | 206 | | | 0.00000149 | 0.0165 | 0.0175 | 0.583 | 0.0836 | 0.0000164 | 45.1 | 0.0000934 | 0.0027 | 0.000199 | 0.00188 | 0.0124 | 0.0000445 | 42.6 | 24.4 | 0.222 | 0.00552 | 97 | 0.0069 | 0.00222 | 0.000101 | 0.00442 | 0.00157 | 2.09 | 0.00000518 | 0.00817 | 0.000552 | 0.00157 | 0.00445 |
| **2101** | 565 | 0.00194 | 0.00298 | 0.0000493 | 144 | 0.329 | 201 | | | 0.00000146 | 0.0162 | 0.0171 | 0.57 | 0.0818 | 0.0000161 | 44.2 | 0.0000913 | 0.00264 | 0.000194 | 0.00184 | 0.0121 | 0.0000435 | 41.6 | 23.9 | 0.217 | 0.0054 | 95 | 0.00675 | 0.00217 | 0.000099 | 0.00433 | 0.00154 | 2.04 | 0.00000507 | 0.00799 | 0.00054 | 0.00153 | 0.00435 |
| **2102** | 552 | 0.00169 | 0.00261 | 0.0000431 | 141 | 0.322 | 197 | | | 0.00000143 | 0.0158 | 0.0167 | 0.557 | 0.08 | 0.0000157 | 43.2 | 0.0000893 | 0.00258 | 0.00019 | 0.0018 | 0.0119 | 0.0000425 | 40.7 | 23.3 | 0.213 | 0.00528 | 93 | 0.0066 | 0.00213 | 0.0000968 | 0.00423 | 0.0015 | 1.99 | 0.00000495 | 0.00781 | 0.000528 | 0.0015 | 0.00425 |
| **2103** | 539 | 0.00148 | 0.00228 | 0.0000377 | 138 | 0.314 | 192 | | | 0.00000139 | 0.0154 | 0.0163 | 0.544 | 0.0781 | 0.0000154 | 42.2 | 0.0000872 | 0.00252 | 0.000185 | 0.00175 | 0.0116 | 0.0000415 | 39.8 | 22.8 | 0.208 | 0.00516 | 91 | 0.00645 | 0.00208 | 0.0000946 | 0.00413 | 0.00147 | 1.95 | 0.00000484 | 0.00763 | 0.000516 | 0.00146 | 0.00415 |
| **2104** | 527 | 0.00129 | 0.00199 | 0.0000329 | 135 | 0.307 | 188 | | | 0.00000136 | 0.0151 | 0.0159 | 0.532 | 0.0763 | 0.000015 | 41.2 | 0.0000852 | 0.00246 | 0.000181 | 0.00171 | 0.0113 | 0.0000406 | 38.8 | 22.3 | 0.203 | 0.00503 | 88 | 0.0063 | 0.00203 | 0.0000924 | 0.00404 | 0.00143 | 1.9 | 0.00000473 | 0.00746 | 0.000504 | 0.00143 | 0.00406 |
| **2105** | 514 | 0.00113 | 0.00174 | 0.0000288 | 131 | 0.3 | 183 | | | 0.00000133 | 0.0147 | 0.0156 | 0.519 | 0.0745 | 0.0000146 | 40.2 | 0.0000831 | 0.0024 | 0.000177 | 0.00167 | 0.0111 | 0.0000396 | 37.9 | 21.7 | 0.198 | 0.00491 | 86 | 0.00615 | 0.00198 | 0.0000901 | 0.00394 | 0.0014 | 1.86 | 0.00000461 | 0.00728 | 0.000492 | 0.00139 | 0.00396 |
| **2106** | 501 | 0.000989 | 0.00152 | 0.0000252 | 128 | 0.292 | 179 | | | 0.0000013 | 0.0143 | 0.0152 | 0.506 | 0.0726 | 0.0000143 | 39.2 | 0.0000811 | 0.00234 | 0.000172 | 0.00163 | 0.0108 | 0.0000386 | 37 | 21.2 | 0.193 | 0.00479 | 84 | 0.006 | 0.00193 | 0.0000879 | 0.00384 | 0.00136 | 1.81 | 0.0000045 | 0.0071 | 0.000479 | 0.00136 | 0.00386 |
| **2107** | 489 | 0.000864 | 0.00133 | 0.000022 | 125 | 0.285 | 174 | | | 0.00000126 | 0.014 | 0.0148 | 0.493 | 0.0708 | 0.0000139 | 38.2 | 0.0000791 | 0.00228 | 0.000168 | 0.00159 | 0.0105 | 0.0000377 | 36 | 20.6 | 0.188 | 0.00467 | 82 | 0.00585 | 0.00188 | 0.0000857 | 0.00375 | 0.00133 | 1.77 | 0.00000439 | 0.00692 | 0.000467 | 0.00133 | 0.00377 |
| **2108** | 476 | 0.000756 | 0.00116 | 0.0000192 | 122 | 0.277 | 170 | | | 0.00000123 | 0.0136 | 0.0144 | 0.48 | 0.069 | 0.0000136 | 37.2 | 0.000077 | 0.00223 | 0.000164 | 0.00155 | 0.0102 | 0.0000367 | 35.1 | 20.1 | 0.183 | 0.00455 | 80 | 0.00569 | 0.00183 | 0.0000835 | 0.00365 | 0.00129 | 1.72 | 0.00000427 | 0.00674 | 0.000455 | 0.00129 | 0.00367 |
| **2109** | 463 | 0.00066 | 0.00102 | 0.0000168 | 118 | 0.27 | 165 | | | 0.0000012 | 0.0133 | 0.014 | 0.468 | 0.0671 | 0.0000132 | 36.2 | 0.000075 | 0.00217 | 0.000159 | 0.00151 | 0.00996 | 0.0000357 | 34.2 | 19.6 | 0.179 | 0.00443 | 78 | 0.00554 | 0.00179 | 0.0000813 | 0.00355 | 0.00126 | 1.67 | 0.00000416 | 0.00656 | 0.000443 | 0.00126 | 0.00357 |
| **2110** | 451 | 0.000577 | 0.000888 | 0.0000147 | 115 | 0.263 | 161 | | | 0.00000117 | 0.0129 | 0.0136 | 0.455 | 0.0653 | 0.0000128 | 35.3 | 0.0000729 | 0.00211 | 0.000155 | 0.00147 | 0.00969 | 0.0000347 | 33.2 | 19 | 0.174 | 0.00431 | 76 | 0.00539 | 0.00174 | 0.0000791 | 0.00346 | 0.00123 | 1.63 | 0.00000405 | 0.00638 | 0.000431 | 0.00122 | 0.00347 |
| **2111** | 438 | 0.000505 | 0.000776 | 0.0000128 | 112 | 0.255 | 156 | | | 0.00000113 | 0.0125 | 0.0133 | 0.442 | 0.0635 | 0.0000125 | 34.3 | 0.0000709 | 0.00205 | 0.000151 | 0.00143 | 0.00942 | 0.0000338 | 32.3 | 18.5 | 0.169 | 0.00419 | 74 | 0.00524 | 0.00169 | 0.0000768 | 0.00336 | 0.00119 | 1.58 | 0.00000393 | 0.0062 | 0.000419 | 0.00119 | 0.00338 |
| **2112** | 426 | 0.000441 | 0.000679 | 0.0000112 | 109 | 0.248 | 152 | | | 0.0000011 | 0.0122 | 0.0129 | 0.429 | 0.0616 | 0.0000121 | 33.3 | 0.0000688 | 0.00199 | 0.000146 | 0.00138 | 0.00915 | 0.0000328 | 31.4 | 18 | 0.164 | 0.00407 | 71 | 0.00509 | 0.00164 | 0.0000746 | 0.00326 | 0.00116 | 1.54 | 0.00000382 | 0.00602 | 0.000407 | 0.00115 | 0.00328 |
| **2113** | 413 | 0.000386 | 0.000593 | 0.0000098 | 105 | 0.241 | 147 | | | 0.00000107 | 0.0118 | 0.0125 | 0.417 | 0.0598 | 0.0000118 | 32.3 | 0.0000668 | 0.00193 | 0.000142 | 0.00134 | 0.00888 | 0.0000318 | 30.4 | 17.4 | 0.159 | 0.00395 | 69 | 0.00494 | 0.00159 | 0.0000724 | 0.00316 | 0.00112 | 1.49 | 0.00000371 | 0.00584 | 0.000395 | 0.00112 | 0.00318 |
| **2114** | 400 | 0.000337 | 0.000518 | 0.00000857 | 102 | 0.233 | 143 | | | 0.00000104 | 0.0114 | 0.0121 | 0.404 | 0.058 | 0.0000114 | 31.3 | 0.0000647 | 0.00187 | 0.000138 | 0.0013 | 0.0086 | 0.0000308 | 29.5 | 16.9 | 0.154 | 0.00383 | 67 | 0.00479 | 0.00154 | 0.0000702 | 0.00307 | 0.00109 | 1.45 | 0.00000359 | 0.00567 | 0.000383 | 0.00109 | 0.00308 |
| **2115** | 388 | 0.000295 | 0.000453 | 0.00000749 | 99 | 0.226 | 138 | | | 0.000001 | 0.0111 | 0.0117 | 0.391 | 0.0561 | 0.000011 | 30.3 | 0.0000627 | 0.00181 | 0.000133 | 0.00126 | 0.00833 | 0.0000299 | 28.6 | 16.4 | 0.149 | 0.0037 | 65 | 0.00464 | 0.00149 | 0.000068 | 0.00297 | 0.00105 | 1.4 | 0.00000348 | 0.00549 | 0.000371 | 0.00105 | 0.00299 |
| **2116** | 375 | 0.000257 | 0.000396 | 0.00000655 | 96 | 0.218 | 134 | | | 0.00000097 | 0.0107 | 0.0113 | 0.378 | 0.0543 | 0.0000107 | 29.3 | 0.0000606 | 0.00175 | 0.000129 | 0.00122 | 0.00806 | 0.0000289 | 27.6 | 15.8 | 0.144 | 0.00358 | 63 | 0.00448 | 0.00144 | 0.0000657 | 0.00287 | 0.00102 | 1.35 | 0.00000337 | 0.00531 | 0.000359 | 0.00102 | 0.00289 |
| **2117** | 362 | 0.000225 | 0.000346 | 0.00000572 | 93 | 0.211 | 129 | | | 0.000000937 | 0.0104 | 0.011 | 0.366 | 0.0525 | 0.0000103 | 28.3 | 0.0000586 | 0.00169 | 0.000125 | 0.00118 | 0.00779 | 0.0000279 | 26.7 | 15.3 | 0.14 | 0.00346 | 61 | 0.00433 | 0.0014 | 0.0000635 | 0.00278 | 0.000985 | 1.31 | 0.00000325 | 0.00513 | 0.000346 | 0.000983 | 0.00279 |
| **2118** | 350 | 0.000197 | 0.000303 | 0.000005 | 89 | 0.204 | 125 | | | 0.000000904 | 0.01 | 0.0106 | 0.353 | 0.0506 | 0.00000995 | 27.3 | 0.0000566 | 0.00163 | 0.00012 | 0.00114 | 0.00752 | 0.0000269 | 25.8 | 14.8 | 0.135 | 0.00334 | 59 | 0.00418 | 0.00135 | 0.0000613 | 0.00268 | 0.000951 | 1.26 | 0.00000314 | 0.00495 | 0.000334 | 0.000949 | 0.00269 |
| **2119** | 337 | 0.000172 | 0.000264 | 0.00000437 | 86 | 0.196 | 120 | | | 0.000000872 | 0.00964 | 0.0102 | 0.34 | 0.0488 | 0.00000959 | 26.4 | 0.0000545 | 0.00158 | 0.000116 | 0.0011 | 0.00724 | 0.000026 | 24.8 | 14.2 | 0.13 | 0.00322 | 57 | 0.00403 | 0.0013 | 0.0000591 | 0.00258 | 0.000916 | 1.22 | 0.00000302 | 0.00477 | 0.000322 | 0.000914 | 0.0026 |
| **2120** | 324 | 0.00015 | 0.000231 | 0.00000382 | 83 | 0.189 | 116 | | | 0.000000839 | 0.00928 | 0.00982 | 0.327 | 0.047 | 0.00000923 | 25.4 | 0.0000525 | 0.00152 | 0.000112 | 0.00106 | 0.00697 | 0.000025 | 23.9 | 13.7 | 0.125 | 0.0031 | 54 | 0.00388 | 0.00125 | 0.0000569 | 0.00249 | 0.000882 | 1.17 | 0.00000291 | 0.00459 | 0.00031 | 0.00088 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF3 and WRSF3 Ext** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 4,350 | 18.3 | 28.1 | 0.465 | 1,960 | 0.756 | 713 | | | 0.00000587 | 0.0321 | 0.0589 | 1.31 | 0.141 | 0.000028 | 156 | 0.000201 | 0.0112 | 0.00107 | 0.00837 | 0.0273 | 0.0001 | 90.4 | 84.4 | 0.5 | 0.018 | 1,290 | 0.0435 | 0.005 | 0.00019 | 0.00819 | 0.00397 | 3.76 | 0.0000129 | 0.0214 | 0.00208 | 0.00519 | 0.01 |
| **2021** | 3,940 | 16 | 24.6 | 0.407 | 1,710 | 0.756 | 713 | | | 0.00000587 | 0.0321 | 0.0589 | 1.31 | 0.141 | 0.000028 | 156 | 0.000201 | 0.0112 | 0.00107 | 0.00837 | 0.0273 | 0.0001 | 90.4 | 84.4 | 0.5 | 0.018 | 1,130 | 0.0435 | 0.005 | 0.00019 | 0.00819 | 0.00397 | 3.76 | 0.0000129 | 0.0214 | 0.00208 | 0.00519 | 0.01 |
| **2022** | 3,520 | 18.3 | 28.1 | 0.465 | 1,580 | 0.756 | 574 | | | 0.00000612 | 0.0367 | 0.0297 | 1.31 | 0.149 | 0.000031 | 126 | 0.000257 | 0.008 | 0.00146 | 0.00834 | 0.0291 | 0.0001 | 80.2 | 68 | 0.498 | 0.0177 | 1,040 | 0.0438 | 0.00498 | 0.000198 | 0.00963 | 0.00358 | 3.88 | 0.0000108 | 0.0205 | 0.00269 | 0.0055 | 0.01 |
| **2023** | 3,270 | 18.3 | 28.1 | 0.465 | 1,470 | 0.756 | 535 | | | 0.00000898 | 0.0354 | 0.0266 | 1.31 | 0.121 | 0.0000271 | 117 | 0.000245 | 0.00627 | 0.00151 | 0.00995 | 0.0316 | 0.0001 | 66.7 | 63.4 | 0.495 | 0.0149 | 967 | 0.0489 | 0.00495 | 0.00017 | 0.00971 | 0.00354 | 3.45 | 0.00000915 | 0.0164 | 0.00318 | 0.0058 | 0.01 |
| **2024** | 3,170 | 18.3 | 28.1 | 0.465 | 1,420 | 0.756 | 517 | | | 0.00000819 | 0.0362 | 0.0267 | 1.31 | 0.131 | 0.0000285 | 113 | 0.000251 | 0.00696 | 0.00157 | 0.00964 | 0.0295 | 0.0001 | 71.8 | 61.2 | 0.494 | 0.0158 | 934 | 0.0492 | 0.00494 | 0.000179 | 0.00973 | 0.00351 | 3.56 | 0.00000978 | 0.0181 | 0.0031 | 0.00578 | 0.01 |
| **2025** | 3,790 | 18.3 | 28.1 | 0.465 | 1,710 | 0.756 | 621 | | | 0.00000657 | 0.0348 | 0.0307 | 1.31 | 0.136 | 0.0000291 | 136 | 0.000242 | 0.00692 | 0.00128 | 0.00814 | 0.0323 | 0.0001 | 73.2 | 73.6 | 0.494 | 0.0161 | 1,120 | 0.0401 | 0.00494 | 0.000187 | 0.00932 | 0.00361 | 3.74 | 0.0000098 | 0.018 | 0.00256 | 0.00527 | 0.01 |
| **2026** | 3,420 | 18.3 | 28.1 | 0.465 | 1,540 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 1,010 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2027** | 3,100 | 16 | 24.6 | 0.407 | 1,350 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 884 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2028** | 2,810 | 14 | 21.5 | 0.355 | 1,180 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 773 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2029** | 2,560 | 12.2 | 18.8 | 0.311 | 1,030 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 676 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2030** | 2,350 | 10.7 | 16.4 | 0.272 | 899 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 591 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2031** | 2,160 | 9.33 | 14.4 | 0.237 | 786 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 516 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2032** | 1,990 | 8.16 | 12.6 | 0.207 | 687 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 451 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2033** | 1,850 | 7.13 | 11 | 0.181 | 600 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 394 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2034** | 1,720 | 6.23 | 9.59 | 0.158 | 525 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 345 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2035** | 1,610 | 5.45 | 8.38 | 0.139 | 459 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 301 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2036** | 1,510 | 4.76 | 7.33 | 0.121 | 401 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 263 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2037** | 1,430 | 4.16 | 6.4 | 0.106 | 350 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 230 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2038** | 1,350 | 3.64 | 5.6 | 0.0925 | 306 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 201 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2039** | 1,290 | 3.18 | 4.89 | 0.0809 | 268 | 0.756 | 560 | | | 0.00000894 | 0.0351 | 0.0269 | 1.31 | 0.12 | 0.0000269 | 123 | 0.000242 | 0.00617 | 0.00147 | 0.00979 | 0.0327 | 0.0001 | 65.8 | 66.3 | 0.496 | 0.0148 | 176 | 0.0479 | 0.00496 | 0.00017 | 0.00964 | 0.00358 | 3.45 | 0.00000904 | 0.0162 | 0.00312 | 0.00575 | 0.01 |
| **2040** | 2,720 | 18.3 | 28.1 | 0.465 | 1,240 | 0.756 | 450 | | | 0.0000199 | 0.0314 | 0.0143 | 1.31 | 0.0217 | 0.0000131 | 98.6 | 0.000206 | 0.000464 | 0.00195 | 0.0164 | 0.042 | 0.0001 | 18 | 53.3 | 0.5 | 0.00525 | 813 | 0.0743 | 0.005 | 0.0000667 | 0.0099 | 0.00354 | 1.73 | 0.00000324 | 0.00259 | 0.00509 | 0.00723 | 0.01 |
| **2041** | 3,170 | 18.3 | 28.1 | 0.465 | 1,430 | 0.756 | 521 | | | 0.0000147 | 0.0324 | 0.0211 | 1.31 | 0.0662 | 0.0000193 | 114 | 0.000215 | 0.00264 | 0.00159 | 0.0129 | 0.0391 | 0.0001 | 38.9 | 61.7 | 0.499 | 0.00885 | 942 | 0.0586 | 0.00499 | 0.000114 | 0.00969 | 0.00359 | 2.55 | 0.00000568 | 0.00793 | 0.00402 | 0.00633 | 0.01 |
| **2042** | 4,400 | 18.3 | 28.1 | 0.465 | 1,990 | 0.756 | 724 | | | 0.00000432 | 0.0332 | 0.0382 | 1.31 | 0.148 | 0.0000309 | 159 | 0.000224 | 0.00639 | 0.000766 | 0.00581 | 0.0358 | 0.0001 | 77.5 | 85.8 | 0.498 | 0.0152 | 1,310 | 0.0247 | 0.00498 | 0.000199 | 0.00893 | 0.00374 | 4.09 | 0.00000991 | 0.0173 | 0.00168 | 0.00435 | 0.01 |
| **2043** | 4,040 | 18.3 | 28.1 | 0.465 | 1,820 | 0.756 | 661 | | | 0.00000307 | 0.0341 | 0.0446 | 1.31 | 0.162 | 0.0000335 | 145 | 0.000218 | 0.00593 | 0.000507 | 0.00481 | 0.0336 | 0.0001 | 84.7 | 78.3 | 0.497 | 0.014 | 1,200 | 0.0167 | 0.00497 | 0.000204 | 0.00911 | 0.00367 | 4.38 | 0.0000103 | 0.0174 | 0.00125 | 0.00378 | 0.01 |
| **2044** | 4,000 | 16 | 24.6 | 0.407 | 1,800 | 0.749 | 655 | | | 0.00000304 | 0.0337 | 0.0442 | 1.3 | 0.16 | 0.0000332 | 144 | 0.000216 | 0.00587 | 0.000502 | 0.00476 | 0.0333 | 0.000099 | 83.9 | 77.6 | 0.492 | 0.0138 | 1,180 | 0.0165 | 0.00492 | 0.000202 | 0.00902 | 0.00364 | 4.34 | 0.0000102 | 0.0172 | 0.00123 | 0.00375 | 0.0099 |
| **2045** | 3,960 | 14 | 21.5 | 0.355 | 1,780 | 0.742 | 648 | | | 0.00000301 | 0.0334 | 0.0437 | 1.28 | 0.158 | 0.0000328 | 142 | 0.000213 | 0.00581 | 0.000497 | 0.00471 | 0.0329 | 0.0000981 | 83.1 | 76.8 | 0.487 | 0.0137 | 1,170 | 0.0164 | 0.00487 | 0.0002 | 0.00893 | 0.0036 | 4.3 | 0.0000101 | 0.017 | 0.00122 | 0.00371 | 0.00981 |
| **2046** | 3,920 | 12.2 | 18.8 | 0.311 | 1,770 | 0.734 | 642 | | | 0.00000298 | 0.0331 | 0.0433 | 1.27 | 0.157 | 0.0000325 | 141 | 0.000211 | 0.00575 | 0.000492 | 0.00467 | 0.0326 | 0.0000971 | 82.2 | 76 | 0.482 | 0.0135 | 1,160 | 0.0162 | 0.00482 | 0.000198 | 0.00884 | 0.00357 | 4.25 | 0.00001 | 0.0169 | 0.00121 | 0.00367 | 0.00971 |
| **2047** | 3,880 | 10.7 | 16.4 | 0.272 | 1,750 | 0.727 | 635 | | | 0.00000295 | 0.0327 | 0.0428 | 1.26 | 0.155 | 0.0000322 | 139 | 0.000209 | 0.0057 | 0.000487 | 0.00462 | 0.0323 | 0.0000961 | 81.4 | 75.3 | 0.477 | 0.0134 | 1,150 | 0.0161 | 0.00477 | 0.000196 | 0.00876 | 0.00353 | 4.21 | 0.00000995 | 0.0167 | 0.0012 | 0.00364 | 0.00961 |
| **2048** | 3,840 | 9.33 | 14.4 | 0.237 | 1,730 | 0.719 | 629 | | | 0.00000292 | 0.0324 | 0.0424 | 1.25 | 0.154 | 0.0000319 | 138 | 0.000207 | 0.00564 | 0.000482 | 0.00457 | 0.032 | 0.0000951 | 80.6 | 74.5 | 0.473 | 0.0133 | 1,140 | 0.0159 | 0.00473 | 0.000194 | 0.00867 | 0.00349 | 4.17 | 0.00000985 | 0.0165 | 0.00119 | 0.0036 | 0.00951 |
| **2049** | 3,800 | 8.16 | 12.6 | 0.207 | 1,710 | 0.712 | 623 | | | 0.00000289 | 0.0321 | 0.042 | 1.23 | 0.152 | 0.0000315 | 136 | 0.000205 | 0.00558 | 0.000477 | 0.00453 | 0.0316 | 0.0000942 | 79.8 | 73.7 | 0.468 | 0.0131 | 1,130 | 0.0157 | 0.00468 | 0.000192 | 0.00858 | 0.00346 | 4.13 | 0.00000974 | 0.0164 | 0.00117 | 0.00356 | 0.00942 |
| **2050** | 3,760 | 7.13 | 11 | 0.181 | 1,690 | 0.705 | 616 | | | 0.00000286 | 0.0317 | 0.0415 | 1.22 | 0.151 | 0.0000312 | 135 | 0.000203 | 0.00552 | 0.000472 | 0.00448 | 0.0313 | 0.0000932 | 78.9 | 73 | 0.463 | 0.013 | 1,110 | 0.0156 | 0.00463 | 0.00019 | 0.00849 | 0.00342 | 4.08 | 0.00000964 | 0.0162 | 0.00116 | 0.00353 | 0.00932 |
| **2051** | 3,720 | 6.23 | 9.59 | 0.158 | 1,680 | 0.697 | 610 | | | 0.00000283 | 0.0314 | 0.0411 | 1.21 | 0.149 | 0.0000309 | 134 | 0.000201 | 0.00546 | 0.000467 | 0.00443 | 0.031 | 0.0000922 | 78.1 | 72.2 | 0.458 | 0.0129 | 1,100 | 0.0154 | 0.00458 | 0.000188 | 0.0084 | 0.00339 | 4.04 | 0.00000954 | 0.016 | 0.00115 | 0.00349 | 0.00922 |
| **2052** | 3,680 | 5.45 | 8.38 | 0.139 | 1,660 | 0.69 | 603 | | | 0.0000028 | 0.0311 | 0.0407 | 1.2 | 0.147 | 0.0000306 | 132 | 0.000199 | 0.00541 | 0.000462 | 0.00439 | 0.0306 | 0.0000912 | 77.3 | 71.5 | 0.453 | 0.0127 | 1,090 | 0.0152 | 0.00453 | 0.000186 | 0.00831 | 0.00335 | 4 | 0.00000944 | 0.0158 | 0.00114 | 0.00345 | 0.00912 |
| **2053** | 3,640 | 4.76 | 7.33 | 0.121 | 1,640 | 0.683 | 597 | | | 0.00000277 | 0.0307 | 0.0402 | 1.18 | 0.146 | 0.0000302 | 131 | 0.000197 | 0.00535 | 0.000457 | 0.00434 | 0.0303 | 0.0000903 | 76.5 | 70.7 | 0.448 | 0.0126 | 1,080 | 0.0151 | 0.00448 | 0.000184 | 0.00822 | 0.00331 | 3.96 | 0.00000934 | 0.0157 | 0.00113 | 0.00341 | 0.00903 |
| **2054** | 3,610 | 4.16 | 6.4 | 0.106 | 1,620 | 0.675 | 590 | | | 0.00000274 | 0.0304 | 0.0398 | 1.17 | 0.144 | 0.0000299 | 129 | 0.000194 | 0.00529 | 0.000452 | 0.00429 | 0.03 | 0.0000893 | 75.6 | 69.9 | 0.444 | 0.0125 | 1,070 | 0.0149 | 0.00444 | 0.000182 | 0.00813 | 0.00328 | 3.91 | 0.00000924 | 0.0155 | 0.00111 | 0.00338 | 0.00893 |
| **2055** | 3,570 | 3.64 | 5.6 | 0.0925 | 1,610 | 0.668 | 584 | | | 0.00000271 | 0.0301 | 0.0394 | 1.16 | 0.143 | 0.0000296 | 128 | 0.000192 | 0.00523 | 0.000447 | 0.00425 | 0.0297 | 0.0000883 | 74.8 | 69.2 | 0.439 | 0.0123 | 1,060 | 0.0148 | 0.00439 | 0.00018 | 0.00805 | 0.00324 | 3.87 | 0.00000914 | 0.0153 | 0.0011 | 0.00334 | 0.00883 |
| **2056** | 3,530 | 3.18 | 4.89 | 0.0809 | 1,590 | 0.661 | 577 | | | 0.00000268 | 0.0297 | 0.0389 | 1.14 | 0.141 | 0.0000292 | 127 | 0.00019 | 0.00518 | 0.000443 | 0.0042 | 0.0293 | 0.0000873 | 74 | 68.4 | 0.434 | 0.0122 | 1,040 | 0.0146 | 0.00434 | 0.000178 | 0.00796 | 0.00321 | 3.83 | 0.00000904 | 0.0152 | 0.00109 | 0.0033 | 0.00873 |
| **2057** | 3,490 | 2.78 | 4.28 | 0.0707 | 1,570 | 0.653 | 571 | | | 0.00000265 | 0.0294 | 0.0385 | 1.13 | 0.14 | 0.0000289 | 125 | 0.000188 | 0.00512 | 0.000438 | 0.00415 | 0.029 | 0.0000864 | 73.2 | 67.6 | 0.429 | 0.0121 | 1,030 | 0.0144 | 0.00429 | 0.000176 | 0.00787 | 0.00317 | 3.78 | 0.00000894 | 0.015 | 0.00108 | 0.00327 | 0.00864 |
| **2058** | 3,450 | 2.43 | 3.74 | 0.0618 | 1,550 | 0.646 | 565 | | | 0.00000262 | 0.0291 | 0.0381 | 1.12 | 0.138 | 0.0000286 | 124 | 0.000186 | 0.00506 | 0.000433 | 0.00411 | 0.0287 | 0.0000854 | 72.3 | 66.9 | 0.424 | 0.0119 | 1,020 | 0.0143 | 0.00424 | 0.000174 | 0.00778 | 0.00314 | 3.74 | 0.00000884 | 0.0148 | 0.00106 | 0.00323 | 0.00854 |
| **2059** | 3,410 | 2.12 | 3.27 | 0.054 | 1,540 | 0.638 | 558 | | | 0.00000259 | 0.0287 | 0.0376 | 1.11 | 0.136 | 0.0000283 | 122 | 0.000184 | 0.005 | 0.000428 | 0.00406 | 0.0284 | 0.0000844 | 71.5 | 66.1 | 0.419 | 0.0118 | 1,010 | 0.0141 | 0.00419 | 0.000172 | 0.00769 | 0.0031 | 3.7 | 0.00000874 | 0.0147 | 0.00105 | 0.00319 | 0.00844 |
| **2060** | 3,370 | 1.86 | 2.86 | 0.0472 | 1,520 | 0.631 | 552 | | | 0.00000256 | 0.0284 | 0.0372 | 1.09 | 0.135 | 0.0000279 | 121 | 0.000182 | 0.00494 | 0.000423 | 0.00401 | 0.028 | 0.0000834 | 70.7 | 65.3 | 0.414 | 0.0116 | 997 | 0.0139 | 0.00414 | 0.00017 | 0.0076 | 0.00306 | 3.66 | 0.00000864 | 0.0145 | 0.00104 | 0.00316 | 0.00834 |
| **2061** | 3,330 | 1.62 | 2.5 | 0.0413 | 1,500 | 0.624 | 545 | | | 0.00000253 | 0.0281 | 0.0368 | 1.08 | 0.133 | 0.0000276 | 120 | 0.00018 | 0.00489 | 0.000418 | 0.00397 | 0.0277 | 0.0000825 | 69.9 | 64.6 | 0.41 | 0.0115 | 986 | 0.0138 | 0.0041 | 0.000168 | 0.00751 | 0.00303 | 3.61 | 0.00000853 | 0.0143 | 0.00103 | 0.00312 | 0.00825 |
| **2062** | 3,290 | 1.42 | 2.18 | 0.0361 | 1,480 | 0.616 | 539 | | | 0.0000025 | 0.0278 | 0.0363 | 1.07 | 0.132 | 0.0000273 | 118 | 0.000177 | 0.00483 | 0.000413 | 0.00392 | 0.0274 | 0.0000815 | 69 | 63.8 | 0.405 | 0.0114 | 974 | 0.0136 | 0.00405 | 0.000166 | 0.00742 | 0.00299 | 3.57 | 0.00000843 | 0.0142 | 0.00102 | 0.00308 | 0.00815 |
| **2063** | 3,250 | 1.24 | 1.91 | 0.0315 | 1,460 | 0.609 | 532 | | | 0.00000247 | 0.0274 | 0.0359 | 1.05 | 0.13 | 0.000027 | 117 | 0.000175 | 0.00477 | 0.000408 | 0.00387 | 0.027 | 0.0000805 | 68.2 | 63.1 | 0.4 | 0.0112 | 962 | 0.0135 | 0.004 | 0.000164 | 0.00734 | 0.00296 | 3.53 | 0.00000833 | 0.014 | 0.001 | 0.00305 | 0.00805 |
| **2064** | 3,210 | 1.08 | 1.67 | 0.0275 | 1,450 | 0.602 | 526 | | | 0.00000244 | 0.0271 | 0.0355 | 1.04 | 0.128 | 0.0000266 | 115 | 0.000173 | 0.00471 | 0.000403 | 0.00382 | 0.0267 | 0.0000795 | 67.4 | 62.3 | 0.395 | 0.0111 | 951 | 0.0133 | 0.00395 | 0.000162 | 0.00725 | 0.00292 | 3.49 | 0.00000823 | 0.0138 | 0.000992 | 0.00301 | 0.00795 |
| **2065** | 3,170 | 0.947 | 1.46 | 0.0241 | 1,430 | 0.594 | 519 | | | 0.00000241 | 0.0268 | 0.035 | 1.03 | 0.127 | 0.0000263 | 114 | 0.000171 | 0.00466 | 0.000398 | 0.00378 | 0.0264 | 0.0000786 | 66.6 | 61.5 | 0.39 | 0.011 | 939 | 0.0131 | 0.0039 | 0.00016 | 0.00716 | 0.00289 | 3.44 | 0.00000813 | 0.0136 | 0.000979 | 0.00297 | 0.00786 |
| **2066** | 3,130 | 0.828 | 1.27 | 0.021 | 1,410 | 0.587 | 513 | | | 0.00000238 | 0.0264 | 0.0346 | 1.02 | 0.125 | 0.000026 | 112 | 0.000169 | 0.0046 | 0.000393 | 0.00373 | 0.0261 | 0.0000776 | 65.7 | 60.8 | 0.385 | 0.0108 | 927 | 0.013 | 0.00385 | 0.000158 | 0.00707 | 0.00285 | 3.4 | 0.00000803 | 0.0135 | 0.000967 | 0.00294 | 0.00776 |
| **2067** | 3,090 | 0.723 | 1.11 | 0.0184 | 1,390 | 0.579 | 507 | | | 0.00000235 | 0.0261 | 0.0342 | 1 | 0.124 | 0.0000257 | 111 | 0.000167 | 0.00454 | 0.000388 | 0.00368 | 0.0257 | 0.0000766 | 64.9 | 60 | 0.381 | 0.0107 | 916 | 0.0128 | 0.00381 | 0.000156 | 0.00698 | 0.00281 | 3.36 | 0.00000793 | 0.0133 | 0.000955 | 0.0029 | 0.00766 |
| **2068** | 3,050 | 0.632 | 0.973 | 0.0161 | 1,380 | 0.572 | 500 | | | 0.00000232 | 0.0258 | 0.0337 | 0.991 | 0.122 | 0.0000253 | 110 | 0.000165 | 0.00448 | 0.000383 | 0.00364 | 0.0254 | 0.0000756 | 64.1 | 59.2 | 0.376 | 0.0106 | 904 | 0.0126 | 0.00376 | 0.000154 | 0.00689 | 0.00278 | 3.32 | 0.00000783 | 0.0131 | 0.000943 | 0.00286 | 0.00756 |
| **2069** | 3,020 | 0.553 | 0.85 | 0.0141 | 1,360 | 0.565 | 494 | | | 0.00000229 | 0.0254 | 0.0333 | 0.978 | 0.121 | 0.000025 | 108 | 0.000163 | 0.00443 | 0.000378 | 0.00359 | 0.0251 | 0.0000747 | 63.3 | 58.5 | 0.371 | 0.0104 | 892 | 0.0125 | 0.00371 | 0.000152 | 0.0068 | 0.00274 | 3.27 | 0.00000773 | 0.013 | 0.000931 | 0.00282 | 0.00747 |
| **2070** | 2,980 | 0.483 | 0.743 | 0.0123 | 1,340 | 0.557 | 487 | | | 0.00000227 | 0.0251 | 0.0329 | 0.965 | 0.119 | 0.0000247 | 107 | 0.00016 | 0.00437 | 0.000373 | 0.00354 | 0.0248 | 0.0000737 | 62.4 | 57.7 | 0.366 | 0.0103 | 881 | 0.0123 | 0.00366 | 0.00015 | 0.00671 | 0.00271 | 3.23 | 0.00000763 | 0.0128 | 0.000919 | 0.00279 | 0.00737 |
| **2071** | 2,940 | 0.422 | 0.65 | 0.0107 | 1,320 | 0.55 | 481 | | | 0.00000224 | 0.0248 | 0.0324 | 0.953 | 0.117 | 0.0000244 | 105 | 0.000158 | 0.00431 | 0.000368 | 0.0035 | 0.0244 | 0.0000727 | 61.6 | 57 | 0.361 | 0.0102 | 869 | 0.0121 | 0.00361 | 0.000148 | 0.00663 | 0.00267 | 3.19 | 0.00000753 | 0.0126 | 0.000907 | 0.00275 | 0.00727 |
| **2072** | 2,900 | 0.369 | 0.568 | 0.00939 | 1,300 | 0.543 | 474 | | | 0.00000221 | 0.0244 | 0.032 | 0.94 | 0.116 | 0.000024 | 104 | 0.000156 | 0.00425 | 0.000364 | 0.00345 | 0.0241 | 0.0000717 | 60.8 | 56.2 | 0.356 | 0.01 | 858 | 0.012 | 0.00356 | 0.000146 | 0.00654 | 0.00263 | 3.14 | 0.00000743 | 0.0125 | 0.000894 | 0.00271 | 0.00717 |
| **2073** | 2,860 | 0.323 | 0.496 | 0.0082 | 1,290 | 0.535 | 468 | | | 0.00000218 | 0.0241 | 0.0316 | 0.927 | 0.114 | 0.0000237 | 103 | 0.000154 | 0.00419 | 0.000359 | 0.0034 | 0.0238 | 0.0000708 | 60 | 55.4 | 0.352 | 0.00988 | 846 | 0.0118 | 0.00352 | 0.000144 | 0.00645 | 0.0026 | 3.1 | 0.00000732 | 0.0123 | 0.000882 | 0.00268 | 0.00708 |
| **2074** | 2,820 | 0.282 | 0.434 | 0.00717 | 1,270 | 0.528 | 462 | | | 0.00000215 | 0.0238 | 0.0311 | 0.914 | 0.113 | 0.0000234 | 101 | 0.000152 | 0.00414 | 0.000354 | 0.00336 | 0.0234 | 0.0000698 | 59.1 | 54.7 | 0.347 | 0.00974 | 834 | 0.0117 | 0.00347 | 0.000142 | 0.00636 | 0.00256 | 3.06 | 0.00000722 | 0.0121 | 0.00087 | 0.00264 | 0.00698 |
| **2075** | 2,780 | 0.246 | 0.379 | 0.00627 | 1,250 | 0.521 | 455 | | | 0.00000212 | 0.0234 | 0.0307 | 0.902 | 0.111 | 0.000023 | 99.8 | 0.00015 | 0.00408 | 0.000349 | 0.00331 | 0.0231 | 0.0000688 | 58.3 | 53.9 | 0.342 | 0.00961 | 823 | 0.0115 | 0.00342 | 0.00014 | 0.00627 | 0.00253 | 3.02 | 0.00000712 | 0.012 | 0.000858 | 0.0026 | 0.00688 |
| **2076** | 2,740 | 0.215 | 0.331 | 0.00548 | 1,230 | 0.513 | 449 | | | 0.00000209 | 0.0231 | 0.0303 | 0.889 | 0.11 | 0.0000227 | 98.4 | 0.000148 | 0.00402 | 0.000344 | 0.00326 | 0.0228 | 0.0000679 | 57.5 | 53.1 | 0.337 | 0.00947 | 811 | 0.0113 | 0.00337 | 0.000138 | 0.00618 | 0.00249 | 2.97 | 0.00000702 | 0.0118 | 0.000846 | 0.00257 | 0.00679 |
| **2077** | 2,700 | 0.188 | 0.29 | 0.00479 | 1,220 | 0.506 | 442 | | | 0.00000206 | 0.0228 | 0.0298 | 0.876 | 0.108 | 0.0000224 | 97 | 0.000146 | 0.00396 | 0.000339 | 0.00322 | 0.0225 | 0.0000669 | 56.7 | 52.4 | 0.332 | 0.00933 | 799 | 0.0112 | 0.00332 | 0.000136 | 0.00609 | 0.00246 | 2.93 | 0.00000692 | 0.0116 | 0.000834 | 0.00253 | 0.00669 |
| **2078** | 2,660 | 0.165 | 0.253 | 0.00419 | 1,200 | 0.498 | 436 | | | 0.00000203 | 0.0224 | 0.0294 | 0.863 | 0.106 | 0.0000221 | 95.5 | 0.000143 | 0.00391 | 0.000334 | 0.00317 | 0.0221 | 0.0000659 | 55.8 | 51.6 | 0.327 | 0.0092 | 788 | 0.011 | 0.00327 | 0.000134 | 0.006 | 0.00242 | 2.89 | 0.00000682 | 0.0114 | 0.000822 | 0.00249 | 0.00659 |
| **2079** | 2,620 | 0.144 | 0.221 | 0.00366 | 1,180 | 0.491 | 429 | | | 0.000002 | 0.0221 | 0.0289 | 0.851 | 0.105 | 0.0000217 | 94.1 | 0.000141 | 0.00385 | 0.000329 | 0.00312 | 0.0218 | 0.0000649 | 55 | 50.9 | 0.323 | 0.00906 | 776 | 0.0108 | 0.00323 | 0.000132 | 0.00592 | 0.00238 | 2.85 | 0.00000672 | 0.0113 | 0.000809 | 0.00246 | 0.00649 |
| **2080** | 2,580 | 0.126 | 0.193 | 0.0032 | 1,160 | 0.484 | 423 | | | 0.00000197 | 0.0218 | 0.0285 | 0.838 | 0.103 | 0.0000214 | 92.7 | 0.000139 | 0.00379 | 0.000324 | 0.00308 | 0.0215 | 0.000064 | 54.2 | 50.1 | 0.318 | 0.00893 | 764 | 0.0107 | 0.00318 | 0.00013 | 0.00583 | 0.00235 | 2.8 | 0.00000662 | 0.0111 | 0.000797 | 0.00242 | 0.0064 |
| **2081** | 2,540 | 0.11 | 0.169 | 0.0028 | 1,150 | 0.476 | 416 | | | 0.00000194 | 0.0214 | 0.0281 | 0.825 | 0.102 | 0.0000211 | 91.3 | 0.000137 | 0.00373 | 0.000319 | 0.00303 | 0.0212 | 0.000063 | 53.4 | 49.3 | 0.313 | 0.00879 | 753 | 0.0105 | 0.00313 | 0.000128 | 0.00574 | 0.00231 | 2.76 | 0.00000652 | 0.0109 | 0.000785 | 0.00238 | 0.0063 |
| **2082** | 2,500 | 0.0961 | 0.148 | 0.00244 | 1,130 | 0.469 | 410 | | | 0.00000191 | 0.0211 | 0.0276 | 0.812 | 0.1 | 0.0000208 | 89.9 | 0.000135 | 0.00367 | 0.000314 | 0.00298 | 0.0208 | 0.000062 | 52.5 | 48.6 | 0.308 | 0.00865 | 741 | 0.0104 | 0.00308 | 0.000126 | 0.00565 | 0.00228 | 2.72 | 0.00000642 | 0.0108 | 0.000773 | 0.00235 | 0.0062 |
| **2083** | 2,460 | 0.084 | 0.129 | 0.00214 | 1,110 | 0.462 | 404 | | | 0.00000188 | 0.0208 | 0.0272 | 0.8 | 0.0986 | 0.0000204 | 88.5 | 0.000133 | 0.00362 | 0.000309 | 0.00293 | 0.0205 | 0.000061 | 51.7 | 47.8 | 0.303 | 0.00852 | 729 | 0.0102 | 0.00303 | 0.000124 | 0.00556 | 0.00224 | 2.67 | 0.00000632 | 0.0106 | 0.000761 | 0.00231 | 0.0061 |
| **2084** | 2,420 | 0.0734 | 0.113 | 0.00187 | 1,090 | 0.454 | 397 | | | 0.00000185 | 0.0205 | 0.0268 | 0.787 | 0.097 | 0.0000201 | 87.1 | 0.000131 | 0.00356 | 0.000304 | 0.00289 | 0.0202 | 0.0000601 | 50.9 | 47 | 0.298 | 0.00838 | 718 | 0.01 | 0.00298 | 0.000122 | 0.00547 | 0.00221 | 2.63 | 0.00000622 | 0.0104 | 0.000749 | 0.00227 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 2,390 | 0.0642 | 0.0987 | 0.00163 | 1,070 | 0.447 | 391 | | | 0.00000182 | 0.0201 | 0.0263 | 0.774 | 0.0954 | 0.0000198 | 85.7 | 0.000129 | 0.0035 | 0.000299 | 0.00284 | 0.0198 | 0.0000591 | 50.1 | 46.3 | 0.293 | 0.00825 | 706 | 0.00987 | 0.00293 | 0.00012 | 0.00538 | 0.00217 | 2.59 | 0.00000611 | 0.0103 | 0.000737 | 0.00224 | 0.00591 |
| **2086** | 2,350 | 0.0561 | 0.0863 | 0.00143 | 1,060 | 0.44 | 384 | | | 0.00000179 | 0.0198 | 0.0259 | 0.761 | 0.0939 | 0.0000195 | 84.2 | 0.000127 | 0.00344 | 0.000294 | 0.00279 | 0.0195 | 0.0000581 | 49.2 | 45.5 | 0.289 | 0.00811 | 695 | 0.00971 | 0.00289 | 0.000118 | 0.00529 | 0.00213 | 2.55 | 0.00000601 | 0.0101 | 0.000724 | 0.0022 | 0.00581 |
| **2087** | 2,310 | 0.049 | 0.0754 | 0.00125 | 1,040 | 0.432 | 378 | | | 0.00000176 | 0.0195 | 0.0255 | 0.748 | 0.0923 | 0.0000191 | 82.8 | 0.000124 | 0.00339 | 0.00029 | 0.00275 | 0.0192 | 0.0000571 | 48.4 | 44.7 | 0.284 | 0.00797 | 683 | 0.00954 | 0.00284 | 0.000116 | 0.00521 | 0.0021 | 2.5 | 0.00000591 | 0.00993 | 0.000712 | 0.00216 | 0.00571 |
| **2088** | 2,270 | 0.0428 | 0.0659 | 0.00109 | 1,020 | 0.425 | 371 | | | 0.00000173 | 0.0191 | 0.025 | 0.736 | 0.0907 | 0.0000188 | 81.4 | 0.000122 | 0.00333 | 0.000285 | 0.0027 | 0.0189 | 0.0000562 | 47.6 | 44 | 0.279 | 0.00784 | 671 | 0.00938 | 0.00279 | 0.000114 | 0.00512 | 0.00206 | 2.46 | 0.00000581 | 0.00976 | 0.0007 | 0.00212 | 0.00562 |
| **2089** | 2,230 | 0.0374 | 0.0576 | 0.000952 | 1,000 | 0.417 | 365 | | | 0.0000017 | 0.0188 | 0.0246 | 0.723 | 0.0892 | 0.0000185 | 80 | 0.00012 | 0.00327 | 0.00028 | 0.00265 | 0.0185 | 0.0000552 | 46.8 | 43.2 | 0.274 | 0.0077 | 660 | 0.00922 | 0.00274 | 0.000112 | 0.00503 | 0.00203 | 2.42 | 0.00000571 | 0.00959 | 0.000688 | 0.00209 | 0.00552 |
| **2090** | 2,190 | 0.0327 | 0.0504 | 0.000832 | 986 | 0.41 | 358 | | | 0.00000167 | 0.0185 | 0.0242 | 0.71 | 0.0876 | 0.0000182 | 78.6 | 0.000118 | 0.00321 | 0.000275 | 0.00261 | 0.0182 | 0.0000542 | 45.9 | 42.5 | 0.269 | 0.00757 | 648 | 0.00906 | 0.00269 | 0.000111 | 0.00494 | 0.00199 | 2.38 | 0.00000561 | 0.00942 | 0.000676 | 0.00205 | 0.00542 |
| **2091** | 2,150 | 0.0286 | 0.044 | 0.000728 | 968 | 0.403 | 352 | | | 0.00000164 | 0.0181 | 0.0237 | 0.697 | 0.086 | 0.0000178 | 77.2 | 0.000116 | 0.00316 | 0.00027 | 0.00256 | 0.0179 | 0.0000532 | 45.1 | 41.7 | 0.264 | 0.00743 | 636 | 0.00889 | 0.00264 | 0.000109 | 0.00485 | 0.00196 | 2.33 | 0.00000551 | 0.00925 | 0.000664 | 0.00201 | 0.00532 |
| **2092** | 2,110 | 0.025 | 0.0385 | 0.000636 | 951 | 0.395 | 346 | | | 0.00000161 | 0.0178 | 0.0233 | 0.685 | 0.0844 | 0.0000175 | 75.8 | 0.000114 | 0.0031 | 0.000265 | 0.00251 | 0.0176 | 0.0000523 | 44.3 | 40.9 | 0.26 | 0.00729 | 625 | 0.00873 | 0.0026 | 0.000107 | 0.00476 | 0.00192 | 2.29 | 0.00000541 | 0.00908 | 0.000652 | 0.00198 | 0.00523 |
| **2093** | 2,070 | 0.0219 | 0.0336 | 0.000556 | 933 | 0.388 | 339 | | | 0.00000158 | 0.0175 | 0.0229 | 0.672 | 0.0829 | 0.0000172 | 74.4 | 0.000112 | 0.00304 | 0.00026 | 0.00247 | 0.0172 | 0.0000513 | 43.5 | 40.2 | 0.255 | 0.00716 | 613 | 0.00857 | 0.00255 | 0.000105 | 0.00467 | 0.00188 | 2.25 | 0.00000531 | 0.00891 | 0.000639 | 0.00194 | 0.00513 |
| **2094** | 2,030 | 0.0191 | 0.0294 | 0.000486 | 915 | 0.381 | 333 | | | 0.00000155 | 0.0171 | 0.0224 | 0.659 | 0.0813 | 0.0000169 | 72.9 | 0.00011 | 0.00298 | 0.000255 | 0.00242 | 0.0169 | 0.0000503 | 42.6 | 39.4 | 0.25 | 0.00702 | 601 | 0.00841 | 0.0025 | 0.000103 | 0.00458 | 0.00185 | 2.21 | 0.00000521 | 0.00874 | 0.000627 | 0.0019 | 0.00503 |
| **2095** | 1,990 | 0.0167 | 0.0257 | 0.000425 | 897 | 0.373 | 326 | | | 0.00000152 | 0.0168 | 0.022 | 0.646 | 0.0797 | 0.0000165 | 71.5 | 0.000107 | 0.00292 | 0.00025 | 0.00237 | 0.0166 | 0.0000493 | 41.8 | 38.6 | 0.245 | 0.00689 | 590 | 0.00824 | 0.00245 | 0.000101 | 0.0045 | 0.00181 | 2.16 | 0.00000511 | 0.00857 | 0.000615 | 0.00187 | 0.00493 |
| **2096** | 1,950 | 0.0146 | 0.0225 | 0.000371 | 880 | 0.366 | 320 | | | 0.00000149 | 0.0165 | 0.0216 | 0.634 | 0.0781 | 0.0000162 | 70.1 | 0.000105 | 0.00287 | 0.000245 | 0.00233 | 0.0162 | 0.0000484 | 41 | 37.9 | 0.24 | 0.00675 | 578 | 0.00808 | 0.0024 | 0.0000986 | 0.00441 | 0.00178 | 2.12 | 0.00000501 | 0.0084 | 0.000603 | 0.00183 | 0.00484 |
| **2097** | 1,910 | 0.0128 | 0.0196 | 0.000324 | 862 | 0.358 | 313 | | | 0.00000146 | 0.0161 | 0.0211 | 0.621 | 0.0766 | 0.0000159 | 68.7 | 0.000103 | 0.00281 | 0.00024 | 0.00228 | 0.0159 | 0.0000474 | 40.2 | 37.1 | 0.235 | 0.00661 | 566 | 0.00792 | 0.00235 | 0.0000966 | 0.00432 | 0.00174 | 2.08 | 0.0000049 | 0.00823 | 0.000591 | 0.00179 | 0.00474 |
| **2098** | 1,870 | 0.0112 | 0.0172 | 0.000284 | 844 | 0.351 | 307 | | | 0.00000143 | 0.0158 | 0.0207 | 0.608 | 0.075 | 0.0000155 | 67.3 | 0.000101 | 0.00275 | 0.000235 | 0.00223 | 0.0156 | 0.0000464 | 39.3 | 36.4 | 0.231 | 0.00648 | 555 | 0.00775 | 0.00231 | 0.0000946 | 0.00423 | 0.0017 | 2.03 | 0.0000048 | 0.00806 | 0.000579 | 0.00176 | 0.00464 |
| **2099** | 1,830 | 0.00975 | 0.015 | 0.000248 | 827 | 0.344 | 300 | | | 0.0000014 | 0.0155 | 0.0203 | 0.595 | 0.0734 | 0.0000152 | 65.9 | 0.0000989 | 0.00269 | 0.00023 | 0.00219 | 0.0153 | 0.0000454 | 38.5 | 35.6 | 0.226 | 0.00634 | 543 | 0.00759 | 0.00226 | 0.0000926 | 0.00414 | 0.00167 | 1.99 | 0.0000047 | 0.00789 | 0.000567 | 0.00172 | 0.00454 |
| **2100** | 1,800 | 0.00852 | 0.0131 | 0.000217 | 809 | 0.336 | 294 | | | 0.00000137 | 0.0151 | 0.0198 | 0.583 | 0.0718 | 0.0000149 | 64.5 | 0.0000968 | 0.00264 | 0.000225 | 0.00214 | 0.0149 | 0.0000445 | 37.7 | 34.8 | 0.221 | 0.00621 | 532 | 0.00743 | 0.00221 | 0.0000907 | 0.00405 | 0.00163 | 1.95 | 0.0000046 | 0.00773 | 0.000554 | 0.00168 | 0.00445 |
| **2101** | 1,760 | 0.00745 | 0.0115 | 0.000189 | 791 | 0.329 | 288 | | | 0.00000134 | 0.0148 | 0.0194 | 0.57 | 0.0703 | 0.0000146 | 63.1 | 0.0000947 | 0.00258 | 0.00022 | 0.00209 | 0.0146 | 0.0000435 | 36.8 | 34.1 | 0.216 | 0.00607 | 520 | 0.00727 | 0.00216 | 0.0000887 | 0.00396 | 0.0016 | 1.91 | 0.0000045 | 0.00756 | 0.000542 | 0.00165 | 0.00435 |
| **2102** | 1,720 | 0.00651 | 0.01 | 0.000166 | 773 | 0.322 | 281 | | | 0.00000131 | 0.0145 | 0.019 | 0.557 | 0.0687 | 0.0000142 | 61.6 | 0.0000926 | 0.00252 | 0.000215 | 0.00204 | 0.0143 | 0.0000425 | 36 | 33.3 | 0.211 | 0.00594 | 508 | 0.0071 | 0.00211 | 0.0000867 | 0.00387 | 0.00156 | 1.86 | 0.0000044 | 0.00739 | 0.00053 | 0.00161 | 0.00425 |
| **2103** | 1,680 | 0.00569 | 0.00875 | 0.000145 | 756 | 0.314 | 275 | | | 0.00000128 | 0.0141 | 0.0185 | 0.544 | 0.0671 | 0.0000139 | 60.2 | 0.0000905 | 0.00246 | 0.000211 | 0.002 | 0.014 | 0.0000415 | 35.2 | 32.5 | 0.206 | 0.0058 | 497 | 0.00694 | 0.00206 | 0.0000847 | 0.00379 | 0.00153 | 1.82 | 0.0000043 | 0.00722 | 0.000518 | 0.00157 | 0.00415 |
| **2104** | 1,640 | 0.00497 | 0.00765 | 0.000126 | 738 | 0.307 | 268 | | | 0.00000125 | 0.0138 | 0.0181 | 0.532 | 0.0655 | 0.0000136 | 58.8 | 0.0000883 | 0.0024 | 0.000206 | 0.00195 | 0.0136 | 0.0000406 | 34.4 | 31.8 | 0.202 | 0.00566 | 485 | 0.00678 | 0.00202 | 0.0000827 | 0.0037 | 0.00149 | 1.78 | 0.0000042 | 0.00705 | 0.000506 | 0.00153 | 0.00406 |
| **2105** | 1,600 | 0.00435 | 0.00669 | 0.000111 | 720 | 0.3 | 262 | | | 0.00000122 | 0.0135 | 0.0177 | 0.519 | 0.064 | 0.0000133 | 57.4 | 0.0000862 | 0.00235 | 0.000201 | 0.0019 | 0.0133 | 0.0000396 | 33.5 | 31 | 0.197 | 0.00553 | 473 | 0.00662 | 0.00197 | 0.0000807 | 0.00361 | 0.00145 | 1.74 | 0.0000041 | 0.00688 | 0.000494 | 0.0015 | 0.00396 |
| **2106** | 1,560 | 0.0038 | 0.00585 | 0.0000966 | 703 | 0.292 | 255 | | | 0.00000119 | 0.0132 | 0.0172 | 0.506 | 0.0624 | 0.0000129 | 56 | 0.0000841 | 0.00229 | 0.000196 | 0.00186 | 0.013 | 0.0000386 | 32.7 | 30.3 | 0.192 | 0.00539 | 462 | 0.00645 | 0.00192 | 0.0000787 | 0.00352 | 0.00142 | 1.69 | 0.000004 | 0.00671 | 0.000482 | 0.00146 | 0.00386 |
| **2107** | 1,520 | 0.00332 | 0.00511 | 0.0000845 | 685 | 0.285 | 249 | | | 0.00000116 | 0.0128 | 0.0168 | 0.493 | 0.0608 | 0.0000126 | 54.6 | 0.000082 | 0.00223 | 0.000191 | 0.00181 | 0.0126 | 0.0000377 | 31.9 | 29.5 | 0.187 | 0.00526 | 450 | 0.00629 | 0.00187 | 0.0000768 | 0.00343 | 0.00138 | 1.65 | 0.0000039 | 0.00654 | 0.000469 | 0.00142 | 0.00377 |
| **2108** | 1,480 | 0.0029 | 0.00447 | 0.0000738 | 667 | 0.277 | 243 | | | 0.00000113 | 0.0125 | 0.0164 | 0.48 | 0.0593 | 0.0000123 | 53.2 | 0.0000799 | 0.00217 | 0.000186 | 0.00176 | 0.0123 | 0.0000367 | 31.1 | 28.7 | 0.182 | 0.00512 | 438 | 0.00613 | 0.00182 | 0.0000748 | 0.00334 | 0.00135 | 1.61 | 0.0000038 | 0.00637 | 0.000457 | 0.00139 | 0.00367 |
| **2109** | 1,440 | 0.00254 | 0.0039 | 0.0000645 | 649 | 0.27 | 236 | | | 0.0000011 | 0.0122 | 0.0159 | 0.468 | 0.0577 | 0.000012 | 51.8 | 0.0000777 | 0.00212 | 0.000181 | 0.00172 | 0.012 | 0.0000357 | 30.2 | 28 | 0.177 | 0.00498 | 427 | 0.00596 | 0.00177 | 0.0000728 | 0.00325 | 0.00131 | 1.56 | 0.0000037 | 0.0062 | 0.000445 | 0.00135 | 0.00357 |
| **2110** | 1,400 | 0.00222 | 0.00341 | 0.0000564 | 632 | 0.263 | 230 | | | 0.00000107 | 0.0118 | 0.0155 | 0.455 | 0.0561 | 0.0000116 | 50.3 | 0.0000756 | 0.00206 | 0.000176 | 0.00167 | 0.0117 | 0.0000347 | 29.4 | 27.2 | 0.173 | 0.00485 | 415 | 0.0058 | 0.00173 | 0.0000708 | 0.00316 | 0.00128 | 1.52 | 0.00000359 | 0.00603 | 0.000433 | 0.00131 | 0.00347 |
| **2111** | 1,360 | 0.00194 | 0.00298 | 0.0000493 | 614 | 0.255 | 223 | | | 0.00000104 | 0.0115 | 0.0151 | 0.442 | 0.0545 | 0.0000113 | 48.9 | 0.0000735 | 0.002 | 0.000171 | 0.00162 | 0.0113 | 0.0000338 | 28.6 | 26.4 | 0.168 | 0.00471 | 403 | 0.00564 | 0.00168 | 0.0000688 | 0.00308 | 0.00124 | 1.48 | 0.00000349 | 0.00586 | 0.000421 | 0.00128 | 0.00338 |
| **2112** | 1,320 | 0.00169 | 0.00261 | 0.0000431 | 596 | 0.248 | 217 | | | 0.00000101 | 0.0112 | 0.0146 | 0.429 | 0.053 | 0.000011 | 47.5 | 0.0000714 | 0.00194 | 0.000166 | 0.00158 | 0.011 | 0.0000328 | 27.8 | 25.7 | 0.163 | 0.00458 | 392 | 0.00548 | 0.00163 | 0.0000668 | 0.00299 | 0.0012 | 1.44 | 0.00000339 | 0.00569 | 0.000409 | 0.00124 | 0.00328 |
| **2113** | 1,280 | 0.00148 | 0.00228 | 0.0000377 | 578 | 0.241 | 210 | | | 0.000000978 | 0.0108 | 0.0142 | 0.417 | 0.0514 | 0.0000107 | 46.1 | 0.0000693 | 0.00189 | 0.000161 | 0.00153 | 0.0107 | 0.0000318 | 26.9 | 24.9 | 0.158 | 0.00444 | 380 | 0.00531 | 0.00158 | 0.0000648 | 0.0029 | 0.00117 | 1.39 | 0.00000329 | 0.00553 | 0.000397 | 0.0012 | 0.00318 |
| **2114** | 1,240 | 0.00129 | 0.00199 | 0.0000329 | 561 | 0.233 | 204 | | | 0.000000948 | 0.0105 | 0.0137 | 0.404 | 0.0498 | 0.0000103 | 44.7 | 0.0000671 | 0.00183 | 0.000156 | 0.00148 | 0.0104 | 0.0000308 | 26.1 | 24.1 | 0.153 | 0.0043 | 369 | 0.00515 | 0.00153 | 0.0000628 | 0.00281 | 0.00113 | 1.35 | 0.00000319 | 0.00536 | 0.000384 | 0.00117 | 0.00308 |
| **2115** | 1,210 | 0.00113 | 0.00174 | 0.0000288 | 543 | 0.226 | 197 | | | 0.000000918 | 0.0102 | 0.0133 | 0.391 | 0.0482 | 0.00001 | 43.3 | 0.000065 | 0.00177 | 0.000151 | 0.00144 | 0.01 | 0.0000299 | 25.3 | 23.4 | 0.148 | 0.00417 | 357 | 0.00499 | 0.00148 | 0.0000609 | 0.00272 | 0.0011 | 1.31 | 0.00000309 | 0.00519 | 0.000372 | 0.00113 | 0.00299 |
| **2116** | 1,170 | 0.000989 | 0.00152 | 0.0000252 | 525 | 0.218 | 191 | | | 0.000000888 | 0.00984 | 0.0129 | 0.378 | 0.0467 | 0.00000967 | 41.9 | 0.0000629 | 0.00171 | 0.000146 | 0.00139 | 0.0097 | 0.0000289 | 24.5 | 22.6 | 0.143 | 0.00403 | 345 | 0.00483 | 0.00143 | 0.0000589 | 0.00263 | 0.00106 | 1.27 | 0.00000299 | 0.00502 | 0.00036 | 0.00109 | 0.00289 |
| **2117** | 1,130 | 0.000864 | 0.00133 | 0.000022 | 508 | 0.211 | 185 | | | 0.000000858 | 0.0095 | 0.0124 | 0.366 | 0.0451 | 0.00000935 | 40.5 | 0.0000608 | 0.00165 | 0.000141 | 0.00134 | 0.00938 | 0.0000279 | 23.6 | 21.9 | 0.139 | 0.0039 | 334 | 0.00466 | 0.00139 | 0.0000569 | 0.00254 | 0.00102 | 1.22 | 0.00000289 | 0.00485 | 0.000348 | 0.00106 | 0.00279 |
| **2118** | 1,090 | 0.000756 | 0.00116 | 0.0000192 | 490 | 0.204 | 178 | | | 0.000000828 | 0.00917 | 0.012 | 0.353 | 0.0435 | 0.00000902 | 39 | 0.0000586 | 0.0016 | 0.000136 | 0.0013 | 0.00905 | 0.0000269 | 22.8 | 21.1 | 0.134 | 0.00376 | 322 | 0.0045 | 0.00134 | 0.0000549 | 0.00245 | 0.000989 | 1.18 | 0.00000279 | 0.00468 | 0.000336 | 0.00102 | 0.00269 |
| **2119** | 1,050 | 0.00066 | 0.00102 | 0.0000168 | 472 | 0.196 | 172 | | | 0.000000798 | 0.00884 | 0.0116 | 0.34 | 0.0419 | 0.00000869 | 37.6 | 0.0000565 | 0.00154 | 0.000132 | 0.00125 | 0.00872 | 0.000026 | 22 | 20.3 | 0.129 | 0.00362 | 310 | 0.00434 | 0.00129 | 0.0000529 | 0.00237 | 0.000953 | 1.14 | 0.00000269 | 0.00451 | 0.000324 | 0.000982 | 0.0026 |
| **2120** | 1,010 | 0.000577 | 0.000888 | 0.0000147 | 454 | 0.189 | 165 | | | 0.000000768 | 0.00851 | 0.0111 | 0.327 | 0.0404 | 0.00000837 | 36.2 | 0.0000544 | 0.00148 | 0.000127 | 0.0012 | 0.00839 | 0.000025 | 21.2 | 19.6 | 0.124 | 0.00349 | 299 | 0.00417 | 0.00124 | 0.0000509 | 0.00228 | 0.000918 | 1.1 | 0.00000259 | 0.00434 | 0.000312 | 0.000945 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF5** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | 2,510 | 18.3 | 28.1 | 0.465 | 1,140 | 0.756 | 414 | | | 0.0000199 | 0.0325 | 0.0121 | 1.31 | 0.0241 | 0.0000132 | 90.8 | 0.000212 | 0.000569 | 0.00171 | 0.016 | 0.0432 | 0.0001 | 18.7 | 49 | 0.5 | 0.00665 | 748 | 0.0676 | 0.005 | 0.0000868 | 0.0107 | 0.00354 | 2.18 | 0.00000393 | 0.00293 | 0.00525 | 0.00718 | 0.01 |
| **2025** | 2,510 | 18.3 | 28.1 | 0.465 | 1,140 | 0.756 | 414 | | | 0.0000199 | 0.0325 | 0.0121 | 1.31 | 0.0241 | 0.0000132 | 90.8 | 0.000212 | 0.000569 | 0.00171 | 0.016 | 0.0432 | 0.0001 | 18.7 | 49 | 0.5 | 0.00665 | 748 | 0.0676 | 0.005 | 0.0000868 | 0.0107 | 0.00354 | 2.18 | 0.00000393 | 0.00293 | 0.00525 | 0.00718 | 0.01 |
| **2026** | 2,620 | 18.3 | 28.1 | 0.465 | 1,190 | 0.756 | 432 | | | 0.0000198 | 0.0318 | 0.0139 | 1.31 | 0.0238 | 0.0000134 | 94.6 | 0.000208 | 0.000562 | 0.00193 | 0.0163 | 0.0417 | 0.0001 | 19 | 51.1 | 0.5 | 0.00556 | 780 | 0.0737 | 0.005 | 0.0000715 | 0.0101 | 0.00353 | 1.83 | 0.00000347 | 0.00289 | 0.00512 | 0.00722 | 0.01 |
| **2027** | 2,610 | 18.3 | 28.1 | 0.465 | 1,180 | 0.756 | 430 | | | 0.0000199 | 0.0317 | 0.0136 | 1.31 | 0.0224 | 0.0000132 | 94.3 | 0.000208 | 0.000494 | 0.00193 | 0.0162 | 0.0424 | 0.0001 | 18.1 | 50.9 | 0.5 | 0.00569 | 777 | 0.0738 | 0.005 | 0.0000737 | 0.0102 | 0.00354 | 1.89 | 0.00000347 | 0.00274 | 0.00515 | 0.00722 | 0.01 |
| **2028** | 2,550 | 18.3 | 28.1 | 0.465 | 1,150 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 759 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2029** | 2,300 | 16 | 24.6 | 0.407 | 1,010 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 663 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2030** | 2,090 | 14 | 21.5 | 0.355 | 882 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 580 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2031** | 1,900 | 12.2 | 18.8 | 0.311 | 771 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 507 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2032** | 1,740 | 10.7 | 16.4 | 0.272 | 674 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 443 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2033** | 1,600 | 9.33 | 14.4 | 0.237 | 589 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 387 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2034** | 1,470 | 8.16 | 12.6 | 0.207 | 515 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 338 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2035** | 1,360 | 7.13 | 11 | 0.181 | 450 | 0.756 | 420 | | | 0.0000199 | 0.0319 | 0.0131 | 1.31 | 0.0229 | 0.0000132 | 92 | 0.000209 | 0.000509 | 0.0019 | 0.0161 | 0.0425 | 0.0001 | 18.2 | 49.7 | 0.499 | 0.00594 | 296 | 0.0729 | 0.00499 | 0.0000775 | 0.0104 | 0.00353 | 1.97 | 0.0000036 | 0.00281 | 0.00518 | 0.00721 | 0.01 |
| **2036** | 5,990 | 21.2 | 36 | 2.68 | 2,700 | 0.8 | 981 | | | 0.00002 | 0.0386 | 0.0284 | 0.9 | 0.146 | 0.000044 | 215 | 0.0000685 | 0.0239 | 0.0019 | 0.0112 | 0.0237 | 0.0001 | 146 | 116 | 0.532 | 0.0357 | 1,770 | 0.062 | 0.0581 | 0.0000775 | 0.00387 | 0.00367 | 0.74 | 0.0000036 | 0.0519 | 0.00153 | 0.005 | 0.01 |
| **2037** | 3,140 | 18.3 | 28.1 | 0.465 | 1,430 | 0.756 | 520 | | | 0.0000189 | 0.0299 | 0.0159 | 1.31 | 0.0214 | 0.0000129 | 114 | 0.000204 | 0.000709 | 0.00206 | 0.0152 | 0.0451 | 0.0001 | 16.7 | 61.6 | 0.5 | 0.00644 | 941 | 0.0764 | 0.005 | 0.0000769 | 0.00992 | 0.00362 | 1.92 | 0.0000033 | 0.00304 | 0.00485 | 0.00707 | 0.01 |
| **2038** | 3,590 | 18.3 | 28.1 | 0.465 | 1,640 | 0.756 | 597 | | | 0.0000182 | 0.029 | 0.0172 | 1.31 | 0.021 | 0.0000127 | 131 | 0.000202 | 0.000856 | 0.00193 | 0.0147 | 0.0468 | 0.0001 | 16.2 | 70.7 | 0.5 | 0.00695 | 1,080 | 0.0723 | 0.005 | 0.0000779 | 0.00956 | 0.00369 | 1.92 | 0.00000321 | 0.0031 | 0.00465 | 0.00694 | 0.01 |
| **2039** | 3,680 | 18.3 | 28.1 | 0.465 | 1,680 | 0.756 | 612 | | | 0.000018 | 0.0286 | 0.0175 | 1.31 | 0.021 | 0.0000126 | 134 | 0.000202 | 0.000921 | 0.00197 | 0.0144 | 0.0476 | 0.0001 | 15.8 | 72.5 | 0.499 | 0.00729 | 1,110 | 0.0732 | 0.00499 | 0.0000812 | 0.0096 | 0.0037 | 1.98 | 0.00000324 | 0.00324 | 0.00459 | 0.00689 | 0.01 |
| **2040** | 4,160 | 18.3 | 28.1 | 0.465 | 1,910 | 0.756 | 694 | | | 0.000017 | 0.0269 | 0.0196 | 1.31 | 0.0201 | 0.0000123 | 152 | 0.000197 | 0.00113 | 0.00208 | 0.0133 | 0.0502 | 0.0001 | 14.5 | 82.2 | 0.498 | 0.00806 | 1,250 | 0.0753 | 0.00498 | 0.0000853 | 0.00933 | 0.00378 | 2.03 | 0.00000311 | 0.00354 | 0.0043 | 0.00672 | 0.01 |
| **2041** | 3,760 | 16 | 24.6 | 0.407 | 1,670 | 0.756 | 694 | | | 0.000017 | 0.0269 | 0.0196 | 1.31 | 0.0201 | 0.0000123 | 152 | 0.000197 | 0.00113 | 0.00208 | 0.0133 | 0.0502 | 0.0001 | 14.5 | 82.2 | 0.498 | 0.00806 | 1,100 | 0.0753 | 0.00498 | 0.0000853 | 0.00933 | 0.00378 | 2.03 | 0.00000311 | 0.00354 | 0.0043 | 0.00672 | 0.01 |
| **2042** | 3,410 | 14 | 21.5 | 0.355 | 1,460 | 0.756 | 694 | | | 0.000017 | 0.0269 | 0.0196 | 1.31 | 0.0201 | 0.0000123 | 152 | 0.000197 | 0.00113 | 0.00208 | 0.0133 | 0.0502 | 0.0001 | 14.5 | 82.2 | 0.498 | 0.00806 | 958 | 0.0753 | 0.00498 | 0.0000853 | 0.00933 | 0.00378 | 2.03 | 0.00000311 | 0.00354 | 0.0043 | 0.00672 | 0.01 |
| **2043** | 3,100 | 12.2 | 18.8 | 0.311 | 1,270 | 0.756 | 694 | | | 0.000017 | 0.0269 | 0.0196 | 1.31 | 0.0201 | 0.0000123 | 152 | 0.000197 | 0.00113 | 0.00208 | 0.0133 | 0.0502 | 0.0001 | 14.5 | 82.2 | 0.498 | 0.00806 | 838 | 0.0753 | 0.00498 | 0.0000853 | 0.00933 | 0.00378 | 2.03 | 0.00000311 | 0.00354 | 0.0043 | 0.00672 | 0.01 |
| **2044** | 3,070 | 10.7 | 16.4 | 0.272 | 1,260 | 0.749 | 687 | | | 0.0000169 | 0.0266 | 0.0194 | 1.3 | 0.0199 | 0.0000122 | 151 | 0.000195 | 0.00112 | 0.00206 | 0.0132 | 0.0497 | 0.000099 | 14.3 | 81.4 | 0.493 | 0.00798 | 830 | 0.0746 | 0.00493 | 0.0000844 | 0.00924 | 0.00374 | 2.01 | 0.00000308 | 0.0035 | 0.00425 | 0.00666 | 0.0099 |
| **2045** | 3,040 | 9.33 | 14.4 | 0.237 | 1,250 | 0.742 | 680 | | | 0.0000167 | 0.0264 | 0.0192 | 1.28 | 0.0197 | 0.0000121 | 149 | 0.000193 | 0.00111 | 0.00204 | 0.0131 | 0.0493 | 0.0000981 | 14.2 | 80.6 | 0.488 | 0.00791 | 821 | 0.0739 | 0.00488 | 0.0000836 | 0.00915 | 0.0037 | 1.99 | 0.00000305 | 0.00347 | 0.00421 | 0.00659 | 0.00981 |
| **2046** | 3,010 | 8.16 | 12.6 | 0.207 | 1,240 | 0.734 | 674 | | | 0.0000165 | 0.0261 | 0.019 | 1.27 | 0.0195 | 0.000012 | 148 | 0.000191 | 0.0011 | 0.00202 | 0.013 | 0.0488 | 0.0000971 | 14 | 79.8 | 0.483 | 0.00783 | 813 | 0.0731 | 0.00483 | 0.0000828 | 0.00906 | 0.00367 | 1.97 | 0.00000302 | 0.00344 | 0.00417 | 0.00652 | 0.00971 |
| **2047** | 2,980 | 7.13 | 11 | 0.181 | 1,230 | 0.727 | 667 | | | 0.0000164 | 0.0259 | 0.0188 | 1.26 | 0.0193 | 0.0000119 | 146 | 0.000189 | 0.00109 | 0.002 | 0.0128 | 0.0483 | 0.0000961 | 13.9 | 79 | 0.479 | 0.00775 | 805 | 0.0724 | 0.00479 | 0.0000819 | 0.00897 | 0.00363 | 1.95 | 0.00000299 | 0.0034 | 0.00413 | 0.00646 | 0.00961 |
| **2048** | 2,950 | 6.23 | 9.59 | 0.158 | 1,210 | 0.719 | 660 | | | 0.0000162 | 0.0256 | 0.0186 | 1.25 | 0.0192 | 0.0000117 | 145 | 0.000187 | 0.00108 | 0.00198 | 0.0127 | 0.0478 | 0.0000951 | 13.8 | 78.2 | 0.474 | 0.00767 | 797 | 0.0717 | 0.00474 | 0.0000811 | 0.00888 | 0.00359 | 1.93 | 0.00000296 | 0.00337 | 0.00409 | 0.00639 | 0.00951 |
| **2049** | 2,920 | 5.45 | 8.38 | 0.139 | 1,200 | 0.712 | 653 | | | 0.000016 | 0.0253 | 0.0184 | 1.23 | 0.019 | 0.0000116 | 143 | 0.000185 | 0.00107 | 0.00196 | 0.0126 | 0.0473 | 0.0000942 | 13.6 | 77.4 | 0.469 | 0.00759 | 789 | 0.0709 | 0.00469 | 0.0000803 | 0.00879 | 0.00356 | 1.91 | 0.00000292 | 0.00333 | 0.00404 | 0.00633 | 0.00942 |
| **2050** | 2,890 | 4.76 | 7.33 | 0.121 | 1,190 | 0.705 | 647 | | | 0.0000159 | 0.0251 | 0.0182 | 1.22 | 0.0188 | 0.0000115 | 142 | 0.000184 | 0.00106 | 0.00194 | 0.0124 | 0.0468 | 0.0000932 | 13.5 | 76.6 | 0.464 | 0.00751 | 781 | 0.0702 | 0.00464 | 0.0000794 | 0.0087 | 0.00352 | 1.89 | 0.00000289 | 0.0033 | 0.004 | 0.00626 | 0.00932 |
| **2051** | 2,860 | 4.16 | 6.4 | 0.106 | 1,180 | 0.697 | 640 | | | 0.0000157 | 0.0248 | 0.0181 | 1.21 | 0.0186 | 0.0000114 | 140 | 0.000182 | 0.00104 | 0.00192 | 0.0123 | 0.0463 | 0.0000922 | 13.3 | 75.8 | 0.459 | 0.00743 | 772 | 0.0695 | 0.00459 | 0.0000786 | 0.00861 | 0.00348 | 1.87 | 0.00000286 | 0.00326 | 0.00396 | 0.0062 | 0.00922 |
| **2052** | 2,830 | 3.64 | 5.6 | 0.0925 | 1,160 | 0.69 | 633 | | | 0.0000155 | 0.0246 | 0.0179 | 1.2 | 0.0184 | 0.0000113 | 139 | 0.00018 | 0.00103 | 0.0019 | 0.0122 | 0.0458 | 0.0000912 | 13.2 | 75 | 0.454 | 0.00736 | 764 | 0.0687 | 0.00454 | 0.0000778 | 0.00852 | 0.00345 | 1.85 | 0.00000283 | 0.00323 | 0.00392 | 0.00613 | 0.00912 |
| **2053** | 2,800 | 3.18 | 4.89 | 0.0809 | 1,150 | 0.683 | 626 | | | 0.0000154 | 0.0243 | 0.0177 | 1.18 | 0.0182 | 0.0000111 | 137 | 0.000178 | 0.00102 | 0.00188 | 0.012 | 0.0453 | 0.0000903 | 13.1 | 74.2 | 0.449 | 0.00728 | 756 | 0.068 | 0.00449 | 0.000077 | 0.00842 | 0.00341 | 1.83 | 0.0000028 | 0.00319 | 0.00388 | 0.00607 | 0.00903 |
| **2054** | 2,770 | 2.78 | 4.28 | 0.0707 | 1,140 | 0.675 | 620 | | | 0.0000152 | 0.024 | 0.0175 | 1.17 | 0.018 | 0.000011 | 136 | 0.000176 | 0.00101 | 0.00186 | 0.0119 | 0.0449 | 0.0000893 | 12.9 | 73.4 | 0.445 | 0.0072 | 748 | 0.0673 | 0.00445 | 0.0000761 | 0.00833 | 0.00337 | 1.81 | 0.00000277 | 0.00316 | 0.00384 | 0.006 | 0.00893 |
| **2055** | 2,740 | 2.43 | 3.74 | 0.0618 | 1,130 | 0.668 | 613 | | | 0.000015 | 0.0238 | 0.0173 | 1.16 | 0.0178 | 0.0000109 | 134 | 0.000174 | 0.001 | 0.00184 | 0.0118 | 0.0444 | 0.0000883 | 12.8 | 72.6 | 0.44 | 0.00712 | 740 | 0.0665 | 0.0044 | 0.0000753 | 0.00824 | 0.00334 | 1.79 | 0.00000274 | 0.00312 | 0.00379 | 0.00594 | 0.00883 |
| **2056** | 2,710 | 2.12 | 3.27 | 0.054 | 1,110 | 0.661 | 606 | | | 0.0000149 | 0.0235 | 0.0171 | 1.14 | 0.0176 | 0.0000108 | 133 | 0.000172 | 0.000989 | 0.00182 | 0.0117 | 0.0439 | 0.0000873 | 12.6 | 71.8 | 0.435 | 0.00704 | 732 | 0.0658 | 0.00435 | 0.0000745 | 0.00815 | 0.0033 | 1.77 | 0.00000271 | 0.00309 | 0.00375 | 0.00587 | 0.00873 |
| **2057** | 2,680 | 1.86 | 2.86 | 0.0472 | 1,100 | 0.653 | 599 | | | 0.0000147 | 0.0232 | 0.0169 | 1.13 | 0.0174 | 0.0000107 | 131 | 0.00017 | 0.000978 | 0.0018 | 0.0115 | 0.0434 | 0.0000864 | 12.5 | 71 | 0.43 | 0.00696 | 723 | 0.065 | 0.0043 | 0.0000736 | 0.00806 | 0.00326 | 1.75 | 0.00000268 | 0.00306 | 0.00371 | 0.0058 | 0.00864 |
| **2058** | 2,650 | 1.62 | 2.5 | 0.0413 | 1,090 | 0.646 | 593 | | | 0.0000145 | 0.023 | 0.0167 | 1.12 | 0.0172 | 0.0000105 | 130 | 0.000168 | 0.000967 | 0.00178 | 0.0114 | 0.0429 | 0.0000854 | 12.4 | 70.2 | 0.425 | 0.00688 | 715 | 0.0643 | 0.00425 | 0.0000728 | 0.00797 | 0.00322 | 1.73 | 0.00000265 | 0.00302 | 0.00367 | 0.00574 | 0.00854 |
| **2059** | 2,620 | 1.42 | 2.18 | 0.0361 | 1,080 | 0.638 | 586 | | | 0.0000144 | 0.0227 | 0.0165 | 1.11 | 0.017 | 0.0000104 | 128 | 0.000166 | 0.000956 | 0.00176 | 0.0113 | 0.0424 | 0.0000844 | 12.2 | 69.4 | 0.42 | 0.00681 | 707 | 0.0636 | 0.0042 | 0.000072 | 0.00788 | 0.00319 | 1.71 | 0.00000262 | 0.00299 | 0.00363 | 0.00567 | 0.00844 |
| **2060** | 2,590 | 1.24 | 1.91 | 0.0315 | 1,060 | 0.631 | 579 | | | 0.0000142 | 0.0225 | 0.0163 | 1.09 | 0.0168 | 0.0000103 | 127 | 0.000164 | 0.000945 | 0.00174 | 0.0111 | 0.0419 | 0.0000834 | 12.1 | 68.6 | 0.415 | 0.00673 | 699 | 0.0628 | 0.00415 | 0.0000711 | 0.00779 | 0.00315 | 1.69 | 0.00000259 | 0.00295 | 0.00358 | 0.00561 | 0.00834 |
| **2061** | 2,560 | 1.08 | 1.67 | 0.0275 | 1,050 | 0.624 | 572 | | | 0.000014 | 0.0222 | 0.0161 | 1.08 | 0.0166 | 0.0000102 | 125 | 0.000162 | 0.000934 | 0.00172 | 0.011 | 0.0414 | 0.0000825 | 11.9 | 67.8 | 0.411 | 0.00665 | 691 | 0.0621 | 0.00411 | 0.0000703 | 0.0077 | 0.00311 | 1.67 | 0.00000256 | 0.00292 | 0.00354 | 0.00554 | 0.00825 |
| **2062** | 2,530 | 0.947 | 1.46 | 0.0241 | 1,040 | 0.616 | 566 | | | 0.0000139 | 0.0219 | 0.016 | 1.07 | 0.0164 | 0.0000101 | 124 | 0.000161 | 0.000923 | 0.0017 | 0.0109 | 0.0409 | 0.0000815 | 11.8 | 67 | 0.406 | 0.00657 | 683 | 0.0614 | 0.00406 | 0.0000695 | 0.00761 | 0.00308 | 1.65 | 0.00000253 | 0.00288 | 0.0035 | 0.00548 | 0.00815 |
| **2063** | 2,500 | 0.828 | 1.27 | 0.021 | 1,030 | 0.609 | 559 | | | 0.0000137 | 0.0217 | 0.0158 | 1.05 | 0.0162 | 0.00000994 | 123 | 0.000159 | 0.000912 | 0.00168 | 0.0107 | 0.0404 | 0.0000805 | 11.6 | 66.2 | 0.401 | 0.00649 | 675 | 0.0606 | 0.00401 | 0.0000686 | 0.00751 | 0.00304 | 1.63 | 0.0000025 | 0.00285 | 0.00346 | 0.00541 | 0.00805 |
| **2064** | 2,470 | 0.723 | 1.11 | 0.0184 | 1,010 | 0.602 | 552 | | | 0.0000135 | 0.0214 | 0.0156 | 1.04 | 0.016 | 0.00000982 | 121 | 0.000157 | 0.000901 | 0.00165 | 0.0106 | 0.04 | 0.0000795 | 11.5 | 65.4 | 0.396 | 0.00641 | 666 | 0.0599 | 0.00396 | 0.0000678 | 0.00742 | 0.003 | 1.62 | 0.00000247 | 0.00281 | 0.00342 | 0.00535 | 0.00795 |
| **2065** | 2,440 | 0.632 | 0.973 | 0.0161 | 1,000 | 0.594 | 545 | | | 0.0000134 | 0.0211 | 0.0154 | 1.03 | 0.0158 | 0.0000097 | 120 | 0.000155 | 0.00089 | 0.00163 | 0.0105 | 0.0395 | 0.0000786 | 11.4 | 64.6 | 0.391 | 0.00634 | 658 | 0.0592 | 0.00391 | 0.000067 | 0.00733 | 0.00297 | 1.6 | 0.00000244 | 0.00278 | 0.00338 | 0.00528 | 0.00786 |
| **2066** | 2,410 | 0.553 | 0.85 | 0.0141 | 989 | 0.587 | 538 | | | 0.0000132 | 0.0209 | 0.0152 | 1.02 | 0.0156 | 0.00000958 | 118 | 0.000153 | 0.000879 | 0.00161 | 0.0104 | 0.039 | 0.0000776 | 11.2 | 63.8 | 0.386 | 0.00626 | 650 | 0.0584 | 0.00386 | 0.0000662 | 0.00724 | 0.00293 | 1.58 | 0.00000241 | 0.00275 | 0.00333 | 0.00522 | 0.00776 |
| **2067** | 2,380 | 0.483 | 0.743 | 0.0123 | 977 | 0.579 | 532 | | | 0.000013 | 0.0206 | 0.015 | 1 | 0.0154 | 0.00000946 | 117 | 0.000151 | 0.000868 | 0.00159 | 0.0102 | 0.0385 | 0.0000766 | 11.1 | 63 | 0.382 | 0.00618 | 642 | 0.0577 | 0.00382 | 0.0000653 | 0.00715 | 0.00289 | 1.56 | 0.00000238 | 0.00271 | 0.00329 | 0.00515 | 0.00766 |
| **2068** | 2,350 | 0.422 | 0.65 | 0.0107 | 964 | 0.572 | 525 | | | 0.0000129 | 0.0204 | 0.0148 | 0.991 | 0.0152 | 0.00000934 | 115 | 0.000149 | 0.000857 | 0.00157 | 0.0101 | 0.038 | 0.0000756 | 10.9 | 62.2 | 0.377 | 0.0061 | 634 | 0.057 | 0.00377 | 0.0000645 | 0.00706 | 0.00286 | 1.54 | 0.00000235 | 0.00268 | 0.00325 | 0.00508 | 0.00756 |
| **2069** | 2,320 | 0.369 | 0.568 | 0.00939 | 952 | 0.565 | 518 | | | 0.0000127 | 0.0201 | 0.0146 | 0.978 | 0.015 | 0.00000922 | 114 | 0.000147 | 0.000846 | 0.00155 | 0.00997 | 0.0375 | 0.0000747 | 10.8 | 61.4 | 0.372 | 0.00602 | 626 | 0.0562 | 0.00372 | 0.0000637 | 0.00697 | 0.00282 | 1.52 | 0.00000232 | 0.00264 | 0.00321 | 0.00502 | 0.00747 |
| **2070** | 2,290 | 0.323 | 0.496 | 0.0082 | 939 | 0.557 | 511 | | | 0.0000125 | 0.0198 | 0.0144 | 0.965 | 0.0148 | 0.0000091 | 112 | 0.000145 | 0.000835 | 0.00153 | 0.00984 | 0.037 | 0.0000737 | 10.7 | 60.6 | 0.367 | 0.00594 | 617 | 0.0555 | 0.00367 | 0.0000628 | 0.00688 | 0.00278 | 1.5 | 0.00000229 | 0.00261 | 0.00317 | 0.00495 | 0.00737 |
| **2071** | 2,250 | 0.282 | 0.434 | 0.00717 | 927 | 0.55 | 505 | | | 0.0000124 | 0.0196 | 0.0142 | 0.953 | 0.0146 | 0.00000898 | 111 | 0.000143 | 0.000824 | 0.00151 | 0.00971 | 0.0365 | 0.0000727 | 10.5 | 59.8 | 0.362 | 0.00586 | 609 | 0.0548 | 0.00362 | 0.000062 | 0.00679 | 0.00275 | 1.48 | 0.00000226 | 0.00257 | 0.00312 | 0.00489 | 0.00727 |
| **2072** | 2,220 | 0.246 | 0.379 | 0.00627 | 915 | 0.543 | 498 | | | 0.0000122 | 0.0193 | 0.014 | 0.94 | 0.0144 | 0.00000886 | 109 | 0.000141 | 0.000813 | 0.00149 | 0.00958 | 0.036 | 0.0000717 | 10.4 | 59 | 0.357 | 0.00579 | 601 | 0.054 | 0.00357 | 0.0000612 | 0.0067 | 0.00271 | 1.46 | 0.00000223 | 0.00254 | 0.00308 | 0.00482 | 0.00717 |
| **2073** | 2,190 | 0.215 | 0.331 | 0.00548 | 902 | 0.535 | 491 | | | 0.000012 | 0.019 | 0.0139 | 0.927 | 0.0143 | 0.00000874 | 108 | 0.000139 | 0.000802 | 0.00147 | 0.00945 | 0.0356 | 0.0000708 | 10.2 | 58.2 | 0.352 | 0.00571 | 593 | 0.0533 | 0.00352 | 0.0000603 | 0.00661 | 0.00267 | 1.44 | 0.0000022 | 0.0025 | 0.00304 | 0.00476 | 0.00708 |
| **2074** | 2,160 | 0.188 | 0.29 | 0.00479 | 890 | 0.528 | 484 | | | 0.0000119 | 0.0188 | 0.0137 | 0.914 | 0.0141 | 0.00000862 | 106 | 0.000138 | 0.000791 | 0.00145 | 0.00932 | 0.0351 | 0.0000698 | 10.1 | 57.4 | 0.348 | 0.00563 | 585 | 0.0526 | 0.00348 | 0.0000595 | 0.00651 | 0.00264 | 1.42 | 0.00000217 | 0.00247 | 0.003 | 0.00469 | 0.00698 |
| **2075** | 2,130 | 0.165 | 0.253 | 0.00419 | 877 | 0.521 | 478 | | | 0.0000117 | 0.0185 | 0.0135 | 0.902 | 0.0139 | 0.0000085 | 105 | 0.000136 | 0.000779 | 0.00143 | 0.00919 | 0.0346 | 0.0000688 | 9.96 | 56.6 | 0.343 | 0.00555 | 577 | 0.0518 | 0.00343 | 0.0000587 | 0.00642 | 0.0026 | 1.4 | 0.00000214 | 0.00244 | 0.00296 | 0.00463 | 0.00688 |
| **2076** | 2,100 | 0.144 | 0.221 | 0.00366 | 865 | 0.513 | 471 | | | 0.0000115 | 0.0183 | 0.0133 | 0.889 | 0.0137 | 0.00000838 | 103 | 0.000134 | 0.000768 | 0.00141 | 0.00906 | 0.0341 | 0.0000679 | 9.82 | 55.8 | 0.338 | 0.00547 | 568 | 0.0511 | 0.00338 | 0.0000578 | 0.00633 | 0.00256 | 1.38 | 0.00000211 | 0.0024 | 0.00291 | 0.00456 | 0.00679 |
| **2077** | 2,070 | 0.126 | 0.193 | 0.0032 | 853 | 0.506 | 464 | | | 0.0000114 | 0.018 | 0.0131 | 0.876 | 0.0135 | 0.00000826 | 102 | 0.000132 | 0.000757 | 0.00139 | 0.00893 | 0.0336 | 0.0000669 | 9.68 | 55 | 0.333 | 0.00539 | 560 | 0.0504 | 0.00333 | 0.000057 | 0.00624 | 0.00253 | 1.36 | 0.00000208 | 0.00237 | 0.00287 | 0.00449 | 0.00669 |
| **2078** | 2,040 | 0.11 | 0.169 | 0.0028 | 840 | 0.498 | 457 | | | 0.0000112 | 0.0177 | 0.0129 | 0.863 | 0.0133 | 0.00000814 | 100 | 0.00013 | 0.000746 | 0.00137 | 0.0088 | 0.0331 | 0.0000659 | 9.53 | 54.2 | 0.328 | 0.00531 | 552 | 0.0496 | 0.00328 | 0.0000562 | 0.00615 | 0.00249 | 1.34 | 0.00000205 | 0.00233 | 0.00283 | 0.00443 | 0.00659 |
| **2079** | 2,010 | 0.0961 | 0.148 | 0.00244 | 828 | 0.491 | 451 | | | 0.000011 | 0.0175 | 0.0127 | 0.851 | 0.0131 | 0.00000802 | 98.8 | 0.000128 | 0.000735 | 0.00135 | 0.00867 | 0.0326 | 0.0000649 | 9.39 | 53.4 | 0.323 | 0.00524 | 544 | 0.0489 | 0.00323 | 0.0000554 | 0.00606 | 0.00245 | 1.32 | 0.00000202 | 0.0023 | 0.00279 | 0.00436 | 0.00649 |
| **2080** | 1,980 | 0.084 | 0.129 | 0.00214 | 815 | 0.484 | 444 | | | 0.0000109 | 0.0172 | 0.0125 | 0.838 | 0.0129 | 0.0000079 | 97.3 | 0.000126 | 0.000724 | 0.00133 | 0.00854 | 0.0321 | 0.000064 | 9.25 | 52.6 | 0.318 | 0.00516 | 536 | 0.0482 | 0.00318 | 0.0000545 | 0.00597 | 0.00242 | 1.3 | 0.00000199 | 0.00226 | 0.00275 | 0.0043 | 0.0064 |
| **2081** | 1,950 | 0.0734 | 0.113 | 0.00187 | 803 | 0.476 | 437 | | | 0.0000107 | 0.0169 | 0.0123 | 0.825 | 0.0127 | 0.00000778 | 95.8 | 0.000124 | 0.000713 | 0.00131 | 0.00841 | 0.0316 | 0.000063 | 9.11 | 51.8 | 0.314 | 0.00508 | 528 | 0.0474 | 0.00314 | 0.0000537 | 0.00588 | 0.00238 | 1.28 | 0.00000196 | 0.00223 | 0.00271 | 0.00423 | 0.0063 |
| **2082** | 1,920 | 0.0642 | 0.0987 | 0.00163 | 790 | 0.469 | 430 | | | 0.0000106 | 0.0167 | 0.0121 | 0.812 | 0.0125 | 0.00000766 | 94.3 | 0.000122 | 0.000702 | 0.00129 | 0.00828 | 0.0312 | 0.000062 | 8.97 | 51 | 0.309 | 0.005 | 519 | 0.0467 | 0.00309 | 0.0000529 | 0.00579 | 0.00234 | 1.26 | 0.00000193 | 0.00219 | 0.00266 | 0.00417 | 0.0062 |
| **2083** | 1,890 | 0.0561 | 0.0863 | 0.00143 | 778 | 0.462 | 424 | | | 0.0000104 | 0.0164 | 0.012 | 0.8 | 0.0123 | 0.00000754 | 92.9 | 0.00012 | 0.000691 | 0.00127 | 0.00815 | 0.0307 | 0.000061 | 8.83 | 50.2 | 0.304 | 0.00492 | 511 | 0.046 | 0.00304 | 0.000052 | 0.0057 | 0.00231 | 1.24 | 0.0000019 | 0.00216 | 0.00262 | 0.0041 | 0.0061 |
| **2084** | 1,860 | 0.049 | 0.0754 | 0.00125 | 766 | 0.454 | 417 | | | 0.0000102 | 0.0162 | 0.0118 | 0.787 | 0.0121 | 0.00000742 | 91.4 | 0.000118 | 0.00068 | 0.00125 | 0.00802 | 0.0302 | 0.0000601 | 8.69 | 49.4 | 0.299 | 0.00484 | 503 | 0.0452 | 0.00299 | 0.0000512 | 0.00561 | 0.00227 | 1.22 | 0.00000187 | 0.00213 | 0.00258 | 0.00404 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 1,830 | 0.0428 | 0.0659 | 0.00109 | 753 | 0.447 | 410 | | | 0.0000101 | 0.0159 | 0.0116 | 0.774 | 0.0119 | 0.0000073 | 89.9 | 0.000116 | 0.000669 | 0.00123 | 0.00789 | 0.0297 | 0.0000591 | 8.55 | 48.6 | 0.294 | 0.00476 | 495 | 0.0445 | 0.00294 | 0.0000504 | 0.00551 | 0.00223 | 1.2 | 0.00000184 | 0.00209 | 0.00254 | 0.00397 | 0.00591 |
| **2086** | 1,800 | 0.0374 | 0.0576 | 0.000952 | 741 | 0.44 | 403 | | | 0.00000989 | 0.0156 | 0.0114 | 0.761 | 0.0117 | 0.00000718 | 88.4 | 0.000114 | 0.000658 | 0.00121 | 0.00776 | 0.0292 | 0.0000581 | 8.41 | 47.8 | 0.289 | 0.00469 | 487 | 0.0438 | 0.00289 | 0.0000495 | 0.00542 | 0.00219 | 1.18 | 0.00000181 | 0.00206 | 0.0025 | 0.00391 | 0.00581 |
| **2087** | 1,770 | 0.0327 | 0.0504 | 0.000832 | 728 | 0.432 | 397 | | | 0.00000972 | 0.0154 | 0.0112 | 0.748 | 0.0115 | 0.00000705 | 86.9 | 0.000113 | 0.000647 | 0.00119 | 0.00763 | 0.0287 | 0.0000571 | 8.27 | 47 | 0.285 | 0.00461 | 479 | 0.043 | 0.00285 | 0.0000487 | 0.00533 | 0.00216 | 1.16 | 0.00000177 | 0.00202 | 0.00245 | 0.00384 | 0.00571 |
| **2088** | 1,740 | 0.0286 | 0.044 | 0.000728 | 716 | 0.425 | 390 | | | 0.00000956 | 0.0151 | 0.011 | 0.736 | 0.0113 | 0.00000693 | 85.5 | 0.000111 | 0.000636 | 0.00117 | 0.0075 | 0.0282 | 0.0000562 | 8.13 | 46.2 | 0.28 | 0.00453 | 470 | 0.0423 | 0.0028 | 0.0000479 | 0.00524 | 0.00212 | 1.14 | 0.00000174 | 0.00199 | 0.00241 | 0.00377 | 0.00562 |
| **2089** | 1,710 | 0.025 | 0.0385 | 0.000636 | 704 | 0.417 | 383 | | | 0.00000939 | 0.0149 | 0.0108 | 0.723 | 0.0111 | 0.00000681 | 84 | 0.000109 | 0.000625 | 0.00115 | 0.00737 | 0.0277 | 0.0000552 | 7.98 | 45.4 | 0.275 | 0.00445 | 462 | 0.0416 | 0.00275 | 0.0000471 | 0.00515 | 0.00208 | 1.12 | 0.00000171 | 0.00195 | 0.00237 | 0.00371 | 0.00552 |
| **2090** | 1,680 | 0.0219 | 0.0336 | 0.000556 | 691 | 0.41 | 376 | | | 0.00000923 | 0.0146 | 0.0106 | 0.71 | 0.0109 | 0.00000669 | 82.5 | 0.000107 | 0.000614 | 0.00113 | 0.00724 | 0.0272 | 0.0000542 | 7.84 | 44.6 | 0.27 | 0.00437 | 454 | 0.0408 | 0.0027 | 0.0000462 | 0.00506 | 0.00205 | 1.1 | 0.00000168 | 0.00192 | 0.00233 | 0.00364 | 0.00542 |
| **2091** | 1,650 | 0.0191 | 0.0294 | 0.000486 | 679 | 0.403 | 369 | | | 0.00000906 | 0.0143 | 0.0104 | 0.697 | 0.0107 | 0.00000657 | 81 | 0.000105 | 0.000603 | 0.00111 | 0.00711 | 0.0267 | 0.0000532 | 7.7 | 43.8 | 0.265 | 0.00429 | 446 | 0.0401 | 0.00265 | 0.0000454 | 0.00497 | 0.00201 | 1.08 | 0.00000165 | 0.00188 | 0.00229 | 0.00358 | 0.00532 |
| **2092** | 1,620 | 0.0167 | 0.0257 | 0.000425 | 666 | 0.395 | 363 | | | 0.00000889 | 0.0141 | 0.0102 | 0.685 | 0.0105 | 0.00000645 | 79.5 | 0.000103 | 0.000592 | 0.00109 | 0.00698 | 0.0263 | 0.0000523 | 7.56 | 43 | 0.26 | 0.00421 | 438 | 0.0394 | 0.0026 | 0.0000446 | 0.00488 | 0.00197 | 1.06 | 0.00000162 | 0.00185 | 0.00225 | 0.00351 | 0.00523 |
| **2093** | 1,590 | 0.0146 | 0.0225 | 0.000371 | 654 | 0.388 | 356 | | | 0.00000873 | 0.0138 | 0.01 | 0.672 | 0.0103 | 0.00000633 | 78 | 0.000101 | 0.000581 | 0.00107 | 0.00685 | 0.0258 | 0.0000513 | 7.42 | 42.2 | 0.255 | 0.00414 | 430 | 0.0386 | 0.00255 | 0.0000437 | 0.00479 | 0.00194 | 1.04 | 0.00000159 | 0.00181 | 0.0022 | 0.00345 | 0.00513 |
| **2094** | 1,560 | 0.0128 | 0.0196 | 0.000324 | 641 | 0.381 | 349 | | | 0.00000856 | 0.0135 | 0.00985 | 0.659 | 0.0101 | 0.00000621 | 76.6 | 0.0000991 | 0.00057 | 0.00105 | 0.00672 | 0.0253 | 0.0000503 | 7.28 | 41.4 | 0.251 | 0.00406 | 422 | 0.0379 | 0.00251 | 0.0000429 | 0.0047 | 0.0019 | 1.02 | 0.00000156 | 0.00178 | 0.00216 | 0.00338 | 0.00503 |
| **2095** | 1,530 | 0.0112 | 0.0172 | 0.000284 | 629 | 0.373 | 342 | | | 0.0000084 | 0.0133 | 0.00966 | 0.646 | 0.00993 | 0.0000609 | 75.1 | 0.0000972 | 0.000559 | 0.00103 | 0.00659 | 0.0248 | 0.0000493 | 7.14 | 40.6 | 0.246 | 0.00398 | 413 | 0.0372 | 0.00246 | 0.0000421 | 0.00461 | 0.00186 | 1 | 0.00000153 | 0.00175 | 0.00212 | 0.00332 | 0.00493 |
| **2096** | 1,500 | 0.00975 | 0.015 | 0.000248 | 617 | 0.366 | 336 | | | 0.00000823 | 0.013 | 0.00947 | 0.634 | 0.00974 | 0.00000597 | 73.6 | 0.0000953 | 0.000548 | 0.00101 | 0.00646 | 0.0243 | 0.0000484 | 7 | 39.8 | 0.241 | 0.0039 | 405 | 0.0364 | 0.00241 | 0.0000412 | 0.00451 | 0.00183 | 0.982 | 0.0000015 | 0.00171 | 0.00208 | 0.00325 | 0.00484 |
| **2097** | 1,470 | 0.00852 | 0.0131 | 0.000217 | 604 | 0.358 | 329 | | | 0.00000807 | 0.0128 | 0.00928 | 0.621 | 0.00954 | 0.00000585 | 72.1 | 0.0000934 | 0.000537 | 0.000986 | 0.00633 | 0.0238 | 0.0000474 | 6.86 | 39 | 0.236 | 0.00382 | 397 | 0.0357 | 0.00236 | 0.0000404 | 0.00442 | 0.00179 | 0.962 | 0.00000147 | 0.00168 | 0.00204 | 0.00319 | 0.00474 |
| **2098** | 1,440 | 0.00745 | 0.0115 | 0.000189 | 592 | 0.351 | 322 | | | 0.0000079 | 0.0125 | 0.00909 | 0.608 | 0.00935 | 0.0000573 | 70.6 | 0.0000914 | 0.000526 | 0.000966 | 0.0062 | 0.0233 | 0.0000464 | 6.72 | 38.2 | 0.231 | 0.00374 | 389 | 0.035 | 0.00231 | 0.0000396 | 0.00433 | 0.00175 | 0.943 | 0.00000144 | 0.00164 | 0.00199 | 0.00312 | 0.00464 |
| **2099** | 1,410 | 0.00651 | 0.01 | 0.000166 | 579 | 0.344 | 315 | | | 0.00000773 | 0.0122 | 0.0089 | 0.595 | 0.00915 | 0.00000561 | 69.1 | 0.0000895 | 0.000515 | 0.000945 | 0.00607 | 0.0228 | 0.0000454 | 6.57 | 37.4 | 0.226 | 0.00366 | 381 | 0.0342 | 0.00226 | 0.0000387 | 0.00424 | 0.00172 | 0.923 | 0.00000141 | 0.00161 | 0.00195 | 0.00305 | 0.00454 |
| **2100** | 1,380 | 0.00569 | 0.00875 | 0.000145 | 567 | 0.336 | 309 | | | 0.00000757 | 0.012 | 0.00871 | 0.583 | 0.00895 | 0.00000549 | 67.7 | 0.0000876 | 0.000504 | 0.000925 | 0.00594 | 0.0223 | 0.0000445 | 6.43 | 36.6 | 0.221 | 0.00359 | 373 | 0.0335 | 0.00221 | 0.0000379 | 0.00415 | 0.00168 | 0.903 | 0.00000138 | 0.00157 | 0.00191 | 0.00299 | 0.00445 |
| **2101** | 1,350 | 0.00497 | 0.00765 | 0.000126 | 555 | 0.329 | 302 | | | 0.0000074 | 0.0117 | 0.00852 | 0.57 | 0.00876 | 0.00000537 | 66.2 | 0.0000857 | 0.000493 | 0.000905 | 0.00581 | 0.0219 | 0.0000435 | 6.29 | 35.8 | 0.217 | 0.00351 | 364 | 0.0328 | 0.00217 | 0.0000371 | 0.00406 | 0.00164 | 0.883 | 0.00000135 | 0.00154 | 0.00187 | 0.00292 | 0.00435 |
| **2102** | 1,320 | 0.00435 | 0.00669 | 0.000111 | 542 | 0.322 | 295 | | | 0.00000724 | 0.0114 | 0.00833 | 0.557 | 0.00856 | 0.00000525 | 64.7 | 0.0000838 | 0.000482 | 0.000885 | 0.00568 | 0.0214 | 0.0000425 | 6.15 | 35 | 0.212 | 0.00343 | 356 | 0.032 | 0.00212 | 0.0000363 | 0.00397 | 0.00161 | 0.863 | 0.00000132 | 0.0015 | 0.00183 | 0.00286 | 0.00425 |
| **2103** | 1,290 | 0.0038 | 0.00585 | 0.0000966 | 530 | 0.314 | 288 | | | 0.00000707 | 0.0112 | 0.00814 | 0.544 | 0.00837 | 0.00000513 | 63.2 | 0.0000819 | 0.000471 | 0.000864 | 0.00555 | 0.0209 | 0.0000415 | 6.01 | 34.2 | 0.207 | 0.00335 | 348 | 0.0313 | 0.00207 | 0.0000354 | 0.00388 | 0.00157 | 0.844 | 0.00000129 | 0.00147 | 0.00178 | 0.00279 | 0.00415 |
| **2104** | 1,260 | 0.00332 | 0.00511 | 0.0000845 | 517 | 0.307 | 282 | | | 0.0000069 | 0.0109 | 0.00794 | 0.532 | 0.00817 | 0.00000501 | 61.7 | 0.0000799 | 0.00046 | 0.000844 | 0.00542 | 0.0204 | 0.0000406 | 5.87 | 33.4 | 0.202 | 0.00327 | 340 | 0.0306 | 0.00202 | 0.0000346 | 0.00379 | 0.00153 | 0.824 | 0.00000126 | 0.00144 | 0.00174 | 0.00273 | 0.00406 |
| **2105** | 1,230 | 0.0029 | 0.00447 | 0.0000738 | 505 | 0.3 | 275 | | | 0.00000674 | 0.0107 | 0.00775 | 0.519 | 0.00797 | 0.00000489 | 60.3 | 0.000078 | 0.000448 | 0.000824 | 0.00529 | 0.0199 | 0.0000396 | 5.73 | 32.6 | 0.197 | 0.00319 | 332 | 0.0298 | 0.00197 | 0.0000338 | 0.0037 | 0.0015 | 0.804 | 0.00000123 | 0.0014 | 0.0017 | 0.00266 | 0.00396 |
| **2106** | 1,200 | 0.00254 | 0.0039 | 0.0000645 | 492 | 0.292 | 268 | | | 0.00000657 | 0.0104 | 0.00756 | 0.506 | 0.00778 | 0.00000477 | 58.8 | 0.0000761 | 0.000437 | 0.000804 | 0.00516 | 0.0194 | 0.0000386 | 5.59 | 31.8 | 0.192 | 0.00311 | 324 | 0.0291 | 0.00192 | 0.0000329 | 0.00361 | 0.00146 | 0.784 | 0.0000012 | 0.00137 | 0.00166 | 0.0026 | 0.00386 |
| **2107** | 1,170 | 0.00222 | 0.00341 | 0.0000564 | 480 | 0.285 | 261 | | | 0.00000641 | 0.0101 | 0.00737 | 0.493 | 0.00758 | 0.00000465 | 57.3 | 0.0000742 | 0.000426 | 0.000783 | 0.00503 | 0.0189 | 0.0000377 | 5.45 | 31 | 0.187 | 0.00304 | 315 | 0.0284 | 0.00187 | 0.0000321 | 0.00351 | 0.00142 | 0.765 | 0.00000117 | 0.00133 | 0.00162 | 0.00253 | 0.00377 |
| **2108** | 1,140 | 0.00194 | 0.00298 | 0.0000493 | 468 | 0.277 | 255 | | | 0.00000624 | 0.00987 | 0.00718 | 0.48 | 0.00738 | 0.00000453 | 55.8 | 0.0000723 | 0.000415 | 0.000763 | 0.0049 | 0.0184 | 0.0000367 | 5.31 | 30.2 | 0.183 | 0.00296 | 307 | 0.0276 | 0.00183 | 0.0000313 | 0.00342 | 0.00139 | 0.745 | 0.00000114 | 0.0013 | 0.00158 | 0.00247 | 0.00367 |
| **2109** | 1,110 | 0.00169 | 0.00261 | 0.0000431 | 455 | 0.27 | 248 | | | 0.00000608 | 0.00961 | 0.00699 | 0.468 | 0.00719 | 0.00000441 | 54.3 | 0.0000703 | 0.000404 | 0.000743 | 0.00477 | 0.0179 | 0.0000357 | 5.17 | 29.3 | 0.178 | 0.00288 | 299 | 0.0269 | 0.00178 | 0.0000304 | 0.00333 | 0.00135 | 0.725 | 0.00000111 | 0.00126 | 0.00153 | 0.0024 | 0.00357 |
| **2110** | 1,080 | 0.00148 | 0.00228 | 0.0000377 | 443 | 0.263 | 241 | | | 0.00000591 | 0.00935 | 0.0068 | 0.455 | 0.00699 | 0.00000429 | 52.8 | 0.0000684 | 0.000393 | 0.000723 | 0.00464 | 0.0174 | 0.0000347 | 5.02 | 28.5 | 0.173 | 0.0028 | 291 | 0.0262 | 0.00173 | 0.0000296 | 0.00324 | 0.00131 | 0.705 | 0.00000108 | 0.00123 | 0.00149 | 0.00233 | 0.00347 |
| **2111** | 1,050 | 0.00129 | 0.00199 | 0.0000329 | 430 | 0.255 | 234 | | | 0.00000574 | 0.00908 | 0.00661 | 0.442 | 0.0068 | 0.00000417 | 51.4 | 0.0000665 | 0.000382 | 0.000702 | 0.00451 | 0.017 | 0.0000338 | 4.88 | 27.7 | 0.168 | 0.00272 | 283 | 0.0254 | 0.00168 | 0.0000288 | 0.00315 | 0.00127 | 0.685 | 0.00000105 | 0.00119 | 0.00145 | 0.00227 | 0.00338 |
| **2112** | 1,020 | 0.00113 | 0.00174 | 0.0000288 | 418 | 0.248 | 227 | | | 0.00000558 | 0.00882 | 0.00642 | 0.429 | 0.0066 | 0.00000405 | 49.9 | 0.0000646 | 0.000371 | 0.000682 | 0.00438 | 0.0165 | 0.0000328 | 4.74 | 26.9 | 0.163 | 0.00264 | 275 | 0.0247 | 0.00163 | 0.0000279 | 0.00306 | 0.00124 | 0.666 | 0.00000102 | 0.00116 | 0.00141 | 0.0022 | 0.00328 |
| **2113** | 986 | 0.000989 | 0.00152 | 0.0000252 | 405 | 0.241 | 221 | | | 0.00000541 | 0.00856 | 0.00623 | 0.417 | 0.0064 | 0.00000393 | 48.4 | 0.0000627 | 0.00036 | 0.000662 | 0.00425 | 0.016 | 0.0000318 | 4.6 | 26.1 | 0.158 | 0.00256 | 266 | 0.024 | 0.00158 | 0.0000271 | 0.00297 | 0.0012 | 0.646 | 0.000000988 | 0.00113 | 0.00137 | 0.00214 | 0.00318 |
| **2114** | 956 | 0.000864 | 0.00133 | 0.000022 | 393 | 0.233 | 214 | | | 0.00000525 | 0.0083 | 0.00604 | 0.404 | 0.00621 | 0.00000381 | 46.9 | 0.0000607 | 0.000349 | 0.000641 | 0.00412 | 0.0155 | 0.0000308 | 4.46 | 25.3 | 0.154 | 0.00249 | 258 | 0.0232 | 0.00154 | 0.0000263 | 0.00288 | 0.00116 | 0.626 | 0.000000958 | 0.00109 | 0.00132 | 0.00207 | 0.00308 |
| **2115** | 926 | 0.000756 | 0.00116 | 0.0000192 | 381 | 0.226 | 207 | | | 0.00000508 | 0.00804 | 0.00585 | 0.391 | 0.00601 | 0.00000369 | 45.4 | 0.0000588 | 0.000338 | 0.000621 | 0.00399 | 0.015 | 0.0000299 | 4.32 | 24.5 | 0.149 | 0.00241 | 250 | 0.0225 | 0.00149 | 0.0000255 | 0.00279 | 0.00113 | 0.606 | 0.000000928 | 0.00106 | 0.00128 | 0.00201 | 0.00299 |
| **2116** | 896 | 0.00066 | 0.00102 | 0.0000168 | 368 | 0.218 | 200 | | | 0.00000492 | 0.00777 | 0.00566 | 0.378 | 0.00582 | 0.00000357 | 43.9 | 0.0000569 | 0.000327 | 0.000601 | 0.00386 | 0.0145 | 0.0000289 | 4.18 | 23.7 | 0.144 | 0.00233 | 242 | 0.0218 | 0.00144 | 0.0000246 | 0.0027 | 0.00109 | 0.587 | 0.000000897 | 0.00102 | 0.00124 | 0.00194 | 0.00289 |
| **2117** | 865 | 0.000577 | 0.000888 | 0.0000147 | 356 | 0.211 | 194 | | | 0.00000475 | 0.00751 | 0.00546 | 0.366 | 0.00562 | 0.00000345 | 42.5 | 0.000055 | 0.000316 | 0.000581 | 0.00373 | 0.014 | 0.0000279 | 4.04 | 22.9 | 0.139 | 0.00225 | 234 | 0.021 | 0.00139 | 0.0000238 | 0.0026 | 0.00105 | 0.567 | 0.000000867 | 0.000988 | 0.0012 | 0.00188 | 0.00279 |
| **2118** | 835 | 0.000505 | 0.000776 | 0.0000128 | 343 | 0.204 | 187 | | | 0.00000458 | 0.00725 | 0.00527 | 0.353 | 0.00542 | 0.00000333 | 41 | 0.0000531 | 0.000305 | 0.00056 | 0.0036 | 0.0135 | 0.0000269 | 3.9 | 22.1 | 0.134 | 0.00217 | 226 | 0.0203 | 0.00134 | 0.000023 | 0.00251 | 0.00102 | 0.547 | 0.000000837 | 0.000953 | 0.00116 | 0.00181 | 0.00269 |
| **2119** | 805 | 0.000441 | 0.000679 | 0.0000112 | 331 | 0.196 | 180 | | | 0.00000442 | 0.00699 | 0.00508 | 0.34 | 0.00523 | 0.00000321 | 39.5 | 0.0000511 | 0.000294 | 0.00054 | 0.00347 | 0.013 | 0.000026 | 3.76 | 21.3 | 0.129 | 0.00209 | 217 | 0.0196 | 0.00129 | 0.0000221 | 0.00242 | 0.000981 | 0.527 | 0.000000806 | 0.000919 | 0.00112 | 0.00174 | 0.0026 |
| **2120** | 775 | 0.000386 | 0.000593 | 0.0000098 | 319 | 0.189 | 173 | | | 0.00000425 | 0.00672 | 0.00489 | 0.327 | 0.00503 | 0.00000309 | 38 | 0.0000492 | 0.000283 | 0.00052 | 0.00334 | 0.0126 | 0.000025 | 3.62 | 20.5 | 0.124 | 0.00201 | 209 | 0.0188 | 0.00124 | 0.0000213 | 0.00233 | 0.000944 | 0.507 | 0.000000776 | 0.000884 | 0.00107 | 0.00168 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF6** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | 6,020 | 39.5 | 64.1 | 3.14 | 2,700 | 1.56 | 981 | | | 0.00002 | 0.0386 | 0.0284 | 2.21 | 0.146 | 0.000044 | 215 | 0.0000685 | 0.0239 | 0.002 | 0.0112 | 0.0237 | 0.0001 | 146 | 116 | 0.532 | 0.0357 | 1,770 | 0.062 | 0.0581 | 0.0000746 | 0.00387 | 0.00367 | 0.74 | 0.00000407 | 0.0519 | 0.00153 | 0.005 | 0.01 |
| **2028** | 4,500 | 18.3 | 28.1 | 0.465 | 2,060 | 0.756 | 751 | | | 0.00000325 | 0.0327 | 0.00802 | 1.31 | 0.0213 | 0.0000104 | 165 | 0.000242 | 0.00055 | 0.002 | 0.0164 | 0.0429 | 0.0001 | 15.1 | 88.9 | 0.5 | 0.0111 | 1,360 | 0.0593 | 0.005 | 0.0000746 | 0.0103 | 0.00366 | 1.69 | 0.00000407 | 0.00326 | 0.00526 | 0.00876 | 0.01 |
| **2029** | 4,550 | 18.3 | 28.1 | 0.465 | 2,090 | 0.756 | 759 | | | 0.00000284 | 0.0327 | 0.00807 | 1.31 | 0.0211 | 0.0000104 | 166 | 0.000242 | 0.000541 | 0.00202 | 0.0165 | 0.0427 | 0.0001 | 15 | 89.9 | 0.5 | 0.0111 | 1,370 | 0.0596 | 0.005 | 0.0000728 | 0.0102 | 0.00366 | 1.64 | 0.00000403 | 0.00324 | 0.00525 | 0.0088 | 0.01 |
| **2030** | 8,060 | 18.3 | 28.1 | 0.465 | 3,730 | 0.756 | 1,360 | | | 0.00000228 | 0.0292 | 0.0118 | 1.31 | 0.0188 | 0.00000999 | 297 | 0.000283 | 0.000604 | 0.00194 | 0.0167 | 0.0451 | 0.0001 | 13.2 | 161 | 0.5 | 0.0118 | 2,450 | 0.0541 | 0.005 | 0.0000712 | 0.0102 | 0.00383 | 1.45 | 0.0000036 | 0.00331 | 0.0047 | 0.00988 | 0.01 |
| **2031** | 9,520 | 18.3 | 28.1 | 0.465 | 4,410 | 0.756 | 1,600 | | | 0.00000324 | 0.0278 | 0.0134 | 1.31 | 0.0185 | 0.00001 | 351 | 0.000301 | 0.00066 | 0.00183 | 0.0167 | 0.0465 | 0.0001 | 12.9 | 190 | 0.5 | 0.0121 | 2,900 | 0.0507 | 0.005 | 0.0000756 | 0.0103 | 0.0039 | 1.49 | 0.00000353 | 0.00339 | 0.00447 | 0.0103 | 0.01 |
| **2032** | 16,200 | 18.3 | 28.1 | 0.465 | 7,520 | 0.756 | 2,730 | | | 0.00000109 | 0.0211 | 0.0206 | 1.31 | 0.0136 | 0.00000909 | 599 | 0.000377 | 0.000753 | 0.00175 | 0.0172 | 0.0504 | 0.0001 | 9.31 | 324 | 0.5 | 0.0134 | 4,940 | 0.0414 | 0.005 | 0.0000677 | 0.00995 | 0.00421 | 1.01 | 0.00000261 | 0.00347 | 0.00341 | 0.0124 | 0.01 |
| **2033** | 9,320 | 18.3 | 28.1 | 0.465 | 4,320 | 0.756 | 1,570 | | | 0.00000105 | 0.0279 | 0.0132 | 1.31 | 0.0175 | 0.00000969 | 344 | 0.000296 | 0.000602 | 0.00198 | 0.0169 | 0.0455 | 0.0001 | 12.4 | 186 | 0.5 | 0.012 | 2,840 | 0.0532 | 0.005 | 0.0000661 | 0.00995 | 0.00389 | 1.27 | 0.00000334 | 0.00328 | 0.00449 | 0.0103 | 0.01 |
| **2034** | 11,700 | 18.3 | 28.1 | 0.465 | 5,410 | 0.756 | 1,970 | | | 0.00000106 | 0.0256 | 0.0157 | 1.31 | 0.0162 | 0.00000949 | 431 | 0.000324 | 0.000654 | 0.0019 | 0.017 | 0.0472 | 0.0001 | 11.3 | 233 | 0.5 | 0.0125 | 3,560 | 0.0492 | 0.005 | 0.0000666 | 0.00995 | 0.004 | 1.18 | 0.00000309 | 0.00335 | 0.00412 | 0.011 | 0.01 |
| **2035** | 17,700 | 18.3 | 28.1 | 0.465 | 8,230 | 0.756 | 2,990 | | | 0.0000011 | 0.0194 | 0.0222 | 1.31 | 0.0127 | 0.0000089 | 656 | 0.000394 | 0.000785 | 0.00168 | 0.0172 | 0.0513 | 0.0001 | 8.54 | 354 | 0.497 | 0.0137 | 5,410 | 0.0384 | 0.00497 | 0.0000677 | 0.0099 | 0.00426 | 0.939 | 0.00000243 | 0.00349 | 0.00313 | 0.0128 | 0.01 |
| **2036** | 9,960 | 18.3 | 28.1 | 0.465 | 4,610 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 3,030 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2037** | 8,990 | 16 | 24.6 | 0.407 | 4,030 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 2,650 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2038** | 8,140 | 14 | 21.5 | 0.355 | 3,520 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 2,320 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2039** | 7,410 | 12.2 | 18.8 | 0.311 | 3,080 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 2,020 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2040** | 6,760 | 10.7 | 16.4 | 0.272 | 2,690 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 1,770 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2041** | 6,200 | 9.33 | 14.4 | 0.237 | 2,350 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 1,550 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2042** | 5,700 | 8.16 | 12.6 | 0.207 | 2,060 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 1,350 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2043** | 5,270 | 7.13 | 11 | 0.181 | 1,800 | 0.756 | 1,680 | | | 0.00000379 | 0.027 | 0.0139 | 1.31 | 0.0183 | 0.00000995 | 368 | 0.000305 | 0.000679 | 0.00176 | 0.0165 | 0.0466 | 0.0001 | 12.7 | 199 | 0.495 | 0.0121 | 1,180 | 0.0488 | 0.00495 | 0.0000775 | 0.0103 | 0.00388 | 1.52 | 0.0000035 | 0.0034 | 0.00434 | 0.0103 | 0.01 |
| **2044** | 5,220 | 6.23 | 9.59 | 0.158 | 1,780 | 0.749 | 1,660 | | | 0.00000375 | 0.0267 | 0.0138 | 1.3 | 0.0181 | 0.00000985 | 364 | 0.000302 | 0.000673 | 0.00174 | 0.0163 | 0.0462 | 0.000099 | 12.5 | 197 | 0.49 | 0.012 | 1,170 | 0.0483 | 0.0049 | 0.0000768 | 0.0102 | 0.00385 | 1.5 | 0.00000347 | 0.00336 | 0.0043 | 0.0102 | 0.0099 |
| **2045** | 5,170 | 5.45 | 8.38 | 0.139 | 1,760 | 0.742 | 1,640 | | | 0.00000372 | 0.0265 | 0.0136 | 1.28 | 0.0179 | 0.00000976 | 361 | 0.000299 | 0.000666 | 0.00172 | 0.0162 | 0.0457 | 0.0000981 | 12.4 | 195 | 0.486 | 0.0119 | 1,160 | 0.0478 | 0.00486 | 0.000076 | 0.0101 | 0.00381 | 1.49 | 0.00000343 | 0.00333 | 0.00426 | 0.0101 | 0.00981 |
| **2046** | 5,120 | 4.76 | 7.33 | 0.121 | 1,750 | 0.734 | 1,630 | | | 0.00000368 | 0.0262 | 0.0135 | 1.27 | 0.0178 | 0.00000966 | 357 | 0.000296 | 0.000659 | 0.00171 | 0.016 | 0.0453 | 0.0000971 | 12.3 | 193 | 0.481 | 0.0118 | 1,150 | 0.0473 | 0.00481 | 0.0000753 | 0.01 | 0.00377 | 1.47 | 0.0000034 | 0.0033 | 0.00421 | 0.00998 | 0.00971 |
| **2047** | 5,070 | 4.16 | 6.4 | 0.106 | 1,730 | 0.727 | 1,610 | | | 0.00000364 | 0.0259 | 0.0133 | 1.26 | 0.0176 | 0.00000956 | 353 | 0.000293 | 0.000653 | 0.00169 | 0.0159 | 0.0448 | 0.0000961 | 12.2 | 191 | 0.476 | 0.0116 | 1,140 | 0.0469 | 0.00476 | 0.0000745 | 0.0099 | 0.00373 | 1.46 | 0.00000336 | 0.00326 | 0.00417 | 0.00988 | 0.00961 |
| **2048** | 5,020 | 3.64 | 5.6 | 0.0925 | 1,710 | 0.719 | 1,600 | | | 0.0000036 | 0.0257 | 0.0132 | 1.25 | 0.0174 | 0.00000946 | 350 | 0.00029 | 0.000646 | 0.00167 | 0.0157 | 0.0443 | 0.0000951 | 12 | 189 | 0.471 | 0.0115 | 1,120 | 0.0464 | 0.00471 | 0.0000737 | 0.0098 | 0.00369 | 1.44 | 0.00000333 | 0.00323 | 0.00413 | 0.00978 | 0.00951 |
| **2049** | 4,960 | 3.18 | 4.89 | 0.0809 | 1,690 | 0.712 | 1,580 | | | 0.00000357 | 0.0254 | 0.0131 | 1.23 | 0.0172 | 0.00000937 | 346 | 0.000287 | 0.00064 | 0.00166 | 0.0155 | 0.0439 | 0.0000942 | 11.9 | 187 | 0.466 | 0.0114 | 1,110 | 0.0459 | 0.00466 | 0.000073 | 0.0097 | 0.00366 | 1.43 | 0.0000033 | 0.0032 | 0.00409 | 0.00968 | 0.00942 |
| **2050** | 4,910 | 2.78 | 4.28 | 0.0707 | 1,680 | 0.705 | 1,560 | | | 0.00000353 | 0.0251 | 0.0129 | 1.22 | 0.017 | 0.00000927 | 343 | 0.000284 | 0.000633 | 0.00164 | 0.0154 | 0.0434 | 0.0000932 | 11.8 | 185 | 0.462 | 0.0113 | 1,100 | 0.0454 | 0.00462 | 0.0000722 | 0.0096 | 0.00362 | 1.41 | 0.00000326 | 0.00316 | 0.00405 | 0.00958 | 0.00932 |
| **2051** | 4,860 | 2.43 | 3.74 | 0.0618 | 1,660 | 0.697 | 1,550 | | | 0.00000349 | 0.0249 | 0.0128 | 1.21 | 0.0169 | 0.00000917 | 339 | 0.000281 | 0.000626 | 0.00162 | 0.0152 | 0.043 | 0.0000922 | 11.7 | 183 | 0.457 | 0.0112 | 1,090 | 0.045 | 0.00457 | 0.0000715 | 0.0095 | 0.00358 | 1.4 | 0.00000323 | 0.00313 | 0.004 | 0.00948 | 0.00922 |
| **2052** | 4,810 | 2.12 | 3.27 | 0.054 | 1,640 | 0.69 | 1,530 | | | 0.00000346 | 0.0246 | 0.0127 | 1.2 | 0.0167 | 0.00000908 | 335 | 0.000278 | 0.00062 | 0.0016 | 0.015 | 0.0425 | 0.0000912 | 11.5 | 181 | 0.452 | 0.011 | 1,080 | 0.0445 | 0.00452 | 0.0000707 | 0.0094 | 0.00354 | 1.38 | 0.00000319 | 0.0031 | 0.00396 | 0.00938 | 0.00912 |
| **2053** | 4,760 | 1.86 | 2.86 | 0.0472 | 1,620 | 0.683 | 1,510 | | | 0.00000342 | 0.0244 | 0.0125 | 1.18 | 0.0165 | 0.00000898 | 332 | 0.000275 | 0.000613 | 0.00159 | 0.0149 | 0.0421 | 0.0000903 | 11.4 | 179 | 0.447 | 0.0109 | 1,070 | 0.044 | 0.00447 | 0.00007 | 0.0093 | 0.0035 | 1.37 | 0.00000316 | 0.00306 | 0.00392 | 0.00928 | 0.00903 |
| **2054** | 4,710 | 1.62 | 2.5 | 0.0413 | 1,610 | 0.675 | 1,500 | | | 0.00000338 | 0.0241 | 0.0124 | 1.17 | 0.0163 | 0.00000888 | 328 | 0.000272 | 0.000607 | 0.00157 | 0.0147 | 0.0416 | 0.0000893 | 11.3 | 177 | 0.442 | 0.0108 | 1,060 | 0.0435 | 0.00442 | 0.0000692 | 0.0092 | 0.00347 | 1.35 | 0.00000313 | 0.00303 | 0.00388 | 0.00918 | 0.00893 |
| **2055** | 4,660 | 1.42 | 2.18 | 0.0361 | 1,590 | 0.668 | 1,480 | | | 0.00000335 | 0.0238 | 0.0123 | 1.16 | 0.0162 | 0.00000879 | 325 | 0.000269 | 0.0006 | 0.00155 | 0.0146 | 0.0412 | 0.0000883 | 11.2 | 175 | 0.437 | 0.0107 | 1,040 | 0.0431 | 0.00437 | 0.0000685 | 0.0091 | 0.00343 | 1.34 | 0.00000309 | 0.003 | 0.00383 | 0.00908 | 0.00883 |
| **2056** | 4,610 | 1.24 | 1.91 | 0.0315 | 1,570 | 0.661 | 1,460 | | | 0.00000331 | 0.0236 | 0.0121 | 1.14 | 0.016 | 0.00000869 | 321 | 0.000266 | 0.000593 | 0.00154 | 0.0144 | 0.0407 | 0.0000873 | 11.1 | 173 | 0.433 | 0.0106 | 1,030 | 0.0426 | 0.00433 | 0.0000677 | 0.009 | 0.00339 | 1.32 | 0.00000306 | 0.00297 | 0.00379 | 0.00898 | 0.00873 |
| **2057** | 4,550 | 1.08 | 1.67 | 0.0275 | 1,550 | 0.653 | 1,450 | | | 0.00000327 | 0.0233 | 0.012 | 1.13 | 0.0158 | 0.00000859 | 318 | 0.000263 | 0.000587 | 0.00152 | 0.0142 | 0.0403 | 0.0000864 | 10.9 | 172 | 0.428 | 0.0105 | 1,020 | 0.0421 | 0.00428 | 0.000067 | 0.0089 | 0.00335 | 1.31 | 0.00000302 | 0.00293 | 0.00375 | 0.00888 | 0.00864 |
| **2058** | 4,500 | 0.947 | 1.46 | 0.0241 | 1,540 | 0.646 | 1,430 | | | 0.00000324 | 0.023 | 0.0119 | 1.12 | 0.0156 | 0.0000085 | 314 | 0.00026 | 0.00058 | 0.0015 | 0.0141 | 0.0398 | 0.0000854 | 10.8 | 170 | 0.423 | 0.0103 | 1,010 | 0.0416 | 0.00423 | 0.0000662 | 0.0088 | 0.00332 | 1.29 | 0.00000299 | 0.0029 | 0.00371 | 0.00878 | 0.00854 |
| **2059** | 4,450 | 0.828 | 1.27 | 0.021 | 1,520 | 0.638 | 1,420 | | | 0.0000032 | 0.0228 | 0.0117 | 1.11 | 0.0154 | 0.0000084 | 310 | 0.000257 | 0.000573 | 0.00148 | 0.0139 | 0.0393 | 0.0000844 | 10.7 | 168 | 0.418 | 0.0102 | 997 | 0.0412 | 0.00418 | 0.0000654 | 0.0087 | 0.00328 | 1.28 | 0.00000295 | 0.00287 | 0.00367 | 0.00868 | 0.00844 |
| **2060** | 4,400 | 0.723 | 1.11 | 0.0184 | 1,500 | 0.631 | 1,400 | | | 0.00000316 | 0.0225 | 0.0116 | 1.09 | 0.0153 | 0.0000083 | 307 | 0.000254 | 0.000567 | 0.00147 | 0.0138 | 0.0389 | 0.0000834 | 10.6 | 166 | 0.413 | 0.0101 | 986 | 0.0407 | 0.00413 | 0.0000647 | 0.0086 | 0.00324 | 1.26 | 0.00000292 | 0.00283 | 0.00362 | 0.00858 | 0.00834 |
| **2061** | 4,350 | 0.632 | 0.973 | 0.0161 | 1,480 | 0.624 | 1,380 | | | 0.00000312 | 0.0222 | 0.0115 | 1.08 | 0.0151 | 0.0000082 | 303 | 0.000251 | 0.00056 | 0.00145 | 0.0136 | 0.0384 | 0.0000825 | 10.4 | 164 | 0.408 | 0.00998 | 974 | 0.0402 | 0.00408 | 0.0000639 | 0.0085 | 0.0032 | 1.25 | 0.00000289 | 0.0028 | 0.00358 | 0.00848 | 0.00825 |
| **2062** | 4,300 | 0.553 | 0.85 | 0.0141 | 1,470 | 0.616 | 1,370 | | | 0.00000309 | 0.022 | 0.0113 | 1.07 | 0.0149 | 0.00000811 | 300 | 0.000248 | 0.000554 | 0.00143 | 0.0134 | 0.038 | 0.0000815 | 10.3 | 162 | 0.404 | 0.00987 | 963 | 0.0397 | 0.00404 | 0.0000632 | 0.0084 | 0.00316 | 1.23 | 0.00000285 | 0.00277 | 0.00354 | 0.00838 | 0.00815 |
| **2063** | 4,250 | 0.483 | 0.743 | 0.0123 | 1,450 | 0.609 | 1,350 | | | 0.00000305 | 0.0217 | 0.0112 | 1.05 | 0.0147 | 0.00000801 | 296 | 0.000245 | 0.000547 | 0.00142 | 0.0133 | 0.0375 | 0.0000805 | 10.2 | 160 | 0.399 | 0.00975 | 951 | 0.0393 | 0.00399 | 0.0000624 | 0.0083 | 0.00313 | 1.22 | 0.00000282 | 0.00273 | 0.0035 | 0.00828 | 0.00805 |
| **2064** | 4,190 | 0.422 | 0.65 | 0.0107 | 1,430 | 0.602 | 1,330 | | | 0.00000301 | 0.0215 | 0.011 | 1.04 | 0.0145 | 0.00000791 | 292 | 0.000242 | 0.00054 | 0.0014 | 0.0131 | 0.0371 | 0.0000795 | 10.1 | 158 | 0.394 | 0.00963 | 940 | 0.0388 | 0.00394 | 0.0000617 | 0.0082 | 0.00309 | 1.21 | 0.00000278 | 0.0027 | 0.00345 | 0.00818 | 0.00795 |
| **2065** | 4,140 | 0.369 | 0.568 | 0.00939 | 1,410 | 0.594 | 1,320 | | | 0.00000298 | 0.0212 | 0.0109 | 1.03 | 0.0144 | 0.00000782 | 289 | 0.00024 | 0.000534 | 0.00138 | 0.013 | 0.0366 | 0.0000786 | 9.94 | 156 | 0.389 | 0.00951 | 928 | 0.0383 | 0.00389 | 0.0000609 | 0.0081 | 0.00305 | 1.19 | 0.00000275 | 0.00267 | 0.00341 | 0.00808 | 0.00786 |
| **2066** | 4,090 | 0.323 | 0.496 | 0.0082 | 1,400 | 0.587 | 1,300 | | | 0.00000294 | 0.0209 | 0.0108 | 1.02 | 0.0142 | 0.00000772 | 285 | 0.000237 | 0.000527 | 0.00136 | 0.0128 | 0.0362 | 0.0000776 | 9.82 | 154 | 0.384 | 0.0094 | 917 | 0.0378 | 0.00384 | 0.0000602 | 0.008 | 0.00301 | 1.18 | 0.00000272 | 0.00263 | 0.00337 | 0.00798 | 0.00776 |
| **2067** | 4,040 | 0.282 | 0.434 | 0.00717 | 1,380 | 0.579 | 1,280 | | | 0.0000029 | 0.0207 | 0.0106 | 1 | 0.014 | 0.00000762 | 282 | 0.000234 | 0.00052 | 0.00135 | 0.0126 | 0.0357 | 0.0000766 | 9.7 | 152 | 0.379 | 0.00928 | 905 | 0.0374 | 0.00379 | 0.0000594 | 0.0079 | 0.00298 | 1.16 | 0.00000268 | 0.0026 | 0.00333 | 0.00788 | 0.00766 |
| **2068** | 3,990 | 0.246 | 0.379 | 0.00627 | 1,360 | 0.572 | 1,270 | | | 0.00000287 | 0.0204 | 0.0105 | 0.991 | 0.0138 | 0.00000753 | 278 | 0.000231 | 0.000514 | 0.00133 | 0.0125 | 0.0353 | 0.0000756 | 9.57 | 150 | 0.375 | 0.00916 | 894 | 0.0369 | 0.00375 | 0.0000586 | 0.0078 | 0.00294 | 1.15 | 0.00000265 | 0.00257 | 0.00328 | 0.00778 | 0.00756 |
| **2069** | 3,940 | 0.215 | 0.331 | 0.00548 | 1,340 | 0.565 | 1,250 | | | 0.00000283 | 0.0201 | 0.0104 | 0.978 | 0.0137 | 0.00000743 | 275 | 0.000228 | 0.000507 | 0.00131 | 0.0123 | 0.0348 | 0.0000747 | 9.45 | 148 | 0.37 | 0.00904 | 882 | 0.0364 | 0.0037 | 0.0000579 | 0.0077 | 0.0029 | 1.13 | 0.00000261 | 0.00254 | 0.00324 | 0.00768 | 0.00747 |
| **2070** | 3,890 | 0.188 | 0.29 | 0.00479 | 1,330 | 0.557 | 1,240 | | | 0.00000279 | 0.0199 | 0.0102 | 0.965 | 0.0135 | 0.00000733 | 271 | 0.000225 | 0.000501 | 0.0013 | 0.0122 | 0.0344 | 0.0000737 | 9.33 | 146 | 0.365 | 0.00892 | 871 | 0.0359 | 0.00365 | 0.0000571 | 0.00759 | 0.00286 | 1.12 | 0.00000258 | 0.0025 | 0.0032 | 0.00758 | 0.00737 |
| **2071** | 3,830 | 0.165 | 0.253 | 0.00419 | 1,310 | 0.55 | 1,220 | | | 0.00000276 | 0.0196 | 0.0101 | 0.953 | 0.0133 | 0.00000724 | 267 | 0.000222 | 0.000494 | 0.00128 | 0.012 | 0.0339 | 0.0000727 | 9.2 | 144 | 0.36 | 0.00881 | 859 | 0.0355 | 0.0036 | 0.0000564 | 0.00749 | 0.00282 | 1.1 | 0.00000255 | 0.00247 | 0.00316 | 0.00748 | 0.00727 |
| **2072** | 3,780 | 0.144 | 0.221 | 0.00366 | 1,290 | 0.543 | 1,200 | | | 0.00000272 | 0.0194 | 0.00997 | 0.94 | 0.0131 | 0.00000714 | 264 | 0.000219 | 0.000487 | 0.00126 | 0.0118 | 0.0334 | 0.0000717 | 9.08 | 143 | 0.355 | 0.00869 | 848 | 0.035 | 0.00355 | 0.0000556 | 0.00739 | 0.00279 | 1.09 | 0.00000251 | 0.00244 | 0.00312 | 0.00738 | 0.00717 |
| **2073** | 3,730 | 0.126 | 0.193 | 0.0032 | 1,270 | 0.535 | 1,190 | | | 0.00000268 | 0.0191 | 0.00983 | 0.927 | 0.0129 | 0.00000704 | 260 | 0.000216 | 0.000481 | 0.00124 | 0.0117 | 0.033 | 0.0000708 | 8.96 | 141 | 0.351 | 0.00857 | 836 | 0.0345 | 0.00351 | 0.0000549 | 0.00729 | 0.00275 | 1.07 | 0.00000248 | 0.0024 | 0.00307 | 0.00728 | 0.00708 |
| **2074** | 3,680 | 0.11 | 0.169 | 0.0028 | 1,260 | 0.528 | 1,170 | | | 0.00000264 | 0.0188 | 0.00969 | 0.914 | 0.0128 | 0.00000694 | 257 | 0.000213 | 0.000474 | 0.00123 | 0.0115 | 0.0325 | 0.0000698 | 8.83 | 139 | 0.346 | 0.00845 | 825 | 0.034 | 0.00346 | 0.0000541 | 0.00719 | 0.00271 | 1.06 | 0.00000244 | 0.00237 | 0.00303 | 0.00718 | 0.00698 |
| **2075** | 3,630 | 0.0961 | 0.148 | 0.00244 | 1,240 | 0.521 | 1,150 | | | 0.00000261 | 0.0186 | 0.00956 | 0.902 | 0.0126 | 0.00000685 | 253 | 0.00021 | 0.000468 | 0.00121 | 0.0114 | 0.0321 | 0.0000688 | 8.71 | 137 | 0.341 | 0.00833 | 813 | 0.0336 | 0.00341 | 0.0000534 | 0.00709 | 0.00267 | 1.04 | 0.00000241 | 0.00234 | 0.00299 | 0.00708 | 0.00688 |
| **2076** | 3,580 | 0.084 | 0.129 | 0.00214 | 1,220 | 0.513 | 1,140 | | | 0.00000257 | 0.0183 | 0.00942 | 0.889 | 0.0124 | 0.00000675 | 249 | 0.000207 | 0.000461 | 0.00119 | 0.0112 | 0.0316 | 0.0000679 | 8.59 | 135 | 0.336 | 0.00822 | 802 | 0.0331 | 0.00336 | 0.0000526 | 0.00699 | 0.00263 | 1.03 | 0.00000237 | 0.0023 | 0.00295 | 0.00698 | 0.00679 |
| **2077** | 3,530 | 0.0734 | 0.113 | 0.00187 | 1,200 | 0.506 | 1,120 | | | 0.00000253 | 0.018 | 0.00929 | 0.876 | 0.0122 | 0.00000665 | 246 | 0.000204 | 0.000454 | 0.00118 | 0.011 | 0.0312 | 0.0000669 | 8.46 | 133 | 0.331 | 0.0081 | 790 | 0.0326 | 0.00331 | 0.0000518 | 0.00689 | 0.0026 | 1.01 | 0.00000234 | 0.00227 | 0.0029 | 0.00688 | 0.00669 |
| **2078** | 3,480 | 0.0642 | 0.0987 | 0.00163 | 1,190 | 0.498 | 1,110 | | | 0.0000025 | 0.0178 | 0.00915 | 0.863 | 0.0121 | 0.00000656 | 242 | 0.000201 | 0.000448 | 0.00116 | 0.0109 | 0.0307 | 0.0000659 | 8.34 | 131 | 0.326 | 0.00798 | 779 | 0.0321 | 0.00326 | 0.0000511 | 0.00679 | 0.00256 | 0.999 | 0.00000231 | 0.00224 | 0.00286 | 0.00678 | 0.00659 |
| **2079** | 3,420 | 0.0561 | 0.0863 | 0.00143 | 1,170 | 0.491 | 1,090 | | | 0.00000246 | 0.0175 | 0.00902 | 0.851 | 0.0119 | 0.00000646 | 239 | 0.000198 | 0.000441 | 0.00114 | 0.0107 | 0.0303 | 0.0000649 | 8.22 | 129 | 0.322 | 0.00786 | 767 | 0.0317 | 0.00322 | 0.0000503 | 0.00669 | 0.00252 | 0.984 | 0.00000227 | 0.0022 | 0.00282 | 0.00668 | 0.00649 |
| **2080** | 3,370 | 0.049 | 0.0754 | 0.00125 | 1,150 | 0.484 | 1,070 | | | 0.00000242 | 0.0173 | 0.00888 | 0.838 | 0.0117 | 0.00000636 | 235 | 0.000195 | 0.000434 | 0.00112 | 0.0106 | 0.0298 | 0.000064 | 8.09 | 127 | 0.317 | 0.00774 | 756 | 0.0312 | 0.00317 | 0.0000496 | 0.00659 | 0.00248 | 0.969 | 0.00000224 | 0.00217 | 0.00278 | 0.00658 | 0.0064 |
| **2081** | 3,320 | 0.0428 | 0.0659 | 0.00109 | 1,130 | 0.476 | 1,060 | | | 0.00000239 | 0.017 | 0.00875 | 0.825 | 0.0115 | 0.00000627 | 232 | 0.000192 | 0.000428 | 0.00111 | 0.0104 | 0.0294 | 0.000063 | 7.97 | 125 | 0.312 | 0.00763 | 744 | 0.0307 | 0.00312 | 0.0000488 | 0.00649 | 0.00245 | 0.954 | 0.0000022 | 0.00214 | 0.00273 | 0.00648 | 0.0063 |
| **2082** | 3,270 | 0.0374 | 0.0576 | 0.000952 | 1,110 | 0.469 | 1,040 | | | 0.00000235 | 0.0167 | 0.00861 | 0.812 | 0.0113 | 0.00000617 | 228 | 0.000189 | 0.000421 | 0.00109 | 0.0102 | 0.0289 | 0.000062 | 7.85 | 123 | 0.307 | 0.00751 | 733 | 0.0302 | 0.00307 | 0.0000481 | 0.00639 | 0.00241 | 0.94 | 0.00000217 | 0.00211 | 0.00269 | 0.00638 | 0.0062 |
| **2083** | 3,220 | 0.0327 | 0.0504 | 0.000832 | 1,100 | 0.462 | 1,020 | | | 0.00000231 | 0.0165 | 0.00848 | 0.8 | 0.0112 | 0.00000607 | 224 | 0.000186 | 0.000415 | 0.00107 | 0.0101 | 0.0284 | 0.000061 | 7.72 | 121 | 0.302 | 0.00739 | 721 | 0.0298 | 0.00302 | 0.0000473 | 0.00629 | 0.00237 | 0.925 | 0.00000214 | 0.00207 | 0.00265 | 0.00628 | 0.0061 |
| **2084** | 3,170 | 0.0286 | 0.044 | 0.000728 | 1,080 | 0.454 | 1,010 | | | 0.00000228 | 0.0162 | 0.00834 | 0.787 | 0.011 | 0.00000598 | 221 | 0.000183 | 0.000408 | 0.00106 | 0.00991 | 0.028 | 0.0000601 | 7.6 | 119 | 0.297 | 0.00727 | 710 | 0.0293 | 0.00297 | 0.0000466 | 0.00619 | 0.00233 | 0.91 | 0.0000021 | 0.00204 | 0.00261 | 0.00618 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 3,120 | 0.025 | 0.0385 | 0.000636 | 1,060 | 0.447 | 991 | | | 0.00000224 | 0.0159 | 0.00821 | 0.774 | 0.0108 | 0.00000588 | 217 | 0.00018 | 0.000401 | 0.00104 | 0.00975 | 0.0275 | 0.0000591 | 7.48 | 117 | 0.293 | 0.00715 | 698 | 0.0288 | 0.00293 | 0.0000458 | 0.00609 | 0.00229 | 0.895 | 0.00000207 | 0.00201 | 0.00257 | 0.00608 | 0.00591 |
| **2086** | 3,060 | 0.0219 | 0.0336 | 0.000556 | 1,040 | 0.44 | 975 | | | 0.0000022 | 0.0157 | 0.00807 | 0.761 | 0.0106 | 0.00000578 | 214 | 0.000177 | 0.000395 | 0.00102 | 0.00959 | 0.0271 | 0.0000581 | 7.35 | 115 | 0.288 | 0.00704 | 687 | 0.0283 | 0.00288 | 0.000045 | 0.00599 | 0.00226 | 0.881 | 0.00000203 | 0.00197 | 0.00252 | 0.00598 | 0.00581 |
| **2087** | 3,010 | 0.0191 | 0.0294 | 0.000486 | 1,030 | 0.432 | 958 | | | 0.00000216 | 0.0154 | 0.00794 | 0.748 | 0.0105 | 0.00000568 | 210 | 0.000174 | 0.000388 | 0.001 | 0.00943 | 0.0266 | 0.0000571 | 7.23 | 113 | 0.283 | 0.00692 | 675 | 0.0279 | 0.00283 | 0.0000443 | 0.00589 | 0.00222 | 0.866 | 0.000002 | 0.00194 | 0.00248 | 0.00588 | 0.00571 |
| **2088** | 2,960 | 0.0167 | 0.0257 | 0.000425 | 1,010 | 0.425 | 942 | | | 0.00000213 | 0.0152 | 0.0078 | 0.736 | 0.0103 | 0.00000559 | 206 | 0.000171 | 0.000382 | 0.000988 | 0.00926 | 0.0262 | 0.0000562 | 7.11 | 112 | 0.278 | 0.0068 | 664 | 0.0274 | 0.00278 | 0.0000435 | 0.00579 | 0.00218 | 0.851 | 0.00000197 | 0.00191 | 0.00244 | 0.00578 | 0.00562 |
| **2089** | 2,910 | 0.0146 | 0.0225 | 0.000371 | 992 | 0.417 | 926 | | | 0.00000209 | 0.0149 | 0.00766 | 0.723 | 0.0101 | 0.00000549 | 203 | 0.000168 | 0.000375 | 0.000971 | 0.0091 | 0.0257 | 0.0000552 | 6.98 | 110 | 0.273 | 0.00668 | 652 | 0.0269 | 0.00273 | 0.0000428 | 0.00569 | 0.00214 | 0.836 | 0.00000193 | 0.00187 | 0.0024 | 0.00568 | 0.00552 |
| **2090** | 2,860 | 0.0128 | 0.0196 | 0.000324 | 975 | 0.41 | 909 | | | 0.00000205 | 0.0146 | 0.00753 | 0.71 | 0.00992 | 0.00000539 | 199 | 0.000165 | 0.000368 | 0.000954 | 0.00894 | 0.0253 | 0.0000542 | 6.86 | 108 | 0.269 | 0.00656 | 641 | 0.0264 | 0.00269 | 0.000042 | 0.00559 | 0.00211 | 0.822 | 0.0000019 | 0.00184 | 0.00235 | 0.00558 | 0.00542 |
| **2091** | 2,810 | 0.0112 | 0.0172 | 0.000284 | 957 | 0.403 | 893 | | | 0.00000202 | 0.0144 | 0.00739 | 0.697 | 0.00974 | 0.0000053 | 196 | 0.000162 | 0.000362 | 0.000936 | 0.00878 | 0.0248 | 0.0000532 | 6.74 | 106 | 0.264 | 0.00645 | 629 | 0.026 | 0.00264 | 0.0000413 | 0.00549 | 0.00207 | 0.807 | 0.00000186 | 0.00181 | 0.00231 | 0.00548 | 0.00532 |
| **2092** | 2,760 | 0.00975 | 0.015 | 0.000248 | 940 | 0.395 | 876 | | | 0.00000198 | 0.0141 | 0.00726 | 0.685 | 0.00956 | 0.0000052 | 192 | 0.000159 | 0.000355 | 0.000919 | 0.00862 | 0.0244 | 0.0000523 | 6.61 | 104 | 0.259 | 0.00633 | 618 | 0.0255 | 0.00259 | 0.0000405 | 0.00539 | 0.00203 | 0.792 | 0.00000183 | 0.00177 | 0.00227 | 0.00538 | 0.00523 |
| **2093** | 2,700 | 0.00852 | 0.0131 | 0.000217 | 922 | 0.388 | 860 | | | 0.00000194 | 0.0138 | 0.00712 | 0.672 | 0.00938 | 0.0000051 | 189 | 0.000156 | 0.000348 | 0.000902 | 0.00846 | 0.0239 | 0.0000513 | 6.49 | 102 | 0.254 | 0.00621 | 606 | 0.025 | 0.00254 | 0.0000398 | 0.00529 | 0.00199 | 0.777 | 0.0000018 | 0.00174 | 0.00223 | 0.00528 | 0.00513 |
| **2094** | 2,650 | 0.00745 | 0.0115 | 0.000189 | 905 | 0.381 | 844 | | | 0.00000191 | 0.0136 | 0.00699 | 0.659 | 0.0092 | 0.00000501 | 185 | 0.000153 | 0.000342 | 0.000885 | 0.0083 | 0.0235 | 0.0000503 | 6.37 | 100 | 0.249 | 0.00609 | 595 | 0.0245 | 0.00249 | 0.000039 | 0.00519 | 0.00195 | 0.763 | 0.00000176 | 0.00171 | 0.00218 | 0.00518 | 0.00503 |
| **2095** | 2,600 | 0.00651 | 0.01 | 0.000166 | 887 | 0.373 | 827 | | | 0.00000187 | 0.0133 | 0.00685 | 0.646 | 0.00903 | 0.00000491 | 181 | 0.00015 | 0.000335 | 0.000868 | 0.00814 | 0.023 | 0.0000493 | 6.24 | 98 | 0.244 | 0.00597 | 583 | 0.0241 | 0.00244 | 0.0000383 | 0.00509 | 0.00192 | 0.748 | 0.00000173 | 0.00168 | 0.00214 | 0.00507 | 0.00493 |
| **2096** | 2,550 | 0.00569 | 0.00875 | 0.000145 | 870 | 0.366 | 811 | | | 0.00000183 | 0.0131 | 0.00672 | 0.634 | 0.00885 | 0.00000481 | 178 | 0.000147 | 0.000329 | 0.000851 | 0.00798 | 0.0225 | 0.0000484 | 6.12 | 96.1 | 0.24 | 0.00586 | 572 | 0.0236 | 0.0024 | 0.0000375 | 0.00498 | 0.00188 | 0.733 | 0.00000169 | 0.00164 | 0.0021 | 0.00497 | 0.00484 |
| **2097** | 2,500 | 0.00497 | 0.00765 | 0.000126 | 852 | 0.358 | 795 | | | 0.0000018 | 0.0128 | 0.00658 | 0.621 | 0.00867 | 0.00000472 | 174 | 0.000144 | 0.000322 | 0.000834 | 0.00782 | 0.0221 | 0.0000474 | 6 | 94.1 | 0.235 | 0.00574 | 560 | 0.0231 | 0.00235 | 0.0000367 | 0.00488 | 0.00184 | 0.718 | 0.00000166 | 0.00161 | 0.00206 | 0.00487 | 0.00474 |
| **2098** | 2,450 | 0.00435 | 0.00669 | 0.000111 | 835 | 0.351 | 778 | | | 0.00000176 | 0.0125 | 0.00645 | 0.608 | 0.00849 | 0.00000462 | 171 | 0.000142 | 0.000315 | 0.000816 | 0.00766 | 0.0216 | 0.0000464 | 5.87 | 92.2 | 0.23 | 0.00562 | 549 | 0.0226 | 0.0023 | 0.000036 | 0.00478 | 0.0018 | 0.703 | 0.00000162 | 0.00158 | 0.00202 | 0.00477 | 0.00464 |
| **2099** | 2,400 | 0.0038 | 0.00585 | 0.0000966 | 817 | 0.344 | 762 | | | 0.00000172 | 0.0123 | 0.00631 | 0.595 | 0.00831 | 0.00000452 | 167 | 0.000139 | 0.000309 | 0.000799 | 0.0075 | 0.0212 | 0.0000454 | 5.75 | 90.3 | 0.225 | 0.0055 | 537 | 0.0222 | 0.00225 | 0.0000352 | 0.00468 | 0.00176 | 0.689 | 0.00000159 | 0.00154 | 0.00197 | 0.00467 | 0.00454 |
| **2100** | 2,350 | 0.00332 | 0.00511 | 0.0000845 | 800 | 0.336 | 746 | | | 0.00000169 | 0.012 | 0.00618 | 0.583 | 0.00813 | 0.00000442 | 164 | 0.000136 | 0.000302 | 0.000782 | 0.00734 | 0.0207 | 0.0000445 | 5.63 | 88.3 | 0.22 | 0.00538 | 525 | 0.0217 | 0.0022 | 0.0000345 | 0.00458 | 0.00173 | 0.674 | 0.00000156 | 0.00151 | 0.00193 | 0.00457 | 0.00445 |
| **2101** | 2,290 | 0.0029 | 0.00447 | 0.0000738 | 782 | 0.329 | 729 | | | 0.00000165 | 0.0117 | 0.00604 | 0.57 | 0.00796 | 0.00000433 | 160 | 0.000133 | 0.000295 | 0.000765 | 0.00718 | 0.0203 | 0.0000435 | 5.5 | 86.4 | 0.215 | 0.00527 | 514 | 0.0212 | 0.00215 | 0.0000337 | 0.00448 | 0.00169 | 0.659 | 0.00000152 | 0.00148 | 0.00189 | 0.00447 | 0.00435 |
| **2102** | 2,240 | 0.00254 | 0.0039 | 0.0000645 | 765 | 0.322 | 713 | | | 0.00000161 | 0.0115 | 0.00591 | 0.557 | 0.00778 | 0.00000423 | 156 | 0.00013 | 0.000289 | 0.000748 | 0.00701 | 0.0198 | 0.0000425 | 5.38 | 84.5 | 0.211 | 0.00515 | 502 | 0.0207 | 0.00211 | 0.000033 | 0.00438 | 0.00165 | 0.644 | 0.00000149 | 0.00144 | 0.00185 | 0.00437 | 0.00425 |
| **2103** | 2,190 | 0.00222 | 0.00341 | 0.0000564 | 747 | 0.314 | 697 | | | 0.00000157 | 0.0112 | 0.00577 | 0.544 | 0.0076 | 0.00000413 | 153 | 0.000127 | 0.000282 | 0.000731 | 0.00685 | 0.0194 | 0.0000415 | 5.26 | 82.5 | 0.206 | 0.00503 | 491 | 0.0203 | 0.00206 | 0.0000322 | 0.00428 | 0.00161 | 0.63 | 0.00000145 | 0.00141 | 0.0018 | 0.00427 | 0.00415 |
| **2104** | 2,140 | 0.00194 | 0.00298 | 0.0000493 | 730 | 0.307 | 680 | | | 0.00000154 | 0.0109 | 0.00564 | 0.532 | 0.00742 | 0.00000404 | 149 | 0.000124 | 0.000276 | 0.000714 | 0.00669 | 0.0189 | 0.0000406 | 5.13 | 80.6 | 0.201 | 0.00491 | 479 | 0.0198 | 0.00201 | 0.0000315 | 0.00418 | 0.00158 | 0.615 | 0.00000142 | 0.00138 | 0.00176 | 0.00417 | 0.00406 |
| **2105** | 2,090 | 0.00169 | 0.00261 | 0.0000431 | 712 | 0.3 | 664 | | | 0.0000015 | 0.0107 | 0.0055 | 0.519 | 0.00724 | 0.00000394 | 146 | 0.000121 | 0.000269 | 0.000697 | 0.00653 | 0.0185 | 0.0000396 | 5.01 | 78.7 | 0.196 | 0.00479 | 468 | 0.0193 | 0.00196 | 0.0000307 | 0.00408 | 0.00154 | 0.6 | 0.00000139 | 0.00134 | 0.00172 | 0.00407 | 0.00396 |
| **2106** | 2,040 | 0.00148 | 0.00228 | 0.0000377 | 695 | 0.292 | 648 | | | 0.00000146 | 0.0104 | 0.00536 | 0.506 | 0.00706 | 0.00000384 | 142 | 0.000118 | 0.000262 | 0.000679 | 0.00637 | 0.018 | 0.0000386 | 4.89 | 76.7 | 0.191 | 0.00468 | 456 | 0.0188 | 0.00191 | 0.0000299 | 0.00398 | 0.0015 | 0.585 | 0.00000135 | 0.00131 | 0.00168 | 0.00397 | 0.00386 |
| **2107** | 1,990 | 0.00129 | 0.00199 | 0.0000329 | 677 | 0.285 | 631 | | | 0.00000143 | 0.0102 | 0.00523 | 0.493 | 0.00689 | 0.00000375 | 138 | 0.000115 | 0.000256 | 0.000662 | 0.00621 | 0.0176 | 0.0000377 | 4.76 | 74.8 | 0.186 | 0.00456 | 445 | 0.0184 | 0.00186 | 0.0000292 | 0.00388 | 0.00146 | 0.571 | 0.00000132 | 0.00128 | 0.00163 | 0.00387 | 0.00377 |
| **2108** | 1,930 | 0.00113 | 0.00174 | 0.0000288 | 660 | 0.277 | 615 | | | 0.00000139 | 0.0099 | 0.00509 | 0.48 | 0.00671 | 0.00000365 | 135 | 0.000112 | 0.000249 | 0.000645 | 0.00605 | 0.0171 | 0.0000367 | 4.64 | 72.9 | 0.182 | 0.00444 | 433 | 0.0179 | 0.00182 | 0.0000284 | 0.00378 | 0.00142 | 0.556 | 0.00000128 | 0.00125 | 0.00159 | 0.00377 | 0.00367 |
| **2109** | 1,880 | 0.000989 | 0.00152 | 0.0000252 | 642 | 0.27 | 599 | | | 0.00000135 | 0.00963 | 0.00496 | 0.468 | 0.00653 | 0.00000355 | 131 | 0.000109 | 0.000243 | 0.000628 | 0.00589 | 0.0166 | 0.0000357 | 4.52 | 70.9 | 0.177 | 0.00432 | 422 | 0.0174 | 0.00177 | 0.0000277 | 0.00368 | 0.00139 | 0.541 | 0.00000125 | 0.00121 | 0.00155 | 0.00367 | 0.00357 |
| **2110** | 1,830 | 0.000864 | 0.00133 | 0.000022 | 624 | 0.263 | 582 | | | 0.00000132 | 0.00937 | 0.00482 | 0.455 | 0.00635 | 0.00000346 | 128 | 0.000106 | 0.000236 | 0.000611 | 0.00573 | 0.0162 | 0.0000347 | 4.39 | 69 | 0.172 | 0.00421 | 410 | 0.0169 | 0.00172 | 0.0000269 | 0.00358 | 0.00135 | 0.526 | 0.00000122 | 0.00118 | 0.00151 | 0.00357 | 0.00347 |
| **2111** | 1,780 | 0.000756 | 0.00116 | 0.0000192 | 607 | 0.255 | 566 | | | 0.00000128 | 0.00911 | 0.00469 | 0.442 | 0.00617 | 0.00000336 | 124 | 0.000103 | 0.000229 | 0.000594 | 0.00557 | 0.0157 | 0.0000338 | 4.27 | 67.1 | 0.167 | 0.00409 | 399 | 0.0165 | 0.00167 | 0.0000262 | 0.00348 | 0.00131 | 0.512 | 0.00000118 | 0.00115 | 0.00147 | 0.00347 | 0.00338 |
| **2112** | 1,730 | 0.00066 | 0.00102 | 0.0000168 | 589 | 0.248 | 550 | | | 0.00000124 | 0.00884 | 0.00455 | 0.429 | 0.006 | 0.00000326 | 121 | 0.0000999 | 0.000223 | 0.000577 | 0.00541 | 0.0153 | 0.0000328 | 4.15 | 65.1 | 0.162 | 0.00397 | 387 | 0.016 | 0.00162 | 0.0000254 | 0.00338 | 0.00127 | 0.497 | 0.00000115 | 0.00111 | 0.00142 | 0.00337 | 0.00328 |
| **2113** | 1,680 | 0.000577 | 0.000888 | 0.0000147 | 572 | 0.241 | 533 | | | 0.00000121 | 0.00858 | 0.00442 | 0.417 | 0.00582 | 0.00000316 | 117 | 0.000097 | 0.000216 | 0.000559 | 0.00525 | 0.0148 | 0.0000318 | 4.02 | 63.2 | 0.158 | 0.00385 | 376 | 0.0155 | 0.00158 | 0.0000247 | 0.00328 | 0.00124 | 0.482 | 0.00000111 | 0.00108 | 0.00138 | 0.00327 | 0.00318 |
| **2114** | 1,630 | 0.000505 | 0.000776 | 0.0000128 | 554 | 0.233 | 517 | | | 0.00000117 | 0.00832 | 0.00428 | 0.404 | 0.00564 | 0.00000307 | 113 | 0.000094 | 0.000209 | 0.000542 | 0.00509 | 0.0144 | 0.0000308 | 3.9 | 61.2 | 0.153 | 0.00373 | 364 | 0.015 | 0.00153 | 0.0000239 | 0.00318 | 0.0012 | 0.467 | 0.00000108 | 0.00105 | 0.00134 | 0.00317 | 0.00308 |
| **2115** | 1,570 | 0.000441 | 0.000679 | 0.0000112 | 537 | 0.226 | 501 | | | 0.00000113 | 0.00806 | 0.00415 | 0.391 | 0.00546 | 0.00000297 | 110 | 0.000091 | 0.000203 | 0.000525 | 0.00493 | 0.0139 | 0.0000299 | 3.78 | 59.3 | 0.148 | 0.00362 | 353 | 0.0146 | 0.00148 | 0.0000231 | 0.00308 | 0.00116 | 0.452 | 0.00000105 | 0.00101 | 0.0013 | 0.00307 | 0.00299 |
| **2116** | 1,520 | 0.000386 | 0.000593 | 0.0000098 | 519 | 0.218 | 484 | | | 0.00000109 | 0.00779 | 0.00401 | 0.378 | 0.00528 | 0.00000287 | 106 | 0.000088 | 0.000196 | 0.000508 | 0.00476 | 0.0135 | 0.0000289 | 3.66 | 57.4 | 0.143 | 0.0035 | 341 | 0.0141 | 0.00143 | 0.0000224 | 0.00298 | 0.00112 | 0.438 | 0.00000101 | 0.000981 | 0.00125 | 0.00297 | 0.00289 |
| **2117** | 1,470 | 0.000337 | 0.000518 | 0.00000857 | 502 | 0.211 | 468 | | | 0.00000106 | 0.00753 | 0.00388 | 0.366 | 0.0051 | 0.00000278 | 103 | 0.0000851 | 0.00019 | 0.000491 | 0.0046 | 0.013 | 0.0000279 | 3.53 | 55.4 | 0.138 | 0.00338 | 330 | 0.0136 | 0.00138 | 0.0000216 | 0.00288 | 0.00108 | 0.423 | 0.000000977 | 0.000948 | 0.00121 | 0.00287 | 0.00279 |
| **2118** | 1,420 | 0.000295 | 0.000453 | 0.00000749 | 484 | 0.204 | 452 | | | 0.00000102 | 0.00727 | 0.00374 | 0.353 | 0.00493 | 0.00000268 | 99 | 0.0000821 | 0.000183 | 0.000474 | 0.00444 | 0.0126 | 0.0000269 | 3.41 | 53.5 | 0.133 | 0.00326 | 318 | 0.0131 | 0.00133 | 0.0000209 | 0.00278 | 0.00105 | 0.408 | 0.000000943 | 0.000915 | 0.00117 | 0.00277 | 0.00269 |
| **2119** | 1,370 | 0.000257 | 0.000396 | 0.00000655 | 467 | 0.196 | 435 | | | 0.000000984 | 0.007 | 0.00361 | 0.34 | 0.00475 | 0.00000258 | 95.5 | 0.0000791 | 0.000176 | 0.000457 | 0.00428 | 0.0121 | 0.000026 | 3.29 | 51.6 | 0.129 | 0.00314 | 307 | 0.0127 | 0.00129 | 0.0000201 | 0.00268 | 0.00101 | 0.393 | 0.000000909 | 0.000881 | 0.00113 | 0.00267 | 0.0026 |
| **2120** | 1,320 | 0.000225 | 0.000346 | 0.00000572 | 449 | 0.189 | 419 | | | 0.000000947 | 0.00674 | 0.00347 | 0.327 | 0.00457 | 0.00000249 | 91.9 | 0.0000762 | 0.00017 | 0.000439 | 0.00412 | 0.0116 | 0.000025 | 3.16 | 49.6 | 0.124 | 0.00303 | 295 | 0.0122 | 0.00124 | 0.0000194 | 0.00258 | 0.00097 | 0.379 | 0.000000875 | 0.000848 | 0.00108 | 0.00257 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF7** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | 6,020 | 39.5 | 64.1 | 3.14 | 2,700 | 1.56 | 981 | | | 0.00002 | 0.0386 | 0.0284 | 2.21 | 0.146 | 0.000044 | 215 | 0.0000685 | 0.0239 | 0.00218 | 0.0112 | 0.0237 | 0.0001 | 146 | 116 | 0.532 | 0.0357 | 1,770 | 0.062 | 0.0581 | 0.0000637 | 0.00387 | 0.00367 | 0.74 | 0.00000402 | 0.0519 | 0.00153 | 0.005 | 0.01 |
| **2030** | 2,460 | 18.3 | 28.1 | 0.465 | 1,110 | 0.756 | 405 | | | 0.000000992 | 0.0342 | 0.00574 | 1.31 | 0.021 | 0.0000102 | 88.7 | 0.000213 | 0.000445 | 0.00218 | 0.0163 | 0.0401 | 0.0001 | 15.2 | 47.9 | 0.494 | 0.0105 | 731 | 0.0641 | 0.00494 | 0.0000637 | 0.00982 | 0.00352 | 1.52 | 0.00000402 | 0.00306 | 0.0055 | 0.00818 | 0.01 |
| **2031** | 3,500 | 18.3 | 28.1 | 0.465 | 1,600 | 0.756 | 582 | | | 0.000001 | 0.0332 | 0.00687 | 1.31 | 0.0205 | 0.0000101 | 128 | 0.000226 | 0.000469 | 0.00215 | 0.0164 | 0.0409 | 0.0001 | 14.7 | 68.9 | 0.494 | 0.0107 | 1,050 | 0.0624 | 0.00494 | 0.000064 | 0.00984 | 0.00357 | 1.48 | 0.00000391 | 0.00309 | 0.00535 | 0.0085 | 0.01 |
| **2032** | 4,690 | 18.3 | 28.1 | 0.465 | 2,160 | 0.756 | 785 | | | 0.000001 | 0.0319 | 0.00815 | 1.31 | 0.0197 | 0.00000995 | 172 | 0.000239 | 0.000494 | 0.0021 | 0.0164 | 0.0416 | 0.0001 | 14.2 | 92.9 | 0.493 | 0.0109 | 1,420 | 0.0601 | 0.00493 | 0.0000641 | 0.0098 | 0.00362 | 1.43 | 0.00000377 | 0.00312 | 0.00514 | 0.00884 | 0.01 |
| **2033** | 6,620 | 18.3 | 28.1 | 0.465 | 3,060 | 0.756 | 1,110 | | | 0.00000101 | 0.0299 | 0.0102 | 1.31 | 0.0186 | 0.00000975 | 244 | 0.000261 | 0.000536 | 0.00203 | 0.0164 | 0.0429 | 0.0001 | 13.3 | 132 | 0.492 | 0.0113 | 2,010 | 0.0567 | 0.00492 | 0.0000644 | 0.00978 | 0.0037 | 1.35 | 0.00000356 | 0.00316 | 0.00482 | 0.0094 | 0.01 |
| **2034** | 6,860 | 18.3 | 28.1 | 0.465 | 3,170 | 0.756 | 1,150 | | | 0.00000101 | 0.0297 | 0.0105 | 1.31 | 0.0185 | 0.00000973 | 252 | 0.000264 | 0.000541 | 0.00202 | 0.0164 | 0.0431 | 0.0001 | 13.2 | 136 | 0.491 | 0.0113 | 2,080 | 0.0562 | 0.00491 | 0.0000644 | 0.00978 | 0.00371 | 1.34 | 0.00000353 | 0.00317 | 0.00478 | 0.00946 | 0.01 |
| **2035** | 9,410 | 18.3 | 28.1 | 0.465 | 4,360 | 0.756 | 1,580 | | | 0.00000105 | 0.0277 | 0.0133 | 1.31 | 0.0174 | 0.00000966 | 347 | 0.000297 | 0.000603 | 0.00197 | 0.0168 | 0.0455 | 0.0001 | 12.3 | 188 | 0.499 | 0.012 | 2,860 | 0.0529 | 0.00499 | 0.000066 | 0.00993 | 0.00388 | 1.26 | 0.00000332 | 0.00328 | 0.00446 | 0.0103 | 0.01 |
| **2036** | 6,410 | 18.3 | 28.1 | 0.465 | 2,960 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 1,940 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2037** | 5,790 | 16 | 24.6 | 0.407 | 2,590 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 1,700 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2038** | 5,250 | 14 | 21.5 | 0.355 | 2,260 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 1,490 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2039** | 4,770 | 12.2 | 18.8 | 0.311 | 1,980 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 1,300 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2040** | 4,360 | 10.7 | 16.4 | 0.272 | 1,730 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 1,130 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2041** | 3,990 | 9.33 | 14.4 | 0.237 | 1,510 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 992 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2042** | 3,680 | 8.16 | 12.6 | 0.207 | 1,320 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 867 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2043** | 3,400 | 7.13 | 11 | 0.181 | 1,150 | 0.756 | 1,080 | | | 0.00000102 | 0.0303 | 0.01 | 1.31 | 0.0188 | 0.00000982 | 236 | 0.00026 | 0.000533 | 0.00205 | 0.0165 | 0.0429 | 0.0001 | 13.4 | 127 | 0.494 | 0.0113 | 758 | 0.0574 | 0.00494 | 0.0000646 | 0.00983 | 0.00371 | 1.36 | 0.0000036 | 0.00317 | 0.00488 | 0.00937 | 0.01 |
| **2044** | 3,370 | 7.06 | 10.9 | 0.18 | 1,140 | 0.749 | 1,070 | | | 0.00000101 | 0.03 | 0.00991 | 1.3 | 0.0186 | 0.00000973 | 234 | 0.000257 | 0.000528 | 0.00203 | 0.0164 | 0.0425 | 0.000099 | 13.3 | 126 | 0.489 | 0.0112 | 751 | 0.0568 | 0.00489 | 0.000064 | 0.00973 | 0.00367 | 1.35 | 0.00000357 | 0.00314 | 0.00483 | 0.00928 | 0.0099 |
| **2045** | 3,330 | 6.99 | 10.8 | 0.178 | 1,130 | 0.742 | 1,050 | | | 0.000000997 | 0.0297 | 0.00981 | 1.28 | 0.0185 | 0.00000963 | 231 | 0.000255 | 0.000523 | 0.00201 | 0.0162 | 0.0421 | 0.0000981 | 13.2 | 125 | 0.484 | 0.0111 | 743 | 0.0563 | 0.00484 | 0.0000634 | 0.00964 | 0.00364 | 1.34 | 0.00000353 | 0.00311 | 0.00479 | 0.00919 | 0.00981 |
| **2046** | 3,300 | 6.92 | 10.6 | 0.176 | 1,120 | 0.734 | 1,040 | | | 0.000000988 | 0.0294 | 0.00971 | 1.27 | 0.0183 | 0.00000953 | 229 | 0.000252 | 0.000517 | 0.00199 | 0.016 | 0.0417 | 0.0000971 | 13.1 | 124 | 0.48 | 0.011 | 736 | 0.0557 | 0.0048 | 0.0000627 | 0.00954 | 0.0036 | 1.32 | 0.0000035 | 0.00308 | 0.00474 | 0.00909 | 0.00971 |
| **2047** | 3,270 | 6.85 | 10.5 | 0.174 | 1,110 | 0.727 | 1,030 | | | 0.000000978 | 0.0292 | 0.00962 | 1.26 | 0.0181 | 0.00000944 | 227 | 0.00025 | 0.000512 | 0.00197 | 0.0159 | 0.0413 | 0.0000961 | 12.9 | 122 | 0.475 | 0.0109 | 728 | 0.0551 | 0.00475 | 0.0000621 | 0.00945 | 0.00356 | 1.31 | 0.00000346 | 0.00305 | 0.00469 | 0.009 | 0.00961 |
| **2048** | 3,240 | 6.78 | 10.4 | 0.172 | 1,100 | 0.719 | 1,020 | | | 0.000000968 | 0.0289 | 0.00952 | 1.25 | 0.0179 | 0.00000934 | 224 | 0.000247 | 0.000507 | 0.00195 | 0.0157 | 0.0409 | 0.0000951 | 12.8 | 121 | 0.47 | 0.0107 | 721 | 0.0546 | 0.0047 | 0.0000615 | 0.00935 | 0.00353 | 1.3 | 0.00000343 | 0.00302 | 0.00464 | 0.00891 | 0.00951 |
| **2049** | 3,200 | 6.71 | 10.3 | 0.171 | 1,090 | 0.712 | 1,010 | | | 0.000000958 | 0.0286 | 0.00942 | 1.23 | 0.0177 | 0.00000925 | 222 | 0.000245 | 0.000502 | 0.00193 | 0.0155 | 0.0404 | 0.0000942 | 12.7 | 120 | 0.465 | 0.0106 | 714 | 0.054 | 0.00465 | 0.0000609 | 0.00926 | 0.00349 | 1.28 | 0.00000339 | 0.00299 | 0.0046 | 0.00882 | 0.00942 |
| **2050** | 3,170 | 6.64 | 10.2 | 0.169 | 1,070 | 0.705 | 1,000 | | | 0.000000948 | 0.0283 | 0.00932 | 1.22 | 0.0175 | 0.00000915 | 220 | 0.000242 | 0.000497 | 0.00191 | 0.0154 | 0.04 | 0.0000932 | 12.5 | 119 | 0.46 | 0.0105 | 706 | 0.0535 | 0.0046 | 0.0000602 | 0.00916 | 0.00346 | 1.27 | 0.00000336 | 0.00295 | 0.00455 | 0.00873 | 0.00932 |
| **2051** | 3,140 | 6.57 | 10.1 | 0.167 | 1,060 | 0.697 | 992 | | | 0.000000938 | 0.028 | 0.00923 | 1.21 | 0.0174 | 0.00000906 | 217 | 0.000239 | 0.000491 | 0.00189 | 0.0152 | 0.0396 | 0.0000922 | 12.4 | 117 | 0.455 | 0.0104 | 699 | 0.0529 | 0.00455 | 0.0000596 | 0.00906 | 0.00342 | 1.26 | 0.00000332 | 0.00292 | 0.0045 | 0.00864 | 0.00922 |
| **2052** | 3,100 | 6.51 | 10 | 0.165 | 1,050 | 0.69 | 981 | | | 0.000000928 | 0.0277 | 0.00913 | 1.2 | 0.0172 | 0.00000896 | 215 | 0.000237 | 0.000486 | 0.00187 | 0.0151 | 0.0392 | 0.0000912 | 12.3 | 116 | 0.451 | 0.0103 | 691 | 0.0523 | 0.00451 | 0.000059 | 0.00897 | 0.00338 | 1.24 | 0.00000329 | 0.00289 | 0.00445 | 0.00855 | 0.00912 |
| **2053** | 3,070 | 6.44 | 9.9 | 0.164 | 1,040 | 0.683 | 971 | | | 0.000000918 | 0.0274 | 0.00903 | 1.18 | 0.017 | 0.00000887 | 213 | 0.000234 | 0.000481 | 0.00185 | 0.0149 | 0.0388 | 0.0000903 | 12.1 | 115 | 0.446 | 0.0102 | 684 | 0.0518 | 0.00446 | 0.0000583 | 0.00887 | 0.00335 | 1.23 | 0.00000325 | 0.00286 | 0.00441 | 0.00846 | 0.00903 |
| **2054** | 3,040 | 6.37 | 9.79 | 0.162 | 1,030 | 0.675 | 960 | | | 0.000000908 | 0.0271 | 0.00893 | 1.17 | 0.0168 | 0.00000877 | 211 | 0.000232 | 0.000476 | 0.00183 | 0.0147 | 0.0383 | 0.0000893 | 12 | 114 | 0.441 | 0.0101 | 677 | 0.0512 | 0.00441 | 0.0000577 | 0.00878 | 0.00331 | 1.22 | 0.00000322 | 0.00283 | 0.00436 | 0.00836 | 0.00893 |
| **2055** | 3,000 | 6.3 | 9.69 | 0.16 | 1,020 | 0.668 | 950 | | | 0.000000898 | 0.0268 | 0.00884 | 1.16 | 0.0166 | 0.00000867 | 208 | 0.000229 | 0.000471 | 0.00181 | 0.0146 | 0.0379 | 0.0000883 | 11.9 | 113 | 0.436 | 0.00997 | 669 | 0.0507 | 0.00436 | 0.0000571 | 0.00868 | 0.00328 | 1.2 | 0.00000318 | 0.0028 | 0.00431 | 0.00827 | 0.00883 |
| **2056** | 2,970 | 6.23 | 9.58 | 0.158 | 1,010 | 0.661 | 939 | | | 0.000000888 | 0.0265 | 0.00874 | 1.14 | 0.0164 | 0.00000858 | 206 | 0.000227 | 0.000465 | 0.00179 | 0.0144 | 0.0375 | 0.0000873 | 11.7 | 111 | 0.431 | 0.00986 | 662 | 0.0501 | 0.00431 | 0.0000565 | 0.00859 | 0.00324 | 1.19 | 0.00000315 | 0.00277 | 0.00426 | 0.00818 | 0.00873 |
| **2057** | 2,940 | 6.16 | 9.47 | 0.157 | 996 | 0.653 | 929 | | | 0.000000879 | 0.0262 | 0.00864 | 1.13 | 0.0163 | 0.00000848 | 204 | 0.000224 | 0.00046 | 0.00177 | 0.0143 | 0.0371 | 0.0000864 | 11.6 | 110 | 0.427 | 0.00975 | 655 | 0.0495 | 0.00427 | 0.0000558 | 0.00849 | 0.0032 | 1.18 | 0.00000311 | 0.00274 | 0.00422 | 0.00809 | 0.00864 |
| **2058** | 2,900 | 6.09 | 9.37 | 0.155 | 985 | 0.646 | 918 | | | 0.000000869 | 0.0259 | 0.00854 | 1.12 | 0.0161 | 0.00000839 | 201 | 0.000222 | 0.000455 | 0.00175 | 0.0141 | 0.0367 | 0.0000854 | 11.5 | 109 | 0.422 | 0.00964 | 647 | 0.049 | 0.00422 | 0.0000552 | 0.00839 | 0.00317 | 1.16 | 0.00000308 | 0.00271 | 0.00417 | 0.008 | 0.00854 |
| **2059** | 2,870 | 6.02 | 9.26 | 0.153 | 974 | 0.638 | 908 | | | 0.000000859 | 0.0256 | 0.00845 | 1.11 | 0.0159 | 0.00000829 | 199 | 0.000219 | 0.00045 | 0.00173 | 0.0139 | 0.0362 | 0.0000844 | 11.4 | 108 | 0.417 | 0.00953 | 640 | 0.0484 | 0.00417 | 0.0000546 | 0.0083 | 0.00313 | 1.15 | 0.00000304 | 0.00268 | 0.00412 | 0.00791 | 0.00844 |
| **2060** | 2,840 | 5.95 | 9.15 | 0.151 | 962 | 0.631 | 898 | | | 0.000000849 | 0.0253 | 0.00835 | 1.09 | 0.0157 | 0.0000082 | 197 | 0.000217 | 0.000445 | 0.00171 | 0.0138 | 0.0358 | 0.0000834 | 11.2 | 106 | 0.412 | 0.00942 | 632 | 0.0479 | 0.00412 | 0.0000539 | 0.0082 | 0.00309 | 1.14 | 0.00000301 | 0.00265 | 0.00407 | 0.00782 | 0.00834 |
| **2061** | 2,800 | 5.88 | 9.05 | 0.15 | 951 | 0.624 | 887 | | | 0.000000839 | 0.025 | 0.00825 | 1.08 | 0.0155 | 0.0000081 | 194 | 0.000214 | 0.000439 | 0.00169 | 0.0136 | 0.0354 | 0.0000825 | 11.1 | 105 | 0.407 | 0.00931 | 625 | 0.0473 | 0.00407 | 0.0000533 | 0.00811 | 0.00306 | 1.12 | 0.00000297 | 0.00261 | 0.00403 | 0.00773 | 0.00825 |
| **2062** | 2,770 | 5.81 | 8.94 | 0.148 | 940 | 0.616 | 877 | | | 0.000000829 | 0.0247 | 0.00815 | 1.07 | 0.0153 | 0.000008 | 192 | 0.000212 | 0.000434 | 0.00167 | 0.0135 | 0.035 | 0.0000815 | 11 | 104 | 0.403 | 0.0092 | 618 | 0.0468 | 0.00403 | 0.0000527 | 0.00801 | 0.00302 | 1.11 | 0.00000294 | 0.00258 | 0.00398 | 0.00763 | 0.00815 |
| **2063** | 2,740 | 5.74 | 8.83 | 0.146 | 929 | 0.609 | 866 | | | 0.000000819 | 0.0244 | 0.00806 | 1.05 | 0.0152 | 0.00000791 | 190 | 0.000209 | 0.000429 | 0.00165 | 0.0133 | 0.0346 | 0.0000805 | 10.8 | 103 | 0.398 | 0.00909 | 610 | 0.0462 | 0.00398 | 0.000052 | 0.00792 | 0.00299 | 1.1 | 0.0000029 | 0.00255 | 0.00393 | 0.00754 | 0.00805 |
| **2064** | 2,710 | 5.67 | 8.73 | 0.144 | 917 | 0.602 | 856 | | | 0.000000809 | 0.0241 | 0.00796 | 1.04 | 0.015 | 0.00000781 | 188 | 0.000207 | 0.000424 | 0.00163 | 0.0131 | 0.0342 | 0.0000795 | 10.7 | 101 | 0.393 | 0.00898 | 603 | 0.0456 | 0.00393 | 0.0000514 | 0.00782 | 0.00295 | 1.08 | 0.00000287 | 0.00252 | 0.00388 | 0.00745 | 0.00795 |
| **2065** | 2,670 | 5.6 | 8.62 | 0.142 | 906 | 0.594 | 845 | | | 0.000000799 | 0.0238 | 0.00786 | 1.03 | 0.0148 | 0.00000772 | 185 | 0.000204 | 0.000419 | 0.00161 | 0.013 | 0.0337 | 0.0000786 | 10.6 | 100 | 0.388 | 0.00887 | 595 | 0.0451 | 0.00388 | 0.0000508 | 0.00772 | 0.00291 | 1.07 | 0.00000283 | 0.00249 | 0.00384 | 0.00736 | 0.00786 |
| **2066** | 2,640 | 5.53 | 8.51 | 0.141 | 895 | 0.587 | 835 | | | 0.000000789 | 0.0235 | 0.00776 | 1.02 | 0.0146 | 0.00000762 | 183 | 0.000202 | 0.000414 | 0.00159 | 0.0128 | 0.0333 | 0.0000776 | 10.4 | 98.9 | 0.383 | 0.00876 | 588 | 0.0445 | 0.00383 | 0.0000502 | 0.00763 | 0.00288 | 1.06 | 0.00000279 | 0.00246 | 0.00379 | 0.00727 | 0.00776 |
| **2067** | 2,610 | 5.46 | 8.41 | 0.139 | 884 | 0.579 | 824 | | | 0.000000779 | 0.0232 | 0.00767 | 1 | 0.0144 | 0.00000753 | 181 | 0.000199 | 0.000408 | 0.00157 | 0.0127 | 0.0329 | 0.0000766 | 10.3 | 97.6 | 0.378 | 0.00865 | 581 | 0.044 | 0.00378 | 0.0000495 | 0.00753 | 0.00284 | 1.05 | 0.00000276 | 0.00243 | 0.00374 | 0.00718 | 0.00766 |
| **2068** | 2,570 | 5.39 | 8.3 | 0.137 | 872 | 0.572 | 814 | | | 0.00000077 | 0.0229 | 0.00757 | 0.991 | 0.0142 | 0.00000743 | 178 | 0.000196 | 0.000403 | 0.00155 | 0.0125 | 0.0325 | 0.0000756 | 10.2 | 96.4 | 0.374 | 0.00854 | 573 | 0.0434 | 0.00374 | 0.0000489 | 0.00744 | 0.00281 | 1.03 | 0.00000272 | 0.0024 | 0.00369 | 0.00709 | 0.00756 |
| **2069** | 2,540 | 5.32 | 8.19 | 0.135 | 861 | 0.565 | 803 | | | 0.00000076 | 0.0227 | 0.00747 | 0.978 | 0.0141 | 0.00000733 | 176 | 0.000194 | 0.000398 | 0.00153 | 0.0123 | 0.0321 | 0.0000747 | 10 | 95.1 | 0.369 | 0.00843 | 566 | 0.0428 | 0.00369 | 0.0000483 | 0.00734 | 0.00277 | 1.02 | 0.00000269 | 0.00237 | 0.00365 | 0.007 | 0.00747 |
| **2070** | 2,510 | 5.25 | 8.08 | 0.134 | 850 | 0.557 | 793 | | | 0.00000075 | 0.0224 | 0.00737 | 0.965 | 0.0139 | 0.00000724 | 174 | 0.000191 | 0.000393 | 0.00151 | 0.0122 | 0.0316 | 0.0000737 | 9.91 | 93.9 | 0.364 | 0.00832 | 559 | 0.0423 | 0.00364 | 0.0000476 | 0.00724 | 0.00273 | 1.01 | 0.00000265 | 0.00234 | 0.0036 | 0.0069 | 0.00737 |
| **2071** | 2,470 | 5.19 | 7.98 | 0.132 | 839 | 0.55 | 782 | | | 0.00000074 | 0.0221 | 0.00728 | 0.953 | 0.0137 | 0.00000714 | 172 | 0.000189 | 0.000388 | 0.00149 | 0.012 | 0.0312 | 0.0000727 | 9.78 | 92.7 | 0.359 | 0.00821 | 551 | 0.0417 | 0.00359 | 0.000047 | 0.00715 | 0.0027 | 0.992 | 0.00000262 | 0.00231 | 0.00355 | 0.00681 | 0.00727 |
| **2072** | 2,440 | 5.12 | 7.87 | 0.13 | 827 | 0.543 | 772 | | | 0.00000073 | 0.0218 | 0.00718 | 0.94 | 0.0135 | 0.00000705 | 169 | 0.000186 | 0.000382 | 0.00147 | 0.0118 | 0.0308 | 0.0000717 | 9.65 | 91.4 | 0.354 | 0.0081 | 544 | 0.0412 | 0.00354 | 0.0000464 | 0.00705 | 0.00266 | 0.979 | 0.00000258 | 0.00227 | 0.0035 | 0.00672 | 0.00717 |
| **2073** | 2,410 | 5.05 | 7.76 | 0.128 | 816 | 0.535 | 761 | | | 0.00000072 | 0.0215 | 0.00708 | 0.927 | 0.0133 | 0.00000695 | 167 | 0.000184 | 0.000377 | 0.00145 | 0.0117 | 0.0304 | 0.0000708 | 9.52 | 90.2 | 0.35 | 0.00799 | 536 | 0.0406 | 0.0035 | 0.0000457 | 0.00696 | 0.00263 | 0.965 | 0.00000255 | 0.00224 | 0.00346 | 0.00663 | 0.00708 |
| **2074** | 2,370 | 4.98 | 7.66 | 0.127 | 805 | 0.528 | 751 | | | 0.00000071 | 0.0212 | 0.00698 | 0.914 | 0.0131 | 0.00000686 | 165 | 0.000181 | 0.000372 | 0.00143 | 0.0115 | 0.03 | 0.0000698 | 9.39 | 88.9 | 0.345 | 0.00788 | 529 | 0.04 | 0.00345 | 0.0000451 | 0.00686 | 0.00259 | 0.952 | 0.00000251 | 0.00221 | 0.00341 | 0.00654 | 0.00698 |
| **2075** | 2,340 | 4.91 | 7.55 | 0.125 | 794 | 0.521 | 740 | | | 0.0000007 | 0.0209 | 0.00689 | 0.902 | 0.013 | 0.00000676 | 162 | 0.000179 | 0.000367 | 0.00141 | 0.0114 | 0.0296 | 0.0000688 | 9.25 | 87.7 | 0.34 | 0.00777 | 522 | 0.0395 | 0.0034 | 0.0000445 | 0.00677 | 0.00255 | 0.939 | 0.00000248 | 0.00218 | 0.00336 | 0.00645 | 0.00688 |
| **2076** | 2,310 | 4.84 | 7.44 | 0.123 | 783 | 0.513 | 730 | | | 0.00000069 | 0.0206 | 0.00679 | 0.889 | 0.0128 | 0.00000666 | 160 | 0.000176 | 0.000362 | 0.00139 | 0.0112 | 0.0291 | 0.0000679 | 9.12 | 86.5 | 0.335 | 0.00766 | 514 | 0.0389 | 0.00335 | 0.0000439 | 0.00667 | 0.00252 | 0.925 | 0.00000244 | 0.00215 | 0.00331 | 0.00636 | 0.00679 |
| **2077** | 2,270 | 4.77 | 7.34 | 0.121 | 771 | 0.506 | 719 | | | 0.00000068 | 0.0203 | 0.00669 | 0.876 | 0.0126 | 0.00000657 | 158 | 0.000174 | 0.000356 | 0.00137 | 0.011 | 0.0287 | 0.0000669 | 8.99 | 85.2 | 0.33 | 0.00755 | 507 | 0.0384 | 0.0033 | 0.0000432 | 0.00657 | 0.00248 | 0.912 | 0.00000241 | 0.00212 | 0.00327 | 0.00627 | 0.00669 |
| **2078** | 2,240 | 4.7 | 7.23 | 0.119 | 760 | 0.498 | 709 | | | 0.00000067 | 0.02 | 0.00659 | 0.863 | 0.0124 | 0.00000647 | 155 | 0.000171 | 0.000351 | 0.00135 | 0.0109 | 0.0283 | 0.0000659 | 8.86 | 84 | 0.326 | 0.00744 | 499 | 0.0378 | 0.00326 | 0.0000426 | 0.00648 | 0.00244 | 0.899 | 0.00000237 | 0.00209 | 0.00322 | 0.00617 | 0.00659 |
| **2079** | 2,210 | 4.63 | 7.12 | 0.118 | 749 | 0.491 | 698 | | | 0.000000661 | 0.0197 | 0.0065 | 0.851 | 0.0122 | 0.00000638 | 153 | 0.000169 | 0.000346 | 0.00133 | 0.0107 | 0.0279 | 0.0000649 | 8.73 | 82.7 | 0.321 | 0.00733 | 492 | 0.0373 | 0.00321 | 0.000042 | 0.00638 | 0.00241 | 0.886 | 0.00000234 | 0.00206 | 0.00317 | 0.00608 | 0.00649 |
| **2080** | 2,180 | 4.56 | 7.02 | 0.116 | 738 | 0.484 | 688 | | | 0.000000651 | 0.0194 | 0.0064 | 0.838 | 0.012 | 0.00000628 | 151 | 0.000166 | 0.000341 | 0.00131 | 0.0106 | 0.0275 | 0.000064 | 8.6 | 81.5 | 0.316 | 0.00722 | 485 | 0.0367 | 0.00316 | 0.0000413 | 0.00629 | 0.00237 | 0.872 | 0.0000023 | 0.00203 | 0.00312 | 0.00599 | 0.0064 |
| **2081** | 2,140 | 4.49 | 6.91 | 0.114 | 726 | 0.476 | 677 | | | 0.000000641 | 0.0191 | 0.0063 | 0.825 | 0.0119 | 0.00000619 | 149 | 0.000164 | 0.000336 | 0.00129 | 0.0104 | 0.027 | 0.000063 | 8.47 | 80.2 | 0.311 | 0.00711 | 477 | 0.0361 | 0.00311 | 0.0000407 | 0.00619 | 0.00234 | 0.859 | 0.00000227 | 0.002 | 0.00307 | 0.0059 | 0.0063 |
| **2082** | 2,110 | 4.42 | 6.8 | 0.112 | 715 | 0.469 | 667 | | | 0.000000631 | 0.0188 | 0.0062 | 0.812 | 0.0117 | 0.00000609 | 146 | 0.000161 | 0.00033 | 0.00127 | 0.0102 | 0.0266 | 0.000062 | 8.34 | 79 | 0.306 | 0.007 | 470 | 0.0356 | 0.00306 | 0.0000401 | 0.0061 | 0.0023 | 0.846 | 0.00000223 | 0.00197 | 0.00303 | 0.00581 | 0.0062 |
| **2083** | 2,080 | 4.35 | 6.7 | 0.111 | 704 | 0.462 | 656 | | | 0.000000621 | 0.0185 | 0.00611 | 0.8 | 0.0115 | 0.00000599 | 144 | 0.000159 | 0.000325 | 0.00125 | 0.0101 | 0.0262 | 0.000061 | 8.21 | 77.8 | 0.301 | 0.00689 | 463 | 0.035 | 0.00301 | 0.0000395 | 0.006 | 0.00226 | 0.832 | 0.0000022 | 0.00194 | 0.00298 | 0.00572 | 0.0061 |
| **2084** | 2,040 | 4.28 | 6.59 | 0.109 | 693 | 0.454 | 646 | | | 0.000000611 | 0.0182 | 0.00601 | 0.787 | 0.0113 | 0.0000059 | 142 | 0.000156 | 0.00032 | 0.00123 | 0.00992 | 0.0258 | 0.0000601 | 8.08 | 76.5 | 0.297 | 0.00678 | 455 | 0.0345 | 0.00297 | 0.0000388 | 0.0059 | 0.00223 | 0.819 | 0.00000216 | 0.0019 | 0.00293 | 0.00563 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 2,010 | 4.21 | 6.48 | 0.107 | 681 | 0.447 | 636 | | | 0.000000601 | 0.0179 | 0.00591 | 0.774 | 0.0111 | 0.0000058 | 139 | 0.000153 | 0.000315 | 0.00121 | 0.00976 | 0.0254 | 0.0000591 | 7.94 | 75.3 | 0.292 | 0.00667 | 448 | 0.0339 | 0.00292 | 0.0000382 | 0.00581 | 0.00219 | 0.806 | 0.00000213 | 0.00187 | 0.00288 | 0.00554 | 0.00591 |
| **2086** | 1,980 | 4.14 | 6.37 | 0.105 | 670 | 0.44 | 625 | | | 0.000000591 | 0.0176 | 0.00581 | 0.761 | 0.0109 | 0.00000571 | 137 | 0.000151 | 0.00031 | 0.00119 | 0.0096 | 0.025 | 0.0000581 | 7.81 | 74 | 0.287 | 0.00656 | 440 | 0.0333 | 0.00287 | 0.0000376 | 0.00571 | 0.00216 | 0.793 | 0.00000209 | 0.00184 | 0.00284 | 0.00544 | 0.00581 |
| **2087** | 1,940 | 4.07 | 6.27 | 0.104 | 659 | 0.432 | 615 | | | 0.000000581 | 0.0173 | 0.00572 | 0.748 | 0.0108 | 0.00000561 | 135 | 0.000148 | 0.000304 | 0.00117 | 0.00943 | 0.0245 | 0.0000571 | 7.68 | 72.8 | 0.282 | 0.00645 | 433 | 0.0328 | 0.00282 | 0.0000369 | 0.00562 | 0.00212 | 0.779 | 0.00000206 | 0.00181 | 0.00279 | 0.00535 | 0.00571 |
| **2088** | 1,910 | 4 | 6.16 | 0.102 | 648 | 0.425 | 604 | | | 0.000000571 | 0.017 | 0.00562 | 0.736 | 0.0106 | 0.00000552 | 132 | 0.000146 | 0.000299 | 0.00115 | 0.00927 | 0.0241 | 0.0000562 | 7.55 | 71.6 | 0.277 | 0.00634 | 426 | 0.0322 | 0.00277 | 0.0000363 | 0.00552 | 0.00208 | 0.766 | 0.00000202 | 0.00178 | 0.00274 | 0.00526 | 0.00562 |
| **2089** | 1,880 | 3.93 | 6.05 | 0.1 | 636 | 0.417 | 594 | | | 0.000000561 | 0.0167 | 0.00552 | 0.723 | 0.0104 | 0.00000542 | 130 | 0.000143 | 0.000294 | 0.00113 | 0.00911 | 0.0237 | 0.0000552 | 7.42 | 70.3 | 0.273 | 0.00623 | 418 | 0.0317 | 0.00273 | 0.0000357 | 0.00543 | 0.00205 | 0.753 | 0.00000199 | 0.00175 | 0.00269 | 0.00517 | 0.00552 |
| **2090** | 1,840 | 3.87 | 5.95 | 0.0983 | 625 | 0.41 | 583 | | | 0.000000552 | 0.0164 | 0.00542 | 0.71 | 0.0102 | 0.00000532 | 128 | 0.000141 | 0.000289 | 0.00111 | 0.00895 | 0.0233 | 0.0000542 | 7.29 | 69.1 | 0.268 | 0.00612 | 411 | 0.0311 | 0.00268 | 0.000035 | 0.00533 | 0.00201 | 0.739 | 0.00000195 | 0.00172 | 0.00265 | 0.00508 | 0.00542 |
| **2091** | 1,810 | 3.8 | 5.84 | 0.0965 | 614 | 0.403 | 573 | | | 0.000000542 | 0.0161 | 0.00533 | 0.697 | 0.01 | 0.00000523 | 126 | 0.000138 | 0.000284 | 0.00109 | 0.00879 | 0.0229 | 0.0000532 | 7.16 | 67.8 | 0.263 | 0.00601 | 403 | 0.0305 | 0.00263 | 0.0000344 | 0.00523 | 0.00197 | 0.726 | 0.00000192 | 0.00169 | 0.0026 | 0.00499 | 0.00532 |
| **2092** | 1,780 | 3.73 | 5.73 | 0.0948 | 603 | 0.395 | 562 | | | 0.000000532 | 0.0159 | 0.00523 | 0.685 | 0.00984 | 0.00000513 | 123 | 0.000136 | 0.000279 | 0.00107 | 0.00863 | 0.0224 | 0.0000523 | 7.03 | 66.6 | 0.258 | 0.0059 | 396 | 0.03 | 0.00258 | 0.0000338 | 0.00514 | 0.00194 | 0.713 | 0.00000188 | 0.00166 | 0.00255 | 0.0049 | 0.00523 |
| **2093** | 1,740 | 3.66 | 5.63 | 0.093 | 592 | 0.388 | 552 | | | 0.000000522 | 0.0156 | 0.00513 | 0.672 | 0.00966 | 0.00000504 | 121 | 0.000133 | 0.000273 | 0.00105 | 0.00847 | 0.022 | 0.0000513 | 6.9 | 65.4 | 0.253 | 0.00579 | 389 | 0.0294 | 0.00253 | 0.0000332 | 0.00504 | 0.0019 | 0.7 | 0.00000185 | 0.00163 | 0.0025 | 0.0048 | 0.00513 |
| **2094** | 1,710 | 3.59 | 5.52 | 0.0912 | 580 | 0.381 | 541 | | | 0.000000512 | 0.0153 | 0.00503 | 0.659 | 0.00947 | 0.00000494 | 119 | 0.000131 | 0.000268 | 0.00103 | 0.00831 | 0.0216 | 0.0000503 | 6.77 | 64.1 | 0.249 | 0.00568 | 381 | 0.0289 | 0.00249 | 0.0000325 | 0.00495 | 0.00187 | 0.686 | 0.00000181 | 0.0016 | 0.00246 | 0.00471 | 0.00503 |
| **2095** | 1,680 | 3.52 | 5.41 | 0.0895 | 569 | 0.373 | 531 | | | 0.000000502 | 0.015 | 0.00494 | 0.646 | 0.00929 | 0.00000485 | 116 | 0.000128 | 0.000263 | 0.00101 | 0.00815 | 0.0212 | 0.0000493 | 6.63 | 62.9 | 0.244 | 0.00557 | 374 | 0.0283 | 0.00244 | 0.0000319 | 0.00485 | 0.00183 | 0.673 | 0.00000178 | 0.00156 | 0.00241 | 0.00462 | 0.00493 |
| **2096** | 1,640 | 3.45 | 5.31 | 0.0877 | 558 | 0.366 | 520 | | | 0.000000492 | 0.0147 | 0.00484 | 0.634 | 0.00911 | 0.00000475 | 114 | 0.000126 | 0.000258 | 0.000992 | 0.00799 | 0.0208 | 0.0000484 | 6.5 | 61.6 | 0.239 | 0.00546 | 367 | 0.0278 | 0.00239 | 0.0000313 | 0.00475 | 0.00179 | 0.66 | 0.00000174 | 0.00153 | 0.00236 | 0.00453 | 0.00484 |
| **2097** | 1,610 | 3.38 | 5.2 | 0.0859 | 547 | 0.358 | 510 | | | 0.000000482 | 0.0144 | 0.00474 | 0.621 | 0.00892 | 0.00000465 | 112 | 0.000123 | 0.000253 | 0.000972 | 0.00783 | 0.0204 | 0.0000474 | 6.37 | 60.4 | 0.234 | 0.00535 | 359 | 0.0272 | 0.00234 | 0.0000306 | 0.00466 | 0.00176 | 0.646 | 0.00000171 | 0.0015 | 0.00231 | 0.00444 | 0.00474 |
| **2098** | 1,580 | 3.31 | 5.09 | 0.0842 | 535 | 0.351 | 499 | | | 0.000000472 | 0.0141 | 0.00464 | 0.608 | 0.00874 | 0.00000456 | 109 | 0.000121 | 0.000247 | 0.000952 | 0.00767 | 0.0199 | 0.0000464 | 6.24 | 59.1 | 0.229 | 0.00524 | 352 | 0.0266 | 0.00229 | 0.00003 | 0.00456 | 0.00172 | 0.633 | 0.00000167 | 0.00147 | 0.00227 | 0.00435 | 0.00464 |
| **2099** | 1,550 | 3.24 | 4.99 | 0.0824 | 524 | 0.344 | 489 | | | 0.000000462 | 0.0138 | 0.00455 | 0.595 | 0.00856 | 0.00000446 | 107 | 0.000118 | 0.000242 | 0.000932 | 0.0075 | 0.0195 | 0.0000454 | 6.11 | 57.9 | 0.224 | 0.00513 | 344 | 0.0261 | 0.00224 | 0.0000294 | 0.00447 | 0.00169 | 0.62 | 0.00000164 | 0.00144 | 0.00222 | 0.00426 | 0.00454 |
| **2100** | 1,510 | 3.17 | 4.88 | 0.0806 | 513 | 0.336 | 478 | | | 0.000000452 | 0.0135 | 0.00445 | 0.583 | 0.00837 | 0.00000437 | 105 | 0.000116 | 0.000237 | 0.000912 | 0.00734 | 0.0191 | 0.0000445 | 5.98 | 56.7 | 0.22 | 0.00502 | 337 | 0.0255 | 0.0022 | 0.0000287 | 0.00437 | 0.00165 | 0.607 | 0.0000016 | 0.00141 | 0.00217 | 0.00417 | 0.00445 |
| **2101** | 1,480 | 3.1 | 4.77 | 0.0789 | 502 | 0.329 | 468 | | | 0.000000442 | 0.0132 | 0.00435 | 0.57 | 0.00819 | 0.00000427 | 103 | 0.000113 | 0.000232 | 0.000892 | 0.00718 | 0.0187 | 0.0000435 | 5.85 | 55.4 | 0.215 | 0.00491 | 330 | 0.025 | 0.00215 | 0.0000281 | 0.00428 | 0.00161 | 0.593 | 0.00000157 | 0.00138 | 0.00212 | 0.00407 | 0.00435 |
| **2102** | 1,450 | 3.03 | 4.66 | 0.0771 | 490 | 0.322 | 457 | | | 0.000000433 | 0.0129 | 0.00425 | 0.557 | 0.00801 | 0.00000418 | 100 | 0.00011 | 0.000227 | 0.000872 | 0.00702 | 0.0183 | 0.0000425 | 5.72 | 54.2 | 0.21 | 0.0048 | 322 | 0.0244 | 0.0021 | 0.0000275 | 0.00418 | 0.00158 | 0.58 | 0.00000153 | 0.00135 | 0.00208 | 0.00398 | 0.00425 |
| **2103** | 1,410 | 2.96 | 4.56 | 0.0753 | 479 | 0.314 | 447 | | | 0.000000423 | 0.0126 | 0.00416 | 0.544 | 0.00782 | 0.00000408 | 98 | 0.000108 | 0.000221 | 0.000852 | 0.00686 | 0.0178 | 0.0000415 | 5.59 | 52.9 | 0.205 | 0.00469 | 315 | 0.0238 | 0.00205 | 0.0000269 | 0.00408 | 0.00154 | 0.567 | 0.0000015 | 0.00132 | 0.00203 | 0.00389 | 0.00415 |
| **2104** | 1,380 | 2.89 | 4.45 | 0.0736 | 468 | 0.307 | 436 | | | 0.000000413 | 0.0123 | 0.00406 | 0.532 | 0.00764 | 0.00000399 | 95.7 | 0.000105 | 0.000216 | 0.000832 | 0.0067 | 0.0174 | 0.0000406 | 5.46 | 51.7 | 0.2 | 0.00458 | 308 | 0.0233 | 0.002 | 0.0000262 | 0.00399 | 0.00151 | 0.553 | 0.00000146 | 0.00129 | 0.00198 | 0.0038 | 0.00406 |
| **2105** | 1,350 | 2.82 | 4.34 | 0.0718 | 457 | 0.3 | 426 | | | 0.000000403 | 0.012 | 0.00396 | 0.519 | 0.00745 | 0.00000389 | 93.4 | 0.000103 | 0.000211 | 0.000812 | 0.00654 | 0.017 | 0.0000396 | 5.32 | 50.5 | 0.196 | 0.00447 | 300 | 0.0227 | 0.00196 | 0.0000256 | 0.00389 | 0.00147 | 0.54 | 0.00000143 | 0.00126 | 0.00193 | 0.00371 | 0.00396 |
| **2106** | 1,310 | 2.75 | 4.24 | 0.07 | 445 | 0.292 | 415 | | | 0.000000393 | 0.0117 | 0.00386 | 0.506 | 0.00727 | 0.00000379 | 91.1 | 0.0001 | 0.000206 | 0.000792 | 0.00638 | 0.0166 | 0.0000386 | 5.19 | 49.2 | 0.191 | 0.00436 | 293 | 0.0222 | 0.00191 | 0.000025 | 0.0038 | 0.00143 | 0.527 | 0.00000139 | 0.00122 | 0.00189 | 0.00362 | 0.00386 |
| **2107** | 1,280 | 2.68 | 4.13 | 0.0683 | 434 | 0.285 | 405 | | | 0.000000383 | 0.0114 | 0.00377 | 0.493 | 0.00709 | 0.0000037 | 88.8 | 0.0000978 | 0.000201 | 0.000772 | 0.00622 | 0.0162 | 0.0000377 | 5.06 | 48 | 0.186 | 0.00425 | 285 | 0.0216 | 0.00186 | 0.0000243 | 0.0037 | 0.0014 | 0.514 | 0.00000136 | 0.00119 | 0.00184 | 0.00353 | 0.00377 |
| **2108** | 1,250 | 2.62 | 4.02 | 0.0665 | 423 | 0.277 | 395 | | | 0.000000373 | 0.0111 | 0.00367 | 0.48 | 0.0069 | 0.0000036 | 86.5 | 0.0000953 | 0.000195 | 0.000752 | 0.00606 | 0.0157 | 0.0000367 | 4.93 | 46.7 | 0.181 | 0.00414 | 278 | 0.021 | 0.00181 | 0.0000237 | 0.00361 | 0.00136 | 0.5 | 0.00000132 | 0.00116 | 0.00179 | 0.00344 | 0.00367 |
| **2109** | 1,210 | 2.55 | 3.92 | 0.0647 | 412 | 0.27 | 384 | | | 0.000000363 | 0.0108 | 0.00357 | 0.468 | 0.00672 | 0.00000351 | 84.2 | 0.0000927 | 0.00019 | 0.000732 | 0.0059 | 0.0153 | 0.0000357 | 4.8 | 45.5 | 0.176 | 0.00403 | 271 | 0.0205 | 0.00176 | 0.0000231 | 0.00351 | 0.00132 | 0.487 | 0.00000129 | 0.00113 | 0.00174 | 0.00334 | 0.00357 |
| **2110** | 1,180 | 2.48 | 3.81 | 0.063 | 401 | 0.263 | 374 | | | 0.000000353 | 0.0105 | 0.00347 | 0.455 | 0.00654 | 0.00000341 | 81.9 | 0.0000902 | 0.000185 | 0.000712 | 0.00573 | 0.0149 | 0.0000347 | 4.67 | 44.2 | 0.172 | 0.00392 | 263 | 0.0199 | 0.00172 | 0.0000224 | 0.00341 | 0.00129 | 0.474 | 0.00000125 | 0.0011 | 0.0017 | 0.00325 | 0.00347 |
| **2111** | 1,150 | 2.41 | 3.7 | 0.0612 | 389 | 0.255 | 363 | | | 0.000000343 | 0.0102 | 0.00338 | 0.442 | 0.00635 | 0.00000332 | 79.6 | 0.0000877 | 0.00018 | 0.000692 | 0.00557 | 0.0145 | 0.0000338 | 4.54 | 43 | 0.167 | 0.00381 | 256 | 0.0194 | 0.00167 | 0.0000218 | 0.00332 | 0.00125 | 0.46 | 0.00000122 | 0.00107 | 0.00165 | 0.00316 | 0.00338 |
| **2112** | 1,110 | 2.34 | 3.6 | 0.0594 | 378 | 0.248 | 353 | | | 0.000000333 | 0.00994 | 0.00328 | 0.429 | 0.00617 | 0.00000322 | 77.3 | 0.0000851 | 0.000175 | 0.000672 | 0.00541 | 0.0141 | 0.0000328 | 4.41 | 41.8 | 0.162 | 0.0037 | 248 | 0.0188 | 0.00162 | 0.0000212 | 0.00322 | 0.00122 | 0.447 | 0.00000118 | 0.00104 | 0.0016 | 0.00307 | 0.00328 |
| **2113** | 1,080 | 2.27 | 3.49 | 0.0577 | 367 | 0.241 | 342 | | | 0.000000324 | 0.00965 | 0.00318 | 0.417 | 0.00599 | 0.00000312 | 75 | 0.0000826 | 0.000169 | 0.000652 | 0.00525 | 0.0137 | 0.0000318 | 4.28 | 40.5 | 0.157 | 0.00359 | 241 | 0.0182 | 0.00157 | 0.0000206 | 0.00313 | 0.00118 | 0.434 | 0.00000115 | 0.00101 | 0.00155 | 0.00298 | 0.00318 |
| **2114** | 1,050 | 2.2 | 3.38 | 0.0559 | 356 | 0.233 | 332 | | | 0.000000314 | 0.00935 | 0.00308 | 0.404 | 0.0058 | 0.00000303 | 72.7 | 0.0000801 | 0.000164 | 0.000632 | 0.00509 | 0.0132 | 0.0000308 | 4.15 | 39.3 | 0.152 | 0.00348 | 234 | 0.0177 | 0.00152 | 0.0000199 | 0.00303 | 0.00114 | 0.421 | 0.00000111 | 0.000978 | 0.00151 | 0.00289 | 0.00308 |
| **2115** | 1,020 | 2.13 | 3.28 | 0.0541 | 344 | 0.226 | 321 | | | 0.000000304 | 0.00906 | 0.00299 | 0.391 | 0.00562 | 0.00000293 | 70.4 | 0.0000776 | 0.000159 | 0.000612 | 0.00493 | 0.0128 | 0.0000299 | 4.01 | 38 | 0.147 | 0.00337 | 226 | 0.0171 | 0.00147 | 0.0000193 | 0.00294 | 0.00111 | 0.407 | 0.00000108 | 0.000947 | 0.00146 | 0.0028 | 0.00299 |
| **2116** | 982 | 2.06 | 3.17 | 0.0524 | 333 | 0.218 | 311 | | | 0.000000294 | 0.00876 | 0.00289 | 0.378 | 0.00544 | 0.00000284 | 68.1 | 0.000075 | 0.000154 | 0.000592 | 0.00477 | 0.0124 | 0.0000289 | 3.88 | 36.8 | 0.143 | 0.00326 | 219 | 0.0166 | 0.00143 | 0.0000187 | 0.00284 | 0.00107 | 0.394 | 0.00000104 | 0.000916 | 0.00141 | 0.00271 | 0.00289 |
| **2117** | 949 | 1.99 | 3.06 | 0.0506 | 322 | 0.211 | 300 | | | 0.000000284 | 0.00847 | 0.00279 | 0.366 | 0.00525 | 0.00000274 | 65.8 | 0.0000725 | 0.000149 | 0.000572 | 0.00461 | 0.012 | 0.0000279 | 3.75 | 35.6 | 0.138 | 0.00315 | 212 | 0.016 | 0.00138 | 0.000018 | 0.00274 | 0.00104 | 0.381 | 0.00000101 | 0.000885 | 0.00136 | 0.00261 | 0.00279 |
| **2118** | 916 | 1.92 | 2.95 | 0.0488 | 311 | 0.204 | 290 | | | 0.000000274 | 0.00817 | 0.00269 | 0.353 | 0.00507 | 0.00000265 | 63.5 | 0.00007 | 0.000144 | 0.000552 | 0.00445 | 0.0116 | 0.0000269 | 3.62 | 34.3 | 0.133 | 0.00304 | 204 | 0.0155 | 0.00133 | 0.0000174 | 0.00265 | 0.000999 | 0.367 | 0.00000097 | 0.000854 | 0.00132 | 0.00252 | 0.00269 |
| **2119** | 883 | 1.85 | 2.85 | 0.0471 | 299 | 0.196 | 279 | | | 0.000000264 | 0.00787 | 0.0026 | 0.34 | 0.00489 | 0.00000255 | 61.2 | 0.0000674 | 0.000138 | 0.000532 | 0.00429 | 0.0111 | 0.000026 | 3.49 | 33.1 | 0.128 | 0.00293 | 197 | 0.0149 | 0.00128 | 0.0000168 | 0.00255 | 0.000963 | 0.354 | 0.000000935 | 0.000823 | 0.00127 | 0.00243 | 0.0026 |
| **2120** | 850 | 1.78 | 2.74 | 0.0453 | 288 | 0.189 | 269 | | | 0.000000254 | 0.00758 | 0.0025 | 0.327 | 0.0047 | 0.00000245 | 58.9 | 0.0000649 | 0.000133 | 0.000512 | 0.00413 | 0.0107 | 0.000025 | 3.36 | 31.8 | 0.123 | 0.00282 | 189 | 0.0143 | 0.00123 | 0.0000162 | 0.00246 | 0.000927 | 0.341 | 0.0000009 | 0.000792 | 0.00122 | 0.00234 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WRSF9** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | 1,910 | 16.4 | 25.6 | 0.579 | 620 | 0.312 | 548 | | | 0.0000147 | 0.0579 | 0.0159 | 0.723 | 0.113 | 0.000213 | 152 | 0.0000692 | 0.0105 | 0.00395 | 0.00974 | 0.0704 | 0.0000486 | 81.3 | 45.6 | 0.411 | 0.0557 | 407 | 0.132 | 0.0443 | 0.000418 | 0.0188 | 0.00331 | 2.87 | 0.0000295 | 0.0518 | 0.015 | 0.0186 | 0.01 |
| **2032** | 1,920 | 16.4 | 25.6 | 0.579 | 620 | 0.312 | 553 | | | 0.0000078 | 0.0578 | 0.0191 | 0.723 | 0.117 | 0.000215 | 154 | 0.0000686 | 0.00907 | 0.00424 | 0.00949 | 0.0637 | 0.0000486 | 87.2 | 46.1 | 0.313 | 0.0569 | 407 | 0.14 | 0.0443 | 0.00041 | 0.0188 | 0.00331 | 2.8 | 0.0000315 | 0.0561 | 0.0129 | 0.0164 | 0.01 |
| **2033** | 1,930 | 16.4 | 25.6 | 0.579 | 620 | 0.312 | 562 | | | 0.00000788 | 0.0573 | 0.0188 | 0.723 | 0.117 | 0.000214 | 156 | 0.0000684 | 0.00903 | 0.00422 | 0.00941 | 0.0651 | 0.0000486 | 86.4 | 46.9 | 0.314 | 0.0568 | 407 | 0.139 | 0.0443 | 0.000408 | 0.0188 | 0.00331 | 2.79 | 0.0000312 | 0.0557 | 0.0128 | 0.0163 | 0.01 |
| **2034** | 1,940 | 16.4 | 25.6 | 0.579 | 620 | 0.312 | 566 | | | 0.00000826 | 0.0571 | 0.0185 | 0.723 | 0.116 | 0.000214 | 157 | 0.0000683 | 0.00908 | 0.0042 | 0.00938 | 0.0662 | 0.0000486 | 85.8 | 47.2 | 0.319 | 0.0568 | 407 | 0.137 | 0.0443 | 0.000407 | 0.0188 | 0.00331 | 2.8 | 0.000031 | 0.0553 | 0.0129 | 0.0164 | 0.01 |
| **2035** | 1,920 | 16.4 | 25.6 | 0.579 | 620 | 0.312 | 557 | | | 0.0000084 | 0.0576 | 0.0187 | 0.723 | 0.117 | 0.000215 | 155 | 0.0000686 | 0.00917 | 0.00421 | 0.00947 | 0.0649 | 0.0000486 | 86.4 | 46.4 | 0.321 | 0.0568 | 407 | 0.139 | 0.0443 | 0.00041 | 0.0188 | 0.00331 | 2.8 | 0.0000312 | 0.0556 | 0.013 | 0.0166 | 0.01 |
| **2036** | 1,920 | 16.4 | 25.6 | 0.579 | 620 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 407 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2037** | 1,780 | 14.3 | 22.4 | 0.506 | 542 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 356 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2038** | 1,670 | 12.5 | 19.5 | 0.443 | 474 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 311 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2039** | 1,570 | 11 | 17.1 | 0.387 | 414 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 272 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2040** | 1,480 | 9.57 | 14.9 | 0.338 | 362 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 238 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2041** | 1,400 | 8.37 | 13.1 | 0.296 | 316 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 208 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2042** | 1,330 | 7.31 | 11.4 | 0.258 | 276 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 182 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2043** | 1,270 | 6.39 | 9.97 | 0.226 | 242 | 0.312 | 552 | | | 0.00000966 | 0.0578 | 0.0182 | 0.723 | 0.116 | 0.000215 | 153 | 0.0000688 | 0.00947 | 0.00416 | 0.00956 | 0.0654 | 0.0000486 | 85.6 | 46 | 0.34 | 0.0566 | 159 | 0.138 | 0.0443 | 0.000412 | 0.0188 | 0.00331 | 2.82 | 0.0000309 | 0.055 | 0.0135 | 0.017 | 0.01 |
| **2044** | 1,260 | 5.59 | 8.72 | 0.197 | 239 | 0.308 | 546 | | | 0.00000957 | 0.0572 | 0.0181 | 0.715 | 0.115 | 0.000212 | 152 | 0.0000681 | 0.00937 | 0.00412 | 0.00947 | 0.0648 | 0.0000481 | 84.8 | 45.5 | 0.336 | 0.056 | 157 | 0.136 | 0.0438 | 0.000408 | 0.0186 | 0.00328 | 2.79 | 0.0000306 | 0.0544 | 0.0133 | 0.0168 | 0.0099 |
| **2045** | 1,250 | 4.88 | 7.62 | 0.173 | 237 | 0.305 | 541 | | | 0.00000948 | 0.0567 | 0.0179 | 0.708 | 0.114 | 0.00021 | 150 | 0.0000675 | 0.00928 | 0.00408 | 0.00937 | 0.0642 | 0.0000476 | 83.9 | 45.1 | 0.333 | 0.0555 | 156 | 0.135 | 0.0434 | 0.000404 | 0.0184 | 0.00324 | 2.76 | 0.0000303 | 0.0539 | 0.0132 | 0.0167 | 0.00981 |
| **2046** | 1,240 | 4.27 | 6.66 | 0.151 | 235 | 0.302 | 535 | | | 0.00000938 | 0.0561 | 0.0177 | 0.701 | 0.113 | 0.000208 | 149 | 0.0000668 | 0.00919 | 0.00404 | 0.00928 | 0.0635 | 0.0000472 | 83.1 | 44.6 | 0.33 | 0.0549 | 154 | 0.134 | 0.043 | 0.0004 | 0.0183 | 0.00321 | 2.73 | 0.00003 | 0.0534 | 0.0131 | 0.0165 | 0.00971 |
| **2047** | 1,220 | 3.73 | 5.82 | 0.132 | 232 | 0.299 | 530 | | | 0.00000929 | 0.0556 | 0.0175 | 0.694 | 0.112 | 0.000206 | 147 | 0.0000661 | 0.0091 | 0.004 | 0.00919 | 0.0629 | 0.0000467 | 82.3 | 44.2 | 0.326 | 0.0544 | 153 | 0.132 | 0.0426 | 0.000396 | 0.0181 | 0.00318 | 2.71 | 0.0000297 | 0.0528 | 0.0129 | 0.0163 | 0.00961 |
| **2048** | 1,210 | 3.26 | 5.09 | 0.115 | 230 | 0.296 | 525 | | | 0.00000919 | 0.055 | 0.0174 | 0.687 | 0.111 | 0.000204 | 146 | 0.0000654 | 0.00901 | 0.00396 | 0.00909 | 0.0622 | 0.0000462 | 81.4 | 43.7 | 0.323 | 0.0538 | 151 | 0.131 | 0.0421 | 0.000392 | 0.0179 | 0.00315 | 2.68 | 0.0000294 | 0.0523 | 0.0128 | 0.0162 | 0.00951 |
| **2049** | 1,200 | 2.85 | 4.45 | 0.101 | 228 | 0.293 | 519 | | | 0.0000091 | 0.0544 | 0.0172 | 0.68 | 0.109 | 0.000202 | 144 | 0.0000648 | 0.00891 | 0.00392 | 0.009 | 0.0616 | 0.0000457 | 80.6 | 43.3 | 0.32 | 0.0533 | 150 | 0.13 | 0.0417 | 0.000388 | 0.0177 | 0.00311 | 2.65 | 0.0000291 | 0.0518 | 0.0127 | 0.016 | 0.00942 |
| **2050** | 1,190 | 2.49 | 3.89 | 0.088 | 225 | 0.29 | 514 | | | 0.000009 | 0.0539 | 0.017 | 0.673 | 0.108 | 0.0002 | 143 | 0.0000641 | 0.00882 | 0.00388 | 0.00891 | 0.061 | 0.0000453 | 79.8 | 42.8 | 0.316 | 0.0527 | 148 | 0.128 | 0.0413 | 0.000384 | 0.0175 | 0.00308 | 2.62 | 0.0000288 | 0.0512 | 0.0125 | 0.0158 | 0.00932 |
| **2051** | 1,170 | 2.18 | 3.4 | 0.0769 | 223 | 0.287 | 509 | | | 0.00000891 | 0.0533 | 0.0168 | 0.666 | 0.107 | 0.000198 | 141 | 0.0000634 | 0.00873 | 0.00384 | 0.00882 | 0.0603 | 0.0000448 | 78.9 | 42.4 | 0.313 | 0.0522 | 146 | 0.127 | 0.0408 | 0.00038 | 0.0173 | 0.00305 | 2.6 | 0.0000285 | 0.0507 | 0.0124 | 0.0157 | 0.00922 |
| **2052** | 1,160 | 1.9 | 2.97 | 0.0672 | 220 | 0.284 | 503 | | | 0.00000882 | 0.0527 | 0.0166 | 0.659 | 0.106 | 0.000196 | 140 | 0.0000628 | 0.00864 | 0.0038 | 0.00872 | 0.0597 | 0.0000443 | 78.1 | 41.9 | 0.31 | 0.0516 | 145 | 0.126 | 0.0404 | 0.000376 | 0.0172 | 0.00302 | 2.57 | 0.0000282 | 0.0502 | 0.0123 | 0.0155 | 0.00912 |
| **2053** | 1,150 | 1.66 | 2.6 | 0.0588 | 218 | 0.281 | 498 | | | 0.00000872 | 0.0522 | 0.0165 | 0.652 | 0.105 | 0.000194 | 138 | 0.0000621 | 0.00854 | 0.00376 | 0.00863 | 0.0591 | 0.0000438 | 77.3 | 41.5 | 0.306 | 0.0511 | 143 | 0.124 | 0.04 | 0.000372 | 0.017 | 0.00299 | 2.54 | 0.0000279 | 0.0496 | 0.0121 | 0.0153 | 0.00903 |
| **2054** | 1,140 | 1.45 | 2.27 | 0.0514 | 216 | 0.278 | 492 | | | 0.00000863 | 0.0516 | 0.0163 | 0.645 | 0.104 | 0.000192 | 137 | 0.0000614 | 0.00845 | 0.00372 | 0.00854 | 0.0584 | 0.0000434 | 76.4 | 41 | 0.303 | 0.0505 | 142 | 0.123 | 0.0395 | 0.000368 | 0.0168 | 0.00295 | 2.51 | 0.0000276 | 0.0491 | 0.012 | 0.0152 | 0.00893 |
| **2055** | 1,120 | 1.27 | 1.98 | 0.0449 | 213 | 0.275 | 487 | | | 0.00000853 | 0.051 | 0.0161 | 0.638 | 0.103 | 0.000189 | 135 | 0.0000607 | 0.00836 | 0.00368 | 0.00844 | 0.0578 | 0.0000429 | 75.6 | 40.6 | 0.3 | 0.05 | 140 | 0.122 | 0.0391 | 0.000364 | 0.0166 | 0.00292 | 2.49 | 0.0000273 | 0.0486 | 0.0119 | 0.015 | 0.00883 |
| **2056** | 1,110 | 1.11 | 1.73 | 0.0393 | 211 | 0.272 | 482 | | | 0.00000844 | 0.0505 | 0.0159 | 0.631 | 0.102 | 0.000187 | 134 | 0.0000601 | 0.00827 | 0.00364 | 0.00835 | 0.0571 | 0.0000424 | 74.8 | 40.1 | 0.297 | 0.0494 | 139 | 0.12 | 0.0387 | 0.00036 | 0.0164 | 0.00289 | 2.46 | 0.000027 | 0.048 | 0.0118 | 0.0148 | 0.00873 |
| **2057** | 1,100 | 0.971 | 1.52 | 0.0343 | 209 | 0.269 | 476 | | | 0.00000835 | 0.0499 | 0.0158 | 0.624 | 0.1 | 0.000185 | 132 | 0.0000594 | 0.00818 | 0.00359 | 0.00826 | 0.0565 | 0.0000419 | 73.9 | 39.7 | 0.293 | 0.0489 | 137 | 0.119 | 0.0382 | 0.000356 | 0.0162 | 0.00286 | 2.43 | 0.0000267 | 0.0475 | 0.0116 | 0.0147 | 0.00864 |
| **2058** | 1,090 | 0.849 | 1.32 | 0.03 | 206 | 0.266 | 471 | | | 0.00000825 | 0.0494 | 0.0156 | 0.617 | 0.0993 | 0.000183 | 131 | 0.0000587 | 0.00808 | 0.00355 | 0.00816 | 0.0559 | 0.0000415 | 73.1 | 39.2 | 0.29 | 0.0483 | 136 | 0.118 | 0.0378 | 0.000352 | 0.0161 | 0.00282 | 2.41 | 0.0000264 | 0.0469 | 0.0115 | 0.0145 | 0.00854 |
| **2059** | 1,070 | 0.742 | 1.16 | 0.0262 | 204 | 0.263 | 466 | | | 0.00000816 | 0.0488 | 0.0154 | 0.61 | 0.0981 | 0.000181 | 129 | 0.0000581 | 0.00799 | 0.00351 | 0.00807 | 0.0552 | 0.000041 | 72.3 | 38.8 | 0.287 | 0.0478 | 134 | 0.116 | 0.0374 | 0.000348 | 0.0159 | 0.00279 | 2.38 | 0.0000261 | 0.0464 | 0.0114 | 0.0143 | 0.00844 |
| **2060** | 1,060 | 0.649 | 1.01 | 0.0229 | 202 | 0.26 | 460 | | | 0.00000806 | 0.0482 | 0.0152 | 0.603 | 0.097 | 0.000179 | 128 | 0.0000574 | 0.0079 | 0.00347 | 0.00798 | 0.0546 | 0.0000405 | 71.4 | 38.3 | 0.283 | 0.0472 | 133 | 0.115 | 0.0369 | 0.000344 | 0.0157 | 0.00276 | 2.35 | 0.0000258 | 0.0459 | 0.0112 | 0.0142 | 0.00834 |
| **2061** | 1,050 | 0.567 | 0.884 | 0.02 | 199 | 0.257 | 455 | | | 0.00000797 | 0.0477 | 0.015 | 0.596 | 0.0959 | 0.000177 | 126 | 0.0000567 | 0.00781 | 0.00343 | 0.00788 | 0.054 | 0.0000401 | 70.6 | 37.9 | 0.28 | 0.0467 | 131 | 0.114 | 0.0365 | 0.00034 | 0.0155 | 0.00273 | 2.32 | 0.0000255 | 0.0453 | 0.0111 | 0.014 | 0.00825 |
| **2062** | 1,040 | 0.496 | 0.773 | 0.0175 | 197 | 0.254 | 449 | | | 0.00000787 | 0.0471 | 0.0149 | 0.589 | 0.0947 | 0.000175 | 125 | 0.0000561 | 0.00771 | 0.00339 | 0.00779 | 0.0533 | 0.0000396 | 69.8 | 37.5 | 0.277 | 0.0461 | 129 | 0.112 | 0.0361 | 0.000336 | 0.0153 | 0.0027 | 2.3 | 0.0000252 | 0.0448 | 0.011 | 0.0139 | 0.00815 |
| **2063** | 1,030 | 0.433 | 0.676 | 0.0153 | 195 | 0.251 | 444 | | | 0.00000778 | 0.0465 | 0.0147 | 0.582 | 0.0936 | 0.000173 | 123 | 0.0000554 | 0.00762 | 0.00335 | 0.0077 | 0.0527 | 0.0000391 | 68.9 | 37 | 0.273 | 0.0456 | 128 | 0.111 | 0.0357 | 0.000332 | 0.0151 | 0.00266 | 2.27 | 0.0000249 | 0.0443 | 0.0108 | 0.0137 | 0.00805 |
| **2064** | 1,010 | 0.379 | 0.591 | 0.0134 | 192 | 0.248 | 439 | | | 0.00000769 | 0.046 | 0.0145 | 0.575 | 0.0925 | 0.000171 | 122 | 0.0000547 | 0.00753 | 0.00331 | 0.0076 | 0.052 | 0.0000386 | 68.1 | 36.6 | 0.27 | 0.045 | 126 | 0.11 | 0.0352 | 0.000328 | 0.015 | 0.00263 | 2.24 | 0.0000246 | 0.0437 | 0.0107 | 0.0135 | 0.00795 |
| **2065** | 1,000 | 0.331 | 0.516 | 0.0117 | 190 | 0.245 | 433 | | | 0.00000759 | 0.0454 | 0.0143 | 0.568 | 0.0914 | 0.000169 | 120 | 0.000054 | 0.00744 | 0.00327 | 0.00751 | 0.0514 | 0.0000382 | 67.3 | 36.1 | 0.267 | 0.0444 | 125 | 0.108 | 0.0348 | 0.000324 | 0.0148 | 0.0026 | 2.21 | 0.0000243 | 0.0432 | 0.0106 | 0.0134 | 0.00786 |
| **2066** | 988 | 0.289 | 0.451 | 0.0102 | 188 | 0.242 | 428 | | | 0.0000075 | 0.0449 | 0.0142 | 0.561 | 0.0902 | 0.000166 | 119 | 0.0000534 | 0.00735 | 0.00323 | 0.00742 | 0.0508 | 0.0000377 | 66.4 | 35.7 | 0.263 | 0.0439 | 123 | 0.107 | 0.0344 | 0.00032 | 0.0146 | 0.00257 | 2.19 | 0.000024 | 0.0427 | 0.0104 | 0.0132 | 0.00776 |
| **2067** | 975 | 0.253 | 0.394 | 0.00893 | 185 | 0.239 | 423 | | | 0.0000074 | 0.0443 | 0.014 | 0.554 | 0.0891 | 0.000164 | 117 | 0.0000527 | 0.00725 | 0.00319 | 0.00733 | 0.0501 | 0.0000372 | 65.6 | 35.2 | 0.26 | 0.0433 | 122 | 0.106 | 0.0339 | 0.000316 | 0.0144 | 0.00253 | 2.16 | 0.0000237 | 0.0421 | 0.0103 | 0.013 | 0.00766 |
| **2068** | 963 | 0.221 | 0.345 | 0.00781 | 183 | 0.236 | 417 | | | 0.00000731 | 0.0437 | 0.0138 | 0.547 | 0.088 | 0.000162 | 116 | 0.000052 | 0.00716 | 0.00315 | 0.00723 | 0.0495 | 0.0000367 | 64.8 | 34.8 | 0.257 | 0.0428 | 120 | 0.104 | 0.0335 | 0.000312 | 0.0142 | 0.0025 | 2.13 | 0.0000234 | 0.0416 | 0.0102 | 0.0129 | 0.00756 |
| **2069** | 951 | 0.193 | 0.301 | 0.00682 | 180 | 0.233 | 412 | | | 0.00000722 | 0.0432 | 0.0136 | 0.539 | 0.0868 | 0.00016 | 114 | 0.0000514 | 0.00707 | 0.00311 | 0.00714 | 0.0489 | 0.0000363 | 63.9 | 34.3 | 0.254 | 0.0422 | 119 | 0.103 | 0.0331 | 0.000308 | 0.014 | 0.00247 | 2.1 | 0.0000231 | 0.0411 | 0.01 | 0.0127 | 0.00747 |
| **2070** | 938 | 0.169 | 0.263 | 0.00596 | 178 | 0.23 | 406 | | | 0.00000712 | 0.0426 | 0.0134 | 0.532 | 0.0857 | 0.000158 | 113 | 0.0000507 | 0.00698 | 0.00307 | 0.00705 | 0.0482 | 0.0000358 | 63.1 | 33.9 | 0.25 | 0.0417 | 117 | 0.102 | 0.0326 | 0.000304 | 0.0139 | 0.00244 | 2.08 | 0.0000228 | 0.0405 | 0.00992 | 0.0125 | 0.00737 |
| **2071** | 926 | 0.148 | 0.23 | 0.00521 | 176 | 0.227 | 401 | | | 0.00000703 | 0.042 | 0.0133 | 0.525 | 0.0846 | 0.000156 | 111 | 0.00005 | 0.00688 | 0.00303 | 0.00695 | 0.0476 | 0.0000353 | 62.3 | 33.4 | 0.247 | 0.0411 | 115 | 0.1 | 0.0322 | 0.0003 | 0.0137 | 0.00241 | 2.05 | 0.0000225 | 0.04 | 0.00979 | 0.0124 | 0.00727 |
| **2072** | 913 | 0.129 | 0.201 | 0.00456 | 173 | 0.223 | 396 | | | 0.00000693 | 0.0415 | 0.0131 | 0.518 | 0.0834 | 0.000154 | 110 | 0.0000494 | 0.00679 | 0.00299 | 0.00686 | 0.0469 | 0.0000348 | 61.4 | 33 | 0.244 | 0.0406 | 114 | 0.0989 | 0.0318 | 0.000296 | 0.0135 | 0.00237 | 2.02 | 0.0000222 | 0.0394 | 0.00966 | 0.0122 | 0.00717 |
| **2073** | 901 | 0.113 | 0.176 | 0.00398 | 171 | 0.22 | 390 | | | 0.00000684 | 0.0409 | 0.0129 | 0.511 | 0.0823 | 0.000152 | 108 | 0.0000487 | 0.0067 | 0.00295 | 0.00677 | 0.0463 | 0.0000344 | 60.6 | 32.5 | 0.24 | 0.04 | 112 | 0.0975 | 0.0313 | 0.000292 | 0.0133 | 0.00234 | 1.99 | 0.0000219 | 0.0389 | 0.00952 | 0.012 | 0.00708 |
| **2074** | 889 | 0.0985 | 0.154 | 0.00348 | 169 | 0.217 | 385 | | | 0.00000675 | 0.0403 | 0.0127 | 0.504 | 0.0812 | 0.00015 | 107 | 0.000048 | 0.00661 | 0.00291 | 0.00667 | 0.0457 | 0.0000339 | 59.8 | 32.1 | 0.237 | 0.0395 | 111 | 0.0962 | 0.0309 | 0.000288 | 0.0131 | 0.00231 | 1.97 | 0.0000216 | 0.0384 | 0.00939 | 0.0119 | 0.00698 |
| **2075** | 876 | 0.0861 | 0.134 | 0.00304 | 166 | 0.214 | 380 | | | 0.00000665 | 0.0398 | 0.0126 | 0.497 | 0.08 | 0.000148 | 105 | 0.0000473 | 0.00652 | 0.00286 | 0.00658 | 0.045 | 0.0000334 | 58.9 | 31.6 | 0.234 | 0.0389 | 109 | 0.0948 | 0.0305 | 0.000284 | 0.0129 | 0.00228 | 1.94 | 0.0000213 | 0.0378 | 0.00926 | 0.0117 | 0.00688 |
| **2076** | 864 | 0.0753 | 0.117 | 0.00266 | 164 | 0.211 | 374 | | | 0.00000656 | 0.0392 | 0.0124 | 0.49 | 0.0789 | 0.000146 | 104 | 0.0000467 | 0.00642 | 0.00282 | 0.00649 | 0.0444 | 0.000033 | 58.1 | 31.2 | 0.23 | 0.0384 | 108 | 0.0935 | 0.03 | 0.00028 | 0.0128 | 0.00224 | 1.91 | 0.000021 | 0.0373 | 0.00913 | 0.0115 | 0.00679 |
| **2077** | 851 | 0.0658 | 0.103 | 0.00232 | 162 | 0.208 | 369 | | | 0.00000646 | 0.0387 | 0.0122 | 0.483 | 0.0778 | 0.000143 | 102 | 0.000046 | 0.00633 | 0.00278 | 0.00639 | 0.0438 | 0.0000325 | 57.3 | 30.7 | 0.227 | 0.0378 | 106 | 0.0921 | 0.0296 | 0.000276 | 0.0126 | 0.00221 | 1.88 | 0.0000207 | 0.0368 | 0.009 | 0.0114 | 0.00669 |
| **2078** | 839 | 0.0575 | 0.0897 | 0.00203 | 159 | 0.205 | 363 | | | 0.00000637 | 0.0381 | 0.012 | 0.476 | 0.0766 | 0.000141 | 101 | 0.0000453 | 0.00624 | 0.00274 | 0.0063 | 0.0431 | 0.000032 | 56.4 | 30.3 | 0.224 | 0.0373 | 105 | 0.0908 | 0.0292 | 0.000272 | 0.0124 | 0.00218 | 1.86 | 0.0000204 | 0.0362 | 0.00887 | 0.0112 | 0.00659 |
| **2079** | 827 | 0.0503 | 0.0784 | 0.00178 | 157 | 0.202 | 358 | | | 0.00000627 | 0.0375 | 0.0118 | 0.469 | 0.0755 | 0.000139 | 99.5 | 0.0000447 | 0.00615 | 0.0027 | 0.00621 | 0.0425 | 0.0000315 | 55.6 | 29.8 | 0.22 | 0.0367 | 103 | 0.0895 | 0.0287 | 0.000268 | 0.0122 | 0.00215 | 1.83 | 0.0000201 | 0.0357 | 0.00874 | 0.011 | 0.00649 |
| **2080** | 814 | 0.0439 | 0.0686 | 0.00155 | 155 | 0.199 | 353 | | | 0.00000618 | 0.037 | 0.0117 | 0.462 | 0.0744 | 0.000137 | 98 | 0.000044 | 0.00605 | 0.00266 | 0.00611 | 0.0419 | 0.0000311 | 54.8 | 29.4 | 0.217 | 0.0362 | 102 | 0.0881 | 0.0283 | 0.000263 | 0.012 | 0.00212 | 1.8 | 0.0000198 | 0.0352 | 0.00861 | 0.0109 | 0.0064 |
| **2081** | 802 | 0.0384 | 0.0599 | 0.00136 | 152 | 0.196 | 347 | | | 0.00000609 | 0.0364 | 0.0115 | 0.455 | 0.0732 | 0.000135 | 96.5 | 0.0000433 | 0.00596 | 0.00262 | 0.00602 | 0.0412 | 0.0000306 | 53.9 | 28.9 | 0.214 | 0.0356 | 100 | 0.0868 | 0.0279 | 0.000259 | 0.0118 | 0.00208 | 1.77 | 0.0000195 | 0.0346 | 0.00848 | 0.0107 | 0.0063 |
| **2082** | 789 | 0.0336 | 0.0524 | 0.00119 | 150 | 0.193 | 342 | | | 0.00000599 | 0.0358 | 0.0113 | 0.448 | 0.0721 | 0.000133 | 95 | 0.0000427 | 0.00587 | 0.00258 | 0.00593 | 0.0406 | 0.0000301 | 53.1 | 28.5 | 0.211 | 0.0351 | 99 | 0.0854 | 0.0275 | 0.000255 | 0.0117 | 0.00205 | 1.75 | 0.0000192 | 0.0341 | 0.00834 | 0.0105 | 0.0062 |
| **2083** | 777 | 0.0293 | 0.0458 | 0.00104 | 147 | 0.19 | 337 | | | 0.0000059 | 0.0353 | 0.0111 | 0.441 | 0.071 | 0.000131 | 93.5 | 0.000042 | 0.00578 | 0.00254 | 0.00583 | 0.0399 | 0.0000296 | 52.3 | 28.1 | 0.207 | 0.0345 | 97 | 0.0841 | 0.027 | 0.000251 | 0.0115 | 0.00202 | 1.72 | 0.0000189 | 0.0336 | 0.00821 | 0.0104 | 0.0061 |
| **2084** | 765 | 0.0257 | 0.04 | 0.000906 | 145 | 0.187 | 331 | | | 0.0000058 | 0.0347 | 0.011 | 0.434 | 0.0698 | 0.000129 | 92 | 0.0000413 | 0.00569 | 0.0025 | 0.00574 | 0.0393 | 0.0000292 | 51.4 | 27.6 | 0.204 | 0.034 | 95 | 0.0828 | 0.0266 | 0.000247 | 0.0113 | 0.00199 | 1.69 | 0.0000186 | 0.033 | 0.00808 | 0.0102 | 0.00601 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2085** | 752 | 0.0224 | 0.035 | 0.000792 | 143 | 0.184 | 326 | | | 0.00000571 | 0.0342 | 0.0108 | 0.427 | 0.0687 | 0.000127 | 90.5 | 0.0000406 | 0.00559 | 0.00246 | 0.00565 | 0.0387 | 0.0000287 | 50.6 | 27.2 | 0.201 | 0.0334 | 94 | 0.0814 | 0.0262 | 0.000243 | 0.0111 | 0.00195 | 1.66 | 0.0000183 | 0.0325 | 0.00795 | 0.01 | 0.00591 |
| **2086** | 740 | 0.0196 | 0.0306 | 0.000692 | 140 | 0.181 | 320 | | | 0.00000562 | 0.0336 | 0.0106 | 0.42 | 0.0676 | 0.000125 | 89 | 0.00004 | 0.0055 | 0.00242 | 0.00556 | 0.038 | 0.0000282 | 49.7 | 26.7 | 0.197 | 0.0329 | 92 | 0.0801 | 0.0257 | 0.000239 | 0.0109 | 0.00192 | 1.64 | 0.000018 | 0.032 | 0.00782 | 0.00988 | 0.00581 |
| **2087** | 727 | 0.0171 | 0.0267 | 0.000605 | 138 | 0.178 | 315 | | | 0.00000552 | 0.033 | 0.0104 | 0.413 | 0.0664 | 0.000123 | 87.5 | 0.0000393 | 0.00541 | 0.00238 | 0.00546 | 0.0374 | 0.0000278 | 48.9 | 26.3 | 0.194 | 0.0323 | 91 | 0.0787 | 0.0253 | 0.000235 | 0.0108 | 0.00189 | 1.61 | 0.0000177 | 0.0314 | 0.00769 | 0.00971 | 0.00571 |
| **2088** | 715 | 0.015 | 0.0234 | 0.000529 | 136 | 0.175 | 310 | | | 0.00000543 | 0.0325 | 0.0102 | 0.406 | 0.0653 | 0.00012 | 86 | 0.0000386 | 0.00532 | 0.00234 | 0.00537 | 0.0368 | 0.0000273 | 48.1 | 25.8 | 0.191 | 0.0318 | 89 | 0.0774 | 0.0249 | 0.000231 | 0.0106 | 0.00186 | 1.58 | 0.0000174 | 0.0309 | 0.00756 | 0.00955 | 0.00562 |
| **2089** | 703 | 0.0131 | 0.0204 | 0.000462 | 133 | 0.172 | 304 | | | 0.00000533 | 0.0319 | 0.0101 | 0.399 | 0.0642 | 0.000118 | 84.5 | 0.000038 | 0.00522 | 0.0023 | 0.00528 | 0.0361 | 0.0000268 | 47.2 | 25.4 | 0.187 | 0.0312 | 88 | 0.076 | 0.0244 | 0.000227 | 0.0104 | 0.00183 | 1.55 | 0.0000171 | 0.0303 | 0.00743 | 0.00938 | 0.00552 |
| **2090** | 690 | 0.0114 | 0.0178 | 0.000404 | 131 | 0.169 | 299 | | | 0.00000524 | 0.0313 | 0.00989 | 0.392 | 0.063 | 0.000116 | 83.1 | 0.0000373 | 0.00513 | 0.00226 | 0.00518 | 0.0355 | 0.0000263 | 46.4 | 24.9 | 0.184 | 0.0307 | 86 | 0.0747 | 0.024 | 0.000223 | 0.0102 | 0.00179 | 1.53 | 0.0000168 | 0.0298 | 0.0073 | 0.00922 | 0.00542 |
| **2091** | 678 | 0.01 | 0.0156 | 0.000353 | 129 | 0.166 | 294 | | | 0.00000514 | 0.0308 | 0.00971 | 0.385 | 0.0619 | 0.000114 | 81.6 | 0.0000366 | 0.00504 | 0.00222 | 0.00509 | 0.0348 | 0.0000259 | 45.6 | 24.5 | 0.181 | 0.0301 | 85 | 0.0734 | 0.0236 | 0.000219 | 0.01 | 0.00176 | 1.5 | 0.0000165 | 0.0293 | 0.00716 | 0.00905 | 0.00532 |
| **2092** | 665 | 0.00874 | 0.0136 | 0.000309 | 126 | 0.163 | 288 | | | 0.00000505 | 0.0302 | 0.00954 | 0.378 | 0.0608 | 0.000112 | 80.1 | 0.000036 | 0.00495 | 0.00218 | 0.005 | 0.0342 | 0.0000254 | 44.7 | 24 | 0.177 | 0.0296 | 83 | 0.072 | 0.0231 | 0.000215 | 0.00983 | 0.00173 | 1.47 | 0.0000162 | 0.0287 | 0.00703 | 0.00888 | 0.00523 |
| **2093** | 653 | 0.00764 | 0.0119 | 0.00027 | 124 | 0.16 | 283 | | | 0.00000496 | 0.0296 | 0.00936 | 0.371 | 0.0596 | 0.00011 | 78.6 | 0.0000353 | 0.00486 | 0.00213 | 0.0049 | 0.0336 | 0.0000249 | 43.9 | 23.6 | 0.174 | 0.029 | 82 | 0.0707 | 0.0227 | 0.000211 | 0.00965 | 0.0017 | 1.44 | 0.0000159 | 0.0282 | 0.0069 | 0.00872 | 0.00513 |
| **2094** | 641 | 0.00668 | 0.0104 | 0.000236 | 122 | 0.157 | 278 | | | 0.00000486 | 0.0291 | 0.00918 | 0.364 | 0.0585 | 0.000108 | 77.1 | 0.0000346 | 0.00476 | 0.00209 | 0.00481 | 0.0329 | 0.0000244 | 43.1 | 23.1 | 0.171 | 0.0285 | 80 | 0.0693 | 0.0223 | 0.000207 | 0.00947 | 0.00166 | 1.42 | 0.0000156 | 0.0277 | 0.00677 | 0.00855 | 0.00503 |
| **2095** | 628 | 0.00584 | 0.0091 | 0.000206 | 119 | 0.154 | 272 | | | 0.00000477 | 0.0285 | 0.009 | 0.356 | 0.0574 | 0.000106 | 75.6 | 0.0000339 | 0.00467 | 0.00205 | 0.00472 | 0.0323 | 0.000024 | 42.2 | 22.7 | 0.168 | 0.0279 | 78 | 0.068 | 0.0218 | 0.000203 | 0.00928 | 0.00163 | 1.39 | 0.0000153 | 0.0271 | 0.00664 | 0.00839 | 0.00493 |
| **2096** | 616 | 0.0051 | 0.00796 | 0.00018 | 117 | 0.151 | 267 | | | 0.00000467 | 0.028 | 0.00883 | 0.349 | 0.0562 | 0.000104 | 74.1 | 0.0000333 | 0.00458 | 0.00201 | 0.00462 | 0.0317 | 0.0000235 | 41.4 | 22.2 | 0.164 | 0.0274 | 77 | 0.0666 | 0.0214 | 0.000199 | 0.0091 | 0.0016 | 1.36 | 0.000015 | 0.0266 | 0.00651 | 0.00822 | 0.00484 |
| **2097** | 603 | 0.00446 | 0.00696 | 0.000157 | 115 | 0.148 | 261 | | | 0.00000458 | 0.0274 | 0.00865 | 0.342 | 0.0551 | 0.000102 | 72.6 | 0.0000326 | 0.00449 | 0.00197 | 0.00453 | 0.031 | 0.000023 | 40.6 | 21.8 | 0.161 | 0.0268 | 75 | 0.0653 | 0.021 | 0.000195 | 0.00892 | 0.00157 | 1.33 | 0.0000147 | 0.0261 | 0.00638 | 0.00806 | 0.00474 |
| **2098** | 591 | 0.0039 | 0.00608 | 0.000138 | 112 | 0.145 | 256 | | | 0.00000449 | 0.0268 | 0.00847 | 0.335 | 0.054 | 0.0000996 | 71.1 | 0.0000319 | 0.00439 | 0.00193 | 0.00444 | 0.0304 | 0.0000225 | 39.7 | 21.3 | 0.158 | 0.0263 | 74 | 0.064 | 0.0206 | 0.000191 | 0.00873 | 0.00154 | 1.31 | 0.0000144 | 0.0255 | 0.00625 | 0.00789 | 0.00464 |
| **2099** | 579 | 0.00341 | 0.00531 | 0.00012 | 110 | 0.142 | 251 | | | 0.00000439 | 0.0263 | 0.00829 | 0.328 | 0.0528 | 0.0000975 | 69.6 | 0.0000313 | 0.0043 | 0.00189 | 0.00434 | 0.0297 | 0.0000221 | 38.9 | 20.9 | 0.154 | 0.0257 | 72 | 0.0626 | 0.0201 | 0.000187 | 0.00855 | 0.0015 | 1.28 | 0.0000141 | 0.025 | 0.00612 | 0.00773 | 0.00454 |
| **2100** | 566 | 0.00298 | 0.00465 | 0.000105 | 107 | 0.139 | 245 | | | 0.0000043 | 0.0257 | 0.00811 | 0.321 | 0.0517 | 0.0000954 | 68.1 | 0.0000306 | 0.00421 | 0.00185 | 0.00425 | 0.0291 | 0.0000216 | 38.1 | 20.4 | 0.151 | 0.0252 | 71 | 0.0613 | 0.0197 | 0.000183 | 0.00837 | 0.00147 | 1.25 | 0.0000138 | 0.0245 | 0.00598 | 0.00756 | 0.00445 |
| **2101** | 554 | 0.0026 | 0.00406 | 0.0000919 | 105 | 0.135 | 240 | | | 0.0000042 | 0.0251 | 0.00794 | 0.314 | 0.0506 | 0.0000933 | 66.6 | 0.0000299 | 0.00412 | 0.00181 | 0.00416 | 0.0285 | 0.0000211 | 37.2 | 20 | 0.148 | 0.0246 | 69 | 0.0599 | 0.0193 | 0.000179 | 0.00818 | 0.00144 | 1.23 | 0.0000135 | 0.0239 | 0.00585 | 0.00739 | 0.00435 |
| **2102** | 541 | 0.00227 | 0.00355 | 0.0000804 | 103 | 0.132 | 235 | | | 0.00000411 | 0.0246 | 0.00776 | 0.307 | 0.0494 | 0.0000912 | 65.1 | 0.0000293 | 0.00403 | 0.00177 | 0.00407 | 0.0278 | 0.0000207 | 36.4 | 19.5 | 0.144 | 0.0241 | 68 | 0.0586 | 0.0188 | 0.000175 | 0.008 | 0.00141 | 1.2 | 0.0000132 | 0.0234 | 0.00572 | 0.00723 | 0.00425 |
| **2103** | 529 | 0.00199 | 0.0031 | 0.0000702 | 100 | 0.129 | 229 | | | 0.00000401 | 0.024 | 0.00758 | 0.3 | 0.0483 | 0.0000891 | 63.7 | 0.0000286 | 0.00393 | 0.00173 | 0.00397 | 0.0272 | 0.0000202 | 35.6 | 19.1 | 0.141 | 0.0235 | 66 | 0.0572 | 0.0184 | 0.000171 | 0.00782 | 0.00137 | 1.17 | 0.0000129 | 0.0228 | 0.00559 | 0.00706 | 0.00415 |
| **2104** | 517 | 0.00174 | 0.00271 | 0.0000614 | 98 | 0.126 | 224 | | | 0.00000392 | 0.0235 | 0.0074 | 0.293 | 0.0472 | 0.000087 | 62.2 | 0.0000279 | 0.00384 | 0.00169 | 0.00388 | 0.0266 | 0.0000197 | 34.7 | 18.6 | 0.138 | 0.023 | 64 | 0.0559 | 0.018 | 0.000167 | 0.00763 | 0.00134 | 1.14 | 0.0000126 | 0.0223 | 0.00546 | 0.0069 | 0.00406 |
| **2105** | 504 | 0.00152 | 0.00237 | 0.0000537 | 96 | 0.123 | 218 | | | 0.00000383 | 0.0229 | 0.00723 | 0.286 | 0.046 | 0.000085 | 60.7 | 0.0000272 | 0.00375 | 0.00165 | 0.00379 | 0.0259 | 0.0000192 | 33.9 | 18.2 | 0.134 | 0.0224 | 63 | 0.0546 | 0.0175 | 0.000163 | 0.00745 | 0.00131 | 1.12 | 0.0000122 | 0.0218 | 0.00533 | 0.00673 | 0.00396 |
| **2106** | 492 | 0.00133 | 0.00207 | 0.0000469 | 93 | 0.12 | 213 | | | 0.00000373 | 0.0223 | 0.00705 | 0.279 | 0.0449 | 0.0000829 | 59.2 | 0.0000266 | 0.00366 | 0.00161 | 0.00369 | 0.0253 | 0.0000188 | 33.1 | 17.8 | 0.131 | 0.0219 | 61 | 0.0532 | 0.0171 | 0.000159 | 0.00727 | 0.00128 | 1.09 | 0.0000119 | 0.0212 | 0.0052 | 0.00657 | 0.00386 |
| **2107** | 479 | 0.00116 | 0.00181 | 0.000041 | 91 | 0.117 | 208 | | | 0.00000364 | 0.0218 | 0.00687 | 0.272 | 0.0438 | 0.0000808 | 57.7 | 0.0000259 | 0.00356 | 0.00157 | 0.0036 | 0.0246 | 0.0000183 | 32.2 | 17.3 | 0.128 | 0.0213 | 60 | 0.0519 | 0.0167 | 0.000155 | 0.00708 | 0.00125 | 1.06 | 0.0000116 | 0.0207 | 0.00507 | 0.0064 | 0.00377 |
| **2108** | 467 | 0.00101 | 0.00158 | 0.0000358 | 89 | 0.114 | 202 | | | 0.00000354 | 0.0212 | 0.00669 | 0.265 | 0.0426 | 0.0000787 | 56.2 | 0.0000252 | 0.00347 | 0.00153 | 0.00351 | 0.024 | 0.0000178 | 31.4 | 16.9 | 0.125 | 0.0207 | 58 | 0.0505 | 0.0162 | 0.000151 | 0.0069 | 0.00121 | 1.03 | 0.0000113 | 0.0202 | 0.00494 | 0.00623 | 0.00367 |
| **2109** | 455 | 0.000887 | 0.00138 | 0.0000313 | 86 | 0.111 | 197 | | | 0.00000345 | 0.0206 | 0.00651 | 0.258 | 0.0415 | 0.0000766 | 54.7 | 0.0000246 | 0.00338 | 0.00149 | 0.00341 | 0.0234 | 0.0000173 | 30.6 | 16.4 | 0.121 | 0.0202 | 57 | 0.0492 | 0.0158 | 0.000147 | 0.00672 | 0.00118 | 1.01 | 0.000011 | 0.0196 | 0.0048 | 0.00607 | 0.00357 |
| **2110** | 442 | 0.000775 | 0.00121 | 0.0000274 | 84 | 0.108 | 192 | | | 0.00000336 | 0.0201 | 0.00634 | 0.251 | 0.0404 | 0.0000745 | 53.2 | 0.0000239 | 0.00329 | 0.00145 | 0.00332 | 0.0227 | 0.0000169 | 29.7 | 16 | 0.118 | 0.0196 | 55 | 0.0479 | 0.0154 | 0.000143 | 0.00653 | 0.00115 | 0.978 | 0.0000107 | 0.0191 | 0.00467 | 0.0059 | 0.00347 |
| **2111** | 430 | 0.000677 | 0.00106 | 0.0000239 | 82 | 0.105 | 186 | | | 0.00000326 | 0.0195 | 0.00616 | 0.244 | 0.0392 | 0.0000724 | 51.7 | 0.0000232 | 0.0032 | 0.0014 | 0.00323 | 0.0221 | 0.0000164 | 28.9 | 15.5 | 0.115 | 0.0191 | 54 | 0.0465 | 0.0149 | 0.000139 | 0.00635 | 0.00112 | 0.951 | 0.0000104 | 0.0186 | 0.00454 | 0.00574 | 0.00338 |
| **2112** | 417 | 0.000592 | 0.000924 | 0.0000209 | 79 | 0.102 | 181 | | | 0.00000317 | 0.0189 | 0.00598 | 0.237 | 0.0381 | 0.0000703 | 50.2 | 0.0000226 | 0.0031 | 0.00136 | 0.00313 | 0.0215 | 0.0000159 | 28.1 | 15.1 | 0.111 | 0.0185 | 52 | 0.0452 | 0.0145 | 0.000135 | 0.00617 | 0.00108 | 0.923 | 0.0000101 | 0.018 | 0.00441 | 0.00557 | 0.00328 |
| **2113** | 405 | 0.000518 | 0.000807 | 0.0000183 | 77 | 0.0991 | 175 | | | 0.00000307 | 0.0184 | 0.0058 | 0.23 | 0.037 | 0.0000682 | 48.7 | 0.0000219 | 0.00301 | 0.00132 | 0.00304 | 0.0208 | 0.0000154 | 27.2 | 14.6 | 0.108 | 0.018 | 51 | 0.0438 | 0.0141 | 0.000131 | 0.00598 | 0.00105 | 0.896 | 0.00000984 | 0.0175 | 0.00428 | 0.00541 | 0.00318 |
| **2114** | 393 | 0.000452 | 0.000706 | 0.000016 | 75 | 0.096 | 170 | | | 0.00000298 | 0.0178 | 0.00563 | 0.223 | 0.0358 | 0.0000661 | 47.2 | 0.0000212 | 0.00292 | 0.00128 | 0.00295 | 0.0202 | 0.000015 | 26.4 | 14.2 | 0.105 | 0.0174 | 49 | 0.0425 | 0.0137 | 0.000127 | 0.0058 | 0.00102 | 0.868 | 0.00000954 | 0.017 | 0.00415 | 0.00524 | 0.00308 |
| **2115** | 380 | 0.000395 | 0.000617 | 0.000014 | 72 | 0.093 | 165 | | | 0.00000289 | 0.0173 | 0.00545 | 0.216 | 0.0347 | 0.0000641 | 45.7 | 0.0000205 | 0.00283 | 0.00124 | 0.00285 | 0.0195 | 0.0000145 | 25.6 | 13.7 | 0.101 | 0.0169 | 47 | 0.0411 | 0.0132 | 0.000123 | 0.00562 | 0.000988 | 0.841 | 0.00000924 | 0.0164 | 0.00402 | 0.00508 | 0.00299 |
| **2116** | 368 | 0.000346 | 0.000539 | 0.0000122 | 70 | 0.09 | 159 | | | 0.00000279 | 0.0167 | 0.00527 | 0.209 | 0.0336 | 0.000062 | 44.3 | 0.0000199 | 0.00273 | 0.0012 | 0.00276 | 0.0189 | 0.000014 | 24.7 | 13.3 | 0.0981 | 0.0163 | 46 | 0.0398 | 0.0128 | 0.000119 | 0.00543 | 0.000955 | 0.814 | 0.00000893 | 0.0159 | 0.00389 | 0.00491 | 0.00289 |
| **2117** | 355 | 0.000302 | 0.000471 | 0.0000107 | 67 | 0.0869 | 154 | | | 0.0000027 | 0.0161 | 0.00509 | 0.202 | 0.0325 | 0.0000599 | 42.8 | 0.0000192 | 0.00264 | 0.00116 | 0.00267 | 0.0183 | 0.0000136 | 23.9 | 12.8 | 0.0948 | 0.0158 | 44 | 0.0385 | 0.0124 | 0.000115 | 0.00525 | 0.000923 | 0.786 | 0.00000863 | 0.0153 | 0.00376 | 0.00474 | 0.00279 |
| **2118** | 343 | 0.000264 | 0.000412 | 0.00000933 | 65 | 0.0839 | 149 | | | 0.0000026 | 0.0156 | 0.00491 | 0.195 | 0.0313 | 0.0000578 | 41.3 | 0.0000185 | 0.00255 | 0.00112 | 0.00258 | 0.0176 | 0.0000131 | 23.1 | 12.4 | 0.0915 | 0.0152 | 43 | 0.0371 | 0.0119 | 0.000111 | 0.00507 | 0.000891 | 0.759 | 0.00000833 | 0.0148 | 0.00362 | 0.00458 | 0.00269 |
| **2119** | 331 | 0.000231 | 0.00036 | 0.00000815 | 63 | 0.0809 | 143 | | | 0.00000251 | 0.015 | 0.00474 | 0.188 | 0.0302 | 0.0000557 | 39.8 | 0.0000179 | 0.00246 | 0.00108 | 0.00248 | 0.017 | 0.0000126 | 22.2 | 11.9 | 0.0882 | 0.0147 | 41 | 0.0358 | 0.0115 | 0.000107 | 0.00488 | 0.000859 | 0.731 | 0.00000803 | 0.0143 | 0.00349 | 0.00441 | 0.0026 |
| **2120** | 318 | 0.000202 | 0.000315 | 0.00000713 | 60 | 0.0778 | 138 | | | 0.00000241 | 0.0144 | 0.00456 | 0.181 | 0.0291 | 0.0000536 | 38.3 | 0.0000172 | 0.00237 | 0.00104 | 0.00239 | 0.0164 | 0.0000121 | 21.4 | 11.5 | 0.0849 | 0.0141 | 40 | 0.0344 | 0.0111 | 0.000103 | 0.0047 | 0.000827 | 0.704 | 0.00000773 | 0.0137 | 0.00336 | 0.00425 | 0.0025 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **Saline WRSF1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | 24,200 | 126 | 371 | 3.92 | 11,900 | 0.312 | 2,600 | | | 0.0000108 | 0.0402 | 0.0408 | 0.723 | 0.059 | 0.000105 | 722 | 0.0000519 | 0.0225 | 0.00468 | 0.0227 | 0.0545 | 0.0000486 | 514 | 217 | 0.77 | 0.0288 | 7,840 | 0.283 | 0.0442 | 0.000287 | 0.00898 | 0.00422 | 1.48 | 0.0000263 | 0.0254 | 0.0221 | 0.0208 | 0.132 |
| **2030** | 24,200 | 126 | 371 | 3.92 | 11,900 | 0.312 | 2,600 | | | 0.00000609 | 0.0265 | 0.0404 | 0.723 | 0.0112 | 0.0000347 | 722 | 0.0000516 | 0.0259 | 0.00459 | 0.0256 | 0.0643 | 0.0000486 | 514 | 217 | 1.04 | 0.0279 | 7,840 | 0.28 | 0.0443 | 0.00015 | 0.00473 | 0.00469 | 0.605 | 0.0000154 | 0.00602 | 0.0232 | 0.0231 | 0.132 |
| **2031** | 24,200 | 126 | 371 | 3.92 | 11,900 | 0.312 | 2,600 | | | 0.0000061 | 0.0254 | 0.0437 | 0.723 | 0.0121 | 0.0000324 | 722 | 0.0000529 | 0.0244 | 0.00468 | 0.0246 | 0.0631 | 0.0000486 | 514 | 217 | 1.05 | 0.0305 | 7,840 | 0.269 | 0.0441 | 0.000143 | 0.00513 | 0.00466 | 0.555 | 0.000016 | 0.00609 | 0.0218 | 0.0227 | 0.132 |
| **2032** | 24,200 | 126 | 371 | 3.92 | 11,900 | 0.312 | 2,600 | | | 0.00000552 | 0.0233 | 0.0423 | 0.723 | 0.00795 | 0.0000251 | 722 | 0.0000511 | 0.0237 | 0.00453 | 0.0238 | 0.0613 | 0.0000486 | 514 | 217 | 1.04 | 0.0294 | 7,840 | 0.259 | 0.0424 | 0.000125 | 0.00462 | 0.00451 | 0.456 | 0.0000148 | 0.00429 | 0.021 | 0.022 | 0.132 |
| **2033** | 24,200 | 126 | 371 | 3.92 | 11,900 | 0.312 | 2,600 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 722 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 514 | 217 | 1.1 | 0.0384 | 7,840 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.132 |
| **2034** | 21,200 | 110 | 324 | 3.43 | 10,400 | 0.312 | 2,270 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 631 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 449 | 189 | 1.1 | 0.0384 | 6,850 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.116 |
| **2035** | 18,500 | 96.3 | 283 | 2.99 | 9,110 | 0.312 | 1,990 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 552 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 393 | 166 | 1.1 | 0.0384 | 5,990 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.101 |
| **2036** | 16,200 | 84.1 | 248 | 2.62 | 7,970 | 0.312 | 1,740 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 482 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 343 | 145 | 1.1 | 0.0384 | 5,240 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0885 |
| **2037** | 14,100 | 73.5 | 217 | 2.29 | 6,960 | 0.312 | 1,520 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 422 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 300 | 126 | 1.1 | 0.0384 | 4,580 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0774 |
| **2038** | 12,400 | 64.3 | 189 | 2 | 6,090 | 0.312 | 1,330 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 368 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 262 | 111 | 1.1 | 0.0384 | 4,000 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0676 |
| **2039** | 10,800 | 56.2 | 165 | 1.75 | 5,320 | 0.312 | 1,160 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 322 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 229 | 96.6 | 1.1 | 0.0384 | 3,500 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0591 |
| **2040** | 9,610 | 49.1 | 145 | 1.53 | 4,650 | 0.312 | 1,120 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 312 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 200 | 93.6 | 1.1 | 0.0384 | 3,060 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0525 |
| **2041** | 8,590 | 42.9 | 126 | 1.34 | 4,060 | 0.312 | 1,120 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 312 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 175 | 93.6 | 1.1 | 0.0384 | 2,670 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.047 |
| **2042** | 7,710 | 37.5 | 110 | 1.17 | 3,550 | 0.312 | 1,120 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 312 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 153 | 93.6 | 1.1 | 0.0384 | 2,330 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0421 |
| **2043** | 6,930 | 32.8 | 96.6 | 1.02 | 3,110 | 0.312 | 1,120 | | | 0.00000512 | 0.0214 | 0.0496 | 0.723 | 0.00638 | 0.0000316 | 312 | 0.0000546 | 0.0216 | 0.00396 | 0.0246 | 0.066 | 0.0000486 | 134 | 93.6 | 1.1 | 0.0384 | 2,040 | 0.226 | 0.0443 | 0.00014 | 0.00564 | 0.00473 | 0.544 | 0.000011 | 0.00515 | 0.0193 | 0.0226 | 0.0379 |
| **Saline WRSF2** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | 21,300 | 126 | 371 | 3.92 | 11,900 | 0.312 | 425 | | | 0.00000603 | 0.0268 | 0.0375 | 0.723 | 0.00785 | 0.0000245 | 118 | 0.000051 | 0.0279 | 0.00505 | 0.0259 | 0.064 | 0.0000486 | 514 | 35.4 | 1.06 | 0.0234 | 7,840 | 0.305 | 0.0443 | 0.00013 | 0.00387 | 0.00473 | 0.474 | 0.0000171 | 0.00374 | 0.0248 | 0.0236 | 0.116 |
| **2034** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 597 | | | 0.00000583 | 0.0253 | 0.041 | 0.723 | 0.00753 | 0.0000245 | 166 | 0.0000522 | 0.0262 | 0.00489 | 0.0254 | 0.0641 | 0.0000486 | 514 | 49.7 | 1.08 | 0.0272 | 7,840 | 0.287 | 0.0443 | 0.000129 | 0.00432 | 0.00472 | 0.463 | 0.0000161 | 0.00389 | 0.0233 | 0.0233 | 0.118 |
| **2035** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 569 | | | 0.00000586 | 0.0255 | 0.0404 | 0.723 | 0.00757 | 0.0000245 | 158 | 0.0000519 | 0.0265 | 0.00491 | 0.0254 | 0.064 | 0.0000486 | 514 | 47.4 | 1.07 | 0.0266 | 7,840 | 0.29 | 0.0442 | 0.000129 | 0.00425 | 0.00472 | 0.464 | 0.0000162 | 0.00386 | 0.0235 | 0.0233 | 0.117 |
| **2036** | 22,100 | 126 | 371 | 3.92 | 11,900 | 0.312 | 1,040 | | | 0.00000534 | 0.0215 | 0.0502 | 0.723 | 0.00668 | 0.0000245 | 289 | 0.0000555 | 0.022 | 0.00447 | 0.0239 | 0.0645 | 0.0000486 | 514 | 86.7 | 1.12 | 0.037 | 7,840 | 0.24 | 0.0443 | 0.000124 | 0.00549 | 0.00472 | 0.436 | 0.0000135 | 0.00428 | 0.0195 | 0.0226 | 0.121 |
| **2037** | 22,800 | 126 | 371 | 3.92 | 11,900 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 514 | 128 | 1.16 | 0.0479 | 7,840 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.125 |
| **2038** | 20,200 | 110 | 324 | 3.43 | 10,400 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 449 | 128 | 1.16 | 0.0479 | 6,850 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.11 |
| **2039** | 17,900 | 96.3 | 283 | 2.99 | 9,110 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 393 | 128 | 1.16 | 0.0479 | 5,990 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.0979 |
| **2040** | 15,900 | 84.1 | 248 | 2.62 | 7,970 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 343 | 128 | 1.16 | 0.0479 | 5,240 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.087 |
| **2041** | 14,200 | 73.5 | 217 | 2.29 | 6,960 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 300 | 128 | 1.16 | 0.0479 | 4,580 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.0775 |
| **2042** | 12,700 | 64.3 | 189 | 2 | 6,090 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 262 | 128 | 1.16 | 0.0479 | 4,000 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.0692 |
| **2043** | 11,300 | 56.2 | 165 | 1.75 | 5,320 | 0.312 | 1,540 | | | 0.00000474 | 0.017 | 0.0602 | 0.723 | 0.00567 | 0.0000243 | 427 | 0.0000587 | 0.0169 | 0.00395 | 0.0221 | 0.0644 | 0.0000486 | 229 | 128 | 1.16 | 0.0479 | 3,500 | 0.185 | 0.0439 | 0.000118 | 0.00677 | 0.00469 | 0.401 | 0.0000105 | 0.00468 | 0.0151 | 0.0216 | 0.062 |
| **Saline WRSF3** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | 21,300 | 126 | 371 | 3.92 | 11,900 | 0.312 | 431 | | | 0.00000413 | 0.017 | 0.0181 | 0.723 | 0.0473 | 0.0000246 | 120 | 0.0000187 | 0.0115 | 0.00375 | 0.0101 | 0.0354 | 0.0000486 | 514 | 35.9 | 0.217 | 0.0522 | 7,840 | 0.185 | 0.0443 | 0.000127 | 0.00119 | 0.00473 | 0.162 | 0.000029 | 0.0405 | 0.0104 | 0.0159 | 0.116 |
| **2026** | 21,300 | 126 | 371 | 3.92 | 11,900 | 0.312 | 440 | | | 0.00000413 | 0.0169 | 0.0178 | 0.723 | 0.0472 | 0.0000249 | 122 | 0.0000186 | 0.0116 | 0.00371 | 0.0101 | 0.0359 | 0.0000486 | 514 | 36.7 | 0.217 | 0.0522 | 7,840 | 0.183 | 0.0443 | 0.000127 | 0.00122 | 0.00473 | 0.173 | 0.0000287 | 0.0401 | 0.0104 | 0.0158 | 0.116 |
| **2027** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 627 | | | 0.00000477 | 0.0154 | 0.0147 | 0.723 | 0.0441 | 0.0000247 | 174 | 0.0000187 | 0.00946 | 0.00334 | 0.00849 | 0.0531 | 0.0000486 | 514 | 52.3 | 0.188 | 0.0516 | 7,840 | 0.154 | 0.0443 | 0.000136 | 0.00125 | 0.00472 | 0.41 | 0.0000253 | 0.0367 | 0.00893 | 0.0133 | 0.118 |
| **2028** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 514 | 48.9 | 0.193 | 0.0517 | 7,840 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.117 |
| **2029** | 18,900 | 110 | 324 | 3.43 | 10,400 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 449 | 48.9 | 0.193 | 0.0517 | 6,850 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.103 |
| **2030** | 16,600 | 96.3 | 283 | 2.99 | 9,110 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 393 | 48.9 | 0.193 | 0.0517 | 5,990 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0908 |
| **2031** | 14,600 | 84.1 | 248 | 2.62 | 7,970 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 343 | 48.9 | 0.193 | 0.0517 | 5,240 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0799 |
| **2032** | 12,900 | 73.5 | 217 | 2.29 | 6,960 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 300 | 48.9 | 0.193 | 0.0517 | 4,580 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0704 |
| **2033** | 11,400 | 64.3 | 189 | 2 | 6,090 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 262 | 48.9 | 0.193 | 0.0517 | 4,000 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0621 |
| **2034** | 10,000 | 56.2 | 165 | 1.75 | 5,320 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 229 | 48.9 | 0.193 | 0.0517 | 3,500 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0549 |
| **2035** | 8,880 | 49.1 | 145 | 1.53 | 4,650 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 200 | 48.9 | 0.193 | 0.0517 | 3,060 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0485 |
| **2036** | 7,860 | 42.9 | 126 | 1.34 | 4,060 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 175 | 48.9 | 0.193 | 0.0517 | 2,670 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.043 |
| **2037** | 6,980 | 37.5 | 110 | 1.17 | 3,550 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 153 | 48.9 | 0.193 | 0.0517 | 2,330 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0381 |
| **2038** | 6,200 | 32.8 | 96.6 | 1.02 | 3,110 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 134 | 48.9 | 0.193 | 0.0517 | 2,040 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0339 |
| **2039** | 5,520 | 28.7 | 84.4 | 0.892 | 2,710 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 117 | 48.9 | 0.193 | 0.0517 | 1,780 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0302 |
| **2040** | 4,930 | 25.1 | 73.8 | 0.78 | 2,370 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 102 | 48.9 | 0.193 | 0.0517 | 1,560 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.027 |
| **2041** | 4,420 | 21.9 | 64.5 | 0.681 | 2,070 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 89.3 | 48.9 | 0.193 | 0.0517 | 1,360 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0241 |
| **2042** | 3,960 | 19.1 | 56.4 | 0.596 | 1,810 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 78.1 | 48.9 | 0.193 | 0.0517 | 1,190 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0217 |
| **2043** | 3,570 | 16.7 | 49.3 | 0.521 | 1,580 | 0.312 | 587 | | | 0.00000465 | 0.0157 | 0.0155 | 0.723 | 0.0447 | 0.0000246 | 163 | 0.0000187 | 0.00985 | 0.00343 | 0.0088 | 0.0496 | 0.0000486 | 68.3 | 48.9 | 0.193 | 0.0517 | 1,040 | 0.161 | 0.0443 | 0.000135 | 0.00123 | 0.00473 | 0.359 | 0.0000261 | 0.0376 | 0.00922 | 0.0138 | 0.0195 |

**Appendix G-2: Source Terms**

**WRSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **Saline WRSF4** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | 21,700 | 126 | 371 | 3.92 | 11,900 | 0.312 | 757 | | | 0.0000193 | 0.0615 | 0.0573 | 0.723 | 0.149 | 0.00024 | 210 | 0.0000576 | 0.0107 | 0.00416 | 0.0158 | 0.0375 | 0.0000486 | 514 | 63.1 | 0.308 | 0.0436 | 7,840 | 0.226 | 0.0443 | 0.000564 | 0.0188 | 0.00334 | 3.15 | 0.0000432 | 0.0633 | 0.0151 | 0.0154 | 0.119 |
| **2033** | 21,700 | 126 | 371 | 3.92 | 11,900 | 0.312 | 771 | | | 0.0000137 | 0.051 | 0.0461 | 0.723 | 0.0876 | 0.000159 | 214 | 0.000057 | 0.0162 | 0.00442 | 0.0229 | 0.047 | 0.0000486 | 514 | 64.3 | 0.667 | 0.0372 | 7,840 | 0.273 | 0.0443 | 0.000437 | 0.0182 | 0.00387 | 2.24 | 0.0000277 | 0.0365 | 0.0212 | 0.0162 | 0.119 |
| **2034** | 21,600 | 126 | 371 | 3.92 | 11,900 | 0.312 | 653 | | | 0.0000143 | 0.0534 | 0.0385 | 0.723 | 0.0956 | 0.00017 | 181 | 0.0000548 | 0.0161 | 0.00452 | 0.0219 | 0.0445 | 0.0000486 | 514 | 54.4 | 0.61 | 0.0358 | 7,840 | 0.278 | 0.0443 | 0.00043 | 0.0182 | 0.00379 | 2.36 | 0.0000299 | 0.0394 | 0.0215 | 0.016 | 0.118 |
| **2035** | 21,800 | 126 | 371 | 3.92 | 11,900 | 0.312 | 788 | | | 0.0000152 | 0.0535 | 0.0507 | 0.723 | 0.104 | 0.00018 | 219 | 0.0000575 | 0.0146 | 0.00433 | 0.021 | 0.0447 | 0.0000486 | 514 | 65.7 | 0.575 | 0.0393 | 7,840 | 0.259 | 0.0443 | 0.000474 | 0.0183 | 0.00373 | 2.47 | 0.0000317 | 0.0436 | 0.0194 | 0.016 | 0.119 |
| **2036** | 22,400 | 126 | 371 | 3.92 | 11,900 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 514 | 104 | 0.602 | 0.0484 | 7,840 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.122 |
| **2037** | 19,800 | 110 | 324 | 3.43 | 10,400 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 449 | 104 | 0.602 | 0.0484 | 6,850 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.108 |
| **2038** | 17,500 | 96.3 | 283 | 2.99 | 9,110 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 393 | 104 | 0.602 | 0.0484 | 5,990 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.0957 |
| **2039** | 15,500 | 84.1 | 248 | 2.62 | 7,970 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 343 | 104 | 0.602 | 0.0484 | 5,240 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.0849 |
| **2040** | 13,800 | 73.5 | 217 | 2.29 | 6,960 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 300 | 104 | 0.602 | 0.0484 | 4,580 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.0754 |
| **2041** | 12,300 | 64.3 | 189 | 2 | 6,090 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 262 | 104 | 0.602 | 0.0484 | 4,000 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.0671 |
| **2042** | 10,900 | 56.2 | 165 | 1.75 | 5,320 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 229 | 104 | 0.602 | 0.0484 | 3,500 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.0598 |
| **2043** | 9,780 | 49.1 | 145 | 1.53 | 4,650 | 0.312 | 1,250 | | | 0.000016 | 0.0497 | 0.0871 | 0.723 | 0.106 | 0.000182 | 348 | 0.0000665 | 0.0119 | 0.00378 | 0.0208 | 0.0493 | 0.0000486 | 200 | 104 | 0.602 | 0.0484 | 3,060 | 0.215 | 0.0443 | 0.000573 | 0.0186 | 0.00375 | 2.48 | 0.0000317 | 0.0471 | 0.0149 | 0.0162 | 0.0535 |
| **WRSF1_Saline Area** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 21,700 | 126 | 371 | 3.92 | 11,900 | 0.312 | 766 | | | 0.00000948 | 0.0384 | 0.052 | 0.723 | 0.0508 | 0.000105 | 213 | 0.0000536 | 0.0149 | 0.00347 | 0.0203 | 0.05 | 0.0000486 | 514 | 63.9 | 0.671 | 0.0335 | 7,840 | 0.23 | 0.044 | 0.000372 | 0.0144 | 0.0042 | 1.73 | 0.0000184 | 0.0246 | 0.0179 | 0.0155 | 0.119 |
| **2021** | 21,700 | 126 | 371 | 3.92 | 11,900 | 0.312 | 760 | | | 0.00000883 | 0.0355 | 0.0549 | 0.723 | 0.0479 | 0.0000972 | 211 | 0.0000516 | 0.0135 | 0.00308 | 0.0183 | 0.0489 | 0.0000486 | 514 | 63.3 | 0.614 | 0.0327 | 7,840 | 0.206 | 0.0436 | 0.000365 | 0.0132 | 0.0042 | 1.7 | 0.0000176 | 0.0244 | 0.0157 | 0.015 | 0.119 |
| **2022** | 21,800 | 126 | 371 | 3.92 | 11,900 | 0.312 | 794 | | | 0.00000796 | 0.0348 | 0.0516 | 0.723 | 0.0361 | 0.000083 | 220 | 0.0000526 | 0.0158 | 0.00336 | 0.0217 | 0.0525 | 0.0000486 | 514 | 66.1 | 0.745 | 0.0319 | 7,840 | 0.232 | 0.044 | 0.000343 | 0.0137 | 0.00434 | 1.53 | 0.0000145 | 0.0182 | 0.0186 | 0.0157 | 0.119 |
| **2023** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 634 | | | 0.00000905 | 0.0392 | 0.0401 | 0.723 | 0.0477 | 0.000102 | 176 | 0.0000505 | 0.0168 | 0.00359 | 0.0216 | 0.0503 | 0.0000486 | 514 | 52.8 | 0.691 | 0.0302 | 7,840 | 0.248 | 0.0438 | 0.000338 | 0.0139 | 0.0042 | 1.69 | 0.0000174 | 0.0224 | 0.0201 | 0.016 | 0.118 |
| **2024** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 615 | | | 0.0000074 | 0.0354 | 0.0385 | 0.723 | 0.032 | 0.0000803 | 171 | 0.0000493 | 0.0174 | 0.00343 | 0.022 | 0.0522 | 0.0000486 | 514 | 51.3 | 0.737 | 0.0282 | 7,840 | 0.246 | 0.044 | 0.000304 | 0.0129 | 0.00437 | 1.48 | 0.0000135 | 0.0163 | 0.0204 | 0.016 | 0.118 |
| **2025** | 21,500 | 126 | 371 | 3.92 | 11,900 | 0.312 | 606 | | | 0.00000712 | 0.0343 | 0.0372 | 0.723 | 0.0286 | 0.0000778 | 168 | 0.0000485 | 0.0179 | 0.00333 | 0.0225 | 0.0525 | 0.0000486 | 514 | 50.5 | 0.743 | 0.0274 | 7,840 | 0.244 | 0.0426 | 0.000295 | 0.0123 | 0.00425 | 1.39 | 0.0000122 | 0.0151 | 0.0207 | 0.0161 | 0.118 |
| **2026** | 21,400 | 126 | 371 | 3.92 | 11,900 | 0.312 | 531 | | | 0.00000568 | 0.031 | 0.0254 | 0.723 | 0.0157 | 0.0000588 | 147 | 0.0000432 | 0.0189 | 0.00335 | 0.0239 | 0.0494 | 0.0000486 | 514 | 44.2 | 0.793 | 0.0228 | 7,840 | 0.251 | 0.0377 | 0.000234 | 0.0117 | 0.00384 | 1.08 | 0.00000823 | 0.0075 | 0.0221 | 0.0151 | 0.117 |
| **2027** | 21,400 | 126 | 371 | 3.92 | 11,900 | 0.312 | 492 | | | 0.0000059 | 0.0336 | 0.0209 | 0.723 | 0.0166 | 0.0000607 | 137 | 0.0000447 | 0.0197 | 0.00376 | 0.0248 | 0.0501 | 0.0000486 | 514 | 41 | 0.836 | 0.0229 | 7,840 | 0.274 | 0.0399 | 0.00023 | 0.013 | 0.00405 | 1.14 | 0.00000912 | 0.00709 | 0.0239 | 0.0153 | 0.117 |
| **2028** | 21,700 | 126 | 371 | 3.92 | 11,900 | 0.312 | 733 | | | 0.00000662 | 0.0344 | 0.0366 | 0.723 | 0.0168 | 0.0000653 | 204 | 0.0000516 | 0.0211 | 0.0038 | 0.028 | 0.0571 | 0.0000486 | 514 | 61.1 | 0.941 | 0.028 | 7,840 | 0.282 | 0.0422 | 0.000286 | 0.0138 | 0.0043 | 1.18 | 0.00000886 | 0.00799 | 0.0248 | 0.017 | 0.119 |
| **2029** | 21,700 | 126 | 371 | 3.92 | 11,900 | 0.312 | 759 | | | 0.00000677 | 0.0347 | 0.0404 | 0.723 | 0.0193 | 0.0000667 | 211 | 0.0000524 | 0.0204 | 0.00377 | 0.0272 | 0.0575 | 0.0000486 | 514 | 63.3 | 0.924 | 0.0291 | 7,840 | 0.277 | 0.0437 | 0.000299 | 0.014 | 0.00444 | 1.26 | 0.00000979 | 0.00944 | 0.0239 | 0.0171 | 0.119 |
| **2030** | 21,900 | 126 | 371 | 3.92 | 11,900 | 0.312 | 858 | | | 0.00000749 | 0.0349 | 0.0486 | 0.723 | 0.0249 | 0.0000741 | 238 | 0.0000548 | 0.0192 | 0.00371 | 0.0265 | 0.0569 | 0.0000486 | 514 | 71.5 | 0.905 | 0.0317 | 7,840 | 0.265 | 0.0432 | 0.00033 | 0.0145 | 0.00434 | 1.31 | 0.0000111 | 0.0123 | 0.0225 | 0.0168 | 0.119 |
| **2031** | 21,800 | 126 | 371 | 3.92 | 11,900 | 0.312 | 848 | | | 0.0000092 | 0.0385 | 0.0526 | 0.723 | 0.0416 | 0.0000982 | 236 | 0.0000569 | 0.0175 | 0.00372 | 0.0242 | 0.0546 | 0.0000486 | 514 | 70.7 | 0.803 | 0.0343 | 7,840 | 0.255 | 0.044 | 0.000371 | 0.0151 | 0.00426 | 1.56 | 0.0000158 | 0.0204 | 0.021 | 0.0166 | 0.119 |
| **2032** | 21,900 | 126 | 371 | 3.92 | 11,900 | 0.312 | 913 | | | 0.00000614 | 0.0304 | 0.0556 | 0.723 | 0.0152 | 0.0000548 | 254 | 0.0000537 | 0.0178 | 0.00331 | 0.025 | 0.0579 | 0.0000486 | 514 | 76.1 | 0.895 | 0.0315 | 7,840 | 0.242 | 0.0442 | 0.000321 | 0.0133 | 0.00457 | 1.23 | 0.0000088 | 0.00919 | 0.0201 | 0.0164 | 0.12 |
| **2033** | 21,100 | 126 | 371 | 3.92 | 11,900 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 514 | 26.4 | 0.235 | 0.0191 | 7,840 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.115 |
| **2034** | 18,500 | 110 | 324 | 3.43 | 10,400 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 449 | 26.4 | 0.235 | 0.0191 | 6,850 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.101 |
| **2035** | 16,200 | 96.3 | 283 | 2.99 | 9,110 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 393 | 26.4 | 0.235 | 0.0191 | 5,990 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0888 |
| **2036** | 14,300 | 84.1 | 248 | 2.62 | 7,970 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 343 | 26.4 | 0.235 | 0.0191 | 5,240 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0779 |
| **2037** | 12,500 | 73.5 | 217 | 2.29 | 6,960 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 300 | 26.4 | 0.235 | 0.0191 | 4,580 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0684 |
| **2038** | 11,000 | 64.3 | 189 | 2 | 6,090 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 262 | 26.4 | 0.235 | 0.0191 | 4,000 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0601 |
| **2039** | 9,670 | 56.2 | 165 | 1.75 | 5,320 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 229 | 26.4 | 0.235 | 0.0191 | 3,500 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0529 |
| **2040** | 8,510 | 49.1 | 145 | 1.53 | 4,650 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 200 | 26.4 | 0.235 | 0.0191 | 3,060 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0465 |
| **2041** | 7,500 | 42.9 | 126 | 1.34 | 4,060 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 175 | 26.4 | 0.235 | 0.0191 | 2,670 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.041 |
| **2042** | 6,610 | 37.5 | 110 | 1.17 | 3,550 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 153 | 26.4 | 0.235 | 0.0191 | 2,330 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0361 |
| **2043** | 5,830 | 32.8 | 96.6 | 1.02 | 3,110 | 0.312 | 317 | | | 0.00000268 | 0.0174 | 0.045 | 0.723 | 0.0201 | 0.0000323 | 88.2 | 0.0000291 | 0.00686 | 0.00083 | 0.005 | 0.0415 | 0.0000486 | 134 | 26.4 | 0.235 | 0.0191 | 2,040 | 0.0852 | 0.0443 | 0.000225 | 0.00362 | 0.00468 | 1.55 | 0.0000106 | 0.0171 | 0.00418 | 0.0121 | 0.0319 |

**Notes:**

TDS = (0.22 x $HCO_3$ as $CaCO_3$)+ Cl + $SO_4$ + Na + K + Ca + Mg + (0.2259 x $NO_3$-N)

**Appendix G-2: Source Terms**

**TSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **TSF Runoff** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 5,790 | 22.3 | 14.7 | 0.714 | 2,680 | 0.346 | 869 | 0.00952 | 0.005 | 0.0000588 | 0.0538 | 0.444 | 0.505 | 0.229 | 0.000134 | 503 | 0.00047 | 0.038 | 0.00253 | 0.00748 | 0.0483 | 0.0000161 | 82.1 | 187 | 3.06 | 0.00587 | 1,430 | 0.0383 | 0.0168 | 0.00133 | 0.00194 | 0.00322 | 3.8 | 0.000123 | 0.00474 | 0.00685 | 0.00938 | 0.00748 |
| **2021** | 5,790 | 22.3 | 14.7 | 0.714 | 2,680 | 0.346 | 869 | 0.00952 | 0.005 | 0.0000586 | 0.0538 | 0.443 | 0.505 | 0.23 | 0.000134 | 503 | 0.000471 | 0.0381 | 0.00254 | 0.00754 | 0.0485 | 0.000016 | 82.1 | 187 | 3.08 | 0.00586 | 1,430 | 0.0383 | 0.0168 | 0.00132 | 0.00194 | 0.00322 | 3.78 | 0.000123 | 0.00473 | 0.00686 | 0.0094 | 0.00748 |
| **2022** | 5,620 | 22.3 | 14.7 | 0.714 | 2,550 | 0.346 | 865 | 0.00952 | 0.005 | 0.0000576 | 0.0545 | 0.439 | 0.505 | 0.235 | 0.000135 | 496 | 0.000459 | 0.0378 | 0.00259 | 0.00722 | 0.0469 | 0.0000159 | 81.2 | 187 | 3 | 0.00576 | 1,400 | 0.0389 | 0.0165 | 0.00132 | 0.00192 | 0.00315 | 3.78 | 0.000125 | 0.00474 | 0.00701 | 0.00919 | 0.00692 |
| **2023** | 5,580 | 22.3 | 14.7 | 0.714 | 2,520 | 0.346 | 865 | 0.00952 | 0.005 | 0.0000582 | 0.0541 | 0.44 | 0.505 | 0.232 | 0.000133 | 495 | 0.000461 | 0.0376 | 0.00255 | 0.00725 | 0.0472 | 0.0000157 | 81.1 | 187 | 3 | 0.00579 | 1,390 | 0.0384 | 0.0165 | 0.00133 | 0.0019 | 0.00317 | 3.79 | 0.000124 | 0.00472 | 0.00696 | 0.00921 | 0.0068 |
| **2024** | 5,480 | 22.3 | 14.7 | 0.714 | 2,450 | 0.346 | 863 | 0.00952 | 0.005 | 0.0000583 | 0.0552 | 0.443 | 0.505 | 0.239 | 0.000135 | 490 | 0.000461 | 0.0374 | 0.00258 | 0.0072 | 0.0472 | 0.0000154 | 80.6 | 187 | 2.99 | 0.00581 | 1,370 | 0.0383 | 0.0166 | 0.00133 | 0.00191 | 0.00317 | 3.82 | 0.000127 | 0.00479 | 0.00705 | 0.00922 | 0.00648 |
| **2025** | 5,390 | 22.3 | 14.7 | 0.714 | 2,380 | 0.346 | 861 | 0.00952 | 0.005 | 0.0000584 | 0.0556 | 0.445 | 0.505 | 0.241 | 0.000136 | 487 | 0.000458 | 0.0374 | 0.00259 | 0.0071 | 0.0469 | 0.0000155 | 80.1 | 187 | 2.97 | 0.00581 | 1,350 | 0.0386 | 0.0166 | 0.00134 | 0.0019 | 0.00316 | 3.84 | 0.000128 | 0.00482 | 0.0071 | 0.00917 | 0.00622 |
| **2026** | 5,310 | 22.3 | 14.7 | 0.714 | 2,320 | 0.346 | 859 | 0.00952 | 0.005 | 0.0000584 | 0.0553 | 0.442 | 0.505 | 0.238 | 0.000135 | 483 | 0.000456 | 0.0376 | 0.0026 | 0.00702 | 0.0464 | 0.0000154 | 79.7 | 187 | 2.96 | 0.00579 | 1,340 | 0.039 | 0.0165 | 0.00135 | 0.00188 | 0.00314 | 3.84 | 0.000128 | 0.00478 | 0.00718 | 0.00912 | 0.00595 |
| **2027** | 5,300 | 22.3 | 14.7 | 0.714 | 2,320 | 0.346 | 859 | 0.00952 | 0.005 | 0.000057 | 0.0561 | 0.435 | 0.505 | 0.241 | 0.000137 | 483 | 0.000453 | 0.0396 | 0.00281 | 0.00709 | 0.0457 | 0.0000158 | 79.7 | 187 | 3.06 | 0.00569 | 1,340 | 0.0418 | 0.0165 | 0.00133 | 0.0019 | 0.00313 | 3.81 | 0.00013 | 0.00475 | 0.0077 | 0.00916 | 0.00593 |
| **2028** | 5,320 | 22.3 | 14.7 | 0.714 | 2,330 | 0.346 | 859 | 0.00952 | 0.005 | 0.0000552 | 0.0574 | 0.428 | 0.505 | 0.248 | 0.000139 | 484 | 0.000451 | 0.0415 | 0.00304 | 0.00721 | 0.0451 | 0.0000161 | 79.8 | 187 | 3.17 | 0.00559 | 1,340 | 0.0445 | 0.0165 | 0.0013 | 0.00193 | 0.00311 | 3.78 | 0.000132 | 0.00473 | 0.00826 | 0.00922 | 0.00598 |
| **2029** | 5,330 | 22.3 | 14.7 | 0.714 | 2,330 | 0.346 | 859 | 0.00952 | 0.005 | 0.0000536 | 0.0584 | 0.417 | 0.505 | 0.251 | 0.00014 | 484 | 0.000449 | 0.0437 | 0.00329 | 0.00739 | 0.0445 | 0.0000157 | 79.8 | 187 | 3.33 | 0.00547 | 1,340 | 0.047 | 0.0164 | 0.00124 | 0.00191 | 0.00309 | 3.73 | 0.000134 | 0.00466 | 0.00895 | 0.00931 | 0.00601 |
| **2030** | 5,310 | 22.3 | 14.7 | 0.714 | 2,320 | 0.346 | 859 | 0.00952 | 0.005 | 0.0000522 | 0.0586 | 0.403 | 0.505 | 0.248 | 0.000138 | 483 | 0.000446 | 0.046 | 0.0035 | 0.00756 | 0.0438 | 0.0000154 | 79.7 | 187 | 3.49 | 0.00533 | 1,340 | 0.0495 | 0.0163 | 0.0012 | 0.00187 | 0.00307 | 3.66 | 0.000133 | 0.00453 | 0.00959 | 0.00938 | 0.00596 |
| **2031** | 5,320 | 22.3 | 14.7 | 0.714 | 2,330 | 0.346 | 859 | 0.00952 | 0.005 | 0.0000512 | 0.0582 | 0.389 | 0.505 | 0.241 | 0.000134 | 484 | 0.000447 | 0.0485 | 0.00368 | 0.00782 | 0.0434 | 0.000015 | 79.7 | 187 | 3.68 | 0.00523 | 1,340 | 0.0519 | 0.0163 | 0.00115 | 0.00182 | 0.00307 | 3.59 | 0.000131 | 0.00437 | 0.0102 | 0.00951 | 0.00597 |
| **2032** | 5,330 | 22.3 | 14.7 | 0.714 | 2,330 | 0.346 | 859 | 0.00952 | 0.005 | 0.0000504 | 0.0579 | 0.379 | 0.505 | 0.236 | 0.000132 | 484 | 0.000448 | 0.0505 | 0.00384 | 0.00806 | 0.0432 | 0.0000147 | 79.8 | 187 | 3.84 | 0.00514 | 1,340 | 0.0539 | 0.0163 | 0.00112 | 0.00178 | 0.00307 | 3.53 | 0.00013 | 0.00426 | 0.0107 | 0.00964 | 0.006 |
| **2033** | 5,340 | 22.3 | 14.7 | 0.714 | 2,340 | 0.346 | 860 | 0.00952 | 0.005 | 0.0000498 | 0.0579 | 0.371 | 0.505 | 0.233 | 0.00013 | 485 | 0.00045 | 0.0519 | 0.00394 | 0.00823 | 0.0432 | 0.0000144 | 79.9 | 187 | 3.96 | 0.00509 | 1,340 | 0.0551 | 0.0163 | 0.00108 | 0.00175 | 0.00307 | 3.49 | 0.000129 | 0.00418 | 0.011 | 0.00973 | 0.00604 |
| **2034** | 5,340 | 22.3 | 14.7 | 0.714 | 2,340 | 0.346 | 860 | 0.00952 | 0.005 | 0.0000494 | 0.0584 | 0.368 | 0.505 | 0.235 | 0.00013 | 485 | 0.000451 | 0.053 | 0.00405 | 0.00835 | 0.0431 | 0.0000142 | 79.9 | 187 | 4.04 | 0.00505 | 1,340 | 0.0562 | 0.0163 | 0.00106 | 0.00174 | 0.00307 | 3.48 | 0.00013 | 0.00416 | 0.0114 | 0.0098 | 0.00605 |
| **2035** | 5,350 | 22.3 | 14.7 | 0.714 | 2,350 | 0.346 | 860 | 0.00952 | 0.005 | 0.000049 | 0.059 | 0.365 | 0.505 | 0.238 | 0.000131 | 485 | 0.000451 | 0.0534 | 0.00412 | 0.0084 | 0.0431 | 0.0000139 | 79.9 | 187 | 4.09 | 0.00502 | 1,350 | 0.0567 | 0.0163 | 0.00104 | 0.00173 | 0.00307 | 3.47 | 0.000131 | 0.00416 | 0.0116 | 0.00984 | 0.00607 |
| **2036** | 5,330 | 22.3 | 14.7 | 0.714 | 2,340 | 0.346 | 860 | 0.00952 | 0.005 | 0.0000487 | 0.0591 | 0.361 | 0.505 | 0.237 | 0.00013 | 484 | 0.000451 | 0.0543 | 0.00419 | 0.0085 | 0.043 | 0.0000137 | 79.8 | 187 | 4.16 | 0.00499 | 1,340 | 0.0574 | 0.0163 | 0.00102 | 0.00172 | 0.00307 | 3.45 | 0.000131 | 0.00412 | 0.0118 | 0.00989 | 0.00602 |
| **2037** | 5,340 | 22.3 | 14.7 | 0.714 | 2,350 | 0.346 | 860 | 0.00952 | 0.005 | 0.0000484 | 0.0588 | 0.357 | 0.505 | 0.234 | 0.000129 | 485 | 0.000452 | 0.055 | 0.00424 | 0.00862 | 0.0431 | 0.0000136 | 79.9 | 187 | 4.22 | 0.00496 | 1,340 | 0.0579 | 0.0163 | 0.001 | 0.0017 | 0.00307 | 3.42 | 0.00013 | 0.00406 | 0.0119 | 0.00995 | 0.00606 |
| **2038** | 5,310 | 22.3 | 14.7 | 0.714 | 2,320 | 0.346 | 859 | 0.00952 | 0.005 | 0.000048 | 0.0586 | 0.352 | 0.505 | 0.231 | 0.000127 | 484 | 0.000454 | 0.0559 | 0.0043 | 0.00878 | 0.0432 | 0.0000134 | 79.7 | 187 | 4.31 | 0.00493 | 1,340 | 0.0587 | 0.0163 | 0.00098 | 0.00169 | 0.00308 | 3.39 | 0.000129 | 0.004 | 0.0121 | 0.01 | 0.00596 |
| **2039** | 5,270 | 22.3 | 14.7 | 0.714 | 2,300 | 0.346 | 858 | 0.00952 | 0.005 | 0.0000476 | 0.0583 | 0.345 | 0.505 | 0.228 | 0.000125 | 482 | 0.000456 | 0.057 | 0.00438 | 0.00893 | 0.0432 | 0.0000133 | 79.5 | 187 | 4.4 | 0.00488 | 1,330 | 0.0597 | 0.0163 | 0.000957 | 0.00167 | 0.00309 | 3.35 | 0.000127 | 0.00393 | 0.0124 | 0.0101 | 0.00584 |
| **2040** | 5,220 | 22.3 | 14.7 | 0.714 | 2,250 | 0.346 | 857 | 0.00952 | 0.005 | 0.0000472 | 0.0582 | 0.341 | 0.505 | 0.225 | 0.000124 | 479 | 0.000456 | 0.058 | 0.00445 | 0.00904 | 0.0431 | 0.0000132 | 79.2 | 187 | 4.47 | 0.00485 | 1,320 | 0.0606 | 0.0164 | 0.00094 | 0.00165 | 0.00309 | 3.33 | 0.000127 | 0.00388 | 0.0126 | 0.0102 | 0.00566 |
| **2041** | 5,190 | 22.3 | 14.7 | 0.714 | 2,230 | 0.346 | 857 | 0.00952 | 0.005 | 0.0000475 | 0.0581 | 0.343 | 0.505 | 0.225 | 0.000124 | 478 | 0.000458 | 0.0575 | 0.0044 | 0.00907 | 0.0435 | 0.0000131 | 79.1 | 187 | 4.46 | 0.00487 | 1,310 | 0.0598 | 0.0164 | 0.000937 | 0.00166 | 0.0031 | 3.33 | 0.000126 | 0.00389 | 0.0125 | 0.0102 | 0.00557 |
| **2042** | 5,140 | 22.3 | 14.7 | 0.714 | 2,200 | 0.346 | 856 | 0.00952 | 0.005 | 0.0000479 | 0.058 | 0.345 | 0.505 | 0.226 | 0.000124 | 476 | 0.000458 | 0.0569 | 0.00435 | 0.00902 | 0.0436 | 0.000013 | 78.9 | 187 | 4.43 | 0.0049 | 1,300 | 0.0591 | 0.0164 | 0.000946 | 0.00165 | 0.0031 | 3.34 | 0.000126 | 0.00391 | 0.0123 | 0.0102 | 0.00542 |
| **2043** | 5,090 | 22.3 | 14.7 | 0.714 | 2,160 | 0.346 | 855 | 0.00952 | 0.005 | 0.0000485 | 0.0579 | 0.35 | 0.505 | 0.226 | 0.000124 | 474 | 0.000458 | 0.0561 | 0.00427 | 0.00893 | 0.0437 | 0.000013 | 78.6 | 187 | 4.36 | 0.00495 | 1,300 | 0.0582 | 0.0164 | 0.000967 | 0.00166 | 0.0031 | 3.37 | 0.000127 | 0.00395 | 0.0121 | 0.0101 | 0.00527 |
| **2044** | 1,020 | 0.947 | 1.46 | 0.0241 | 93 | 0.75 | 569 | 0.000 | 0.000 | 0.00000606 | 0.0364 | 0.0295 | 1.3 | 0.147 | 0.0000307 | 125 | 0.000255 | 0.00792 | 0.00144 | 0.00827 | 0.0289 | 0.0000991 | 79.5 | 67.4 | 0.494 | 0.0175 | 61 | 0.0434 | 0.00494 | 0.000197 | 0.00954 | 0.00355 | 3.85 | 0.0000107 | 0.0203 | 0.00266 | 0.00545 | 0.00991 |
| **2045** | 1,010 | 0.828 | 1.27 | 0.021 | 92 | 0.743 | 564 | 0.000 | 0.000 | 0.00000601 | 0.036 | 0.0292 | 1.29 | 0.146 | 0.0000304 | 124 | 0.000253 | 0.00785 | 0.00143 | 0.0082 | 0.0286 | 0.0000982 | 78.8 | 66.8 | 0.489 | 0.0174 | 60 | 0.043 | 0.00489 | 0.000195 | 0.00945 | 0.00352 | 3.81 | 0.0000106 | 0.0201 | 0.00264 | 0.0054 | 0.00982 |
| **2046** | 1,000 | 0.723 | 1.11 | 0.0184 | 91 | 0.736 | 559 | 0.000 | 0.000 | 0.00000595 | 0.0357 | 0.029 | 1.27 | 0.145 | 0.0000302 | 123 | 0.00025 | 0.00778 | 0.00142 | 0.00812 | 0.0283 | 0.0000973 | 78.1 | 66.2 | 0.485 | 0.0172 | 60 | 0.0426 | 0.00485 | 0.000193 | 0.00937 | 0.00349 | 3.78 | 0.0000105 | 0.0199 | 0.00261 | 0.00535 | 0.00973 |
| **2047** | 995 | 0.632 | 0.973 | 0.0161 | 90 | 0.729 | 554 | 0.000 | 0.000 | 0.0000059 | 0.0354 | 0.0287 | 1.26 | 0.143 | 0.0000299 | 121 | 0.000248 | 0.00771 | 0.0014 | 0.00805 | 0.0281 | 0.0000964 | 77.4 | 65.6 | 0.48 | 0.017 | 59 | 0.0422 | 0.0048 | 0.000191 | 0.00928 | 0.00346 | 3.74 | 0.0000104 | 0.0197 | 0.00259 | 0.0053 | 0.00964 |
| **2048** | 986 | 0.553 | 0.85 | 0.0141 | 89 | 0.723 | 549 | 0.000 | 0.000 | 0.00000584 | 0.0351 | 0.0284 | 1.25 | 0.142 | 0.0000296 | 120 | 0.000246 | 0.00764 | 0.00139 | 0.00797 | 0.0278 | 0.0000955 | 76.6 | 65 | 0.476 | 0.0169 | 59 | 0.0418 | 0.00476 | 0.000189 | 0.0092 | 0.00342 | 3.71 | 0.0000103 | 0.0195 | 0.00257 | 0.00525 | 0.00955 |
| **2049** | 976 | 0.483 | 0.743 | 0.0123 | 89 | 0.716 | 544 | 0.000 | 0.000 | 0.00000579 | 0.0347 | 0.0282 | 1.24 | 0.141 | 0.0000293 | 119 | 0.000243 | 0.00757 | 0.00138 | 0.0079 | 0.0276 | 0.0000946 | 75.9 | 64.4 | 0.471 | 0.0167 | 58 | 0.0414 | 0.00471 | 0.000188 | 0.00911 | 0.00339 | 3.68 | 0.0000102 | 0.0194 | 0.00254 | 0.00521 | 0.00946 |
| **2050** | 967 | 0.422 | 0.65 | 0.0107 | 88 | 0.709 | 539 | 0.000 | 0.000 | 0.00000574 | 0.0344 | 0.0279 | 1.23 | 0.139 | 0.000029 | 118 | 0.000241 | 0.0075 | 0.00136 | 0.00782 | 0.0273 | 0.0000937 | 75.2 | 63.8 | 0.467 | 0.0166 | 58 | 0.041 | 0.00467 | 0.000186 | 0.00902 | 0.00336 | 3.64 | 0.0000101 | 0.0192 | 0.00252 | 0.00516 | 0.00937 |
| **2051** | 958 | 0.369 | 0.568 | 0.00939 | 87 | 0.702 | 533 | 0.000 | 0.000 | 0.00000568 | 0.0341 | 0.0276 | 1.22 | 0.138 | 0.0000288 | 117 | 0.000239 | 0.00742 | 0.00135 | 0.00775 | 0.027 | 0.0000928 | 74.5 | 63.2 | 0.463 | 0.0164 | 57 | 0.0406 | 0.00463 | 0.000184 | 0.00894 | 0.00333 | 3.61 | 0.00001 | 0.019 | 0.00249 | 0.00511 | 0.00928 |
| **2052** | 949 | 0.323 | 0.496 | 0.0082 | 86 | 0.695 | 528 | 0.000 | 0.000 | 0.00000563 | 0.0337 | 0.0274 | 1.2 | 0.137 | 0.0000285 | 116 | 0.000237 | 0.00735 | 0.00134 | 0.00767 | 0.0268 | 0.000092 | 73.8 | 62.6 | 0.458 | 0.0162 | 57 | 0.0402 | 0.00458 | 0.000182 | 0.00885 | 0.0033 | 3.57 | 0.00000991 | 0.0188 | 0.00247 | 0.00506 | 0.0092 |
| **2053** | 940 | 0.282 | 0.434 | 0.00717 | 85 | 0.689 | 523 | 0.000 | 0.000 | 0.00000557 | 0.0334 | 0.0271 | 1.19 | 0.135 | 0.0000282 | 115 | 0.000234 | 0.00728 | 0.00133 | 0.0076 | 0.0265 | 0.0000911 | 73.1 | 62 | 0.454 | 0.0161 | 56 | 0.0399 | 0.00454 | 0.000181 | 0.00877 | 0.00326 | 3.54 | 0.00000981 | 0.0186 | 0.00245 | 0.00501 | 0.00911 |
| **2054** | 930 | 0.246 | 0.379 | 0.00627 | 84 | 0.682 | 518 | 0.000 | 0.000 | 0.00000552 | 0.0331 | 0.0268 | 1.18 | 0.134 | 0.0000279 | 114 | 0.000232 | 0.00721 | 0.00131 | 0.00752 | 0.0263 | 0.0000902 | 72.3 | 61.4 | 0.449 | 0.0159 | 55 | 0.0395 | 0.00449 | 0.000179 | 0.00868 | 0.00323 | 3.5 | 0.00000972 | 0.0184 | 0.00242 | 0.00496 | 0.00902 |
| **2055** | 921 | 0.215 | 0.331 | 0.00548 | 84 | 0.675 | 513 | 0.000 | 0.000 | 0.00000546 | 0.0328 | 0.0266 | 1.17 | 0.133 | 0.0000277 | 112 | 0.00023 | 0.00714 | 0.0013 | 0.00745 | 0.026 | 0.0000893 | 71.6 | 60.7 | 0.445 | 0.0158 | 55 | 0.0391 | 0.00445 | 0.000177 | 0.00859 | 0.0032 | 3.47 | 0.00000962 | 0.0183 | 0.0024 | 0.00491 | 0.00893 |
| **2056** | 912 | 0.188 | 0.29 | 0.00479 | 83 | 0.668 | 508 | 0.000 | 0.000 | 0.00000541 | 0.0324 | 0.0263 | 1.16 | 0.131 | 0.0000274 | 111 | 0.000227 | 0.00707 | 0.00129 | 0.00737 | 0.0257 | 0.0000884 | 70.9 | 60.1 | 0.44 | 0.0156 | 54 | 0.0387 | 0.0044 | 0.000175 | 0.00851 | 0.00317 | 3.43 | 0.00000952 | 0.0181 | 0.00237 | 0.00486 | 0.00884 |
| **2057** | 903 | 0.165 | 0.253 | 0.00419 | 82 | 0.662 | 503 | 0.000 | 0.000 | 0.00000535 | 0.0321 | 0.026 | 1.15 | 0.13 | 0.0000271 | 110 | 0.000225 | 0.00699 | 0.00127 | 0.0073 | 0.0255 | 0.0000875 | 70.2 | 59.5 | 0.436 | 0.0155 | 54 | 0.0383 | 0.00436 | 0.000174 | 0.00842 | 0.00314 | 3.4 | 0.00000943 | 0.0179 | 0.00235 | 0.00481 | 0.00875 |
| **2058** | 893 | 0.144 | 0.221 | 0.00366 | 81 | 0.655 | 497 | 0.000 | 0.000 | 0.0000053 | 0.0318 | 0.0258 | 1.13 | 0.129 | 0.0000268 | 109 | 0.000223 | 0.00692 | 0.00126 | 0.00723 | 0.0252 | 0.0000866 | 69.5 | 58.9 | 0.431 | 0.0153 | 53 | 0.0379 | 0.00431 | 0.000172 | 0.00834 | 0.0031 | 3.36 | 0.00000933 | 0.0177 | 0.00233 | 0.00476 | 0.00866 |
| **2059** | 884 | 0.126 | 0.193 | 0.0032 | 80 | 0.648 | 492 | 0.000 | 0.000 | 0.00000524 | 0.0314 | 0.0255 | 1.12 | 0.127 | 0.0000266 | 108 | 0.00022 | 0.00685 | 0.00125 | 0.00715 | 0.025 | 0.0000857 | 68.8 | 58.3 | 0.427 | 0.0151 | 53 | 0.0375 | 0.00427 | 0.00017 | 0.00825 | 0.00307 | 3.33 | 0.00000924 | 0.0175 | 0.0023 | 0.00471 | 0.00857 |
| **2060** | 875 | 0.11 | 0.169 | 0.0028 | 79 | 0.641 | 487 | 0.000 | 0.000 | 0.00000519 | 0.0311 | 0.0252 | 1.11 | 0.126 | 0.0000263 | 107 | 0.000218 | 0.00678 | 0.00123 | 0.00708 | 0.0247 | 0.0000848 | 68 | 57.7 | 0.422 | 0.015 | 52 | 0.0371 | 0.00422 | 0.000168 | 0.00816 | 0.00304 | 3.29 | 0.00000914 | 0.0173 | 0.00228 | 0.00466 | 0.00848 |
| **2061** | 866 | 0.0961 | 0.148 | 0.00244 | 79 | 0.635 | 482 | 0.000 | 0.000 | 0.00000513 | 0.0308 | 0.025 | 1.1 | 0.125 | 0.000026 | 106 | 0.000216 | 0.00671 | 0.00122 | 0.007 | 0.0244 | 0.0000839 | 67.3 | 57.1 | 0.418 | 0.0148 | 52 | 0.0367 | 0.00418 | 0.000166 | 0.00808 | 0.00301 | 3.26 | 0.00000904 | 0.0172 | 0.00225 | 0.00462 | 0.00839 |
| **2062** | 857 | 0.084 | 0.129 | 0.00214 | 78 | 0.628 | 477 | 0.000 | 0.000 | 0.00000508 | 0.0305 | 0.0247 | 1.09 | 0.123 | 0.0000257 | 105 | 0.000214 | 0.00664 | 0.00121 | 0.00693 | 0.0242 | 0.000083 | 66.6 | 56.5 | 0.414 | 0.0147 | 51 | 0.0363 | 0.00414 | 0.000165 | 0.00799 | 0.00298 | 3.22 | 0.00000895 | 0.017 | 0.00223 | 0.00457 | 0.0083 |
| **2063** | 847 | 0.0734 | 0.113 | 0.00187 | 77 | 0.621 | 472 | 0.000 | 0.000 | 0.00000502 | 0.0301 | 0.0244 | 1.08 | 0.122 | 0.0000254 | 103 | 0.000211 | 0.00657 | 0.0012 | 0.00685 | 0.0239 | 0.0000821 | 65.9 | 55.9 | 0.409 | 0.0145 | 51 | 0.0359 | 0.00409 | 0.000163 | 0.00791 | 0.00294 | 3.19 | 0.00000885 | 0.0168 | 0.00221 | 0.00452 | 0.00821 |
| **2064** | 838 | 0.0642 | 0.0987 | 0.00163 | 76 | 0.614 | 467 | 0.000 | 0.000 | 0.00000497 | 0.0298 | 0.0242 | 1.06 | 0.121 | 0.0000252 | 102 | 0.000209 | 0.00649 | 0.00118 | 0.00678 | 0.0237 | 0.0000812 | 65.2 | 55.3 | 0.405 | 0.0144 | 50 | 0.0355 | 0.00405 | 0.000161 | 0.00782 | 0.00291 | 3.15 | 0.00000875 | 0.0166 | 0.00218 | 0.00447 | 0.00812 |
| **2065** | 829 | 0.0561 | 0.0863 | 0.00143 | 75 | 0.608 | 461 | 0.000 | 0.000 | 0.00000491 | 0.0295 | 0.0239 | 1.05 | 0.119 | 0.0000249 | 101 | 0.000207 | 0.00642 | 0.00117 | 0.0067 | 0.0234 | 0.0000803 | 64.4 | 54.7 | 0.4 | 0.0142 | 49 | 0.0352 | 0.004 | 0.000159 | 0.00773 | 0.00288 | 3.12 | 0.00000866 | 0.0164 | 0.00216 | 0.00442 | 0.00803 |
| **2066** | 820 | 0.049 | 0.0754 | 0.00125 | 74 | 0.601 | 456 | 0.000 | 0.000 | 0.00000486 | 0.0292 | 0.0236 | 1.04 | 0.118 | 0.0000246 | 100 | 0.000204 | 0.00635 | 0.00116 | 0.00663 | 0.0231 | 0.0000794 | 63.7 | 54.1 | 0.396 | 0.014 | 49 | 0.0348 | 0.00396 | 0.000158 | 0.00765 | 0.00285 | 3.09 | 0.00000856 | 0.0162 | 0.00213 | 0.00437 | 0.00794 |
| **2067** | 810 | 0.0428 | 0.0659 | 0.00109 | 74 | 0.594 | 451 | 0.000 | 0.000 | 0.00000481 | 0.0288 | 0.0234 | 1.03 | 0.117 | 0.0000243 | 98.9 | 0.000202 | 0.00628 | 0.00114 | 0.00655 | 0.0229 | 0.0000785 | 63 | 53.4 | 0.391 | 0.0139 | 48 | 0.0344 | 0.00391 | 0.000156 | 0.00756 | 0.00282 | 3.05 | 0.00000846 | 0.0161 | 0.00211 | 0.00432 | 0.00785 |
| **2068** | 801 | 0.0374 | 0.0576 | 0.000952 | 73 | 0.587 | 446 | 0.000 | 0.000 | 0.00000475 | 0.0285 | 0.0231 | 1.02 | 0.115 | 0.0000241 | 97.8 | 0.0002 | 0.00621 | 0.00113 | 0.00648 | 0.0226 | 0.0000776 | 62.3 | 52.8 | 0.387 | 0.0137 | 48 | 0.034 | 0.00387 | 0.000154 | 0.00747 | 0.00278 | 3.02 | 0.00000837 | 0.0159 | 0.00209 | 0.00427 | 0.00776 |
| **2069** | 792 | 0.0327 | 0.0504 | 0.000832 | 72 | 0.58 | 441 | 0.000 | 0.000 | 0.0000047 | 0.0282 | 0.0228 | 1.01 | 0.114 | 0.0000238 | 96.7 | 0.000197 | 0.00614 | 0.00112 | 0.0064 | 0.0224 | 0.0000768 | 61.6 | 52.2 | 0.382 | 0.0136 | 47 | 0.0336 | 0.00382 | 0.000152 | 0.00739 | 0.00275 | 2.98 | 0.00000827 | 0.0157 | 0.00206 | 0.00422 | 0.00768 |
| **2070** | 783 | 0.0286 | 0.044 | 0.000728 | 71 | 0.574 | 436 | 0.000 | 0.000 | 0.00000464 | 0.0278 | 0.0226 | 0.994 | 0.113 | 0.0000235 | 95.5 | 0.000195 | 0.00607 | 0.0011 | 0.00633 | 0.0221 | 0.0000759 | 60.9 | 51.6 | 0.378 | 0.0134 | 47 | 0.0332 | 0.00378 | 0.00015 | 0.0073 | 0.00272 | 2.95 | 0.00000818 | 0.0155 | 0.00204 | 0.00417 | 0.00759 |
| **2071** | 774 | 0.025 | 0.0385 | 0.000636 | 70 | 0.567 | 431 | 0.000 | 0.000 | 0.00000459 | 0.0275 | 0.0223 | 0.982 | 0.111 | 0.0000232 | 94.4 | 0.000193 | 0.00599 | 0.00109 | 0.00626 | 0.0218 | 0.000075 | 60.1 | 51 | 0.373 | 0.0132 | 46 | 0.0328 | 0.00373 | 0.000149 | 0.00722 | 0.00269 | 2.91 | 0.00000808 | 0.0153 | 0.00201 | 0.00412 | 0.0075 |
| **2072** | 764 | 0.0219 | 0.0336 | 0.000556 | 69 | 0.56 | 426 | 0.000 | 0.000 | 0.00000453 | 0.0272 | 0.022 | 0.97 | 0.11 | 0.000023 | 93.3 | 0.000191 | 0.00592 | 0.00108 | 0.00618 | 0.0216 | 0.0000741 | 59.4 | 50.4 | 0.369 | 0.0131 | 46 | 0.0324 | 0.00369 | 0.000147 | 0.00713 | 0.00265 | 2.88 | 0.00000798 | 0.0151 | 0.00199 | 0.00407 | 0.00741 |
| **2073** | 755 | 0.0191 | 0.0294 | 0.000486 | 69 | 0.553 | 420 | 0.000 | 0.000 | 0.00000448 | 0.0269 | 0.0218 | 0.959 | 0.109 | 0.0000227 | 92.2 | 0.000188 | 0.00585 | 0.00107 | 0.00611 | 0.0213 | 0.0000732 | 58.7 | 49.8 | 0.365 | 0.0129 | 45 | 0.032 | 0.00365 | 0.000145 | 0.00704 | 0.00262 | 2.84 | 0.00000789 | 0.015 | 0.00197 | 0.00402 | 0.00732 |
| **2074** | 746 | 0.0167 | 0.0257 | 0.000425 | 68 | 0.547 | 415 | 0.000 | 0.000 | 0.00000442 | 0.0265 | 0.0215 | 0.947 | 0.108 | 0.0000224 | 91 | 0.000186 | 0.00578 | 0.00105 | 0.00603 | 0.0211 | 0.0000723 | 58 | 49.2 | 0.36 | 0.0128 | 45 | 0.0316 | 0.0036 | 0.000143 | 0.00696 | 0.00259 | 2.81 | 0.00000779 | 0.0148 | 0.00194 | 0.00398 | 0.00723 |
| **2075** | 737 | 0.0146 | 0.0225 | 0.000371 | 67 | 0.54 | 410 | 0.000 | 0.000 | 0.00000437 | 0.0262 | 0.0212 | 0.935 | 0.106 | 0.0000221 | 89.9 | 0.000184 | 0.00571 | 0.00104 | 0.00596 | 0.0208 | 0.0000714 | 57.3 | 48.6 | 0.356 | 0.0126 | 44 | 0.0312 | 0.00356 | 0.000142 | 0.00687 | 0.00256 | 2.77 | 0.00000769 | 0.0146 | 0.00192 | 0.00393 | 0.00714 |
| **2076** | 727 | 0.0128 | 0.0196 | 0.000324 | 66 | 0.533 | 405 | 0.000 | 0.000 | 0.00000431 | 0.0259 | 0.021 | 0.923 | 0.105 | 0.0000218 | 88.8 | 0.000181 | 0.00564 | 0.00103 | 0.00588 | 0.0205 | 0.0000705 | 56.6 | 48 | 0.351 | 0.0125 | 43 | 0.0308 | 0.00351 | 0.00014 | 0.00679 | 0.00253 | 2.74 | 0.0000076 | 0.0144 | 0.00189 | 0.00388 | 0.00705 |
| **2077** | 718 | 0.0112 | 0.0172 | 0.000284 | 65 | 0.526 | 400 | 0.000 | 0.000 | 0.00000426 | 0.0255 | 0.0207 | 0.912 | 0.104 | 0.0000216 | 87.7 | 0.000179 | 0.00556 | 0.00101 | 0.00581 | 0.0203 | 0.0000696 | 55.8 | 47.4 | 0.347 | 0.0123 | 43 | 0.0305 | 0.00347 | 0.000138 | 0.0067 | 0.00249 | 2.7 | 0.0000075 | 0.0142 | 0.00187 | 0.00383 | 0.00696 |
| **2078** | 709 | 0.00975 | 0.015 | 0.000248 | 64 | 0.52 | 395 | 0.000 | 0.000 | 0.0000042 | 0.0252 | 0.0204 | 0.9 | 0.102 | 0.0000213 | 86.5 | 0.000177 | 0.00549 | 0.001 | 0.00573 | 0.02 | 0.0000687 | 55.1 | 46.8 | 0.342 | 0.0121 | 42 | 0.0301 | 0.00342 | 0.000136 | 0.00661 | 0.00246 | 2.67 | 0.0000074 | 0.0141 | 0.00185 | 0.00378 | 0.00687 |
| **2079** | 700 | 0.00852 | 0.0131 | 0.000217 | 64 | 0.513 | 390 | 0.000 | 0.000 | 0.00000415 | 0.0249 | 0.0202 | 0.888 | 0.101 | 0.000021 | 85.4 | 0.000174 | 0.00542 | 0.000987 | 0.00566 | 0.0197 | 0.0000678 | 54.4 | 46.1 | 0.338 | 0.012 | 42 | 0.0297 | 0.00338 | 0.000134 | 0.00653 | 0.00243 | 2.63 | 0.00000731 | 0.0139 | 0.00182 | 0.00373 | 0.00678 |

**Appendix G-2: Source Terms**

**TSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2080** | 690 | 0.00745 | 0.0115 | 0.000189 | 63 | 0.506 | 384 | 0.000 | 0.000 | 0.00000409 | 0.0246 | 0.0199 | 0.877 | 0.0995 | 0.0000207 | 84.3 | 0.000172 | 0.00535 | 0.000974 | 0.00558 | 0.0195 | 0.0000669 | 53.7 | 45.5 | 0.333 | 0.0118 | 41 | 0.0293 | 0.00333 | 0.000133 | 0.00644 | 0.0024 | 2.6 | 0.00000721 | 0.0137 | 0.0018 | 0.00368 | 0.00669 |
| **2081** | 681 | 0.00651 | 0.01 | 0.000166 | 62 | 0.499 | 379 | 0.000 | 0.000 | 0.00000404 | 0.0242 | 0.0196 | 0.865 | 0.0982 | 0.0000205 | 83.2 | 0.00017 | 0.00528 | 0.000961 | 0.00551 | 0.0192 | 0.000066 | 53 | 44.9 | 0.329 | 0.0117 | 41 | 0.0289 | 0.00329 | 0.000131 | 0.00636 | 0.00237 | 2.56 | 0.00000712 | 0.0135 | 0.00177 | 0.00363 | 0.0066 |
| **2082** | 672 | 0.00569 | 0.00875 | 0.000145 | 61 | 0.493 | 374 | 0.000 | 0.000 | 0.00000398 | 0.0239 | 0.0194 | 0.853 | 0.0969 | 0.0000202 | 82 | 0.000168 | 0.00521 | 0.000948 | 0.00543 | 0.019 | 0.0000651 | 52.3 | 44.3 | 0.324 | 0.0115 | 40 | 0.0285 | 0.00324 | 0.000129 | 0.00627 | 0.00233 | 2.53 | 0.00000702 | 0.0133 | 0.00175 | 0.00358 | 0.00651 |
| **2083** | 663 | 0.00497 | 0.00765 | 0.000126 | 60 | 0.486 | 369 | 0.000 | 0.000 | 0.00000393 | 0.0236 | 0.0191 | 0.841 | 0.0955 | 0.0000199 | 80.9 | 0.000165 | 0.00514 | 0.000935 | 0.00536 | 0.0187 | 0.0000642 | 51.5 | 43.7 | 0.32 | 0.0114 | 40 | 0.0281 | 0.0032 | 0.000127 | 0.00618 | 0.0023 | 2.49 | 0.00000692 | 0.0131 | 0.00173 | 0.00353 | 0.00642 |
| **2084** | 654 | 0.00435 | 0.00669 | 0.000111 | 59 | 0.479 | 364 | 0.000 | 0.000 | 0.00000388 | 0.0232 | 0.0188 | 0.83 | 0.0942 | 0.0000196 | 79.8 | 0.000163 | 0.00506 | 0.000922 | 0.00529 | 0.0184 | 0.0000633 | 50.8 | 43.1 | 0.316 | 0.0112 | 39 | 0.0277 | 0.00316 | 0.000126 | 0.0061 | 0.00227 | 2.46 | 0.00000683 | 0.013 | 0.0017 | 0.00348 | 0.00633 |
| **2085** | 644 | 0.0038 | 0.00585 | 0.0000966 | 58 | 0.472 | 359 | 0.000 | 0.000 | 0.00000382 | 0.0229 | 0.0186 | 0.818 | 0.0929 | 0.0000193 | 78.6 | 0.000161 | 0.00499 | 0.000909 | 0.00521 | 0.0182 | 0.0000624 | 50.1 | 42.5 | 0.311 | 0.011 | 38 | 0.0273 | 0.00311 | 0.000124 | 0.00601 | 0.00224 | 2.43 | 0.00000673 | 0.0128 | 0.00168 | 0.00343 | 0.00624 |
| **2086** | 635 | 0.00332 | 0.00511 | 0.0000845 | 58 | 0.466 | 354 | 0.000 | 0.000 | 0.00000377 | 0.0226 | 0.0183 | 0.806 | 0.0915 | 0.0000191 | 77.5 | 0.000158 | 0.00492 | 0.000896 | 0.00514 | 0.0179 | 0.0000615 | 49.4 | 41.9 | 0.307 | 0.0109 | 38 | 0.0269 | 0.00307 | 0.000122 | 0.00593 | 0.00221 | 2.39 | 0.00000663 | 0.0126 | 0.00165 | 0.00339 | 0.00615 |
| **2087** | 626 | 0.0029 | 0.00447 | 0.0000738 | 57 | 0.459 | 348 | 0.000 | 0.000 | 0.00000371 | 0.0223 | 0.018 | 0.795 | 0.0902 | 0.0000188 | 76.4 | 0.000156 | 0.00485 | 0.000883 | 0.00506 | 0.0177 | 0.0000607 | 48.7 | 41.3 | 0.302 | 0.0107 | 37 | 0.0265 | 0.00302 | 0.00012 | 0.00584 | 0.00217 | 2.36 | 0.00000654 | 0.0124 | 0.00163 | 0.00334 | 0.00607 |
| **2088** | 617 | 0.00254 | 0.0039 | 0.0000645 | 56 | 0.452 | 343 | 0.000 | 0.000 | 0.00000366 | 0.0219 | 0.0178 | 0.783 | 0.0889 | 0.0000185 | 75.3 | 0.000154 | 0.00478 | 0.00087 | 0.00499 | 0.0174 | 0.0000598 | 47.9 | 40.7 | 0.298 | 0.0106 | 37 | 0.0262 | 0.00298 | 0.000119 | 0.00575 | 0.00214 | 2.32 | 0.00000644 | 0.0122 | 0.00161 | 0.00329 | 0.00598 |
| **2089** | 607 | 0.00222 | 0.00341 | 0.0000564 | 55 | 0.445 | 338 | 0.000 | 0.000 | 0.0000036 | 0.0216 | 0.0175 | 0.771 | 0.0876 | 0.0000182 | 74.1 | 0.000151 | 0.00471 | 0.000857 | 0.00491 | 0.0171 | 0.0000589 | 47.2 | 40.1 | 0.293 | 0.0104 | 36 | 0.0258 | 0.00293 | 0.000117 | 0.00567 | 0.00211 | 2.29 | 0.00000634 | 0.012 | 0.00158 | 0.00324 | 0.00589 |
| **2090** | 598 | 0.00194 | 0.00298 | 0.0000493 | 54 | 0.438 | 333 | 0.000 | 0.000 | 0.00000355 | 0.0213 | 0.0172 | 0.759 | 0.0862 | 0.000018 | 73 | 0.000149 | 0.00464 | 0.000844 | 0.00484 | 0.0169 | 0.000058 | 46.5 | 39.4 | 0.289 | 0.0102 | 36 | 0.0254 | 0.00289 | 0.000115 | 0.00558 | 0.00208 | 2.25 | 0.00000625 | 0.0119 | 0.00156 | 0.00319 | 0.0058 |
| **2091** | 589 | 0.00169 | 0.00261 | 0.0000431 | 53 | 0.432 | 328 | 0.000 | 0.000 | 0.00000349 | 0.0209 | 0.017 | 0.748 | 0.0849 | 0.0000177 | 71.9 | 0.000147 | 0.00456 | 0.000831 | 0.00476 | 0.0166 | 0.0000571 | 45.8 | 38.8 | 0.284 | 0.0101 | 35 | 0.025 | 0.00284 | 0.000113 | 0.00549 | 0.00205 | 2.22 | 0.00000615 | 0.0117 | 0.00153 | 0.00314 | 0.00571 |
| **2092** | 580 | 0.00148 | 0.00228 | 0.0000377 | 53 | 0.425 | 323 | 0.000 | 0.000 | 0.00000344 | 0.0206 | 0.0167 | 0.736 | 0.0836 | 0.0000174 | 70.8 | 0.000145 | 0.00449 | 0.000818 | 0.00469 | 0.0164 | 0.0000562 | 45.1 | 38.2 | 0.28 | 0.00993 | 35 | 0.0246 | 0.0028 | 0.000111 | 0.00541 | 0.00201 | 2.18 | 0.00000606 | 0.0115 | 0.00151 | 0.00309 | 0.00562 |
| **2093** | 571 | 0.00129 | 0.00199 | 0.0000329 | 52 | 0.418 | 318 | 0.000 | 0.000 | 0.00000338 | 0.0203 | 0.0164 | 0.724 | 0.0822 | 0.0000171 | 69.6 | 0.000142 | 0.00442 | 0.000805 | 0.00461 | 0.0161 | 0.0000553 | 44.4 | 37.6 | 0.275 | 0.00977 | 34 | 0.0242 | 0.00275 | 0.00011 | 0.00532 | 0.00198 | 2.15 | 0.00000596 | 0.0113 | 0.00149 | 0.00304 | 0.00553 |
| **2094** | 561 | 0.00113 | 0.00174 | 0.0000288 | 51 | 0.411 | 312 | 0.000 | 0.000 | 0.00000333 | 0.02 | 0.0162 | 0.713 | 0.0809 | 0.0000169 | 68.5 | 0.00014 | 0.00435 | 0.000792 | 0.00454 | 0.0158 | 0.0000544 | 43.6 | 37 | 0.271 | 0.00961 | 34 | 0.0238 | 0.00271 | 0.000108 | 0.00524 | 0.00195 | 2.11 | 0.00000586 | 0.0111 | 0.00146 | 0.00299 | 0.00544 |
| **2095** | 552 | 0.000989 | 0.00152 | 0.0000252 | 50 | 0.405 | 307 | 0.000 | 0.000 | 0.00000327 | 0.0196 | 0.0159 | 0.701 | 0.0796 | 0.0000166 | 67.4 | 0.000138 | 0.00428 | 0.000779 | 0.00446 | 0.0156 | 0.0000535 | 42.9 | 36.4 | 0.267 | 0.00945 | 33 | 0.0234 | 0.00267 | 0.000106 | 0.00515 | 0.00192 | 2.08 | 0.00000577 | 0.0109 | 0.00144 | 0.00294 | 0.00535 |
| **2096** | 543 | 0.000864 | 0.00133 | 0.000022 | 49 | 0.398 | 302 | 0.000 | 0.000 | 0.00000322 | 0.0193 | 0.0157 | 0.689 | 0.0782 | 0.0000163 | 66.3 | 0.000135 | 0.00421 | 0.000766 | 0.00439 | 0.0153 | 0.0000526 | 42.2 | 35.8 | 0.262 | 0.0093 | 32 | 0.023 | 0.00262 | 0.000104 | 0.00506 | 0.00189 | 2.04 | 0.00000567 | 0.0108 | 0.00141 | 0.00289 | 0.00526 |
| **2097** | 534 | 0.000756 | 0.00116 | 0.0000192 | 48 | 0.391 | 297 | 0.000 | 0.000 | 0.00000316 | 0.019 | 0.0154 | 0.677 | 0.0769 | 0.000016 | 65.1 | 0.000133 | 0.00413 | 0.000753 | 0.00432 | 0.0151 | 0.0000517 | 41.5 | 35.2 | 0.258 | 0.00914 | 32 | 0.0226 | 0.00258 | 0.000103 | 0.00498 | 0.00185 | 2.01 | 0.00000557 | 0.0106 | 0.00139 | 0.00284 | 0.00517 |
| **2098** | 524 | 0.00066 | 0.00102 | 0.0000168 | 48 | 0.384 | 292 | 0.000 | 0.000 | 0.00000311 | 0.0187 | 0.0151 | 0.666 | 0.0756 | 0.0000157 | 64 | 0.000131 | 0.00406 | 0.00074 | 0.00424 | 0.0148 | 0.0000508 | 40.8 | 34.6 | 0.253 | 0.00898 | 31 | 0.0222 | 0.00253 | 0.000101 | 0.00489 | 0.00182 | 1.97 | 0.00000548 | 0.0104 | 0.00137 | 0.0028 | 0.00508 |
| **2099** | 515 | 0.000577 | 0.000888 | 0.0000147 | 47 | 0.378 | 287 | 0.000 | 0.000 | 0.00000305 | 0.0183 | 0.0149 | 0.654 | 0.0743 | 0.0000155 | 62.9 | 0.000128 | 0.00399 | 0.000727 | 0.00417 | 0.0145 | 0.0000499 | 40.1 | 34 | 0.249 | 0.00882 | 31 | 0.0218 | 0.00249 | 0.000099 | 0.00481 | 0.00179 | 1.94 | 0.00000538 | 0.0102 | 0.00134 | 0.00275 | 0.00499 |
| **2100** | 506 | 0.000505 | 0.000776 | 0.0000128 | 46 | 0.371 | 282 | 0.000 | 0.000 | 0.000003 | 0.018 | 0.0146 | 0.642 | 0.0729 | 0.0000152 | 61.8 | 0.000126 | 0.00392 | 0.000714 | 0.00409 | 0.0143 | 0.000049 | 39.3 | 33.4 | 0.244 | 0.00866 | 30 | 0.0215 | 0.00244 | 9.72E-05 | 0.00472 | 0.00176 | 1.9 | 0.00000528 | 0.01 | 0.00132 | 0.0027 | 0.0049 |
| **2101** | 497 | 0.000441 | 0.000679 | 0.0000112 | 45 | 0.364 | 277 | 0.000 | 0.000 | 0.00000295 | 0.0177 | 0.0143 | 0.631 | 0.0716 | 0.0000149 | 60.6 | 0.000124 | 0.00385 | 0.000701 | 0.00402 | 0.014 | 0.0000481 | 38.6 | 32.8 | 0.24 | 0.00851 | 30 | 0.0211 | 0.0024 | 9.55E-05 | 0.00463 | 0.00173 | 1.87 | 0.00000519 | 0.00985 | 0.00129 | 0.00265 | 0.00481 |
| **2102** | 487 | 0.000386 | 0.000593 | 0.0000098 | 44 | 0.357 | 271 | 0.000 | 0.000 | 0.00000289 | 0.0173 | 0.0141 | 0.619 | 0.0703 | 0.0000146 | 59.5 | 0.000122 | 0.00378 | 0.000688 | 0.00394 | 0.0138 | 0.0000472 | 37.9 | 32.1 | 0.235 | 0.00835 | 29 | 0.0207 | 0.00235 | 9.37E-05 | 0.00455 | 0.00169 | 1.83 | 0.00000509 | 0.00966 | 0.00127 | 0.0026 | 0.00472 |
| **2103** | 478 | 0.000337 | 0.000518 | 0.00000857 | 43 | 0.351 | 266 | 0.000 | 0.000 | 0.00000284 | 0.017 | 0.0138 | 0.607 | 0.0689 | 0.0000144 | 58.4 | 0.000119 | 0.00371 | 0.000675 | 0.00387 | 0.0135 | 0.0000463 | 37.2 | 31.5 | 0.231 | 0.00819 | 29 | 0.0203 | 0.00231 | 9.19E-05 | 0.00446 | 0.00166 | 1.8 | 0.000005 | 0.00948 | 0.00125 | 0.00255 | 0.00463 |
| **2104** | 469 | 0.000295 | 0.000453 | 0.00000749 | 43 | 0.344 | 261 | 0.000 | 0.000 | 0.00000278 | 0.0167 | 0.0135 | 0.595 | 0.0676 | 0.0000141 | 57.3 | 0.000117 | 0.00363 | 0.000662 | 0.00379 | 0.0132 | 0.0000455 | 36.5 | 30.9 | 0.226 | 0.00803 | 28 | 0.0199 | 0.00226 | 9.01E-05 | 0.00438 | 0.00163 | 1.77 | 0.0000049 | 0.0093 | 0.00122 | 0.0025 | 0.00455 |
| **2105** | 460 | 0.000257 | 0.000396 | 0.00000655 | 42 | 0.337 | 256 | 0.000 | 0.000 | 0.00000273 | 0.0164 | 0.0133 | 0.584 | 0.0663 | 0.0000138 | 56.1 | 0.000115 | 0.00356 | 0.000649 | 0.00372 | 0.013 | 0.0000446 | 35.8 | 30.3 | 0.222 | 0.00787 | 27 | 0.0195 | 0.00222 | 8.84E-05 | 0.00429 | 0.0016 | 1.73 | 0.0000048 | 0.00911 | 0.0012 | 0.00245 | 0.00446 |
| **2106** | 451 | 0.000225 | 0.000346 | 0.00000572 | 41 | 0.33 | 251 | 0.000 | 0.000 | 0.00000267 | 0.016 | 0.013 | 0.572 | 0.0649 | 0.0000135 | 55 | 0.000112 | 0.00349 | 0.000636 | 0.00364 | 0.0127 | 0.0000437 | 35 | 29.7 | 0.218 | 0.00772 | 27 | 0.0191 | 0.00218 | 8.66E-05 | 0.0042 | 0.00157 | 1.7 | 0.00000471 | 0.00893 | 0.00117 | 0.0024 | 0.00437 |
| **2107** | 441 | 0.000197 | 0.000303 | 0.000005 | 40 | 0.323 | 246 | 0.000 | 0.000 | 0.00000262 | 0.0157 | 0.0127 | 0.56 | 0.0636 | 0.0000133 | 53.9 | 0.00011 | 0.00342 | 0.000623 | 0.00357 | 0.0125 | 0.0000428 | 34.3 | 29.1 | 0.213 | 0.00756 | 26 | 0.0187 | 0.00213 | 8.48E-05 | 0.00412 | 0.00153 | 1.66 | 0.00000461 | 0.00875 | 0.00115 | 0.00235 | 0.00428 |
| **2108** | 432 | 0.000172 | 0.000264 | 0.00000437 | 39 | 0.317 | 241 | 0.000 | 0.000 | 0.00000256 | 0.0154 | 0.0125 | 0.549 | 0.0623 | 0.000013 | 52.7 | 0.000108 | 0.00335 | 0.00061 | 0.00349 | 0.0122 | 0.0000419 | 33.6 | 28.5 | 0.209 | 0.0074 | 26 | 0.0183 | 0.00209 | 8.31E-05 | 0.00403 | 0.0015 | 1.63 | 0.00000451 | 0.00856 | 0.00113 | 0.0023 | 0.00419 |
| **2109** | 423 | 0.00015 | 0.000231 | 0.00000382 | 38 | 0.31 | 235 | 0.000 | 0.000 | 0.00000251 | 0.015 | 0.0122 | 0.537 | 0.061 | 0.0000127 | 51.6 | 0.000105 | 0.00328 | 0.000597 | 0.00342 | 0.0119 | 0.000041 | 32.9 | 27.9 | 0.204 | 0.00724 | 25 | 0.0179 | 0.00204 | 8.13E-05 | 0.00395 | 0.00147 | 1.59 | 0.00000442 | 0.00838 | 0.0011 | 0.00225 | 0.0041 |
| **2110** | 414 | 0.000131 | 0.000202 | 0.00000334 | 38 | 0.303 | 230 | 0.000 | 0.000 | 0.00000245 | 0.0147 | 0.0119 | 0.525 | 0.0596 | 0.0000124 | 50.5 | 0.000103 | 0.00321 | 0.000584 | 0.00335 | 0.0117 | 0.0000401 | 32.2 | 27.3 | 0.2 | 0.00708 | 25 | 0.0175 | 0.002 | 7.95E-05 | 0.00386 | 0.00144 | 1.56 | 0.00000432 | 0.0082 | 0.00108 | 0.00221 | 0.00401 |
| **2111** | 404 | 0.000115 | 0.000177 | 0.00000292 | 37 | 0.296 | 225 | 0.000 | 0.000 | 0.0000024 | 0.0144 | 0.0117 | 0.513 | 0.0583 | 0.0000121 | 49.4 | 0.000101 | 0.00313 | 0.000571 | 0.00327 | 0.0114 | 0.0000392 | 31.4 | 26.7 | 0.195 | 0.00693 | 24 | 0.0172 | 0.00195 | 7.77E-05 | 0.00377 | 0.0014 | 1.52 | 0.00000422 | 0.00802 | 0.00105 | 0.00216 | 0.00392 |
| **2112** | 395 | 0.0001 | 0.000154 | 0.00000255 | 36 | 0.29 | 220 | 0.000 | 0.000 | 0.00000234 | 0.0141 | 0.0114 | 0.502 | 0.057 | 0.0000119 | 48.2 | 0.0000985 | 0.00306 | 0.000558 | 0.0032 | 0.0112 | 0.0000383 | 30.7 | 26.1 | 0.191 | 0.00677 | 24 | 0.0168 | 0.00191 | 0.000076 | 0.00369 | 0.00137 | 1.49 | 0.00000413 | 0.00783 | 0.00103 | 0.00211 | 0.00383 |
| **2113** | 386 | 0.0000877 | 0.000135 | 0.00000223 | 35 | 0.283 | 215 | 0.000 | 0.000 | 0.00000229 | 0.0137 | 0.0111 | 0.49 | 0.0556 | 0.0000116 | 47.1 | 0.0000962 | 0.00299 | 0.000545 | 0.00312 | 0.0109 | 0.0000374 | 30 | 25.5 | 0.186 | 0.00661 | 23 | 0.0164 | 0.00186 | 7.42E-05 | 0.0036 | 0.00134 | 1.45 | 0.00000403 | 0.00765 | 0.00101 | 0.00206 | 0.00374 |
| **2114** | 377 | 0.0000767 | 0.000118 | 0.00000195 | 34 | 0.276 | 210 | 0.000 | 0.000 | 0.00000223 | 0.0134 | 0.0109 | 0.478 | 0.0543 | 0.0000113 | 46 | 0.0000939 | 0.00292 | 0.000532 | 0.00305 | 0.0106 | 0.0000365 | 29.3 | 24.8 | 0.182 | 0.00645 | 23 | 0.016 | 0.00182 | 7.24E-05 | 0.00352 | 0.00131 | 1.42 | 0.00000394 | 0.00747 | 0.000981 | 0.00201 | 0.00365 |
| **2115** | 368 | 0.000067 | 0.000103 | 0.0000017 | 33 | 0.269 | 205 | 0.000 | 0.000 | 0.00000218 | 0.0131 | 0.0106 | 0.467 | 0.053 | 0.000011 | 44.9 | 0.0000916 | 0.00285 | 0.000519 | 0.00297 | 0.0104 | 0.0000356 | 28.6 | 24.2 | 0.177 | 0.00629 | 22 | 0.0156 | 0.00177 | 7.06E-05 | 0.00343 | 0.00128 | 1.38 | 0.00000384 | 0.00728 | 0.000957 | 0.00196 | 0.00356 |
| **2116** | 358 | 0.0000586 | 0.0000901 | 0.00000149 | 33 | 0.263 | 199 | 0.000 | 0.000 | 0.00000212 | 0.0127 | 0.0103 | 0.455 | 0.0516 | 0.0000108 | 43.7 | 0.0000893 | 0.00278 | 0.000506 | 0.0029 | 0.0101 | 0.0000347 | 27.9 | 23.6 | 0.173 | 0.00614 | 21 | 0.0152 | 0.00173 | 6.89E-05 | 0.00334 | 0.00124 | 1.35 | 0.00000374 | 0.0071 | 0.000933 | 0.00191 | 0.00347 |
| **2117** | 349 | 0.0000512 | 0.0000788 | 0.0000013 | 32 | 0.256 | 194 | 0.000 | 0.000 | 0.00000207 | 0.0124 | 0.0101 | 0.443 | 0.0503 | 0.0000105 | 42.6 | 0.000087 | 0.0027 | 0.000493 | 0.00282 | 0.00985 | 0.0000338 | 27.1 | 23 | 0.169 | 0.00598 | 21 | 0.0148 | 0.00169 | 6.71E-05 | 0.00326 | 0.00121 | 1.31 | 0.00000365 | 0.00692 | 0.000909 | 0.00186 | 0.00338 |
| **2118** | 340 | 0.0000447 | 0.0000688 | 0.00000114 | 31 | 0.249 | 189 | 0.000 | 0.000 | 0.00000202 | 0.0121 | 0.0098 | 0.431 | 0.049 | 0.0000102 | 41.5 | 0.0000847 | 0.00263 | 0.00048 | 0.00275 | 0.00959 | 0.0000329 | 26.4 | 22.4 | 0.164 | 0.00582 | 20 | 0.0144 | 0.00164 | 6.53E-05 | 0.00317 | 0.00118 | 1.28 | 0.00000355 | 0.00674 | 0.000885 | 0.00181 | 0.00329 |
| **2119** | 331 | 0.0000391 | 0.0000602 | 0.000000995 | 30 | 0.242 | 184 | 0.000 | 0.000 | 0.00000196 | 0.0118 | 0.00953 | 0.42 | 0.0477 | 9.93E-06 | 40.4 | 0.0000824 | 0.00256 | 0.000467 | 0.00267 | 0.00933 | 0.000032 | 25.7 | 21.8 | 0.16 | 0.00566 | 20 | 0.014 | 0.0016 | 6.35E-05 | 0.00308 | 0.00115 | 1.24 | 0.00000345 | 0.00655 | 0.000861 | 0.00176 | 0.0032 |
| **2120** | 321 | 0.0000342 | 0.0000526 | 0.000000869 | 29 | 0.236 | 179 | 0.000 | 0.000 | 0.00000191 | 0.0114 | 0.00927 | 0.408 | 0.0463 | 9.65E-06 | 39.2 | 0.0000801 | 0.00249 | 0.000453 | 0.0026 | 0.00907 | 0.0000311 | 25 | 21.2 | 0.155 | 0.0055 | 19 | 0.0136 | 0.00155 | 6.18E-05 | 0.003 | 0.00112 | 1.21 | 0.00000336 | 0.00637 | 0.000837 | 0.00171 | 0.00311 |

**Appendix G-2: Source Terms**

**TSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **TSF Infiltration** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 20,000 | 94 | 166 | 0.239 | 10,100 | 0.104 | 2,160 | 0.0926 | 0.0102 | 0.000124 | 0.124 | 0.444 | 1.46 | 0.279 | 0.000267 | 1140 | 0.000462 | 0.0544 | 0.00253 | 0.0111 | 0.0873 | 0.0000161 | 314 | 712 | 5.28 | 0.014 | 5,380 | 0.115 | 0.0139 | 0.00133 | 0.00449 | 0.00721 | 5.15 | 0.000193 | 0.0234 | 0.00685 | 0.0159 | 0.00748 |
| **2021** | 20,000 | 94 | 166 | 0.239 | 10,100 | 0.104 | 2,160 | 0.0926 | 0.0102 | 0.000123 | 0.124 | 0.443 | 1.46 | 0.28 | 0.000267 | 1140 | 0.000463 | 0.0545 | 0.00254 | 0.0112 | 0.0876 | 0.000016 | 314 | 712 | 5.31 | 0.014 | 5,380 | 0.115 | 0.0139 | 0.00132 | 0.00449 | 0.00722 | 5.13 | 0.000193 | 0.0234 | 0.00686 | 0.0159 | 0.00748 |
| **2022** | 19,300 | 94 | 166 | 0.239 | 9,570 | 0.104 | 2,150 | 0.0926 | 0.0102 | 0.000121 | 0.125 | 0.44 | 1.46 | 0.286 | 0.00027 | 1120 | 0.000451 | 0.0541 | 0.00259 | 0.0108 | 0.0848 | 0.0000159 | 311 | 712 | 5.17 | 0.0138 | 5,250 | 0.117 | 0.0137 | 0.00132 | 0.00445 | 0.00707 | 5.13 | 0.000196 | 0.0234 | 0.00701 | 0.0155 | 0.00692 |
| **2023** | 19,200 | 94 | 166 | 0.239 | 9,470 | 0.104 | 2,150 | 0.0926 | 0.0102 | 0.000122 | 0.124 | 0.44 | 1.46 | 0.283 | 0.000266 | 1120 | 0.000453 | 0.0539 | 0.00255 | 0.0108 | 0.0852 | 0.0000157 | 310 | 712 | 5.18 | 0.0139 | 5,220 | 0.115 | 0.0138 | 0.00133 | 0.0044 | 0.00709 | 5.13 | 0.000195 | 0.0233 | 0.00696 | 0.0156 | 0.0068 |
| **2024** | 18,800 | 94 | 166 | 0.239 | 9,190 | 0.104 | 2,140 | 0.0926 | 0.0102 | 0.000123 | 0.127 | 0.444 | 1.46 | 0.292 | 0.000271 | 1110 | 0.000453 | 0.0537 | 0.00258 | 0.0107 | 0.0853 | 0.0000154 | 308 | 712 | 5.16 | 0.0139 | 5,150 | 0.115 | 0.0138 | 0.00133 | 0.0044 | 0.00709 | 5.18 | 0.000199 | 0.0237 | 0.00705 | 0.0156 | 0.00648 |
| **2025** | 18,500 | 94 | 166 | 0.239 | 8,960 | 0.104 | 2,140 | 0.0926 | 0.0102 | 0.000123 | 0.128 | 0.445 | 1.46 | 0.294 | 0.000272 | 1100 | 0.000451 | 0.0536 | 0.00259 | 0.0106 | 0.0847 | 0.0000155 | 307 | 712 | 5.11 | 0.0139 | 5,090 | 0.116 | 0.0138 | 0.00134 | 0.0044 | 0.00707 | 5.21 | 0.000201 | 0.0238 | 0.0071 | 0.0155 | 0.00622 |
| **2026** | 18,200 | 94 | 166 | 0.239 | 8,720 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000123 | 0.127 | 0.443 | 1.46 | 0.291 | 0.000269 | 1090 | 0.000448 | 0.0539 | 0.0026 | 0.0105 | 0.0838 | 0.0000154 | 305 | 712 | 5.1 | 0.0138 | 5,030 | 0.117 | 0.0137 | 0.00135 | 0.00434 | 0.00704 | 5.2 | 0.000201 | 0.0236 | 0.00718 | 0.0154 | 0.00595 |
| **2027** | 18,200 | 94 | 166 | 0.239 | 8,710 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.00012 | 0.129 | 0.436 | 1.46 | 0.294 | 0.000273 | 1090 | 0.000446 | 0.0567 | 0.00281 | 0.0106 | 0.0825 | 0.0000158 | 305 | 712 | 5.27 | 0.0136 | 5,020 | 0.125 | 0.0137 | 0.00133 | 0.00439 | 0.00701 | 5.17 | 0.000203 | 0.0235 | 0.0077 | 0.0155 | 0.00593 |
| **2028** | 18,200 | 94 | 166 | 0.239 | 8,750 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000116 | 0.132 | 0.428 | 1.46 | 0.302 | 0.000279 | 1090 | 0.000443 | 0.0595 | 0.00304 | 0.0107 | 0.0814 | 0.0000161 | 305 | 712 | 5.46 | 0.0134 | 5,030 | 0.134 | 0.0137 | 0.0013 | 0.00446 | 0.00697 | 5.13 | 0.000207 | 0.0234 | 0.00826 | 0.0156 | 0.00598 |
| **2029** | 18,200 | 94 | 166 | 0.239 | 8,770 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000113 | 0.134 | 0.417 | 1.46 | 0.307 | 0.00028 | 1090 | 0.000441 | 0.0627 | 0.00329 | 0.011 | 0.0804 | 0.0000157 | 305 | 712 | 5.74 | 0.0131 | 5,040 | 0.141 | 0.0137 | 0.00124 | 0.00442 | 0.00692 | 5.06 | 0.000209 | 0.023 | 0.00895 | 0.0158 | 0.00601 |
| **2030** | 18,200 | 94 | 166 | 0.239 | 8,730 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.00011 | 0.135 | 0.403 | 1.46 | 0.303 | 0.000275 | 1090 | 0.000439 | 0.0659 | 0.0035 | 0.0113 | 0.0791 | 0.0000154 | 305 | 712 | 6.02 | 0.0128 | 5,030 | 0.149 | 0.0136 | 0.0012 | 0.00432 | 0.00687 | 4.96 | 0.000208 | 0.0224 | 0.00959 | 0.0159 | 0.00596 |
| **2031** | 18,200 | 94 | 166 | 0.239 | 8,740 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000108 | 0.134 | 0.389 | 1.46 | 0.294 | 0.000268 | 1090 | 0.00044 | 0.0695 | 0.00368 | 0.0116 | 0.0785 | 0.000015 | 305 | 712 | 6.34 | 0.0125 | 5,030 | 0.156 | 0.0136 | 0.00115 | 0.0042 | 0.00687 | 4.87 | 0.000206 | 0.0216 | 0.0102 | 0.0161 | 0.00597 |
| **2032** | 18,200 | 94 | 166 | 0.239 | 8,770 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000106 | 0.133 | 0.379 | 1.46 | 0.288 | 0.000263 | 1090 | 0.000441 | 0.0724 | 0.00384 | 0.012 | 0.0782 | 0.0000147 | 305 | 712 | 6.62 | 0.0123 | 5,040 | 0.162 | 0.0136 | 0.00112 | 0.00411 | 0.00688 | 4.79 | 0.000203 | 0.021 | 0.0107 | 0.0163 | 0.006 |
| **2033** | 18,300 | 94 | 166 | 0.239 | 8,800 | 0.104 | 2,140 | 0.0926 | 0.0102 | 0.000105 | 0.133 | 0.372 | 1.46 | 0.285 | 0.00026 | 1100 | 0.000442 | 0.0744 | 0.00394 | 0.0123 | 0.0781 | 0.0000144 | 306 | 712 | 6.82 | 0.0122 | 5,050 | 0.165 | 0.0136 | 0.00108 | 0.00405 | 0.00688 | 4.73 | 0.000202 | 0.0207 | 0.011 | 0.0165 | 0.00604 |
| **2034** | 18,300 | 94 | 166 | 0.239 | 8,810 | 0.104 | 2,140 | 0.0926 | 0.0102 | 0.000104 | 0.134 | 0.368 | 1.46 | 0.287 | 0.00026 | 1100 | 0.000443 | 0.0759 | 0.00405 | 0.0124 | 0.0779 | 0.0000142 | 306 | 712 | 6.96 | 0.0121 | 5,050 | 0.169 | 0.0136 | 0.00106 | 0.00402 | 0.00689 | 4.72 | 0.000204 | 0.0206 | 0.0114 | 0.0166 | 0.00605 |
| **2035** | 18,300 | 94 | 166 | 0.239 | 8,830 | 0.104 | 2,140 | 0.0926 | 0.0102 | 0.000103 | 0.136 | 0.366 | 1.46 | 0.291 | 0.000261 | 1100 | 0.000443 | 0.0766 | 0.00412 | 0.0125 | 0.0778 | 0.0000139 | 306 | 712 | 7.04 | 0.012 | 5,050 | 0.17 | 0.0136 | 0.00104 | 0.004 | 0.00688 | 4.71 | 0.000205 | 0.0205 | 0.0116 | 0.0166 | 0.00607 |
| **2036** | 18,300 | 94 | 166 | 0.239 | 8,780 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000102 | 0.136 | 0.361 | 1.46 | 0.29 | 0.00026 | 1090 | 0.000444 | 0.0778 | 0.00419 | 0.0127 | 0.0777 | 0.0000137 | 306 | 712 | 7.16 | 0.0119 | 5,040 | 0.172 | 0.0136 | 0.00102 | 0.00397 | 0.00688 | 4.68 | 0.000205 | 0.0203 | 0.0118 | 0.0167 | 0.00602 |
| **2037** | 18,300 | 94 | 166 | 0.239 | 8,820 | 0.104 | 2,140 | 0.0926 | 0.0102 | 0.000102 | 0.135 | 0.357 | 1.46 | 0.286 | 0.000257 | 1100 | 0.000445 | 0.0788 | 0.00424 | 0.0128 | 0.0779 | 0.0000136 | 306 | 712 | 7.28 | 0.0119 | 5,050 | 0.174 | 0.0136 | 0.001 | 0.00393 | 0.00689 | 4.64 | 0.000203 | 0.0201 | 0.0119 | 0.0168 | 0.00606 |
| **2038** | 18,200 | 94 | 166 | 0.239 | 8,730 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000101 | 0.135 | 0.352 | 1.46 | 0.282 | 0.000254 | 1090 | 0.000447 | 0.0801 | 0.0043 | 0.0131 | 0.0781 | 0.0000134 | 305 | 712 | 7.42 | 0.0118 | 5,030 | 0.176 | 0.0136 | 0.00098 | 0.0039 | 0.0069 | 4.59 | 0.000201 | 0.0198 | 0.0121 | 0.017 | 0.00596 |
| **2039** | 18,100 | 94 | 166 | 0.239 | 8,620 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.0001 | 0.134 | 0.346 | 1.46 | 0.278 | 0.000251 | 1090 | 0.000448 | 0.0817 | 0.00438 | 0.0133 | 0.078 | 0.0000133 | 304 | 712 | 7.58 | 0.0117 | 5,000 | 0.179 | 0.0136 | 0.000957 | 0.00386 | 0.00691 | 4.54 | 0.0002 | 0.0194 | 0.0124 | 0.0171 | 0.00584 |
| **2040** | 17,800 | 94 | 166 | 0.239 | 8,460 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.0000994 | 0.134 | 0.341 | 1.46 | 0.275 | 0.000249 | 1080 | 0.000449 | 0.0831 | 0.00445 | 0.0135 | 0.078 | 0.0000132 | 303 | 712 | 7.71 | 0.0116 | 4,960 | 0.182 | 0.0136 | 0.00094 | 0.00382 | 0.00692 | 4.51 | 0.000199 | 0.0192 | 0.0126 | 0.0172 | 0.00566 |
| **2041** | 17,700 | 94 | 166 | 0.239 | 8,390 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.0000999 | 0.134 | 0.343 | 1.46 | 0.275 | 0.000248 | 1080 | 0.00045 | 0.0824 | 0.0044 | 0.0135 | 0.0786 | 0.0000131 | 303 | 712 | 7.68 | 0.0117 | 4,940 | 0.179 | 0.0136 | 0.000937 | 0.00383 | 0.00694 | 4.51 | 0.000198 | 0.0192 | 0.0125 | 0.0172 | 0.00557 |
| **2042** | 17,600 | 94 | 166 | 0.239 | 8,260 | 0.104 | 2,130 | 0.0926 | 0.0102 | 0.000101 | 0.133 | 0.345 | 1.46 | 0.275 | 0.000248 | 1080 | 0.000451 | 0.0816 | 0.00435 | 0.0134 | 0.0788 | 0.000013 | 302 | 712 | 7.63 | 0.0117 | 4,900 | 0.177 | 0.0136 | 0.000946 | 0.00382 | 0.00694 | 4.53 | 0.000198 | 0.0193 | 0.0123 | 0.0172 | 0.00542 |
| **2043** | 17,400 | 94 | 166 | 0.239 | 8,130 | 0.104 | 2,120 | 0.0926 | 0.0102 | 0.000102 | 0.133 | 0.35 | 1.46 | 0.276 | 0.000249 | 1070 | 0.000451 | 0.0803 | 0.00427 | 0.0133 | 0.079 | 0.000013 | 301 | 712 | 7.51 | 0.0118 | 4,870 | 0.175 | 0.0136 | 0.000967 | 0.00383 | 0.00695 | 4.57 | 0.000198 | 0.0195 | 0.0121 | 0.0171 | 0.00527 |
| **2044** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2045** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2046** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2047** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2048** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2049** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2050** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2051** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2052** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2053** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2054** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2055** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2056** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2057** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2058** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2059** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2060** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2061** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2062** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2063** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2064** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2065** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2066** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2067** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2068** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2069** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2070** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2071** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2072** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2073** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2074** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2075** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2076** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2077** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2078** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2079** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2080** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2081** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2082** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |

**Appendix G-2: Source Terms**

**TSF Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **2083** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2084** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2085** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2086** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2087** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2088** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2089** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2090** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2091** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2092** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2093** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2094** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2095** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2096** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2097** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2098** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2099** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2100** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2101** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2102** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2103** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2104** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2105** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2106** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2107** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2108** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2109** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2110** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2111** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2112** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2113** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2114** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2115** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2116** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2117** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2118** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2119** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |
| **2120** | 3,410 | 0.0025 | 4.83 | 0.48 | 93 | 0.2 | 2,310 | 0.0613 | 0.0117 | 0.000025 | 0.0025 | 0.303 | 0.932 | 0.0312 | 0.00005 | 458 | 0.000035 | 0.012 | 0.00125 | 0.00115 | 0.075 | 0.000013 | 121 | 52 | 0.855 | 0.0118 | 350 | 0.00125 | 0.0136 | 0.000125 | 0.00475 | 0.0084 | 1.4 | 0.0005 | 0.00384 | 0.00125 | 0.0025 | 0.005 |

**Notes:**

TDS = (0.22 x $HCO_3$ as $CaCO_3$)+ Cl + $SO_4$ + Na + K + Ca + Mg + (0.2259 x $NO_3$-N)

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **DIS01** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | 2,450 | 2.83 | 3.67 | 0.125 | 1,490 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 586 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2032** | 2,450 | 2.83 | 3.67 | 0.125 | 1,490 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 586 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2033** | 2,450 | 2.83 | 3.67 | 0.125 | 1,490 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 586 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2034** | 2,450 | 2.83 | 3.67 | 0.125 | 1,490 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 586 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2035** | 2,450 | 2.83 | 3.67 | 0.125 | 1,490 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 586 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2036** | 2,450 | 2.83 | 3.67 | 0.125 | 1,490 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 586 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2037** | 2,190 | 2.47 | 3.21 | 0.109 | 1,300 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 512 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2038** | 1,960 | 2.16 | 2.8 | 0.0955 | 1,140 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 448 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2039** | 1,760 | 1.89 | 2.45 | 0.0835 | 996 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 391 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2040** | 1,580 | 1.65 | 2.14 | 0.073 | 871 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 342 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2041** | 1,430 | 1.44 | 1.87 | 0.0638 | 761 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 299 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2042** | 1,300 | 1.26 | 1.64 | 0.0557 | 665 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 261 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2043** | 1,180 | 1.1 | 1.43 | 0.0487 | 582 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 228 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **2044+** | 1,180 | 0.01 | 0.007 | 0.001 | 582 | 0.342 | 227 | | | 0.00000199 | 0.0175 | 0.00852 | 0.57 | 0.0676 | 0.0000156 | 49.8 | 0.000106 | 0.00473 | 0.00057 | 0.00278 | 0.0167 | 0.000045 | 39.3 | 26.9 | 0.227 | 0.0119 | 228 | 0.0166 | 0.00477 | 0.0000622 | 0.00419 | 0.0016 | 1.63 | 0.000005 | 0.0124 | 0.000967 | 0.0025 | 0.01 |
| **FZO01** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | 2,630 | 2.83 | 3.67 | 0.125 | 1,540 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 646 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2031** | 2,630 | 2.83 | 3.67 | 0.125 | 1,540 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 646 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2032** | 2,630 | 2.83 | 3.67 | 0.125 | 1,540 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 646 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2033** | 2,630 | 2.83 | 3.67 | 0.125 | 1,540 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 646 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2034** | 2,630 | 2.83 | 3.67 | 0.125 | 1,540 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 646 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2035** | 2,350 | 2.47 | 3.21 | 0.109 | 1,340 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 564 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2036** | 2,110 | 2.16 | 2.8 | 0.0955 | 1,170 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 493 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2037** | 1,900 | 1.89 | 2.45 | 0.0835 | 1,030 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 431 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2038** | 1,720 | 1.65 | 2.14 | 0.073 | 897 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 377 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2039** | 1,550 | 1.44 | 1.87 | 0.0638 | 784 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 329 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2040** | 1,410 | 1.26 | 1.64 | 0.0557 | 685 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 288 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2041** | 1,290 | 1.1 | 1.43 | 0.0487 | 599 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 252 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2042** | 1,180 | 0.964 | 1.25 | 0.0426 | 523 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 220 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2043** | 1,090 | 0.843 | 1.09 | 0.0372 | 457 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 192 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |
| **2044+** | 1,090 | 0.01 | 0.007 | 0.001 | 457 | 0.344 | 296 | | | 0.00000192 | 0.0154 | 0.00478 | 0.558 | 0.0189 | 0.00000717 | 65 | 0.0000898 | 0.00203 | 0.000803 | 0.00699 | 0.0171 | 0.000045 | 16.8 | 35.1 | 0.226 | 0.00676 | 192 | 0.0281 | 0.00634 | 0.0000239 | 0.00398 | 0.00162 | 0.609 | 0.00000146 | 0.00517 | 0.00211 | 0.00357 | 0.01 |

**Appendix G-2: Source Terms**

**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **FZO02** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | 3,200 | 2.83 | 3.67 | 0.125 | 1,650 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 805 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2033** | 3,200 | 2.83 | 3.67 | 0.125 | 1,650 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 805 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2034** | 3,200 | 2.83 | 3.67 | 0.125 | 1,650 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 805 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2035** | 3,200 | 2.83 | 3.67 | 0.125 | 1,650 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 805 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2036** | 2,890 | 2.47 | 3.21 | 0.109 | 1,450 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 704 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2037** | 2,620 | 2.16 | 2.8 | 0.0955 | 1,260 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 615 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2038** | 2,380 | 1.89 | 2.45 | 0.0835 | 1,100 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 538 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2039** | 2,180 | 1.65 | 2.14 | 0.073 | 965 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 470 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2040** | 2,000 | 1.44 | 1.87 | 0.0638 | 844 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 411 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2041** | 1,840 | 1.26 | 1.64 | 0.0557 | 737 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 359 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2042** | 1,700 | 1.1 | 1.43 | 0.0487 | 645 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 314 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2043** | 1,580 | 0.964 | 1.25 | 0.0426 | 563 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 274 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **2044+** | 1,580 | 0.01 | 0.007 | 0.001 | 563 | 0.347 | 514 | | | 0.00000344 | 0.0147 | 0.00767 | 0.525 | 0.0283 | 0.00000976 | 113 | 0.00009 | 0.00392 | 0.000593 | 0.00662 | 0.0165 | 0.000045 | 26.8 | 60.8 | 0.228 | 0.00897 | 274 | 0.0261 | 0.0106 | 0.000019 | 0.00349 | 0.00168 | 0.506 | 0.00000103 | 0.00908 | 0.00163 | 0.00361 | 0.01 |
| **FZO03** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | 3,260 | 2.83 | 3.67 | 0.125 | 1,720 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 892 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2036** | 3,260 | 2.83 | 3.67 | 0.125 | 1,720 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 892 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2037** | 2,930 | 2.47 | 3.21 | 0.109 | 1,500 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 780 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2038** | 2,650 | 2.16 | 2.8 | 0.0955 | 1,310 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 682 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2039** | 2,400 | 1.89 | 2.45 | 0.0835 | 1,150 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 596 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2040** | 2,180 | 1.65 | 2.14 | 0.073 | 1,000 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 521 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2041** | 1,980 | 1.44 | 1.87 | 0.0638 | 876 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 455 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2042** | 1,820 | 1.26 | 1.64 | 0.0557 | 766 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 398 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2043** | 1,670 | 1.1 | 1.43 | 0.0487 | 669 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 348 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |
| **2044+** | 1,670 | 0.01 | 0.007 | 0.001 | 669 | 0.349 | 442 | | | 0.00000426 | 0.0155 | 0.00804 | 0.507 | 0.034 | 0.0000113 | 96.9 | 0.0000772 | 0.00492 | 0.00052 | 0.00638 | 0.0154 | 0.000045 | 32.8 | 52.3 | 0.231 | 0.00995 | 348 | 0.0271 | 0.0129 | 0.0000162 | 0.00324 | 0.00166 | 0.496 | 0.00000092 | 0.0112 | 0.00156 | 0.00331 | 0.01 |

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **NOR01** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | 2,510 | 2.83 | 3.67 | 0.125 | 1,520 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 618 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2027** | 2,510 | 2.83 | 3.67 | 0.125 | 1,520 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 618 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2028** | 2,510 | 2.83 | 3.67 | 0.125 | 1,520 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 618 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2029** | 2,510 | 2.83 | 3.67 | 0.125 | 1,520 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 618 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2030** | 2,510 | 2.83 | 3.67 | 0.125 | 1,520 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 618 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2031** | 2,240 | 2.47 | 3.21 | 0.109 | 1,320 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 540 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2032** | 2,010 | 2.16 | 2.8 | 0.0955 | 1,160 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 472 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2033** | 1,800 | 1.89 | 2.45 | 0.0835 | 1,010 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 412 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2034** | 1,620 | 1.65 | 2.14 | 0.073 | 885 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 360 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2035** | 1,470 | 1.44 | 1.87 | 0.0638 | 773 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 315 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2036** | 1,330 | 1.26 | 1.64 | 0.0557 | 676 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 275 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2037** | 1,210 | 1.1 | 1.43 | 0.0487 | 591 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 241 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2038** | 1,100 | 0.964 | 1.25 | 0.0426 | 516 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 210 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2039** | 1,010 | 0.843 | 1.09 | 0.0372 | 451 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 184 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2040** | 932 | 0.737 | 0.955 | 0.0325 | 394 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 161 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2041** | 862 | 0.644 | 0.834 | 0.0284 | 345 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 141 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2042** | 801 | 0.563 | 0.729 | 0.0249 | 301 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 123 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2043** | 747 | 0.492 | 0.637 | 0.0217 | 263 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 107 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **2044+** | 747 | 0.01 | 0.007 | 0.001 | 263 | 0.343 | 244 | | | 0.00000753 | 0.0152 | 0.00883 | 0.564 | 0.0311 | 0.00000976 | 53.5 | 0.0000903 | 0.0025 | 0.000706 | 0.00618 | 0.0165 | 0.000045 | 22.8 | 28.9 | 0.227 | 0.00573 | 107 | 0.0296 | 0.00561 | 0.0000412 | 0.00413 | 0.00161 | 0.978 | 0.0000021 | 0.00623 | 0.00184 | 0.00294 | 0.01 |
| **PUM01** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | 3,420 | 2.83 | 3.67 | 0.125 | 1,700 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 875 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2030** | 3,420 | 2.83 | 3.67 | 0.125 | 1,700 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 875 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2031** | 3,420 | 2.83 | 3.67 | 0.125 | 1,700 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 875 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2032** | 3,100 | 2.47 | 3.21 | 0.109 | 1,490 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 764 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2033** | 2,810 | 2.16 | 2.8 | 0.0955 | 1,300 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 668 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2034** | 2,560 | 1.89 | 2.45 | 0.0835 | 1,140 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 584 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2035** | 2,350 | 1.65 | 2.14 | 0.073 | 995 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 510 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2036** | 2,160 | 1.44 | 1.87 | 0.0638 | 870 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 446 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2037** | 1,990 | 1.26 | 1.64 | 0.0557 | 760 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 390 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2038** | 1,850 | 1.1 | 1.43 | 0.0487 | 664 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 341 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2039** | 1,720 | 0.964 | 1.25 | 0.0426 | 581 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 298 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2040** | 1,610 | 0.843 | 1.09 | 0.0372 | 508 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 260 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2041** | 1,510 | 0.737 | 0.955 | 0.0325 | 444 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 228 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2042** | 1,430 | 0.644 | 0.834 | 0.0284 | 388 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 199 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2043** | 1,350 | 0.563 | 0.729 | 0.0249 | 339 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 174 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |
| **2044+** | 1,350 | 0.01 | 0.007 | 0.001 | 339 | 0.349 | 585 | | | 0.00000455 | 0.0147 | 0.0088 | 0.511 | 0.0327 | 0.000011 | 128 | 0.0000896 | 0.00475 | 0.000485 | 0.00646 | 0.0164 | 0.000045 | 31.4 | 69.2 | 0.231 | 0.00994 | 174 | 0.0253 | 0.0124 | 0.000019 | 0.00339 | 0.0017 | 0.519 | 0.000000914 | 0.0108 | 0.00146 | 0.00359 | 0.01 |

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **PUM02** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | 3,300 | 2.83 | 3.67 | 0.125 | 1,670 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 822 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2033** | 3,300 | 2.83 | 3.67 | 0.125 | 1,670 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 822 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2034** | 3,300 | 2.83 | 3.67 | 0.125 | 1,670 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 822 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2035** | 3,300 | 2.83 | 3.67 | 0.125 | 1,670 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 822 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2036** | 2,990 | 2.47 | 3.21 | 0.109 | 1,460 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 718 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2037** | 2,710 | 2.16 | 2.8 | 0.0955 | 1,270 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 628 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2038** | 2,470 | 1.89 | 2.45 | 0.0835 | 1,110 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 549 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2039** | 2,260 | 1.65 | 2.14 | 0.073 | 972 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 480 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2040** | 2,080 | 1.44 | 1.87 | 0.0638 | 850 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 419 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2041** | 1,920 | 1.26 | 1.64 | 0.0557 | 743 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 366 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2042** | 1,780 | 1.1 | 1.43 | 0.0487 | 649 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 320 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2043** | 1,660 | 0.964 | 1.25 | 0.0426 | 568 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 280 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **2044+** | 1,660 | 0.01 | 0.007 | 0.001 | 568 | 0.348 | 564 | | | 0.0000036 | 0.0146 | 0.00816 | 0.522 | 0.0292 | 0.0000101 | 124 | 0.0000925 | 0.00412 | 0.000573 | 0.00664 | 0.0167 | 0.000045 | 27.8 | 66.8 | 0.23 | 0.00926 | 280 | 0.0259 | 0.011 | 0.0000188 | 0.00347 | 0.0017 | 0.495 | 0.000000981 | 0.0095 | 0.00157 | 0.00369 | 0.01 |
| **PUM03** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | 2,900 | 2.83 | 3.67 | 0.125 | 1,620 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 763 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2029** | 2,900 | 2.83 | 3.67 | 0.125 | 1,620 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 763 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2030** | 2,900 | 2.83 | 3.67 | 0.125 | 1,620 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 763 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2031** | 2,600 | 2.47 | 3.21 | 0.109 | 1,420 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 667 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2032** | 2,340 | 2.16 | 2.8 | 0.0955 | 1,240 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 583 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2033** | 2,110 | 1.89 | 2.45 | 0.0835 | 1,080 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 510 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2034** | 1,910 | 1.65 | 2.14 | 0.073 | 947 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 445 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2035** | 1,730 | 1.44 | 1.87 | 0.0638 | 828 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 389 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2036** | 1,580 | 1.26 | 1.64 | 0.0557 | 724 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 340 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2037** | 1,440 | 1.1 | 1.43 | 0.0487 | 632 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 297 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2038** | 1,330 | 0.964 | 1.25 | 0.0426 | 553 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 260 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2039** | 1,230 | 0.843 | 1.09 | 0.0372 | 483 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 227 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2040** | 1,140 | 0.737 | 0.955 | 0.0325 | 422 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 199 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2041** | 1,060 | 0.644 | 0.834 | 0.0284 | 369 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 174 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2042** | 989 | 0.563 | 0.729 | 0.0249 | 323 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 152 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2043** | 929 | 0.492 | 0.637 | 0.0217 | 282 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 133 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |
| **2044+** | 929 | 0.01 | 0.007 | 0.001 | 282 | 0.346 | 346 | | | 0.00000366 | 0.0157 | 0.00623 | 0.534 | 0.0266 | 0.00000926 | 75.8 | 0.0000835 | 0.00342 | 0.000637 | 0.00667 | 0.0165 | 0.000045 | 24.7 | 40.9 | 0.229 | 0.00829 | 133 | 0.0274 | 0.00946 | 0.0000231 | 0.00375 | 0.00164 | 0.628 | 0.00000129 | 0.00807 | 0.00188 | 0.00339 | 0.01 |

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **PUM04** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | 3,260 | 2.83 | 3.67 | 0.125 | 1,690 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 850 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2036** | 3,260 | 2.83 | 3.67 | 0.125 | 1,690 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 850 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2037** | 2,940 | 2.47 | 3.21 | 0.109 | 1,470 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 743 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2038** | 2,660 | 2.16 | 2.8 | 0.0955 | 1,290 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 650 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2039** | 2,410 | 1.89 | 2.45 | 0.0835 | 1,130 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 568 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2040** | 2,200 | 1.65 | 2.14 | 0.073 | 985 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 496 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2041** | 2,010 | 1.44 | 1.87 | 0.0638 | 861 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 434 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2042** | 1,850 | 1.26 | 1.64 | 0.0557 | 752 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 379 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2043** | 1,710 | 1.1 | 1.43 | 0.0487 | 657 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 331 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **2044+** | 1,710 | 0.01 | 0.007 | 0.001 | 657 | 0.348 | 494 | | | 0.00000446 | 0.0148 | 0.00797 | 0.516 | 0.0314 | 0.0000106 | 108 | 0.0000842 | 0.00445 | 0.0005 | 0.00636 | 0.016 | 0.000045 | 29.9 | 58.5 | 0.227 | 0.00946 | 331 | 0.0255 | 0.0117 | 0.0000198 | 0.00341 | 0.00165 | 0.551 | 0.000000996 | 0.0102 | 0.00154 | 0.00341 | 0.01 |
| **TIRI01** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2022** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2023** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2024** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2025** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2026** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2027** | 2,660 | 2.83 | 3.67 | 0.125 | 1,550 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 660 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2028** | 2,380 | 2.47 | 3.21 | 0.109 | 1,350 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 577 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2029** | 2,130 | 2.16 | 2.8 | 0.0955 | 1,180 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 504 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2030** | 1,920 | 1.89 | 2.45 | 0.0835 | 1,030 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 441 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2031** | 1,740 | 1.65 | 2.14 | 0.073 | 903 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 385 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2032** | 1,570 | 1.44 | 1.87 | 0.0638 | 789 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 337 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2033** | 1,430 | 1.26 | 1.64 | 0.0557 | 690 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 294 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2034** | 1,310 | 1.1 | 1.43 | 0.0487 | 603 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 257 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2035** | 1,200 | 0.964 | 1.25 | 0.0426 | 527 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 225 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2036** | 1,100 | 0.843 | 1.09 | 0.0372 | 461 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 196 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2037** | 1,020 | 0.737 | 0.955 | 0.0325 | 403 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 172 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2038** | 948 | 0.644 | 0.834 | 0.0284 | 352 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 150 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2039** | 885 | 0.563 | 0.729 | 0.0249 | 308 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 131 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2040** | 830 | 0.492 | 0.637 | 0.0217 | 269 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 115 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2041** | 781 | 0.43 | 0.557 | 0.019 | 235 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 100 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2042** | 739 | 0.376 | 0.487 | 0.0166 | 205 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 88 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2043** | 702 | 0.328 | 0.426 | 0.0145 | 180 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 77 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |
| **2044+** | 702 | 0.01 | 0.007 | 0.001 | 180 | 0.344 | 287 | | | 0.00000528 | 0.0159 | 0.0119 | 0.555 | 0.0529 | 0.0000131 | 63 | 0.0000929 | 0.00408 | 0.000546 | 0.00471 | 0.0144 | 0.000045 | 34.8 | 34 | 0.226 | 0.0081 | 77 | 0.0234 | 0.00671 | 0.0000588 | 0.00384 | 0.00162 | 1.27 | 0.0000031 | 0.00981 | 0.00132 | 0.00256 | 0.01 |

**Appendix G-2: Source Terms**

**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **TIRI02** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 2,820 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 674 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2021** | 2,820 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 674 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2022** | 2,540 | 2.47 | 3.21 | 0.109 | 1,360 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 589 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2023** | 2,300 | 2.16 | 2.8 | 0.0955 | 1,190 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 515 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2024** | 2,080 | 1.89 | 2.45 | 0.0835 | 1,040 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 450 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2025** | 2,080 | 1.89 | 2.45 | 0.0835 | 1,040 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 450 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2026** | 2,080 | 1.89 | 2.45 | 0.0835 | 1,040 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 450 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2027** | 1,890 | 1.65 | 2.14 | 0.073 | 909 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 393 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2028** | 1,730 | 1.44 | 1.87 | 0.0638 | 794 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 344 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2029** | 1,590 | 1.26 | 1.64 | 0.0557 | 694 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 301 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2030** | 1,460 | 1.1 | 1.43 | 0.0487 | 607 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 263 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2031** | 1,350 | 0.964 | 1.25 | 0.0426 | 530 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 230 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2032** | 1,250 | 0.843 | 1.09 | 0.0372 | 464 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 201 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2033** | 1,170 | 0.737 | 0.955 | 0.0325 | 405 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 175 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2034** | 1,100 | 0.644 | 0.834 | 0.0284 | 354 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 153 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2035** | 1,030 | 0.563 | 0.729 | 0.0249 | 310 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 134 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2036** | 978 | 0.492 | 0.637 | 0.0217 | 271 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 117 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2037** | 929 | 0.43 | 0.557 | 0.019 | 237 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 102 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2038** | 886 | 0.376 | 0.487 | 0.0166 | 207 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 90 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2039** | 849 | 0.328 | 0.426 | 0.0145 | 181 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 78 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2040** | 816 | 0.287 | 0.372 | 0.0127 | 158 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 68 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2041** | 787 | 0.251 | 0.325 | 0.0111 | 138 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 60 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2042** | 762 | 0.219 | 0.284 | 0.00969 | 121 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 52 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2043** | 741 | 0.192 | 0.248 | 0.00847 | 105 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 46 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **2044+** | 741 | 0.01 | 0.007 | 0.001 | 105 | 0.344 | 389 | | | 0.00000284 | 0.0154 | 0.0158 | 0.552 | 0.0694 | 0.0000153 | 85.3 | 0.0000924 | 0.00511 | 0.000334 | 0.00294 | 0.0151 | 0.000045 | 42.5 | 46.1 | 0.228 | 0.00994 | 46 | 0.0153 | 0.0071 | 0.0000766 | 0.00342 | 0.00171 | 1.56 | 0.00000383 | 0.0121 | 0.000712 | 0.0021 | 0.01 |
| **TIRI03** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2037** | 3,000 | 2.83 | 3.67 | 0.125 | 1,680 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 841 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2038** | 3,000 | 2.83 | 3.67 | 0.125 | 1,680 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 841 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2039** | 3,000 | 2.83 | 3.67 | 0.125 | 1,680 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 841 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2040** | 3,000 | 2.83 | 3.67 | 0.125 | 1,680 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 841 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2041** | 2,690 | 2.47 | 3.21 | 0.109 | 1,470 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 735 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2042** | 2,410 | 2.16 | 2.8 | 0.0955 | 1,280 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 643 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2043** | 2,170 | 1.89 | 2.45 | 0.0835 | 1,120 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 562 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |
| **2044+** | 2,170 | 0.01 | 0.007 | 0.001 | 1,120 | 0.348 | 325 | | | 0.00000262 | 0.0098 | 0.00707 | 0.518 | 0.0317 | 0.00000721 | 71.4 | 0.0000689 | 0.00172 | 0.000415 | 0.00284 | 0.00925 | 0.000045 | 17.6 | 38.6 | 0.138 | 0.0043 | 562 | 0.0135 | 0.00138 | 0.0000473 | 0.00274 | 0.000992 | 0.966 | 0.0000025 | 0.00447 | 0.00093 | 0.00165 | 0.01 |

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **TIRI04** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2037** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | 2,820 | 2.83 | 3.67 | 0.125 | 1,590 | 0.345 | 334 | | | 0.00000241 | 0.0114 | 0.00992 | 0.542 | 0.0428 | 0.00000928 | 73.2 | 0.0000807 | 0.00223 | 0.000432 | 0.00284 | 0.0115 | 0.000045 | 23.1 | 39.5 | 0.166 | 0.00536 | 725 | 0.0138 | 0.00166 | 0.0000609 | 0.00311 | 0.00122 | 1.22 | 0.00000314 | 0.00574 | 0.000898 | 0.00181 | 0.01 |
| **2042** | 2,820 | 2.83 | 3.67 | 0.125 | 1,590 | 0.345 | 334 | | | 0.00000241 | 0.0114 | 0.00992 | 0.542 | 0.0428 | 0.00000928 | 73.2 | 0.0000807 | 0.00223 | 0.000432 | 0.00284 | 0.0115 | 0.000045 | 23.1 | 39.5 | 0.166 | 0.00536 | 725 | 0.0138 | 0.00166 | 0.0000609 | 0.00311 | 0.00122 | 1.22 | 0.00000314 | 0.00574 | 0.000898 | 0.00181 | 0.01 |
| **2043** | 2,820 | 2.83 | 3.67 | 0.125 | 1,590 | 0.345 | 334 | | | 0.00000241 | 0.0114 | 0.00992 | 0.542 | 0.0428 | 0.00000928 | 73.2 | 0.0000807 | 0.00223 | 0.000432 | 0.00284 | 0.0115 | 0.000045 | 23.1 | 39.5 | 0.166 | 0.00536 | 725 | 0.0138 | 0.00166 | 0.0000609 | 0.00311 | 0.00122 | 1.22 | 0.00000314 | 0.00574 | 0.000898 | 0.00181 | 0.01 |
| **2044+** | 2,820 | 0.01 | 0.007 | 0.001 | 1,590 | 0.345 | 334 | | | 0.00000241 | 0.0114 | 0.00992 | 0.542 | 0.0428 | 0.00000928 | 73.2 | 0.0000807 | 0.00223 | 0.000432 | 0.00284 | 0.0115 | 0.000045 | 23.1 | 39.5 | 0.166 | 0.00536 | 725 | 0.0138 | 0.00166 | 0.0000609 | 0.00311 | 0.00122 | 1.22 | 0.00000314 | 0.00574 | 0.000898 | 0.00181 | 0.01 |
| **WES01** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | 2,760 | 2.83 | 3.67 | 0.125 | 1,610 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 740 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2026** | 2,760 | 2.83 | 3.67 | 0.125 | 1,610 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 740 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2027** | 2,760 | 2.83 | 3.67 | 0.125 | 1,610 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 740 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2028** | 2,760 | 2.83 | 3.67 | 0.125 | 1,610 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 740 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2029** | 2,460 | 2.47 | 3.21 | 0.109 | 1,400 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 647 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2030** | 2,200 | 2.16 | 2.8 | 0.0955 | 1,230 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 565 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2031** | 1,980 | 1.89 | 2.45 | 0.0835 | 1,070 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 494 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2032** | 1,780 | 1.65 | 2.14 | 0.073 | 937 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 432 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2033** | 1,610 | 1.44 | 1.87 | 0.0638 | 819 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 377 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2034** | 1,450 | 1.26 | 1.64 | 0.0557 | 716 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 330 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2035** | 1,320 | 1.1 | 1.43 | 0.0487 | 626 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 288 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2036** | 1,210 | 0.964 | 1.25 | 0.0426 | 547 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 252 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2037** | 1,110 | 0.843 | 1.09 | 0.0372 | 478 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 220 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2038** | 1,020 | 0.737 | 0.955 | 0.0325 | 418 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 193 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2039** | 942 | 0.644 | 0.834 | 0.0284 | 365 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 168 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2040** | 874 | 0.563 | 0.729 | 0.0249 | 319 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 147 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2041** | 816 | 0.492 | 0.637 | 0.0217 | 279 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 129 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2042** | 764 | 0.43 | 0.557 | 0.019 | 244 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 112 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2043** | 719 | 0.376 | 0.487 | 0.0166 | 213 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 98 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |
| **2044+** | 719 | 0.01 | 0.007 | 0.001 | 213 | 0.346 | 267 | | | 0.00000888 | 0.0151 | 0.00811 | 0.539 | 0.0259 | 0.00000981 | 58.4 | 0.0000762 | 0.00317 | 0.000626 | 0.00659 | 0.0168 | 0.000045 | 24.3 | 31.6 | 0.229 | 0.00636 | 98 | 0.0315 | 0.00884 | 0.0000246 | 0.00379 | 0.00161 | 0.715 | 0.00000115 | 0.00741 | 0.00184 | 0.00296 | 0.01 |

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WES04** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | 2,650 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 674 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2037** | 2,650 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 674 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2038** | 2,650 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 674 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2039** | 2,650 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 674 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2040** | 2,650 | 2.83 | 3.67 | 0.125 | 1,560 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 674 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2041** | 2,370 | 2.47 | 3.21 | 0.109 | 1,360 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 589 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2042** | 2,120 | 2.16 | 2.8 | 0.0955 | 1,190 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 515 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2043** | 1,910 | 1.89 | 2.45 | 0.0835 | 1,040 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 450 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **2044+** | 1,910 | 0.01 | 0.007 | 0.001 | 1,040 | 0.344 | 276 | | | 0.0000086 | 0.0142 | 0.00829 | 0.552 | 0.0211 | 0.00000866 | 60.5 | 0.0000791 | 0.00245 | 0.000745 | 0.00642 | 0.0184 | 0.000045 | 19.4 | 32.7 | 0.228 | 0.00563 | 450 | 0.0332 | 0.00711 | 0.0000282 | 0.00393 | 0.00164 | 0.769 | 0.0000012 | 0.00586 | 0.00187 | 0.00299 | 0.01 |
| **WES05** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | 2,820 | 2.83 | 3.67 | 0.125 | 1,580 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 711 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2037** | 2,820 | 2.83 | 3.67 | 0.125 | 1,580 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 711 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2038** | 2,820 | 2.83 | 3.67 | 0.125 | 1,580 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 711 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2039** | 2,820 | 2.83 | 3.67 | 0.125 | 1,580 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 711 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2040** | 2,820 | 2.83 | 3.67 | 0.125 | 1,580 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 711 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2041** | 2,530 | 2.47 | 3.21 | 0.109 | 1,380 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 621 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2042** | 2,280 | 2.16 | 2.8 | 0.0955 | 1,210 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 543 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2043** | 2,060 | 1.89 | 2.45 | 0.0835 | 1,060 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 475 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |
| **2044+** | 2,060 | 0.01 | 0.007 | 0.001 | 1,060 | 0.345 | 357 | | | 0.00000798 | 0.0135 | 0.00982 | 0.545 | 0.0228 | 0.00000899 | 78.3 | 0.0000753 | 0.003 | 0.0006 | 0.00599 | 0.0194 | 0.000045 | 21.2 | 42.3 | 0.228 | 0.00652 | 475 | 0.0294 | 0.00807 | 0.0000262 | 0.00343 | 0.00169 | 0.713 | 0.000001 | 0.00678 | 0.00163 | 0.00283 | 0.01 |

**Appendix G-2: Source Terms**
**Pit Wall Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **WES06** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | 3,270 | 2.83 | 3.67 | 0.125 | 1,780 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 978 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2025** | 2,920 | 2.47 | 3.21 | 0.109 | 1,560 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 855 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2026** | 2,620 | 2.16 | 2.8 | 0.0955 | 1,360 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 748 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2027** | 2,350 | 1.89 | 2.45 | 0.0835 | 1,190 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 653 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2028** | 2,120 | 1.65 | 2.14 | 0.073 | 1,040 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 571 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2029** | 1,920 | 1.44 | 1.87 | 0.0638 | 909 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 499 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2030** | 1,740 | 1.26 | 1.64 | 0.0557 | 794 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 436 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2031** | 1,580 | 1.1 | 1.43 | 0.0487 | 694 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 381 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2032** | 1,450 | 0.964 | 1.25 | 0.0426 | 607 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 333 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2033** | 1,330 | 0.843 | 1.09 | 0.0372 | 530 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 291 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2034** | 1,230 | 0.737 | 0.955 | 0.0325 | 464 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 255 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2035** | 1,140 | 0.644 | 0.834 | 0.0284 | 405 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 223 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2036** | 1,060 | 0.563 | 0.729 | 0.0249 | 354 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 195 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2037** | 987 | 0.492 | 0.637 | 0.0217 | 310 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 170 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2038** | 926 | 0.43 | 0.557 | 0.019 | 271 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 149 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2039** | 874 | 0.376 | 0.487 | 0.0166 | 237 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 130 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2040** | 827 | 0.328 | 0.426 | 0.0145 | 207 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 114 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2041** | 787 | 0.287 | 0.372 | 0.0127 | 181 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 99 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2042** | 752 | 0.251 | 0.325 | 0.0111 | 158 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 87 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2043** | 721 | 0.219 | 0.284 | 0.00969 | 138 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 76 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **2044+** | 721 | 0.01 | 0.007 | 0.001 | 138 | 0.351 | 330 | | | 0.00000893 | 0.0161 | 0.00946 | 0.49 | 0.0405 | 0.0000134 | 72.2 | 0.0000606 | 0.00595 | 0.000343 | 0.00598 | 0.0149 | 0.000045 | 39.5 | 39 | 0.233 | 0.0101 | 76 | 0.0287 | 0.0152 | 0.0000186 | 0.00315 | 0.00163 | 0.643 | 0.000000822 | 0.0132 | 0.00145 | 0.00269 | 0.01 |
| **WES09** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2037** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | 2,740 | 2.83 | 3.67 | 0.125 | 1,590 | 0.345 | 283 | | | 0.00000875 | 0.0147 | 0.00837 | 0.543 | 0.0239 | 0.00000937 | 62.1 | 0.0000769 | 0.00294 | 0.000627 | 0.00661 | 0.0174 | 0.000045 | 22.6 | 33.5 | 0.229 | 0.00604 | 720 | 0.0311 | 0.00831 | 0.0000235 | 0.0037 | 0.00163 | 0.683 | 0.00000108 | 0.00684 | 0.00183 | 0.00296 | 0.01 |
| **2041** | 2,740 | 2.83 | 3.67 | 0.125 | 1,590 | 0.345 | 283 | | | 0.00000875 | 0.0147 | 0.00837 | 0.543 | 0.0239 | 0.00000937 | 62.1 | 0.0000769 | 0.00294 | 0.000627 | 0.00661 | 0.0174 | 0.000045 | 22.6 | 33.5 | 0.229 | 0.00604 | 720 | 0.0311 | 0.00831 | 0.0000235 | 0.0037 | 0.00163 | 0.683 | 0.00000108 | 0.00684 | 0.00183 | 0.00296 | 0.01 |
| **2042** | 2,740 | 2.83 | 3.67 | 0.125 | 1,590 | 0.345 | 283 | | | 0.00000875 | 0.0147 | 0.00837 | 0.543 | 0.0239 | 0.00000937 | 62.1 | 0.0000769 | 0.00294 | 0.000627 | 0.00661 | 0.0174 | 0.000045 | 22.6 | 33.5 | 0.229 | 0.00604 | 720 | 0.0311 | 0.00831 | 0.0000235 | 0.0037 | 0.00163 | 0.683 | 0.00000108 | 0.00684 | 0.00183 | 0.00296 | 0.01 |
| **2043** | 2,450 | 2.47 | 3.21 | 0.109 | 1,390 | 0.345 | 283 | | | 0.00000875 | 0.0147 | 0.00837 | 0.543 | 0.0239 | 0.00000937 | 62.1 | 0.0000769 | 0.00294 | 0.000627 | 0.00661 | 0.0174 | 0.000045 | 22.6 | 33.5 | 0.229 | 0.00604 | 629 | 0.0311 | 0.00831 | 0.0000235 | 0.0037 | 0.00163 | 0.683 | 0.00000108 | 0.00684 | 0.00183 | 0.00296 | 0.01 |
| **2044+** | 2,450 | 0.01 | 0.007 | 0.001 | 1,390 | 0.345 | 283 | | | 0.00000875 | 0.0147 | 0.00837 | 0.543 | 0.0239 | 0.00000937 | 62.1 | 0.0000769 | 0.00294 | 0.000627 | 0.00661 | 0.0174 | 0.000045 | 22.6 | 33.5 | 0.229 | 0.00604 | 629 | 0.0311 | 0.00831 | 0.0000235 | 0.0037 | 0.00163 | 0.683 | 0.00000108 | 0.00684 | 0.00183 | 0.00296 | 0.01 |

**Notes:**
TDS = (0.22 x $HCO_3$ as $CaCO_3$)+ Cl + $SO_4$ + Na + K + Ca + Mg + (0.2259 x $NO_3$-N)

**Appendix G-2: Source Terms**

**Underground Mine Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **Discovery** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | 59,000 | 623 | 723 | 10.9 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0107 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2027** | 59,000 | 56.2 | 64.5 | 2.97 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0156 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2028** | 60,000 | 92.6 | 106 | 4.89 | 35,100 | 0.01 | 3,410 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0322 | 1.29 | 0.31 | 0.00007 | 1720 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 497 | 131 | 0.135 | 0.05 | 16,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 44.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.306 |
| **2029** | 59,000 | 139 | 159 | 7.34 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0249 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2030** | 60,000 | 67.6 | 77.6 | 3.58 | 35,100 | 0.01 | 3,410 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0298 | 1.29 | 0.31 | 0.00007 | 1720 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 497 | 131 | 0.135 | 0.05 | 16,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 44.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.306 |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2036** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2037** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2043** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **F Zone** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | 59,000 | 623 | 723 | 10.9 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0218 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2035** | 59,000 | 139 | 160 | 7.35 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0239 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2036** | 59,500 | 113 | 130 | 6 | 34,800 | 0.01 | 3,380 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0299 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.05 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2037** | 60,000 | 127 | 146 | 6.71 | 35,100 | 0.01 | 3,410 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0448 | 1.29 | 0.31 | 0.00007 | 1720 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 497 | 131 | 0.135 | 0.05 | 16,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 44.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.306 |
| **2038** | 60,000 | 124 | 142 | 6.55 | 35,100 | 0.01 | 3,410 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0568 | 1.29 | 0.31 | 0.00007 | 1720 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 497 | 131 | 0.135 | 0.0501 | 16,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 44.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.306 |
| **2039** | 60,000 | 97.7 | 112 | 5.16 | 35,100 | 0.01 | 3,410 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0649 | 1.29 | 0.31 | 0.00007 | 1720 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 497 | 131 | 0.135 | 0.0573 | 16,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00554 | 44.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.306 |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2043** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Appendix G-2: Source Terms**

**Underground Mine Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **Pump** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | 59,000 | 76.8 | 88.2 | 4.06 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.00858 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2030** | 57,500 | 88.2 | 101 | 4.66 | 33,700 | 0.01 | 3,270 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.014 | 1.23 | 0.321 | 0.00007 | 1650 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 476 | 125 | 0.13 | 0.05 | 15,400 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 42.4 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.293 |
| **2031** | 51,500 | 140 | 160 | 7.39 | 30,200 | 0.01 | 2,920 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0295 | 1.1 | 0.352 | 0.00007 | 1480 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 426 | 112 | 0.116 | 0.05 | 13,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 38 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.263 |
| **2032** | 49,000 | 174 | 199 | 9.18 | 28,700 | 0.01 | 2,780 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0487 | 1.05 | 0.367 | 0.00007 | 1410 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 406 | 107 | 0.11 | 0.05 | 13,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 36.2 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.25 |
| **2033** | 44,000 | 102 | 117 | 5.41 | 25,800 | 0.01 | 2,500 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0435 | 0.943 | 0.402 | 0.00007 | 1260 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 364 | 95.8 | 0.0992 | 0.05 | 11,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 32.5 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.225 |
| **2034** | 44,500 | 63.6 | 73 | 3.36 | 26,100 | 0.01 | 2,530 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0499 | 0.954 | 0.398 | 0.00007 | 1280 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 368 | 96.9 | 0.1 | 0.05 | 11,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 32.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.227 |
| **2035** | 45,500 | 69.1 | 79.3 | 3.65 | 26,600 | 0.01 | 2,580 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0829 | 0.975 | 0.39 | 0.00007 | 1310 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 377 | 99 | 0.103 | 0.0732 | 12,200 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00708 | 33.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.232 |
| **2036** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2037** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2043** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Tiriganiaq** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | 59,500 | 191 | 219 | 10.1 | 34,800 | 0.01 | 3,380 | 0.086 | 0.00964 | 0.0005 | 0.02 | 0.258 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.159 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0149 | | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2021** | 59,500 | 123 | 141 | 6.49 | 34,800 | 0.01 | 3,380 | 0.207 | 0.0232 | 0.0005 | 0.02 | 0.425 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.208 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0189 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2022** | 59,500 | 81.9 | 94 | 4.33 | 34,800 | 0.01 | 3,380 | 0.147 | 0.0164 | 0.0005 | 0.02 | 0.307 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.153 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0139 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2023** | 59,500 | 73.9 | 84.8 | 3.91 | 34,800 | 0.01 | 3,380 | 0.136 | 0.0152 | 0.0005 | 0.02 | 0.289 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.145 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0133 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2024** | 59,500 | 60.1 | 69 | 3.18 | 34,800 | 0.01 | 3,380 | 0.107 | 0.012 | 0.0005 | 0.02 | 0.232 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.119 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0109 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2025** | 57,500 | 37 | 42.5 | 1.96 | 33,700 | 0.01 | 3,270 | 0.0707 | 0.00792 | 0.0005 | 0.02 | 0.157 | 1.23 | 0.321 | 0.00007 | 1650 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 476 | 125 | 0.13 | 0.0821 | 15,400 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00753 | 42.4 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.293 |
| **2026** | 56,000 | 21.6 | 24.8 | 1.14 | 32,800 | 0.01 | 3,180 | 0.0497 | 0.00558 | 0.0005 | 0.02 | 0.113 | 1.2 | 0.328 | 0.00007 | 1610 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 464 | 122 | 0.126 | 0.0595 | 15,000 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00546 | 41.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.286 |
| **2027** | 56,000 | 20.6 | 23.7 | 1.09 | 32,800 | 0.01 | 3,180 | 0.0465 | 0.00521 | 0.0005 | 0.02 | 0.106 | 1.2 | 0.328 | 0.00007 | 1610 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 464 | 122 | 0.126 | 0.0563 | 15,000 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00517 | 41.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.286 |
| **2028** | 56,000 | 19.8 | 22.7 | 1.04 | 32,800 | 0.01 | 3,180 | 0.0571 | 0.0064 | 0.0005 | 0.02 | 0.128 | 1.2 | 0.328 | 0.00007 | 1610 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 464 | 122 | 0.126 | 0.0671 | 15,000 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00616 | 41.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.286 |
| **2029** | 56,000 | 14 | 16 | 0.738 | 32,800 | 0.01 | 3,180 | 0.0558 | 0.00626 | 0.0005 | 0.02 | 0.13 | 1.2 | 0.328 | 0.00007 | 1610 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 464 | 122 | 0.126 | 0.0696 | 15,000 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00641 | 41.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.286 |
| **2030** | 55,500 | 10.5 | 12 | 0.553 | 32,500 | 0.01 | 3,150 | 0.0544 | 0.0061 | 0.0005 | 0.02 | 0.129 | 1.19 | 0.331 | 0.00007 | 1600 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 459 | 121 | 0.125 | 0.0701 | 14,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00646 | 41 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.283 |
| **2031** | 55,500 | 12.9 | 14.8 | 0.68 | 32,500 | 0.01 | 3,150 | 0.06 | 0.00673 | 0.0005 | 0.02 | 0.14 | 1.19 | 0.331 | 0.00007 | 1600 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 459 | 121 | 0.125 | 0.0753 | 14,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00693 | 41 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.283 |
| **2032** | 55,500 | 10.5 | 12.1 | 0.555 | 32,500 | 0.01 | 3,150 | 0.0565 | 0.00633 | 0.0005 | 0.02 | 0.137 | 1.19 | 0.331 | 0.00007 | 1600 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 459 | 121 | 0.125 | 0.0752 | 14,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00694 | 41 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.283 |
| **2033** | 55,500 | 6.55 | 7.52 | 0.347 | 32,500 | 0.01 | 3,150 | 0.0569 | 0.00638 | 0.0005 | 0.02 | 0.138 | 1.19 | 0.331 | 0.00007 | 1600 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 459 | 121 | 0.125 | 0.0759 | 14,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00701 | 41 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.283 |
| **2034** | 55,000 | 8.82 | 10.1 | 0.466 | 32,200 | 0.01 | 3,120 | 0.0577 | 0.00647 | 0.0005 | 0.02 | 0.143 | 1.18 | 0.333 | 0.00007 | 1580 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 455 | 120 | 0.124 | 0.0793 | 14,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00733 | 40.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.281 |
| **2035** | 55,000 | 9.4 | 10.8 | 0.497 | 32,200 | 0.01 | 3,120 | 0.0569 | 0.00638 | 0.0005 | 0.02 | 0.143 | 1.18 | 0.333 | 0.00007 | 1580 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 455 | 120 | 0.124 | 0.08 | 14,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00741 | 40.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.281 |
| **2036** | 55,000 | 8.97 | 10.3 | 0.474 | 32,200 | 0.01 | 3,120 | 0.0565 | 0.00633 | 0.0005 | 0.02 | 0.143 | 1.18 | 0.333 | 0.00007 | 1580 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 455 | 120 | 0.124 | 0.0809 | 14,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00749 | 40.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.281 |
| **2037** | 55,000 | 9.05 | 10.4 | 0.479 | 32,200 | 0.01 | 3,120 | 0.043 | 0.005 | 0.0005 | 0.02 | 0.127 | 1.18 | 0.333 | 0.00007 | 1580 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 455 | 120 | 0.124 | 0.0772 | 14,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00722 | 40.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.281 |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2043** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Appendix G-2: Source Terms**

**Underground Mine Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **Tiriganiaq-Wolf** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2024** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2025** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2026** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2027** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2028** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2029** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2030** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2031** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2032** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2033** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2034** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2035** | 56,500 | 623 | 723 | 10.9 | 33,100 | 0.01 | 3,210 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0387 | 1.21 | 0.326 | 0.00007 | 1620 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 468 | 123 | 0.127 | 0.05 | 15,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 41.7 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.288 |
| **2036** | 53,000 | 623 | 723 | 10.9 | 31,000 | 0.01 | 3,010 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0527 | 1.14 | 0.344 | 0.00007 | 1520 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 439 | 115 | 0.119 | 0.05 | 14,200 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 39.1 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.27 |
| **2037** | 50,500 | 623 | 723 | 10.9 | 29,600 | 0.01 | 2,870 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0718 | 1.08 | 0.358 | 0.00007 | 1450 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 418 | 110 | 0.114 | 0.0634 | 13,500 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00614 | 37.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.258 |
| **2038** | 49,500 | 77 | 88.4 | 4.07 | 29,000 | 0.01 | 2,810 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0428 | 1.06 | 0.364 | 0.00007 | 1420 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 410 | 108 | 0.112 | 0.05 | 13,300 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 36.5 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.253 |
| **2039** | 52,500 | 110 | 127 | 5.84 | 30,700 | 0.01 | 2,980 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0324 | 1.12 | 0.346 | 0.00007 | 1510 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 435 | 114 | 0.118 | 0.05 | 14,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 38.8 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.268 |
| **2040** | 52,000 | 231 | 265 | 12.2 | 30,500 | 0.01 | 2,950 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0379 | 1.11 | 0.349 | 0.00007 | 1490 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 430 | 113 | 0.117 | 0.05 | 13,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 38.4 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.265 |
| **2041** | 52,000 | 128 | 146 | 6.75 | 30,500 | 0.01 | 2,950 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0393 | 1.11 | 0.349 | 0.00007 | 1490 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 430 | 113 | 0.117 | 0.05 | 13,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 38.4 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.265 |
| **2042** | 51,000 | 80.5 | 92.3 | 4.25 | 29,900 | 0.01 | 2,900 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0393 | 1.09 | 0.355 | 0.00007 | 1470 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 422 | 111 | 0.115 | 0.05 | 13,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 37.7 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.26 |
| **2043** | 49,500 | 78.4 | 90 | 4.15 | 29,000 | 0.01 | 2,810 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0393 | 1.06 | 0.364 | 0.00007 | 1420 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 410 | 108 | 0.112 | 0.05 | 13,300 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 36.5 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.253 |
| **Wesmeg** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | 59,500 | 0.559 | 0.642 | 0.0296 | 34,800 | 0.01 | 3,380 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.005 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.05 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2022** | 60,000 | 9.04 | 10.4 | 0.478 | 35,100 | 0.01 | 3,410 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.005 | 1.29 | 0.31 | 0.00007 | 1720 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 497 | 131 | 0.135 | 0.05 | 16,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 44.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.306 |
| **2023** | 59,000 | 47 | 54 | 2.49 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.00625 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2024** | 59,500 | 28.3 | 32.5 | 1.5 | 34,800 | 0.01 | 3,380 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.00625 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.05 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2025** | 59,500 | 42.8 | 49.1 | 2.26 | 34,800 | 0.01 | 3,380 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.011 | 1.27 | 0.312 | 0.00007 | 1710 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 493 | 130 | 0.134 | 0.05 | 15,900 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.9 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.304 |
| **2026** | 59,000 | 84.1 | 96.6 | 4.45 | 34,600 | 0.01 | 3,350 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0202 | 1.26 | 0.314 | 0.00007 | 1700 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 488 | 128 | 0.133 | 0.05 | 15,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.301 |
| **2027** | 58,500 | 60 | 68.8 | 3.17 | 34,300 | 0.01 | 3,320 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0201 | 1.25 | 0.316 | 0.00007 | 1680 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 484 | 127 | 0.132 | 0.05 | 15,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 43.2 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.299 |
| **2028** | 58,000 | 120 | 138 | 6.36 | 34,000 | 0.01 | 3,290 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0328 | 1.24 | 0.319 | 0.00007 | 1670 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 480 | 126 | 0.131 | 0.05 | 15,500 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 42.8 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.296 |
| **2029** | 58,000 | 141 | 162 | 7.47 | 34,000 | 0.01 | 3,290 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0479 | 1.24 | 0.319 | 0.00007 | 1670 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 480 | 126 | 0.131 | 0.05 | 15,500 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 42.8 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.296 |
| **2030** | 57,000 | 173 | 199 | 9.15 | 33,400 | 0.01 | 3,240 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0657 | 1.22 | 0.323 | 0.00007 | 1640 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 472 | 124 | 0.128 | 0.058 | 15,300 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00561 | 42.1 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.291 |
| **2031** | 54,500 | 114 | 131 | 6.05 | 31,900 | 0.01 | 3,090 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0616 | 1.17 | 0.336 | 0.00007 | 1570 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 451 | 119 | 0.123 | 0.0544 | 14,600 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00526 | 40.2 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.278 |
| **2032** | 55,000 | 155 | 178 | 8.2 | 32,200 | 0.01 | 3,120 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0991 | 1.18 | 0.333 | 0.00007 | 1580 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 455 | 120 | 0.124 | 0.0875 | 14,700 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00847 | 40.6 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.281 |
| **2033** | 53,500 | 128 | 147 | 6.79 | 31,300 | 0.01 | 3,040 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.113 | 1.15 | 0.341 | 0.00007 | 1540 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 443 | 116 | 0.121 | 0.0998 | 14,300 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.00965 | 39.5 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.273 |
| **2034** | 53,000 | 99.7 | 114 | 5.27 | 31,000 | 0.01 | 3,010 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.125 | 1.14 | 0.344 | 0.00007 | 1520 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 439 | 115 | 0.119 | 0.11 | 14,200 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0107 | 39.1 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.27 |
| **2035** | 52,500 | 84.5 | 96.9 | 4.47 | 30,700 | 0.01 | 2,980 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.134 | 1.12 | 0.346 | 0.00007 | 1510 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 435 | 114 | 0.118 | 0.118 | 14,100 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0114 | 38.8 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.268 |
| **2036** | 51,500 | 94.4 | 108 | 4.99 | 30,200 | 0.01 | 2,920 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.145 | 1.1 | 0.352 | 0.00007 | 1480 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 426 | 112 | 0.116 | 0.128 | 13,800 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0123 | 38 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.263 |
| **2037** | 50,500 | 54.1 | 62.1 | 2.86 | 29,600 | 0.01 | 2,870 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.151 | 1.08 | 0.358 | 0.00007 | 1450 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 418 | 110 | 0.114 | 0.133 | 13,500 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.0129 | 37.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.258 |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2043** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Appendix G-2: Source Terms**

**Underground Mine Source Terms**

| Parameter | TDS | $NH_3$-N | $NO_3$-N | $NO_2$-N | Cl | F | $SO_4$ | T-CN | WAD-CN | D-Ag | D-Al | D-As | D-B | D-Ba | D-Be | D-Ca | D-Cd | D-Co | D-Cr | D-Cu | D-Fe | D-Hg | D-K | D-Mg | D-Mn | D-Mo | D-Na | D-Ni | D-P | D-Pb | D-Sb | D-Se | D-Sr | D-Tl | D-U | D-V | D-Zn | D-Ra226 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unit | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | Bq/L |
| **Wesmeg North** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2020** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2021** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2022** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2023** | 35,000 | 5.36 | 6.16 | 0.284 | 20,500 | 0.01 | 1,990 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.005 | 0.75 | 0.312 | 0.00007 | 1010 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 290 | 76.2 | 0.0789 | 0.05 | 9,380 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 25.8 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.179 |
| **2024** | 18,000 | 25.2 | 28.9 | 1.33 | 10,500 | 0.01 | 1,020 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.005 | 0.386 | 0.31 | 0.00007 | 517 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 149 | 39.2 | 0.0406 | 0.05 | 4,820 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 13.3 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0919 |
| **2025** | 10,500 | 22 | 25.2 | 1.16 | 6,150 | 0.01 | 596 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.00579 | 0.225 | 0.314 | 0.00007 | 302 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 86.9 | 22.9 | 0.0237 | 0.05 | 2,810 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 7.75 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0536 |
| **2026** | 6,000 | 72.1 | 82.7 | 3.81 | 3,510 | 0.01 | 341 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0137 | 0.129 | 0.312 | 0.00007 | 172 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 49.7 | 13.1 | 0.0135 | 0.05 | 1,610 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 4.43 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0306 |
| **2027** | 5,000 | 27.3 | 31.4 | 1.45 | 2,930 | 0.01 | 284 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0167 | 0.107 | 0.312 | 0.00007 | 144 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 41.4 | 10.9 | 0.0113 | 0.05 | 1,340 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 3.69 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0255 |
| **2028** | 5,500 | 8.93 | 10.2 | 0.472 | 3,220 | 0.01 | 312 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0179 | 0.118 | 0.314 | 0.00007 | 158 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 45.5 | 12 | 0.0124 | 0.05 | 1,470 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 4.06 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0281 |
| **2029** | 4,000 | 77.2 | 88.6 | 4.08 | 2,340 | 0.01 | 227 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0277 | 0.0857 | 0.316 | 0.00007 | 115 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 33.1 | 8.71 | 0.00902 | 0.05 | 1,070 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 2.95 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0204 |
| **2030** | 3,000 | 50.1 | 57.5 | 2.65 | 1,760 | 0.01 | 170 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0333 | 0.0643 | 0.319 | 0.00007 | 86.2 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 24.8 | 6.53 | 0.00676 | 0.05 | 804 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 2.21 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0153 |
| **2031** | 2,500 | 23.1 | 26.5 | 1.22 | 1,460 | 0.01 | 142 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0359 | 0.0536 | 0.319 | 0.00007 | 71.9 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 20.7 | 5.44 | 0.00563 | 0.05 | 670 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 1.85 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0128 |
| **2032** | 4,000 | 29.4 | 33.8 | 1.56 | 2,340 | 0.01 | 227 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0388 | 0.0857 | 0.323 | 0.00007 | 115 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 33.1 | 8.71 | 0.00902 | 0.05 | 1,070 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 2.95 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0204 |
| **2033** | 4,500 | 14.4 | 16.6 | 0.763 | 2,640 | 0.01 | 256 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0404 | 0.0964 | 0.336 | 0.00007 | 129 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 37.3 | 9.8 | 0.0101 | 0.05 | 1,210 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 3.32 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.023 |
| **2034** | 3,500 | 3.61 | 4.14 | 0.191 | 2,050 | 0.01 | 199 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0404 | 0.075 | 0.333 | 0.00007 | 101 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 29 | 7.62 | 0.00789 | 0.05 | 938 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 2.58 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0179 |
| **2035** | 3,000 | 23.2 | 26.6 | 1.23 | 1,760 | 0.01 | 170 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0432 | 0.0643 | 0.341 | 0.00007 | 86.2 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 24.8 | 6.53 | 0.00676 | 0.05 | 804 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 2.21 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0153 |
| **2036** | 2,500 | 23.2 | 26.6 | 1.23 | 1,460 | 0.01 | 142 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0432 | 0.0536 | 0.344 | 0.00007 | 71.9 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 20.7 | 5.44 | 0.00563 | 0.05 | 670 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 1.85 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0128 |
| **2037** | 2,500 | 76.8 | 88.2 | 4.06 | 1,460 | 0.01 | 142 | 0.005 | 0.005 | 0.0005 | 0.02 | 0.0432 | 0.0536 | 0.346 | 0.00007 | 71.9 | 0.0005 | 0.00006 | 0.01 | 0.003 | 0.07 | 0.00001 | 20.7 | 5.44 | 0.00563 | 0.05 | 670 | 0.05 | 0.03 | 0.0002 | 0.025 | 0.005 | 1.85 | 0.00005 | 0.00016 | 0.0133 | 0.04 | 0.0128 |
| **2038** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2039** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2040** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2041** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2042** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2043** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Notes:**

TDS = (0.22 x $HCO_3$ as $CaCO_3$)+ Cl + $SO_4$ + Na + K + Ca + Mg + (0.2259 x $NO_3$-N)