Appendix 27: 2022 Terrestrial Environment Monitoring and Mitigation Program (TEMMP) Annual Report

REPORT

Agnico Eagle Mines Limited - Meliadine Division

2022 Terrestrial Environment Management and Monitoring Plan Annual Report

Submitted to:

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Distribution List

1 Electronic Copy - Agnico Eagle Mines Limited

1 Electronic Copy - Nuqsana Golder

Study Limitations

On behalf of Agnico Eagle Mines Limited (Agnico Eagle), Nuqsana Golder Engineering and Environmental Inc. (Nuqsana Golder) has prepared this Terrestrial Environment Management and Monitoring Plan (TEMMP) Annual Report for the 2022 Monitoring Period at the Meliadine Gold Mine near Rankin Inlet, Nunavut.

This report was prepared, based in part, on information obtained from Agnico Eagle and other external information sources. In preparing the report, WSP Canada Inc. has relied in good faith on the information provided. We accept no responsibility for any deficiency or inaccuracy contained in this report because of our reliance on the aforementioned information.

The findings and conclusions documented in this report have been prepared for the specific application to this Project and have been developed in a manner consistent with that level of care normally exercised by environmental professionals currently practicing under similar conditions in the jurisdiction.

With respect to regulatory compliance issues, regulatory statutes are subject to interpretation. These interpretations may change over time and should be reviewed regularly.

If new information is discovered during future work, the conclusions of this report should be re-evaluated, and the report amended, as required, prior to any reliance upon the information presented herein.

Executive Summary

The Agnico Eagle Mines Limited (Agnico Eagle) Meliadine Gold Mine (the Project or the Mine), received a Project Certificate (No. 006) from the Nunavut Impact Review Board (NIRB) in February 2015, and amended in February 2019 (Amendment No. 001) and in March 2022 (Amendment No. 002). A Terrestrial Environment Management and Monitoring Plan (TEMMP) for the Project was prepared for submission with the Project Final Environmental Impact Statement (FEIS; Golder 2014) and forms a component of the documentation series produced in accordance with the Project, updated and submitted to the NIRB in June 2020 (TEMMP Version 4; Agnico Eagle 2022c). This report addresses requirements of the Terms and Conditions of the NIRB Project Certificate (No. 006), as relevant to the TEMMP.

The objectives of the TEMMP Annual Report are to summarize annual data collected from wildlife and vegetation monitoring programs, and to describe natural variation and potential Project-related effects to wildlife populations within and adjacent to the Project. The data was collected according to procedures and sampling or monitoring intervals outlined in the Project's Standard Operating Procedures (SOPs) and the TEMMP. The 2022 TEMMP Annual Report describes monitoring objectives and methods, 2022 survey results, mitigation activities, and management recommendations (i.e., adaptive management). The following summary documents monitoring information collected for the 2022 TEMMP for the Meliadine Project located in the Kivalliq Region of Nunavut.

Incorporation of Inuit Qaujimajatuqangit

- Eight meetings and site visits were held in 2022 where Inuit Qaujimajatuqangit (IQ) was collected. Two local field assistants worked on site in 2022. Local participation in monitoring programs considered COVID-19 health and safety measures for the protection of local communities.

Direct Habitat Loss

- Direct habitat loss is assessed every three years and was last assessed in 2021 (next assessment in 2024).

Indirect Habitat Loss

- Indirect habitat loss for caribou and wildlife habitat (soils and vegetation) is assessed every three years and was assessed in 2022. The next full assessment is scheduled for 2025.

Wildlife Observations

Wildlife Sighting/Track Surveys

- Wildlife sighting/track surveys were completed by Agnico Eagle personnel along the All-Weather Access Road (AWAR) and Mine infrastructure throughout the year.
- A total of 3,775 individuals from 10 identified wildlife species and 3 unidentified wildlife species groups (e.g., gull species) were recorded during surveys along the AWAR in 2022.
- A total of 537 individuals from 10 identified wildlife species and 3 unidentified wildlife species groups (e.g., gull species, duck species) were recorded during surveys on the Mine site in 2022.

Wildlife Incidentals

- There were 341 recorded incidental observations, representing 910 individuals of 19 species, around the Mine site (including the camp area) and the AWAR in 2022.

Den Sites

- Surveys were completed between 16 March to 20 March 2022 to locate dens of Arctic fox, grey wolf, polar bear, grizzly bear, and wolverine along the waterlines alignment. No dens were identified.
- Additional den surveys were performed around the Meliadine Mine Site, AWAR and the Rankin Inlet Bypass Road (RIBR) during the summer. All dens identified were Arctic fox dens. Six dens were located around the Meliadine Mine Site, two along the AWAR and one along the RIBR. One den near the Meliadine Mine Site was active in 2022.

Bird Nests

- Two common raven nests, one cackling goose nest, one barn swallow, one American robin nest, and one snow bunting nest were observed on Site 2022.

Incidents and Mortalities

- A total of 41 mortalities across 4 different species was reported at the Project from 13 January to 19 December 2022; all of these mortalities were suspected or confirmed to be caused as a direct result of Project activities. The majority of mortalities were Arctic foxes, 37 of which were trapped under GN guidance and euthanized in 2022. Four incidental reports were completed in 2022. No caribou mortalities were reported in 2022.

Wildlife Deterrents

- Wildlife deterrents (i.e., propane cannons and deterrent balloons) were implemented at five locations to deter birds from nesting on site.

Barren-ground Caribou

Caribou Behaviour Monitoring

- Statistical analysis of 2020 to 2022 data found that caribou farther from infrastructure (>300 m) displayed lower proportions of response behaviours.
- The proportion of response behaviours in groups increased following disturbances, but behaviours usually returned to baseline levels after six minutes.
- Caribou displayed a greater likelihood to be walking, alert, or running in surveys where there were disturbances such as vehicle traffic.

Caribou Remote Camera Study

- As in 2020 and 2021, a study was conducted in 2022 using motion-trigger cameras to study caribou interactions with the Project infrastructure during their annual migration, and particularly the AWAR.
- The cameras were successful at capturing many caribou crossing the AWAR, with peak caribou passage occurring two weeks later in 2022 versus 2021, consistent with patterns of inter-annual variability observed in the collar data. Caribou crossing timing and locations in 2022 were consistent with locations identified in 2020, 2021, and with locations identified by IQ from Inuit Elders and community members.
- Physical attributes of the road did not appear to influence crossing locations. More caribou were observed on cameras on the northern half of the road. Esker material is more common as a substrate on the northern half of the road which may suggest caribou prefer crossing on esker material.

Caribou Advisory

- Surveys to monitor migration of the Qamanirjuaq herd through the project were performed from 16 June through 01 August 2022. Caribou were detected during surveys from 19 June to 16 July, and closure of the Site and/or AWAR was triggered between 19 June to 15 July.
- The AWAR was closed for 273.50 hours across 13 days. Vehicle traffic on site was restricted for 269.70 hours across 17 days.
- Open pit operations, Exploration Camp, and activities at the Main Camp were restricted or shutdown for 266.70 across 16 days.
- Flights were cancelled to mitigate disturbance to caribou on 11 July and 12 July.

Hunter Harvest

- The 2022 Hunter Harvest Study included 44 participants amongst which 31 reported harvesting caribou. A total of 547 caribou were reported as harvested in 2022.
- A total of 10 muskox, 8 wolverine, and 14 wolves were harvested in 2022. Other harvested terrestrial mammals included Arctic hare. In the marine environment, beluga (27 individuals) was the most common species harvested followed by ringed seal (22 individuals), narwal (5 individuals), and bearded seal (1 individual).
- Considerably fewer birds were harvested by Rankin Inlet participants in 2022 (136 individuals) than in 2021 (394 individuals). In 2022, Canada goose and snow goose were harvested at the highest levels and made up 65% of all harvest bird species. Common eider, ptarmigan (Lagopus sp.), sandhill crane, and northern pintail were also harvested.
- Arctic char (878 fish), lake trout (124 fish), and Arctic cod (115 fish) were the most common species caught by fisherman. Relatively small numbers of Arctic grayling and lake whitefish were caught in 2022.

Birds

- Agnico Eagle contributed to the Environment and Climate Change Canada (ECCC) PRISM surveys in 2018 and 2019 and will continue to do so every five years (next survey in 2023/2024).
- Arctic Raptors conducted a formal survey and analysis for all known raptor nesting sites in the entire RSA in 2022. Study design included two surveys, one to assess the location of occupied territories during the pre-incubation and incubation periods, and one to assess site productivity during the late brood rearing period. Occupancy models were used to determine influence of disturbance on nest occupancy for peregrine falcons and rough-legged hawks. The analysis did not find an effect of distance to disturbance on nest occupancy for either species.

Soil and Vegetation Monitoring

- A soil and vegetation health field program was carried out by an ecologist from 28 July to 02 August, 2022. No dust deposition was visually observed at the reference locations. However, dust deposition on vegetation was observed on vegetation near the AWAR and a few sampling plots at the Mine. Vegetation die-back was observed at one sampling location near the Mine. Agnico Eagle will continue inspecting vegetation visually to assess possible impacts of dust deposition on vegetation.

- Results from the 2022 soil and vegetation health monitoring and indicate that soil characteristics and vegetation health remain comparable to baseline conditions, with the exception of a small, localized area near the WRSA and Tailings Facility, which was observed to have higher arsenic concentrations in the soil and vegetation compared to past sampling. Results from the FEIS (Golder 2014 - Volume 5 and 6, Sections 5.2 and 6.4 respectively) indicate there are areas where naturally occurring arsenic concentrations are high and above the CCME (2012) SQGs within the footprint, including the AWAR.
- Non-native plant surveys were completed along the AWAR and Project footprint from 28 July to 03 August.
- No non-native or invasive plant species were observed.
- From 2019 to 2021, many observations of what was then identified as flixweed (*Descurainia sophia*) were documented (Agnico Eagle 2019, 2020 and 2022a). However, these samples have been confirmed by researchers from the University of Saskatchewan that this species is northern tansy mustard (*Descurainia sophioides*), a species native to Nunavut (Agnico Eagle 2022b).

Environmental Variables

- The maximum annual temperature of 29.1°C was recorded on 14 July and the minimum annual temperature -39.8°C was recorded on five days in February (2, 3, 11, 20, and 21 February). The mean annual temperature was -9.3°C. Total recorded annual precipitation was 269.5 mm and snowmelt began 28 May when the average daily air temperature exceeded 0°C. The green-up date was estimated as 21 June 2022 based on photographs taken on site. Environmental variables will continue to be monitored on an on-going basis.

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Acronyms

Acronym	Full Term
AI	Artificial Intelligence
AIC	Akaike Information Criterion
ATV	All Terrain Vehicle
AWAR	All-Weather Access Road
CCME	Canadian Council of Ministers of the Environment
CESCC	Canadian Endangered Species Conservation Council
COVID-19	Coronavirus Disease
ECCC	Environment and Climate Change Canada
ERM	ERM Consultants Canada Ltd.
FEIS	Final Environmental Impact Statement
GIS	Geographic Information System
GLM	Generalized Linear Model
GN	Government of Nunavut
GN DoE	Government of Nunavut Department of Environment
GNWT ENR	Government of Northwest Territories Department of Environment and Natural Resources
GPS	Global Positioning System
HHS	Hunter Harvest Study
HTO	Hunters and Trappers Organization
IOL	Inuit Owned Lands
IQ	Inuit Qaujimajatuqangit
KEAC	Kivalliq Elders Advisory Committee
KHTO	Kangiqliniq Hunters and Trappers Organization
KivIA	Kivalliq Inuit Association
LSA	Local Study Area
MOU	Memorandum of Understanding
N/A	Not Applicable
NIRB	Nunavut Impact Review Board
NRV	Natural Range of Variability
NWMB	Nunavut Wildlife Management Board
PRISM	Program for Regional and International Shorebird Monitoring
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percent Difference
RIBR	Rankin Inlet Bypass Road
RSA	Regional Study Area
SARA	Species At Risk Act
SLRA	Screening Level Risk Assessment

Acronym	Full Term
SNU	Statues of Nunavut
SOP	Standard Operating Procedures
SQG	Soil Quality Guidelines
UAS	Unmanned aircraft system
UTM	Universal Transverse Mercator
TAG	Terrestrial Advisory Group
TBD	To Be Determined
TEMMP	Terrestrial Environment Management and Monitoring Plan
TEMMP Report	Terrestrial Environment Management and Monitoring Plan Annual Report
ToR	Terms of Reference
VEC	Valued Ecosystem Component
WRSA	Waste Rock Storage Area
WSP	WSP Canada Inc.

1.0 INTRODUCTION

1.1 Background

The Agnico Eagle Mines Limited (Agnico Eagle) Meliadine Gold Mine (the Project), located in the Kivalliq Region of Nunavut (Figure 1), received a Project Certificate (No. 006) from the Nunavut Impact Review Board (NIRB) in February 2015 (with Amendment 001 in February 2019 and Amendment 002 in March 2022). The subsequent Water Licence and leases allowed for the construction of a gold mine and ancillary facilities including an All-weather Access Road (AWAR), barge unloading facilities, lay-down area, and a fuel tank farm in Rankin Inlet. A conceptual Terrestrial Environment Management and Monitoring Plan (TEMMP) for the Mine was prepared for submission with the Project Final Environmental Impact Statement (FEIS; Golder 2014). The TEMMP will be reviewed and updated on an as-needed basis as the Mine proceeds from detailed design and construction through operations, closure, and post-closure. The TEMMP was updated in June 2020 and issued to the NIRB (TEMMP Version 4; Agnico Eagle 2022c).

This report addresses requirements of Project Certificate No. 006, which were first included in the 2017 Annual TEMMP Report (Golder 2018) and are listed in Table 1 of this report. The 2022 TEMMP Annual Report (this document) is the fifth of a series of annual TEMMP summary reports for the Mine and captures the third year of operations for the Mine. The purpose of this report is to summarize the 2022 data collected from wildlife and vegetation monitoring programs, and to describe natural variation and potential Project-related changes in wildlife populations within and adjacent to the Mine. The 2022 Annual Report describes monitoring objectives and methods, annual results, mitigation activities, and management recommendations (i.e., adaptive management). The Mine is anticipated to be operational through to 2027, with closure and post-closure activities continuing until 2037.

1.2 Project Description

The Project is located approximately 25 km north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. Situated on the western shore of Hudson Bay, the Project site is located on a peninsula between the east, south, and west basins of Meliadine Lake (63°1’23.8’’ N, 92°13’6.42"W), on Inuit Owned Lands (IOL).

Project site facilities include a plant site and accommodation buildings, a water management system that includes collection ponds, water diversion channels, retention dikes/berms, and water treatment plants. Project components include two ore stockpiles, a temporary overburden stockpile, a tailings storage facility, two waste rock storage facilities, a landfarm, incinerator, and landfill.

Environmental baseline studies were completed in the Project area prior to Project approval and integrated into the current project design according to the TEMMP (Agnico Eagle 2022c). Vegetation and wildlife Valued Ecosystem Components (VECs) were identified in consultation with regulatory agencies, the Kivalliq Inuit Association (KivIA) and the Kangiqliniq Hunters and Trappers Organization (KHTO). Vegetation VECs include plant populations and communities, listed (rare) plant species, and traditional use plant species. Wildlife VECs include ungulates (caribou [*Rangifer tarandus groenlandicus*] and muskox [*Ovibos moschatus*]), carnivores (grey wolf [*Canis lupus*] and polar bear [*Ursus maritimus*]), raptors, waterbirds, and upland birds (including migratory birds). Further details on VEC selection can be found in the FEIS (Golder 2014) and the TEMMP (Agnico Eagle 2022c).

LEGEND

- MINE INFRASTRUCTURE (2022)
- MINE FOOTPRINT (2022)
- APPROVED PROPOSED TERRESTRIAL LOCAL STUDY AREA (LSA)
- ALL-WEATHER ACCESS ROAD (AWAR)
- RANKIN INLET
- WATERCOURSE
- WATERBODY
- TERRITORIAL PARK

0 2,500 5,000
1:125,000 METRES

REFERENCE(S)
1. BASE DATA OBTAINED FROM AGNICO EAGLE LIMITED.
2. DATUM: NAD83 PROJECTION: UTM ZONE 15

CLIENT
AGNICO EAGLE
AGNICO EAGLE MINES LIMITED

PROJECT
MELIADINE GOLD PROJECT
NUNAVUT

TITLE
PROJECT LOCAL STUDY AREA

CONSULTANT
wsp

YYYY-MM-DD	2023-03-20
DESIGNED	HH
PREPARED	CDB
REVIEWED	SW
APPROVED	CDM

PROJECT NO.	CONTROL	REV.	FIGURE
21505027	3000/3200	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Table 1: Concordance Table with NIRB Project Certificate No. 006 (Amendment 002) Terms and Conditions

Term	Condition	Annual Report Section
37	The Proponent shall incorporate protocols for monitoring for the potential introduction of invasive vegetation species (e.g., surveys of plant populations in previously disturbed areas) into its Terrestrial Environment and Monitoring Plan. Any introductions of non-indigenous plant species must be promptly reported to the Government of Nunavut Department of Environment (GN DoE).	7.0
38	The Proponent shall conduct sampling to determine baseline levels for metals in soils found in areas with berry-producing plants near the Project area and shall update relevant vegetation sections within the Terrestrial Management and Monitoring Plan to incorporate ongoing monitoring of these parameters prior to commencing operations.	6.0
39	The Proponent shall develop and establish an on-going monitoring program to determine the distribution, abundance, and health of vegetation species used as caribou forage (such as lichens) near Project areas, prior to commencing operations.	5.1, 6.0
40	The Proponent shall review, on an annual basis, all monitoring information and the vegetation mitigation and management plans developed under its Environmental Management Plan and Terrestrial Environment and Monitoring Plan (TEMMP) and adjust such plans as may be required to effectively prevent or reduce the potential for significant adverse project effects on vegetation abundance, diversity and health, taking into account lessons learned at other northern mining developments where appropriate.	5.1, 6.0
44	In consultation with the Government of Nunavut (GN) and other relevant parties, such as the Terrestrial Advisory Group, the Proponent shall further develop its Terrestrial Environment Management and Monitoring Plan (TEMMP) to include increased caribou monitoring across the regional study area and additional details on the scope and design of monitoring programs. The Proponent shall also demonstrate consideration for contributing to existing and planned regional monitoring initiatives associated with terrestrial wildlife and wildlife habitat and the incorporation of Inuit Qaujimaningit, Inuit Qaujimajatuqangit, Traditional and Community Knowledge, as appropriate. Monitoring should be adequate to test impact predictions, monitor impact thresholds and trends over time, and to support implementation of mitigation measures as proposed in the Final Environmental Impact Statement and any subsequent Addenda submitted by the Proponent. The Proponent in consultation with the Terrestrial Advisory Group shall revise the 2021 Technical Memorandum entitled "Collared Caribou Meliadine All-Weather Access Road Interactions" describing the crossings and deflections of caribou in relation to the all-weather access road as assessed using caribou collar data and shall provide a copy to the NIRB prior to construction/installation of the waterlines.	3.0
45	The Proponent shall demonstrate consideration for cooperating with existing and planned regional and/or community-based monitoring initiatives associated with terrestrial wildlife and wildlife habitat that produce information pertinent to mitigating project-induced impacts. The Proponent shall give special consideration for supporting regional studies of population health and harvest programs for Qamanirjuaq caribou which help address areas of uncertainty for Project impact predictions.	3.0
46	The Proponent shall update its Terrestrial Environment Management and Monitoring Plan (TEMMP) for the Project to include a detailed harvest study prepared in consultation with the Government of Nunavut (GN) and other affected parties. The design of the harvest study should demonstrate consideration for the following: a. Hiring of a dedicated local survey coordinator through local Hunters and Trappers Organizations (HTOs) and provision of adequate resources for the HTOs to run the program; b. The potential effects on caribou populations and on caribou behaviour resulting from increased human access caused by the all-weather access road and associated roads and trails; and, c. Increasing local knowledge of the project development areas, including establishing baseline harvesting levels prior to unrestricted public access on the all-weather access road.	13.0
47	The Proponent shall share information with the Government of Nunavut (GN) relating to the migration of caribou and include the GN as a party respecting caribou monitoring and movement through Project development areas, including the all-weather access road and associated roads and trails.	12.0
52	The Proponent shall undertake periodic surveys and a habitat assessment for muskoxen in the regional study area by partnering with, or complementing, the existing regional muskox monitoring programs.	11.0
53	Prior to construction of Project infrastructure including the waterlines and Phase 2 of the all-weather access road, the Proponent shall conduct a survey that is sufficient to locate any dens of foxes, bears or wolverines that could be damaged or destroyed during construction or operation of the Project.	9.3
54	The Proponent shall ensure that road safety barriers, or berms, or waterline coverings associated with Project infrastructure, all-weather access road and associated roads/trails and the waterlines are constructed to allow for the safe passage of caribou and other terrestrial wildlife while achieving the objective of separating public road use with Project-related mine traffic or transport of saline effluent.	9.0, 12.4

Table 1: Concordance Table with NIRB Project Certificate No. 006 (Amendment 002) Terms and Conditions

Term	Condition	Annual Report Section
55	In consultation with the Government of Nunavut (GN) and other affected parties, the Proponent shall set thresholds for direct mortality of wolf, grizzly bear, polar bear, wolverine, and fox to ensure monitoring and mitigation for the Project is responsive to undesirable rates of mortality. The Proponent shall reach an agreement with the appropriate Designated Inuit Organization regarding compensation or any direct mortality of wildlife resulting from the Project.	9.5
56	The Proponent shall report annually to the NIRB regarding its terrestrial environment monitoring efforts, with inclusion of the following information: a. Description of all updates to terrestrial ecosystem baseline data; b. A description of the involvement of Inuit in its monitoring programs; c. A detailed presentation and analysis of the distribution relative to Project infrastructure and activities for caribou and other terrestrial mammals observed during surveys and incidental sightings; d. Results of the annual monitoring program, including field methodologies and statistical approaches used to support conclusions drawn; and, e. An assessment and presentation of annual environmental conditions including timing of snowmelt, green-up, as well as standard weather summaries.	1.2.1, 3.0, and 4.0, 9.1, and 12.1
57	Within its annual report to the NIRB, the Proponent shall incorporate a review section which includes: a. An examination for trends in the measured natural variability of Valued Ecosystem Components in the region relative to the baseline reporting; b. A detailed analysis of wildlife responses to operations with emphasis on wildlife behaviour, mortalities and displacements (if any), responses to operations of the all-weather access road and associated access roads/trails, and the waterlines; c. A demonstration and description of how the monitoring results, including the all-weather access road and associated access roads/trails, and waterlines contribute to cumulative effects of the project; and, d. Any proposed changes to the monitoring survey methodologies, statistical approaches or proposed adaptive management stemming from the results of the monitoring program.	8.2.3.2, 9.1, and 12.1
59	If Species at Risk or their nests and eggs are encountered during Project activities or monitoring programs, the primary mitigation measure must be avoidance. The Proponent shall establish clear zones of avoidance based on the species-specific nest setback distances outlined in the Terrestrial Environment Management and Monitoring Plan.	9.4
61	Prior to bird breeding season, the Proponent shall either conduct clearing activities or identify and install nesting deterrents (e.g., flagging) to discourage birds from nesting in areas likely to be disturbed by construction/clearing activities. If clearing is to take place during the nesting season, a nest survey should take place to identify nests and any identified nests must remain undisturbed until the young have fledged or left the nest. Any nests identified shall be included as part of the annual reporting for the Terrestrial Environmental Mitigation and Monitoring Plan (TEMMP).	9.4, 10.0
62	The Proponent shall protect any nests found (or indicated nests) with a buffer zone determined by the setback distances outlined in its Terrestrial Environment Mitigation and Monitoring Plan (TEMMP), until the young have fledged. If it is determined that observance of these setbacks is not feasible, the Proponent will develop nest-specific guidelines and procedures to ensure bird's nests and their young are protected.	9.4,10.0
71	The Proponent shall develop detailed and robust mitigation and monitoring plans for migratory birds, reflecting input from relevant agencies, the Kivalliq Inuit Association and communities.	8.0
72	The Proponent shall continue to develop and update relevant monitoring and management plans for migratory birds under the Proponent's Environmental Protection Plan and Terrestrial Environment Mitigation and Monitoring Plan (TEMMP) prior to construction. The key indicators for follow up monitoring under this plan will include upland birds (including migratory birds), waterbirds, raptors, and seabirds including migration and wintering.	8.0
73	The Proponent's monitoring program shall assess and report, on annual basis, the extent of terrestrial habitat loss due to the Project to verify impact predictions and provide updated estimates of the total Project footprint.	5.1
105	The Proponent is strongly encouraged to consider incorporating information obtained from local outfitting and guiding businesses into its Hunter Harvest Survey where possible, and to include these organizations as potential respondents to surveys undertaken.	13.0
118	The Proponent shall include in an updated Terrestrial Wildlife Management and Monitoring Plan (TEMMP), plans for increased caribou monitoring efforts including weekly winter track surveying and summer and fall surveys undertaken on foot twice per month. These results shall be reported to the NIRB with the Proponent's annual reporting requirements. The Proponent shall, in consultation with the Terrestrial Advisory Group or appropriate parties, develop a decision tree outlining mitigation and monitoring steps to be implemented when caribou in specified group sizes are observed within specified distances of the Project's AWAR and waterlines.	12.5

Table 1: Concordance Table with NIRB Project Certificate No. 006 (Amendment 002) Terms and Conditions

Term	Condition	Annual Report Section
119	The Proponent shall include within its updated Terrestrial Wildlife Management and Monitoring Plan (TEMMP), a commitment to establishing deterrents along the all-weather access road (AWAR) at any areas where it is observed that caribou are attracted to the AWAR and their presence may present a risk of collisions with traffic along the AWAR (such as areas where caribou are utilizing the AWAR to facilitate movement, areas where caribou may be licking minerals/road salt from the road, areas where caribou are gathering to avoid insects, etc.). Prior to the waterlines becoming operational, the Proponent shall specify within the TEMMP and/or Spill Contingency Plan measures that will be implemented to prevent caribou from accessing or being exposed to water spilled, or otherwise released from the waterlines.	TEMMP (Agnico Eagle 2022c, Appendix III)
132	The Proponent shall, in consultation with the groups listed as Responsible Parties above, and any other parties considered by the Group to be necessary, establish a Terrestrial Advisory Group (TAG). The TAG shall hold its first meeting prior to any construction/installation of the waterlines. The central mandate of the TAG will be to continually review and refine impact management, mitigation, and monitoring details within the Terrestrial Environment Management and Monitoring Plan (TEMMP). The TAG Members will collaborate to share and consider methods, results, and analysis from caribou and terrestrial environment studies and monitoring Inuit Qaujimaningit, Inuit Qaujimajatuqangit, Traditional and Community Knowledge shared by knowledge holders, and other terrestrial environment monitoring data as it becomes available. The Proponent will consider the information shared by the TAG Members for incorporation into the Project's impact management, mitigation, and monitoring measures related to the protection of terrestrial wildlife and wildlife habitat as appropriate. Agnico Eagle shall be responsible for demonstrating how the information shared and considered by the TAG has been incorporated into the Project's impact management, mitigation, and monitoring measures related to the protection of terrestrial wildlife and wildlife habitat as appropriate.	3.0

1.2.1 Concordance with Terms of Reference

Concordance with Terms and Conditions of NIRB Project Certificate No. 006 (Amendment 2) is reflected in Table 1. NIRB recommends the following related to standardization of data for monitoring programs:

> *"all monitoring plans should be designed so that results from these programs can be coordinated with ongoing regional initiatives or programs with relevant government organizations, or regional authorities." NIRB guidelines, Section 9.3, page 78-79.*

> *"When designing data collection or baseline studies, it is recommended that the Proponent coordinate with ongoing programs with relevant developments, government organizations, regional authorities, and researchers. This recommendation applies to data collected for the Nunavut General Monitoring Program (NGMP), as per Article 12 of the Nunavut Land Claims Agreement (NLCA), the Proponent's project-specific monitoring programs, as well as any regional monitoring initiatives in which the Proponent will participate. The Proponent is expected to coordinate on any initiatives undertaken by government organizations in respect to the NGMP and to liaise with the NGMP Secretariat whenever possible." NIRB guidelines, Section 7.7.1, page 40-41.*

Agnico Eagle will comply with these principles and has already established several programs that involve collaborations with regional initiatives and contribute to monitoring cumulative effects. These include:

- **Caribou Collar Program:** Support the Government of Nunavut's (GN) caribou satellite-collaring program for the Qamanirjuaq herd (and other herds in the Kivalliq Region that may interact with the Mine), facilitating monitoring of cumulative effects at the herd level (Agnico Eagle 2022c; Sections 2.2 and 4.7).
- **Hunter Harvest Program:** Agnico Eagle renewed its Collaboration Agreement with the KHTO to develop and implement a methodology to document caribou harvesting around the Meliadine Mine, and to participate

in Mine site studies and monitoring. This will contribute to an understanding of cumulative effects by increasing understanding of the regional distribution and seasonality of hunting (Agnico Eagle 2022c; Sections 2.2 and 4.7).

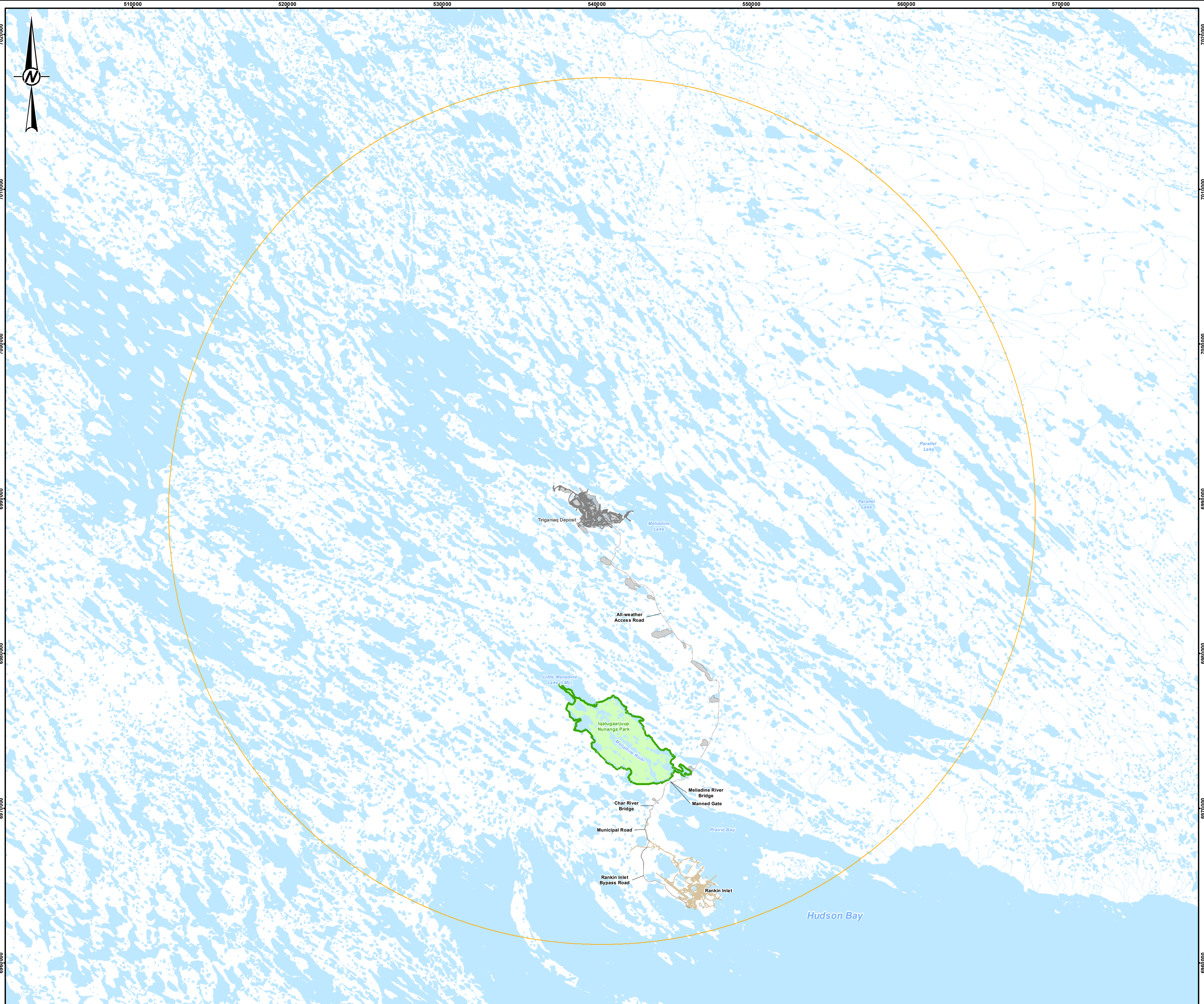
- **Raptor Monitoring Program:** Agnico Eagle, in collaboration with the Arctic Raptor Project implemented a raptor monitoring program (Agnico Eagle 2022c; Section 4.9). This will directly align monitoring efforts at Meliadine with this long-term regional research program which involves government, non-government, Indigenous communities, and academic partnerships.
- **Waterfowl and Shorebird Monitoring:** Agnico Eagle, in collaboration with Environment and Climate Change Canada (ECCC), have agreed to implement the Program for Regional and International Shorebird Monitoring (PRISM) (Agnico Eagle 2022c; Section 4.11). This will directly align monitoring efforts at Meliadine with other Agnico Eagle properties for waterfowl and shorebirds.
- **Wildlife Surveys**: Agnico Eagle, in collaboration with the KHTO, will conduct wildlife surveys along the AWAR and with Environmental Technicians around the Mine site. This will contribute to an understanding of cumulative effects in the region by collecting routine wildlife survey data (including caribou) and assist in anticipating large herd migrations, communicating with the KHTO, KivIA, and managing mine activities during migration events.

1.3 Study Area Boundaries

The Local Study Area (LSA) includes a 500 m buffer around the Project footprint and includes a 1,000 m buffer around the AWAR, and the Rankin Inlet Bypass Road. The total area of the LSA is 10,598 hectares (ha) (Figure 1).

The Regional Study Area (RSA) encompasses an area that includes a 28 km radius cantered around the Project, including Rankin Inlet for a total area of 246,300 ha (Figure 2).

Further details on the justification for study area sizes can be found in the FEIS (Golder 2014) and the TEMMP (Agnico Eagle 2022c).



LEGEND

- MINE INFRASTRUCTURE (2022)
- MINE FOOTPRINT (2022)
- REGIONAL STUDY AREA (RSA)
- ALL-WEATHER ACCESS ROAD (AWAR)
- RANKIN INLET
- WATERCOURSE
- WATERBODY
- TERRITORIAL PARK

0 5 10

1:250,000 KILOMETRES

REFERENCE(S)

1. BASE DATA OBTAINED FROM AGNICO EAGLE LIMITED.
2. DATUM: NAD83 PROJECTION: UTM ZONE 15

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED

PROJECT

MELIADINE GOLD PROJECT
NUNAVUT

TITLE

PROJECT REGIONAL STUDY AREA

CONSULTANT

wsp

YYYY-MM-DD	2023-03-20
DESIGNED	HH
PREPARED	CDB
REVIEWED	SW
APPROVED	CDM

PROJECT NO.	CONTROL	REV.	FIGURE
21505027	3000/3200	0	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

1.4 Monitoring Approach

Wildlife monitoring is an essential tool in protecting and maintaining wildlife in the vicinity of the Project. A comprehensive monitoring strategy has been implemented and, as required, is adapted to meet the objectives of the management strategy and methods set out in the TEMMP (Agnico Eagle 2022c). Monitoring programs evaluate the effectiveness of mitigation measures and assess Project-related effects predictions. For all wildlife monitoring programs there is a certain level of uncertainty or unpredictability; therefore, residual effects identified during monitoring may require implementation of adaptive management strategies. Outcomes of adaptive management may include increasing, decreasing, or no change to mitigation and/or monitoring or implementing special studies to further understand Mine-related effects.

To evaluate the accuracy of effects predictions, a series of quantitative monitoring indicators have been developed within the broad categories of habitat distribution, wildlife distribution, wildlife richness, wildlife diversity, wildlife abundance, and environmental health. Previous monitoring was conducted during the construction phase, and continued into the operations phase. Some of the objectives below may not be answered at this time or will be addressed qualitatively until more data under operations is obtained.

1.5 Objectives

The primary objectives of this 2022 TEMMP Annual Report include:

- Collecting information that will assist Agnico Eagle to determine if there are effects on the terrestrial environment and if these effects were accurately predicted in the FEIS.
- Reporting the results of the 2022 monitoring programs.
- Summarizing the monitoring strategy implemented over the course of the year.
- Evaluating the function and validity of implemented monitoring strategies.
- Summarizing adaptive management strategies.
- Providing management recommendations for 2023.
- Allowing regulators to contribute advice for improving monitoring and management.

1.6 Report Organization

Within each section of this report, data is presented that will be tracked over the life of the Project. Recommendations for enhancement to the TEMMP are presented at the end of each section for consideration and may be incorporated into the TEMMP for subsequent years. The TEMMP is an evolving program that will reflect recommendations during previous years, as well as advances in Project development. Changes will be captured in future revisions of the TEMMP as needed.

2.0 REVIEW OF IMPACT PREDICTIONS

A summary of the impact predictions proposed in the updated TEMMP (Agnico Eagle 2022c) is provided in Table 2. If Project impacts exceed the thresholds, an internal review of mitigation is triggered and adaptive management is implemented where applicable. The corresponding sections of this TEMMP Annual Report where monitoring indicators are discussed are also listed.

Table 2: Summary of Predicted Effects, and Accuracy of Impact Predictions

Monitoring Indicator	Proposed Thresholds	Surveyed in 2022?	Exceeded in 2022?	Monitoring Methods	Frequency of Data Collection	Annual Report Section Reference
Vegetation (Wildlife Habitat)						
Habitat Loss	No greater than: Terrestrial – 2,951 ha Aquatic – 515 ha	No	N/A	Aerial photographs, satellite imagery, ground surveys, GIS analysis	Every 3 Years	5.0
Habitat Degradation by Contamination	No effects to plant health from dust deposition SLRA – TBD	Yes	Yes	Vegetation and Soil Samples	Every 3 Years	6.0
Habitat Reclamation following Mine Closure	N/A	No	N/A	Ground Surveys, Vegetation Plots, Mapping	Once pre-construction baseline (2017) and 3 times Post-Closure	N/A
Habitat Degradation by Contamination	No non-native plant species established	Yes	No	Invasive Plant Survey of AWAR and Project site	Annually	7.0
Ungulates						
Habitat Loss and Degradation	No greater than 2,951 ha of terrestrial habitat loss	No	N/A	Aerial photographs, satellite imagery, ground surveys, GIS analysis	Every 3 Years	5.0
Sensory Disturbance	<10% caribou deflections from AWAR	No	N/A	Caribou Behaviour Monitoring	Daily / Weekly	12.3
Vehicle Collisions	No more than 1 ungulate/year	Yes	No	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance	Daily	9.5
Hunting by Rankin Inlet Residents	TBD after 3 years of data collection, in collaboration with GN	Yes	TBD	Hunter Harvest Study	Collected throughout the year and reported annually	13.0
Other Project-related Mortality	No more than 1 ungulate/year	Yes	No	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance	Daily	9.5
Exposure to Contaminated Water or Vegetation	SLRA – TBD	No	N/A	Vegetation and Soil Samples	Every 3 Years	N/A

Table 2: Summary of Predicted Effects, and Accuracy of Impact Predictions

Monitoring Indicator	Proposed Thresholds	Surveyed in 2022?	Exceeded in 2022?	Monitoring Methods	Frequency of Data Collection	Annual Report Section Reference
Predatory Mammals						
Project-related Mortality	20 Arctic fox/year	Yes	Yes	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance. No trapping in 2020	Daily	9.5
Raptors						
Disturbance of Nesting Raptors	To be determined in consultation with GN and Alastair Franke, related to occupancy and productivity.	Yes	No	Active Nest Monitoring	Nests within 200 m – Daily Nests from 200 to 1,000 m – Weekly	8.2
Project-related Mortality	No more than 1 raptor/year	Yes	No	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance	Mine Site-Daily AWAR – 2x/Week	9.5
Waterbirds						
Habitat Loss and Degradation	No more than 515 ha of aquatic habitat	No	N/A	Aerial photographs, satellite imagery, ground surveys, GIS analysis	Every 3 Years	5.0
Disturbance of Nesting Waterfowl	TBD once NRV is established through consultation with ECCC and GN	No	N/A	Shoreline Surveys	Annually	9.4
Exposure to Contaminated Water or Vegetation	SLRA – TBD	No	N/A	Vegetation and Soil Samples	Every 3 Years	N/A
Project-related Mortality	No more than 1 waterbird/year	Yes	No	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance	Mine Site-Daily AWAR – 2x/Week	9.5

Table 2: Summary of Predicted Effects, and Accuracy of Impact Predictions

Monitoring Indicator	Proposed Thresholds	Surveyed in 2022?	Exceeded in 2022?	Monitoring Methods	Frequency of Data Collection	Annual Report Section Reference
Other Breeding Birds						
Habitat Loss and Degradation	No greater than 2,951 ha of terrestrial habitat loss	No	N/A	Aerial photographs, satellite imagery, ground surveys, GIS analysis	Every 3 Years	5.0
Exposure to Contaminated Water or Vegetation	SLRA – TBD	No	N/A	Vegetation and Soil Samples	Every 3 Years	N/A
Changes in Breeding Bird Populations	TBD once NRV is established through consultation with ECCC	No	N/A	Breeding Bird Plots and Transects, PRISM	Breeding Bird – Every 3 Years PRISM – Plots surveyed over 2 years every 5 Years	N/A

Notes: AWAR = All-Weather Access Road; ECCC = Environment and Climate Change Canada; GN = Government of Nunavut Department of Environment; NRV = Natural Range of Variability; PRISM – Program for Regional and International Shorebird Monitoring; SLRA = Screening Level Risk Assessment; TEMMP = Terrestrial Environment Management and Monitoring Plan (Agnico Eagle 2022c); ha = hectares; m = metres; N/A = not applicable; TBD = to be determined.

3.0 INCORPORATION OF INUIT QUAJIMAJATUQANGIT

Inuit Qaujimajatuqangit (IQ) was collected through site visits and meetings between 2 June and 19 November (Table 3).

Table 3: Inuit Qaujimajatuqangit captured for Meliadine in 2022

Date	Topic	Participants	Venue	Inuit Qaujimajatuqangit
02 June	Caribou trails around Meliadine AWAR	Rankin Elders: Jack Kabvitok Aline Kabvitok Levenia Brown John Tatty Rosie Oolooyuk Susie Kritterdlik David Kritterdlik	Rankin Office	Agnico Eagle sought advice from Elders from long time Rankin Inlet residents as to if the route used by the caribou herd through Ittiqluk and Meliadine is the usual route or trail? Answer: the original route by the caribou herd was through the Ittiqluk and Dianne river. Now, the herd moves through another trail. Agnico Eagle asked where is the place called Akutnaaq? Answer: it is located near Pistol Bay, closer to Whale Cove.
22 August	KEAC (Kivalliq Elders Advisory Committee) annual meeting	Committee members from Arviat, Whale Cove, Rankin Inlet, Chesterfield Inlet, Baker Lake	Baker Lake	Terms of Reference: ■ Review & approval of the Terms of Reference (ToR) outlining roles and responsibilities for KEAC. The ToR was approved. Meliadine Extension Update ■ Permitting Shared NIRB related updates regarding the proposed extension of Meliadine. ■ Elders asked that information about Meliadine mine be communicated on the radio because are keen to learn more. Radio is easiest to have information communicated in Inuktitut. ■ Elder asked if possible to have more information about impacts of AWAR on bird nesting and dust. ■ Elder asked if possible to have more information of mine operations and denning areas. ■ Elder asked if can learn more about types of tailings and how that impact nuna "land" and water.

23 August	DeWatering and Fish Out	KEAC	Baker Lake	■ Dewatering and fish out were concepts that were difficult to explain to committee members. Inuit were informed of dewatering but wanted to talk about fish out. Following comments were captured:
				  ■ One elder participated in fish out. He saw fish bite other fish.
				  ■ One elder added that Elders always knew what lakes had drinkable water and they shared that knowledge with others. Now, with tailings and dewatering, they would not know anymore. It would be good to know what is the impact of tailings on drinkable water after the mine is closed.

Table 3: Inuit Qaujimajatuqangit captured for Meliadine in 2022

Date	Topic	Participants	Venue	Inuit Qaujimajatuqangit
23 August	Meliadine Extension update	KEAC	Baker Lake	▪ Elders from Rankin asked why the airstrip location was selected. ▪ Elders from Rankin asked why the location of the wind farm was selected. ▪ Winter storms could last 10 days so the animals are used to strong winds and associated sounds. That is why animals should adjust (to wind farms). ▪ Elder from Rankin visited a wind farm in Saskatchewan and was not happy with having a wind farm close to her cabin. ▪ Another Elder from Rankin indicated there may be graves around (the area where wind farms are located). It would be a shame if no one knows if graves are located near the wind farms and the mine.
25 October	Executive KEAC meeting	KEAC Executives (Rosie Oolooyuk, Levenia Brown, David Owingayak, Martin Kreelak, Philippa Iksiraq, John Avaala)	Baker Lake	▪ Agnico Eagle IQ coordinator reminded group that KEAC was established after elders wanted to play a role to keep communities informed of mining and other Agnico Eagle activities in the communities. Elders are often consulted in the beginning of the projects but are sometimes forgotten afterwards. By being kept informed of the activities by Agnico, Elders are very active in providing advice on how to keep Inuit culture and traditions even as the region moves towards more mining activities.
26 October	Executive KEAC meeting	KEAC Executives	Baker Lake	▪ Elders asked if there are promotions for Inuit working at Agnico Eagle. Elders would like to know if Inuit have options to be promoted at work? Elders would like more information on this question (this is a commitment to brief KEAC at next Annual meeting). ▪ Elder mentioned that Inuit now have good jobs with Agnico Eagle. But this creates problems at home because Inuit get into trouble with alcohol (because they can now afford it). Also, absence causes family issues because one spouse is on rotation. This creates jealousy and tension. Couples do not know how to manage their time away. Elders can easily identify Inuit needing advice on how to deal with mental stress about family worries. Suicide is thought about when dealing with mental stress. Elders are offering their help to Agnico Eagle in providing counselling at site. Agnico Eagle will be asking both Meliadine and Meadowbank for their feedback on getting Elders on site for this purpose. Agnico is pleased to report that this advice has since been incorporated into Meadowbank and will be incorporated at Meliadine by spring 2023.

Table 3: Inuit Qaujimajatuqangit captured for Meliadine in 2022

Date	Topic	Participants	Venue	Inuit Qaujimajatuqangit
18 November	KEAC Executives	Dorothy, Levenia, Rosie, Martin Kreelak, John Avaala, John Tatty	Rankin Inlet in person	■ Elders brought forward questions about helicopters “chasing” or scaring caribou herd. Agnico Eagle: we have strict policies about flying when caribou is located. ■ Elders expressed concerns that many other organizations such as the GN or other scientists might be using helicopters to monitor caribou either for collaring or other matters. Elders are concerned about increased use of helicopters. They request that Agnico keep the Elders advised of helicopter use and protocols when caribou are around. ■ Agnico Eagle committed to bring exploration representative to meet Elders to update on exploration activities.
19 November	KEAC Executives	Same as above	Rankin Inlet in person	■ Elder asked if it is possible to post the activities of the Terrestrial Advisory Group (TAG) on the radio? Community members would like to be kept informed about TAG activities on radio. ■ Elders would like to be more involved with consultation and sharing of information in the communities. ■ Elder recommended that youth need to be trained on well-being and training programs. Also, elders are needed at mine site to help reduce racism to resolve some cultural issues. ■ Agnico Eagle is looking at culturally appropriate programs that could support this request by Elders such as Arctic Rose Messy Book programs.

AWAR = All-Weather Access Road; GN = Government of Nunavut; IQ = Inuit Qaujimajatuqangit; KEAC = Kivalliq Elders Advisory Committee; NIRB = Nunavut Impact Review Board; TAG = Terrestrial Advisory Group; ToR = Terms of Reference.

Field programs were guided by IQ, including the assistance of local field assistants whenever possible. Two local field assistants worked on site in 2022. Local participation in monitoring programs considered COVID-19 health and safety measures for the protection of local communities.

4.0 ENVIRONMENTAL VARIABLES

A summary of climate conditions collected on site in 2022 are presented in Table 4. Data was collected from 1 January to 31 December 2022 through the on-site meteorological station and rain gauges.

Table 4: Climate Conditions Recorded in the Project Area (2022)

Environmental Variable	Value[a]
TEMPERATURE (°C)	
Mean Annual Temperature	-9.3
Maximum Annual Temperature	29.1
Minimum Annual Temperature	-39.8
PRECIPITATION (mm)	
Total Annual Precipitation	269.5[b]

a) Values reported from 1 January to 31 December, collected by Agnico Eagle staff.

b) Measured using Geonor Precipitation Gauge.

Notes: °C = Celsius; mm = millimetre.

The maximum annual temperature of 29.1°C was recorded on 14 July 2022 and the minimum annual temperature -39.8°C was recorded on five days in February 2022 (2, 3, 11, 20, and 21 February). The mean annual temperature was -9.3°C (Table 4). Total recorded annual precipitation was 269.5 mm and snowmelt began 28 May 2022 when the average daily air temperature exceeded 0°C. Total precipitation includes both rain and snowfall. The green-up date was estimated as 21 June 2022 based on photographs taken on site. Environmental variables will continue to be monitored on an on-going basis.

5.0 HABITAT LOSS

5.1 Direct Habitat Loss

The vegetation component of the TEMMP (Agnico Eagle 2022c) outlines how Agnico Eagle plans to reduce Project-related effects to vegetation populations and communities and, consequently, wildlife habitat.
The monitoring plan includes both environmental and follow-up monitoring. The objective of this component of the TEMMP Annual Report is to determine if direct vegetation/habitat loss due to the Project footprint stays within impact prediction of 2,950 ha (Golder 2014).

Direct habitat loss was reported in the 2021 TEMMP Annual Report (Agnico Eagle 2022a). As of January 2022, a total area of 633 ha has been altered due to Project construction, representing 38% of the 2012 Project Approved footprint (1,682 ha) and 21% of the predicted Project Footprint (2,950 ha (Golder 2014). The footprint that was analyzed included all developments being completed as part of the construction phase. Follow-up monitoring occurs at three-year intervals, with the next scheduled for 2024. The follow-up monitoring is used to provide feedback to Mine operations to determine if the goals and objectives are being met.

5.2 Indirect Habitat Loss

Indirect effects to wildlife are associated with changes in habitat that can alter the movement and behaviour of individuals in the vicinity of the Project as a result of sensory disturbance. Indirect effects are addressed through several of the monitoring programs per the TEMMP.

Caribou behaviour monitoring is presented in Section 12.1 of this report. Across all years studied (2020, 2021, and 2022), caribou groups tended to show greater response behaviours (running, alert) when in smaller groups or within 300 m of a road (ERM 2023a).

For nesting birds, site-specific nest management plans may be required if birds are within the Project footprint. For the 2022 monitoring period, indirect Project effects on nesting birds are addressed in Section 9.4. In 2022, seven incidental bird nests were observed on the Mine site during the nesting season.

Indirect Project effects are assessed through soils and vegetation monitoring every three years, to align sampling years with the first year of construction in 2017. Soil and vegetation monitoring was completed in 2019 and 2022 and is presented in Section 6.0. The next full assessment is scheduled for 2025.

6.0 SOIL AND VEGETATION MONITORING

The scope of the landscape component of the TEMMP Annual Report is to report on levels of metals in berry producing plants, sedges, lichen, and soil chemistry potentially affected by the Mine. To evaluate the potential for adverse health effects to terrestrial life associated with changes in environmental quality due to chemical releases from the Project, the existing (or baseline) conditions of the environment must first be understood. Soil and Vegetation monitoring was conducted in 2017 to inform the baseline conditions. Monitoring is completed on a three-year interval, first initiated in 2019 (first year of operations). This section provides the results for soil and vegetation monitoring completed in 2022.

Local vegetation cover is predominantly characterized by heath tundra, and lichen-heath communities. Low-lying areas between the drumlins and eskers are dominated by sedge wetlands, shallow ponds, and various shallow and deep-water lakes. The main change from the Mine on the landscape is direct disturbance, which will be a long-term effect as the recovery of vegetation is slow in Arctic environments (Burt 1997).

The objectives of this component of the TEMMP Annual Report are:

- To monitor levels of metals in soils collected at the Mine site, AWAR, and Reference Areas (10 to 15 km from the site infrastructure).
- To monitor level of metals in lichen tissue and vascular plants within the Mine site, AWAR, and Reference Areas (10 to 15 km from the site infrastructure).

Lichens were chosen because they are estimated to account for 87 to 90% of the diet for caribou (Thomas 1998). Lichens can also effectively and preferentially bioaccumulate airborne contaminants because of their lack of roots, large surface area, long life span, and high ion exchange capacity (Naeth and Wilkinson 2006). This allows lichens to provide “worst-case” exposure concentrations for assessment of risks to caribou.

Berry-producing plants were included in the assessment because human consumption of berries in the Project infrastructure and AWAR was raised as a concern by local communities.

6.1 Methods

6.1.1 Sampling Locations

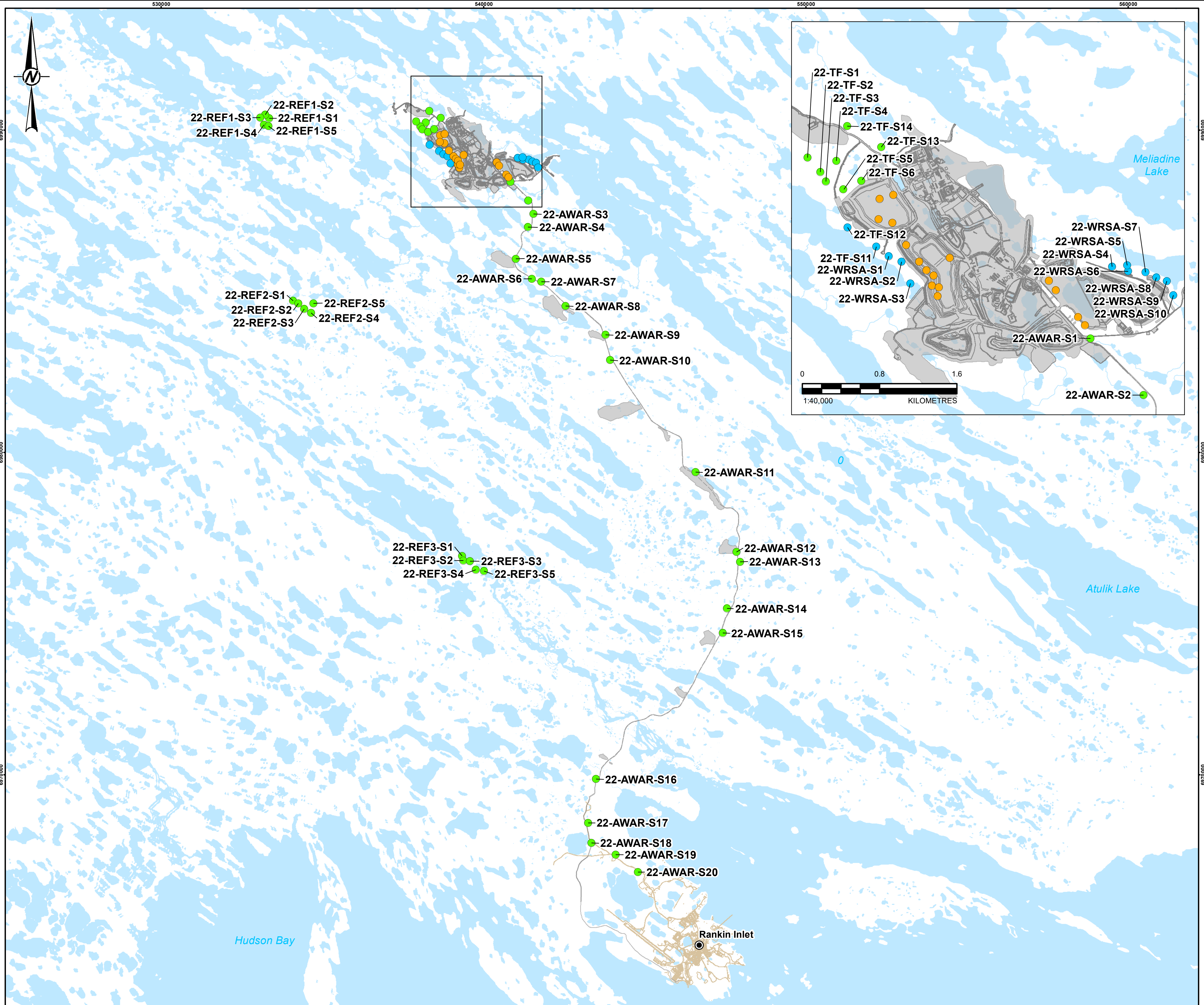
A field program was carried out by a WSP Vegetation Ecologist from 28 July to 02 August 2022 to monitor the existing conditions of soil and vegetation quality. Sampling locations selected in 2017 as part of the TEMMP were revisited in 2019 (Golder 2020) and in 2022 (Figure 3). Due to advancement of Mine development and footprint expansion from 2019, some previously visited sites were not able to be re-sampled. New sites were established to replace these locations lost to Mine footprint advancement (Table 5) and were located at the most immediate available location to the lost sampling locations. The field program included the collection of soil and vegetation samples, and analysis of the samples for concentrations of metals by Bureau Veritas Laboratories in Nepean, Ontario. The metal concentrations in soil and vegetation will be used to provide context to the predicted changes to environmental quality as a result of the Project.

The soil and vegetation sampling program were designed to include the collection of vegetation samples of interest (i.e., berries, sedges, and lichens) and co-located soil samples, while taking spatial distribution into account. Vegetation types selected for sampling were identified based on their importance as food for human consumption (e.g., berries) and primary forage type for wildlife considered in the assessment of human and ecological health risk (e.g., lichens). Soil and vegetation were sampled at following locations in the Mine site (Treatment Sites) outside of the Mine site (Reference Area):

- Treatment Sites:
  - AWAR – 20 samples (20 sample sites, 10 at each side of the road)
  - Waste Rock Storage Area (WRSA) – 10 samples
  - Tailings Facility – 10 samples
- Reference Areas – 15 samples (3 sample sites, 5 sample at each site)

Three reference areas and three treatment areas were sampled (Figure 3). Reference areas were selected southwest and west of the Project area, upwind from Mine related activities (Ref 1 to Ref 3). Within each reference area, five sample sites (S1 to S5) were selected within a 200 to 300 m radius, at least 150 m apart from one another. Treatment areas, Waste Rock Storage Area (WRSA), Tailings Facility, and AWAR were selected to represent wind distribution of contaminants from mining-related activities. Ten sample sites were selected in the WRSA facilities, ten in the Tailings Facility and 20 along the AWAR at least 150 m apart. Specific sampling locations established during 2017 and 2019 that no longer exist are shown in Figure 3.

In each sample site, composite tissue and soil samples were collected within a 10 to 30 m radius, depending on tissue (particularly berry) availability. Dominant plant species and any incidental observations of non-native and listed plant species were recorded at each sampling location.



LEGEND

SAMPLING LOCATION

- SITE
- 2022 REPLACEMENT SITE
- SITE NO LONGER EXISTS
- MINE INFRASTRUCTURE (2022)
- MINE FOOTPRINT (2022)
- ALL-WEATHER ACCESS ROAD (AWAR)
- RANKIN INLET
- WATERCOURSE
- WATERBODY

0 3 6

1:120,000 KILOMETRES

NOTES(S)

1. TSF, WRSF1, WRSF2, CP1 ARE THE MAXIMUM EXTENT UNDER THE APPROVED MINE PLAN AND DO NOT REPRESENT SIZE IN 2018.
2. BORROW PIT B1A IS EXCLUDED AND IS NOT ILLUSTRATED IN THE CURRENT FOOTPRINT.
3. THE PROPOSED MINE PLAN INCLUDES TIRIGANIAQ PIT 1, TIRIGANIAQ PIT 2, AND WASTE ROCK STORAGE FACILITY 3 (WRSF3) AND ASSOCIATED INFRASTRUCTURE; THESE ITEMS HAVE NOT BEEN CONSTRUCTED YET (AS OF THE END OF 2018) AND THEREFORE WERE NOT INCLUDED ON THIS MAP.

REFERENCE(S)

1. BASE DATA OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. DATUM: NAD83 PROJECTION UTM ZONE 15

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED

PROJECT

MELIADINE GOLD PROJECT
NUNAVUT

TITLE

2022 VEGETATION AND SOIL MONITORING

CONSULTANT

wsp

YYYY-MM-DD	2023-03-20
DESIGNED	HH
PREPARED	CDB
REVIEWED	SW
APPROVED	CDM

PROJECT NO.	CONTROL	REV.	FIGURE
21505027	3000/3200	0	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Table 5: Soils and Vegetation Tissue Sampling Locations

Sampling Area	Site #	Sampling Location Name	UTM Coordinate (Zone 15V NAD 83)	
			Easting	Northing
Tailings Facility	Site 1	22-TF-S1	537909	6990266
	Site 2	22-TF-S2	538040	6990117
	Site 3	22-TF-S3	538097	6990019
	Site 4	22-TF-S4	538208	6990235
	Site 5	22-TF-S5	538278	6989938
	Site 6	22-TF-S6	538466	6990027
	Site 7	22-TF-S11	538622	6989347
	Site 8*	22-TF-S12	538322	6989546
	Site 9*	22-TF-S13	538672	6990375
	Site 10*	22-TF-S14	538320	6990590
WRSA	Site 1*	22-WRSA-S1	538747	6989248
	Site 2*	22-WRSA-S2	538882	6989190
	Site 3*	22-WRSA-S3	538973	6988967
	Site 4*	22-WRSA-S4	541059	6989140
	Site 5*	22-WRSA-S5	541213	6989153
	Site 6*	22-WRSA-S6	541224	6989090
	Site 7*	22-WRSA-S7	541406	6989081
	Site 8*	22-WRSA-S8	541517	6989026
	Site 9*	22-WRSA-S9	541624	6988990
	Site 10*	22-WRSA-S10	541690	6988845
AWAR	Site 1	22-AWAR-S1	540836	6988397
	Site 2	22-AWAR-S2	541383	6987812
	Site 3	22-AWAR-S3	541546	6987401
	Site 4	22-AWAR-S4	541370	6986990
	Site 5	22-AWAR-S5	541002	6986008
	Site 6	22-AWAR-S6	541494	6985390
	Site 7	22-AWAR-S7	541787	6985299
	Site 8	22-AWAR-S8	542546	6984543
	Site 9	22-AWAR-S9	543777	6983654
	Site 10	22-AWAR-S10	543923	6982864
	Site 11	22-AWAR-S11	546575	6979391
	Site 12	22-AWAR-S12	547841	6976918
	Site 13	22-AWAR-S13	547955	6976614
	Site 14	22-AWAR-S14	547547	6975167
	Site 15	22-AWAR-S15	547420	6974405
	Site 16	22-AWAR-S16	543485	6969872
	Site 17	22-AWAR-S17	543242	6968514
	Site 18	22-AWAR-S18	543343	6967889
	Site 19	22-AWAR-S19	544097	6967527
	Site 20	22-AWAR-S20	544783	6966983
Reference 1	Site 1	22-REF1-S1	533352	6990369
	Site 2	22-REF1-S2	533221	6990483
	Site 3	22-REF1-S3	533071	6990384
	Site 4	22-REF1-S4	533183	6990165
	Site 5	22-REF1-S5	533325	6990118

Table 5: Soils and Vegetation Tissue Sampling Locations

Sampling Area	Site #	Sampling Location Name	UTM Coordinate (Zone 15V NAD 83)	
			Easting	Northing
Reference 2	Site 1	22-REF2-S1	534088	6984708
	Site 2	22-REF2-S2	534255	6984626
	Site 3	22-REF2-S3	534431	6984456
	Site 4	22-REF2-S4	534648	6984332
	Site 5	22-REF2-S5	534723	6984630
Reference 3	Site 1	22-REF3-S1	539333	6976792
	Site 2	22-REF2-S2	539377	6976651
	Site 3	22-REF2-S3	539579	6976630
	Site 4	22-REF2-S4	539756	6976362
	Site 5	22-REF2-S5	540010	6976323

Notes:

* Sites established in 2022 to replace disturbed sites.

Upon arriving at a suitable sampling site, Universal Transverse Mercator (UTM) coordinates were collected with a Garmin GPSMAP65s Global Positioning System device. Several photographs were taken at each sampling location to document the physical characteristics and habitat present. Close-up photographs were taken of each sample showing the corresponding sample ID and sample condition; however, some photos were not of sufficient quality to allow proper post-analysis visual assessment of the sample. Representative photos of each sampling location are presented in Appendix A.

6.1.2 Lichen and Vascular Plant Sampling

Lichens and vascular plants (vegetation tissue samples) were collected for chemical analysis at the locations listed in Table 5. Due to berry producing plant distribution across the landscape, berries were not present at all sampling locations. For those locations where berries were not available, vegetation samples were collected from other plants such as Labrador tea, lichen species, birch and sedge were collected. Powderless nitrile gloves were used for all contact with lichens and vascular plants. Titanium scissors were used to snip the upper leafy portion from several plants within the same location at each sample site to create a composite sample. Samples were collected in sealable bags and kept cool until they could be frozen and transported to the laboratory for analysis. All tools used in sampling were cleaned between sites by washing with detergent and rinsing with distilled water. New nitrile gloves were used at each sample plot.

The species of plant collected was identified and general notes regarding the plant’s health and vigour were recorded. Unhealthy plants were only collected when there was insufficient healthy plant material available. Plant material that was dropped during collection was not included in the sample. Vegetation was inspected visually at each sample location to assess possible impacts of dust deposition on vegetation. When berries were available for sampling they were hand-picked, and care was taken to avoid removing dust from their surface. They were collected from a minimum of three plants. Effort was made to pick ripe berries that someone would consider edible. Graminoids (sedge) were collected by cutting the base of the aboveground growth with clean, titanium blade, non-stick coated scissors and folding the stems gently. At least 10 g of each vegetation type was collected and placed in a plastic sample bag. Once the sample was collected, the air was squeezed out of the bag and the bag was sealed closed. Sample bags were labelled with the date, location, time, and sample identification, and then placed inside a second plastic bag. The second bag was labelled with the same information as the first bag and sealed closed.

The samples collected at each plot were recorded, and each plot was photographed. A selection of photographs taken during the vegetation sample program is presented in Appendix A.

6.1.2.1 Soil Sampling

Soil samples were collected at each location where berries, graminoids (sedge), or lichen samples were collected. Before collecting the samples, leaves and debris were cleared from the ground or water surface. Soil samples were collected using a composite sampling method at each site. Representative grab samples were collected from three separate test pits (no greater than 5.0 m^2) per sample site using a plastic trowel. The organic layer (which ranges from 0 cm to 5 cm below surface) was removed and discarded. Mineral soil was collected from the upper soil horizons to a maximum depth of 15 cm to 20 cm and placed in a sealable bag and homogenized. Soil was collected in pre-labelled sealable bags and kept cool until they could be transported to the laboratory for analysis. All samples were recorded on an electronic chain-of-custody form, which was submitted to the analytical laboratory via email communication.

6.1.2.2 Soils and Vegetation Tissue Analysis

Laboratory analyses on vegetation and soil samples were performed by Bureau Veritas Laboratories in Nepean, Ontario. Total extractable metals in soil and vegetation were analyzed using inductively coupled plasma mass spectrometry and inductively coupled plasma triple quad tandem mass spectrometry. The laboratory certificates of analyses are provided in Appendix B and results are presented in Appendix C. Samples were analyzed for the following suite of parameters:

- pH (soil only)
- Total metals (plant tissue and soil unless otherwise indicated) included: aluminum (soils only), antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, molybdenum, nickel, selenium, silver, sodium (plant tissue only), tin, and zinc.
- Concentrations of metals on lichen, vascular plants, and soil samples were screened against the CCME Canadian Soil Quality Guidelines (SQG) for the Protection of Environment and Human Health (CCME 2012) for residential land use.

6.1.2.3 Quality Assurance and Quality Control

Sample duplicates were randomly selected at the laboratory for Quality Assurance and Quality Control (QA/QC) purposes. Duplicates provide an indication of natural sample variation and the reproducibility of the laboratory test methods. The sample duplicates are tested by weighing out a second portion of the sample and running the digestion on both portions of the sample prior to analysis. Three soil sample duplicates were selected from the 55 total soil samples submitted for analysis (5.5%) and six vegetation sample duplicates were selected from the 63 total vegetation samples submitted for analysis (9.5%).

The results of the duplicate pair were expressed as a Relative Percent Difference (RPD). The RPD is an indicator of laboratory precision and sample heterogeneity. Lower RPD numbers indicate better precision in laboratory analysis and sample homogeneity. The formula for computing the RPD is given in the equation below:

$$RPD = \frac{|Sample - Duplicate|}{Mean} \times 100$$

Where:
RPD = relative percent difference (%)

Sample = concentration in original sample (mg/kg)
Duplicate = concentration in duplicate sample (mg/kg)
Mean = average of the original sample and the duplicate sample (mg/kg)

Relative percent differences were not calculated if concentrations were not detected in one or both of the duplicate samples. The calculated relative percent difference (RPDs) was compared to the CCME Canadian SQLs for the Protection of Environment and Human Health (CCME 2012) for residential land use.

6.2 Soil and Vegetation Results

The laboratory results of the soil sampling program are presented in Appendix D (Tables D-1 and D-2). No dust deposition was visually observed at the reference locations. However, a deposit of material was visually observed at one location in the Tailings Facility and two locations in the WRSA. Vegetation and lichen were observed to be stressed (i.e., discoloured) and had die-back at the Tailings Facility site (22-TF-S6; Table 5). A deposit of material was visually observed at site 22-TF-S6 where vegetation and lichen was observed to be stressed. A deposit of material on vegetation was also observed at some of the locations, between 0 m to 30 m approximately, along the AWAR, however vegetation stress was not observed at these locations. Dust generation from Project vehicles along the AWAR and mine roads is expected but loads to overall dust accumulation in the area were considered negligible (Golder 2014). Agnico Eagle will continue inspecting vegetation visually within 3 years when the next surveys are scheduled to assess possible impacts of dust deposition on vegetation.

Soil samples collected around vegetation had concentrations of antimony, barium, beryllium, chromium, cobalt, lead, mercury, silver, thallium, uranium, vanadium and zinc less than residential limits (Appendix D, Table D-1) comparable to results reported in 2017 (Golder 2018) and 2019 (Golder 2020). Concentrations of beryllium and tin were less than detection limits in all soil samples collected in 2022. The CCME (2012) does not include residential, commercial and industrial limits for boron, however, this metal exceeded the agricultural limits in 17 samples by more than double the limits (Appendix D, Table D-1). Baseline values for boron are not available, but this result is similar to what was observed in 2019 (Golder 2020). Arsenic, copper, nickel and selenium exceed the residential limits in more than one sample and molybdenum in one sample (Appendix D, Table D-1), similar to the baseline condition results reported from 2014 for the FEIS (Volume 5, Section 5.2) where copper and selenium exceed the agricultural limits in two and one sampling locations from 2008, respectively. Similar to results reported in 2017 (Golder 2018) and 2019 (Golder 2020), arsenic concentrations in soil samples from the Mine site are above the CCME (2012) SQG residential limit of 12 mg/kg. Three sampling sites immediately adjacent to the WRSA, 22-WRSA-S1, 22-WRSA-S2, and 22-WRSA-S3, had higher concentrations of arsenic compared to the rest of the soil samples collected in 2022 (Appendix D, Table D-1, Figure D-1). These sampling sites were selected in the field in 2022 to replace WRSA sites that had been covered by the Project footprint since the 2019 survey (Table 5). A comparison of the average soil metal concentrations between sampling location and year is presented Appendix D - Table D-6.

The soil pH varied widely among the samples, ranging from 3.23 to 7.05 (Appendix D - Table D-3). This variability in pH is comparable to results reported in 2017 (Golder 2018) and 2019 (Golder 2020). Soil quality was not measured in the FEIS (Golder 2014).

The results of the vegetation tissue sampling program are presented in Appendix D (Tables D-4 and D-5). Vegetation samples had concentrations of most metals sampled, except for levels of beryllium and tin, which were below laboratory detection limits in all samples collected (Appendix D - Table D-5) and comparable to results reported in 2017 (Golder 2018) and 2019 (Golder 2020). Concentrations of antimony, bismuth, sodium, cadmium, thallium and uranium were below the detection limit in most of the samples (Appendix D - Table D-4) and comparable to results reported in 2017 (Golder 2018) and 2019 (Golder 2020). Similar to the results of the soil metal concentrations, some of the vegetation tissue samples in the Mine site had arsenic concentrations above the CCME SQG (2012; Appendix D – Table D-4). Samples collected in 2022, that had arsenic concentrations above the CCME SQG (2012) were found in lichen and vascular plants (sedges, birch leaves, Labrador tea leaves) at the Mine site; berries were not collected at the Mine site as there were not enough available for collection. This result is comparable to 2019 (Golder 2020) where several vegetation tissues samples collected in the Mine site had arsenic concentrations above the CCME SQG (2012). Baseline conditions in 2017 (Golder 2018) did not have any samples with arsenic concentrations exceeding the CCME SQG (2012). Arsenic concentrations in the vegetation samples (lichen, vascular plants and berries) collected at along the AWAR and Reference Areas were below the CCME SQG (2012) as was seen in 2017 (Golder 2018) and 2019 (Golder 2020). The concentrations of all other metals sampled in the vegetation tissues were below the CCME SQG (2012; Appendix D - Table D-4), which is comparable to results reported in 2017 (Golder 2018) and 2019 (Golder 2020).

Results from the FEIS (Golder 2014 - Volume 5 and 6, Sections 5.2 and 6.4 respectively) indicate there are areas where naturally occurring arsenic concentrations are high and above the CCME (2012) SQGs within the Mine footprint, including the AWAR. Respective mitigation and management measures employed at site to minimize effects of dust deposition on soils and vegetation continue to be employed per the Project Dust Management and Road Management Plans.

6.3 Quality Assurance and Quality Control

The RPDs for duplicates for metal concentrations in soil are presented in Appendix D - Table D-2). The RPDs for the soil duplicates were within the 30% criterion for all metals analyzed.

The RPDs for the vegetation tissue sample duplicates are presented in Appendix D - Table D-5) and all are within the 30% criterion for all metal parameters except for arsenic which is above in a duplicate for a sample of Labrador tea leaves.

Duplicate samples that have larger variation indicate high sample variability, which can be attributed to laboratory analysis, sampling technique or natural sample heterogeneity. The results of the laboratory QA/QC analyses performed by Bureau Veritas on both soil and vegetation fell within acceptable control limits for most samples, suggesting laboratory analyses would not be a large source of variability for either of these media.

For soils, the majority of the variability observed is likely attributed to the natural heterogeneity of soils, as can be seen in the RPD values in Appendix D. Almost all natural soils are highly variable and rarely homogeneous. Soil heterogeneity can be classified into two main categories. The first is lithological heterogeneity, which can be manifested in the form of different lithology within a more uniform soil mass. The second source of heterogeneity can be attributed to inherent spatial soil variability, which is the variation of soil properties from one point to another in space due to different deposition conditions.

6.4 Accuracy of Impacts Predictions

A summary of the impact predictions proposed in the TEMMP (Golder 2015) is provided in Table 2. Specific thresholds for vegetation and wildlife habitat monitoring are outlined in Table 6.

Table 6: Accuracy of Impact Predictions - Vegetation

Monitoring Indicators	Threshold	Exceeded in 2022?	Adaptive Management	Monitoring Method	TEMMP Section
Wildlife Habitat Loss	Terrestrial – 2,951 ha Aquatic – 515 ha	N/A	Not Currently Identified	Ground Surveys, Mapping, GIS Analysis	5.0
Habitat Degradation by Contamination	No effects to plant health from dust deposition	Yes	Further Validation will be Required	Vegetation and Soil Samples	6.0
Habitat Reclamation Following Mine Closure	Not applicable	No	Not Currently Identified	Ground Surveys, Vegetation Plots, Mapping	5.0

6.5 Recommendations

Results from the 2022 soil and vegetation health monitoring indicate that soil characteristics and vegetation health remain comparable to baseline conditions, with the exception of a small, localized area near the WRSA and Tailings Facility. This area showed high arsenic concentrations in the soil and vegetation. Further validation will be required for the samples with high arsenic concentrations.

The next surveys are scheduled to be completed in 2025. Indications of vegetation stress, poor vigour, or plant die-back that are not related to natural causes (e.g., disease, drought, pest damage, etc.,) will be documented if they are observed during the annual non-native plant species surveys. If it appears that the vegetation stress may be caused by dust, soil and vegetation sampling may be implemented prior to the 3-year sampling period, as required, to determine whether changes in the growth media is influencing plant health and/or establishment.

7.0 NON-NATIVE PLANT SURVEYS

The spread of non-native species across the landscape is a concern for the Inuit. Construction equipment and operation activities can result in the introduction of, or spread of, non-native vegetation species. Thus, Project Certificate No. 006 includes Term and Condition 36 and 37 to prevent and minimize the introduction of non-native plants during pre-construction, construction, operations, temporary closure and maintenance, closure and post-closure. Pre-construction surveys were completed during the baseline studies completed during 1998, 2008 and 2009 surveys (Volume 6, SD 6-5; Golder 2014).

This section includes the methods, results, and mitigation measures to minimize the spread of non-native invasive plant species resulting from Mine activities. The GN and ECCC define a non-native species as ‘an organism that is not normally found in a region (CESCC 2010). Additionally, according to Section 91 of *The Wildlife Act*, Statues of Nunavut (SNU) 2003, c 26, invasive species shall not be released into a habitat in which that species does not belong or never naturally occurred. Any introductions of non-native plant species must be promptly reported to the GN, Department of Environment. Non-native plant monitoring surveys occurred in 2018 prior to Mine operations initiation and in 2019, when Mine operations commenced. Subsequent surveys will be completed annually as per the TEMMP (Agnico Eagle 2022c).

7.1 Methods

Non-native plant surveys were completed from 28 July to 03 August by a WSP biologist. The 2022 survey was focused on the five regulated weeds in Nunavut and monitoring existing non-native plant locations. The five regulated weeds in Nunavut are wild caraway (*Carum carvi*), common dandelion (*Taraxacum officinale*), field sow thistle (*Sonchus arvensis)*, oxeye-daisy (*Leucanthemum vulgare)* and field pennycress (*Thlaspi arvense)*.

Non-regulated non-native vascular plants were identified when observed, there are 14 non-native vascular plants identified by the Canadian Endangered Species Conservation Council List (CESCC 2010; Appendix E).

Non-native plant surveys consisted of targeted surveys focused within high-priority or potential areas. The high potential areas were identified as the Project footprint, the accommodations area, AWAR, and ship loading areas. Mitigation to control the spread of non-native plants have been applied as described in Section 7.3. The 2023 monitoring surveys will continue to document the presence (if any) and extent of any new non-native species occurrences.

Species were documented as they were encountered within the Mine site, accommodation area, and along the AWAR. Where invasive plant species were observed, the occurrence was documented by recording a Global Positioning System (GPS) location and the size of occurrence and by taking photographs. Given the length of the AWAR, the road was travelled via vehicle at slow speeds while observers surveyed for obvious signs of weed infestations along road margins. Field staff periodically stopped to meander on foot in areas with high potential for weed occurrences (e.g., pull-outs, work areas, road-side quarries, and other areas with disturbed substrates).

When non-native or invasive plant species were encountered, the following information was recorded: site ID; surveyor name; GPS coordinates; photos of the occurrence / infestation; species name; estimated area of infestation; estimated number of plants (e.g., <10, 10 to 100, 100 to 1,000, >1,000) of each species; estimated cover of bare ground; growth stage (i.e., seedling, in bud, seed set, expired); recommended action for each species; and record of any hand pulling completed.

7.2 2022 Results

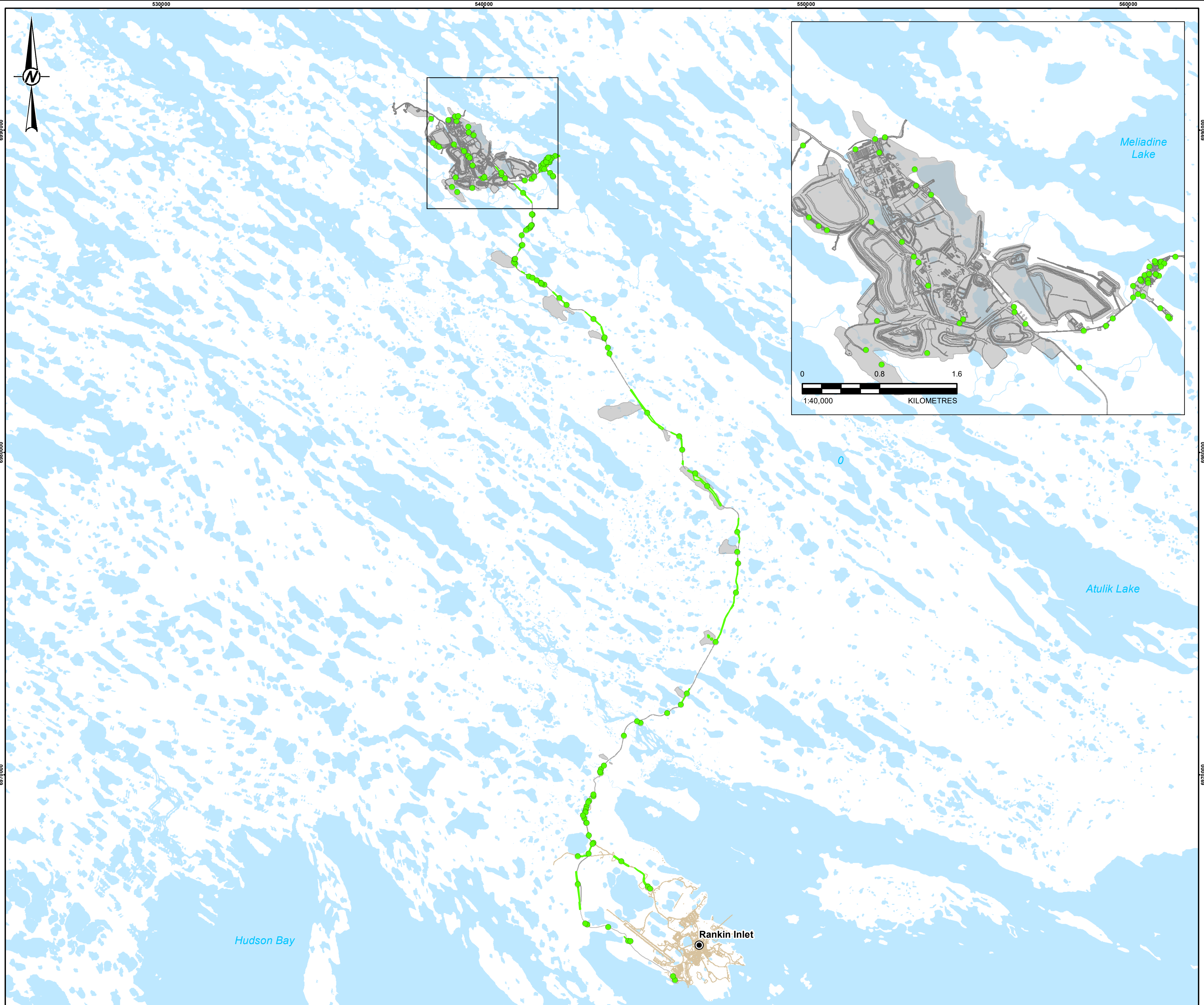
No non-native plants, as identified by the CESCC, were recorded along the AWAR and Mine site. A summary of the locations where weed surveys were completed is presented in Table 7 and Figure 4. Approximately 56.6 km was surveyed by vehicle and on foot during the 2022 non-native plant survey.

Table 7: Summary of 2022 Non-Native Plant Survey Effort

Location of Survey	Total Number of Survey Locations
AWAR	73
Mine site	52
Rankin Inlet Shipping Area	6
Total	**131**

7.2.1 Historical Results

From 2019 to 2021, many observations of what was then identified as flixweed (*Descurainia sophia*) were documented (Agnico Eagle 2019, 2020 and 2022a). However, it has been confirmed by researchers from the University of Saskatchewan that this species is northern tansy mustard (*Descurainia sophioides*). Northern tansy mustard is a species native to Nunavut (Agnico Eagle 2022b). Northern tansy mustard is a biennial herb that colonizes gravel bars, roadsides, waste sites and disturbed soils. It is common in the western Arctic around settlements and along roads (Aiken et al. 2007). Known populations of northern tansy mustard have been collected from Baker Lake and Rankin Inlet (E-Flora BC 2023). In July 2022, flixweed plant samples were collected at the nearby Meadowbank Mine and sent to a botanist at the Canadian Museum of Nature for identification. The specimens from Meadowbank Mine were also confirmed to be northern tansy mustard (*Descurainia sophioides*) (P. Sokoloff [personal communication, 24 August 2022). Due to the visual similarity between these two species, ongoing monitoring is recommended.



LEGEND

- SURVEY LOCATION - NO NON-NATIVE PLANTS OBSERVED
- MINE INFRASTRUCTURE (2022)
- MINE FOOTPRINT (2022)
- ALL-WEATHER ACCESS ROAD (AWAR)
- RANKIN INLET
- WATERCOURSE
- WATERBODY

0 3 6
1:120,000 KILOMETRES

NOTES(S)

1. TSF, WRSF1, WRSF2, CP1 ARE THE MAXIMUM EXTENT UNDER THE APPROVED MINE PLAN AND DO NOT REPRESENT SIZE IN 2018.
2. BORROW PIT B1A IS EXCLUDED AND IS NOT ILLUSTRATED IN THE CURRENT FOOTPRINT.
3. THE PROPOSED MINE PLAN INCLUDES TIRIGANIAQ PIT 1, TIRIGANIAQ PIT 2, AND WASTE ROCK STORAGE FACILITY 3 (WRSF3) AND ASSOCIATED INFRASTRUCTURE; THESE ITEMS HAVE NOT BEEN CONSTRUCTED YET (AS OF THE END OF 2018) AND THEREFORE WERE NOT INCLUDED ON THIS MAP.

REFERENCE(S)

1. BASE DATA OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. DATUM: NAD83 PROJECTION UTM ZONE 15

CLIENT
AGNICO EAGLE
AGNICO EAGLE MINES LIMITED

PROJECT
MELIADINE GOLD PROJECT
NUNAVUT

TITLE
2022 NON-NATIVE PLANT SURVEY RESULTS

CONSULTANT
wsp

YYYY-MM-DD	2023-03-20
DESIGNED	HH
PREPARED	CDB
REVIEWED	SW
APPROVED	CDM

PROJECT NO.	CONTROL	REV.	FIGURE
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
25mm

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7.3 Mitigation

The 2022 survey was the fourth consecutive year of non-native species monitoring for Meliadine since operations commenced.

The early detection of non-native invasive plant species is important, as preventing these species from becoming established is the most effective mitigation that can be employed. Invasive plants identified as a concern by the Government of Nunavut Department of Environment (GN DoE) will be reported to the GN, including location of the species (i.e., GPS coordinates and map), species identification and photographs of the species in question.

In addition, due to the early detection of non-native invasive species, the following mitigation measures have been implemented by Agnico Eagle during Project operation, per the TEMMP (Agnico Eagle 2022c):

- Where possible, utilize existing access trails and roads.
- Limit the width of access roads and the size of workspaces.
- Inspect and clean new equipment arriving to site from the ship loading area prior to entering the Project area. Shipping inspection sheets from 2022 are provided in Appendix F.
- Complete non-native invasive plant monitoring surveys every year during operations to identify problem areas. Surveys should be targeted for areas with a high potential of occurrence such as along the AWAR, Project footprint, and ship loading areas.

7.4 Accuracy of Impact Predictions

No non-native invasive plant species occurrences were observed in the Project Area. A summary of the effects predictions proposed in the TEMMP (Golder 2020) is provided in Table 8. Specific thresholds for vegetation and wildlife habitat monitoring are outlined in Table 8.

Table 8: Accuracy of Effects Predictions – Vegetation

Monitoring Indicators	Threshold	Exceeded in 2022?	Adaptive Management	Monitoring Method	TEMMP* Section
Habitat Degradation by Contamination	No non-native invasive plant species established	No	See Section 7.3	Non-native invasive Plant Survey of AWAR, and Project site	7.0
Habitat Reclamation following Project Closure	N/A	N/A	Not Currently Identified	Ground Surveys, Vegetation Plots, Mapping	5.0

TEMMP = Terrestrial Environment Management and Monitoring Plan (Agnico Eagle 2022c), AWAR = All-weather Access Road.

7.5 Recommendations

The CESCC (2010; Appendix E) has developed posters that show non-native species and invasive species in Nunavut. These can continue to be easily displayed at the Mine site and incorporated into on-boarding materials. If any non-native and invasive species are incidentally observed on site, they should be eradicated through mechanical control such as mowing or hand pulling, as practical for the terrain on site. If hand pulling with a shovel, the plant material should be collected in bags and disposed of at an offsite location. Mowing is a viable option if the there is access for a mowing unit or handheld trimmer, the terrain is not too steep or hazardous, or if the phenology of the plant stage is not at risk for greater seed dispersal. A vegetation ecologist should be consulted prior to mowing or trimming. Chemical herbicide treatments are not recommended to be used at this point as the native vegetation/habits in the tundra are very sensitive to impacts.

8.0 BIRDS

Shoreline surveys and point count surveys were completed for the first three years of operation (2019 to 2021) in consultation with GN, to monitor waterfowl, waterbirds, and upland birds. Shoreline surveys are planned for 2023 to allow estimation of observer influence on nest detectability, based on recommendations provided in the 2019 annual report (Nuqsana Golder 2020).

8.1 PRISM

The Program for Regional and International Shorebird Monitoring (PRISM) is a standardized method for monitoring shorebirds. PRISM surveys are designed to document population numbers of Arctic breeding shorebirds, describe the distribution and habitat associations of shorebirds, and monitor trends in population size (Bart et al. 2005). The PRISM surveys conducted as part of monitoring for the Project will contribute to regional knowledge in an effort to set population targets and assist with management and conservation of these species (EC 2012). All PRISM data will be submitted to ECCC for inclusion in their regional database.

PRISM surveys were not conducted in 2022. As per recommendations from ECCC, Agnico Eagle has committed to completing PRISM surveys over 2 years, every 5 years (Agnico Eagle 2022c). The next two monitoring years are scheduled to occur in 2023 and 2024.

8.2 Arctic Raptors Research Program

The following is a summary of the 2022 Arctic Raptors Research Program, completed by Artic Raptors (Arctic Raptors 2023; Appendix G). The Arctic Raptors Research Program is designed to address the following monitoring indicators for nesting raptors are outlined in the TEMMP (Agnico Eagle 2022c):

- Monitoring Indicator 1; Disturbance of nesting raptors — To be determined in consultation with GN and Alastair Franke, related to occupancy and productivity.
- Monitoring Indicator 2; Projected-related mortality — To be determined in consultation with GN and Alastair Franke.

The TEMMP requires the protection of species at risk during the breeding season (T&C 59 and 60) and requires that disturbance to birds is minimized through consistent monitoring (T&C 59, 71, and 72), including nest-specific mitigation where necessary (T&C 61 and 62). Peregrine falcons were assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in November of 2017, and were ranked “Not at Risk”. The responsible Minister rendered a decision on the recommendation made by COSEWIC, and peregrine falcons are no longer considered to be threatened. This report meets the T&C outlined by NIRB by documenting and mapping raptor nesting sites within 1.5 km of the project infrastructure, including minimum “no disturbance” buffers.

8.2.1 Methods

Two structured surveys were conducted in 2022. The focus of these surveys was to search known nesting sites for the presence of cliff-nesting raptors. In addition to the structured surveys, favourable habitat was searched opportunistically when ferrying between known sites, camps, or other mine infrastructure and when raptors or signs of site use (e.g., whitewash, orange-colored lichen, and unused nests) were observed. Sites were considered occupied if one or more adults displayed territorial or reproductive behaviour (e.g., vocalization and/or flight behaviour associated with defense of breeding territory or presence of nest building, nest, or eggs).

Locations with partially built or unused nests without detection of breeding aged adults were noted as such (e.g., old stick nest; no birds detected). Raptor monitoring in 2022 involved two helicopter surveys (24 - 25 May, 09 - 10 August), and ground - monitoring of potential nesting habitat (natural cliffs, quarries and borrow pits) in coastal areas using snowmobile in May and boat in August.

In any given year, the status of a nesting site is limited to one of only two outcomes: occupied or not occupied. Although estimation of nesting site occupancy can serve as a metric of population status, detection of nesting pairs is imperfect, and estimating the proportion of occupied sites without accounting for detection error can lead to underestimation of true occupancy. Occupancy modelling estimates parameters that influence occupancy, and simultaneously accounts for imperfect detection (Arctic Raptors 2023; Appendix G).

In addition, environmental covariates can be added to an occupancy model to test whether they influence the above parameters using a logit link function. Single-year occupancy was calculated in R (R Development Core Team 2019) using the 'unmarked' package. When appropriate, data were standardized.

Occupancy was analyzed separately for peregrine falcons (*Falco peregrinus*) and rough-legged hawks (*Buteo lagopus*). No gyrfalcons [*Falco rusticolus*] were detected. To do so, the total number of nesting sites was filtered to include only those nesting sites that were occupied in 2022 for each species. Four candidate models were selected *a priori* to estimate the effect of distance to anthropogenic disturbance on detection probability (γ) and occupancy (ψ). Candidate models were fit and selected using Akaike Information Criterion (AIC).

8.2.2 Results

Monitoring for breeding raptors has occurred consistently in the area associated with Meliadine Project infrastructure for decades. Surveys have focused on searching for, documenting, and mapping nesting sites for three raptor species (peregrine falcons, rough-legged hawks, and gyrfalcons). This report represents the first formal survey and analysis for all known raptor nesting sites in the entire RSA. Study design included two surveys, one to assess the location of occupied territories during the pre-incubation and incubation periods, and one to assess site productivity during the late brood rearing period.

Throughout the region, nesting raptors have been detected at 220 nesting sites. Of these, 106 have been occupied by only rough legged hawks, 79 by only peregrine falcons (21 additional nesting sites have been occupied by either peregrine falcons or rough legged hawks). Six nesting sites have been occupied by common ravens, two by snowy owls and one each by gyrfalcon and short-eared owl.

Within the Regional Study Area (RSA), nesting raptors have been detected at 177 nesting sites. Of these, 93 have been occupied by only rough legged hawks and 55 by only peregrine falcons. Seventeen additional nesting sites have been occupied by either peregrine falcons or rough legged hawks resulting in a total of 72 known peregrine falcon nesting sites and 110 rough legged hawk nesting sites. Five nesting sites have been occupied by common ravens, and one each by gyrfalcons, snowy owls, and short-eared owl.

Eleven peregrine falcon nesting sites were deemed alternates (i.e., nest within a nesting territory that is not used in the current year), resulting in a total of 61 known peregrine falcon nesting territories. Of the 59 nesting territories surveyed, evidence of breeding was detected at 33 nesting territories (observed proportion = 0.56). One rough legged hawk nesting site was deemed an alternative site, resulting in a total of 109 known rough legged hawk nesting territories. Of the 101 territories surveyed, evidence of breeding was detected at 21 nesting territories (observed proportion = 0.21).

The null occupancy model (i.e., model that did not test the influence of distance to anthropogenic disturbance on occupancy or detection) best explained probability of occupancy among peregrine falcons ($\psi = 0.77 \pm 0.10$ [predicted occupancy ± standard error]) and rough-legged hawks ($\psi = 0.31 \pm 0.88$).

8.3 Recommendations

During shoreline surveys in 2023, a subset of shorelines could be surveyed twice, potentially as part of nest re-checks, to identify potential observer effects on nest detection. Alternatively, pre-determined transects in areas where nests have previously been located could be established, to allow accurate comparison of effort across years, nest-finding ability, and changes in nest density related to different locations.

The analysis completed for the Arctic Raptors Research Program found no evidence of an effect of distance to disturbance on occupancy. The potential detecting mine-related anthropogenic disturbance will be challenging in light of the presence of roads, trails, cabins, travel routes and activities on the sea/sea-ice and lake ice associated with the community of Rankin Inlet. Multi-year surveys should be conducted at the scale of the RSA, and effort in northern portion of the RSA should be made as there has been no survey effort throughout much of the RSA (Arctic Raptors 2023; Appendix F).

9.0 WILDLIFE OBSERVATIONS

Agnico Eagle’s Environment Technicians conduct site surveillance monitoring and road surveillance monitoring regularly of the AWAR and the Project. In addition to planned surveys, all supervisors ask their employees to report wildlife sightings; Wildlife logs are posted throughout the Mine site and easily accessible to employees to facilitate wildlife reporting before, during, and after work shifts.

In previous years, observations of wildlife surveys and wildlife incidental observations were pooled and compared with previous years. Results are presented separately to distinguish between results of formal wildlife surveys, and incidental observations in 2022. However, combined survey observations and incidentals in 2022 were comparable to other years (2018: 7,198 individuals; 2019: 880 individuals; 2020: 2,650 individuals; 2021: 4,182 individuals; 2022: 5,255; Golder 2021). Table 9 includes wildlife observations between 2018 and 2022 from both incidental observations and wildlife surveys.

Table 9: Wildlife Observations from Wildlife Surveys and Incidental Observations, 2018 to 2022

Wildlife Species	Scientific Names	Number of Individuals Observed					
		2018	2019	2020	2021	2022	Total
American pine marten	*Martes americana*	0	0	20	2	0	22
Arctic fox	*Vulpes lagopus*	105	67	62	160	256	650
Arctic ground squirrel	*Urocitellus parryii*	1	10	14	14	45	84
Arctic hare	*Lepus arcticus*	31	34	50	84	146	345
Baird's sandpiper	*Calidris bairdii*	0	0	0	2	70	72
bald eagle	*Haliaeetus leucocephalus*	1	0	0	1	4	6
bird species	N/A	0	0	0	99	0	99
brant	*Branta bernicla*	0	0	181	25	0	206
Canada goose	*Branta canadensis*	67	145	470	1,027	889	2598
caribou	*Rangifer tarandus groenlandicus*	6,839	86	106	30	1,066	8127
common raven	*Corvus corax*	2	5	43	29	93	172
duck species	N/A	20	17	95	164	105	401
gray wolf	*Canis lupus*	0	2	2	2	2	8
greater white-fronted goose	*Anser albifrons*	0	44	0	6	0	50
gull species	N/A	0	18	76	74	232	400
hawk species	N/A	0	0	0	2	0	2
long-tailed duck	*Clangula hyemalis*	0	0	3	5	0	8
mammal species	N/A	0	0	0	3	0	3
muskox	*Ovibos moschatus*	0	0	22	0	8	30
peregrine falcon	*Falco peregrinus*	0	4	5	2	0	11
polar bear	*Ursus maritimus*	2	2	4	0	1	9
ptarmigan species	N/A	19	8	59	142	87	315
rough-legged hawk	*Buteo lagopus*	0	9	74	5	10	98
sandhill crane	*Grus canadensis*	4	68	152	202	175	601
snow goose	*Anser caerulescens*	100	340	1,190	2,083	1,968	5,681
snowy owl	*Bubo scandiacus*	2	0	1	1	1	5
tundra swan	*Cygnus columbianus*	4	21	21	18	97	161
wolverine	*Gulo gulo*	1	0	0	0	0	1
	Total	7,198	880	2,650	4,182	5,255	20,165

9.1 Wildlife Surveys

Wildlife sighting/track surveys were completed by Agnico Eagle personnel along the AWAR an average of every 4.7 days from 1 January 2021 to 31 December. In addition, wildlife sighting/track surveys were completed at Mine infrastructure (e.g., land farms, tank farms, camps, construction areas, exploration areas, the incinerator, water management ponds) an average of every 8.6 days from 9 January to 26 December (Table 10).

Table 10: Details of Wildlife Surveys in 2022

Month	Number of All-Weather Access Road Surveys	Number of Mine Site Surveys
January	7	4
February	3	6
March	7	3
April	4	5
May	7	4
June[a]	6	2
July[a]	6	1
August	7	3
September	6	2
October	9	4
November	7	4
December	9	4
Total	**78**	**42**

a) Additional caribou surveys completed regularly throughout June and July, described in Section 12.

A total of 3,775 individuals from 10 identified wildlife species and 3 unidentified wildlife species groups (e.g., duck species) were recorded during surveys along the AWAR. A total of 537 individuals from 10 identified wildlife species and 3 unidentified wildlife species groups were recorded during surveys on the Mine site. These totals do not include caribou documented as part of the caribou behaviour monitoring (Section 12.1), caribou remote camera study (Section 12.2), or caribou advisory programs (Section 12.4). Barren-ground caribou are listed as 'Threatened' by COSEWIC, but are not currently listed under the *Species at Risk Act* (SARA; Government of Canada 2023). No species listed under Schedule 1 of *SARA* were observed during wildlife surveys.

Snow goose (*Chen caerulescens*) was the most commonly recorded bird species with a total of 1,784 individuals observed along the AWAR. Flocks of snow goose observed may include the Ross's goose (*Anser rossii*), which are difficult to distinguish from snow geese from a distance. Large numbers of Canada goose, sandhill crane (*Grus canadensis*), and duck species were also frequently observed along the AWAR with a total of 494, 97, and 26 individuals recorded, respectively.

A total of 537 individuals from 10 identified species and 3 unidentified species groups were observed during surveys at Mine infrastructure other than the AWAR in 2022. Canada goose and snow goose were the most frequently observed species with 227 and 89 individuals recorded, respectively. Mammal species recorded at Mine infrastructure included Arctic ground squirrel (*Urocitellus parryii*; 10 individuals), Arctic fox (*Vulpes lagopus*; 27 individuals), and Arctic hare (*Lepus arcticus*; 62 individuals). No species at risk were observed during surveys of Mine infrastructure.

Table 11: Wildlife Track Survey Observations (2022)

Common Name	Scientific Name	AWAR		Mine Site	
		Number of Observations	Number of Individuals	Number of Observations	Number of Individuals
Arctic fox	*Vulpes lagopus*	16	16	21	27
Arctic ground squirrel	*Urocitellus parryii*	24	25	8	10
Arctic hare	*Lepus arcticus*	3	3	32	62
Canada goose	*Branta canadensis*	50	494	25	227
caribou[(a)]	*Rangifer tarandus*	5	1004	2	2
common raven	*Corvus corax*	30	48	16	22
duck species	N/A	12	26	5	44
gull species	N/A	52	203	12	15
ptarmigan species	*Lagopus* spp.	4	16	7	12
rough-legged hawk	*Buteo lagopus*	3	3	0	0
sandhill crane	*Grus canadensis*	36	97	9	22
snow goose	*Anser caerulescens*	36	1784	7	89
tundra swan	*Cygnus columbianus*	29	56	3	5
	TOTAL	**300**	**3775**	**147**	**537**

a) Caribou are documented as part of other survey types described in Section 12.

N/A = not applicable.

9.2 Wildlife Incidentals

In 2022, there were 341 recorded incidental observations, representing 910 individuals of 19 species, around the Mine site (including the camp area) and the AWAR (Table 12). Incidental wildlife observations were recorded between 6 January and 21 December through Wildlife Logs and Reports, and do not include mortalities or observations of large herds of migrating caribou. Information on caribou migration through the Mine site and AWAR is presented in Section 12.0.

The most frequently observed species were Arctic fox (185 individuals), Canada goose (168 individuals) and snow goose (95 individuals; Table 12). Species observed incidentally, and not during wildlife surveys include Baird's sandpiper (*Calidris bairdii*), bald eagle (*Haliaeetus leucocephalus*), gray wolf (*Canis lupus*), musk-ox (*Ovibos moschatus*), polar bear (*Ursus maritimus*), and snowy owl (*Bubo scandiacus*).

Table 12: Incidental Wildlife Observations (2022)

Common Name	Scientific Name	2022	
		Number of Observations	Number of Individuals
Arctic hare	*Lepus arcticus*	50	78
Arctic fox	*Vulpes lagopus*	153	185
Arctic ground squirrel	*Urocitellus parryii*	8	9
Baird's sandpiper	*Calidris bairdii*	3	70
bald eagle	*Haliaeetus leucocephalus*	3	4
Canada Goose	*Branta canadensis*	28	168
caribou	*Rangifer tarandus*	14	60
common raven	*Corvus corax*	11	23
duck species	N/A	3	35
gray wolf	*Canis lupus*	2	2
gull species	N/A	9	14
musk-ox	*Ovibos moschatus*	2	8
polar bear	*Ursus maritimus*	1	1
ptarmigan spp.	N/A	7	58
rough-legged hawk	*Buteo lagopus*	7	7
sandhill crane	*Grus canadensis*	18	56
snow goose	*Anser caerulescens*	9	95
snowy owl	*Bubo scandiacus*	1	1
tundra swan	*Cygnus columbianus*	12	36
Total		**341**	**910**

Notes: Specific global positioning system (GPS) locations were not recorded for incidental wildlife observations in 2022. Wildlife mortalities and counts of large herds of migrating caribou are not included.

N/A = not applicable

9.3 Den Sites

Prior to construction of Project infrastructure, surveys are required to locate dens of denning carnivores in accordance with NIRB Project Certificate No. 006 (Amendment No. 002) Term and Condition 53. Den surveys were required specifically 60 days prior to construction of the waterlines. Surveys were completed between 16 March to 20 March to locate dens of Arctic fox, grey wolf, polar bear, grizzly bear (*Ursus arctos*), and wolverine (*Gulo gulo*).

March surveys targeted overwintering dens of grizzly bear, polar bear, and wolverine. An unmanned aircraft system (UAS) was used to survey for dens between KM8 and KM30 of the AWAR, and a foot-based visual survey was used to survey from KM8 to KM3.5, including the Rankin Inlet Bypass Road to Itivia Harbour. Surveys were performed by a qualified Environment Specialist (biologist) and an Environmental Technician who was certified as a UAS pilot. Three historical Arctic fox dens occur along the waterlines alignment and no new dens were identified during the March surveys. Full details on den surveys completed for the waterline are provided in Appendix H. Surveys during the Arctic fox and grey wolf denning season were recommended between May and mid-July. Additional den surveys were performed around the Meliadine Mine Site, AWAR and the Rankin Inlet Bypass Road (RIBR) during the summer (Appendix I). All dens identified were Arctic fox dens. Six dens were located around the

Meliadine Mine Site, two along the AWAR and one along the RIBR (Appendix I). One den near the Meliadine Mine Site was active in 2022. The recommended construction setback for Arctic fox dens is 150 m. In the situation that construction is closer than the setback distance, mitigation measures identified in Appendix I will be implemented.

9.4 Bird Nests

In 2022, seven incidental bird nests were observed on the Mine site during the nesting season (Table 13).

Table 13: Incidental Bird Nests and Approximate Location, 2022

Date Nest First Observed	Bird Species	Location	Approximate Coordinates (NAD 83; Zone 15V)		Notes
			Easting	Northing	
09 May 2022	Cackling goose	J6 Pond	540970	6988137	The nest was potentially predated on 10 June 2022.
26 May 2022	Common raven	SP4	539844	6988382	A raven nest was found on the north-west side of SP4 wall with 3 young in it.
11 June 2022	Barn swallow	Paste Plant Extension	539562	6988842	Nest specific mitigations for work occurring near the nest, and monitoring protocols were developed in discussion with ECCC. Four young appeared to fledge the nest by 25 July 2022.
11 June 2022	Canada geese	H8	-	-	Potentially predated by fox on 12 June 2022.
22 June 2022	American robin	Seacan near Big Dome	539349	6990171	Nest fledged by 21 July 2022.
23 June 2022	Common raven	KM8 Bridge	544799	6971689	Nest under bridge at KM8 of AWAR.
23 July 2022	Snow bunting	Generator Seacan	538991	6990233	Two adults present near nest on 27 July 2022.

ECCC = Environment and Climate Change Canada; - = exact location was not recorded

9.5 Incidents and Mortalities

Mortalities can occur as wildlife interact with the Project site or become habituated to mining activities resulting from efforts to locate food or shelter (DDMI 1998). Diligent waste management, employee and environmental awareness, and immediate reporting of wildlife sightings in and around Project infrastructure can limit the mortality of wildlife.

9.5.1 Methods

Project-related incidents and mortalities are reported to the Mine’s Environment Department for documentation in a detailed incident investigation for immediate follow-up. All incidental wildlife mortalities are reported immediately to the GN DoE, and the GN DoE is consulted for follow-up mitigation and disposal procedures. In addition, the KivIA is also immediately notified of wildlife mortalities and the events and circumstances around that mortality. If wildlife had to be deterred to reduce the risk of a wildlife-human incident, then all efforts are made by the environmental technicians to start with the least intrusive method available. All deterrent actions are recorded.

9.5.2 Results

A total of 41 mortalities across 4 different species was reported at the Project from 13 January to 19 December; all mortalities were suspected or confirmed to be caused as a direct result of Project activities (Table 14). In 2022, there were four incidental reports completed.

Table 14: Wildlife Mortalities and Incidents Reported in 2022

Date	Species	Number	Location	Project Related	Comments
13 January 2022	Arctic fox	3	Incinerator	Yes	At the beginning of January 2022, multiple foxes were observed on a regular basis in the incinerator area. Cage traps were deployed on site. 3 foxes were caught on 13 January 2022 and euthanized, and the fox carcasses were disposed as per GN Conservation Officer's instructions.
25 January 2022	Arctic fox	4	Incinerator	Yes	Four (4) foxes were trapped in the incinerator area and euthanized. The foxes had been around for a few days and had shown aggressive behaviour towards workers and were euthanized as instructed by the GN Conservation Officer. The carcasses were disposed of according to GN instructions.
07 February 2022	Arctic fox	2	Kitchen, Incinerator	Yes	Six (6) fox mortalities occurred between 07 February and 09 February 2022. The foxes were trapped in the kitchen and incinerator areas and euthanized by the GN Conservation officer. The carcasses were disposed of according to GN instructions.
08 February 2022		2			
09 February 2022		2			
28 April 2022	Arctic fox	3	Incinerator, Waste Rock Storage 3	Yes	In April 2022, the GN Conservation officer installed cage traps at site. On 28 April, 2 foxes were trapped in the incinerator area and 1 fox was trapped on the Waste Rock Storage Facility 3. GN Conservation Officer's euthanized the 3 foxes caught and their carcasses were disposed of according to GN instructions.
03 May 2022	Arctic fox	2	Kitchen, Waste Rock Storage 3	Yes	In May 2022, the GN Conservation officer installed cage traps at site. Four foxes were trapped during the month, on 03 May (2 foxes), 04 May (1 fox) and 05 May (1 fox). The foxes were trapped in the kitchen area and on the Waste Rock Storage Facility 3. The GN Conservation Officer's euthanized the foxes caught and their carcasses were disposed of according to GN instructions.
04 May 2022		1			
05 May 2022		1			
13 May 2022	Ptarmigan species	1	Church	Yes	On 12 May, a ptarmigan entered the church and flew into a light fixture, which accidentally led to its death. The Ptarmigan was collected and bagged using nitrile gloves, then put in the freezer. The GN Conservation Officer's was notified, and the carcass was disposed of according to GN instructions.

Table 14: Wildlife Mortalities and Incidents Reported in 2022

Date	Species	Number	Location	Project Related	Comments
17 July 2022	Arctic fox	1	AWAR KM18	Yes	On 17 July, the Environment Department was notified of a deceased fox on the AWAR at KM18. Agnico Eagle did not receive a report of vehicle collision or a close encounter with any wildlife. No clear cause of death could be ascertained. Agnico Eagle retrieved the carcass, which was disposed of according to the GN Conservation Officer's instructions.
04 August 2022	Arctic ground squirrel	1	AWAR KM29	-	On 4 August 2022, the Environment Department found an Artic ground squirrel on the AWAR at KM29. The carcass was disposed on the side of the road.
17 September 2022	Arctic hare	1	AWAR KM25	Yes	On 17 September 2022, the Environmental Department was notified of a deceased Arctic hare at KM25 on the AWAR. Agnico Eagle personnel did not receive a report of vehicle collision of a close encounter with any wildlife. Environmental personnel attempted to collect the carcass, although it could not be located.
05 October 2022	Arctic fox	1	Incinerator	Yes	In October 2022, the GN Conservation Officer's installed cage traps at site. Three (3) foxes were trapped during the month, on 05, 25, and 26 October. The foxes were trapped in the incinerator area. On 14 October and 17 October. The foxes were trapped in the area of Ore Pad (OP2). The GN Conservation Officer's euthanized the foxes caught and their carcasses were disposed of according to GN instructions.
14 October 2022	Arctic fox	1	Ore Pad 2		
17 October 2022	Arctic fox	1			
25 October 2022	Arctic fox	1	Incinerator		
26 October 2022	Arctic fox	1	Incinerator		
03 November 2022	Arctic hare	1	Emulsion Plant Service Road	Yes	On 03 November 2022, the Environment Department was notified of a deceased Arctic hare along the service road to the Emulsion Plant. Agnico Eagle personnel were driving to the Emulsion Plant when an Arctic Hare ran under the vehicle and was struck. Agnico Eagle personnel collected the carcass and placed it in a freezer prior by incinerate according to GN instructions.
03 November 2022	Arctic fox	3	Incinerator, Landfill, Kitchen, Orbit Garage	Yes	In November 2022, the GN Conservation officer installed cage traps at site. Eight (8) foxes were trapped during the month, on 03 November (3 foxes), 04 November (1 fox), 10 November (1 fox), 14 November (2 foxes) and 15 November (1 fox). The foxes were trapped in the incinerator, landfill, kitchen, and Orbit garage areas. The GN Conservation Officer's euthanized the foxes caught and their carcasses were disposed of according to GN instructions.
04 November 2022	Arctic fox	1			
10 November 2022	Arctic fox	1			
14 November 2022	Arctic fox	2			
15 November 2022	Arctic fox	1			
13 December 2022	Arctic fox	1	Landfill	Yes	In December 2022, the GN Conservation Officer's installed cage traps at site. The GN Conservation Officer's euthanized the foxes caught and their carcasses were disposed of according to GN instructions.
15 December 2022	Arctic fox	1			
19 December	Arctic fox	1			

AWAR = All-Weather Access Road, GN = Government of Nunavut, HTO = Hunters and Trappers Organization.

One Project-related bird mortality was recorded in 2022. A ptarmigan (*Lagopus* sp.) flew into a light fixture in the church, causing its death. The ptarmigan was bagged and placed in a freezer to await further directives from GN DoE and HTO. One Arctic hare was found reported dead near AWAR KM25 but could not be located by Environment personnel. An additional Arctic hare mortality occurred when Mine personnel were driving to the Emulsion Plant, and the Arctic hare ran under the vehicle. One Arctic ground squirrel was found dead near AWAR KM29.

Following initial guidance from the GN DoE in response to incidents and observations of Arctic foxes in and around the Mine in 2017, the GN DoE directs Agnico Eagle to deploy traps to remove animals as necessary. A total of 37 foxes were trapped under GN guidance and euthanized in 2022. One additional fox was found deceased on the AWAR at KM18. Agnico Eagle did not receive a report of vehicle collision or a close encounter with any wildlife, and no clear cause of death could be ascertained. Environment Department deployed many mitigation measures to minimize the presence of foxes on site. Toolbox concerning the importance of waste segregation to avoid attracting wildlife were completed on every crew of all the department. Inspections are completed regularly in every location outside to prevent food waste availability to wildlife.

9.6 Accuracy of Impact Predictions

A summary of the impact predictions proposed in the TEMMP (Agnico Eagle 2022c) is provided in Table 15. Through systematically recording the presence of all wildlife within and around the Project footprint, Environmental staff will remain appraised of current and emerging issues and will be able to manage issues as they arise. To use a common example, surveillance monitoring may detect that wildlife has gained access and is taking shelter beneath a building.

The thresholds presented in Table 15 have been employed for the Mine to date for consideration of any adaptive management for the TEMMP (Agnico Eagle 2022c). Refinement of these thresholds may be considered, in collaboration with the GN, as appropriate, as more data is collected and analyzed over time.

Table 15: Accuracy of Impact Predictions – Wildlife Incidents 2022

Monitoring Indicator	Preliminary Threshold	Exceeded in 2022?	Adaptive Management	Monitoring Method	TEMMP Section
Vehicle Collisions	No more than 1 ungulate/year	No	No action required	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance	9.5.2
Project Related Mortality[(a)]	No more than 1 ungulate/year	No	No action required	Wildlife Sightings Log, Site Surveillance Monitoring	9.5.2
Project Related Mortality[(a)]	No more than 20 Arctic fox/year	Yes	On-going waste management and, regular toolbox meetings reiterating that any disrespect of wildlife or of Meliadine's wildlife policy is unacceptable and against company rules	Wildlife Sightings Log, Site Surveillance Monitoring, with particular emphasis around waste management areas	9.5.2
Project Related Mortality[(a)]	No more than 1 raptor/year	No	Not currently identified	Wildlife Sightings Log, Site Surveillance Monitoring	9.5.2

Table 15: Accuracy of Impact Predictions – Wildlife Incidents 2022

Monitoring Indicator	Preliminary Threshold	Exceeded in 2022?	Adaptive Management	Monitoring Method	TEMMP Section
Project Related Mortality[(a)]	No more than 1 waterbird/year	No	On-going and regular toolbox meetings on awareness of blind-spots, particularly for large vehicles and equipment	Wildlife Sightings Log, Site Surveillance Monitoring	9.5.2

TEMMP = Terrestrial Environment Management and Monitoring Plan

a) Project related Mortality = A death that can be directly linked to the mine or mining activity.

9.7 Recommendations

Thresholds for Arctic fox were exceeded in 2022, however the majority of Arctic fox were euthanized under GN guidance. Other mortalities are within predicted thresholds. Agnico Eagle was proactive in managing wildlife conflict in 2022. Diligent waste management practices, employee and environmental awareness (e.g., toolboxes), and immediate reporting of wildlife sightings in and around Project infrastructure to limit mortality of wildlife should be continued. Specific recommendations from GN in 2022 were to avoid mixing food waste with other types of waste, to educate personnel to not feed wildlife, to ensure that all waste containers are sealed, and to ensure that doors of buildings that contain waste remain closed. Agnico Eagle will continue to implement these recommendations.

10.0 WILDLIFE DETERRENTS

Wildlife deterrents were implemented at five locations to deter birds from nesting. Tarps were effective for preventing ravens nesting at the 3M & 6M Fuel Farm. Propane cannons were used at TIRI-02 H18, H8, Crusher Pad, and TIRI-01 Open Pit. Bird deterrent balloons were used at the 3M & 6M Fuel Farm and H8.

11.0 MUSKOXEN

Agnico Eagle has provided the GN DoE with in-kind contributions and support for previous muskoxen surveys and will continue to do so when requested. No surveys were completed by the GN DoE in 2022 and in-kind contributions were not requested.

12.0 BARREN-GROUND CARIBOU

Barren-ground caribou (including the Lorillard and Qamanirjuaq herds) are listed as ‘Threatened’ under COSEWIC but are not currently listed under the *Species at Risk Act* (Government of Canada 2023). Barren-ground caribou are considered ‘Apparently Secure’ in Nunavut (CESCC 2016). Annual home ranges mapped by GN DoE show that the Project is within the annual home range of the Qamanirjuaq (pronounced “Kaminuriak”) caribou herd (Campbell et al. 2012, 2014). The Lorillard caribou are migratory (Campbell et al. 2014) and generally distributed north of Chesterfield Inlet, based on telemetry data collected by the GN DoE and the location of their historical calving grounds (Campbell et al. 2012). The likelihood of animals from the Lorillard herd occurring in the RSA for the Mine, as defined in the FEIS (Golder 2014), is very low. Baseline survey data documenting the distribution of barren-ground caribou during early winter, spring migration and calving, and post-calving through fall migration and rut periods suggest that the RSA is within the seasonal range of the Qamanirjuaq barren-ground caribou herd (Jalkotzy 1999, 2000, 2001). The annual range of the Qamanirjuaq herd occupies an area from northern Manitoba and Saskatchewan in the south, to southwestern Nunavut and southeastern Northwest Territories (BQCMB 1999;

Campbell et al. 2012). Barren-ground caribou are migratory, and movements and range use vary annually (Wakelyn 1999). The annual distribution and life history of this population has been previously documented (Banfield 1954; Kelsall 1968; Thomas 1969; Parker 1972; Heard 1986). The Qamanirjuaq herd calves approximately 57 km to the west-northwest of the Mine and after calving the herd aggregates into a post-calving movement, generally moving east towards the coast and then back to the west and southwest of the Mine where their summer movement and distribution patterns commence. During the post-calving movements to the coast, thousands of caribou can come through the Mine site and reside within and around the Project area for approximately 5 to 10 days during late June to mid-July (Nuqsana Golder 2020). For additional discussion on the Qamanirjuaq herd please refer to the FEIS (Golder 2014).

12.1 Caribou Behaviour Monitoring

The TEMMP indicates that once 50 caribou are observed within 5 km of the Project footprint boundary (visual detection or based on collar data provided by the GN), a work suspension protocol commences at the Mine. Monitoring caribou behaviour in proximity to the mine is integral to understanding how caribou interact with the Project infrastructure including roads (i.e., crossing, deflection, walking parallel) and other Project infrastructure. Documenting behaviour through activity budgets may better inform appropriate adaptive management and distance triggers and thresholds in the future. Over time, a long-term dataset will be used to evaluate obvious response or lack of obvious response of caribou to mining based on behaviour.

The overall objectives of the caribou behaviour monitoring program are to determine if caribou activity budgets change with distance from the mine, and to document caribou response to stressors. Activity budgets (i.e., time spent feeding, resting, walking, running) of caribou exposed to disturbances from the Mine and AWAR will be used to provide inputs for assessing the impact to the energy balance of caribou (see Section 4.5.2 of the TEMMP, Agnico Eagle 2022c, for additional discussion). The immediate effect of specific stressors (e.g., aircraft, vehicles, other wildlife) on caribou behaviour will also provide general insight into the relative effect of natural, Project-related, and community-related (i.e., ATV traffic and harvesting) road stressors on caribou behaviour. Consequently, opportunistic surveys should be completed when appropriate to do so during the caribou post-calving migration, without causing additional stress to caribou.

An external caribou behaviour expert (from ERM Consultants Canada Ltd.) was brought on site in 2020, 2021, and 2022 to conduct the behaviour monitoring program, and to provide training for the Meliadine Mine Environmental Technicians. The overall objective of the caribou behaviour monitoring program as stated in the TEMMP is (Appendix J; ERM 2023a):

- To determine if caribou activity budgets change with distance from the mine, and to document caribou response to stressors.
- To determine if caribou distribution changes with proximity to the mine (i.e., do caribou avoid the mine).

Per the Project Certificate (T&C 57), a detailed analysis of caribou responses to operations of the AWAR is required at Meliadine. The detailed objectives of the 2022 study were:

1. To conduct a study using behaviour survey methodology at the Project site to estimate how the AWAR and site infrastructure may contribute to the effects of the Project on caribou.

2. To use information from the surveys (combined across three years of data collection) to determine factors that predict caribou behaviour near the mine site, specifically looking at distance; group size; and vehicle disturbances.

The primary hypothesis of this study was that caribou closer to the road would demonstrate a stronger response to vehicle disturbances.

12.1.1 Methods

Ground-based behavioural observations, or scan sampling, are conducted to provide data on changes in caribou behaviour as a function of distance from the Project. Two different, but complementary approaches have been used to record the activity budget of caribou around the Project and AWAR. See the TEMMP (Agnico Eagle 2022c) for additional details on the behaviour scan method.

Prior to arrival of caribou in June, a wildlife biologist from ERM conducted a classroom and practical training program for Agnico Eagle environmental technicians from Meliadine Mine. The ERM wildlife biologist with and assistant was tasked with conducting behaviour observations as a primary role during July, while Meliadine technicians conducted behaviour observations opportunistically during other fieldwork in alignment with the TEMMP (Appendix J; ERM 2023a).

Surveys were conducted by ERM and Agnico Eagle technicians. In total, 56 behaviour monitoring sessions were completed in 2020, 46 in 2021, and 69 in 2022. Behavioural surveys were conducted from 1 to 17 July 2020, 29 June to 12 July 2021, and 20 June to 12 July 2022. Following data collection in 2020, and protocols were updated for the 2021 season to include use of a laser range finder to determine distance of caribou from roads, and side of road (east or west) that caribou were observed. The time and type of disturbances (e.g., noise, aircraft, or vehicles) that occurred during surveys were recorded. Surveys were 30 minutes in duration, with observations collected every three minutes.

The objective of the data analysis was to quantify trends in the survey data, and determine whether factors such as distance to infrastructure, group size, or disturbances could be used to explain caribou behaviour. The primary hypothesis was that caribou closer to the road would demonstrate a stronger response to disturbances. An initial exploratory analysis was conducted to visualize the data and determine the appropriate method for analyzing the data. Behaviour categories were grouped for analysis into “response” behaviours (alert and running) and non-response (feeding, lying down, standing, and walking) to increase statistical power.

Generalized linear mixed-effects models (GLMs) were developed to statistically test for differences in the proportion of response behaviours in surveyed animals as a function of various controlling variables, including the occurrence of disturbances. Variables were averaged over the entire 30-minute survey period. One analysis focused on the average proportion of response behaviours in each thirty-minute survey period using a binomial distribution. A second analysis focused on tracking the number of minutes it took caribou to return to background behaviour levels following a disturbance event and was modelled using a normal distribution.

12.1.2 Results

The following provides a summary of caribou behaviour monitoring completed during 2020, 2021 and 2022. Further details are provided in Appendix J. Field surveys were conducted as the Qamanirjuaq herd was observed approaching the Project to trigger the decision to begin behaviour surveys.

Sample size was distributed across group sizes for the 171 surveys completed (Table 16). Over half of all surveys incidentally involved at least one disturbance (e.g., ATV traffic). The greatest caribou activity occurred slightly earlier in 2022 (between 28 June and 29 June) relative to 2021 and 2020. The most common behaviours observed by caribou in 2022 were standing, laying, feeding, and walking. Across all years, groups tended to show greater response behaviours (running, alert) when in smaller groups or within 300 m of a road (ERM 2023a).

Statistical analysis of 2020 to 2022 data found that caribou farther from infrastructure (>300 m) displayed lower proportions of response behaviours. Environmental variables (e.g., temperature and wind speed) were not related to proportion of response behaviours in caribou groups. The proportion of response behaviours in groups increased following disturbances, but behaviours usually returned to baseline levels after six minutes. Caribou displayed a greater likelihood to be walking, alert, or running in surveys where there were disturbances such as vehicle traffic (ERM 2023a).

Further explanation of statistical analyses and results of the caribou behaviour monitoring program are contained in Appendix J.

Table 16: Meliadine Caribou Behaviour Surveys Data Summary

Caribou Group Size	2020			2021			2022		
	Total Number of Surveys	Surveys with Disturbances	Surveys with Observed Road Crossings	Total Number of Surveys	Surveys with Disturbances	Surveys with Observed Road Crossings	Total Number of Surveys	Surveys with Disturbances	Surveys with Observed Road Crossings
1-2	5	4	2	8	5	0	11	9	3
3-25	11	2	2	11	7	3	9	7	4
26-50	9	3	0	2	0	0	3	1	0
51-500	14	11	1	16	8	6	18	15	6
501-1,000	6	3	1	0	0	0	8	4	0
>1,000	11	6	0	9	7	3	20	17	2
Total	**56**	**29**	**6**	**46**	**27**	**12**	**69**	**53**	**15**

12.2 Caribou Remote Camera Study

The following section is a summary of the Caribou Trail Camera Study Compilation Report (2020 to 2022), completed by ERM (ERM 2023b).

In 2020, 2021, and 2022, a study was conducted using motion-triggered cameras to study caribou interactions with the Project infrastructure during their annual migration, focusing on the AWAR. The initial study was designed to identify features of the AWAR (i.e., slope, substrate, height, and surrounding habitat) that may facilitate higher rates of caribou passage during annual migratory movements. Cameras were also placed at locations identified by community members and Inuit Elders from Inuit Qaujimajatuqangit (IQ) where caribou more frequently crossed the road. The survey protocol in 2022 followed that used in the previous two years, with minor improvements intended to increase the quality of data collected.

The objectives of the 2022 study were:

- To conduct a study using motion-trigger cameras at the Project site to estimate how the AWAR may affect caribou movement during seasonal migration.
- To evaluate if there were specific locations with high numbers of caribou observations along the AWAR in 2022, and compare these locations with 2020 and 2021 camera data, and with those identified by IQ and GPS collar data.
- To collect information to determine road characteristics used by caribou for crossing, specifically:
  - Material of road construction (esker versus quarry);
  - Side slope;
  - Road height; and
  - Surrounding vegetation type.
- To evaluate what relationship (if any) there is between vehicles recorded on the road and location/timing of caribou observations.

Full details on the study are provided in Appendix K.

12.2.1 Methods

Camera locations along the AWAR were selected to maximize coverage and representation of habitat and road types, and to best detect caribou and vehicles. The same approximate locations were used in 2020, 2021, and 2022 with five additional locations added in 2022 to extend camera coverage south along the AWAR. Thirty-four cameras were placed along the AWAR in mid-June 2022 and were removed in mid-July. Cameras were placed approximately 2 m west of the AWAR, facing north; and took both timed and motion-triggered photos. Road survey data from 2020 was used and included: height above tundra, width, side-slope, surfacing material (esker versus quarry rock, and size), and surrounding vegetation type. Data from three cameras were analyzed in detail to provide information on vehicle traffic.

All cameras took five pictures whenever motion was detected within approximately 40 m of the motion detector, including wildlife, vehicles, and occasionally objects moving in the wind. In addition, all cameras were programmed to take one photo every 30 minutes, day or night.

All photos from 2022 were pre-processed by an artificial intelligence (AI) algorithm to automatically sort photos into four categories: animals, vehicles, humans, and blank images (Beery et al. 2019; Fennell et al. 2022). ERM personnel then reviewed all photos as classified by the AI algorithm and confirmed all detections of wildlife or vehicles. In 2020 and 2021, ERM personnel reviewed all photos from the cameras and recorded every detection of wildlife and vehicles.

Where data were complete GLMs were used to assess the differences in the number of caribou detection events as a function of various controlling variables, including road structure and the occurrence of vehicle traffic. This regression framework provides a means to control for habitat, environmental variables, repeated measurements, and spatial correlation. For some comparisons in which statistical models were not useful due to a small sample size, summary statistics and correlations were calculated. This included the comparison of collar data to camera data by kilometre of roadway. Analyses were carried out using program R version 4.1.1 (R Core Team 2021).

12.2.2 Results

Overall, the key findings from the camera study included (Appendix K; ERM 2023b):

- The cameras were successful at capturing many caribou crossing the AWAR, with peak caribou passage occurring two weeks later in 2022 versus 2021, consistent with patterns of inter-annual variability observed in the collar data.
- Caribou crossing timing and locations in 2022 were consistent with locations identified in 2020, 2021, and with locations identified by IQ from Inuit Elders and community members. The hotspots identified by the camera data in all three years aligned more closely with the IQ identified hotspots than the collar data from 2012 to 2019.
- Road height and road-side slope at each camera location was not related to the number of caribou observed at each camera location, suggesting that differences in the structure of the AWAR was not influencing the locations where caribou cross. Alternatively, since the structure of the road is relatively uniform along its length, there may not be enough difference in the shape or profile of the road to influence which sections of the road caribou prefer to cross.
- More caribou were observed on cameras on the northern half of the road. Esker material is more common as a substrate on the northern half of the road which may suggest caribou prefer crossing on esker material. However, this may be an artefact of a sampling bias in the data, or inter-annual route fidelity by caribou.

Overall, the results suggest that caribou are not affected by the structure of the Meliadine AWAR, but spatial differences in road crossing locations may be explained by sampling bias, traffic, timing, migratory route fidelity, or some combination of these factors. The lack of a strong relationship between caribou crossing and either vehicles or road structures suggests that existing mitigations for caribou along the AWAR are effective at reducing potential Project effects. These results highlight the power of using motion-trigger cameras to draw connections between the many interacting variables that may explain caribou passage through the Project area, which may be integrated with additional sources of data to inform potential cumulative effects of the Meliadine Mine. Additional camera data will help confirm any potential effects, as well as provide further insight on areas of high caribou passage across the AWAR. Further, pooling data collected across multiple study years will allow for minimum sample sizes necessary to incorporate further quantitative analyses of patterns of caribou movement across the Meliadine AWAR.

Further explanation of analyses and results of the caribou trail camera study are contained in Appendix K.

12.3 Collared Caribou Inventory

Analysis of Qamanirjuaq collared caribou from 1993 to 2019 indicate presence in the RSA (including baseline) in 13 of 27 years and alternate between periods of presence and absence through time (Nuqsana Golder 2020). Alternating periods of presence and absence of caribou in the RSA has been noted by IQ (Golder 2014). Collared caribou have typically entered the RSA in mid- to late- April. Annual exits from the RSA have been more variable ranging from late April to October. Evidence from collared caribou support that a portion of the Qamanirjuaq herd may pass through the RSA in summer but on occasion may in some years linger from late October through March (Hubert and Associates 2007; Nuqsana Golder 2020). When present, collared caribou spend about one to three weeks in the RSA and over all years are present for an average of 6 days.

Qamanirjuaq collared caribou have been present in 10 of 27 years in the LSA (Nuqsana Golder 2020). Collared caribou from this herd typically enter the LSA in early to mid-July and leave within a couple of days. Over all years, collared caribou spend less than half a day inside the LSA. In consideration of these results, impacts to the Qamanirjuaq herd due to the Project have the potential for limited transboundary effects. The collar data also support that caribou are spending very little time in the areas immediately adjacent to the Project. A data sharing agreement for caribou collar data with the GN DoE is currently being developed. Agnico Eagle intends to update collar results once the data sharing agreement is in place. Past analysis of collar data interactions with the Mine infrastructure and AWAR in indicate no strong local scale deflection effects although more regional effects have not been assessed (Appendix D in Golder 2021).

12.4 Caribou Advisory

The objective of the Caribou Advisory Monitoring program is ensuring workers are aware of the approximate numbers of caribou on and in close proximity to the Project, which is related to the potential for interactions between caribou and mining activities. The Caribou Advisory raises general awareness so that employees are alert to the likelihood that mitigation could be triggered, and what mitigation entails. The number of animals near the Project and in specific areas dictates the type of mitigation practices that will be undertaken (e.g., haul road closure, closing specific areas at the Mine site, speed reduction).

12.4.1 Methods

Mine staff, in collaboration with the GN and KivIA and including participation of the KHTO, undertake the implementation of a caribou monitoring and work suspension protocol during caribou migration to minimize sensory disturbance at the Project site and along the AWAR. KHTO and KivIA members typically assist Mine staff conducting surveys during caribou migration. Due to concerns around the COVID-19 pandemic, adaptative measures were taken to ensure contacts between the community members and Mine employees were avoided. In accordance with the Detached Operation Protocol, KHTO led the convoys when travel was required on the AWAR (equipment transportation or employee buses) during the caribou migration. Communication protocols built into the work suspensions are designed to be broadcast swiftly and broadly among all departments in real time. The Environmental Department monitored caribou presence as per the caribou migration protocol (TEMMP Appendix III; Agnico Eagle 2022c) including the use of collar data and regular surveys and issuing caribou advisories. Regular surveys for caribou, were completed by on site Environmental Technicians, and consisted of ground surveys at multiple locations, at regular intervals throughout the day (i.e., 06:00, 12:00, 18:00) during caribou migration. The results of the surveys were communicated to all Project Departments, including the KivIA and KHTO, indicating if any work stoppages or restrictions are required and the affected work areas.

A decision tree is used to guide adaptive monitoring and mitigation based on results of surveys. Three action levels are outlined in the decision tree:

- Level 1: triggered when 50 or more caribou are observed within 10 km of the Mine based on ground surveys or review of satellite collar data. Ground surveys are completed every two days, and satellite collar data is reviewed twice per week. Site-wide warnings are issued daily. Level 1 is ongoing for 5 days, or until Level 2 is triggered.
- Level 2: triggered when less than 50 caribou are observed within 5 km of the Mine. Ground surveys are completed every two days, and satellite collar data is reviewed twice per week. Additional mitigation (e.g., work suspension), may be implemented by the Environmental supervisor. Site-wide warnings are issued daily. Level 2 is ongoing for 10 days; or until caribou exit the 5 km mark or Level 3 is triggered.
- Level 3: triggered when 50 or more caribou are observed within 5 km of the Mine. Ground surveys are completed three times per day, and satellite collar data is reviewed at least twice per week. A work suspension protocol is implemented. Site-wide warnings are issued three times per day. Closure occurs on the AWAR when 50 or more caribou are within 100 m of the road. Level 3 is ongoing until caribou exit the 5km mark.

12.4.2 Results

Surveys to monitor migration of the Qamanirjuaq herd through the project were performed from 16 June through 1 August. A record of caribou surveys during the migration period, including location, date, time, number of caribou, herd composition, and direction of travel are presented in Appendix L. Caribou were detected during surveys from 19 June to 16 July, and closure of the Mine site and/or AWAR was triggered between 19 June to 15 July (Table 17). The highest caribou numbers were observed between 11 July and 13 July (Figure 5). Mine site and AWAR surveys were completed three times daily throughout this period by Mine personnel. Shutdowns affecting different components of the Mine were implemented to facilitate the safe migration of caribou through the Project. Shutdowns are summarized in Table 17. This includes closures along the AWAR for a total of 273.50 hours across 14 days. Vehicle traffic on site was restricted for 269.70 hours across 17 days. Open-pit operations, Exploration Camp, and activities at the Main Camp were restricted shutdown for 266.70 hours across 16 days. Flights were cancelled to mitigate disturbance to caribou on 11 July and 12 July.

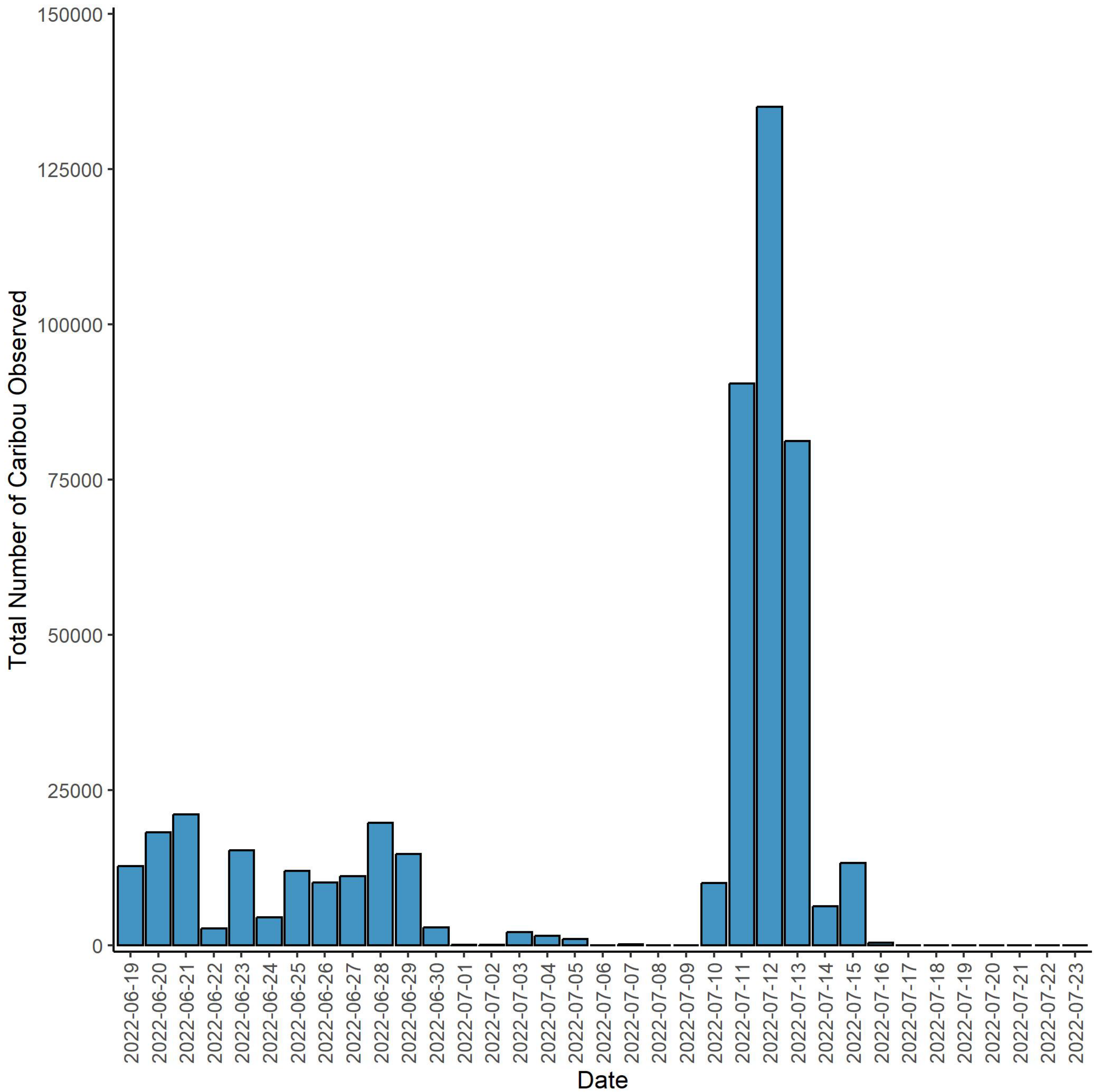

Figure 5: Total Number of Caribou Observed by Date, 2022.

Table 17: Caribou Advisories 2022

Date	AWAR		Vehicle Traffic on Site		UG Operations		OP Operations		Expl. Camp Area		Main Camp		Comments
	Time	Hours Closed	Time	Hours Closed	Time	Hours Closed	Time	Hours Closed	Time	Hours Closed	Time	Hours Closed	
2022-06-19	-	0:00	14:00	10.00	-	0:00	14:00	10.00	14:00	10.00	14:00	10.00	Operations shut down 2PM to 12AM
2022-06-20	-	0:00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	Level 3 active for 24 hours
2022-06-21	-	0:00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	Level 3 active for 24 hours
2022-06-22	6:00	24.00	6:00	18.00	-	0:00	6:00	18.00	6:00	18.00	6:00	18.00	Opened in the afternoon and closed in the evening
2022-06-23	6:00	24.00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	Level 3 active for 24 hours
2022-06-24	6:00	24.00	6:00	6.00	-	0:00	6:00	6.00	6:00	6.00	6:00	6.00	Level 3 was active on site from 6:00AM to 12:00PM
2022-06-25	6:00	24.00	-	0:00	-	0:00	0:00	0.00	0:00	0.00	0:00	0.00	AWAR is closed, Site at Level 2
2022-06-26	6:00	24.00	9:40	14.20	-	0:00	9:40	14.20	9:40	14.20	9:40	14.20	Site went into a Level 3 at 9:40AM
2022-06-27	-	0:00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	Site was in a Level 3 all day, AWAR open with restriction
2022-06-28	6:00	24.00	6:00	11.00	-	0:00	6:00	11.00	6:00	11.00	6:00	11.00	Moved into a Level 2 at 11:00AM
2022-06-29	6:00	24.00	-	0:00	-	0:00	0:00	0.00	-	0.00	-	0.00	AWAR is closed, Site is at Level 2
2022-06-30	-	0:00	11:30	14.50	-	0:00	11:30	14.50	11:30	14.50	11:30	14.50	Site went into Level 3 at 11:30AM, AWAR open with restriction
2022-07-01	-	0:00	6:00	3.00	-	0:00	0:00	0.00	0:00	0.00	0:00	0.00	Portal 1 area was in Level 3 from 6AM - 9AM
2022-07-02	-	0:00	-	0:00	-	0:00	0:00	0.00	0:00	0.00	0:00	0.00	Site was in Level 2 all day
2022-07-03	6:00	0:00	8:30	9.50	-	0:00	8:30	9.50	8:30	9.50	8:30	9.50	AWAR closed at 6AM, Site went into Level 3 at 8:30AM, Level 2 at 6PM
2022-07-04	6:00	24.00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	
2022-07-05	6:00	3.50	6:00	3.50	-	0:00	6:00	3.50	6:00	3.50	6:00	3.50	Site was closed at 6AM and opened at 9:30AM
2022-07-06	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	No shutdown for Site or AWAR
2022-07-07	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	No shutdown for Site or AWAR
2022-07-08	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	No shutdown for Site or AWAR
2022-07-09	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	No shutdown for Site or AWAR
2022-07-10	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	No shutdown for Site or AWAR
2022-07-11	6:00	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	AWAR closed at 6AM
2022-07-12	6:00	24.00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	Site went into a Level 3 at 6AM, AWAR closed
2022-07-13	6:00	24.00	6:00	24.00	-	0:00	6:00	24.00	6:00	24.00	6:00	24.00	Site went into a Level 3 at 6AM, AWAR closed
2022-07-14	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	No shutdown for Site, AWAR closed (convoy authorized)
2022-07-15	6:00	12.00	6:00	12.00		0:00	6:00	12.00	6:00	12.00	6:00	12.00	Site and AWAR closed 6AM due to fog
2022-07-16	-	0.00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-17	-	0.00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-18	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-19	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-20	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-21	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-22	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-23	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-24	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-25	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site open, AWAR open with restrictions
2022-07-26	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
2022-07-27	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
2022-07-28	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
2022-07-29	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
2022-07-30	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
2022-07-31	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
2022-08-01	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	-	0:00	Site and AWAR open
Total Hours Lost	**-**	**273.50**	**-**	**269.70**	**-**	**-**	**-**	**266.70**	**-**	**266.70**	**-**	**266.70**	

12.4.3 Traffic Data

A total of 18,331 one-way trips along the AWAR were recorded in 2022, with an average of 1,528 trips per month (Table 18). Traffic rates were lowest in February, and highest in September. Pickup trucks and tractor-trailers were large contributors to traffic rates, followed by water tankers, fuel tankers, and buses. The number of one-way trips in 2022 was lower than the 20,323 trips in 2021 but was higher than the 17,422 one-way trips in 2020 (Golder 2021). In addition to one-way trips, there were 85 records of convoy trips between June and July 2022. Trips included crew changes, food or fuel transport, sign deployment, and medical trips.

Table 18: AWAR Traffic by Month (2022).

Vehicle Type	January	February	March	April	May	June	July	August	September	October	November	December	Total
Ambulance	4	5	4	2	2	2	2	0	6	2	1	2	32
ATV	0	0	2	2	18	88	181	154	84	45	28	0	602
Backhoe	0	0	0	5	0	1	0	0	6	0	0	2	14
B-Train	0	0	0	8	7	0	0	3	6	1	25	0	50
Bus	167	178	224	211	247	213	203	272	124	217	270	211	2,537
Crane	0	0	1	0	2	5	6	11	7	9	0	3	44
Dump Truck	0	0	0	0	8	0	2	69	144	299	2	0	524
Excavator	0	0	0	0	0	0	0	0	0	0	1	0	1
Flatbed Tractor	0	0	2	1	0	0	0	3	5	0	28	1	40
Fuel Tanker (40,000 L)	225	269	248	241	198	153	128	231	140	257	184	270	2,544
Fuel Truck (15,000 L)	29	4	5	6	0	11	16	12	9	29	12	13	146
Grader	24	18	21	37	24	28	12	41	27	26	32	47	337
Haul Truck	0	0	0	4	5	115	65	140	46	121	0	7	503
Hino-luggage	12	17	31	20	19	23	21	29	8	26	34	24	264
Hyster (Reach Stacker)	0	0	0	0	2	0	2	1	1	0	0	1	7
Loader	9	9	16	19	11	13	2	21	0	3	5	7	115
Oversized load	0	0	0	0	0	0	12	12	0	4	3	0	31
Pickup	176	180	282	286	440	444	552	471	348	645	568	471	4,863
Roll Off truck	0	0	9	0	3	0	37	36	24	0	8	4	121
Sand Truck	0	0	0	0	0	1	0	0	0	0	0	0	1
Service truck	8	3	2	7	9	2	9	1	4	9	1	7	62
Sewage Truck	12	6	14	20	22	28	32	28	5	18	21	16	222
Snowblower	22	21	19	16	0	0	0	0	0	2	15	37	132
Telehandler	0	0	0	0	0	0	3	0	0	0	0	0	3
Tractor-trailer	154	79	263	326	702	264	384	536	404	681	848	428	5,069
Van	0	0	0	0	0	0	0	0	0	0	0	0	0
Water tanker (40 000L)	0	0	0	0	0	0	0	0	0	0	2	0	2
Water Truck (15 000L)	0	0	0	2	4	6	6	9	0	0	2	0	29
Other*	2	3	0	4	5	20	21	14	0	7	8	2	86
Total	**844**	**792**	**1,143**	**1,217**	**1,728**	**1,417**	**1,696**	**2,094**	**1,398**	**2,401**	**20,98**	**1,553**	**18,381**

Note: Trips less than the entire length of the road were rounded up to whole numbers (e.g., 0.5 rounded to 1), therefore total trip numbers provided in table will be larger actual trips performed.

12.5 Accuracy of Impact Predictions

A summary of the impact predictions proposed in the TEMMP (Agnico Eagle 2022c) is provided in Table 19. Though not fully developed, the following thresholds are suggested as a starting point for adaptive management and TEMMP (Agnico Eagle 2022c) refinement and is tested against the results of the 2022 observational data (Table 19).

Table 19: Accuracy of Impact Predictions – Caribou

Monitoring Indicator	Preliminary Threshold	Exceeded in 2022?	Adaptive Management	Monitoring Method	TEMMP Section
Habitat Loss and Degradation	No greater than 2,950 ha of terrestrial habitat loss	Not assessed in 2022	Not Currently Identified	Aerial photographs, satellite imagery, ground surveys, GIS analysis	5.0
Sensory Disturbance	<10% caribou deflections from AWAR	Not assessed in 2022	Not Currently Identified	Caribou Behaviour Monitoring	12.3
Vehicle Collisions	No more than 1 ungulate/year	No	No action required	Wildlife Sightings Log, Site Surveillance Monitoring, AWAR Road Surveillance, Road Surveillance	9.5
Hunting by Rankin Inlet Residents	After 3 years of data collection in collaboration with GN, establish a threshold level	Not assessed in 2022	Not Currently Identified	Hunter Harvest Survey, data collected throughout the year and reported annually	13.0
Other Project Related Mortality	No more than 1 ungulate/year	No	No action required	Wildlife Sightings Log, Site Surveillance Monitoring	9.5
Exposure to Contaminated Water or Vegetation	SLRA – TBD	N/A	Not Currently Identified	Vegetation and soil samples	N/A

AWAR = All-Weather Access Road; GN = Government of Nunavut; SLRA = Screening Level Risk Assessment; TEMMP = Terrestrial Environment Management and Monitoring Plan; N/A = not applicable; <= less than; TBD = to be determined

13.0 HUNTER HARVEST SURVEY

Agnico Eagle signed a Memorandum of Understanding (MOU), in principle, with the KHTO in March 2019 for the development and execution of a Hunter Harvest Survey (HHS). The HHS supports Project Certificate No.006 Term and Condition 46 and 48. The HHS was implemented in 2020 through 2022.

In 2021 and 2022, an external consultant, Nunavut Environmental Consulting, was contracted to work alongside the KHTO to conduct the study. The full Hunter Harvest Study report is provided in Appendix L.

13.1 Methods

The wildlife species that are the focus of the HHS are caribou, muskox, grizzly bear, polar bear, wolf, wolverine, Arctic fox, goose, ptarmigan, and seal. However, harvest data on other species, such as beluga (*Delphinapterus leucas*), common eider (*Somateria mollissima*), and sandhill crane are also collected. The species in the study were deliberately chosen to make data entry and collection as simple as possible. To support creel surveys, data on fish harvest (Priority species = Arctic char, lake trout, lake whitefish, and Arctic grayling) were also collected.

Inuit and non-Inuit residents, at least 16 years of age, are eligible to participate in the harvest survey. Harvest calendars are provided on a household basis, rather than an individual basis, to simplify data entry and collection, and reflect household hunting patterns. The harvest calendar is attractive and consists of local photographs of wildlife and Nunavut residents. Space is provided for each calendar day where harvest details can be documented.

A map is provided at the end of the calendar that delineates a 5 km^2 UTM grid around the Rankin Inlet and Meliadine mine areas, and regions indicated as important for hunting during discussions with HTO members. Each grid has a unique code to facilitate recording of information. When calendars are issued, participants or participating households are encouraged to write harvest details (e.g., number of animals, sex, age, and location (i.e., grid code) for the appropriate date on the calendar.

Participants were interviewed in person three times during the year (i.e., June 2022, October 2022, and February 2023) by the harvest study coordinator. During the February 2023 interviews, remaining data from 2022 were collected. The purpose of the interviews is to ensure all harvest data are recorded on the calendars and to collect incidental information to compliment calendar data, including notable Caribou movements, aggregations, and unique observations. Between interview periods, participants were often contacted by phone or social media to encourage recording of harvest data.

Features of the 2022 Hunter Harvest Study included:

1) building long-term relationships between participants and researchers;
2) increasing engagement with participants on social media platforms such as Facebook and Instagram; and
3) increasing incentives for participating in the study (e.g., gas vouchers and prizes).

13.2 Results

The 2022 HHS Study included 44 participants amongst which 31 reported harvesting caribou. Given an estimated 300 to 350 active hunters in the Hamlet of Rankin Inlet, the HHS represents from 9% to 10% of hunters in the community. With a total reported caribou harvest of 547 in 2022, the total Caribou harvest in Rankin Inlet is estimated to range from 5,470 to 6,077 caribou. This estimate is likely high because the current study attracted some of the more successful hunters (e.g., Kangiqliniq Hunters and Trappers Organization members) in the community and total number of active hunters may be less than 300 to 350.

Of Caribou harvests reported by Rankin Inlet participants in 2022, 3.3% were harvested within 5 km of the Meliadine All-Weather Access Road (AWAR), which compares to 4.5% during the Nunavut Wildlife Management Board's (NWMBs) harvest study from 1996 to 2001 (pre-construction) (Table 20). Harvests within the Meliadine Mine Regional Study Area in 2022 were 29.4% of the total compared to 19.7% in 2021 and 24.8% during the NWMB study. These very preliminary numbers suggest that the presence of the AWAR and the Meliadine Mine has not dramatically increased hunting in the area.

Table 20: Caribou Harvest Distribution along the AWAR and within the Rankin Inlet LSA and RSA (1996 to 2001 [NWMB], and 2021 and 2022 [Rankin Inlet HHS])

Study	Participation Rate within 5 km of AWAR (# of hunters)	Average Caribou Harvest within 5 km of AWAR per Participant	% of Annual Harvest within 5 km of AWAR	% of Annual Harvest within Meliadine LSA	% of Annual Harvest within Meliadine RSA
NWMB 1996 to 2001 (Rankin Inlet)	32	4.1	4.5	0.3	24.8
Rankin Inlet HHS 2021	5	5.0	3.7	3.3	19.7
Rankin Inlet HHS 2022	11	3.3	4.8	4.0	29.4

AWAR = All-weather Access Road; HHS = Hunter Harvest Study; LSA = Local Study Area; NWMB = Nunavut Wildlife Management Board; RSA = Regional Study Area.

A total of 10 muskox, 8 wolverine, and 14 wolves were harvested in 2022. Other harvested terrestrial mammals included Arctic hare. In the marine environment, beluga (*Delphinapterus leucas*; 27 individuals) was the most common species harvested followed by ringed seal (*Pusa hispida*; 22 individuals), narwal (*Monodon monoceros*; 5 individuals), and bearded seal (*Erignathus barbatus*; 1 individual).

Considerably fewer birds were harvested by Rankin Inlet participants in 2022 (136 individuals) than in 2021 (394 individuals). In 2022, Canada goose and snow goose were harvested at the highest levels and made up 65% of all harvest bird species. Common eider, ptarmigan (*Lagopus* sp.), sandhill crane, and northern pintail were also harvested.

Arctic char (*Salvelinus alpinus*; 878 fish), lake trout (*Salvelinus namaycush*; 124 fish), and Arctic cod (*Arctogadus glacialis*; 115 fish) were the most common species caught by fisherman. Relatively small numbers of Arctic grayling (*Thymallus arcticus*) and lake whitefish (*Coregonus clupeaformis*) were caught in 2022. No burbot (*Lota lota*) catches were reported in 2022.

13.3 Recommendations

The Rankin Inlet Hunter Harvest Study and Creel Survey should be continued on an annual basis to monitor the hunting and fishing patterns of Rankin Inlet residents, and the potential effects of the mine and AWAR. Meetings with participants at certain intervals throughout the year will be particularly important in maintaining contact, building relationships, expanding the study, and collecting good harvest data.

Participation rates can be maintained by continuing to use social media platforms, expanding connections on these platforms, ensuring that all participants are visited during the three scheduled field visits, and continuing with distribution of the well-received year-end prizes while in the community. An effort should be made to bringing on new participants in 2023.

14.0 CLOSURE

We trust the above meets your present requirements. If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Your Truly,

WSP Canada Inc.

ORIGINAL SIGNED

Scott Wilson, M.Sc. R.P.Bio
Biologist

ORIGINAL SIGNED

Corey De La Mare, P.Biol.
Fellow, Project Director and Senior Wildlife Biologist

ORIGINAL SIGNED

Dan Coulton, Ph.D., R.P.Bio.
Senior Wildlife Biologist

SW/CDLM/pls/jlb

https://golderassociates.sharepoint.com/sites/156265/project files/5 technical work/01_reporting/03_temmp_2022/03_final/final-rev0/21505027-960-r-2022 temmp annual report-rev0 29march2023.docx

15.0 REFERENCES

Agnico Eagle. 2019. Meliadine Gold Project 2018 Annual Report. Appendix H6: Terrestrial Effects Monitoring and Mitigation Program Annual Report. Prepared for the Meliadine Division by Golder Associates Ltd. 190402-11MN034-2018 Annual Report-IA1E.

Agnico Eagle. 2022a. Meliadine Gold Mine 2021 Annual Report. Appendix 26: Terrestrial Effects Monitoring and Mitigation Program Annual Report. Prepared for the Meliadine Division by WSP.

Agnico Eagle. 2022b. Meliadine Gold Mine 2021 Annual Report. Appendix 31: 2021 Natural Recovery and Active Restoration of Tundra Plant-Soil Systems Report. Prepared for the Meliadine Division by Drs. Katherine Standen and Katherine Stewart. 220419-11MN034-2021 Annual Report-App 31 Tundra Restoration & Natural Recovery Rpt-IA1E.

Agnico Eagle. 2022c. Terrestrial Environment Management and Monitoring Plan (TEMMP) – Meliadine Division, Nunavut. Prepared by Agnico Eagle – Environmental Department. Version 4, April 2022.

Aiken, S.G., Dallwitz, M.J., Consaul, L.L., McJannet, C.L., Boles, R.L., Argus, G.W., Gillett, J.M., Scott, P.J., Elven, R., LeBlanc, M.C., Gillespie, L.J., Brysting, A.K., Solstad, H., and Harris, J.G. 2007. Flora of the Canadian Arctic Archipelago: Descriptions, Illustrations, Identification, and Information Retrieval. NRC Research Press, National Research Council of Canada, Ottawa. http://nature.ca/aaflora/data, accessed on November 24, 2022.

Arctic Raptors Inc. 2023. [Raptor Monitoring Program Summary]. Prepared for prepared for Agnico Eagle Mines Ltd. 23 p.

Banfield AWF. 1954. Preliminary investigation of the barren ground caribou. Wildlife Management Bulletin Series 1: 10A and 10B.

Bart J, Andres B, Brown S, Donaldson G, Harrington B, Johnston V, Jones S, Morrison G, SkagenS. 2005. The program for Regional and International Shorebird Monitoring (PRISM). USDA Forest Service Gen. Tech. Rep. PSW-GTR-191: 893-901. https://www.fs.fed.us/psw/publications/documents/psw_gtr191/psw_gtr191_0893-0901_bart.pdf

Beery S, Morris D, Yang S. 2019. Efficient Pipeline for Camera Trap Image Review. arXiv. https://arxiv.org/abs/1907.06772

BQCMB (Beverly and Qamanirjuaq Caribou Management Herd). 1999. Protecting Beverly and Qamanirjuaq Caribou and Caribou Range – Part 1: Background Information. 40 p.

Burt PM. 1997. Diavik Diamond Project Vegetation Baseline Studies - Plant Associations and Habitat Types and Plant Species List.

Campbell MW, Shaw JG, Blyth CA. 2012 Kivaliq Ecological Land Classification Map Atlas: A Wildlife Perspective. Government of Nunavut. Department of the Environment. Technical Report Series 1-2012. 274pp.

Campbell MW, Kelly A, Croft B, Shaw JG, Blyth CA. 2014. Barren-ground Caribou in Nunavut and Northwest Territories – Map Atlas. Government of Nunavut, Department of Environment. Government of Northwest Territories, Department of Environment and Natural Resources. Technical Report in preparation.

CCME (Canadian Council of Ministers of the Environment). 2012. Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health: Summary Tables. Available at: http://st-ts.ccme.ca/. Accessed November 2022.

CESCC (Canadian Endangered Species Conservation Council List) 2010. Non-Native Species and Invasive Species in Nunavut.

CESCC. 2016. Wild Species 2015: The general status of species in Canada. National General Status Working Group: 128 pp.

DDMI (Diavik Diamond Mines Inc.). 1998. Environmental Effects Report, Wildlife. Yellowknife, Northwest Territories.

EC (Environment Canada – Avian Monitoring Review Steering Committee). 2012. Environment Canada Avian Monitoring Review – Final Report. Environment Canada, Ottawa, ON, xii + 170 pages + 3 appendices. [Accessed January 2022]: https://publications.gc.ca/site/fra/422608/publication.html

E-Flora BC (Electronic Atlas of the Flora of British Columbia. *Descurainia sophioides* (northern tansy mustard) Distribution Map. [Accessed January 2023]: https://linnet.geog.ubc.ca/eflora_NewFullMap/index.html?sciname=Descurainia%20sophioides&BCStatus=Not%20listed%20provincially&synonyms=%27Sisymbrium%20sophioides%27&commonname=northern%20tansy%20mustard&PhotoID=51369&mapservice=Vascular.

EPA (United States Environmental Protection Agency). 2022. Regional Guidance on Handling Chemical Concentration Data Near the Detection Limit in Risk Assessment. [Accessed January 2023]: https://www.epa.gov/risk/regional-guidance-handling-chemical-concentration-data-near-detection-limit-risk-assessments

ERM (ERM Consultants Canada Ltd.). 2023a. Meliadine Project, Caribou Behaviour Study, 2022. Prepared for Agnico Eagle Mines Limited. 10 p. + appendices.

ERM. 2023b. Meliadine Mine, Caribou Trail Camera Study Compilation Report, 2020 to 2022. Prepared for Agnico Eagle Mines Limited. 44 p.

Fennell M, Beirne C, Burton AC. 2022. Use of object detection in camera trap image identification: assessing a method to rapidly and accurately classify human and animal detections for research and application in recreation ecology. Global Ecology and Conservation 35:e02104.

Golder. 2014. Final Environmental Impact Statement (FEIS) – Meliadine Gold Project, Nunavut. Submitted to Nunavut Impact Review Board. April 2014.

Golder. 2015.Terrestrial Environment Management Monitoring Plan (TEMP). Meliadine Gold Project, Nunavut. Prepared for Agnico Eagle Mines Limited. Rankin Inlet, Nunavut.

Golder. 2018. 2017 Terrestrial Effects Monitoring and Mitigation Program Annual Report-Agnico Eagle – Meliadine Division. Prepared for Agnico Eagle Mines Limited. Rankin Inlet, Nunavut.

Golder. 2020. 2019 Terrestrial Effects Monitoring and Mitigation Program Annual Report. Meliadine Division. Prepared for Agnico Eagle Mines Limited. Rankin Inlet, Nunavut.

Golder. 2021. 2020 Terrestrial Effects Monitoring and Mitigation Program Annual Report. Meliadine Division. Prepared for Agnico Eagle Mines Limited. Rankin Inlet, Nunavut.

Government of Canada. 2023. Species at risk public registry. [accessed February 2023]. https://species-registry.canada.ca/index-en.html#/species?sortBy=commonNameSort&sortDirection=asc&pageSize=10

Heard D, Calef GW. 1986. Population Dynamics of the Qamanirjuaq Caribou Herd, 1968 – 1985. Rangifer, Special Issue No. 1:159-166.

Hubert and Associates. 2007. Overview, Environmental Program 1995-2002 Meliadine West Gold Project. Prepared for Comaplex Minerals Corp. 40 p.

Jalkotzy MG. 1999. Baseline studies of wildlife populations in the Meliadine River Baseline, Nunavut: May-December 1998. Prepared for WMC International Inc. Prepared by Arc Wildlife Services Ltd. Calgary, AB.

Jalkotzy MG. 2000. Baseline studies of wildlife populations in the Meliadine River Baseline, Nunavut: May-December 1999. Prepared for WMC International Inc. Prepared by Arc Wildlife Services Ltd. Calgary, AB.

Jalkotzy MG. 2001. Baseline studies of wildlife populations in the Meliadine River Baseline, Nunavut: 2000. Prepared for WMC International Inc. Prepared by Arc Wildlife Services Ltd. Calgary, AB.

Kelsall JP. 1968. The Migratory Barren-Ground Caribou of Canada. Canadian Wildlife Service Monograph. Number 3. Ottawa. 326-339.

Naeth, M.A., and Wilkinson, S. 2006. Lichens as bioindicators of dust distribution and monitoring at Diavik Diamond Mine, Northwest Territories. Final Report. Submitted to Environmental Division. Diavik Diamond Mines Ltd. NWT.

Nuqsana Golder. 2020. Meliadine Division - 2019 Terrestrial Effects Monitoring and Mitigation Program Annual Report. Prepared for Agnico Eagle Mines Limited by Nuqsana Golder Engineering and Environmental Inc.

Parker GR. 1972. Biology of the Kaminuriak Population of Barren-Ground Caribou Part 1. Canadian Wildlife Service Report Series Number 20. 88pp.

R Development Core Team. 2019. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/.

R Development Core Team. 2021. R: A language and environment for statistical computing. R Foundation for Statistical Computing (v4.1.1), Vienna, Austria. https://www.R-project.org/.

Thomas, DC. 1969. Population estimates and distribution of barren-ground caribou in Mackenzie District, Northwest Territories, Saskatchewan, and Alberta – March to May 1967. Canadian Wildlife Service Report Series Number 9.

Thomas, D.C. 1998. Fire-Caribou Relationships: (V) Winter Diet of the Beverly Herd in Northern Canada, 1980 to 1987. Technical Report Series No. 313. Canadian Wildlife Service, Edmonton, AB.

Wakelyn L. 1999. The Qamanirjuaq caribou herd – an arctic enigma. Beverly and Qamanirjuaq Management Board. Stonewall, MB.

15.1 Personal Communication

P. Sokoloff, P. 2022. Senior Research Assistant, Botany. Canadian Museum of Nature. Email. 24 August 2022.

APPENDIX A

Vegetation and Soil Sampling Location Photographs

Vegetation and Soil Sampling Location Photographs – July and August 2022

Photo 1: Tailings Facility sampling site 22-TF-S12 (538322 E, 6989546 N). Sampling site overview, July 28, 2022.

Photo 2: Tailings Facility sampling site 22-TF-S12 (538322 E, 6989546 N). Soil pit, July 28, 2022.

Photo 3: Tailings Facility sampling site 22-TF-S12 (538322 E, 6989546 N). Vegetation sample, July 28, 2022.

Photo 4: All weather access road sampling site 22-AWAR-S11 (546575 E, 6979391 N). Sampling site overview, July 30, 2022.

Photo 5: All weather access road sampling site 22-AWAR-S11 (546575 E, 6979391 N). Cloud berries collected for sampling, July 30, 2022.

Photo 6: All weather access road sampling site 22-AWAR-S11 (546575 E, 6979391 N). Soil pit, July 30, 2022.

Photo 7: Waste Rock Storage Area sampling site 22-WRSA-S2 (538882 E, 6989190 N). Sampling site overview, August 1, 2022.

Photo 8: Waste Rock Storage Area sampling site 22-WRSA-S2 (538882 E, 6989190 N). Soil pit, August 1, 2022.

Photo 9: Waste Rock Storage Area sampling site 22-WRSA-S2 (538882 E, 6989190 N). Collected vegetation and soil samples in double bagged and labelled, August 1, 2022.

Photo 10: Reference area 1 sampling site 22-REF1-S5 (533325E, 6990118 N). Sampling site overview, July 29, 2022.

Photo 11: Reference Area 1 sampling site 22-REF1-S5 (533325E, 6990118 N). Soil pit, July 28, 2022.

Photo 12: Reference Area 1 sampling site 22-REF1-S5 (533325E, 6990118 N). Collected vegetation and soil samples, bagged and labeled, July 28, 2022.

Photo 13: Reference Area 2 sampling site 22-REF2-S1 (534088 E, 6984708 N). Sampling site overview, July 29, 2022.

Photo 14: Reference Area 2 sampling site 22-REF2-S1 (534088 E, 6984708 N). Soil pit, July 29, 2022.

Photo 15: Reference Area 2 sampling site 22-REF2-S1 (534088 E, 6984708 N). Soil and vegetation samples collected in labelled bags, July 29, 2022.

Photo 16: Reference Area 3 sampling site 22-REF3-S2 (539377 E, 6976651 N). Sampling site overview, July 31, 2022.

Photo 17: Reference Area 3 sampling site 22-REF3-S2 (539377 E, 6976651 N). Soil pit, July 31, 2022.

Photo 18: Reference Area 3 sampling site 22-REF3-S2 (539377 E, 6976651 N). Soil and vegetation samples collected in labelled bags, July 31, 2022.

APPENDIX B

Vegetation and Soil Laboratory Certificates

Your P.O. #: OL-1129375
Site Location: MELIADINE MINE, NUNAVUT
Your C.O.C. #: n/a

Attention: Reporting

Agnico-Eagle
Meliadine
Meliadine Mine
Rankin Inlet, NU
CANADA X0C 0G0

Report Date: 2022/08/17
Report #: R7257688
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2M3525
Received: 2022/08/08, 08:30

Sample Matrix: Soil
Samples Received: 55

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acid Extractable Metals by ICPMS (1)	40	2022/08/11	2022/08/11	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	13	2022/08/12	2022/08/12	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	1	2022/08/12	2022/08/15	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	1	2022/08/17	2022/08/17	CAM SOP-00447	EPA 6020B m
pH CaCl2 EXTRACT (1)	54	2022/08/11	2022/08/11	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT (1)	1	2022/08/17	2022/08/17	CAM SOP-00413	EPA 9045 D m

Sample Matrix: Tissue
Samples Received: 63

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury in Vegetation by CVAA (1)	39	2022/08/11	2022/08/15	CAM SOP-00453	Health Canada Method
Mercury in Vegetation by CVAA (1)	19	2022/08/12	2022/08/15	CAM SOP-00453	Health Canada Method
Mercury in Vegetation by CVAA (1)	5	2022/08/15	2022/08/16	CAM SOP-00453	Health Canada Method
Metals in Vegetation by ICPMS (1)	23	N/A	2022/08/12	CAM SOP-00447	EPA 6020/200.3 m
Metals in Vegetation by ICPMS (1)	34	N/A	2022/08/15	CAM SOP-00447	EPA 6020/200.3 m
Metals in Vegetation by ICPMS (1)	6	N/A	2022/08/16	CAM SOP-00447	EPA 6020/200.3 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Your P.O. #: OL-1129375
Site Location: MELIADINE MINE, NUNAVUT
Your C.O.C. #: n/a

Attention: Reporting

Agnico-Eagle
Meliadine
Meliadine Mine
Rankin Inlet, NU
CANADA X0C 0G0

Report Date: 2022/08/17
Report #: R7257688
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2M3525

Received: 2022/08/08, 08:30

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TJU727	TJU729	TJU731		TJU733	TJU735	
Sampling Date		2022/08/01 11:10	2022/08/01 11:31	2022/08/01 11:58		2022/08/01 13:10	2022/08/01 13:40	
COC Number		n/a	n/a	n/a		n/a	n/a	
	UNITS	**22-WRSA-S1-S**	**22-WRSA-S2-S**	**22-WRSA-S3-S**	**QC Batch**	**22-WRSA-S4-S**	**22-WRSA-S5-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	5.91	6.49	5.79	8160746	6.44	6.39	8160260

QC Batch = Quality Control Batch

Bureau Veritas ID		TJU735	TJU737	TJU739	TJU741		TJU743	
Sampling Date		2022/08/01 13:40	2022/08/01 14:07	2022/08/01 14:30	2022/08/02 10:45		2022/08/02 11:10	
COC Number		n/a	n/a	n/a	n/a		n/a	
	UNITS	**22-WRSA-S5-S Lab-Dup**	**22-WRSA-S6-S**	**22-WRSA-S7-S**	**22-WRSA-S8-S**	**QC Batch**	**22-WRSA-S9-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	6.38	5.92	6.59	7.05	8160260	5.79	8160732

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJU743		TJU745	TJU762	TJU765		TJU767	
Sampling Date		2022/08/02 11:10		2022/08/02 11:45	2022/07/28 11:22	2022/07/28 08:04		2022/07/28 08:42	
COC Number		n/a		n/a	n/a	n/a		n/a	
	UNITS	**22-WRSA-S9-S Lab-Dup**	**QC Batch**	**22-WRSA-S10-S**	**22-TF-S1-S**	**22-TF-S2-S**	**QC Batch**	**22-TF-S3-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.85	8160732	5.32	5.99	6.00	8160260	5.48	8160746

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJU769	TJU771	TJU773		TJU779		TJU782	TJU784	
Sampling Date		2022/07/28 07:33	2022/07/28 09:21	2022/07/28 10:20		2022/07/28 15:46		2022/07/28 15:12	2022/07/28 14:03	
COC Number		n/a	n/a	n/a		n/a		n/a	n/a	
	UNITS	**22-TF-S4-S**	**22-TF-S5-S**	**22-TF-S6-S**	**QC Batch**	**22-TF-S11-S**	**QC Batch**	**22-TF-S12-S**	**22-TF-S13-S**	**QC Batch**
Inorganics										
Available (CaCl2) pH	pH	6.70	5.58	4.26	8160260	5.90	8160746	5.83	4.29	8160260

QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TJU786		TJV568	TJV570	TJV573		TJV575	
Sampling Date		2022/07/28 14:36		2022/07/28 16:15	2022/07/28 16:45	2022/07/30 08:35		2022/07/30 07:55	
COC Number		n/a		n/a	n/a	n/a		n/a	
	UNITS	**22-TF-S14-S**	**QC Batch**	**22-AWAR-S1-S**	**22-AWAR-S2-S**	**22-AWAR-S3-S**	**QC Batch**	**22-AWAR-S4-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.08	8160260	6.97	6.11	5.42	8160746	6.60	8160732
QC Batch = Quality Control Batch									

Bureau Veritas ID		TJV578	TJV580	TJV582	TJV584	TJV586	TJV588	
Sampling Date		2022/07/30 09:47	2022/07/30 10:50	2022/07/30 11:21	2022/07/30 11:54	2022/07/30 12:30	2022/07/30 13:00	
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	
	UNITS	**22-AWAR-S5-S**	**22-AWAR-S6-S**	**22-AWAR-S7-S**	**22-AWAR-S8-S**	**22-AWAR-S9-S**	**22-AWAR-S10-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	5.72	6.15	6.04	5.30	3.39	5.24	8160732
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJV590		TJV593		TJV595	TJV597	
Sampling Date		2022/07/30 13:50		2022/07/30 14:32		2022/07/30 15:17	2022/07/30 15:40	
COC Number		n/a		n/a		n/a	n/a	
	UNITS	**22-AWAR-S11-S**	**QC Batch**	**22-AWAR-S12-S**	**QC Batch**	**22-AWAR-S13-S**	**22-AWAR-S14-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	3.82	8160732	3.23	8160746	3.58	4.15	8160732
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJV599	TJV601		TJV603		TJV605	
Sampling Date		2022/07/31 07:40	2022/07/31 08:20		2022/07/31 08:50		2022/07/31 09:17	
COC Number		n/a	n/a		n/a		n/a	
	UNITS	**22-AWAR-S15-S**	**22-AWAR-S16-S**	**QC Batch**	**22-AWAR-S17-S**	**QC Batch**	**22-AWAR-S18-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	3.98	4.01	8160746	5.81	8160260	3.86	8160746
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJV608	TJV610		TJV657		TJV659	TJV661	
Sampling Date		2022/07/31 10:02	2022/08/01 15:52		2022/07/29 11:15		2022/07/29 12:00	2022/07/29 12:35	
COC Number		n/a	n/a		n/a		n/a	n/a	
	UNITS	**22-AWAR-S19-S**	**22-AWAR-S20-S**	**QC Batch**	**22-REF1-S1-S**	**QC Batch**	**22-REF1-S2-S**	**22-REF1-S3-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.21	5.96	8160746	5.81	8160260	6.02	3.71	8160746
QC Batch = Quality Control Batch									

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TJV663	TJV663		TJV666	TJV669		TJV671	
Sampling Date		2022/07/29 13:10	2022/07/29 13:10		2022/07/29 14:03	2022/07/29 15:35		2022/07/29 15:10	
COC Number		n/a	n/a		n/a	n/a		n/a	
	UNITS	**22-REF1-S4-S**	**22-REF1-S4-S Lab-Dup**	**QC Batch**	**22-REF1-S5-S**	**22-REF2-S1-S**	**QC Batch**	**22-REF2-S2-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.43	5.45	8160746	6.26	3.45	8160260	4.70	8160746

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJV673		TJV675		TJV677		TJV679	TJV681	
Sampling Date		2022/07/29 16:16		2022/07/29 16:45		2022/07/29 16:26		2022/07/31 12:55	2022/07/31 13:23	
COC Number		n/a		n/a		n/a		n/a	n/a	
	UNITS	**22-REF2-S3-S**	**QC Batch**	**22-REF2-S4-S**	**QC Batch**	**22-REF2-S5-S**	**QC Batch**	**22-REF3-S1-S**	**22-REF3-S2-S**	**QC Batch**
Inorganics										
Available (CaCl2) pH	pH	4.48	8160732	4.85	8160260	5.05	8160732	4.32	3.27	8160746

QC Batch = Quality Control Batch

Bureau Veritas ID		TJV683		TJV686		TLO475	TLO475	
Sampling Date		2022/07/31 13:58		2022/07/31 14:55		2022/08/01 11:10	2022/08/01 11:10	
COC Number		n/a		n/a		n/a	n/a	
	UNITS	**22-REF3-S3-S**	**QC Batch**	**22-REF3-S5-S**	**QC Batch**	**22-REF3-S4-S**	**22-REF3-S4-S Lab-Dup**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	5.74	8160732	5.04	8160260	4.64	4.67	8170677

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU727	TJU729	TJU729	TJU731		TJU733		
Sampling Date		2022/08/01 11:10	2022/08/01 11:31	2022/08/01 11:31	2022/08/01 11:58		2022/08/01 13:10		
COC Number		n/a	n/a	n/a	n/a		n/a		
	UNITS	**22-WRSA-S1-S**	**22-WRSA-S2-S**	**22-WRSA-S2-S Lab-Dup**	**22-WRSA-S3-S**	**QC Batch**	**22-WRSA-S4-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	3500	4900	4800	5900	8160965	4000	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	0.25	8160965	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	360	330	330	1100	8160965	14	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	90	27	25	56	8160965	81	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	<0.20	<0.20	8160965	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	<1.0	<1.0	8160965	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	5.9	<5.0	<5.0	6.3	8160965	7.1	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	0.28	<0.10	<0.10	0.31	8160965	0.16	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	19000	3700	3700	12000	8160965	17000	50	8160948
Acid Extractable Chromium (Cr)	ug/g	7.9	17	17	21	8160965	17	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	4.5	7.5	7.7	6.4	8160965	5.8	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	30	19	19	41	8160965	15	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	9400	14000	14000	34000	8160965	8600	50	8160948
Acid Extractable Lead (Pb)	ug/g	12	12	11	37	8160965	2.8	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	3100	3100	3100	3500	8160965	3100	50	8160948
Acid Extractable Manganese (Mn)	ug/g	250	120	120	230	8160965	140	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	1.1	<0.50	<0.50	2.3	8160965	0.95	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	22	18	18	29	8160965	12	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	610	570	570	770	8160965	580	50	8160948
Acid Extractable Potassium (K)	ug/g	720	510	510	910	8160965	690	200	8160948
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	0.68	8160965	<0.50	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	8160965	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	170	120	120	720	8160965	90	50	8160948
Acid Extractable Strontium (Sr)	ug/g	93	19	20	110	8160965	89	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	0.071	0.066	0.053	0.074	8160965	0.063	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	<1.0	<1.0	8160965	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	0.32	0.48	0.46	1.1	8160965	0.49	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	13	16	16	32	8160965	16	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	55	23	22	52	8160965	48	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	0.13	<0.050	<0.050	0.071	8160965	0.097	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU735	TJU737		TJU739	TJU741		
Sampling Date		2022/08/01 13:40	2022/08/01 14:07		2022/08/01 14:30	2022/08/02 10:45		
COC Number		n/a	n/a		n/a	n/a		
	UNITS	**22-WRSA-S5-S**	**22-WRSA-S6-S**	**QC Batch**	**22-WRSA-S7-S**	**22-WRSA-S8-S**	**RDL**	**QC Batch**
Metals								
Acid Extractable Aluminum (Al)	ug/g	4100	4300	8160965	6300	3600	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160965	<0.20	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	4.1	5.7	8160965	4.4	2.9	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	28	37	8160965	41	23	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160965	<0.20	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160965	<1.0	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	8160965	<5.0	<5.0	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	8160965	<0.10	<0.10	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	4100	6100	8160965	4300	4100	50	8160948
Acid Extractable Chromium (Cr)	ug/g	16	15	8160965	25	14	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	3.0	3.2	8160965	6.2	3.1	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	7.9	54	8160965	16	5.7	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	8600	8100	8160965	14000	8000	50	8160948
Acid Extractable Lead (Pb)	ug/g	2.7	3.1	8160965	3.0	2.1	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	2700	2500	8160965	4500	2400	50	8160948
Acid Extractable Manganese (Mn)	ug/g	87	74	8160965	140	86	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	0.95	0.61	8160965	<0.50	0.65	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	11	17	8160965	19	9.0	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	420	530	8160965	650	510	50	8160948
Acid Extractable Potassium (K)	ug/g	420	390	8160965	1100	470	200	8160948
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8160965	<0.50	<0.50	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160965	<0.20	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	72	79	8160965	190	79	50	8160948
Acid Extractable Strontium (Sr)	ug/g	23	37	8160965	22	23	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	0.070	0.10	8160965	0.11	0.081	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160965	<1.0	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	1.6	1.8	8160965	0.72	0.66	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	18	17	8160965	25	15	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	16	21	8160965	28	14	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8160965	<0.050	<0.050	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU743	TJU745	TJU762	TJU765	TJU767		
Sampling Date		2022/08/02 11:10	2022/08/02 11:45	2022/07/28 11:22	2022/07/28 08:04	2022/07/28 08:42		
COC Number		n/a	n/a	n/a	n/a	n/a		
	UNITS	**22-WRSA-S9-S**	**22-WRSA-S10-S**	**22-TF-S1-S**	**22-TF-S2-S**	**22-TF-S3-S**	**RDL**	**QC Batch**
Metals								
Acid Extractable Aluminum (Al)	ug/g	3400	5500	11000	6100	3900	50	8160965
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	5.9	44	19	21	11	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	18	66	39	63	25	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	<5.0	5.5	<5.0	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.20	<0.10	0.11	<0.10	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	4400	15000	5700	8900	2600	50	8160965
Acid Extractable Chromium (Cr)	ug/g	14	20	49	18	14	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	2.9	3.9	12	10	4.0	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	11	57	16	28	15	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	7700	24000	20000	13000	8100	50	8160965
Acid Extractable Lead (Pb)	ug/g	1.9	6.6	4.6	6.2	3.2	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	2300	2400	8900	4400	2500	50	8160965
Acid Extractable Manganese (Mn)	ug/g	65	87	200	320	63	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	0.99	5.6	0.81	0.59	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	11	27	41	25	10	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	460	1100	370	590	510	50	8160965
Acid Extractable Potassium (K)	ug/g	440	410	500	760	490	200	8160965
Acid Extractable Selenium (Se)	ug/g	<0.50	1.1	<0.50	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	69	140	380	110	87	50	8160965
Acid Extractable Strontium (Sr)	ug/g	24	92	32	46	13	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.065	0.13	<0.050	0.095	0.079	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	0.49	7.2	1.2	1.3	0.82	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	14	71	38	19	15	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	16	17	51	46	18	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU769	TJU769	TJU771	TJU773	TJU779		TJU782		
Sampling Date		2022/07/28 07:33	2022/07/28 07:33	2022/07/28 09:21	2022/07/28 10:20	2022/07/28 15:46		2022/07/28 15:12		
COC Number		n/a	n/a	n/a	n/a	n/a		n/a		
	UNITS	**22-TF-S4-S**	**22-TF-S4-S Lab-Dup**	**22-TF-S5-S**	**22-TF-S6-S**	**22-TF-S11-S**	**QC Batch**	**22-TF-S12-S**	**RDL**	**QC Batch**
Metals										
Acid Extractable Aluminum (Al)	ug/g	5900	6000	4300	5400	6200	8160948	4400	50	8163041
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	8160948	<0.20	0.20	8163041
Acid Extractable Arsenic (As)	ug/g	34	36	8.0	25	40	8160948	6.0	1.0	8163041
Acid Extractable Barium (Ba)	ug/g	39	40	23	61	110	8160948	22	0.50	8163041
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	<0.20	0.22	<0.20	8160948	<0.20	0.20	8163041
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	8160948	<1.0	1.0	8163041
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	<5.0	<5.0	<5.0	8160948	<5.0	5.0	8163041
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	<0.10	<0.10	0.19	8160948	<0.10	0.10	8163041
Acid Extractable Calcium (Ca)	ug/g	3200	3300	2200	5200	19000	8160948	2800	50	8163041
Acid Extractable Chromium (Cr)	ug/g	21	21	16	24	11	8160948	16	1.0	8163041
Acid Extractable Cobalt (Co)	ug/g	12	12	5.1	5.4	8.0	8160948	4.1	0.10	8163041
Acid Extractable Copper (Cu)	ug/g	33	30	5.9	13	49	8160948	6.8	0.50	8163041
Acid Extractable Iron (Fe)	ug/g	13000	14000	10000	11000	13000	8160948	8000	50	8163041
Acid Extractable Lead (Pb)	ug/g	6.1	6.0	2.9	7.1	3.8	8160948	2.3	1.0	8163041
Acid Extractable Magnesium (Mg)	ug/g	3700	3900	2900	4400	5000	8160948	2800	50	8163041
Acid Extractable Manganese (Mn)	ug/g	130	130	130	220	500	8160948	73	1.0	8163041
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	<0.50	1.3	8160948	0.56	0.50	8163041
Acid Extractable Nickel (Ni)	ug/g	26	27	10	21	33	8160948	11	0.50	8163041
Acid Extractable Phosphorus (P)	ug/g	670	720	420	610	970	8160948	600	50	8163041
Acid Extractable Potassium (K)	ug/g	940	950	560	940	460	8160948	520	200	8163041
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	0.83	8160948	<0.50	0.50	8163041
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	8160948	<0.20	0.20	8163041
Acid Extractable Sodium (Na)	ug/g	120	120	70	100	120	8160948	84	50	8163041
Acid Extractable Strontium (Sr)	ug/g	18	19	12	37	120	8160948	14	1.0	8163041
Acid Extractable Thallium (Tl)	ug/g	0.086	0.090	0.081	0.079	0.11	8160948	<0.050	0.050	8163041
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	8160948	<1.0	1.0	8163041
Acid Extractable Uranium (U)	ug/g	0.65	0.58	0.59	0.70	4.3	8160948	0.78	0.050	8163041
Acid Extractable Vanadium (V)	ug/g	20	20	17	20	18	8160948	14	5.0	8163041
Acid Extractable Zinc (Zn)	ug/g	26	27	19	24	62	8160948	16	5.0	8163041
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	0.053	8160948	<0.050	0.050	8163041

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU784	TJU786		TJV568	TJV570		
Sampling Date		2022/07/28 14:03	2022/07/28 14:36		2022/07/28 16:15	2022/07/28 16:45		
COC Number		n/a	n/a		n/a	n/a		
	UNITS	22-TF-S13-S	22-TF-S14-S	QC Batch	22-AWAR-S1-S	22-AWAR-S2-S	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	ug/g	6000	4000	8160948	5600	1500	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160948	<0.20	<0.20	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	32	9.4	8160948	18	9.5	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	39	47	8160948	36	77	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160948	<0.20	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160948	<1.0	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	8160948	<5.0	7.0	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	8160948	<0.10	0.21	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	3000	4400	8160948	3800	18000	50	8162803
Acid Extractable Chromium (Cr)	ug/g	22	17	8160948	21	3.4	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	12	5.9	8160948	10	2.1	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	16	10	8160948	27	46	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	14000	11000	8160948	13000	3000	50	8162803
Acid Extractable Lead (Pb)	ug/g	6.5	3.5	8160948	6.5	2.4	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	4200	2800	8160948	3600	1600	50	8162803
Acid Extractable Manganese (Mn)	ug/g	210	120	8160948	250	26	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	0.57	<0.50	8160948	0.64	0.90	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	19	12	8160948	22	16	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	390	630	8160948	650	680	50	8162803
Acid Extractable Potassium (K)	ug/g	630	680	8160948	920	400	200	8162803
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8160948	<0.50	0.52	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160948	<0.20	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	91	99	8160948	120	92	50	8162803
Acid Extractable Strontium (Sr)	ug/g	19	23	8160948	22	87	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.080	0.066	8160948	0.087	<0.050	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160948	<1.0	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	0.68	0.65	8160948	0.69	0.94	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	20	18	8160948	20	<5.0	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	32	21	8160948	25	23	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8160948	<0.050	0.15	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV573		TJV575		TJV578	TJV580		
Sampling Date		2022/07/30 08:35		2022/07/30 07:55		2022/07/30 09:47	2022/07/30 10:50		
COC Number		n/a		n/a		n/a	n/a		
	UNITS	**22-AWAR-S3-S**	**QC Batch**	**22-AWAR-S4-S**	**QC Batch**	**22-AWAR-S5-S**	**22-AWAR-S6-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	5400	8163666	1800	8161273	5400	2300	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	8163666	0.26	8161273	<0.20	0.34	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	51	8163666	19	8161273	25	24	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	31	8163666	110	8161273	66	110	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	8163666	<0.20	8161273	<0.20	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8163666	<1.0	8161273	<1.0	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	<5.0	8163666	17	8161273	<5.0	8.5	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8163666	0.36	8161273	0.11	0.16	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	3300	8163666	39000	8161273	9000	30000	50	8162803
Acid Extractable Chromium (Cr)	ug/g	18	8163666	4.8	8161273	21	4.2	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	9.4	8163666	4.1	8161273	8.5	3.2	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	26	8163666	160	8161273	43	210	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	14000	8163666	3600	8161273	12000	5000	50	8162803
Acid Extractable Lead (Pb)	ug/g	7.9	8163666	2.9	8161273	4.4	2.2	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	3300	8163666	2000	8161273	3400	1300	50	8162803
Acid Extractable Manganese (Mn)	ug/g	130	8163666	320	8161273	330	25	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8163666	1.0	8161273	0.64	0.70	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	23	8163666	57	8161273	26	28	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	570	8163666	950	8161273	690	820	50	8162803
Acid Extractable Potassium (K)	ug/g	530	8163666	350	8161273	310	240	200	8162803
Acid Extractable Selenium (Se)	ug/g	<0.50	8163666	1.1	8161273	<0.50	1.1	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	8163666	<0.20	8161273	<0.20	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	92	8163666	93	8161273	79	83	50	8162803
Acid Extractable Strontium (Sr)	ug/g	17	8163666	140	8161273	27	110	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.068	8163666	0.16	8161273	0.079	0.087	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	8163666	<1.0	8161273	<1.0	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	0.60	8163666	4.0	8161273	0.63	1.5	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	15	8163666	<5.0	8161273	19	5.2	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	24	8163666	60	8161273	22	6.1	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	8163666	0.094	8161273	0.064	0.12	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV582		TJV584		TJV586	TJV588		
Sampling Date		2022/07/30 11:21		2022/07/30 11:54		2022/07/30 12:30	2022/07/30 13:00		
COC Number		n/a		n/a		n/a	n/a		
	UNITS	**22-AWAR-S7-S**	**QC Batch**	**22-AWAR-S8-S**	**QC Batch**	**22-AWAR-S9-S**	**22-AWAR-S10-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	11000	8160948	6500	8162803	5700	4500	50	8160965
Acid Extractable Antimony (Sb)	ug/g	<0.20	8160948	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	16	8160948	19	8162803	8.7	2.5	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	120	8160948	48	8162803	23	130	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	8160948	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8160948	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	<5.0	8160948	<5.0	8162803	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8160948	0.11	8162803	<0.10	0.19	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	5700	8160948	4600	8162803	1400	11000	50	8160965
Acid Extractable Chromium (Cr)	ug/g	14	8160948	27	8162803	22	11	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	15	8160948	10	8162803	6.0	5.2	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	29	8160948	32	8162803	4.8	47	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	20000	8160948	14000	8162803	11000	8500	50	8160965
Acid Extractable Lead (Pb)	ug/g	1.1	8160948	4.4	8162803	3.4	1.3	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	8600	8160948	4200	8162803	3300	3000	50	8160965
Acid Extractable Manganese (Mn)	ug/g	300	8160948	210	8162803	160	150	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	0.70	8160948	<0.50	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	25	8160948	24	8162803	9.9	16	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	400	8160948	640	8162803	310	520	50	8160965
Acid Extractable Potassium (K)	ug/g	1000	8160948	860	8162803	620	770	200	8160965
Acid Extractable Selenium (Se)	ug/g	<0.50	8160948	<0.50	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	8160948	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	110	8160948	100	8162803	62	68	50	8160965
Acid Extractable Strontium (Sr)	ug/g	26	8160948	16	8162803	8.2	34	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.069	8160948	0.073	8162803	<0.050	0.061	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	8160948	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	1.7	8160948	0.66	8162803	0.32	0.40	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	30	8160948	22	8162803	20	16	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	41	8160948	28	8162803	26	18	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	<0.050	8160948	<0.050	8162803	<0.050	0.079	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV590		TJV593		TJV595		
Sampling Date		2022/07/30 13:50		2022/07/30 14:32		2022/07/30 15:17		
COC Number		n/a		n/a		n/a		
	UNITS	22-AWAR-S11-S	QC Batch	22-AWAR-S12-S	QC Batch	22-AWAR-S13-S	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	ug/g	2900	8160965	1600	8162803	6200	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	8160965	<0.20	8162803	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	1.7	8160965	2.0	8162803	1.4	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	130	8160965	30	8162803	74	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	8160965	<0.20	8162803	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8160965	<1.0	8162803	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	<5.0	8160965	<5.0	8162803	<5.0	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	0.43	8160965	1.1	8162803	0.19	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	3900	8160965	3300	8162803	1000	50	8160948
Acid Extractable Chromium (Cr)	ug/g	4.8	8160965	2.2	8162803	25	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	1.8	8160965	2.0	8162803	3.8	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	20	8160965	5.1	8162803	15	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	4000	8160965	6000	8162803	12000	50	8160948
Acid Extractable Lead (Pb)	ug/g	2.4	8160965	1.5	8162803	3.0	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	1200	8160965	790	8162803	3300	50	8160948
Acid Extractable Manganese (Mn)	ug/g	11	8160965	19	8162803	96	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8160965	0.88	8162803	0.73	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	6.9	8160965	6.2	8162803	9.4	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	720	8160965	770	8162803	550	50	8160948
Acid Extractable Potassium (K)	ug/g	370	8160965	320	8162803	1600	200	8160948
Acid Extractable Selenium (Se)	ug/g	0.68	8160965	<0.50	8162803	<0.50	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	8160965	<0.20	8162803	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	84	8160965	160	8162803	80	50	8160948
Acid Extractable Strontium (Sr)	ug/g	41	8160965	84	8162803	9.6	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	<0.050	8160965	<0.050	8162803	0.11	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	8160965	<1.0	8162803	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	0.84	8160965	0.41	8162803	0.67	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	<5.0	8160965	<5.0	8162803	25	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	19	8160965	10	8162803	26	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	0.13	8160965	0.12	8162803	0.10	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV597		TJV599	TJV601		
Sampling Date		2022/07/30 15:40		2022/07/31 07:40	2022/07/31 08:20		
COC Number		n/a		n/a	n/a		
	UNITS	22-AWAR-S14-S	QC Batch	22-AWAR-S15-S	22-AWAR-S16-S	RDL	QC Batch
Metals							
Acid Extractable Aluminum (Al)	ug/g	4200	8162803	1300	4000	50	8160965
Acid Extractable Antimony (Sb)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	2.6	8162803	<1.0	1.4	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	170	8162803	36	34	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	<5.0	8162803	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	1.0	8162803	0.11	<0.10	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	11000	8162803	3000	1100	50	8160965
Acid Extractable Chromium (Cr)	ug/g	9.0	8162803	4.4	16	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	9.0	8162803	1.5	2.8	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	77	8162803	3.9	2.4	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	8500	8162803	24000	7900	50	8160965
Acid Extractable Lead (Pb)	ug/g	4.1	8162803	<1.0	2.0	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	1700	8162803	490	2600	50	8160965
Acid Extractable Manganese (Mn)	ug/g	550	8162803	6.9	66	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	1.6	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	15	8162803	3.9	6.8	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	860	8162803	500	290	50	8160965
Acid Extractable Potassium (K)	ug/g	520	8162803	<200	830	200	8160965
Acid Extractable Selenium (Se)	ug/g	0.74	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	91	8162803	79	68	50	8160965
Acid Extractable Strontium (Sr)	ug/g	39	8162803	24	7.7	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.24	8162803	<0.050	<0.050	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	3.1	8162803	0.37	0.41	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	10	8162803	<5.0	16	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	21	8162803	10	15	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	0.23	8162803	0.052	<0.050	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV603		TJV605	TJV608		
Sampling Date		2022/07/31 08:50		2022/07/31 09:17	2022/07/31 10:02		
COC Number		n/a		n/a	n/a		
	UNITS	**22-AWAR-S17-S**	**QC Batch**	**22-AWAR-S18-S**	**22-AWAR-S19-S**	**RDL**	**QC Batch**
Metals							
Acid Extractable Aluminum (Al)	ug/g	3200	8162803	3200	8700	50	8160965
Acid Extractable Antimony (Sb)	ug/g	0.50	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	18	8162803	1.4	5.9	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	99	8162803	9.5	130	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	10	8162803	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	0.51	8162803	<0.10	0.31	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	24000	8162803	750	8600	50	8160965
Acid Extractable Chromium (Cr)	ug/g	12	8162803	21	42	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	13	8162803	2.3	10	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	110	8162803	2.1	27	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	8500	8162803	7700	17000	50	8160965
Acid Extractable Lead (Pb)	ug/g	2.4	8162803	1.7	5.3	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	3600	8162803	2100	6700	50	8160965
Acid Extractable Manganese (Mn)	ug/g	490	8162803	64	210	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	1.0	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	22	8162803	5.8	22	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	1300	8162803	200	780	50	8160965
Acid Extractable Potassium (K)	ug/g	620	8162803	270	1900	200	8160965
Acid Extractable Selenium (Se)	ug/g	0.88	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	110	8162803	<50	140	50	8160965
Acid Extractable Strontium (Sr)	ug/g	61	8162803	5.9	40	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.17	8162803	<0.050	0.16	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	2.0	8162803	0.26	0.74	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	7.0	8162803	14	34	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	41	8162803	9.7	43	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	0.23	8162803	<0.050	0.25	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV610		TJV657	TJV659	TJV661	TJV663		
Sampling Date		2022/08/01 15:52		2022/07/29 11:15	2022/07/29 12:00	2022/07/29 12:35	2022/07/29 13:10		
COC Number		n/a		n/a	n/a	n/a	n/a		
	UNITS	**22-AWAR-S20-S**	**QC Batch**	**22-REF1-S1-S**	**22-REF1-S2-S**	**22-REF1-S3-S**	**22-REF1-S4-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	8800	8162803	4800	5400	890	2400	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	8162803	0.25	<0.20	<0.20	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	3.0	8162803	16	42	<1.0	2.9	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	110	8162803	130	110	40	130	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	8162803	<0.20	<0.20	<0.20	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8162803	<1.0	<1.0	<1.0	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	8.6	8162803	6.8	5.7	<5.0	6.4	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	0.18	8162803	0.25	0.18	0.44	0.13	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	15000	8162803	26000	19000	5600	24000	50	8160948
Acid Extractable Chromium (Cr)	ug/g	39	8162803	13	27	2.2	4.8	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	7.1	8162803	13	15	1.4	2.6	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	140	8162803	81	35	6.0	36	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	15000	8162803	13000	23000	1900	3600	50	8160948
Acid Extractable Lead (Pb)	ug/g	2.6	8162803	1.9	4.5	<1.0	1.1	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	6500	8162803	3400	3600	900	1500	50	8160948
Acid Extractable Manganese (Mn)	ug/g	180	8162803	690	1100	6.3	38	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	1.0	8162803	1.4	2.1	<0.50	0.90	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	28	8162803	45	36	3.5	18	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	660	8162803	790	700	570	740	50	8160948
Acid Extractable Potassium (K)	ug/g	1800	8162803	500	660	270	290	200	8160948
Acid Extractable Selenium (Se)	ug/g	0.63	8162803	1.2	0.75	<0.50	0.55	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	8162803	<0.20	<0.20	<0.20	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	320	8162803	52	<50	59	<50	50	8160948
Acid Extractable Strontium (Sr)	ug/g	64	8162803	140	97	40	130	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	0.22	8162803	0.16	0.11	<0.050	0.070	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	8162803	<1.0	<1.0	<1.0	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	3.4	8162803	3.1	2.7	0.11	0.39	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	29	8162803	18	22	<5.0	<5.0	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	28	8162803	29	39	21	9.9	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	0.076	8162803	0.080	0.061	0.093	0.10	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV666	TJV669		TJV671		TJV673		
Sampling Date		2022/07/29 14:03	2022/07/29 15:35		2022/07/29 15:10		2022/07/29 16:16		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-REF1-S5-S**	**22-REF2-S1-S**	**QC Batch**	**22-REF2-S2-S**	**QC Batch**	**22-REF2-S3-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	5200	5400	8160948	2300	8160965	5900	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160948	<0.20	8160965	<0.20	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	4.8	1.1	8160948	1.7	8160965	4.6	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	71	58	8160948	98	8160965	41	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160948	<0.20	8160965	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160948	<1.0	8160965	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	7.5	<5.0	8160948	<5.0	8160965	<5.0	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	0.16	<0.10	8160948	0.39	8160965	<0.10	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	21000	950	8160948	5600	8160965	2300	50	8162803
Acid Extractable Chromium (Cr)	ug/g	13	20	8160948	6.0	8160965	23	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	3.4	3.2	8160948	5.4	8160965	5.5	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	68	4.2	8160948	28	8160965	13	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	14000	9800	8160948	3400	8160965	12000	50	8162803
Acid Extractable Lead (Pb)	ug/g	1.4	2.5	8160948	1.1	8160965	3.9	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	2400	3100	8160948	610	8160965	3200	50	8162803
Acid Extractable Manganese (Mn)	ug/g	50	150	8160948	41	8160965	110	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	0.86	<0.50	8160948	1.2	8160965	0.61	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	34	8.6	8160948	20	8160965	13	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	560	380	8160948	830	8160965	530	50	8162803
Acid Extractable Potassium (K)	ug/g	1300	730	8160948	350	8160965	1000	200	8162803
Acid Extractable Selenium (Se)	ug/g	0.59	<0.50	8160948	0.50	8160965	<0.50	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160948	<0.20	8160965	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	<50	<50	8160948	130	8160965	120	50	8162803
Acid Extractable Strontium (Sr)	ug/g	110	8.3	8160948	28	8160965	14	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.097	0.079	8160948	0.090	8160965	0.096	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160948	<1.0	8160965	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	1.6	0.73	8160948	1.2	8160965	0.78	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	11	15	8160948	6.3	8160965	23	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	20	26	8160948	7.9	8160965	16	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.082	8160948	<0.050	8160965	<0.050	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV673	TJV675		TJV677		TJV679		
Sampling Date		2022/07/29 16:16	2022/07/29 16:45		2022/07/29 16:26		2022/07/31 12:55		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-REF2-S3-S Lab-Dup**	**22-REF2-S4-S**	**QC Batch**	**22-REF2-S5-S**	**QC Batch**	**22-REF3-S1-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	6000	4900	8162803	8000	8160948	1800	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8162803	<0.20	8160948	<0.20	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	5.0	2.3	8162803	9.3	8160948	1.8	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	41	39	8162803	69	8160948	98	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8162803	<0.20	8160948	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8162803	<1.0	8160948	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	8162803	<5.0	8160948	13	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	8162803	<0.10	8160948	0.41	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	2300	2300	8162803	3000	8160948	23000	50	8162803
Acid Extractable Chromium (Cr)	ug/g	24	20	8162803	33	8160948	5.1	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	5.8	4.3	8162803	10	8160948	1.3	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	13	14	8162803	30	8160948	34	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	13000	8200	8162803	16000	8160948	3300	50	8162803
Acid Extractable Lead (Pb)	ug/g	3.8	3.0	8162803	3.7	8160948	3.6	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	3200	2900	8162803	5100	8160948	1700	50	8162803
Acid Extractable Manganese (Mn)	ug/g	110	80	8162803	160	8160948	21	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	0.61	<0.50	8162803	<0.50	8160948	0.79	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	13	13	8162803	27	8160948	8.1	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	530	570	8162803	650	8160948	1100	50	8162803
Acid Extractable Potassium (K)	ug/g	1000	1000	8162803	1800	8160948	610	200	8162803
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8162803	<0.50	8160948	0.59	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8162803	<0.20	8160948	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	120	120	8162803	170	8160948	160	50	8162803
Acid Extractable Strontium (Sr)	ug/g	14	14	8162803	15	8160948	130	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.10	0.088	8162803	0.13	8160948	0.097	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8162803	<1.0	8160948	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	0.77	0.68	8162803	0.82	8160948	0.60	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	24	19	8162803	28	8160948	<5.0	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	16	17	8162803	29	8160948	35	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8162803	<0.050	8160948	0.26	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV681	TJV683		TJV686		TLO475		
Sampling Date		2022/07/31 13:23	2022/07/31 13:58		2022/07/31 14:55		2022/08/01 11:10		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-REF3-S2-S**	**22-REF3-S3-S**	**QC Batch**	**22-REF3-S5-S**	**QC Batch**	**22-REF3-S4-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	6500	3800	8160965	14000	8160948	10000	50	8170582
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160965	<0.20	8160948	<0.20	0.20	8170582
Acid Extractable Arsenic (As)	ug/g	<1.0	1.2	8160965	9.9	8160948	1.5	1.0	8170582
Acid Extractable Barium (Ba)	ug/g	110	81	8160965	240	8160948	95	0.50	8170582
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160965	0.25	8160948	<0.20	0.20	8170582
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160965	<1.0	8160948	<1.0	1.0	8170582
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8160965	<5.0	8160948	<5.0	5.0	8170582
Acid Extractable Cadmium (Cd)	ug/g	0.29	0.15	8160965	0.26	8160948	<0.10	0.10	8170582
Acid Extractable Calcium (Ca)	ug/g	1800	13000	8160965	5100	8160948	4300	50	8170582
Acid Extractable Chromium (Cr)	ug/g	23	15	8160965	58	8160948	50	1.0	8170582
Acid Extractable Cobalt (Co)	ug/g	4.8	3.4	8160965	20	8160948	5.8	0.10	8170582
Acid Extractable Copper (Cu)	ug/g	7.8	13	8160965	47	8160948	37	0.50	8170582
Acid Extractable Iron (Fe)	ug/g	9200	7300	8160965	38000	8160948	20000	50	8170582
Acid Extractable Lead (Pb)	ug/g	1.8	2.8	8160965	3.7	8160948	5.3	1.0	8170582
Acid Extractable Magnesium (Mg)	ug/g	4000	2700	8160965	9700	8160948	5800	50	8170582
Acid Extractable Manganese (Mn)	ug/g	79	53	8160965	2100	8160948	130	1.0	8170582
Acid Extractable Molybdenum (Mo)	ug/g	0.73	0.55	8160965	2.0	8160948	2.5	0.50	8170582
Acid Extractable Nickel (Ni)	ug/g	12	8.7	8160965	52	8160948	21	0.50	8170582
Acid Extractable Phosphorus (P)	ug/g	570	460	8160965	850	8160948	650	50	8170582
Acid Extractable Potassium (K)	ug/g	2400	960	8160965	4100	8160948	2100	200	8170582
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8160965	0.58	8160948	<0.50	0.50	8170582
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160965	<0.20	8160948	<0.20	0.20	8170582
Acid Extractable Sodium (Na)	ug/g	100	87	8160965	200	8160948	110	50	8170582
Acid Extractable Strontium (Sr)	ug/g	17	68	8160965	24	8160948	24	1.0	8170582
Acid Extractable Thallium (Tl)	ug/g	0.13	0.073	8160965	0.42	8160948	0.27	0.050	8170582
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160965	<1.0	8160948	<1.0	1.0	8170582
Acid Extractable Uranium (U)	ug/g	0.45	0.67	8160965	2.7	8160948	2.3	0.050	8170582
Acid Extractable Vanadium (V)	ug/g	20	16	8160965	59	8160948	42	5.0	8170582
Acid Extractable Zinc (Zn)	ug/g	29	14	8160965	73	8160948	30	5.0	8170582
Acid Extractable Mercury (Hg)	ug/g	0.13	0.11	8160965	<0.050	8160948	<0.050	0.050	8170582

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BUREAU VERITAS

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU728		TJU730		TJU732		TJU734		
Sampling Date		2022/08/01 11:10		2022/08/01 11:31		2022/08/01 11:58		2022/08/01 13:10		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	**22-WRSA-S1-BR**	**RDL**	**22-WRSA-S2-SE**	**QC Batch**	**22-WRSA-S3-SE**	**QC Batch**	**22-WRSA-S4-L**	**RDL**	**QC Batch**
Metals										
Antimony (Sb)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Arsenic (As)	ug/g	37.7	0.5	8.9	8161589	5.0	8162711	5.3	0.1	8161589
Barium (Ba)	ug/g	13.8	0.3	12.0	8161589	6.2	8162711	17.0	0.3	8161589
Beryllium (Be)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Boron (B)	ug/g	5.6	0.5	1.9	8161589	4.5	8162711	2.0	0.5	8161589
Cadmium (Cd)	ug/g	0.02	0.01	<0.01	8161589	0.01	8162711	0.08	0.01	8161589
Calcium (Ca)	ug/g	3080	50	2470	8161589	1260	8162711	10500	50	8161589
Chromium (Cr)	ug/g	0.7	0.3	<0.3	8161589	<0.3	8162711	2.5	0.3	8161589
Cobalt (Co)	ug/g	0.170	0.005	0.031	8161589	0.034	8162711	0.580	0.005	8161589
Copper (Cu)	ug/g	3.0	0.5	2.7	8161589	1.9	8162711	3.3	0.5	8161589
Iron (Fe)	ug/g	514	3	124	8161589	127	8162711	900	3	8161589
Lead (Pb)	ug/g	4.01	0.03	0.45	8161589	0.20	8162711	1.81	0.03	8161589
Magnesium (Mg)	ug/g	491	100	354	8161589	338	8162711	616	100	8161589
Manganese (Mn)	ug/g	44.6	0.3	60.8	8161589	166	8162711	39.9	0.3	8161589
Molybdenum (Mo)	ug/g	0.12	0.05	0.14	8161589	0.17	8162711	0.19	0.05	8161589
Nickel (Ni)	ug/g	1.59	0.05	0.56	8161589	0.24	8162711	1.61	0.05	8161589
Phosphorus (P)	ug/g	383	50	421	8161589	506	8162711	356	50	8161589
Potassium (K)	ug/g	1920	100	4670	8161589	5850	8162711	914	100	8161589
Selenium (Se)	ug/g	<0.04	0.04	<0.04	8161589	<0.04	8162711	0.09	0.04	8161589
Silver (Ag)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Sodium (Na)	ug/g	87	50	<50	8161589	63	8162711	82	50	8161589
Strontium (Sr)	ug/g	13.3	0.5	13.8	8161589	10.8	8162711	44.2	0.5	8161589
Thallium (Tl)	ug/g	<0.003	0.003	<0.003	8161589	<0.003	8162711	0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	0.3	<0.3	8161589	<0.3	8162711	<0.3	0.3	8161589
Titanium (Ti)	ug/g	2.7	0.5	0.9	8161589	0.6	8162711	14.7	0.5	8161589
Uranium (U)	ug/g	0.007	0.005	<0.005	8161589	<0.005	8162711	0.043	0.005	8161589
Vanadium (V)	ug/g	0.19	0.05	<0.05	8161589	<0.05	8162711	0.87	0.05	8161589
Zinc (Zn)	ug/g	100	2	10	8161589	18	8162711	22	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU736			TJU738		TJU740		
Sampling Date		2022/08/01 13:40			2022/08/01 14:07		2022/08/01 14:30		
COC Number		n/a			n/a		n/a		
	UNITS	**22-WRSA-S5-BR**	**RDL**	**QC Batch**	**22-WRSA-S6-SE**	**RDL**	**22-WRSA-S7-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Arsenic (As)	ug/g	1.1	0.1	8163142	0.3	0.1	1.0	0.1	8161589
Barium (Ba)	ug/g	16.2	0.3	8163142	7.8	0.3	11.0	0.3	8161589
Beryllium (Be)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Boron (B)	ug/g	10.3	0.5	8163142	2.2	0.5	6.9	0.5	8161589
Cadmium (Cd)	ug/g	0.04	0.01	8163142	<0.01	0.01	0.01	0.01	8161589
Calcium (Ca)	ug/g	3750	50	8163142	2210	50	3330	50	8161589
Chromium (Cr)	ug/g	0.3	0.3	8163142	<0.3	0.3	0.3	0.3	8161589
Cobalt (Co)	ug/g	0.097	0.005	8163142	0.032	0.005	0.086	0.005	8161589
Copper (Cu)	ug/g	2.8	0.5	8163142	1.7	0.5	2.6	0.5	8161589
Iron (Fe)	ug/g	106	3	8163142	60	3	121	3	8161589
Lead (Pb)	ug/g	0.24	0.03	8163142	0.04	0.03	0.16	0.03	8161589
Magnesium (Mg)	ug/g	752	100	8163142	359	100	634	100	8161589
Manganese (Mn)	ug/g	85.7	0.3	8163142	82.5	0.3	41.1	0.3	8161589
Molybdenum (Mo)	ug/g	0.09	0.05	8163142	0.32	0.05	<0.05	0.05	8161589
Nickel (Ni)	ug/g	1.66	0.05	8163142	0.24	0.05	0.84	0.05	8161589
Phosphorus (P)	ug/g	501	50	8163142	327	50	489	50	8161589
Potassium (K)	ug/g	1920	100	8163142	6140	500	1810	100	8161589
Selenium (Se)	ug/g	<0.04	0.04	8163142	<0.04	0.04	<0.04	0.04	8161589
Silver (Ag)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Sodium (Na)	ug/g	<50	50	8163142	<50	50	<50	50	8161589
Strontium (Sr)	ug/g	19.4	0.5	8163142	11.9	0.5	18.7	0.5	8161589
Thallium (Tl)	ug/g	<0.003	0.003	8163142	<0.003	0.003	<0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	0.3	8163142	<0.3	0.3	<0.3	0.3	8161589
Titanium (Ti)	ug/g	1.6	0.5	8163142	1.0	0.5	2.0	0.5	8161589
Uranium (U)	ug/g	<0.005	0.005	8163142	<0.005	0.005	<0.005	0.005	8161589
Vanadium (V)	ug/g	0.09	0.05	8163142	<0.05	0.05	0.11	0.05	8161589
Zinc (Zn)	ug/g	119	2	8163142	16	2	112	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU742	TJU744	TJU744			TJU746		
Sampling Date		2022/08/02 10:45	2022/08/02 11:10	2022/08/02 11:10			2022/08/02 11:45		
COC Number		n/a	n/a	n/a			n/a		
	UNITS	**22-WRSA-SE**	**22-WRSA-S9-L**	**22-WRSA-S9-L Lab-Dup**	**RDL**	**QC Batch**	**22-WRSA-S10-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Arsenic (As)	ug/g	1.4	4.8	5.0	0.1	8162711	0.3	0.1	8161589
Barium (Ba)	ug/g	9.2	8.1	7.9	0.3	8162711	7.3	0.3	8161589
Beryllium (Be)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Boron (B)	ug/g	1.9	0.6	0.6	0.5	8162711	19.1	0.5	8161589
Cadmium (Cd)	ug/g	<0.01	0.09	0.09	0.01	8162711	0.02	0.01	8161589
Calcium (Ca)	ug/g	3330	6090	6010	50	8162711	2270	50	8161589
Chromium (Cr)	ug/g	0.6	1.0	1.0	0.3	8162711	<0.3	0.3	8161589
Cobalt (Co)	ug/g	0.081	0.281	0.251	0.005	8162711	0.101	0.005	8161589
Copper (Cu)	ug/g	1.9	1.7	1.5	0.5	8162711	2.4	0.5	8161589
Iron (Fe)	ug/g	163	685	655	3	8162711	50	3	8161589
Lead (Pb)	ug/g	0.12	0.99	0.98	0.03	8162711	<0.03	0.03	8161589
Magnesium (Mg)	ug/g	438	556	549	100	8162711	916	100	8161589
Manganese (Mn)	ug/g	79.3	34.9	35.2	0.3	8162711	117	0.3	8161589
Molybdenum (Mo)	ug/g	0.39	0.11	0.10	0.05	8162711	0.13	0.05	8161589
Nickel (Ni)	ug/g	0.38	0.92	0.89	0.05	8162711	1.44	0.05	8161589
Phosphorus (P)	ug/g	339	322	310	50	8162711	611	300	8161589
Potassium (K)	ug/g	4900	1100	1110	100	8162711	2440	100	8161589
Selenium (Se)	ug/g	<0.04	0.07	0.08	0.04	8162711	<0.04	0.04	8161589
Silver (Ag)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Sodium (Na)	ug/g	<50	152	156	50	8162711	<50	50	8161589
Strontium (Sr)	ug/g	19.6	21.9	22.2	0.5	8162711	9.0	0.5	8161589
Thallium (Tl)	ug/g	<0.003	0.003	<0.003	0.003	8162711	<0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	<0.3	<0.3	0.3	8162711	<0.3	0.3	8161589
Titanium (Ti)	ug/g	2.4	10.5	9.9	0.5	8162711	1.0	0.5	8161589
Uranium (U)	ug/g	0.007	0.018	0.017	0.005	8162711	<0.005	0.005	8161589
Vanadium (V)	ug/g	0.14	0.64	0.60	0.05	8162711	<0.05	0.05	8161589
Zinc (Zn)	ug/g	8	16	16	2	8162711	50	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU763			TJU764	TJU766		TJU768	TJU770		
Sampling Date		2022/07/28 11:22			2022/07/28 11:22	2022/07/28 08:04		2022/07/28 08:42	2022/07/28 07:33		
COC Number		n/a			n/a	n/a		n/a	n/a		
	UNITS	**22-TF-S1-L**	**RDL**	**QC Batch**	**22-TF-S1-SE**	**22-TF-S2-SE**	**QC Batch**	**22-TF-S3-BR**	**22-TF-S4-BR**	**RDL**	**QC Batch**
Metals											
Antimony (Sb)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Arsenic (As)	ug/g	49.1	0.5	8163142	3.1	5.4	8163847	4.4	12.6	0.1	8163142
Barium (Ba)	ug/g	16.8	0.3	8163142	10.4	15.1	8163847	19.5	20.1	0.3	8163142
Beryllium (Be)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Bismuth (Bi)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Boron (B)	ug/g	0.8	0.5	8163142	5.1	2.6	8163847	5.2	7.1	0.5	8163142
Cadmium (Cd)	ug/g	0.08	0.01	8163142	<0.01	0.02	8163847	0.02	0.07	0.01	8163142
Calcium (Ca)	ug/g	8190	50	8163142	2380	3100	8163847	2390	2620	50	8163142
Chromium (Cr)	ug/g	1.4	0.3	8163142	<0.3	0.3	8163847	<0.3	0.3	0.3	8163142
Cobalt (Co)	ug/g	0.386	0.005	8163142	0.048	0.066	8163847	0.131	0.192	0.005	8163142
Copper (Cu)	ug/g	2.5	0.5	8163142	1.9	2.5	8163847	2.7	3.2	0.5	8163142
Iron (Fe)	ug/g	1110	3	8163142	111	154	8163847	104	286	3	8163142
Lead (Pb)	ug/g	6.20	0.03	8163142	0.28	0.63	8163847	0.32	1.43	0.03	8163142
Magnesium (Mg)	ug/g	673	100	8163142	426	385	8163847	758	678	100	8163142
Manganese (Mn)	ug/g	83.3	0.3	8163142	69.9	74.1	8163847	39.8	242	0.3	8163142
Molybdenum (Mo)	ug/g	0.23	0.05	8163142	0.47	0.51	8163847	0.09	<0.05	0.05	8163142
Nickel (Ni)	ug/g	1.03	0.05	8163142	0.38	0.55	8163847	1.07	1.54	0.05	8163142
Phosphorus (P)	ug/g	349	50	8163142	345	315	8163847	505	570	50	8163142
Potassium (K)	ug/g	1340	100	8163142	5760	4330	8163847	2490	2110	100	8163142
Selenium (Se)	ug/g	0.12	0.04	8163142	<0.04	<0.04	8163847	<0.04	<0.04	0.04	8163142
Silver (Ag)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Sodium (Na)	ug/g	239	50	8163142	68	<50	8163847	<50	51	50	8163142
Strontium (Sr)	ug/g	27.0	0.5	8163142	11.7	13.0	8163847	9.8	11.0	0.5	8163142
Thallium (Tl)	ug/g	0.004	0.003	8163142	<0.003	<0.003	8163847	<0.003	<0.003	0.003	8163142
Tin (Sn)	ug/g	<0.3	0.3	8163142	<0.3	<0.3	8163847	<0.3	<0.3	0.3	8163142
Titanium (Ti)	ug/g	11.1	0.5	8163142	1.1	1.1	8163847	0.9	2.4	0.5	8163142
Uranium (U)	ug/g	0.032	0.005	8163142	0.014	<0.005	8163847	<0.005	<0.005	0.005	8163142
Vanadium (V)	ug/g	0.62	0.05	8163142	0.06	0.07	8163847	0.05	0.14	0.05	8163142
Zinc (Zn)	ug/g	25	2	8163142	14	14	8163847	79	145	2	8163142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU772	TJU772		TJU774			TJU776	TJU776		
Sampling Date		2022/07/28 09:21	2022/07/28 09:21		2022/07/28 10:20			2022/07/28 10:20	2022/07/28 10:20		
COC Number		n/a	n/a		n/a			n/a	n/a		
	UNITS	**22-TF-S5-LT**	**22-TF-S5-LT Lab-Dup**	**RDL**	**22-TF-S6-CR**	**RDL**	**QC Batch**	**22-TF-S6-L**	**22-TF-S6-L Lab-Dup**	**RDL**	**QC Batch**
Metals											
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	0.30	0.26	0.05	8163847
Arsenic (As)	ug/g	12.5	12.1	0.1	52.5	0.5	8161589	884	840	5	8163847
Barium (Ba)	ug/g	27.0	25.3	0.3	15.4	0.3	8161589	28.3	26.7	0.3	8163847
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	<0.05	<0.05	0.05	8163847
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	0.13	0.12	0.05	8163847
Boron (B)	ug/g	6.8	6.6	0.5	8.0	0.5	8161589	2.4	2.5	0.5	8163847
Cadmium (Cd)	ug/g	<0.01	<0.01	0.01	<0.01	0.01	8161589	0.15	0.13	0.01	8163847
Calcium (Ca)	ug/g	2180	2150	50	2660	50	8161589	6790	6850	50	8163847
Chromium (Cr)	ug/g	0.4	0.4	0.3	1.7	0.3	8161589	7.1	6.4	0.3	8163847
Cobalt (Co)	ug/g	0.062	0.082	0.005	0.236	0.005	8161589	2.11	1.89	0.005	8163847
Copper (Cu)	ug/g	2.4	2.5	0.5	3.3	0.5	8161589	18.0	16.2	0.5	8163847
Iron (Fe)	ug/g	204	194	3	755	3	8161589	11200	10400	20	8163847
Lead (Pb)	ug/g	0.92	0.88	0.03	3.71	0.03	8161589	59.4	57.7	0.03	8163847
Magnesium (Mg)	ug/g	506	482	100	631	100	8161589	1580	1530	100	8163847
Manganese (Mn)	ug/g	412	401	0.3	235	0.3	8161589	164	158	0.3	8163847
Molybdenum (Mo)	ug/g	<0.05	<0.05	0.05	0.12	0.05	8161589	1.08	0.88	0.05	8163847
Nickel (Ni)	ug/g	0.40	0.42	0.05	3.74	0.05	8161589	5.70	5.23	0.05	8163847
Phosphorus (P)	ug/g	443	436	50	406	50	8161589	390	375	50	8163847
Potassium (K)	ug/g	2590	2490	100	2090	100	8161589	750	724	100	8163847
Selenium (Se)	ug/g	<0.04	<0.04	0.04	<0.04	0.04	8161589	0.33	0.31	0.04	8163847
Silver (Ag)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	0.07	0.07	0.05	8163847
Sodium (Na)	ug/g	<50	<50	50	52	50	8161589	351	333	50	8163847
Strontium (Sr)	ug/g	4.1	4.0	0.5	5.2	0.5	8161589	32.3	31.1	0.5	8163847
Thallium (Tl)	ug/g	0.075	0.075	0.003	0.004	0.003	8161589	0.025	0.025	0.003	8163847
Tin (Sn)	ug/g	<0.3	<0.3	0.3	<0.3	0.3	8161589	<0.3	<0.3	0.3	8163847
Titanium (Ti)	ug/g	1.5	1.4	0.5	3.6	0.5	8161589	49	48	3	8163847
Uranium (U)	ug/g	<0.005	<0.005	0.005	0.005	0.005	8161589	0.107	0.096	0.005	8163847
Vanadium (V)	ug/g	0.10	0.09	0.05	0.27	0.05	8161589	3.42	3.11	0.05	8163847
Zinc (Zn)	ug/g	13	13	2	6	2	8161589	28	27	2	8163847

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU781			TJU783		TJU785	TJU787		
Sampling Date		2022/07/28 15:46			2022/07/28 15:12		2022/07/28 14:03	2022/07/28 14:36		
COC Number		n/a			n/a		n/a	n/a		
	UNITS	**22-TF-S11-BR**	**RDL**	**QC Batch**	**22-TF-S12-SE**	**QC Batch**	**22-TF-S13-LT**	**22-TF-S4-L**	**RDL**	**QC Batch**
Metals										
Antimony (Sb)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Arsenic (As)	ug/g	38.6	0.5	8161589	12.4	8163142	8.0	17.3	0.1	8162711
Barium (Ba)	ug/g	12.7	0.3	8161589	11.1	8163142	39.0	6.5	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Boron (B)	ug/g	4.4	0.5	8161589	3.0	8163142	6.7	<0.5	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	0.01	8161589	<0.01	8163142	<0.01	0.09	0.01	8162711
Calcium (Ca)	ug/g	2820	50	8161589	2880	8163142	2690	5020	50	8162711
Chromium (Cr)	ug/g	0.6	0.3	8161589	0.4	8163142	0.7	0.6	0.3	8162711
Cobalt (Co)	ug/g	0.174	0.005	8161589	0.053	8163142	0.130	0.182	0.005	8162711
Copper (Cu)	ug/g	3.3	0.5	8161589	2.7	8163142	2.0	1.5	0.5	8162711
Iron (Fe)	ug/g	546	3	8161589	213	8163142	276	440	3	8162711
Lead (Pb)	ug/g	3.66	0.03	8161589	1.28	8163142	0.74	12.6	0.03	8162711
Magnesium (Mg)	ug/g	560	100	8161589	228	8163142	779	275	100	8162711
Manganese (Mn)	ug/g	26.2	0.3	8161589	54.8	8163142	343	46.1	0.3	8162711
Molybdenum (Mo)	ug/g	0.13	0.05	8161589	0.59	8163142	0.10	0.09	0.05	8162711
Nickel (Ni)	ug/g	1.19	0.05	8161589	0.38	8163142	0.79	0.53	0.05	8162711
Phosphorus (P)	ug/g	429	50	8161589	363	8163142	467	380	50	8162711
Potassium (K)	ug/g	2590	100	8161589	6640	8163142	2370	1220	100	8162711
Selenium (Se)	ug/g	<0.04	0.04	8161589	<0.04	8163142	<0.04	0.09	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Sodium (Na)	ug/g	64	50	8161589	<50	8163142	<50	<50	50	8162711
Strontium (Sr)	ug/g	14.2	0.5	8161589	24.5	8163142	5.4	17.3	0.5	8162711
Thallium (Tl)	ug/g	<0.003	0.003	8161589	<0.003	8163142	0.076	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	8161589	<0.3	8163142	<0.3	<0.3	0.3	8162711
Titanium (Ti)	ug/g	3.1	0.5	8161589	1.2	8163142	1.9	5.8	0.5	8162711
Uranium (U)	ug/g	0.008	0.005	8161589	<0.005	8163142	<0.005	0.015	0.005	8162711
Vanadium (V)	ug/g	0.21	0.05	8161589	0.09	8163142	0.15	0.23	0.05	8162711
Zinc (Zn)	ug/g	81	2	8161589	16	8163142	10	14	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV569		TJV571		TJV572		
Sampling Date		2022/07/28 16:15		2022/07/28 16:45		2022/07/28 16:45		
COC Number		n/a		n/a		n/a		
	UNITS	22-AWAR-S1-SE	QC Batch	22-AWAR-S2-CR	QC Batch	22-AWAR-S2-CR2	RDL	QC Batch
Metals								
Antimony (Sb)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	2.7	8162711	5.3	8161589	0.2	0.1	8162711
Barium (Ba)	ug/g	15.5	8162711	15.9	8161589	1.5	0.3	8162711
Beryllium (Be)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	6.9	8162711	11.0	8161589	1.7	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	8162711	<0.01	8161589	<0.01	0.01	8162711
Calcium (Ca)	ug/g	2600	8162711	2870	8161589	219	50	8162711
Chromium (Cr)	ug/g	1.0	8162711	1.4	8161589	<0.3	0.3	8162711
Cobalt (Co)	ug/g	0.163	8162711	0.239	8161589	0.008	0.005	8162711
Copper (Cu)	ug/g	2.8	8162711	2.7	8161589	2.1	0.5	8162711
Iron (Fe)	ug/g	462	8162711	574	8161589	21	3	8162711
Lead (Pb)	ug/g	0.31	8162711	0.48	8161589	<0.03	0.03	8162711
Magnesium (Mg)	ug/g	527	8162711	631	8161589	114	100	8162711
Manganese (Mn)	ug/g	249	8162711	130	8161589	5.9	0.3	8162711
Molybdenum (Mo)	ug/g	0.47	8162711	0.08	8161589	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.75	8162711	1.21	8161589	0.15	0.05	8162711
Phosphorus (P)	ug/g	434	8162711	353	8161589	241	50	8162711
Potassium (K)	ug/g	6670	8162711	2290	8161589	2050	100	8162711
Selenium (Se)	ug/g	<0.04	8162711	<0.04	8161589	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	8162711	<50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	19.1	8162711	11.6	8161589	0.7	0.5	8162711
Thallium (Tl)	ug/g	<0.003	8162711	<0.003	8161589	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	8162711	<0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	4.8	8162711	8.3	8161589	<0.5	0.5	8162711
Uranium (U)	ug/g	0.012	8162711	0.011	8161589	<0.005	0.005	8162711
Vanadium (V)	ug/g	0.35	8162711	0.49	8161589	<0.05	0.05	8162711
Zinc (Zn)	ug/g	22	8162711	7	8161589	3	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV574	TJV576		TJV577		TJV579		
Sampling Date		2022/07/30 08:35	2022/07/30 07:55		2022/07/30 07:55		2022/07/30 09:47		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	22-AWAR-S3-L	22-AWAR-S4-SE	QC Batch	22-AWAR-S5-CRAN	QC Batch	22-AWAR-S5-BR	RDL	QC Batch
Metals									
Antimony (Sb)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Arsenic (As)	ug/g	3.9	8.6	8161589	<0.1	8168229	1.6	0.1	8163142
Barium (Ba)	ug/g	7.2	13.4	8161589	0.5	8168229	11.6	0.3	8163142
Beryllium (Be)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Bismuth (Bi)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Boron (B)	ug/g	0.5	2.6	8161589	0.9	8168229	3.6	0.5	8163142
Cadmium (Cd)	ug/g	0.06	<0.01	8161589	<0.01	8168229	0.02	0.01	8163142
Calcium (Ca)	ug/g	10000	4100	8161589	164	8168229	2510	50	8163142
Chromium (Cr)	ug/g	3.1	1.1	8161589	<0.3	8168229	0.4	0.3	8163142
Cobalt (Co)	ug/g	0.433	0.125	8161589	<0.005	8168229	0.119	0.005	8163142
Copper (Cu)	ug/g	2.1	3.0	8161589	0.7	8168229	2.9	0.5	8163142
Iron (Fe)	ug/g	796	493	8161589	6	8168229	223	3	8163142
Lead (Pb)	ug/g	2.08	0.68	8161589	<0.03	8168229	0.23	0.03	8163142
Magnesium (Mg)	ug/g	366	492	8161589	<100	8168229	732	100	8163142
Manganese (Mn)	ug/g	34.9	39.3	8161589	0.6	8168229	48.2	0.3	8163142
Molybdenum (Mo)	ug/g	0.08	0.65	8161589	<0.05	8168229	<0.05	0.05	8163142
Nickel (Ni)	ug/g	1.28	0.62	8161589	0.16	8168229	1.55	0.05	8163142
Phosphorus (P)	ug/g	306	320	8161589	96	8168229	528	50	8163142
Potassium (K)	ug/g	1120	4520	8161589	1320	8168229	2180	100	8163142
Selenium (Se)	ug/g	0.07	<0.04	8161589	<0.04	8168229	<0.04	0.04	8163142
Silver (Ag)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Sodium (Na)	ug/g	55	<50	8161589	<50	8168229	<50	50	8163142
Strontium (Sr)	ug/g	46.6	20.1	8161589	0.6	8168229	8.3	0.5	8163142
Thallium (Tl)	ug/g	0.005	<0.003	8161589	<0.003	8168229	<0.003	0.003	8163142
Tin (Sn)	ug/g	<0.3	<0.3	8161589	<0.3	8168229	<0.3	0.3	8163142
Titanium (Ti)	ug/g	16.5	3.9	8161589	<0.5	8168229	2.1	0.5	8163142
Uranium (U)	ug/g	0.036	0.013	8161589	<0.005	8168229	<0.005	0.005	8163142
Vanadium (V)	ug/g	0.91	0.27	8161589	<0.05	8168229	0.13	0.05	8163142
Zinc (Zn)	ug/g	14	15	8161589	<2	8168229	71	2	8163142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV581	TJV583		TJV585		
Sampling Date		2022/07/30 10:50	2022/07/30 11:21		2022/07/30 11:54		
COC Number		n/a	n/a		n/a		
	UNITS	**22-AWAR-S6-SE**	**22-AWAR-S7-SE**	**QC Batch**	**22-AWAR-S8-BR**	**RDL**	**QC Batch**
Metals							
Antimony (Sb)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Arsenic (As)	ug/g	6.1	2.3	8163142	1.0	0.1	8162711
Barium (Ba)	ug/g	16.0	11.9	8163142	14.6	0.3	8162711
Beryllium (Be)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Boron (B)	ug/g	3.0	2.4	8163142	8.0	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	<0.01	8163142	0.02	0.01	8162711
Calcium (Ca)	ug/g	2790	3040	8163142	2590	50	8162711
Chromium (Cr)	ug/g	1.8	0.4	8163142	0.4	0.3	8162711
Cobalt (Co)	ug/g	0.134	0.077	8163142	0.283	0.005	8162711
Copper (Cu)	ug/g	2.5	2.0	8163142	3.1	0.5	8162711
Iron (Fe)	ug/g	496	157	8163142	211	3	8162711
Lead (Pb)	ug/g	0.54	0.23	8163142	0.17	0.03	8162711
Magnesium (Mg)	ug/g	355	394	8163142	726	100	8162711
Manganese (Mn)	ug/g	128	203	8163142	80.5	0.3	8162711
Molybdenum (Mo)	ug/g	0.53	0.12	8163142	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.55	0.38	8163142	1.63	0.05	8162711
Phosphorus (P)	ug/g	470	400	8163142	575	50	8162711
Potassium (K)	ug/g	5550	6040	8163142	2360	100	8162711
Selenium (Se)	ug/g	<0.04	<0.04	8163142	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	<50	8163142	<50	50	8162711
Strontium (Sr)	ug/g	14.6	15.6	8163142	8.2	0.5	8162711
Thallium (Tl)	ug/g	<0.003	<0.003	8163142	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	<0.3	8163142	<0.3	0.3	8162711
Titanium (Ti)	ug/g	4.2	1.1	8163142	2.8	0.5	8162711
Uranium (U)	ug/g	0.011	0.011	8163142	<0.005	0.005	8162711
Vanadium (V)	ug/g	0.29	0.06	8163142	0.13	0.05	8162711
Zinc (Zn)	ug/g	12	22	8163142	90	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV587		TJV589		TJV591		
Sampling Date		2022/07/30 12:30		2022/07/30 13:00		2022/07/30 13:50		
COC Number		n/a		n/a		n/a		
	UNITS	**22-AWAR-S9-LT**	**RDL**	**22-AWAR-S10-L**	**QC Batch**	**22-AWAR-S11-L**	**RDL**	**QC Batch**
Metals								
Antimony (Sb)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	0.7	0.1	2.4	8161589	4.0	0.1	8162711
Barium (Ba)	ug/g	29.0	0.3	6.3	8161589	6.1	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	7.7	0.5	<0.5	8161589	<0.5	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	0.01	0.08	8161589	0.05	0.01	8162711
Calcium (Ca)	ug/g	2230	50	3330	8161589	3140	50	8162711
Chromium (Cr)	ug/g	0.8	0.3	0.6	8161589	0.7	0.3	8162711
Cobalt (Co)	ug/g	0.075	0.005	0.158	8161589	0.215	0.005	8162711
Copper (Cu)	ug/g	2.5	0.5	0.9	8161589	1.1	0.5	8162711
Iron (Fe)	ug/g	158	3	183	8161589	201	3	8162711
Lead (Pb)	ug/g	0.10	0.03	1.86	8161589	2.87	0.03	8162711
Magnesium (Mg)	ug/g	633	100	219	8161589	185	100	8162711
Manganese (Mn)	ug/g	411	0.3	19.5	8161589	14.3	0.3	8162711
Molybdenum (Mo)	ug/g	<0.05	0.05	0.05	8161589	0.05	0.05	8162711
Nickel (Ni)	ug/g	0.45	0.05	0.38	8161589	0.46	0.05	8162711
Phosphorus (P)	ug/g	550	300	347	8161589	317	50	8162711
Potassium (K)	ug/g	2320	100	1160	8161589	1270	100	8162711
Selenium (Se)	ug/g	<0.04	0.04	0.07	8161589	0.10	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	50	<50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	6.1	0.5	19.0	8161589	28.2	0.5	8162711
Thallium (Tl)	ug/g	0.075	0.003	0.004	8161589	0.006	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	<0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	3.9	0.5	8.0	8161589	9.7	0.5	8162711
Uranium (U)	ug/g	<0.005	0.005	0.016	8161589	0.021	0.005	8162711
Vanadium (V)	ug/g	0.17	0.05	0.21	8161589	0.26	0.05	8162711
Zinc (Zn)	ug/g	13	2	12	8161589	12	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BUREAU VERITAS

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV592		TJV594	TJV596		
Sampling Date		2022/07/30 13:50		2022/07/30 14:32	2022/07/30 15:17		
COC Number		n/a		n/a	n/a		
	UNITS	**22-AWAR-S11-CL**	**QC Batch**	**22-AWAR-S12-LT**	**22-AWAR-S13-CR**	**RDL**	**QC Batch**
Metals							
Antimony (Sb)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Arsenic (As)	ug/g	<0.1	8168229	2.1	1.6	0.1	8162711
Barium (Ba)	ug/g	<0.3	8168229	23.5	12.6	0.3	8162711
Beryllium (Be)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Boron (B)	ug/g	2.7	8168229	8.1	10.4	0.5	8162711
Cadmium (Cd)	ug/g	0.05	8168229	<0.01	<0.01	0.01	8162711
Calcium (Ca)	ug/g	174	8168229	2030	2100	50	8162711
Chromium (Cr)	ug/g	<0.3	8168229	0.7	1.3	0.3	8162711
Cobalt (Co)	ug/g	0.016	8168229	0.077	0.113	0.005	8162711
Copper (Cu)	ug/g	1.1	8168229	2.1	2.4	0.5	8162711
Iron (Fe)	ug/g	8	8168229	308	326	3	8162711
Lead (Pb)	ug/g	<0.03	8168229	0.35	0.15	0.03	8162711
Magnesium (Mg)	ug/g	326	8168229	710	720	100	8162711
Manganese (Mn)	ug/g	12.2	8168229	295	244	0.3	8162711
Molybdenum (Mo)	ug/g	0.14	8168229	0.07	0.07	0.05	8162711
Nickel (Ni)	ug/g	0.39	8168229	0.36	1.36	0.05	8162711
Phosphorus (P)	ug/g	309	8168229	514	518	50	8162711
Potassium (K)	ug/g	1980	8168229	2850	2550	100	8162711
Selenium (Se)	ug/g	<0.04	8168229	<0.04	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	8168229	<50	<50	50	8162711
Strontium (Sr)	ug/g	<0.5	8168229	8.6	4.7	0.5	8162711
Thallium (Tl)	ug/g	<0.003	8168229	0.030	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	8168229	<0.3	<0.3	0.3	8162711
Titanium (Ti)	ug/g	<0.5	8168229	3.2	4.2	0.5	8162711
Uranium (U)	ug/g	<0.005	8168229	0.005	<0.005	0.005	8162711
Vanadium (V)	ug/g	<0.05	8168229	0.15	0.21	0.05	8162711
Zinc (Zn)	ug/g	6	8168229	13	7	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV598		TJV600			TJV602		
Sampling Date		2022/07/30 15:40		2022/07/31 07:40			2022/07/31 08:20		
COC Number		n/a		n/a			n/a		
	UNITS	**22-AWAR-S14-SE**	**RDL**	**22-AWAR-S15-SE**	**RDL**	**QC Batch**	**22-AWAR-S16-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	0.2	0.1	0.1	0.1	8161589	0.7	0.1	8162711
Barium (Ba)	ug/g	10.8	0.3	8.4	0.3	8161589	43.5	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	2.7	0.5	1.9	0.5	8161589	6.2	0.5	8162711
Cadmium (Cd)	ug/g	0.01	0.01	<0.01	0.01	8161589	0.02	0.01	8162711
Calcium (Ca)	ug/g	1700	50	922	50	8161589	1890	50	8162711
Chromium (Cr)	ug/g	<0.3	0.3	<0.3	0.3	8161589	0.8	0.3	8162711
Cobalt (Co)	ug/g	0.017	0.005	0.011	0.005	8161589	0.251	0.005	8162711
Copper (Cu)	ug/g	2.7	0.5	1.4	0.5	8161589	3.0	0.5	8162711
Iron (Fe)	ug/g	56	3	87	3	8161589	367	3	8162711
Lead (Pb)	ug/g	<0.03	0.03	<0.03	0.03	8161589	0.17	0.03	8162711
Magnesium (Mg)	ug/g	299	100	404	100	8161589	1030	100	8162711
Manganese (Mn)	ug/g	112	0.3	11.0	0.3	8161589	59.9	0.3	8162711
Molybdenum (Mo)	ug/g	0.68	0.05	0.37	0.05	8161589	0.06	0.05	8162711
Nickel (Ni)	ug/g	0.41	0.05	0.24	0.05	8161589	2.04	0.05	8162711
Phosphorus (P)	ug/g	395	50	390	50	8161589	1170	300	8162711
Potassium (K)	ug/g	5710	500	3150	100	8161589	2430	100	8162711
Selenium (Se)	ug/g	<0.04	0.04	<0.04	0.04	8161589	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	50	82	50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	4.3	0.5	4.3	0.5	8161589	10.0	0.5	8162711
Thallium (Tl)	ug/g	<0.003	0.003	<0.003	0.003	8161589	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	<0.3	0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	0.7	0.5	0.6	0.5	8161589	4.3	0.5	8162711
Uranium (U)	ug/g	<0.005	0.005	<0.005	0.005	8161589	0.007	0.005	8162711
Vanadium (V)	ug/g	<0.05	0.05	<0.05	0.05	8161589	0.20	0.05	8162711
Zinc (Zn)	ug/g	20	2	11	2	8161589	44	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV604		TJV606		TJV607		
Sampling Date		2022/07/31 08:50		2022/07/31 09:17		2022/07/31 09:17		
COC Number		n/a		n/a		n/a		
	UNITS	**22-AWAR-S17-BR**	**QC Batch**	**22-AWAR-S18-CR**	**QC Batch**	**22-AWAR-S18-CRB**	**RDL**	**QC Batch**
Metals								
Antimony (Sb)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Arsenic (As)	ug/g	0.5	8163142	1.0	8162711	<0.1	0.1	8168229
Barium (Ba)	ug/g	11.3	8163142	15.3	8162711	0.8	0.3	8168229
Beryllium (Be)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Bismuth (Bi)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Boron (B)	ug/g	9.1	8163142	11.1	8162711	1.2	0.5	8168229
Cadmium (Cd)	ug/g	0.02	8163142	<0.01	8162711	<0.01	0.01	8168229
Calcium (Ca)	ug/g	2630	8163142	2470	8162711	104	50	8168229
Chromium (Cr)	ug/g	0.6	8163142	3.2	8162711	<0.3	0.3	8168229
Cobalt (Co)	ug/g	0.153	8163142	0.296	8162711	0.008	0.005	8168229
Copper (Cu)	ug/g	2.8	8163142	3.1	8162711	0.9	0.5	8168229
Iron (Fe)	ug/g	330	8163142	903	8162711	25	3	8168229
Lead (Pb)	ug/g	0.16	8163142	0.31	8162711	<0.03	0.03	8168229
Magnesium (Mg)	ug/g	954	8163142	875	8162711	<100	100	8168229
Manganese (Mn)	ug/g	36.7	8163142	196	8162711	9.0	0.3	8168229
Molybdenum (Mo)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Nickel (Ni)	ug/g	0.62	8163142	2.14	8162711	0.15	0.05	8168229
Phosphorus (P)	ug/g	712	8163142	397	8162711	168	50	8168229
Potassium (K)	ug/g	2390	8163142	2460	8162711	1330	100	8168229
Selenium (Se)	ug/g	<0.04	8163142	<0.04	8162711	<0.04	0.04	8168229
Silver (Ag)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Sodium (Na)	ug/g	<50	8163142	<50	8162711	<50	50	8168229
Strontium (Sr)	ug/g	8.4	8163142	8.7	8162711	<0.5	0.5	8168229
Thallium (Tl)	ug/g	<0.003	8163142	0.004	8162711	<0.003	0.003	8168229
Tin (Sn)	ug/g	<0.3	8163142	<0.3	8162711	<0.3	0.3	8168229
Titanium (Ti)	ug/g	4.6	8163142	17.2	8162711	0.6	0.5	8168229
Uranium (U)	ug/g	0.007	8163142	0.019	8162711	<0.005	0.005	8168229
Vanadium (V)	ug/g	0.21	8163142	0.75	8162711	<0.05	0.05	8168229
Zinc (Zn)	ug/g	97	8163142	9	8162711	<2	2	8168229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV609	TJV611		TJV658		TJV660		
Sampling Date		2022/07/31 10:02	2022/08/01 15:52		2022/07/29 11:15		2022/07/29 12:00		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-AWAR-S19-L**	**22-AWAR-S20-L**	**RDL**	**22-REF1-S1-L**	**QC Batch**	**22-REF1-S2-L**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	0.21	<0.05	0.05	<0.05	8162711	<0.05	0.05	8163847
Arsenic (As)	ug/g	3.1	2.6	0.1	3.9	8162711	2.9	0.1	8163847
Barium (Ba)	ug/g	46.6	32.3	0.3	10.0	8162711	3.2	0.3	8163847
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	<0.05	8162711	<0.05	0.05	8163847
Bismuth (Bi)	ug/g	0.09	0.15	0.05	<0.05	8162711	<0.05	0.05	8163847
Boron (B)	ug/g	1.4	<0.5	0.5	<0.5	8162711	<0.5	0.5	8163847
Cadmium (Cd)	ug/g	0.12	0.03	0.01	0.04	8162711	0.05	0.01	8163847
Calcium (Ca)	ug/g	9030	9540	50	11500	8162711	2220	50	8163847
Chromium (Cr)	ug/g	23.3	19.3	0.3	<0.3	8162711	<0.3	0.3	8163847
Cobalt (Co)	ug/g	2.75	2.22	0.005	0.052	8162711	0.077	0.005	8163847
Copper (Cu)	ug/g	11.0	6.8	0.5	1.0	8162711	0.7	0.5	8163847
Iron (Fe)	ug/g	4660	4240	3	144	8162711	78	3	8163847
Lead (Pb)	ug/g	2.13	1.19	0.03	0.63	8162711	0.52	0.03	8163847
Magnesium (Mg)	ug/g	2440	2090	100	315	8162711	184	100	8163847
Manganese (Mn)	ug/g	98.9	63.1	0.3	14.1	8162711	38.4	0.3	8163847
Molybdenum (Mo)	ug/g	0.18	0.20	0.05	0.06	8162711	<0.05	0.05	8163847
Nickel (Ni)	ug/g	7.33	5.84	0.05	0.30	8162711	0.24	0.05	8163847
Phosphorus (P)	ug/g	649	309	50	182	8162711	189	50	8163847
Potassium (K)	ug/g	1810	1150	100	654	8162711	630	100	8163847
Selenium (Se)	ug/g	0.17	0.05	0.04	0.04	8162711	0.05	0.04	8163847
Silver (Ag)	ug/g	<0.05	<0.05	0.05	<0.05	8162711	<0.05	0.05	8163847
Sodium (Na)	ug/g	230	134	50	107	8162711	<50	50	8163847
Strontium (Sr)	ug/g	30.5	29.2	0.5	38.1	8162711	5.7	0.5	8163847
Thallium (Tl)	ug/g	0.035	0.034	0.003	<0.003	8162711	<0.003	0.003	8163847
Tin (Sn)	ug/g	<0.3	<0.3	0.3	<0.3	8162711	<0.3	0.3	8163847
Titanium (Ti)	ug/g	205	207	5	2.4	8162711	1.2	0.5	8163847
Uranium (U)	ug/g	0.155	0.129	0.005	0.013	8162711	<0.005	0.005	8163847
Vanadium (V)	ug/g	7.52	7.41	0.05	0.11	8162711	0.06	0.05	8163847
Zinc (Zn)	ug/g	24	13	2	10	8162711	9	2	8163847

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV662	TJV662			TJV664		TJV665		
Sampling Date		2022/07/29 12:35	2022/07/29 12:35			2022/07/29 13:10		2022/07/29 13:10		
COC Number		n/a	n/a			n/a		n/a		
	UNITS	22-REF1-S3-LT	22-REF1-S3-LT Lab-Dup	RDL	QC Batch	22-REF1-S4-CR	QC Batch	22-REF1-S4-CRB	RDL	QC Batch
Metals										
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Arsenic (As)	ug/g	0.2	0.3	0.1	8168229	1.4	8163142	<0.1	0.1	8168229
Barium (Ba)	ug/g	42.7	42.8	0.3	8168229	15.7	8163142	1.1	0.3	8168229
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Boron (B)	ug/g	9.2	8.9	0.5	8168229	13.0	8163142	1.6	0.5	8168229
Cadmium (Cd)	ug/g	<0.01	<0.01	0.01	8168229	<0.01	8163142	<0.01	0.01	8168229
Calcium (Ca)	ug/g	2590	2470	50	8168229	3130	8163142	175	50	8168229
Chromium (Cr)	ug/g	<0.3	<0.3	0.3	8168229	<0.3	8163142	<0.3	0.3	8168229
Cobalt (Co)	ug/g	0.028	0.033	0.005	8168229	0.143	8163142	0.005	0.005	8168229
Copper (Cu)	ug/g	1.7	1.7	0.5	8168229	1.9	8163142	1.6	0.5	8168229
Iron (Fe)	ug/g	18	17	3	8168229	50	8163142	4	3	8168229
Lead (Pb)	ug/g	0.03	<0.03	0.03	8168229	0.09	8163142	<0.03	0.03	8168229
Magnesium (Mg)	ug/g	668	645	100	8168229	767	8163142	<100	100	8168229
Manganese (Mn)	ug/g	522	543	2	8168229	272	8163142	8.8	0.3	8168229
Molybdenum (Mo)	ug/g	<0.05	<0.05	0.05	8168229	0.06	8163142	<0.05	0.05	8168229
Nickel (Ni)	ug/g	0.26	0.26	0.05	8168229	1.27	8163142	0.15	0.05	8168229
Phosphorus (P)	ug/g	480	477	50	8168229	379	8163142	222	50	8168229
Potassium (K)	ug/g	2330	2290	100	8168229	2300	8163142	1760	100	8168229
Selenium (Se)	ug/g	<0.04	<0.04	0.04	8168229	<0.04	8163142	<0.04	0.04	8168229
Silver (Ag)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Sodium (Na)	ug/g	<50	<50	50	8168229	<50	8163142	<50	50	8168229
Strontium (Sr)	ug/g	3.8	3.7	0.5	8168229	3.9	8163142	<0.5	0.5	8168229
Thallium (Tl)	ug/g	0.085	0.080	0.003	8168229	<0.003	8163142	<0.003	0.003	8168229
Tin (Sn)	ug/g	<0.3	<0.3	0.3	8168229	<0.3	8163142	<0.3	0.3	8168229
Titanium (Ti)	ug/g	0.7	0.7	0.5	8168229	0.9	8163142	<0.5	0.5	8168229
Uranium (U)	ug/g	<0.005	<0.005	0.005	8168229	<0.005	8163142	<0.005	0.005	8168229
Vanadium (V)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Zinc (Zn)	ug/g	12	11	2	8168229	8	8163142	<2	2	8168229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV667	TJV668			TJV670		
Sampling Date		2022/07/29 14:03	2022/07/29 14:03			2022/07/29 15:35		
COC Number		n/a	n/a			n/a		
	UNITS	**22-REF1-S5-SE**	**22-REF1-S5-CL**	**RDL**	**QC Batch**	**22-REF2-S1-BR**	**RDL**	**QC Batch**
Metals								
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	2.0	<0.1	0.1	8161589	0.1	0.1	8162711
Barium (Ba)	ug/g	10.3	<0.3	0.3	8161589	22.2	0.3	8162711
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	2.5	2.0	0.5	8161589	5.2	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	<0.01	0.01	8161589	0.08	0.01	8162711
Calcium (Ca)	ug/g	2950	412	50	8161589	1590	50	8162711
Chromium (Cr)	ug/g	0.5	<0.3	0.3	8161589	<0.3	0.3	8162711
Cobalt (Co)	ug/g	0.025	0.017	0.005	8161589	0.217	0.005	8162711
Copper (Cu)	ug/g	3.0	1.0	0.5	8161589	2.7	0.5	8162711
Iron (Fe)	ug/g	76	4	3	8161589	29	3	8162711
Lead (Pb)	ug/g	0.30	<0.03	0.03	8161589	0.03	0.03	8162711
Magnesium (Mg)	ug/g	401	262	100	8161589	770	100	8162711
Manganese (Mn)	ug/g	17.9	5.9	0.3	8161589	655	2	8162711
Molybdenum (Mo)	ug/g	0.51	0.07	0.05	8161589	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.54	0.13	0.05	8161589	1.72	0.05	8162711
Phosphorus (P)	ug/g	375	244	50	8161589	911	300	8162711
Potassium (K)	ug/g	4740	1750	100	8161589	2050	100	8162711
Selenium (Se)	ug/g	<0.04	<0.04	0.04	8161589	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	<50	50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	15.8	1.4	0.5	8161589	5.7	0.5	8162711
Thallium (Tl)	ug/g	<0.003	<0.003	0.003	8161589	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	<0.3	0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	1.0	<0.5	0.5	8161589	0.7	0.5	8162711
Uranium (U)	ug/g	0.014	<0.005	0.005	8161589	<0.005	0.005	8162711
Vanadium (V)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Zinc (Zn)	ug/g	7	4	2	8161589	78	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV672		TJV674		TJV676		TJV678		
Sampling Date		2022/07/29 15:10		2022/07/29 16:16		2022/07/29 16:45		2022/07/31 16:26		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	22-REF2-S2-BR	QC Batch	22-REF2-S3-BR	QC Batch	22-REF2-S4-SE	RDL	22-REF2-S5-BR	RDL	QC Batch
Metals										
Antimony (Sb)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Arsenic (As)	ug/g	0.4	8163142	0.3	8162711	0.7	0.1	0.5	0.1	8161589
Barium (Ba)	ug/g	28.1	8163142	13.5	8162711	16.0	0.3	19.9	0.3	8161589
Beryllium (Be)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Boron (B)	ug/g	7.6	8163142	6.0	8162711	2.2	0.5	4.1	0.5	8161589
Cadmium (Cd)	ug/g	0.04	8163142	0.05	8162711	<0.01	0.01	0.08	0.01	8161589
Calcium (Ca)	ug/g	1970	8163142	1400	8162711	2040	50	1340	50	8161589
Chromium (Cr)	ug/g	<0.3	8163142	<0.3	8162711	<0.3	0.3	<0.3	0.3	8161589
Cobalt (Co)	ug/g	0.252	8163142	0.229	8162711	0.179	0.005	0.362	0.005	8161589
Copper (Cu)	ug/g	3.4	8163142	2.7	8162711	2.8	0.5	2.6	0.5	8161589
Iron (Fe)	ug/g	35	8163142	34	8162711	66	3	33	3	8161589
Lead (Pb)	ug/g	0.05	8163142	0.06	8162711	0.09	0.03	0.07	0.03	8161589
Magnesium (Mg)	ug/g	824	8163142	641	8162711	419	100	544	100	8161589
Manganese (Mn)	ug/g	330	8163142	313	8162711	86.4	0.3	293	0.3	8161589
Molybdenum (Mo)	ug/g	<0.05	8163142	<0.05	8162711	0.31	0.05	<0.05	0.05	8161589
Nickel (Ni)	ug/g	1.27	8163142	2.17	8162711	1.11	0.05	2.72	0.05	8161589
Phosphorus (P)	ug/g	569	8163142	521	8162711	338	50	558	300	8161589
Potassium (K)	ug/g	1890	8163142	2280	8162711	3590	100	1620	100	8161589
Selenium (Se)	ug/g	<0.04	8163142	<0.04	8162711	<0.04	0.04	<0.04	0.04	8161589
Silver (Ag)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Sodium (Na)	ug/g	<50	8163142	<50	8162711	<50	50	<50	50	8161589
Strontium (Sr)	ug/g	7.7	8163142	3.9	8162711	7.9	0.5	4.4	0.5	8161589
Thallium (Tl)	ug/g	0.005	8163142	<0.003	8162711	<0.003	0.003	<0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	8163142	<0.3	8162711	<0.3	0.3	<0.3	0.3	8161589
Titanium (Ti)	ug/g	0.7	8163142	0.7	8162711	0.7	0.5	1.0	0.5	8161589
Uranium (U)	ug/g	<0.005	8163142	<0.005	8162711	<0.005	0.005	<0.005	0.005	8161589
Vanadium (V)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Zinc (Zn)	ug/g	107	8163142	42	8162711	8	2	31	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV680			TJV682			TJV684		
Sampling Date		2022/07/31 12:55			2022/07/31 13:23			2022/07/31 13:58		
COC Number		n/a			n/a			n/a		
	UNITS	**22-REF3-S1-L**	**RDL**	**QC Batch**	**22-REF3-S2-LT**	**RDL**	**QC Batch**	**22-REF3-S3-BR**	**RDL**	**QC Batch**
Metals										
Antimony (Sb)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Arsenic (As)	ug/g	2.5	0.1	8162711	0.5	0.1	8168229	0.3	0.1	8162711
Barium (Ba)	ug/g	2.8	0.3	8162711	35.2	0.3	8168229	16.8	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Boron (B)	ug/g	<0.5	0.5	8162711	6.8	0.5	8168229	8.5	0.5	8162711
Cadmium (Cd)	ug/g	0.08	0.01	8162711	<0.01	0.01	8168229	0.04	0.01	8162711
Calcium (Ca)	ug/g	620	50	8162711	2190	50	8168229	1690	50	8162711
Chromium (Cr)	ug/g	0.3	0.3	8162711	<0.3	0.3	8168229	<0.3	0.3	8162711
Cobalt (Co)	ug/g	0.057	0.005	8162711	0.038	0.005	8168229	0.219	0.005	8162711
Copper (Cu)	ug/g	0.8	0.5	8162711	1.6	0.5	8168229	3.1	0.5	8162711
Iron (Fe)	ug/g	85	3	8162711	30	3	8168229	33	3	8162711
Lead (Pb)	ug/g	0.62	0.03	8162711	0.06	0.03	8168229	0.04	0.03	8162711
Magnesium (Mg)	ug/g	204	100	8162711	573	100	8168229	611	100	8162711
Manganese (Mn)	ug/g	27.3	0.3	8162711	340	0.3	8168229	174	0.3	8162711
Molybdenum (Mo)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.15	0.05	8162711	0.41	0.05	8168229	0.71	0.05	8162711
Phosphorus (P)	ug/g	389	50	8162711	572	300	8168229	623	50	8162711
Potassium (K)	ug/g	1060	100	8162711	2510	100	8168229	2210	100	8162711
Selenium (Se)	ug/g	0.06	0.04	8162711	<0.04	0.04	8168229	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	50	8162711	<50	50	8168229	<50	50	8162711
Strontium (Sr)	ug/g	2.6	0.5	8162711	2.8	0.5	8168229	8.1	0.5	8162711
Thallium (Tl)	ug/g	0.007	0.003	8162711	0.153	0.003	8168229	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	8162711	<0.3	0.3	8168229	<0.3	0.3	8162711
Titanium (Ti)	ug/g	2.1	0.5	8162711	1.0	0.5	8168229	1.0	0.5	8162711
Uranium (U)	ug/g	<0.005	0.005	8162711	<0.005	0.005	8168229	<0.005	0.005	8162711
Vanadium (V)	ug/g	0.08	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Zinc (Zn)	ug/g	7	2	8162711	13	2	8168229	42	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV685	TJV687		
Sampling Date		2022/07/31 14:28	2022/07/31 14:55		
COC Number		n/a	n/a		
	UNITS	**22-REF3-S4-SE**	**22-REF3-S5-BR**	**RDL**	**QC Batch**
Metals					
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	8163142
Arsenic (As)	ug/g	0.7	0.2	0.1	8163142
Barium (Ba)	ug/g	11.5	20.8	0.3	8163142
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	8163142
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	8163142
Boron (B)	ug/g	2.1	12.9	0.5	8163142
Cadmium (Cd)	ug/g	0.02	0.07	0.01	8163142
Calcium (Ca)	ug/g	1260	2060	50	8163142
Chromium (Cr)	ug/g	<0.3	<0.3	0.3	8163142
Cobalt (Co)	ug/g	0.063	0.082	0.005	8163142
Copper (Cu)	ug/g	4.4	3.3	0.5	8163142
Iron (Fe)	ug/g	47	34	3	8163142
Lead (Pb)	ug/g	0.09	0.04	0.03	8163142
Magnesium (Mg)	ug/g	284	637	100	8163142
Manganese (Mn)	ug/g	72.5	253	0.3	8163142
Molybdenum (Mo)	ug/g	0.96	<0.05	0.05	8163142
Nickel (Ni)	ug/g	0.87	4.58	0.05	8163142
Phosphorus (P)	ug/g	465	684	50	8163142
Potassium (K)	ug/g	5220	2300	100	8163142
Selenium (Se)	ug/g	<0.04	<0.04	0.04	8163142
Silver (Ag)	ug/g	<0.05	<0.05	0.05	8163142
Sodium (Na)	ug/g	<50	<50	50	8163142
Strontium (Sr)	ug/g	5.7	8.2	0.5	8163142
Thallium (Tl)	ug/g	<0.003	<0.003	0.003	8163142
Tin (Sn)	ug/g	<0.3	<0.3	0.3	8163142
Titanium (Ti)	ug/g	1.1	1.0	0.5	8163142
Uranium (U)	ug/g	<0.005	<0.005	0.005	8163142
Vanadium (V)	ug/g	<0.05	<0.05	0.05	8163142
Zinc (Zn)	ug/g	9	69	2	8163142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJU728	TJU730		TJU732		TJU734		
Sampling Date		2022/08/01 11:10	2022/08/01 11:31		2022/08/01 11:58		2022/08/01 13:10		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	22-WRSA-S1-BR	22-WRSA-S2-SE	QC Batch	22-WRSA-S3-SE	QC Batch	22-WRSA-S4-L	RDL	QC Batch
Metals									
Mercury (Hg)	ug/g	0.01	<0.01	8161803	<0.01	8164229	0.09	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJU736		TJU738	TJU740		TJU742		
Sampling Date		2022/08/01 13:40		2022/08/01 14:07	2022/08/01 14:30		2022/08/02 10:45		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	22-WRSA-S5-BR	QC Batch	22-WRSA-S6-SE	22-WRSA-S7-BR	QC Batch	22-WRSA-SE	RDL	QC Batch
Metals									
Mercury (Hg)	ug/g	0.01	8161766	<0.01	0.01	8161803	<0.01	0.01	8166152

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJU744	TJU744		TJU746		TJU763		
Sampling Date		2022/08/02 11:10	2022/08/02 11:10		2022/08/02 11:45		2022/07/28 11:22		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	22-WRSA-S9-L	22-WRSA-S9-L Lab-Dup	QC Batch	22-WRSA-S10-BR	QC Batch	22-TF-S1-L	RDL	QC Batch
Metals									
Mercury (Hg)	ug/g	0.05	0.05	8166152	<0.01	8161803	0.08	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJU764	TJU766		TJU768	TJU770		TJU772		
Sampling Date		2022/07/28 11:22	2022/07/28 08:04		2022/07/28 08:42	2022/07/28 07:33		2022/07/28 09:21		
COC Number		n/a	n/a		n/a	n/a		n/a		
	UNITS	22-TF-S1-SE	22-TF-S2-SE	QC Batch	22-TF-S3-BR	22-TF-S4-BR	QC Batch	22-TF-S5-LT	RDL	QC Batch
Metals										
Mercury (Hg)	ug/g	0.01	0.01	8166152	0.02	0.01	8161766	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJU774		TJU776	TJU776		TJU781		
Sampling Date		2022/07/28 10:20		2022/07/28 10:20	2022/07/28 10:20		2022/07/28 15:46		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-TF-S6-CR**	**QC Batch**	**22-TF-S6-L**	**22-TF-S6-L Lab-Dup**	**QC Batch**	**22-TF-S11-BR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	8161803	0.25	0.21	8164229	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJU783		TJU785	TJU787	TJV569		TJV571		
Sampling Date		2022/07/28 15:12		2022/07/28 14:03	2022/07/28 14:36	2022/07/28 16:15		2022/07/28 16:45		
COC Number		n/a		n/a	n/a	n/a		n/a		
	UNITS	**22-TF-S12-SE**	**QC Batch**	**22-TF-S13-LT**	**22-TF-S4-L**	**22-AWAR-S1-SE**	**QC Batch**	**22-AWAR-S2-CR**	**RDL**	**QC Batch**
Metals										
Mercury (Hg)	ug/g	0.01	8161766	0.01	0.09	0.01	8164229	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV572		TJV574	TJV576	TJV576		
Sampling Date		2022/07/28 16:45		2022/07/30 08:35	2022/07/30 07:55	2022/07/30 07:55		
COC Number		n/a		n/a	n/a	n/a		
	UNITS	**22-AWAR-S2-CR2**	**QC Batch**	**22-AWAR-S3-L**	**22-AWAR-S4-SE**	**22-AWAR-S4-SE Lab-Dup**	**RDL**	**QC Batch**
Metals								
Mercury (Hg)	ug/g	<0.01	8164229	0.07	0.01	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJV577	TJV579		TJV581		TJV583		
Sampling Date		2022/07/30 07:55	2022/07/30 09:47		2022/07/30 10:50		2022/07/30 11:21		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-AWAR-S5-CRAN**	**22-AWAR-S5-BR**	**QC Batch**	**22-AWAR-S6-SE**	**QC Batch**	**22-AWAR-S7-SE**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	<0.01	0.01	8161766	<0.01	8166152	<0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJV585		TJV587	TJV589		TJV591		
Sampling Date		2022/07/30 11:54		2022/07/30 12:30	2022/07/30 13:00		2022/07/30 13:50		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-AWAR-S8-BR**	**QC Batch**	**22-AWAR-S9-LT**	**22-AWAR-S10-L**	**QC Batch**	**22-AWAR-S11-L**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	<0.01	8164229	0.01	0.06	8161803	0.08	0.01	8164229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV592		TJV594	TJV596		TJV598		
Sampling Date		2022/07/30 13:50		2022/07/30 14:32	2022/07/30 15:17		2022/07/30 15:40		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-AWAR-S11-CL**	**QC Batch**	**22-AWAR-S12-LT**	**22-AWAR-S13-CR**	**QC Batch**	**22-AWAR-S14-SE**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	<0.01	8161766	0.01	<0.01	8164229	<0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV600		TJV602		TJV604		
Sampling Date		2022/07/31 07:40		2022/07/31 08:20		2022/07/31 08:50		
COC Number		n/a		n/a		n/a		
	UNITS	**22-AWAR-S15-SE**	**QC Batch**	**22-AWAR-S16-BR**	**QC Batch**	**22-AWAR-S17-BR**	**RDL**	**QC Batch**
Metals								
Mercury (Hg)	ug/g	<0.01	8161803	<0.01	8164229	0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV606		TJV607	TJV607		TJV609		
Sampling Date		2022/07/31 09:17		2022/07/31 09:17	2022/07/31 09:17		2022/07/31 10:02		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-AWAR-S18-CR**	**QC Batch**	**22-AWAR-S18-CRB**	**22-AWAR-S18-CRB Lab-Dup**	**QC Batch**	**22-AWAR-S19-L**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	8164229	<0.01	<0.01	8161766	0.09	0.01	8164229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJV611	TJV658		TJV660	TJV662	TJV664		
Sampling Date		2022/08/01 15:52	2022/07/29 11:15		2022/07/29 12:00	2022/07/29 12:35	2022/07/29 13:10		
COC Number		n/a	n/a		n/a	n/a	n/a		
	UNITS	**22-AWAR-S20-L**	**22-REF1-S1-L**	**QC Batch**	**22-REF1-S2-L**	**22-REF1-S3-LT**	**22-REF1-S4-CR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.03	0.03	8164229	0.04	0.01	0.02	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV665		TJV667	TJV668		TJV670		
Sampling Date		2022/07/29 13:10		2022/07/29 14:03	2022/07/29 14:03		2022/07/29 15:35		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-REF1-S4-CRB**	**QC Batch**	**22-REF1-S5-SE**	**22-REF1-S5-CL**	**QC Batch**	**22-REF2-S1-BR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	<0.01	8161766	0.01	<0.01	8161803	<0.01	0.01	8164229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV672		TJV674		TJV676	TJV678		
Sampling Date		2022/07/29 15:10		2022/07/29 16:16		2022/07/29 16:45	2022/07/31 16:26		
COC Number		n/a		n/a		n/a	n/a		
	UNITS	**22-REF2-S2-BR**	**QC Batch**	**22-REF2-S3-BR**	**QC Batch**	**22-REF2-S4-SE**	**22-REF2-S5-BR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	8161766	0.01	8164229	<0.01	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV680		TJV682		TJV684		TJV685		
Sampling Date		2022/07/31 12:55		2022/07/31 13:23		2022/07/31 13:58		2022/07/31 14:28		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	**22-REF3-S1-L**	**QC Batch**	**22-REF3-S2-LT**	**QC Batch**	**22-REF3-S3-BR**	**QC Batch**	**22-REF3-S4-SE**	**RDL**	**QC Batch**
Metals										
Mercury (Hg)	ug/g	0.07	8164229	0.01	8161766	<0.01	8164229	<0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJV687		
Sampling Date		2022/07/31 14:55		
COC Number		n/a		
	UNITS	**22-REF3-S5-BR**	**RDL**	**QC Batch**
Metals				
Mercury (Hg)	ug/g	0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU727
Sample ID: 22-WRSA-S1-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU728
Sample ID: 22-WRSA-S1-BR
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU729
Sample ID: 22-WRSA-S2-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU729 Dup
Sample ID: 22-WRSA-S2-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr

Bureau Veritas ID: TJU730
Sample ID: 22-WRSA-S2-SE
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU731
Sample ID: 22-WRSA-S3-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU732
Sample ID: 22-WRSA-S3-SE
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU733
Sample ID: 22-WRSA-S4-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU734
Sample ID: 22-WRSA-S4-L
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU735
Sample ID: 22-WRSA-S5-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU735 Dup
Sample ID: 22-WRSA-S5-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU736
Sample ID: 22-WRSA-S5-BR
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU737
Sample ID: 22-WRSA-S6-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU738
Sample ID: 22-WRSA-S6-SE
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU739
Sample ID: 22-WRSA-S7-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU740
Sample ID: 22-WRSA-S7-BR
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU741
Sample ID: 22-WRSA-S8-S
Matrix: Soil

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU742
Sample ID: 22-WRSA-SE
Matrix: Tissue

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

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Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU743
Sample ID: 22-WRSA-S9-S
Matrix: Soil

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU743 Dup
Sample ID: 22-WRSA-S9-S
Matrix: Soil

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU744
Sample ID: 22-WRSA-S9-L
Matrix: Tissue

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU744 Dup
Sample ID: 22-WRSA-S9-L
Matrix: Tissue

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU745
Sample ID: 22-WRSA-S10-S
Matrix: Soil

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU746
Sample ID: 22-WRSA-S10-BR
Matrix: Tissue

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

TEST SUMMARY

Bureau Veritas ID: TJU762
Sample ID: 22-TF-S1-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU763
Sample ID: 22-TF-S1-L
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU764
Sample ID: 22-TF-S1-SE
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/12	Daniel Teclu

Bureau Veritas ID: TJU765
Sample ID: 22-TF-S2-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU766
Sample ID: 22-TF-S2-SE
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/12	Daniel Teclu

Bureau Veritas ID: TJU767
Sample ID: 22-TF-S3-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU768
Sample ID: 22-TF-S3-BR
Matrix: Tissue
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU769
Sample ID: 22-TF-S4-S
Matrix: Soil
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU769 Dup
Sample ID: 22-TF-S4-S
Matrix: Soil
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli

Bureau Veritas ID: TJU770
Sample ID: 22-TF-S4-BR
Matrix: Tissue
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU771
Sample ID: 22-TF-S5-S
Matrix: Soil
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU772
Sample ID: 22-TF-S5-LT
Matrix: Tissue
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

TEST SUMMARY

Bureau Veritas ID: TJU772 Dup
Sample ID: 22-TF-S5-LT
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU773
Sample ID: 22-TF-S6-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU774
Sample ID: 22-TF-S6-CR
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU776
Sample ID: 22-TF-S6-L
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/15	Daniel Teclu

Bureau Veritas ID: TJU776 Dup
Sample ID: 22-TF-S6-L
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/15	Daniel Teclu

Bureau Veritas ID: TJU779
Sample ID: 22-TF-S11-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU781
Sample ID: 22-TF-S11-BR
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU782
Sample ID: 22-TF-S12-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8163041	2022/08/12	2022/08/12	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU783
Sample ID: 22-TF-S12-SE
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU784
Sample ID: 22-TF-S13-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU785
Sample ID: 22-TF-S13-LT
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU786
Sample ID: 22-TF-S14-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

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Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU787 | **Collected:** 2022/07/28
Sample ID: 22-TF-S4-L | **Shipped:**
Matrix: Tissue | **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV568 | **Collected:** 2022/07/28
Sample ID: 22-AWAR-S1-S | **Shipped:**
Matrix: Soil | **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV569 | **Collected:** 2022/07/28
Sample ID: 22-AWAR-S1-SE | **Shipped:**
Matrix: Tissue | **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV570 | **Collected:** 2022/07/28
Sample ID: 22-AWAR-S2-S | **Shipped:**
Matrix: Soil | **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV571 | **Collected:** 2022/07/28
Sample ID: 22-AWAR-S2-CR | **Shipped:**
Matrix: Tissue | **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV572 | **Collected:** 2022/07/28
Sample ID: 22-AWAR-S2-CR2 | **Shipped:**
Matrix: Tissue | **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV573
Sample ID: 22-AWAR-S3-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8163666	2022/08/12	2022/08/15	Daniel Teclu
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV574
Sample ID: 22-AWAR-S3-L
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV575
Sample ID: 22-AWAR-S4-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8161273	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV576
Sample ID: 22-AWAR-S4-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV576 Dup
Sample ID: 22-AWAR-S4-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill

Bureau Veritas ID: TJV577
Sample ID: 22-AWAR-S5-CRAN
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV578
Sample ID: 22-AWAR-S5-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV579
Sample ID: 22-AWAR-S5-BR
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV580
Sample ID: 22-AWAR-S6-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV581
Sample ID: 22-AWAR-S6-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV582
Sample ID: 22-AWAR-S7-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV583
Sample ID: 22-AWAR-S7-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV584
Sample ID: 22-AWAR-S8-S
Matrix: Soil
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV585
Sample ID: 22-AWAR-S8-BR
Matrix: Tissue
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV586
Sample ID: 22-AWAR-S9-S
Matrix: Soil
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV587
Sample ID: 22-AWAR-S9-LT
Matrix: Tissue
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV588
Sample ID: 22-AWAR-S10-S
Matrix: Soil
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV589
Sample ID: 22-AWAR-S10-L
Matrix: Tissue
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV590 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S11-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV591 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S11-L **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV592 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S11-CL **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV593 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S12-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV594 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S12-LT **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV595 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S13-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV596
Sample ID: 22-AWAR-S13-CR
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV597
Sample ID: 22-AWAR-S14-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV598
Sample ID: 22-AWAR-S14-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV599
Sample ID: 22-AWAR-S15-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV600
Sample ID: 22-AWAR-S15-SE
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV601
Sample ID: 22-AWAR-S16-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV602
Sample ID: 22-AWAR-S16-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV603
Sample ID: 22-AWAR-S17-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV604
Sample ID: 22-AWAR-S17-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV605
Sample ID: 22-AWAR-S18-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV606
Sample ID: 22-AWAR-S18-CR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV607
Sample ID: 22-AWAR-S18-CRB
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

TEST SUMMARY

Bureau Veritas ID: TJV607 Dup
Sample ID: 22-AWAR-S18-CRB
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill

Bureau Veritas ID: TJV608
Sample ID: 22-AWAR-S19-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV609
Sample ID: 22-AWAR-S19-L
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV610
Sample ID: 22-AWAR-S20-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV611
Sample ID: 22-AWAR-S20-L
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV657
Sample ID: 22-REF1-S1-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

TEST SUMMARY

Bureau Veritas ID: TJV658
Sample ID: 22-REF1-S1-L
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV659
Sample ID: 22-REF1-S2-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV660
Sample ID: 22-REF1-S2-L
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/12	Daniel Teclu

Bureau Veritas ID: TJV661
Sample ID: 22-REF1-S3-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV662
Sample ID: 22-REF1-S3-LT
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV662 Dup
Sample ID: 22-REF1-S3-LT
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV663
Sample ID: 22-REF1-S4-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV663 Dup
Sample ID: 22-REF1-S4-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV664
Sample ID: 22-REF1-S4-CR
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV665
Sample ID: 22-REF1-S4-CRB
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV666
Sample ID: 22-REF1-S5-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV667
Sample ID: 22-REF1-S5-SE
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

TEST SUMMARY

Bureau Veritas ID: TJV668 **Collected:** 2022/07/29
Sample ID: 22-REF1-S5-CL **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV669 **Collected:** 2022/07/29
Sample ID: 22-REF2-S1-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV670 **Collected:** 2022/07/29
Sample ID: 22-REF2-S1-BR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV671 **Collected:** 2022/07/29
Sample ID: 22-REF2-S2-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV672 **Collected:** 2022/07/29
Sample ID: 22-REF2-S2-BR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV673 **Collected:** 2022/07/29
Sample ID: 22-REF2-S3-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV673 Dup
Sample ID: 22-REF2-S3-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri

Bureau Veritas ID: TJV674
Sample ID: 22-REF2-S3-BR
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV675
Sample ID: 22-REF2-S4-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV676
Sample ID: 22-REF2-S4-SE
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV677
Sample ID: 22-REF2-S5-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV678
Sample ID: 22-REF2-S5-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV679
Sample ID: 22-REF3-S1-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV680
Sample ID: 22-REF3-S1-L
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV681
Sample ID: 22-REF3-S2-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV682
Sample ID: 22-REF3-S2-LT
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV683
Sample ID: 22-REF3-S3-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV684
Sample ID: 22-REF3-S3-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV685
Sample ID: 22-REF3-S4-SE
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV686
Sample ID: 22-REF3-S5-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV687
Sample ID: 22-REF3-S5-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TLO475
Sample ID: 22-REF3-S4-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8170582	2022/08/17	2022/08/17	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8170677	2022/08/17	2022/08/17	Taslima Aktar

Bureau Veritas ID: TLO475 Dup
Sample ID: 22-REF3-S4-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8170677	2022/08/17	2022/08/17	Taslima Aktar

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	20.3°C

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8160260	Available (CaCl2) pH	2022/08/11			100	97 - 103			0.19	N/A		
8160732	Available (CaCl2) pH	2022/08/11			99	N/A			0.97	N/A		
8160746	Available (CaCl2) pH	2022/08/11			100	N/A			0.38	N/A		
8160948	Acid Extractable Aluminum (Al)	2022/08/11	NC	75 - 125	103	80 - 120	<50	ug/g	1.8	30		
8160948	Acid Extractable Antimony (Sb)	2022/08/11	96	75 - 125	102	80 - 120	<0.20	ug/g	NC	30		
8160948	Acid Extractable Arsenic (As)	2022/08/11	NC	75 - 125	99	80 - 120	<1.0	ug/g	5.4	30		
8160948	Acid Extractable Barium (Ba)	2022/08/11	NC	75 - 125	100	80 - 120	<0.50	ug/g	3.6	30		
8160948	Acid Extractable Beryllium (Be)	2022/08/11	100	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
8160948	Acid Extractable Bismuth (Bi)	2022/08/11	99	75 - 125	104	80 - 120	<1.0	ug/g	NC	30		
8160948	Acid Extractable Boron (B)	2022/08/11	100	75 - 125	102	80 - 120	<5.0	ug/g	NC	30		
8160948	Acid Extractable Cadmium (Cd)	2022/08/11	96	75 - 125	98	80 - 120	<0.10	ug/g	NC	30		
8160948	Acid Extractable Calcium (Ca)	2022/08/11	NC	75 - 125	107	80 - 120	<50	ug/g	4.4	30		
8160948	Acid Extractable Chromium (Cr)	2022/08/11	101	75 - 125	100	80 - 120	<1.0	ug/g	2.4	30		
8160948	Acid Extractable Cobalt (Co)	2022/08/11	97	75 - 125	100	80 - 120	<0.10	ug/g	0.47	30		
8160948	Acid Extractable Copper (Cu)	2022/08/11	NC	75 - 125	98	80 - 120	<0.50	ug/g	11	30		
8160948	Acid Extractable Iron (Fe)	2022/08/11	NC	75 - 125	101	80 - 120	<50	ug/g	2.0	30		
8160948	Acid Extractable Lead (Pb)	2022/08/11	95	75 - 125	100	80 - 120	<1.0	ug/g	1.7	30		
8160948	Acid Extractable Magnesium (Mg)	2022/08/11	NC	75 - 125	103	80 - 120	<50	ug/g	3.4	30		
8160948	Acid Extractable Manganese (Mn)	2022/08/11	NC	75 - 125	100	80 - 120	<1.0	ug/g	1.3	30		
8160948	Acid Extractable Mercury (Hg)	2022/08/11	85	75 - 125	87	80 - 120	<0.050	ug/g	NC	30		
8160948	Acid Extractable Molybdenum (Mo)	2022/08/11	98	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8160948	Acid Extractable Nickel (Ni)	2022/08/11	NC	75 - 125	100	80 - 120	<0.50	ug/g	1.1	30		
8160948	Acid Extractable Phosphorus (P)	2022/08/11	NC	75 - 125	107	80 - 120	<50	ug/g	7.2	30		
8160948	Acid Extractable Potassium (K)	2022/08/11	NC	75 - 125	106	80 - 120	<200	ug/g	1.8	30		
8160948	Acid Extractable Selenium (Se)	2022/08/11	97	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8160948	Acid Extractable Silver (Ag)	2022/08/11	96	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8160948	Acid Extractable Sodium (Na)	2022/08/11	105	75 - 125	118	80 - 120	<50	ug/g	2.2	30		
8160948	Acid Extractable Strontium (Sr)	2022/08/11	104	75 - 125	100	80 - 120	<1.0	ug/g	5.2	30		
8160948	Acid Extractable Thallium (Tl)	2022/08/11	95	75 - 125	99	80 - 120	<0.050	ug/g	4.0	30		
8160948	Acid Extractable Tin (Sn)	2022/08/11	96	75 - 125	100	80 - 120	<1.0	ug/g	NC	30		
8160948	Acid Extractable Uranium (U)	2022/08/11	102	75 - 125	105	80 - 120	<0.050	ug/g	13	30		
8160948	Acid Extractable Vanadium (V)	2022/08/11	102	75 - 125	100	80 - 120	<5.0	ug/g	2.8	30		
8160948	Acid Extractable Zinc (Zn)	2022/08/11	NC	75 - 125	111	80 - 120	<5.0	ug/g	4.3	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8160965	Acid Extractable Aluminum (Al)	2022/08/11	NC	75 - 125	99	80 - 120	<50	ug/g	1.6	30		
8160965	Acid Extractable Antimony (Sb)	2022/08/11	98	75 - 125	98	80 - 120	<0.20	ug/g	NC	30		
8160965	Acid Extractable Arsenic (As)	2022/08/11	NC	75 - 125	96	80 - 120	<1.0	ug/g	1.4	30		
8160965	Acid Extractable Barium (Ba)	2022/08/11	NC	75 - 125	95	80 - 120	<0.50	ug/g	6.3	30		
8160965	Acid Extractable Beryllium (Be)	2022/08/11	96	75 - 125	95	80 - 120	<0.20	ug/g	NC	30		
8160965	Acid Extractable Bismuth (Bi)	2022/08/11	100	75 - 125	101	80 - 120	<1.0	ug/g	NC	30		
8160965	Acid Extractable Boron (B)	2022/08/11	91	75 - 125	91	80 - 120	<5.0	ug/g	NC	30		
8160965	Acid Extractable Cadmium (Cd)	2022/08/11	99	75 - 125	95	80 - 120	<0.10	ug/g	NC	30		
8160965	Acid Extractable Calcium (Ca)	2022/08/11	NC	75 - 125	101	80 - 120	<50	ug/g	0.87	30		
8160965	Acid Extractable Chromium (Cr)	2022/08/11	95	75 - 125	96	80 - 120	<1.0	ug/g	0.50	30		
8160965	Acid Extractable Cobalt (Co)	2022/08/11	97	75 - 125	99	80 - 120	<0.10	ug/g	2.3	30		
8160965	Acid Extractable Copper (Cu)	2022/08/11	95	75 - 125	95	80 - 120	<0.50	ug/g	3.3	30		
8160965	Acid Extractable Iron (Fe)	2022/08/11	NC	75 - 125	97	80 - 120	<50	ug/g	0.21	30		
8160965	Acid Extractable Lead (Pb)	2022/08/11	96	75 - 125	99	80 - 120	<1.0	ug/g	0.64	30		
8160965	Acid Extractable Magnesium (Mg)	2022/08/11	NC	75 - 125	100	80 - 120	<50	ug/g	0.67	30		
8160965	Acid Extractable Manganese (Mn)	2022/08/11	NC	75 - 125	98	80 - 120	<1.0	ug/g	1.7	30		
8160965	Acid Extractable Mercury (Hg)	2022/08/11	89	75 - 125	92	80 - 120	<0.050	ug/g	NC	30		
8160965	Acid Extractable Molybdenum (Mo)	2022/08/11	100	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8160965	Acid Extractable Nickel (Ni)	2022/08/11	97	75 - 125	100	80 - 120	<0.50	ug/g	1.1	30		
8160965	Acid Extractable Phosphorus (P)	2022/08/11	NC	75 - 125	95	80 - 120	<50	ug/g	0.24	30		
8160965	Acid Extractable Potassium (K)	2022/08/11	NC	75 - 125	90	80 - 120	<200	ug/g	0.94	30		
8160965	Acid Extractable Selenium (Se)	2022/08/11	97	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8160965	Acid Extractable Silver (Ag)	2022/08/11	100	75 - 125	98	80 - 120	<0.20	ug/g	NC	30		
8160965	Acid Extractable Sodium (Na)	2022/08/11	101	75 - 125	96	80 - 120	<50	ug/g	5.2	30		
8160965	Acid Extractable Strontium (Sr)	2022/08/11	104	75 - 125	96	80 - 120	<1.0	ug/g	4.0	30		
8160965	Acid Extractable Thallium (Tl)	2022/08/11	99	75 - 125	100	80 - 120	<0.050	ug/g	22	30		
8160965	Acid Extractable Tin (Sn)	2022/08/11	99	75 - 125	93	80 - 120	<1.0	ug/g	NC	30		
8160965	Acid Extractable Uranium (U)	2022/08/11	99	75 - 125	101	80 - 120	<0.050	ug/g	3.9	30		
8160965	Acid Extractable Vanadium (V)	2022/08/11	98	75 - 125	97	80 - 120	<5.0	ug/g	2.6	30		
8160965	Acid Extractable Zinc (Zn)	2022/08/11	96	75 - 125	96	80 - 120	<5.0	ug/g	4.1	30		
8161273	Acid Extractable Aluminum (Al)	2022/08/11	NC	75 - 125	102	80 - 120	<50	ug/g				
8161273	Acid Extractable Antimony (Sb)	2022/08/11	93	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8161273	Acid Extractable Arsenic (As)	2022/08/11	94	75 - 125	96	80 - 120	<1.0	ug/g	17	30		

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8161273	Acid Extractable Barium (Ba)	2022/08/11	NC	75 - 125	99	80 - 120	<0.50	ug/g	12	30		
8161273	Acid Extractable Beryllium (Be)	2022/08/11	99	75 - 125	99	80 - 120	<0.20	ug/g	11	30		
8161273	Acid Extractable Bismuth (Bi)	2022/08/11	95	75 - 125	101	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Boron (B)	2022/08/11	101	75 - 125	101	80 - 120	<5.0	ug/g	NC	30		
8161273	Acid Extractable Cadmium (Cd)	2022/08/11	93	75 - 125	97	80 - 120	<0.10	ug/g	18	30		
8161273	Acid Extractable Calcium (Ca)	2022/08/11	NC	75 - 125	95	80 - 120	<50	ug/g				
8161273	Acid Extractable Chromium (Cr)	2022/08/11	101	75 - 125	100	80 - 120	<1.0	ug/g	9.3	30		
8161273	Acid Extractable Cobalt (Co)	2022/08/11	96	75 - 125	98	80 - 120	<0.10	ug/g	11	30		
8161273	Acid Extractable Copper (Cu)	2022/08/11	98	75 - 125	96	80 - 120	<0.50	ug/g	10	30		
8161273	Acid Extractable Iron (Fe)	2022/08/11	NC	75 - 125	99	80 - 120	<50	ug/g				
8161273	Acid Extractable Lead (Pb)	2022/08/11	97	75 - 125	98	80 - 120	<1.0	ug/g	6.8	30		
8161273	Acid Extractable Magnesium (Mg)	2022/08/11	NC	75 - 125	98	80 - 120	<50	ug/g				
8161273	Acid Extractable Manganese (Mn)	2022/08/11	NC	75 - 125	98	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Mercury (Hg)	2022/08/11	81	75 - 125	84	80 - 120	<0.050	ug/g	NC	30		
8161273	Acid Extractable Molybdenum (Mo)	2022/08/11	97	75 - 125	98	80 - 120	<0.50	ug/g	17	30		
8161273	Acid Extractable Nickel (Ni)	2022/08/11	97	75 - 125	99	80 - 120	<0.50	ug/g	4.3	30		
8161273	Acid Extractable Phosphorus (P)	2022/08/11	NC	75 - 125	104	80 - 120	<50	ug/g				
8161273	Acid Extractable Potassium (K)	2022/08/11	NC	75 - 125	101	80 - 120	<200	ug/g				
8161273	Acid Extractable Selenium (Se)	2022/08/11	92	75 - 125	96	80 - 120	<0.50	ug/g	NC	30		
8161273	Acid Extractable Silver (Ag)	2022/08/11	94	75 - 125	97	80 - 120	<0.20	ug/g	NC	30		
8161273	Acid Extractable Sodium (Na)	2022/08/11	102	75 - 125	97	80 - 120	<50	ug/g				
8161273	Acid Extractable Strontium (Sr)	2022/08/11	NC	75 - 125	97	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Thallium (Tl)	2022/08/11	91	75 - 125	96	80 - 120	<0.050	ug/g	6.2	30		
8161273	Acid Extractable Tin (Sn)	2022/08/11	97	75 - 125	97	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Uranium (U)	2022/08/11	99	75 - 125	102	80 - 120	<0.050	ug/g	4.7	30		
8161273	Acid Extractable Vanadium (V)	2022/08/11	106	75 - 125	98	80 - 120	<5.0	ug/g	8.5	30		
8161273	Acid Extractable Zinc (Zn)	2022/08/11	NC	75 - 125	98	80 - 120	<5.0	ug/g	12	30		
8161589	Antimony (Sb)	2022/08/12	98	75 - 125	98	80 - 120	<0.05	ug/g	NC	30		
8161589	Arsenic (As)	2022/08/12	NC	75 - 125	95	80 - 120	<0.1	ug/g	3.0	30	95	70 - 130
8161589	Barium (Ba)	2022/08/12	NC	75 - 125	96	80 - 120	<0.3	ug/g	6.5	30		
8161589	Beryllium (Be)	2022/08/12	93	75 - 125	100	80 - 120	<0.05	ug/g	NC	30		
8161589	Bismuth (Bi)	2022/08/12	96	75 - 125	104	80 - 120	<0.05	ug/g	NC	30		
8161589	Boron (B)	2022/08/12	91	75 - 125	96	80 - 120	<0.5	ug/g	3.2	30	93	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8161589	Cadmium (Cd)	2022/08/12	95	75 - 125	95	80 - 120	<0.01	ug/g	NC	30	91	70 - 130
8161589	Calcium (Ca)	2022/08/12	NC	75 - 125	99	80 - 120	<50	ug/g	1.6	30	97	70 - 130
8161589	Chromium (Cr)	2022/08/12	91	75 - 125	92	80 - 120	<0.3	ug/g	9.3	30		
8161589	Cobalt (Co)	2022/08/12	91	75 - 125	93	80 - 120	<0.005	ug/g	27	30	84	70 - 130
8161589	Copper (Cu)	2022/08/12	92	75 - 125	92	80 - 120	<0.5	ug/g	2.4	30	92	70 - 130
8161589	Iron (Fe)	2022/08/12	92	75 - 125	94	80 - 120	<3	ug/g	5.1	30		
8161589	Lead (Pb)	2022/08/12	90	75 - 125	95	80 - 120	<0.03	ug/g	4.7	30	94	70 - 130
8161589	Magnesium (Mg)	2022/08/12	91	75 - 125	91	80 - 120	<100	ug/g	4.9	30	95	70 - 130
8161589	Manganese (Mn)	2022/08/12	NC	75 - 125	95	80 - 120	<0.3	ug/g	2.7	30	94	70 - 130
8161589	Molybdenum (Mo)	2022/08/12	94	75 - 125	94	80 - 120	<0.05	ug/g	NC	30		
8161589	Nickel (Ni)	2022/08/12	93	75 - 125	95	80 - 120	<0.05	ug/g	3.5	30	64	42 - 78
8161589	Phosphorus (P)	2022/08/12	NC	75 - 125	119	80 - 120	<50	ug/g	1.5	30	101	70 - 130
8161589	Potassium (K)	2022/08/12	NC	75 - 125	98	80 - 120	<100	ug/g	3.9	30	98	70 - 130
8161589	Selenium (Se)	2022/08/12	96	75 - 125	97	80 - 120	<0.04	ug/g	NC	30		
8161589	Silver (Ag)	2022/08/12	95	75 - 125	96	80 - 120	<0.05	ug/g	NC	30		
8161589	Sodium (Na)	2022/08/12	93	75 - 125	96	80 - 120	<50	ug/g	NC	30	79	70 - 130
8161589	Strontium (Sr)	2022/08/12	95	75 - 125	95	80 - 120	<0.5	ug/g	2.6	30	97	70 - 130
8161589	Thallium (Tl)	2022/08/12	90	75 - 125	96	80 - 120	<0.003	ug/g	0.15	30	85	70 - 130
8161589	Tin (Sn)	2022/08/12	94	75 - 125	98	80 - 120	<0.3	ug/g	NC	30		
8161589	Titanium (Ti)	2022/08/12	94	75 - 125	96	80 - 120	<0.5	ug/g	5.3	30		
8161589	Uranium (U)	2022/08/12	98	75 - 125	102	80 - 120	<0.005	ug/g	NC	30	29	23 - 40
8161589	Vanadium (V)	2022/08/12	92	75 - 125	93	80 - 120	<0.05	ug/g	5.4	30	37	28 - 52
8161589	Zinc (Zn)	2022/08/12	NC	75 - 125	93	80 - 120	<2	ug/g	2.6	30	85	70 - 130
8161766	Mercury (Hg)	2022/08/15	98	75 - 125			<0.01	ug/g	NC	35	104	70 - 130
8161803	Mercury (Hg)	2022/08/15	96	75 - 125			<0.01	ug/g	8.0	35	104	70 - 130
8162711	Antimony (Sb)	2022/08/15	104	75 - 125	106	80 - 120	<0.05	ug/g	NC	30		
8162711	Arsenic (As)	2022/08/15	93	75 - 125	100	80 - 120	<0.1	ug/g	4.2	30	107	70 - 130
8162711	Barium (Ba)	2022/08/15	104	75 - 125	98	80 - 120	<0.3	ug/g	1.8	30		
8162711	Beryllium (Be)	2022/08/15	98	75 - 125	97	80 - 120	<0.05	ug/g	NC	30		
8162711	Bismuth (Bi)	2022/08/15	110	75 - 125	107	80 - 120	<0.05	ug/g	NC	30		
8162711	Boron (B)	2022/08/15	91	75 - 125	90	80 - 120	<0.5	ug/g	3.6	30	92	70 - 130
8162711	Cadmium (Cd)	2022/08/15	100	75 - 125	99	80 - 120	<0.01	ug/g	0.69	30	98	70 - 130
8162711	Calcium (Ca)	2022/08/15	NC	75 - 125	99	80 - 120	<50	ug/g	1.3	30	98	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8162711	Chromium (Cr)	2022/08/15	94	75 - 125	92	80 - 120	<0.3	ug/g	4.4	30		
8162711	Cobalt (Co)	2022/08/15	95	75 - 125	94	80 - 120	<0.005	ug/g	12	30	88	70 - 130
8162711	Copper (Cu)	2022/08/15	98	75 - 125	95	80 - 120	<0.5	ug/g	11	30	96	70 - 130
8162711	Iron (Fe)	2022/08/15	NC	75 - 125	102	80 - 120	<3	ug/g	4.4	30		
8162711	Lead (Pb)	2022/08/15	98	75 - 125	98	80 - 120	<0.03	ug/g	1.1	30	99	70 - 130
8162711	Magnesium (Mg)	2022/08/15	101	75 - 125	102	80 - 120	<100	ug/g	1.3	30	101	70 - 130
8162711	Manganese (Mn)	2022/08/15	NC	75 - 125	99	80 - 120	<0.3	ug/g	0.90	30	104	70 - 130
8162711	Molybdenum (Mo)	2022/08/15	100	75 - 125	99	80 - 120	<0.05	ug/g	5.9	30		
8162711	Nickel (Ni)	2022/08/15	100	75 - 125	100	80 - 120	<0.05	ug/g	3.3	30	72	42 - 78
8162711	Phosphorus (P)	2022/08/15	NC	75 - 125	122 (1)	80 - 120	<50	ug/g	4.0	30	109	70 - 130
8162711	Potassium (K)	2022/08/15	NC	75 - 125	97	80 - 120	<100	ug/g	0.31	30	102	70 - 130
8162711	Selenium (Se)	2022/08/15	102	75 - 125	101	80 - 120	<0.04	ug/g	3.0	30		
8162711	Silver (Ag)	2022/08/15	95	75 - 125	97	80 - 120	<0.05	ug/g	NC	30		
8162711	Sodium (Na)	2022/08/15	107	75 - 125	105	80 - 120	<50	ug/g	2.6	30	86	70 - 130
8162711	Strontium (Sr)	2022/08/15	NC	75 - 125	98	80 - 120	<0.5	ug/g	1.4	30	103	70 - 130
8162711	Thallium (Tl)	2022/08/15	91	75 - 125	94	80 - 120	<0.003	ug/g	8.6	30	101	70 - 130
8162711	Tin (Sn)	2022/08/15	101	75 - 125	103	80 - 120	<0.3	ug/g	NC	30		
8162711	Titanium (Ti)	2022/08/15	NC	75 - 125	100	80 - 120	<0.5	ug/g	5.1	30		
8162711	Uranium (U)	2022/08/15	98	75 - 125	99	80 - 120	<0.005	ug/g	9.2	30	36	23 - 40
8162711	Vanadium (V)	2022/08/15	98	75 - 125	95	80 - 120	<0.05	ug/g	6.6	30	41	28 - 52
8162711	Zinc (Zn)	2022/08/15	NC	75 - 125	98	80 - 120	<2	ug/g	1.0	30	91	70 - 130
8162803	Acid Extractable Aluminum (Al)	2022/08/12	NC	75 - 125	109	80 - 120	<50	ug/g	0.52	30		
8162803	Acid Extractable Antimony (Sb)	2022/08/12	98	75 - 125	107	80 - 120	<0.20	ug/g	NC	30		
8162803	Acid Extractable Arsenic (As)	2022/08/12	99	75 - 125	104	80 - 120	<1.0	ug/g	9.3	30		
8162803	Acid Extractable Barium (Ba)	2022/08/12	NC	75 - 125	102	80 - 120	<0.50	ug/g	0.87	30		
8162803	Acid Extractable Beryllium (Be)	2022/08/12	98	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
8162803	Acid Extractable Bismuth (Bi)	2022/08/12	97	75 - 125	103	80 - 120	<1.0	ug/g	NC	30		
8162803	Acid Extractable Boron (B)	2022/08/12	88	75 - 125	99	80 - 120	<5.0	ug/g	NC	30		
8162803	Acid Extractable Cadmium (Cd)	2022/08/12	100	75 - 125	101	80 - 120	<0.10	ug/g	NC	30		
8162803	Acid Extractable Calcium (Ca)	2022/08/12	NC	75 - 125	110	80 - 120	<50	ug/g	1.6	30		
8162803	Acid Extractable Chromium (Cr)	2022/08/12	95	75 - 125	103	80 - 120	<1.0	ug/g	1.4	30		
8162803	Acid Extractable Cobalt (Co)	2022/08/12	98	75 - 125	104	80 - 120	<0.10	ug/g	4.6	30		
8162803	Acid Extractable Copper (Cu)	2022/08/12	94	75 - 125	104	80 - 120	<0.50	ug/g	2.3	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8162803	Acid Extractable Iron (Fe)	2022/08/12	NC	75 - 125	104	80 - 120	<50	ug/g	5.5	30		
8162803	Acid Extractable Lead (Pb)	2022/08/12	99	75 - 125	106	80 - 120	<1.0	ug/g	4.4	30		
8162803	Acid Extractable Magnesium (Mg)	2022/08/12	NC	75 - 125	99	80 - 120	<50	ug/g	2.0	30		
8162803	Acid Extractable Manganese (Mn)	2022/08/12	NC	75 - 125	104	80 - 120	<1.0	ug/g	4.1	30		
8162803	Acid Extractable Mercury (Hg)	2022/08/12	85	75 - 125	92	80 - 120	<0.050	ug/g	NC	30		
8162803	Acid Extractable Molybdenum (Mo)	2022/08/12	99	75 - 125	102	80 - 120	<0.50	ug/g	0.58	30		
8162803	Acid Extractable Nickel (Ni)	2022/08/12	100	75 - 125	104	80 - 120	<0.50	ug/g	2.5	30		
8162803	Acid Extractable Phosphorus (P)	2022/08/12	NC	75 - 125	107	80 - 120	<50	ug/g	0.11	30		
8162803	Acid Extractable Potassium (K)	2022/08/12	NC	75 - 125	104	80 - 120	<200	ug/g	1.1	30		
8162803	Acid Extractable Selenium (Se)	2022/08/12	99	75 - 125	103	80 - 120	<0.50	ug/g	NC	30		
8162803	Acid Extractable Silver (Ag)	2022/08/12	101	75 - 125	105	80 - 120	<0.20	ug/g	NC	30		
8162803	Acid Extractable Sodium (Na)	2022/08/12	103	75 - 125	101	80 - 120	<50	ug/g	3.1	30		
8162803	Acid Extractable Strontium (Sr)	2022/08/12	106	75 - 125	105	80 - 120	<1.0	ug/g	0.82	30		
8162803	Acid Extractable Thallium (Tl)	2022/08/12	100	75 - 125	108	80 - 120	<0.050	ug/g	4.3	30		
8162803	Acid Extractable Tin (Sn)	2022/08/12	102	75 - 125	104	80 - 120	<1.0	ug/g	NC	30		
8162803	Acid Extractable Uranium (U)	2022/08/12	99	75 - 125	104	80 - 120	<0.050	ug/g	2.0	30		
8162803	Acid Extractable Vanadium (V)	2022/08/12	97	75 - 125	104	80 - 120	<5.0	ug/g	3.4	30		
8162803	Acid Extractable Zinc (Zn)	2022/08/12	98	75 - 125	96	80 - 120	<5.0	ug/g	1.7	30		
8163041	Acid Extractable Aluminum (Al)	2022/08/12	NC	75 - 125	106	80 - 120	<50	ug/g				
8163041	Acid Extractable Antimony (Sb)	2022/08/12	101	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
8163041	Acid Extractable Arsenic (As)	2022/08/12	104	75 - 125	100	80 - 120	<1.0	ug/g	2.0	30		
8163041	Acid Extractable Barium (Ba)	2022/08/12	NC	75 - 125	100	80 - 120	<0.50	ug/g	3.1	30		
8163041	Acid Extractable Beryllium (Be)	2022/08/12	109	75 - 125	105	80 - 120	<0.20	ug/g	1.8	30		
8163041	Acid Extractable Bismuth (Bi)	2022/08/12	100	75 - 125	101	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Boron (B)	2022/08/12	105	75 - 125	106	80 - 120	<5.0	ug/g	NC	30		
8163041	Acid Extractable Cadmium (Cd)	2022/08/12	102	75 - 125	99	80 - 120	<0.10	ug/g	NC	30		
8163041	Acid Extractable Calcium (Ca)	2022/08/12	NC	75 - 125	104	80 - 120	<50	ug/g				
8163041	Acid Extractable Chromium (Cr)	2022/08/12	102	75 - 125	101	80 - 120	<1.0	ug/g	1.9	30		
8163041	Acid Extractable Cobalt (Co)	2022/08/12	103	75 - 125	101	80 - 120	<0.10	ug/g	2.4	30		
8163041	Acid Extractable Copper (Cu)	2022/08/12	101	75 - 125	101	80 - 120	<0.50	ug/g	0.12	30		
8163041	Acid Extractable Iron (Fe)	2022/08/12	NC	75 - 125	103	80 - 120	<50	ug/g				
8163041	Acid Extractable Lead (Pb)	2022/08/12	97	75 - 125	96	80 - 120	<1.0	ug/g	5.3	30		
8163041	Acid Extractable Magnesium (Mg)	2022/08/12	NC	75 - 125	104	80 - 120	<50	ug/g				

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163041	Acid Extractable Manganese (Mn)	2022/08/12	NC	75 - 125	100	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Mercury (Hg)	2022/08/12	87	75 - 125	87	80 - 120	<0.050	ug/g				
8163041	Acid Extractable Molybdenum (Mo)	2022/08/12	104	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8163041	Acid Extractable Nickel (Ni)	2022/08/12	102	75 - 125	102	80 - 120	<0.50	ug/g	1.2	30		
8163041	Acid Extractable Phosphorus (P)	2022/08/12	NC	75 - 125	109	80 - 120	<50	ug/g				
8163041	Acid Extractable Potassium (K)	2022/08/12	NC	75 - 125	107	80 - 120	<200	ug/g				
8163041	Acid Extractable Selenium (Se)	2022/08/12	101	75 - 125	99	80 - 120	<0.50	ug/g	NC	30		
8163041	Acid Extractable Silver (Ag)	2022/08/12	101	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8163041	Acid Extractable Sodium (Na)	2022/08/12	NC	75 - 125	103	80 - 120	<50	ug/g				
8163041	Acid Extractable Strontium (Sr)	2022/08/12	NC	75 - 125	100	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Thallium (Tl)	2022/08/12	96	75 - 125	98	80 - 120	<0.050	ug/g	11	30		
8163041	Acid Extractable Tin (Sn)	2022/08/12	103	75 - 125	100	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Uranium (U)	2022/08/12	103	75 - 125	102	80 - 120	<0.050	ug/g	12	30		
8163041	Acid Extractable Vanadium (V)	2022/08/12	106	75 - 125	101	80 - 120	<5.0	ug/g	1.9	30		
8163041	Acid Extractable Zinc (Zn)	2022/08/12	NC	75 - 125	99	80 - 120	<5.0	ug/g	0.23	30		
8163142	Antimony (Sb)	2022/08/15	100	75 - 125	105	80 - 120	<0.05	ug/g				
8163142	Arsenic (As)	2022/08/15	97	75 - 125	98	80 - 120	<0.1	ug/g			99	70 - 130
8163142	Barium (Ba)	2022/08/15	96	75 - 125	99	80 - 120	<0.3	ug/g				
8163142	Beryllium (Be)	2022/08/15	98	75 - 125	100	80 - 120	<0.05	ug/g				
8163142	Bismuth (Bi)	2022/08/15	103	75 - 125	101	80 - 120	<0.05	ug/g				
8163142	Boron (B)	2022/08/15	90	75 - 125	93	80 - 120	<0.5	ug/g			86	70 - 130
8163142	Cadmium (Cd)	2022/08/15	96	75 - 125	99	80 - 120	<0.01	ug/g			94	70 - 130
8163142	Calcium (Ca)	2022/08/15	98	75 - 125	100	80 - 120	<50	ug/g			97	70 - 130
8163142	Chromium (Cr)	2022/08/15	90	75 - 125	92	80 - 120	<0.3	ug/g				
8163142	Cobalt (Co)	2022/08/15	92	75 - 125	93	80 - 120	<0.005	ug/g			83	70 - 130
8163142	Copper (Cu)	2022/08/15	96	75 - 125	96	80 - 120	<0.5	ug/g			93	70 - 130
8163142	Iron (Fe)	2022/08/15	101	75 - 125	99	80 - 120	3,RDL=3	ug/g				
8163142	Lead (Pb)	2022/08/15	95	75 - 125	96	80 - 120	<0.03	ug/g			96	70 - 130
8163142	Magnesium (Mg)	2022/08/15	103	75 - 125	101	80 - 120	<100	ug/g			100	70 - 130
8163142	Manganese (Mn)	2022/08/15	96	75 - 125	96	80 - 120	<0.3	ug/g			100	70 - 130
8163142	Molybdenum (Mo)	2022/08/15	96	75 - 125	100	80 - 120	<0.05	ug/g				
8163142	Nickel (Ni)	2022/08/15	98	75 - 125	98	80 - 120	<0.05	ug/g			67	42 - 78
8163142	Phosphorus (P)	2022/08/15	NC	75 - 125	110	80 - 120	<50	ug/g			106	70 - 130

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163142	Potassium (K)	2022/08/15	NC	75 - 125	96	80 - 120	<100	ug/g			100	70 - 130
8163142	Selenium (Se)	2022/08/15	96	75 - 125	98	80 - 120	<0.04	ug/g				
8163142	Silver (Ag)	2022/08/15	94	75 - 125	97	80 - 120	<0.05	ug/g				
8163142	Sodium (Na)	2022/08/15	105	75 - 125	103	80 - 120	<50	ug/g			81	70 - 130
8163142	Strontium (Sr)	2022/08/15	95	75 - 125	96	80 - 120	<0.5	ug/g			101	70 - 130
8163142	Thallium (Tl)	2022/08/15	93	75 - 125	93	80 - 120	<0.003	ug/g			93	70 - 130
8163142	Tin (Sn)	2022/08/15	90	75 - 125	103	80 - 120	<0.3	ug/g				
8163142	Titanium (Ti)	2022/08/15	84	75 - 125	95	80 - 120	<0.5	ug/g				
8163142	Uranium (U)	2022/08/15	98	75 - 125	96	80 - 120	<0.005	ug/g			32	23 - 40
8163142	Vanadium (V)	2022/08/15	94	75 - 125	95	80 - 120	<0.05	ug/g			38	28 - 52
8163142	Zinc (Zn)	2022/08/15	95	75 - 125	96	80 - 120	<2	ug/g			89	70 - 130
8163666	Acid Extractable Aluminum (Al)	2022/08/15	NC	75 - 125	99	80 - 120	<50	ug/g				
8163666	Acid Extractable Antimony (Sb)	2022/08/15	NC	75 - 125	99	80 - 120	<0.20	ug/g				
8163666	Acid Extractable Arsenic (As)	2022/08/15	98	75 - 125	101	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Barium (Ba)	2022/08/15	NC	75 - 125	100	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Beryllium (Be)	2022/08/15	103	75 - 125	97	80 - 120	<0.20	ug/g				
8163666	Acid Extractable Bismuth (Bi)	2022/08/15	107	75 - 125	100	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Boron (B)	2022/08/15	95	75 - 125	93	80 - 120	<5.0	ug/g				
8163666	Acid Extractable Cadmium (Cd)	2022/08/15	102	75 - 125	98	80 - 120	<0.10	ug/g				
8163666	Acid Extractable Calcium (Ca)	2022/08/15	NC	75 - 125	103	80 - 120	<50	ug/g				
8163666	Acid Extractable Chromium (Cr)	2022/08/15	96	75 - 125	99	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Cobalt (Co)	2022/08/15	97	75 - 125	99	80 - 120	<0.10	ug/g				
8163666	Acid Extractable Copper (Cu)	2022/08/15	NC	75 - 125	97	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Iron (Fe)	2022/08/15	NC	75 - 125	100	80 - 120	<50	ug/g				
8163666	Acid Extractable Lead (Pb)	2022/08/15	NC	75 - 125	99	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Magnesium (Mg)	2022/08/15	NC	75 - 125	88	80 - 120	<50	ug/g				
8163666	Acid Extractable Manganese (Mn)	2022/08/15	NC	75 - 125	97	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Mercury (Hg)	2022/08/15	93	75 - 125	87	80 - 120	<0.050	ug/g				
8163666	Acid Extractable Molybdenum (Mo)	2022/08/15	95	75 - 125	98	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Nickel (Ni)	2022/08/15	NC	75 - 125	97	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Phosphorus (P)	2022/08/15	NC	75 - 125	99	80 - 120	<50	ug/g				
8163666	Acid Extractable Potassium (K)	2022/08/15	NC	75 - 125	106	80 - 120	<200	ug/g				
8163666	Acid Extractable Selenium (Se)	2022/08/15	70 (1)	75 - 125	99	80 - 120	<0.50	ug/g				

Bureau Veritas Job #: C2M3525
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QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163666	Acid Extractable Silver (Ag)	2022/08/15	106	75 - 125	98	80 - 120	<0.20	ug/g				
8163666	Acid Extractable Sodium (Na)	2022/08/15	NC	75 - 125	100	80 - 120	<50	ug/g				
8163666	Acid Extractable Strontium (Sr)	2022/08/15	NC	75 - 125	97	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Thallium (Tl)	2022/08/15	97	75 - 125	102	80 - 120	<0.050	ug/g				
8163666	Acid Extractable Tin (Sn)	2022/08/15	8570 (1)	75 - 125	100	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Uranium (U)	2022/08/15	105	75 - 125	100	80 - 120	<0.050	ug/g				
8163666	Acid Extractable Vanadium (V)	2022/08/15	NC	75 - 125	98	80 - 120	<5.0	ug/g				
8163666	Acid Extractable Zinc (Zn)	2022/08/15	NC	75 - 125	94	80 - 120	<5.0	ug/g				
8163847	Antimony (Sb)	2022/08/15	101	75 - 125	100	80 - 120	<0.05	ug/g	15	30		
8163847	Arsenic (As)	2022/08/15	NC	75 - 125	98	80 - 120	<0.1	ug/g	5.2	30	97	70 - 130
8163847	Barium (Ba)	2022/08/15	NC	75 - 125	98	80 - 120	<0.3	ug/g	5.8	30		
8163847	Beryllium (Be)	2022/08/15	97	75 - 125	95	80 - 120	<0.05	ug/g	NC	30		
8163847	Bismuth (Bi)	2022/08/15	103	75 - 125	104	80 - 120	<0.05	ug/g	7.1	30		
8163847	Boron (B)	2022/08/15	90	75 - 125	90	80 - 120	<0.5	ug/g	2.9	30	92	70 - 130
8163847	Cadmium (Cd)	2022/08/15	100	75 - 125	96	80 - 120	<0.01	ug/g	11	30	93	70 - 130
8163847	Calcium (Ca)	2022/08/15	NC	75 - 125	101	80 - 120	<50	ug/g	0.91	30	100	70 - 130
8163847	Chromium (Cr)	2022/08/15	99	75 - 125	95	80 - 120	<0.3	ug/g	11	30		
8163847	Cobalt (Co)	2022/08/15	88	75 - 125	92	80 - 120	<0.005	ug/g	11	30	86	70 - 130
8163847	Copper (Cu)	2022/08/15	NC	75 - 125	92	80 - 120	<0.5	ug/g	11	30	94	70 - 130
8163847	Iron (Fe)	2022/08/15	NC	75 - 125	101	80 - 120	4,RDL=3	ug/g	6.7	30		
8163847	Lead (Pb)	2022/08/15	NC	75 - 125	96	80 - 120	<0.03	ug/g	2.9	30	98	70 - 130
8163847	Magnesium (Mg)	2022/08/15	NC	75 - 125	101	80 - 120	<100	ug/g	3.1	30	102	70 - 130
8163847	Manganese (Mn)	2022/08/15	NC	75 - 125	99	80 - 120	<0.3	ug/g	4.0	30	101	70 - 130
8163847	Molybdenum (Mo)	2022/08/15	97	75 - 125	95	80 - 120	<0.05	ug/g	20	30		
8163847	Nickel (Ni)	2022/08/15	88	75 - 125	98	80 - 120	<0.05	ug/g	8.5	30	69	42 - 78
8163847	Phosphorus (P)	2022/08/15	NC	75 - 125	97	80 - 120	<50	ug/g	3.9	30	109	70 - 130
8163847	Potassium (K)	2022/08/15	NC	75 - 125	93	80 - 120	<100	ug/g	3.5	30	98	70 - 130
8163847	Selenium (Se)	2022/08/15	100	75 - 125	99	80 - 120	<0.04	ug/g	4.5	30		
8163847	Silver (Ag)	2022/08/15	100	75 - 125	97	80 - 120	<0.05	ug/g	0.27	30		
8163847	Sodium (Na)	2022/08/15	89	75 - 125	100	80 - 120	<50	ug/g	5.1	30	83	70 - 130
8163847	Strontium (Sr)	2022/08/15	NC	75 - 125	96	80 - 120	<0.5	ug/g	3.6	30	105	70 - 130
8163847	Thallium (Tl)	2022/08/15	90	75 - 125	93	80 - 120	<0.003	ug/g	0.88	30	97	70 - 130
8163847	Tin (Sn)	2022/08/15	100	75 - 125	97	80 - 120	<0.3	ug/g	NC	30		

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163847	Titanium (Ti)	2022/08/15	NC	75 - 125	97	80 - 120	<0.5	ug/g	3.5	30		
8163847	Uranium (U)	2022/08/15	100	75 - 125	103	80 - 120	<0.005	ug/g	11	30	34	23 - 40
8163847	Vanadium (V)	2022/08/15	92	75 - 125	93	80 - 120	<0.05	ug/g	9.4	30	37	28 - 52
8163847	Zinc (Zn)	2022/08/15	NC	75 - 125	97	80 - 120	<2	ug/g	5.4	30	90	70 - 130
8164229	Mercury (Hg)	2022/08/15	NC	75 - 125			<0.01	ug/g	18	35	97	70 - 130
8166152	Mercury (Hg)	2022/08/16	NC	75 - 125			<0.01	ug/g	0.87	35	107	70 - 130
8168229	Antimony (Sb)	2022/08/16	96	75 - 125	99	80 - 120	<0.05	ug/g	NC	30		
8168229	Arsenic (As)	2022/08/16	95	75 - 125	98	80 - 120	<0.1	ug/g	25	30	100	70 - 130
8168229	Barium (Ba)	2022/08/16	NC	75 - 125	96	80 - 120	<0.3	ug/g	0.12	30		
8168229	Beryllium (Be)	2022/08/16	96	75 - 125	98	80 - 120	<0.05	ug/g	NC	30		
8168229	Bismuth (Bi)	2022/08/16	97	75 - 125	101	80 - 120	<0.05	ug/g	NC	30		
8168229	Boron (B)	2022/08/16	93	75 - 125	92	80 - 120	<0.5	ug/g	2.4	30	89	70 - 130
8168229	Cadmium (Cd)	2022/08/16	94	75 - 125	96	80 - 120	<0.01	ug/g	NC	30	91	70 - 130
8168229	Calcium (Ca)	2022/08/16	NC	75 - 125	101	80 - 120	<50	ug/g	4.8	30	102	70 - 130
8168229	Chromium (Cr)	2022/08/16	89	75 - 125	93	80 - 120	<0.3	ug/g	NC	30		
8168229	Cobalt (Co)	2022/08/16	90	75 - 125	95	80 - 120	<0.005	ug/g	15	30	85	70 - 130
8168229	Copper (Cu)	2022/08/16	90	75 - 125	93	80 - 120	<0.5	ug/g	0.55	30	91	70 - 130
8168229	Iron (Fe)	2022/08/16	96	75 - 125	99	80 - 120	<3	ug/g	4.6	30		
8168229	Lead (Pb)	2022/08/16	89	75 - 125	96	80 - 120	<0.03	ug/g	13	30	92	70 - 130
8168229	Magnesium (Mg)	2022/08/16	NC	75 - 125	100	80 - 120	<100	ug/g	3.6	30	100	70 - 130
8168229	Manganese (Mn)	2022/08/16	NC	75 - 125	96	80 - 120	<0.3	ug/g	4.0	30	95	70 - 130
8168229	Molybdenum (Mo)	2022/08/16	93	75 - 125	96	80 - 120	<0.05	ug/g	NC	30		
8168229	Nickel (Ni)	2022/08/16	92	75 - 125	97	80 - 120	<0.05	ug/g	0.13	30	66	42 - 78
8168229	Phosphorus (P)	2022/08/16	NC	75 - 125	133 (1)	80 - 120	<50	ug/g	0.64	30	109	70 - 130
8168229	Potassium (K)	2022/08/16	NC	75 - 125	95	80 - 120	<100	ug/g	1.9	30	101	70 - 130
8168229	Selenium (Se)	2022/08/16	96	75 - 125	99	80 - 120	<0.04	ug/g	NC	30		
8168229	Silver (Ag)	2022/08/16	91	75 - 125	96	80 - 120	<0.05	ug/g	NC	30		
8168229	Sodium (Na)	2022/08/16	95	75 - 125	100	80 - 120	<50	ug/g	NC	30	85	70 - 130
8168229	Strontium (Sr)	2022/08/16	91	75 - 125	95	80 - 120	<0.5	ug/g	3.0	30	97	70 - 130
8168229	Thallium (Tl)	2022/08/16	89	75 - 125	96	80 - 120	<0.003	ug/g	6.4	30	95	70 - 130
8168229	Tin (Sn)	2022/08/16	91	75 - 125	98	80 - 120	<0.3	ug/g	NC	30		
8168229	Titanium (Ti)	2022/08/16	92	75 - 125	99	80 - 120	<0.5	ug/g	1.4	30		
8168229	Uranium (U)	2022/08/16	97	75 - 125	99	80 - 120	<0.005	ug/g	NC	30	36	23 - 40

Bureau Veritas Job #: C2M3525
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QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8168229	Vanadium (V)	2022/08/16	91	75 - 125	95	80 - 120	<0.05	ug/g	NC	30	38	28 - 52
8168229	Zinc (Zn)	2022/08/16	91	75 - 125	96	80 - 120	<2	ug/g	2.1	30	88	70 - 130
8170582	Acid Extractable Aluminum (Al)	2022/08/17	NC	75 - 125	106	80 - 120	<50	ug/g				
8170582	Acid Extractable Antimony (Sb)	2022/08/17	105	75 - 125	105	80 - 120	<0.20	ug/g				
8170582	Acid Extractable Arsenic (As)	2022/08/17	107	75 - 125	100	80 - 120	<1.0	ug/g	NC	30		
8170582	Acid Extractable Barium (Ba)	2022/08/17	NC	75 - 125	100	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Beryllium (Be)	2022/08/17	105	75 - 125	100	80 - 120	<0.20	ug/g				
8170582	Acid Extractable Bismuth (Bi)	2022/08/17	110	75 - 125	104	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Boron (B)	2022/08/17	100	75 - 125	100	80 - 120	<5.0	ug/g				
8170582	Acid Extractable Cadmium (Cd)	2022/08/17	107	75 - 125	102	80 - 120	<0.10	ug/g				
8170582	Acid Extractable Calcium (Ca)	2022/08/17	NC	75 - 125	110	80 - 120	<50	ug/g				
8170582	Acid Extractable Chromium (Cr)	2022/08/17	105	75 - 125	104	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Cobalt (Co)	2022/08/17	110	75 - 125	104	80 - 120	<0.10	ug/g				
8170582	Acid Extractable Copper (Cu)	2022/08/17	105	75 - 125	101	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Iron (Fe)	2022/08/17	NC	75 - 125	102	80 - 120	<50	ug/g				
8170582	Acid Extractable Lead (Pb)	2022/08/17	109	75 - 125	103	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Magnesium (Mg)	2022/08/17	NC	75 - 125	99	80 - 120	<50	ug/g				
8170582	Acid Extractable Manganese (Mn)	2022/08/17	NC	75 - 125	104	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Mercury (Hg)	2022/08/17	100	75 - 125	95	80 - 120	<0.050	ug/g				
8170582	Acid Extractable Molybdenum (Mo)	2022/08/17	107	75 - 125	103	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Nickel (Ni)	2022/08/17	108	75 - 125	106	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Phosphorus (P)	2022/08/17	NC	75 - 125	106	80 - 120	<50	ug/g				
8170582	Acid Extractable Potassium (K)	2022/08/17	NC	75 - 125	95	80 - 120	<200	ug/g				
8170582	Acid Extractable Selenium (Se)	2022/08/17	107	75 - 125	105	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Silver (Ag)	2022/08/17	110	75 - 125	104	80 - 120	<0.20	ug/g				
8170582	Acid Extractable Sodium (Na)	2022/08/17	113	75 - 125	104	80 - 120	<50	ug/g				
8170582	Acid Extractable Strontium (Sr)	2022/08/17	109	75 - 125	103	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Thallium (Tl)	2022/08/17	111	75 - 125	104	80 - 120	<0.050	ug/g				
8170582	Acid Extractable Tin (Sn)	2022/08/17	105	75 - 125	97	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Uranium (U)	2022/08/17	109	75 - 125	103	80 - 120	<0.050	ug/g				
8170582	Acid Extractable Vanadium (V)	2022/08/17	NC	75 - 125	102	80 - 120	<5.0	ug/g				
8170582	Acid Extractable Zinc (Zn)	2022/08/17	117	75 - 125	104	80 - 120	<5.0	ug/g				

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8170677	Available (CaCl2) pH	2022/08/17			100	97 - 103			0.55	N/A		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Exceedance Summary Table – Metal Mining Effluent Reg

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

APPENDIX C

Vegetation and Soil Sampling Laboratory Results

Your P.O. #: OL-1129375
Site Location: MELIADINE MINE, NUNAVUT
Your C.O.C. #: n/a

Attention: Reporting

Agnico-Eagle
Meliadine
Meliadine Mine
Rankin Inlet, NU
CANADA X0C 0G0

Report Date: 2022/08/17
Report #: R7257688
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2M3525
Received: 2022/08/08, 08:30

Sample Matrix: Soil
Samples Received: 55

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acid Extractable Metals by ICPMS (1)	40	2022/08/11	2022/08/11	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	13	2022/08/12	2022/08/12	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	1	2022/08/12	2022/08/15	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	1	2022/08/17	2022/08/17	CAM SOP-00447	EPA 6020B m
pH CaCl2 EXTRACT (1)	54	2022/08/11	2022/08/11	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT (1)	1	2022/08/17	2022/08/17	CAM SOP-00413	EPA 9045 D m

Sample Matrix: Tissue
Samples Received: 63

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury in Vegetation by CVAA (1)	39	2022/08/11	2022/08/15	CAM SOP-00453	Health Canada Method
Mercury in Vegetation by CVAA (1)	19	2022/08/12	2022/08/15	CAM SOP-00453	Health Canada Method
Mercury in Vegetation by CVAA (1)	5	2022/08/15	2022/08/16	CAM SOP-00453	Health Canada Method
Metals in Vegetation by ICPMS (1)	23	N/A	2022/08/12	CAM SOP-00447	EPA 6020/200.3 m
Metals in Vegetation by ICPMS (1)	34	N/A	2022/08/15	CAM SOP-00447	EPA 6020/200.3 m
Metals in Vegetation by ICPMS (1)	6	N/A	2022/08/16	CAM SOP-00447	EPA 6020/200.3 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Your P.O. #: OL-1129375
Site Location: MELIADINE MINE, NUNAVUT
Your C.O.C. #: n/a

Attention: Reporting

Agnico-Eagle
Meliadine
Meliadine Mine
Rankin Inlet, NU
CANADA X0C 0G0

Report Date: 2022/08/17
Report #: R7257688
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2M3525
Received: 2022/08/08, 08:30

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TJU727	TJU729	TJU731		TJU733	TJU735	
Sampling Date		2022/08/01 11:10	2022/08/01 11:31	2022/08/01 11:58		2022/08/01 13:10	2022/08/01 13:40	
COC Number		n/a	n/a	n/a		n/a	n/a	
	UNITS	**22-WRSA-S1-S**	**22-WRSA-S2-S**	**22-WRSA-S3-S**	**QC Batch**	**22-WRSA-S4-S**	**22-WRSA-S5-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	5.91	6.49	5.79	8160746	6.44	6.39	8160260
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJU735	TJU737	TJU739	TJU741		TJU743	
Sampling Date		2022/08/01 13:40	2022/08/01 14:07	2022/08/01 14:30	2022/08/02 10:45		2022/08/02 11:10	
COC Number		n/a	n/a	n/a	n/a		n/a	
	UNITS	**22-WRSA-S5-S Lab-Dup**	**22-WRSA-S6-S**	**22-WRSA-S7-S**	**22-WRSA-S8-S**	**QC Batch**	**22-WRSA-S9-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	6.38	5.92	6.59	7.05	8160260	5.79	8160732
QC Batch = Quality Control Batch								
Lab-Dup = Laboratory Initiated Duplicate								

Bureau Veritas ID		TJU743		TJU745	TJU762	TJU765		TJU767	
Sampling Date		2022/08/02 11:10		2022/08/02 11:45	2022/07/28 11:22	2022/07/28 08:04		2022/07/28 08:42	
COC Number		n/a		n/a	n/a	n/a		n/a	
	UNITS	**22-WRSA-S9-S Lab-Dup**	**QC Batch**	**22-WRSA-S10-S**	**22-TF-S1-S**	**22-TF-S2-S**	**QC Batch**	**22-TF-S3-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.85	8160732	5.32	5.99	6.00	8160260	5.48	8160746
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									

Bureau Veritas ID		TJU769	TJU771	TJU773		TJU779		TJU782	TJU784	
Sampling Date		2022/07/28 07:33	2022/07/28 09:21	2022/07/28 10:20		2022/07/28 15:46		2022/07/28 15:12	2022/07/28 14:03	
COC Number		n/a	n/a	n/a		n/a		n/a	n/a	
	UNITS	**22-TF-S4-S**	**22-TF-S5-S**	**22-TF-S6-S**	**QC Batch**	**22-TF-S11-S**	**QC Batch**	**22-TF-S12-S**	**22-TF-S13-S**	**QC Batch**
Inorganics										
Available (CaCl2) pH	pH	6.70	5.58	4.26	8160260	5.90	8160746	5.83	4.29	8160260
QC Batch = Quality Control Batch										

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TJU786		TJV568	TJV570	TJV573		TJV575	
Sampling Date		2022/07/28 14:36		2022/07/28 16:15	2022/07/28 16:45	2022/07/30 08:35		2022/07/30 07:55	
COC Number		n/a		n/a	n/a	n/a		n/a	
	UNITS	**22-TF-S14-S**	**QC Batch**	**22-AWAR-S1-S**	**22-AWAR-S2-S**	**22-AWAR-S3-S**	**QC Batch**	**22-AWAR-S4-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.08	8160260	6.97	6.11	5.42	8160746	6.60	8160732
QC Batch = Quality Control Batch									

Bureau Veritas ID		TJV578	TJV580	TJV582	TJV584	TJV586	TJV588	
Sampling Date		2022/07/30 09:47	2022/07/30 10:50	2022/07/30 11:21	2022/07/30 11:54	2022/07/30 12:30	2022/07/30 13:00	
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	
	UNITS	**22-AWAR-S5-S**	**22-AWAR-S6-S**	**22-AWAR-S7-S**	**22-AWAR-S8-S**	**22-AWAR-S9-S**	**22-AWAR-S10-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	5.72	6.15	6.04	5.30	3.39	5.24	8160732
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJV590		TJV593		TJV595	TJV597	
Sampling Date		2022/07/30 13:50		2022/07/30 14:32		2022/07/30 15:17	2022/07/30 15:40	
COC Number		n/a		n/a		n/a	n/a	
	UNITS	**22-AWAR-S11-S**	**QC Batch**	**22-AWAR-S12-S**	**QC Batch**	**22-AWAR-S13-S**	**22-AWAR-S14-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	3.82	8160732	3.23	8160746	3.58	4.15	8160732
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJV599	TJV601		TJV603		TJV605	
Sampling Date		2022/07/31 07:40	2022/07/31 08:20		2022/07/31 08:50		2022/07/31 09:17	
COC Number		n/a	n/a		n/a		n/a	
	UNITS	**22-AWAR-S15-S**	**22-AWAR-S16-S**	**QC Batch**	**22-AWAR-S17-S**	**QC Batch**	**22-AWAR-S18-S**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	3.98	4.01	8160746	5.81	8160260	3.86	8160746
QC Batch = Quality Control Batch								

Bureau Veritas ID		TJV608	TJV610		TJV657		TJV659	TJV661	
Sampling Date		2022/07/31 10:02	2022/08/01 15:52		2022/07/29 11:15		2022/07/29 12:00	2022/07/29 12:35	
COC Number		n/a	n/a		n/a		n/a	n/a	
	UNITS	**22-AWAR-S19-S**	**22-AWAR-S20-S**	**QC Batch**	**22-REF1-S1-S**	**QC Batch**	**22-REF1-S2-S**	**22-REF1-S3-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.21	5.96	8160746	5.81	8160260	6.02	3.71	8160746
QC Batch = Quality Control Batch									

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TJV663	TJV663		TJV666	TJV669		TJV671	
Sampling Date		2022/07/29 13:10	2022/07/29 13:10		2022/07/29 14:03	2022/07/29 15:35		2022/07/29 15:10	
COC Number		n/a	n/a		n/a	n/a		n/a	
	UNITS	**22-REF1-S4-S**	**22-REF1-S4-S Lab-Dup**	**QC Batch**	**22-REF1-S5-S**	**22-REF2-S1-S**	**QC Batch**	**22-REF2-S2-S**	**QC Batch**
Inorganics									
Available (CaCl2) pH	pH	5.43	5.45	8160746	6.26	3.45	8160260	4.70	8160746

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJV673		TJV675		TJV677		TJV679	TJV681	
Sampling Date		2022/07/29 16:16		2022/07/29 16:45		2022/07/29 16:26		2022/07/31 12:55	2022/07/31 13:23	
COC Number		n/a		n/a		n/a		n/a	n/a	
	UNITS	**22-REF2-S3-S**	**QC Batch**	**22-REF2-S4-S**	**QC Batch**	**22-REF2-S5-S**	**QC Batch**	**22-REF3-S1-S**	**22-REF3-S2-S**	**QC Batch**
Inorganics										
Available (CaCl2) pH	pH	4.48	8160732	4.85	8160260	5.05	8160732	4.32	3.27	8160746

QC Batch = Quality Control Batch

Bureau Veritas ID		TJV683		TJV686		TLO475	TLO475	
Sampling Date		2022/07/31 13:58		2022/07/31 14:55		2022/08/01 11:10	2022/08/01 11:10	
COC Number		n/a		n/a		n/a	n/a	
	UNITS	**22-REF3-S3-S**	**QC Batch**	**22-REF3-S5-S**	**QC Batch**	**22-REF3-S4-S**	**22-REF3-S4-S Lab-Dup**	**QC Batch**
Inorganics								
Available (CaCl2) pH	pH	5.74	8160732	5.04	8160260	4.64	4.67	8170677

QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU727	TJU729	TJU729	TJU731		TJU733		
Sampling Date		2022/08/01 11:10	2022/08/01 11:31	2022/08/01 11:31	2022/08/01 11:58		2022/08/01 13:10		
COC Number		n/a	n/a	n/a	n/a		n/a		
	UNITS	**22-WRSA-S1-S**	**22-WRSA-S2-S**	**22-WRSA-S2-S Lab-Dup**	**22-WRSA-S3-S**	**QC Batch**	**22-WRSA-S4-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	3500	4900	4800	5900	8160965	4000	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	0.25	8160965	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	360	330	330	1100	8160965	14	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	90	27	25	56	8160965	81	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	<0.20	<0.20	8160965	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	<1.0	<1.0	8160965	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	5.9	<5.0	<5.0	6.3	8160965	7.1	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	0.28	<0.10	<0.10	0.31	8160965	0.16	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	19000	3700	3700	12000	8160965	17000	50	8160948
Acid Extractable Chromium (Cr)	ug/g	7.9	17	17	21	8160965	17	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	4.5	7.5	7.7	6.4	8160965	5.8	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	30	19	19	41	8160965	15	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	9400	14000	14000	34000	8160965	8600	50	8160948
Acid Extractable Lead (Pb)	ug/g	12	12	11	37	8160965	2.8	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	3100	3100	3100	3500	8160965	3100	50	8160948
Acid Extractable Manganese (Mn)	ug/g	250	120	120	230	8160965	140	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	1.1	<0.50	<0.50	2.3	8160965	0.95	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	22	18	18	29	8160965	12	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	610	570	570	770	8160965	580	50	8160948
Acid Extractable Potassium (K)	ug/g	720	510	510	910	8160965	690	200	8160948
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	0.68	8160965	<0.50	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	8160965	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	170	120	120	720	8160965	90	50	8160948
Acid Extractable Strontium (Sr)	ug/g	93	19	20	110	8160965	89	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	0.071	0.066	0.053	0.074	8160965	0.063	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	<1.0	<1.0	8160965	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	0.32	0.48	0.46	1.1	8160965	0.49	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	13	16	16	32	8160965	16	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	55	23	22	52	8160965	48	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	0.13	<0.050	<0.050	0.071	8160965	0.097	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU735	TJU737		TJU739	TJU741		
Sampling Date		2022/08/01 13:40	2022/08/01 14:07		2022/08/01 14:30	2022/08/02 10:45		
COC Number		n/a	n/a		n/a	n/a		
	UNITS	22-WRSA-S5-S	22-WRSA-S6-S	QC Batch	22-WRSA-S7-S	22-WRSA-S8-S	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	ug/g	4100	4300	8160965	6300	3600	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160965	<0.20	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	4.1	5.7	8160965	4.4	2.9	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	28	37	8160965	41	23	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160965	<0.20	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160965	<1.0	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	8160965	<5.0	<5.0	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	8160965	<0.10	<0.10	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	4100	6100	8160965	4300	4100	50	8160948
Acid Extractable Chromium (Cr)	ug/g	16	15	8160965	25	14	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	3.0	3.2	8160965	6.2	3.1	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	7.9	54	8160965	16	5.7	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	8600	8100	8160965	14000	8000	50	8160948
Acid Extractable Lead (Pb)	ug/g	2.7	3.1	8160965	3.0	2.1	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	2700	2500	8160965	4500	2400	50	8160948
Acid Extractable Manganese (Mn)	ug/g	87	74	8160965	140	86	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	0.95	0.61	8160965	<0.50	0.65	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	11	17	8160965	19	9.0	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	420	530	8160965	650	510	50	8160948
Acid Extractable Potassium (K)	ug/g	420	390	8160965	1100	470	200	8160948
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8160965	<0.50	<0.50	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160965	<0.20	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	72	79	8160965	190	79	50	8160948
Acid Extractable Strontium (Sr)	ug/g	23	37	8160965	22	23	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	0.070	0.10	8160965	0.11	0.081	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160965	<1.0	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	1.6	1.8	8160965	0.72	0.66	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	18	17	8160965	25	15	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	16	21	8160965	28	14	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8160965	<0.050	<0.050	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU743	TJU745	TJU762	TJU765	TJU767		
Sampling Date		2022/08/02 11:10	2022/08/02 11:45	2022/07/28 11:22	2022/07/28 08:04	2022/07/28 08:42		
COC Number		n/a	n/a	n/a	n/a	n/a		
	UNITS	**22-WRSA-S9-S**	**22-WRSA-S10-S**	**22-TF-S1-S**	**22-TF-S2-S**	**22-TF-S3-S**	**RDL**	**QC Batch**
Metals								
Acid Extractable Aluminum (Al)	ug/g	3400	5500	11000	6100	3900	50	8160965
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	5.9	44	19	21	11	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	18	66	39	63	25	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	<5.0	5.5	<5.0	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.20	<0.10	0.11	<0.10	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	4400	15000	5700	8900	2600	50	8160965
Acid Extractable Chromium (Cr)	ug/g	14	20	49	18	14	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	2.9	3.9	12	10	4.0	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	11	57	16	28	15	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	7700	24000	20000	13000	8100	50	8160965
Acid Extractable Lead (Pb)	ug/g	1.9	6.6	4.6	6.2	3.2	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	2300	2400	8900	4400	2500	50	8160965
Acid Extractable Manganese (Mn)	ug/g	65	87	200	320	63	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	0.99	5.6	0.81	0.59	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	11	27	41	25	10	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	460	1100	370	590	510	50	8160965
Acid Extractable Potassium (K)	ug/g	440	410	500	760	490	200	8160965
Acid Extractable Selenium (Se)	ug/g	<0.50	1.1	<0.50	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	69	140	380	110	87	50	8160965
Acid Extractable Strontium (Sr)	ug/g	24	92	32	46	13	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.065	0.13	<0.050	0.095	0.079	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	0.49	7.2	1.2	1.3	0.82	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	14	71	38	19	15	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	16	17	51	46	18	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU769	TJU769	TJU771	TJU773	TJU779		TJU782		
Sampling Date		2022/07/28 07:33	2022/07/28 07:33	2022/07/28 09:21	2022/07/28 10:20	2022/07/28 15:46		2022/07/28 15:12		
COC Number		n/a	n/a	n/a	n/a	n/a		n/a		
	UNITS	**22-TF-S4-S**	**22-TF-S4-S Lab-Dup**	**22-TF-S5-S**	**22-TF-S6-S**	**22-TF-S11-S**	**QC Batch**	**22-TF-S12-S**	**RDL**	**QC Batch**
Metals										
Acid Extractable Aluminum (Al)	ug/g	5900	6000	4300	5400	6200	8160948	4400	50	8163041
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	8160948	<0.20	0.20	8163041
Acid Extractable Arsenic (As)	ug/g	34	36	8.0	25	40	8160948	6.0	1.0	8163041
Acid Extractable Barium (Ba)	ug/g	39	40	23	61	110	8160948	22	0.50	8163041
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	<0.20	0.22	<0.20	8160948	<0.20	0.20	8163041
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	8160948	<1.0	1.0	8163041
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	<5.0	<5.0	<5.0	8160948	<5.0	5.0	8163041
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	<0.10	<0.10	0.19	8160948	<0.10	0.10	8163041
Acid Extractable Calcium (Ca)	ug/g	3200	3300	2200	5200	19000	8160948	2800	50	8163041
Acid Extractable Chromium (Cr)	ug/g	21	21	16	24	11	8160948	16	1.0	8163041
Acid Extractable Cobalt (Co)	ug/g	12	12	5.1	5.4	8.0	8160948	4.1	0.10	8163041
Acid Extractable Copper (Cu)	ug/g	33	30	5.9	13	49	8160948	6.8	0.50	8163041
Acid Extractable Iron (Fe)	ug/g	13000	14000	10000	11000	13000	8160948	8000	50	8163041
Acid Extractable Lead (Pb)	ug/g	6.1	6.0	2.9	7.1	3.8	8160948	2.3	1.0	8163041
Acid Extractable Magnesium (Mg)	ug/g	3700	3900	2900	4400	5000	8160948	2800	50	8163041
Acid Extractable Manganese (Mn)	ug/g	130	130	130	220	500	8160948	73	1.0	8163041
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	<0.50	<0.50	1.3	8160948	0.56	0.50	8163041
Acid Extractable Nickel (Ni)	ug/g	26	27	10	21	33	8160948	11	0.50	8163041
Acid Extractable Phosphorus (P)	ug/g	670	720	420	610	970	8160948	600	50	8163041
Acid Extractable Potassium (K)	ug/g	940	950	560	940	460	8160948	520	200	8163041
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	0.83	8160948	<0.50	0.50	8163041
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	8160948	<0.20	0.20	8163041
Acid Extractable Sodium (Na)	ug/g	120	120	70	100	120	8160948	84	50	8163041
Acid Extractable Strontium (Sr)	ug/g	18	19	12	37	120	8160948	14	1.0	8163041
Acid Extractable Thallium (Tl)	ug/g	0.086	0.090	0.081	0.079	0.11	8160948	<0.050	0.050	8163041
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	<1.0	<1.0	<1.0	8160948	<1.0	1.0	8163041
Acid Extractable Uranium (U)	ug/g	0.65	0.58	0.59	0.70	4.3	8160948	0.78	0.050	8163041
Acid Extractable Vanadium (V)	ug/g	20	20	17	20	18	8160948	14	5.0	8163041
Acid Extractable Zinc (Zn)	ug/g	26	27	19	24	62	8160948	16	5.0	8163041
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	0.053	8160948	<0.050	0.050	8163041

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJU784	TJU786		TJV568	TJV570		
Sampling Date		2022/07/28 14:03	2022/07/28 14:36		2022/07/28 16:15	2022/07/28 16:45		
COC Number		n/a	n/a		n/a	n/a		
	UNITS	22-TF-S13-S	22-TF-S14-S	QC Batch	22-AWAR-S1-S	22-AWAR-S2-S	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	ug/g	6000	4000	8160948	5600	1500	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160948	<0.20	<0.20	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	32	9.4	8160948	18	9.5	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	39	47	8160948	36	77	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160948	<0.20	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160948	<1.0	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	8160948	<5.0	7.0	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	8160948	<0.10	0.21	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	3000	4400	8160948	3800	18000	50	8162803
Acid Extractable Chromium (Cr)	ug/g	22	17	8160948	21	3.4	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	12	5.9	8160948	10	2.1	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	16	10	8160948	27	46	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	14000	11000	8160948	13000	3000	50	8162803
Acid Extractable Lead (Pb)	ug/g	6.5	3.5	8160948	6.5	2.4	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	4200	2800	8160948	3600	1600	50	8162803
Acid Extractable Manganese (Mn)	ug/g	210	120	8160948	250	26	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	0.57	<0.50	8160948	0.64	0.90	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	19	12	8160948	22	16	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	390	630	8160948	650	680	50	8162803
Acid Extractable Potassium (K)	ug/g	630	680	8160948	920	400	200	8162803
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8160948	<0.50	0.52	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160948	<0.20	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	91	99	8160948	120	92	50	8162803
Acid Extractable Strontium (Sr)	ug/g	19	23	8160948	22	87	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.080	0.066	8160948	0.087	<0.050	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160948	<1.0	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	0.68	0.65	8160948	0.69	0.94	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	20	18	8160948	20	<5.0	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	32	21	8160948	25	23	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8160948	<0.050	0.15	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV573		TJV575		TJV578	TJV580		
Sampling Date		2022/07/30 08:35		2022/07/30 07:55		2022/07/30 09:47	2022/07/30 10:50		
COC Number		n/a		n/a		n/a	n/a		
	UNITS	**22-AWAR-S3-S**	**QC Batch**	**22-AWAR-S4-S**	**QC Batch**	**22-AWAR-S5-S**	**22-AWAR-S6-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	5400	8163666	1800	8161273	5400	2300	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	8163666	0.26	8161273	<0.20	0.34	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	51	8163666	19	8161273	25	24	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	31	8163666	110	8161273	66	110	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	8163666	<0.20	8161273	<0.20	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8163666	<1.0	8161273	<1.0	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	<5.0	8163666	17	8161273	<5.0	8.5	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8163666	0.36	8161273	0.11	0.16	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	3300	8163666	39000	8161273	9000	30000	50	8162803
Acid Extractable Chromium (Cr)	ug/g	18	8163666	4.8	8161273	21	4.2	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	9.4	8163666	4.1	8161273	8.5	3.2	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	26	8163666	160	8161273	43	210	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	14000	8163666	3600	8161273	12000	5000	50	8162803
Acid Extractable Lead (Pb)	ug/g	7.9	8163666	2.9	8161273	4.4	2.2	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	3300	8163666	2000	8161273	3400	1300	50	8162803
Acid Extractable Manganese (Mn)	ug/g	130	8163666	320	8161273	330	25	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8163666	1.0	8161273	0.64	0.70	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	23	8163666	57	8161273	26	28	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	570	8163666	950	8161273	690	820	50	8162803
Acid Extractable Potassium (K)	ug/g	530	8163666	350	8161273	310	240	200	8162803
Acid Extractable Selenium (Se)	ug/g	<0.50	8163666	1.1	8161273	<0.50	1.1	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	8163666	<0.20	8161273	<0.20	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	92	8163666	93	8161273	79	83	50	8162803
Acid Extractable Strontium (Sr)	ug/g	17	8163666	140	8161273	27	110	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.068	8163666	0.16	8161273	0.079	0.087	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	8163666	<1.0	8161273	<1.0	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	0.60	8163666	4.0	8161273	0.63	1.5	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	15	8163666	<5.0	8161273	19	5.2	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	24	8163666	60	8161273	22	6.1	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	8163666	0.094	8161273	0.064	0.12	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV582		TJV584		TJV586	TJV588		
Sampling Date		2022/07/30 11:21		2022/07/30 11:54		2022/07/30 12:30	2022/07/30 13:00		
COC Number		n/a		n/a		n/a	n/a		
	UNITS	22-AWAR-S7-S	QC Batch	22-AWAR-S8-S	QC Batch	22-AWAR-S9-S	22-AWAR-S10-S	RDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	ug/g	11000	8160948	6500	8162803	5700	4500	50	8160965
Acid Extractable Antimony (Sb)	ug/g	<0.20	8160948	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	16	8160948	19	8162803	8.7	2.5	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	120	8160948	48	8162803	23	130	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	8160948	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8160948	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	<5.0	8160948	<5.0	8162803	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8160948	0.11	8162803	<0.10	0.19	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	5700	8160948	4600	8162803	1400	11000	50	8160965
Acid Extractable Chromium (Cr)	ug/g	14	8160948	27	8162803	22	11	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	15	8160948	10	8162803	6.0	5.2	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	29	8160948	32	8162803	4.8	47	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	20000	8160948	14000	8162803	11000	8500	50	8160965
Acid Extractable Lead (Pb)	ug/g	1.1	8160948	4.4	8162803	3.4	1.3	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	8600	8160948	4200	8162803	3300	3000	50	8160965
Acid Extractable Manganese (Mn)	ug/g	300	8160948	210	8162803	160	150	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	0.70	8160948	<0.50	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	25	8160948	24	8162803	9.9	16	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	400	8160948	640	8162803	310	520	50	8160965
Acid Extractable Potassium (K)	ug/g	1000	8160948	860	8162803	620	770	200	8160965
Acid Extractable Selenium (Se)	ug/g	<0.50	8160948	<0.50	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	8160948	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	110	8160948	100	8162803	62	68	50	8160965
Acid Extractable Strontium (Sr)	ug/g	26	8160948	16	8162803	8.2	34	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.069	8160948	0.073	8162803	<0.050	0.061	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	8160948	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	1.7	8160948	0.66	8162803	0.32	0.40	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	30	8160948	22	8162803	20	16	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	41	8160948	28	8162803	26	18	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	<0.050	8160948	<0.050	8162803	<0.050	0.079	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV590		TJV593		TJV595		
Sampling Date		2022/07/30 13:50		2022/07/30 14:32		2022/07/30 15:17		
COC Number		n/a		n/a		n/a		
	UNITS	**22-AWAR-S11-S**	**QC Batch**	**22-AWAR-S12-S**	**QC Batch**	**22-AWAR-S13-S**	**RDL**	**QC Batch**
Metals								
Acid Extractable Aluminum (Al)	ug/g	2900	8160965	1600	8162803	6200	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	8160965	<0.20	8162803	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	1.7	8160965	2.0	8162803	1.4	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	130	8160965	30	8162803	74	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	8160965	<0.20	8162803	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8160965	<1.0	8162803	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	<5.0	8160965	<5.0	8162803	<5.0	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	0.43	8160965	1.1	8162803	0.19	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	3900	8160965	3300	8162803	1000	50	8160948
Acid Extractable Chromium (Cr)	ug/g	4.8	8160965	2.2	8162803	25	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	1.8	8160965	2.0	8162803	3.8	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	20	8160965	5.1	8162803	15	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	4000	8160965	6000	8162803	12000	50	8160948
Acid Extractable Lead (Pb)	ug/g	2.4	8160965	1.5	8162803	3.0	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	1200	8160965	790	8162803	3300	50	8160948
Acid Extractable Manganese (Mn)	ug/g	11	8160965	19	8162803	96	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8160965	0.88	8162803	0.73	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	6.9	8160965	6.2	8162803	9.4	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	720	8160965	770	8162803	550	50	8160948
Acid Extractable Potassium (K)	ug/g	370	8160965	320	8162803	1600	200	8160948
Acid Extractable Selenium (Se)	ug/g	0.68	8160965	<0.50	8162803	<0.50	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	8160965	<0.20	8162803	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	84	8160965	160	8162803	80	50	8160948
Acid Extractable Strontium (Sr)	ug/g	41	8160965	84	8162803	9.6	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	<0.050	8160965	<0.050	8162803	0.11	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	8160965	<1.0	8162803	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	0.84	8160965	0.41	8162803	0.67	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	<5.0	8160965	<5.0	8162803	25	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	19	8160965	10	8162803	26	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	0.13	8160965	0.12	8162803	0.10	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV597		TJV599	TJV601		
Sampling Date		2022/07/30 15:40		2022/07/31 07:40	2022/07/31 08:20		
COC Number		n/a		n/a	n/a		
	UNITS	22-AWAR-S14-S	QC Batch	22-AWAR-S15-S	22-AWAR-S16-S	RDL	QC Batch
Metals							
Acid Extractable Aluminum (Al)	ug/g	4200	8162803	1300	4000	50	8160965
Acid Extractable Antimony (Sb)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	2.6	8162803	<1.0	1.4	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	170	8162803	36	34	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	<5.0	8162803	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	1.0	8162803	0.11	<0.10	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	11000	8162803	3000	1100	50	8160965
Acid Extractable Chromium (Cr)	ug/g	9.0	8162803	4.4	16	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	9.0	8162803	1.5	2.8	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	77	8162803	3.9	2.4	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	8500	8162803	24000	7900	50	8160965
Acid Extractable Lead (Pb)	ug/g	4.1	8162803	<1.0	2.0	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	1700	8162803	490	2600	50	8160965
Acid Extractable Manganese (Mn)	ug/g	550	8162803	6.9	66	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	1.6	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	15	8162803	3.9	6.8	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	860	8162803	500	290	50	8160965
Acid Extractable Potassium (K)	ug/g	520	8162803	<200	830	200	8160965
Acid Extractable Selenium (Se)	ug/g	0.74	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	91	8162803	79	68	50	8160965
Acid Extractable Strontium (Sr)	ug/g	39	8162803	24	7.7	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.24	8162803	<0.050	<0.050	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	3.1	8162803	0.37	0.41	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	10	8162803	<5.0	16	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	21	8162803	10	15	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	0.23	8162803	0.052	<0.050	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV603		TJV605	TJV608		
Sampling Date		2022/07/31 08:50		2022/07/31 09:17	2022/07/31 10:02		
COC Number		n/a		n/a	n/a		
	UNITS	22-AWAR-S17-S	QC Batch	22-AWAR-S18-S	22-AWAR-S19-S	RDL	QC Batch
Metals							
Acid Extractable Aluminum (Al)	ug/g	3200	8162803	3200	8700	50	8160965
Acid Extractable Antimony (Sb)	ug/g	0.50	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Arsenic (As)	ug/g	18	8162803	1.4	5.9	1.0	8160965
Acid Extractable Barium (Ba)	ug/g	99	8162803	9.5	130	0.50	8160965
Acid Extractable Beryllium (Be)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Boron (B)	ug/g	10	8162803	<5.0	<5.0	5.0	8160965
Acid Extractable Cadmium (Cd)	ug/g	0.51	8162803	<0.10	0.31	0.10	8160965
Acid Extractable Calcium (Ca)	ug/g	24000	8162803	750	8600	50	8160965
Acid Extractable Chromium (Cr)	ug/g	12	8162803	21	42	1.0	8160965
Acid Extractable Cobalt (Co)	ug/g	13	8162803	2.3	10	0.10	8160965
Acid Extractable Copper (Cu)	ug/g	110	8162803	2.1	27	0.50	8160965
Acid Extractable Iron (Fe)	ug/g	8500	8162803	7700	17000	50	8160965
Acid Extractable Lead (Pb)	ug/g	2.4	8162803	1.7	5.3	1.0	8160965
Acid Extractable Magnesium (Mg)	ug/g	3600	8162803	2100	6700	50	8160965
Acid Extractable Manganese (Mn)	ug/g	490	8162803	64	210	1.0	8160965
Acid Extractable Molybdenum (Mo)	ug/g	1.0	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Nickel (Ni)	ug/g	22	8162803	5.8	22	0.50	8160965
Acid Extractable Phosphorus (P)	ug/g	1300	8162803	200	780	50	8160965
Acid Extractable Potassium (K)	ug/g	620	8162803	270	1900	200	8160965
Acid Extractable Selenium (Se)	ug/g	0.88	8162803	<0.50	<0.50	0.50	8160965
Acid Extractable Silver (Ag)	ug/g	<0.20	8162803	<0.20	<0.20	0.20	8160965
Acid Extractable Sodium (Na)	ug/g	110	8162803	<50	140	50	8160965
Acid Extractable Strontium (Sr)	ug/g	61	8162803	5.9	40	1.0	8160965
Acid Extractable Thallium (Tl)	ug/g	0.17	8162803	<0.050	0.16	0.050	8160965
Acid Extractable Tin (Sn)	ug/g	<1.0	8162803	<1.0	<1.0	1.0	8160965
Acid Extractable Uranium (U)	ug/g	2.0	8162803	0.26	0.74	0.050	8160965
Acid Extractable Vanadium (V)	ug/g	7.0	8162803	14	34	5.0	8160965
Acid Extractable Zinc (Zn)	ug/g	41	8162803	9.7	43	5.0	8160965
Acid Extractable Mercury (Hg)	ug/g	0.23	8162803	<0.050	0.25	0.050	8160965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV610		TJV657	TJV659	TJV661	TJV663		
Sampling Date		2022/08/01 15:52		2022/07/29 11:15	2022/07/29 12:00	2022/07/29 12:35	2022/07/29 13:10		
COC Number		n/a		n/a	n/a	n/a	n/a		
	UNITS	22-AWAR-S20-S	QC Batch	22-REF1-S1-S	22-REF1-S2-S	22-REF1-S3-S	22-REF1-S4-S	RDL	QC Batch
Metals									
Acid Extractable Aluminum (Al)	ug/g	8800	8162803	4800	5400	890	2400	50	8160948
Acid Extractable Antimony (Sb)	ug/g	<0.20	8162803	0.25	<0.20	<0.20	<0.20	0.20	8160948
Acid Extractable Arsenic (As)	ug/g	3.0	8162803	16	42	<1.0	2.9	1.0	8160948
Acid Extractable Barium (Ba)	ug/g	110	8162803	130	110	40	130	0.50	8160948
Acid Extractable Beryllium (Be)	ug/g	<0.20	8162803	<0.20	<0.20	<0.20	<0.20	0.20	8160948
Acid Extractable Bismuth (Bi)	ug/g	<1.0	8162803	<1.0	<1.0	<1.0	<1.0	1.0	8160948
Acid Extractable Boron (B)	ug/g	8.6	8162803	6.8	5.7	<5.0	6.4	5.0	8160948
Acid Extractable Cadmium (Cd)	ug/g	0.18	8162803	0.25	0.18	0.44	0.13	0.10	8160948
Acid Extractable Calcium (Ca)	ug/g	15000	8162803	26000	19000	5600	24000	50	8160948
Acid Extractable Chromium (Cr)	ug/g	39	8162803	13	27	2.2	4.8	1.0	8160948
Acid Extractable Cobalt (Co)	ug/g	7.1	8162803	13	15	1.4	2.6	0.10	8160948
Acid Extractable Copper (Cu)	ug/g	140	8162803	81	35	6.0	36	0.50	8160948
Acid Extractable Iron (Fe)	ug/g	15000	8162803	13000	23000	1900	3600	50	8160948
Acid Extractable Lead (Pb)	ug/g	2.6	8162803	1.9	4.5	<1.0	1.1	1.0	8160948
Acid Extractable Magnesium (Mg)	ug/g	6500	8162803	3400	3600	900	1500	50	8160948
Acid Extractable Manganese (Mn)	ug/g	180	8162803	690	1100	6.3	38	1.0	8160948
Acid Extractable Molybdenum (Mo)	ug/g	1.0	8162803	1.4	2.1	<0.50	0.90	0.50	8160948
Acid Extractable Nickel (Ni)	ug/g	28	8162803	45	36	3.5	18	0.50	8160948
Acid Extractable Phosphorus (P)	ug/g	660	8162803	790	700	570	740	50	8160948
Acid Extractable Potassium (K)	ug/g	1800	8162803	500	660	270	290	200	8160948
Acid Extractable Selenium (Se)	ug/g	0.63	8162803	1.2	0.75	<0.50	0.55	0.50	8160948
Acid Extractable Silver (Ag)	ug/g	<0.20	8162803	<0.20	<0.20	<0.20	<0.20	0.20	8160948
Acid Extractable Sodium (Na)	ug/g	320	8162803	52	<50	59	<50	50	8160948
Acid Extractable Strontium (Sr)	ug/g	64	8162803	140	97	40	130	1.0	8160948
Acid Extractable Thallium (Tl)	ug/g	0.22	8162803	0.16	0.11	<0.050	0.070	0.050	8160948
Acid Extractable Tin (Sn)	ug/g	<1.0	8162803	<1.0	<1.0	<1.0	<1.0	1.0	8160948
Acid Extractable Uranium (U)	ug/g	3.4	8162803	3.1	2.7	0.11	0.39	0.050	8160948
Acid Extractable Vanadium (V)	ug/g	29	8162803	18	22	<5.0	<5.0	5.0	8160948
Acid Extractable Zinc (Zn)	ug/g	28	8162803	29	39	21	9.9	5.0	8160948
Acid Extractable Mercury (Hg)	ug/g	0.076	8162803	0.080	0.061	0.093	0.10	0.050	8160948

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV666	TJV669		TJV671		TJV673		
Sampling Date		2022/07/29 14:03	2022/07/29 15:35		2022/07/29 15:10		2022/07/29 16:16		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-REF1-S5-S**	**22-REF2-S1-S**	**QC Batch**	**22-REF2-S2-S**	**QC Batch**	**22-REF2-S3-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	5200	5400	8160948	2300	8160965	5900	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160948	<0.20	8160965	<0.20	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	4.8	1.1	8160948	1.7	8160965	4.6	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	71	58	8160948	98	8160965	41	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160948	<0.20	8160965	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160948	<1.0	8160965	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	7.5	<5.0	8160948	<5.0	8160965	<5.0	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	0.16	<0.10	8160948	0.39	8160965	<0.10	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	21000	950	8160948	5600	8160965	2300	50	8162803
Acid Extractable Chromium (Cr)	ug/g	13	20	8160948	6.0	8160965	23	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	3.4	3.2	8160948	5.4	8160965	5.5	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	68	4.2	8160948	28	8160965	13	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	14000	9800	8160948	3400	8160965	12000	50	8162803
Acid Extractable Lead (Pb)	ug/g	1.4	2.5	8160948	1.1	8160965	3.9	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	2400	3100	8160948	610	8160965	3200	50	8162803
Acid Extractable Manganese (Mn)	ug/g	50	150	8160948	41	8160965	110	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	0.86	<0.50	8160948	1.2	8160965	0.61	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	34	8.6	8160948	20	8160965	13	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	560	380	8160948	830	8160965	530	50	8162803
Acid Extractable Potassium (K)	ug/g	1300	730	8160948	350	8160965	1000	200	8162803
Acid Extractable Selenium (Se)	ug/g	0.59	<0.50	8160948	0.50	8160965	<0.50	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160948	<0.20	8160965	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	<50	<50	8160948	130	8160965	120	50	8162803
Acid Extractable Strontium (Sr)	ug/g	110	8.3	8160948	28	8160965	14	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.097	0.079	8160948	0.090	8160965	0.096	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160948	<1.0	8160965	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	1.6	0.73	8160948	1.2	8160965	0.78	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	11	15	8160948	6.3	8160965	23	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	20	26	8160948	7.9	8160965	16	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.082	8160948	<0.050	8160965	<0.050	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV673	TJV675		TJV677		TJV679		
Sampling Date		2022/07/29 16:16	2022/07/29 16:45		2022/07/29 16:26		2022/07/31 12:55		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-REF2-S3-S Lab-Dup**	**22-REF2-S4-S**	**QC Batch**	**22-REF2-S5-S**	**QC Batch**	**22-REF3-S1-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	6000	4900	8162803	8000	8160948	1800	50	8162803
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8162803	<0.20	8160948	<0.20	0.20	8162803
Acid Extractable Arsenic (As)	ug/g	5.0	2.3	8162803	9.3	8160948	1.8	1.0	8162803
Acid Extractable Barium (Ba)	ug/g	41	39	8162803	69	8160948	98	0.50	8162803
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8162803	<0.20	8160948	<0.20	0.20	8162803
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8162803	<1.0	8160948	<1.0	1.0	8162803
Acid Extractable Boron (B)	ug/g	<5.0	<5.0	8162803	<5.0	8160948	13	5.0	8162803
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	8162803	<0.10	8160948	0.41	0.10	8162803
Acid Extractable Calcium (Ca)	ug/g	2300	2300	8162803	3000	8160948	23000	50	8162803
Acid Extractable Chromium (Cr)	ug/g	24	20	8162803	33	8160948	5.1	1.0	8162803
Acid Extractable Cobalt (Co)	ug/g	5.8	4.3	8162803	10	8160948	1.3	0.10	8162803
Acid Extractable Copper (Cu)	ug/g	13	14	8162803	30	8160948	34	0.50	8162803
Acid Extractable Iron (Fe)	ug/g	13000	8200	8162803	16000	8160948	3300	50	8162803
Acid Extractable Lead (Pb)	ug/g	3.8	3.0	8162803	3.7	8160948	3.6	1.0	8162803
Acid Extractable Magnesium (Mg)	ug/g	3200	2900	8162803	5100	8160948	1700	50	8162803
Acid Extractable Manganese (Mn)	ug/g	110	80	8162803	160	8160948	21	1.0	8162803
Acid Extractable Molybdenum (Mo)	ug/g	0.61	<0.50	8162803	<0.50	8160948	0.79	0.50	8162803
Acid Extractable Nickel (Ni)	ug/g	13	13	8162803	27	8160948	8.1	0.50	8162803
Acid Extractable Phosphorus (P)	ug/g	530	570	8162803	650	8160948	1100	50	8162803
Acid Extractable Potassium (K)	ug/g	1000	1000	8162803	1800	8160948	610	200	8162803
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8162803	<0.50	8160948	0.59	0.50	8162803
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8162803	<0.20	8160948	<0.20	0.20	8162803
Acid Extractable Sodium (Na)	ug/g	120	120	8162803	170	8160948	160	50	8162803
Acid Extractable Strontium (Sr)	ug/g	14	14	8162803	15	8160948	130	1.0	8162803
Acid Extractable Thallium (Tl)	ug/g	0.10	0.088	8162803	0.13	8160948	0.097	0.050	8162803
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8162803	<1.0	8160948	<1.0	1.0	8162803
Acid Extractable Uranium (U)	ug/g	0.77	0.68	8162803	0.82	8160948	0.60	0.050	8162803
Acid Extractable Vanadium (V)	ug/g	24	19	8162803	28	8160948	<5.0	5.0	8162803
Acid Extractable Zinc (Zn)	ug/g	16	17	8162803	29	8160948	35	5.0	8162803
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8162803	<0.050	8160948	0.26	0.050	8162803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		TJV681	TJV683		TJV686		TLO475		
Sampling Date		2022/07/31 13:23	2022/07/31 13:58		2022/07/31 14:55		2022/08/01 11:10		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-REF3-S2-S**	**22-REF3-S3-S**	**QC Batch**	**22-REF3-S5-S**	**QC Batch**	**22-REF3-S4-S**	**RDL**	**QC Batch**
Metals									
Acid Extractable Aluminum (Al)	ug/g	6500	3800	8160965	14000	8160948	10000	50	8170582
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	8160965	<0.20	8160948	<0.20	0.20	8170582
Acid Extractable Arsenic (As)	ug/g	<1.0	1.2	8160965	9.9	8160948	1.5	1.0	8170582
Acid Extractable Barium (Ba)	ug/g	110	81	8160965	240	8160948	95	0.50	8170582
Acid Extractable Beryllium (Be)	ug/g	<0.20	<0.20	8160965	0.25	8160948	<0.20	0.20	8170582
Acid Extractable Bismuth (Bi)	ug/g	<1.0	<1.0	8160965	<1.0	8160948	<1.0	1.0	8170582
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8160965	<5.0	8160948	<5.0	5.0	8170582
Acid Extractable Cadmium (Cd)	ug/g	0.29	0.15	8160965	0.26	8160948	<0.10	0.10	8170582
Acid Extractable Calcium (Ca)	ug/g	1800	13000	8160965	5100	8160948	4300	50	8170582
Acid Extractable Chromium (Cr)	ug/g	23	15	8160965	58	8160948	50	1.0	8170582
Acid Extractable Cobalt (Co)	ug/g	4.8	3.4	8160965	20	8160948	5.8	0.10	8170582
Acid Extractable Copper (Cu)	ug/g	7.8	13	8160965	47	8160948	37	0.50	8170582
Acid Extractable Iron (Fe)	ug/g	9200	7300	8160965	38000	8160948	20000	50	8170582
Acid Extractable Lead (Pb)	ug/g	1.8	2.8	8160965	3.7	8160948	5.3	1.0	8170582
Acid Extractable Magnesium (Mg)	ug/g	4000	2700	8160965	9700	8160948	5800	50	8170582
Acid Extractable Manganese (Mn)	ug/g	79	53	8160965	2100	8160948	130	1.0	8170582
Acid Extractable Molybdenum (Mo)	ug/g	0.73	0.55	8160965	2.0	8160948	2.5	0.50	8170582
Acid Extractable Nickel (Ni)	ug/g	12	8.7	8160965	52	8160948	21	0.50	8170582
Acid Extractable Phosphorus (P)	ug/g	570	460	8160965	850	8160948	650	50	8170582
Acid Extractable Potassium (K)	ug/g	2400	960	8160965	4100	8160948	2100	200	8170582
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8160965	0.58	8160948	<0.50	0.50	8170582
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8160965	<0.20	8160948	<0.20	0.20	8170582
Acid Extractable Sodium (Na)	ug/g	100	87	8160965	200	8160948	110	50	8170582
Acid Extractable Strontium (Sr)	ug/g	17	68	8160965	24	8160948	24	1.0	8170582
Acid Extractable Thallium (Tl)	ug/g	0.13	0.073	8160965	0.42	8160948	0.27	0.050	8170582
Acid Extractable Tin (Sn)	ug/g	<1.0	<1.0	8160965	<1.0	8160948	<1.0	1.0	8170582
Acid Extractable Uranium (U)	ug/g	0.45	0.67	8160965	2.7	8160948	2.3	0.050	8170582
Acid Extractable Vanadium (V)	ug/g	20	16	8160965	59	8160948	42	5.0	8170582
Acid Extractable Zinc (Zn)	ug/g	29	14	8160965	73	8160948	30	5.0	8170582
Acid Extractable Mercury (Hg)	ug/g	0.13	0.11	8160965	<0.050	8160948	<0.050	0.050	8170582

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU728		TJU730		TJU732		TJU734		
Sampling Date		2022/08/01 11:10		2022/08/01 11:31		2022/08/01 11:58		2022/08/01 13:10		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	**22-WRSA-S1-BR**	**RDL**	**22-WRSA-S2-SE**	**QC Batch**	**22-WRSA-S3-SE**	**QC Batch**	**22-WRSA-S4-L**	**RDL**	**QC Batch**
Metals										
Antimony (Sb)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Arsenic (As)	ug/g	37.7	0.5	8.9	8161589	5.0	8162711	5.3	0.1	8161589
Barium (Ba)	ug/g	13.8	0.3	12.0	8161589	6.2	8162711	17.0	0.3	8161589
Beryllium (Be)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Boron (B)	ug/g	5.6	0.5	1.9	8161589	4.5	8162711	2.0	0.5	8161589
Cadmium (Cd)	ug/g	0.02	0.01	<0.01	8161589	0.01	8162711	0.08	0.01	8161589
Calcium (Ca)	ug/g	3080	50	2470	8161589	1260	8162711	10500	50	8161589
Chromium (Cr)	ug/g	0.7	0.3	<0.3	8161589	<0.3	8162711	2.5	0.3	8161589
Cobalt (Co)	ug/g	0.170	0.005	0.031	8161589	0.034	8162711	0.580	0.005	8161589
Copper (Cu)	ug/g	3.0	0.5	2.7	8161589	1.9	8162711	3.3	0.5	8161589
Iron (Fe)	ug/g	514	3	124	8161589	127	8162711	900	3	8161589
Lead (Pb)	ug/g	4.01	0.03	0.45	8161589	0.20	8162711	1.81	0.03	8161589
Magnesium (Mg)	ug/g	491	100	354	8161589	338	8162711	616	100	8161589
Manganese (Mn)	ug/g	44.6	0.3	60.8	8161589	166	8162711	39.9	0.3	8161589
Molybdenum (Mo)	ug/g	0.12	0.05	0.14	8161589	0.17	8162711	0.19	0.05	8161589
Nickel (Ni)	ug/g	1.59	0.05	0.56	8161589	0.24	8162711	1.61	0.05	8161589
Phosphorus (P)	ug/g	383	50	421	8161589	506	8162711	356	50	8161589
Potassium (K)	ug/g	1920	100	4670	8161589	5850	8162711	914	100	8161589
Selenium (Se)	ug/g	<0.04	0.04	<0.04	8161589	<0.04	8162711	0.09	0.04	8161589
Silver (Ag)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	8162711	<0.05	0.05	8161589
Sodium (Na)	ug/g	87	50	<50	8161589	63	8162711	82	50	8161589
Strontium (Sr)	ug/g	13.3	0.5	13.8	8161589	10.8	8162711	44.2	0.5	8161589
Thallium (Tl)	ug/g	<0.003	0.003	<0.003	8161589	<0.003	8162711	0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	0.3	<0.3	8161589	<0.3	8162711	<0.3	0.3	8161589
Titanium (Ti)	ug/g	2.7	0.5	0.9	8161589	0.6	8162711	14.7	0.5	8161589
Uranium (U)	ug/g	0.007	0.005	<0.005	8161589	<0.005	8162711	0.043	0.005	8161589
Vanadium (V)	ug/g	0.19	0.05	<0.05	8161589	<0.05	8162711	0.87	0.05	8161589
Zinc (Zn)	ug/g	100	2	10	8161589	18	8162711	22	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU736			TJU738		TJU740		
Sampling Date		2022/08/01 13:40			2022/08/01 14:07		2022/08/01 14:30		
COC Number		n/a			n/a		n/a		
	UNITS	**22-WRSA-S5-BR**	**RDL**	**QC Batch**	**22-WRSA-S6-SE**	**RDL**	**22-WRSA-S7-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Arsenic (As)	ug/g	1.1	0.1	8163142	0.3	0.1	1.0	0.1	8161589
Barium (Ba)	ug/g	16.2	0.3	8163142	7.8	0.3	11.0	0.3	8161589
Beryllium (Be)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Boron (B)	ug/g	10.3	0.5	8163142	2.2	0.5	6.9	0.5	8161589
Cadmium (Cd)	ug/g	0.04	0.01	8163142	<0.01	0.01	0.01	0.01	8161589
Calcium (Ca)	ug/g	3750	50	8163142	2210	50	3330	50	8161589
Chromium (Cr)	ug/g	0.3	0.3	8163142	<0.3	0.3	0.3	0.3	8161589
Cobalt (Co)	ug/g	0.097	0.005	8163142	0.032	0.005	0.086	0.005	8161589
Copper (Cu)	ug/g	2.8	0.5	8163142	1.7	0.5	2.6	0.5	8161589
Iron (Fe)	ug/g	106	3	8163142	60	3	121	3	8161589
Lead (Pb)	ug/g	0.24	0.03	8163142	0.04	0.03	0.16	0.03	8161589
Magnesium (Mg)	ug/g	752	100	8163142	359	100	634	100	8161589
Manganese (Mn)	ug/g	85.7	0.3	8163142	82.5	0.3	41.1	0.3	8161589
Molybdenum (Mo)	ug/g	0.09	0.05	8163142	0.32	0.05	<0.05	0.05	8161589
Nickel (Ni)	ug/g	1.66	0.05	8163142	0.24	0.05	0.84	0.05	8161589
Phosphorus (P)	ug/g	501	50	8163142	327	50	489	50	8161589
Potassium (K)	ug/g	1920	100	8163142	6140	500	1810	100	8161589
Selenium (Se)	ug/g	<0.04	0.04	8163142	<0.04	0.04	<0.04	0.04	8161589
Silver (Ag)	ug/g	<0.05	0.05	8163142	<0.05	0.05	<0.05	0.05	8161589
Sodium (Na)	ug/g	<50	50	8163142	<50	50	<50	50	8161589
Strontium (Sr)	ug/g	19.4	0.5	8163142	11.9	0.5	18.7	0.5	8161589
Thallium (Tl)	ug/g	<0.003	0.003	8163142	<0.003	0.003	<0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	0.3	8163142	<0.3	0.3	<0.3	0.3	8161589
Titanium (Ti)	ug/g	1.6	0.5	8163142	1.0	0.5	2.0	0.5	8161589
Uranium (U)	ug/g	<0.005	0.005	8163142	<0.005	0.005	<0.005	0.005	8161589
Vanadium (V)	ug/g	0.09	0.05	8163142	<0.05	0.05	0.11	0.05	8161589
Zinc (Zn)	ug/g	119	2	8163142	16	2	112	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU742	TJU744	TJU744			TJU746		
Sampling Date		2022/08/02 10:45	2022/08/02 11:10	2022/08/02 11:10			2022/08/02 11:45		
COC Number		n/a	n/a	n/a			n/a		
	UNITS	**22-WRSA-SE**	**22-WRSA-S9-L**	**22-WRSA-S9-L Lab-Dup**	**RDL**	**QC Batch**	**22-WRSA-S10-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Arsenic (As)	ug/g	1.4	4.8	5.0	0.1	8162711	0.3	0.1	8161589
Barium (Ba)	ug/g	9.2	8.1	7.9	0.3	8162711	7.3	0.3	8161589
Beryllium (Be)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Boron (B)	ug/g	1.9	0.6	0.6	0.5	8162711	19.1	0.5	8161589
Cadmium (Cd)	ug/g	<0.01	0.09	0.09	0.01	8162711	0.02	0.01	8161589
Calcium (Ca)	ug/g	3330	6090	6010	50	8162711	2270	50	8161589
Chromium (Cr)	ug/g	0.6	1.0	1.0	0.3	8162711	<0.3	0.3	8161589
Cobalt (Co)	ug/g	0.081	0.281	0.251	0.005	8162711	0.101	0.005	8161589
Copper (Cu)	ug/g	1.9	1.7	1.5	0.5	8162711	2.4	0.5	8161589
Iron (Fe)	ug/g	163	685	655	3	8162711	50	3	8161589
Lead (Pb)	ug/g	0.12	0.99	0.98	0.03	8162711	<0.03	0.03	8161589
Magnesium (Mg)	ug/g	438	556	549	100	8162711	916	100	8161589
Manganese (Mn)	ug/g	79.3	34.9	35.2	0.3	8162711	117	0.3	8161589
Molybdenum (Mo)	ug/g	0.39	0.11	0.10	0.05	8162711	0.13	0.05	8161589
Nickel (Ni)	ug/g	0.38	0.92	0.89	0.05	8162711	1.44	0.05	8161589
Phosphorus (P)	ug/g	339	322	310	50	8162711	611	300	8161589
Potassium (K)	ug/g	4900	1100	1110	100	8162711	2440	100	8161589
Selenium (Se)	ug/g	<0.04	0.07	0.08	0.04	8162711	<0.04	0.04	8161589
Silver (Ag)	ug/g	<0.05	<0.05	<0.05	0.05	8162711	<0.05	0.05	8161589
Sodium (Na)	ug/g	<50	152	156	50	8162711	<50	50	8161589
Strontium (Sr)	ug/g	19.6	21.9	22.2	0.5	8162711	9.0	0.5	8161589
Thallium (Tl)	ug/g	<0.003	0.003	<0.003	0.003	8162711	<0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	<0.3	<0.3	0.3	8162711	<0.3	0.3	8161589
Titanium (Ti)	ug/g	2.4	10.5	9.9	0.5	8162711	1.0	0.5	8161589
Uranium (U)	ug/g	0.007	0.018	0.017	0.005	8162711	<0.005	0.005	8161589
Vanadium (V)	ug/g	0.14	0.64	0.60	0.05	8162711	<0.05	0.05	8161589
Zinc (Zn)	ug/g	8	16	16	2	8162711	50	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU763			TJU764	TJU766		TJU768	TJU770		
Sampling Date		2022/07/28 11:22			2022/07/28 11:22	2022/07/28 08:04		2022/07/28 08:42	2022/07/28 07:33		
COC Number		n/a			n/a	n/a		n/a	n/a		
	UNITS	22-TF-S1-L	RDL	QC Batch	22-TF-S1-SE	22-TF-S2-SE	QC Batch	22-TF-S3-BR	22-TF-S4-BR	RDL	QC Batch
Metals											
Antimony (Sb)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Arsenic (As)	ug/g	49.1	0.5	8163142	3.1	5.4	8163847	4.4	12.6	0.1	8163142
Barium (Ba)	ug/g	16.8	0.3	8163142	10.4	15.1	8163847	19.5	20.1	0.3	8163142
Beryllium (Be)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Bismuth (Bi)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Boron (B)	ug/g	0.8	0.5	8163142	5.1	2.6	8163847	5.2	7.1	0.5	8163142
Cadmium (Cd)	ug/g	0.08	0.01	8163142	<0.01	0.02	8163847	0.02	0.07	0.01	8163142
Calcium (Ca)	ug/g	8190	50	8163142	2380	3100	8163847	2390	2620	50	8163142
Chromium (Cr)	ug/g	1.4	0.3	8163142	<0.3	0.3	8163847	<0.3	0.3	0.3	8163142
Cobalt (Co)	ug/g	0.386	0.005	8163142	0.048	0.066	8163847	0.131	0.192	0.005	8163142
Copper (Cu)	ug/g	2.5	0.5	8163142	1.9	2.5	8163847	2.7	3.2	0.5	8163142
Iron (Fe)	ug/g	1110	3	8163142	111	154	8163847	104	286	3	8163142
Lead (Pb)	ug/g	6.20	0.03	8163142	0.28	0.63	8163847	0.32	1.43	0.03	8163142
Magnesium (Mg)	ug/g	673	100	8163142	426	385	8163847	758	678	100	8163142
Manganese (Mn)	ug/g	83.3	0.3	8163142	69.9	74.1	8163847	39.8	242	0.3	8163142
Molybdenum (Mo)	ug/g	0.23	0.05	8163142	0.47	0.51	8163847	0.09	<0.05	0.05	8163142
Nickel (Ni)	ug/g	1.03	0.05	8163142	0.38	0.55	8163847	1.07	1.54	0.05	8163142
Phosphorus (P)	ug/g	349	50	8163142	345	315	8163847	505	570	50	8163142
Potassium (K)	ug/g	1340	100	8163142	5760	4330	8163847	2490	2110	100	8163142
Selenium (Se)	ug/g	0.12	0.04	8163142	<0.04	<0.04	8163847	<0.04	<0.04	0.04	8163142
Silver (Ag)	ug/g	<0.05	0.05	8163142	<0.05	<0.05	8163847	<0.05	<0.05	0.05	8163142
Sodium (Na)	ug/g	239	50	8163142	68	<50	8163847	<50	51	50	8163142
Strontium (Sr)	ug/g	27.0	0.5	8163142	11.7	13.0	8163847	9.8	11.0	0.5	8163142
Thallium (Tl)	ug/g	0.004	0.003	8163142	<0.003	<0.003	8163847	<0.003	<0.003	0.003	8163142
Tin (Sn)	ug/g	<0.3	0.3	8163142	<0.3	<0.3	8163847	<0.3	<0.3	0.3	8163142
Titanium (Ti)	ug/g	11.1	0.5	8163142	1.1	1.1	8163847	0.9	2.4	0.5	8163142
Uranium (U)	ug/g	0.032	0.005	8163142	0.014	<0.005	8163847	<0.005	<0.005	0.005	8163142
Vanadium (V)	ug/g	0.62	0.05	8163142	0.06	0.07	8163847	0.05	0.14	0.05	8163142
Zinc (Zn)	ug/g	25	2	8163142	14	14	8163847	79	145	2	8163142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU772	TJU772		TJU774			TJU776	TJU776		
Sampling Date		2022/07/28 09:21	2022/07/28 09:21		2022/07/28 10:20			2022/07/28 10:20	2022/07/28 10:20		
COC Number		n/a	n/a		n/a			n/a	n/a		
	UNITS	**22-TF-S5-LT**	**22-TF-S5-LT Lab-Dup**	**RDL**	**22-TF-S6-CR**	**RDL**	**QC Batch**	**22-TF-S6-L**	**22-TF-S6-L Lab-Dup**	**RDL**	**QC Batch**
Metals											
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	0.30	0.26	0.05	8163847
Arsenic (As)	ug/g	12.5	12.1	0.1	52.5	0.5	8161589	884	840	5	8163847
Barium (Ba)	ug/g	27.0	25.3	0.3	15.4	0.3	8161589	28.3	26.7	0.3	8163847
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	<0.05	<0.05	0.05	8163847
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	0.13	0.12	0.05	8163847
Boron (B)	ug/g	6.8	6.6	0.5	8.0	0.5	8161589	2.4	2.5	0.5	8163847
Cadmium (Cd)	ug/g	<0.01	<0.01	0.01	<0.01	0.01	8161589	0.15	0.13	0.01	8163847
Calcium (Ca)	ug/g	2180	2150	50	2660	50	8161589	6790	6850	50	8163847
Chromium (Cr)	ug/g	0.4	0.4	0.3	1.7	0.3	8161589	7.1	6.4	0.3	8163847
Cobalt (Co)	ug/g	0.062	0.082	0.005	0.236	0.005	8161589	2.11	1.89	0.005	8163847
Copper (Cu)	ug/g	2.4	2.5	0.5	3.3	0.5	8161589	18.0	16.2	0.5	8163847
Iron (Fe)	ug/g	204	194	3	755	3	8161589	11200	10400	20	8163847
Lead (Pb)	ug/g	0.92	0.88	0.03	3.71	0.03	8161589	59.4	57.7	0.03	8163847
Magnesium (Mg)	ug/g	506	482	100	631	100	8161589	1580	1530	100	8163847
Manganese (Mn)	ug/g	412	401	0.3	235	0.3	8161589	164	158	0.3	8163847
Molybdenum (Mo)	ug/g	<0.05	<0.05	0.05	0.12	0.05	8161589	1.08	0.88	0.05	8163847
Nickel (Ni)	ug/g	0.40	0.42	0.05	3.74	0.05	8161589	5.70	5.23	0.05	8163847
Phosphorus (P)	ug/g	443	436	50	406	50	8161589	390	375	50	8163847
Potassium (K)	ug/g	2590	2490	100	2090	100	8161589	750	724	100	8163847
Selenium (Se)	ug/g	<0.04	<0.04	0.04	<0.04	0.04	8161589	0.33	0.31	0.04	8163847
Silver (Ag)	ug/g	<0.05	<0.05	0.05	<0.05	0.05	8161589	0.07	0.07	0.05	8163847
Sodium (Na)	ug/g	<50	<50	50	52	50	8161589	351	333	50	8163847
Strontium (Sr)	ug/g	4.1	4.0	0.5	5.2	0.5	8161589	32.3	31.1	0.5	8163847
Thallium (Tl)	ug/g	0.075	0.075	0.003	0.004	0.003	8161589	0.025	0.025	0.003	8163847
Tin (Sn)	ug/g	<0.3	<0.3	0.3	<0.3	0.3	8161589	<0.3	<0.3	0.3	8163847
Titanium (Ti)	ug/g	1.5	1.4	0.5	3.6	0.5	8161589	49	48	3	8163847
Uranium (U)	ug/g	<0.005	<0.005	0.005	0.005	0.005	8161589	0.107	0.096	0.005	8163847
Vanadium (V)	ug/g	0.10	0.09	0.05	0.27	0.05	8161589	3.42	3.11	0.05	8163847
Zinc (Zn)	ug/g	13	13	2	6	2	8161589	28	27	2	8163847

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJU781			TJU783		TJU785	TJU787		
Sampling Date		2022/07/28 15:46			2022/07/28 15:12		2022/07/28 14:03	2022/07/28 14:36		
COC Number		n/a			n/a		n/a	n/a		
	UNITS	**22-TF-S11-BR**	**RDL**	**QC Batch**	**22-TF-S12-SE**	**QC Batch**	**22-TF-S13-LT**	**22-TF-S4-L**	**RDL**	**QC Batch**
Metals										
Antimony (Sb)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Arsenic (As)	ug/g	38.6	0.5	8161589	12.4	8163142	8.0	17.3	0.1	8162711
Barium (Ba)	ug/g	12.7	0.3	8161589	11.1	8163142	39.0	6.5	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Boron (B)	ug/g	4.4	0.5	8161589	3.0	8163142	6.7	<0.5	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	0.01	8161589	<0.01	8163142	<0.01	0.09	0.01	8162711
Calcium (Ca)	ug/g	2820	50	8161589	2880	8163142	2690	5020	50	8162711
Chromium (Cr)	ug/g	0.6	0.3	8161589	0.4	8163142	0.7	0.6	0.3	8162711
Cobalt (Co)	ug/g	0.174	0.005	8161589	0.053	8163142	0.130	0.182	0.005	8162711
Copper (Cu)	ug/g	3.3	0.5	8161589	2.7	8163142	2.0	1.5	0.5	8162711
Iron (Fe)	ug/g	546	3	8161589	213	8163142	276	440	3	8162711
Lead (Pb)	ug/g	3.66	0.03	8161589	1.28	8163142	0.74	12.6	0.03	8162711
Magnesium (Mg)	ug/g	560	100	8161589	228	8163142	779	275	100	8162711
Manganese (Mn)	ug/g	26.2	0.3	8161589	54.8	8163142	343	46.1	0.3	8162711
Molybdenum (Mo)	ug/g	0.13	0.05	8161589	0.59	8163142	0.10	0.09	0.05	8162711
Nickel (Ni)	ug/g	1.19	0.05	8161589	0.38	8163142	0.79	0.53	0.05	8162711
Phosphorus (P)	ug/g	429	50	8161589	363	8163142	467	380	50	8162711
Potassium (K)	ug/g	2590	100	8161589	6640	8163142	2370	1220	100	8162711
Selenium (Se)	ug/g	<0.04	0.04	8161589	<0.04	8163142	<0.04	0.09	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	8161589	<0.05	8163142	<0.05	<0.05	0.05	8162711
Sodium (Na)	ug/g	64	50	8161589	<50	8163142	<50	<50	50	8162711
Strontium (Sr)	ug/g	14.2	0.5	8161589	24.5	8163142	5.4	17.3	0.5	8162711
Thallium (Tl)	ug/g	<0.003	0.003	8161589	<0.003	8163142	0.076	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	8161589	<0.3	8163142	<0.3	<0.3	0.3	8162711
Titanium (Ti)	ug/g	3.1	0.5	8161589	1.2	8163142	1.9	5.8	0.5	8162711
Uranium (U)	ug/g	0.008	0.005	8161589	<0.005	8163142	<0.005	0.015	0.005	8162711
Vanadium (V)	ug/g	0.21	0.05	8161589	0.09	8163142	0.15	0.23	0.05	8162711
Zinc (Zn)	ug/g	81	2	8161589	16	8163142	10	14	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV569		TJV571		TJV572		
Sampling Date		2022/07/28 16:15		2022/07/28 16:45		2022/07/28 16:45		
COC Number		n/a		n/a		n/a		
	UNITS	22-AWAR-S1-SE	QC Batch	22-AWAR-S2-CR	QC Batch	22-AWAR-S2-CR2	RDL	QC Batch
Metals								
Antimony (Sb)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	2.7	8162711	5.3	8161589	0.2	0.1	8162711
Barium (Ba)	ug/g	15.5	8162711	15.9	8161589	1.5	0.3	8162711
Beryllium (Be)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	6.9	8162711	11.0	8161589	1.7	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	8162711	<0.01	8161589	<0.01	0.01	8162711
Calcium (Ca)	ug/g	2600	8162711	2870	8161589	219	50	8162711
Chromium (Cr)	ug/g	1.0	8162711	1.4	8161589	<0.3	0.3	8162711
Cobalt (Co)	ug/g	0.163	8162711	0.239	8161589	0.008	0.005	8162711
Copper (Cu)	ug/g	2.8	8162711	2.7	8161589	2.1	0.5	8162711
Iron (Fe)	ug/g	462	8162711	574	8161589	21	3	8162711
Lead (Pb)	ug/g	0.31	8162711	0.48	8161589	<0.03	0.03	8162711
Magnesium (Mg)	ug/g	527	8162711	631	8161589	114	100	8162711
Manganese (Mn)	ug/g	249	8162711	130	8161589	5.9	0.3	8162711
Molybdenum (Mo)	ug/g	0.47	8162711	0.08	8161589	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.75	8162711	1.21	8161589	0.15	0.05	8162711
Phosphorus (P)	ug/g	434	8162711	353	8161589	241	50	8162711
Potassium (K)	ug/g	6670	8162711	2290	8161589	2050	100	8162711
Selenium (Se)	ug/g	<0.04	8162711	<0.04	8161589	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	8162711	<0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	8162711	<50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	19.1	8162711	11.6	8161589	0.7	0.5	8162711
Thallium (Tl)	ug/g	<0.003	8162711	<0.003	8161589	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	8162711	<0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	4.8	8162711	8.3	8161589	<0.5	0.5	8162711
Uranium (U)	ug/g	0.012	8162711	0.011	8161589	<0.005	0.005	8162711
Vanadium (V)	ug/g	0.35	8162711	0.49	8161589	<0.05	0.05	8162711
Zinc (Zn)	ug/g	22	8162711	7	8161589	3	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV574	TJV576		TJV577		TJV579		
Sampling Date		2022/07/30 08:35	2022/07/30 07:55		2022/07/30 07:55		2022/07/30 09:47		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-AWAR-S3-L**	**22-AWAR-S4-SE**	**QC Batch**	**22-AWAR-S5-CRAN**	**QC Batch**	**22-AWAR-S5-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Arsenic (As)	ug/g	3.9	8.6	8161589	<0.1	8168229	1.6	0.1	8163142
Barium (Ba)	ug/g	7.2	13.4	8161589	0.5	8168229	11.6	0.3	8163142
Beryllium (Be)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Bismuth (Bi)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Boron (B)	ug/g	0.5	2.6	8161589	0.9	8168229	3.6	0.5	8163142
Cadmium (Cd)	ug/g	0.06	<0.01	8161589	<0.01	8168229	0.02	0.01	8163142
Calcium (Ca)	ug/g	10000	4100	8161589	164	8168229	2510	50	8163142
Chromium (Cr)	ug/g	3.1	1.1	8161589	<0.3	8168229	0.4	0.3	8163142
Cobalt (Co)	ug/g	0.433	0.125	8161589	<0.005	8168229	0.119	0.005	8163142
Copper (Cu)	ug/g	2.1	3.0	8161589	0.7	8168229	2.9	0.5	8163142
Iron (Fe)	ug/g	796	493	8161589	6	8168229	223	3	8163142
Lead (Pb)	ug/g	2.08	0.68	8161589	<0.03	8168229	0.23	0.03	8163142
Magnesium (Mg)	ug/g	366	492	8161589	<100	8168229	732	100	8163142
Manganese (Mn)	ug/g	34.9	39.3	8161589	0.6	8168229	48.2	0.3	8163142
Molybdenum (Mo)	ug/g	0.08	0.65	8161589	<0.05	8168229	<0.05	0.05	8163142
Nickel (Ni)	ug/g	1.28	0.62	8161589	0.16	8168229	1.55	0.05	8163142
Phosphorus (P)	ug/g	306	320	8161589	96	8168229	528	50	8163142
Potassium (K)	ug/g	1120	4520	8161589	1320	8168229	2180	100	8163142
Selenium (Se)	ug/g	0.07	<0.04	8161589	<0.04	8168229	<0.04	0.04	8163142
Silver (Ag)	ug/g	<0.05	<0.05	8161589	<0.05	8168229	<0.05	0.05	8163142
Sodium (Na)	ug/g	55	<50	8161589	<50	8168229	<50	50	8163142
Strontium (Sr)	ug/g	46.6	20.1	8161589	0.6	8168229	8.3	0.5	8163142
Thallium (Tl)	ug/g	0.005	<0.003	8161589	<0.003	8168229	<0.003	0.003	8163142
Tin (Sn)	ug/g	<0.3	<0.3	8161589	<0.3	8168229	<0.3	0.3	8163142
Titanium (Ti)	ug/g	16.5	3.9	8161589	<0.5	8168229	2.1	0.5	8163142
Uranium (U)	ug/g	0.036	0.013	8161589	<0.005	8168229	<0.005	0.005	8163142
Vanadium (V)	ug/g	0.91	0.27	8161589	<0.05	8168229	0.13	0.05	8163142
Zinc (Zn)	ug/g	14	15	8161589	<2	8168229	71	2	8163142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV581	TJV583		TJV585		
Sampling Date		2022/07/30 10:50	2022/07/30 11:21		2022/07/30 11:54		
COC Number		n/a	n/a		n/a		
	UNITS	**22-AWAR-S6-SE**	**22-AWAR-S7-SE**	**QC Batch**	**22-AWAR-S8-BR**	**RDL**	**QC Batch**
Metals							
Antimony (Sb)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Arsenic (As)	ug/g	6.1	2.3	8163142	1.0	0.1	8162711
Barium (Ba)	ug/g	16.0	11.9	8163142	14.6	0.3	8162711
Beryllium (Be)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Boron (B)	ug/g	3.0	2.4	8163142	8.0	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	<0.01	8163142	0.02	0.01	8162711
Calcium (Ca)	ug/g	2790	3040	8163142	2590	50	8162711
Chromium (Cr)	ug/g	1.8	0.4	8163142	0.4	0.3	8162711
Cobalt (Co)	ug/g	0.134	0.077	8163142	0.283	0.005	8162711
Copper (Cu)	ug/g	2.5	2.0	8163142	3.1	0.5	8162711
Iron (Fe)	ug/g	496	157	8163142	211	3	8162711
Lead (Pb)	ug/g	0.54	0.23	8163142	0.17	0.03	8162711
Magnesium (Mg)	ug/g	355	394	8163142	726	100	8162711
Manganese (Mn)	ug/g	128	203	8163142	80.5	0.3	8162711
Molybdenum (Mo)	ug/g	0.53	0.12	8163142	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.55	0.38	8163142	1.63	0.05	8162711
Phosphorus (P)	ug/g	470	400	8163142	575	50	8162711
Potassium (K)	ug/g	5550	6040	8163142	2360	100	8162711
Selenium (Se)	ug/g	<0.04	<0.04	8163142	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	<0.05	8163142	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	<50	8163142	<50	50	8162711
Strontium (Sr)	ug/g	14.6	15.6	8163142	8.2	0.5	8162711
Thallium (Tl)	ug/g	<0.003	<0.003	8163142	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	<0.3	8163142	<0.3	0.3	8162711
Titanium (Ti)	ug/g	4.2	1.1	8163142	2.8	0.5	8162711
Uranium (U)	ug/g	0.011	0.011	8163142	<0.005	0.005	8162711
Vanadium (V)	ug/g	0.29	0.06	8163142	0.13	0.05	8162711
Zinc (Zn)	ug/g	12	22	8163142	90	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV587		TJV589		TJV591		
Sampling Date		2022/07/30 12:30		2022/07/30 13:00		2022/07/30 13:50		
COC Number		n/a		n/a		n/a		
	UNITS	**22-AWAR-S9-LT**	**RDL**	**22-AWAR-S10-L**	**QC Batch**	**22-AWAR-S11-L**	**RDL**	**QC Batch**
Metals								
Antimony (Sb)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	0.7	0.1	2.4	8161589	4.0	0.1	8162711
Barium (Ba)	ug/g	29.0	0.3	6.3	8161589	6.1	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	7.7	0.5	<0.5	8161589	<0.5	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	0.01	0.08	8161589	0.05	0.01	8162711
Calcium (Ca)	ug/g	2230	50	3330	8161589	3140	50	8162711
Chromium (Cr)	ug/g	0.8	0.3	0.6	8161589	0.7	0.3	8162711
Cobalt (Co)	ug/g	0.075	0.005	0.158	8161589	0.215	0.005	8162711
Copper (Cu)	ug/g	2.5	0.5	0.9	8161589	1.1	0.5	8162711
Iron (Fe)	ug/g	158	3	183	8161589	201	3	8162711
Lead (Pb)	ug/g	0.10	0.03	1.86	8161589	2.87	0.03	8162711
Magnesium (Mg)	ug/g	633	100	219	8161589	185	100	8162711
Manganese (Mn)	ug/g	411	0.3	19.5	8161589	14.3	0.3	8162711
Molybdenum (Mo)	ug/g	<0.05	0.05	0.05	8161589	0.05	0.05	8162711
Nickel (Ni)	ug/g	0.45	0.05	0.38	8161589	0.46	0.05	8162711
Phosphorus (P)	ug/g	550	300	347	8161589	317	50	8162711
Potassium (K)	ug/g	2320	100	1160	8161589	1270	100	8162711
Selenium (Se)	ug/g	<0.04	0.04	0.07	8161589	0.10	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	<0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	50	<50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	6.1	0.5	19.0	8161589	28.2	0.5	8162711
Thallium (Tl)	ug/g	0.075	0.003	0.004	8161589	0.006	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	<0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	3.9	0.5	8.0	8161589	9.7	0.5	8162711
Uranium (U)	ug/g	<0.005	0.005	0.016	8161589	0.021	0.005	8162711
Vanadium (V)	ug/g	0.17	0.05	0.21	8161589	0.26	0.05	8162711
Zinc (Zn)	ug/g	13	2	12	8161589	12	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV592		TJV594	TJV596		
Sampling Date		2022/07/30 13:50		2022/07/30 14:32	2022/07/30 15:17		
COC Number		n/a		n/a	n/a		
	UNITS	**22-AWAR-S11-CL**	**QC Batch**	**22-AWAR-S12-LT**	**22-AWAR-S13-CR**	**RDL**	**QC Batch**
Metals							
Antimony (Sb)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Arsenic (As)	ug/g	<0.1	8168229	2.1	1.6	0.1	8162711
Barium (Ba)	ug/g	<0.3	8168229	23.5	12.6	0.3	8162711
Beryllium (Be)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Boron (B)	ug/g	2.7	8168229	8.1	10.4	0.5	8162711
Cadmium (Cd)	ug/g	0.05	8168229	<0.01	<0.01	0.01	8162711
Calcium (Ca)	ug/g	174	8168229	2030	2100	50	8162711
Chromium (Cr)	ug/g	<0.3	8168229	0.7	1.3	0.3	8162711
Cobalt (Co)	ug/g	0.016	8168229	0.077	0.113	0.005	8162711
Copper (Cu)	ug/g	1.1	8168229	2.1	2.4	0.5	8162711
Iron (Fe)	ug/g	8	8168229	308	326	3	8162711
Lead (Pb)	ug/g	<0.03	8168229	0.35	0.15	0.03	8162711
Magnesium (Mg)	ug/g	326	8168229	710	720	100	8162711
Manganese (Mn)	ug/g	12.2	8168229	295	244	0.3	8162711
Molybdenum (Mo)	ug/g	0.14	8168229	0.07	0.07	0.05	8162711
Nickel (Ni)	ug/g	0.39	8168229	0.36	1.36	0.05	8162711
Phosphorus (P)	ug/g	309	8168229	514	518	50	8162711
Potassium (K)	ug/g	1980	8168229	2850	2550	100	8162711
Selenium (Se)	ug/g	<0.04	8168229	<0.04	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	8168229	<0.05	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	8168229	<50	<50	50	8162711
Strontium (Sr)	ug/g	<0.5	8168229	8.6	4.7	0.5	8162711
Thallium (Tl)	ug/g	<0.003	8168229	0.030	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	8168229	<0.3	<0.3	0.3	8162711
Titanium (Ti)	ug/g	<0.5	8168229	3.2	4.2	0.5	8162711
Uranium (U)	ug/g	<0.005	8168229	0.005	<0.005	0.005	8162711
Vanadium (V)	ug/g	<0.05	8168229	0.15	0.21	0.05	8162711
Zinc (Zn)	ug/g	6	8168229	13	7	2	8162711

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Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV598		TJV600			TJV602		
Sampling Date		2022/07/30 15:40		2022/07/31 07:40			2022/07/31 08:20		
COC Number		n/a		n/a			n/a		
	UNITS	**22-AWAR-S14-SE**	**RDL**	**22-AWAR-S15-SE**	**RDL**	**QC Batch**	**22-AWAR-S16-BR**	**RDL**	**QC Batch**
Metals									
Antimony (Sb)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	0.2	0.1	0.1	0.1	8161589	0.7	0.1	8162711
Barium (Ba)	ug/g	10.8	0.3	8.4	0.3	8161589	43.5	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	2.7	0.5	1.9	0.5	8161589	6.2	0.5	8162711
Cadmium (Cd)	ug/g	0.01	0.01	<0.01	0.01	8161589	0.02	0.01	8162711
Calcium (Ca)	ug/g	1700	50	922	50	8161589	1890	50	8162711
Chromium (Cr)	ug/g	<0.3	0.3	<0.3	0.3	8161589	0.8	0.3	8162711
Cobalt (Co)	ug/g	0.017	0.005	0.011	0.005	8161589	0.251	0.005	8162711
Copper (Cu)	ug/g	2.7	0.5	1.4	0.5	8161589	3.0	0.5	8162711
Iron (Fe)	ug/g	56	3	87	3	8161589	367	3	8162711
Lead (Pb)	ug/g	<0.03	0.03	<0.03	0.03	8161589	0.17	0.03	8162711
Magnesium (Mg)	ug/g	299	100	404	100	8161589	1030	100	8162711
Manganese (Mn)	ug/g	112	0.3	11.0	0.3	8161589	59.9	0.3	8162711
Molybdenum (Mo)	ug/g	0.68	0.05	0.37	0.05	8161589	0.06	0.05	8162711
Nickel (Ni)	ug/g	0.41	0.05	0.24	0.05	8161589	2.04	0.05	8162711
Phosphorus (P)	ug/g	395	50	390	50	8161589	1170	300	8162711
Potassium (K)	ug/g	5710	500	3150	100	8161589	2430	100	8162711
Selenium (Se)	ug/g	<0.04	0.04	<0.04	0.04	8161589	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	50	82	50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	4.3	0.5	4.3	0.5	8161589	10.0	0.5	8162711
Thallium (Tl)	ug/g	<0.003	0.003	<0.003	0.003	8161589	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	<0.3	0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	0.7	0.5	0.6	0.5	8161589	4.3	0.5	8162711
Uranium (U)	ug/g	<0.005	0.005	<0.005	0.005	8161589	0.007	0.005	8162711
Vanadium (V)	ug/g	<0.05	0.05	<0.05	0.05	8161589	0.20	0.05	8162711
Zinc (Zn)	ug/g	20	2	11	2	8161589	44	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV604		TJV606		TJV607		
Sampling Date		2022/07/31 08:50		2022/07/31 09:17		2022/07/31 09:17		
COC Number		n/a		n/a		n/a		
	UNITS	**22-AWAR-S17-BR**	**QC Batch**	**22-AWAR-S18-CR**	**QC Batch**	**22-AWAR-S18-CRB**	**RDL**	**QC Batch**
Metals								
Antimony (Sb)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Arsenic (As)	ug/g	0.5	8163142	1.0	8162711	<0.1	0.1	8168229
Barium (Ba)	ug/g	11.3	8163142	15.3	8162711	0.8	0.3	8168229
Beryllium (Be)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Bismuth (Bi)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Boron (B)	ug/g	9.1	8163142	11.1	8162711	1.2	0.5	8168229
Cadmium (Cd)	ug/g	0.02	8163142	<0.01	8162711	<0.01	0.01	8168229
Calcium (Ca)	ug/g	2630	8163142	2470	8162711	104	50	8168229
Chromium (Cr)	ug/g	0.6	8163142	3.2	8162711	<0.3	0.3	8168229
Cobalt (Co)	ug/g	0.153	8163142	0.296	8162711	0.008	0.005	8168229
Copper (Cu)	ug/g	2.8	8163142	3.1	8162711	0.9	0.5	8168229
Iron (Fe)	ug/g	330	8163142	903	8162711	25	3	8168229
Lead (Pb)	ug/g	0.16	8163142	0.31	8162711	<0.03	0.03	8168229
Magnesium (Mg)	ug/g	954	8163142	875	8162711	<100	100	8168229
Manganese (Mn)	ug/g	36.7	8163142	196	8162711	9.0	0.3	8168229
Molybdenum (Mo)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Nickel (Ni)	ug/g	0.62	8163142	2.14	8162711	0.15	0.05	8168229
Phosphorus (P)	ug/g	712	8163142	397	8162711	168	50	8168229
Potassium (K)	ug/g	2390	8163142	2460	8162711	1330	100	8168229
Selenium (Se)	ug/g	<0.04	8163142	<0.04	8162711	<0.04	0.04	8168229
Silver (Ag)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	8168229
Sodium (Na)	ug/g	<50	8163142	<50	8162711	<50	50	8168229
Strontium (Sr)	ug/g	8.4	8163142	8.7	8162711	<0.5	0.5	8168229
Thallium (Tl)	ug/g	<0.003	8163142	0.004	8162711	<0.003	0.003	8168229
Tin (Sn)	ug/g	<0.3	8163142	<0.3	8162711	<0.3	0.3	8168229
Titanium (Ti)	ug/g	4.6	8163142	17.2	8162711	0.6	0.5	8168229
Uranium (U)	ug/g	0.007	8163142	0.019	8162711	<0.005	0.005	8168229
Vanadium (V)	ug/g	0.21	8163142	0.75	8162711	<0.05	0.05	8168229
Zinc (Zn)	ug/g	97	8163142	9	8162711	<2	2	8168229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV609	TJV611		TJV658		TJV660		
Sampling Date		2022/07/31 10:02	2022/08/01 15:52		2022/07/29 11:15		2022/07/29 12:00		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	22-AWAR-S19-L	22-AWAR-S20-L	RDL	22-REF1-S1-L	QC Batch	22-REF1-S2-L	RDL	QC Batch
Metals									
Antimony (Sb)	ug/g	0.21	<0.05	0.05	<0.05	8162711	<0.05	0.05	8163847
Arsenic (As)	ug/g	3.1	2.6	0.1	3.9	8162711	2.9	0.1	8163847
Barium (Ba)	ug/g	46.6	32.3	0.3	10.0	8162711	3.2	0.3	8163847
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	<0.05	8162711	<0.05	0.05	8163847
Bismuth (Bi)	ug/g	0.09	0.15	0.05	<0.05	8162711	<0.05	0.05	8163847
Boron (B)	ug/g	1.4	<0.5	0.5	<0.5	8162711	<0.5	0.5	8163847
Cadmium (Cd)	ug/g	0.12	0.03	0.01	0.04	8162711	0.05	0.01	8163847
Calcium (Ca)	ug/g	9030	9540	50	11500	8162711	2220	50	8163847
Chromium (Cr)	ug/g	23.3	19.3	0.3	<0.3	8162711	<0.3	0.3	8163847
Cobalt (Co)	ug/g	2.75	2.22	0.005	0.052	8162711	0.077	0.005	8163847
Copper (Cu)	ug/g	11.0	6.8	0.5	1.0	8162711	0.7	0.5	8163847
Iron (Fe)	ug/g	4660	4240	3	144	8162711	78	3	8163847
Lead (Pb)	ug/g	2.13	1.19	0.03	0.63	8162711	0.52	0.03	8163847
Magnesium (Mg)	ug/g	2440	2090	100	315	8162711	184	100	8163847
Manganese (Mn)	ug/g	98.9	63.1	0.3	14.1	8162711	38.4	0.3	8163847
Molybdenum (Mo)	ug/g	0.18	0.20	0.05	0.06	8162711	<0.05	0.05	8163847
Nickel (Ni)	ug/g	7.33	5.84	0.05	0.30	8162711	0.24	0.05	8163847
Phosphorus (P)	ug/g	649	309	50	182	8162711	189	50	8163847
Potassium (K)	ug/g	1810	1150	100	654	8162711	630	100	8163847
Selenium (Se)	ug/g	0.17	0.05	0.04	0.04	8162711	0.05	0.04	8163847
Silver (Ag)	ug/g	<0.05	<0.05	0.05	<0.05	8162711	<0.05	0.05	8163847
Sodium (Na)	ug/g	230	134	50	107	8162711	<50	50	8163847
Strontium (Sr)	ug/g	30.5	29.2	0.5	38.1	8162711	5.7	0.5	8163847
Thallium (Tl)	ug/g	0.035	0.034	0.003	<0.003	8162711	<0.003	0.003	8163847
Tin (Sn)	ug/g	<0.3	<0.3	0.3	<0.3	8162711	<0.3	0.3	8163847
Titanium (Ti)	ug/g	205	207	5	2.4	8162711	1.2	0.5	8163847
Uranium (U)	ug/g	0.155	0.129	0.005	0.013	8162711	<0.005	0.005	8163847
Vanadium (V)	ug/g	7.52	7.41	0.05	0.11	8162711	0.06	0.05	8163847
Zinc (Zn)	ug/g	24	13	2	10	8162711	9	2	8163847

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV662	TJV662			TJV664		TJV665		
Sampling Date		2022/07/29 12:35	2022/07/29 12:35			2022/07/29 13:10		2022/07/29 13:10		
COC Number		n/a	n/a			n/a		n/a		
	UNITS	22-REF1-S3-LT	22-REF1-S3-LT Lab-Dup	RDL	QC Batch	22-REF1-S4-CR	QC Batch	22-REF1-S4-CRB	RDL	QC Batch
Metals										
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Arsenic (As)	ug/g	0.2	0.3	0.1	8168229	1.4	8163142	<0.1	0.1	8168229
Barium (Ba)	ug/g	42.7	42.8	0.3	8168229	15.7	8163142	1.1	0.3	8168229
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Boron (B)	ug/g	9.2	8.9	0.5	8168229	13.0	8163142	1.6	0.5	8168229
Cadmium (Cd)	ug/g	<0.01	<0.01	0.01	8168229	<0.01	8163142	<0.01	0.01	8168229
Calcium (Ca)	ug/g	2590	2470	50	8168229	3130	8163142	175	50	8168229
Chromium (Cr)	ug/g	<0.3	<0.3	0.3	8168229	<0.3	8163142	<0.3	0.3	8168229
Cobalt (Co)	ug/g	0.028	0.033	0.005	8168229	0.143	8163142	0.005	0.005	8168229
Copper (Cu)	ug/g	1.7	1.7	0.5	8168229	1.9	8163142	1.6	0.5	8168229
Iron (Fe)	ug/g	18	17	3	8168229	50	8163142	4	3	8168229
Lead (Pb)	ug/g	0.03	<0.03	0.03	8168229	0.09	8163142	<0.03	0.03	8168229
Magnesium (Mg)	ug/g	668	645	100	8168229	767	8163142	<100	100	8168229
Manganese (Mn)	ug/g	522	543	2	8168229	272	8163142	8.8	0.3	8168229
Molybdenum (Mo)	ug/g	<0.05	<0.05	0.05	8168229	0.06	8163142	<0.05	0.05	8168229
Nickel (Ni)	ug/g	0.26	0.26	0.05	8168229	1.27	8163142	0.15	0.05	8168229
Phosphorus (P)	ug/g	480	477	50	8168229	379	8163142	222	50	8168229
Potassium (K)	ug/g	2330	2290	100	8168229	2300	8163142	1760	100	8168229
Selenium (Se)	ug/g	<0.04	<0.04	0.04	8168229	<0.04	8163142	<0.04	0.04	8168229
Silver (Ag)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Sodium (Na)	ug/g	<50	<50	50	8168229	<50	8163142	<50	50	8168229
Strontium (Sr)	ug/g	3.8	3.7	0.5	8168229	3.9	8163142	<0.5	0.5	8168229
Thallium (Tl)	ug/g	0.085	0.080	0.003	8168229	<0.003	8163142	<0.003	0.003	8168229
Tin (Sn)	ug/g	<0.3	<0.3	0.3	8168229	<0.3	8163142	<0.3	0.3	8168229
Titanium (Ti)	ug/g	0.7	0.7	0.5	8168229	0.9	8163142	<0.5	0.5	8168229
Uranium (U)	ug/g	<0.005	<0.005	0.005	8168229	<0.005	8163142	<0.005	0.005	8168229
Vanadium (V)	ug/g	<0.05	<0.05	0.05	8168229	<0.05	8163142	<0.05	0.05	8168229
Zinc (Zn)	ug/g	12	11	2	8168229	8	8163142	<2	2	8168229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV667	TJV668			TJV670		
Sampling Date		2022/07/29 14:03	2022/07/29 14:03			2022/07/29 15:35		
COC Number		n/a	n/a			n/a		
	UNITS	**22-REF1-S5-SE**	**22-REF1-S5-CL**	**RDL**	**QC Batch**	**22-REF2-S1-BR**	**RDL**	**QC Batch**
Metals								
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Arsenic (As)	ug/g	2.0	<0.1	0.1	8161589	0.1	0.1	8162711
Barium (Ba)	ug/g	10.3	<0.3	0.3	8161589	22.2	0.3	8162711
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Boron (B)	ug/g	2.5	2.0	0.5	8161589	5.2	0.5	8162711
Cadmium (Cd)	ug/g	<0.01	<0.01	0.01	8161589	0.08	0.01	8162711
Calcium (Ca)	ug/g	2950	412	50	8161589	1590	50	8162711
Chromium (Cr)	ug/g	0.5	<0.3	0.3	8161589	<0.3	0.3	8162711
Cobalt (Co)	ug/g	0.025	0.017	0.005	8161589	0.217	0.005	8162711
Copper (Cu)	ug/g	3.0	1.0	0.5	8161589	2.7	0.5	8162711
Iron (Fe)	ug/g	76	4	3	8161589	29	3	8162711
Lead (Pb)	ug/g	0.30	<0.03	0.03	8161589	0.03	0.03	8162711
Magnesium (Mg)	ug/g	401	262	100	8161589	770	100	8162711
Manganese (Mn)	ug/g	17.9	5.9	0.3	8161589	655	2	8162711
Molybdenum (Mo)	ug/g	0.51	0.07	0.05	8161589	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.54	0.13	0.05	8161589	1.72	0.05	8162711
Phosphorus (P)	ug/g	375	244	50	8161589	911	300	8162711
Potassium (K)	ug/g	4740	1750	100	8161589	2050	100	8162711
Selenium (Se)	ug/g	<0.04	<0.04	0.04	8161589	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	<50	50	8161589	<50	50	8162711
Strontium (Sr)	ug/g	15.8	1.4	0.5	8161589	5.7	0.5	8162711
Thallium (Tl)	ug/g	<0.003	<0.003	0.003	8161589	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	<0.3	0.3	8161589	<0.3	0.3	8162711
Titanium (Ti)	ug/g	1.0	<0.5	0.5	8161589	0.7	0.5	8162711
Uranium (U)	ug/g	0.014	<0.005	0.005	8161589	<0.005	0.005	8162711
Vanadium (V)	ug/g	<0.05	<0.05	0.05	8161589	<0.05	0.05	8162711
Zinc (Zn)	ug/g	7	4	2	8161589	78	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BUREAU VERITAS

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV672		TJV674		TJV676		TJV678		
Sampling Date		2022/07/29 15:10		2022/07/29 16:16		2022/07/29 16:45		2022/07/31 16:26		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	**22-REF2-S2-BR**	**QC Batch**	**22-REF2-S3-BR**	**QC Batch**	**22-REF2-S4-SE**	**RDL**	**22-REF2-S5-BR**	**RDL**	**QC Batch**
Metals										
Antimony (Sb)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Arsenic (As)	ug/g	0.4	8163142	0.3	8162711	0.7	0.1	0.5	0.1	8161589
Barium (Ba)	ug/g	28.1	8163142	13.5	8162711	16.0	0.3	19.9	0.3	8161589
Beryllium (Be)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Bismuth (Bi)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Boron (B)	ug/g	7.6	8163142	6.0	8162711	2.2	0.5	4.1	0.5	8161589
Cadmium (Cd)	ug/g	0.04	8163142	0.05	8162711	<0.01	0.01	0.08	0.01	8161589
Calcium (Ca)	ug/g	1970	8163142	1400	8162711	2040	50	1340	50	8161589
Chromium (Cr)	ug/g	<0.3	8163142	<0.3	8162711	<0.3	0.3	<0.3	0.3	8161589
Cobalt (Co)	ug/g	0.252	8163142	0.229	8162711	0.179	0.005	0.362	0.005	8161589
Copper (Cu)	ug/g	3.4	8163142	2.7	8162711	2.8	0.5	2.6	0.5	8161589
Iron (Fe)	ug/g	35	8163142	34	8162711	66	3	33	3	8161589
Lead (Pb)	ug/g	0.05	8163142	0.06	8162711	0.09	0.03	0.07	0.03	8161589
Magnesium (Mg)	ug/g	824	8163142	641	8162711	419	100	544	100	8161589
Manganese (Mn)	ug/g	330	8163142	313	8162711	86.4	0.3	293	0.3	8161589
Molybdenum (Mo)	ug/g	<0.05	8163142	<0.05	8162711	0.31	0.05	<0.05	0.05	8161589
Nickel (Ni)	ug/g	1.27	8163142	2.17	8162711	1.11	0.05	2.72	0.05	8161589
Phosphorus (P)	ug/g	569	8163142	521	8162711	338	50	558	300	8161589
Potassium (K)	ug/g	1890	8163142	2280	8162711	3590	100	1620	100	8161589
Selenium (Se)	ug/g	<0.04	8163142	<0.04	8162711	<0.04	0.04	<0.04	0.04	8161589
Silver (Ag)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Sodium (Na)	ug/g	<50	8163142	<50	8162711	<50	50	<50	50	8161589
Strontium (Sr)	ug/g	7.7	8163142	3.9	8162711	7.9	0.5	4.4	0.5	8161589
Thallium (Tl)	ug/g	0.005	8163142	<0.003	8162711	<0.003	0.003	<0.003	0.003	8161589
Tin (Sn)	ug/g	<0.3	8163142	<0.3	8162711	<0.3	0.3	<0.3	0.3	8161589
Titanium (Ti)	ug/g	0.7	8163142	0.7	8162711	0.7	0.5	1.0	0.5	8161589
Uranium (U)	ug/g	<0.005	8163142	<0.005	8162711	<0.005	0.005	<0.005	0.005	8161589
Vanadium (V)	ug/g	<0.05	8163142	<0.05	8162711	<0.05	0.05	<0.05	0.05	8161589
Zinc (Zn)	ug/g	107	8163142	42	8162711	8	2	31	2	8161589

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV680			TJV682			TJV684		
Sampling Date		2022/07/31 12:55			2022/07/31 13:23			2022/07/31 13:58		
COC Number		n/a			n/a			n/a		
	UNITS	22-REF3-S1-L	RDL	QC Batch	22-REF3-S2-LT	RDL	QC Batch	22-REF3-S3-BR	RDL	QC Batch
Metals										
Antimony (Sb)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Arsenic (As)	ug/g	2.5	0.1	8162711	0.5	0.1	8168229	0.3	0.1	8162711
Barium (Ba)	ug/g	2.8	0.3	8162711	35.2	0.3	8168229	16.8	0.3	8162711
Beryllium (Be)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Bismuth (Bi)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Boron (B)	ug/g	<0.5	0.5	8162711	6.8	0.5	8168229	8.5	0.5	8162711
Cadmium (Cd)	ug/g	0.08	0.01	8162711	<0.01	0.01	8168229	0.04	0.01	8162711
Calcium (Ca)	ug/g	620	50	8162711	2190	50	8168229	1690	50	8162711
Chromium (Cr)	ug/g	0.3	0.3	8162711	<0.3	0.3	8168229	<0.3	0.3	8162711
Cobalt (Co)	ug/g	0.057	0.005	8162711	0.038	0.005	8168229	0.219	0.005	8162711
Copper (Cu)	ug/g	0.8	0.5	8162711	1.6	0.5	8168229	3.1	0.5	8162711
Iron (Fe)	ug/g	85	3	8162711	30	3	8168229	33	3	8162711
Lead (Pb)	ug/g	0.62	0.03	8162711	0.06	0.03	8168229	0.04	0.03	8162711
Magnesium (Mg)	ug/g	204	100	8162711	573	100	8168229	611	100	8162711
Manganese (Mn)	ug/g	27.3	0.3	8162711	340	0.3	8168229	174	0.3	8162711
Molybdenum (Mo)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Nickel (Ni)	ug/g	0.15	0.05	8162711	0.41	0.05	8168229	0.71	0.05	8162711
Phosphorus (P)	ug/g	389	50	8162711	572	300	8168229	623	50	8162711
Potassium (K)	ug/g	1060	100	8162711	2510	100	8168229	2210	100	8162711
Selenium (Se)	ug/g	0.06	0.04	8162711	<0.04	0.04	8168229	<0.04	0.04	8162711
Silver (Ag)	ug/g	<0.05	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Sodium (Na)	ug/g	<50	50	8162711	<50	50	8168229	<50	50	8162711
Strontium (Sr)	ug/g	2.6	0.5	8162711	2.8	0.5	8168229	8.1	0.5	8162711
Thallium (Tl)	ug/g	0.007	0.003	8162711	0.153	0.003	8168229	<0.003	0.003	8162711
Tin (Sn)	ug/g	<0.3	0.3	8162711	<0.3	0.3	8168229	<0.3	0.3	8162711
Titanium (Ti)	ug/g	2.1	0.5	8162711	1.0	0.5	8168229	1.0	0.5	8162711
Uranium (U)	ug/g	<0.005	0.005	8162711	<0.005	0.005	8168229	<0.005	0.005	8162711
Vanadium (V)	ug/g	0.08	0.05	8162711	<0.05	0.05	8168229	<0.05	0.05	8162711
Zinc (Zn)	ug/g	7	2	8162711	13	2	8168229	42	2	8162711

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ICP/MS (TISSUE)

Bureau Veritas ID		TJV685	TJV687		
Sampling Date		2022/07/31 14:28	2022/07/31 14:55		
COC Number		n/a	n/a		
	UNITS	22-REF3-S4-SE	22-REF3-S5-BR	RDL	QC Batch
Metals					
Antimony (Sb)	ug/g	<0.05	<0.05	0.05	8163142
Arsenic (As)	ug/g	0.7	0.2	0.1	8163142
Barium (Ba)	ug/g	11.5	20.8	0.3	8163142
Beryllium (Be)	ug/g	<0.05	<0.05	0.05	8163142
Bismuth (Bi)	ug/g	<0.05	<0.05	0.05	8163142
Boron (B)	ug/g	2.1	12.9	0.5	8163142
Cadmium (Cd)	ug/g	0.02	0.07	0.01	8163142
Calcium (Ca)	ug/g	1260	2060	50	8163142
Chromium (Cr)	ug/g	<0.3	<0.3	0.3	8163142
Cobalt (Co)	ug/g	0.063	0.082	0.005	8163142
Copper (Cu)	ug/g	4.4	3.3	0.5	8163142
Iron (Fe)	ug/g	47	34	3	8163142
Lead (Pb)	ug/g	0.09	0.04	0.03	8163142
Magnesium (Mg)	ug/g	284	637	100	8163142
Manganese (Mn)	ug/g	72.5	253	0.3	8163142
Molybdenum (Mo)	ug/g	0.96	<0.05	0.05	8163142
Nickel (Ni)	ug/g	0.87	4.58	0.05	8163142
Phosphorus (P)	ug/g	465	684	50	8163142
Potassium (K)	ug/g	5220	2300	100	8163142
Selenium (Se)	ug/g	<0.04	<0.04	0.04	8163142
Silver (Ag)	ug/g	<0.05	<0.05	0.05	8163142
Sodium (Na)	ug/g	<50	<50	50	8163142
Strontium (Sr)	ug/g	5.7	8.2	0.5	8163142
Thallium (Tl)	ug/g	<0.003	<0.003	0.003	8163142
Tin (Sn)	ug/g	<0.3	<0.3	0.3	8163142
Titanium (Ti)	ug/g	1.1	1.0	0.5	8163142
Uranium (U)	ug/g	<0.005	<0.005	0.005	8163142
Vanadium (V)	ug/g	<0.05	<0.05	0.05	8163142
Zinc (Zn)	ug/g	9	69	2	8163142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJU728	TJU730		TJU732		TJU734		
Sampling Date		2022/08/01 11:10	2022/08/01 11:31		2022/08/01 11:58		2022/08/01 13:10		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-WRSA-S1-BR**	**22-WRSA-S2-SE**	**QC Batch**	**22-WRSA-S3-SE**	**QC Batch**	**22-WRSA-S4-L**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	<0.01	8161803	<0.01	8164229	0.09	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJU736		TJU738	TJU740		TJU742		
Sampling Date		2022/08/01 13:40		2022/08/01 14:07	2022/08/01 14:30		2022/08/02 10:45		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-WRSA-S5-BR**	**QC Batch**	**22-WRSA-S6-SE**	**22-WRSA-S7-BR**	**QC Batch**	**22-WRSA-SE**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	8161766	<0.01	0.01	8161803	<0.01	0.01	8166152

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJU744	TJU744		TJU746		TJU763		
Sampling Date		2022/08/02 11:10	2022/08/02 11:10		2022/08/02 11:45		2022/07/28 11:22		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-WRSA-S9-L**	**22-WRSA-S9-L Lab-Dup**	**QC Batch**	**22-WRSA-S10-BR**	**QC Batch**	**22-TF-S1-L**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.05	0.05	8166152	<0.01	8161803	0.08	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJU764	TJU766		TJU768	TJU770		TJU772		
Sampling Date		2022/07/28 11:22	2022/07/28 08:04		2022/07/28 08:42	2022/07/28 07:33		2022/07/28 09:21		
COC Number		n/a	n/a		n/a	n/a		n/a		
	UNITS	**22-TF-S1-SE**	**22-TF-S2-SE**	**QC Batch**	**22-TF-S3-BR**	**22-TF-S4-BR**	**QC Batch**	**22-TF-S5-LT**	**RDL**	**QC Batch**
Metals										
Mercury (Hg)	ug/g	0.01	0.01	8166152	0.02	0.01	8161766	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJU774		TJU776	TJU776		TJU781		
Sampling Date		2022/07/28 10:20		2022/07/28 10:20	2022/07/28 10:20		2022/07/28 15:46		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-TF-S6-CR**	**QC Batch**	**22-TF-S6-L**	**22-TF-S6-L Lab-Dup**	**QC Batch**	**22-TF-S11-BR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	8161803	0.25	0.21	8164229	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJU783		TJU785	TJU787	TJV569		TJV571		
Sampling Date		2022/07/28 15:12		2022/07/28 14:03	2022/07/28 14:36	2022/07/28 16:15		2022/07/28 16:45		
COC Number		n/a		n/a	n/a	n/a		n/a		
	UNITS	**22-TF-S12-SE**	**QC Batch**	**22-TF-S13-LT**	**22-TF-S4-L**	**22-AWAR-S1-SE**	**QC Batch**	**22-AWAR-S2-CR**	**RDL**	**QC Batch**
Metals										
Mercury (Hg)	ug/g	0.01	8161766	0.01	0.09	0.01	8164229	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV572		TJV574	TJV576	TJV576		
Sampling Date		2022/07/28 16:45		2022/07/30 08:35	2022/07/30 07:55	2022/07/30 07:55		
COC Number		n/a		n/a	n/a	n/a		
	UNITS	**22-AWAR-S2-CR2**	**QC Batch**	**22-AWAR-S3-L**	**22-AWAR-S4-SE**	**22-AWAR-S4-SE Lab-Dup**	**RDL**	**QC Batch**
Metals								
Mercury (Hg)	ug/g	<0.01	8164229	0.07	0.01	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		TJV577	TJV579		TJV581		TJV583		
Sampling Date		2022/07/30 07:55	2022/07/30 09:47		2022/07/30 10:50		2022/07/30 11:21		
COC Number		n/a	n/a		n/a		n/a		
	UNITS	**22-AWAR-S5-CRAN**	**22-AWAR-S5-BR**	**QC Batch**	**22-AWAR-S6-SE**	**QC Batch**	**22-AWAR-S7-SE**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	<0.01	0.01	8161766	<0.01	8166152	<0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJV585		TJV587	TJV589		TJV591		
Sampling Date		2022/07/30 11:54		2022/07/30 12:30	2022/07/30 13:00		2022/07/30 13:50		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	22-AWAR-S8-BR	QC Batch	22-AWAR-S9-LT	22-AWAR-S10-L	QC Batch	22-AWAR-S11-L	RDL	QC Batch
Metals									
Mercury (Hg)	ug/g	<0.01	8164229	0.01	0.06	8161803	0.08	0.01	8164229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV592		TJV594	TJV596		TJV598		
Sampling Date		2022/07/30 13:50		2022/07/30 14:32	2022/07/30 15:17		2022/07/30 15:40		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	22-AWAR-S11-CL	QC Batch	22-AWAR-S12-LT	22-AWAR-S13-CR	QC Batch	22-AWAR-S14-SE	RDL	QC Batch
Metals									
Mercury (Hg)	ug/g	<0.01	8161766	0.01	<0.01	8164229	<0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV600		TJV602		TJV604		
Sampling Date		2022/07/31 07:40		2022/07/31 08:20		2022/07/31 08:50		
COC Number		n/a		n/a		n/a		
	UNITS	22-AWAR-S15-SE	QC Batch	22-AWAR-S16-BR	QC Batch	22-AWAR-S17-BR	RDL	QC Batch
Metals								
Mercury (Hg)	ug/g	<0.01	8161803	<0.01	8164229	0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV606		TJV607	TJV607		TJV609		
Sampling Date		2022/07/31 09:17		2022/07/31 09:17	2022/07/31 09:17		2022/07/31 10:02		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	22-AWAR-S18-CR	QC Batch	22-AWAR-S18-CRB	22-AWAR-S18-CRB Lab-Dup	QC Batch	22-AWAR-S19-L	RDL	QC Batch
Metals									
Mercury (Hg)	ug/g	0.01	8164229	<0.01	<0.01	8161766	0.09	0.01	8164229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJV611	TJV658		TJV660	TJV662	TJV664		
Sampling Date		2022/08/01 15:52	2022/07/29 11:15		2022/07/29 12:00	2022/07/29 12:35	2022/07/29 13:10		
COC Number		n/a	n/a		n/a	n/a	n/a		
	UNITS	**22-AWAR-S20-L**	**22-REF1-S1-L**	**QC Batch**	**22-REF1-S2-L**	**22-REF1-S3-LT**	**22-REF1-S4-CR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.03	0.03	8164229	0.04	0.01	0.02	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV665		TJV667	TJV668		TJV670		
Sampling Date		2022/07/29 13:10		2022/07/29 14:03	2022/07/29 14:03		2022/07/29 15:35		
COC Number		n/a		n/a	n/a		n/a		
	UNITS	**22-REF1-S4-CRB**	**QC Batch**	**22-REF1-S5-SE**	**22-REF1-S5-CL**	**QC Batch**	**22-REF2-S1-BR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	<0.01	8161766	0.01	<0.01	8161803	<0.01	0.01	8164229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV672		TJV674		TJV676	TJV678		
Sampling Date		2022/07/29 15:10		2022/07/29 16:16		2022/07/29 16:45	2022/07/31 16:26		
COC Number		n/a		n/a		n/a	n/a		
	UNITS	**22-REF2-S2-BR**	**QC Batch**	**22-REF2-S3-BR**	**QC Batch**	**22-REF2-S4-SE**	**22-REF2-S5-BR**	**RDL**	**QC Batch**
Metals									
Mercury (Hg)	ug/g	0.01	8161766	0.01	8164229	<0.01	0.01	0.01	8161803

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		TJV680		TJV682		TJV684		TJV685		
Sampling Date		2022/07/31 12:55		2022/07/31 13:23		2022/07/31 13:58		2022/07/31 14:28		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	**22-REF3-S1-L**	**QC Batch**	**22-REF3-S2-LT**	**QC Batch**	**22-REF3-S3-BR**	**QC Batch**	**22-REF3-S4-SE**	**RDL**	**QC Batch**
Metals										
Mercury (Hg)	ug/g	0.07	8164229	0.01	8161766	<0.01	8164229	<0.01	0.01	8161766

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

ELEMENTS BY ATOMIC SPECTROSCOPY (TISSUE)

Bureau Veritas ID		TJV687		
Sampling Date		2022/07/31 14:55		
COC Number		n/a		
	UNITS	**22-REF3-S5-BR**	**RDL**	**QC Batch**
Metals				
Mercury (Hg)	ug/g	0.01	0.01	8161766
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU727
Sample ID: 22-WRSA-S1-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU728
Sample ID: 22-WRSA-S1-BR
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU729
Sample ID: 22-WRSA-S2-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU729 Dup
Sample ID: 22-WRSA-S2-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr

Bureau Veritas ID: TJU730
Sample ID: 22-WRSA-S2-SE
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU731
Sample ID: 22-WRSA-S3-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU732 **Collected:** 2022/08/01
Sample ID: 22-WRSA-S3-SE **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU733 **Collected:** 2022/08/01
Sample ID: 22-WRSA-S4-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU734 **Collected:** 2022/08/01
Sample ID: 22-WRSA-S4-L **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU735 **Collected:** 2022/08/01
Sample ID: 22-WRSA-S5-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU735 Dup **Collected:** 2022/08/01
Sample ID: 22-WRSA-S5-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU736 **Collected:** 2022/08/01
Sample ID: 22-WRSA-S5-BR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

TEST SUMMARY

Bureau Veritas ID: TJU737
Sample ID: 22-WRSA-S6-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU738
Sample ID: 22-WRSA-S6-SE
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU739
Sample ID: 22-WRSA-S7-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU740
Sample ID: 22-WRSA-S7-BR
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU741
Sample ID: 22-WRSA-S8-S
Matrix: Soil

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU742
Sample ID: 22-WRSA-SE
Matrix: Tissue

Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU743
Sample ID: 22-WRSA-S9-S
Matrix: Soil
Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU743 Dup
Sample ID: 22-WRSA-S9-S
Matrix: Soil
Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU744
Sample ID: 22-WRSA-S9-L
Matrix: Tissue
Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU744 Dup
Sample ID: 22-WRSA-S9-L
Matrix: Tissue
Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU745
Sample ID: 22-WRSA-S10-S
Matrix: Soil
Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU746
Sample ID: 22-WRSA-S10-BR
Matrix: Tissue
Collected: 2022/08/02
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU762
Sample ID: 22-TF-S1-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU763
Sample ID: 22-TF-S1-L
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU764
Sample ID: 22-TF-S1-SE
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/12	Daniel Teclu

Bureau Veritas ID: TJU765
Sample ID: 22-TF-S2-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU766
Sample ID: 22-TF-S2-SE
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/12	Daniel Teclu

Bureau Veritas ID: TJU767
Sample ID: 22-TF-S3-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

TEST SUMMARY

Bureau Veritas ID: TJU768
Sample ID: 22-TF-S3-BR
Matrix: Tissue
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU769
Sample ID: 22-TF-S4-S
Matrix: Soil
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU769 Dup
Sample ID: 22-TF-S4-S
Matrix: Soil
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli

Bureau Veritas ID: TJU770
Sample ID: 22-TF-S4-BR
Matrix: Tissue
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU771
Sample ID: 22-TF-S5-S
Matrix: Soil
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU772
Sample ID: 22-TF-S5-LT
Matrix: Tissue
Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU772 Dup
Sample ID: 22-TF-S5-LT
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU773
Sample ID: 22-TF-S6-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU774
Sample ID: 22-TF-S6-CR
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU776
Sample ID: 22-TF-S6-L
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/15	Daniel Teclu

Bureau Veritas ID: TJU776 Dup
Sample ID: 22-TF-S6-L
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/15	Daniel Teclu

Bureau Veritas ID: TJU779
Sample ID: 22-TF-S11-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU781
Sample ID: 22-TF-S11-BR
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJU782
Sample ID: 22-TF-S12-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8163041	2022/08/12	2022/08/12	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU783
Sample ID: 22-TF-S12-SE
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU784
Sample ID: 22-TF-S13-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJU785
Sample ID: 22-TF-S13-LT
Matrix: Tissue

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJU786
Sample ID: 22-TF-S14-S
Matrix: Soil

Collected: 2022/07/28
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJU787 **Collected:** 2022/07/28
Sample ID: 22-TF-S4-L **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV568 **Collected:** 2022/07/28
Sample ID: 22-AWAR-S1-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV569 **Collected:** 2022/07/28
Sample ID: 22-AWAR-S1-SE **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV570 **Collected:** 2022/07/28
Sample ID: 22-AWAR-S2-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV571 **Collected:** 2022/07/28
Sample ID: 22-AWAR-S2-CR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV572 **Collected:** 2022/07/28
Sample ID: 22-AWAR-S2-CR2 **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV573
Sample ID: 22-AWAR-S3-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8163666	2022/08/12	2022/08/15	Daniel Teclu
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV574
Sample ID: 22-AWAR-S3-L
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV575
Sample ID: 22-AWAR-S4-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8161273	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV576
Sample ID: 22-AWAR-S4-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV576 Dup
Sample ID: 22-AWAR-S4-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill

Bureau Veritas ID: TJV577
Sample ID: 22-AWAR-S5-CRAN
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV578
Sample ID: 22-AWAR-S5-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV579
Sample ID: 22-AWAR-S5-BR
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV580
Sample ID: 22-AWAR-S6-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV581
Sample ID: 22-AWAR-S6-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8166152	2022/08/15	2022/08/16	Thuy Linh Nguyen
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV582
Sample ID: 22-AWAR-S7-S
Matrix: Soil

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV583
Sample ID: 22-AWAR-S7-SE
Matrix: Tissue

Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV584 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S8-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV585 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S8-BR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV586 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S9-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV587 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S9-LT **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV588 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S10-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV589 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S10-L **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

TEST SUMMARY

Bureau Veritas ID: TJV590
Sample ID: 22-AWAR-S11-S
Matrix: Soil
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV591
Sample ID: 22-AWAR-S11-L
Matrix: Tissue
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV592
Sample ID: 22-AWAR-S11-CL
Matrix: Tissue
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV593
Sample ID: 22-AWAR-S12-S
Matrix: Soil
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV594
Sample ID: 22-AWAR-S12-LT
Matrix: Tissue
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV595
Sample ID: 22-AWAR-S13-S
Matrix: Soil
Collected: 2022/07/30
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

TEST SUMMARY

Bureau Veritas ID: TJV596 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S13-CR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV597 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S14-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV598 **Collected:** 2022/07/30
Sample ID: 22-AWAR-S14-SE **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV599 **Collected:** 2022/07/31
Sample ID: 22-AWAR-S15-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV600 **Collected:** 2022/07/31
Sample ID: 22-AWAR-S15-SE **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV601 **Collected:** 2022/07/31
Sample ID: 22-AWAR-S16-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

TEST SUMMARY

Bureau Veritas ID: TJV602
Sample ID: 22-AWAR-S16-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV603
Sample ID: 22-AWAR-S17-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV604
Sample ID: 22-AWAR-S17-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV605
Sample ID: 22-AWAR-S18-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV606
Sample ID: 22-AWAR-S18-CR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV607
Sample ID: 22-AWAR-S18-CRB
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV607 Dup
Sample ID: 22-AWAR-S18-CRB
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill

Bureau Veritas ID: TJV608
Sample ID: 22-AWAR-S19-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV609
Sample ID: 22-AWAR-S19-L
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV610
Sample ID: 22-AWAR-S20-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV611
Sample ID: 22-AWAR-S20-L
Matrix: Tissue

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV657
Sample ID: 22-REF1-S1-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

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Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV658
Sample ID: 22-REF1-S1-L
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV659
Sample ID: 22-REF1-S2-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV660
Sample ID: 22-REF1-S2-L
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163847	N/A	2022/08/12	Daniel Teclu

Bureau Veritas ID: TJV661
Sample ID: 22-REF1-S3-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV662
Sample ID: 22-REF1-S3-LT
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV662 Dup
Sample ID: 22-REF1-S3-LT
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV663
Sample ID: 22-REF1-S4-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV663 Dup
Sample ID: 22-REF1-S4-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV664
Sample ID: 22-REF1-S4-CR
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV665
Sample ID: 22-REF1-S4-CRB
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV666
Sample ID: 22-REF1-S5-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV667
Sample ID: 22-REF1-S5-SE
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

TEST SUMMARY

Bureau Veritas ID: TJV668
Sample ID: 22-REF1-S5-CL
Matrix: Tissue
Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV669
Sample ID: 22-REF2-S1-S
Matrix: Soil
Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV670
Sample ID: 22-REF2-S1-BR
Matrix: Tissue
Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV671
Sample ID: 22-REF2-S2-S
Matrix: Soil
Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV672
Sample ID: 22-REF2-S2-BR
Matrix: Tissue
Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV673
Sample ID: 22-REF2-S3-S
Matrix: Soil
Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV673 Dup
Sample ID: 22-REF2-S3-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri

Bureau Veritas ID: TJV674
Sample ID: 22-REF2-S3-BR
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV675
Sample ID: 22-REF2-S4-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV676
Sample ID: 22-REF2-S4-SE
Matrix: Tissue

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas ID: TJV677
Sample ID: 22-REF2-S5-S
Matrix: Soil

Collected: 2022/07/29
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV678
Sample ID: 22-REF2-S5-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161803	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8161589	N/A	2022/08/12	Prempal Bhatti

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV679 **Collected:** 2022/07/31
Sample ID: 22-REF3-S1-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8162803	2022/08/12	2022/08/12	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV680 **Collected:** 2022/07/31
Sample ID: 22-REF3-S1-L **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV681 **Collected:** 2022/07/31
Sample ID: 22-REF3-S2-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160746	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV682 **Collected:** 2022/07/31
Sample ID: 22-REF3-S2-LT **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8168229	N/A	2022/08/16	Prempal Bhatti

Bureau Veritas ID: TJV683 **Collected:** 2022/07/31
Sample ID: 22-REF3-S3-S **Shipped:**
Matrix: Soil **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160965	2022/08/11	2022/08/11	Medhat Nasr
pH CaCl2 EXTRACT	AT	8160732	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV684 **Collected:** 2022/07/31
Sample ID: 22-REF3-S3-BR **Shipped:**
Matrix: Tissue **Received:** 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8164229	2022/08/12	2022/08/15	Jaswinder Kaur
Metals in Vegetation by ICPMS	ICP1/MS	8162711	N/A	2022/08/15	Rupinder Gill

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

TEST SUMMARY

Bureau Veritas ID: TJV685
Sample ID: 22-REF3-S4-SE
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TJV686
Sample ID: 22-REF3-S5-S
Matrix: Soil

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8160948	2022/08/11	2022/08/11	Azita Fazaeli
pH CaCl2 EXTRACT	AT	8160260	2022/08/11	2022/08/11	Taslima Aktar

Bureau Veritas ID: TJV687
Sample ID: 22-REF3-S5-BR
Matrix: Tissue

Collected: 2022/07/31
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury in Vegetation by CVAA	CV/AA	8161766	2022/08/11	2022/08/15	Japneet Gill
Metals in Vegetation by ICPMS	ICP1/MS	8163142	N/A	2022/08/15	Rupinder Gill

Bureau Veritas ID: TLO475
Sample ID: 22-REF3-S4-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8170582	2022/08/17	2022/08/17	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	8170677	2022/08/17	2022/08/17	Taslima Aktar

Bureau Veritas ID: TLO475 Dup
Sample ID: 22-REF3-S4-S
Matrix: Soil

Collected: 2022/08/01
Shipped:
Received: 2022/08/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8170677	2022/08/17	2022/08/17	Taslima Aktar

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	20.3°C

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8160260	Available (CaCl2) pH	2022/08/11			100	97 - 103			0.19	N/A		
8160732	Available (CaCl2) pH	2022/08/11			99	N/A			0.97	N/A		
8160746	Available (CaCl2) pH	2022/08/11			100	N/A			0.38	N/A		
8160948	Acid Extractable Aluminum (Al)	2022/08/11	NC	75 - 125	103	80 - 120	<50	ug/g	1.8	30		
8160948	Acid Extractable Antimony (Sb)	2022/08/11	96	75 - 125	102	80 - 120	<0.20	ug/g	NC	30		
8160948	Acid Extractable Arsenic (As)	2022/08/11	NC	75 - 125	99	80 - 120	<1.0	ug/g	5.4	30		
8160948	Acid Extractable Barium (Ba)	2022/08/11	NC	75 - 125	100	80 - 120	<0.50	ug/g	3.6	30		
8160948	Acid Extractable Beryllium (Be)	2022/08/11	100	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
8160948	Acid Extractable Bismuth (Bi)	2022/08/11	99	75 - 125	104	80 - 120	<1.0	ug/g	NC	30		
8160948	Acid Extractable Boron (B)	2022/08/11	100	75 - 125	102	80 - 120	<5.0	ug/g	NC	30		
8160948	Acid Extractable Cadmium (Cd)	2022/08/11	96	75 - 125	98	80 - 120	<0.10	ug/g	NC	30		
8160948	Acid Extractable Calcium (Ca)	2022/08/11	NC	75 - 125	107	80 - 120	<50	ug/g	4.4	30		
8160948	Acid Extractable Chromium (Cr)	2022/08/11	101	75 - 125	100	80 - 120	<1.0	ug/g	2.4	30		
8160948	Acid Extractable Cobalt (Co)	2022/08/11	97	75 - 125	100	80 - 120	<0.10	ug/g	0.47	30		
8160948	Acid Extractable Copper (Cu)	2022/08/11	NC	75 - 125	98	80 - 120	<0.50	ug/g	11	30		
8160948	Acid Extractable Iron (Fe)	2022/08/11	NC	75 - 125	101	80 - 120	<50	ug/g	2.0	30		
8160948	Acid Extractable Lead (Pb)	2022/08/11	95	75 - 125	100	80 - 120	<1.0	ug/g	1.7	30		
8160948	Acid Extractable Magnesium (Mg)	2022/08/11	NC	75 - 125	103	80 - 120	<50	ug/g	3.4	30		
8160948	Acid Extractable Manganese (Mn)	2022/08/11	NC	75 - 125	100	80 - 120	<1.0	ug/g	1.3	30		
8160948	Acid Extractable Mercury (Hg)	2022/08/11	85	75 - 125	87	80 - 120	<0.050	ug/g	NC	30		
8160948	Acid Extractable Molybdenum (Mo)	2022/08/11	98	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8160948	Acid Extractable Nickel (Ni)	2022/08/11	NC	75 - 125	100	80 - 120	<0.50	ug/g	1.1	30		
8160948	Acid Extractable Phosphorus (P)	2022/08/11	NC	75 - 125	107	80 - 120	<50	ug/g	7.2	30		
8160948	Acid Extractable Potassium (K)	2022/08/11	NC	75 - 125	106	80 - 120	<200	ug/g	1.8	30		
8160948	Acid Extractable Selenium (Se)	2022/08/11	97	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8160948	Acid Extractable Silver (Ag)	2022/08/11	96	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8160948	Acid Extractable Sodium (Na)	2022/08/11	105	75 - 125	118	80 - 120	<50	ug/g	2.2	30		
8160948	Acid Extractable Strontium (Sr)	2022/08/11	104	75 - 125	100	80 - 120	<1.0	ug/g	5.2	30		
8160948	Acid Extractable Thallium (Tl)	2022/08/11	95	75 - 125	99	80 - 120	<0.050	ug/g	4.0	30		
8160948	Acid Extractable Tin (Sn)	2022/08/11	96	75 - 125	100	80 - 120	<1.0	ug/g	NC	30		
8160948	Acid Extractable Uranium (U)	2022/08/11	102	75 - 125	105	80 - 120	<0.050	ug/g	13	30		
8160948	Acid Extractable Vanadium (V)	2022/08/11	102	75 - 125	100	80 - 120	<5.0	ug/g	2.8	30		
8160948	Acid Extractable Zinc (Zn)	2022/08/11	NC	75 - 125	111	80 - 120	<5.0	ug/g	4.3	30		

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8160965	Acid Extractable Aluminum (Al)	2022/08/11	NC	75 - 125	99	80 - 120	<50	ug/g	1.6	30		
8160965	Acid Extractable Antimony (Sb)	2022/08/11	98	75 - 125	98	80 - 120	<0.20	ug/g	NC	30		
8160965	Acid Extractable Arsenic (As)	2022/08/11	NC	75 - 125	96	80 - 120	<1.0	ug/g	1.4	30		
8160965	Acid Extractable Barium (Ba)	2022/08/11	NC	75 - 125	95	80 - 120	<0.50	ug/g	6.3	30		
8160965	Acid Extractable Beryllium (Be)	2022/08/11	96	75 - 125	95	80 - 120	<0.20	ug/g	NC	30		
8160965	Acid Extractable Bismuth (Bi)	2022/08/11	100	75 - 125	101	80 - 120	<1.0	ug/g	NC	30		
8160965	Acid Extractable Boron (B)	2022/08/11	91	75 - 125	91	80 - 120	<5.0	ug/g	NC	30		
8160965	Acid Extractable Cadmium (Cd)	2022/08/11	99	75 - 125	95	80 - 120	<0.10	ug/g	NC	30		
8160965	Acid Extractable Calcium (Ca)	2022/08/11	NC	75 - 125	101	80 - 120	<50	ug/g	0.87	30		
8160965	Acid Extractable Chromium (Cr)	2022/08/11	95	75 - 125	96	80 - 120	<1.0	ug/g	0.50	30		
8160965	Acid Extractable Cobalt (Co)	2022/08/11	97	75 - 125	99	80 - 120	<0.10	ug/g	2.3	30		
8160965	Acid Extractable Copper (Cu)	2022/08/11	95	75 - 125	95	80 - 120	<0.50	ug/g	3.3	30		
8160965	Acid Extractable Iron (Fe)	2022/08/11	NC	75 - 125	97	80 - 120	<50	ug/g	0.21	30		
8160965	Acid Extractable Lead (Pb)	2022/08/11	96	75 - 125	99	80 - 120	<1.0	ug/g	0.64	30		
8160965	Acid Extractable Magnesium (Mg)	2022/08/11	NC	75 - 125	100	80 - 120	<50	ug/g	0.67	30		
8160965	Acid Extractable Manganese (Mn)	2022/08/11	NC	75 - 125	98	80 - 120	<1.0	ug/g	1.7	30		
8160965	Acid Extractable Mercury (Hg)	2022/08/11	89	75 - 125	92	80 - 120	<0.050	ug/g	NC	30		
8160965	Acid Extractable Molybdenum (Mo)	2022/08/11	100	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8160965	Acid Extractable Nickel (Ni)	2022/08/11	97	75 - 125	100	80 - 120	<0.50	ug/g	1.1	30		
8160965	Acid Extractable Phosphorus (P)	2022/08/11	NC	75 - 125	95	80 - 120	<50	ug/g	0.24	30		
8160965	Acid Extractable Potassium (K)	2022/08/11	NC	75 - 125	90	80 - 120	<200	ug/g	0.94	30		
8160965	Acid Extractable Selenium (Se)	2022/08/11	97	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
8160965	Acid Extractable Silver (Ag)	2022/08/11	100	75 - 125	98	80 - 120	<0.20	ug/g	NC	30		
8160965	Acid Extractable Sodium (Na)	2022/08/11	101	75 - 125	96	80 - 120	<50	ug/g	5.2	30		
8160965	Acid Extractable Strontium (Sr)	2022/08/11	104	75 - 125	96	80 - 120	<1.0	ug/g	4.0	30		
8160965	Acid Extractable Thallium (Tl)	2022/08/11	99	75 - 125	100	80 - 120	<0.050	ug/g	22	30		
8160965	Acid Extractable Tin (Sn)	2022/08/11	99	75 - 125	93	80 - 120	<1.0	ug/g	NC	30		
8160965	Acid Extractable Uranium (U)	2022/08/11	99	75 - 125	101	80 - 120	<0.050	ug/g	3.9	30		
8160965	Acid Extractable Vanadium (V)	2022/08/11	98	75 - 125	97	80 - 120	<5.0	ug/g	2.6	30		
8160965	Acid Extractable Zinc (Zn)	2022/08/11	96	75 - 125	96	80 - 120	<5.0	ug/g	4.1	30		
8161273	Acid Extractable Aluminum (Al)	2022/08/11	NC	75 - 125	102	80 - 120	<50	ug/g				
8161273	Acid Extractable Antimony (Sb)	2022/08/11	93	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8161273	Acid Extractable Arsenic (As)	2022/08/11	94	75 - 125	96	80 - 120	<1.0	ug/g	17	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8161273	Acid Extractable Barium (Ba)	2022/08/11	NC	75 - 125	99	80 - 120	<0.50	ug/g	12	30		
8161273	Acid Extractable Beryllium (Be)	2022/08/11	99	75 - 125	99	80 - 120	<0.20	ug/g	11	30		
8161273	Acid Extractable Bismuth (Bi)	2022/08/11	95	75 - 125	101	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Boron (B)	2022/08/11	101	75 - 125	101	80 - 120	<5.0	ug/g	NC	30		
8161273	Acid Extractable Cadmium (Cd)	2022/08/11	93	75 - 125	97	80 - 120	<0.10	ug/g	18	30		
8161273	Acid Extractable Calcium (Ca)	2022/08/11	NC	75 - 125	95	80 - 120	<50	ug/g				
8161273	Acid Extractable Chromium (Cr)	2022/08/11	101	75 - 125	100	80 - 120	<1.0	ug/g	9.3	30		
8161273	Acid Extractable Cobalt (Co)	2022/08/11	96	75 - 125	98	80 - 120	<0.10	ug/g	11	30		
8161273	Acid Extractable Copper (Cu)	2022/08/11	98	75 - 125	96	80 - 120	<0.50	ug/g	10	30		
8161273	Acid Extractable Iron (Fe)	2022/08/11	NC	75 - 125	99	80 - 120	<50	ug/g				
8161273	Acid Extractable Lead (Pb)	2022/08/11	97	75 - 125	98	80 - 120	<1.0	ug/g	6.8	30		
8161273	Acid Extractable Magnesium (Mg)	2022/08/11	NC	75 - 125	98	80 - 120	<50	ug/g				
8161273	Acid Extractable Manganese (Mn)	2022/08/11	NC	75 - 125	98	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Mercury (Hg)	2022/08/11	81	75 - 125	84	80 - 120	<0.050	ug/g	NC	30		
8161273	Acid Extractable Molybdenum (Mo)	2022/08/11	97	75 - 125	98	80 - 120	<0.50	ug/g	17	30		
8161273	Acid Extractable Nickel (Ni)	2022/08/11	97	75 - 125	99	80 - 120	<0.50	ug/g	4.3	30		
8161273	Acid Extractable Phosphorus (P)	2022/08/11	NC	75 - 125	104	80 - 120	<50	ug/g				
8161273	Acid Extractable Potassium (K)	2022/08/11	NC	75 - 125	101	80 - 120	<200	ug/g				
8161273	Acid Extractable Selenium (Se)	2022/08/11	92	75 - 125	96	80 - 120	<0.50	ug/g	NC	30		
8161273	Acid Extractable Silver (Ag)	2022/08/11	94	75 - 125	97	80 - 120	<0.20	ug/g	NC	30		
8161273	Acid Extractable Sodium (Na)	2022/08/11	102	75 - 125	97	80 - 120	<50	ug/g				
8161273	Acid Extractable Strontium (Sr)	2022/08/11	NC	75 - 125	97	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Thallium (Tl)	2022/08/11	91	75 - 125	96	80 - 120	<0.050	ug/g	6.2	30		
8161273	Acid Extractable Tin (Sn)	2022/08/11	97	75 - 125	97	80 - 120	<1.0	ug/g				
8161273	Acid Extractable Uranium (U)	2022/08/11	99	75 - 125	102	80 - 120	<0.050	ug/g	4.7	30		
8161273	Acid Extractable Vanadium (V)	2022/08/11	106	75 - 125	98	80 - 120	<5.0	ug/g	8.5	30		
8161273	Acid Extractable Zinc (Zn)	2022/08/11	NC	75 - 125	98	80 - 120	<5.0	ug/g	12	30		
8161589	Antimony (Sb)	2022/08/12	98	75 - 125	98	80 - 120	<0.05	ug/g	NC	30		
8161589	Arsenic (As)	2022/08/12	NC	75 - 125	95	80 - 120	<0.1	ug/g	3.0	30	95	70 - 130
8161589	Barium (Ba)	2022/08/12	NC	75 - 125	96	80 - 120	<0.3	ug/g	6.5	30		
8161589	Beryllium (Be)	2022/08/12	93	75 - 125	100	80 - 120	<0.05	ug/g	NC	30		
8161589	Bismuth (Bi)	2022/08/12	96	75 - 125	104	80 - 120	<0.05	ug/g	NC	30		
8161589	Boron (B)	2022/08/12	91	75 - 125	96	80 - 120	<0.5	ug/g	3.2	30	93	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8161589	Cadmium (Cd)	2022/08/12	95	75 - 125	95	80 - 120	<0.01	ug/g	NC	30	91	70 - 130
8161589	Calcium (Ca)	2022/08/12	NC	75 - 125	99	80 - 120	<50	ug/g	1.6	30	97	70 - 130
8161589	Chromium (Cr)	2022/08/12	91	75 - 125	92	80 - 120	<0.3	ug/g	9.3	30		
8161589	Cobalt (Co)	2022/08/12	91	75 - 125	93	80 - 120	<0.005	ug/g	27	30	84	70 - 130
8161589	Copper (Cu)	2022/08/12	92	75 - 125	92	80 - 120	<0.5	ug/g	2.4	30	92	70 - 130
8161589	Iron (Fe)	2022/08/12	92	75 - 125	94	80 - 120	<3	ug/g	5.1	30		
8161589	Lead (Pb)	2022/08/12	90	75 - 125	95	80 - 120	<0.03	ug/g	4.7	30	94	70 - 130
8161589	Magnesium (Mg)	2022/08/12	91	75 - 125	91	80 - 120	<100	ug/g	4.9	30	95	70 - 130
8161589	Manganese (Mn)	2022/08/12	NC	75 - 125	95	80 - 120	<0.3	ug/g	2.7	30	94	70 - 130
8161589	Molybdenum (Mo)	2022/08/12	94	75 - 125	94	80 - 120	<0.05	ug/g	NC	30		
8161589	Nickel (Ni)	2022/08/12	93	75 - 125	95	80 - 120	<0.05	ug/g	3.5	30	64	42 - 78
8161589	Phosphorus (P)	2022/08/12	NC	75 - 125	119	80 - 120	<50	ug/g	1.5	30	101	70 - 130
8161589	Potassium (K)	2022/08/12	NC	75 - 125	98	80 - 120	<100	ug/g	3.9	30	98	70 - 130
8161589	Selenium (Se)	2022/08/12	96	75 - 125	97	80 - 120	<0.04	ug/g	NC	30		
8161589	Silver (Ag)	2022/08/12	95	75 - 125	96	80 - 120	<0.05	ug/g	NC	30		
8161589	Sodium (Na)	2022/08/12	93	75 - 125	96	80 - 120	<50	ug/g	NC	30	79	70 - 130
8161589	Strontium (Sr)	2022/08/12	95	75 - 125	95	80 - 120	<0.5	ug/g	2.6	30	97	70 - 130
8161589	Thallium (Tl)	2022/08/12	90	75 - 125	96	80 - 120	<0.003	ug/g	0.15	30	85	70 - 130
8161589	Tin (Sn)	2022/08/12	94	75 - 125	98	80 - 120	<0.3	ug/g	NC	30		
8161589	Titanium (Ti)	2022/08/12	94	75 - 125	96	80 - 120	<0.5	ug/g	5.3	30		
8161589	Uranium (U)	2022/08/12	98	75 - 125	102	80 - 120	<0.005	ug/g	NC	30	29	23 - 40
8161589	Vanadium (V)	2022/08/12	92	75 - 125	93	80 - 120	<0.05	ug/g	5.4	30	37	28 - 52
8161589	Zinc (Zn)	2022/08/12	NC	75 - 125	93	80 - 120	<2	ug/g	2.6	30	85	70 - 130
8161766	Mercury (Hg)	2022/08/15	98	75 - 125			<0.01	ug/g	NC	35	104	70 - 130
8161803	Mercury (Hg)	2022/08/15	96	75 - 125			<0.01	ug/g	8.0	35	104	70 - 130
8162711	Antimony (Sb)	2022/08/15	104	75 - 125	106	80 - 120	<0.05	ug/g	NC	30		
8162711	Arsenic (As)	2022/08/15	93	75 - 125	100	80 - 120	<0.1	ug/g	4.2	30	107	70 - 130
8162711	Barium (Ba)	2022/08/15	104	75 - 125	98	80 - 120	<0.3	ug/g	1.8	30		
8162711	Beryllium (Be)	2022/08/15	98	75 - 125	97	80 - 120	<0.05	ug/g	NC	30		
8162711	Bismuth (Bi)	2022/08/15	110	75 - 125	107	80 - 120	<0.05	ug/g	NC	30		
8162711	Boron (B)	2022/08/15	91	75 - 125	90	80 - 120	<0.5	ug/g	3.6	30	92	70 - 130
8162711	Cadmium (Cd)	2022/08/15	100	75 - 125	99	80 - 120	<0.01	ug/g	0.69	30	98	70 - 130
8162711	Calcium (Ca)	2022/08/15	NC	75 - 125	99	80 - 120	<50	ug/g	1.3	30	98	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8162711	Chromium (Cr)	2022/08/15	94	75 - 125	92	80 - 120	<0.3	ug/g	4.4	30		
8162711	Cobalt (Co)	2022/08/15	95	75 - 125	94	80 - 120	<0.005	ug/g	12	30	88	70 - 130
8162711	Copper (Cu)	2022/08/15	98	75 - 125	95	80 - 120	<0.5	ug/g	11	30	96	70 - 130
8162711	Iron (Fe)	2022/08/15	NC	75 - 125	102	80 - 120	<3	ug/g	4.4	30		
8162711	Lead (Pb)	2022/08/15	98	75 - 125	98	80 - 120	<0.03	ug/g	1.1	30	99	70 - 130
8162711	Magnesium (Mg)	2022/08/15	101	75 - 125	102	80 - 120	<100	ug/g	1.3	30	101	70 - 130
8162711	Manganese (Mn)	2022/08/15	NC	75 - 125	99	80 - 120	<0.3	ug/g	0.90	30	104	70 - 130
8162711	Molybdenum (Mo)	2022/08/15	100	75 - 125	99	80 - 120	<0.05	ug/g	5.9	30		
8162711	Nickel (Ni)	2022/08/15	100	75 - 125	100	80 - 120	<0.05	ug/g	3.3	30	72	42 - 78
8162711	Phosphorus (P)	2022/08/15	NC	75 - 125	122 (1)	80 - 120	<50	ug/g	4.0	30	109	70 - 130
8162711	Potassium (K)	2022/08/15	NC	75 - 125	97	80 - 120	<100	ug/g	0.31	30	102	70 - 130
8162711	Selenium (Se)	2022/08/15	102	75 - 125	101	80 - 120	<0.04	ug/g	3.0	30		
8162711	Silver (Ag)	2022/08/15	95	75 - 125	97	80 - 120	<0.05	ug/g	NC	30		
8162711	Sodium (Na)	2022/08/15	107	75 - 125	105	80 - 120	<50	ug/g	2.6	30	86	70 - 130
8162711	Strontium (Sr)	2022/08/15	NC	75 - 125	98	80 - 120	<0.5	ug/g	1.4	30	103	70 - 130
8162711	Thallium (Tl)	2022/08/15	91	75 - 125	94	80 - 120	<0.003	ug/g	8.6	30	101	70 - 130
8162711	Tin (Sn)	2022/08/15	101	75 - 125	103	80 - 120	<0.3	ug/g	NC	30		
8162711	Titanium (Ti)	2022/08/15	NC	75 - 125	100	80 - 120	<0.5	ug/g	5.1	30		
8162711	Uranium (U)	2022/08/15	98	75 - 125	99	80 - 120	<0.005	ug/g	9.2	30	36	23 - 40
8162711	Vanadium (V)	2022/08/15	98	75 - 125	95	80 - 120	<0.05	ug/g	6.6	30	41	28 - 52
8162711	Zinc (Zn)	2022/08/15	NC	75 - 125	98	80 - 120	<2	ug/g	1.0	30	91	70 - 130
8162803	Acid Extractable Aluminum (Al)	2022/08/12	NC	75 - 125	109	80 - 120	<50	ug/g	0.52	30		
8162803	Acid Extractable Antimony (Sb)	2022/08/12	98	75 - 125	107	80 - 120	<0.20	ug/g	NC	30		
8162803	Acid Extractable Arsenic (As)	2022/08/12	99	75 - 125	104	80 - 120	<1.0	ug/g	9.3	30		
8162803	Acid Extractable Barium (Ba)	2022/08/12	NC	75 - 125	102	80 - 120	<0.50	ug/g	0.87	30		
8162803	Acid Extractable Beryllium (Be)	2022/08/12	98	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
8162803	Acid Extractable Bismuth (Bi)	2022/08/12	97	75 - 125	103	80 - 120	<1.0	ug/g	NC	30		
8162803	Acid Extractable Boron (B)	2022/08/12	88	75 - 125	99	80 - 120	<5.0	ug/g	NC	30		
8162803	Acid Extractable Cadmium (Cd)	2022/08/12	100	75 - 125	101	80 - 120	<0.10	ug/g	NC	30		
8162803	Acid Extractable Calcium (Ca)	2022/08/12	NC	75 - 125	110	80 - 120	<50	ug/g	1.6	30		
8162803	Acid Extractable Chromium (Cr)	2022/08/12	95	75 - 125	103	80 - 120	<1.0	ug/g	1.4	30		
8162803	Acid Extractable Cobalt (Co)	2022/08/12	98	75 - 125	104	80 - 120	<0.10	ug/g	4.6	30		
8162803	Acid Extractable Copper (Cu)	2022/08/12	94	75 - 125	104	80 - 120	<0.50	ug/g	2.3	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8162803	Acid Extractable Iron (Fe)	2022/08/12	NC	75 - 125	104	80 - 120	<50	ug/g	5.5	30		
8162803	Acid Extractable Lead (Pb)	2022/08/12	99	75 - 125	106	80 - 120	<1.0	ug/g	4.4	30		
8162803	Acid Extractable Magnesium (Mg)	2022/08/12	NC	75 - 125	99	80 - 120	<50	ug/g	2.0	30		
8162803	Acid Extractable Manganese (Mn)	2022/08/12	NC	75 - 125	104	80 - 120	<1.0	ug/g	4.1	30		
8162803	Acid Extractable Mercury (Hg)	2022/08/12	85	75 - 125	92	80 - 120	<0.050	ug/g	NC	30		
8162803	Acid Extractable Molybdenum (Mo)	2022/08/12	99	75 - 125	102	80 - 120	<0.50	ug/g	0.58	30		
8162803	Acid Extractable Nickel (Ni)	2022/08/12	100	75 - 125	104	80 - 120	<0.50	ug/g	2.5	30		
8162803	Acid Extractable Phosphorus (P)	2022/08/12	NC	75 - 125	107	80 - 120	<50	ug/g	0.11	30		
8162803	Acid Extractable Potassium (K)	2022/08/12	NC	75 - 125	104	80 - 120	<200	ug/g	1.1	30		
8162803	Acid Extractable Selenium (Se)	2022/08/12	99	75 - 125	103	80 - 120	<0.50	ug/g	NC	30		
8162803	Acid Extractable Silver (Ag)	2022/08/12	101	75 - 125	105	80 - 120	<0.20	ug/g	NC	30		
8162803	Acid Extractable Sodium (Na)	2022/08/12	103	75 - 125	101	80 - 120	<50	ug/g	3.1	30		
8162803	Acid Extractable Strontium (Sr)	2022/08/12	106	75 - 125	105	80 - 120	<1.0	ug/g	0.82	30		
8162803	Acid Extractable Thallium (Tl)	2022/08/12	100	75 - 125	108	80 - 120	<0.050	ug/g	4.3	30		
8162803	Acid Extractable Tin (Sn)	2022/08/12	102	75 - 125	104	80 - 120	<1.0	ug/g	NC	30		
8162803	Acid Extractable Uranium (U)	2022/08/12	99	75 - 125	104	80 - 120	<0.050	ug/g	2.0	30		
8162803	Acid Extractable Vanadium (V)	2022/08/12	97	75 - 125	104	80 - 120	<5.0	ug/g	3.4	30		
8162803	Acid Extractable Zinc (Zn)	2022/08/12	98	75 - 125	96	80 - 120	<5.0	ug/g	1.7	30		
8163041	Acid Extractable Aluminum (Al)	2022/08/12	NC	75 - 125	106	80 - 120	<50	ug/g				
8163041	Acid Extractable Antimony (Sb)	2022/08/12	101	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
8163041	Acid Extractable Arsenic (As)	2022/08/12	104	75 - 125	100	80 - 120	<1.0	ug/g	2.0	30		
8163041	Acid Extractable Barium (Ba)	2022/08/12	NC	75 - 125	100	80 - 120	<0.50	ug/g	3.1	30		
8163041	Acid Extractable Beryllium (Be)	2022/08/12	109	75 - 125	105	80 - 120	<0.20	ug/g	1.8	30		
8163041	Acid Extractable Bismuth (Bi)	2022/08/12	100	75 - 125	101	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Boron (B)	2022/08/12	105	75 - 125	106	80 - 120	<5.0	ug/g	NC	30		
8163041	Acid Extractable Cadmium (Cd)	2022/08/12	102	75 - 125	99	80 - 120	<0.10	ug/g	NC	30		
8163041	Acid Extractable Calcium (Ca)	2022/08/12	NC	75 - 125	104	80 - 120	<50	ug/g				
8163041	Acid Extractable Chromium (Cr)	2022/08/12	102	75 - 125	101	80 - 120	<1.0	ug/g	1.9	30		
8163041	Acid Extractable Cobalt (Co)	2022/08/12	103	75 - 125	101	80 - 120	<0.10	ug/g	2.4	30		
8163041	Acid Extractable Copper (Cu)	2022/08/12	101	75 - 125	101	80 - 120	<0.50	ug/g	0.12	30		
8163041	Acid Extractable Iron (Fe)	2022/08/12	NC	75 - 125	103	80 - 120	<50	ug/g				
8163041	Acid Extractable Lead (Pb)	2022/08/12	97	75 - 125	96	80 - 120	<1.0	ug/g	5.3	30		
8163041	Acid Extractable Magnesium (Mg)	2022/08/12	NC	75 - 125	104	80 - 120	<50	ug/g				

BUREAU VERITAS

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163041	Acid Extractable Manganese (Mn)	2022/08/12	NC	75 - 125	100	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Mercury (Hg)	2022/08/12	87	75 - 125	87	80 - 120	<0.050	ug/g				
8163041	Acid Extractable Molybdenum (Mo)	2022/08/12	104	75 - 125	100	80 - 120	<0.50	ug/g	NC	30		
8163041	Acid Extractable Nickel (Ni)	2022/08/12	102	75 - 125	102	80 - 120	<0.50	ug/g	1.2	30		
8163041	Acid Extractable Phosphorus (P)	2022/08/12	NC	75 - 125	109	80 - 120	<50	ug/g				
8163041	Acid Extractable Potassium (K)	2022/08/12	NC	75 - 125	107	80 - 120	<200	ug/g				
8163041	Acid Extractable Selenium (Se)	2022/08/12	101	75 - 125	99	80 - 120	<0.50	ug/g	NC	30		
8163041	Acid Extractable Silver (Ag)	2022/08/12	101	75 - 125	100	80 - 120	<0.20	ug/g	NC	30		
8163041	Acid Extractable Sodium (Na)	2022/08/12	NC	75 - 125	103	80 - 120	<50	ug/g				
8163041	Acid Extractable Strontium (Sr)	2022/08/12	NC	75 - 125	100	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Thallium (Tl)	2022/08/12	96	75 - 125	98	80 - 120	<0.050	ug/g	11	30		
8163041	Acid Extractable Tin (Sn)	2022/08/12	103	75 - 125	100	80 - 120	<1.0	ug/g				
8163041	Acid Extractable Uranium (U)	2022/08/12	103	75 - 125	102	80 - 120	<0.050	ug/g	12	30		
8163041	Acid Extractable Vanadium (V)	2022/08/12	106	75 - 125	101	80 - 120	<5.0	ug/g	1.9	30		
8163041	Acid Extractable Zinc (Zn)	2022/08/12	NC	75 - 125	99	80 - 120	<5.0	ug/g	0.23	30		
8163142	Antimony (Sb)	2022/08/15	100	75 - 125	105	80 - 120	<0.05	ug/g				
8163142	Arsenic (As)	2022/08/15	97	75 - 125	98	80 - 120	<0.1	ug/g			99	70 - 130
8163142	Barium (Ba)	2022/08/15	96	75 - 125	99	80 - 120	<0.3	ug/g				
8163142	Beryllium (Be)	2022/08/15	98	75 - 125	100	80 - 120	<0.05	ug/g				
8163142	Bismuth (Bi)	2022/08/15	103	75 - 125	101	80 - 120	<0.05	ug/g				
8163142	Boron (B)	2022/08/15	90	75 - 125	93	80 - 120	<0.5	ug/g			86	70 - 130
8163142	Cadmium (Cd)	2022/08/15	96	75 - 125	99	80 - 120	<0.01	ug/g			94	70 - 130
8163142	Calcium (Ca)	2022/08/15	98	75 - 125	100	80 - 120	<50	ug/g			97	70 - 130
8163142	Chromium (Cr)	2022/08/15	90	75 - 125	92	80 - 120	<0.3	ug/g				
8163142	Cobalt (Co)	2022/08/15	92	75 - 125	93	80 - 120	<0.005	ug/g			83	70 - 130
8163142	Copper (Cu)	2022/08/15	96	75 - 125	96	80 - 120	<0.5	ug/g			93	70 - 130
8163142	Iron (Fe)	2022/08/15	101	75 - 125	99	80 - 120	3,RDL=3	ug/g				
8163142	Lead (Pb)	2022/08/15	95	75 - 125	96	80 - 120	<0.03	ug/g			96	70 - 130
8163142	Magnesium (Mg)	2022/08/15	103	75 - 125	101	80 - 120	<100	ug/g			100	70 - 130
8163142	Manganese (Mn)	2022/08/15	96	75 - 125	96	80 - 120	<0.3	ug/g			100	70 - 130
8163142	Molybdenum (Mo)	2022/08/15	96	75 - 125	100	80 - 120	<0.05	ug/g				
8163142	Nickel (Ni)	2022/08/15	98	75 - 125	98	80 - 120	<0.05	ug/g			67	42 - 78
8163142	Phosphorus (P)	2022/08/15	NC	75 - 125	110	80 - 120	<50	ug/g			106	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163142	Potassium (K)	2022/08/15	NC	75 - 125	96	80 - 120	<100	ug/g			100	70 - 130
8163142	Selenium (Se)	2022/08/15	96	75 - 125	98	80 - 120	<0.04	ug/g				
8163142	Silver (Ag)	2022/08/15	94	75 - 125	97	80 - 120	<0.05	ug/g				
8163142	Sodium (Na)	2022/08/15	105	75 - 125	103	80 - 120	<50	ug/g			81	70 - 130
8163142	Strontium (Sr)	2022/08/15	95	75 - 125	96	80 - 120	<0.5	ug/g			101	70 - 130
8163142	Thallium (Tl)	2022/08/15	93	75 - 125	93	80 - 120	<0.003	ug/g			93	70 - 130
8163142	Tin (Sn)	2022/08/15	90	75 - 125	103	80 - 120	<0.3	ug/g				
8163142	Titanium (Ti)	2022/08/15	84	75 - 125	95	80 - 120	<0.5	ug/g				
8163142	Uranium (U)	2022/08/15	98	75 - 125	96	80 - 120	<0.005	ug/g			32	23 - 40
8163142	Vanadium (V)	2022/08/15	94	75 - 125	95	80 - 120	<0.05	ug/g			38	28 - 52
8163142	Zinc (Zn)	2022/08/15	95	75 - 125	96	80 - 120	<2	ug/g			89	70 - 130
8163666	Acid Extractable Aluminum (Al)	2022/08/15	NC	75 - 125	99	80 - 120	<50	ug/g				
8163666	Acid Extractable Antimony (Sb)	2022/08/15	NC	75 - 125	99	80 - 120	<0.20	ug/g				
8163666	Acid Extractable Arsenic (As)	2022/08/15	98	75 - 125	101	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Barium (Ba)	2022/08/15	NC	75 - 125	100	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Beryllium (Be)	2022/08/15	103	75 - 125	97	80 - 120	<0.20	ug/g				
8163666	Acid Extractable Bismuth (Bi)	2022/08/15	107	75 - 125	100	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Boron (B)	2022/08/15	95	75 - 125	93	80 - 120	<5.0	ug/g				
8163666	Acid Extractable Cadmium (Cd)	2022/08/15	102	75 - 125	98	80 - 120	<0.10	ug/g				
8163666	Acid Extractable Calcium (Ca)	2022/08/15	NC	75 - 125	103	80 - 120	<50	ug/g				
8163666	Acid Extractable Chromium (Cr)	2022/08/15	96	75 - 125	99	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Cobalt (Co)	2022/08/15	97	75 - 125	99	80 - 120	<0.10	ug/g				
8163666	Acid Extractable Copper (Cu)	2022/08/15	NC	75 - 125	97	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Iron (Fe)	2022/08/15	NC	75 - 125	100	80 - 120	<50	ug/g				
8163666	Acid Extractable Lead (Pb)	2022/08/15	NC	75 - 125	99	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Magnesium (Mg)	2022/08/15	NC	75 - 125	88	80 - 120	<50	ug/g				
8163666	Acid Extractable Manganese (Mn)	2022/08/15	NC	75 - 125	97	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Mercury (Hg)	2022/08/15	93	75 - 125	87	80 - 120	<0.050	ug/g				
8163666	Acid Extractable Molybdenum (Mo)	2022/08/15	95	75 - 125	98	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Nickel (Ni)	2022/08/15	NC	75 - 125	97	80 - 120	<0.50	ug/g				
8163666	Acid Extractable Phosphorus (P)	2022/08/15	NC	75 - 125	99	80 - 120	<50	ug/g				
8163666	Acid Extractable Potassium (K)	2022/08/15	NC	75 - 125	106	80 - 120	<200	ug/g				
8163666	Acid Extractable Selenium (Se)	2022/08/15	70 (1)	75 - 125	99	80 - 120	<0.50	ug/g				

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QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163666	Acid Extractable Silver (Ag)	2022/08/15	106	75 - 125	98	80 - 120	<0.20	ug/g				
8163666	Acid Extractable Sodium (Na)	2022/08/15	NC	75 - 125	100	80 - 120	<50	ug/g				
8163666	Acid Extractable Strontium (Sr)	2022/08/15	NC	75 - 125	97	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Thallium (Tl)	2022/08/15	97	75 - 125	102	80 - 120	<0.050	ug/g				
8163666	Acid Extractable Tin (Sn)	2022/08/15	8570 (1)	75 - 125	100	80 - 120	<1.0	ug/g				
8163666	Acid Extractable Uranium (U)	2022/08/15	105	75 - 125	100	80 - 120	<0.050	ug/g				
8163666	Acid Extractable Vanadium (V)	2022/08/15	NC	75 - 125	98	80 - 120	<5.0	ug/g				
8163666	Acid Extractable Zinc (Zn)	2022/08/15	NC	75 - 125	94	80 - 120	<5.0	ug/g				
8163847	Antimony (Sb)	2022/08/15	101	75 - 125	100	80 - 120	<0.05	ug/g	15	30		
8163847	Arsenic (As)	2022/08/15	NC	75 - 125	98	80 - 120	<0.1	ug/g	5.2	30	97	70 - 130
8163847	Barium (Ba)	2022/08/15	NC	75 - 125	98	80 - 120	<0.3	ug/g	5.8	30		
8163847	Beryllium (Be)	2022/08/15	97	75 - 125	95	80 - 120	<0.05	ug/g	NC	30		
8163847	Bismuth (Bi)	2022/08/15	103	75 - 125	104	80 - 120	<0.05	ug/g	7.1	30		
8163847	Boron (B)	2022/08/15	90	75 - 125	90	80 - 120	<0.5	ug/g	2.9	30	92	70 - 130
8163847	Cadmium (Cd)	2022/08/15	100	75 - 125	96	80 - 120	<0.01	ug/g	11	30	93	70 - 130
8163847	Calcium (Ca)	2022/08/15	NC	75 - 125	101	80 - 120	<50	ug/g	0.91	30	100	70 - 130
8163847	Chromium (Cr)	2022/08/15	99	75 - 125	95	80 - 120	<0.3	ug/g	11	30		
8163847	Cobalt (Co)	2022/08/15	88	75 - 125	92	80 - 120	<0.005	ug/g	11	30	86	70 - 130
8163847	Copper (Cu)	2022/08/15	NC	75 - 125	92	80 - 120	<0.5	ug/g	11	30	94	70 - 130
8163847	Iron (Fe)	2022/08/15	NC	75 - 125	101	80 - 120	4,RDL=3	ug/g	6.7	30		
8163847	Lead (Pb)	2022/08/15	NC	75 - 125	96	80 - 120	<0.03	ug/g	2.9	30	98	70 - 130
8163847	Magnesium (Mg)	2022/08/15	NC	75 - 125	101	80 - 120	<100	ug/g	3.1	30	102	70 - 130
8163847	Manganese (Mn)	2022/08/15	NC	75 - 125	99	80 - 120	<0.3	ug/g	4.0	30	101	70 - 130
8163847	Molybdenum (Mo)	2022/08/15	97	75 - 125	95	80 - 120	<0.05	ug/g	20	30		
8163847	Nickel (Ni)	2022/08/15	88	75 - 125	98	80 - 120	<0.05	ug/g	8.5	30	69	42 - 78
8163847	Phosphorus (P)	2022/08/15	NC	75 - 125	97	80 - 120	<50	ug/g	3.9	30	109	70 - 130
8163847	Potassium (K)	2022/08/15	NC	75 - 125	93	80 - 120	<100	ug/g	3.5	30	98	70 - 130
8163847	Selenium (Se)	2022/08/15	100	75 - 125	99	80 - 120	<0.04	ug/g	4.5	30		
8163847	Silver (Ag)	2022/08/15	100	75 - 125	97	80 - 120	<0.05	ug/g	0.27	30		
8163847	Sodium (Na)	2022/08/15	89	75 - 125	100	80 - 120	<50	ug/g	5.1	30	83	70 - 130
8163847	Strontium (Sr)	2022/08/15	NC	75 - 125	96	80 - 120	<0.5	ug/g	3.6	30	105	70 - 130
8163847	Thallium (Tl)	2022/08/15	90	75 - 125	93	80 - 120	<0.003	ug/g	0.88	30	97	70 - 130
8163847	Tin (Sn)	2022/08/15	100	75 - 125	97	80 - 120	<0.3	ug/g	NC	30		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8163847	Titanium (Ti)	2022/08/15	NC	75 - 125	97	80 - 120	<0.5	ug/g	3.5	30		
8163847	Uranium (U)	2022/08/15	100	75 - 125	103	80 - 120	<0.005	ug/g	11	30	34	23 - 40
8163847	Vanadium (V)	2022/08/15	92	75 - 125	93	80 - 120	<0.05	ug/g	9.4	30	37	28 - 52
8163847	Zinc (Zn)	2022/08/15	NC	75 - 125	97	80 - 120	<2	ug/g	5.4	30	90	70 - 130
8164229	Mercury (Hg)	2022/08/15	NC	75 - 125			<0.01	ug/g	18	35	97	70 - 130
8166152	Mercury (Hg)	2022/08/16	NC	75 - 125			<0.01	ug/g	0.87	35	107	70 - 130
8168229	Antimony (Sb)	2022/08/16	96	75 - 125	99	80 - 120	<0.05	ug/g	NC	30		
8168229	Arsenic (As)	2022/08/16	95	75 - 125	98	80 - 120	<0.1	ug/g	25	30	100	70 - 130
8168229	Barium (Ba)	2022/08/16	NC	75 - 125	96	80 - 120	<0.3	ug/g	0.12	30		
8168229	Beryllium (Be)	2022/08/16	96	75 - 125	98	80 - 120	<0.05	ug/g	NC	30		
8168229	Bismuth (Bi)	2022/08/16	97	75 - 125	101	80 - 120	<0.05	ug/g	NC	30		
8168229	Boron (B)	2022/08/16	93	75 - 125	92	80 - 120	<0.5	ug/g	2.4	30	89	70 - 130
8168229	Cadmium (Cd)	2022/08/16	94	75 - 125	96	80 - 120	<0.01	ug/g	NC	30	91	70 - 130
8168229	Calcium (Ca)	2022/08/16	NC	75 - 125	101	80 - 120	<50	ug/g	4.8	30	102	70 - 130
8168229	Chromium (Cr)	2022/08/16	89	75 - 125	93	80 - 120	<0.3	ug/g	NC	30		
8168229	Cobalt (Co)	2022/08/16	90	75 - 125	95	80 - 120	<0.005	ug/g	15	30	85	70 - 130
8168229	Copper (Cu)	2022/08/16	90	75 - 125	93	80 - 120	<0.5	ug/g	0.55	30	91	70 - 130
8168229	Iron (Fe)	2022/08/16	96	75 - 125	99	80 - 120	<3	ug/g	4.6	30		
8168229	Lead (Pb)	2022/08/16	89	75 - 125	96	80 - 120	<0.03	ug/g	13	30	92	70 - 130
8168229	Magnesium (Mg)	2022/08/16	NC	75 - 125	100	80 - 120	<100	ug/g	3.6	30	100	70 - 130
8168229	Manganese (Mn)	2022/08/16	NC	75 - 125	96	80 - 120	<0.3	ug/g	4.0	30	95	70 - 130
8168229	Molybdenum (Mo)	2022/08/16	93	75 - 125	96	80 - 120	<0.05	ug/g	NC	30		
8168229	Nickel (Ni)	2022/08/16	92	75 - 125	97	80 - 120	<0.05	ug/g	0.13	30	66	42 - 78
8168229	Phosphorus (P)	2022/08/16	NC	75 - 125	133 (1)	80 - 120	<50	ug/g	0.64	30	109	70 - 130
8168229	Potassium (K)	2022/08/16	NC	75 - 125	95	80 - 120	<100	ug/g	1.9	30	101	70 - 130
8168229	Selenium (Se)	2022/08/16	96	75 - 125	99	80 - 120	<0.04	ug/g	NC	30		
8168229	Silver (Ag)	2022/08/16	91	75 - 125	96	80 - 120	<0.05	ug/g	NC	30		
8168229	Sodium (Na)	2022/08/16	95	75 - 125	100	80 - 120	<50	ug/g	NC	30	85	70 - 130
8168229	Strontium (Sr)	2022/08/16	91	75 - 125	95	80 - 120	<0.5	ug/g	3.0	30	97	70 - 130
8168229	Thallium (Tl)	2022/08/16	89	75 - 125	96	80 - 120	<0.003	ug/g	6.4	30	95	70 - 130
8168229	Tin (Sn)	2022/08/16	91	75 - 125	98	80 - 120	<0.3	ug/g	NC	30		
8168229	Titanium (Ti)	2022/08/16	92	75 - 125	99	80 - 120	<0.5	ug/g	1.4	30		
8168229	Uranium (U)	2022/08/16	97	75 - 125	99	80 - 120	<0.005	ug/g	NC	30	36	23 - 40

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QUALITY ASSURANCE REPORT(CONT'D)

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8168229	Vanadium (V)	2022/08/16	91	75 - 125	95	80 - 120	<0.05	ug/g	NC	30	38	28 - 52
8168229	Zinc (Zn)	2022/08/16	91	75 - 125	96	80 - 120	<2	ug/g	2.1	30	88	70 - 130
8170582	Acid Extractable Aluminum (Al)	2022/08/17	NC	75 - 125	106	80 - 120	<50	ug/g				
8170582	Acid Extractable Antimony (Sb)	2022/08/17	105	75 - 125	105	80 - 120	<0.20	ug/g				
8170582	Acid Extractable Arsenic (As)	2022/08/17	107	75 - 125	100	80 - 120	<1.0	ug/g	NC	30		
8170582	Acid Extractable Barium (Ba)	2022/08/17	NC	75 - 125	100	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Beryllium (Be)	2022/08/17	105	75 - 125	100	80 - 120	<0.20	ug/g				
8170582	Acid Extractable Bismuth (Bi)	2022/08/17	110	75 - 125	104	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Boron (B)	2022/08/17	100	75 - 125	100	80 - 120	<5.0	ug/g				
8170582	Acid Extractable Cadmium (Cd)	2022/08/17	107	75 - 125	102	80 - 120	<0.10	ug/g				
8170582	Acid Extractable Calcium (Ca)	2022/08/17	NC	75 - 125	110	80 - 120	<50	ug/g				
8170582	Acid Extractable Chromium (Cr)	2022/08/17	105	75 - 125	104	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Cobalt (Co)	2022/08/17	110	75 - 125	104	80 - 120	<0.10	ug/g				
8170582	Acid Extractable Copper (Cu)	2022/08/17	105	75 - 125	101	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Iron (Fe)	2022/08/17	NC	75 - 125	102	80 - 120	<50	ug/g				
8170582	Acid Extractable Lead (Pb)	2022/08/17	109	75 - 125	103	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Magnesium (Mg)	2022/08/17	NC	75 - 125	99	80 - 120	<50	ug/g				
8170582	Acid Extractable Manganese (Mn)	2022/08/17	NC	75 - 125	104	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Mercury (Hg)	2022/08/17	100	75 - 125	95	80 - 120	<0.050	ug/g				
8170582	Acid Extractable Molybdenum (Mo)	2022/08/17	107	75 - 125	103	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Nickel (Ni)	2022/08/17	108	75 - 125	106	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Phosphorus (P)	2022/08/17	NC	75 - 125	106	80 - 120	<50	ug/g				
8170582	Acid Extractable Potassium (K)	2022/08/17	NC	75 - 125	95	80 - 120	<200	ug/g				
8170582	Acid Extractable Selenium (Se)	2022/08/17	107	75 - 125	105	80 - 120	<0.50	ug/g				
8170582	Acid Extractable Silver (Ag)	2022/08/17	110	75 - 125	104	80 - 120	<0.20	ug/g				
8170582	Acid Extractable Sodium (Na)	2022/08/17	113	75 - 125	104	80 - 120	<50	ug/g				
8170582	Acid Extractable Strontium (Sr)	2022/08/17	109	75 - 125	103	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Thallium (Tl)	2022/08/17	111	75 - 125	104	80 - 120	<0.050	ug/g				
8170582	Acid Extractable Tin (Sn)	2022/08/17	105	75 - 125	97	80 - 120	<1.0	ug/g				
8170582	Acid Extractable Uranium (U)	2022/08/17	109	75 - 125	103	80 - 120	<0.050	ug/g				
8170582	Acid Extractable Vanadium (V)	2022/08/17	NC	75 - 125	102	80 - 120	<5.0	ug/g				
8170582	Acid Extractable Zinc (Zn)	2022/08/17	117	75 - 125	104	80 - 120	<5.0	ug/g				

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8170677	Available (CaCl2) pH	2022/08/17			100	97 - 103			0.55	N/A		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Bureau Veritas Job #: C2M3525
Report Date: 2022/08/17

Agnico-Eagle
Site Location: MELIADINE MINE, NUNAVUT
Your P.O. #: OL-1129375

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Exceedance Summary Table – Metal Mining Effluent Reg

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

APPENDIX D

Vegetation and Soil Samples Data Tables

SOIL METALS AND MERCURY (ICP/MS)

				Sample Location			TF-S1	TF-S2	TF-S3	TF-S4	TF-S5	TF-S6	TF-S11	TF-S12	TF-S13	TF-S14	WRSA-S1	WRSA-S2
				Sample Name			22-TF-S1-S	22-TF-S2-S	22-TF-S3-S	22-TF-S4-S	22-TF-S5-S	22-TF-S6-S	22-TF-S11-S	22-TF-S12-S	22-TF-S13-S	22-TF-S14-S	22-WRSA-S1-S	22-WRSA-S2-S
				Sampling Date			2022-07-28 11:22	2022-07-28 08:04	2022-07-28 08:42	2022-07-28 07:33	2022-07-28 09:21	2022-07-28 10:20	2022-07-28 15:46	2022-07-28 15:12	2022-07-28 14:03	2022-07-28 14:36	2022-08-01 11:10	2022-08-01 11:31
Parameter	**Units**	**RDL**	**Agr**	**Res**	**Com**	**Ind**												
Aluminum (Al)	mg/kg	50	NA	NA	NA	NA	11000	6100	3900	5900	4300	5400	6200	4400	6000	4000	3500	4900
Antimony (Sb)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Arsenic (As)	mg/kg	1.0	12	12	12	12	19	21	11	34	8.0	25	40	6.0	32	9.4	360	330
Barium (Ba)	mg/kg	0.50	750	500	2000	2000	39	63	25	39	23	61	110	22	39	47	90	27
Beryllium (Be)	mg/kg	0.20	4	4	8	8	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bismuth (Bi)	mg/kg	1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron (B)	mg/kg	5.0	2	NA	NA	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.9	<5.0
Cadmium (Cd)	mg/kg	0.10	1.4	10	22	22	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	0.19	<0.10	<0.10	<0.10	0.28	<0.10
Calcium (Ca)	mg/kg	50	NA	NA	NA	NA	5700	8900	2600	3200	2200	5200	19000	2800	3000	4400	19000	3700
Chromium (Cr)	mg/kg	1.0	64	64	87	87	49	18	14	21	16	24	11	16	22	17	7.9	17
Cobalt (Co)	mg/kg	0.10	40	50	300	300	12	10	4.0	12	5.1	5.4	8.0	4.1	12	5.9	4.5	7.5
Copper (Cu)	mg/kg	0.50	63	63	91	91	16	28	15	33	5.9	13	49	6.8	16	10	30	19
Iron (Fe)	mg/kg	50	NA	NA	NA	NA	20000	13000	8100	13000	10000	11000	13000	8000	14000	11000	9400	14000
Lead (Pb)	mg/kg	1.0	70	140	260	600	4.6	6.2	3.2	6.1	2.9	7.1	3.8	2.3	6.5	3.5	12	12
Magnesium (Mg)	mg/kg	50	NA	NA	NA	NA	8900	4400	2500	3700	2900	4400	5000	2800	4200	2800	3100	3100
Manganese (Mn)	mg/kg	1.0	NA	NA	NA	NA	200	320	63	130	130	220	500	73	210	120	250	120
Mercury (Hg)	mg/kg	0.050	6.6	6.6	24	50	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.053	<0.050	<0.050	<0.050	0.13	<0.050
Molybdenum (Mo)	mg/kg	0.50	5	10	40	40	0.81	0.59	<0.50	<0.50	<0.50	<0.50	1.3	0.56	0.57	<0.50	1.1	<0.50
Nickel (Ni)	mg/kg	0.50	45	45	89	89	41	25	10	26	10	21	33	11	19	12	22	18
Phosphorus (P)	mg/kg	50	NA	NA	NA	NA	370	590	510	670	420	610	970	600	390	630	610	570
Potassium (K)	mg/kg	200	NA	NA	NA	NA	500	760	490	940	560	940	460	520	630	680	720	510
Selenium (Se)	mg/kg	0.50	1	1	2.9	2.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.83	<0.50	<0.50	<0.50	<0.50	<0.50
Silver (Ag)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sodium (Na)	mg/kg	50	NA	NA	NA	NA	380	110	87	120	70	100	120	84	91	99	170	120
Strontium (Sr)	mg/kg	1.0	NA	NA	NA	NA	32	46	13	18	12	37	120	14	19	23	93	19
Thallium (Tl)	mg/kg	0.050	1	1	1	1	<0.050	0.095	0.079	0.086	0.081	0.079	0.11	<0.050	0.080	0.066	0.071	0.066
Tin (Sn)	mg/kg	1.0	5	50	300	300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium (U)	mg/kg	0.050	23	23	33	300	1.2	1.3	0.82	0.65	0.59	0.70	4.3	0.78	0.68	0.65	0.32	0.48
Vanadium (V)	mg/kg	5.0	130	130	130	130	38	19	15	20	17	20	18	14	20	18	13	16
Zinc (Zn)	mg/kg	5.0	250	250	410	410	51	46	18	26	19	24	62	16	32	21	55	23

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

NA = Not Available

SOIL METALS AND MERCURY (ICP/MS)

				Sample Location			WRSA-S3	WRSA-S4	WRSA-S5	WRSA-S6	WRSA-S7	WRSA-S8	WRSA-S9	WRSA-S10	AWAR-S1	AWAR-S2	AWAR-S3	AWAR-S4	AWAR-S5
				Sample Name			22-WRSA-S3-S	22-WRSA-S4-S	22-WRSA-S5-S	22-WRSA-S6-S	22-WRSA-S7-S	22-WRSA-S8-S	22-WRSA-S9-S	22-WRSA-S10-S	22-AWAR-S1-S	22-AWAR-S2-S	22-AWAR-S3-S	22-AWAR-S4-S	22-AWAR-S5-S
				Sampling Date			2022-08-01 11:58	2022-08-01 13:10	2022-08-01 13:40	2022-08-01 14:07	2022-08-01 14:30	2022-08-02 10:45	2022-08-02 11:10	2022-08-02 11:45	2022-07-28 16:15	2022-07-28 16:45	2022-07-30 08:35	2022-07-30 07:55	2022-07-30 09:47
Parameter	**Units**	**RDL**	**Agr**	**Res**	**Com**	**Ind**													
Aluminum (Al)	mg/kg	50	NA	NA	NA	NA	5900	4000	4100	4300	6300	3600	3400	5500	5600	1500	5400	1800	5400
Antimony (Sb)	mg/kg	0.20	20	20	40	40	0.25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.26	<0.20
Arsenic (As)	mg/kg	1.0	12	12	12	12	1100	14	4.1	5.7	4.4	2.9	5.9	44	18	9.5	51	19	25
Barium (Ba)	mg/kg	0.50	750	500	2000	2000	56	81	28	37	41	23	18	66	36	77	31	110	66
Beryllium (Be)	mg/kg	0.20	4	4	8	8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bismuth (Bi)	mg/kg	1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron (B)	mg/kg	5.0	2	NA	NA	NA	6.3	7.1	<5.0	<5.0	<5.0	<5.0	<5.0	5.5	<5.0	7.0	<5.0	17	<5.0
Cadmium (Cd)	mg/kg	0.10	1.4	10	22	22	0.31	0.16	<0.10	<0.10	<0.10	<0.10	<0.10	0.20	<0.10	0.21	<0.10	0.36	0.11
Calcium (Ca)	mg/kg	50	NA	NA	NA	NA	12000	17000	4100	6100	4300	4100	4400	15000	3800	18000	3300	39000	9000
Chromium (Cr)	mg/kg	1.0	64	64	87	87	21	17	16	15	25	14	14	20	21	3.4	18	4.8	21
Cobalt (Co)	mg/kg	0.10	40	50	300	300	6.4	5.8	3.0	3.2	6.2	3.1	2.9	3.9	10	2.1	9.4	4.1	8.5
Copper (Cu)	mg/kg	0.50	63	63	91	91	41	15	7.9	54	16	5.7	11	57	27	46	26	160	43
Iron (Fe)	mg/kg	50	NA	NA	NA	NA	34000	8600	8600	8100	14000	8000	7700	24000	13000	3000	14000	3600	12000
Lead (Pb)	mg/kg	1.0	70	140	260	600	37	2.8	2.7	3.1	3.0	2.1	1.9	6.6	6.5	2.4	7.9	2.9	4.4
Magnesium (Mg)	mg/kg	50	NA	NA	NA	NA	3500	3100	2700	2500	4500	2400	2300	2400	3600	1600	3300	2000	3400
Manganese (Mn)	mg/kg	1.0	NA	NA	NA	NA	230	140	87	74	140	86	65	87	250	26	130	320	330
Mercury (Hg)	mg/kg	0.050	6.6	6.6	24	50	0.071	0.097	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.15	<0.050	0.094	0.064
Molybdenum (Mo)	mg/kg	0.50	5	10	40	40	2.3	0.95	0.95	0.61	<0.50	0.65	0.99	5.6	0.64	0.90	<0.50	1.0	0.64
Nickel (Ni)	mg/kg	0.50	45	45	89	89	29	12	11	17	19	9.0	11	27	22	16	23	57	26
Phosphorus (P)	mg/kg	50	NA	NA	NA	NA	770	580	420	530	650	510	460	1100	650	680	570	950	690
Potassium (K)	mg/kg	200	NA	NA	NA	NA	910	690	420	390	1100	470	440	410	920	400	530	350	310
Selenium (Se)	mg/kg	0.50	1	1	2.9	2.9	0.68	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	<0.50	0.52	<0.50	1.1	<0.50
Silver (Ag)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sodium (Na)	mg/kg	50	NA	NA	NA	NA	720	90	72	79	190	79	69	140	120	92	92	93	79
Strontium (Sr)	mg/kg	1.0	NA	NA	NA	NA	110	89	23	37	22	23	24	92	22	87	17	140	27
Thallium (Tl)	mg/kg	0.050	1	1	1	1	0.074	0.063	0.070	0.10	0.11	0.081	0.065	0.13	0.087	<0.050	0.068	0.16	0.079
Tin (Sn)	mg/kg	1.0	5	50	300	300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium (U)	mg/kg	0.050	23	23	33	300	1.1	0.49	1.6	1.8	0.72	0.66	0.49	7.2	0.69	0.94	0.60	4.0	0.63
Vanadium (V)	mg/kg	5.0	130	130	130	130	32	16	18	17	25	15	14	71	20	<5.0	15	<5.0	19
Zinc (Zn)	mg/kg	5.0	250	250	410	410	52	48	16	21	28	14	16	17	25	23	24	60	22

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

NA = Not Available

SOIL METALS AND MERCURY (ICP/MS)

				Sample Location			AWAR-S6	AWAR-S7	AWAR-S8	AWAR-S9	AWAR-S10	AWAR-S11	AWAR-S12	AWAR-S13	AWAR-S14	AWAR-S15	AWAR-S16	AWAR-S17	AWAR-S18
				Sample Name			22-AWAR-S6-S	22-AWAR-S7-S	22-AWAR-S8-S	22-AWAR-S9-S	22-AWAR-S10-S	22-AWAR-S11-S	22-AWAR-S12-S	22-AWAR-S13-S	22-AWAR-S14-S	22-AWAR-S15-S	22-AWAR-S16-S	22-AWAR-S17-S	22-AWAR-S18-S
				Sampling Date			2022-07-30 10:50	2022-07-30 11:21	2022-07-30 11:54	2022-07-30 12:30	2022-07-30 13:00	2022-07-30 13:50	2022-07-30 14:32	2022-07-30 15:17	2022-07-30 15:40	2022-07-31 07:40	2022-07-31 08:20	2022-07-31 08:50	2022-07-31 09:17
Parameter	**Units**	**RDL**	**Agr**	**Res**	**Com**	**Ind**													
Aluminum (Al)	mg/kg	50	NA	NA	NA	NA	2300	11000	6500	5700	4500	2900	1600	6200	4200	1300	4000	3200	3200
Antimony (Sb)	mg/kg	0.20	20	20	40	40	0.34	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.50	<0.20
Arsenic (As)	mg/kg	1.0	12	12	12	12	24	16	19	8.7	2.5	1.7	2.0	1.4	2.6	<1.0	1.4	18	1.4
Barium (Ba)	mg/kg	0.50	750	500	2000	2000	110	120	48	23	130	130	30	74	170	36	34	99	9.5
Beryllium (Be)	mg/kg	0.20	4	4	8	8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bismuth (Bi)	mg/kg	1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron (B)	mg/kg	5.0	2	NA	NA	NA	8.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10	<5.0
Cadmium (Cd)	mg/kg	0.10	1.4	10	22	22	0.16	<0.10	0.11	<0.10	0.19	0.43	1.1	0.19	1.0	0.11	<0.10	0.51	<0.10
Calcium (Ca)	mg/kg	50	NA	NA	NA	NA	30000	5700	4600	1400	11000	3900	3300	1000	11000	3000	1100	24000	750
Chromium (Cr)	mg/kg	1.0	64	64	87	87	4.2	14	27	22	11	4.8	2.2	25	9.0	4.4	16	12	21
Cobalt (Co)	mg/kg	0.10	40	50	300	300	3.2	15	10	6.0	5.2	1.8	2.0	3.8	9.0	1.5	2.8	13	2.3
Copper (Cu)	mg/kg	0.50	63	63	91	91	210	29	32	4.8	47	20	5.1	15	77	3.9	2.4	110	2.1
Iron (Fe)	mg/kg	50	NA	NA	NA	NA	5000	20000	14000	11000	8500	4000	6000	12000	8500	24000	7900	8500	7700
Lead (Pb)	mg/kg	1.0	70	140	260	600	2.2	1.1	4.4	3.4	1.3	2.4	1.5	3.0	4.1	<1.0	2.0	2.4	1.7
Magnesium (Mg)	mg/kg	50	NA	NA	NA	NA	1300	8600	4200	3300	3000	1200	790	3300	1700	490	2600	3600	2100
Manganese (Mn)	mg/kg	1.0	NA	NA	NA	NA	25	300	210	160	150	11	19	96	550	6.9	66	490	64
Mercury (Hg)	mg/kg	0.050	6.6	6.6	24	50	0.12	<0.050	<0.050	<0.050	0.079	0.13	0.12	0.10	0.23	0.052	<0.050	0.23	<0.050
Molybdenum (Mo)	mg/kg	0.50	5	10	40	40	0.70	0.70	<0.50	<0.50	<0.50	<0.50	0.88	0.73	1.6	<0.50	<0.50	1.0	<0.50
Nickel (Ni)	mg/kg	0.50	45	45	89	89	28	25	24	9.9	16	6.9	6.2	9.4	15	3.9	6.8	22	5.8
Phosphorus (P)	mg/kg	50	NA	NA	NA	NA	820	400	640	310	520	720	770	550	860	500	290	1300	200
Potassium (K)	mg/kg	200	NA	NA	NA	NA	240	1000	860	620	770	370	320	1600	520	<200	830	620	270
Selenium (Se)	mg/kg	0.50	1	1	2.9	2.9	1.1	<0.50	<0.50	<0.50	<0.50	0.68	<0.50	<0.50	0.74	<0.50	<0.50	0.88	<0.50
Silver (Ag)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sodium (Na)	mg/kg	50	NA	NA	NA	NA	83	110	100	62	68	84	160	80	91	79	68	110	<50
Strontium (Sr)	mg/kg	1.0	NA	NA	NA	NA	110	26	16	8.2	34	41	84	9.6	39	24	7.7	61	5.9
Thallium (Tl)	mg/kg	0.050	1	1	1	1	0.087	0.069	0.073	<0.050	0.061	<0.050	<0.050	0.11	0.24	<0.050	<0.050	0.17	<0.050
Tin (Sn)	mg/kg	1.0	5	50	300	300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium (U)	mg/kg	0.050	23	23	33	300	1.5	1.7	0.66	0.32	0.40	0.84	0.41	0.67	3.1	0.37	0.41	2.0	0.26
Vanadium (V)	mg/kg	5.0	130	130	130	130	5.2	30	22	20	16	<5.0	<5.0	25	10	<5.0	16	7.0	14
Zinc (Zn)	mg/kg	5.0	250	250	410	410	6.1	41	28	26	18	19	10	26	21	10	15	41	9.7

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

NA = Not Available

SOIL METALS AND MERCURY (ICP/MS)

				Sample Location			AWAR-S19	AWAR-S20	REF1-S1	REF1-S2	REF1-S3	REF1-S4	REF1-S5	REF2-S1	REF2-S2	REF2-S3	REF2-S4	REF2-S5	REF3-S1
				Sample Name			22-AWAR-S19-S	22-AWAR-S20-S	22-REF1-S1-S	22-REF1-S2-S	22-REF1-S3-S	22-REF1-S4-S	22-REF1-S5-S	22-REF2-S1-S	22-REF2-S2-S	22-REF2-S3-S	22-REF2-S4-S	22-REF2-S5-S	22-REF3-S1-S
				Sampling Date			2022-07-31 10:02	2022-08-01 15:52	2022-07-29 11:15	2022-07-29 12:00	2022-07-29 12:35	2022-07-29 13:10	2022-07-29 14:03	2022-07-29 15:35	2022-07-29 15:10	2022-07-29 16:16	2022-07-29 16:45	2022-07-29 16:26	2022-07-31 12:55
Parameter	Units	RDL	Agr	Res	Com	Ind													
Aluminum (Al)	mg/kg	50	NA	NA	NA	NA	8700	8800	4800	5400	890	2400	5200	5400	2300	5900	4900	8000	1800
Antimony (Sb)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	0.25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Arsenic (As)	mg/kg	1.0	12	12	12	12	5.9	3.0	16	42	<1.0	2.9	4.8	1.1	1.7	4.6	2.3	9.3	1.8
Barium (Ba)	mg/kg	0.50	750	500	2000	2000	130	110	130	110	40	130	71	58	98	41	39	69	98
Beryllium (Be)	mg/kg	0.20	4	4	8	8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bismuth (Bi)	mg/kg	1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Boron (B)	mg/kg	5.0	2	NA	NA	NA	<5.0	8.6	6.8	5.7	<5.0	6.4	7.5	<5.0	<5.0	<5.0	<5.0	<5.0	13
Cadmium (Cd)	mg/kg	0.10	1.4	10	22	22	0.31	0.18	0.25	0.18	0.44	0.13	0.16	<0.10	0.39	<0.10	<0.10	<0.10	0.41
Calcium (Ca)	mg/kg	50	NA	NA	NA	NA	8600	15000	26000	19000	5600	24000	21000	950	5600	2300	2300	3000	23000
Chromium (Cr)	mg/kg	1.0	64	64	87	87	42	39	13	27	2.2	4.8	13	20	6.0	23	20	33	5.1
Cobalt (Co)	mg/kg	0.10	40	50	300	300	10	7.1	13	15	1.4	2.6	3.4	3.2	5.4	5.5	4.3	10	1.3
Copper (Cu)	mg/kg	0.50	63	63	91	91	27	140	81	35	6.0	36	68	4.2	28	13	14	30	34
Iron (Fe)	mg/kg	50	NA	NA	NA	NA	17000	15000	13000	23000	1900	3600	14000	9800	3400	12000	8200	16000	3300
Lead (Pb)	mg/kg	1.0	70	140	260	600	5.3	2.6	1.9	4.5	<1.0	1.1	1.4	2.5	1.1	3.9	3.0	3.7	3.6
Magnesium (Mg)	mg/kg	50	NA	NA	NA	NA	6700	6500	3400	3600	900	1500	2400	3100	610	3200	2900	5100	1700
Manganese (Mn)	mg/kg	1.0	NA	NA	NA	NA	210	180	690	1100	6.3	38	50	150	41	110	80	160	21
Mercury (Hg)	mg/kg	0.050	6.6	6.6	24	50	0.25	0.076	0.080	0.061	0.093	0.10	<0.050	0.082	<0.050	<0.050	<0.050	<0.050	0.26
Molybdenum (Mo)	mg/kg	0.50	5	10	40	40	<0.50	1.0	1.4	2.1	<0.50	0.90	0.86	<0.50	1.2	0.61	<0.50	<0.50	0.79
Nickel (Ni)	mg/kg	0.50	45	45	89	89	22	28	45	36	3.5	18	34	8.6	20	13	13	27	8.1
Phosphorus (P)	mg/kg	50	NA	NA	NA	NA	780	660	790	700	570	740	560	380	830	530	570	650	1100
Potassium (K)	mg/kg	200	NA	NA	NA	NA	1900	1800	500	660	270	290	1300	730	350	1000	1000	1800	610
Selenium (Se)	mg/kg	0.50	1	1	2.9	2.9	<0.50	0.63	1.2	0.75	<0.50	0.55	0.59	<0.50	0.50	<0.50	<0.50	<0.50	0.59
Silver (Ag)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sodium (Na)	mg/kg	50	NA	NA	NA	NA	140	320	52	<50	59	<50	<50	<50	130	120	120	170	160
Strontium (Sr)	mg/kg	1.0	NA	NA	NA	NA	40	64	140	97	40	130	110	8.3	28	14	14	15	130
Thallium (Tl)	mg/kg	0.050	1	1	1	1	0.16	0.22	0.16	0.11	<0.050	0.070	0.097	0.079	0.090	0.096	0.088	0.13	0.097
Tin (Sn)	mg/kg	1.0	5	50	300	300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium (U)	mg/kg	0.050	23	23	33	300	0.74	3.4	3.1	2.7	0.11	0.39	1.6	0.73	1.2	0.78	0.68	0.82	0.60
Vanadium (V)	mg/kg	5.0	130	130	130	130	34	29	18	22	<5.0	<5.0	11	15	6.3	23	19	28	<5.0
Zinc (Zn)	mg/kg	5.0	250	250	410	410	43	28	29	39	21	9.9	20	26	7.9	16	17	29	35

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

NA = Not Available

SOIL METALS AND MERCURY (ICP/MS)

				Sample Location			REF3-S2	REF3-S3	REF3-S4	REF3-S5
				Sample Name			22-REF3-S2-S	22-REF3-S3-S	22-REF3-S4-S	22-REF3-S5-S
				Sampling Date			2022-07-31 13:23	2022-07-31 13:58	2022-08-01 11:10	2022-07-31 14:55
Parameter	Units	RDL	Agr	Res	Com	Ind				
Aluminum (Al)	mg/kg	50	NA	NA	NA	NA	6500	3800	10000	14000
Antimony (Sb)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20
Arsenic (As)	mg/kg	1.0	12	12	12	12	<1.0	1.2	1.5	9.9
Barium (Ba)	mg/kg	0.50	750	500	2000	2000	110	81	95	240
Beryllium (Be)	mg/kg	0.20	4	4	8	8	<0.20	<0.20	<0.20	0.25
Bismuth (Bi)	mg/kg	1.0	NA	NA	NA	NA	<1.0	<1.0	<1.0	<1.0
Boron (B)	mg/kg	5.0	2	NA	NA	NA	<5.0	5.0	<5.0	<5.0
Cadmium (Cd)	mg/kg	0.10	1.4	10	22	22	0.29	0.15	<0.10	0.26
Calcium (Ca)	mg/kg	50	NA	NA	NA	NA	1800	13000	4300	5100
Chromium (Cr)	mg/kg	1.0	64	64	87	87	23	15	50	58
Cobalt (Co)	mg/kg	0.10	40	50	300	300	4.8	3.4	5.8	20
Copper (Cu)	mg/kg	0.50	63	63	91	91	7.8	13	37	47
Iron (Fe)	mg/kg	50	NA	NA	NA	NA	9200	7300	20000	38000
Lead (Pb)	mg/kg	1.0	70	140	260	600	1.8	2.8	5.3	3.7
Magnesium (Mg)	mg/kg	50	NA	NA	NA	NA	4000	2700	5800	9700
Manganese (Mn)	mg/kg	1.0	NA	NA	NA	NA	79	53	130	2100
Mercury (Hg)	mg/kg	0.050	6.6	6.6	24	50	0.13	0.11	<0.050	<0.050
Molybdenum (Mo)	mg/kg	0.50	5	10	40	40	0.73	0.55	2.5	2.0
Nickel (Ni)	mg/kg	0.50	45	45	89	89	12	8.7	21	52
Phosphorus (P)	mg/kg	50	NA	NA	NA	NA	570	460	650	850
Potassium (K)	mg/kg	200	NA	NA	NA	NA	2400	960	2100	4100
Selenium (Se)	mg/kg	0.50	1	1	2.9	2.9	<0.50	<0.50	<0.50	0.58
Silver (Ag)	mg/kg	0.20	20	20	40	40	<0.20	<0.20	<0.20	<0.20
Sodium (Na)	mg/kg	50	NA	NA	NA	NA	100	87	110	200
Strontium (Sr)	mg/kg	1.0	NA	NA	NA	NA	17	68	24	24
Thallium (Tl)	mg/kg	0.050	1	1	1	1	0.13	0.073	0.27	0.42
Tin (Sn)	mg/kg	1.0	5	50	300	300	<1.0	<1.0	<1.0	<1.0
Uranium (U)	mg/kg	0.050	23	23	33	300	0.45	0.67	2.3	2.7
Vanadium (V)	mg/kg	5.0	130	130	130	130	20	16	42	59
Zinc (Zn)	mg/kg	5.0	250	250	410	410	29	14	30	73

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

NA = Not Available

SOIL METALS AND MERCURY (ICP/MS)

Sample Location			TF-S4	TF-S4	RPD (%)	WRSA-S2	WRSA-S2	RPD (%)	REF2-S3	REF2-S3	RPD (%)
Sample Name			22-TF-S4-S	22-TF-S4-S Lab-Dup		22-WRSA-S2-S	22-WRSA-S2-S Lab-Dup		22-REF2-S3-S	22-REF2-S3-S Lab-Dup	
Sampling Date			2022-07-28 07:33	2022-07-28 07:33		2022-08-01 11:31	2022-08-01 11:31		2022-07-29 16:16	2022-07-29 16:16	
Parameter	Units	RDL									
Aluminum (Al)	mg/kg	50	5900	6000	1.7	4900	4800	2.1	5900	6000	1.7
Antimony (Sb)	mg/kg	0.20	<0.20	<0.20	-	<0.20	<0.20	-	<0.20	<0.20	-
Arsenic (As)	mg/kg	1.0	34	36	5.7	330	330	0.0	4.6	5.0	8.3
Barium (Ba)	mg/kg	0.50	39	40	2.5	27	25	7.7	41	41	0.0
Beryllium (Be)	mg/kg	0.20	<0.20	<0.20	-	<0.20	<0.20	-	<0.20	<0.20	-
Bismuth (Bi)	mg/kg	1.0	<1.0	<1.0	-	<1.0	<1.0	-	<1.0	<1.0	-
Boron (B)	mg/kg	5.0	<5.0	<5.0	-	<5.0	<5.0	-	<5.0	<5.0	-
Cadmium (Cd)	mg/kg	0.10	<0.10	<0.10	-	<0.10	<0.10	-	<0.10	<0.10	-
Calcium (Ca)	mg/kg	50	3200	3300	3.1	3700	3700	0.0	2300	2300	0.0
Chromium (Cr)	mg/kg	1.0	21	21	0.0	17	17	0.0	23	24	4.3
Cobalt (Co)	mg/kg	0.10	12	12	0.0	7.5	7.7	2.6	5.5	5.8	5.3
Copper (Cu)	mg/kg	0.50	33	30	9.5	19	19	0.0	13	13	0.0
Iron (Fe)	mg/kg	50	13000	14000	7.4	14000	14000	0.0	12000	13000	8.0
Lead (Pb)	mg/kg	1.0	6.1	6.0	1.7	12	11	8.7	3.9	3.8	2.6
Magnesium (Mg)	mg/kg	50	3700	3900	5.3	3100	3100	0.0	3200	3200	0.0
Manganese (Mn)	mg/kg	1.0	130	130	0.0	120	120	0.0	110	110	0.0
Mercury (Hg)	mg/kg	0.050	<0.050	<0.050	-	<0.050	<0.050	-	<0.050	<0.050	-
Molybdenum (Mo)	mg/kg	0.50	<0.50	<0.50	-	<0.50	<0.50	-	0.61	0.61	0.0
Nickel (Ni)	mg/kg	0.50	26	27	3.8	18	18	0.0	13	13	0.0
Phosphorus (P)	mg/kg	50	670	720	7.2	570	570	0.0	530	530	0.0
Potassium (K)	mg/kg	200	940	950	1.1	510	510	0.0	1000	1000	0.0
Selenium (Se)	mg/kg	0.50	<0.50	<0.50	-	<0.50	<0.50	-	<0.50	<0.50	-
Silver (Ag)	mg/kg	0.20	<0.20	<0.20	-	<0.20	<0.20	-	<0.20	<0.20	-
Sodium (Na)	mg/kg	50	120	120	0.0	120	120	0.0	120	120	0.0
Strontium (Sr)	mg/kg	1.0	18	19	5.4	19	20	5.1	14	14	0.0
Thallium (Tl)	mg/kg	0.050	0.086	0.090	4.5	0.066	0.053	21.8	0.096	0.10	4.1
Tin (Sn)	mg/kg	1.0	<1.0	<1.0	-	<1.0	<1.0	-	<1.0	<1.0	-
Uranium (U)	mg/kg	0.050	0.65	0.58	11.4	0.48	0.46	4.3	0.78	0.77	1.3
Vanadium (V)	mg/kg	5.0	20	20	0.0	16	16	0.0	23	24	4.3
Zinc (Zn)	mg/kg	5.0	26	27	3.8	23	22	4.4	16	16	0.0

Notes:

RPD = relative percent difference

Lab Dup = Laboratory Duplicate

RDL = Reportable Detection Limit

All concentrations in milligrams per kilogram (mg/kg)

"<" = less than laboratory method detection limit

"- "= not calculated because one or both concentrations were below the laboratory method detection limit

SOIL pH

	Sample Location	TF-S1	TF-S2	TF-S3	TF-S4	TF-S5	TF-S6	TF-S11	TF-S12	TF-S13	TF-S14	WRSA-S1
	Sample Name	22-TF-S1-S	22-TF-S2-S	22-TF-S3-S	22-TF-S4-S	22-TF-S5-S	22-TF-S6-S	22-TF-S11-S	22-TF-S12-S	22-TF-S13-S	22-TF-S14-S	22-WRSA-S1-S
Parameter/Unit	Sampling Date	2022-07-28 11:22	2022-07-28 08:04	2022-07-28 08:42	2022-07-28 07:33	2022-07-28 09:21	2022-07-28 10:20	2022-07-28 15:46	2022-07-28 15:12	2022-07-28 14:03	2022-07-28 14:36	2022-08-01 11:10
pH *	pH	5.99	6.00	5.48	6.70	5.58	4.26	5.90	5.83	4.29	5.08	5.91

Notes:

* pH tested by available CaCl2

Lab Dup=Laboratory Duplicate

SOIL pH

	Sample Location	WRSA-S2	WRSA-S3	WRSA-S4	WRSA-S5	WRSA-S5	WRSA-S6	WRSA-S7	WRSA-S8	WRSA-S9	WRSA-S9
	Sample Name	22-WRSA-S2-S	22-WRSA-S3-S	22-WRSA-S4-S	22-WRSA-S5-S	22-WRSA-S5-S Lab-Dup	22-WRSA-S6-S	22-WRSA-S7-S	22-WRSA-S8-S	22-WRSA-S9-S	22-WRSA-S9-S Lab-Dup
Parameter/Unit	Sampling Date	2022-08-01 11:31	2022-08-01 11:58	2022-08-01 13:10	2022-08-01 13:40	2022-08-01 13:40	2022-08-01 14:07	2022-08-01 14:30	2022-08-02 10:45	2022-08-02 11:10	2022-08-02 11:10
pH *	pH	6.49	5.79	6.44	6.39	6.38	5.92	6.59	7.05	5.79	5.85

Notes:

* pH tested by available CaCl2

Lab Dup=Laboratory Duplicate

SOIL pH

	Sample Location	WRSA-S10	AWAR-S1	AWAR-S2	AWAR-S3	AWAR-S4	AWAR-S5	AWAR-S6	AWAR-S7	AWAR-S8	AWAR-S9
	Sample Name	22-WRSA-S10-S	22-AWAR-S1-S	22-AWAR-S2-S	22-AWAR-S3-S	22-AWAR-S4-S	22-AWAR-S5-S	22-AWAR-S6-S	22-AWAR-S7-S	22-AWAR-S8-S	22-AWAR-S9-S
Parameter/Unit	Sampling Date	2022-08-02 11:45	2022-07-28 16:15	2022-07-28 16:45	2022-07-30 08:35	2022-07-30 07:55	2022-07-30 09:47	2022-07-30 10:50	2022-07-30 11:21	2022-07-30 11:54	2022-07-30 12:30
pH *	pH	5.32	6.97	6.11	5.42	6.60	5.72	6.15	6.04	5.30	3.39

Notes:

* pH tested by available CaCl2

Lab Dup=Laboratory Duplicate

SOIL pH

	Sample Location	AWAR-S10	AWAR-S11	AWAR-S12	AWAR-S13	AWAR-S14	AWAR-S15	AWAR-S16	AWAR-S17	AWAR-S18	AWAR-S19
	Sample Name	22-AWAR-S10-S	22-AWAR-S11-S	22-AWAR-S12-S	22-AWAR-S13-S	22-AWAR-S14-S	22-AWAR-S15-S	22-AWAR-S16-S	22-AWAR-S17-S	22-AWAR-S18-S	22-AWAR-S19-S
Parameter/Unit	Sampling Date	2022-07-30 13:00	2022-07-30 13:50	2022-07-30 14:32	2022-07-30 15:17	2022-07-30 15:40	2022-07-31 07:40	2022-07-31 08:20	2022-07-31 08:50	2022-07-31 09:17	2022-07-31 10:02
pH *	pH	5.24	3.82	3.23	3.58	4.15	3.98	4.01	5.81	3.86	5.21

Notes:

* pH tested by available CaCl2

Lab Dup=Laboratory Duplicate

SOIL pH

	Sample Location	AWAR-S20	REF1-S1	REF1-S2	REF1-S3	REF1-S4	REF1-S4	REF1-S5	REF2-S1	REF2-S2	REF2-S3
	Sample Name	22-AWAR-S20-S	22-REF1-S1-S	22-REF1-S2-S	22-REF1-S3-S	22-REF1-S4-S	22-REF1-S4-S Lab-Dup	22-REF1-S5-S	22-REF2-S1-S	22-REF2-S2-S	22-REF2-S3-S
Parameter/Unit	Sampling Date	2022-08-01 15:52	2022-07-29 11:15	2022-07-29 12:00	2022-07-29 12:35	2022-07-29 13:10	2022-07-29 13:10	2022-07-29 14:03	2022-07-29 15:35	2022-07-29 15:10	2022-07-29 16:16
pH *	pH	5.96	5.81	6.02	3.71	5.43	5.45	6.26	3.45	4.70	4.48

Notes:

* pH tested by available CaCl2

Lab Dup=Laboratory Duplicate

SOIL pH

	Sample Location	REF2-S4	REF2-S5	REF3-S1	REF3-S2	REF3-S3	REF3-S4	REF3-S4	REF3-S5		
	Sample Name	22-REF2-S4-S	22-REF2-S5-S	22-REF3-S1-S	22-REF3-S2-S	22-REF3-S3-S	22-REF3-S4-S	22-REF3-S4-S Lab-Dup	22-REF3-S5-S		
Parameter/Unit	Sampling Date	2022-07-29 16:45	2022-07-29 16:26	2022-07-31 12:55	2022-07-31 13:23	2022-07-31 13:58	2022-08-01 11:10	2022-08-01 11:10	2022-07-31 14:55	Min	Max
pH *	pH	4.85	5.05	4.32	3.27	5.74	4.64	4.67	5.04	3.23	7.05

Notes:

* pH tested by available CaCl2

Lab Dup=Laboratory Duplicate

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS)

Sample Location			TF-S1	TF-S1	TF-S2	TF-S3	TF-S4	TF-S5	TF-S6	TF-S6	TF-S11	TF-S12	TF-S13
Sample Name			22-TF-S1-L	22-TF-S1-SE	22-TF-S2-SE	22-TF-S3-BR	22-TF-S4-BR	22-TF-S5-LT	22-TF-S6-CR	22-TF-S6-L	22-TF-S11-BR	22-TF-S12-SE	22-TF-S13-LT
Sample Type			Lichen	Sedge	Sedge	Birch Leaves	Birch Leaves	Labrador Tea Leaves	Crowberry Leaves	Lichen	Birch Leaves	Sedge	Labrador Tea Leaves
Sampling Date			2022-07-28 11:22	2022-07-28 11:22	2022-07-28 08:04	2022-07-28 08:42	2022-07-28 07:33	2022-07-28 09:21	2022-07-28 10:20	2022-07-28 10:20	2022-07-28 15:46	2022-07-28 15:12	2022-07-28 14:03
METALS	**Units**	**RDL**											
Antimony (Sb)	mg/kg	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.30	<0.05	<0.05	<0.05
Arsenic (As)	mg/kg	0.20	49.1	3.1	5.4	4.4	12.6	12.5	52.5	884	38.6	12.4	8.0
Barium (Ba)	mg/kg	1.0	16.8	10.4	15.1	19.5	20.1	27.0	15.4	28.3	12.7	11.1	39.0
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	<0.05	<0.05
Boron (B)	mg/kg	1.0	0.8	5.1	2.6	5.2	7.1	6.8	8.0	2.4	4.4	3.0	6.7
Cadmium (Cd)	mg/kg	5.0	0.08	<0.01	0.02	0.02	0.07	<0.01	<0.01	0.15	<0.01	<0.01	<0.01
Calcium (Ca)	mg/kg	0.10	8190	2380	3100	2390	2620	2180	2660	6790	2820	2880	2690
Chromium (Cr)	mg/kg	50	1.4	<0.3	0.3	<0.3	0.3	0.4	1.7	7.1	0.6	0.4	0.7
Cobalt (Co)	mg/kg	1.0	0.386	0.048	0.066	0.131	0.192	0.062	0.236	2.11	0.174	0.053	0.130
Copper (Cu)	mg/kg	0.10	2.5	1.9	2.5	2.7	3.2	2.4	3.3	18.0	3.3	2.7	2.0
Iron (Fe)	mg/kg	0.50	1110	111	154	104	286	204	755	11200	546	213	276
Lead (Pb)	mg/kg	50	6.20	0.28	0.63	0.32	1.43	0.92	3.71	59.4	3.66	1.28	0.74
Magnesium (Mg)	mg/kg	1.0	673	426	385	758	678	506	631	1580	560	228	779
Manganese (Mn)	mg/kg	50	83.3	69.9	74.1	39.8	242	412	235	164	26.2	54.8	343
Mercury (Hg)	mg/kg	1.0	0.08	0.01	0.01	0.02	0.01	0.01	0.01	0.25	0.01	0.01	0.01
Molybdenum (Mo)	mg/kg	0.050	0.23	0.47	0.51	0.09	<0.05	<0.05	0.12	1.08	0.13	0.59	0.10
Nickel (Ni)	mg/kg	0.50	1.03	0.38	0.55	1.07	1.54	0.40	3.74	5.70	1.19	0.38	0.79
Phosphorus (P)	mg/kg	0.50	349	345	315	505	570	443	406	390	429	363	467
Potassium (K)	mg/kg	50	1340	5760	4330	2490	2110	2590	2090	750	2590	6640	2370
Selenium (Se)	mg/kg	200	0.12	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.33	<0.04	<0.04	<0.04
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
Sodium (Na)	mg/kg	0.20	239	68	<50	<50	51	<50	52	351	64	<50	<50
Strontium (Sr)	mg/kg	50	27.0	11.7	13.0	9.8	11.0	4.1	5.2	32.3	14.2	24.5	5.4
Thallium (Tl)	mg/kg	1.0	0.004	<0.003	<0.003	<0.003	<0.003	0.075	0.004	0.025	<0.003	<0.003	0.076
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Titanium (Ti)	mg/kg	1.0	11.1	1.1	1.1	0.9	2.4	1.5	3.6	49	3.1	1.2	1.9
Uranium (U)	mg/kg	0.050	0.032	0.014	<0.005	<0.005	<0.005	<0.005	0.005	0.107	0.008	<0.005	<0.005
Vanadium (V)	mg/kg	5.0	0.62	0.06	0.07	0.05	0.14	0.10	0.27	3.42	0.21	0.09	0.15
Zinc (Zn)	mg/kg	5.0	25	14	14	79	145	13	6	28	81	16	10

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS)

Sample Location			TF-S14	WRSA-S1	WRSA-S2	WRSA-S3	WRSA-S4	WRSA-S5	WRSA-S6	WRSA-S7	WRSA-S8	WRSA-S9
Sample Name			22-TF-S14-L	22-WRSA-S1-BR	22-WRSA-S2-SE	22-WRSA-S3-SE	22-WRSA-S4-L	22-WRSA-S5-BR	22-WRSA-S6-SE	22-WRSA-S7-BR	22-WRSA-S8-SE	22-WRSA-S9-L
Sample Type			Lichen	Birch Leaves	Sedge	Sedge	Lichen	Birch Leaves	Sedge	Birch Leaves	Sedge	Lichen
Sampling Date			2022-07-28 14:36	2022-08-01 11:10	2022-08-01 11:31	2022-08-01 11:58	2022-08-01 13:10	2022-08-01 13:40	2022-08-01 14:07	2022-08-01 14:30	2022-08-02 10:45	2022-08-02 11:10
METALS	**Units**	**RDL**										
Antimony (Sb)	mg/kg	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic (As)	mg/kg	0.20	17.3	37.7	8.9	5.0	5.3	1.1	0.3	1.0	1.4	4.8
Barium (Ba)	mg/kg	1.0	6.5	13.8	12.0	6.2	17.0	16.2	7.8	11.0	9.2	8.1
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Boron (B)	mg/kg	1.0	<0.5	5.6	1.9	4.5	2.0	10.3	2.2	6.9	1.9	0.6
Cadmium (Cd)	mg/kg	5.0	0.09	0.02	<0.01	0.01	0.08	0.04	<0.01	0.01	<0.01	0.09
Calcium (Ca)	mg/kg	0.10	5020	3080	2470	1260	10500	3750	2210	3330	3330	6090
Chromium (Cr)	mg/kg	50	0.6	0.7	<0.3	<0.3	2.5	0.3	<0.3	0.3	0.6	1.0
Cobalt (Co)	mg/kg	1.0	0.182	0.170	0.031	0.034	0.580	0.097	0.032	0.086	0.081	0.281
Copper (Cu)	mg/kg	0.10	1.5	3.0	2.7	1.9	3.3	2.8	1.7	2.6	1.9	1.7
Iron (Fe)	mg/kg	0.50	440	514	124	127	900	106	60	121	163	685
Lead (Pb)	mg/kg	50	12.6	4.01	0.45	0.20	1.81	0.24	0.04	0.16	0.12	0.99
Magnesium (Mg)	mg/kg	1.0	275	491	354	338	616	752	359	634	438	556
Manganese (Mn)	mg/kg	50	46.1	44.6	60.8	166	39.9	85.7	82.5	41.1	79.3	34.9
Mercury (Hg)	mg/kg	1.0	0.09	0.01	<0.01	<0.01	0.09	0.01	<0.01	0.01	<0.01	0.05
Molybdenum (Mo)	mg/kg	0.050	0.09	0.12	0.14	0.17	0.19	0.09	0.32	<0.05	0.39	0.11
Nickel (Ni)	mg/kg	0.50	0.53	1.59	0.56	0.24	1.61	1.66	0.24	0.84	0.38	0.92
Phosphorus (P)	mg/kg	0.50	380	383	421	506	356	501	327	489	339	322
Potassium (K)	mg/kg	50	1220	1920	4670	5850	914	1920	6140	1810	4900	1100
Selenium (Se)	mg/kg	200	0.09	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	0.07
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium (Na)	mg/kg	0.20	<50	87	<50	63	82	<50	<50	<50	<50	152
Strontium (Sr)	mg/kg	50	17.3	13.3	13.8	10.8	44.2	19.4	11.9	18.7	19.6	21.9
Thallium (Tl)	mg/kg	1.0	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	0.003
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Titanium (Ti)	mg/kg	1.0	5.8	2.7	0.9	0.6	14.7	1.6	1.0	2.0	2.4	10.5
Uranium (U)	mg/kg	0.050	0.015	0.007	<0.005	<0.005	0.043	<0.005	<0.005	<0.005	0.007	0.018
Vanadium (V)	mg/kg	5.0	0.23	0.19	<0.05	<0.05	0.87	0.09	<0.05	0.11	0.14	0.64
Zinc (Zn)	mg/kg	5.0	14	100	10	18	22	119	16	112	8	16

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS)

Sample Location			WRSA-S10	AWAR-S1	AWAR-S2	AWAR-S2	AWAR-S3	AWAR-S4	AWAR-S5	AWAR-S5	AWAR-S6	AWAR-S7
Sample Name			22-WRSA-S10-BR	22-AWAR-S1-SE	22-AWAR-S2-CR	22-AWAR-S2-CR2	22-AWAR-S3-L	22-AWAR-S4-SE	22-AWAR-S4-CRAN	22-AWAR-S5-BR	22-AWAR-S6-SE	22-AWAR-S7-SE
Sample Type			Birch Leaves	Sedge	Crowberry Leaves	Crowberry Berries	Lichen	Sedge	Cranberry Berries	Birch Leaves	Sedge	Sedge
Sampling Date			2022-08-02 11:45	2022-07-28 16:15	2022-07-28 16:45	2022-07-28 16:45	2022-07-30 08:35	2022-07-30 07:55	2022-07-30 07:55	2022-07-30 09:47	2022-07-30 10:50	2022-07-30 11:21
METALS	Units	RDL										
Antimony (Sb)	mg/kg	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic (As)	mg/kg	0.20	0.3	2.7	5.3	0.2	3.9	8.6	<0.1	1.6	6.1	2.3
Barium (Ba)	mg/kg	1.0	7.3	15.5	15.9	1.5	7.2	13.4	0.5	11.6	16.0	11.9
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Boron (B)	mg/kg	1.0	19.1	6.9	11.0	1.7	0.5	2.6	0.9	3.6	3.0	2.4
Cadmium (Cd)	mg/kg	5.0	0.02	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	0.02	<0.01	<0.01
Calcium (Ca)	mg/kg	0.10	2270	2600	2870	219	10000	4100	164	2510	2790	3040
Chromium (Cr)	mg/kg	50	<0.3	1.0	1.4	<0.3	3.1	1.1	<0.3	0.4	1.8	0.4
Cobalt (Co)	mg/kg	1.0	0.101	0.163	0.239	0.008	0.433	0.125	<0.005	0.119	0.134	0.077
Copper (Cu)	mg/kg	0.10	2.4	2.8	2.7	2.1	2.1	3.0	0.7	2.9	2.5	2.0
Iron (Fe)	mg/kg	0.50	50	462	574	21	796	493	6	223	496	157
Lead (Pb)	mg/kg	50	<0.03	0.31	0.48	<0.03	2.08	0.68	<0.03	0.23	0.54	0.23
Magnesium (Mg)	mg/kg	1.0	916	527	631	114	366	492	<100	732	355	394
Manganese (Mn)	mg/kg	50	117	249	130	5.9	34.9	39.3	0.6	48.2	128	203
Mercury (Hg)	mg/kg	1.0	<0.01	0.01	0.01	<0.01	0.07	0.01	<0.01	0.01	<0.01	<0.01
Molybdenum (Mo)	mg/kg	0.050	0.13	0.47	0.08	<0.05	0.08	0.65	<0.05	<0.05	0.53	0.12
Nickel (Ni)	mg/kg	0.50	1.44	0.75	1.21	0.15	1.28	0.62	0.16	1.55	0.55	0.38
Phosphorus (P)	mg/kg	0.50	611	434	353	241	306	320	96	528	470	400
Potassium (K)	mg/kg	50	2440	6670	2290	2050	1120	4520	1320	2180	5550	6040
Selenium (Se)	mg/kg	200	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium (Na)	mg/kg	0.20	<50	<50	<50	<50	55	<50	<50	<50	<50	<50
Strontium (Sr)	mg/kg	50	9.0	19.1	11.6	0.7	46.6	20.1	0.6	8.3	14.6	15.6
Thallium (Tl)	mg/kg	1.0	<0.003	<0.003	<0.003	<0.003	0.005	<0.003	<0.003	<0.003	<0.003	<0.003
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Titanium (Ti)	mg/kg	1.0	1.0	4.8	8.3	<0.5	16.5	3.9	<0.5	2.1	4.2	1.1
Uranium (U)	mg/kg	0.050	<0.005	0.012	0.011	<0.005	0.036	0.013	<0.005	<0.005	0.011	0.011
Vanadium (V)	mg/kg	5.0	<0.05	0.35	0.49	<0.05	0.91	0.27	<0.05	0.13	0.29	0.06
Zinc (Zn)	mg/kg	5.0	50	22	7	3	14	15	<2	71	12	22

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS)

Sample Location			AWAR-S8	AWAR-S9	AWAR-S10	AWAR-S11	AWAR-S11	AWAR-S12	AWAR-S13	AWAR-S14	AWAR-S15	AWAR-S16
Sample Name			22-AWAR-S8-BR	22-AWAR-S9-LT	22-AWAR-S10-L	22-AWAR-S11-L	22-AWAR-S11-CL	22-AWAR-S12-LT	22-AWAR-S13-CR	22-AWAR-S14-SE	22-AWAR-S15-SE	22-AWAR-S16-BR
Sample Type			Birch Leaves	Labrador Tea Leaves	Lichen	Lichen	Cloudberry Berries	Labrador Tea Leaves	Crowberry Leaves	Sedge	Sedge	Birch Leaves
Sampling Date			2022-07-30 11:54	2022-07-30 12:30	2022-07-30 13:00	2022-07-30 13:50	2022-07-30 13:50	2022-07-30 14:32	2022-07-30 15:17	2022-07-30 15:40	2022-07-31 07:40	2022-07-31 08:20
METALS	Units	RDL										
Antimony (Sb)	mg/kg	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic (As)	mg/kg	0.20	1.0	0.7	2.4	4.0	<0.1	2.1	1.6	0.2	0.1	0.7
Barium (Ba)	mg/kg	1.0	14.6	29.0	6.3	6.1	<0.3	23.5	12.6	10.8	8.4	43.5
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Boron (B)	mg/kg	1.0	8.0	7.7	<0.5	<0.5	2.7	8.1	10.4	2.7	1.9	6.2
Cadmium (Cd)	mg/kg	5.0	0.02	<0.01	0.08	0.05	0.05	<0.01	<0.01	0.01	<0.01	0.02
Calcium (Ca)	mg/kg	0.10	2590	2230	3330	3140	174	2030	2100	1700	922	1890
Chromium (Cr)	mg/kg	50	0.4	0.8	0.6	0.7	<0.3	0.7	1.3	<0.3	<0.3	0.8
Cobalt (Co)	mg/kg	1.0	0.283	0.075	0.158	0.215	0.016	0.077	0.113	0.017	0.011	0.251
Copper (Cu)	mg/kg	0.10	3.1	2.5	0.9	1.1	1.1	2.1	2.4	2.7	1.4	3.0
Iron (Fe)	mg/kg	0.50	211	158	183	201	8	308	326	56	87	367
Lead (Pb)	mg/kg	50	0.17	0.10	1.86	2.87	<0.03	0.35	0.15	<0.03	<0.03	0.17
Magnesium (Mg)	mg/kg	1.0	726	633	219	185	326	710	720	299	404	1030
Manganese (Mn)	mg/kg	50	80.5	411	19.5	14.3	12.2	295	244	112	11.0	59.9
Mercury (Hg)	mg/kg	1.0	<0.01	0.01	0.06	0.08	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum (Mo)	mg/kg	0.050	<0.05	<0.05	0.05	0.05	0.14	0.07	0.07	0.68	0.37	0.06
Nickel (Ni)	mg/kg	0.50	1.63	0.45	0.38	0.46	0.39	0.36	1.36	0.41	0.24	2.04
Phosphorus (P)	mg/kg	0.50	575	550	347	317	309	514	518	395	390	1170
Potassium (K)	mg/kg	50	2360	2320	1160	1270	1980	2850	2550	5710	3150	2430
Selenium (Se)	mg/kg	200	<0.04	<0.04	0.07	0.10	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium (Na)	mg/kg	0.20	<50	<50	<50	<50	<50	<50	<50	<50	82	<50
Strontium (Sr)	mg/kg	50	8.2	6.1	19.0	28.2	<0.5	8.6	4.7	4.3	4.3	10.0
Thallium (Tl)	mg/kg	1.0	<0.003	0.075	0.004	0.006	<0.003	0.030	<0.003	<0.003	<0.003	<0.003
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Titanium (Ti)	mg/kg	1.0	2.8	3.9	8.0	9.7	<0.5	3.2	4.2	0.7	0.6	4.3
Uranium (U)	mg/kg	0.050	<0.005	<0.005	0.016	0.021	<0.005	0.005	<0.005	<0.005	<0.005	0.007
Vanadium (V)	mg/kg	5.0	0.13	0.17	0.21	0.26	<0.05	0.15	0.21	<0.05	<0.05	0.20
Zinc (Zn)	mg/kg	5.0	90	13	12	12	6	13	7	20	11	44

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS)

Sample Location			AWAR-S17	AWAR-S18	AWAR-S18	AWAR-S19	AWAR-S20	REF1-S1	REF1-S2	REF1-S3	REF1-S4	REF1-S4	REF1-S5
Sample Name			22-AWAR-S17-BR	22-AWAR-S18-CR	22-AWAR-S18-CRB	22-AWAR-S19-L	22-AWAR-S20-L	22-REF1-S1-L	22-REF1-S2-L	22-REF1-S3-LT	22-REF1-S4-CR	22-REF1-S4-CRB	22-REF1-S5-SE
Sample Type			Birch Leaves	Crowberry Leaves	Crowberry Berries	Lichen	Lichen	Lichen	Lichen	Labrador Tea Leaves	Crowberry Leaves	Crowberry Berries	Sedge
Sampling Date			2022-07-31 08:50	2022-07-31 09:17	2022-07-31 09:17	2022-07-31 10:02	2022-08-01 15:52	2022-07-29 11:15	2022-07-29 12:00	2022-07-29 12:35	2022-07-29 13:10	2022-07-29 13:10	2022-07-29 14:03
METALS	**Units**	**RDL**											
Antimony (Sb)	mg/kg	50	<0.05	<0.05	<0.05	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic (As)	mg/kg	0.20	0.5	1.0	<0.1	3.1	2.6	3.9	2.9	0.2	1.4	<0.1	2.0
Barium (Ba)	mg/kg	1.0	11.3	15.3	0.8	46.6	32.3	10.0	3.2	42.7	15.7	1.1	10.3
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	<0.05	0.09	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Boron (B)	mg/kg	1.0	9.1	11.1	1.2	1.4	<0.5	<0.5	<0.5	9.2	13.0	1.6	2.5
Cadmium (Cd)	mg/kg	5.0	0.02	<0.01	<0.01	0.12	0.03	0.04	0.05	<0.01	<0.01	<0.01	<0.01
Calcium (Ca)	mg/kg	0.10	2630	2470	104	9030	9540	11500	2220	2590	3130	175	2950
Chromium (Cr)	mg/kg	50	0.6	3.2	<0.3	23.3	19.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.5
Cobalt (Co)	mg/kg	1.0	0.153	0.296	0.008	2.75	2.22	0.052	0.077	0.028	0.143	0.005	0.025
Copper (Cu)	mg/kg	0.10	2.8	3.1	0.9	11.0	6.8	1.0	0.7	1.7	1.9	1.6	3.0
Iron (Fe)	mg/kg	0.50	330	903	25	4660	4240	144	78	18	50	4	76
Lead (Pb)	mg/kg	50	0.16	0.31	<0.03	2.13	1.19	0.63	0.52	0.03	0.09	<0.03	0.30
Magnesium (Mg)	mg/kg	1.0	954	875	<100	2440	2090	315	184	668	767	<100	401
Manganese (Mn)	mg/kg	50	36.7	196	9.0	98.9	63.1	14.1	38.4	522	272	8.8	17.9
Mercury (Hg)	mg/kg	1.0	0.01	0.01	<0.01	0.09	0.03	0.03	0.04	0.01	0.02	<0.01	0.01
Molybdenum (Mo)	mg/kg	0.050	<0.05	<0.05	<0.05	0.18	0.20	0.06	<0.05	<0.05	0.06	<0.05	0.51
Nickel (Ni)	mg/kg	0.50	0.62	2.14	0.15	7.33	5.84	0.30	0.24	0.26	1.27	0.15	0.54
Phosphorus (P)	mg/kg	0.50	712	397	168	649	309	182	189	480	379	222	375
Potassium (K)	mg/kg	50	2390	2460	1330	1810	1150	654	630	2330	2300	1760	4740
Selenium (Se)	mg/kg	200	<0.04	<0.04	<0.04	0.17	0.05	0.04	0.05	<0.04	<0.04	<0.04	<0.04
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium (Na)	mg/kg	0.20	<50	<50	<50	230	134	107	<50	<50	<50	<50	<50
Strontium (Sr)	mg/kg	50	8.4	8.7	<0.5	30.5	29.2	38.1	5.7	3.8	3.9	<0.5	15.8
Thallium (Tl)	mg/kg	1.0	<0.003	0.004	<0.003	0.035	0.034	<0.003	<0.003	0.085	<0.003	<0.003	<0.003
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Titanium (Ti)	mg/kg	1.0	4.6	17.2	0.6	205	207	2.4	1.2	0.7	0.9	<0.5	1.0
Uranium (U)	mg/kg	0.050	0.007	0.019	<0.005	0.155	0.129	0.013	<0.005	<0.005	<0.005	<0.005	0.014
Vanadium (V)	mg/kg	5.0	0.21	0.75	<0.05	7.52	7.41	0.11	0.06	<0.05	<0.05	<0.05	<0.05
Zinc (Zn)	mg/kg	5.0	97	9	<2	24	13	10	9	12	8	<2	7

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS)

Sample Location			REF1-S5	REF2-S1	REF2-S2	REF2-S3	REF2-S4	REF2-S5	REF3-S1	REF3-S2	REF3-S3	REF3-S4	REF3-S5
Sample Name			22-REF1-S5-CL	22-REF2-S1-BR	22-REF2-S2-BR	22-REF2-S3-BR	22-REF2-S4-SE	22-REF2-S5-BR	22-REF3-S1-L	22-REF3-S2-LT	22-REF3-S3-BR	22-REF3-S4-SE	22-REF3-S5-BR
Sample Type			Cloudberry Berries	Birch Leaves	Birch Leaves	Birch Leaves	Sedge	Birch Leaves	Lichen	Labrador Tea Leaves	Birch Leaves	Sedge	Birch Leaves
Sampling Date			2022-07-29 14:03	2022-07-29 15:35	2022-07-29 15:10	2022-07-29 16:16	2022-07-29 16:45	2022-07-31 16:26	2022-07-31 12:55	2022-07-31 13:23	2022-07-31 13:58	2022-07-31 14:28	2022-07-31 14:55
METALS	**Units**	**RDL**											
Antimony (Sb)	mg/kg	50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Arsenic (As)	mg/kg	0.20	<0.1	0.1	0.4	0.3	0.7	0.5	2.5	0.5	0.3	0.7	0.2
Barium (Ba)	mg/kg	1.0	<0.3	22.2	28.1	13.5	16.0	19.9	2.8	35.2	16.8	11.5	20.8
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Boron (B)	mg/kg	1.0	2.0	5.2	7.6	6.0	2.2	4.1	<0.5	6.8	8.5	2.1	12.9
Cadmium (Cd)	mg/kg	5.0	<0.01	0.08	0.04	0.05	<0.01	0.08	0.08	<0.01	0.04	0.02	0.07
Calcium (Ca)	mg/kg	0.10	412	1590	1970	1400	2040	1340	620	2190	1690	1260	2060
Chromium (Cr)	mg/kg	50	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3
Cobalt (Co)	mg/kg	1.0	0.017	0.217	0.252	0.229	0.179	0.362	0.057	0.038	0.219	0.063	0.082
Copper (Cu)	mg/kg	0.10	1.0	2.7	3.4	2.7	2.8	2.6	0.8	1.6	3.1	4.4	3.3
Iron (Fe)	mg/kg	0.50	4	29	35	34	66	33	85	30	33	47	34
Lead (Pb)	mg/kg	50	<0.03	0.03	0.05	0.06	0.09	0.07	0.62	0.06	0.04	0.09	0.04
Magnesium (Mg)	mg/kg	1.0	262	770	824	641	419	544	204	573	611	284	637
Manganese (Mn)	mg/kg	50	5.9	655	330	313	86.4	293	27.3	340	174	72.5	253
Mercury (Hg)	mg/kg	1.0	<0.01	<0.01	0.01	0.01	<0.01	0.01	0.07	0.01	<0.01	<0.01	0.01
Molybdenum (Mo)	mg/kg	0.050	0.07	<0.05	<0.05	<0.05	0.31	<0.05	<0.05	<0.05	<0.05	0.96	<0.05
Nickel (Ni)	mg/kg	0.50	0.13	1.72	1.27	2.17	1.11	2.72	0.15	0.41	0.71	0.87	4.58
Phosphorus (P)	mg/kg	0.50	244	911	569	521	338	558	389	572	623	465	684
Potassium (K)	mg/kg	50	1750	2050	1890	2280	3590	1620	1060	2510	2210	5220	2300
Selenium (Se)	mg/kg	200	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	<0.04	<0.04
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium (Na)	mg/kg	0.20	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Strontium (Sr)	mg/kg	50	1.4	5.7	7.7	3.9	7.9	4.4	2.6	2.8	8.1	5.7	8.2
Thallium (Tl)	mg/kg	1.0	<0.003	<0.003	0.005	<0.003	<0.003	<0.003	0.007	0.153	<0.003	<0.003	<0.003
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Titanium (Ti)	mg/kg	1.0	<0.5	0.7	0.7	0.7	0.7	1.0	2.1	1.0	1.0	1.1	1.0
Uranium (U)	mg/kg	0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (V)	mg/kg	5.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05
Zinc (Zn)	mg/kg	5.0	4	78	107	42	8	31	7	13	42	9	69

Notes:

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

VEGETATION TISSUE METALS (ICP/MS) AND MERCURY (AS) Relative Percent Difference

		Vegetation Type	Labrador Tea Leaves			Lichen			Lichen			Sedge		
		Sample Location	TF-S5	TF-S5	RPD (%)	TF-S6	TF-S6	RPD (%)	WRSA-S9	WRSA-S9	RPD (%)	AWAR-S4	AWAR-S4	RPD (%)
		Sample Name	22-TF-S5-LT	22-TF-S5-LT Lab-Dup		22-TF-S6-L	22-TF-S6-L Lab-Dup		22-WRSA-S9-L	22-WRSA-S9-L Lab-Dup		22-AWAR-S4-SE	22-AWAR-S4-SE Lab-Dup	
		Sampling Date	2022-07-28 09:21	2022-07-28 09:21		2022-07-28 10:20	2022-07-28 10:20		2022-08-02 11:10	2022-08-02 11:10		2022-07-30 07:55	2022-07-30 07:55	
METALS	Units	RDL												
Antimony (Sb)	mg/kg	50	<0.05	<0.05	-	0.30	0.26	14.3	<0.05	<0.05	-	<0.05	**	-
Arsenic (As)	mg/kg	0.20	12.5	12.1	3.3	884	840	5.1	4.8	5.0	4.1	8.6	**	-
Barium (Ba)	mg/kg	1.0	27.0	25.3	6.5	28.3	26.7	5.8	8.1	7.9	2.5	13.4	**	-
Beryllium (Be)	mg/kg	0.50	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	**	-
Bismuth (Bi)	mg/kg	0.20	<0.05	<0.05	-	0.13	0.12	8.0	<0.05	<0.05	-	<0.05	**	-
Boron (B)	mg/kg	1.0	6.8	6.6	3.0	2.4	2.5	4.1	0.6	0.6	0.0	2.6	**	-
Cadmium (Cd)	mg/kg	5.0	<0.01	<0.01	-	0.15	0.13	14.3	0.09	0.09	0.0	<0.01	**	-
Calcium (Ca)	mg/kg	0.10	2180	2150	1.4	6790	6850	0.9	6090	6010	1.3	4100	**	-
Chromium (Cr)	mg/kg	50	0.4	0.4	0.0	7.1	6.4	10.4	1.0	1.0	0.0	1.1	**	-
Cobalt (Co)	mg/kg	1.0	0.062	0.082	27.8	2.11	1.89	11.0	0.281	0.251	11.3	0.125	**	-
Copper (Cu)	mg/kg	0.10	2.4	2.5	4.1	18.0	16.2	10.5	1.7	1.5	12.5	3.0	**	-
Iron (Fe)	mg/kg	0.50	204	194	5.0	11200	10400	7.4	685	655	4.5	493	**	-
Lead (Pb)	mg/kg	50	0.92	0.88	4.4	59.4	57.7	2.9	0.99	0.98	1.0	0.68	**	-
Magnesium (Mg)	mg/kg	1.0	506	482	4.9	1580	1530	3.2	556	549	1.3	492	**	-
Manganese (Mn)	mg/kg	50	412	401	2.7	164	158	3.7	34.9	35.2	0.9	39.3	**	-
Mercury (Hg)	mg/kg	1.0	0.01	*	-	0.25	0.21	17.4	0.05	0.05	0.0	0.01	0.01	0
Molybdenum (Mo)	mg/kg	0.050	<0.05	<0.05	-	1.08	0.88	20.4	0.11	0.10	9.5	0.65	**	-
Nickel (Ni)	mg/kg	0.50	0.40	0.42	4.9	5.70	5.23	8.6	0.92	0.89	3.3	0.62	**	-
Phosphorus (P)	mg/kg	0.50	443	436	1.6	390	375	3.9	322	310	3.8	320	**	-
Potassium (K)	mg/kg	50	2590	2490	3.9	750	724	3.5	1100	1110	0.9	4520	**	-
Selenium (Se)	mg/kg	200	<0.04	<0.04	-	0.33	0.31	6.3	0.07	0.08	13.3	<0.04	**	-
Silver (Ag)	mg/kg	0.50	<0.05	<0.05	-	0.07	0.07	0.0	<0.05	<0.05	-	<0.05	**	-
Sodium (Na)	mg/kg	0.20	<50	<50	-	351	333	5.3	152	156	2.6	<50	**	-
Strontium (Sr)	mg/kg	50	4.1	4.0	2.5	32.3	31.1	3.8	21.9	22.2	1.4	20.1	**	-
Thallium (Tl)	mg/kg	1.0	0.075	0.075	0.0	0.025	0.025	0.0	0.003	<0.003	-	<0.003	**	-
Tin (Sn)	mg/kg	0.050	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	<0.3	**	-
Titanium (Ti)	mg/kg	1.0	1.5	1.4	6.9	49	48	2.1	10.5	9.9	5.9	3.9	**	-
Uranium (U)	mg/kg	0.050	<0.005	<0.005	-	0.107	0.096	10.8	0.018	0.017	5.7	0.013	**	-
Vanadium (V)	mg/kg	5.0	0.10	0.09	10.5	3.42	3.11	9.5	0.64	0.60	6.5	0.27	**	-
Zinc (Zn)	mg/kg	5.0	13	13	0.0	28	27	3.6	16	16	0.0	15	**	-

Notes:

(*) lab duplicate analysis was not performed for mercury

(**) lab duplicate anaylsis was only performed for mercury

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

VEGETATION TISSUE METALS (ICP/MS)

Vegetation Type			Crowberry berry			Labrador Tea Leaves		
Sample Location			AWAR-S18	AWAR-S18	RPD (%)	REF1-S3	REF1-S3	RPD (%)
Sample Name			22-AWAR-S18-CRB	22-AWAR-S18-CRB Lab-Dup		22-REF1-S3-LT	22-REF1-S3-LT Lab-Dup	
Sampling Date			2022-07-31 09:17	2022-07-31 09:17		2022-07-29 12:35	2022-07-29 12:35	
METALS	Units	RDL						
Antimony (Sb)	mg/kg	50	<0.05	**	-	<0.05	<0.05	-
Arsenic (As)	mg/kg	0.20	<0.1	**	-	0.2	0.3	40.0
Barium (Ba)	mg/kg	1.0	0.8	**	-	42.7	42.8	0.2
Beryllium (Be)	mg/kg	0.50	<0.05	**	-	<0.05	<0.05	-
Bismuth (Bi)	mg/kg	0.20	<0.05	**	-	<0.05	<0.05	-
Boron (B)	mg/kg	1.0	1.2	**	-	9.2	8.9	3.3
Cadmium (Cd)	mg/kg	5.0	<0.01	**	-	<0.01	<0.01	-
Calcium (Ca)	mg/kg	0.10	104	**	-	2590	2470	4.7
Chromium (Cr)	mg/kg	50	<0.3	**	-	<0.3	<0.3	-
Cobalt (Co)	mg/kg	1.0	0.008	**	-	0.028	0.033	16.4
Copper (Cu)	mg/kg	0.10	0.9	**	-	1.7	1.7	0.0
Iron (Fe)	mg/kg	0.50	25	**	-	18	17	5.7
Lead (Pb)	mg/kg	50	<0.03	**	-	0.03	<0.03	-
Magnesium (Mg)	mg/kg	1.0	<100	**	-	668	645	3.5
Manganese (Mn)	mg/kg	50	9.0	**	-	522	543	3.9
Mercury (Hg)	mg/kg	1.0	<0.01	<0.01	-	0.01	*	-
Molybdenum (Mo)	mg/kg	0.050	<0.05	**	-	<0.05	<0.05	-
Nickel (Ni)	mg/kg	0.50	0.15	**	-	0.26	0.26	0.0
Phosphorus (P)	mg/kg	0.50	168	**	-	480	477	0.6
Potassium (K)	mg/kg	50	1330	**	-	2330	2290	1.7
Selenium (Se)	mg/kg	200	<0.04	**	-	<0.04	<0.04	-
Silver (Ag)	mg/kg	0.50	<0.05	**	-	<0.05	<0.05	-
Sodium (Na)	mg/kg	0.20	<50	**	-	<50	<50	-
Strontium (Sr)	mg/kg	50	<0.5	**	-	3.8	3.7	2.7
Thallium (Tl)	mg/kg	1.0	<0.003	**	-	0.085	0.080	6.1
Tin (Sn)	mg/kg	0.050	<0.3	**	-	<0.3	<0.3	-
Titanium (Ti)	mg/kg	1.0	0.6	**	-	0.7	0.7	0.0
Uranium (U)	mg/kg	0.050	<0.005	**	-	<0.005	<0.005	-
Vanadium (V)	mg/kg	5.0	<0.05	**	-	<0.05	<0.05	-
Zinc (Zn)	mg/kg	5.0	<2	**	-	12	11	8.7

Notes:

(*) lab duplicate analysis was not performed for mercury

(**) lab duplicate anaylsis was only performed for mercury

mg/kg = milligram per kilogram

< = less than laboratory method detection limit

RDL = Reportable Detection Limit

RPD = Relative Percent Difference

Table D6: Average Soil Metal Concentrations

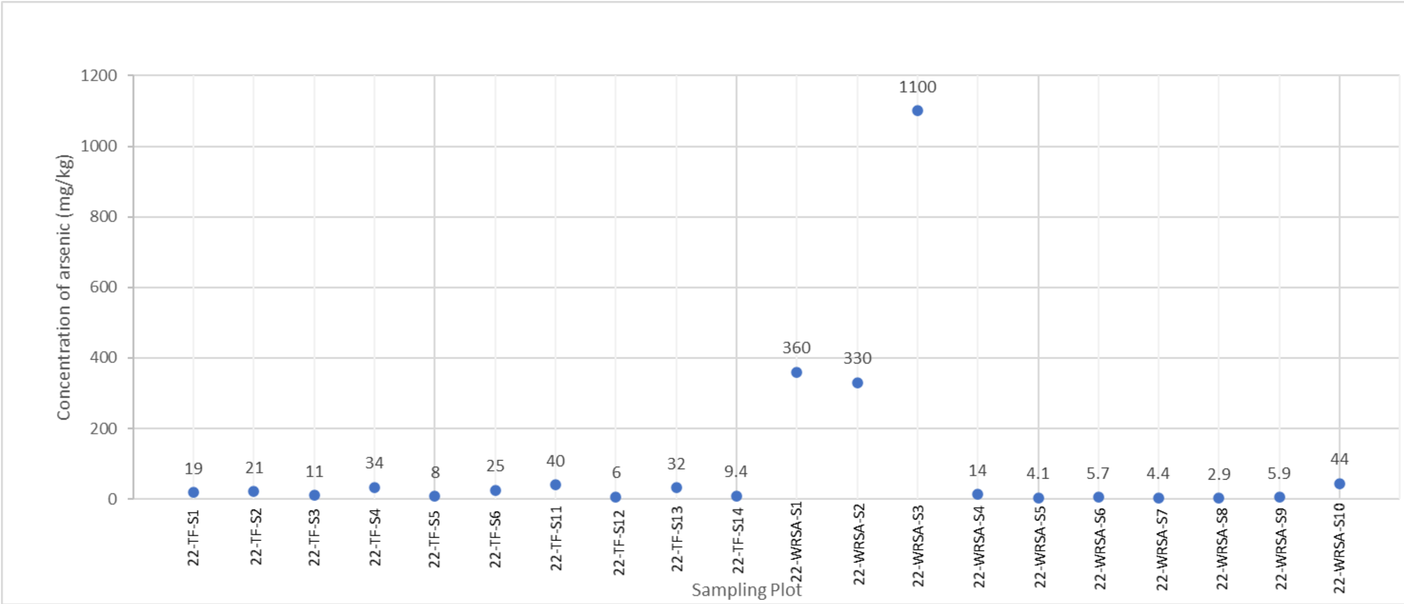
Analyte	CCME SQG Residential Limit (mg/kg)[a]	Laboratory Reportable Detection Limit (mg/kg)	Sampling Location																	
			Reference Areas (n=15)						AWAR (n=20)						Mine Site (Tailings Facility and WRSA; n=20)					
			2017[b]		2019[c]		2022[d]		2017[b]		2019[c]		2022[d]		2017[b]		2019[c]		2022[d]	
			Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)	Average concentration (mg/kg)[e]	Relative standard deviation (%)
Antimony (Sb)	20	0.20	-	-	0.1	<1	0.1	34	-	-	0.1	68	0.1	75	-	-	0.1	69	0.1	31
Arsenic (As)	12	1.0	5.2	93	7.8	104	6.6	158	**19.7**	144	11.3	129	11.5	109	**34.7**	81	**33.2**	83	**103.8**[f]	246
Barium (Ba)	500	0.50	69.1	31	69.1	87	90.7	56	57.5	72	77.5	81	78.7	59	56.1	67	51.2	71	46.8	54
Beryllium (Be)	4	0.20	-	-	0.1	40	0.1	34	-	-	0.1	0	0.1	<1	-	-	0.1	23	0.1	25
Boron (B)	2[g]	5.0	-	-	2.7	37	4.3	68	-	-	3.8	57	4.4	87	-	-	3.5	70	3.2	48
Cadmium (Cd)	10	0.10	0.1	106	0.1	119	0.3	43	0.2	148	0.2	143	0.3	111	0.1	77	0.1	96	0.1	86
Chromium (Cr)	64	1.0	21.1	56	25.3	40	21.1	74	16.4	67	17.9	97	16.1	71	15.5	40	18.6	33	18.7	44
Cobalt (Co)	50	0.10	5.7	146	7.3	58	6.6	81	6.0	101	6.1	75	6.3	64	7.4	42	7.4	40	6.3	49
Copper (Cu)	63	0.50	**64.3**	40	25.9	65	29.2	76	37.6	58	40.3	98	51.4	114	31.8	94	38.5	105	22.5	73
Lead (Pb)	140	1.0	3.5	34	3.6	42	2.8	50	3.0	61	2.8	54	3.1	60	4.3	54	4.5	37	6.5	120
Manganese (Mn)	NA	50	117.6	61	-	-	307.4	182	127.6	66	-	-	179.7	66	141.1	45	-	-	162.3	66
Mercury (Hg)	6.6	0.050	<0.1	101	<0.1	100	0.1	54	<0.1	110	0.1	64	0.1	79	<0.1	157	<0.1	84	<0.1	77
Molybdenum (Mo)	10	0.50	0.7	79	0.7	88	1.2	56	1.3	235	0.8	184	0.6	64	0.7	129	0.9	112	0.9	129
Nickel (Ni)	45	0.50	23.4	58	20.1	55	20.8	68	16.5	66	17.8	70	18.6	65	23.8	53	24.4	46	19.2	46
Selenium (Se)	1	0.50	0.5	80	0.3	62	0.7	36	0.4	95	0.5	87	0.5	67	0.4	75	0.5	98	0.3	69
Silver (Ag)	20	0.20	0.3	0	0.1	<1	0.1	<1	0.3	0	0.1	0	0.1	<1	0.3	0	0.1	23	0.1	<1
Thallium (Tl)	1	0.050	-	-	0.1	64	0.1	70	-	-	0.1	85	0.1	77	-	-	0.1	34	0.1	22
Tin (Sn)	50	1.0	0.6	50	-	-	0.5	0	0.6	58	-	-	0.5	0	0.5	0	-	-	0.5	0
Uranium (U)	23	0.05	-	-	1.0	72	1.2	77	-	-	1.4	122	1.2	94	-	-	1.9	152	1.3	123
Vanadium (V)	130	5.0	-	-	25.3	41	19.4	77	-	-	15.9	68	14.7	69	-	-	17.8	35	21.8	60
Zinc (Zn)	250	5.0	23.1	49	24.9	41	25.7	60	20.6	39	20.7	51	24.8	53	22.3	27	23.0	33	30.3	52

a) Canadian Soil Quality Guidelines for the Protection of Environment and Human Health (CCME 2012).
b) Baseline conditions. Data compiled from Golder 2018.
c) Operations Phase of Mine. Data compiled from Golder 2020.
d) Operations Phase of Mine.
e) Non-detect values were replaced with half the detection limit for analytical purposes.
f) Three samples in WRSA with high arsenic levels increased average (APPENDIX D - Table D-1).
g) agricultural CCME (2012) soil quality guideline. There is no residential limit for boron.
Note: **bold** cells indicate average metal concentrations are over CCME (2012) soil quality guideline for residential land use. Bismuth, calcium, iron, magnesium, phosphorus, potassium, sodium and strontium were excluded from table summary as they were only tested for in 2022.
\- = analyte not tested, NA = not available
Concentrations of metals were analyzed by calculating the average metal concentration by sampling area (Reference, AWAR, Mine Site [Tailings Facility and WRSA]). Where concentrations were below the detection limit, a value of half the detection limit was used. This assumes that concentration of the sample is between 0 and the detection limit, and the average value of the non-detected value could be half as high as the detection limit (EPA 2022). The average concentration of metals was compared to CCME (2012) SQG guidelines for residential land use.
Soil chemistry have been presented by calculating the mean concentration and relative standard deviation (RSD) for each analyte among the three sampling locations. The RSD was calculated using the following formula:

$$RSD = \frac{\text{Relative Standard Deviation Among Samples}}{\text{Mean Concentration}} \times 100\%$$

The RSD value was used as a measure of variability among plots within each sampling site. A higher value indicating a greater amount of variation observed among plots.

Figure D-1: 2022 Soil Arsenic Concentration at Mine Site Sampling Locations



APPENDIX E

CESS Non-Native and Invasive Species in Nunavut

Non-Native & Invasive species
In Nunavut

In 2010 the Canadian Endangered Species Conservation Council (CESCC) identified 17 species not normally found in Nunavut.

These are called "non-native species". Some of these plants and animals can become an "invasive species", which represents a potential major concern for the future health of the Arctic.

What is a *non-native species*?

A non-native species is defined as an organism that is not normally found in a region. They are introduced by human activities, which can be intentional (e.g. species introduced to control a pest species), accidental (e.g. shipping and ballast water exchange), or environmental (e.g. changes in climate leading to wildlife movements). An example of a non-native species in Nunavut is the European Starling (*Sturnus vulgaris*), which was introduced to North America from Europe intentionally by humans.

What is an *invasive species*?

Not all non-native species are considered invasive. This term is reserved for species that do so well in their new habitat that they end up causing harm to the environment, other species, human health, or economic activity (ISAC, 2006). An example of an invasive species in southern Canada is the Zebra Mussel (*Dreissena polymorpha*), which was introduced to North America by ships releasing their ballast water. The Zebra mussel reproduces quickly and establishes large colonies on any hard surface. In this way they take over habitat occupied by native species, reducing the availability of food for other species, and also attaching themselves in great numbers to boats and other infrastructure in the water. (Benson and Raikow, 2010).

Why should you be concerned about invasive species?

When invasive species are introduced and survive, their populations can increase rapidly because there are no natural predators. Invasive species may feed on native species, compete for food and space, as well as expose native species to new parasites and disease. Invasive species are now widely recognized as a leading cause of endangerment and/or extinction of native species (Lassuy and Lewis, 2010).

** There are currently no known species in Nunavut that can be classified as aquatic or terrestrial invasive species.*


Scott 2011

Species: Field Sow Thistle *(Sonchus arvensis)*

Impact: The Field Sow Thistle grows quickly, easily and when there are many of them they can reduce the water resources available to other plants. They have the potential to decrease native plant diversity by competing for space and water.

Introduction pathway: Accidently introduced from Europe into North America in a containment of agricultural crop seed. This plant has been able to spread long distances across Canada because the seeds can travel far in the wind.


Sohl 2005

Species: The European Starling *(Sturnus vulgaris)*

Impact: The European Starling can displace native bird species by taking over nesting sites and competing for food.

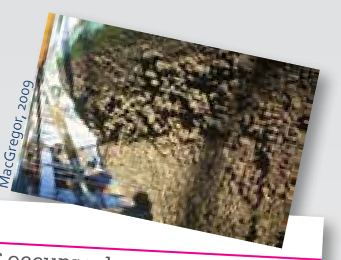
Introduction pathway: Introduced intentionally to North America from Europe. These birds then dispersed naturally into Canada through migration.

How might invasive species get into Nunavut?

Species are transported throughout the world by human activities, like shipping, which allows species to move further distances and over barriers that they could not do on their own. Nunavut remains very remote compared to the rest of Canada and so the lack of major road systems, infrequent shipping and cold climate has limited their introduction and survival.

However, as climate change alters Arctic ecosystems, it creates conditions that are more favorable to the survival and reproduction of non-native species. It also enables greater human activity and development, which gives potential invasive species more opportunities to establish themselves. (Lassuy and Lewis, 2010).

Pathways of introduction for invasive species into Nunavut


MacGregor, 2009

Hull fouling occurs when organisms attach themselves to the outside of a ship's hull where they can then be transported around the world.

* Ballast water exchange and hull fouling have the greatest potential for introducing invasive species into the aquatic ecosystems of Nunavut. Ballast water is used to stabilize ships. It is pumped aboard ships from different ports around the world and often exchanged far from the region it was obtained. This water can contain species that are not native, and may establish themselves locally.
* Seeds, insects and even small mammals can be transported around the world through the shipping of grocery produce, lumber, construction supplies, and packing materials, even dirt from someone's footwear can contain plant seeds (IASC, 2010).
* As climate continues to change in the Arctic, many terrestrial and aquatic plants and animals will move further north looking for the food and habitat they desire. These wildlife movements are not a threat when it comes to invasive species, but it is important to note that some species, (especially rare or threatened ones) may not survive the transition. Others may do well, like flying insects, which are already increasing in number in some areas of Nunavut. (IASC, 2010).

Wildlife movements are often referred to as "range extensions" where a species expands the area they can live in when the habitat and climate is favorable for them.


DeeDee 2011

The Migratory Grasshopper (*Melanoplus sanguinipes*) is a winged insect that is widely distributed across Canada and is one example of a species that may expand its range into Nunavut.

How can you help?

Report

Have you seen a different plant, animal or insect in Nunavut?

You help identifying these species is important. Report the **location** where you observed the species (GPS Coordinates are very helpful) and provide a **detailed description** of the plant, animal, or insect. If possible **take a photo**.

Remember that not all non-native species are considered invasive. If you see an unknown plant or animal, it is very important to report it.

Do not take any extreme actions; the first step is reporting the species so that territorial and federal agencies can respond appropriately. We will report our findings back to you and information about the species you have observed.

Share

Keep yourself informed and educate others about non-native and invasive species. Let them know what to do if they see an unknown or uncommon species.

Report a species to your local Conservation Officer.

For More Information or if your CO is not available please contact:

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Sr. Science Advisor (Aquatic)
Department of Environment,
Fisheries and Sealing Division
Box 1000 Station 1310, Iqaluit, Nunavut, X0A 0H0
: (867) 975-7706, : (867) 975-7754
: jkennedy1@gov.nu.ca

Matthew Fredlund
Legislation and Management Wildlife Technicain
Department of Environment, Wildlife Divison
Iglulik, Nunavut
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: kimberly.howland@dfo-mpo.gc.ca

Nunavut

This project was undertaken with the financial support of:
Environment Canada | Environnement Canada

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PRINTED WITH VEGETABLE-BASED INKS • LOW VOC'S

Non-Native Species in Nunavut

As of 2011, there are 17 species known to be non-native in Nunavut, these are listed below and are all terrestrial species. Please note that it is not currently known what the potential is for any of these species to become invasive and to what extent. Two species, the starling and the sow thistle are described in more detail below.

SCIENTIFIC NAME	COMMON NAME	ORGANISM TYPE
Carum carvi	Wild Caraway	Flowering Plant
Taraxacum officinale	Common Dandelion	Flowering Plant
Sonchus arvensis	Field Sow Thistle	Flowering Plant
Leucanthemum vulgare	Oxeye Daisy	Flowering Plant
Thlaspi arvense	Field Pennycress	Flowering Plant
Capsella bursa-pastoris	Shepherd's Purse	Flowering Plant
Barbarea vulgaris	Yellow Rocket	Flowering Plant
Amaranthus retroflexus	Green Amaranth	Flowering Plant
Hordeum vulgare	Common Barley	Flowering Plant
Puccinellia distans	Spreading Alkali Grass	Flowering Plant
Vicia cracca	Tufted Vetch	Flowering Plant
Papaver somniferum	Opium Poppy	Flowering Plant
Plantago major	Common Plantain	Flowering Plant
Polygonum aviculare	Prostrate Knotweed	Flowering Plant
Pieris rapae	Cabbage White	Butterfly
Sturnus vulgaris	European Starling	Passerine Bird
Passer domesticus	House Sparrow	Passerine Bird

*Species photo references available upon request. Images are not to scale.

Potential Invasive Species in Nunavut

As trade and shipping continues to increase, some aquatic invasive species known to commonly foul ship hulls and ballast waters, like the Chinese Mitten Crab, are more likely to arrive at ports around Nunavut.

A recent report commissioned by Fisheries and Oceans Canada identified a number of potential aquatic invasive species, mainly for the Hudson Bay region. The table below lists only those species considered as "High Risk" to Nunavut and they are found in freshwater & marine environments.

SCIENTIFIC NAME	COMMON NAME	ORGANISM TYPE
Osmerus mordax	Rainbow Smelt	Fish
Gymnocephalus cernuus	Ruffe	Fish
Caprella mutica	Skeleton Shrimp	Crustacean
Chelicorophium curvispinum	Data unavailable	Crustacean
Dikerogammarus villosus	Killer Shrimp	Crustacean
Gmelinoides fasciatus	Data unavailable	Crustacean
Pontogammarus robustoides	Data unavailable	Crustacean
Eriocheir sinensis	Chinese Mitten Crab	Crustacean
Hemimysis anomala	Data unavailable	Crustacean
Balanus improvisus	Acorn Barnacle	Crustacean
Corbicula fluminea	Asian Clam	Mollusc
Dreissena bugensi	Quagga Mussel	Mollusc
Bythotrephes longimanus	Spiny Water Flea	Zooplankton
Cercopagis pengo	Fishhook Water Flea	Zooplankton
Eubosmina maritima	Data unavailable	Zooplankton
Marenzelleria cf. viridis	Data unavailable	Worm
Marenzelleria cf. wireni	Data unavailable	Worm
Cordylophora caspia	Freshwater Hydroid	Hydrozoa
Coscinodiscus wailesii	Data unavailable	Phytoplankton
Odontella sinensi	Data unavailable	Phytoplankton
Prorocentrum minimum	Data unavailable	Phytoplankton
Codium fragile ssp. tomentosoides	Oyster Thief	Algae
Glugea hertwigi	Data unavailable	Protozoa
Amphilina foliacea	Data unavailable	Parasite

*Species photo references available upon request. Images are not to scale.

APPENDIX F

Shipping Inspection Forms, 2022

QSL

1 3 3 6 7 2
2022-06-20 14:00 - N/A
V220500

MELIADINE-AEM-STOCK - LOWERHOLD 3

SUBTOTAL QTY: 114	SUBTOTAL VOLUME: 2881.9999 m³ (101777 cu.ft.)	1717.589 MT (3786636 lb)
TOTAL QTY: 529	TOTAL VOLUME: 19031.7778 m³ (672102 cu.ft.)	6378.1145 MT (14061336 lb)

Quantity: 529	Volume: 19031.7778 m³ (672102 cu.ft.)	6378.1145 MT (14061336 lb)

Captain, First Officer / Mate or vessel authorized personnel: ______________________

QSL Canada inc. without prejudice: ______________________

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-06-29 16:10

QSL

1 3 4 7 5 1
2022-06-29 23:00 - N/A
V220501

Port
Bécancour

Section
Becancour

Pro Forma MANIFEST

NORDIKA DESGAGNES

Port of Discharge	Shipper	C/O	Consignee	Notify
BAKER LAKE NUNAVUT	AGNICO EAGLE MINES LIMITED 355 Alphonse-Deshaies Blvd BÉCANCOUR QC G9H 2Y7 CANADA	N/A	AGNICO EAGLE MINES LIMITED (DIVISION MEADOWBANK) PO Box 540 BAKER LAKE NU X0C 0A0 CANADA	N/A

MEADOWBANK-AEM-STOCK

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Northern cargo GENERAL	StrappedBundle	Bc: 432907, Scope: loose	490 cm x 130 cm x 88 cm	1	5.6056 m³	1.315 MT	-
Northern cargo GENERAL	StrappedBundle	Bc: 432911, Scope: loose	490 cm x 130 cm x 88 cm	1	5.6056 m³	1.315 MT	-
Northern cargo GENERAL	StrappedBundle	Bc: 432908, Scope: loose	490 cm x 130 cm x 88 cm	1	5.6056 m³	1.315 MT	-
Northern cargo GENERAL	StrappedBundle	Bc: 432904, Scope: loose	490 cm x 130 cm x 88 cm	1	5.6056 m³	1.315 MT	-

SUBTOTAL QTY: 4 SUBTOTAL VOLUME: 22.4224 m³ (792 cu.ft.) 5.26 MT (11596 lb)

TOTAL QTY: 4 TOTAL VOLUME: 22.4224 m³ (792 cu.ft.) 5.26 MT (11596 lb)

Quantity: 1038 Volume: 23093.0524 m³ (815525 cu.ft.) 9807.13 MT (21621021 lb)

Captain, First Officer / Mate or vessel authorized personnel: ____________

QSL Canada inc. without prejudice: ____________

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-07-05 15:39

TOTAL QTY: 79	TOTAL VOLUME: 3912.1996 m³ (138158 cu.ft.)	1035.764 MT (2283469 lb)

Quantity: 79	Volume: 3912.1996 m³ (138158 cu.ft.)	1035.764 MT (2283469 lb)

Captain, First Officer / Mate or vessel authorized personnel: J. G. Papin

QSL Canada inc. without prejudice: ______________________

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

QSL

135180
2022-07-01 00:00 - N/A
V220502

MEADOWBANK-AEM-STOCK

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Equipment TIRE	Loose	Bc: 434654, Scope: loose	305 cm x 305 cm x 90 cm	1	8.3723 m³	2.5 MT	-
Equipment TIRE	Loose	Bc: 434531, Scope: loose	310 cm x 310 cm x 95 cm	1	9.1295 m³	2.436 MT	-
Equipment TIRE	Loose	Bc: 435674, Scope: loose	303 cm x 303 cm x 93 cm	1	8.5382 m³	2.436 MT	-
Equipment TIRE	Loose	Bc: 435681, Scope: loose	303 cm x 303 cm x 93 cm	1	8.5382 m³	2.436 MT	-
Equipment TIRE	Loose	Bc: 435675, Scope: loose	303 cm x 303 cm x 93 cm	1	8.5382 m³	2.436 MT	-
Equipment TIRE	Loose	Bc: 435656, Scope: loose	310 cm x 310 cm x 95 cm	1	9.1295 m³	2.441 MT	-
Northern cargo PIPES	StrappedBundle	Bc: 434649, Desc: HDPE, Scope: loose	610 cm x 125 cm x 122 cm	1	9.3025 m³	0.552 MT	-

SUBTOTAL QTY: 136 SUBTOTAL VOLUME: 5061.4215 m³ (178743 cu.ft.) 2561.6755 MT (5647528 lb)

TOTAL QTY: 136 TOTAL VOLUME: 5061.4215 m³ (178743 cu.ft.) 2561.6755 MT (5647528 lb)

Quantity: 136 Volume: 5061.4215 m³ (178743 cu.ft.) 2561.6755 MT (5647528 lb)

Captain, First Officer / Mate or vessel authorized personnel:

QSL Canada inc. without prejudice: L. Payeur

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-07-03 15:46

QSL

137420
2022-07-13 08:00 - N/A
V220856

DESGAGNES ARVIAT

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
		Scope: containerized, PO: 22-00754-1					
Northern cargo GENERAL	Crate	Bc: 92197, Desc: MATERIEL POUR LE CHARGEMENT DES UNITÉS MODULAIRES, Scope: containerized, PO: 22-00754-1	120 cm x 100 cm x 85 cm	1	1.02 m³	0.395 MT	-

SUBTOTAL QTY: 46 SUBTOTAL VOLUME: 4777.232 m³ (168707 cu.ft.) 388.6607 MT (856850 lb)

TOTAL QTY: 46 TOTAL VOLUME: 4777.232 m³ (168707 cu.ft.) 388.6607 MT (856850 lb)

Quantity: 722 Volume: 24086.3163 m³ (850602 cu.ft.) 7994.7972 MT (17625511 lb)

Captain, First Officer / Mate or vessel authorized personnel: ~40

QSL Canada inc. without prejudice: J. T. Pelletier

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

QSL

1 3 8 5 2 9
2022-07-19 18:00 - N/A
V220857

MEADOWBANK-AEM-STOCK

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Northern cargo TIRES	Loose	Bc: 441410, Scope: loose, Other: PRIORITY	310 cm x 310 cm x 95 cm	1	9.1295 m³	5.371 MT	-

SUBTOTAL QTY: 172 SUBTOTAL VOLUME: 6011.8841 m³ (212308 cu.ft.) 3087.404 MT (6806561 lb)

TOTAL QTY: 172 TOTAL VOLUME: 6011.8841 m³ (212308 cu.ft.) 3087.404 MT (6806561 lb)

Quantity: 172 Volume: 6011.8841 m³ (212308 cu.ft.) 3087.404 MT (6806561 lb)

Captain, First Officer / Mate or vessel authorized personnel: ACADIA DESGAGNÉS

QSL Canada inc. without prejudice:

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-07-23 16:04

QSL

139584
2022-07-21 00:00 - N/A
V220860

Port: Bécancour

Section: Becancour

Pro Forma MANIFEST

MIENA DESGAGNES

Port of Discharge	Shipper	C/O	Consignee	Notify
RANKIN INLET, NUNAVUT	DESGAGNÉS TRANSARCTIK INC. N/A	N/A	DESGAGNÉS TRANSARCTIK INC. N/A	N/A

DESGAGNES RANKIN INLET

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Vehicles - self-propelled (passenger) PICK UP-WITH ASSISTANCE	Unit	Bc: 92074, Desc: TOYOTA TUNDRA NOIR 2022 A2657RAN01, Scope: loose, PO: 22-00343-1	597 cm x 234 cm x 203 cm	1	28.3587 m³	3.295 MT	Class 9/3166/P.G. III
Vehicles - self-propelled (passenger) PICK UP-WITH ASSISTANCE	Unit	Bc: 92073, Desc: TOYOTA TACOMA BLANC 2022 A2657RAN01, Scope: loose, PO: 22-00343-1	592 cm x 229 cm x 180 cm	1	24.4022 m³	2.54 MT	Class 9/3166/P.G. III

SUBTOTAL QTY: 2 SUBTOTAL VOLUME: 52.7609 m³ (1863 cu.ft.) 5.835 MT (12864 lb)

TOTAL QTY: 2 TOTAL VOLUME: 52.7609 m³ (1863 cu.ft.) 5.835 MT (12864 lb)

Quantity: 730 Volume: 23689.1009 m³ (836574 cu.ft.) 9311.2205 MT (20527727 lb)

Captain, First Officer / Mate or vessel authorized personnel: ____________________

QSL Canada inc. without prejudice: J. F. Paquin

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-07-29 13:19

QSL

140683
2022-08-01 21:00 - N/A
V221237

DESGAGNES BAKER LAKE

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
20' containers FULL	Unit	Bc: ACOL 200851-4, Desc: CONTAINER 20' SANAVIK COOP, Scope: loose, PO: 22-00373-1, Seal # 1522829	610 cm x 244 cm x 262 cm	1	38.9961 m³	12.9 MT	-
20' containers FULL	Unit	Bc: KMTU 728092-0, Desc: CONTENEUR 20' A2316 ARTIC FUEL, Scope: loose, PO: 22-00662-1, Seal # 6702257	610 cm x 244 cm x 262 cm	1	38.9961 m³	10.901 MT	-
20' containers FULL	Unit	Bc: ACOL 209055-0, Desc: CTN 20' FULL SANAVIK COOP, Scope: loose, PO: 22-00373-1, Seal # TRUCK SEAL	610 cm x 244 cm x 262 cm	1	38.9961 m³	10.338 MT	-
20' containers FULL	Unit	Bc: 291946-5, Desc: CONTENEURS 20 PIEDS, Scope: loose, PO: 22-00373-1, Seal # 1522888	610 cm x 244 cm x 262 cm	1	38.9961 m³	4.698 MT	-
20' containers FULL	Unit	Bc: BBUU 202320-2, Desc: CONTENEUR 20 PIEDS, Scope: loose, PO: 22-00373-1, Seal # 1522808	610 cm x 244 cm x 262 cm	1	38.9961 m³	3.632 MT	-
Northern cargo GENERAL	Crate	Bc: 92102, Desc: CRATE 245096, Scope: containerized, PO: 22-00264-2	92 cm x 92 cm x 94 cm	1	0.7956 m³	0.14 MT	Class 2.1/1075
Northern cargo GENERAL	Pallet	Bc: 92167, Scope: containerized, PO: 22-01622-2	130 cm x 130 cm x 210 cm	1	3.549 m³	1.312 MT	Class 2.2/1046
Vehicles - self-propelled (passenger) PICK UP-NO ASSISTANCE	Unit	Bc: 92238, Desc: FORD ESCAPE 2017, Scope: loose, PO: 22-01398-1	452 cm x 208 cm x 168 cm	1	15.7947 m³	1.599 MT	Class 9/3166/P.G. III

SUBTOTAL QTY: 16 SUBTOTAL VOLUME: 527.0886 m³ (18614 cu.ft.) 127.865 MT (281894 lb)

TOTAL QTY: 16 TOTAL VOLUME: 527.0886 m³ (18614 cu.ft.) 127.865 MT (281894 lb)

Quantity: 832 Volume: 24784.9652 m³ (875274 cu.ft.) 10698.6655 MT (23586520 lb)

Captain, First Officer / Mate or vessel authorized personnel: [signature]

QSL Canada inc. without prejudice: J. S. Pajuin

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

QSL

1 4 2 6 3 6
2022-08-09 00:00 - N/A
V221328

Port	Section
Bécancour	Becancour

Pro Forma MANIFEST

SEDNA DESGAGNES

Port of Discharge	Shipper	C/O	Consignee	Notify
RANKIN INLET, NUNAVUT	DESGAGNÉS TRANSARCTIK INC. N/A	N/A	DESGAGNÉS TRANSARCTIK INC. N/A	N/A

DESGAGNES RANKIN INLET

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Vehicles - self-propelled (passenger) PICK UP-NO ASSISTANCE	Unit	Bc: 92076, Desc: FORD F150 A5008 2018, Scope: loose, PO: 22-01155-1	610 cm x 230 cm x 191 cm	1	26.7973 m³	1.8 MT	Class 9/3166/P.G. III

SUBTOTAL QTY: 1 SUBTOTAL VOLUME: 26.7973 m³ (946 cu.ft.) 1.8 MT (3968 lb)

TOTAL QTY: 1 TOTAL VOLUME: 26.7973 m³ (946 cu.ft.) 1.8 MT (3968 lb)

Quantity: 227 Volume: 7984.7554 m³ (281979 cu.ft.) 3825.0245 MT (8432736 lb)

Captain, First Officer / Mate or vessel authorized personnel: ____________

QSL Canada inc. without prejudice: ____________

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-08-13 19:04

QSL

1 4 2 8 3 0
2022-08-06 08:00 - N/A
V221327

DESGAGNES BAKER LAKE

SUBTOTAL QTY: 43	SUBTOTAL VOLUME: 417.4426 m³ (14742 cu.ft.)	108.676 MT (239590 lb)
TOTAL QTY: 43	TOTAL VOLUME: 417.4426 m³ (14742 cu.ft.)	108.676 MT (239590 lb)

Quantity: 491	Volume: 17952.4174 m³ (633985 cu.ft.)	9107.898 MT (20079478 lb)

Captain, First Officer / Mate or vessel authorized personnel: ______

QSL Canada inc. without prejudice: ______

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

QSL

145918
2022-08-23 00:00 - N/A
V221498

DESGAGNES BAKER LAKE

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
(passenger) VUS-NO ASSISTANCE		22-02400-3					
Vehicles - self-propelled (passenger) VUS-NO ASSISTANCE	Unit	Bc: 92130, Desc: GMC ENVOY SERIAL NUMBER 46147314, Scope: loose, PO: 22-02400-3	528 cm x 191 cm x 193 cm	1	19.4637 m³	2.253 MT	Class 9/3166/P.G. III
Vehicles - self-propelled (passenger) VUS-NO ASSISTANCE	Unit	Bc: 92129, Desc: GMC ENVOY SERIAL NUMBER 8235295, Scope: loose, PO: 22-02400-3	528 cm x 191 cm x 193 cm	1	19.4637 m³	2.253 MT	Class 9/3166/P.G. III
Vehicles - self-propelled (passenger) VUS-NO ASSISTANCE	Unit	Bc: 92128, Desc: GMC ACADIA SERIAL NUMBER 8J144388, Scope: loose, PO: 22-02400-3	511 cm x 201 cm x 185 cm	1	19.0015 m³	2.203 MT	Class 9/3166/P.G. III
Vehicles - self-propelled (passenger) VUS-NO ASSISTANCE	Unit	Bc: 92127, Desc: GMC ACADIA SERIAL NUMBER CJ354065, Scope: loose, PO: 22-02400-3	511 cm x 201 cm x 185 cm	1	19.0015 m³	2.203 MT	Class 9/3166/P.G. III

SUBTOTAL QTY: 35 SUBTOTAL VOLUME: 416.8604 m³ (14721 cu.ft.) 65.408 MT (144200 lb)

TOTAL QTY: 35 TOTAL VOLUME: 416.8604 m³ (14721 cu.ft.) 65.408 MT (144200 lb)

Quantity: 624 Volume: 20843.4235 m³ (736080 cu.ft.) 8456.086 MT (18642478 lb)

Captain, First Officer / Mate or vessel authorized personnel: ____________

QSL Canada inc. without prejudice: ____________

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-08-29 15:27

QSL

Port	Section
Bécancour	Becancour

Pro Forma MANIFEST

CLAUDE A.DESGAGNES

Port of Discharge	Shipper	C/O	Consignee	Notify
RANKIN INLET, NUNAVUT	DESGAGNÉS TRANSARCTIK INC. N/A	N/A	DESGAGNÉS TRANSARCTIK INC. N/A	N/A

DESGAGNES RANKIN INLET

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
20' containers FULL	Unit	Bc: 828170-3, Desc: NATIK PROJECTS, Scope: loose, PO: 22-02776-3, Seal # NOSEAL	610 cm x 244 cm x 262 cm	1	38.9961 m³	10 MT	-

SUBTOTAL QTY: 1 SUBTOTAL VOLUME: 38.9961 m³ (1377 cu.ft.) 10 MT (22046 lb)

TOTAL QTY: 1 TOTAL VOLUME: 38.9961 m³ (1377 cu.ft.) 10 MT (22046 lb)

Quantity: 568 Volume: 18663.0525 m³ (659081 cu.ft.) 7890.2745 MT (17395078 lb)

Captain, First Officer / Mate or vessel authorized personnel: ______________________

QSL Canada inc. without prejudice: ______________________

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

148621
2022-09-04 07:30 - N/A
V221582

TOTAL QTY: 338	TOTAL VOLUME: 6205.7606 m³ (219155 cu.ft.)	2386.793 MT (5261978 lb)

Quantity: 1145	Volume: 21936.0787 m³ (774667 cu.ft.)	10392.732 MT (22912052 lb)

Captain, First Officer / Mate or vessel authorized personnel: Paul Pepe

QSL Canada inc. without prejudice:

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-09-10 08:39

QSL

1 5 2 5 7 5
2022-09-21 00:00 - N/A
V221639

MELIADINE-AEM-STOCK

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Vehicles - self-propelled (passenger) SMALL TRAILER-NO ASSISTANCE	Unit	Bc: 450665, Desc: DIESEL HEATER IDH1000 UNIT SGD611, Scope: loose	432 cm x 244 cm x 183 cm	1	19.2897 m³	2.177 MT	-
Vehicles - self-propelled (passenger) SMALL TRAILER-NO ASSISTANCE	Unit	Bc: 450666, Desc: DIESEL HEATER IDH1000 UNIT SGD610, Scope: loose	432 cm x 244 cm x 183 cm	1	19.2897 m³	2.177 MT	-
Vehicles - self-propelled (passenger) VUS-NO ASSISTANCE	Unit	Bc: 451270, Desc: LANDCRUISER HZJ79 MENCARRIER, Scope: loose	557 cm x 205 cm x 244 cm	1	27.8611 m³	2.86 MT	Class 9/3166/P.G. III

SUBTOTAL QTY: 306 SUBTOTAL VOLUME: 13393.2986 m³ (472981 cu.ft.) 5232.678 MT (11536080 lb)

TOTAL QTY: 306 TOTAL VOLUME: 13393.2986 m³ (472981 cu.ft.) 5232.678 MT (11536080 lb)

Quantity: 723 Volume: 24923.8315 m³ (880178 cu.ft.) 8317.901 MT (18337833 lb)

Captain, First Officer / Mate or vessel authorized personnel:

QSL Canada inc. without prejudice: J. S. Paquin

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-09-28 13:39

QSL

154146
2022-09-28 00:00 - N/A
V221776

MELIADINE-AEM-STOCK - HOLD STOCK 2021

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
Northern cargo PIPES	StrappedBundle	Bc: 382389, Desc: 3 PIPES OC-905863, Scope: loose	1677 cm x 122 cm x 47 cm	1	9.6159 m³	1.432 MT	-
Northern cargo PIPES	StrappedBundle	Bc: 382388, Desc: 3 PIPES OC-905863, Scope: loose	1677 cm x 122 cm x 47 cm	1	9.6159 m³	1.432 MT	-
Northern cargo PIPES	StrappedBundle	Bc: 382390, Desc: 3 PIPES OC-905863, Scope: loose	1677 cm x 122 cm x 47 cm	1	9.6159 m³	1.432 MT	-

SUBTOTAL QTY: 101 SUBTOTAL VOLUME: 971.2059 m³ (34298 cu.ft.) 144.632 MT (318859 lb)

TOTAL QTY: 1173 TOTAL VOLUME: 21399.6906 m³ (755724 cu.ft.) 8430 MT (18584969 lb)

Quantity: 1173 Volume: 21399.6906 m³ (755724 cu.ft.) 8430 MT (18584969 lb)

Captain, First Officer / Mate or vessel authorized personnel: ________

QSL Canada inc. without prejudice: J. F. Poirier.

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-10-05 07:43

QSL

155325
2022-10-04 13:00 - N/A
V221906

MEADOWBANK-AEM-STOCK

Product	Packaging	Identifier	Dimensions	Qty	Volume	Weight	HAZ MAT
STANDARD		8485439					
20' containers STANDARD	Unit	Bc: TOLU 256277-6, Desc: , Scope: loose, Seal # 8485437	610 cm x 244 cm x 262 cm	1	38.9961 m³	11.818 MT	-
40' containers FLAT RACK	Unit	Bc: CCLU 940202-3, Desc: , Seal # No seal	1220 cm x 244 cm x 262 cm	1	77.9922 m³	24.338 MT	-
Northern cargo GENERAL	StrappedBundle	Bc: 455648, Scope: loose	611 cm x 10 cm x 16 cm	1	0.0978 m³	0.065 MT	-
Northern cargo GENERAL	Crate	Bc: 453362, Desc: BOITE A GRAVEL AVEC ONEWAY, Scope: containerized	605 cm x 325 cm x 222 cm	1	43.6508 m³	6.6 MT	-
Northern cargo GENERAL	Pallet	Bc: 451531, Scope: loose	323 cm x 143 cm x 24 cm	1	1.1085 m³	0.54 MT	-
Northern cargo RACK OF SWELLEX	Loose	Bc: AEM2500100, Scope: loose, Seal # NO SEAL	122 cm x 31 cm x 762 cm	1	2.8819 m³	1.092 MT	-
Northern cargo STEEL	StrappedBundle	Bc: 453450, Desc: , Scope: loose	183 cm x 37 cm x 11 cm	1	0.0745 m³	0.063 MT	-

SUBTOTAL QTY: 17 SUBTOTAL VOLUME: 554.7628 m³ (19591 cu.ft.) 160.851 MT (354616 lb)

TOTAL QTY: 17 TOTAL VOLUME: 554.7628 m³ (19591 cu.ft.) 160.851 MT (354616 lb)

Quantity: 946 **Volume: 20593.2036 m³ (727243 cu.ft.)** **8293.5022 MT (18284043 lb)**

Captain, First Officer / Mate or vessel authorized personnel: Paul P...

QSL Canada inc. without prejudice: J. L. Paquin.

QSL Canada visually inspected the parcels before loading them on board to prevent them from holding soils that could contain plant seeds of invasive breeds.

2022-10-11 16:42

APPENDIX G

Arctic Raptors Research Program Report

Prepared For:
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Background

Agnico Eagle Mines Limited (Agnico Eagle) is operating the Meliadine Mine, located approximately 25 km north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. In February 2015, Meliadine was issued the Project Certificate No. 006 from the Nunavut Impact Review Board (NIRB) with Amendment No. 001 in February 2019 and Amendment No. 002 in March 2022. Terms and conditions related to management and mitigation for birds and bird habitat (including raptorial species) are outlined in Nunavut Impact Review Board Project Certificate for the Meliadine Gold Mine Project Certificate (NIRB 2022), as follows:

- *Term and Condition (T&C) 59; Species at Risk — If Species at Risk or their nests and eggs are encountered during Project activities or monitoring programs, the primary mitigation measure must be avoidance. The Proponent shall establish clear zones of avoidance based on the species-specific nest setback distances outlined in the Terrestrial Environment Management and Monitoring Plan.*
- *T&C 60;* Species at Risk — *The Proponent shall ensure that the mitigation and monitoring strategies developed for Species at Risk are updated as necessary to maintain consistency with any applicable status reports, recovery strategies, action plans and management plans that may become available during the duration of the Project.*
- *T&C 61; Construction/clearing activities — Prior to bird breeding season, the Proponent shall either conduct clearing activities or identify and install nesting deterrents (e.g., flagging) to discourage birds from nesting in areas likely to be disturbed by construction/clearing activities. If clearing is to take place during the nesting season, a nest survey should take place to identify nests and any identified nests must remain undisturbed until the young have fledged or left the nest. Any nests identified shall be included as part of the annual reporting for the Terrestrial Environmental Mitigation and Monitoring Plan (TEMMP).*
- *T&C 62; Construction/clearing activities — The Proponent shall protect any nests found (or indicated nests) with a buffer zone determined by the setback distances outlined in its Terrestrial Environment Mitigation and Monitoring Plan (TEMMP), until the young have fledged. If it is determined that observance of these setbacks is not feasible, the Proponent will develop nest-specific guidelines and procedures to ensure bird's nests and their young are protected.*
- *T&C 71; Monitoring — The Proponent shall develop detailed and robust mitigation and monitoring plans for migratory birds, reflecting input from relevant agencies, the Kivalliq Inuit Association and communities.*
- *T&C 72; Monitoring — The Proponent shall continue to develop and update relevant monitoring and management plans for migratory birds under the Proponent's Environmental Protection Plan and Terrestrial Environment Mitigation and Monitoring Plan (TEMMP) prior to construction. The key indicators for follow up monitoring under this plan will include upland birds (including migratory birds), waterbirds, raptors, and seabirds including migration and wintering.*

Monitoring indicators for nesting raptors are outlined in the Agnico Eagle Meliadine Division Terrestrial Environment Management and Monitoring Plan (TEMMP; Agnico Eagle 2022) as follows:

- *Monitoring Indicator 1; Disturbance of nesting raptors — To be determined in consultation with GN and Alastair Franke, related to occupancy and productivity.*
- *Monitoring Indicator 2; Projected-related mortality — To be determined in consultation with GN and Alastair Franke.*

Species Descriptions

Peregrine Falcon (*Falco peregrinus tundrius*)

The Arctic peregrine falcon (Figure 1, PEFA) is medium- to large-sized falcon. It has a dark hood and face with distinct dark malar stripe, cream to white throat, slate-grey back; barred belly, legs, and tail. Long pointed wings, stocky body. Plumage of immature birds brown rather than grey, and the breast is streaked rather than barred. In adults, the cere and orbital ring are yellow, and bluish in immature birds. Compared with gyrfalcons, the peregrine is smaller and less stocky. In flight, the wings of peregrines appear narrower and more pointed. In peregrine falcons, wing tips extend to bottom of the tail when perched, while in gyrfalcons, wing tips extend two-thirds down the length of tail.

F. p. tundrius breeds mainly north of the treeline from Alaska east throughout northern Canada to Greenland. It breeds throughout the taiga and tundra wherever suitable nesting habitat and sufficient prey are present. In Nunavut, peregrines appear to have their highest densities in the Kivalliq and Kitikmeot regions. Highest breeding density on record is on the western shores of Hudson Bay in the Kivalliq Region.

F. p. tundrius is a long-distance migrant, wintering mainly throughout South and Central America, but also in southern United States and Mexico. Northern-breeding American and Arctic peregrines are highly migratory (Yates et al. 1988, Schmutz et al. 1991, Fuller et al. 1998), and although fall migration occurs over a broad geographic range (Fuller et al. 1998), Yates et al. (1988) indicated that “separate and distinct autumn migratory populations pass through the east and Gulf coasts” of the United States.

Peregrine falcons usually nests on cliffs and rocky outcrops, but also nest on hilltops, river canyons, rock screes, and on occasion directly on the ground (Court et al. 1988, Ratcliffe 1993). They prefer nesting in locations close to water in south-facing, rugged terrain. Hunting habitat includes rugged coastline areas and rolling tundra that consists of raised beaches, dry tundra, sedge meadows, wetlands, and lakes that are inhabited by a diversity of breeding songbirds and shorebirds.

Peregrine Falcons do not build a nest but make a depression (called a scrape) in the substrate on a cliff ledge. Scrapes are usually approximately 20 cm in diameter and 4 cm deep. Females usually do the majority of incubation and brooding of small young. Males provision incubating females and provide most of the prey when nestlings are small. Thereafter, females do most of the feeding, beginning to hunt after young are large enough to thermoregulate on their own. Clutch size is typically 3 or 4 eggs in Nunavut. In Rankin Inlet and Igloolik, the median incubation period of the first egg was 36 days and decreased 1 day for each additional egg. The incubation period of the 4th egg (33 days) was similar to what has been reported elsewhere (Burnham 1983).

The Arctic peregrine falcon is a generalist predator with a diverse diet that includes passerines, shorebirds , ducks , gulls, terns, jaegers, black guillemots, and, when available, collared lemmings, brown lemmings, and Arctic ground squirrels. Bradley and Oliphant (1991) indicated that, around Rankin Inlet, small birds (64% of prey items) represented the greatest portion of prey items, followed by microtine rodents (25%), large birds (8%), and Arctic ground squirrels (4%). The most important prey measured by percent biomass were large birds (43%), followed by small birds (25%), microtine rodents (18%), and Arctic ground squirrels (15%).

In Nunavut, the earliest documented arrival for Peregrine Falcons is 10 May at a known breeding site near Rankin Inlet. Although arrival timing varies with spring conditions, the majority of sites are occupied during the 3rd week of May. Median laying date in Rankin Inlet (9 June) is typically earlier than Igloolik (15 June) and northern Baffin Island (16 June). Median date of hatching ranges from 14 July at Rankin Inlet to 18 July on northern Baffin Island and 20 July at Igloolik (Jaffre et al. 2015). Birds depart the breeding grounds from mid-September through early October, arriving on the wintering grounds throughout Central and South America in November.

Gyrfalcon (*Falco rusticolus*)

The gyrfalcon (Figure 2, GYRF) is large with pointed wings, but more rounded and broader than the wings of other falcon species. The tail is relatively long. When perched, wings extend 2/3 down the tail. The body is thick and powerful, particularly in females. Adults have yellow ceres, eye-rings and legs. As in all falcons, the eyes appear black. Three main color morphs occur: black, grey and white. White adults have almost pure white breasts and bellies, with dark wingtips (dipped-in-ink appearance). Grey adults have slate-colored back, with white underparts mottled with gray arrowhead-shaped markings. Dark adults are dark-grey overall above and dark-streaked breasts and belly. There is extreme reverse sex dimorphism, with males being approximately 2/3 the size of females (Ferguson-Lees et al. 2001).

Gyrfalcons distribution extends throughout the circumpolar Arctic. Most of the breeding range occurs north of 60°N, but breeding pairs are known to exist as far south as 55°N, mainly along sea-coasts in eastern Canada. Many adults remain within the breeding range throughout the year, but some disperse southwards in winter, small numbers reaching the norther. United States (Cade 1982, Poole 1987). Immature birds are much more likely to winter to south of breeding range, and females are thought to disperse more widely, with many males remaining relatively close to breeding territories throughout the year.

Ptarmigan are often cited as the most important prey species by biomass, but Arctic ground squirrel and Arctic hare are also important, as well as small mammals (mice and voles) and other birds (ducks, sparrows, buntings). In central Nunavut, Poole and Boag (1988) identified eleven species of birds and five species of mammals among the prey. Birds accounted for three quarters of the diet, and adult rock ptarmigan were the most common. Arctic ground squirrel and arctic hare made up the bulk of mammalian prey.

Males occupy and defend nesting territories as early as the end of January, with females arriving in mid-March. In Nunavut, laying typically begin in the first week of May with most pairs laying by the end of the second week in May. Nestlings typically hatch in mid-June, but hatching can occur throughout June. Nestlings fledge in late July or early August after 7 weeks in the nest. In Nunavut, gyrfalcon usually nest on cliff ledges, ideally beneath sheltering overhang; sometimes nests in trees or on man-made structures. Nests are generally on rock ledges or abandoned rough-legged hawk or common raven nests. Use of alternate nest sites is not uncommon. Pairs do not necessarily attempt breeding every year, depending on food supply. Typical clutch size is 3-4 eggs (Booms et al. 2008) that are incubated for 34-36 days mostly by the female (ca. 80%). The North American population including Nunavut is considered to be stable (Clum and Cade 1994, Kirk and Hyslop 1998). Although low spring temperatures are associated with later arrival at nesting territories in Nunavut (Poole and Bromley 1988), there was no effect on laying dates. However, (Poole and Bromley 1988) indicated that increased spring precipitation (snow) reduced reproductive success.

Rough-legged Hawk (*Buteo lagopus)*

The rough-legged hawk (Figure 3, RLHA) is a medium-large bird of prey, with a fairly small beak, predominantly brown in colour and often mottled. Plumage is highly variable with recognized light and dark morphs. Extensive field experience is required to distinguish between males and females, and between adults and juveniles based on plumage alone. A broad chest band is evident in most plumage variations, and in flight, a dark carpal patch is characteristic in light morph individuals. One or more dark terminal bands appear on the tail. The wing tips are long enough to reach or extend past the tail when the animal is perched. Legs are feathered to feet (Ferguson-Lees et al. 2005).

Widespread throughout North America, breeding from the Aleutian Islands, the interior of Alaska, Yukon, northern Mackenzie, and across Nunavut to northern Labrador and Newfoundland and south to Manitoba and southeastern Quebec. In Nunavut, rough-legged hawks are present over most of the territory except for islands without lemmings (Bechard and Swem 2002).

Regularly hovers, or “kites” while facing into the wind scanning for prey. Soars with wings raised in a slight dihedral (V-shape). It is a diurnal raptor that still-hunts from prominent perching structure on both breeding and wintering grounds. Prey is captured on the ground. Courtship involves soaring and calling, with the male engaged in a flight display of repeated undulating stoops rising upward to mid-air stall. It is gregarious on migration, often travelling in large flocks, but small groups or individuals are not uncommon.

During the summer, breeding pairs prefer rugged terrain areas with steeper slopes in areas associated with primary production (i.e., vegetation), and were most likely to nest in large, productive valleys surrounded by high-elevation plateaus (Galipeau et al. 2016). It is widely distributed in winter, usually found in open habitat resembling the tundra such as prairies, plains, coastal marshes, agricultural fields, and airports (Johnsgard and Johnsgard 1990). More common in wintering areas typified by short growing seasons and low precipitation, with highest densities in the northern United States, Great Basin area, and the western shortgrass prairies (Bock and Lepthien 1976, Bock et al. 1977).

The rough-legged hawk is a small mammal specialist; thus, its breeding activity is generally associated with local abundance of ground squirrels, voles, or lemmings (Hanski 1991, Potapov 1997). It will prey on birds when small mammals are scarce, particularly juvenile passerines and shorebirds, and will resort to consuming carrion opportunistically (Watson 1986). Usually reproductively mature at 2 years of age. Stick-nests are built soon after arrival on territory, typically on cliffs, on bluffs, or on the ground. Clutch sizes are variable (1-7 eggs), depending on food availability, but 3-5 eggs are usual and laid in May. Incubation 31-33 days, provided almost entirely by the female. Nestling period is 35-40 days, and fledglings remain dependent on adults for another 2 weeks. The male provisions the young and the female, which feeds the young. Pairs show nest site fidelity, and in locations where ground squirrels are entirely absent, they may forgo breeding or have small broods when lemmings are low, in contrast to Snowy Owls, which are truly nomadic (Bechard and Swem 2002). Bechard and Swem (2002) indicated that egg-laying date was associated with spring temperatures and snow-free ledges, but Potapov (1997) reported no effect of snow melting date or spring/summer temperatures on number of nesting pairs.

Methods

Terminology

The terminology used throughout this report follows (Franke et al. 2017). The following terms are highlighted in an effort to clarify terminology used in this report, and/or to distinguish terms used from similar terms that have distinct meaning:

nest — The structure made or the place used by birds for laying their eggs and sheltering their young (Steenhof and Newton 2007) regardless of whether eggs are laid in the nest in a given year or in any year (Millsap et al. 2015, Steenhof et al. 2017), see Scrape for Gyrfalcons.

nesting site — The substrate which supports the nest or the specific location of the nest on the landscape (Ritchie and Curatolo 1982, Millsap et al. 2015, Steenhof et al. 2017).

alternative nesting site — One of potentially several nests within a nesting territory that is not a used nest in the current year (Millsap et al. 2015).

nesting territory — An area that contains, or historically contained, one or more nests within the home range of a mated pair: a confined locality where nests are found, usually in successive years, and where no more than one pair is known to have bred at one time (Newton and Marquiss 1984, Steenhoff and Newton 2007). Note that a nesting territory may or may not be defended (Postupalsky 1974), and probably does not include all of a pair's foraging habitat (Newton and Marquiss 1984, Steenhoff and Newton 2007).

occupancy — The quotient of the count of occupied nesting territories and the count of known nesting territories that were fully surveyed in a given breeding season (Franke et al. 2017).

brood size — The actual number of young hatched from a single nesting attempt by a pair of birds. For studies in which mortality that occurs between hatching and the first observation of the brood is unknown, it is appropriate to report brood size (i.e., number hatched) only for broods equal to, or less than 10 days of age. For broods older than 10 days of age, see Brood Size ≥10 days. Report mean and standard error, or standard deviation.

brood size ≥ 10 days — The number of young hatched from a single nesting attempt by a pair of birds. For studies in which mortality that occurs between hatching and the first observation of the brood is unknown, and nestlings are equal to, or greater than 10 days of age, but less than Minimum Acceptable Age for Assessing Success. Report mean and standard error, or standard deviation.

minimum acceptable age for assessing success — A standard nestling age at which a nest can be considered successful. An age when young are well grown but not old enough to fly and after which mortality is minimal until actual fledging. Typically 80% of the age that young of a species normally leave the nest of their own volition for many species, but lower (65–75%) for species in which age at fledging varies considerably or for species that are more likely to leave the nest prematurely when checked (Steenhof and Newton 2007).

nest survival — The probability that a nesting attempt survives over the complete nesting period. When Daily Survival Rate (DSR; Dinsmore et al. 2002) is assumed to be constant over time and E is the nesting period (usually expressed in days), nest survival is DSR^E; otherwise nest survival is the product of each estimated DSR. For raptors, nest survival is the equivalent of nesting success for egg-laying pairs (Steenhof et al. 2017).

productivity — The number of young that reach the minimum acceptable age for assessing success; usually reported as the number of young produced per territorial pair or per occupied territory in a particular year (Steenhoff and Newton 2007, Steenhof et al. 2017).

total production — The total number of young detected.

Data Exploration

Distance to disturbance

Spatial objects (lines and polygons) describing the project footprint and road were acquired from Agnico Eagle. Euclidean distances from nesting sites to the nearest spatial object were calculated in R (R Development Core Team 2017) using the `sp`, `rgeos`, and `geosphere` packages. Summary data were generated using the `hist`, `boxplot`, and `summary` functions in R.

Assigning Nesting Sites to Nesting Territories

In the absence of marked individuals, it can be challenging to definitively identify alternative nesting sites. Failure to account for alternative nesting sites can lead to underestimating demographic parameters such as annual productivity. To address this problem, a rule-based approach was used to estimate the number of alternative nesting sites within the study area (Figure 4):

- If two species-specific nesting sites were separated by a distance of ≤ 1 km they were considered alternative nesting sites in a single nesting territory.
- If two nesting sites within 1 km of each other were occupied by the same species in a given year, they were considered separate territories.
- If multiple species-specific nesting sites were within 1 km of one another, discrete geographic landforms or discontinuities in cliff structure were used to separate or combine sites into territories.

Temporal patterns of multi-species occupancy were used to assess the plausibility of decisions based on the application of the three rules listed above. For example, if two nesting sites were located within 1 km of each other and were occupied by two different species in alternating years, these nesting sites were identified as distinct alternative nesting sites for each species.

Assigning Identification Numbers (ID) to Nesting Territories was conducted according to the following rule set:

- Nesting Territory IDs were assigned within species only (e.g., Nesting Territory IDs for Peregrine Falcon and Rough-legged hawk were never shared).
- Nesting Territory IDs were assigned using the Identification Number of one of the Nesting Sites in the cluster according to the following rule set, in order of priority:

    i. Length of tenure (i.e., nesting sites with the longest tenure)

    ii. First tenure (i.e., nesting sites with the first tenure in the event length of tenure was equal).

Field Surveys

Two structured surveys were conducted in 2022. The focus of these surveys was to search known nesting sites for the presence of cliff-nesting raptors. In addition to the structured surveys, favorable habitat was searched opportunistically when ferrying between known sites, camps, or other mine infrastructure and when raptors or signs of site use (e.g., whitewash, orange-colored lichen, and unused nests) were observed. Sites were considered occupied if one or more adults displayed territorial or reproductive behavior (e.g., vocalization and/or flight behavior associated with defense of breeding territory or presence of nest building, nest, or eggs). Locations with partially built or unused nests without detection of breeding aged adults were noted as such (e.g., old stick nest; no birds detected). Raptor monitoring in 2022 involved two helicopter surveys (24 - 25 May, 9 – 10 August), and ground - monitoring of potential nesting habitat (natural cliffs, quarries and borrow pits) in coastal areas using snowmobile in May and boat in August.

Mapping

Shapefiles for the Road, and project footprints were read into R using the `readOGR` function in the `rddal` package and converted to a data frame for `ggplot2` using the `fortify` function. The spatial extent for the mapping exercise was set using the `get_map` function in the `ggmap` package. Maps portraying species-specific nesting sites were plotted using `ggmap`.

Occupancy

Although estimation of nesting site occupancy can serve as a metric of population status (MacKenzie et al. 2002, 2003), detection of nesting pairs is imperfect, and estimating the proportion of occupied sites without accounting for detection error can lead to underestimation of true occupancy (Kéry and Schmidt 2008). Occupancy modeling estimates parameters that influence occupancy, and simultaneously accounts for imperfect detection (Marsh and Trenham 2008). In any given year, the status of a nesting site is limited to one of only two outcomes: occupied or not occupied. Single year occupancy modelling estimates the following parameters:

1. initial colonization – the probability that a nesting site is occupied in the first survey year (ψ), and;
2. detection – the probability that PEFA are detected given that the nesting site is occupied (*p*).

In addition, environmental covariates can be added to an occupancy model to test whether they influence the above parameters using a logit link function. Single-year occupancy was calculated in R (R Development Core Team 2019) using the ‘unmarked’ package. When appropriate, data were standardized (e.g., distance to disturbance was standardized by subtracting the mean from each distance value and dividing by the standard deviation), and then formatted specifically for ‘unmarked’ using the `unmarkedFrameOccu` function.

Occupancy was analyzed separately for peregrine falcons and rough-legged hawks (no gyrfalcons were detected). To do so, the total number of nesting sites was filtered to include only those nesting sites that were occupied in 2022 for each species. Model fitting of candidate models (Table 2) was performed using the *occu* function. Akaike Information Criterion (AIC) was used for model selection.

Four candidate models were selected *a priori* to estimate the effect of distance to anthropogenic disturbance (d2d) on detection probability (γ) and occupancy (ψ; Table 2).

Table 1. Candidate models

Model structure	Model #	Tests for effect of:
ψ(1) + *p*(1)	m0	Null model (contrast to m1, m2, and m3)
ψ(1) + *p*(d2d)	m1	d2d on detection, occupancy is constant
ψ(d2d) + *p*(d2d)	m2	d2d on detection and d2d on occupancy
ψ(d2d) + *p*(1)	m3	Detection is constant, and d2d on occupancy

Results

Throughout the region, nesting raptors have been detected at 220 nesting sites (Figure 5). Of these, 106 have been occupied by only rough legged hawks, 79 by only peregrine falcons (21 additional nesting sites have been occupied by either peregrine falcons or rough legged hawks). Six (6) nesting sites have been occupied by common ravens, two (2) by snowy owls and one (1) each by gyrfalcon and short-eared owl.

Within the Regional Study Area (RSA; Figure 1), nesting raptors have been detected at 177 nesting sites. Of these, 93 have been occupied by only rough legged hawks and 55 by only peregrine falcons. Seventeen (17) additional nesting sites have been occupied by either peregrine falcons or rough legged hawks resulting in a total of 72 known peregrine falcon nesting sites and 110 rough legged hawk nesting sites. Five (5) nesting sites have been occupied by common ravens, and one (1) each by gyrfalcons, snowy owls, and short-eared owl.

Table 2. Count of known nesting sites for common raven (CORA), gyrfalcon (GYRF), peregrine falcon (PEFA/PERL), rough legged hawk (RLHA/PERL), short eared owl (SEOW), snowy owl (SNOW), and unknown raptor species (SPP) in the Rankin Inlet region and within the regional study area.

	CORA	GYRF	PEFA	PERL	RLHA	SEOW	SNOW	SPP
Region	6	1	79	21	106	1	2	4
RSA	5	1	55	17	93	1	1	4

Eleven (11) peregrine falcon nesting sites were deemed alternates, resulting in a total of 61 known peregrine falcon nesting territories. Fifty-nine (59) nesting territories were fully surveyed, of which, evidence of breeding was detected at 33 nesting territories (observed proportion = 0.56). One rough legged hawk nesting site was deemed an alternative site, resulting in a total of 109 known rough legged hawk nesting territories. One hundred and one (101) territories were fully surveyed, of which, evidence of breeding was detected at 21 nesting territories (observed proportion = 0.21).

Peregrine Falcon Occupancy

The null model (m0; Table 3) best explained probability of occupancy among peregrine falcons (0.77±0.10; Table 5). Including distance to anthropogenic disturbance did not improve model fit.

Table 3. Model selection based on AIC score for peregrine falcons.

Model	K	AICc	Delta AICc	AICcWt	Cum.Wt	LL
m0	2	156.49	0.00	0.53	0.53	-76.14
m1	3	158.43	1.95	0.20	0.74	-76.01
m3	3	158.70	2.21	0.18	0.91	-76.14
m2	4	160.09	3.61	0.09	1.00	-75.69

Table 4. Parameter estimates (null model; log odds scale) for peregrine falcon occupancy (psi) and detection (rho).

	psi (intercept)	***p* (intercept)**
Estimate	0.84	0.25
SE	0.50	0.36

Table 5. Predicted occupancy and detection (probability scale), SE, and 95% CI for peregrine falcons.

	Predicted	**SE**	**Lower 95% CI**	**Upper 95% CI**
PEFA occupancy	0.70	0.10	0.47	0.86
PEFA detection	0.56	0.09	0.39	0.72

Rough legged Hawk Occupancy

The null model (m0; Table 6) best explained probability of occupancy among rough legged hawks (0.31±0.88; Table 8). Including distance to anthropogenic disturbance did not improve model fit.

Table 6. Model selection based on AIC score for rough legged hawks.

Model	**K**	**AICc**	**Delta AICc**	**AICcWt**	**Cum.Wt**	**LL**
m0	2	150.31	0.00	0.34	0.34	-73.10
m3	3	150.43	0.11	0.32	0.65	-72.10
m2	4	151.13	0.82	0.22	0.87	-71.38
m1	3	152.28	1.97	0.13	1.00	-73.03

Table 7. Parameter estimates (null model; log odds scale) for rough legged hawk occupancy (psi) and detection (rho).

	psi (intercept)	***p* (intercept)**
Estimate	-.82	-0.26
SE	0.41	0.52

Table 8. Predicted occupancy and detection (probability scale), SE, and 95% CI for rough legged hawks.

	Predicted	**SE**	**Lower 95% CI**	**Upper 95% CI**
RLHA occupancy	0.31	0.88	0.16	0.49
RLHA detection	0.44	0.13	0.22	0.68

Discussion

Monitoring for breeding raptors has occurred consistently in the area associated with Meliadine Project infrastructure for decades. Conducted by Arctic Raptors Inc., surveys have focused on searching for, documenting, and mapping nesting sites for three raptor species (peregrine falcons, rough-legged hawks, and gyrfalcons).This report represents the first formal survey and analysis for all known raptor nesting sites in the entire RSA. Study design included at two surveys – one to assess the location of occupied territories during the pre-incubation and incubation periods, and one to assess site productivity during the late brood rearing period.

Mitigation and management outlined in the TEMMP requires the protection of species at risk during the breeding season (T&C 59), and requires that disturbance to birds is minimized through consistent monitoring (T&C 59), including nest-specific mitigation where necessary (T&C 61, 62, and 75). Peregrine falcons were assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in November of 2017, and were ranked “Not at Risk”. The responsible Minister rendered a decision on the recommendation made by COSEWIC, and peregrine falcons are no longer considered to be threatened. This report meets the T&C outlined by NIRB by documenting and mapping raptor nesting sites within 1.5km of the project infrastructure, including minimum “no disturbance” buffers.

Although this analysis found no evidence of an effect of distance to disturbance on occupancy. Regardless of this finding, for the potential detecting mine-related anthropogenic disturbance will be challenging in light of the presence of roads, trails, cabins, travel routes and activities on the sea/sea-ice and lake ice associated with the community of Rankin Inlet. Multi-year surveys should be conducted at the scale of the RSA, and effort in northern portion of the RSA should be made as there has been no survey effort throughout much of the RSA.

Terms and Conditions

T&C 59 - 60: Do not apply to raptors.

T&C 61: Nesting deterrents to discourage birds from nesting in areas likely to be disturbed by construction/clearing activities were not required. Surveys of known nesting sites identified those at which breeding attempts were detected, and are reported here.

T&C 62: 39 known nesting sites are within 1.5km of project infrastructure. Eleven peregrine falcon nesting sites are within 1.5km of the haul road and 1 is with 1.5km of the site footprint. Twenty-two rough legged hawk nesting sites are within 1.5km of the haul road and two are within 1.5km of the site footprint. Of the 39 known nesting sites within 1.5km of project infrastructure, 19 nesting sites within 0.6 Km of project infrastructure. Six known peregrine falcon nesting sites are within 0.6 km of the haul road and 1 is within 0.6 km of the site footprint. Nine rough legged hawk nesting sites are within 0.6 km of the haul road and two are within 0.6 km of the site footprint.

T&C 71: This report and the result herein represent detailed monitoring for raptors.

T&C 72: Comprehensive field surveys conducted in 2022 represent the first efforts to develop and update relevant monitoring for raptors. Heretofore Agnico has relied on monitoring conducted by Arctic Raptors, which covers a small portion of the RSA .

Table 9 Geographic coordinates (decimal degrees), distance to project footprint (Km2FP), and distance to haul road (Km2HR) and minimum distance to disturbance (minD2D) for 177 occupied nesting sites in the RSA. Territories within 600 m of infrastructure (road, or footprint) are highlighted in dark yellow, while territories that are within 1500 m are highlighted in light yellow require a management plan. Species column indicates historical occupancy; PEFA = peregrine falcon, RLHA = rough legged hawk, PERL = peregrine falcon or rough legged hawk, SPP = unknown, CORA = common raven, GYRF = gyrfalcon, SNOW = snowy owl, SEOW = short eared owl. Not all nesting sites are occupied in any given year.

NSID	Species	Km2FP	Km2HR	minD2D	Mgt. Plan Required
1	PEFA	17.10	4.77	4.77	No
2	SPP	25.22	3.27	3.27	No
3	PEFA	25.26	7.86	7.86	No
4	PERL	20.05	7.31	7.31	No
5	PEFA	19.48	8.40	8.40	No
6	RLHA	20.17	6.80	6.80	No
8	PEFA	26.37	1.23	1.23	Yes
10	RLHA	26.03	0.86	0.86	Yes
11	RLHA	26.12	2.06	2.06	No
14	RLHA	6.02	0.20	0.20	Yes
15	RLHA	25.67	4.01	4.01	No
37	PEFA	18.26	0.92	0.92	Yes
20	PERL	18.60	0.29	0.29	Yes
18	PERL	18.67	0.81	0.81	Yes
26	RLHA	26.53	8.02	8.02	No
28	PEFA	25.66	8.92	8.92	No
29	PERL	25.12	8.67	8.67	No
30	PEFA	26.33	3.93	3.93	No
31	PEFA	22.57	5.24	5.24	No
57	PERL	22.17	5.08	5.08	No
32	CORA	21.50	4.21	4.21	No
33	PEFA	21.53	4.17	4.17	No
34	RLHA	21.29	4.28	4.28	No
35	RLHA	22.07	7.01	7.01	No
36	RLHA	24.25	2.70	2.70	No
38	PEFA	25.63	3.32	3.32	No
39	PEFA	23.88	5.60	5.60	No
41	PEFA	23.99	6.21	6.21	No
40	PEFA	24.52	6.97	6.97	No
42	PEFA	24.39	6.20	6.20	No
43	RLHA	25.25	7.44	7.44	No
44	RLHA	26.64	9.37	9.37	No
45	RLHA	25.62	8.33	8.33	No
46	PEFA	5.74	5.76	5.74	No
47	PERL	22.93	1.74	1.74	No
137	PEFA	23.14	2.07	2.07	No
48	RLHA	24.19	1.50	1.50	Yes

49	RLHA	26.37	2.83	2.83	No
50	PERL	25.49	1.89	1.89	No
51	PEFA	26.43	2.00	2.00	No
52	PERL	26.34	3.22	3.22	No
53	PEFA	24.33	3.42	3.42	No
54	RLHA	23.45	3.37	3.37	No
55	RLHA	25.66	2.71	2.71	No
56	RLHA	25.22	2.46	2.46	No
58	PEFA	21.54	7.80	7.80	No
59	PERL	20.85	9.52	9.52	No
60	SPP	24.06	8.34	8.34	No
61	PEFA	12.38	1.24	1.24	Yes
63	PEFA	18.32	1.39	1.39	Yes
66	PERL	20.60	8.56	8.56	No
67	PERL	12.50	0.23	0.23	Yes
110	PEFA	11.69	0.40	0.40	Yes
69	PERL	22.68	4.15	4.15	No
71	PERL	19.01	7.10	7.10	No
72	RLHA	23.67	8.03	8.03	No
74	PEFA	24.67	2.23	2.23	No
76	PERL	25.02	5.60	5.60	No
212	PERL	19.64	4.12	4.12	No
77	PEFA	19.72	4.28	4.28	No
78	PEFA	25.09	2.13	2.13	No
79	RLHA	15.71	3.25	3.25	No
81	PEFA	17.27	2.13	2.13	No
83	RLHA	25.17	8.59	8.59	No
84	PEFA	4.35	4.39	4.35	No
85	PEFA	24.16	10.85	10.85	No
210	PEFA	23.46	10.13	10.13	No
86	RLHA	17.58	6.10	6.10	No
87	RLHA	19.66	10.10	10.10	No
88	PEFA	15.12	0.49	0.49	Yes
201	PEFA	14.92	0.05	0.05	Yes
89	PEFA	10.15	1.85	1.85	No
90	PEFA	19.09	19.12	19.09	No
95	PEFA	10.60	0.59	0.59	Yes
96	RLHA	9.50	5.14	5.14	No
98	PEFA	9.16	5.47	5.47	No
218	PEFA	8.91	5.41	5.41	No
99	PEFA	20.95	11.98	11.98	No
100	PEFA	23.12	12.45	12.45	No
102	CORA	26.37	9.13	9.13	No
103	RLHA	7.22	7.24	7.22	No

104	RLHA	25.31	1.96	1.96	No
105	CORA	26.66	1.99	1.99	No
106	RLHA	20.60	9.47	9.47	No
107	RLHA	19.44	3.48	3.48	No
108	RLHA	25.16	2.17	2.17	No
109	RLHA	3.89	3.93	3.89	No
111	RLHA	24.86	3.02	3.02	No
112	RLHA	15.98	3.72	3.72	No
113	RLHA	14.20	0.62	0.62	Yes
114	RLHA	10.69	1.17	1.17	Yes
115	RLHA	5.59	0.25	0.25	Yes
116	RLHA	9.76	5.85	5.85	No
117	RLHA	2.17	2.34	2.17	No
118	RLHA	20.69	4.83	4.83	No
119	RLHA	20.03	5.34	5.34	No
120	RLHA	19.67	6.11	6.11	No
121	RLHA	14.62	1.44	1.44	Yes
123	RLHA	25.17	1.75	1.75	No
124	RLHA	14.37	0.20	0.20	Yes
125	PEFA	25.72	0.60	0.60	Yes
127	RLHA	17.85	4.38	4.38	No
190	PEFA	5.25	5.04	5.04	No
129	PEFA	4.97	4.76	4.76	No
130	PERL	25.49	9.52	9.52	No
133	RLHA	24.15	1.06	1.06	Yes
134	PEFA	6.19	6.21	6.19	No
135	PEFA	2.09	2.13	2.09	No
196	PEFA	2.08	2.06	2.06	No
136	RLHA	5.61	4.96	4.96	No
138	RLHA	9.25	0.20	0.20	Yes
144	CORA	24.69	2.21	2.21	No
145	PEFA	20.69	5.40	5.40	No
146	RLHA	23.77	19.68	19.68	No
147	PEFA	24.27	7.85	7.85	No
148	RLHA	22.30	7.74	7.74	No
149	RLHA	24.59	3.36	3.36	No
150	SNOW	7.93	4.70	4.70	No
151	PEFA	27.03	1.81	1.81	No
152	PEFA	23.00	2.99	2.99	No
153	RLHA	20.91	4.45	4.45	No
154	PEFA	23.90	2.74	2.74	No
156	RLHA	23.88	1.62	1.62	No
158	RLHA	18.75	0.89	0.89	Yes
159	RLHA	26.55	1.28	1.28	Yes

160	RLHA	11.75	5.04	5.04	No
161	PEFA	23.54	3.33	3.33	No
162	PEFA	19.79	5.76	5.76	No
163	RLHA	17.81	3.28	3.28	No
164	RLHA	10.63	8.25	8.25	No
165	RLHA	21.40	2.92	2.92	No
166	RLHA	13.77	2.54	2.54	No
168	RLHA	21.70	7.78	7.78	No
169	RLHA	17.58	3.66	3.66	No
171	RLHA	18.75	0.89	0.89	Yes
172	RLHA	8.89	1.42	1.42	Yes
173	RLHA	11.09	1.22	1.22	Yes
174	PERL	11.48	0.31	0.31	Yes
175	RLHA	10.84	0.20	0.20	Yes
176	RLHA	9.07	3.40	3.40	No
177	RLHA	9.43	0.76	0.76	Yes
178	RLHA	26.12	12.98	12.98	No
179	RLHA	7.18	5.84	5.84	No
180	RLHA	18.06	18.11	18.06	No
181	RLHA	15.98	16.02	15.98	No
183	RLHA	21.52	3.39	3.39	No
184	RLHA	0.23	0.16	0.16	Yes
185	RLHA	2.05	2.22	2.05	No
186	RLHA	2.22	2.20	2.20	No
187	PEFA	2.91	2.69	2.69	No
188	RLHA	6.05	5.28	5.28	No
189	SPP	4.21	4.00	4.00	No
191	SEOW	1.73	0.53	0.53	Yes
192	RLHA	4.21	0.09	0.09	Yes
193	CORA	22.46	4.14	4.14	No
194	RLHA	6.63	6.66	6.63	No
195	RLHA	4.64	4.68	4.64	No
197	GYRF	1.17	1.16	1.16	Yes
198	RLHA	16.52	5.88	5.88	No
199	RLHA	5.28	5.06	5.06	No
200	PEFA	1.74	1.73	1.73	No
202	RLHA	14.25	1.03	1.03	Yes
203	RLHA	18.92	18.59	18.59	No
204	RLHA	16.36	16.40	16.36	No
205	RLHA	16.10	16.14	16.10	No
206	RLHA	15.73	15.76	15.73	No
207	RLHA	19.19	19.23	19.19	No
208	RLHA	5.28	5.06	5.06	No
209	RLHA	5.92	5.94	5.92	No

211	RLHA	26.76	8.69	8.69	No
213	RLHA	14.64	0.47	0.47	Yes
214	RLHA	16.96	6.21	6.21	No
215	PEFA	0.07	0.20	0.07	Yes
216	RLHA	0.08	0.19	0.08	Yes
217	SPP	1.73	1.77	1.73	No
219	RLHA	9.75	6.39	6.39	No
220	PEFA	9.08	1.04	1.04	Yes

Figure 1

Figure 1. Adult male peregrine falcon. Note the dark hood and face with distinct dark malar stripe, white throat, slate-grey back, and barred belly, legs, and tail. Wings are long and pointed. Note the yellow legs, cere and eye ring.

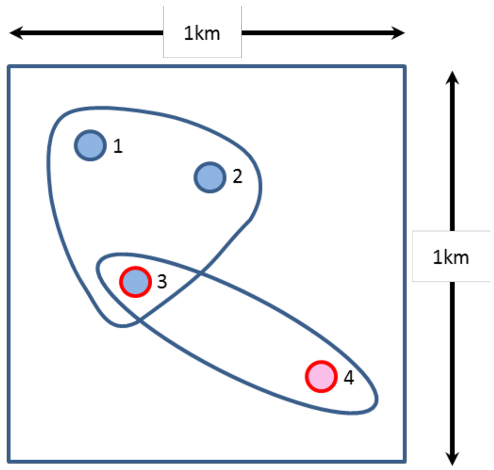
Figure 2

Figure 2. Adult female gyrfalcon. Note that wings are more rounded and broader than the peregrine falcon. The tail is relatively long. When perched, wings extend 2/3 down the tail. The body is thick and powerful, particularly in females. Adults have a yellow cere

Figure3

Figure 3. Adult male rough-legged hawk. Note predominantly brown in colour and mottled. A broad chest band is evident, and dark carpal patches (not evident here) are characteristic in light morph individuals. One or more dark terminal bands appear on the tail. T

Figure 4



NS ID	PEFA NT ID	RLHA NT ID	2011	2012	2103	2014	2015	2016	2017
1	**1**	**-**	PEFA	PEFA	NBD	NBD	NBD	PEFA	PEFA
2	1	-	NBD	NBD	PEFA	NBD	PEFA	NBD	NBD
3	1	4	NBD	NBD	NBD	PEFA	RLHA	RLHA	NBD
4	-	4	RLHA	RLHA	NBD	RLHA	NBD	NBD	RLHA

Figure 4. Rule-based approach used to assign nesting sites to nesting territories. A cluster of four nesting sites within 1 km of one another that exhibit a site occupancy history among seven years for two species (PEFA and RLHA). Nesting Sites 1 and 2 (blue circles with blue borders) have been occupied solely by PEFA. Nesting Site 4 (red circle with red border) has been occupied solely by RLHA. Nesting Site 3 (blue circle with red border) has been occupied by both PEFA and RLHA. In this example, Nesting Sites 1, 2 and 3 are grouped into a single PEFA Nesting Territory and assigned Nesting Territory ID 1 based on PEFA–specific tenure length (Nesting Site 1 has the longest tenure) and first tenure. Nesting Sites 3 and 4 are grouped into a single RLHA Territory and assigned Nesting Territory ID 4 based on RLHA–specific tenure length (Nesting Site 4 has the longest tenure) and first tenure. Unique nesting locations are ultimately defined by a Nesting Territory ID and a Nesting Site ID (E.g., NT ID 1, NS ID 2). NBD = no birds detected.

Figure 5

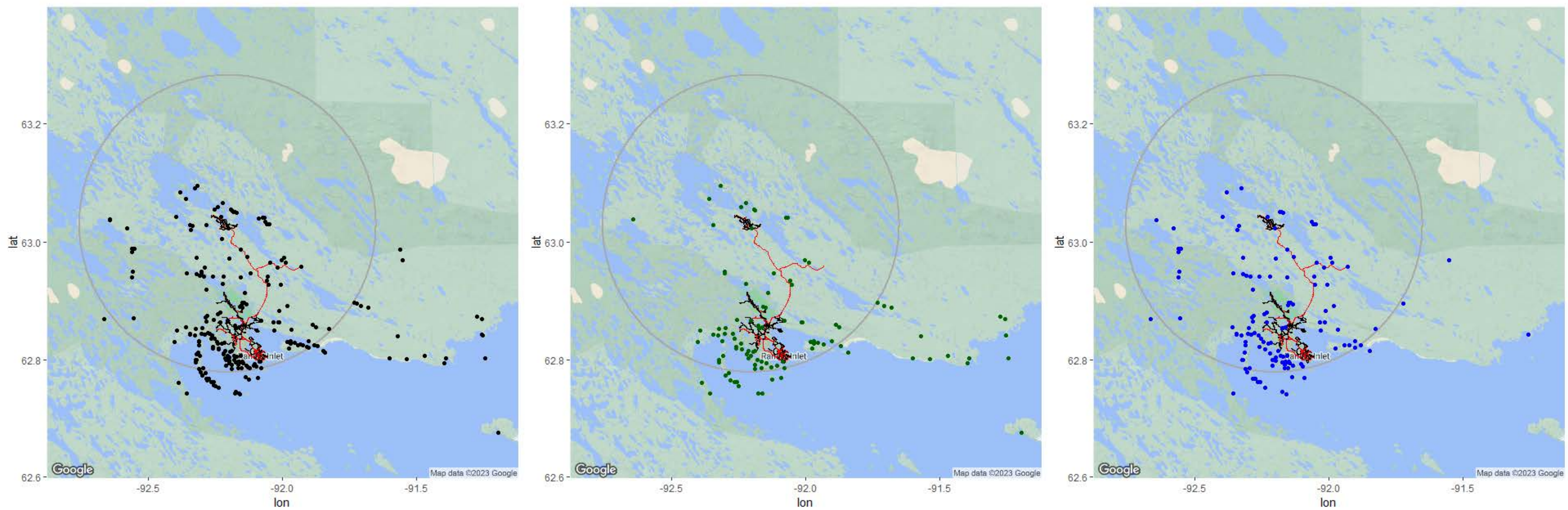


Figure 5. All known nesting sites in the Rankin Inlet region surveyed (n=220; left), known peregrine falcon nesting sites (n= 110; middle), and known rough legged hawk nesting sites (n=127; right). Count of nesting sites for other raptor species and common raven are reported in in Table X. Also shown are roads (red lines) and trails (black lines), the project footprint (grey polygon), and the boundary of the regional study area (grey).

References

Agnico Eagle. 2022. Agnico Eagle Meliadine Division Terrestrial Environment Management and Monitoring Plan (TEMMP).

Bechard, M. J., and T. R. Swem. 2002. Rough-legged Hawk: Buteo lagopus. Birds of North America:1-31.

Bock, C. E., J. H. Bock, and L. W. Lepthien. 1977. Abundance patterns of some bird species wintering on great-plains of USA. Journal of Biogeography **4**:101-110.

Bock, C. E., and L. W. Lepthien. 1976. Geographical ecology of common species of buteo and parabuteo wintering in North America. Condor **78**:554-557.

Bradley, M., and L. W. Oliphant. 1991. The diet of peregrine falcons in rankin inlet, northwest-territories - an unusually high proportion of mammalian prey. Condor **93**:193-197.

Burnham, W. 1983. Artificial incubation of falcon eggs. The Journal of Wildlife Management **47**:158-168.

Cade, T. J. 1982. Falcons of the world. Comstock/Cornell University Press, Ithaca, New York.

Clum, N. J., and T. J. Cade. 1994. Gyrfalcon. Falco rusticolus. Birds of North America **114**:1-28.

Court, G. S., C. C. Gates, and D. A. Boag. 1988. Natural-history of the Peregrine Falcon in the Keewatin district of the northwest-territories. Arctic **41**:17-30.

Dinsmore, S. J., G. C. White, and F. L. Knopf. 2002. Advanced techniques for modeling avian nest survival. Ecology **83**:3476-3488.

Ferguson-Lees, J., D. Christie, J. Ferguson-Lees, and D. Christie. 2005. Raptors of the world: a field guide.

Ferguson-Lees, J., D. A. Christie, J. Ferguson-Lees, and D. A. Christie. 2001. Raptors of the world.

Franke, A., K. Steenhoff, and C. L. McIntyre. 2017. Terminology. Pages 33-42 *in* D. l. Anderson, C. M. McClure, and A. Franke, editors. Applied raptor ecology: essentials from Gyrfalcon research. The Peregrine Fund, Boise, Idaho, USA.

Fuller, M. R., W. S. Seegar, and L. S. Schueck. 1998. Routes and travel rates of migrating Peregrine Falcons *Falco peregrinus* and Swainson's Hawks *Buteo swainsoni* in the western hemisphere. Journal of Avian Biology **29**:433-440.

Hanski, I. 1991. The Functional-Response of Predators - Worries About Scale. Trends in Ecology & Evolution **6**:141-142.

Jaffre, M., A. Franke, A. Anctil, P. Galipeau, E. Hedlin, V. Lamarre, V. L'herault, L. Nikolaiczuk, K Peck, B. Robinson, and J. Bêty. 2015. Écologie de la reproduction du faucon pèlerin au Nunavut. Le Naturaliste Canadien **139**:54-64.

Johnsgard, P. A., and P. A. Johnsgard. 1990. Hawks, eagles & falcons of North America. Biology and natural history.

Kirk, D. A., and C. Hyslop. 1998. Population status and recent trends in Canadian raptors: A review. Biological Conservation **83**:91-118.

Millsap, B. A., T. G. Grubbb, R. K. Murphy, T. R. Swem, and J. W. Watson. 2015. Conservation significance of alternative nests of golden eagles. Global Ecology and Conservation:234-241.

NIRB. 2022. NIRB Meliadine Gold Mine Project Certificate [NO.: 006] Amendment No. 002. March 2nd, 2022. Nunavut Impact Review Board (NIRB).

Poole, K. G. 1987. Aspects of the ecology, food habits and foraging characteristics of Gyrfalcons in the central Canadian Arctic. Raptor Research **21**:80-80.

Poole, K. G., and D. A. Boag. 1988. Ecology of Gyrfalcons, *falco-rusticolus*, in the central canadian arctic - diet and feeding-behavior. Canadian Journal of Zoology-Revue Canadienne De Zoologie **66**:334-344.

Poole, K. G., and R. G. Bromley. 1988. Natural-history of the Gyrfalcon in the central Canadian Arctic. Arctic **41**:31-38.

Potapov, E. R. 1997. What determines the population density and reproductive success of rough-legged buzzards, Buteo lagopus, in the Siberian tundra? Oikos **78**:362-376.

Ratcliffe, D. 1993. The Peregrine Falcon. 2nd edn. edition. T. and A. D. Poyser, Carlton, England.

Schmutz, J. K., R. W. Fyfe, U. Banasch, and H. Armbruster. 1991. Routes and timing of migration of falcons banded in Canada. Wilson Bulletin **103**:44-58.

Steenhof, K., M. N. Kochert, C. L. McIntyre, and J. L. Brown. 2017. Coming to terms about describing golden eagle reproduction. Journal of Raptor Research **51**:in press.

Steenhof, K., and I. Newton. 2007. Assessing nesting success and productivity. Pages 181-192 *in* D. M. Bird and K. L. Bildstein, editors. Raptor research and management techniques. Hancock House, Blaine, WA U.S.A. .

Watson, J. W. 1986. Temporal fluctuations of rough-legged hawks during carrion abundance. Raptor Research **20**:42-43.

Yates, M. A., K. E. Riddle, and F. P. Ward. 1988. Recoveries of Peregrine Falcons migrating through the eastern and central United States. Pages 471 - 484 *in* T. J. Cade, Enderson, J.H, White, C.M., editor. Peregrine Falcon Populations; Their Management and Recovery. The Peregrine Fund, Boise, Idaho.

APPENDIX H

Waterline Alignment Den Survey

AGNICO EAGLE

MELIADINE GOLD PROJECT

Waterlines Alignment

Den Survey

In Accordance with NIRB Project Certificate No. 006 – Amendment No. 002

Prepared by Agnico-Eagle Mines Limited – Meliadine Division

March 31st 2022

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1 INTRODUCTION

1.1 BACKGROUND AND OBJECTIVES

The Agnico Eagle Mines Limited (Agnico Eagle) Meliadine Gold Mine is located near Rankin Inlet in Nunavut. In February 2015, the Project was issued the Project Certificate No. 006 from the Nunavut Impact Review Board (NIRB) with Amendment No. 001 in February 2019 and Amendment No. 002 in March 2022 to include the Waterlines Proposal.

The Waterlines Proposal consists of changing the conveyance of treated saline effluent from trucking to dual waterlines from the Meliadine Mine site to Itivia Harbour in Rankin Inlet along the All-weather Access Road (AWAR) then along the Rankin Inlet Bypass Road (RIBR). Construction of the waterlines is expected to begin in summer 2022.

In accordance with Term and Condition 53 of the NIRB Project Certificate No. 006 (Amendment No. 002):

---

*Prior to construction of Project infrastructure **including the waterlines** and Phase 2 of the all-weather access road, the Proponent shall conduct a survey that is sufficient to locate any dens of foxes, bears or wolverines that could be damaged or destroyed during construction or operation of the Project.*

In addition, the Terrestrial Environment Management and Monitoring Plan (TEMMP) Section 2.3 also specifies that den surveys for fox, bears, and wolverines should be undertaken prior to construction of Project infrastructure and Phase 2 of the AWAR.

This document was prepared to address the above referenced Term and Condition 53 aims to:

- summarizes den methodology used to conduct the survey;
- locate carnivore dens prior the construction of the waterlines;
- present the results from the den survey conducted along the waterlines alignment in March 2022;
- gather the historic of den locations located along the waterlines alignment; and
- propose mitigation measures to be implemented if active dens are found during construction.

2 METHODS

A den survey was conducted between March 16 to March 20, 2022, along waterlines alignment to locate carnivore dens prior construction. Carnivore abundance in the vicinity of the waterlines is relatively low and includes the following species:

- Arctic fox (*Alopex lagopus*);
- Grey wolf (*Canis lupus*);
- Polar bear (*Ursus maritimus*);
- Barren ground grizzly (*Ursus arctos*); and
- Wolverine (*Gulo gulo*).

For the March 2022 den survey, the species targeted were the bears and the wolverine because those species are denning in the winter period. Appendix A describes further the den characteristics and denning period for each species.

2.1 STUDY AREA

The den survey was conducted along the proposed waterlines reflecting the alignment at the time of the survey. The length of the waterlines is about 34 kilometers in total. Figures 1 and 2 indicate the proposed location of the waterlines between the Meliadine mine site and Itivia Harbour. The area was divided into two sections according to the methods used during the survey:

- Section 1 includes the AWAR section from the mine site until kilometer marker (KM) 8; and
- Section 2 includes the AWAR section from KM8 to KM3.5 including the entire RIBR until Itivia Harbour.

The priority for den surveying includes areas of suitable habitat around the perimeter of the proposed waterlines alignment.

2.2 SURVEY METHODS

Several methods were combined to gather data increasing the chance to locate dens in the vicinity of the 34 kilometers waterlines. Photos of the survey are provided in Appendix B.

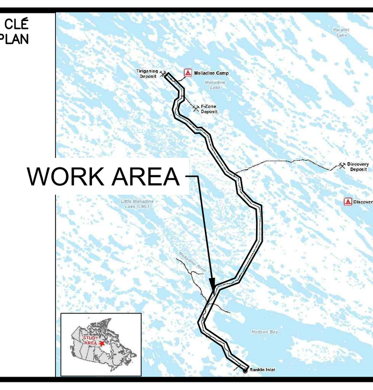
2.2.1 UNMANNED AIR-CRAFT SYSTEM SURVEY

For the Section 1, the survey was conducted using an unmanned air-craft system (UAS). The area covered with the UAS was from KM8 to KM30 along the AWAR. The Rankin Inlet Airport safety zone was avoided as per Transport Canada procedure regarding the use of drone and the Canadian Aviation Regulation.

NO. DESSIN DRAWING NO. 65–180–230–245

FORMAT ARCHD

PLAN CLÉ
KEY PLAN



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Projet No. : 674195

NOTES GÉNÉRALES / GENERAL NOTES

COORDINATES SYSTEMS

UTM15–RKI (–0+250 TO 13+000) :
UTM15 NAD83 CSRS/SCRS (GEOïD HT V2.0)
BENCHMARK CCM–14–92977013 :
EAST : 545280.004
NORTH : 6965803.749
ELE : 19.045

UTM15–MEL (13+000 TO 35+000) :
UTM15 NAD83 (GEOïD HT V2.0)
BENCHMARK CCM–14–92977013 :
EAST : 545279.894
NORTH : 6965802.926
ELE : 22.598

POUR COMMENTAIRES
FOR COMMENTS
AGNICO EAGLE
DATE : 2020–10–05

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
A	2020/10–05	FOR COMMENTS	A.L.	A.L.	B.R.

REVISIONS

TITRE / TITLE
AGNICO EAGLE – MELIADINE DIVISION
180 – SALINE EFFLUENT DISCHARGE SYSTEM
230 – GENERAL EARTH WORKS
PLAN
DISCHARGE TO SEA
BURIED WATERLINE LOCALIZATION

		DATE
DESSINÉ PAR DRAWN BY	PATRICK BUREAU, Tech.	2020/10/05
VERIFIÉ PAR CHECKED BY	ANDRÉ LEVESQUE,P.Eng.	2020/10/05
APPROUVÉ PAR APPROVED BY	ANDRÉ LEVESQUE,P.Eng.	2020/10/05
ÉCHELLE SCALE	1:40000	2020/10/05

NO. DESSIN DRAWING NO. 65–180–230–245

NO. PROJET PROJECT NO.	REVISION	FEUILLE / SHT
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FILE NO.

Figure 2. Proposed Waterlines Alignment.

The UAS was a DJI Mavic 2 Enterprise Dual equipped with a forward-looking infrared (FLIR) camera. The UAS was flying at an altitude of 20 meters (m) above the ground and at a speed between 10 and 15 meters per second covering about 70 m large on the ground. At each KM where deems safe to park along the AWAR, a transect of 800 m of each side of the AWAR was surveyed. The transect length corresponds to the recommended construction setbacks for active bear and wolf dens for general development activities excluding any blasting activity (GNWT, 2016). Also, it was not logistically possible to go further than 800 m because the flight duration was limited by the battery life. During the survey, new batteries were used, however due to weather conditions they lasted between 15 to 20 minutes maximum. A total of 22 transects was surveyed in the Section 1 during the waterlines den survey of March 2022 (Figure 3).

During the flight, the FLIR function was enabled to observe any sudden increase of temperature at the surface of the ground that could indicate the presence of an active den. The survey was mainly conducted during daytime to be able to observe the presence of snow tracks and habitat at the same time. The focus was in areas that had the presence of uneven terrain, boulders, bedrocks, and other areas where snow can be accumulated.

The team was composed of two qualified members of Agnico Eagle's Environmental Department: an Environmental Specialist (biologist) and an Environmental Technician who is also a certified UAS pilot. Both members focused on the presence of anormal temperature signatures and tracks on the snow.

Pictures were taken at each corner of the area surveyed and at locations where anormal temperature or snow tracks were observed and can be found in the Appendix B. Snow tracks were identified using the specialized guides (Elbroch 2003; Murie 1989).

2.2.2 VISUAL SURVEY

The section 2 corresponds to the areas where the UAS cannot be used due to the Transport Canada restriction and the proximity of residential areas. Instead, a visual survey was conducted on March 17, 2022, to identify areas having den habitat potential along the proposed waterlines alignment. The focus was in areas with uneven terrain. About 50 m on each side of the AWAR and RIBR was assessed by the same team that conducted the UAS survey.

2.2.3 HISTORICAL DATA

In addition to the field survey, historic information related with den locations were compiled. The information analyzed was mainly from the Final Environmental Impact Statement (Golder 2014). Other sources of information were the previous den surveys, the wildlife observation logs and incidental observations while conducting other type of surveys at the mine site.

Figure 3. Areas Covered using the Unmanned Air-Craft System.

Figure 4. Compilation of Known Den Locations.

3 Results and Discussion

No new den was found during the March 2022 survey.

In the sector 1, the area most suitable for bears or wolverines is the AWAR at KM16 on both sides of the AWAR. This is the area where the terrain was the roughest containing a large amount of boulders and bed rocks. In general, along the waterline alignment, there was large areas with minimal snow accumulation on the ground. Bears and wolverine require some snow depth to build their dens.

The use of UAS equipped with FLIR to detect denning polar bears has been documented in research for over a decade (Alaska Department Fish and Game 2013; Pedersen *et al.* 2020). The literature recommends conducting the survey at night to reduce the impact of sun warming up the ground and giving false readings. However, the lack of visibility and the high quantity of waterbodies found in the area complicated the analysis. Several false FLIR readings were recorded because the FLIR was bouncing back from the ice. Also, at night it is not possible to see what is under the UAS, to observe snow tracks or to quantify suitable habitat. Therefore, to increase chances of finding dens, the survey was conducted during daytime.

In the sector 2, dens could be difficult to find especially when not active or covered with snow, as they blend perfectly with their surroundings. The likelihood of having bears or wolverine dens in this sector is very low due to low snow depth. Also, there is more human activities because sector

2 is located closer to and within Rankin Inlet hamlet limits. The area the most suitable for wolverine would be the Apache Pass however the presence of residences would reduce the possibility of wolverines to den in the area. According to the Nunavut Land Use Plan, there is no known designated polar bear denning in the area (Nunavut Planning Commission 2021).

During the survey, three Arctic foxes were observed in the sector 1 and several ravens (*Corvus corax*) were observed in the sector 2. The observations were recorded in the wildlife observation log. In addition, the UAS detected old snow tracks. The tracks were only found between KM 08 et 10 but were mainly in the sector west of KM 09. The snow pattern in the snow was later identified as caribou (*Rangifer tarandus*) tracks and canids tracks (fox, wolf and/or dogs). There were also snowmobile tracks in the same area. There was no sign of the presence of bears or wolverines.

The most abundant carnivore species occurring around the mine site is the Arctic fox followed by the marten. Wolves are occasionally observed while polar bears, grizzlies, and wolverines are rarely observed in the area (Golder 2014).

Denning bears are unlikely to be impacted by the waterlines constructions because the denning period is between November and March (GNWT 2016). At the time of the construction, the bears would have already left their dens. Wolverine, fox and wolf denning periods overlap on construction. Due to the abundance of Arctic fox and the presence of suitable habitat such as esker in the area, the fox is the specie that is most likely to be observed along the waterlines alignment.

Looking at the historic data (Figure 4), three fox dens are located at proximity of the waterlines alignment :

- between KM 28 and 29 along the AWAR;
- at KM 25 along the AWAR; and
- about 275 m Northwest of the Itivia Harbour along the RIBR.

In the situation where a den is active during construction, mitigation measures found in the next section will be implemented.

4 MITIGATION MEASURES

This section lists recommendations in the situation where construction activities are within the recommended construction setbacks distances of an active den. The recommended construction setbacks are a protected buffer zone around a den where further mitigation measures will be implemented as described below. The setback distances depend on the species, the period of the year and the type of construction activities. The relevant recommended construction setbacks are presented in Table 1.

Table 1 Recommended Construction Setbacks per Species.

Species	Construction Setbacks	Sensitive period	Type of activity
Fox dens	150 m	May 1-Sept 15	General industrial activity
Wolf dens	800 m	May 1-Sept 15	General industrial activity
Bear dens polar bear, grizzly	800 m	Sept 30-Mar 30	General industrial activity
Bear dens polar bear, grizzly	1500 m	Sept 30-Mar 30	Blasting
Wolverine dens	2 000 m	Oct 15-July15	General industrial activity

Source: GNWT 2016

Precaution will be taken to not damage or destroy dens. In the situation where a new den is discovered, the Environment Department will be contacted to implement the mitigations measures. Otherwise, the mitigation measures of known den locations will consist of :

- incorporating known den locations and setback distances on the construction plans (drawings and engineering specifications);
- delineating protective areas clearly at the working site;
- minimizing the footprint to what is necessary for construction;
- informing the workers in the area when work is performed at proximity of the dens;
- keeping the working site clean and free of garbage that could impact or attract wildlife;
- avoiding harassing wildlife; and
- implementing the Wildlife Protection Response Plan.

5 CONCLUSION

In conclusion, a den survey was completed in March 2022 along the proposed waterlines alignment. The focus was put on bear and wolverine dens because the survey was conducted in the winter period. No new den location was found. This result is indicative of low density of bears and wolverines in the area.

The compilation of historic den survey data indicated the presence of three known arctic fox den locations at proximity of the proposed waterlines alignment. In addition, denning season for fox and for wolf are between May and mid-July.

Even though the presence of wolf den is unlikely, it is possible that new fox den locations are used in the summer of 2022. For this reason, a den survey will be conducted in mid-May 2022 after the snow melt and during the fox denning season. The purpose of the den survey will be to identify new fox dens, clearly identify the presence of known den locations for the construction crew, and to monitor the den activities. The recommended construction setback for fox dens is 150 m. In the situation that construction is closer than the setback distance, mitigation measures as described in the Section 4 will be implemented.

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6 REFERENCES

Alaska Department of Fish and Game. 2013. Comparison of Techniques to detect denning polar bears. [Accessed on March 22, 2022] Available at: https://www.adfg.alaska.gov/static/home/library/pdfs/wildlife/federal_aid/e_16_polar_bear_den_detection_final_rpt_fy13.pdf

Awan, M., M. Efford and J. Boulanger. 2020. Estimates of Wolverine Density from Mark-Recapture DNA Sampling. Napaktulik Lake, Kitikmeot Region, Nunavut 2018-2019. 51 p.

Cluff, H.D., L.R. Walton and P.C. Paquet. 2002. Movement and Habitat Use of Wolves Denning in the Central Arctic, Northwest Territories and Nunavut, Cannada- Esker Habitat Studies in the Slave Geological Province. Yellownife. [Accessed on March 22, 2022] Available at: https://www.enr.gov.nt.ca/sites/enr/files/wkss_wolves_habitat_2002.pdf

Elbroch, M. 2003. Mammal Tracks and Sign-A Guide to North American Species. Stackpole Books. Mechanicburg. 778 p.

Golder (Golder Associates Ltd.). 2014. Final Environmental Impact Statement. Meliadine Gold Project, Nunavut. Prepared for Agnico Eagle Mines Limited. Submitted to the Nunavut Impact Review Board.

GNWT (Government of Northwest Territories). 2016. Northern Land Use Guidelines: Northwest Territories Seismic Operation. Government of Northwest Territories – Department of Environment, Aboriginal Affair and Northern Development Canada, Environment Canada – Canadian Wildlife Service, and Fisheries and Oceans Canada. [Accessed on March 22, 2022] Available at: http://library.assembly.gov.nt.ca/2016/L/a360801_Vol4.pdf

Hendrickson, C.J., G. Salmelius, R.T. Aliasukas and S. Larivière. 2005. Simultaneous Den Use by Arctic Foxes and Wolves at a Den Site in Nunavut, Canada. Arctic 58(4):418-420.

Hodder, D., C.J. Johnson, R.V. Rea and A. Zedrosser. 2014. Application of a Species Distribution Model to Identify and Manage Bear Den Habitat in Central British Columbia. Wildlife Biology 20(4):238-248.

Lai, S. and. Berteaux. 2013. Technical Manual for Monitoring Foxes in the Arctic-Version 1. Canada Research Chair on Northern Biodiversity, University du Québec à Rimouski, Québec, 25 p.

Murie, O.J. 1989. Le guide des traces d'animaux. Les guides Peterson. Broquet. St-Constant. 363 p.

Nirlungayuk, G., P.Irngaut, M. Dyck, P. Frame, J. Qilliaq, A. Hadlari, R.Tatty and C. Hotson. 2016. Nunavut Polar Bear Co-Management Plan. 63 p.

Nunavut Planning Commission. 2021. 2021 Draft Nunavut Land Use Plan. [Accessed on March 22, 2022] Available at: https://www.nunavut.ca/land-use-plans/draft-nunavut-land-use-plan

Pedersen, N.J., T.J. Brinkman, R.T. Shideler, and C.J. Perham. 2020. Effects of environmental conditions on the use of forward looking infrared for bear den detection in the Alaska Arctic. Conservation Science and Practice 2020;2:e2015

SNC Lavallin. 2020. Agnico Eagle – Meliadine Division. 180-Saline Effluent Discharge System Drawing. 230-General Earth Works Plan Discharge to Sea Buried Waterline Localization. No. 65-180-230-245. Revision A.

The Wolverine Foundation. Online. Denning. [Accessed on March 22, 2022] Available at: http://wolverinefoundation.org/denning

APPENDIX A: DEN CHARACTERISTICS PER SPECIES

Table A-1: Den Characteristics per Species

Species	Den Characteristics
Arctic fox	- Locate on mounds, ridges, slopes or river banks. - Excavate from sandy soil or other well-drained substrate where active layer over permafrost is deeper. - Situate on south facing or early thawed areas. - Can be found under large rocks and boulders. - Dens openings are 15-20 cm in diameter. (Lai and Berteaux 2013; Hendrickson et al 2005)
Grey wolf	- Excavate in eskers, ridges of gravel and sand formed by melting glaciers. - Can take over dens of other animals (foxes, ground squirrel). - Close access to caribou. (Hendrickson et al 2005; Cluff et al 2002)
Polar bear	- Excavate soil on land along the slopes of fiords, on peninsulas or islands with sufficient snow cover in early winter for the construction of the dens or on moving multi-year ice and areas of annual rough ice. (Nirlungayuk et al. 2016)
Barren ground grizzly	- Excavate in soil - Rock cavity dens are either caves or cavities in boulder piles. - Locate mid to upper slope positions. (Hodder et al 2014)
Wolverine	-Rocky scree slopes, along eskers, within hard packed snowdrifts or under snow-covered boulders. - Snow greater than 1 m deep, distributed uniformly or accumulated in drifts. - Long, complex snow tunnels in hardened snowdrifts characterize den sites in tundra and alpine areas, and in some cases, the tunnels lead down to entrances under boulders. - Denning period (February-May). (Wolverine Foundation online; Awan et al. 2020)

APPENDIX B: Waterlines Den Survey Photos

Photo 1 Habitat at AWAR KM 28 Looking East. Picture Taken on March 19, 2022.

Photo 2 Habitat at AWAR KM 25 Looking East. Picture Taken on March 19, 2022.

Photo 3 Habitat at AWAR KM 16 Looking East. Picture Taken on March 19, 2022.

Photo 4 Habitat at AWAR KM 9 Looking East. Picture Taken on March 18, 2022.

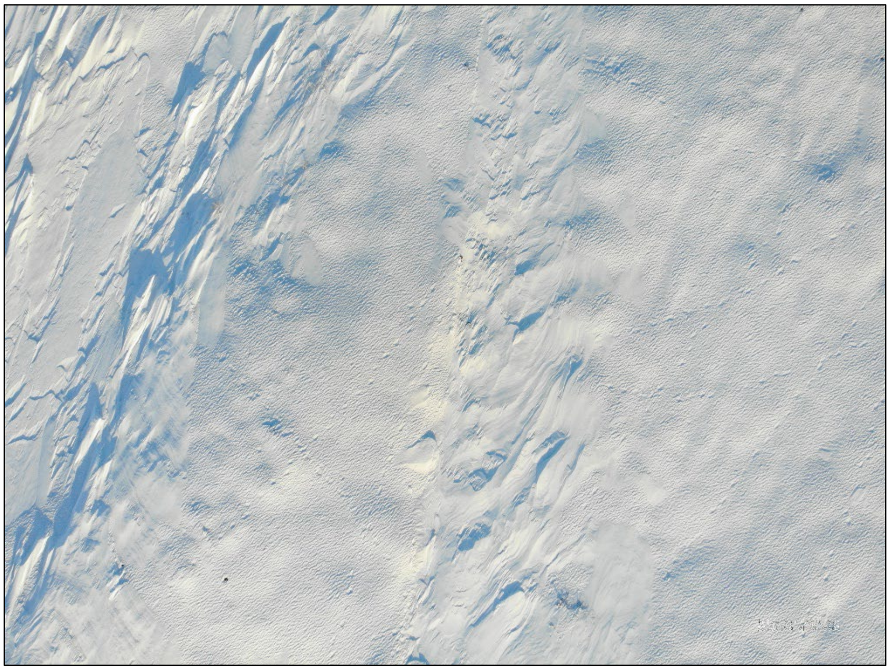

Photo 5 Caribou Tracks West of KM 9. Picture Taken on March 18, 2022.

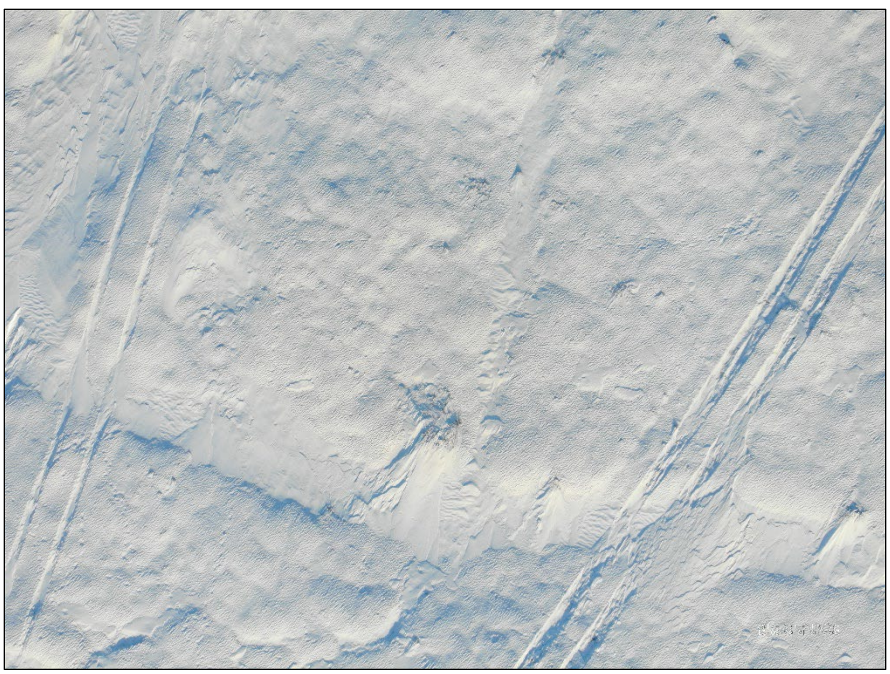

Photo 6 Caribou and Canids Tracks West of KM 9. Picture Taken on March 18, 2022.

Photo 7 Apache Pass Looking North. Picture Taken on March 17, 2022.

Photo 8 RIBR Looking East at KM 6.5. Picture Taken on March 17, 2022.

Photo 9 RIBR at KM 5.5 Looking East. Picture Taken on March 17, 2022.

Photo 10 Itivia Harbour. Picture Taken on March 17, 2022.

APPENDIX I

2022 Den Survey

AGNICO EAGLE

MELIADINE GOLD PROJECT

2022 Den Survey

Prepared for:
Nunavut Impact Review Board

Prepared by:
Agnico Eagle Mines Limited – Meliadine Division

FEBRUARY 2023

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ABBREVIATIONS AND UNITS

Agnico Eagle	Agnico Eagle Mine Limited
AWAR	All-weathers Access Road
cm	centimeters
km	kilometer
ha	hectares
m	meters
NIRB	Nunavut Impact Review Board
RIBR	Rankin Inlet Bypass Road
TEMMP	Terrestrial Environment Management and Monitoring Plan

1 INTRODUCTION

1.1 BACKGROUND

Agnico Eagle Mines Limited (Agnico Eagle) is operating the Meliadine Mine, located approximately 25 km north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. In February 2015, Meliadine was issued the Project Certificate No. 006 from the Nunavut Impact Review Board (NIRB) with Amendment No. 001 in February 2019 and Amendment No. 002 in March 2022 to include the construction of the waterline.

The waterline consists of changing the conveyance of treated saline effluent from trucking to dual waterlines from the Meliadine Mine site to Itivia Harbour in Rankin Inlet along the All-weather Access Road (AWAR) then along the Rankin Inlet Bypass Road (RIBR). Construction of the waterlines was postponed in 2022 and is now expected to begin in 2023.

In accordance with Term and Condition 53 of the NIRB Project Certificate No. 006 (Amendment No. 002):

> *"Prior to construction of Project infrastructure including the waterlines and Phase 2 of the all-weather access road, the Proponent shall conduct a survey that is sufficient to locate any dens of foxes, bears or wolverines that could be damaged or destroyed during construction or operation of the Project."*

In addition, the Terrestrial Environment Management and Monitoring Plan (TEMMP) Section 2.3 also specifies that den surveys for fox, bears, and wolverines should be undertaken prior to construction of Project infrastructure and Phase 2 of the AWAR.

Carnivore around the Project site includes the following species:

- Arctic fox (*Alopex lagopus*);
- Grey wolf (*Canis lupus*);
- Polar bear (*Ursus maritimus*);
- Barren ground grizzly (*Ursus arctos*); and
- Wolverine (*Gulo gulo*).

1.2 PURPOSE OF THIS DOCUMENT

This document was prepared to address the above referenced Term and Condition 53 aims to:

- Summarize den methodology used to conduct the survey;
- Locate carnivore dens that could be impacted by the Project; and
- Present the results from the den survey conducted around the Mine site, AWAR, RIBR, and along the proposed waterline.

2 METHODS

2.1 DEN SURVEYS AT THE MINE SITE

The den survey at the Mine Site was conducted by foot by an Agnico Eagle biologist between August 13th to August 18th, 2022. The areas to be surveyed were previously selected according to the denning characteristic preferences based on the literature. Appendix A further describes those den characteristics for each species. The emphasis of this report will be on the Arctic fox as it is the only known specie to den in the area during the survey period. Therefore, denning habitat potential in the vicinity of the Mine Site were targeted to increase the chance to find fox dens. Sandy and/or vegetated mound or ridges with a gentle slope facing south were indicators of a suitable ground (Macpherson 1996; Lai and Berteaux 2013).

The den survey consisted of visual observations of den openings. To do so, transects of 200 m separated by 100 m were walked. Any den openings having 15-20 cm in diameter were assessed (Lai and Berteaux 2013). Signs of wildlife such as animal observations, tracks, scats, bones, trail conditions, fresh digging were also used to determine the type of wildlife using the den and if the den was active in 2022 (Elbroch 2003; Murie 1989). When a den was found:

- Location was recorded using a GARMIN map 78s;
- Pictures of the den and the surrounding habitat were taken;
- Den openings were measured; and
- Signs of wildlife were documented.

2.2 DEN SURVEYS ALONG THE WATERLINE

In addition, other field visits were conducted to locate any carnivore dens along the waterline in conjunction with other assessments along the AWAR and the RIBR during the summer of 2022. Large sections of the AWAR and the entire section of the RIBR were walked by a biologist. For any den discovered, a location, photo and a sign of presence were recorded as described in the previous section. Table 1 lists the various tundra sections surveyed within the lease boundaries of the Mine Site and along the Waterline.

Table 1: Tundra Areas Surveyed at the Mine Site and along the Waterline

Location	Sections	Area Surveyed (ha)
Mine Site	Northeast	5
	North	6
	Northwest	17
	Southwest	19
	Southeast	15
	Total Mine Site	**62**
Waterline	AWAR	78
	RIBR	60
	Total Waterline	**138**
Total 2022		**200**

3 RESULTS AND DISCUSSION

During the 2022 summer den survey, 6 dens were located around the Meliadine Mine Site and 2 along the AWAR and 1 along the RIBR (Table 2). Figure 1 indicated their location. From this den found, only 1 den was active during the spring of 2022. The pictures of the den can be found in Appendix B.

Table 2: List of Fox Den Found in 2022

Fox Den Number	Location	UTM Zone 15 NAD 83		Den Area (m^2)	Active in 2022
		Easting	Northing		
Fox-2022-1	AWAR	541443	6987064	25	No
Fox-2022-2	AWAR	541562	6987030	300	No
Fox-2022-3	RIBR	540486	6987945	150	No
Fox-2022-4	Site	536995	6990914	30	No
Fox-2022-5	Site	537301	6990794	30	No
Fox-2022-6	Site	538991	6988119	60	No
Fox-2022-7	Site	540486	6987945	30	Yes
Fox-2022-8	Site	541971	6988814	25	No
Fox-2022-9	Site	542139	6989139	40	No

Figure 1: 2022 Den Locations at the Mine Site and along the waterline

4 MITIGATION MEASURES

This section lists recommendations in the situation where construction activities are within the recommended construction setbacks distances of an active den. The recommended construction setbacks are a protected buffer zone around a den where further mitigation measures will be implemented as described below. The setback distances depend on the species, the period of the year and the type of construction activities. The relevant recommended construction setbacks are presented in Table 3.

Table 3: Recommended Construction Setbacks per Species.

Species	Construction Setbacks	Sensitive period	Type of activity
Fox dens	150 m	May 1-Sept 15	General industrial activity
Wolf dens	800 m	May 1-Sept 15	General industrial activity
Bear dens polar bear, grizzly	800 m	Sept 30-Mar 30	General industrial activity
Bear dens polar bear, grizzly	1500 m	Sept 30-Mar 30	Blasting
Wolverine dens	2000 m	Oct 15-July 15	General industrial activity

Source: GNWT 2016

Precaution will be taken to not damage or destroy dens. In the situation where a new den is discovered, the Environment Department will be contacted to implement mitigation measures. Otherwise, the mitigation measures of known den locations will consist of:

- Incorporating known den locations and setback distances on the construction plans (drawings and engineering specifications);
- Delineating protective areas clearly at the working site;
- Minimizing the footprint to what is necessary for construction;
- Informing the workers in the area when work is performed at proximity of the dens;
- Keeping the working site clean and free of garbage that could impact or attract wildlife;
- Avoiding harassing wildlife; and
- Implementing the Wildlife Protection Response Plan.

5 CONCLUSION

In conclusion, a den survey was completed in summer of 2022 at the Meliadine Mine Site and along the proposed waterlines alignment. The focus was on Arctic fox as the survey was conducted during their denning period. A total of 9 new den locations were found.

The recommended construction setback for fox dens is 150 m. In the situation that construction is closer than the setback distance, mitigation measures as described in the Section 4 will be implemented.

6 REFERENCES

Awan, M., M. Efford and J. Boulanger. 2020. Estimates of Wolverine Density from Mark-Recapture DNA Sampling. Napaktulik Lake, Kitikmeot Region, Nunavut 2018-2019. 51 p.

Cluff, H.D., L.R. Walton and P.C. Paquet. 2002. Movement and Habitat Use of Wolves Denning in the Central Arctic, Northwest Territories and Nunavut, Canada- Esker Habitat Studies in the Slave Geological Province. Yellowknife. [Accessed on March 22, 2022] Available at: https://www.enr.gov.nt.ca/sites/enr/files/wkss_wolves_habitat_2002.pdf

Elbroch, M. 2003. Mammal Tracks and Sign-A Guide to North American Species. Stackpole Books. Mechanicburg. 778 p

GNWT (Government of Northwest Territories). 2016. Northern Land Use Guidelines: Northwest Territories Seismic Operation. Government of Northwest Territories – Department of Environment, Aboriginal Affair and Northern Development Canada, Environment Canada.

Hendrickson, C.J., G. Salmelius, R.T. Aliasukas and S. Larivière. 2005. Simultaneous Den Use by Arctic Foxes and Wolves at a Den Site in Nunavut, Canada. Arctic 58(4):418-420.

Hodder, D., C.J. Johnson, R.V. Rea and A. Zedrosser. 2014. Application of a Species Distribution Model to Identify and Manage Bear Den Habitat in Central British Columbia. Wildlife Biology 20(4):238-248.

Lai, S. and. Berteaux, D. 2013. Technical Manual for Monitoring Foxes in the Arctic-Version 1. Canada Research Chair on Northern Biodiversity, University du Québec à Rimouski, Québec, 25 p.

Macpherson, A. H. 1969. The dynamics of Canadian arctic fox populations. Canadian Wildlife Service Report Series — Number 8. Ottawa. 54 p

Murie, O.J. 1989. Le guide des traces d'animaux. Les guides Peterson. Broquet. St-Constant. 363 p.

Nirlungayuk, G., P.Irngaut, M. Dyck, P. Frame, J. Qilliaq, A. Hadlari, R.Tatty and C. Hotson. 2016. Nunavut Polar Bear Co-Management Plan. 63 p.

The Wolverine Foundation. Online. Denning. [Accessed on March 22, 2022] Available at: http://wolverinefoundation.org/denning

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Grey wolf	• Excavate in eskers, ridges of gravel and sand formed by melting glaciers. • Can take over dens of other animals (foxes, ground squirrel). • Close access to caribou. (Hendrickson et al 2005; Cluff et al 2002)
Polar bear	• Excavate soil on land along the slopes of fiords, on peninsulas or islands with sufficient snow cover in early winter for the construction of the dens or on moving multi-year ice and areas of annual rough ice. (Nirlungayuk et al. 2016)
Barren ground grizzly	• Excavate in soil. • Rock cavity dens are either caves or cavities in boulder piles. • Locate mid to upper slope positions. (Hodder et al 2014)
Wolverine	• Rocky scree slopes, along eskers, within hard packed snowdrifts or under snow-covered boulders. • Snow greater than 1 m deep, distributed uniformly or accumulated in drifts. • Long, complex snow tunnels in hardened snowdrifts characterize den sites in tundra and alpine areas, and in some cases, the tunnels lead down to entrances under boulders. • Denning period (February-May). (Wolverine Foundation online; Awan et al. 2020)

APPENDIX B. DEN SURVEY PHOTOS

Photo 1: Fox-2022-3 along RIBR on August 6th, 2022.

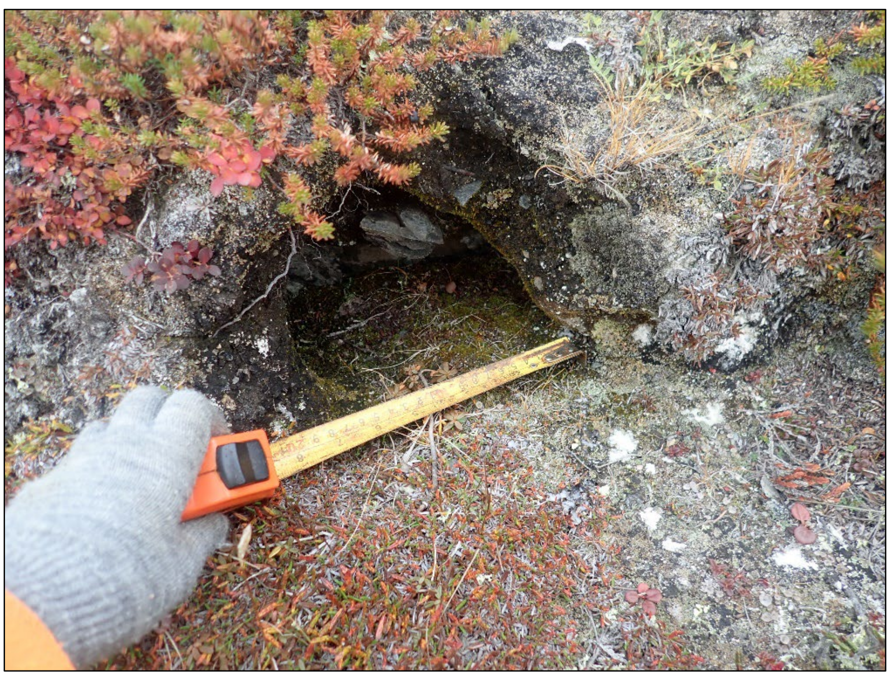

Photo 2: Fox-2022-4 at Site on September 17th, 2022.

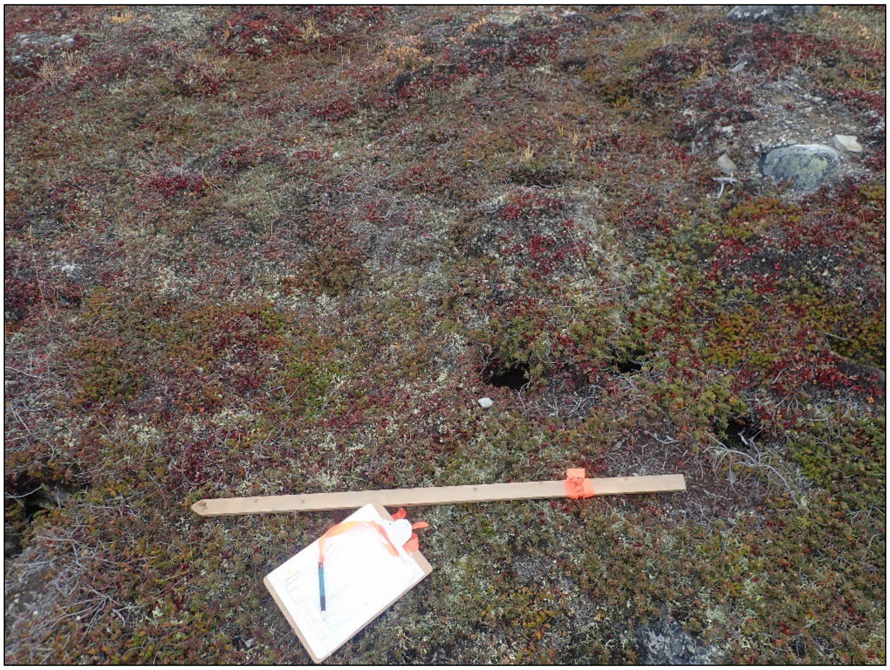

Photo 3: Fox-2022-5 at Site on September 17th, 2022.

Photo 4: Fox-2022-8 at Site on September 17th, 2022.

APPENDIX J

Meliadine Project Caribou Behaviour Study, 2022

Meliadine Mine

Caribou Behaviour Study, 2022

March 20233

ERM Project No.: 0652009

The business of sustainability

March 20233

Meliadine Mine

Caribou Behaviour Study, 2022

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EXECUTIVE SUMMARY

The Meliadine Mine (the Project), owned and operated by Agnico Eagle Mines Limited (Agnico Eagle), is located on Inuit Owned Land (IOL) approximately 25 km north of Rankin Inlet, Nunavut. A 30 km All Season Access Road (AWAR) connects the Project to Rankin Inlet. During June and July each year, groups of caribou from the Qamanirjuaq herd occur in the Project area, some crossing through the Project site and the AWAR.

As part of the Nunavut Impact Review Board (NIRB) Project Certificate #006, Agnico Eagle reports on effects of the Project on caribou behaviour (Term and Condition 57, b.). The Agnico Eagle Terrestrial Environment Management and Monitoring Plan (TEMMP 2020) includes a behaviour monitoring program to determine if there are changes to behaviour i) with distance to the Project and ii) in response to disturbances such as passing vehicles.

Behaviour monitoring was conducted in 2020, 2021, and 2022. Agnico Eagle retained ERM Consultants Canada Ltd. (ERM) to update the field protocols used for behaviour monitoring in early 2020. ERM adapted standard methods for caribou behaviour monitoring developed by the Government of Northwest Territories Department of Environment and Natural Resources (GNWT ENR). Following the first year of data collection in 2020, the protocols were updated for the 2021 season to improve the quality of the data collected. Methods for behaviour monitoring during the 2022 season were unchanged from 2021.

A Terrestrial Advisory Group (TAG) was formed in 2022 as a collaborative forum to discuss Inuit Qaujimajatuqangit (IQ), Traditional Knowledge (TK) and western science applications to mitigation and monitoring programs for the Meliadine Mine, including on caribou movement in the project area. Following the discussion of the caribou behaviour survey results in 2020 and 2021, the TAG and particularly Kivalliq Inuit Association (KivIA) suggested several improvements to the survey protocol and analysis methods. Though the TAG first convened after the data collection for 2022 was already complete, Agnico Eagle has endeavored to incorporate all the suggestions of the TAG into the 2022 analysis.

Field surveys were conducted during June and July 2022 by an ERM wildlife biologist and an Agnico Eagle environmental technician dedicated to behaviour monitoring. In addition, Project environmental technicians were trained in the updated method and conducted behaviour surveys on an opportunistic basis while conducting other duties. Each survey lasted 30 minutes, with scan samples conducted every three minutes.

The behaviour monitoring program in 2022 had several results:

- The standard monitoring protocols adapted from the GNWT ENR worked well at the Project site.
- Sixty-nine surveys were conducted in 2022 with peak caribou activity observed between June 28 and June 29. This was slightly earlier than the peak in 2021 and approximately one week earlier than the peak in 2020. The data from 2020 to 2022 were combined for a total of 171 surveys across three years.
- Caribou mostly exhibited the non-response behaviours of standing, laying, and feeding.
- Observations were well distributed across a range of caribou group sizes from 1 to 2 individuals to >1,000.
- Small groups (<50 caribou) tended to have a higher proportion of response behaviours (running, alert) than larger groups, irrespective of disturbances. Groups within 300 m of the road also tended to have a higher proportion of response behaviours than those further away. This was apparent in 2020, 2021, and 2022.

- Groups of caribou were observed near the road in equal proportions on both the upstream and downstream sides of the road. Behaviour did not differ between caribou on the two sides.
- Statistical analysis indicated a trend for caribou at greater distance from the road (>300 m) to have a lower proportion of response behaviours. Distance to the road was not linked to walking behaviour.
- The proportion of caribou with response behaviours in a group was unrelated to measured environmental variables including temperature and wind speed.
- Approximately half of the surveys included a disturbance event, typically from essential Project vehicles, mostly pickups, and all-terrain vehicles (ATVs) used by community members on the AWAR for travel and harvesting and in some cases the survey vehicle. The AWAR was closed to Project vehicles (with the exception of approved convoys) when caribou were near the road and all Project vehicles stop when caribou are on the road.
- Following a disturbance event, the proportion of response behaviours in a group of caribou rose, but typically returned to baseline behaviours within two sampling periods (three to six minutes). Caribou were statistically more likely to be walking, alert, or running in surveys where there were more disturbances (i.e. vehicle traffic).

The updates applied to the survey protocol in 2021 and 2022 used feedback from the first year of data and analysis, and were helpful in improving the overall quality and accuracy of the data. Interestingly, even with these changes, the trends in the results were highly consistent between the three years of data. This increases the confidence that trends are repeatable year to year. Overall, the results of the statistical analysis provided support for the key hypothesis that caribou tend to respond to disturbances, particularly when they are close to the road. However, the analysis also found that disturbances did not have a detectable effect on caribou behaviour after three to six minutes.

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ACRONYMS AND ABBREVIATIONS

Agnico Eagle	Agnico Eagle Mines Ltd.
AIC	Akaike information criterion
ATV	All-Terrain Vehicle
AWAR	Meliadine Mine All-Weather Access Road
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
BQCMB	Beverly Qamanirjuaq Caribou Management Board
GLMMs	Generalized linear mixed-effects models
GN	Government of Nunavut
GNWT ENR	Government of Northwest Territories Department of Environment and Natural Resources
HTO	Kangiqliniq Hunters and Trappers Association
IOL	Inuit Owned Land
KivIA	Kivalliq Inuit Association
km	Kilometre
km/hr	Speed expressed as kilometer per hour
m	Metre
NDFN	Northlands Denesuline First Nation
NIRB	Nunavut Impact Review Board
NWT	Northwest Territories
SDFN	Sayisi Dene First Nation
T&C	Terms and Conditions
TEMMP	Terrestrial Environment Management and Monitoring Plan
the Project	The Meliadine Mine

1. PROJECT OVERVIEW

The Meliadine Mine (the Project), owned and operated by Agnico Eagle Mines Limited (Agnico Eagle), is located on Inuit Owned Land (IOL) approximately 25 km north of Rankin Inlet, Nunavut. A 30 km all weather access road (AWAR) connects the Project to Rankin Inlet. The Rankin Inlet By-pass Road (RIBR) was constructed to the west and south of Rankin Inlet to allow mine traffic to circumvent the hamlet when traveling from the AWAR to Itivia (Figure 1-1).

The Meliadine Mine was approved with a life of mine plan that includes production from five ore bodies by the NIRB in 2015 (Project Certificate #006). The mine plan includes open pits, underground mining and associated ore processing, waste management and ancillary infrastructure. Construction of the AWAR, camp, ore processing facilities and ancillary infrastructure began in 2017 and production from the Tiriganiaq deposit began in Q2 2019. The remainder of the orebodies are planned throughout the life of the Meliadine complex. In 2019, the Meliadine Mine NIRB Project Certificate (#006 No. 001) was amended to include discharge of treated saline effluent to the marine environment via diffuser at Itivia Harbour and to convey via truck treated saline effluent along the AWAR to Itivia Harbour (i.e., Melvin Bay). In 2022, the Project Certificate (#006 No. 002) was further amended for construction of 34 km waterline, which consists of two 16-inch diameter pipes to convey an increased volume of treated saline effluent from Meliadine Mine into the ocean at Melvin Bay instead of trucking.

Studies of caribou behaviour were conducted in June and July 2020, 2021, and 2022 at the Meliadine Mine and AWAR in support of existing NIRB conditions as outlined in Project Certificate #006.

1.1 Terrestrial Environment Management and Monitoring Plan

The Meliadine Mine 2015 Project Certificate and 2019 Project Certificate Amendment from the Nunavut Impact Review Board (NIRB), Term and Condition 57 requires the Project to report in its annual NIRB report:

> *(T&C 57, b.) A detailed analysis of wildlife responses to operations with emphasis on wildlife behaviour, mortalities, and displacements (if any), and responses to operations of the all-weather access road and associated access roads/trails; and the waterlines;*

The Meliadine Mine Terrestrial Environment Management and Monitoring Plan (TEMMP; Agnico Eagle 2022) is designed to meet this condition, with a behaviour monitoring program (Section 4.5) that has two objectives:

- "To determine if caribou activity budgets change with distance from the mine, and to document caribou response to stressors.
- To determine if caribou distribution changes with proximity to the mine (i.e. do caribou avoid the mine)."

The behaviour monitoring program described in this report is designed to address the first of these objectives.

The TEMMP also specifies mitigation measures for traffic on the AWAR when caribou are in the area, namely that the AWAR must be closed to non-essential mine traffic when 50 or more caribou are within 100 m of the road.

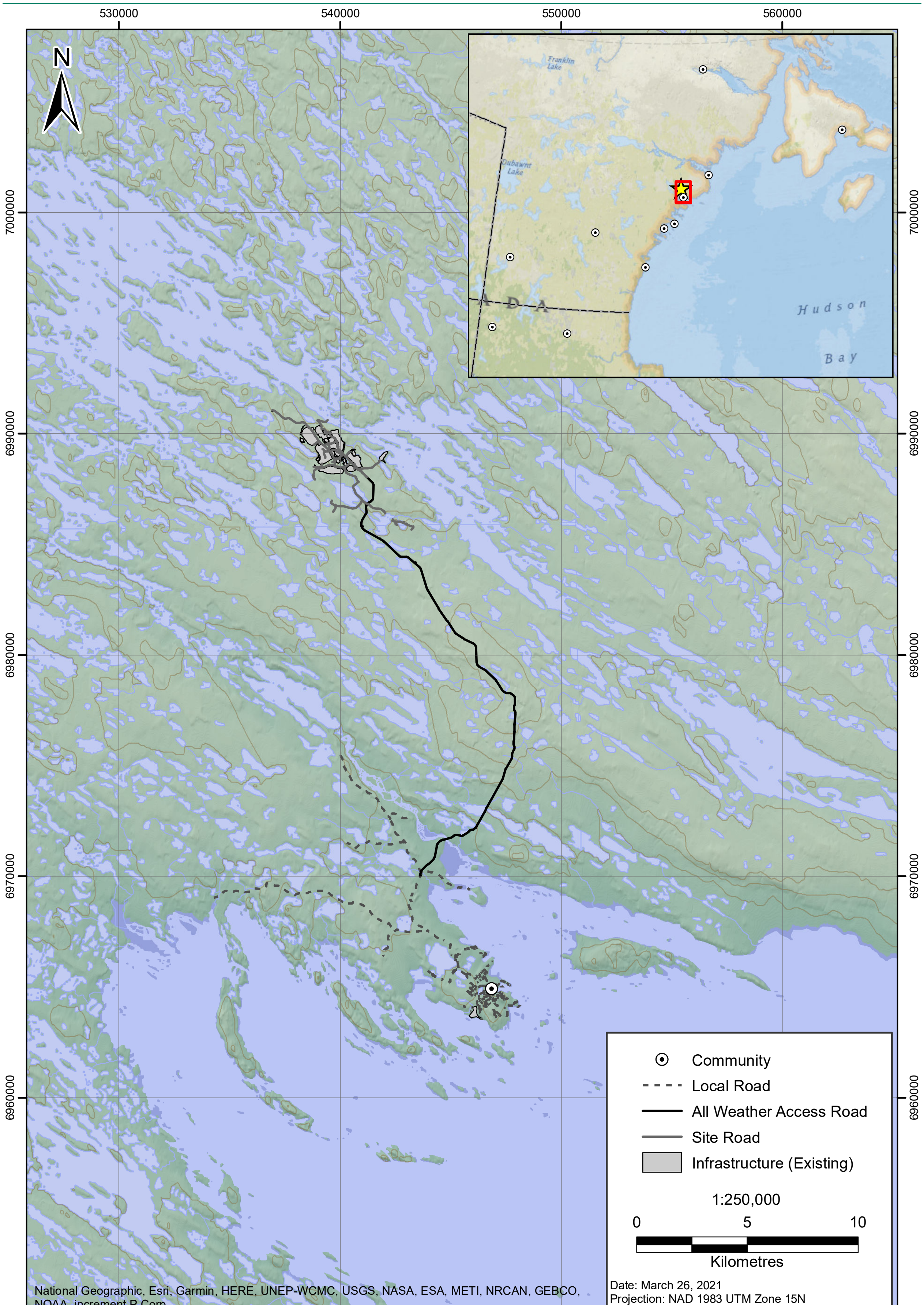


Figure 1-1: Meliadine Gold Project Location

2. STUDY OBJECTIVES

The overall objective of the caribou behaviour monitoring program as stated in the TEMMP is:

- To determine if caribou activity budgets change with distance from the mine, and to document caribou response to stressors.

Per the Project Certificate (T&C 57), a detailed analysis of caribou responses to operations of the all-weather access road is required at Meliadine. The detailed objectives of the 2022 study were:

1. To conduct a study using behaviour survey methodology at the Project site to estimate how the AWAR and site infrastructure may contribute to the effects of the Project on caribou.
2. To use information from the surveys (combined across three years of data collection) to determine factors predict caribou behaviour near the mine site, specifically looking at distance; group size; and vehicle disturbances.

The primary hypothesis of this study was that caribou closer to the road would demonstrate a stronger response to vehicle disturbances.

3. BACKGROUND

3.1 Qamanirjuaq Herd

The Qamanirjuaq caribou subpopulation is a large barren-ground caribou herd numbering approximately 288,000 animals in 2017, down from over 348,000 animals reported in 2008 (Boulanger et al. 2018). A new population survey was conducted in 2022 but the results were not publicly available at the time of this report. The herd range stretches approximately 1,000 km from Chesterfield Inlet in the north to northern Manitoba in the south, and from Hudson Bay on the east to eastern Northwest Territories and north-eastern Saskatchewan in the west (BQCMB 2022).

The Beverly and Qamanirjuaq Caribou Management Board (BQCMB) rated the Qamanirjuaq herd as having “Medium” vulnerability in 2014 due to continued population declines since 2008 (BQCMB 2014) and upgraded this rating to “Medium-High” in 2016, a status that remains unchanged (BQCMB 2021).

The herd generally winters below the treeline in northern Manitoba, Saskatchewan, and the adjoining areas of the Northwest Territories (NWT) and Nunavut. Spring migration is north along the coast of Hudson Bay, past the communities of Arviat, Whale Cove and Rankin Inlet to a broad calving ground generally centered on Qamanirjuaq Lake (BQCMB 2022).

Following calving, the caribou form into large groups of hundreds to thousands of caribou and radiate out from the calving grounds, including east towards the coast. During June and July, groups of animals from this herd interact with the hamlet of Rankin Inlet, the Meliadine Mine and the AWAR connecting the two.

During summer and fall, the caribou generally move south and inland, gradually returning south towards their wintering areas by early December. Maps of the caribou range and movement are available on the BQCMB website (https://arctic-caribou.com/resources/).

3.2 Terrestrial Advisory Group

A Terrestrial Advisory Group (TAG) was formed in 2022 as a collaborative forum to discuss Inuit Qaujimajatuqangit (IQ), Traditional Knowledge (TK) and western science applications to mitigation and monitoring programs for the Meliadine Mine, including on caribou movement in the project area. Members of the group include the Government of Nunavut (GN), the Kivalliq Inuit Association (KivIA), the Sayisi Dene First Nation (SDFN), the Northlands Denesuline First Nation (NDFN), and the Kangiqliniq Hunters and Trappers Association (HTO). Following the discussion of the caribou behaviour survey results in 2020 and 2021, the TAG and particularly KivIA suggested several improvements to the survey protocol and analysis methods. These improvements included adding a variable for road closures and testing whether caribou walking could be considered a response behaviour. Wherever sample size allows, these comparisons have been added into the 2022 analysis. It was also suggested that in future years, a variable for caribou movement direction relative to the road should be added and additional information collected on the speed of passing vehicles. Though the TAG first convened after the data collection for 2022 was already complete, Agnico Eagle has endeavored to incorporate all the suggestions of the TAG into the 2022 analysis.

4. STUDY AREA

The dominant terrain in the Project area comprises glacial landforms such as drumlins (glacial till), eskers (gravel and sand), and lakes. A series of low relief ridges are composed of glacial deposits, oriented in a northwest-southeast direction, which control the regional surface drainage patterns. The property is about 60 meters above sea level in low-lying topography with numerous lakes (Final Environmental Impact Statement; Agnico Eagle 2015).

The study area for behaviour monitoring included the existing Project footprint or the Meliadine Mine site and the AWAR (See Figure 1-1). Surveys were conducted on any caribou that could be visually surveyed from Project infrastructure up to a distance of 3 km with the aid of binoculars and a spotting scope.

5. METHODS

5.1 Field Surveys

Survey methods followed protocols for monitoring caribou behaviour developed by the GNWT ENR (2017). In 2020, ERM refined these methods for Agnico Eagle's Nunavut mine operations. The updated methods focus on scan samples, *in lieu* of both scan and focal samples. Given time and personnel constraints, this was determined to be a more efficient use of time and produce better quality data that is suitable for statistical analysis. The updated methods also include an initial survey step to randomize which group of caribou to monitor when multiple groups are available. In 2021 these methods were further refined to reflect lessons learned in 2020. The 2021 updates included using a rangefinder to measure distance and recording additional information such as whether the caribou occurred on the east or west side of the road. The methodology used in 2022 included the 2021 updates but was otherwise unchanged. Detailed protocols are attached in Appendix A.

Prior to the arrival of caribou in June, a wildlife biologist from ERM conducted a classroom and practical training program for Agnico Eagle environmental technicians from the Meliadine Mine. The ERM wildlife biologist with an assistant was tasked with conducting behaviour observations as a primary role during July, while Meliadine technicians conducted behaviour observations opportunistically during other fieldwork in alignment with the TEMMP.

The overall method for the field surveys was to identify caribou groups visible from the mine site and AWAR, to select some groups for observation, and to record the behaviour of individuals in groups of different sizes including their responses without any disturbance and in response to mine-related activities and natural factors. Surveys were conducted in late June and early July during the post-calving and early summer periods, when caribou pass through the Project area in large numbers.

A reconnaissance survey was first conducted to identify where caribou groups were located. Where multiple groups were observed, surveyors chose which group to sample using a random number table, or specifically chose groups to fill data gaps. Field methods included the recording of site information at the location of each survey, including GPS coordinates, weather conditions, road structure, and location of the caribou group in relation to the surveyors and the road. Individuals in the observed-group were categorized when the survey started and every three minutes (referred to here as a "time interval") until 30 minutes had elapsed.

Behaviour categories and their definitions were standardized following GNWT ENR (2017) classifications. The behaviour categories were feeding, lying down, standing, alert, walking, and trotting or running.

At each three-minute interval, surveyors recorded the numbers of individuals in the group exhibiting each behaviour at that time. If the group was too large to be counted in each interval (>100 individuals), an identifiable subset of the group was surveyed during each interval and the total group size was recorded on the datasheet. In the case that a disturbance event occurred during the survey the time and type of disturbance was recorded. A disturbance is defined as any human-caused loud noise, low-flying aircraft, or vehicle travelling on the road.

Alert behaviour and trotting or running were considered disturbance "response behaviours" and were grouped together in the subsequent data analysis. In this report, alert and running behaviours are referred to collectively as response behaviours, but it is important to note that this is irrespective of whether there were disturbances recorded. Caribou may exhibit these behaviours without a disturbance occurring. Walking was also assessed as a response behaviour in some analyses, which are specifically noted in the results.

5.2 Data Analysis

The objective of the data analysis was to quantify trends in the survey data, and determine whether factors such as distance to infrastructure, group size, or the disturbances could be used to explain caribou behavior. The primary hypothesis was that caribou closer to the road would demonstrate a stronger response to disturbances. An initial exploratory analysis was conducted to visualize the data and determine the appropriate method for analyzing the data.

A regression analysis was conducted to test for statistically significant trends in the data. To increase the statistical power to detect changes in caribou behaviour, the behaviour categories were grouped for analysis into “response” behaviours (alert and running) and non-response behaviours (feeding, lying down, standing, and walking).

Following the 2021 analysis, there was a suggestion to explore whether the proportion of walking caribou changed as a response to disturbance. This was done to see if walking would be better categorized as a response behaviour or a non-response behaviour. To test this, a model that included walking, running, and alert behaviours was run in addition to the original model with just running and alert behaviours.

Generalized linear mixed-effects models (GLMMs) were used to assess the differences in the proportion of response behaviours in surveyed animals as a function of various controlling variables, including the occurrence of disturbances. This regression framework provides a means to control for habitat, environmental variables, repeated measurements, and spatial correlation.

Statistical analyses were conducted using R Statistical Software version 4.1.2 (R Core Development Team, 2014). Variables were averaged over the entire 30-minute survey period, rather than breaking the data down by three-minute intervals. Two dependent variables were tested:

1. The first dependent variable tested was the average proportion of response behaviours (alert and running) in each survey, and this variable was modelled using a binomial distribution.
2. The second dependent variable tested was the average proportion of walking plus response behaviours in each survey, and this variable was modelled using a binomial distribution.
3. A second dependent variable was developed to track the number of minutes it took caribou to return to background behavior levels every time there was a disturbance. In order for a response to be included, the proportion of alert or running caribou after a disturbance had to be 40% greater than in the interval before disturbance. The response was considered “over” when the proportion of alert or running caribou returned to with the level observed in the interval before the disturbance (±5%). This variable, called “duration of response”, was assessed for each survey and modelled with a normal distribution.

The two dependent variables were each modelled against a suite of potentially important variables to determine if there was any statistical relationship with response behaviour. Based on an initial assessment of which variables were most statistically relevant, the variables included in this analysis were group size, distance to road, wind speed, and a variable identifying how many disturbances occurred in each survey.

For each dependent variable, GLMMs were constructed and tested for model fit, as evidenced by the Akaike Information Criterion (AIC). AIC is a number that is helpful for comparing models as it includes measures of both how well the model fits the data and how complex the model is (simpler is usually better). The top models were identified as having a low AIC and were within a 2-unit difference in AIC (ΔAIC ≤ 2) of the top-ranked model (i.e. the model with the lowest AIC; Burnham & Anderson 2004). This is the industry standard for identifying models that are essentially ‘equally good’ at explaining the data. Models with a difference in AIC (ΔAIC) of 2 to 4 from the top model are generally considered to have ‘limited support’ (Burnham & Anderson 2004).

6. RESULTS AND DISCUSSION

6.1 Caribou Distribution Relative to the Project

During late June and early July in the three years surveyed (2020-2022), caribou GPS collar locations were provided to the Project though a data sharing agreement by the Government of Nunavut (GN). These data indicated that caribou were approaching the Project site. In the field, confirmation of caribou presence using height of land and road surveys were conducted three times per day by Agnico Eagle environment technicians to trigger management actions (TEMMP; Agnico Eagle 2022). These data informed the decision to begin behaviour surveys for caribou as they approached the site.

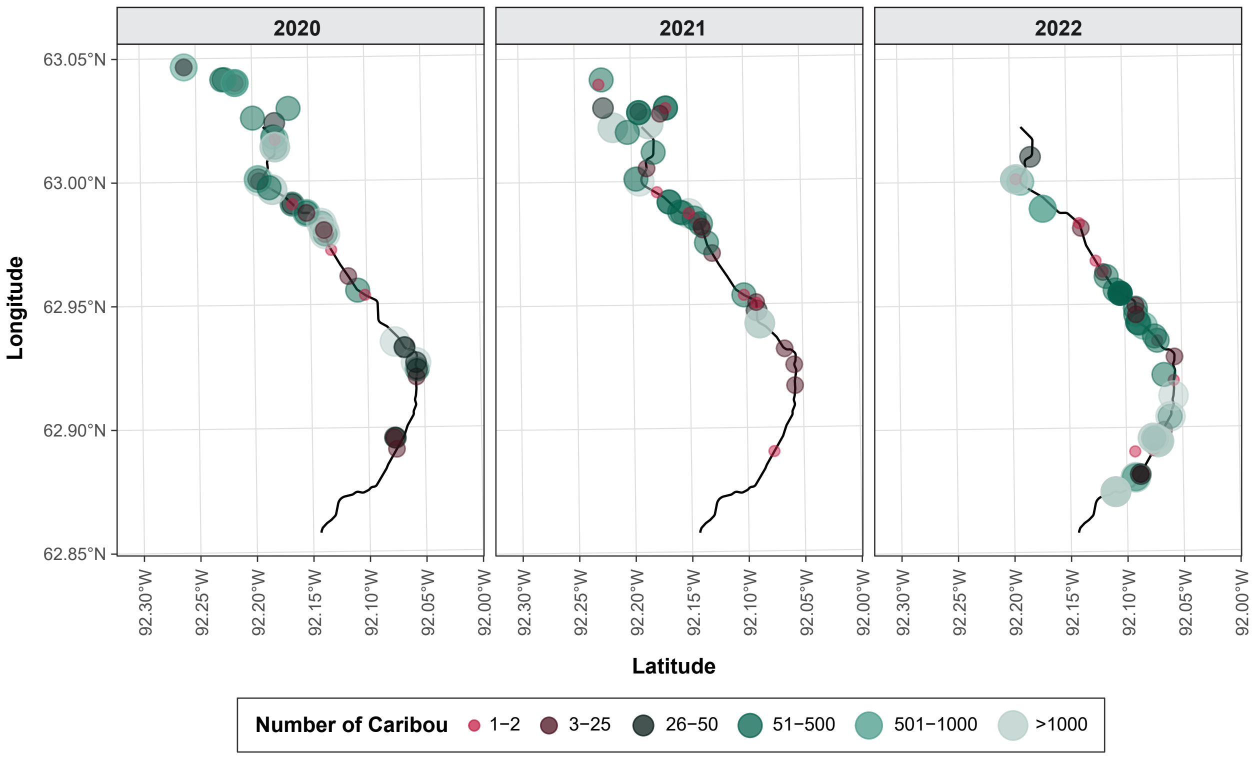
Survey locations by date are presented in Figure 6.1-1. From June 19 to July 25, 2022, groups of caribou from the Qamanirjuaq herd were surveyed passing through or near the study area, with numbers peaking from June 28 to 29. This was slightly earlier than the peak in 2021 and at least a weak earlier than the peak in 2020. The length of time during which caribou could be seen from the AWAR increased from 16 days in 2020, to 18 days in 2021, to 23 days in 2022. In 2020 and 2021 most surveys were conducted from the northern portion of the AWAR, but in 2022 most surveys were conducted from the mid to southern portion of the AWAR.

6.2 Field Surveys Completed

In total, 69 behaviour surveys were conducted during the three-week period in 2022 (June 20 to July 12) when groups of caribou were near the Project. This is compared to the 56 and 46 surveys completed in 2020 and 2021, respectively (Table 6.2-1). Surveys were conducted opportunistically whenever caribou were encountered during daily reconnaissance drives, primarily along the AWAR but also around the mine site when the opportunity arose. These numbers represent the upper limit of what could be achieved in each year given the logistical challenges of: 1) the caribou being on-site for a short period; and 2) the vehicles being stopped by caribou on the road. More surveys were collected in 2022 because caribou were in the area for longer than in the other years.

Table 6.2-1: Meliadine Caribou Behaviour Surveys Data Summary

		Caribou Group Size						
		Small Group			Large Group			
		1-2	3-25	26-50	51-500	501-1,000	>1,000	Total
2020	Total # of Surveys	5	11	9	14	6	11	**56**
	Surveys with Disturbances	4	2	3	11	3	6	**29**
	Surveys with Observed Road Crossings	2	2	0	1	1	0	**6**
2021	Total # of Surveys	8	11	2	16	0	9	**46**
	Surveys with Disturbances	5	7	0	8	0	7	**27**
	Surveys with Observed Road Crossings	0	3	0	6	0	3	**12**
2022	Total # of Surveys	11	9	3	18	8	20	**69**
	Surveys with Disturbances	9	7	1	15	4	17	**53**
	Surveys with Observed Road Crossings	3	4	0	6	0	2	**15**



Note: Colour and size indicate group size, and the location of the All−Weather Access Road is indicated by the black line.

Figure 6.1-1: Locations of Behaviour Surveys by Date

In general, during the post-calving and early summer periods (June-July), barren-ground caribou aggregate into large groups (COSEWIC 2016; Russell and Gunn 2019). There were several days where only a single group of more than 1,000 individuals and up to 50,000 individuals was encountered. To diminish the risk of pseudo-replication, surveyors targeted different subsets of large groups when repeating surveys of that group. This should be considered when assessing the robustness of subsequent statistical analyses. A logistical constraint on sample size will likely also have to be a consideration for future behaviour surveys at Meliadine, which will always occur during the high-density post-calving season.

Overall, the survey methodology worked well for the Project location and circumstances, and the survey results were generally consistent between 2020, 2021, and 2022. All reported results use the combined data from 2020, 2021, and 2022, unless otherwise stated. General observations on survey methodology and results included:

- Surveys were well distributed across a range of group sizes (Table 6.2-1). Surveyors reported that the addition of a reconnaissance survey and random selection of which group to survey assisted with a relatively even distribution of survey intensity across group sizes. In 2022, all group sizes were sampled at least three times, but most groups were in the categories of 1-2 caribou, 51-500 caribou, or more than 1000 caribou.
- Of the 171 surveys completed across three years, more than half recorded at least one disturbance during the survey (Table 6.2-1). In 2022, 77% of surveys recorded a disturbance. Mine traffic was suspended during periods when groups of caribou were near the road, which coincided with the timing of most (>90%) behaviour surveys. An exception was made for approved convoys of mine vehicles that occurred approximately three times per week for crew change and exchange of essential goods. The road was not closed to traffic from the Rankin Inlet.
- In total, 50% of disturbances were from ATV traffic, 31% were from light trucks (pickups), and 6% were from convoys. Light trucks included trucks from community groups conducting monitoring, the Kangiqliniq Hunters and Trappers Organization and KivIA, the GN wildlife officers, the pickup used for caribou surveys, or other Project environment pickups. A disturbance caused by the survey vehicle stopping at the start of the survey was unavoidable in some cases and accounted for 5% of disturbances.
- The AWAR was closed to mine traffic as measure of mitigation during many of the surveys, leaving a small number of essential vehicles on the road, generally pickup trucks. It is expected that the ratio of ATVs to total traffic would therefore be higher during road closures because total traffic is much reduced.
- Caribou surveys were considered an essential activity by the Project, allowing the survey pickup truck to be used on the AWAR even when the road was closed to normal mine traffic. However, all vehicles must stop when caribou are on the road, leading to long periods where the survey truck was stopped on the road.
- The methodology allowed for the estimation of baseline behaviour, response to disturbance, and return to baseline behaviour. Few surveys ended before caribou returned to baseline behaviour. Thus, 30 minutes appears to be an appropriate survey length.
- Most caribou behaviours were calm, generally foraging, and not moving quickly (non-response). The one exception was smaller groups who moved more than larger groups – more walking and trotting. Consequently, caribou were observed crossing the road in only 22% of surveys in 2022, 25% of surveys in 2021, and 10% of surveys in 2020, primarily in small groups of less than 25 individuals.
- One source of uncertainty in 2020 was consistently estimating distance. Hence, distance was categorized into blocks of 0 to 50 m, 50 to 100 m, etc. Though distance was estimated with a

rangefinder in 2021 and 2022, the data were still binned into distance intervals to allow the three years of data to be analysed together.

6.3 Exploratory Analysis Results

The exploratory analysis was conducted to determine if there were any trends or interactions in the following variables: road crossing, group size, distance to the infrastructure (AWAR/mine), weather and timing, side of the road (east or west), number of disturbances, and response time following disturbances. All results use the combined data from 2020 to 2022, unless otherwise stated.

6.3.1 Road Crossing

Results of the exploratory analysis indicated, unsurprisingly, that groups closer to the road at the start of the survey were more likely to cross the road during the survey (Figure 6.3-1). This trend was seen in 2020, 2021, and 2022.

6.3.2 Group Size and Distance to Infrastructure

Plotting the caribou group size against the distance of caribou groups to the road at the start of the survey revealed that small groups (less than 50 individuals) were observed in equal proportions across all distances, regardless of year (Figure 6.3-1).

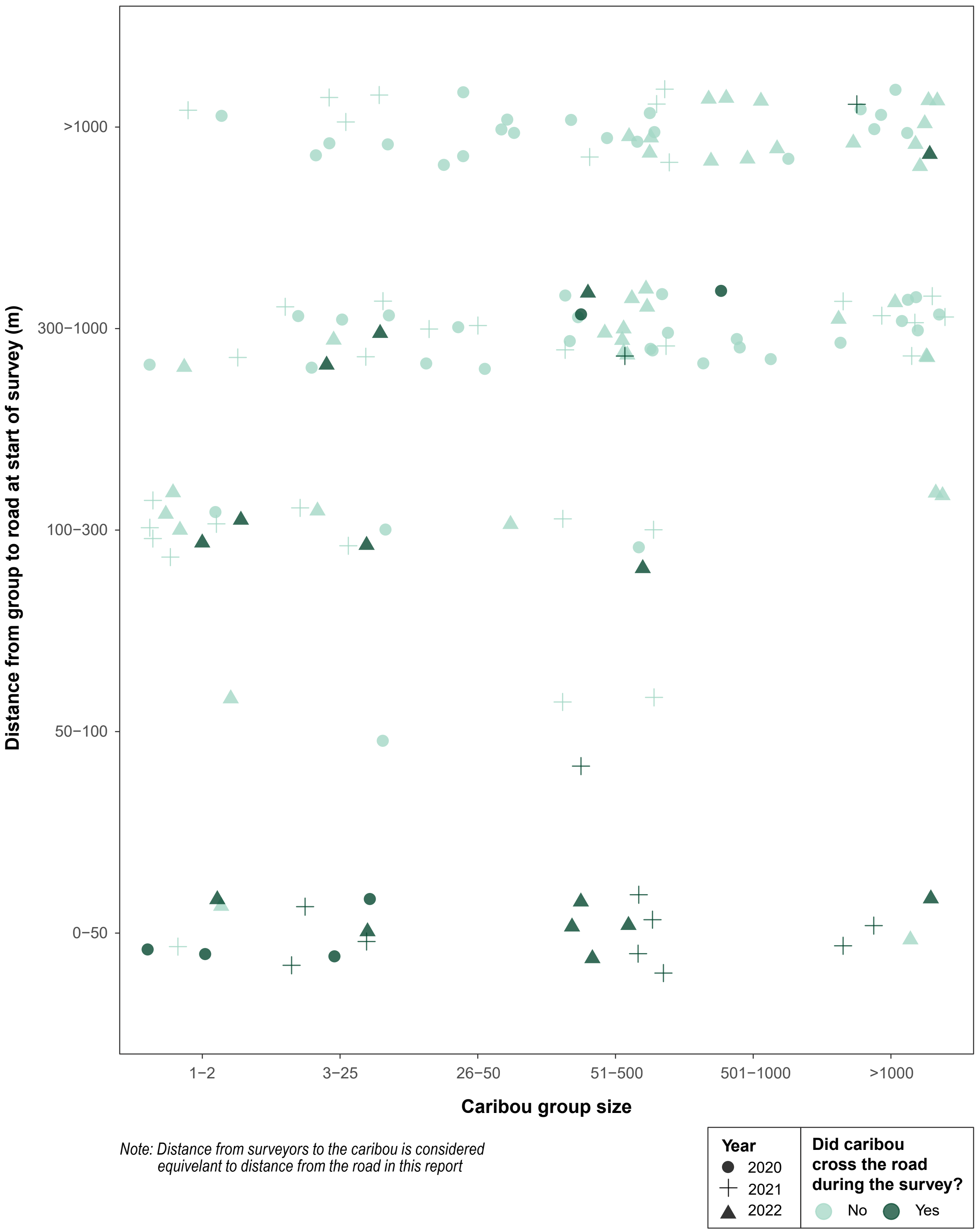
Large groups tended to be observed further from the road at the start of the survey. No groups larger than 50 individuals were recorded within 100 m of the road at the start of the survey, and no group larger than 500 individuals was recorded within 300 m of the road at the start of the survey. Regardless of the mechanism, these potential trends need to be considered so that statistical analyses are not confounded.

6.3.3 Behaviour Type, Group Size and Distance to Infrastructure

Average proportions of each behaviour type by group size and by distance to road are presented in Figure 6.3-2. When analyzed by group size (panel a), the results suggest that the average proportion of the response behaviours of “Alert” and “Trotting” are largest in small groups, with the highest proportion consistently observed in groups smaller than 50.

When analyzed by distance to road (Figure 6.3-2 panel b), the results suggest that the proportion of response behaviours is higher closer to the road than further away, with the proportion dropping off in groups further than 300 m from the road. However, due to the previously mentioned correlation between group size and distance to road, these data cannot discern between two possibilities – that caribou are more likely to be disturbed near the road, or that small groups of caribou are more likely to have a higher baseline level of response behaviours. In future years of surveys, additional data with large groups observed close to the road will be required to clarify this.

The result that smaller groups (<50) displayed alert behaviours more frequently than larger groups (>50) is interesting. The activity level of smaller groups was higher, with 50% or more of time spent in alert behaviour and running in the absence of any disturbance. This was especially true near the road (i.e., within 50 m when the survey started). This was a clear trend in all three years of data. It should be noted that the variable used here to approximate distance to road is actually distance to observer, which is usually but not always the same as distance to road. In 2021 and 2022 distance to road and distance to observer were collected separately, but for the purpose of continuity across the two years, distance to observer was used throughout this analysis. Additional years of data will allow for the more accurate distance to road variable to be used in place of distance to observer.



Note: Distance from surveyors to the caribou is considered equivelant to distance from the road in this report

Figure 6.3-1: Caribou Group Size Versus Distance from the Caribou to the Road

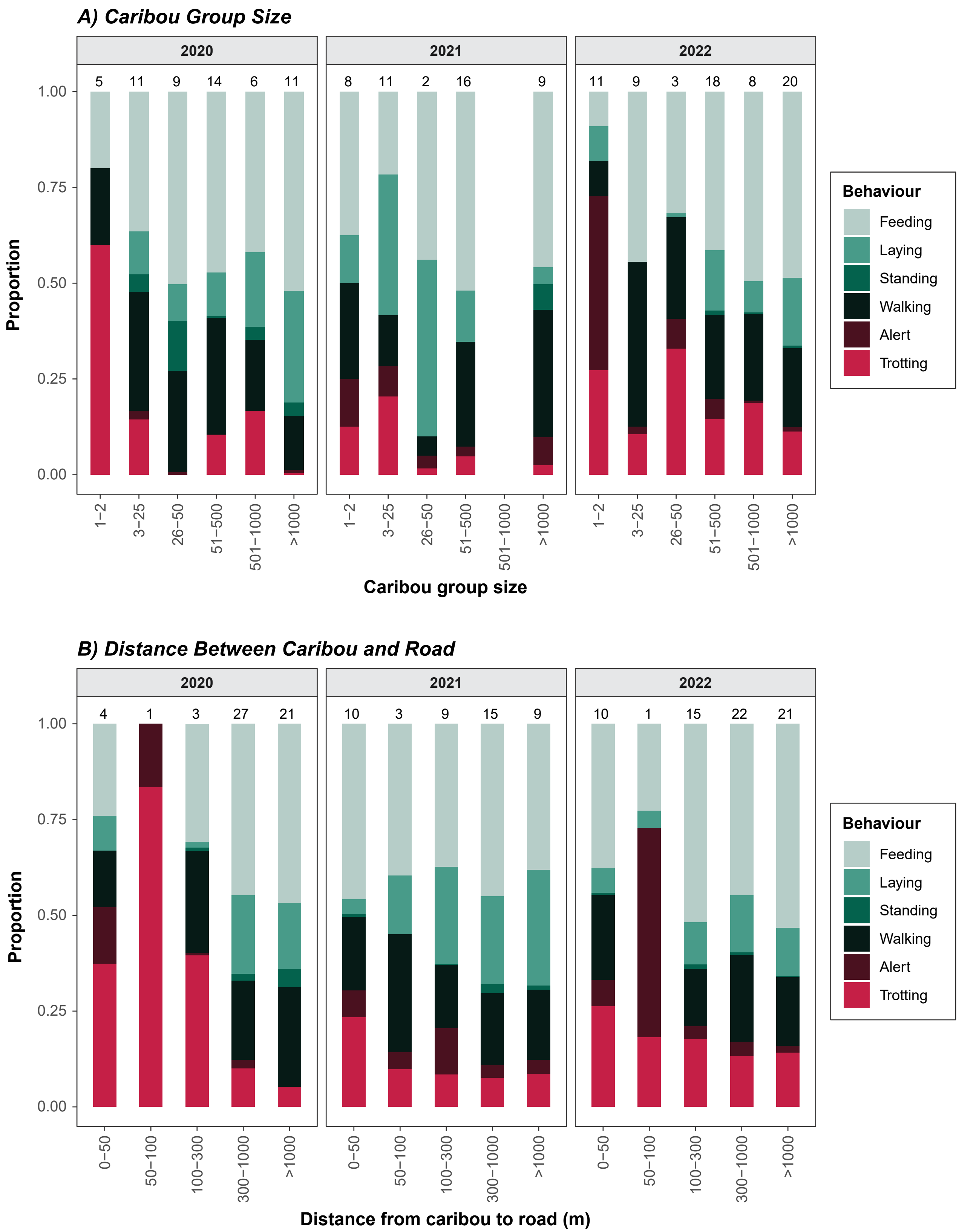


Figure 6.3-2: Average Proportion of Each Behaviour Type Observed

6.3.4 Behaviour Type and Environmental Variables

Figure 6.3-3 shows the relationship between 1) the proportion of response behaviours and 2) environmental variables temperature, wind speed, and date. This comparison was included to explore the possibility that environmental factors such as heat or high winds were influencing caribou behaviour during the survey. No trend is visible in the data and trend lines fit to the weather data are nearly flat with wide confidence intervals, suggesting that weather does not have a substantial effect on behaviour relative to other factors. Date was also included to explore the hypothesis that caribou behaviour may change as the season transitions from the more sensitive post-calving season into summer. However, the results indicated that date was not associated with caribou behaviour.

6.3.5 Upstream or Downstream Observations

The movement pattern for caribou in the Project area is variable. In some years, caribou primarily cross the road travelling east to west, and in other years it is the opposite. In all three years of data collection, most of the observed caribou were travelling northwest to southeast from their calving grounds, around the west side of Meliadine Lake, and on to the coast to feed. This aligns with observations from community members in Rankin Inlet and the KivIA, i.e. ''*The majority of collared caribou going Northward when the lake is frozen. Some come through the South end then cross at KM 25-27 then go East* '' - Jeff Tulugak, KivIA, personal communication.

Because of this, caribou were most often seen crossing the road from the west side (or the "upstream" side) to the east side (or the "downstream" side). It was hypothesised that behaviour may vary depending on whether the caribou had crossed the road already (East) or whether they were anticipating doing so (West).

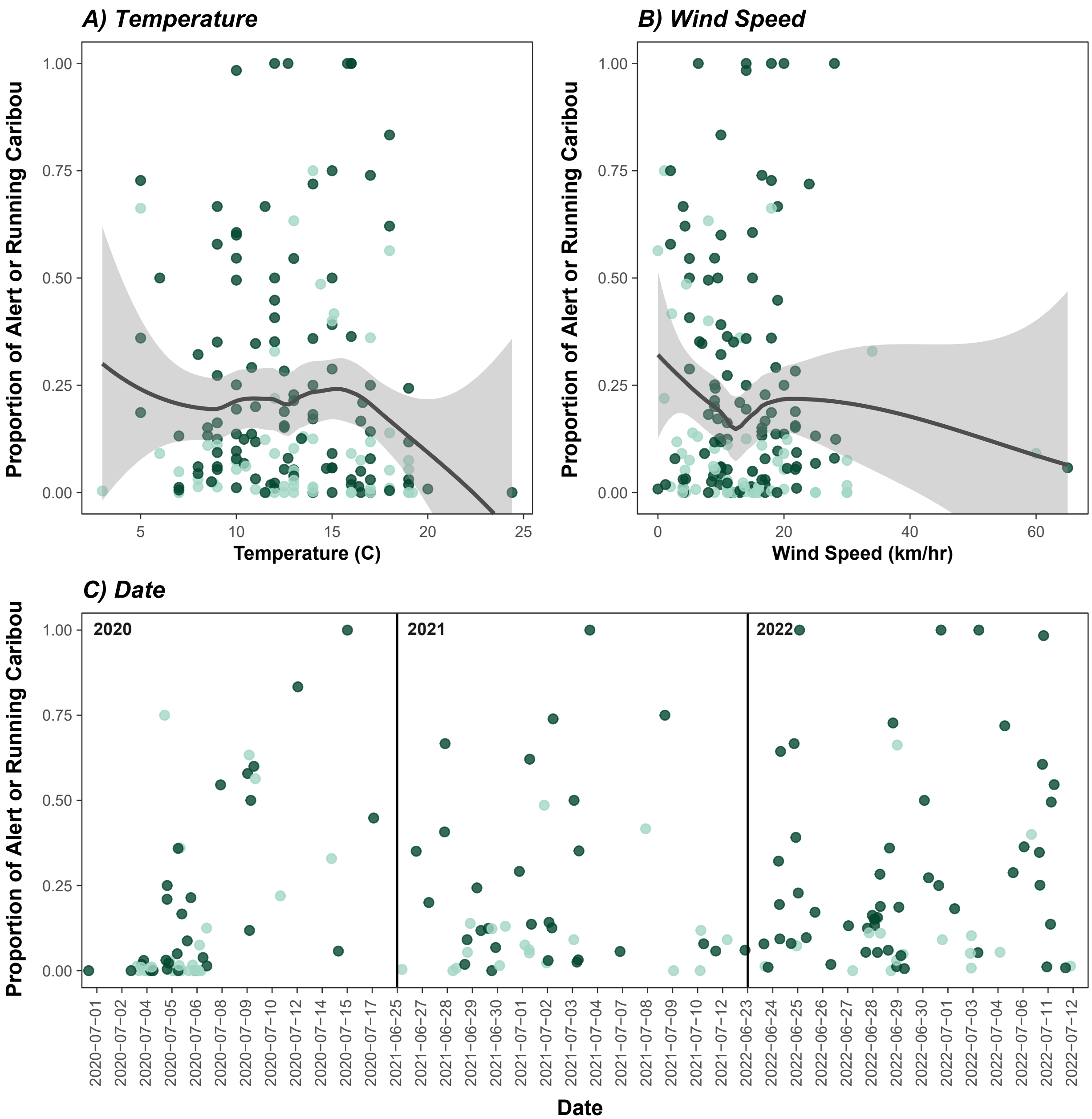
One hypothesis is that caribou are hesitating to cross the road but that once they cross the road, they move away quickly. If this were the case, the prediction would be that groups of caribou would be observed close to the road on the upstream side with fewer groups or groups further away on the downstream side. This predicted distribution was not observed. Instead, groups of caribou were observed near the road on both sides of the road. Figure 6.3-4 compares the distance to the road at the start of the survey with the location relative to the road (East or West). More surveys occurred on caribou further from the road, but this was independent of which side of the road the caribou were on.

When proportion of each behaviour type was compared between surveys on the East and West (Figure 6.3-4), the two subsets were almost identical, and no difference could be observed.

6.3.6 Number of Disturbances

When duration of response (i.e., time taken for caribou to return to a baseline condition following a disturbance) is compared with the proportion of response behaviours, it appears that surveys with a higher proportion of caribou responding to the disturbance tend to take longer to recover to a baseline condition (Figure 6.3-5 panel a). Interestingly, it appears that surveys with multiple disturbances don't consistently produce a larger response or a longer one. Although the long-lasting full-group responses are in surveys with multiple disturbances, there are surveys with multiple disturbances that don't have large reactions or longer-lasting response durations.

Figure 6.3-5 (panel b) shows a density plot for the proportion of response behaviours in three subsets of surveys; those with no disturbances, those with one disturbance, and those with multiple disturbances. The results suggest a slightly higher proportion of alert or running caribou in surveys when one or more disturbances occurred. Surveys with multiple disturbances do not appear to have a greater overall response than surveys with one disturbance. It should be noted that this figure is an average proportion of response behaviours across the entire 30-minute survey, so in some instances the proportion of response behaviours may have been obscured by the large number of intervals with no response behaviour.



Note: Colour indicates whether or not a disturbance occurred suring the survey. In the top two panels, an exploratory loess smooth fit is shown in grey with 95% confidence intervals.

Disturbance occurredduring survey ● Yes ● No

Figure 6.3-3: Proportion of Alert or Running Caribou by Temperature, Wind Speed and Date

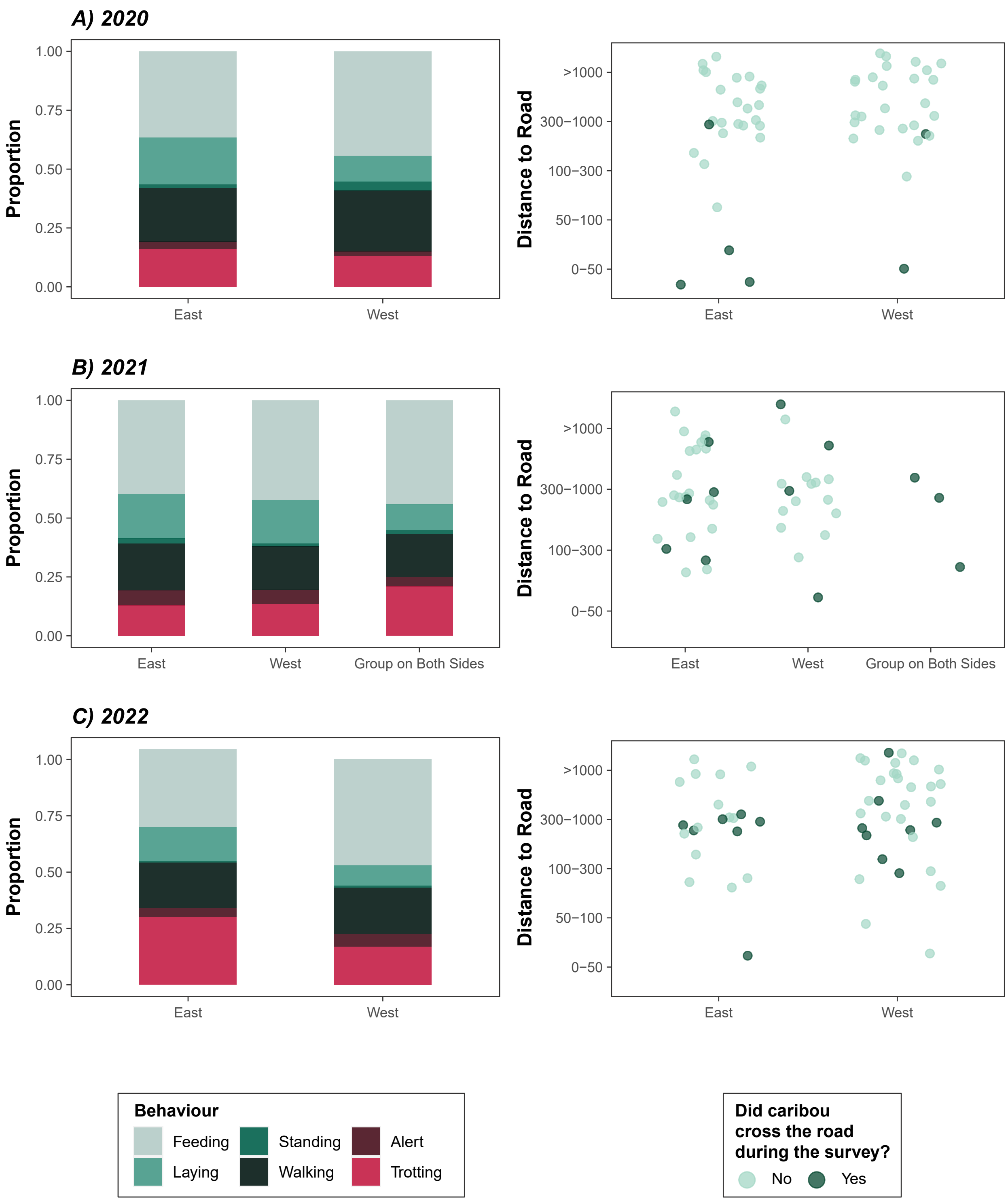


Figure 6.3-4: Average Proportion of Each Behaviour Type Observed on East and West Side of Road

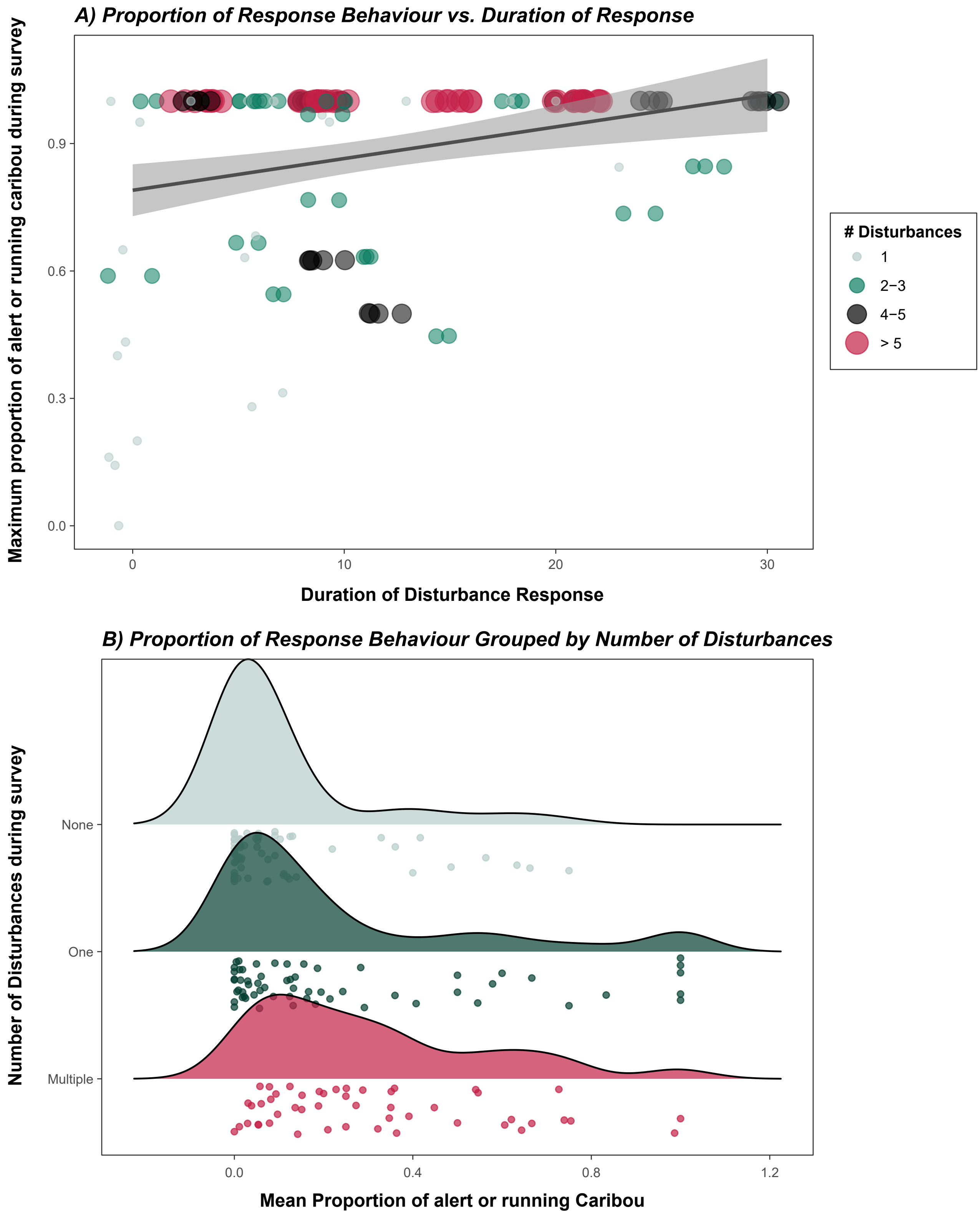


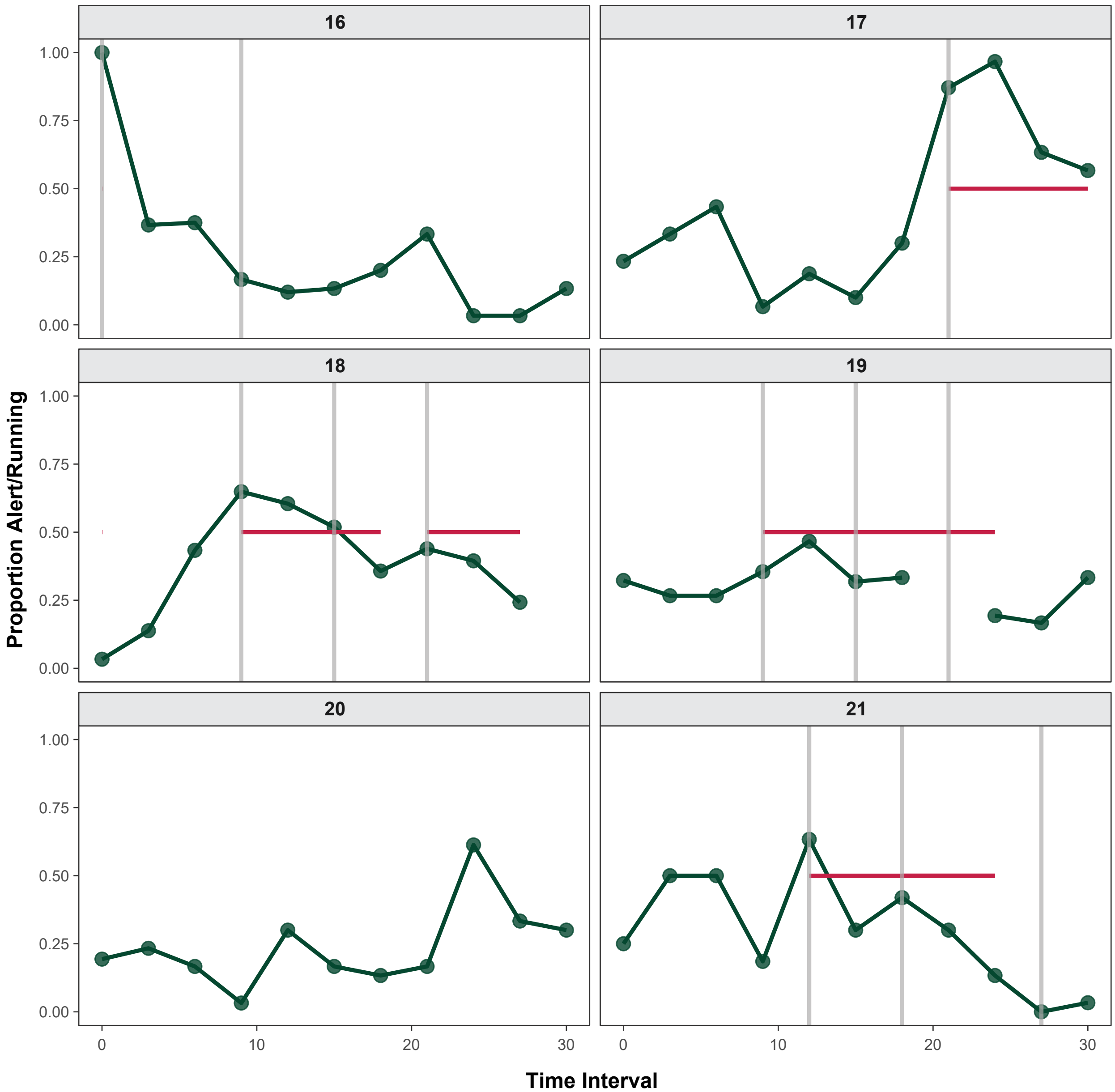
Figure 6.3-5: Comparison of Response Behaviours by Number of Disturbances

6.3.7 Response to Disturbances

Summarizing data over the entire 30-minute survey is useful for broad comparisons but has the disadvantage that response behaviour can be washed out in a relatively uneventful survey. To examine the response to disturbances within a survey, the proportion of response behaviours was plotted by three-minute interval for each survey, as shown for a subset of surveys in Figure 6.3-6. See Appendix C for plots of all surveys. In Figure 6.3-6, the response behaviours of “alert” and “trotting or running” are combined to create the total proportion of responding caribou in any given time interval and plotted over time within the 30-minute survey. Disturbances are denoted with a vertical bar. A spike in response behaviours in the interval during a disturbance or immediately following a disturbance, suggests that the caribou are responding to the disturbance.

The results show that even in the absence of disturbances, an average of 0-10% of caribou typically exhibit response behaviours at any given time. Figure 6.3-6 and Appendix C suggest that following a disturbance event, there was commonly a spike in the proportion of caribou with response behaviours increasing from 0-10% up to 60-90% of the group. The proportion of caribou with response behaviours returned to a pre-disturbance level quickly, often within two intervals (6 minutes). For example, when a vehicle passed, most caribou would look up (which is classified as a response behaviour) and then return to feeding or standing (a pre-disturbance behaviour).

There was some variability in the proportion of response behaviours. During some surveys, there was a spike in response behaviours when no vehicle or other obvious disturbance was observed. There are several things that may account for this, including a disturbance that could not be detected by surveyors, insect harassment, or gregarious behaviour (i.e. one caribou reacting triggers a chain reaction). In some surveys a vehicle passed by (a disturbance), but there was no increase in response behaviours observed in the caribou group on the subsequent time period.



Note: See Appendix C for all surveys from 2020, 2021, and 2022.

Figure 6.3-6: Proportion of Response Behaviour during Each Survey – Example Subset

6.4 Statistical Analysis Results

As group size and distance to road were identified as being potentially correlated during the exploratory analysis, a Chi-square test was conducted between the two variables to determine if they were too closely related to be included in a model together. A Chi-square ($\chi 2$) statistic is a test that measures how a model compares to actual observed data and can be used to test for the correlation between two categorical variables. The resulting Chi-square statistic was significant ($p=0.003$), indicating that group size is associated with distance to road. Considering this, and in order to prevent overfitting the models, two separate models were run that included group size as an independent variable and distance to road as an independent variable, respectively. To bolster the sample size for statistical analyses, all analyses in this section were conducted on the pooled dataset of 2020 to 2022 data.

The final models had many parameters, and it was difficult to attain model convergence. As a result, model variables that had little or no explanatory power and were not variables of interest (such as Temperature) were dropped from the final model sets. Three response (dependent) variables were tested in three separate model sets: proportion of response behaviour (alert or running), proportion of walking and response behaviour, and duration of response following a disturbance.

The estimates and significance levels for the best-fitting model that used response behaviour as the dependent variable are presented in Table 6.4-1, for the best-fitting model that used walking behaviour as the dependent variable in Table 6.4-2, and for the best-fitting model that used duration of response as the response variable in Table 6.4-3.

The statistics presented include the variable estimate, which can be interpreted as the expected effect on the dependent variable as the independent variable increases. For example, in Table 6.4-1 the negative estimate for windspeed indicates that as the wind speed increases, the proportion of caribou with response behaviours decreases. However, estimates should always be considered in tandem with the standard error; if the standard error is larger than the estimate, the estimate is meaningless. The p-value statistic indicates whether the model is a "statistically significant" predictor of the dependent variable, regardless of how large the estimate is. A p-value of less than 0.05 suggests that the variable is an important determinant of the response, as it indicates there was less than 5% probability that the results occurred by chance.

Table 6.4-1: Summary of Model Coefficients and Significance Levels for Response Behaviour Model (n = 171)

Variable	Estimate	Standard Error	P-value	Significant
(Intercept)	0.64	0.70	0.366	
Caribou Group Size (3 – 25 caribou)	-0.59	0.65	0.365	
Caribou Group Size (26 – 50 caribou)	-1.24	0.99	0.211	
Caribou Group Size (51 – 500 caribou)	-1.62	0.67	0.016	*
Caribou Group Size (501–1000 caribou)	-0.72	0.97	0.459	
Caribou Group Size (>1000 caribou)	-1.51	0.75	0.045	*
Distance to road 50-100 m	0.29	1.13	0.800	
Distance to road 100-300 m	-0.95	0.67	0.157	
Distance to road 300-1000 m	-1.42	0.61	0.020	*
Distance to road >1000 m	-1.78	0.71	0.012	*
Wind speed (km/hr)	-0.02	0.03	0.350	
Number of Disturbances in Survey	0.24	0.10	0.019	*

Note:
* *Note: Statistically significant p-values <0.05 are indicated with a single asterisk. Highly significant values (p < 0.001) indicated with three asterisks. Near significant values (0.10 > p > 0.05) are indicated with a dot*

Table 6.4-2: Summary of Model Coefficients and Significance Levels for Walking and Response Behaviour Model (n = 171)

Variable	Estimate	Standard Error	P-value	Significant
(Intercept)	1.06	0.66	0.110	
Caribou Group Size (3 – 25 caribou)	-0.45	0.60	0.453	
Caribou Group Size (26 – 50 caribou)	-0.76	0.75	0.307	
Caribou Group Size (51 – 500 caribou)	-0.96	0.58	0.096	.
Caribou Group Size (501–1000 caribou)	-0.88	0.79	0.262	
Caribou Group Size (>1000 caribou)	-1.05	0.62	0.091	.
Distance to road 50-100 m	0.18	1.10	0.874	
Distance to road 100-300 m	-0.93	0.63	0.139	
Distance to road 300-1000 m	-0.94	0.53	0.078	.
Distance to road >1000 m	-0.91	0.56	0.105	
Wind speed (km/hr)	-0.02	0.02	0.432	
Number of Disturbances in Survey	0.20	0.09	0.037	*

Note:
* *Note: Statistically significant p-values <0.05 are indicated with a single asterisk. Highly significant values (p < 0.001) indicated with three asterisks. Near significant values (0.1 > p > 0.05) are indicated with a dot*

Table 6.4-3: Summary of Model Coefficients and Significance Levels for Duration of Response Model (n = 171)

Variable	Estimate	Standard Error	P-value	Significant
(Intercept)	6.95	4.70	0.145	
Caribou Group Size (3 – 25 caribou)	-1.24	5.73	0.829	
Caribou Group Size (26 – 50 caribou)	-1.68	4.48	0.709	
Caribou Group Size (51 – 500 caribou)	-0.54	3.48	0.877	
Caribou Group Size (501–1000 caribou)	-2.17	3.83	0.573	
Caribou Group Size (>1000 caribou)	0.41	4.55	0.928	
Distance to road 50-100 m	-4.02	6.36	0.529	
Distance to road 100-300 m	0.73	4.25	0.865	
Distance to road 300-1000 m	1.56	5.79	0.789	
Distance to road >1000 m	2.09	4.21	0.621	
Number of Disturbances in Survey	0.90	0.45	0.050	.

Note:
* *Note: Statistically significant p-values <0.05 are indicated with a single asterisk. Highly significant values (p < 0.001) indicated with three asterisks. Near significant values (0.10 > p > 0.05) are indicated with a dot.*

6.4.1 Effect of Distance to Infrastructure

The results suggest that there is a differential effect of distance to the road on response behaviour, as caribou were less likely to be exhibiting response behaviours further from the road (Table 6.4-1). The effect was statistically significant for caribou within 300-1000 m (estimate: -1.42±0.61, p-value = 0.020), and caribou further than 1000 m (estimate: -1.78±0.71, p-value = 0.012), suggesting caribou within 300 m of the road are significantly more likely to exhibit response behaviours than caribou more than 300 m away. The effect of distance was not significant for any distance category in the walking model or duration of response model (Tables 6.4-2 and 6.4-3), which suggests that a link between distance to road and response could not be detected in these models. For the duration of response model this may be explained by the smaller sample size.

6.4.2 Effect of Group Size

The results suggest that there is also a differential effect of group size on response behaviour, as larger groups were less likely to be exhibiting response behaviours (Table 6.4-1). The effect was statistically significant for caribou groups of 51-500 individuals (estimate: -1.62±0.67, p-value = 0.016), and caribou groups of more than 1000 (estimate: -1.51±0.75, p-value = 0.045), suggesting larger caribou groups of caribou are less likely to have response behaviour than smaller groups. The effect of distance was not significant for any size category in the walking model or duration of response model (Tables 6.4-2 and 6.4-3), which suggests that a link between group size and response could not be detected in these models. These results should be taken with caution as smaller groups of caribou naturally have greater variability in values, and this could bias the results. For example, a group of two caribou is far more likely to have 100% of caribou responding to a disturbance than a group of 50 caribou.

6.4.3 Effect of Disturbances

The occurrence of disturbances resulted in a statistically significant increase in the proportion of response behaviour (Table 6.4-1; estimate: 0.24±0.10, p-value = 0.019), as well as a significant increase in the amount of walking and responding caribou (Table 6.4-2; estimate: 0.20±0.09, p-value = 0.036). This suggests that the more disturbances there were in a survey, the more caribou that would be recorded walking or responding. The occurrence of disturbances was not statistically linked to the duration of response.

6.4.4 Results Summary

The results of the statistical analysis provided support for the key hypothesis that caribou tend to respond to disturbances, particularly when they are close to the road.

The proportion of caribou walking was also linked to disturbances, which suggests that walking may be useful for inclusion in future models as a response behaviour. However, it was more difficult to detect trends in group size and distance to road when walking was included in models. The inclusion of a separate model set for the more sensitive alert/running behaviour parameter allows for the detection of trends that are not apparent when walking is included.

These results should be treated with caution due to the high number of variables and the variability in the behaviours observed, and because response behaviours were averaged over each 30-minute survey period. Nevertheless, these results are consistent with other surveys recorded on barren-ground caribou during the post-calving and early summer periods, which suggest that caribou behavioural responses to all-season haul roads tend to taper off beyond approximately 500 m (Curatolo et al. 1987; Johnson and Lawhead 1989; Dyer et al. 2001). However, zone of influence estimates are highly variable in the literature and this method of data collection is not designed to estimate it. In addition, responses to roads and infrastructure have previously been linked to increased harvest from roadways (Plante et al. 2018; Russell and Gunn 2019), a factor which was not included in this analysis.

One consideration with analyzing these data, is that the response of caribou to disturbances is relatively brief, lasting on-average 2 sampling periods (5.83 minutes). Using average behaviour type across the 30-minute (10 sampling periods) effectively dilutes the caribou response, and likely explains why duration of response models performed so poorly. With the addition of future sampling, it may be possible to examine average behaviours within a 30-minute sampling period; before a disturbance, immediately following the disturbance, and following return to pre-disturbance behaviour.

7. SUMMARY

The behaviour monitoring data from 2022 were combined with data from 2021 and 2020, to determine if caribou activity budgets change with distance from the mine, and to document caribou response to stressors. All results outlined in this report use all three years, unless otherwise stated. The program and combined data resulted in several key findings:

- The monitoring protocols adapted from the GNWT ENR worked well at the Project site.
- Sixty-nine surveys were conducted in 2022 with peak caribou activity observed between June 28 and June 29. This was a slightly earlier than the peak in 2021 and approximately one week earlier than the peak in 2020. The data from 2020 to 2022 were combined for a total of 171 surveys across three years.
- Caribou mostly exhibited the non-response behaviours of standing, laying, and feeding.
- Observations were well distributed across a range of caribou group sizes from 1 to 2 individuals to >1,000.
- Small groups tended to have a higher proportion of response behaviours (running, alert) than larger groups, irrespective of disturbances. Groups within 300 m of the road also tended to have a higher proportion of response behaviours than those further away. This was apparent in 2020, 2021, and 2022.
- Groups of caribou were observed near the road in equal proportions on both the upstream and downstream sides of the road. Behaviour did not differ between caribou on the two sides.
- Statistical analysis indicated a trend for caribou at greater distance from the road (>300 m) to have a lower proportion of response behaviours. Distance to the road was not linked to walking behaviour.
- The proportion of caribou with response behaviours in a group was unrelated to measured environmental variables including temperature and wind speed.
- Approximately half of the surveys included a disturbance event, typically from essential Project vehicles, mostly pickups, and all-terrain vehicles (ATVs) used by community members on the AWAR for travel and harvesting. The AWAR was closed to Project vehicles (with the exception of approved convoys) when caribou were near the road and all Project vehicles stop when caribou are on the road.
- Following a disturbance event, the proportion of response behaviours in a group of caribou rose, but typically returned to baseline behaviours within two sampling periods (three to six minutes). Caribou were statistically more likely to be walking, alert, or running in surveys where there were more disturbances (i.e. vehicle traffic).

8. REFERENCES

Agnico Eagle 2015. *Agnico Eagle Meliadine Division Final Environmental Impact Statement (FEIS)*.

Agnico Eagle 2022. *Agnico Eagle Meliadine Division Terrestrial Environment Management and Monitoring Plan (TEMMP)*.

Boulanger, J., M. Campbell, and D.S. Lee. 2018. Estimating Abundance and Trend of the Qamanirjuaq Mainland Migratory Barren-Ground Caribou Subpopulation - June 2017. Technical Report Series – No: 01-2018, Government of Nunavut. 193 pp.

BQCMB. 2014. *The Beverly and Qamanirjuaq Caribou Management Plan 2013-2022.* Beverly and Qamanirjuaq Caribou Management Board.

BQCMB. 2022. *Home page.* Beverly and Qamanirjuaq Caribou Management Board. https://arctic-caribou.com/

BQCMB. 2021. *The Beverly and Qamanirjuaq Caribou Management Board Annual Report 2020-2021.* Beverly and Qamanirjuaq Caribou Management Board.

Burnham, K.P., Anderson, D.R. 2004. *Multimodel inference: understanding AIC and BIC in model selection.* Sociol. Methods Res. 33, 261–304.

COSEWIC. 2016. *COSEWIC assessment and status report on the Caribou* Rangifer tarandus*, Barren-ground population, in Canada.* Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 123 pp. (http://www.registrelep-sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1).

Curatolo, James A.; Murphy, Stephen M. 1986. The effects of pipelines, roads, and traffic on the movements of caribou, *Rangifer tarandus*. *The Canadian Field-Naturalist* 100(2):218-224.

Dyer, S., O'Neill, J., Wasel, S., & Boutin, S. 2001. Avoidance of Industrial Development by Woodland Caribou. *The Journal of Wildlife Management,* 65(3), 531-542. doi:10.2307/3803106.

GNWT-ENR. 2017. *Caribou behaviour monitoring field protocols.* Government of the Northwest Territories Environment and Natural Resources, 10 page unpublished document. Yellowknife, NT.

Johnson, C. B., and B. E. Lawhead. 1989. *Distribution, Movements, and Behavior of Caribou in the Kuparuk Oilfield, Summer 1988.* Report by Alaska Biological Research, Inc., to ARCO Alaska, Inc., and the Kuparuk River Unit, Anchorage, Alaska.

Plante, S., Dussault, C., Richard, J.H., Cote, S. 2018. Human disturbance effects and cumulative habitat loss in endangered migratory caribou. *Biological Conservation* 224: 129-143.

Russell, D., and A. Gunn. 2019. *Vulnerability Analysis of the Porcupine Caribou Herd to Potential Development of the 1002 Lands in the Arctic National Wildlife Refuge, Alaska.* Report prepared for: Environment Yukon, Canadian Wildlife Service, and GNWT ENR Department of Environment and Natural Resources. 143 pp.

Wolfe S.A., Griffith B., and Wolfe C.A.G. 2000. *Response of Reindeer and Caribou to Human Activities.* Polar Research 19(1), 63-13.

APPENDIX A DETAILED METHODS FOR CARIBOU BEHAVIOUR SURVEYS

AGNICO EAGLE

Meadowbank Gold Mine

Caribou Behaviour Monitoring

September 15, 2021

Project No.: 0597635

The business of sustainability

ERM

CONTENTS

1. INTRODUCTION

Agnico Eagle Mines Ltd. (Agnico Eagle) would like to determine whether caribou behaviour changes in response to mine activities. The purpose of caribou behaviour surveys is to provide information to characterize the effects of the physical road and mine-related activities on caribou behaviour, including the All Weather Access Road (AWAR) and Haul Road.

The planned monitoring program is designed to collect data on caribou behaviour using standardized, scientifically-defensible methods. The data will be used to monitor Project effects.

1.1 Objectives

Following discussions with the Kivalliq Inuit Association and Government of Nunavut during the spring of 2021, the objectives of the behaviour monitoring program for caribou have been updated to the following:

- Evaluate the baseline behaviour of caribou (behaviour in the absence of disturbance);
- Evaluate the response of caribou to disturbances;
- Compare the behaviour of caribou between the following categories, if there is sufficient data:
    1) in large vs. small groups,
    2) near vs. far from the road,
    3) when the road is open vs. closed,
    4) east vs. west of the road, (upstream and downstream), and
    5) spring migration vs. summer and fall periods.

2. STUDY AREA

The study area for behaviour monitoring is anywhere that caribou may interact with the mine, including the All Weather Access Road (AWAR), the Meadowbank Mine site, Whale Tail site and the Haul Road connecting Meadowbank to Whale Tail.

3. STANDARD OPERATING PROCEDURES

The purpose of caribou behaviour surveys is to provide information to characterize the effects of the physical road and mine-related activities on caribou behaviour, including the All Weather Access Road (AWAR) and Haul Road. The overall method for the surveys is to identify caribou groups visible from the road, to select some groups for observation, and to record the behaviour of individuals in groups of different sizes including their behaviour without any disturbance and responses to both mine-related activities and natural factors.

Notes to guide the work include:

- Systematic surveys will be conducted along all Project roads during spring, summer and fall periods.
- The survey team will consist of a driver/observer and a second observer when available.

Surveys should be performed:

- During spring, summer and fall when caribou may be in the Project area,
- Of caribou at various distances from the road and group sizes, and
- If surveying effects of a convoy, conduct two surveys, one at least an hour before convoy deployment so that a pre-disturbance measurement can be made, and a second survey during the convoy passing by caribou.

3.1 General Field Data

For each survey day, the appropriate general field data will be recorded onto field data sheets supplied in Appendix A and B. A new data sheet will be used for each survey, including additional sheets as necessary to record all observations. General information includes:

- Survey date and start and end times.
- Field personnel (full names on the data sheet header and initials thereafter).
- Weather conditions during and prior to sampling (e.g., snow in the last 24 hours, current wind conditions).
- Site description: provide location and description (GPS coordinates, road name and distance marker).
- Photographs or video (if possible):
  - Take a photo of the caribou every time an observation is recorded so that the observations can be verified by a biologist.
  - For any photographs taken, record the picture IDs in the comments field on the field data sheet.
  - Write descriptions of any photos taken for specific reasons.
- General observations/notes of the environment/sampling procedures.
- Any deviation from the SOPs outlined below.

Note: When in doubt take pictures and make field notes explaining the situation, your response or consequent changes in methods. It is better to have more data/notes than not enough when interpreting the results later on.

3.2 General Equipment List

- A GPS unit with waypoints of road km markings.
- Field data sheets (Appendix A and B), clipboard, pencils, or iPad with data form.
- A timer capable of alarm setting for repeat time intervals (i.e., can be set to go off every three minutes, like a smart phone).
- Binoculars or spotting scope.
- Compass (or use compass function on GPS unit).
- Portable weather station (temperature and wind speed).
- Camera.
- Rangefinder.

3.3 Field Methods

3.3.1 Group Selection

The survey day will begin with a reconnaissance survey to determine how many caribou groups are present near the road, how large they are, and where they are. This will be accomplished by driving from the mine site along the road and noting relevant information about the groups and their sizes along the way (using the standard, tablet-based road survey form). Observers will preferentially choose groups to survey to across group sizes and distances from the road. Ideally, caribou would be sampled in an even distribution across these variables and along the AWAR and Haul Road. However, the nature of caribou and field sampling mean that observers may need to survey what caribou are available, rather than what is "ideal".

Allow approximately one hour to survey each group. If the length of the survey day permits all groups to be surveyed then they should all be surveyed. If there are more groups to survey than the time in the day, then do the following:

1. Look at how many of each group size (bullet list below) have been surveyed to date. If one of them is under-represented and there is a group of that size on the road, then go survey that group. If there is more than one group of that size, choose it randomly using the procedure in step 4.
    - 1 or 2 caribou
    - 3 to 25 caribou
    - 26 to 50 caribou
    - >50 caribou
2. During 2020, few groups of caribou within 300 m of the road were observed or sampled. Preferentially choose groups of caribou within 300 m of the road, with a soft target of approximately 1/3 of samples in this area.
3. If any Project-tolerant caribou are observed (e.g., caribou observed near the road or mine site for more than 72 hours in summer and 48 hours in other seasons; TEMP 2020), then select these animals for sampling. In Appendix A data sheet, record that the group is Project tolerant in the notes field.
4. If there are multiple groups available, choose groups to fill in an even distribution of group sizes and distances from roads.

Record all caribou groups observed during the reconnaissance survey in the standard, tablet-based survey form and submit that data along with the results of behaviour monitoring.

3.3.2 Selection of an Observation Site

Find a safe parking location and follow site safety protocols. The observation location may be the vehicle itself or a safe location off the road. If observers exit the vehicle, the observation location should be chosen where observer activity is not likely to influence caribou behaviour and where the observer can remain comfortable for a period of approximately 45 minutes without needing to move. Ideally, the vehicle should be stopped a minimum of ~250-300 m from the caribou – adapt this distance as needed. If the animals are staring at the truck or moving away, then the truck is too close.

3.3.3 Data Recording

Allow 15 minutes between arrival and the time at which behavioural observations begin. This is to allow animals to return to behaviour that may have been interrupted by the arrival of observers. In the time before recording behaviour, fill in the top portion of the form with location, weather, and group size information.

After 15 minutes, begin recording data in the form in Appendix A. The start time to record is the time that observations begin.

3.3.3.1 Location

Location: Collect a waypoint of the location from which the observations will be made. Note the waypoint number and the UTM coordinates on the data sheet.

Road Condition: If observing caribou on a road, record whether the AWAR or Haul Road are open or closed.

Distance: Estimate the distance to the group using a laser rangefinder and, using a compass or the GPS unit compass feature, record the bearing (0° to 360°) to the group being observed. If the group of caribou is large and spread over a considerable distance from the road, estimate the distance to nearby caribou and the caribou furthest away that will be sampled. If some caribou in the group are too far away to sample, then do not include them in the distance estimate.

Behaviour: At each time interval during the survey, observers should record the number of individuals in the group exhibiting behaviour in each category. For clarity, observers should record zero values for behaviours not observed.

East vs. West: Note if the group is on the east or west side of the road. At the end of the 30 minute observation period return to the top of the form and record (Y or N) if the group crossed the road during the survey period. If monitoring at the mine site or Whale Tail, leave this section blank.

Sex: Note the sex of the group. This can be difficult in large groups, so record in the following categories: mostly males, mostly females, mostly females with calves, juveniles, or mixed group.

3.3.3.2 Weather Conditions

Use the portable weather station to record:

- Air temperature;
- Wind speed;
- Wind direction;
- Precipitation; and
- Humidity (if the weather station has this function).

3.3.3.3 Road Structure

At the location of the caribou group, record the road characteristics:

- Height of the road above the tundra (m);
- Slope of the road side (with of the slope in m);
- Approximate height of snow bank (m); and
- Any structures, such as bridges, present.

3.3.3.4 Caribou Behaviour

Individuals in the group being observed will be categorized when the survey starts and at three minute intervals. Standardized behaviour categories will be used (Section 3.3.4). The standardization of behaviour is necessary for clarity and data analysis. If the observed behaviour does not fit within any of the categories then observers have the option of noting other behaviour in the comments field. However, this should be used only rarely as most behaviour should fit in the primary categories listed below. If noting a new/different behaviour, please take a photo or video of the caribou.

The data to record at each three-minute interval are the numbers of individuals in the group exhibiting each behaviour at that time. Do not attempt to characterize the behaviour that occurred during the interval. If the group is too large to be counted in each interval, choose an identifiable subset of the group, count the individuals exhibiting each behaviour at each time interval, and add a comment that a subset of the group was sampled.

Indicate the total group size at the top of the data form, not the size of the subset whose behaviour was recorded. Count the number of caribou up to 100 animals, and then record group size in categories above 100; 100-200 animals, etc. (see Appendix A).

Practically, the easiest way to do this is to have the observer scan across the group of caribou from Left to Right, calling out the behaviour of each animal, while the recorder adds tick marks to the data sheet. When complete, count up the tick marks.

3.3.3.5 Disturbance Events

Caribou behaviour is expected to vary in response to some disturbance events. The bottom of the data form should be used to record any potential disturbance events evident to the observer regardless of whether caribou respond to them. The main categories of events are included in the data sheet:

- Light truck;
- Haul truck;
- Road maintenance vehicle (e.g., grader);
- ATV or skidoo;
- Aircraft; and
- Predator (note species).

Record the number and approximate speed of the vehicle (regular driving speed, or moving slowly, ~10 km/h, past caribou).

Record the time of the disturbance event (0:00 to 30:00 of the survey), indicate which type of disturbance was observed in the appropriate column. Record any additional comments and records of photographs taken in the final column.

Record whether the vehicle stopped when approaching caribou or continued to drive slowly. If possible, coordinate with passing vehicles on the road to have some vehicles stop for 10 minutes, and others drive by slowly.

3.3.4 Behaviour Classification

With the exception of Alert behaviour, the primary behaviour categories and their definitions follow classifications from the Government of Northwest Territories (GNWT 2017). The categories appear as columns on the data form, with descriptions on the form. The behaviour categories are:

- **Feeding –** standing or walking posture, with the muzzle touching or nearly touching the ground; can be ingesting food or not; head down or moving from side to side.
- **Lying down –** bedded on the ground, either upright or lying on its side, in a resting or ruminating position.
- **Standing –** stationary in an upright, standing posture with head elevated above the ground, and usually above the knees; if cow is nursing, if possible record the time spend nursing.
- **Alert –** head up scanning horizon or focused on a source of disturbance (e.g., vehicle, predator, human).
- **Walking –** similar to standing posture but moving at a slow gait (<5 km/h).
- **Trotting/running –** similar to standing posture but moving rapidly in symmetrical or asymmetrical gait.

Other behaviours that may be observed (record in comments field on form) are:

- **Nursing –** calf is suckling cow.
- **Sparring –** two males in contact.
- **Insect response behavior –** twitching, stamping, tossing head.

In the comments, record if any animals are moving towards the road, parallel or away from the road.

4. DATA MANAGEMENT

Please scan all data sheets at the end of the day. Data from behaviour surveys should be entered into Excel. Data from group selection surveys (standard tablet data form) and behaviour surveys should be delivered at the end of each month to ERM for QA/QC.

5. CLOSURE

This SOP has been produced for Agnico Eagle Meadowbank Division by ERM Canada. Please contact the authors with any questions.

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6. REFERENCES

GNWT-ENR. 2017. *Caribou behaviour monitoring field protocols.* Government of the Northwest Territories Environment and Natural Resources, 10 page unpublished document. Yellowknife, NT.

TEMP. 2020. Meadowbank Division. Terrestrial Ecosystem Management Plan. Version 8, April 2020

APPENDIX A MEADOWBANK GOLD MINE: CARIBOU BEHAVIOUR MONITORING DATA SHEET

Meadowbank Gold Mine: Caribou Behaviour Monitoring Data Sheet

Date: | Time (24 hr [00:00 to 24:00]) Start: End:

Observers:

Location Waypoint number: | UTM Easting: | UTM Northing: | Road name and distance marker:

Distance from caribou to observer location (use rangefinder). (if group diffuse, estimate average distance) Bearing:

Is group location East or West of the Road at start of survey? Circle one: **E W** | Did the group cross the road during the survey? Circle one: **Y N**

Caribou group size: Exact count (up to 100): _____ Estimated size for larger groups. Circle one: **101-200** **201-500** **501-1000** **>1000**

Record sex of group (mostly males, females, females with calves, mostly juveniles, or mixed group):

Temperature: ___°C Wind speed: ______km/h Wind direction:______° Humidity:_____% Days since last snow or wind event: ______

Weather observations:

Road: Open? Closed? Road Height: Road Side Width: Structures/snowbank Present:

Observation time from start of survey	Number of animals exhibiting each behaviour type: Feeding	Lying Down	Standing	Walking	Alert	Trotting or running	Comments and photo numbers (Note if any caribou crossed road or travelled along road)
0 minutes							
3 minutes							
6 minutes							
9 minutes							
12 minutes							
15 minutes							
18 minutes							
21 minutes							
24 minutes							
27 minutes							
30 minutes							

Observed disturbance events

(record time from start of survey and check type of disturbance. Record whether vehicle stopped (s) or drove slowly (d) past caribou)

Time from start of survey	Light truck	Haul Truck	Road maintenance vehicle (e.g., grader)	ATV	Aircraft	Predator (note species)	Comments and photo numbers. Note other disturbances here

Categories and Definitions of Behaviour[1]:

- **Feeding –** standing or walking posture, with the muzzle touching or nearly touching the ground; can be ingesting food or not; head down or moving from side to side.
- **Lying down –** bedded on the ground, either upright or lying on its side, in a resting or ruminating position.
- **Standing –** stationary in an upright, standing posture with head elevated above the ground, and usually above the knees; if cow is nursing, if possible record the time spend nursing.
- **Alert –** head up scanning horizon or focused on a source of disturbance (e.g., vehicle, predator, human).
- **Walking –** similar to standing posture but moving at a slow gait (<5 km/h).
- **Trotting/running –** similar to standing posture but moving rapidly in symmetrical or asymmetrical gait.

Other behaviours that may be observed (record in comments field on form) are:

- **Nursing –** calf is suckling cow.
- **Sparring –** two males in contact.
- **Insect response behavior –** twitching, stamping, tossing head.

[1] Primary source: GNWT-ENR 2017 caribou behaviour monitoring field protocols, courtesy of GNWT Yellowknife, NT.

APPENDIX B DATA FROM CARIBOU BEHAVIOUR SURVEYS

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Observers	Waypoint	UTM_E	UTM_N	Road Name and Distance Marker	Distance from Caribou to Observer Location (m)	Distance from Caribou to Road (if different)	Bearing	Is Group East or West of Survey?	Did the Group Cross the Road during the Survey?
1	6/23/2022	7:43	8:15	NM	1071	541406	6986957	AWAR KM 28	100-300m	NA	320	West	No
2	6/24/2022	8:31	NA	NM	1077	545452	6980816	AWAR KM 20	300-1000m	50	180	East	Yes
3		8:39	9:00	NM, JR	1078	546152	6980141	AWAR 19	600	550	120	East	No
4		10:20	10:50	NM	1080	546173	6979861	AWAR KM 100m	0-50m	NA	180	East	Yes
5		13:37	14:08	NM	1085	545242	6980957	AWAR KM 21	>1000m	NA	270	West	No
6		13:54	14:12	NM, JR	1104	545463	6980811	AWAR 20	400	0	127	West	Yes
7		14:35	15:07	NM	1086	544835	6981569	AWAR KM 21	300-1000m	NA	270	West	No
8		18:22	10:05	NM	1079	547010	6978889	AWAR KM 17	100-300m	500	45	East	No
9	6/25/2022	8:12	8:42	NM, HB	1088	545310	6980926	AWAR 20	300	300	222	West	No
10		9:06	9:36	NM	1089	546255	6979499	AWAR 18	700	30	270	West	Yes
11		9:46	10:20	NM	1089	546255	6979499	AWAR 18	700	30	270	West	NA
12		12:02	12:10	NM	1090	547132	6978694	AWAR 17	50	NA	270	West	No
13		12:19	12:51	NM	1090	547132	6978694	AWAR 17	120	890	270	West	No
14		13:19	13:54	NM	1091	547444	6974667	AWAR 12	700	700	115	East	No
15		14:06	NA	NM	1092	547212	6974168	AWAR 12	1 200	1 000	NA	East	No
16	6/26/2022	9:21	9:55	NM	1093	546165	6979860	AWAR 19	1 600	1 400	218	West	No
17		13:12	13:47	NM	1094	546532	6979345	AWAR 18	1 100	NA	243	West	No
18	6/27/2022	8:42	9:13	NM, JR	1095	544692	6981769	AWAR 20	150	NA	0	East	No
19		10:13	NA	NM,JR	1096	546153	6980267	AWAR 19	1 200	1 150	45	NA	NA
20	6/28/2022	7:13	7:46	NM, JR	1097	547179	6974114	AWAR 12	1 900	1 600	200	West	No
21		7:47	NA	NM, JR	1097	547179	6974114	AWAR 13	1 900	1 600	200	West	No
22		8:20	8:50	NM, JR	1097	547179	6974114	AWAR 12	1 000	800	NA	West	No
23		9:25	10:00	NM, JR	1098	546173	6972521	AWAR 10	800	850	300	West	NA
24		10:15	10:45	NM	1098	546173	6972521	AWAR 12	1 600	1 300	340	West	NA
25		10:15	10:48	JR	1098	546173	6972521	AWAR 10	800	850	300	NA	NA
26		11:33	12:04	NM	1098	546173	6972521	AWAR 12	1 600	500	NA	West	NA
27		12:33	13:04	NM, JR	1099	545273	6971872	AWAR 8	800	300	250	West	No
28		13:30	14:00	JR	1099	545273	6971872	AWAR 8	800	300	275	West	M
29		14:24	14:30	NM, JR	1099	545273	6971872	AWAR 8	1 900	1 200	293	West	No
30		14:34	15:04	NM, JR	1099	545273	6971872	AWAR 8	1 400	1 100	300	West	NA
31		15:12	15:46	NM, JR	1099	545273	6971872	AWAR 8	2 400	2 100	301	West	NA
32	6/29/2022	7:41	8:11	NM, JR	1100	546980	6973753	AWAR 12	100	100	115	West	No
33		8:24	8:40	JR	1101	546394	6972664	AWAR 10	750	500	NA	West	Yes
34		8:24	9:00	NM	1101	546394	6972664	AWAR 10	670	670	125	East	NA
35		9:00	9:16	JR, NM	1101	546394	6972664	AWAR 10	680	235	NA	East	NA
36		9:30	10:00	NM	1102	547215	6974157	AWAR 12	2 000	2 000	90	East	No
37		10:20	10:52	NM, JR	1102	547215	6974157	AWAR 12	2 000	2 000	90	East	NA
38		11:13	11:43	JR	1103	546307	6979464	AWAR 18	1 130	850	300	West	No
39		11:57	12:29	JR	1104	545463	6980811	AWAR 20	200	200	223	West	NA
40		13:08	13:40	NM, JR	1104	545463	6980811	AWAR 20	150	200	127	West	NA
41		14:49	15:21	JR, NM	1104	545463	6980811	AWAR 20	750	500	170	West	No
42		15:21	NA	JR, NM	1104	545463	6980811	AWAR 20	750	300	140	West	Yes
43	6/30/2022	7:38	NA	NM	1105	547033	6973831	AWAR 11	400	400	283	West	NA
44		12:14	12:38	NA	1106	547913	6977966	AWAR	1 100	800	NA	West	Yes
45	7/1/2022	0:33	13:03	NM, MF	1108	544672	6981799	AWAR KM 22	100-300m	150	15	East	No
46		9:16	9:41	MF	1107	546145	6973689	AWAR KM 11	300-1000m	300	90	East	Yes
47		12:30	13:00	NM	1108	544672	6981799	AWAR 22	1 500	150	0	West	NA
48		14:23	14:42	MF, NM	1109	544357	6982279	AWAR KM 22	100-300m	300	90	East	No
49	7/3/2022	7:40	8:12	NM, GL	1110	540964	6985832	AWAR 27	2 000	1 600	187	West	No
50		8:40	9:11	NA	1111	541977	6984618	AWAR 25	1 400	1 600	234	West	No
51		9:40	10:12	NM, GL	1111	541977	6984618	AWAR 25	1 400	1 600	234	West	No
52		10:38	10:41	MF, HB	184	547881	6976910	AWAR KM 15	100-300m	10	30	West	Yes
53		11:42	12:16	MF, HB	185	540685	6985944	AWAR KM 27	>1000m	2000	270	West	No
54	7/4/2022	9:39	9:56	MF, ZL	186	547439	6977154	AWAR KM 15	>1000m	500	190	West	No
55		13:14	13:36	MF, ZL	187	547714	6975265	AWAR KM 14	300-1000m	0	180	West	Yes
56	7/6/2022	10:23	10:57	MF, ZL	188	543692	6983755	AWAR KM 23	300-1000m	300	40	East	Yes
57		11:24	11:40	MF, ZL	189	540755	6985951	AWAR KM 27	300-1000m	500	180	West	No
58		13:03	13:33	MF, IL	190	543605	6983973	AWAR KM 24	100-300m	300	90	West	Yes
59	7/11/2022	7:42	8:10	MF, ZL	191	547002	6974268	AWAR KM 12	300-1000m	400	90	East	No
60		8:32	8:57	MF, ZL	192	547076	6974255	AWAR KM 12	300-1000m	400	160	East	Yes
61		9:18	9:26	MF, ZL	193	547734	6975270	AWAR KM 14	>1000m	900	60	East	No
62		9:51	10:19	MF, ZL	194	547198	6974166	AWAR KM 12	300-1000m	10	180	East	Yes
63		10:32	10:59	MF, ZL	195	546974	6974295	AWAR KM 12	300-1000m	1200	290	West	No
64		11:26	11:59	MF,ZL	196	546944	6974293	AWAR KM 12	300-1000m	5	180	East	No
65		12:44	13:14	MF, ZL	196	546944	6974293	AWAR KM 12	300-1000m	800	180	East	No
66		13:47	14:14	MF, ZL	197	547093	6974248	AWAR KM 12	300-1000m	1000	90	East	Yes
67		15:00	15:30	MF, ZL	198	547870	6976210	AWAR KM 14	>1000m	1500	95	East	No
68	7/12/2022	8:18	8:46	MF	199	540768	6985943	AWAR KM 27	300-1000m	600	195	West	No
69		13:58	14:28	MF, AR	199	540768	6985943	AWAR KM 27	>1000m	1000	120	East	No

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Caribou Group Size (Exact Count or Estimate)	Temp. (°C)	Wind Speed (km/h)	Wind Direction	Days since Last Snow or Wind Event	Weather Observations	Road Height (cm)	Road Side Width	Structures Present
1	6/23/2022	7:43	8:15	50-100	9	22	320	1	NA	50	200	Quarry
2	6/24/2022	8:31	NA	201-500	10	14	0	NA	Sunny warm	100	200	50m
3		8:39	9:00	201-500	9	14	0	3	Sunny	100	200	AWAR
4		10:20	10:50	15	NA	NA	NA	NA	NA	100	200	NA
5		13:37	14:08	201-500	12	22	NA	NA	NA	100	200	NA
6		13:54	14:12	100	8	10	300	NA	cloudy/windy/rain	150	200	AWAR
7		14:35	15:07	201-500	10	17	270	3	NA	100	200	NA
8		18:22	10:05	201-500	9	22	90	3	Sunny	100	2000	500 m from road
9	6/25/2022	8:12	8:42	1	9	19	270	4	sunny/windy/ no clouds	100	200	AWAR
10		9:06	9:36	300	10	19	NW	4	sunny/windy	50	300	AWAR
11		9:46	10:20	300	10	19	NW	4	NA	50	300	AWAR
12		12:02	12:10	1	12.7	28	NA	4	just 42 Km/h wind	NA	NA	AWAR
13		12:19	12:51	150	12.7	28	NA	NA	windy/sunny/no clouds (only verry far)	1,7	6	AWAR
14		13:19	13:54	10	13	17	30	4	clear/sunny/windy	200	200	AWAR
15		14:06	NA	501-1 000	15	10	270	4	NA	200	200	AWAR
16	6/26/2022	9:21	9:55	150	11.8	17	0	NA	Sunny/nice	150	200	AWAR
17		13:12	13:47	600	14	9.5	0	NA	NA	200	400	AWAR
18	6/27/2022	8:42	9:13	4	7	25	315	5	NA	100	200	AWAR
19		10:13	NA	4	7	25	315	NA	sunny	100	200	AWAR
20	6/28/2022	7:13	7:46	>1 000	8.5	16.5	330	7	sunny	100	200	AWAR
21		7:47	NA	>2 000	8.5	16.5	330	7	sunny	100	200	AWAR
22		8:20	8:50	>2 000	8.5	16.5	330	NA	sunny	100	200	AWAR
23		9:25	10:00	1 500	9	11	330	NA	sunny	100	200	AWAR
24		10:15	10:45	800	9	11	330	NA	NA	100	200	AWAR
25		10:15	10:48	1 500	9	11	330	NA	NA	100	200	AWAR
26		11:33	12:04	501-1 000 (800)	9	11	330	NA	cloudy	100	200	AWAR
27		12:33	13:04	3 000	12.5	21.8	330	NA	cloudy/still	150	200	AWAR
28		13:30	14:00	3 000	12.5	21.8	330	NA	cloudy/still	150	200	AWAR
29		14:24	14:30	3 000	12.5	21.8	330	NA	cloudy/still	150	200	AWAR
30		14:34	15:04	3 000	12.5	21.8	330	NA	cloudy/still/drizzle	100	150	AWAR
31		15:12	15:46	4 000	12.5	21.8	330	NA	cloudy	100	150	AWAR
32	6/29/2022	7:41	8:11	1	5	18	300	NA	rainning	100	300	AWAR
33		8:24	8:40	21	5	18	300	NA	cloudy	100	200	AWAR
34		8:24	9:00	24	5	18	300	NA	cold/rain/clearing	150	NA	AWAR
35		9:00	9:16	30	5	18	300	NA	cloudy/rainy	150	200	AWAR
36		9:30	10:00	>1 000	7	16	300	NA	cloudy/cold	150	200	AWAR
37		10:20	10:52	>1 000	7	16	300	NA	cloudy/cold	150	200	AWAR
38		11:13	11:43	400	7	15	300	NA	cloudy/cold	200	900	AWAR
39		11:57	12:29	34	7	15	300	NA	cloudy/cold	100	200	AWAR
40		13:08	13:40	16	8	10	300	NA	windy/cold	150	200	AWAR
41		14:49	15:21	150	8	10	300	NA	cloudy/rain	150	200	AWAR
42		15:21	NA	150	8	10	300	NA	cloudy/rain	150	200	AWAR
43	6/30/2022	7:38	NA	1	9	11	270	NA	NA	200	200	AWAR
44		12:14	12:38	9	12	15	NW	NA	sunny/cloud	NA	NA	AWAR
45	7/1/2022	0:33	13:03	1	16	20	270	NA	Clear, sunny, warm	160	300	150 from road
46		9:16	9:41	2	14	8	0	NA	Sunny clear	100	100	300 from road
47		12:30	13:00	1	16	20	270	NA	sunny/warm	150	150	AWAR
48		14:23	14:42	1	17	20	75	NA	Clear, warm, windy	100	250	300
49	7/3/2022	7:40	8:12	501-1 000	13	9	N	NA	sunny	NA	NA	AWAR
50		8:40	9:11	501-1 00	13	9	N	NA	NA	NA	NA	AWAR
51		9:40	10:12	501-1 01	13	9	N	NA	NA	NA	NA	AWAR
52		10:38	10:41	2	12	18	90	NA	Cloud cover, warm	200	250	10m from road
53		11:42	12:16	501-1000	18	20	195	NA	Overcast, rain in distance	2	2	2km from road
54	7/4/2022	9:39	9:56	101-200	10	20	90	NA	Windy, cool,	100	150	500m to road
55		13:14	13:36	101-200	14	24	165	NA	Overcast, windy, cool	200	300	0m from road
56	7/6/2022	10:23	10:57	3	15	5	15	NA	Warm, clear	200	300	300m from road
57		11:24	11:40	1	15	8	15	NA	Sunny, warm	200	250	500m from road
58		13:03	13:33	1	16	11	15	NA	Clear, hot	240	200	300m from road
59	7/11/2022	7:42	8:10	201-500	10	4	55	NA	Cool, broken cloud, rain overnight	150	200	400m from road
60		8:32	8:57	201-500	11	7	55	NA	Overcast, showers in distance	150	200	400m from road
61		9:18	9:26	>1000	10	12	50	NA	Broken cloud	240	180	900m from road
62		9:51	10:19	>1000	10	8	55	NA	Overcast, broken cloud	180	300	10m from road
63		10:32	10:59	101-200	10	9	55	NA	Overcast, cool	200	300	1.2km from road
64		11:26	11:59	>1000	10	20	45	NA	Broken cloud	100	200	5m from road
65		12:44	13:14	>1000	10	15	55	NA	Broken cloud	180	250	800m from road at km8
66		13:47	14:14	>1000	10	14	55	NA	Overcast, cool	220	260	1km from road
67		15:00	15:30	>1000	10	9	55	NA	Clearing, broken clouds	110	400	1.5km from road
68	7/12/2022	8:18	8:46	>1000	8	2	60	NA	Clear, hazy	140	220	600m from road
69		13:58	14:28	>1000	20	0	0	NA	Hot and clear	180	240	1km from road

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Feeding_0	Laying_0	Standing_0	Walking_0	Alert_0	Trotting_0	Comments_0	Feeding_3	Laying_3	Standing_3	Walking_3	Alert_3	Trotting_3	Comments_3
1	6/23/2022	7:43	8:15	8	0	0	4	2	0	NA	12	0	0	4	0	0	NA
2	6/24/2022	8:31	NA	13	0	0	10	0	6	NA	21	0	1	4	3	1	NA
3		8:39	9:00	14	0	2	10	2	0	NA	17	8	0	2	1	0	NA
4		10:20	10:50	1	0	0	10	1	8	On the road	6	0	0	7	1	7	Group splitted in half, one when east side of the road, the other one on west side
5		13:37	14:08	17	0	0	12	0	1	NA	23	0	0	6	1	0	NA
6		13:54	14:12	14	1	0	3	1	7	ATV stopped 300m before group	20	0	0	1	1	0	1 caribou on road at 19km
7		14:35	15:07	3	13	1	3	1	0	NA	3	15	1	1	0	0	NA
8		18:22	10:05	4	25	0	0	1	0	NA	4	24	0	0	2	0	NA
9	6/25/2022	8:12	8:42	0	0	0	0	0	1	NA	1	0	0	0	0	0	NA
10		9:06	9:36	6	0	0	1	1	0	most of the gronf on other side of bridge	5	0	0	2	0	2	NA
11		9:46	10:20	10	0	0	5	3	0	NA	11	0	0	12	2	0	going N approching road
12		12:02	12:10	0	0	0	0	1	0	Gull boming (after survey)	0	0	0	0	0	1	NA
13		12:19	12:51	16	0	0	13	0	1	NA	25	0	0	4	0	2	NA
14		13:19	13:54	7	0	0	0	0	0	2 unknow distant	8	0	0	2	0	0	NA
15		14:06	NA	0	0	0	0	0	30	NA	3	0	0	2	0	25	hunting
16	6/26/2022	9:21	9:55	32	2	0	1	0	2	NA	32	2	0	2	0	1	NA
17		13:12	13:47	29	1	0	8	1	1	NA	20	2	0	4	3	0	NA
18	6/27/2022	8:42	9:13	0	0	0	3	0	1	disturbance	0	0	0	1	0	3	NA
19		10:13	NA	0	0	0	4	0	0	walking away from road	0	0	0	4	0	0	NA
20	6/28/2022	7:13	7:46	25	7	0	3	0	0	NA	24	6	0	5	0	0	NA
21		7:47	NA	27	0	0	1	0	2	NA	26	0	0	4	0	0	NA
22		8:20	8:50	0	0	0	0	0	30	NA	19	0	0	2	0	9	disturbance from the ist truck moved them away from the road
23		9:25	10:00	22	1	0	4	1	2	NA	20	0	0	8	0	2	NA
24		10:15	10:45	13	15	1	1	0	0	NA	10	15	0	4	0	0	NA
25		10:15	10:48	18	3	0	8	0	2	NA	16	6	0	7	1	0	NA
26		11:33	12:04	25	0	0	4	0	2	NA	23	0	0	4	0	3	NA
27		12:33	13:04	4	20	0	8	0	0	NA	5	10	0	15	0	0	NA
28		13:30	14:00	15	10	1	6	0	0	NA	20	9	1	2	1	0	NA
29		14:24	14:30	0	0	0	15	1	15	moving from road	2	10	1	3	0	0	behind hill
30		14:34	15:04	9	0	0	15	0	0	NA	29	0	0	1	0	0	rain starting
31		15:12	15:46	18	12	1	0	0	0	NA	23	6	0	1	0	0	NA
32	6/29/2022	7:41	8:11	0	0	0	0	1	0	NA	0	0	0	0	1	0	while eating
33		8:24	8:40	1	0	0	21	0	0	NA	7	0	0	13	1	21	NA
34		8:24	9:00	21	0	0	1	0	2	NA	15	0	0	7	2	0	moving parallel to the road
35		9:00	9:16	0	0	0	3	0	20	NA	1	0	0	7	2	20	moving away trom road
36		9:30	10:00	17	13	0	0	0	0	NA	16	14	0	0	0	0	NA
37		10:20	10:52	11	19	0	0	0	0	NA	10	20	0	0	0	0	NA
38		11:13	11:43	12	10	0	10	0	0	parallel to road, walking N	16	13	1	1	0	0	NA
39		11:57	12:29	13	1	0	13	3	4	NA	21	1	0	10	1	0	group merged with more caribou from W
40		13:08	13:40	13	0	0	1	2	0	NA	14	0	1	1	0	0	*nursing
41		14:49	15:21	20	12	1	6	4	2	NA	13	13	0	5	1	0	NA
42		15:21	NA	25	0	0	6	2	NA	caribou seeing convoy at km16	25	0	0	5	1	4	caribou looking towards convoy
43	6/30/2022	7:38	NA	0	0	0	0	1	0	NA	0	0	0	0	0	1	towards road
44		12:14	12:38	2	0	0	5	0	2	walking towards road	6	0	0	3	0	0	NA
45	7/1/2022	0:33	13:03	0	0	0	0	1	0	NA	0	0	0	0	0	1	NA
46		9:16	9:41	0	0	0	0	1	0	Parallel to road	0	0	0	1	0	1	Met w other lone caribou
47		12:30	13:00	0	0	0	1	0	0	NA	0	0	1	0	0	0	nursing
48		14:23	14:42	0	1	0	0	0	0	Cow with calf	0	1	0	0	0	0	NA
49	7/3/2022	7:40	8:12	4	0	0	26	1	8	NA	12	0	0	17	0	7	NA
50		8:40	9:11	18	3	0	2	0	1	NA	22	2	0	0	0	0	NA
51		9:40	10:12	6	0	0	20	0	5	walking N parallel to road	10	0	0	17	0	4	NA
52		10:38	10:41	0	0	0	0	0	2	NA	0	0	0	0	0	0	Out of sight
53		11:42	12:16	40	0	0	2	0	0	10 yoy	33	2	0	4	0	0	10 yoy
54	7/4/2022	9:39	9:56	28	0	0	5	4	0	Hunter kill before survey start (30 mins)	1	0	0	11	NA	2	Going south over ridge
55		13:14	13:36	0	0	1	2	0	15	Crossing the road	0	0	0	0	0	0	Out of sight because of hill and the atv stop and look at then hunt
56	7/6/2022	10:23	10:57	1	0	0	0	0	0	Pre convoy	1	0	0	0	0	1	New one appear and cross the road
57		11:24	11:40	0	0	0	0	0	1	NA	1	0	0	0	0	0	NA
58		13:03	13:33	1	0	0	0	0	0	Male	1	0	0	0	0	0	NA
59	7/11/2022	7:42	8:10	16	25	0	5	0	0	Group E of gatehouse	19	20	0	2	2	0	NA
60		8:32	8:57	2	0	0	17	5	0	NA	0	0	0	22	0	0	NA
61		9:18	9:26	0	0	0	NA	0	40	NA	0	0	0	25	0	NA	NA
62		9:51	10:19	0	0	0	NA	0	31	21 calves	1	0	0	5	2	38	Crossing the AWAR
63		10:32	10:59	0	0	0	0	0	150	NA	0	0	0	0	0	147	NA
64		11:26	11:59	11	0	0	8	0	6	Crosing the road	8	0	0	20	2	0	Walking paralel of AWAR
65		12:44	13:14	38	0	0	2	3	0	NA	3	0	0	12	7	25	NA
66		13:47	14:14	NA	0	0	0	0	40	Running from hunters	0	0	0	0	0	40	NA
67		15:00	15:30	2	0	0	45	3	0	NA	0	0	0	50	0	0	NA
68	7/12/2022	8:18	8:46	30	4	2	1	0	0	NA	30	1	1	2	0	0	NA
69		13:58	14:28	25	7	0	5	0	0	NA	35	3	0	2	0	0	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Feeding_6	Laying_6	Standing_6	Walking_6	Alert_6	Trotting_6	Comments_6	Feeding_9	Laying_9	Standing_9	Walking_9	Alert_9	Trotting_9	Comments_9
1	6/23/2022	7:43	8:15	8	0	0	2	0	0	NA	7	0	0	2	1	0	Some out of sight
2	6/24/2022	8:31	NA	27	0	0	2	1	0	On the east side of the road (1-2m)	25	0	0	2	0	3	NA
3		8:39	9:00	16	7	1	4	1	0	NA	5	23	0	1	0	0	NA
4		10:20	10:50	6	0	0	6	1	2	NA	0	0	0	0	0	15	NA
5		13:37	14:08	24	0	0	5	1	0	NA	23	0	0	7	0	0	NA
6		13:54	14:12	16	1	0	1	1	0	3 caribou crossing the road W to E	18	2	0	0	0	0	NA
7		14:35	15:07	11	10	1	0	1	0	NA	12	11	0	2	3	0	NA
8		18:22	10:05	2	5	0	10	18	-5	NA	4	13	0	9	4	0	NA
9	6/25/2022	8:12	8:42	1	0	0	0	0	0	NA	0	0	0	0	0	1	NA
10		9:06	9:36	7	6	0	6	0	2	crossing road	8	5	0	1	0	2	NA
11		9:46	10:20	18	0	0	6	2	0	4 on top of the road	11	0	0	8	2	12	15 on top of the road can't see
12		12:02	12:10	NA	NA	NA	NA	NA	NA	Join it's buddies	NA	NA	NA	NA	NA	NA	NA
13		12:19	12:51	20	0	0	7	0	6	no disturbance just reaching buddies	22	0	0	17	1	8	no disturbance bad buddies went back to other buddies
14		13:19	13:54	6	0	0	2	0	0	NA	8	0	0	0	0	0	2 slightly distant
15		14:06	NA	9	0	0	0	0	18	hunting	23	0	0	5	0	8	NA
16	6/26/2022	9:21	9:55	24	6	0	5	0	0	NA	25	8	0	3	0	0	whine noise
17		13:12	13:47	21	2	0	10	1	0	NA	19	11	0	10	3	0	NA
18	6/27/2022	8:42	9:13	3	0	0	0	1	0	NA	4	0	0	0	0	0	NA
19		10:13	NA	0	0	0	4	0	0	walking OOS	NA	NA	NA	NA	NA	NA	OOS
20	6/28/2022	7:13	7:46	16	8	0	11	0	0	walking S parralel to road	18	3	0	12	2	0	NA
21		7:47	NA	25	0	0	4	0	1	NA	25	0	0	4	1	0	NA
22		8:20	8:50	20	0	0	6	1	5	NA	25	0	0	5	0	0	NA
23		9:25	10:00	17	0	0	10	0	3	walking S parralel to road	27	1	0	1	1	0	NA
24		10:15	10:45	8	9	0	13	0	0	moving N, parralel to the road	8	5	0	20	1	3	NA
25		10:15	10:48	22	0	0	3	2	3	NA	20	0	0	3	2	6	NA
26		11:33	12:04	25	0	0	4	0	1	NA	30	0	0	1	0	0	NA
27		12:33	13:04	5	10	0	12	2	1	NA	16	6	0	5	0	0	Larger group (1 500) reach the
28		13:30	14:00	20	11	1	2	0	0	NA	19	16	0	3	0	0	NA
29		14:24	14:30	1	0	0	5	2	1	out of sight away from the road	NA	NA	NA	NA	NA	NA	NA
30		14:34	15:04	18	0	0	1	0	0	NA	24	0	0	8	0	0	walking towards road
31		15:12	15:46	22	8	0	0	0	0	NA	10	19	0	0	1	0	NA
32	6/29/2022	7:41	8:11	0	0	0	0	1	0	while eating	0	0	0	0	1	0	while eating, staying near road
33		8:24	8:40	0	0	0	15	2	5	moving trought the road	0	0	0	15	2	5	NA
34		8:24	9:00	19	0	0	2	1	2	NA	8	0	0	8	0	0	NA
35		9:00	9:16	13	0	0	3	0	10	NA	NA	NA	NA	NA	NA	NA	8min: out of site
36		9:30	10:00	16	14	0	0	0	0	NA	6	14	0	0	0	0	NA
37		10:20	10:52	15	15	0	0	0	0	NA	14	21	0	0	0	0	convoy passing
38		11:13	11:43	14	15	0	3	0	0	NA	12	15	0	3	0	0	NA
39		11:57	12:29	25	0	0	9	1	2	NA	24	0	0	9	0	1	walking towards road
40		13:08	13:40	13	0	0	2	0	0	walking away from road	14	0	0	2	0	0	NA
41		14:49	15:21	15	10	0	10	0	0	walking S parallel to the road	12	7	2	15	0	0	walking out of sight
42		15:21	NA	25	0	0	5	0	3	convoy parked at km18	32	0	0	9	0	0	NA
43	6/30/2022	7:38	NA	0	0	0	1	0	0	along road (in circles)	1	0	0	0	0	0	NA
44		12:14	12:38	0	0	0	6	0	3	NA	0	0	0	0	0	0	we moved
45	7/1/2022	0:33	13:03	0	0	0	0	0	1	NA	0	0	0	0	0	1	NA
46		9:16	9:41	0	0	0	1	0	1	NA	1	0	1	0	0	0	NA
47		12:30	13:00	0	0	0	0	1	0	feeding/alert	1	0	0	0	0	0	NA
48		14:23	14:42	0	1	0	0	0	0	NA	0	0	0	0	0	1	NA
49	7/3/2022	7:40	8:12	13	0	0	16	0	2	NA	30	0	0	2	0	1	NA
50		8:40	9:11	16	3	0	0	0	0	NA	16	1	0	0	0	0	NA
51		9:40	10:12	6	0	0	17	1	3	NA	23	0	0	8	0	3	NA
52		10:38	10:41	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
53		11:42	12:16	36	2	0	1	1	0	9 yoy	35	3	0	0	0	1	9 yoy
54	7/4/2022	9:39	9:56	0	0	0	0	0	0	NA	0	0	0	7	0	0	Main group out of sight
55		13:14	13:36	0	0	0	12	3	0	NA	0	0	0	0	0	15	12 bull
56	7/6/2022	10:23	10:57	0	0	0	0	0	2	NA	1	0	0	0	0	0	Other out oos
57		11:24	11:40	0	0	0	0	0	1	NA	0	0	0	1	0	0	NA
58		13:03	13:33	1	0	0	0	0	0	NA	1	0	0	0	0	0	NA
59	7/11/2022	7:42	8:10	16	14	3	4	0	0	More caribou comming towards our group	22	10	0	2	0	0	NA
60		8:32	8:57	0	0	0	22	2	5	We moved	0	0	0	24	0	1	NA
61		9:18	9:26	0	0	0	NA	0	12	Rest OOS	0	0	0	0	0	0	OOS
62		9:51	10:19	0	0	0	0	0	52	Group of ish 5 000 all running anotherngroup joinning them	0	0	0	0	0	55	NA
63		10:32	10:59	0	0	0	40	0	0	NA	0	0	15	28	1	NA	NA
64		11:26	11:59	0	0	0	19	3	10	NA	0	0	0	22	0	7	NA
65		12:44	13:14	16	0	0	33	0	0	NA	0	0	0	0	0	40	NA
66		13:47	14:14	0	0	0	0	0	40	Running towards E	0	0	0	0	0	40	NA
67		15:00	15:30	0	0	0	0	0	50	Running from hunters	0	0	2	10	3	35	NA
68	7/12/2022	8:18	8:46	35	0	0	0	0	0	Part of large herd	29	5	3	2	0	0	NA
69		13:58	14:28	24	7	5	NA	1	0	NA	36	3	0	3	0	0	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Feeding_12	Laying_12	Standing_12	Walking_12	Alert_12	Trotting_12	Comments_12	Feeding_15	Laying_15	Standing_15	Walking_15	Alert_15	Trotting_15	Comments_15
1	6/23/2022	7:43	8:15	5	1	0	7	0	1	NA	8	1	0	10	0	0	NA
2	6/24/2022	8:31	NA	26	0	0	2	2	0	On the road	20	0	0	6	2	2	5 have crossed the road, 2 on the road
3		8:39	9:00	3	25	0	0	0	0	NA	1	29	0	0	0	0	NA
4		10:20	10:50	0	0	0	6	1	8	NA	2	0	0	3	3	7	NA
5		13:37	14:08	29	0	0	1	0	0	NA	23	0	0	7	0	0	NA
6		13:54	14:12	1	0	0	9	4	7	NA	0	0	0	0	1	0	OOS
7		14:35	15:07	0	0	0	19	9	2	NA	3	0	0	24	3	0	NA
8		18:22	10:05	11	17	1	0	1	0	NA	5	24	0	1	0	0	NA
9	6/25/2022	8:12	8:42	0	0	0	0	0	0	out of sight	0	0	0	0	0	0	out of sight
10		9:06	9:36	7	6	0	0	0	2	NA	7	5	0	2	0	0	NA
11		9:46	10:20	16	0	0	12	0	4	can't see dip in road	19	0	0	6	0	0	slope of road (3)
12		12:02	12:10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13		12:19	12:51	15	0	0	17	0	1	NA	15	0	1	13	0	4	NA
14		13:19	13:54	4	0	0	3	2	0	1 unknow behaviour	5	0	0	2	0	0	NA
15		14:06	NA	19	0	0	2	0	5	NA	20	0	0	6	0	14	NA
16	6/26/2022	9:21	9:55	31	4	0	2	0	1	NA	32	10	0	3	0	0	NA
17		13:12	13:47	17	3	0	13	1	3	1st ATV obserced (hunter)	15	1	0	11	4	1	NA
18	6/27/2022	8:42	9:13	3	0	0	1	0	0	NA	4	0	0	0	1	0	NA
19		10:13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	14	7	0	13	1	0	NA	17	2	0	17	0	0	NA
21		7:47	NA	18	0	0	10	1	1	NA	18	0	0	6	1	7	walking trought the road
22		8:20	8:50	21	0	1	2	0	1	NA	26	0	0	3	0	1	NA
23		9:25	10:00	24	2	0	3	1	2	1 nursing	24	3	0	3	0	0	NA
24		10:15	10:45	12	5	0	19	0	7	NA	10	3	0	14	0	0	NA
25		10:15	10:48	16	0	0	8	1	5	NA	15	0	0	2	2	3	NA
26		11:33	12:04	21	0	0	6	0	3	NA	25	0	0	2	0	3	NA
27		12:33	13:04	11	0	0	13	0	6	NA	21	0	0	8	0	1	NA
28		13:30	14:00	15	16	0	2	2	0	NA	16	8	2	9	0	0	NA
29		14:24	14:30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30		14:34	15:04	20	0	0	8	4	1	convoy passing	23	0	0	4	4	1	walking towards road
31		15:12	15:46	11	16	1	1	1	0	NA	12	17	0	1	0	0	NA
32	6/29/2022	7:41	8:11	0	0	0	0	1	0	NA	0	0	0	0	0	1	parallel to road
33		8:24	8:40	5	0	0	17	0	0	11 min. crossed the road	0	0	0	0	0	22	NA
34		8:24	9:00	6	0	0	10	1	5	NA	2	0	0	5	4	13	moving parallel to the road
35		9:00	9:16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36		9:30	10:00	13	17	0	0	0	0	NA	8	22	0	0	0	0	NA
37		10:20	10:52	20	11	0	0	1	0	NA	11	13	0	4	1	1	convoy finish passing
38		11:13	11:43	12	14	0	9	0	0	walking out of site	15	15	1	1	0	0	1 nursing (entered as standing)
39		11:57	12:29	28	0	0	4	0	1	group now 150 large	30	0	0	6	1	0	NA
40		13:08	13:40	10	0	0	3	0	0	walking to the road	8	0	0	1	1	0	NA
41		14:49	15:21	4	9	1	13	3	7	NA	7	8	0	20	2	0	NA
42		15:21	NA	27	0	0	8	0	0	some crossing roads at km19	30	0	0	8	0	0	walking towards road
43	6/30/2022	7:38	NA	1	0	0	0	0	0	NA	1	0	0	0	0	0	NA
44		12:14	12:38	0	0	0	5	2	2	NA	0	0	0	0	2	2	crossing road at km17
45	7/1/2022	0:33	13:03	0	0	0	0	0	1	NA	0	0	0	0	0	1	NA
46		9:16	9:41	2	0	0	0	0	0	NA	2	0	0	0	0	0	NA
47		12:30	13:00	0	1	0	0	0	0	NA	0	1	0	0	0	0	NA
48		14:23	14:42	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
49	7/3/2022	7:40	8:12	30	0	0	1	0	1	NA	30	1	0	0	0	0	NA
50		8:40	9:11	20	2	0	0	0	0	NA	18	1	0	1	1	3	NA
51		9:40	10:12	23	0	0	6	0	3	NA	27	0	0	5	0	0	NA
52		10:38	10:41	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
53		11:42	12:16	34	6	0	0	0	0	Another herd walking toward north mine some behind running to reach group. Our	36	5	0	0	0	0	9 yoy
54	7/4/2022	9:39	9:56	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
55		13:14	13:36	0	0	0	20	0	0	12 bull and 1 calf, atv left,	0	0	0	0	0	14	There is way more now they join a bigger group
56	7/6/2022	10:23	10:57	1	0	0	0	0	1	Durimg convoy	1	0	0	0	0	2	New one by the lake
57		11:24	11:40	1	0	0	0	0	0	NA	0	0	0	0	0	0	oos
58		13:03	13:33	1	0	0	0	0	0	NA	0	0	0	1	0	0	NA
59	7/11/2022	7:42	8:10	30	5	2	3	0	0	NA	20	7	0	2	0	0	NA
60		8:32	8:57	16	0	2	9	0	0	NA	0	0	0	22	0	17	Join another group, getting oos we moved, crossing road
61		9:18	9:26	0	0	0	0	0	0	OOS	0	0	0	0	0	0	OOS
62		9:51	10:19	0	0	0	0	0	55	NA	26	0	0	8	3	0	NA
63		10:32	10:59	0	0	0	1	1	2	Rest OOS	0	0	0	0	0	145	NA
64		11:26	11:59	15	3	0	0	0	0	NA	23	3	0	4	5	0	NA
65		12:44	13:14	0	0	0	0	0	40	NA	14	0	0	27	2	3	NA
66		13:47	14:14	0	0	0	6	0	35	NA	0	0	0	0	0	40	NA
67		15:00	15:30	15	3	0	0	10	22	NA	19	0	0	25	2	0	NA
68	7/12/2022	8:18	8:46	22	3	1	12	0	0	NA	2	0	0	42	0	3	NA
69		13:58	14:28	32	8	3	2	0	0	NA	45	2	0	0	0	1	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Feeding_18	Laying_18	Standing_18	Walking_18	Alert_18	Trotting_18	Comments_18	Feeding_21	Laying_21	Standing_21	Walking_21	Alert_21	Trotting_21	Comments_21
1	6/23/2022	7:43	8:15	17	1	0	2	0	0	NA	13	1	0	3	0	1	NA
2	6/24/2022	8:31	NA	18	0	0	9	3	0	Big group comming to the road, and a group have crossed the	15	0	0	6	2	7	The group that went in the west side moved back to the east
3		8:39	9:00	0	29	0	1	0	0	NA	0	30	0	0	0	0	NA
4		10:20	10:50	2	0	0	7	0	3	NA	2	0	0	1	2	4	NA
5		13:37	14:08	40	NA	0	2	0	0	NA	27	2	0	1	0	0	NA
6		13:54	14:12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7		14:35	15:07	14	0	0	16	0	0	NA	16	0	1	9	4	0	NA
8		18:22	10:05	5	23	0	1	1	0	NA	3	27	0	0	0	0	NA
9	6/25/2022	8:12	8:42	0	0	0	0	0	0	out of sight	0	0	0	0	0	0	running along the road to
10		9:06	9:36	5	5	0	1	0	0	NA	3	5	0	0	0	0	NA
11		9:46	10:20	19	0	0	4	3	0	2 bite - stare - unhappy - in alert	20	1	0	4	0	0	no duck flying around maybe
12		12:02	12:10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13		12:19	12:51	51	0	0	6	0	0	NA	18	NA	11	7	1	3	NA
14		13:19	13:54	4	0	0	1	1	1	some out of sight	2	0	0	0	0	1	out of sight
15		14:06	NA	NA	NA	NA	NA	NA	NA	phone call	NA	NA	NA	NA	NA	NA	phone call
16	6/26/2022	9:21	9:55	37	11	0	3	0	4	NA	34	13	0	2	0	1	NA
17		13:12	13:47	8	0	NA	15	5	9	NA	3	3	0	25	6	2	moving S
18	6/27/2022	8:42	9:13	3	0	0	0	0	0	NA	3	0	0	1	0	0	NA
19		10:13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	15	1	0	18	1	0	NA	8	0	0	23	0	4	NA
21		7:47	NA	14	0	0	8	0	8	NA	20	0	0	4	1	5	NA
22		8:20	8:50	24	0	0	5	0	1	NA	20	0	0	10	0	0	NA
23		9:25	10:00	21	0	0	4	2	3	NA	3	1	0	20	5	2	NA
24		10:15	10:45	15	3	0	10	0	0	NA	20	3	0	15	0	3	NA
25		10:15	10:48	20	0	0	5	1	4	NA	22	3	0	3	2	NA	convoy closer to the group
26		11:33	12:04	26	0	0	1	0	3	NA	25	0	0	2	0	3	NA
27		12:33	13:04	18	0	0	8	0	5	NA	21	0	0	6	3	0	NA
28		13:30	14:00	4	5	2	21	0	1	moving S parralel from the road	5	0	0	13	0	20	NA
29		14:24	14:30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30		14:34	15:04	19	0	1	13	1	1	NA	9	0	0	9	1	15	towards road, unknow reason
31		15:12	15:46	10	20	0	0	0	0	NA	0	0	0	0	0	30	running away from road
32	6/29/2022	7:41	8:11	1	0	0	0	0	0	NA	0	0	0	0	1	0	started running parallel to road
33		8:24	8:40	0	0	0	0	0	0	group out of site	NA	NA	NA	NA	NA	NA	NA
34		8:24	9:00	7	0	0	9	3	2	NA	1	0	0	1	1	0	NA
35		9:00	9:16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36		9:30	10:00	15	15	0	0	0	0	NA	14	16	0	0	0	0	NA
37		10:20	10:52	16	13	0	1	0	0	NA	18	12	0	0	0	0	NA
38		11:13	11:43	18	15	0	0	0	0	NA	16	17	1	0	0	0	NA
39		11:57	12:29	30	0	0	4	0	0	NA	30	0	0	8	1	0	spreading out in all direction
40		13:08	13:40	8	1	0	0	0	0	NA	6	1	0	1	1	0	NA
41		14:49	15:21	6	12	0	13	1	0	NA	5	5	0	21	0	0	reaapering close to the rpad
42		15:21	NA	36	0	0	5	0	0	NA	38	0	0	6	1	0	NA
43	6/30/2022	7:38	NA	1	0	0	0	0	0	NA	1	0	0	0	0	0	NA
44		12:14	12:38	0	0	0	0	0	0	we moved	0	0	0	0	0	9	NA
45	7/1/2022	0:33	13:03	0	0	0	0	0	1	NA	0	0	0	0	0	0	Out of sight
46		9:16	9:41	2	0	0	0	0	0	NA	0	0	0	2	0	0	Walking away from road
47		12:30	13:00	0	1	0	0	0	0	NA	0	1	0	0	0	0	NA
48		14:23	14:42	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
49	7/3/2022	7:40	8:12	30	2	0	0	1	0	NA	29	4	0	3	0	0	NA
50		8:40	9:11	3	0	0	10	0	4	unknow disturbance	8	0	0	12	0	0	traveling parallel to the road
51		9:40	10:12	29	0	0	3	0	1	NA	27	0	0	3	0	1	NA
52		10:38	10:41	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
53		11:42	12:16	27	2	0	6	0	0	11 yoy	24	7	0	1	0	0	Yoy 7
54	7/4/2022	9:39	9:56	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
55		13:14	13:36	0	0	0	0	0	20	NA	NA	0	0	0	0	9	Most out of sight because running
56	7/6/2022	10:23	10:57	1	0	0	0	0	1	1 oos	1	0	0	0	0	0	2 oos
57		11:24	11:40	0	0	0	0	0	0	oos	0	0	0	0	0	0	oos
58		13:03	13:33	0	0	0	0	0	1	NA	0	0	0	0	0	1	Crossed and crossed back
59	7/11/2022	7:42	8:10	26	4	0	3	0	0	NA	35	2	5	0	2	0	NA
60		8:32	8:57	1	0	0	2	1	19	NA	1	0	0	0	0	57	NA
61		9:18	9:26	0	0	0	0	0	0	OOS	0	0	0	0	0	0	OOS
62		9:51	10:19	0	0	0	0	0	55	NA	15	0	4	27	0	0	NA
63		10:32	10:59	2	0	0	1	0	140	NA	0	0	4	14	0	12	Rest OOS
64		11:26	11:59	30	0	0	7	2	3	NA	24	0	0	8	5	0	NA
65		12:44	13:14	2	0	0	8	4	27	NA	26	0	0	12	2	0	NA
66		13:47	14:14	0	0	0	0	0	40	NA	0	0	0	0	10	30	NA
67		15:00	15:30	33	0	3	8	0	0	NA	35	0	3	6	2	0	NA
68	7/12/2022	8:18	8:46	38	0	0	10	0	0	Group moving SW	45	4	0	0	0	0	NA
69		13:58	14:28	50	0	0	0	0	0	NA	50	0	0	0	0	0	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Feeding_24	Laying_24	Standing_24	Walking_24	Alert_24	Trotting_24	Comments_24	Feeding_27	Laying_27	Standing_27	Walking_27	Alert_27	Trotting_27	Comments_27
1	6/23/2022	7:43	8:15	16	4	0	0	0	0	NA	13	4	0	1	1	0	NA
2	6/24/2022	8:31	NA	11	0	0	16	0	3	NA	0	0	0	6	7	13	NA
3		8:39	9:00	0	30	0	0	0	0	NA	0	30	0	0	0	0	NA
4		10:20	10:50	0	0	0	2	2	11	NA	0	0	0	0	0	13	NA
5		13:37	14:08	16	2	0	0	0	0	NA	14	11	0	0	0	0	NA
6		13:54	14:12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7		14:35	15:07	16	0	0	12	0	2	NA	21	0	0	9	0	0	NA
8		18:22	10:05	7	22	1	0	0	0	NA	2	25	0	0	3	0	NA
9	6/25/2022	8:12	8:42	0	0	0	0	0	1	running parallel to the road	0	0	0	0	0	0	out of sight
10		9:06	9:36	3	5	0	1	1	0	NA	7	3	0	0	0	0	NA
11		9:46	10:20	19	3	0	7	0	0	NA	13	8	0	4	1	0	1 nursing (noted alert)
12		12:02	12:10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13		12:19	12:51	24	0	0	7	0	3	NA	29	0	0	1	0	2	NA
14		13:19	13:54	1	0	0	2	0	0	1 unknow behevior, rest oos	0	0	0	1	0	2	3 split of
15		14:06	NA	38	0	0	2	0	0	NA	31	0	0	4	0	9	NA
16	6/26/2022	9:21	9:55	29	14	0	0	0	0	NA	26	13	0	0	0	0	NA
17		13:12	13:47	6	0	0	6	3	23	NA	25	0	0	13	2	5	Same spot ATV, not following
18	6/27/2022	8:42	9:13	2	0	0	1	0	0	1 OOS	3	0	0	0	0	0	NA
19		10:13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	0	0	0	19	1	15	2 small sub group running trough the road	2	0	0	15	2	16	NA
21		7:47	NA	27	0	0	1	0	3	NA	28	0	0	0	0	2	NA
22		8:20	8:50	29	0	0	1	0	0	NA	29	0	0	0	1	0	NA
23		9:25	10:00	1	0	0	18	4	7	NA	11	0	0	6	2	11	NA
24		10:15	10:45	20	3	0	10	3	2	NA	25	0	0	6	1	1	NA
25		10:15	10:48	20	5	0	2	3	1	convoy at bridge 8	20	5	0	5	0	0	NA
26		11:33	12:04	12	0	0	8	0	11	NA	20	0	0	5	0	5	NA
27		12:33	13:04	26	0	0	4	0	0	NA	30	0	0	0	0	0	NA
28		13:30	14:00	0	0	0	2	0	30	hunting	3	0	0	21	2	10	moving away from road going
29		14:24	14:30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30		14:34	15:04	16	1	0	5	0	15	towards road, following friends	19	0	0	8	0	10	NA
31		15:12	15:46	7	0	0	5	0	19	NA	20	3	0	7	0	0	NA
32	6/29/2022	7:41	8:11	0	0	0	0	0	1	run. Not trot away from road	2	0	0	0	0	0	united with other solo caribou
33		8:24	8:40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
34		8:24	9:00	1	0	0	5	1	0	NA	10	0	0	5	1	0	moving to the road
35		9:00	9:16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36		9:30	10:00	9	20	0	1	0	0	NA	8	22	0	0	0	0	NA
37		10:20	10:52	18	11	0	0	1	0	NA	22	8	0	0	0	0	NA
38		11:13	11:43	11	18	0	0	2	0	NA	8	21	0	3	0	0	NA
39		11:57	12:29	28	1	1	6	0	0	NA	25	2	0	8	0	4	NA
40		13:08	13:40	7	1	0	0	0	0	NA	5	1	0	1	0	0	little group at 5m from the road
41		14:49	15:21	3	1	1	27	0	0	NA	20	0	0	20	0	2	NA
42		15:21	NA	23	1	1	9	0	1	6 cross the road	32	2	0	4	1	0	NA
43	6/30/2022	7:38	NA	1	0	0	0	0	0	NA	1	0	0	0	0	0	NA
44		12:14	12:38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
45	7/1/2022	0:33	13:03	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
46		9:16	9:41	2	0	0	0	0	0	NA	2	0	0	0	0	0	0
47		12:30	13:00	0	1	0	0	0	0	NA	0	1	0	0	0	0	NA
48		14:23	14:42	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
49	7/3/2022	7:40	8:12	26	2	0	6	0	0	NA	25	2	0	3	0	0	NA
50		8:40	9:11	17	0	0	2	0	0	NA	20	0	0	2	0	0	NA
51		9:40	10:12	0	0	0	0	0	0	NA	14	0	0	22	0	3	NA
52		10:38	10:41	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
53		11:42	12:16	18	2	0	13	0	0	Yoy 10	17	3	0	8	0	1	Yoy 4
54	7/4/2022	9:39	9:56	0	0	0	0	0	0	Out of sight	0	0	0	0	0	0	Out of sight
55		13:14	13:36	0	0	0	0	3	10	NA	0	0	0	0	0	0	Out of sight
56	7/6/2022	10:23	10:57	1	0	0	0	0	0	2 oos	1	0	0	0	0	0	2 oos
57		11:24	11:40	0	0	0	0	0	0	oos	0	0	0	0	0	0	oos
58		13:03	13:33	0	0	0	0	0	1	Running very fast. Polar bear in	0	0	0	1	0	0	NA
59	7/11/2022	7:42	8:10	24	13	0	4	0	-1	NA	28	8	3	1	1	0	NA
60		8:32	8:57	0	0	0	9	0	NA	Rest oos	0	0	0	0	0	0	OOS
61		9:18	9:26	0	0	0	0	0	0	OOS	0	0	0	0	0	0	OOS
62		9:51	10:19	0	0	0	55	0	0	NA	0	0	0	55	0	0	Very far
63		10:32	10:59	1	1	0	0	1	0	Rest OOS	1	0	0	0	0	0	Rest OOS
64		11:26	11:59	27	0	0	13	1	2	NA	33	0	0	6	0	0	NA
65		12:44	13:14	0	0	0	0	0	40	NA	0	0	0	0	0	40	NA
66		13:47	14:14	0	0	0	0	0	40	NA	0	0	0	NA	0	20	rest OOS
67		15:00	15:30	38	0	0	5	2	1	Hunters in area	12	0	0	39	3	0	Hunters in area
68	7/12/2022	8:18	8:46	27	0	2	11	0	2	NA	7	0	5	32	0	0	NA
69		13:58	14:28	45	2	0	3	0	0	NA	40	0	0	6	2	1	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Feeding_30	Laying_30	Standing_30	Walking_30	Alert_30	Trotting_30	Comments_30	Disturbance_0	Dist_comments_0
1	6/23/2022	7:43	8:15	8	4	0	7	6	0	NA	Light Truck	Own pickup
2	6/24/2022	8:31	NA	6	0	0	17	2	NA	NA	NA	NA
3		8:39	9:00	0	30	0	0	0	0	NA	NA	NA
4		10:20	10:50	0	0	0	0	0	13	NA	NA	NA
5		13:37	14:08	12	18	0	0	0	0	NA	NA	NA
6		13:54	14:12	NA	NA	NA	NA	NA	NA	NA	ATV	going S, turn off ATV
7		14:35	15:07	25	0	0	5	0	0	NA	NA	NA
8		18:22	10:05	3	15	0	3	5	0	NA	NA	NA
9	6/25/2022	8:12	8:42	0	0	0	0	0	1	out of sight	Light truck	own vehicule
10		9:06	9:36	6	1	0	0	0	0	NA	NA	NA
11		9:46	10:20	13	10	0	2	1	0	NA	ATV	1 red.
12		12:02	12:10	NA	NA	NA	NA	NA	NA	NA	NA	NA
13		12:19	12:51	29	2	0	2	1	0	NA	ARV	red, slow quad (nice elder)
14		13:19	13:54	0	0	0	0	0	4	moving to join bigger group	NA	NA
15		14:06	NA	34	0	0	2	0	2	NA	4 quads	hunting
16	6/26/2022	9:21	9:55	28	8	0	1	0	0	NA	NA	NA
17		13:12	13:47	30	0	0	3	2	4	NA	ATV	nice elder on AWAR
18	6/27/2022	8:42	9:13	2	0	0	0	0	0	1 OOS	Light truck	our own vehicule
19		10:13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	13	0	0	13	1	8	NA	NA	NA
21		7:47	NA	20	0	0	7	0	4	NA	NA	NA
22		8:20	8:50	26	0	0	3	1	0	NA	light truck	800m from the group, at 1min
23		9:25	10:00	13	0	0	11	0	6	NA	NA	NA
24		10:15	10:45	21	0	5	0	4	NA	NA	NA	NA
25		10:15	10:48	15	5	0	10	0	0	NA	NA	NA
26		11:33	12:04	21	0	0	6	0	3	NA	NA	NA
27		12:33	13:04	29	0	0	1	0	0	NA	NA	NA
28		13:30	14:00	20	2	0	15	3	4	NA	NA	NA
29		14:24	14:30	NA	NA	NA	NA	NA	NA	NA	lifgt truck	on toundra, moving towards herd
30		14:34	15:04	17	0	0	15	2	4	NA	light truck	slow moving pesky SUV
31		15:12	15:46	18	6	0	5	0	1	NA	NA	NA
32	6/29/2022	7:41	8:11	1	1	0	0	0	0	NA	light truck	own truck
33		8:24	8:40	NA	NA	NA	NA	NA	NA	NA	NA	NA
34		8:24	9:00	0	0	0	20	0	0	crossed the road at 31	NA	NA
35		9:00	9:16	NA	NA	NA	NA	NA	NA	NA	NA	NA
36		9:30	10:00	7	23	0	0	0	0	NA	NA	NA
37		10:20	10:52	16	14	0	0	0	0	NA	NA	NA
38		11:13	11:43	11	13	0	4	0	0	NA	NA	NA
39		11:57	12:29	30	1	0	5	0	0	NA	NA	NA
40		13:08	13:40	8	1	0	0	0	0	NA	NA	NA
41		14:49	15:21	25	0	0	14	1	3	NA	NA	NA
42		15:21	NA	25	0	0	8	0	5	NA	2 light truck, 6 buses and 1 tractor/trailer	caribou detected convoy
43	6/30/2022	7:38	NA	0	0	0	0	0	1	NA	light truck	onw vehicule, slow
44		12:14	12:38	NA	NA	NA	NA	NA	NA	NA	light truck	when we arrived
45	7/1/2022	0:33	13:03	0	0	0	0	0	0	Out of sight	Light Truck	Own vehicle
46		9:16	9:41	1	0	0	1	0	0	NA	Light Truck	Own vehicle
47		12:30	13:00	0	1	0	0	0	0	NA	NA	NA
48		14:23	14:42	0	0	0	0	0	0	NA	NA	NA
49	7/3/2022	7:40	8:12	30	2	0	1	0	0	NA	NA	NA
50		8:40	9:11	15	0	0	0	0	2	NA	NA	NA
51		9:40	10:12	11	0	0	11	0	8	NA	NA	NA
52		10:38	10:41	0	0	0	0	0	0	Out of sight	Light Truck	Own truck
53		11:42	12:16	33	5	0	5	0	0	Yoy 12, most of them on the move on north but sampling stranglers	NA	NA
54	7/4/2022	9:39	9:56	0	0	0	0	0	0	Out of sight	NA	NA
55		13:14	13:36	0	0	0	0	0	0	Out of sight	Light Truck	Truck almost run them over atv going fast but slow down when the saw them
56	7/6/2022	10:23	10:57	1	0	0	0	0	0	2 oos	Light Truck	Hto truck
57		11:24	11:40	0	0	0	0	0	0	oos	NA	NA
58		13:03	13:33	0	0	0	0	0	1	NA	Light Truck	Own truck, randy truck (slow)
59	7/11/2022	7:42	8:10	15	11	3	2	1	0	NA	NA	NA
60		8:32	8:57	0	0	0	0	0	0	OOS	Light Truck	Gatehouse staff
61		9:18	9:26	0	0	0	0	0	0	OOS	Light Truck	Ouwn truck
62		9:51	10:19	17	3	0	30	0	0	NA	NA	NA
63		10:32	10:59	2	0	0	0	0	0	Rest OOS	Light Truck	NA
64		11:26	11:59	27	0	7	1	3	0	NA	NA	NA
65		12:44	13:14	0	0	0	0	0	40	NA	Light Truck	Active hunting
66		13:47	14:14	0	0	0	0	0	40	NA	Light Truck	Active hunting
67		15:00	15:30	25	0	0	14	2	2	Hunters in area, and atv going	Light Truck	Active hunting
68	7/12/2022	8:18	8:46	22	0	0	30	1	1	NA	NA	NA
69		13:58	14:28	35	0	0	20	0	0	NA	Light Truck	AEM truck

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Disturbance_3	Dist_comments_3	Disturbance_6	Dist_comments_6
1	6/23/2022	7:43	8:15	Light Truck	NA	NA	NA
2	6/24/2022	8:31	NA	NA	NA	NA	NA
3		8:39	9:00	NA	NA	NA	NA
4		10:20	10:50	Light Truck	NA	Light Truck	NA
5		13:37	14:08	Light Truck	NA	NA	NA
6		13:54	14:12	NA	NA	NA	NA
7		14:35	15:07	NA	NA	NA	NA
8		18:22	10:05	Light Truck	NA	Light Truck	NA
9	6/25/2022	8:12	8:42	NA	NA	NA	NA
10		9:06	9:36	NA	NA	NA	NA
11		9:46	10:20	NA	NA	NA	NA
12		12:02	12:10	ATV	1 bleu	ATV	1 red
13		12:19	12:51	NA	NA	NA	NA
14		13:19	13:54	NA	NA	NA	NA
15		14:06	NA	NA	NA	ATV	fast and noisy
16	6/26/2022	9:21	9:55	NA	NA	NA	NA
17		13:12	13:47	Convoy	1 pck, 2 tlanlee, 2 maintenance vehicule	NA	NA
18	6/27/2022	8:42	9:13	NA	NA	NA	NA
19		10:13	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	NA	NA	NA	NA
21		7:47	NA	NA	NA	NA	NA
22		8:20	8:50	NA	NA	NA	NA
23		9:25	10:00	NA	NA	NA	NA
24		10:15	10:45	NA	NA	NA	NA
25		10:15	10:48	NA	NA	NA	NA
26		11:33	12:04	NA	NA	NA	NA
27		12:33	13:04	NA	NA	NA	NA
28		13:30	14:00	Light Truck	very very slow	NA	NA
29		14:24	14:30	NA	NA	NA	NA
30		14:34	15:04	NA	NA	3 light truck, 6 buses, 1 tractor/trailer	convoy at 15km/h (7 to 18 min)
31		15:12	15:46	NA	NA	NA	NA
32	6/29/2022	7:41	8:11	NA	NA	light truck	other AEM survey truck (slow)
33		8:24	8:40	NA	NA	NA	NA
34		8:24	9:00	NA	NA	NA	NA
35		9:00	9:16	NA	NA	NA	NA
36		9:30	10:00	NA	NA	NA	NA
37		10:20	10:52	NA	NA	2 light truck, 6 buses	going S, 10-15km/h at 5min
38		11:13	11:43	NA	NA	NA	NA
39		11:57	12:29	NA	NA	NA	NA
40		13:08	13:40	NA	NA	NA	NA
41		14:49	15:21	NA	NA	ATV	fast, stopped @ sur. At 7min
42		15:21	NA	NA	NA	NA	NA
43	6/30/2022	7:38	NA	NA	NA	NA	NA
44		12:14	12:38	NA	NA	NA	NA
45	7/1/2022	0:33	13:03	Light Truck	NA	NA	NA
46		9:16	9:41	Light Truck	NA	NA	NA
47		12:30	13:00	NA	NA	NA	NA
48		14:23	14:42	NA	NA	NA	NA
49	7/3/2022	7:40	8:12	NA	NA	NA	NA
50		8:40	9:11	NA	NA	NA	NA
51		9:40	10:12	NA	NA	NA	NA
52		10:38	10:41	Light Truck	NA	NA	NA
53		11:42	12:16	NA	NA	NA	NA
54	7/4/2022	9:39	9:56	NA	NA	NA	NA
55		13:14	13:36	Light Truck	NA	Light Truck	NA
56	7/6/2022	10:23	10:57	Light Truck	NA	Light Truck	Convoy comming 1 500
57		11:24	11:40	NA	NA	NA	NA
58		13:03	13:33	Light Truck	NA	NA	NA
59	7/11/2022	7:42	8:10	NA	NA	NA	NA
60		8:32	8:57	Light Truck	NA	Light Truck	Gatehouse staff
61		9:18	9:26	Light Truck	NA	NA	NA
62		9:51	10:19	NA	NA	NA	NA
63		10:32	10:59	Light Truck	Plane, not agnico eagle plane	Light Truck	NA
64		11:26	11:59	NA	NA	Light Truck	NA
65		12:44	13:14	Light Truck	Active hunting	Light Truck	NA
66		13:47	14:14	Light Truck	Active hunting	Light Truck	NA
67		15:00	15:30	Light Truck	Acrive hunting	Light Truck	Active hunting
68	7/12/2022	8:18	8:46	NA	NA	NA	NA
69		13:58	14:28	Light Truck	NA	NA	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Disturbance_9	Dist_comments_9	Disturbance_12	Dist_comments_12
1	6/23/2022	7:43	8:15	NA	NA	NA	NA
2	6/24/2022	8:31	NA	NA	NA	NA	NA
3		8:39	9:00	NA	NA	NA	NA
4		10:20	10:50	Light Truck	Convoy 3 bus 4 light truck 4tracker trailer	Light Truck	Convoy
5		13:37	14:08	NA	NA	NA	NA
6		13:54	14:12	NA	NA	NA	light truck
7		14:35	15:07	NA	NA	Light Truck	3 school buses 2 tractor trailer
8		18:22	10:05	NA	NA	NA	NA
9	6/25/2022	8:12	8:42	NA	NA	NA	NA
10		9:06	9:36	NA	NA	NA	NA
11		9:46	10:20	unknow	noise or something out of sight	NA	NA
12		12:02	12:10	NA	NA	NA	NA
13		12:19	12:51	NA	NA	NA	NA
14		13:19	13:54	ATV	2 quads	ATV	2 quads
15		14:06	NA	ATV	NA	NA	NA
16	6/26/2022	9:21	9:55	NA	Tractor trailer on AWAR	at 10 min	NA
17		13:12	13:47	NA	NA	ATV	hunter
18	6/27/2022	8:42	9:13	NA	NA	NA	NA
19		10:13	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	NA	NA	NA	NA
21		7:47	NA	NA	NA	NA	NA
22		8:20	8:50	light truck	1 600m from the group	NA	NA
23		9:25	10:00	NA	NA	NA	NA
24		10:15	10:45	4 light truck, 6 bus, 1 tractor trailer	8 to 15 min convoy going at ish 10km/h	NA	NA
25		10:15	10:48	2 light truck, 6 bus	convoy going S at km12 at 10km/h	NA	NA
26		11:33	12:04	NA	NA	NA	NA
27		12:33	13:04	NA	NA	ATV	coming W trought the group
28		13:30	14:00	NA	NA	NA	NA
29		14:24	14:30	NA	NA	NA	NA
30		14:34	15:04	NA	NA	NA	NA
31		15:12	15:46	NA	NA	NA	NA
32	6/29/2022	7:41	8:11	NA	NA	NA	NA
33		8:24	8:40	NA	NA	NA	NA
34		8:24	9:00	NA	NA	NA	NA
35		9:00	9:16	NA	NA	NA	NA
36		9:30	10:00	NA	NA	NA	NA
37		10:20	10:52	NA	NA	NA	NA
38		11:13	11:43	NA	NA	NA	NA
39		11:57	12:29	NA	NA	NA	NA
40		13:08	13:40	NA	NA	NA	NA
41		14:49	15:21	NA	NA	NA	NA
42		15:21	NA	NA	NA	NA	NA
43	6/30/2022	7:38	NA	NA	NA	NA	NA
44		12:14	12:38	light truck	changed our position for better view	NA	NA
45	7/1/2022	0:33	13:03	NA	NA	NA	NA
46		9:16	9:41	NA	NA	NA	NA
47		12:30	13:00	NA	NA	NA	NA
48		14:23	14:42	Light Truck	NA	Light Truck	Convoy
49	7/3/2022	7:40	8:12	NA	NA	NA	NA
50		8:40	9:11	NA	NA	NA	NA
51		9:40	10:12	NA	NA	NA	NA
52		10:38	10:41	NA	NA	NA	NA
53		11:42	12:16	NA	NA	NA	NA
54	7/4/2022	9:39	9:56	NA	NA	NA	NA
55		13:14	13:36	Light Truck	NA	NA	NA
56	7/6/2022	10:23	10:57	Light Truck	Convoy	Light Truck	Durimg convoy
57		11:24	11:40	NA	NA	NA	NA
58		13:03	13:33	NA	NA	Light Truck	Convoy
59	7/11/2022	7:42	8:10	NA	NA	NA	NA
60		8:32	8:57	Light Truck	NA	NA	NA
61		9:18	9:26	NA	NA	NA	NA
62		9:51	10:19	NA	NA	Light Truck	NA
63		10:32	10:59	NA	NA	NA	NA
64		11:26	11:59	Light Truck	They shot one on the road and now all the caribou are running the other way (W)	Light Truck	NA
65		12:44	13:14	Light Truck	Active hunting	Light Truck	Active hunting
66		13:47	14:14	Light Truck	NA	Light Truck	Active running
67		15:00	15:30	Light Truck	Acrive hunting	Light Truck	Active hunting
68	7/12/2022	8:18	8:46	NA	NA	NA	NA
69		13:58	14:28	NA	NA	NA	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Disturbance_15	Dist_comments_15	Disturbance_18	Dist_comments_18
1	6/23/2022	7:43	8:15	NA	NA	NA	NA
2	6/24/2022	8:31	NA	NA	NA	NA	NA
3		8:39	9:00	NA	NA	NA	NA
4		10:20	10:50	NA	NA	NA	NA
5		13:37	14:08	NA	NA	NA	NA
6		13:54	14:12	stopped at 19kn, traveling N	NA	NA	NA
7		14:35	15:07	Light Truck	NA	Light Truck	NA
8		18:22	10:05	NA	NA	NA	NA
9	6/25/2022	8:12	8:42	NA	NA	NA	NA
10		9:06	9:36	NA	NA	NA	NA
11		9:46	10:20	NA	NA	NA	NA
12		12:02	12:10	NA	NA	NA	NA
13		12:19	12:51	NA	NA	NA	NA
14		13:19	13:54	ATV	1 side by side / 1 quad	ATV	2 quads
15		14:06	NA	NA	NA	NA	NA
16	6/26/2022	9:21	9:55	NA	NA	NA	NA
17		13:12	13:47	NA	NA	NA	NA
18	6/27/2022	8:42	9:13	NA	NA	NA	NA
19		10:13	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	NA	NA	NA	NA
21		7:47	NA	NA	NA	NA	NA
22		8:20	8:50	NA	NA	NA	NA
23		9:25	10:00	NA	NA	NA	NA
24		10:15	10:45	light truck	stopped at km10 until 18 min	NA	NA
25		10:15	10:48	light truck	pick up going N at km8	NA	NA
26		11:33	12:04	NA	NA	NA	NA
27		12:33	13:04	NA	NA	ATV (hunter)	gunshot earded (19 min)
28		13:30	14:00	NA	NA	NA	NA
29		14:24	14:30	NA	NA	NA	NA
30		14:34	15:04	NA	NA	NA	NA
31		15:12	15:46	NA	NA	3 ATV	goimng S, at 19min
32	6/29/2022	7:41	8:11	NA	NA	NA	NA
33		8:24	8:40	light truck	going N	NA	NA
34		8:24	9:00	light truck	slow survey vehicule	NA	NA
35		9:00	9:16	NA	NA	NA	NA
36		9:30	10:00	NA	NA	NA	NA
37		10:20	10:52	NA	NA	NA	NA
38		11:13	11:43	NA	NA	NA	NA
39		11:57	12:29	NA	NA	NA	NA
40		13:08	13:40	NA	NA	NA	NA
41		14:49	15:21	NA	NA	NA	NA
42		15:21	NA	NA	NA	NA	NA
43	6/30/2022	7:38	NA	NA	NA	NA	NA
44		12:14	12:38	NA	NA	light truck	changed our position for better view
45	7/1/2022	0:33	13:03	NA	NA	NA	NA
46		9:16	9:41	NA	NA	NA	NA
47		12:30	13:00	NA	NA	NA	NA
48		14:23	14:42	Light Truck	Convoy	Light Truck	NA
49	7/3/2022	7:40	8:12	light truck	pick-up truck real slow ish 10km/h	NA	NA
50		8:40	9:11	NA	NA	NA	NA
51		9:40	10:12	NA	NA	NA	NA
52		10:38	10:41	NA	NA	NA	NA
53		11:42	12:16	NA	NA	NA	NA
54	7/4/2022	9:39	9:56	NA	NA	NA	NA
55		13:14	13:36	NA	NA	Light Truck	The tow groups start running we think its the atv's
56	7/6/2022	10:23	10:57	Light Truck	NA	Light Truck	NA
57		11:24	11:40	NA	NA	NA	NA
58		13:03	13:33	Light Truck	NA	NA	NA
59	7/11/2022	7:42	8:10	NA	NA	Light Truck	Survey truck
60		8:32	8:57	NA	NA	Light Truck	Stoped on the bridge
61		9:18	9:26	NA	NA	NA	NA
62		9:51	10:19	Light Truck	NA	Light Truck	Hunter
63		10:32	10:59	NA	NA	NA	NA
64		11:26	11:59	Light Truck	NA	Light Truck	NA
65		12:44	13:14	Light Truck	Active hunting	Light Truck	NA
66		13:47	14:14	Light Truck	Active running	Light Truck	Active hunting crossing road
67		15:00	15:30	Light Truck	Active hunting	Light Truck	Active hunting
68	7/12/2022	8:18	8:46	NA	NA	NA	NA
69		13:58	14:28	NA	NA	NA	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Disturbance_21	Dist_comments_21	Disturbance_24	Dist_comments_24
1	6/23/2022	7:43	8:15	NA	NA	NA	NA
2	6/24/2022	8:31	NA	NA	NA	NA	NA
3		8:39	9:00	NA	NA	NA	NA
4		10:20	10:50	Light Truck	NA	Light Truck	NA
5		13:37	14:08	NA	NA	NA	NA
6		13:54	14:12	NA	NA	NA	NA
7		14:35	15:07	NA	NA	NA	NA
8		18:22	10:05	NA	NA	NA	NA
9	6/25/2022	8:12	8:42	NA	NA	NA	NA
10		9:06	9:36	NA	NA	NA	NA
11		9:46	10:20	NA	NA	NA	NA
12		12:02	12:10	NA	NA	NA	NA
13		12:19	12:51	ATV	red, loud and fast but ok (2 people)	NA	NA
14		13:19	13:54	NA	NA	NA	NA
15		14:06	NA	NA	NA	NA	NA
16	6/26/2022	9:21	9:55	NA	NA	NA	NA
17		13:12	13:47	NA	NA	NA	NA
18	6/27/2022	8:42	9:13	NA	NA	NA	NA
19		10:13	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	NA	NA	Helicopter	at 23 min, helicopter when just over the survey group
21		7:47	NA	NA	NA	NA	NA
22		8:20	8:50	NA	NA	NA	NA
23		9:25	10:00	light truck	HTO leaving km10 to go to Rankin Inlet	NA	NA
24		10:15	10:45	2 ATV	NA	NA	NA
25		10:15	10:48	2 ATV	going N at km8	NA	NA
26		11:33	12:04	NA	NA	NA	NA
27		12:33	13:04	NA	NA	NA	NA
28		13:30	14:00	aircraft	plane noise, very scary (22 min)	human	hunting (people outside the pick up)
29		14:24	14:30	NA	NA	NA	NA
30		14:34	15:04	NA	NA	NA	NA
31		15:12	15:46	NA	NA	NA	NA
32	6/29/2022	7:41	8:11	light truck	gatehouse crew change (fast)	NA	NA
33		8:24	8:40	NA	NA	NA	NA
34		8:24	9:00	NA	NA	NA	NA
35		9:00	9:16	NA	NA	NA	NA
36		9:30	10:00	NA	NA	NA	NA
37		10:20	10:52	NA	NA	NA	NA
38		11:13	11:43	NA	NA	ATV	going N, slow (30km/h ish)
39		11:57	12:29	NA	NA	NA	NA
40		13:08	13:40	NA	NA	NA	NA
41		14:49	15:21	NA	NA	NA	NA
42		15:21	NA	NA	NA	NA	NA
43	6/30/2022	7:38	NA	NA	NA	NA	NA
44		12:14	12:38	NA	NA	NA	NA
45	7/1/2022	0:33	13:03	NA	NA	NA	NA
46		9:16	9:41	NA	NA	NA	NA
47		12:30	13:00	NA	NA	NA	NA
48		14:23	14:42	NA	NA	NA	NA
49	7/3/2022	7:40	8:12	NA	NA	NA	NA
50		8:40	9:11	NA	NA	NA	NA
51		9:40	10:12	NA	NA	NA	NA
52		10:38	10:41	NA	NA	NA	NA
53		11:42	12:16	NA	NA	NA	NA
54	7/4/2022	9:39	9:56	NA	NA	NA	NA
55		13:14	13:36	Light Truck	Side by side	Light Truck	NA
56	7/6/2022	10:23	10:57	NA	NA	NA	NA
57		11:24	11:40	NA	NA	NA	NA
58		13:03	13:33	NA	NA	NA	NA
59	7/11/2022	7:42	8:10	Light Truck	Survey truck	Light Truck	NA
60		8:32	8:57	Light Truck	Truck left	Light Truck	NA
61		9:18	9:26	NA	NA	NA	NA
62		9:51	10:19	Light Truck	NA	NA	NA
63		10:32	10:59	NA	NA	NA	NA
64		11:26	11:59	Light Truck	NA	Light Truck	NA
65		12:44	13:14	Light Truck	NA	Light Truck	Active hunting
66		13:47	14:14	Light Truck	Being chase by atv	Light Truck	NA
67		15:00	15:30	Light Truck	Hunters in area	Light Truck	NA
68	7/12/2022	8:18	8:46	NA	NA	NA	NA
69		13:58	14:28	NA	NA	NA	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	Disturbance_27	Dist_comments_27	Disturbance_30	Dist_comments_30
1	6/23/2022	7:43	8:15	NA	NA	Light Truck	NA
2	6/24/2022	8:31	NA	Light Truck	Atv speeding going south	Light Truck	NA
3		8:39	9:00	NA	NA	NA	NA
4		10:20	10:50	Light Truck	NA	NA	NA
5		13:37	14:08	NA	NA	NA	NA
6		13:54	14:12	NA	NA	NA	NA
7		14:35	15:07	NA	NA	NA	NA
8		18:22	10:05	NA	NA	Light Truck	NA
9	6/25/2022	8:12	8:42	NA	NA	NA	NA
10		9:06	9:36	NA	NA	NA	NA
11		9:46	10:20	NA	NA	NA	NA
12		12:02	12:10	NA	NA	NA	NA
13		12:19	12:51	NA	NA	NA	NA
14		13:19	13:54	NA	NA	NA	NA
15		14:06	NA	NA	NA	NA	NA
16	6/26/2022	9:21	9:55	NA	NA	NA	NA
17		13:12	13:47	NA	NA	NA	NA
18	6/27/2022	8:42	9:13	NA	NA	NA	NA
19		10:13	NA	NA	NA	NA	NA
20	6/28/2022	7:13	7:46	NA	NA	NA	NA
21		7:47	NA	NA	NA	NA	NA
22		8:20	8:50	NA	NA	NA	NA
23		9:25	10:00	NA	NA	NA	NA
24		10:15	10:45	NA	NA	NA	NA
25		10:15	10:48	NA	NA	NA	NA
26		11:33	12:04	NA	NA	NA	NA
27		12:33	13:04	ATV	km7 going N (speeding)	NA	NA
28		13:30	14:00	NA	NA	NA	NA
29		14:24	14:30	NA	NA	NA	NA
30		14:34	15:04	NA	NA	NA	NA
31		15:12	15:46	NA	NA	NA	NA
32	6/29/2022	7:41	8:11	NA	NA	NA	NA
33		8:24	8:40	NA	NA	NA	NA
34		8:24	9:00	NA	NA	NA	NA
35		9:00	9:16	NA	NA	NA	NA
36		9:30	10:00	NA	NA	NA	NA
37		10:20	10:52	NA	NA	NA	NA
38		11:13	11:43	NA	NA	NA	NA
39		11:57	12:29	NA	NA	NA	NA
40		13:08	13:40	NA	NA	NA	NA
41		14:49	15:21	NA	NA	NA	NA
42		15:21	NA	NA	NA	NA	NA
43	6/30/2022	7:38	NA	NA	NA	light truck	NA
44		12:14	12:38	NA	NA	NA	NA
45	7/1/2022	0:33	13:03	NA	NA	NA	NA
46		9:16	9:41	NA	NA	NA	NA
47		12:30	13:00	NA	NA	NA	NA
48		14:23	14:42	NA	NA	NA	NA
49	7/3/2022	7:40	8:12	NA	NA	NA	NA
50		8:40	9:11	NA	NA	NA	NA
51		9:40	10:12	NA	NA	NA	NA
52		10:38	10:41	NA	NA	NA	NA
53		11:42	12:16	NA	NA	NA	NA
54	7/4/2022	9:39	9:56	NA	NA	NA	NA
55		13:14	13:36	NA	NA	NA	NA
56	7/6/2022	10:23	10:57	NA	NA	NA	NA
57		11:24	11:40	NA	NA	NA	NA
58		13:03	13:33	Light Truck	Heli	Light Truck	NA
59	7/11/2022	7:42	8:10	NA	NA	NA	NA
60		8:32	8:57	NA	NA	NA	NA
61		9:18	9:26	NA	NA	NA	NA
62		9:51	10:19	NA	NA	NA	NA
63		10:32	10:59	NA	NA	NA	NA
64		11:26	11:59	Light Truck	NA	Light Truck	NA
65		12:44	13:14	Light Truck	Active hunting	Light Truck	NA
66		13:47	14:14	Light Truck	NA	Light Truck	NA
67		15:00	15:30	Light Truck	NA	Light Truck	NA
68	7/12/2022	8:18	8:46	NA	NA	NA	NA
69		13:58	14:28	NA	NA	NA	NA

Appendix B: Caribou Behaviour Monitoring Data Sheet

Survey ID	Date	Time Start	Time End	General_comments
1	6/23/2022	7:43	8:15	NA
2	6/24/2022	8:31	NA	NA
3		8:39	9:00	NA
4		10:20	10:50	NA
5		13:37	14:08	NA
6		13:54	14:12	NA
7		14:35	15:07	NA
8		18:22	10:05	NA
9	6/25/2022	8:12	8:42	3 consecutive windows w/0 caribou = send helene PDF georefereneed -> 1-2|3-25|25-50|50+
10		9:06	9:36	NA
11		9:46	10:20	red ATV
12		12:02	12:10	post-convoy stress
13		12:19	12:51	NA
14		13:19	13:54	drawing of behavior type
15		14:06	NA	during hunting
16	6/26/2022	9:21	9:55	NA
17		13:12	13:47	NA
18	6/27/2022	8:42	9:13	NA
19		10:13	NA	NA
20	6/28/2022	7:13	7:46	BGC_ZONE, BAC_SUBZON, BGC_VRT, SITE_S1, SITE MC_S1 (written on verso)
21		7:47	NA	NA
22		8:20	8:50	NA
23		9:25	10:00	NA
24		10:15	10:45	NA
25		10:15	10:48	NA
26		11:33	12:04	NA
27		12:33	13:04	NA
28		13:30	14:00	Pre-convoy, very relaxed group, do not seem to react very mutch
29		14:24	14:30	pre-convoy
30		14:34	15:04	convoy survey
31		15:12	15:46	post-convoy
32	6/29/2022	7:41	8:11	NA
33		8:24	8:40	NA
34		8:24	9:00	NA
35		9:00	9:16	NA
36		9:30	10:00	NA
37		10:20	10:52	convoy survey
38		11:13	11:43	NA
39		11:57	12:29	NA
40		13:08	13:40	NA
41		14:49	15:21	pre-convoy, afternoon
42		15:21	NA	aftermoom, convoy survey sort of
43	6/30/2022	7:38	NA	NA
44		12:14	12:38	NA
45	7/1/2022	0:33	13:03	Ran perpendicular and away from road
46		9:16	9:41	Caribou have been by km 11 for 3+ days
47		12:30	13:00	3961, drawings of bahavior (verso)
48		14:23	14:42	Mom and calf. Scared off by ATV
49	7/3/2022	7:40	8:12	NA
50		8:40	9:11	AWAR 25 at the quary, small group separated from main group, main group all lying down
51		9:40	10:12	AWAR 25 at the quary
52		10:38	10:41	Both crossed
53		11:42	12:16	Large group, no disturbance, on the move on their terms. Northward movement
54	7/4/2022	9:39	9:56	Moving South/Southeast
55		13:14	13:36	Smaller group (20) join larger group (130)
56	7/6/2022	10:23	10:57	Slowed convoy
57		11:24	11:40	1 male
58		13:03	13:33	Polar bear sighted at km19 at minute 6 in survey
59	7/11/2022	7:42	8:10	Closest group to road. Additional groups to east, south, southwest. Stationary group.
60		8:32	8:57	Multipul group joinimg togeter and cross the AWAR
61		9:18	9:26	Group size ish 6 000+
62		9:51	10:19	Group more 10 000 ish
63		10:32	10:59	Joinning larger group
64		11:26	11:59	12 000 isg group + more we can see
65		12:44	13:14	Group gigger than 12 000
66		13:47	14:14	NA
67		15:00	15:30	10 000 minimum
68	7/12/2022	8:18	8:46	Group of 20000+
69		13:58	14:28	~4000 caribou

APPENDIX C PROPORTION OF ALERT AND RUNNING CARIBOU IN EACH SURVEY

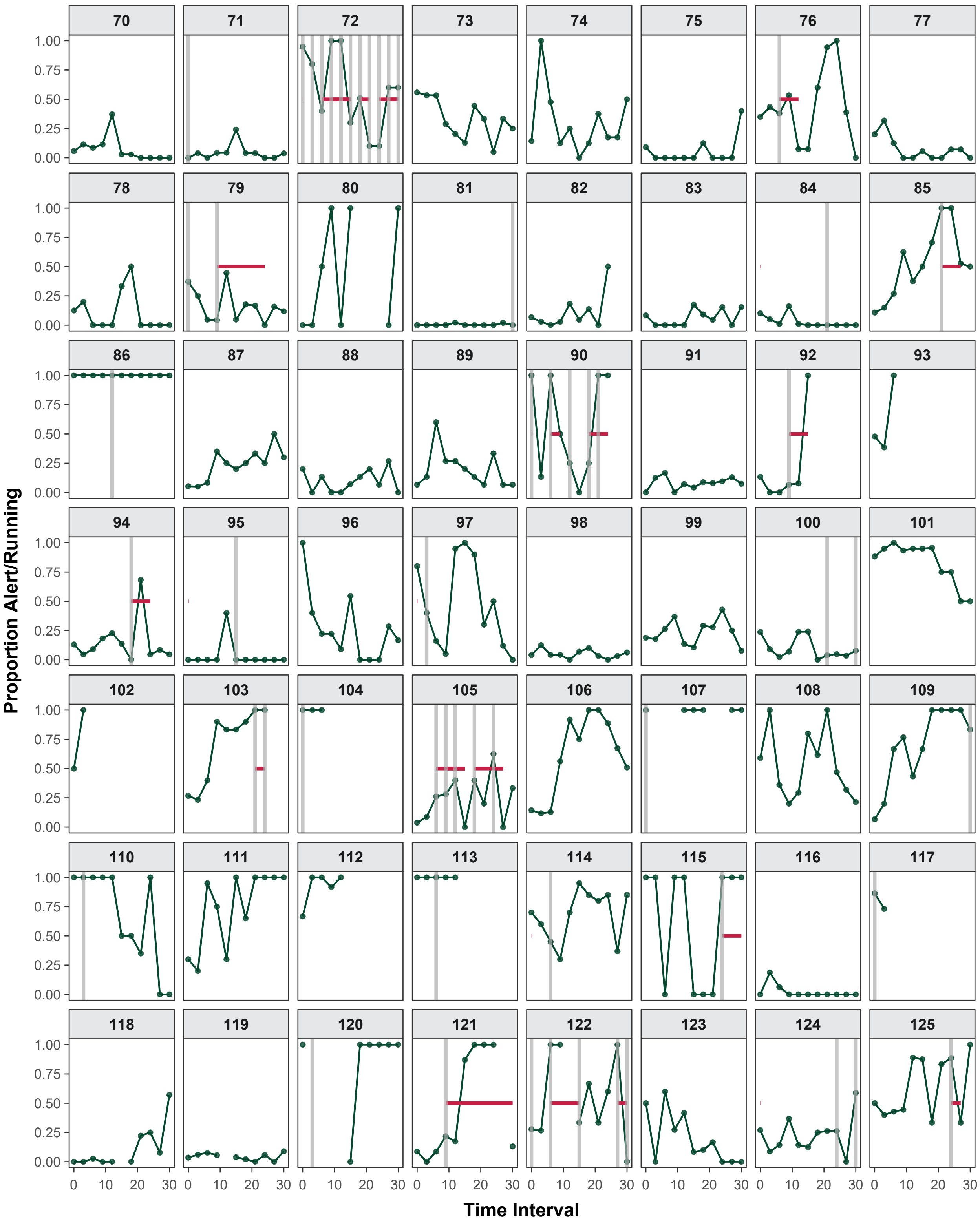

Figure C-1: Proportion of Response Behaviour during Each Survey – 2020

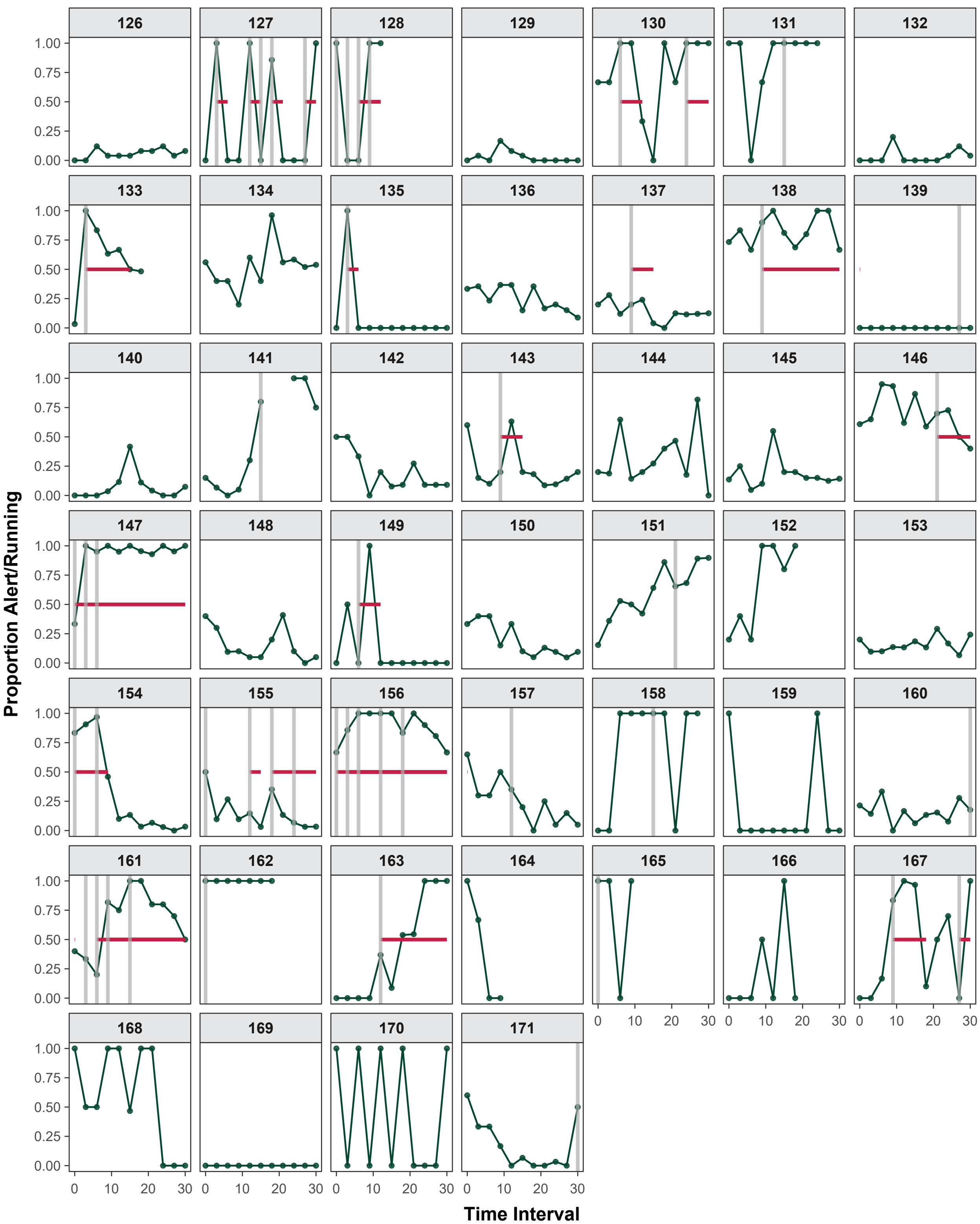

Figure C-2: Proportion of Response Behaviour during Each Survey – 2021

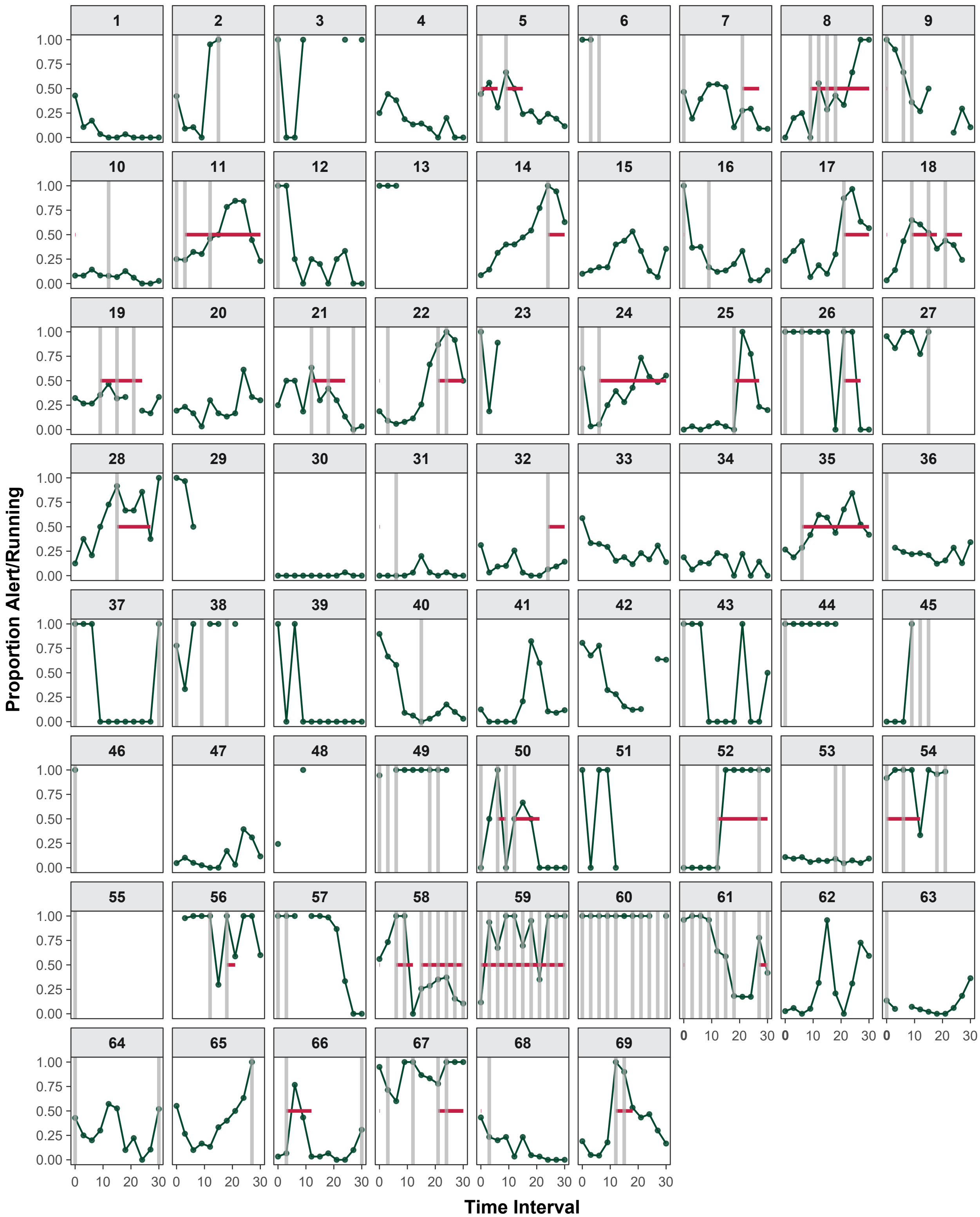

Figure C-3: Proportion of Response Behaviour during Each Survey – 2022

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APPENDIX K

Meliadine Project Caribou Trail Camera Study, 2022

Meliadine Mine

Caribou Trail Camera Study Compilation Report, 2020 to 2022

March 2023

Project No.: 0652009-03

The business of sustainability

March 2023

Meliadine Mine

Caribou Trail Camera Study Compilation Report, 2020 to 2022

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EXECUTIVE SUMMARY

The Meliadine Mine (the Project), owned and operated by Agnico Eagle Mines Limited (Agnico Eagle), is located on Inuit Owned Land (IOL) approximately 25 km north of Rankin Inlet, Nunavut. A 30 km all-weather access road (AWAR) connects the Project to Rankin Inlet. During July each year, groups of Qamanirjuaq caribou occur in the Project area, regularly crossing through the Project site and the AWAR.

In 2020, 2021, and 2022, a study was conducted using motion-triggered cameras to study caribou interactions with the Project infrastructure during their annual migration, focusing on the AWAR. The initial study was designed to identify features of the AWAR (i.e., slope, substrate, height, and surrounding habitat) that may facilitate higher rates of caribou passage during annual migratory movements. Cameras were also placed at locations identified by community members and Inuit Elders from Inuit Qaujimajatuqangit (IQ) where caribou more frequently crossed the road. The survey protocol in 2022 followed that used in the previous two years, with minor improvements intended to increase the quality of data collected.

This study was completed in accordance with the Meliadine Mine Nunavut Impact Review Board (NIRB) Project Certificate (#006) and commitments made by Agnico Eagle to document and assess whether caribou movement near the Project Area is affected by Project infrastructure, including the AWAR.

Thirty-four cameras were placed along the AWAR in mid-June 2022 and were removed in mid-July. Cameras were placed approximately 2 metres west of the AWAR, facing north; and took both timed and motion-triggered photos. Road survey data from 2020 was used and included: height above tundra, width, side-slope, surfacing material (esker vs. quarry rock, and size), and surrounding vegetation type. Data from three cameras were analysed in detail to provide information on vehicle traffic.

Overall, the key findings across three years (2020 to 2022) of the camera study included:

- The cameras were successful at capturing many caribou crossing the AWAR, with peak caribou passage occurring two weeks later in 2022 vs. 2021, consistent with patterns of inter-annual variability observed in the collar data.
- Caribou crossing timing and locations in 2022 were consistent with locations identified in 2020, 2021, and with locations identified by IQ from Inuit Elders and community members. The hotspots identified by the camera data in all three years aligned more closely with the IQ identified hotspots than the collar data from 2012 to 2019.
- Road height and road-side slope at each camera location was not related to the number of caribou observed at each camera location, suggesting that differences in the structure of the AWAR was not influencing the locations where caribou cross. Alternatively, since the structure of the road is relatively uniform along its length, there may not be enough difference in the shape or profile of the road to influence which sections of the road caribou prefer to cross.
- More caribou were observed on cameras on the northern half of the road. Esker material is more common as a substrate on the northern half of the road which may suggest caribou prefer crossing on esker material. However, this may be an artefact of a sampling bias in the data, or inter-annual route fidelity by caribou.

Overall, the results suggest that caribou are not affected by the structure of the Meliadine AWAR, but spatial differences in road crossing locations may be explained by sampling bias, traffic, timing, migratory route fidelity, or some combination of these factors. The lack of a strong relationship between caribou crossing and either vehicles or road structures suggests that existing mitigations for caribou along the AWAR are effective at reducing potential Project effects. These results highlight the power of using motion-trigger cameras to draw connections between the many interacting variables that may explain caribou passage through the Project area, which may be integrated with additional sources of data to inform potential cumulative effects of the Meliadine Mine. Additional camera data will help confirm any potential effects, as well as provide further insight on areas of high caribou passage across the AWAR. Further, pooling data collected across multiple study years will allow for minimum sample sizes necessary to incorporate further quantitative analyses of patterns of caribou movement across the Meliadine AWAR.

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ACRONYMS AND ABBREVIATIONS

Agnico Eagle	Agnico Eagle Mines Ltd.
AI	Artificial intelligence
ATV	All-terrain vehicle
AWAR	All weather access road
BQCMB	Beverly Qamanirjuaq Caribou Management Board
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
GLMs	Generalized linear models
GN	Government of Nunavut
IOL	Inuit-owned land
IQ	Inuit Qaujimajatuqangit (Inuit Traditional Knowledge)
km	Kilometre
KM	Kilometer Marker
m	Metre
NIRB	Nunavut Impact Review Board
NWT	Northwest Territories
RIBR	Rankin Inlet by-pass Road
TEMMP	Meliadine Mine Terrestrial Environment Management and Monitoring Plan
The Project	The Meliadine Mine

1. PROJECT OVERVIEW

The Meliadine Mine (the Project), owned and operated by Agnico Eagle Mines Limited (Agnico Eagle), is located on Inuit Owned Land (IOL) approximately 25 km north of Rankin Inlet, Nunavut. A 30 km all weather access road (AWAR) connects the Project to Rankin Inlet. The Rankin Inlet By-pass Road (RIBR) was constructed to the west and south of Rankin Inlet to allow mine traffic to circumvent the hamlet when traveling from the AWAR to Itivia (Figure 1-1).

The Meliadine Mine was approved with a life of mine plan that includes production from five ore bodies by the Nunavut Impact Review Board (NIRB) in 2015 (Project Certificate #006). The mine plan includes open pits, underground mining and associated ore processing, waste management and ancillary infrastructure. Construction of the AWAR, camp, ore processing facilities and ancillary infrastructure began in 2017 and production from the Tiriganiaq deposit began in Q2 2019. The remainder of the orebodies are planned throughout the life of the Meliadine complex. In 2019, the Meliadine Mine NIRB Project Certificate (#006 No.001) was amended to include discharge of saline effluent to the marine environment via diffuser at Itivia Harbour (Melvin Bay) and to convey via truck saline effluent along the AWAR to Itivia Harbour. In 2022 the Meliadine Mine NIRB Project Certificate (#006 No.002) was amended to include the construction of a 34 km waterline, which consists of two 16 inch diameter pipes to transport an increased volume of saline effluent to Itivia Harbour without increasing traffic on the AWAR.

A caribou motion-trigger camera study was conducted in June and July 2020, 2021, and 2022 at the Meliadine Mine and along the AWAR in support of existing NIRB monitoring conditions as outlined in Project Certificate No. 6.

1.1 Regulatory Requirements

The Meliadine Mine 2015 Project Certificate and 2022 Project Certificate Amendment from the NIRB, Term and Condition 57 requires the Project to report in its annual NIRB report:

> "(T&C 57, c.) Demonstration and description of how the monitoring results, including the all-weather access road, associated access roads/trails, and waterlines contribute to cumulative effects of the project."

The Meliadine Mine Terrestrial Environment Management and Monitoring Plan (TEMMP; Agnico Eagle 2022) is designed to meet this condition, with a road surveillance monitoring program (Section 4.3) that has the following objective:

> "To record the presence of wildlife and/or wildlife signs (e.g., tracks, nesting) in relation to the Mine infrastructure. Of particular importance is the frequency of wildlife entering the Mine infrastructure areas and along the AWAR corridor. This information can then be used to determine any areas of attraction to wildlife, document human-wildlife conflicts, areas/timing of wildlife mortality or potential mortality; seasonal trends of wildlife occurrence in the Project area, and effectiveness of mitigation (e.g., waste management and landfill)."

The caribou camera program described in this report is designed to be complementary to the objectives of the caribou collaring program (TEMMP Section 4.7), which are:

- To contribute to the scientific knowledge of caribou activity near mining operations and caribou population dynamics in Nunavut; and
- To assess whether caribou movement near the Project Area is hindered by Project infrastructure (i.e., mine site infrastructure and AWAR).

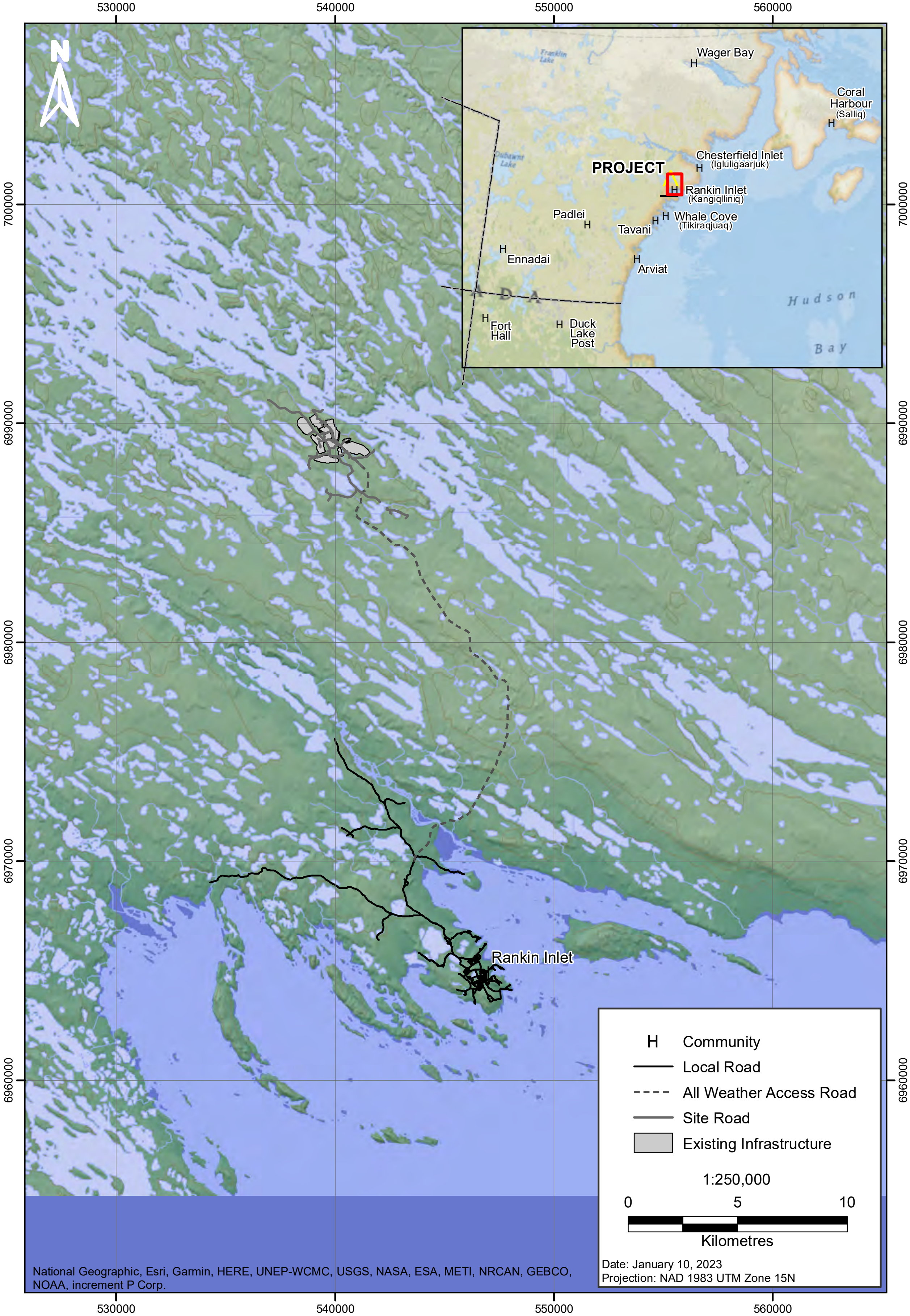

Figure 1-1: Meliadine Mine Project Location

2. STUDY OBJECTIVES

The objectives of the 2022 study were:

- To conduct a study using motion-trigger cameras at the Project site to estimate how the AWAR may affect caribou movement during seasonal migration.
- To evaluate if there were specific locations with high numbers of caribou observations along the AWAR in 2022, and compare these locations with 2020 and 2021 camera data, and with those identified by Inuit Qaujimajatuqangit (IQ) and GPS collar data.
- To collect information to determine road characteristics used by caribou for crossing, specifically:
  - Material of road construction (esker vs. quarry);
  - Side slope;
  - Road height; and
  - Surrounding vegetation type.
- To evaluate what relationship (if any) there is between vehicles recorded on the road and location/timing of caribou observations.

3. BACKGROUND

3.1 Qamanirjuaq Herd

The Qamanirjuaq caribou subpopulation is a large barren-ground caribou herd numbering approximately 288,000 animals in 2017, down from over 348,000 animals reported in 2008 (Boulanger et al. 2018). A new population survey was conducted in 2022 but the results were not publicly available at the time of this report. The herd range stretches approximately 1,000 km from Chesterfield Inlet in the north to northern Manitoba in the south, and from Hudson Bay on the east to eastern Northwest Territories and north-eastern Saskatchewan in the west (BQCMB 2022). The Beverly and Qamanirjuaq Caribou Management Board (BQCMB) has rated the Qamanirjuaq herd as having “Medium” vulnerability in 2014 due to continued population declines since 2008 (BQCMB 2014) and upgraded this rating to Medium-High in 2016, a status that remains unchanged (BQCMB 2021).

The herd generally winters below the treeline in northern Manitoba, Saskatchewan, and the adjoining areas of the Northwest Territories (NWT) and Nunavut. Spring migration is north along the coast of Hudson Bay, past the communities of Arviat, Whale Cove and Rankin Inlet to a broad calving ground generally centered on Qamanirjuaq Lake (BQCMB 2022).

Following calving, the caribou form into large groups of hundreds to thousands of caribou and radiate out from the calving grounds, including east towards the coast. During June and July, large groups of animals from this herd interact with the hamlet of Rankin Inlet, the Meliadine Mine, and the AWAR connecting the two.

During summer and fall, the caribou generally move south and inland, gradually returning south towards their wintering areas by early December. Maps of the caribou range and movement are available on the BQCMB website (https://arctic-caribou.com/resources).

4. STUDY AREA

The dominant terrain in the Project area comprises glacial landforms such as drumlins (glacial till), eskers (gravel and sand), and lakes. A series of low relief ridges are composed of glacial deposits, oriented in a northwest-southeast direction, which control the regional surface drainage patterns. The property is approximately 60 metres (m) above sea level in low-lying topography with numerous lakes (Final Environmental Impact Statement; Agnico Eagle 2015).

The study area for the camera study included the length of the AWAR from kilometer marker (KM) 7 to KM 30 (the mine site; see Figure 1-1). During 2020, AEM acquired Bushnell Core HD Low Glow motion-trigger cameras, which were installed along the AWAR and around the mine site. In 2021 the study was repeated with a focus on the AWAR and modifications to the survey design to better capture vehicle traffic, with these modifications retained in 2022. As such, the results and analyses presented here include only data from the AWAR cameras to allow direct comparison across years.

5. METHODS

5.1 Camera Field Study

The cameras were programmed and installed in mid-June by a wildlife biologist from ERM and a Meliadine Environment technician, two weeks prior to the predicted arrival of caribou in the area. The ERM wildlife biologist maintained the cameras for the duration of the study and Meliadine Environment technicians disassembled the cameras and setup in late July when caribou were no longer in the area in substantial numbers.

Camera locations were selected to maximize coverage and representation of habitat and road types, and to best detect caribou and vehicles (Figure 5.1-1). The same approximate locations were used in 2020, 2021, and 2022 with five additional locations added in 2022 to extend camera coverage south along the AWAR (Table 5.1-1):

- Thirty-four single cameras were installed at a spacing of 500 m to 1,000 m, starting from KM 7 of the AWAR, and ending at the mine site at KM 30. Cameras were not installed further south than the gatehouse at KM 8 of the AWAR in 2020 and 2021 due to COVID-19 protocols in place at the time.
- Through previous consultation and community meetings community members and Inuit Elders identified locations on the road where caribou are known to cross more frequently, including at KM 9, 12, 16, 22, and 27 (Public Meeting; Rankin Inlet, March 17, 2020). Cameras were placed at or near these locations.
- The camera locations were stratified by road structure, with approximately half of cameras placed in areas where the road shoulder was esker material and half where the shoulder was quarry rock. Locations were also selected to have equal representation of steep and flat road shoulders.
- All cameras were installed on the west side of the road facing north with the road in the camera field of view on the right side of images. In 2020, cameras were located up to 15 m from the road, whereas in 2021 and 2022 cameras were placed no more than 5 m from the side of the road in order to better capture vehicle traffic.

During camera setup in 2020, the surrounding habitat type, road structure, and GPS location were recorded. If any all-terrain vehicle (ATV) trails or caribou trails were detected near the camera site, these were noted. Any changes to these factors in subsequent years were noted. The coordinates for the road cameras were used to calculate the distance to the mine and to Rankin Inlet along the AWAR.

Cameras were installed at a height of 50 centimetres, which was determined to be the optimal height for detecting movement of a passing caribou (ERM, unpublished data). Cameras on the AWAR were positioned to capture part of the road in the field of view. In 2020, cameras were not explicitly set up to capture vehicle traffic, but in 2021 and 2022 cameras were placed closer to the road (no more than 5 m) to capture traffic. Three cameras spaced along the AWAR at KM 14, 20, and 25 were analysed for vehicle traffic in addition to wildlife.

The installation setup was a simple bucket-and-stick design, where the camera was strapped onto a 2" × 4" piece of lumber that was stabilized in a bucket full of quarry rock (Photo 5.1-1). This setup was designed to be temporary and to minimize impact on the ground where it was placed. When the cameras were removed at the end of the study, all setup materials were returned to the Mine Site.

Photo 5.1-1: Typical camera setup from the Meliadine 2022 Camera Study.

All cameras took five pictures whenever motion was detected within approximately 40 m of the motion detector, including wildlife, vehicles, and occasionally objects moving in the wind. In addition, all cameras were programmed to take one photo every 30 minutes, day or night. This was done for two reasons:

1. to help capture activity happening beyond the range of the motion detector, and
2. to provide assurance that the cameras were operational during the entire duration of the study (measure effort).

The cameras were checked after one week to ensure battery life, SD card space, and positioning was still adequate. Throughout the duration of the study, field technicians and the ERM field biologist regularly checked the cameras to ensure they were still in place and functioning properly.

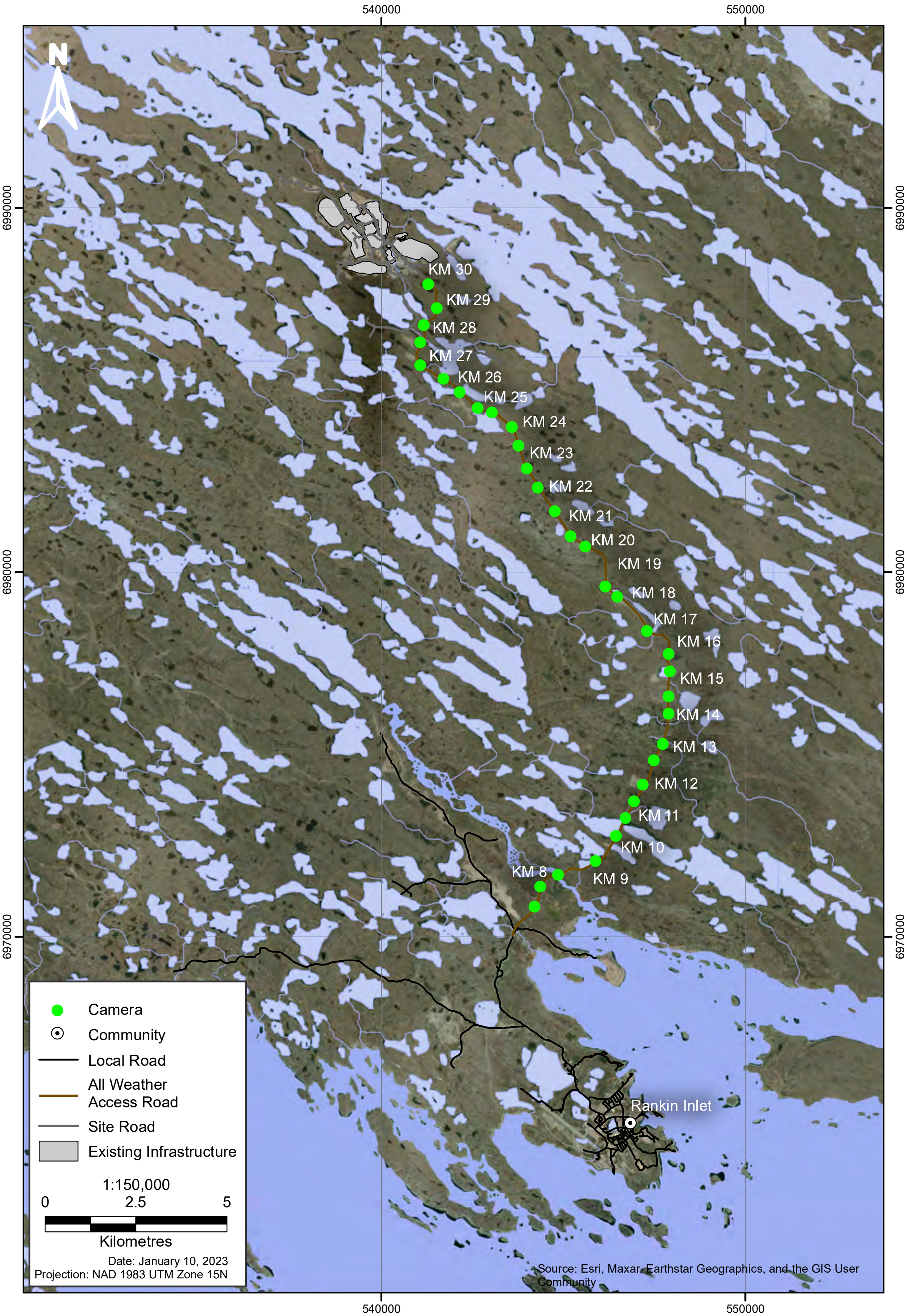

Figure 5.1-1: Locations of Motion-trigger Cameras along the Meliadine Mine AWAR, June – July 2022

Table 5.1-1: Camera Deployments on the Meliadine Mine AWAR from 2020 to 2022

Year	Number of Cameras	Deployment Dates
2020	30	June 22 – July 11
2021	27	June 23 – July 13
2022	32[1]	June 22 – July 22

[1] *34 cameras were deployed in 2022, but two did not collect data due to malfunction.*

5.2 Road Structure Field Study

In 2020, additional surveys were conducted on the as-built AWAR to help address the objective of determining whether there are road characteristics that caribou prefer to cross on. As the AWAR structure did not significantly change after this survey, the same data were used in the 2020, 2021, and 2022 analyses.

An ERM wildlife biologist and Meliadine environment technician surveyed the road structure, taking the measurements every 100 m along the road, including:

- GPS location;
- Width of the road (m);
- Height of the road above the tundra (m);
- Road-side slope angle – measured with an inclinometer (east and west side);
- Road-side material (esker or quarry stone);
- Substrate grain size, i.e., the area of the roadside shoulder covered by <0.75 inch, 0.75 to 6 inch, 6 to 12 inch, and >12 inch stones (measurement standards used by road engineers); and
- Surrounding habitat features.

5.3 Photo Processing

All photos from 2022 were pre-processed by an artificial intelligence (AI) algorithm to automatically sort photos into four categories: animals, vehicles, humans, and blank images (Beery et al. 2019; Fennell et al. 2022). ERM personnel then reviewed all photos as classified by the AI algorithm and confirmed all detections of wildlife or vehicles. In 2020 and 2021, ERM personnel reviewed all photos from the cameras and recorded every detection of wildlife and vehicles. A detection is an event where an individual or group triggers the camera, or at least one animal is captured in a timed photo. There can be one photo or many photos in quick succession, depending on how long the caribou were in front of the camera. Hence, one detection may have many individual caribou which may not be able to be individually differentiated. The number of caribou recorded for each detection event is the largest number of caribou visible in any one photo during the event To ensure consistency, a detection event was defined as a time lag of at least 30 minutes between photos of the same species, which was applied programmatically to group individual photos into independent detection events..

Data recorded for each wildlife detection event included:

- The time of the first photo;
- The species of wildlife;

- The number of individuals in the group; and
- For events where multiple photos were captured, the duration of the motion-trigger event.

Vehicle traffic was also quantified in detail from three cameras. Data recorded on each vehicle detection included:

- The time of the detection;
- The type of vehicle; and
- Whether the vehicle was travelling in a convoy or not.

5.4 Satellite Collar Data

Satellite collar data presented here was collected by the Government of Nunavut (collected 2012-2019), and previously made public via a data sharing agreement. No new collar data was available for these analyses, and data presented has been reported in previous iterations of this report (ERM 2022).

5.5 Data Analysis

The analysis in this report was designed to quantify trends in the study data both between and within years, and to determine whether factors such as road structure, vehicle traffic on the road, or placement of the cameras could be used to explain caribou occurrence and identify “hotspots” where caribou may be likely to cross the AWAR.

An initial exploratory analysis was conducted to visualize the data and determine the appropriate method for analyzing the data. Where data were complete, generalized linear models (GLMs) were used to assess the differences in the number of caribou detection events as a function of various controlling variables, including road structure and the occurrence of vehicle traffic. This regression framework provides a means to control for habitat, environmental variables, repeated measurements, and spatial correlation. For some comparisons in which statistical models were not useful due to a small sample size, summary statistics and correlations were calculated. This included the comparison of collar data to camera data by kilometre of roadway. Analyses were carried out using program R version 4.1.1 (R Core Team 2021).

6. RESULTS AND DISCUSSION

6.1 Field Work

In total, 34 cameras were deployed from June 22 to 24, 2022, and were removed on July 22, 2022. The study concluded on July 22, 2022, when caribou had not been observed for several days at or near the Project and collar maps indicated that they were not expected to return. Cameras were removed and the setup was disassembled. Collar maps and in-person observations indicated that the majority of the migration was captured during the deployment period. This amounted to 946 trap-nights and ~110,000 photos. More than two-thirds of all photos were from timed photos, most of which did not contain wildlife or vehicles. The remainder were from motion-triggered events. Of the 34 cameras deployed, two did not collect useable data due to hardware malfunction.

6.2 Caribou Distribution Relative to the AWAR

One of the objectives of this study was to evaluate if there were specific locations with high numbers of caribou observations along the AWAR in 2022, and compare these locations with those identified in 2020, 2021, and with collar data and IQ. This information can be used to inform improved mitigations along the AWAR relating to caribou crossing, while also providing data on changes over time in caribou use of habitat along the AWAR.

Of the 305 independent wildlife detection events from the cameras in 2022, nearly half were of caribou (Table 6.2-1).

Table 6.2-1: Wildlife Detections across All Cameras along the AWAR in 2020, 2021, and 2022

Wildlife Type	2020	2021	2022
Arctic Fox	13	14	77
Arctic Ground Squirrel	3	8	13
Arctic Hare	4	4	33
Caribou	91	128	150
Gull	12	11	-
Raptor	1	2	-
Sandhill Crane	6	28	-
Songbird	23	17	-
Uncategorized Bird	35	110	32
Unknown	1	0	0
Waterfowl	51	30	-
Uncategorized Mammal	0	6	0
Total	**240**	**358**	**305**

Note: Detections may be from motion-triggered photos or from timed photos. For consistency, results from off-site cameras in 2020 were not included in these results. Birds in 2022 were not classified to species.

The first caribou recorded on cameras occurred on June 23, 2022, which was consistent with collar maps and observations of caribou from site personnel who were conducting wildlife surveys which observed the first caribou on June 19, 2022. Caribou detections peaked from July 10 to July 15, with 28 detection events and 1,987 adult caribou recorded across all cameras and detection events on July 12, though this should not be interpreted as a population estimate as the same caribou may be recorded on multiple cameras at different times throught the day (Figure 6.2-1). This was approximately one week later than peak caribou detections in 2020, and two weeks later than peak caribou detections in 2021 (Figure 6.2-1). This finding is generally consistent with the pattern from anecdotal summaries of collar data that caribou use of the site is variable between years. Figure 6.2-1 shows the number of independent caribou detections recorded each year (top panel) and the total number of adult caribou counted across these detections (bottom panel). The shaded outline in the background of each panel is the density of these data recorded through time, which appears more flat in the number of detections in 2022 due to a bimodal distribution of detections early and late in the sampling period.

Note that the 2020-2022 GN collar data were not available to conduct a detailed analysis of these patterns for the time period of the study.

After the peak, caribou were detected less frequently and in smaller groups until July 20, with the cameras demobilized on July 22, 2022. Caribou were detected in 30 of 32 cameras (94%) in 2022, compared to 73% of road cameras in 2020 and 93% in 2021. More caribou were detected overall in 2021 than 2022, with the lowest number counted in 2020, though the highest number of detection events occurred in 2022 (150). Most caribou observations were concentrated in the northern half of the AWAR as seen in 2020 and 2021, though a larger percentage of observations in the southern half of the AWAR occurred in 2022 than in either previous year (Figure 6.2-2). As cameras were deployed for a longer period in 2022, there is a possibility that this is an artifact of the data representing the migration more fully than previous years.

There were 91, 128, and 150 caribou detection events captured on the AWAR cameras in 2020, 2021, 2022 (respectively), and the average number of road crossing events in the collar data from 2012 to 2019 was 20 individuals per year, with a maximum of 62 individuals crossing 2018.

Time of day was not related to the number of caribou detections, although there was some evidence that caribou were consistently detected earlier in the day (03:00 to 12:00) than at night in 2021 and 2022 (Figure 6.2-3). The same trend was not noted in 2020.

Overall, the results suggest that the span from KM 21-25 was a major crossing area in 2022, with 10% of all caribou detections recorded at KM 21, with an additional major crossing area identified spanning from KM 11 to KM 12 (Figure 6.2-2). The high number of detections at the northern end of the AWAR strongly aligns with the pattern seen in 2020 and 2021. The major caribou crossing locations identified by Elders and community members in March 2020 are at KM 16, 22, and 27. The results from the 2022 cameras are highly consistent with this IQ.

The distribution of caribou crossings recorded in the camera data from 2020 to 2022, and collar data from previous years (2012 to 2019) is shown in Table 6.2-2, where values for each kilometre segment of the road are expressed as the proportion of total crossing events that occurred in that segment...

The extent of agreement between the hotspots identified in each dataset can be measured by testing the correlation: an index of linear relationship between variables. A correlation value of 100% would indicate that the number of crossings per km in the camera data for one year are identical to the number of crossings per km in the camera data from another year. A correlation value of 0% indicates there is no similarity between the locations identified in the two datasets.

The camera data from 2022 shares a 48% correlation with the camera data from 2021, and a 34% correlation with the data from 2020. The camera data from 2021 shares a 37% correlation with the camera data from 2020, with all three datasets showing relatively high numbers of crossings between KM 21 and 25 (an IQ identified section). In 2021 fewer crossings occurred near KM 27 and KM 16, two locations identified by Elders that were more heavily frequented in 2020 and 2022 (Figure 6.2-4). Both the collar data and camera data suggest that caribou may have preferred crossing locations along the AWAR that are generally consistent across multiple years, with annual variation in the use of these different sections of road.

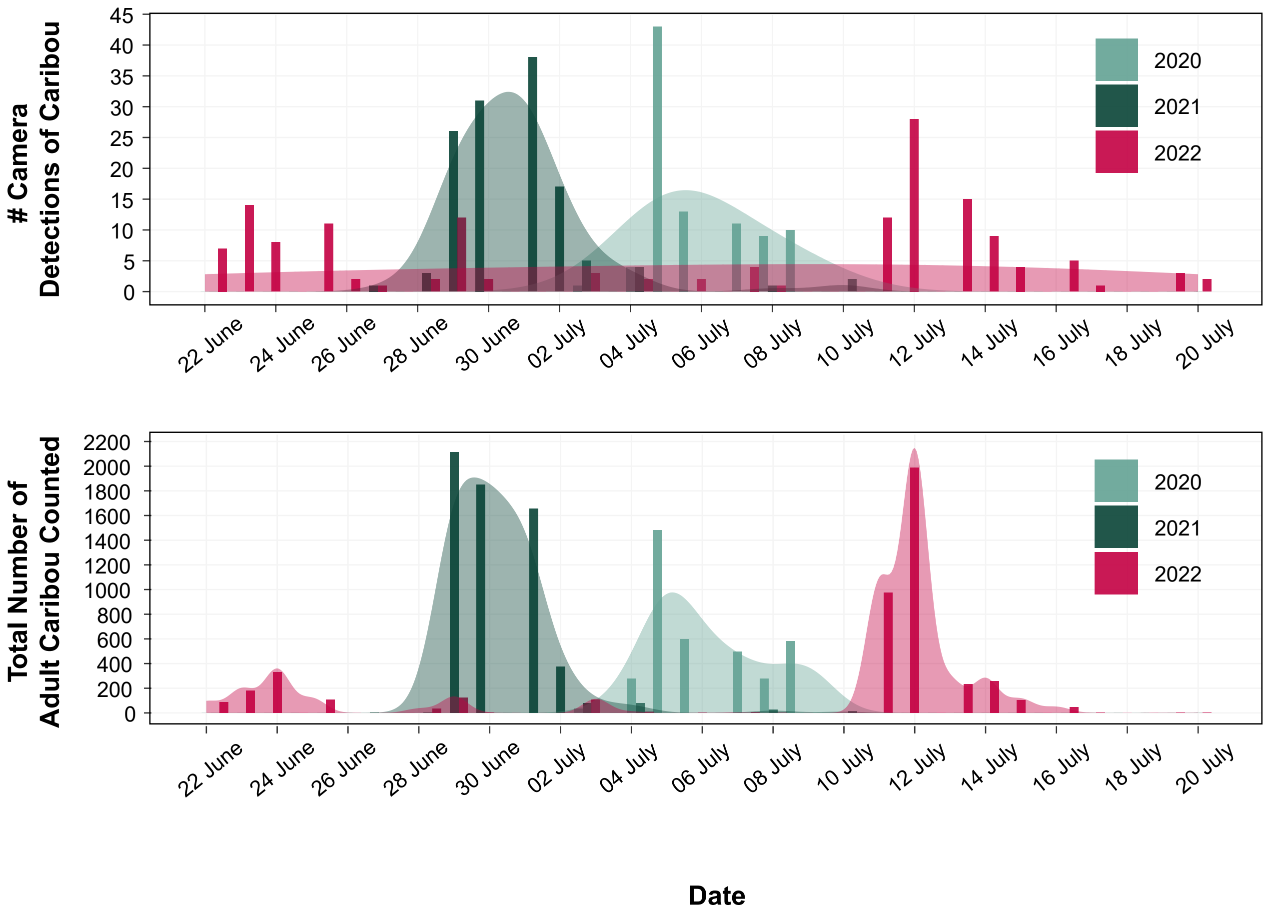

Figure 6.2-1: Caribou Detections at Meliadine Mine AWAR Cameras, 2020, 2021, and 2022

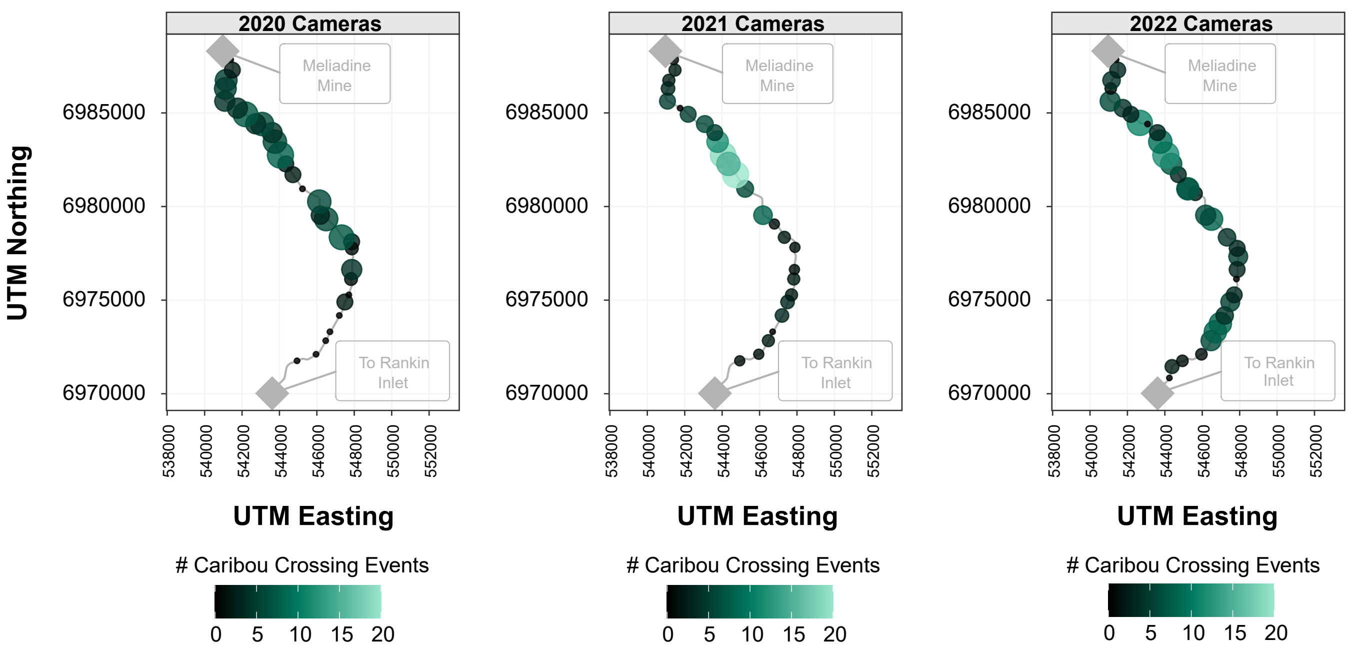

Figure 6.2-2: Distribution of Caribou Detections on Meliadine Mine AWAR Cameras, 2020, 2021, and 2022

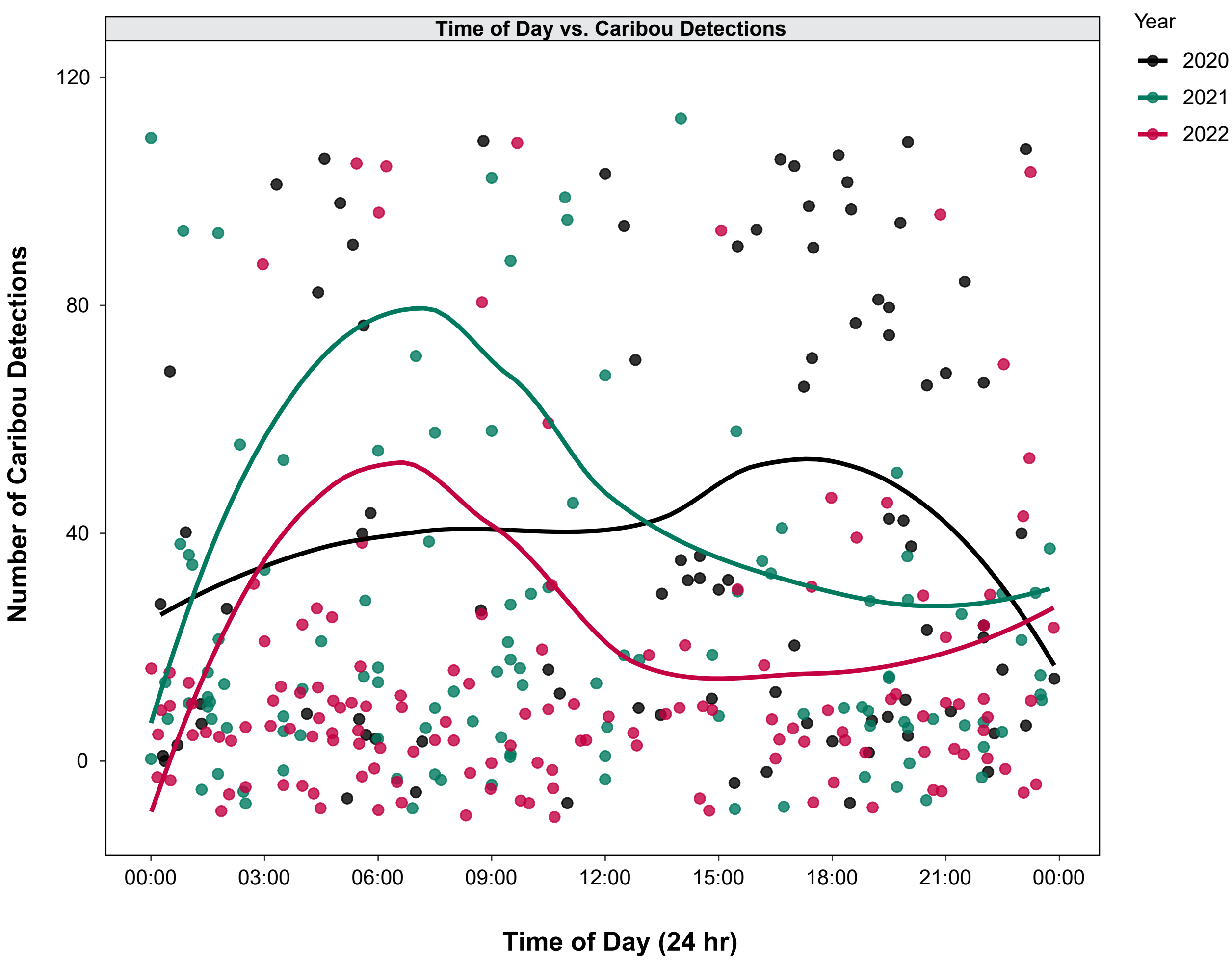

Figure 6.2-3: Time of Day of Caribou Detections on the Meliadine Mine AWAR, 2020, 2021, and 2022

Table 6.2-2: Distribution of Meliadine Mine AWAR Caribou Crossing Locations from Cameras (2020, 2021, and 2022) and from Collar Data (2012-2019)

AWAR KM	Proportion of Camera Observations in 2020 (%)	Proportion of Camera Observations in 2021 (%)	Proportion of Camera Observations in 2022 (%)	Proportion of Collar Observations 2012-2019 (%)
7	-	-	0	0
8	-	-	1	2
9	0	1	1	4
10	0	1	1	6
11	0	2	9	6
12	0	2	8	6
13	2	2	3	5
14	0	2	2	5
15	5	2	2	4
16	1	1	5	6
17	10	2	3	2
18	0	1	0	2
19	10	6	9	5
20	7	0	1	2
21	0	5	10	4
22	4	27	7	3
23	9	15	8	8
24	11	13	8	3
25	11	5	7	3
26	8	4	2	4
27	9	4	7	2
28	5	2	1	8
29	8	3	5	6
30	0	1	0	7

Overall, the hotspots identified by the camera data in all years aligned more closely with the IQ identified hotspots than the collar data from 2012-2019. This makes sense as only a small fraction of caribou are collared, and therefore crossing locations identified from collar data are far more subject to random chance locations may be only partially detected by collar data.. Some inter-annual variation is expected and may also help explain the differences noted between IQ, camera data, and collar data.

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6.3 Road Structure Survey Results and Caribou

The next objective for this study was to use the information on the number of road crossings at each camera to determine if caribou tend to use certain road conditions for crossing, specifically: material of road construction (esker vs. quarry); side slope; road height; and surrounding vegetation type.

In 2020, road surveys for structure and substrate type were completed every 100 m along the length of the AWAR from KM 8 to the mine entrance at KM 30, totaling 210 surveys. The results of these surveys are presented in Figure 6.3-1. As the road structure has not changed significantly since 2020, the results from the survey were also used for analysis in 2021 and 2022. Road structure was generally consistent, with 88% of the roadside slope measurements falling within the “moderate” category (15-30 degrees), and only 6% classified as steep (>30 degrees). Similarly, 92% of road height measurements were either low (<1 m from the tundra; 48%), or moderate (between 1-2 m from the tundra; 44%). The maximum road height measured was 4.9 m, but this value represented an outlier as it was measured on a bridge ramp.

The surveys indicated there was a higher proportion of road with esker as the substrate material in the northern two-thirds of the AWAR, and a higher proportion of quarry rock as the substrate material in the southern third of the AWAR (Figure 6.3-1). This was likely because there is a large esker at approximately KM 18 that was used to construct most of the northern part of the road. There was also a higher proportion of lowland habitat in the southern third of the AWAR.

The road structure at the site of each camera was compared with the number of caribou detected combined across all three years (Figure 6.3-2). Neither slope nor road height was highly correlated with the number of caribou detected crossing the road, as evidenced by the flat GLM line fitted to the data. This may be due to the lack of variability in road height and slope along the length of the AWAR – most of the road had moderate side slope and low height.

When data was pooled across 2020, 2021, and 2022 caribou did appear to cross the road more readily where esker material was the substrate vs. quarry rock, though quarry rock was concentrated in the southern portion of the road where the cameras were removed earlier in 2021, and sampling effort was lower in 2020. This suggests that the apparent preference by caribou of esker over quarry rock may be an artifact of the data, and not a true effect. The presence of a higher proportion of lowland habitat in the southern portion of the AWAR, which includes marshes and lakes, may have also reduced the number of locations where caribou are likely to cross.

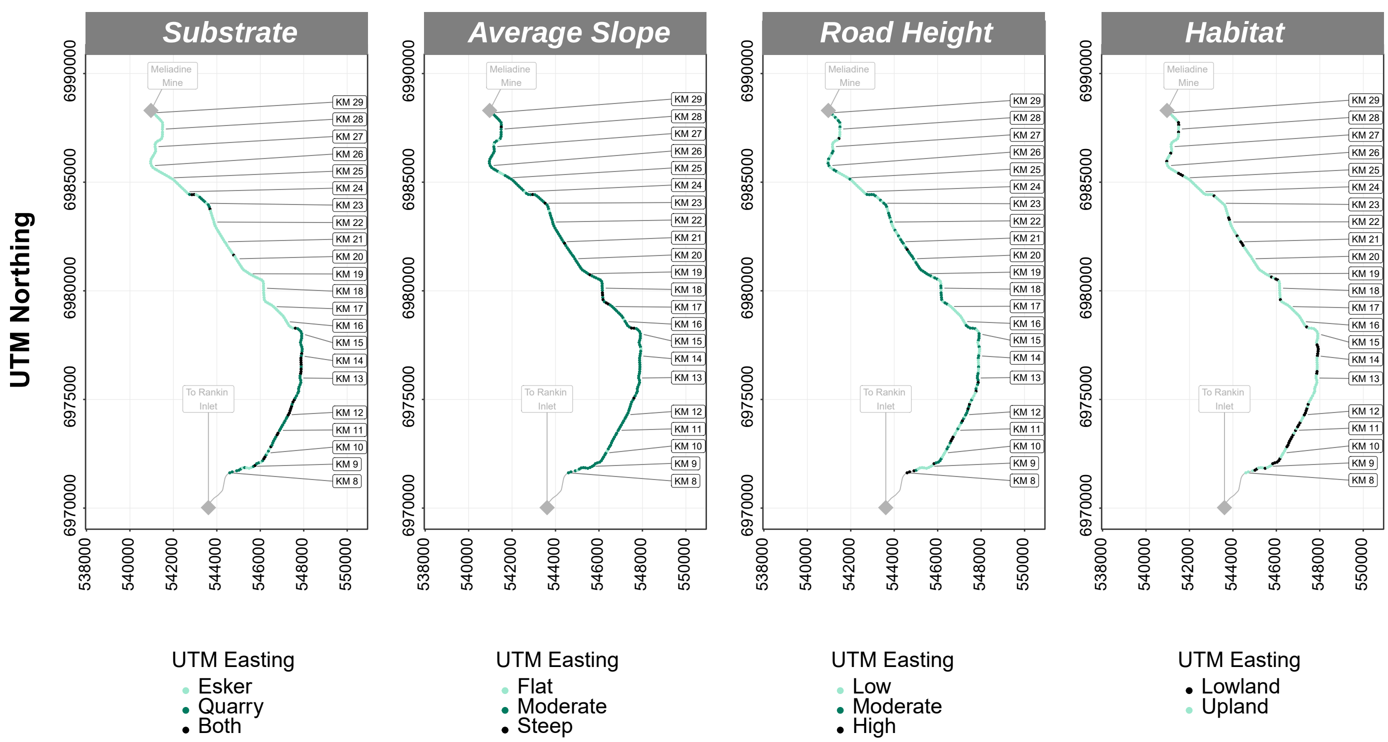

Figure 6.3-1: Road Structure Survey Results

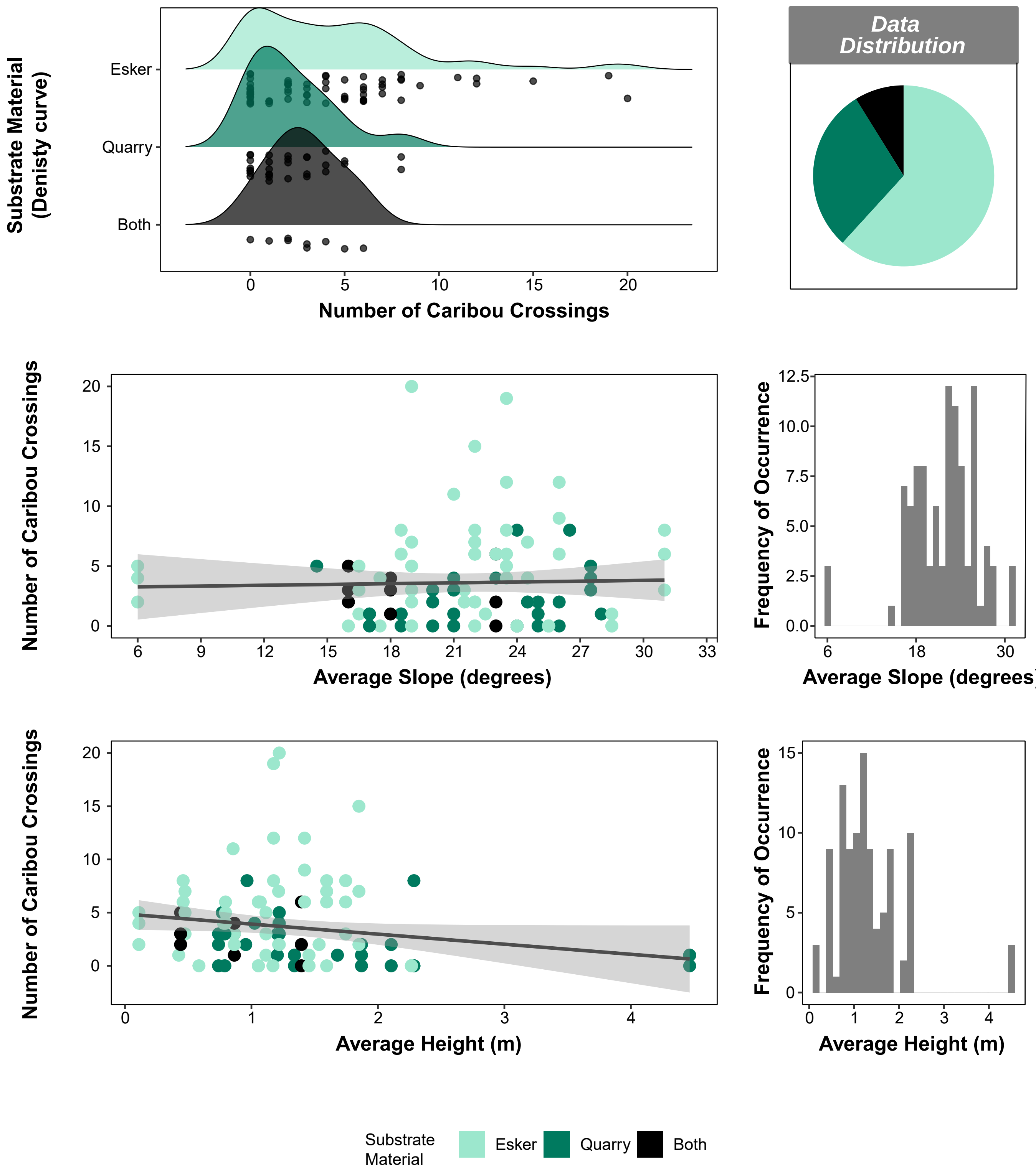

Figure 6.3-2: Comparisons of Road Structure and Caribou Detections from 2020, 2021, and 2022

6.4 Vehicle Detections on the AWAR and Caribou

In 2021 and 2022, the cameras were angled to better capture vehicle traffic on the road, based on lessons learned in 2020 when vehicle traffic was only captured incidentally. Because each camera had hundreds of vehicle triggers, it was decided that only three cameras would be fully processed for detailed vehicle information, while all other cameras had only the presence of an unclassified vehicle type recorded. A summary of vehicles detected on those three cameras is presented in Table 6.4-1. The number of vehicles detected on each of these cameras is presented in Figure 6.4-1.

Table 6.4-1: Vehicle Detections across the Three AWAR Cameras Processed, June – July 2022

Vehicle Type	Vehicle	Average Number of Detections across Cameras	Proportion of Total Detections (%)
Heavy Vehicle	Ambulance	3	0.16
	Box Truck	18	1.06
	Forklift	6	0.40
	Fuel Tanker	119	7.24
	Grader	10	0.58
	Haul Truck	4	0.24
	Bus	132	8.03
	Tractor Trailer	196	11.95
	Water Truck	26	1.61
Light Truck	Pickup Truck	486	29.52
	Service Truck	10	0.61
Quad	Motorcycle	1	0.06
	Quad	628	38.18
Total		**1,639**	**100**

The three primary groups of vehicles (quads, pickups, and heavy vehicles) exhibited slightly different patterns of observations:

- There were more quads in the southern section of the road compared to the northern section. This is consistent with a scenario of people traveling out from Rankin Inlet and either stopping along the road or turning off to side trails and cabins along the road.
- Pickup trucks are relatively consistent between the two northern cameras, but fewer were detected at the southern camera. This is consistent with a scenario where most pickup trucks are based at the mine site, with some stopping along the road to conduct surveys or road checks.
- The number of heavy vehicles was variable between the three cameras, with a decreasing trend towards the south. As heavy vehicles are primarily hauling fuel and equipment from Rankin Inlet to the mine site and not stopping along the road, this may be attributable to error in detection by cameras set at different heights relative to the road grade, which should be noted for future analyses and field deployments.
- Observations showed that caribou are willing to cross the road during relatively short pauses in traffic.

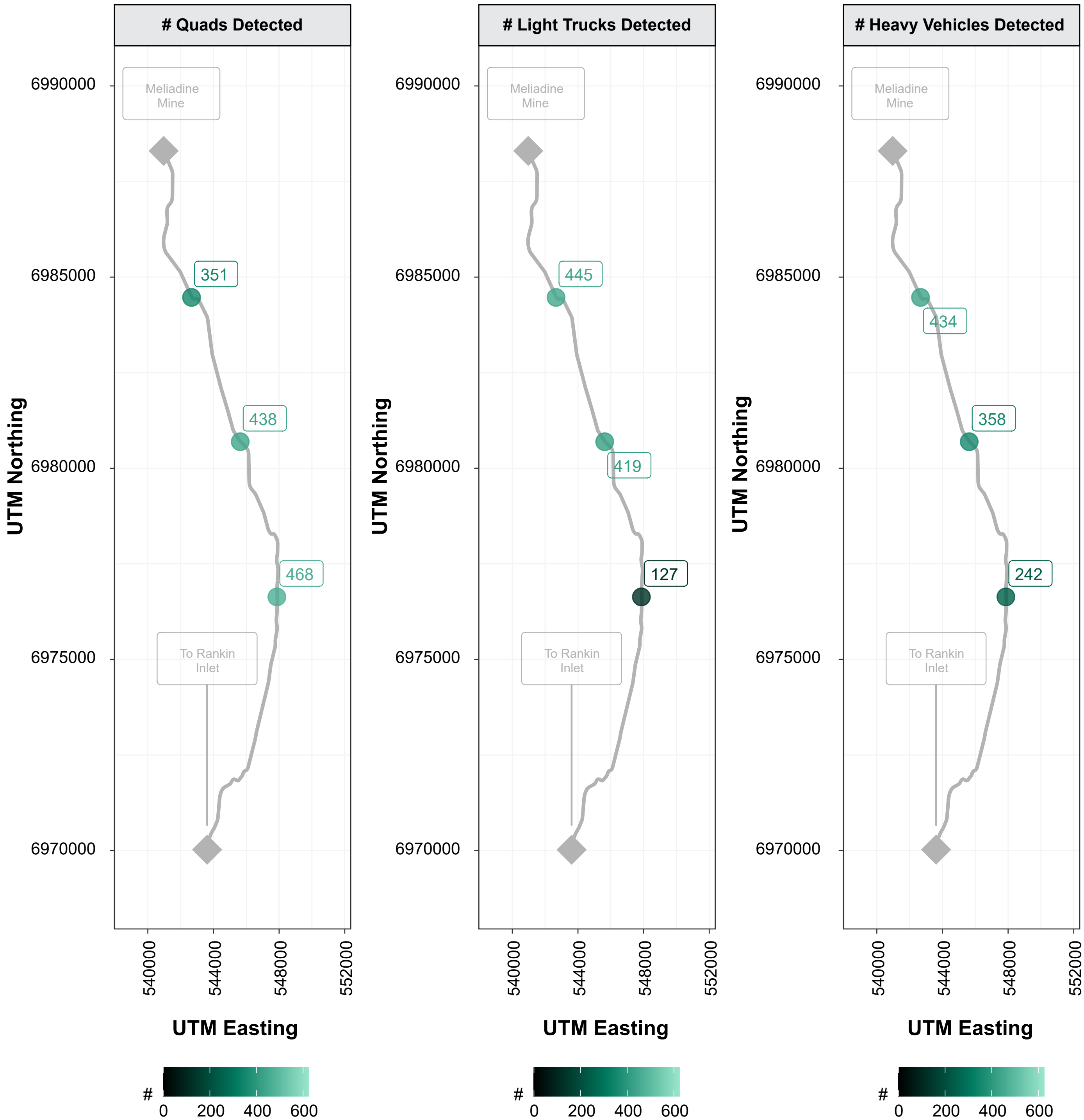

Figure 6.4-1: Number of Vehicle Detections on the Meliadine Mine AWAR, June – July 2022

7. SUMMARY

The results of this combined three-year study suggest the potential for many interacting factors explaining where and when caribou cross the AWAR. The choice of where to cross the road may be mitigated by several factors to varying degrees, including habitat, road traffic, substrate type, and inter-annual route fidelity (i.e., same route chosen every year).

Overall, the camera study found that the cameras were successful at capturing many caribou crossing the AWAR in numerous locations.

The first objective of this study was to evaluate how the AWAR may affect caribou movement during migration:

- The highest number of caribou detections events recorded during the three years of this study was recorded in 2022 (150 detections), suggesting no pattern of learned avoidance of the AWAR year to year.
- Caribou were observed crossing the AWAR in different group sizes, ranging from single individuals to hundreds, suggesting no strong avoidance by small or large caribou amalgamations.

The second objective of this study was to evaluate if there were specific locations with high numbers of caribou observations along the AWAR in 2022, and compare these locations with those identified in 2020, 2021, and by collar data and IQ.

- Peak caribou passage occurred two weeks later in 2022 vs 2021, consistent with patterns of inter-annual variability observed in the collar data.
- The study found that caribou crossing timing and locations on the AWAR in 2022 were consistent with locations identified in 2020, 2021, and with locations identified by IQ from Elders and community members. The hotspots identified by the camera data in 2020, 2021, and 2022 aligned more closely with the IQ identified hotspots than the collar data from 2012 to 2019.

The third objective of this study was to use the information on road crossings determine whether caribou prefer to cross the road at locations with a particular set of road features, specifically: material of road construction (esker vs. quarry); side slope; road height; and surrounding vegetation type.

- Road height and road-side slope did not have an impact on caribou crossing locations.
- Alternatively, since the structure of the road is relatively uniform along its length, there may not be enough difference in the shape, profile, or materials used to build the road to influence which sections of the road caribou prefer to cross, or crossing locations may be driven by surrounding features, such as habitat, trails, etc.
- Caribou appeared to cross the AWAR more readily in the northern portion of the road where esker rock is more common as a substrate, but this may be an artifact of a sampling bias in the data, or the result of inter-annual route fidelity.

Collating data across the three years reported here with future data will allow further robust statistical analysis of caribou habitat use along the AWAR. This information may be incorporated with other data sources, including behaviour surveys and collar data to inform potential cumulative effects on caribou from the Meliadine Mine and associated infrastructure. Insights about improving data collection in the future include ensuring vehicle traffic is captured accurately at as many cameras as possible, as well as continuing the longer sampling time conducted in 2022 versus the previous study years to capture the entirety of caribou migration activities. This study highlights the power of using motion-trigger cameras to draw connections between the many possible variables explaining caribou movement. The results suggest that multiple factors may contribute to when and where caribou cross the AWAR, including vehicle traffic, road substrate, and inter-annual variability.

8. REFERENCES

Agnico Eagle. 2022. *Agnico Eagle Meliadine Division Terrestrial Environment Management and Monitoring Plan (TEMMP).*

Beery, S., Morris, D., and Yang, S. 2019. *Efficient Pipeline for Camera Trap Image Review*. arXiv. https://arxiv.org/abs/1907.06772

BQCMB. 2014. *The Beverly and Qamanirjuaq Caribou Management Plan 2013-2022.* Beverly and Qamanirjuaq Caribou Management Board.

BQCMB. 2016. *BQCMB News Release, May 26, 2016*. Beverly and Qamanirjuaq Caribou Management Board.

BQCMB. 2022. *Home page.* Beverly and Qamanirjuaq Caribou Management Board. https://arctic-caribou.com/

BQCMB. 2021. *The Beverly and Qamanirjuaq Caribou Management Board Annual Report 2020-2021.* Beverly and Qamanirjuaq Caribou Management Board.

COSEWIC. 2016. *COSEWIC assessment and status report on the Caribou Rangifer tarandus, Barren-ground population, in Canada.* Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 123 pp. http://www.registrelep-sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1

ERM. 2022. *Meliadine Project Caribou Trail Camera Study, 2021.* ERM Consultants Canada Ltd. for Agnico Eagle: Toronto, Canada.

Fennell M, Beirne C, Burton AC. 2022. Use of object detection in camera trap image identification: assessing a method to rapidly and accurately classify human and animal detections for research and application in recreation ecology. *Global Ecology and Conservation*, 35:e02104.

R Development Core Team. 2021. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing (v4.1.1), Vienna.

APPENDIX A DATA FROM WILDLIFE CAMERAS

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM01__2022-07-12__06-59-59.jpg	CAM01	7/12/2022 6:59	Caribou	500	0	Resting	FALSE	10,254	500	238
CAM18__2022-07-12__06-43-18.jpg	CAM18	7/12/2022 6:43	Caribou	400	100	Walking	TRUE	6,801	500	260
CAM12__2022-07-11__03-59-42.jpg	CAM12	7/11/2022 3:59	Caribou	400	4	Feeding	TRUE	3,943	404	105
CAM34__2022-07-12__05-29-59.jpg	CAM34	7/12/2022 5:29	Caribou	250	100	Resting	TRUE	8,666	350	180
CAM13__2022-07-11__04-10-04.jpg	CAM13	7/11/2022 4:10	Caribou	300	5	Feeding	TRUE	2,804	305	120
CAM15__2022-06-24__13-48-09.jpg	CAM15	6/24/2022 13:48	Caribou	300	1	Feeding	FALSE	182	301	28
CAM31__2022-07-12__07-04-34.jpg	CAM31	7/12/2022 7:4	Caribou	200	4	Walking	TRUE	3,305	204	98
CAM38__2022-07-12__06-29-59.jpg	CAM38	7/12/2022 6:29	Caribou	190	0	Feeding	TRUE	2,686	190	139
CAM21__2022-07-13__05-25-51.jpg	CAM21	7/13/2022 5:25	Caribou	100	30	Walking	TRUE	330	130	10
CAM39__2022-07-12__06-12-57.jpg	CAM39	7/12/2022 6:12	Caribou	100	25	Walking	TRUE	2,493	125	95
CAM28__2022-07-12__23-14-24.jpg	CAM28	7/12/2022 23:14	Caribou	100	20	Walking	TRUE	932	120	104
CAM31__2022-07-14__20-51-19.jpg	CAM31	7/14/2022 20:51	Caribou	100	20	Running	TRUE	1,211	120	52
CAM31__2022-07-15__09-40-42.jpg	CAM31	7/15/2022 9:40	Caribou	100	7	Walking	TRUE	26	107	6
CAM27__2022-07-03__06-01-09.jpg	CAM27	7/3/2022 6:1	Caribou	100	0	Walking	TRUE	304	100	50
CAM17__2022-07-14__15-03-56.jpg	CAM17	7/14/2022 15:03	Caribou	90	4	Standing	TRUE	4,995	94	252
CAM19__2022-07-11__08-44-41.jpg	CAM19	7/11/2022 8:44	Caribou	90	0	Walking	TRUE	268	90	57
CAM10__2022-07-11__02-57-13.jpg	CAM10	7/11/2022 2:57	Caribou	80	3	Feeding	TRUE	4,117	83	276
CAM01__2022-07-12__10-29-59.jpg	CAM01	7/12/2022 10:29	Caribou	50	20	Feeding	TRUE	455	70	48
CAM19__2022-07-13__22-31-47.jpg	CAM19	7/13/2022 22:31	Caribou	70	0	Feeding	TRUE	473	70	93
CAM27__2022-07-12__23-12-34.jpg	CAM27	7/12/2022 23:12	Caribou	60	0	Walking	TRUE	115	60	14
CAM28__2022-06-23__17-58-28.jpg	CAM28	6/23/2022 17:58	Caribou	50	10	Walking	TRUE	977	60	149
CAM29__2022-07-12__19-26-52.jpg	CAM29	7/12/2022 19:26	Caribou	47	9	Walking	TRUE	567	56	29
CAM04__2022-07-11__02-42-53.jpg	CAM04	7/11/2022 2:42	Caribou	40	10	Feeding	TRUE	5,582	50	200
CAM30__2022-07-12__18-38-29.jpg	CAM30	7/12/2022 18:38	Caribou	40	10	Walking	TRUE	5,990	50	67
CAM28__2022-06-23__23-02-44.jpg	CAM28	6/23/2022 23:02	Caribou	45	0	Walking	TRUE	1,020	45	46
CAM01__2022-07-14__20-24-19.jpg	CAM01	7/14/2022 20:24	Caribou	30	10	Running	TRUE	129	40	27
CAM28__2022-06-25__10-35-15.jpg	CAM28	6/25/2022 10:35	Caribou	35	5	Feeding	TRUE	5,365	40	215
CAM17__2022-07-13__22-00-36.jpg	CAM17	7/13/2022 22:00	Caribou	33	3	Feeding	FALSE	182	36	32
CAM04__2022-06-29__04-22-54.jpg	CAM04	6/29/2022 4:22	Caribou	30	5	Feeding	FALSE	430	35	3
CAM12__2022-07-11__14-06-44.jpg	CAM12	7/11/2022 14:6	Caribou	30	5	Walking	TRUE	18	35	4
CAM12__2022-06-29__04-47-03.jpg	CAM12	6/29/2022 4:47	Caribou	30	2	Feeding	TRUE	5,917	32	51
CAM29__2022-06-22__22-10-15.jpg	CAM29	6/22/2022 22:10	Caribou	22	10	Walking	TRUE	339	32	12
CAM16__2022-07-14__15-29-59.jpg	CAM16	7/14/2022 15:29	Caribou	30	1	Feeding	TRUE	2,794	31	68
CAM04__2022-06-29__02-59-59.jpg	CAM04	6/29/2022 2:59	Caribou	25	5	Feeding	TRUE	7,705	30	36
CAM04__2022-07-11__05-17-59.jpg	CAM04	7/11/2022 5:17	Caribou	20	10	Walking	TRUE	753	30	15
CAM07__2022-06-28__17-27-14.jpg	CAM07	6/28/2022 17:27	Caribou	25	5	Walking	TRUE	5,715	30	128
CAM12__2022-06-25__05-34-36.jpg	CAM12	6/25/2022 5:34	Caribou	30	0	Walking	FALSE	14,512	30	142
CAM28__2022-06-22__20-59-59.jpg	CAM28	6/22/2022 20:59	Caribou	30	0	Feeding	FALSE	204	30	2
CAM27__2022-06-23__03-59-59.jpg	CAM27	6/23/2022 3:59	Caribou	23	2	Feeding	FALSE	1,800	25	13

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM28__2022-06-22__23-50-56.jpg	CAM28	6/22/2022 23:50	Caribou	25	0	Walking	TRUE	1,492	25	22
CAM34__2022-07-12__08-44-20.jpg	CAM34	7/12/2022 8:44	Caribou	20	5	Walking	TRUE	1,374	25	73
CAM27__2022-07-16__10-19-51.jpg	CAM27	7/16/2022 10:19	Caribou	20	3	Walking	TRUE	24	23	3
CAM28__2022-06-23__03-13-39.jpg	CAM28	6/23/2022 3:13	Caribou	15	8	Walking	TRUE	299	23	32
CAM21__2022-06-24__03-25-59.jpg	CAM21	6/24/2022 3:25	Caribou	15	5	Walking	TRUE	1,615	20	30
CAM10__2022-07-16__04-24-43.jpg	CAM10	7/16/2022 4:24	Caribou	19	0	Feeding	TRUE	486	19	95
CAM39__2022-07-13__00-29-59.jpg	CAM39	7/13/2022 0:29	Caribou	15	2	Walking	TRUE	158	17	9
CAM19__2022-06-25__08-24-21.jpg	CAM19	6/25/2022 8:24	Caribou	14	1	Feeding	FALSE	948	15	76
CAM10__2022-06-29__03-40-04.jpg	CAM10	6/29/2022 3:40	Caribou	10	3	Feeding	FALSE	6,208	13	158
CAM22__2022-06-23__16-12-11.jpg	CAM22	6/23/2022 16:12	Caribou	9	4	Walking	TRUE	402	13	15
CAM29__2022-06-23__05-54-00.jpg	CAM29	6/23/2022 5:54	Caribou	8	4	Walking	TRUE	359	12	2
CAM06__2022-06-28__17-15-30.jpg	CAM06	6/28/2022 17:15	Caribou	8	3	Walking	FALSE	839	11	55
CAM01__2022-07-12__04-59-59.jpg	CAM01	7/12/2022 4:59	Caribou	7	3	Feeding	FALSE	1,800	10	2
CAM12__2022-07-04__13-09-24.jpg	CAM12	7/4/2022 13:9	Caribou	10	0	Feeding	FALSE	209	10	10
CAM15__2022-07-11__21-59-59.jpg	CAM15	7/11/2022 21:59	Caribou	10	0	Walking	FALSE	0	10	1
CAM22__2022-07-13__04-48-53.jpg	CAM22	7/13/2022 4:48	Caribou	6	4	Walking	TRUE	135	10	21
CAM29__2022-06-23__00-00-31.jpg	CAM29	6/23/2022 0:00	Caribou	10	0	Standing	TRUE	1,668	10	13
CAM15__2022-06-29__21-13-36.jpg	CAM15	6/29/2022 21:13	Caribou	6	3	Walking	TRUE	38	9	4
CAM19__2022-06-25__05-31-58.jpg	CAM19	6/25/2022 5:31	Caribou	9	0	Feeding	FALSE	1,436	9	35
CAM25__2022-06-23__05-34-34.jpg	CAM25	6/23/2022 5:34	Caribou	7	2	Walking	FALSE	838	9	33
CAM04__2022-06-29__00-16-16.jpg	CAM04	6/29/2022 0:16	Caribou	7	1	Feeding	FALSE	2,281	8	41
CAM19__2022-07-14__16-24-20.jpg	CAM19	7/14/2022 16:24	Caribou	5	3	Feeding	FALSE	63	8	11
CAM22__2022-07-16__16-57-51.jpg	CAM22	7/16/2022 16:57	Caribou	5	3	Walking	TRUE	8	8	2
CAM09__2022-06-29__01-48-04.jpg	CAM09	6/29/2022 1:48	Caribou	6	1	Feeding	FALSE	290	7	9
CAM19__2022-06-25__10-29-59.jpg	CAM19	6/25/2022 10:29	Caribou	7	0	Walking	FALSE	0	7	1
CAM20__2022-07-03__00-59-51.jpg	CAM20	7/3/2022 0:59	Caribou	5	2	Feeding	FALSE	3,212	7	79
CAM10__2022-06-29__00-29-28.jpg	CAM10	6/29/2022 0:29	Caribou	6	0	Feeding	FALSE	2,041	6	61
CAM11__2022-06-25__09-30-00.jpg	CAM11	6/25/2022 9:30	Caribou	6	0	Walking	FALSE	1,747	6	2
CAM21__2022-06-24__07-59-59.jpg	CAM21	6/24/2022 7:59	Caribou	6	0	Feeding	FALSE	0	6	1
CAM28__2022-06-22__23-14-56.jpg	CAM28	6/22/2022 23:14	Caribou	6	0	Walking	TRUE	496	6	3
CAM30__2022-06-23__01-06-05.jpg	CAM30	6/23/2022 1:06	Caribou	6	0	Walking	TRUE	0	6	1
CAM03__2022-06-24__13-36-13.jpg	CAM03	6/24/2022 13:36	Caribou	5	0	Feeding	FALSE	145	5	24
CAM11__2022-07-11__04-28-44.jpg	CAM11	7/11/2022 4:28	Caribou	1	4	Walking	TRUE	4,106	5	54
CAM20__2022-06-24__03-56-29.jpg	CAM20	6/24/2022 3:56	Caribou	5	0	Feeding	FALSE	1,525	5	25
CAM02__2022-07-13__05-41-01.jpg	CAM02	7/13/2022 5:41	Caribou	2	2	Feeding	FALSE	183	4	11
CAM28__2022-07-04__08-03-45.jpg	CAM28	7/4/2022 8:3	Uncategorized Bird	4	0	Walking	TRUE	131	4	6
CAM29__2022-07-13__19-40-50.jpg	CAM29	7/13/2022 19:40	Caribou	2	2	Walking	TRUE	31	4	3
CAM40__2022-07-12__06-37-45.jpg	CAM40	7/12/2022 6:37	Caribou	4	0	Walking	FALSE	63	4	5
CAM02__2022-07-10__05-13-00.jpg	CAM02	7/10/2022 5:13	Arctic Hare	3	0	Running	FALSE	0	3	1

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM03__2022-06-25__00-11-27.jpg	CAM03	6/25/2022 0:11	Caribou	3	0	Walking	TRUE	117	3	5
CAM18__2022-07-14__20-40-18.jpg	CAM18	7/14/2022 20:40	Caribou	1	2	Running	TRUE	4	3	2
CAM19__2022-07-13__20-53-14.jpg	CAM19	7/13/2022 20:53	Caribou	1	2	Walking	TRUE	0	3	1
CAM19__2022-07-14__14-49-39.jpg	CAM19	7/14/2022 14:49	Caribou	2	1	Walking	FALSE	204	3	18
CAM20__2022-06-25__07-47-12.jpg	CAM20	6/25/2022 7:47	Caribou	2	1	Walking	FALSE	33	3	3
CAM22__2022-06-23__16-30-04.jpg	CAM22	6/23/2022 16:30	Caribou	3	0	Running	TRUE	634	3	8
CAM27__2022-07-12__09-59-20.jpg	CAM27	7/12/2022 9:59	Caribou	2	1	Walking	FALSE	118	3	3
CAM01__2022-07-07__02-29-59.jpg	CAM01	7/7/2022 2:29	Caribou	2	0	Walking	TRUE	0	2	1
CAM01__2022-07-12__03-29-59.jpg	CAM01	7/12/2022 3:29	Caribou	2	0	Feeding	FALSE	0	2	1
CAM02__2022-07-10__01-42-10.jpg	CAM02	7/10/2022 1:42	Arctic Hare	2	0	Running	FALSE	0	2	1
CAM02__2022-07-13__22-06-21.jpg	CAM02	7/13/2022 22:06	Caribou	0	2	Walking	TRUE	9	2	2
CAM04__2022-06-29__06-00-24.jpg	CAM04	6/29/2022 6:00	Caribou	1	1	Walking	FALSE	1,426	2	2
CAM04__2022-06-29__06-35-55.jpg	CAM04	6/29/2022 6:35	Caribou	2	0	Walking	FALSE	5	2	2
CAM08__2022-06-24__00-50-29.jpg	CAM08	6/24/2022 0:50	Domestic dog	2	0	Walking	FALSE	0	2	1
CAM08__2022-06-24__14-39-19.jpg	CAM08	6/24/2022 14:39	Uncategorized Bird	2	0	Resting	FALSE	705	2	10
CAM09__2022-07-11__04-15-55.jpg	CAM09	7/11/2022 4:15	Caribou	2	0	Walking	FALSE	73	2	2
CAM09__2022-07-11__04-48-34.jpg	CAM09	7/11/2022 4:48	Caribou	2	0	Feeding	FALSE	3,867	2	8
CAM09__2022-07-12__05-29-59.jpg	CAM09	7/12/2022 5:29	Caribou	2	0	Feeding	FALSE	0	2	1
CAM10__2022-06-29__06-03-34.jpg	CAM10	6/29/2022 6:03	Caribou	1	1	Walking	FALSE	1,208	2	3
CAM10__2022-07-21__06-04-34.jpg	CAM10	7/21/2022 6:04	Uncategorized Bird	2	0	Walking	FALSE	154	2	10
CAM11__2022-07-17__21-02-40.jpg	CAM11	7/17/2022 21:02	Domestic dog	2	0	Walking	FALSE	15	2	4
CAM11__2022-07-20__21-04-07.jpg	CAM11	7/20/2022 21:04	Domestic dog	2	0	Walking	FALSE	0	2	1
CAM13__2022-07-12__08-59-39.jpg	CAM13	7/12/2022 8:59	Caribou	1	1	Walking	TRUE	5	2	2
CAM16__2022-07-03__10-37-27.jpg	CAM16	7/3/2022 10:37	Caribou	2	0	Walking	FALSE	0	2	1
CAM17__2022-07-15__14-35-01.jpg	CAM17	7/15/2022 14:35	Caribou	2	0	Walking	FALSE	0	2	1
CAM18__2022-07-12__05-28-33.jpg	CAM18	7/12/2022 5:28	Caribou	2	0	Feeding	TRUE	2,033	2	19
CAM18__2022-07-14__22-05-57.jpg	CAM18	7/14/2022 22:05	Caribou	1	1	Running	TRUE	0	2	1
CAM21__2022-06-30__10-36-07.jpg	CAM21	6/30/2022 10:36	Caribou	1	1	Running	TRUE	505	2	14
CAM21__2022-07-12__06-29-59.jpg	CAM21	7/12/2022 6:29	Caribou	2	0	Feeding	FALSE	0	2	1
CAM28__2022-06-22__21-59-59.jpg	CAM28	6/22/2022 21:59	Caribou	2	0	Feeding	FALSE	0	2	1
CAM29__2022-06-23__07-59-59.jpg	CAM29	6/23/2022 7:59	Caribou	2	0	Standing	FALSE	853	2	2
CAM30__2022-07-13__05-08-50.jpg	CAM30	7/13/2022 5:08	Uncategorized Bird	2	0	Standing	FALSE	619	2	4
CAM30__2022-07-14__15-18-16.jpg	CAM30	7/14/2022 15:18	Uncategorized Bird	2	0	Standing	FALSE	5	2	2
CAM31__2022-07-12__21-28-10.jpg	CAM31	7/12/2022 21:28	Caribou	1	1	Walking	FALSE	0	2	1
CAM39__2022-07-12__18-16-13.jpg	CAM39	7/12/2022 18:16	Caribou	1	1	Running	FALSE	0	2	1
CAM39__2022-07-12__22-34-22.jpg	CAM39	7/12/2022 22:34	Caribou	1	1	Running	FALSE	0	2	1
CAM40__2022-07-03__22-45-44.jpg	CAM40	7/3/2022 22:45	Uncategorized Bird	2	0	Standing	FALSE	22	2	2
CAM01__2022-06-29__17-56-46.jpg	CAM01	6/29/2022 17:56	Arctic Fox	1	0	Walking	TRUE	7	1	2
CAM01__2022-07-06__10-12-46.jpg	CAM01	7/6/2022 10:12	Caribou	1	0	Running	FALSE	3,225	1	26

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM01__2022-07-06__12-05-27.jpg	CAM01	7/6/2022 12:5	Caribou	1	0	Walking	FALSE	5	1	2
CAM01__2022-07-07__15-03-33.jpg	CAM01	7/7/2022 15:3	Arctic Fox	1	0	Walking	TRUE	3,089	1	10
CAM01__2022-07-13__01-27-17.jpg	CAM01	7/13/2022 1:27	Caribou	1	0	Walking	FALSE	7	1	2
CAM01__2022-07-13__06-55-58.jpg	CAM01	7/13/2022 6:55	Caribou	1	0	Walking	FALSE	0	1	1
CAM01__2022-07-13__18-52-25.jpg	CAM01	7/13/2022 18:52	Caribou	1	0	Walking	FALSE	0	1	1
CAM01__2022-07-14__16-07-10.jpg	CAM01	7/14/2022 16:07	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM01__2022-07-16__05-03-44.jpg	CAM01	7/16/2022 5:03	Arctic Fox	1	0	Running	TRUE	0	1	1
CAM01__2022-07-18__18-51-11.jpg	CAM01	7/18/2022 18:51	Arctic Fox	1	0	Walking	TRUE	15	1	2
CAM02__2022-06-25__02-18-42.jpg	CAM02	6/25/2022 2:18	Arctic Hare	1	0	Walking	FALSE	0	1	1
CAM02__2022-06-28__04-05-37.jpg	CAM02	6/28/2022 4:05	Arctic Hare	1	0	Walking	FALSE	0	1	1
CAM02__2022-06-28__23-30-00.jpg	CAM02	6/28/2022 23:30	Arctic Hare	1	0	Resting	FALSE	0	1	1
CAM02__2022-07-01__02-50-36.jpg	CAM02	7/1/2022 2:50	Arctic Hare	1	0	Running	FALSE	18	1	2
CAM02__2022-07-01__23-08-23.jpg	CAM02	7/1/2022 23:8	Arctic Hare	1	0	Running	FALSE	555	1	3
CAM02__2022-07-02__20-34-22.jpg	CAM02	7/2/2022 20:34	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-02__21-37-28.jpg	CAM02	7/2/2022 21:37	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-03__22-13-17.jpg	CAM02	7/3/2022 22:13	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-06__04-29-22.jpg	CAM02	7/6/2022 4:29	Arctic Hare	1	0	Running	FALSE	37	1	2
CAM02__2022-07-06__05-03-39.jpg	CAM02	7/6/2022 5:3	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-07__02-28-20.jpg	CAM02	7/7/2022 2:28	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-07__06-10-57.jpg	CAM02	7/7/2022 6:10	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-07__20-39-14.jpg	CAM02	7/7/2022 20:39	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-07__22-55-57.jpg	CAM02	7/7/2022 22:55	Arctic Hare	1	0	Running	FALSE	63	1	2
CAM02__2022-07-08__07-32-55.jpg	CAM02	7/8/2022 7:32	Arctic Hare	1	0	Running	FALSE	194	1	2
CAM02__2022-07-12__07-42-49.jpg	CAM02	7/12/2022 7:42	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-12__22-40-34.jpg	CAM02	7/12/2022 22:40	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-12__23-15-54.jpg	CAM02	7/12/2022 23:15	Arctic Hare	1	0	Running	FALSE	846	1	3
CAM02__2022-07-13__20-59-59.jpg	CAM02	7/13/2022 20:59	Arctic Hare	1	0	Feeding	FALSE	0	1	1
CAM02__2022-07-13__22-29-59.jpg	CAM02	7/13/2022 22:29	Arctic Hare	1	0	Resting	FALSE	0	1	1
CAM02__2022-07-16__00-48-08.jpg	CAM02	7/16/2022 0:48	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-16__03-29-05.jpg	CAM02	7/16/2022 3:29	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM02__2022-07-17__06-31-42.jpg	CAM02	7/17/2022 6:31	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM02__2022-07-20__23-03-53.jpg	CAM02	7/20/2022 23:03	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM03__2022-06-29__08-20-17.jpg	CAM03	6/29/2022 8:20	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM03__2022-07-01__15-08-06.jpg	CAM03	7/1/2022 15:8	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM03__2022-07-04__00-10-02.jpg	CAM03	7/4/2022 0:10	Caribou	1	0	Walking	FALSE	5	1	2
CAM03__2022-07-04__15-43-09.jpg	CAM03	7/4/2022 15:43	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM03__2022-07-07__07-17-21.jpg	CAM03	7/7/2022 7:17	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM03__2022-07-07__11-10-35.jpg	CAM03	7/7/2022 11:10	Caribou	1	0	Walking	FALSE	0	1	1
CAM03__2022-07-07__19-33-01.jpg	CAM03	7/7/2022 19:33	Caribou	1	0	Walking	TRUE	0	1	1

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM04__2022-06-25__02-05-36.jpg	CAM04	6/25/2022 2:05	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM04__2022-06-30__03-09-41.jpg	CAM04	6/30/2022 3:09	Caribou	1	0	Walking	FALSE	123	1	8
CAM04__2022-07-03__04-59-59.jpg	CAM04	7/3/2022 4:59	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM04__2022-07-05__07-30-47.jpg	CAM04	7/5/2022 7:30	Arctic Ground Squirrel	1	0	Resting	FALSE	0	1	1
CAM04__2022-07-07__20-37-36.jpg	CAM04	7/7/2022 20:37	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM04__2022-07-14__07-32-59.jpg	CAM04	7/14/2022 7:32	Arctic Ground Squirrel	1	0	Resting	FALSE	0	1	1
CAM04__2022-07-20__10-10-34.jpg	CAM04	7/20/2022 10:10	Uncategorized Bird	1	0	Feeding	FALSE	0	1	1
CAM05__2022-06-27__02-54-20.jpg	CAM05	6/27/2022 2:54	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM05__2022-06-30__22-41-26.jpg	CAM05	6/30/2022 22:41	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM05__2022-07-07__05-28-53.jpg	CAM05	7/7/2022 5:28	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM05__2022-07-07__08-13-10.jpg	CAM05	7/7/2022 8:13	Arctic Hare	1	0	Running	FALSE	46	1	2
CAM05__2022-07-12__22-25-46.jpg	CAM05	7/12/2022 22:25	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM05__2022-07-20__11-57-44.jpg	CAM05	7/20/2022 11:57	Uncategorized Bird	1	0	Feeding	FALSE	9	1	3
CAM06__2022-07-05__04-40-13.jpg	CAM06	7/5/2022 4:40	Arctic Hare	1	0	Resting	FALSE	483	1	19
CAM06__2022-07-12__17-52-58.jpg	CAM06	7/12/2022 17:52	Caribou	1	0	Feeding	FALSE	0	1	1
CAM07__2022-06-28__12-57-43.jpg	CAM07	6/28/2022 12:57	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM07__2022-06-29__15-04-28.jpg	CAM07	6/29/2022 15:04	Arctic Ground Squirrel	1	0	Walking	FALSE	0	1	1
CAM07__2022-06-30__09-59-27.jpg	CAM07	6/30/2022 9:59	Arctic Fox	1	0	Walking	FALSE	33	1	2
CAM07__2022-07-03__11-29-52.jpg	CAM07	7/3/2022 11:29	Uncategorized Bird	1	0	Resting	FALSE	0	1	1
CAM07__2022-07-17__17-58-11.jpg	CAM07	7/17/2022 17:58	Arctic Ground Squirrel	1	0	Walking	FALSE	0	1	1
CAM07__2022-07-21__04-40-04.jpg	CAM07	7/21/2022 4:40	Uncategorized Bird	1	0	Walking	FALSE	87	1	2
CAM08__2022-06-24__08-16-10.jpg	CAM08	6/24/2022 8:16	Uncategorized Bird	1	0	Walking	FALSE	267	1	2
CAM08__2022-06-25__07-36-12.jpg	CAM08	6/25/2022 7:36	Uncategorized Bird	1	0	Resting	FALSE	0	1	1
CAM08__2022-06-27__08-08-50.jpg	CAM08	6/27/2022 8:08	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM08__2022-07-02__17-14-11.jpg	CAM08	7/2/2022 17:14	Domestic dog	1	0	Running	FALSE	9,317	1	59
CAM08__2022-07-03__09-18-47.jpg	CAM08	7/3/2022 9:18	Uncategorized Bird	1	0	Walking	FALSE	1,037	1	4
CAM08__2022-07-04__06-16-57.jpg	CAM08	7/4/2022 6:16	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM08__2022-07-20__08-25-54.jpg	CAM08	7/20/2022 8:25	Caribou	1	0	Running	FALSE	0	1	1
CAM08__2022-07-21__14-19-23.jpg	CAM08	7/21/2022 14:19	Arctic Ground Squirrel	1	0	Resting	FALSE	2,968	1	9
CAM09__2022-07-08__08-58-22.jpg	CAM09	7/8/2022 8:58	Caribou	1	0	Walking	TRUE	1,741	1	6
CAM09__2022-07-12__20-00-22.jpg	CAM09	7/12/2022 20:0	Uncategorized Bird	1	0	Flying	FALSE	5,794	1	10
CAM09__2022-07-15__18-59-59.jpg	CAM09	7/15/2022 18:59	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM09__2022-07-20__12-50-10.jpg	CAM09	7/20/2022 12:50	Caribou	1	0	Feeding	FALSE	9	1	2
CAM10__2022-06-29__02-03-39.jpg	CAM10	6/29/2022 2:03	Caribou	1	0	Feeding	FALSE	5	1	2
CAM10__2022-07-03__19-12-36.jpg	CAM10	7/3/2022 19:12	Arctic Fox	1	0	Walking	FALSE	6,313	1	9
CAM10__2022-07-03__21-10-54.jpg	CAM10	7/3/2022 21:10	Arctic Fox	1	0	Walking	FALSE	1,659	1	3
CAM10__2022-07-11__04-47-14.jpg	CAM10	7/11/2022 4:47	Caribou	1	0	Walking	TRUE	0	1	1
CAM10__2022-07-16__13-57-52.jpg	CAM10	7/16/2022 13:57	Caribou	1	0	Walking	FALSE	0	1	1
CAM10__2022-07-18__07-00-00.jpg	CAM10	7/18/2022 7:00	Uncategorized Bird	1	0	Feeding	FALSE	945	1	6

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM10__2022-07-19__21-00-00.jpg	CAM10	7/19/2022 21:00	Arctic Fox	1	0	Standing	FALSE	1,771	1	3
CAM11__2022-06-24__22-02-01.jpg	CAM11	6/24/2022 22:02	Domestic dog	1	0	Running	FALSE	0	1	1
CAM11__2022-06-26__23-09-49.jpg	CAM11	6/26/2022 23:09	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM11__2022-07-16__02-06-59.jpg	CAM11	7/16/2022 2:06	Caribou	1	0	Walking	TRUE	0	1	1
CAM11__2022-07-19__11-30-00.jpg	CAM11	7/19/2022 11:30	Caribou	1	0	Walking	FALSE	528	1	2
CAM13__2022-07-12__06-33-41.jpg	CAM13	7/12/2022 6:33	Arctic Fox	1	0	Running	FALSE	6	1	2
CAM13__2022-07-17__11-42-19.jpg	CAM13	7/17/2022 11:42	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM13__2022-07-19__03-14-58.jpg	CAM13	7/19/2022 3:14	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM14__2022-06-26__18-33-54.jpg	CAM14	6/26/2022 18:33	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM14__2022-07-03__21-19-52.jpg	CAM14	7/3/2022 21:19	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM14__2022-07-05__20-30-21.jpg	CAM14	7/5/2022 20:30	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM14__2022-07-06__23-27-03.jpg	CAM14	7/6/2022 23:27	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM14__2022-07-07__23-24-08.jpg	CAM14	7/7/2022 23:24	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM14__2022-07-17__19-14-10.jpg	CAM14	7/17/2022 19:14	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM15__2022-06-28__05-06-26.jpg	CAM15	6/28/2022 5:06	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM15__2022-07-14__01-59-53.jpg	CAM15	7/14/2022 1:59	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM15__2022-07-19__20-54-01.jpg	CAM15	7/19/2022 20:54	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM15__2022-07-20__19-47-01.jpg	CAM15	7/20/2022 19:47	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM16__2022-06-27__04-22-18.jpg	CAM16	6/27/2022 4:22	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM16__2022-07-09__00-54-54.jpg	CAM16	7/9/2022 0:54	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM16__2022-07-12__09-45-56.jpg	CAM16	7/12/2022 9:45	Caribou	1	0	Walking	FALSE	0	1	1
CAM16__2022-07-12__19-55-14.jpg	CAM16	7/12/2022 19:55	Arctic Ground Squirrel	1	0	Running	FALSE	0	1	1
CAM16__2022-07-13__02-00-27.jpg	CAM16	7/13/2022 2:00	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM16__2022-07-17__19-41-28.jpg	CAM16	7/17/2022 19:41	Arctic Fox	1	0	Walking	FALSE	17	1	2
CAM17__2022-07-14__10-39-44.jpg	CAM17	7/14/2022 10:39	Caribou	0	1	Walking	FALSE	0	1	1
CAM18__2022-07-07__07-00-00.jpg	CAM18	7/7/2022 7:0	Uncategorized Bird	1	0	Standing	FALSE	0	1	1
CAM18__2022-07-08__07-03-01.jpg	CAM18	7/8/2022 7:3	Arctic Fox	1	0	Walking	FALSE	754	1	2
CAM19__2022-06-26__02-54-45.jpg	CAM19	6/26/2022 2:54	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM19__2022-07-04__00-17-11.jpg	CAM19	7/4/2022 0:17	Arctic Fox	1	0	Standing	FALSE	0	1	1
CAM19__2022-07-09__02-49-00.jpg	CAM19	7/9/2022 2:49	Arctic Fox	1	0	Running	FALSE	85	1	2
CAM19__2022-07-17__03-01-07.jpg	CAM19	7/17/2022 3:01	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM19__2022-07-22__03-27-01.jpg	CAM19	7/22/2022 3:27	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM20__2022-06-25__01-05-26.jpg	CAM20	6/25/2022 1:05	Caribou	1	0	Running	FALSE	5	1	2
CAM20__2022-06-27__20-26-21.jpg	CAM20	6/27/2022 20:26	Caribou	0	1	Walking	FALSE	5	1	2
CAM20__2022-07-07__07-05-15.jpg	CAM20	7/7/2022 7:5	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM20__2022-07-07__23-23-08.jpg	CAM20	7/7/2022 23:23	Caribou	1	0	Walking	FALSE	13	1	3
CAM20__2022-07-08__01-31-01.jpg	CAM20	7/8/2022 1:31	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM21__2022-06-26__03-04-53.jpg	CAM21	6/26/2022 3:04	Arctic Fox	1	0	Walking	FALSE	377	1	2
CAM21__2022-06-26__18-20-30.jpg	CAM21	6/26/2022 18:20	Caribou	0	1	Walking	FALSE	0	1	1

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM21__2022-07-07__23-33-33.jpg	CAM21	7/7/2022 23:33	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM21__2022-07-10__03-30-00.jpg	CAM21	7/10/2022 3:30	Arctic Fox	1	0	Running	TRUE	0	1	1
CAM21__2022-07-12__07-29-59.jpg	CAM21	7/12/2022 7:29	Caribou	1	0	Feeding	FALSE	21	1	5
CAM21__2022-07-15__14-30-00.jpg	CAM21	7/15/2022 14:30	Caribou	1	0	Feeding	TRUE	0	1	1
CAM21__2022-07-18__23-55-57.jpg	CAM21	7/18/2022 23:55	Arctic Hare	1	0	Walking	FALSE	0	1	1
CAM21__2022-07-20__04-29-59.jpg	CAM21	7/20/2022 4:29	Arctic Fox	1	0	Walking	FALSE	1,800	1	2
CAM22__2022-06-23__00-42-02.jpg	CAM22	6/23/2022 0:42	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM22__2022-06-24__04-17-51.jpg	CAM22	6/24/2022 4:17	Caribou	0	1	Running	FALSE	0	1	1
CAM22__2022-07-06__23-35-06.jpg	CAM22	7/6/2022 23:35	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM22__2022-07-07__01-47-10.jpg	CAM22	7/7/2022 1:47	Arctic Hare	1	0	Running	FALSE	0	1	1
CAM22__2022-07-13__21-20-30.jpg	CAM22	7/13/2022 21:20	Caribou	1	0	Running	FALSE	31	1	2
CAM22__2022-07-19__12-44-38.jpg	CAM22	7/19/2022 12:44	Caribou	0	1	Running	TRUE	0	1	1
CAM25__2022-06-22__21-00-00.jpg	CAM25	6/22/2022 21:00	Caribou	1	0	Standing	FALSE	0	1	1
CAM25__2022-06-23__04-26-27.jpg	CAM25	6/23/2022 4:26	Caribou	0	1	Walking	FALSE	0	1	1
CAM27__2022-06-22__23-03-21.jpg	CAM27	6/22/2022 23:03	Caribou	1	0	Standing	FALSE	38	1	4
CAM27__2022-06-25__08-19-13.jpg	CAM27	6/25/2022 8:19	Caribou	0	1	Walking	FALSE	0	1	1
CAM27__2022-06-29__19-13-32.jpg	CAM27	6/29/2022 19:13	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM27__2022-07-01__08-30-51.jpg	CAM27	7/1/2022 8:30	Arctic Fox	1	0	Walking	FALSE	193	1	2
CAM28__2022-06-24__00-30-57.jpg	CAM28	6/24/2022 0:30	Caribou	0	1	Running	TRUE	0	1	1
CAM28__2022-06-24__01-51-27.jpg	CAM28	6/24/2022 1:51	Caribou	0	1	Running	TRUE	0	1	1
CAM28__2022-06-24__06-59-59.jpg	CAM28	6/24/2022 6:59	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM28__2022-06-24__09-43-06.jpg	CAM28	6/24/2022 9:43	Arctic Fox	1	0	Running	TRUE	0	1	1
CAM28__2022-06-26__23-20-21.jpg	CAM28	6/26/2022 23:20	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM28__2022-06-29__03-35-18.jpg	CAM28	6/29/2022 3:35	Arctic Fox	1	0	Running	TRUE	0	1	1
CAM28__2022-07-02__05-51-40.jpg	CAM28	7/2/2022 5:51	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM28__2022-07-03__20-37-06.jpg	CAM28	7/3/2022 20:37	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM28__2022-07-15__18-02-34.jpg	CAM28	7/15/2022 18:02	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM28__2022-07-17__09-53-15.jpg	CAM28	7/17/2022 9:53	Caribou	1	0	Running	TRUE	0	1	1
CAM28__2022-07-19__00-38-02.jpg	CAM28	7/19/2022 0:38	Arctic Hare	1	0	Walking	FALSE	0	1	1
CAM29__2022-06-23__18-02-19.jpg	CAM29	6/23/2022 18:02	Caribou	1	0	Walking	FALSE	0	1	1
CAM29__2022-06-25__05-29-59.jpg	CAM29	6/25/2022 5:29	Uncategorized Bird	0	1	Walking	TRUE	0	1	1
CAM29__2022-07-13__11-21-10.jpg	CAM29	7/13/2022 11:21	Caribou	1	0	Walking	FALSE	501	1	3
CAM29__2022-07-13__19-04-04.jpg	CAM29	7/13/2022 19:04	Caribou	0	1	Walking	FALSE	0	1	1
CAM29__2022-07-19__09-29-59.jpg	CAM29	7/19/2022 9:29	Uncategorized Bird	1	0	Walking	TRUE	0	1	1
CAM30__2022-06-23__11-39-12.jpg	CAM30	6/23/2022 11:39	Arctic Ground Squirrel	1	0	Walking	FALSE	0	1	1
CAM30__2022-06-28__07-50-43.jpg	CAM30	6/28/2022 7:50	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM30__2022-06-29__10-54-53.jpg	CAM30	6/29/2022 10:54	Arctic Ground Squirrel	1	0	Walking	FALSE	5	1	2
CAM30__2022-07-01__12-30-00.jpg	CAM30	7/1/2022 12:30	Uncategorized Bird	1	0	Standing	FALSE	0	1	1
CAM30__2022-07-12__16-36-04.jpg	CAM30	7/12/2022 16:36	Caribou	1	0	Running	TRUE	0	1	1

Appendix A: Data from Wildlife Cameras

Image ID	Camera Location	Date/Time Captured	Species	Number Adults	Number Juvenile	Behaviour	Crossed	Event Duration (seconds)	Event Groupsize	Event Observations
CAM30__2022-07-13__07-13-12.jpg	CAM30	7/13/2022 7:13	Arctic Fox	1	0	Walking	FALSE	301	1	11
CAM30__2022-07-14__09-31-37.jpg	CAM30	7/14/2022 9:31	Arctic Ground Squirrel	1	0	Walking	FALSE	0	1	1
CAM30__2022-07-21__07-07-40.jpg	CAM30	7/21/2022 7:07	Arctic Fox	1	0	Running	FALSE	106	1	7
CAM31__2022-06-29__14-38-39.jpg	CAM31	6/29/2022 14:38	Uncategorized Bird	1	0	Walking	FALSE	0	1	1
CAM31__2022-07-15__17-29-59.jpg	CAM31	7/15/2022 17:29	Caribou	1	0	Walking	FALSE	0	1	1
CAM31__2022-07-16__17-26-57.jpg	CAM31	7/16/2022 17:26	Uncategorized Bird	1	0	Walking	FALSE	0	1	1
CAM31__2022-07-17__09-58-48.jpg	CAM31	7/17/2022 9:58	Arctic Fox	1	0	NA	FALSE	0	1	1
CAM31__2022-07-19__14-44-59.jpg	CAM31	7/19/2022 14:44	Caribou	1	0	Running	FALSE	0	1	1
CAM34__2022-06-22__23-47-33.jpg	CAM34	6/22/2022 23:47	Arctic Hare	1	0	Running	TRUE	0	1	1
CAM34__2022-06-23__03-59-59.jpg	CAM34	6/23/2022 3:59	Caribou	1	0	Walking	TRUE	774	1	7
CAM34__2022-06-23__05-15-09.jpg	CAM34	6/23/2022 5:15	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM34__2022-06-23__18-46-59.jpg	CAM34	6/23/2022 18:46	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM34__2022-06-23__20-17-26.jpg	CAM34	6/23/2022 20:17	Arctic Fox	1	0	Walking	FALSE	3,584	1	9
CAM34__2022-07-09__14-48-34.jpg	CAM34	7/9/2022 14:48	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM34__2022-07-10__08-01-26.jpg	CAM34	7/10/2022 8:1	Arctic Ground Squirrel	1	0	Running	TRUE	0	1	1
CAM34__2022-07-14__07-20-37.jpg	CAM34	7/14/2022 7:20	Arctic Ground Squirrel	1	0	Running	FALSE	0	1	1
CAM34__2022-07-19__00-43-17.jpg	CAM34	7/19/2022 0:43	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM34__2022-07-21__20-14-51.jpg	CAM34	7/21/2022 20:14	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM38__2022-06-25__23-07-57.jpg	CAM38	6/25/2022 23:07	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM38__2022-06-25__23-58-13.jpg	CAM38	6/25/2022 23:58	Arctic Fox	1	0	Standing	FALSE	8	1	3
CAM38__2022-06-29__01-49-18.jpg	CAM38	6/29/2022 1:49	Arctic Fox	1	0	Walking	FALSE	0	1	1
CAM38__2022-07-11__21-59-59.jpg	CAM38	7/11/2022 21:59	Uncategorized Bird	1	0	NA	FALSE	99	1	2
CAM39__2022-06-25__09-59-59.jpg	CAM39	6/25/2022 9:59	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM39__2022-06-25__17-04-48.jpg	CAM39	6/25/2022 17:04	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM39__2022-07-01__09-42-47.jpg	CAM39	7/1/2022 9:42	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM39__2022-07-05__15-45-42.jpg	CAM39	7/5/2022 15:45	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM39__2022-07-14__02-58-38.jpg	CAM39	7/14/2022 2:58	Arctic Fox	1	0	Walking	TRUE	0	1	1
CAM39__2022-07-19__17-59-59.jpg	CAM39	7/19/2022 17:59	Arctic Ground Squirrel	1	0	Standing	FALSE	0	1	1
CAM40__2022-06-25__20-24-18.jpg	CAM40	6/25/2022 20:24	Caribou	1	0	Walking	FALSE	0	1	1
CAM40__2022-06-30__11-19-02.jpg	CAM40	6/30/2022 11:19	Uncategorized Bird	1	0	Flying	FALSE	0	1	1
CAM40__2022-07-12__06-37-29.jpg	CAM40	7/12/2022 6:37	Caribou	1	0	Walking	FALSE	4	1	2
CAM40__2022-07-12__14-30-00.jpg	CAM40	7/12/2022 14:30	Arctic Ground Squirrel	1	0	Running	FALSE	0	1	1
CAM40__2022-07-21__21-53-55.jpg	CAM40	7/21/2022 21:53	Arctic Fox	1	0	Running	FALSE	0	1	1
CAM10__2022-06-28__06-48-29.jpg	CAM10	6/28/2022 6:48	Arctic Fox	0	0	NA	FALSE	0	0	1
CAM13__2022-06-26__02-29-59.jpg	CAM13	6/26/2022 2:29	Caribou	0	0	NA	FALSE	0	0	1
CAM16__2022-06-24__03-59-59.jpg	CAM16	6/24/2022 3:59	Uncategorized Bird	0	0	NA	FALSE	0	0	1
CAM27__2022-07-01__16-33-17.jpg	CAM27	7/1/2022 16:33	Uncategorized Bird	0	0	Walking	FALSE	0	0	1

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APPENDIX L

Caribou Observations, 2022

Date	Time	Number	Composition Population	moving	Comments	Closest Distance from Site/AWAR (m)	Location direction	Location
2022-06-19	14:00	1500	-	-	Caribou Migration Alert - June 19 2022 2:00 PM	4500	North	Ind. Site
2022-06-19	14:00	1500	-	-	Caribou Migration Alert - June 19 2022 2:00 PM	4500	West	Portal 1
2022-06-19	14:00	2000	-	-	Caribou Migration Alert - June 19 2022 2:00 PM	5000	East	KM23
2022-06-19	18:00	1500	-	-	Caribou Migration Alert - June 19 2022 6:00 PM	4000	North	Portal 1
2022-06-19	18:00	1000	-	-	Caribou Migration Alert - June 19 2022 6:00 PM	5000	Northwest	Ind. Site
2022-06-19	18:00	1500	-	-	Caribou Migration Alert - June 19 2022 6:00 PM	4500	West	Portal 1
2022-06-19	18:00	2500	-	-	Caribou Migration Alert - June 19 2022 6:00 PM	5000	East	KM23
2022-06-19	18:00	1000	-	-	Caribou Migration Alert - June 19 2022 6:00 PM	5500	East	Portal 1
2022-06-19	18:00	250	-	-	Caribou Migration Alert - June 19 2022 6:00 PM	4500	Northeast	Portal 1
2022-06-20	6:00	1500	-	-	Caribou Migration Alert - June 20 2022 6:00 AM	5000	North	Portal 1
2022-06-20	6:00	1500	-	-	Caribou Migration Alert - June 20 2022 6:00 AM	4500	West	Portal 1
2022-06-20	6:00	2500	-	-	Caribou Migration Alert - June 20 2022 6:00 AM	5000	East	KM23
2022-06-20	6:00	1000	-	-	Caribou Migration Alert - June 20 2022 6:00 AM	5500	East	Portal 1
2022-06-20	6:00	1000	-	-	Caribou Migration Alert - June 20 2022 6:00 AM	4500	Northeast	Portal 1
2022-06-20	11:00	1	1 adult male	Running South	not crossing rd	150	West	KM22
2022-06-20	12:00	1500	-	-	Caribou Migration Alert - June 20 2022 12:00 PM	5000	North	Portal 1
2022-06-20	12:00	1500	-	-	Caribou Migration Alert - June 20 2022 12:00 PM	4500	West	Portal 1
2022-06-20	12:00	500	-	-	Caribou Migration Alert - June 20 2022 12:00 PM	5500	East	KM 20
2022-06-20	12:00	1000	-	-	Caribou Migration Alert - June 20 2022 12:00 PM	5000	East	KM 21
2022-06-20	12:00	1000	-	-	Caribou Migration Alert - June 20 2022 12:00 PM	400	Northeast	Portal 1
2022-06-20	12:00	500	-	-	Caribou Migration Alert - June 20 2022 12:00 PM	200	Northeast	Portal 1
2022-06-20	18:00	500	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	5000	North	Portal 1
2022-06-20	18:00	100	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	4000	North	Portal 1
2022-06-20	18:00	500	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	7500	Northwest	Portal 1
2022-06-20	18:00	1000	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	4000	West	Portal 1
2022-06-20	18:00	1500	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	5000	East	KM20
2022-06-20	18:00	500	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	4500	Northeast	Portal 1
2022-06-20	18:00	500	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	250	Northeast	Portal 1
2022-06-20	18:00	100	-	-	Caribou Migration Alert - June 20 2022 6:00 PM	4500	Northeast	Portal 1
2022-06-20	20:00	9	female; 2 male juvenile;	South	walking along shoreline	150	Northeast	CP1
2022-06-21	6:00	1000	-	-	Caribou Migration Alert - June 21 2022 6:00 AM	4000	West	KM28
2022-06-21	6:00	2500	-	-	Caribou Migration Alert - June 21 2022 6:00 AM	3500	West	KM20
2022-06-21	6:00	500	-	-	Caribou Migration Alert - June 21 2022 6:00 AM	4000	East	KM19
2022-06-21	6:00	1000	-	-	Caribou Migration Alert - June 21 2022 6:00 AM	3500	East	KM21
2022-06-21	6:00	1000	-	-	Caribou Migration Alert - June 21 2022 6:00 AM	3000	Northeast	Portal 1
2022-06-21	6:00	500	-	-	Caribou Migration Alert - June 21 2022 6:00 AM	2000	Northeast	Portal 1
2022-06-21	10:30	15	-	-	15 standing crossed west-east / east-west / west-east while 2 were in alert m	0		KM 22
2022-06-21	12:00	1000	-	-	Caribou Migration Alert - June 21 2022 12:00 PM	150	West	KM25
2022-06-21	12:00	1000	-	-	Caribou Migration Alert - June 21 2022 12:00 PM	2500	West	KM20
2022-06-21	12:00	50	-	-	Caribou Migration Alert - June 21 2022 12:00 PM	150	West	KM22
2022-06-21	12:00	1000	-	-	Caribou Migration Alert - June 21 2022 12:00 PM	5000	East	KM20
2022-06-21	12:00	15	-	-	Caribou Migration Alert - June 21 2022 12:00 PM	250	Northeast	Portal 1
2022-06-21	12:00	1000	-	-	Caribou Migration Alert - June 21 2022 12:00 PM	500	Northeast	Portal 1
2022-06-21	18:00	10000	-	-	Caribou Migration Alert - June 21 2022 6:00 PM	500	West	KM25
2022-06-21	18:00	200	-	-	Caribou Migration Alert - June 21 2022 6:00 PM	3000	West	KM21
2022-06-21	18:00	25	-	-	Caribou Migration Alert - June 21 2022 6:00 PM	250	East	Portal 1
2022-06-21	18:00	50	-	-	Caribou Migration Alert - June 21 2022 6:00 PM	350	Northeast	Portal 1
2022-06-21	18:00	200	-	-	Caribou Migration Alert - June 21 2022 6:00 PM	300	Northeast	Portal 1
2022-06-22	6:00	100	-	-	Caribou Migration Alert - June 22 2022 6:00 AM	4000	West	Portal 1
2022-06-22	6:00	1000	-	-	Caribou Migration Alert - June 22 2022 6:00 AM	200	West	KM25
2022-06-22	6:00	50	-	-	Caribou Migration Alert - June 22 2022 6:00 AM	0	-	KM28
2022-06-22	6:00	50	-	-	Caribou Migration Alert - June 22 2022 6:00 AM	150	West	Portal 1
2022-06-22	9:00	13	1 YOY	South	Standing	0	East	CP1
2022-06-22	9:00	20	Female adult	South	Caribou crossing AWAR	0	East	KM26
2022-06-22	9:00	30	-	South		-	-	KM26
2022-06-22	9:00	-	-	East	Tracks and pellets of caribou crossing AWAR at steep area	0	-	KM24
2022-06-22	9:00	1	Female adult	-	1 caribou alone crossing AWAR	0	-	KM23
2022-06-22	11:30	5	-	-	Caribou Migration Alert - June 22 2022 12:00 PM; East side of CP1	0	East	CP1
2022-06-22	11:30	4	-	-	Caribou Migration Alert - June 22 2022 12:00 PM; Water intake	0	-	Water intake
2022-06-22	12:00	50	-	-	Caribou Migration Alert - June 22 2022 12:00 PM	0	-	KM25
2022-06-22	12:00	3	-	-	Caribou Migration Alert - June 22 2022 12:00 PM	0	-	KM28
2022-06-22	16:45	5	-	-	East side of CP1	0	East	CP1
2022-06-22	18:00	3	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	400	Northwest	Portal 1
2022-06-22	18:00	1000	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	3500	West	KM28
2022-06-22	18:00	100	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	250	-	KM25
2022-06-22	18:00	5	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	0	-	KM17
2022-06-22	18:00	300	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	200	-	KM22
2022-06-22	18:00	10	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	2500	-	KM29
2022-06-22	18:00	8	-	-	Caribou Migration Alert - June 22 2022 6:00 PM	200	-	Portal 1
2022-06-23	6:00	2500	-	-	Caribou Migration Alert - June 23 2022 6:00 AM	2000	West	KM25
2022-06-23	6:00	50	-	-	Caribou Migration Alert - June 23 2022 6:00 AM	0	West	KM25
2022-06-23	6:00	75	-	-	Caribou Migration Alert - June 23 2022 6:00 AM	0	-	KM22
2022-06-23	6:00	1000	-	-	Caribou Migration Alert - June 23 2022 6:00 AM	300	East	KM27
2022-06-23	10:00	20	20 female adult	West	Caribou behaviour study; were disturbed by 4 ATV	250	West	KM28
2022-06-23	10:00	1000	-	-		no info	West	KM27
2022-06-23	10:00	-	-	-	Hunter had a kill East of KM25 about 200 m away, most likely female hunted	200	East	KM24
2022-06-23	10:00	50	-	-		700	West	KM22
2022-06-23	10:00	200	-	-		2000	East	KM22
2022-06-23	10:00	1500	-	-		2000	East	KM19
2022-06-23	10:00	1	1 female adult	East	1 caribou alone crossing AWAR without any hesitation	0	-	KM18
2022-06-23	12:00	300	-	-	Caribou Migration Alert - June 23 2022 12:00 PM	2500	West	KM28
2022-06-23	12:00	27	-	-	Caribou Migration Alert - June 23 2022 12:00 PM	0	-	KM28
2022-06-23	12:00	2000	-	-	Caribou Migration Alert - June 23 2022 12:00 PM	3500	West	KM22
2022-06-23	12:00	2000	-	-	Caribou Migration Alert - June 23 2022 12:00 PM	2500	East	KM19
2022-06-23	12:00	300	-	-	Caribou Migration Alert - June 23 2022 12:00 PM	1500	East	KM23
2022-06-23	16:30	2000	-	Chaos	ATV. Herd were then hunted by ATVs	750	East	KM21
2022-06-23	16:30	4	2 fem adult; 2 YOY	East	Caribou crossing AWAR	0	East	KM21
2022-06-23	16:30	1	YOY	South	YOY of female that was killed. Reached the herd	50	East	KM21
2022-06-23	18:00	150	-	-	Caribou Migration Alert - June 23 2022 6:00 PM	150	West	KM23
2022-06-23	18:00	2000	-	-	Caribou Migration Alert - June 23 2022 6:00 PM	3000	East	KM20
2022-06-23	18:00	5	-	-	Caribou Migration Alert - June 23 2022 6:00 PM	100	East	KM22
2022-06-23	18:00	100	-	-	Caribou Migration Alert - June 23 2022 6:00 PM	1000	East	KM29
2022-06-24	6:00	100	-	-	Caribou Migration Alert - June 24 2022 6:00 AM	3500	West	Portal 1
2022-06-24	6:00	30	-	-	Caribou Migration Alert - June 24 2022 6:00 AM	3000	West	KM22
2022-06-24	6:00	1000	-	-	Caribou Migration Alert - June 24 2022 6:00 AM	300	East	KM19
2022-06-24	6:00	300	-	-	Caribou Migration Alert - June 24 2022 6:00 AM	250	East	KM21
2022-06-24	8:39	200-500	Females with calves	-	Caribou behaviour study	550	East	KM19
2022-06-24	10:30	200	-	East to West	but driver and herd were surprised. Caribou turn around.	0	East	KM16
2022-06-24	10:30	-	-	-	Caribou crossing	0	-	KM25
2022-06-24	12:00	200	-	-	Caribou Migration Alert - June 24 2022 12:00 PM	50	West	KM23
2022-06-24	13:54	100	Females with calves	-	crossing at 3 min on road at KM19; 3 caribou crossing road West to East at 6	0	West	KM20
2022-06-24	18:00	300	-	-	Caribou Migration Alert - June 24 2022 6:00 PM	1500	West	KM20
2022-06-24	18:00	2000	-	East to West	Caribou Migration Alert - June 24 2022 6:00 PM	1000	East	KM15
2022-06-24	18:00	300	-	-	Caribou Migration Alert - June 24 2022 6:00 PM	4000	East	KM20

2022-06-25	6:00	1000	-	-	Caribou Migration Alert - June 25 2022 6:00 AM	4000	West	KM22
2022-06-25	6:00	300	-	-	Caribou Migration Alert - June 25 2022 6:00 AM	100	West	KM17
2022-06-25	8:15	1	Female	Southeast	Caribou behaviour study; Caribou running parallele to road 24 min; Lonely ca	300	West	KM20
2022-06-25	9:00	-	-	South	down the road. Culverts nb 8-9 area	0	-	KM18
2022-06-25	9:06	300	Female with calves	-	Caribou behaviour study; Caribou crossing the road at 6 min	30	West	KM18
2022-06-25	9:30	300	-	South	Caribou behaviour study	0	West	KM18
2022-06-25	9:46	300	Female with calves	-	Caribou behaviour study	30	West	KM18
2022-06-25	12:00	100	-	-	Caribou Migration Alert - June 25 2022 12:00 PM	6000	West	KM28
2022-06-25	12:00	30	-	-	Caribou Migration Alert - June 25 2022 12:00 PM	5500	West	KM28
2022-06-25	12:00	300	-	South	Caribou Migration Alert - June 25 2022 12:00 PM; Caribou behaviour study	700	East	KM12
2022-06-25	12:02	1	Female		Caribou behaviour study	50	West	KM17
2022-06-25	12:19					900		
2022-06-25	13:30	10	Female	South	Caribou behaviour study	700	East	KM12
2022-06-25	14:30	10	-	-	Caribou behaviour study; caribou laying down	400	West	KM12
2022-06-25	14:30	5000	-	-	Caribou behaviour study; too far to see what caribou are doing	2000	East	KM12
2022-06-25	14:30	1000	-	North	ATVs. Herd scattered and were divided in smaller groups.	1000	East	KM12
2022-06-25	18:00	300	-	-	Caribou Migration Alert - June 25 2022 6:00 PM	100	West	KM17
2022-06-25	18:00	10	-	-	Caribou Migration Alert - June 25 2022 6:00 PM; Caribou behaviour study	400	East	KM12
2022-06-25	18:00	1000	-	North	Caribou Migration Alert - June 25 2022 6:00 PM; Caribou behaviour study	800	West	KM12
2022-06-25	18:00	2000	-	-	Caribou Migration Alert - June 25 2022 6:00 PM; Caribou behaviour study	5000	West	KM12
2022-06-25	18:00	10	-	-	Caribou Migration Alert - June 25 2022 6:00 PM	5000	East	KM27
2022-06-26	6:00	100	-	-	Caribou Migration Alert - June 26 2022 6:00 AM	5500	East	WRSF-1
2022-06-26	6:00	300	-	-	Caribou Migration Alert - June 26 2022 6:00 AM	2000	East	KM17
2022-06-26	8:00	2000	-	-	Caribou Migration Alert - June 26 2022 9:30 AM; Caribou behaviour study	4500	North	WRSF-1
2022-06-26	9:00	800	-	-	Caribou Migration Alert - June 26 2022 12:00 PM; Caribou behaviour study	3500	West	KM20
2022-06-26	9:00	1	Female adult	-	Carcases of Female found	50	East	KM19
2022-06-26	9:00	1	YOY	-	1 YOY lost, possibly female from kill; Caribou behaviour study	100	East	KM19
2022-06-26	9:20	150	-	North	Caribou Migration Alert - June 26 2022 12:00 PM	1600	West	KM18
2022-06-26	12:00	2000	-	-	Caribou Migration Alert - June 26 2022 12:00 PM	4000	North	WRSF-1
2022-06-26	13:30	600	-	South	Caribou behaviour study; Witness hunting live	1100	West	KM18
2022-06-26	15:30	30	-	-	Caribou behaviour study; Post hunting period; Herd not found	2000	West	KM18
2022-06-26	16:30	2000	-	-	Caribou Migration Alert - June 26 2022 6:00 PM; Caribou behaviour study	5000	North	WRSF-1
2022-06-26	18:00	50	-	-	Caribou Migration Alert - June 26 2022 6:00 PM	7000	East	Portal 1
2022-06-26	18:00	50	-	-	Caribou Migration Alert - June 26 2022 6:00 PM	8000	East	Portal 1
2022-06-26	18:00	2000	-	-	Caribou Migration Alert - June 26 2022 6:00 PM	5000	North	Portal 1
2022-06-27	6:00	2000	-	-	Caribou Migration Alert - June 27 2022 6:00 AM	4500	West	Portal 1
2022-06-27	12:00	2000	-	-	Caribou Migration Alert - June 27 2022 12:00 PM	4500	West	Portal 1
2022-06-27	12:00	3000	-	-	Caribou Migration Alert - June 27 2022 12:00 PM	5000	West	KM24
2022-06-27	12:00	5	-	-	Caribou Migration Alert - June 27 2022 12:00 PM	100	East	KM19
2022-06-27	18:00	1000	-	-	Caribou Migration Alert - June 27 2022 6:00 PM	4000	West	KM27
2022-06-27	18:00	100	-	-	Caribou Migration Alert - June 27 2022 6:00 PM	3000	West	KM27
2022-06-27	18:00	50	-	-	Caribou Migration Alert - June 27 2022 6:00 PM	1500	West	KM27
2022-06-27	18:00	3000	-	-	Caribou Migration Alert - June 27 2022 6:00 PM	2500	West	KM 21
2022-06-28	6:00	100	-	-	Caribou Migration Alert - June 28 2022 6:00 AM	5000	North	Portal 1
2022-06-28	6:00	100	-	-	Caribou Migration Alert - June 28 2022 6:00 AM	4000	West	Portal 1
2022-06-28	6:00	100	-	-	Caribou Migration Alert - June 28 2022 6:00 AM	250	West	KM10
2022-06-28	6:00	2500	-	-	Caribou Migration Alert - June 28 2022 6:00 AM	250	West	KM13
2022-06-28	6:00	500	-	-	Caribou Migration Alert - June 28 2022 6:00 AM	150	West	KM13
2022-06-28	10:00	200	-	-	Convoy to Itivia	2000	West	KM23
2022-06-28	10:30	1000	-	-	Convoy to Itivia	1000	West	KM11.5
2022-06-28	10:30	3000	-	-	Convoy to Itivia	1000	West	KM10
2022-06-28	11:00	100	-	-	Caribou Migration Alert - June 28 2022 11:00 PM; Level 2 called at 11:15	5000	West	KM27
2022-06-28	11:00	100	-	-	Caribou Migration Alert - June 28 2022 11:00 PM; Level 2 called at 11:15	200	West	KM23
2022-06-28	11:00	50	-	-	Caribou Migration Alert - June 28 2022 11:00 PM; Level 2 called at 11:15	50	West	KM22
2022-06-28	11:00	3000	-	-	Caribou Migration Alert - June 28 2022 11:00 PM; Level 2 called at 11:15	250	West	KM13
2022-06-28	14:45	5000	-	-	Convoy to Itivia	800	West	KM9
2022-06-28	15:10	2	1 female, 1 YOY	Northeast	Convoy to Itivia; calf tired; the femal was getting further to the convoy but ru	50	East	KM9
2022-06-28	15:30	1	Juvenile	North	Convoy to Itivia; tried to cross twice, but turn around, walk parallele to the ro	50	East	KM22
2022-06-28	18:00	4000	-	-	Caribou Migration Alert - June 28 2022 18:00 PM	150	West	KM09
2022-06-29	3:00	100	-	Northeast	Gatehouse	50	West	KM11.5
2022-06-29	4:00	4000	-	-	Caribou Migration Alert - June 29 2022 06:00 AM; Resting between km 11 and	0	West	KM13
2022-06-29	11:00	4000	-	-	Caribou Migration Alert - June 29 2022 12:00 PM	50	West	KM13
2022-06-29	12:00	50			Caribou Migration Alert - June 29 2022 12:00 PM	50	West	KM20
2022-06-29	12:00	500	-	-	Caribou Migration Alert - June 29 2022 12:00 PM	6000	West	KM25
2022-06-29	12:00	800	-	-	Caribou Migration Alert - June 29 2022 12:00 PM	150	West	KM19
2022-06-29	12:00	30	-	-	Caribou Migration Alert - June 29 2022 12:00 PM	150	West	KM16
2022-06-29	12:00	12	-	-	Caribou Migration Alert - June 29 2022 12:00 PM	200	East	KM26
2022-06-29	16:00	4000	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	150	East	KM14
2022-06-29	16:00	30	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	6500	Northwest	Portal 1
2022-06-29	16:00	200	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	6000	West	KM26
2022-06-29	16:00	500	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	4000	West	KM23
2022-06-29	16:00	200	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	0	East	KM19
2022-06-29	16:00	30	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	150	West	KM17
2022-06-29	16:00	100	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	2000	East	KM11
2022-06-29	16:00	100	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	3000	East	KM11
2022-06-29	16:00	50	-	-	Caribou Migration Alert - June 29 2022 6:00 PM	1500	East	KM24
2022-06-30	3:50	5	-	-	Caribou Migration Alert - June 30 2022 6:00 AM	2000	West	KM18
2022-06-30	3:55	11	7 adult; 4YOY	-	Caribou Migration Alert - June 30 2022 6:00 AM	500	East	KM14
2022-06-30	9:00	2	2 adult female	West	2 caribou crossing from east to west at KM11.5	0	West	KM11.5
2022-06-30	11:30	200	-	-	Caribou Migration Alert - June 30 2022 12:00 PM	4000	Northeast	Portal 1
2022-06-30	11:30	1000	-	-	Caribou Migration Alert - June 30 2022 12:00 PM	5000	East	KM27
2022-06-30	18:00	200	-	-	Caribou Migration Alert - June 30 2022 6:00 PM	4500	Northeast	Portal 1
2022-06-30	18:00	200	-	-	Caribou Migration Alert - June 30 2022 6:00 PM	6000	West	Portal 1
2022-06-30	18:00	1000	-	-	Caribou Migration Alert - June 30 2022 6:00 PM	7000	West	KM25
2022-06-30	18:00	300	-	-	Caribou Migration Alert - June 30 2022 6:00 PM	7500	East	Portal 1
2022-07-01	6:00	100	-	-	Caribou Migration Alert - July 01 2022 6:00 AM	4500	West	KM26
2022-07-01	6:00	1	-	-	where the informatin is from?	150	West	KM11
2022-07-01	9:00	0	-	-	Caribou Migration Alert - July 01 2022 9:00 AM- No caribou observed	-	-	-
2022-07-01	12:00	0	-	-	Caribou Migration Alert - July 01 2022 12:00 PM- No caribou observed	-	-	-
2022-07-01	18:00	6	-	-	Caribou Migration Alert - July 01 2022 6:00 PM	4500	East	KM23
2022-07-02	3:42	15	-	South	Caribou Migration Alert - July 02 2022 6:00 AM	1500	West	KM20
2022-07-02	4:36	15	-	East	Caribou Migration Alert - July 02 2022 6:00 AM	300	East	KM 26
2022-07-02	4:58	3	-	North-West	Caribou Migration Alert - July 02 2022 6:00 AM	5050	South-West	Portal 1/Industriel Site
2022-07-02	12:00	8	-	-	Caribou Migration Alert - July 02 2022 12:00 PM	5000	West	KM30
2022-07-02	18:00	0	-	-	Caribou Migration Alert - July 02 2022 6:00 PM; no caribou observed	-	-	-
2022-07-03	3:52	1	-	-	Caribou Migration Alert - July 03 2022 6:00 AM	100	East	KM13
2022-07-03	4:32	500	-	North	Caribou Migration Alert - July 03 2022 6:00 AM	350	West	KM21
2022-07-03	4:42	1	-	North	Caribou Migration Alert - July 03 2022 6:00 AM	300	East	KM27
2022-07-03	8:30	500	-	-	Caribou Migration Alert - July 03 2022 8:30 AM	1000	West	KM27
2022-07-03	12:00	500	-	-	Caribou Migration Alert - July 03 2022 12:00 PM	3000	West	KM27
2022-07-03	12:00	100	-	-	Caribou Migration Alert - July 03 2022 12:00 PM	1500	East	KM29
2022-07-03	18:00	500	-	-	Caribou Migration Alert - July 03 2022 18:00 PM	6000	Northwest	Portal 1
2022-07-04	4:55	500	-	-	Caribou Migration Alert - July 04 2022 6:00 AM	3000	North	Industriel pad/Portal 1
2022-07-04	12:00	500	-	NNE	Caribou Migration Alert - July 04 2022 12:00PM; close to emultion pad	3800	NNE	Industrial pad
2022-07-04	18:00	500	-	-	Caribou Migration Alert - July 04 2022 6:00PM	5000	Northwest	Portal 1

2022-07-05	3:52	3	1 male; 2 adult female	East	Caribou Migration Alert - July 05 2022 6:00 AM	200	East	km12
2022-07-05	5:15	500	-	NW	Caribou Migration Alert - July 05 2022 6:00 AM	4800	NW	Industrial pad
2022-07-05	9:30	500	-	-	Caribou Migration Alert - July 05 2022 9:30 AM	6000	West	Portal1
2022-07-05	12:00	0	-	-	Caribou Migration Alert - July 05 2022 12:00 PM; No caribou observed	-	-	-
2022-07-05	18:00	0	-	-	Caribou Migration Alert - July 05 2022 6:00 PM; No caribou observed	-	-	-
2022-07-06	6:00	0	-	-	Caribou Migration Alert - July 06 2022 6:00 AM; No caribou observed	-	-	-
2022-07-06	12:00	0	-	-	Caribou Migration Alert - July 06 2022 12:00 PM; No caribou observed	-	-	-
2022-07-06	17:45	0	-	-	Caribou Migration Alert - July 06 2022 5:45 PM; No caribou observed	-	-	-
2022-07-07	6:00	0	-	-	Caribou Migration Alert - July 07 2022 6:00 AM; No caribou observed	-	-	-
2022-07-07	12:00	200	-	-	Caribou Migration Alert - July 07 2022 12:00 PM	8000	Northwest	Portal1
2022-07-07	18:00	0	-	-	Caribou Migration Alert - July 07 2022 6:00 PM; No caribou observed	-	-	-
2022-07-08	6:00	0	-	-	Caribou Migration Alert - July 08 2022 6:00 AM; No caribou observed	-	-	-
2022-07-08	12:00	0	-	-	Caribou Migration Alert - July 08 2022 12:00 PM; No caribou observed	-	-	-
2022-07-09	6:00	0	-	-	Caribou Migration Alert - July 09 2022 6:00 AM; No caribou observed	-	-	-
2022-07-09	12:00	0	-	-	Caribou Migration Alert - July 09 2022 12:00 PM; No caribou observed	-	-	-
2022-07-09	18:00	0	-	-	Caribou Migration Alert - July 09 2022 6:00 PM; No caribou observed	-	-	-
2022-07-10	6:00	0	-	-	Caribou Migration Alert - July 10 2022 6:00 AM; No caribou observed	-	-	-
2022-07-10	12:00	2000	-	-	Caribou Migration Alert - July 10 2022 12:00 PM	5000	East	KM23
2022-07-10	18:00	8000	-	-	Caribou Migration Alert - July 10 2022 6:00 PM	5000	East	KM20
2022-07-11	3:45	50000	-	South West	Caribou Migration Alert - July 11 2022 6:00 AM	1500 to 300	East	Km 15 to 12
2022-07-11	3:45	5000	-	West	Caribou Migration Alert - July 11 2022 6:00 AM	500	West	Km 12
2022-07-11	12:00	1000	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	0	East	KM14
2022-07-11	12:00	20	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	1000	West	KM14
2022-07-11	12:00	10000	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	500	West	KM12
2022-07-11	12:00	500	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	500	East	KM12
2022-07-11	12:00	2000	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	1500	East	KM12
2022-07-11	12:00	10000	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	0	East	KM09
2022-07-11	12:00	2000	-	-	Caribou Migration Alert - July 11 2022 12:00 PM	2000	East	KM09
2022-07-11	18:00	8000	-	-	Caribou Migration Alert - July 11 2022 18:00 PM	500	East	KM10-KM14
2022-07-11	18:00	2000	-	-	Caribou Migration Alert - July 11 2022 18:00 PM	300	East	KM09
2022-07-12	4:00	25000	-	North	Caribou Migration Alert - July 12 2022 6:00 AM	200	East	KM29
2022-07-12	4:00	5000	-	North	Caribou Migration Alert - July 12 2022 6:00 AM	2500	East	KM23
2022-07-12	4:00	2000	-	North	Caribou Migration Alert - July 12 2022 6:00 AM	1000	East	KM23
2022-07-12	4:00	3000	-	North	Caribou Migration Alert - July 12 2022 6:00 AM	1500	East	KM19
2022-07-12	12:00	25000	-	-	Caribou Migration Alert - July 12 2022 12:00 PM	200	East	KM26-29
2022-07-12	12:00	10000	-	-	Caribou Migration Alert - July 12 2022 12:00 PM	1500	West	KM25
2022-07-12	18:00	20000	-	-	Caribou Migration Alert - July 12 2022 6:00 PM	5000	North	Industrial pad
2022-07-12	18:00	40000	-	-	Caribou Migration Alert - July 12 2022 6:00 PM	3500	West	KM25
2022-07-12	18:00	5000	-	-	Caribou Migration Alert - July 12 2022 6:00 PM	0	East	KM26
2022-07-13	6:00	40000	-	-	Caribou Migration Alert - July 13 2022 6:00 AM	4500	West	KM 25
2022-07-13	6:00	350	-	-	Caribou Migration Alert - July 13 2022 6:00 AM	250	West	KM19
2022-07-13	12:00	40000	-	-	Caribou Migration Alert - July 13 2022 12:00 PM	6000	West	Portal1
2022-07-13	18:00	200	-	-	Caribou Migration Alert - July 13 2022 6:00 PM	5000	East	KM25
2022-07-13	21:30	200	-	Stationary	Email- Meliadine Gatehouse	3000	East	KM14
2022-07-13	22:30	500	-	Northwest	Email- Meliadine Gatehouse; There was another herd that came from the nor	2000	NNW	KM14
2022-07-14	6:00	500	-	-	Caribou Migration Alert - July 14 2022 06:00 AM	1000	West	KM17
2022-07-14	12:00	1500	-	-	Caribou Migration Alert - July 14 2022 12:00PM	300	West	KM17
2022-07-14	18:00	3500	-	-	Caribou Migration Alert - July 14 2022 6:00 PM	3000	East	KM18
2022-07-14	18:00	800	-	-	Caribou Migration Alert - July 14 2022 6:00 PM	5000	West	KM16
2022-07-15	6:00	-	-	-	Caribou Migration Alert - July 15 2022 06:00 AM; Poor visibility; no survey cor	-	-	-
2022-07-15	9:00	8000	-	-	Caribou Migration Alert - July 15 2022 09:00 AM	500	West	Portal 1
2022-07-15	12:00	2000	-	-	Caribou Migration Alert - July 15 2022 12:00 PM	3000	West	Portal 1
2022-07-15	12:00	1000	-	-	Caribou Migration Alert - July 15 2022 12:00 PM	700	West	KM30
2022-07-15	12:00	200	-	-	Caribou Migration Alert - July 15 2022 12:00 PM	1500	West	KM25
2022-07-15	12:00	500	-	-	Caribou Migration Alert - July 15 2022 12:00 PM	1000	West	KM18
2022-07-15	16:00	1200	-	-	Caribou Migration Alert - July 15 2022 4:00 PM	2500	West	KM22
2022-07-15	16:00	400	-	-	Caribou Migration Alert - July 15 2022 4:00 PM	2000	East	KM13
2022-07-16	6:00	400	-	-	Caribou Migration Alert - July 16 2022 06:00 AM	500	West	KM12
2022-07-16	12:00	0	-	-	Caribou Migration Alert - July 16 2022 12:00 PM; No caribou observed	-	-	-
2022-07-16	18:00	0	-	-	Caribou Migration Alert - July 16 2022 18:00 PM; No caribou observed	-	-	-
2022-07-17	6:00	0	-	-	Caribou Migration Alert - July 17 2022 06:00 AM; No caribou observed	-	-	-
2022-07-17	12:00	0	-	-	Caribou Migration Alert - July 17 2022 12:00 PM; No caribou observed	-	-	-
2022-07-17	18:00	0	-	-	Caribou Migration Alert - July 17 2022 6:00 PM; No caribou observed	-	-	-
2022-07-18	6:00	0	-	-	Caribou Migration Alert - July 18 2022 6:00 AM; No caribou observed	-	-	-
2022-07-18	12:00	0	-	-	Caribou Migration Alert - July 18 2022 12:00 PM; No caribou observed	-	-	-
2022-07-18	18:00	0	-	-	Caribou Migration Alert - July 18 2022 18:00 PM; No caribou observed	-	-	-
2022-07-19	6:00	0	-	-	Caribou Migration Alert - July 19 2022 6:00 AM; No caribou observed	-	-	-
2022-07-19	12:00	0	-	-	Caribou Migration Alert - July 19 2022 12:00 PM; No caribou observed	-	-	-
2022-07-19	18:00	0	-	-	Caribou Migration Alert - July 19 2022 18:00 PM; No caribou observed	-	-	-
2022-07-20	6:00	0	-	-	Caribou Migration Alert - July 20 2022 06:00 AM; No caribou observed	-	-	-
2022-07-20	12:00	0	-	-	Caribou Migration Alert - July 20 2022 12:00 PM; No caribou observed	-	-	-
2022-07-20	18:00	0	-	-	Caribou Migration Alert - July 20 2022 6:00 PM; No caribou observed	-	-	-
2022-07-21	6:00	0	-	-	Caribou Migration Alert - July 21 2022 6:00 AM; No caribou observed	-	-	-
2022-07-21	12:00	0	-	-	Caribou Migration Alert - July 21 2022 12:00 PM; No caribou observed	-	-	-
2022-07-21	18:00	0	-	-	Caribou Migration Alert - July 21 2022 6:00 PM; No caribou observed	-	-	-
2022-07-22	6:00	0	-	-	Caribou Migration Alert - July 22 2022 6:00 AM; No caribou observed	-	-	-
2022-07-22	12:00	0	-	-	Caribou Migration Alert - July 22 2022 12:00 PM; No caribou observed	-	-	-
2022-07-22	18:00	0	-	-	Caribou Migration Alert - July 22 2022 6:00 PM; No caribou observed	-	-	-
2022-07-23	6:00	0	-	-	Caribou Migration Alert - July 23 2022 6:00 AM; No caribou observed	-	-	-
2022-07-23	12:00	0	-	-	Caribou Migration Alert - July 23 2022 12:00 PM; No caribou observed	-	-	-
2022-07-23	18:00	0	-	-	Caribou Migration Alert - July 23 2022 6:00 PM; No caribou observed	-	-	-

APPENDIX M

Hunter Harvest Study, 2022

MELIADINE MINE

2022 HUNTER HARVEST STUDY AND CREEL SURVEY SUMMARY REPORT

13 MARCH 2023

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List of Acronyms

AWAR	All-Weather Access Road
GN DoE	Government of Nunavut, Department of Environment
HHS	Hunter Harvest Study
IQ	Inuit Qaujimajatuqangit
KHTO	Kangiqliniq Hunters and Trappers Organization
LSA	Local Study Area
NWMB	Nunavut Wildlife Management Board
NIRB	Nunavut Impact Review Board
RSA	Regional Study Area
TEMMP	Terrestrial Environment Management and Monitoring Program
TK	Traditional Knowledge

SECTION 1 • EXECUTIVE SUMMARY

A Rankin Inlet Hunter Harvest Study (HHS) was initiated in 2020 and continued through 2022. The 2022 study included 44 participants of which 31 reported harvesting Caribou (*Rangifer tarandus*). Given an estimated 300 to 350 active hunters in the Hamlet of Rankin Inlet, the HHS represents from 9 to 10% of hunters in the community. With a total reported Caribou harvest of 547 in 2022, the total Caribou harvest in Rankin Inlet is estimated to range from 5,470 to 6,077 Caribou, which was less than that reported in 2021 (i.e., 6,700 to 7,444). The 2022 estimate is likely high because the current study attracted some of the more successful hunters (e.g., Kangiqliniq Hunters and Trappers Organization [KHTO] members) in the community and total number of active hunters may be less than 300 to 350. During community visits in 2023, an attempt will be made to refine the estimate of active hunters in the Hamlet of Rankin Inlet by having discussions with the KHTO and other community organizations.

Of Caribou harvests reported by Rankin Inlet participants in 2022, 4.8% were harvested within 5 km of the Meliadine All-Weather Access Road (AWAR), which compares to 4.5% during the Nunavut Wildlife Management Board's (NWMBs) harvest study in Rankin Inlet from 1996 to 2001 (pre-construction). Harvests within the Meliadine Mine Regional Study Area (RSA) in 2022 were 29.4% of the total compared to 24.8% during the NWMB study. These very preliminary numbers suggest that the presence of the AWAR and the Meliadine Mine has not greatly increased hunting in the area.

Ten (10) Muskox (*Ovibos moschatus*), eight (8) Wolverine (*Gulo gulo*), and 14 Arctic Wolves (*Canis lupus*) were harvested in 2022. The only other harvested terrestrial mammal in 2022 was Arctic Hare (*Lepus arcticus*). In the marine environment, Beluga (*Delphinapterus leucas*; 27 individuals) was the most common species reported as harvested, followed by Ringed Seal (*Pusa hispida*; 22 individuals), Narwhal (*Monodon monoceros*; 5) and Bearded Seal (*Erignathus barbatus*; 1).

A moderate number of bird species were harvested by Rankin Inlet participants in 2022 with Canada Goose (*Branta canadensis*; 45 individuals) and Snow Goose (*Anser caerulescens*; 44) harvested at the highest levels. Common Eider (*Somateria mollissima*; 2), goose sp. (8), Northern Pintail (*Anas acuta*; 10), ptarmigan (*Lagopus* sp.; 26), and Sandhill Crane (Grus canadensis; 1) were also harvested.

The most common fish species captured, Arctic Char (*Salvelinus alpinus*), represented 77% of the total catch in 2022. Lake Trout (*Salvelinus namaycush*; 11%) were also captured at reasonably high numbers as were Arctic Cod (*Arctogadus glacialis*; 10%). The other two species that were the focus of the HHS, Arctic Grayling (*Thymallus arcticus*) and Lake Whitefish (*Coregonus clupeaformis*), were caught at relatively low numbers.

SECTION 2 • OVERVIEW

As outlined in the original Terrestrial Environment Management and Monitoring Program (TEMMP; Agnico Eagle 2020) and as a requirement of NIRB Project Certificate No. 006 Terms and Conditions 46 and 48, the Rankin Inlet Hunter Harvest Study (HHS) was initiated in 2020 by Agnico Eagle. The HHS is being conducted in conjunction with the Kangiqliniq Hunters and Trappers Organization (KHTO) to monitor and document the spatial distribution, seasonal patterns, and harvest rates of hunter kills and angler catches within the Meliadine Regional Study Area (RSA).

Nunavut Environmental Consulting was contracted to work alongside the KHTO in conducting the study in 2021 and increase hunter participation. The 2022 HHS, through regular visits, contributed to developing relationships with local harvesters, the KHTO, and the Government of Nunavut, Department of Environment (GN DoE).

SECTION 3 • OBJECTIVES

The primary objective of the HHS is to monitor potential project-related effects on harvesting of wildlife by residents of the Hamlet of Rankin Inlet. This objective is achieved by estimating the following key metrics:

1. Determining the distribution of Caribou (*Rangifer tarandus*), Muskox (*Ovibos moschatus),* Grizzly Bear (*Ursus arctos*), Polar Bear (*Ursus maritimus*), Arctic Wolf (*Canis lupus*), Wolverine (*Gulo gulo*), Arctic Fox (*Vulpes lagopus*), goose, ptarmigan, and seal harvest by residents of Rankin Inlet; and
2. Estimating the total level (or an index) of harvest by residents of Rankin Inlet.

Other objectives of the HHS include:

1. Supporting creel surveys by gathering information on Arctic Char (*Salvelinus alpinus*), Lake Trout (*Salvelinus namaycush*), Lake Whitefish (*Coregonus clupeaformis*), and Arctic Grayling (*Thymallus arcticus*) catch rates and Inuit-use patterns in the Rankin Inlet area;
2. Understanding regional distribution of hunting and fishing activity;
3. Investigating seasonal timing of hunting and fishing activity; and
4. Determining whether increased harvest and catch rates are associated with the Meliadine All-Weather Access Road (AWAR).

As discussed during consultation with stakeholders, the HHS will further seek to:

- increase and maintain the hunter and fisherman participant rate in the future of the program;
- improve resource protection;
- improve hunter and fisherman awareness and education;
- increase the integration of Inuit Qaujimajatuqangit (IQ) and Traditional Knowledge (TK);
- increase availability of data to support a collective approach to understanding harvest; and
- assist Agnico Eagle in mitigative actions and the GN in management decisions.

SECTION 4 • METHODOLOGY

The wildlife species that are the focus of the HHS are Caribou, Muskox, Grizzly Bear, Polar Bear, Wolf, Wolverine, Arctic Fox, goose, ptarmigan, and seal; however, harvest data on other species, such as Beluga (*Delphinapterus leucas*), Common Eider (*Somateria mollissima*), and Sandhill Crane (*Grus canadensis*) are also collected. The species in the study were deliberately chosen to make data entry and collection as simple as possible. To support creel surveys, data on fish harvest (Priority species = Arctic Char, Lake Trout, Lake Whitefish, and Arctic Grayling) were also collected.

Inuit and non-Inuit residents, at least 16 years of age, are eligible to participate in the harvest survey. Harvest calendars are provided on a household basis, rather than an individual basis, to simplify data entry and collection, and reflect household hunting patterns. The harvest calendar is attractive and consists of local photographs of wildlife and Nunavut residents (see **Appendix A** for the 2022 Rankin Inlet calendar). Space is provided for each calendar day where harvest details can be documented.

A map is provided at the end of the calendar that delineates a 5 km^2 UTM grid around the Rankin Inlet and Meliadine mine areas, and regions indicated as important for hunting during discussions with HTO members. Each grid has a unique code to facilitate recording of information. When calendars are issued, participants or participating households are encouraged to write harvest details (e.g., number of animals, sex, age, and location (i.e., grid code) for the appropriate date on the calendar.

Participants were interviewed in person three times during the year (i.e., June 2022, October 2022, and February 2023) by the harvest study coordinator. During the February 2023 interviews, remaining data from 2022 were collected, a new 2023 HHS calendar was distributed, and prizes were given. The purpose of the interviews is to ensure all harvest data are recorded on the calendars and to collect incidental information to compliment calendar data, including notable Caribou movements, aggregations, and unique observations. Between interview periods, participants were often contacted by phone or social media to encourage recording of harvest data.

Features of the 2022 HHS included:

1) building long-term relationships between participants and researchers;
2) increasing engagement with participants on social media platforms such as Facebook and Instagram; and
3) increasing incentives for participating in the study (e.g., gas vouchers and prizes).

SECTION 5 • HISTORICAL RESULTS

The number of hunters interviewed during the comprehensive 5-year Nunavut Wildlife Harvest Study (NWMB 2005) was 327, which apparently represented 97% of all hunters in Rankin Inlet (NWMB 2005). For the purposes of this annual report, and in the absence of more specific details on hunter numbers, the total number of active hunters in Rankin Inlet was estimated to be 300 to 350. Future discussions with KHTO members and other community groups in 2023 will focus on getting a better estimate of current numbers of active hunters in the Hamlet of Rankin Inlet.

Between 1996 and 2001, 4.5% of Caribou reported harvests were within 5 km of the Meliadine AWAR (prior to construction) and 24.8% of harvests occurred within the RSA (NWMB 2005). According to the NWMB harvest study, an average of 535 Caribou were harvested per year over the five-years between June 1996 and May 2001 (NWMB 2005).

Based on the NWMB (2005) results, highest Caribou harvests occurred from March to May and from September to November.

Additional historical data discussions will be conducted after the 2023 HHS is completed and when a minimum of three years of data are available.

SECTION 6 • 2022 HUNTER HARVEST STUDY RESULTS

6.1 BARREN-LAND CARIBOU

6.1.1 Number of Hunters

The HHS included 44 participants by the end of 2022, which is an increase from the 40 participants in 2021. Recruitment efforts in the Hamlet of Rankin Inlet during community visits and on social media platforms resulted in the new participants in 2022. Of the 2022 participants, Caribou harvest data were collected from 31 participants.

Based on the previous discussion of total numbers of hunters in the Hamlet of Rankin Inlet (Section 5 Historical Results), an estimated 300 to 350 active hunters live within the Rankin Inlet community. Discussions with Rankin Inlet HTO members in 2019 suggest the total number of hunters is well over 300 but future discussions are planned to confirm hunter numbers. Based on these numbers, the 31 hunters reporting Caribou harvest in 2022 conservatively represent from 9 to 10% of total hunters in the community.

6.1.2 Distribution of Hunting

Figure 6.1 shows the distribution of Caribou harvest within the HHS data collection area. Hunting was concentrated in the vicinity of the Hamlet of Rankin Inlet and north to the northern shore of Chesterfield Inlet. Some harvests were recorded southwest of the Hamlet of Whale Cove while very few harvests were reported near the hamlets of Arviat and Chesterfield Inlet.

Hunting did not appear to be associated with the Meliadine AWAR, although several harvests were recorded within the Meliadine RSA. Variation in harvest location and intensity is attributable to numerous factors. For instance, hunters may have a 'favorite' hunting area that they frequent each year while others prefer hunting in 'convenient' locations. Some hunters prefer remote locations well away from frequented areas. The primary factor determining location of successful harvests each year is the availability and distribution of Caribou herds in the area.

Figure 6.2 shows hunting distribution by community from the five-year NWMB study for the HHS study area. Most Caribou hunting occurred around the four hamlets in the study area.

The 2022 HHS data indicated that 4.8% of reported harvest occurred within 5 km of the AWAR (3.7% in 2021), and 29.4% occurred within the Meliadine RSA (19.7% in 2021; see Table 6.1). During the NWMB study from 1996 to 2001, 24.8% of reported harvest was within the Meliadine RSA. Unlike for the Meadowbank Mine project, threshold levels for monitoring the effects of the Meliadine mine development on the distribution of Caribou harvest will not be set until three years of hunter harvest data has been collected as per TEMMP (i.e., after the 2023 HHS).

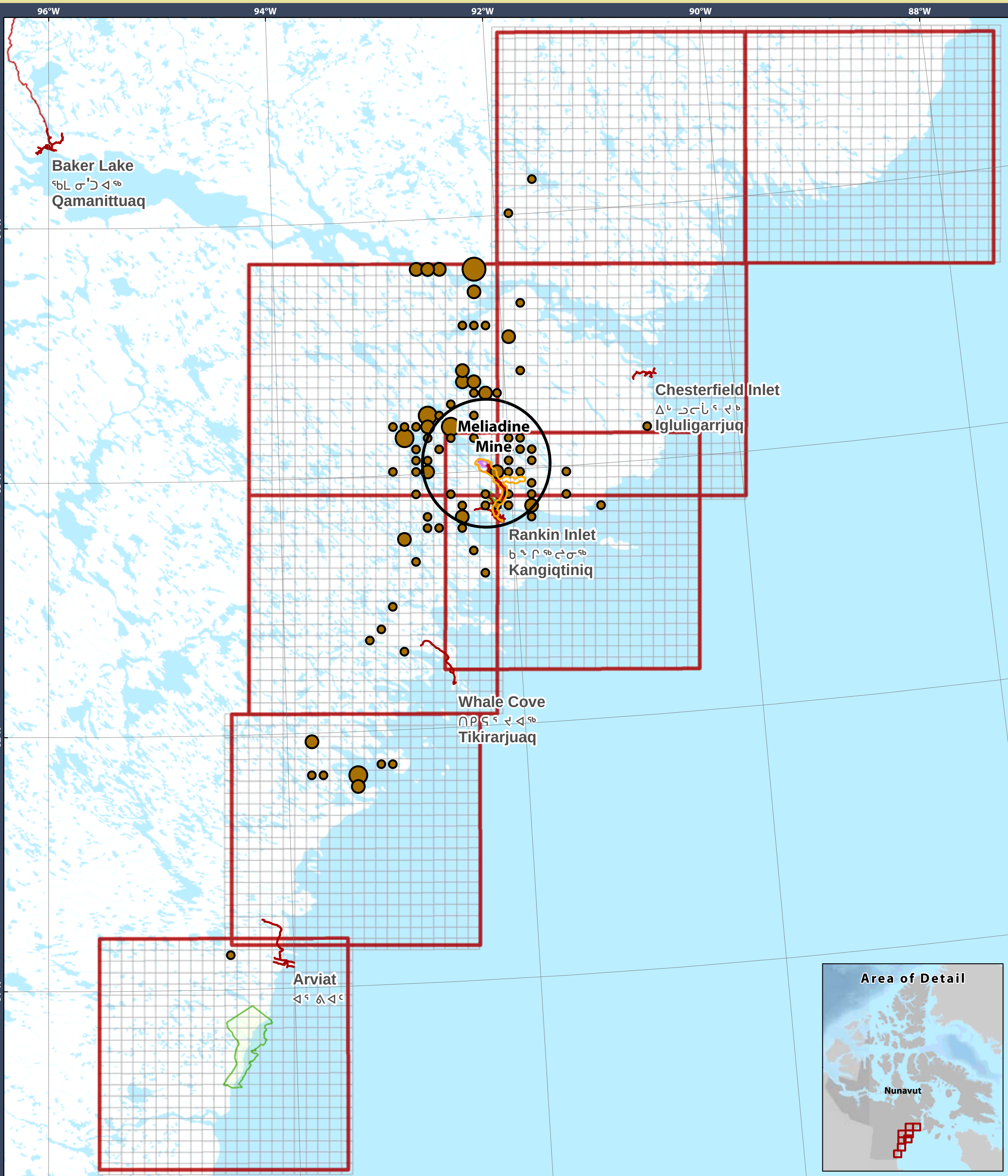
Table 6.1: Caribou Harvest Distribution along the AWAR and within the Rankin Inlet LSA and RSA (1996 to 2001 [NWMB], and 2021 to 2022 [Rankin Inlet HHS]).

Study	Participation Rate within 5 km of AWAR (% of total hunters)	Average Caribou Harvest within 5 km of AWAR per Participant	% of Annual Harvest within 5 km of AWAR	% of Annual Harvest within Meliadine LSA	% of Annual Harvest within Meliadine RSA
NWMB 1996 to 2001 (Rankin Inlet)	NA	4.1	4.5%	0.3%	24.8%
Rankin Inlet HHS 2021	16.7%	5.0	3.7%	3.3%	19.7%
Rankin Inlet HHS 2022	25.8%	3.3	4.8%	4.0%	29.4%
Average (2021 & 2022)	21.2%	4.2	4.2%	3.7%	24.6%

6.1.3 Magnitude of Hunting

In 2022, a total of 547 Caribou were reported as being harvested by 31 participants in the Rankin Inlet HHS (see Table 6.2). Caribou harvest numbers during the five-year NWMB study for the hamlets of Rankin Inlet, Arviat, Chesterfield Inlet, and Whale Cove are also provided in Table 6.2. The average number of Caribou harvested in the study was 535, which is very similar to the 2022 reported harvest (Table 6.2).

Given that the 31 hunters may represent an estimated 9 to 10% of the Rankin Inlet hunting community (see Section 5 Historical Results), the total estimated number of Caribou harvested in 2022 may have been as high as 5,470 to 6,077 animals, which is lower than estimates in 2021 (i.e., 6,700 to 7,444). This estimate is very likely conservative (i.e., high) since the Rankin inlet HHS assumed a total of 300 to 350 active hunters, while the actual number is likely lower, and participants likely represented a higher proportion of successful hunters in the community.



Legend

Roads
HHS Extents
Local Study Area
Regional Study Area
Production Lease
Parks & Protected Areas

Total Caribou Harvest
1 - 5
6 - 25
26 - 50
>50

0 15 30 45 60
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

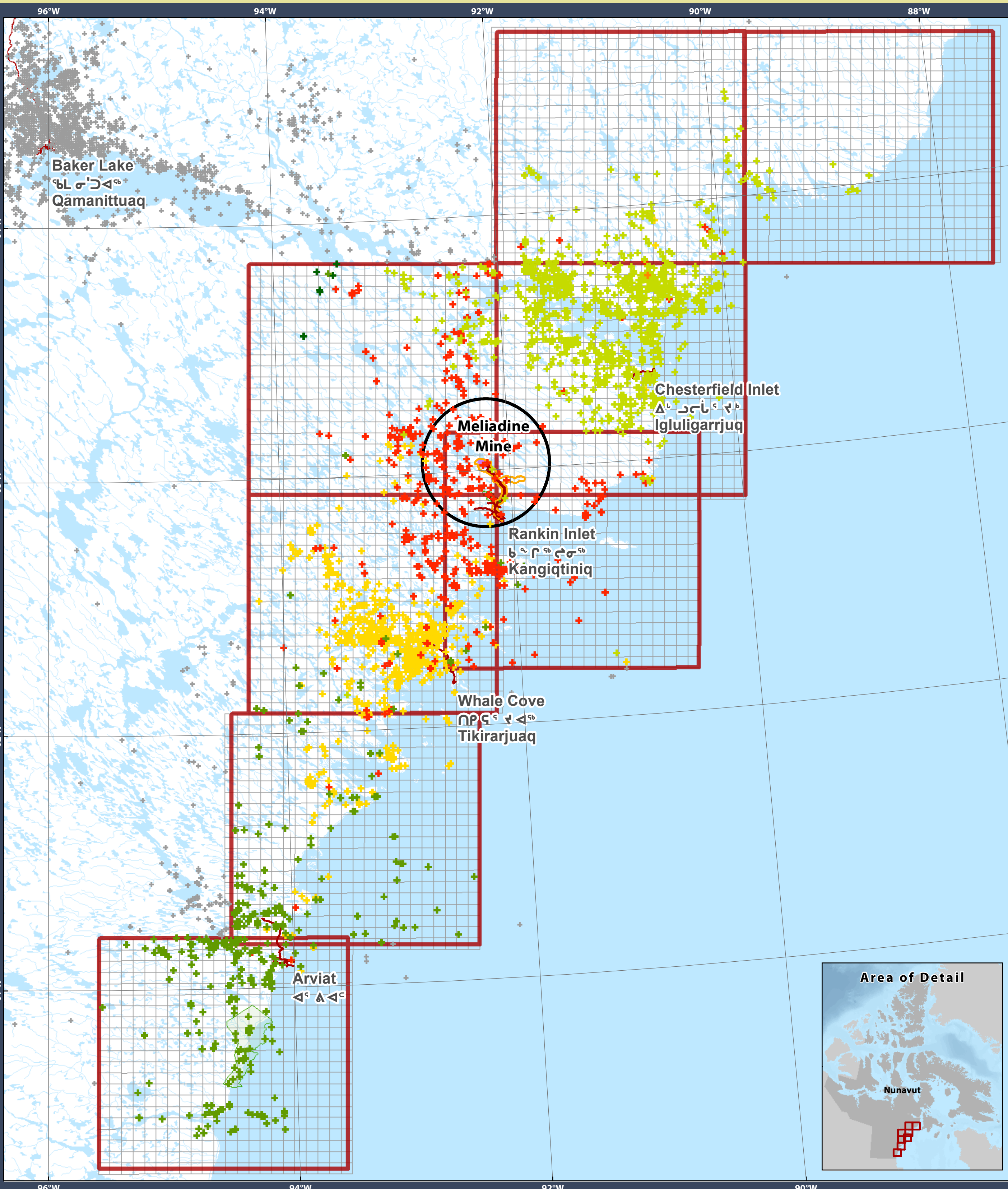
Figure 6.1:
Total Number of Caribou Harvested in 2022

Rankin Inlet Hunter Harvest Study

Prepared for:
AGNICO-EAGLE

By:
CASLYS CONSULTING
Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

NWMB Caribou Harvest

- Outside RIHHS
- Baker Lake
- Arviat
- Chesterfield Inlet
- Whale Cove
- Coral Harbour
- Rankin Inlet

0 15 30 45 60

Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Wildlife Management Board
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.2:

Distribution of NWMB Caribou Harvest By Community (1996-2001)

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO EAGLE

By: CASLYS CONSULTING; Nunavut Environmental Consulting Ltd

2022-03-09

Table 6.2: Hunter Caribou Harvest Statistics from the NWMB (2005) Study and Rankin Inlet HHS (2021 and 2022).

2022 Rankin Inlet Hunter Harvest Study

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
2021	283	36	37	78	96	0	13	14	51	27	8	27	670
2022	94	95	51	27	75	6	14	49	73	20	15	28	547
Total #	377	131	88	105	171	6	27	63	124	47	23	55	1217
Average	188.5	65.5	44.0	52.5	85.5	3.0	13.5	31.5	62.0	23.5	11.5	27.5	243.4
% of Total	31.0%	10.8%	7.2%	8.6%	14.1%	0.5%	2.2%	5.2%	10.2%	3.9%	1.9%	4.5%	100.0%

Nunavut Wildlife Harvest Study (NWMB 2005) – Rankin Inlet Results within the Rankin Inlet HHS Survey Area

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
1996							35	67	67	87	138	116	510
1997	95	105	118	89	50	1	4						462
1998			117	33	6	7	15	12	72	15	15	28	320
1999	108	80	108	80	33	20	75	86	52	38	63	41	784
2000	34	35	68	111	69	29	17	40	78		30		511
2001		19	27	37	3								86
Total #	237	239	438	350	161	57	146	205	269	140	246	185	2673
Average	79.0	59.8	87.6	70.0	32.2	14.3	29.2	51.3	67.3	46.7	61.5	61.7	445.5
% of Total	8.9	8.9	16.4	13.1	6.0	2.1	5.5	7.7	10.1	5.2	9.2	6.9	100.0

Table 6.2: Continued.

Nunavut Wildlife Harvest Study (NWMB 2005) – Arviat Results within the Rankin Inlet HHS Survey Area

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
1996						56	52	53	317	349	260	122	1209
1997	133	102	112	190	48	62	116	122	245	230	89	59	1508
1998	99	121	169	147	138	88	156	68	207	74	15	15	1297
1999	168	91	79	128	25	49	70	51	271	275	19	22	1248
2000	49	17	13	62	35	32	54	68	211	79	118	93	831
2001	44	181	6	211	159								601
Total #	493	512	379	738	405	287	448	362	1251	1007	501	311	6694
Average	98.6	102.4	75.8	147.6	81.0	57.4	89.6	72.4	250.2	201.4	100.2	62.2	1115.7
% of Total	7.4	7.6	5.7	11.0	6.1	4.3	6.7	5.4	18.7	15.0	7.5	4.6	100.0

Nunavut Wildlife Harvest Study (NWMB 2005) – Chesterfield Inlet Results within the Rankin Inlet HHS Survey Area

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
1996						27	45	98	77	29	30	46	352
1997	112	51	89	24	17	31	31	30	71	33	150	29	668
1998	54	42	28	39	53	18	40	41	90	12	16	8	441
1999	88	40	47	16	33	21	23	37	35	18	34	27	419
2000	22	16	10	17	18	8	43	45	33	25	32	30	299
2001	17	24	37	26	24								128
Total #	293	173	211	122	145	105	182	251	306	117	262	140	2307
Average	58.6	34.6	42.2	24.4	29.0	21.0	36.4	50.2	61.2	23.4	52.4	28.0	384.5
% of Total	11.0	6.5	7.9	4.6	5.4	3.9	6.8	9.4	11.4	4.4	9.8	5.2	100.0

Table 6.2: Continued.

Nunavut Wildlife Harvest Study (NWMB 2005) – Whale Cove Results within the Rankin Inlet HHS Survey Area

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Total
1996						13	25	43	58	50	82	40	311
1997	68	9	13	35	9	14	8	25	22	16	14	14	247
1998	21	11	21	22	65	21	39	31	43	19	31	19	343
1999	35	38	53	49	30	28	42	51	48	46	40	23	483
2000	27	29	15	23	20	11	42	37	42	55	56	18	375
2001	37	46	42	47	24								196
Total #	188	133	144	176	148	87	156	187	213	186	223	114	1955
Average	37.6	26.6	28.8	35.2	29.6	17.4	31.2	37.4	42.6	37.2	44.6	22.8	325.8
% of Total	7.0	5.0	5.4	6.6	5.5	3.3	5.8	7.0	8.0	7.0	8.3	4.3	100.0

6.1.4 Seasonal Distribution and Timing of Hunting

In 2022, HHS results indicate that the highest Caribou harvests occurred in winter (January and February), with smaller peaks in spring (May), and fall (September and October) (see Figure 6.3). Similarly, during the five-year NWMB harvest study, the highest Caribou harvests occurred between March and May, and between September and November. The pattern between the studies (other than the winter 2022 harvests) indicates that seasonal hunting preferences are similar.

More details on the seasonal timing of harvest in 2022 can be found in Figure 6.4 (i.e., numbers of animals harvested, numbers of participants, and average number of animals harvested by participant by month) and Figure 6.5 (i.e., Caribou harvest numbers by season and proximity to the Meliadine AWAR). As can be seen from the latter figure, very few Caribou were harvested within 5 km of the AWAR.

The distribution of hunting in the Rankin Inlet HHS study area is illustrated in Figure 6.1, which includes all 2022 results, and Figures 6.6a to 6.6d, representing the spring, summer, fall and winter Caribou seasons.

In spring, overall Caribou hunting occurred primarily north of the Hamlet of Rankin Inlet, within and west of the Meliadine RSA, south of the Hamlet of Rankin Inlet to the Hamlet of Whale Cove, and along Chesterfield Inlet (Figure 6.6a). Very few harvests were reported near the hamlets of Chesterfield Inlet and Arviat.

During the summer, most Caribou were harvested north of the Hamlet of Rankin Inlet and within the Meliadine Mine RSA (Figure 6.6b). Some hunting appeared to be near the Meliadine Mine AWAR. A moderate number of Caribou were reported as being harvested along Chesterfield Inlet, few were reported near the hamlets of Chesterfield Inlet and Whale Cove, and none were reported near the Hamlet of Arviat (Figure 6.6b).

In the fall, hunting was concentrated north of the Hamlet of Rankin Inlet within and outside the Meliadine Mine RSA (Figure 6.6c). Hunting did not appear to be associated with the Meliadine Mine AWAR.

In winter, most reported Caribou harvests were north of the Hamlet of Rankin Inlet, along the northern shore of Chesterfield Inlet, and southwest of the Hamlet of Whale Cove (Figure 6.6d). Successful hunters during winter appeared to be those that travelled further afield by snowmobile.

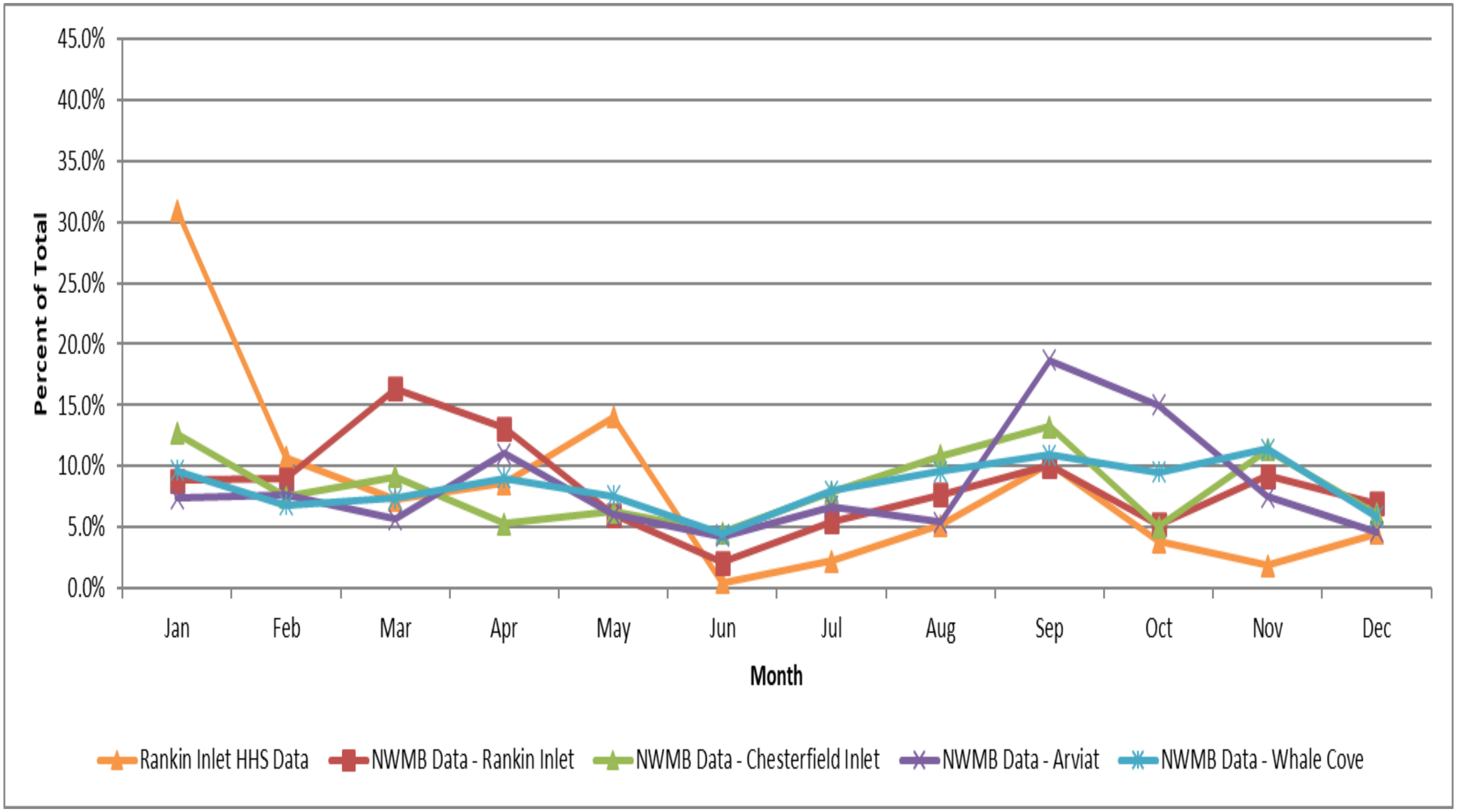


Figure 6.3: Seasonal Trends in Caribou Harvest from the Rankin Inlet Hunter Harvest Study (2021 and 2022) and the NWMB Study (1996 to 2001)

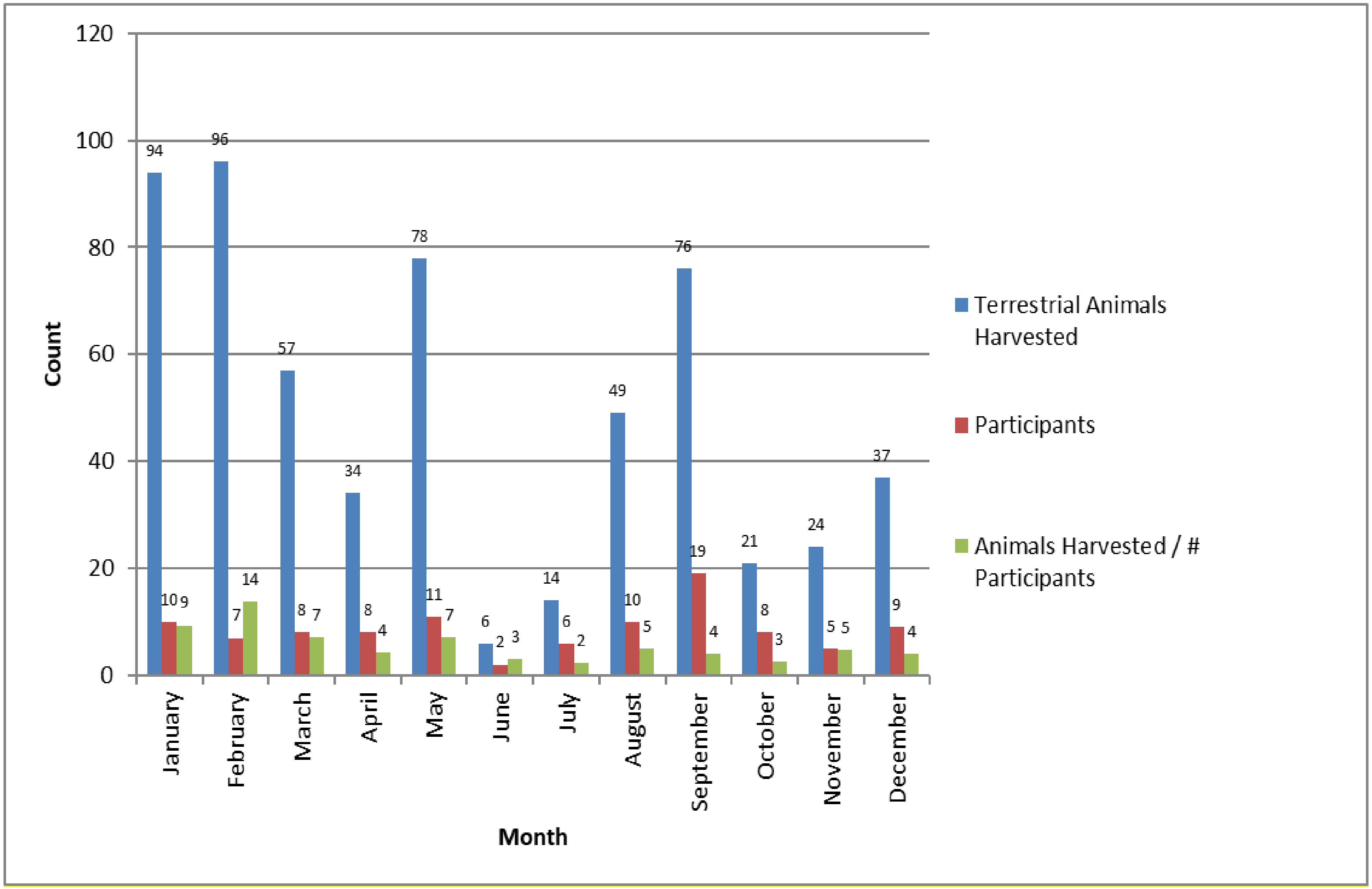


Figure 6.4: Terrestrial Animals Harvested per Month and by Participant in 2022.

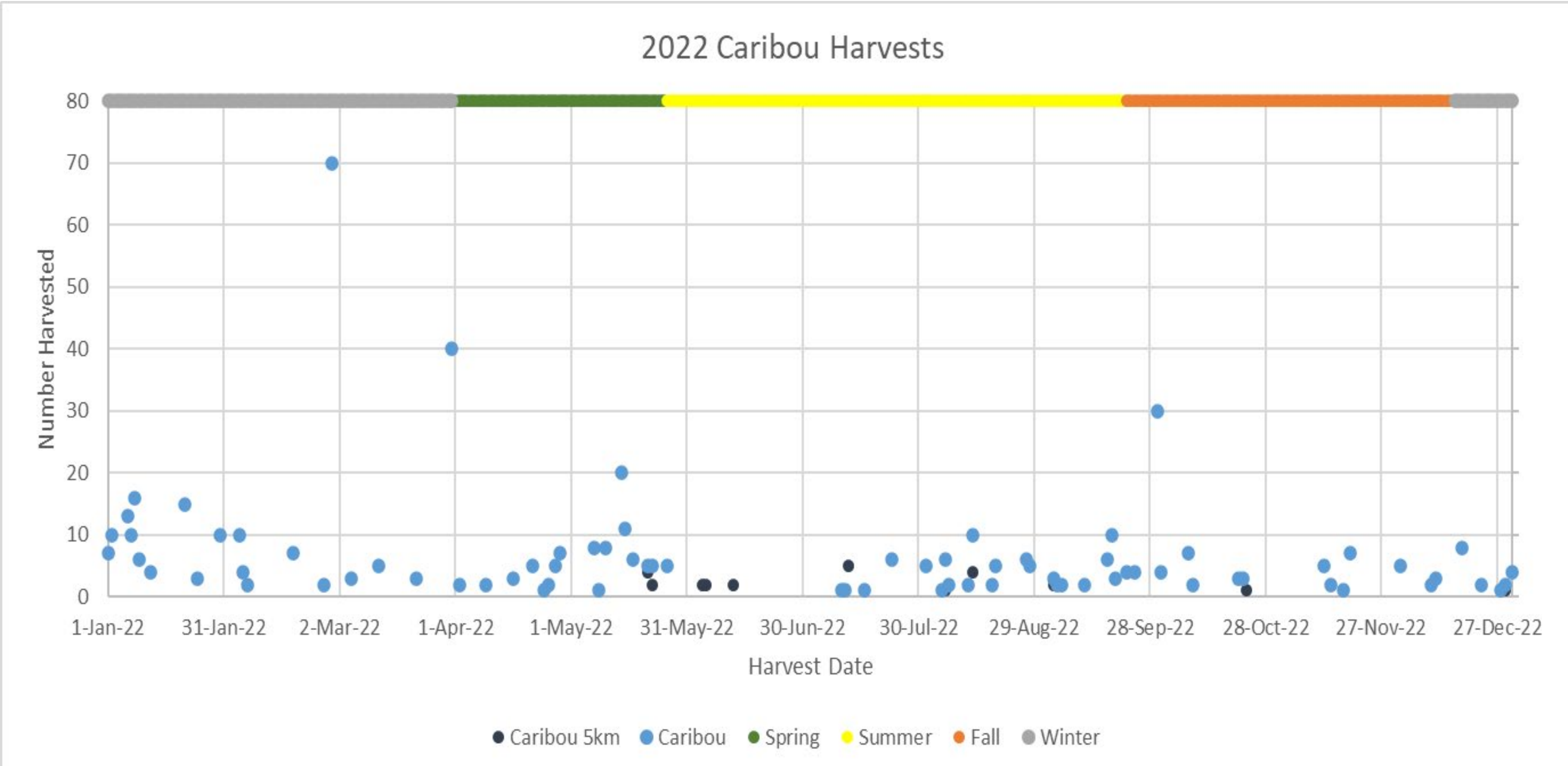
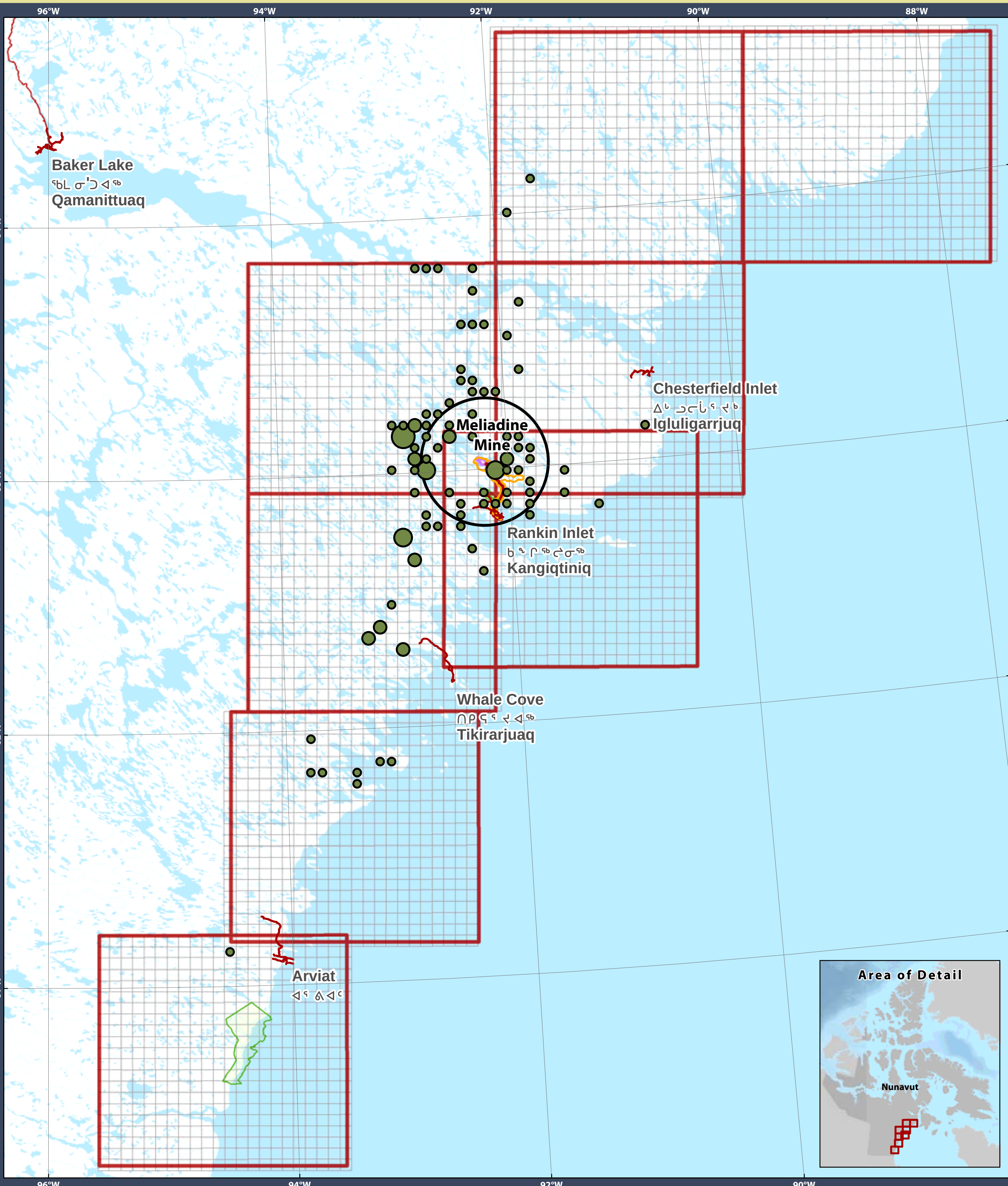


Figure 6.5: Number of Caribou Harvested in each Caribou Season and Proximity to the Meliadine All-Weather Access Road in 2022.



Legend

Roads
HHS Extents
Local Study Area
Regional Study Area
Production Lease
Parks & Protected Areas

Total Caribou Harvested
- 1 - 2
- 3 - 5
- 6 - 10
- >10

0 15 30 45 60
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.6a:

Total Number of Caribou Harvested Spring 2022 (Apr 1 - May 25)

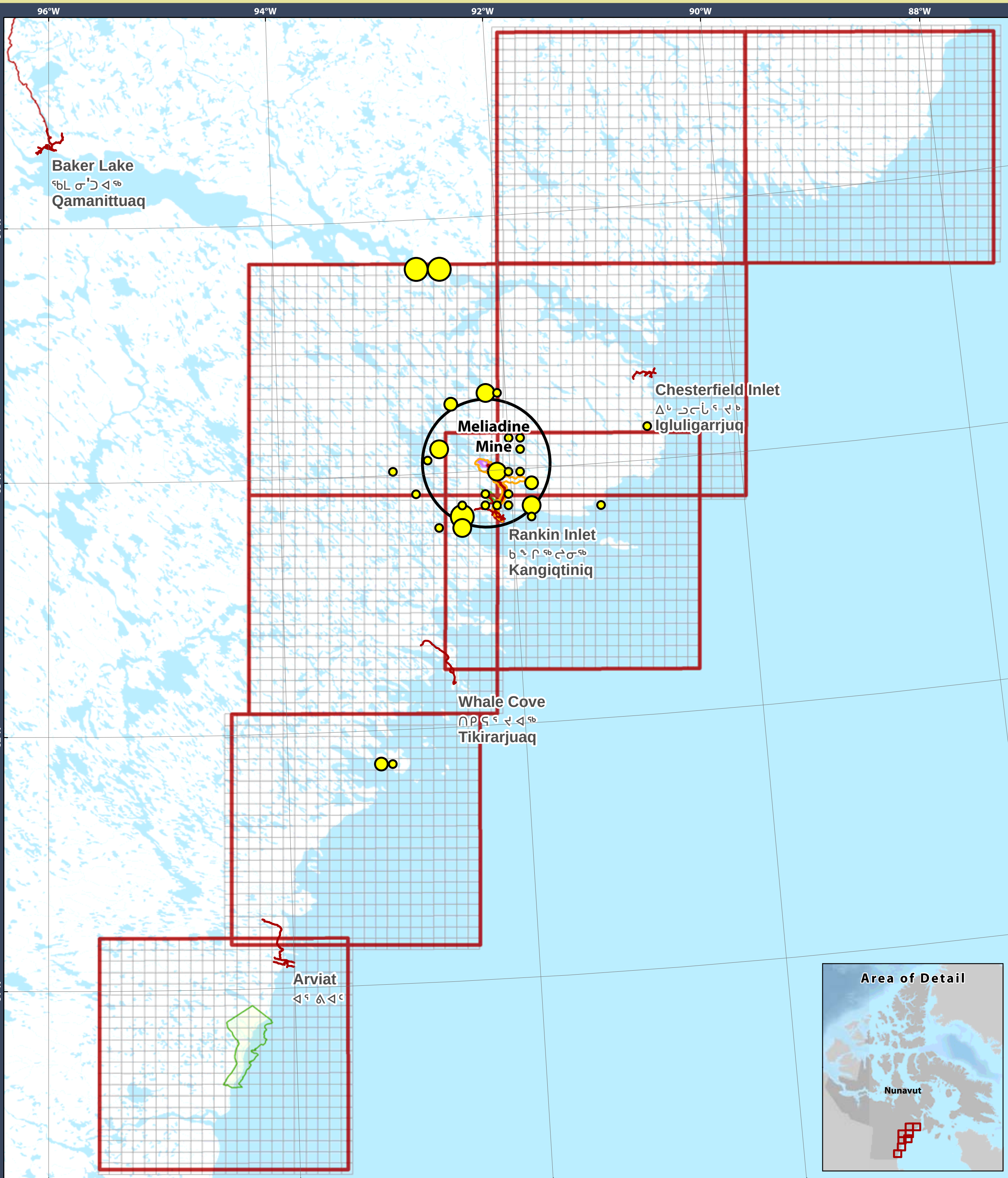
Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING

Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

Total Caribou Harvested

- 1 - 2
- 3 - 4
- 5 - 6
- >6

0 15 30 45 60

Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.6b:

Total Number of Caribou Harvested Summer 2022 (May 26 - Sep 21)

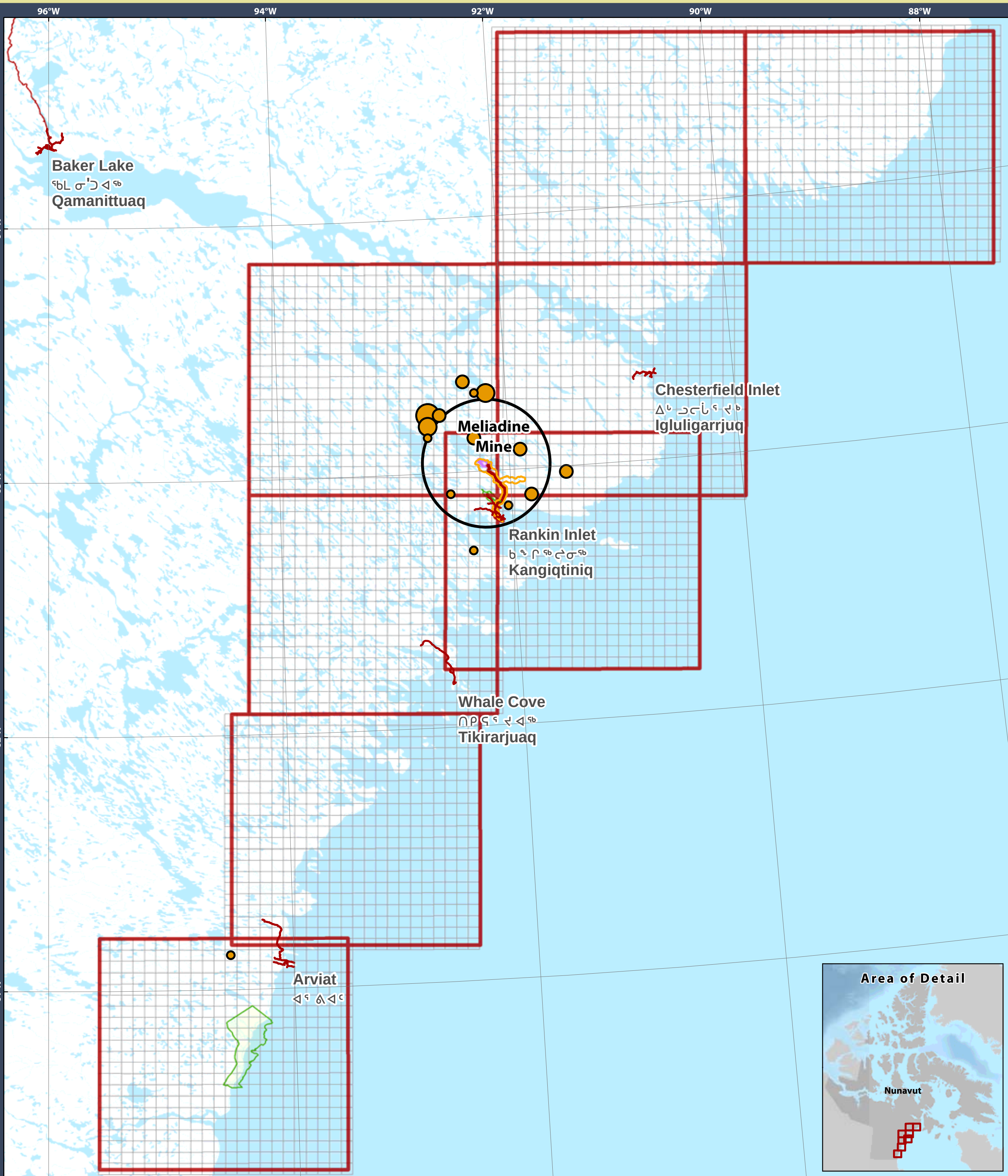
Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING

Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

Total Caribou Harvested

- 1 - 2
- 3 - 5
- 6 - 10
- >10

0 15 30 45 60
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.6c:

Total Number of Caribou Harvested Fall 2022 (Sep 22 - Dec 15)

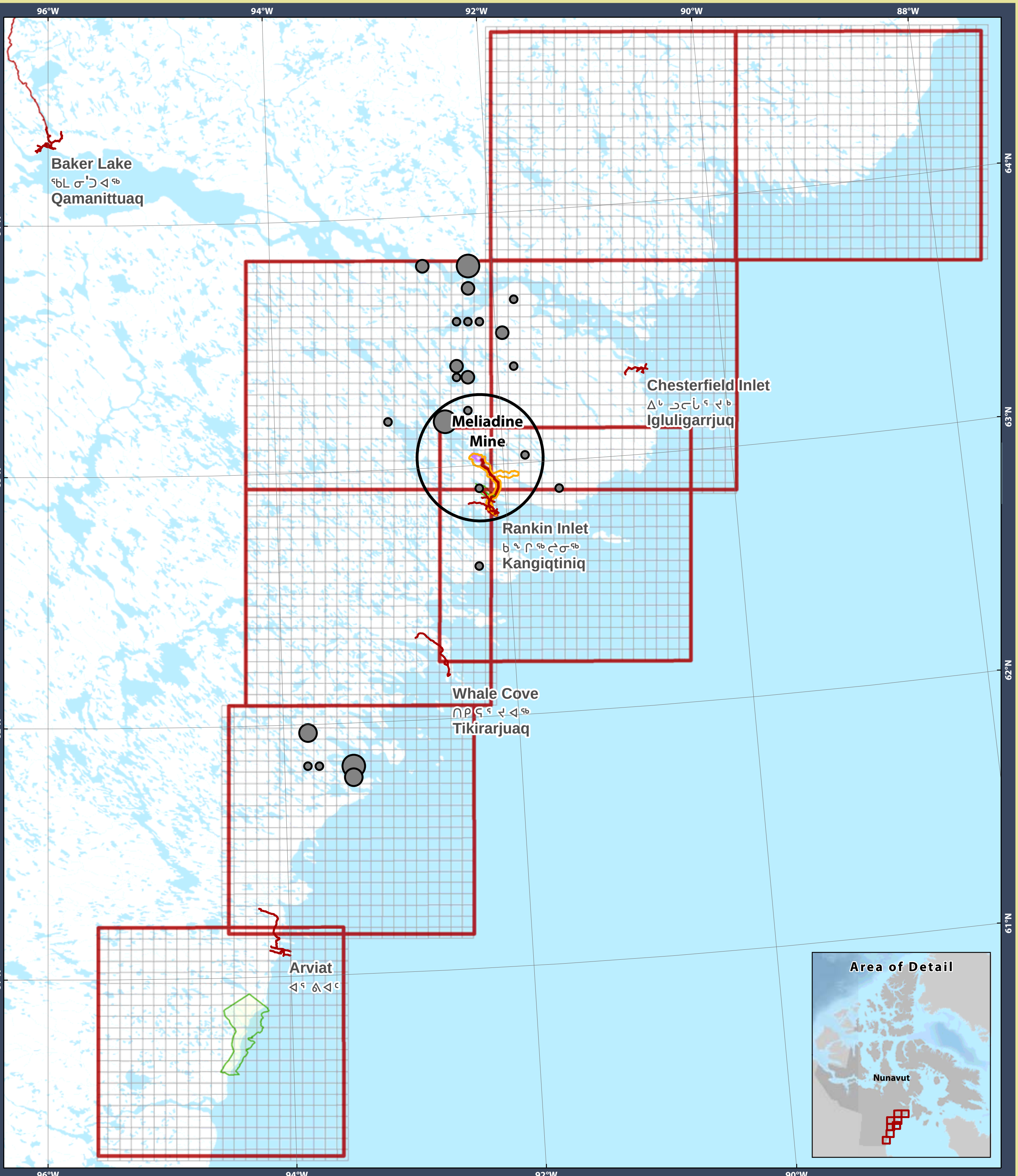
Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING

Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

RATASEAS.WINTER

- 1 - 5
- 6 - 10
- 11 - 25
- >25

0 15 30 45 60

Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.6d:

Total Number of Caribou Harvested Winter 2022 (Dec 16 - Mar 31)

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING
Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023

6.2 OTHER TERRESTRIAL MAMMAL SPECIES

6.2.1 Muskox

A total of 10 Muskox harvests were reported within the Rankin Inlet HHS area in 2022, which is lower than the 14 reported in 2021. All Muskox were harvested more than 50 km northwest of the community of Rankin Inlet (see Figure 6.7).

6.2.2 Wolverine, Wolf, Grizzly Bear, and Polar Bear

Eight (8) Wolverine were reported as being harvested in 2022 compared to two (2) in 2021. All Wolverine harvests within the study area were within 50 km of the Hamlet of Rankin Inlet (see Figure 6.8). Arctic Wolves (total of 14 reported in 2022 compared to 18 in 2021) were mostly harvested outside the Meliadine Mine RSA (Figure 6.8). In general, relatively low densities of Wolverines and Arctic Wolves, and their general aversion to humans, requires hunters to hunt well away from the AWAR. As was the case in 2021, there were no reported harvests of Grizzly Bear or Polar Bear by HHS participants in 2022.

6.2.3 Arctic Fox and Arctic Hare

Arctic Fox were not reported as being harvested in 2022 compared to only one (1) in 2021. Similar to 2021, seven (7) Arctic Hares were harvested near the community of Rankin Inlet (Figure 6.7). One hunter in 2021 indicated that the hare fur was used primarily for women's mittens.

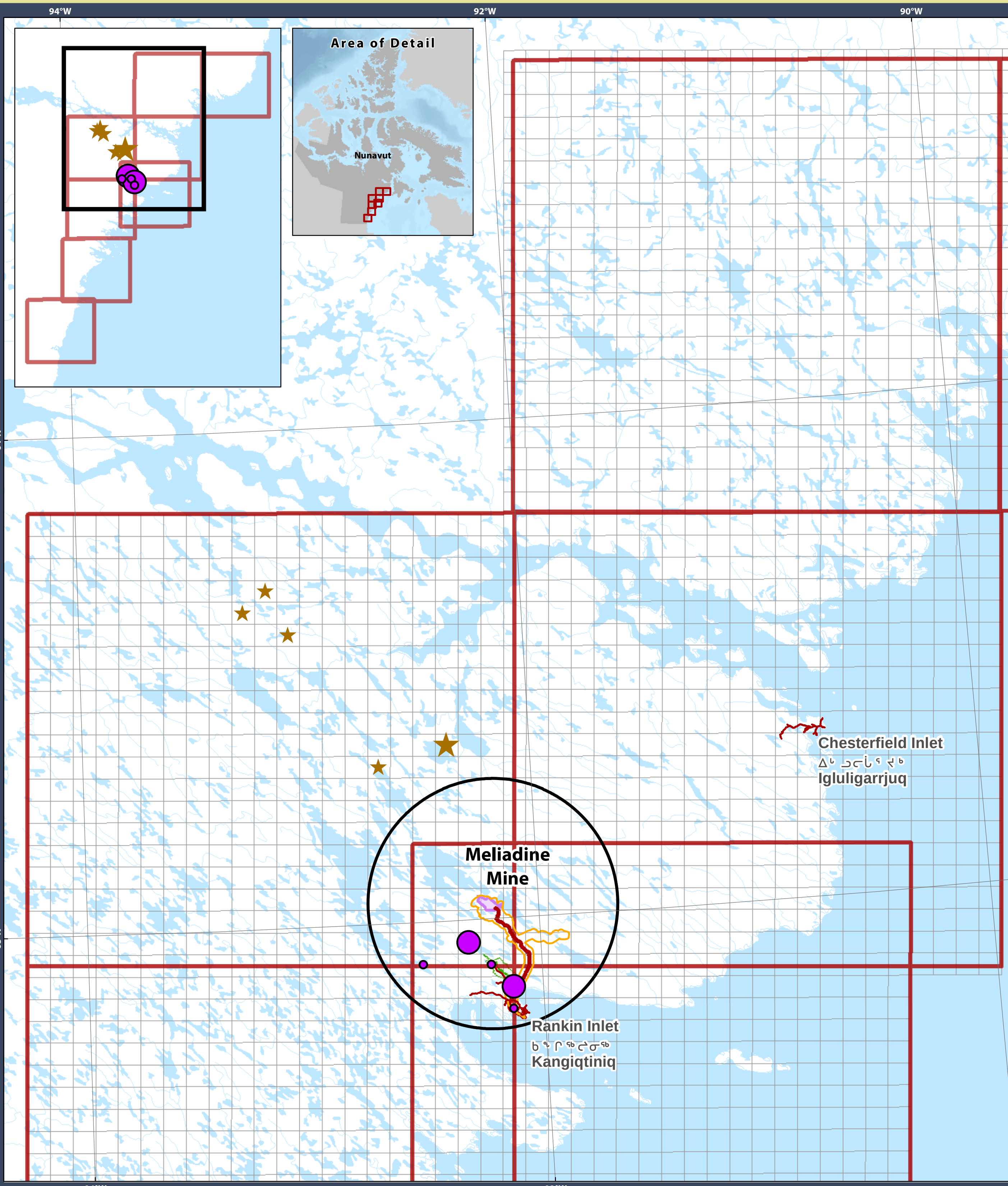
6.3 BIRD SPECIES

Considerably fewer birds were reported as being harvested in 2022 (136 individuals) than in 2021 (394 indiviudals). Canada Goose (*Branta canadensis*) and Snow Goose (*Anser caerulescens*) made up 65% (89 individuals) of the total birds harvested, which was similar to 2021 (66%). Bird species reported as being harvested by Rankin Inlet HHS participants in 2021 included Canada Goose (45 individuals), Common Eider (2), goose sp. (8), Northern Pintail (*Anas acuta*; 10), ptarmigan (*Lagopus* sp.; 26), Sandhill Crane (1), and Snow Goose (44). Most birds were harvested in marine shoreline areas and lakes around the Hamlet of Rankin Inlet, particularly east of town (Figure 6.9), during the spring (i.e., June) and fall (i.e., September) migrations (Figure 6.10).

6.4 MARINE MAMMAL SPECIES

6.4.1 Seals

Ringed Seal (*Pusa hispida*) and Bearded Seal (*Erignathus barbatus*) were the only seals reported as harvested by HHS participants in 2022, with Ringed Seal the most harvested (i.e., 22 individuals vs 1 Bearded Seal). All reported seal harvests generally occurred near shoreline areas within Rankin Inlet (Figure 6.11). Bearded Seal was considered by one hunter in 2021 to be particularly delicious if prepared properly.



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

Total Arctic Hare Harvest
- 1
- 2

Total Muskox Harvest
- 1
- 2 - 5

0 10 20 30 40
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.7:

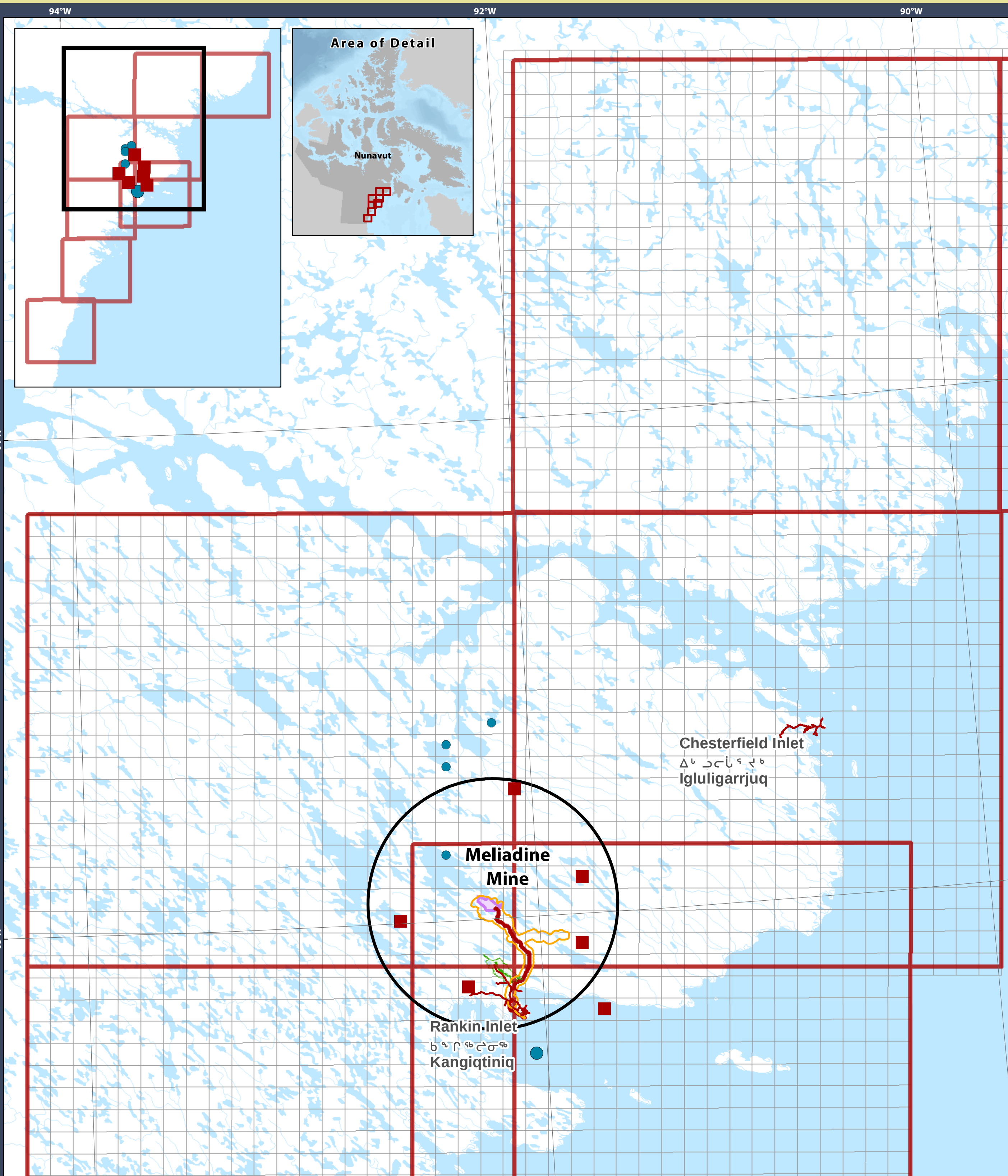
Total Number of Arctic Hare and Muskox Harvested in 2022

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING, Nunavut Environmental Consulting Ltd

10/03/2023



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

Total Wolverine Harvest

Total Arctic Wolf Harvest
- 1
- 2 - 3

0 10 20 30 40
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.8:

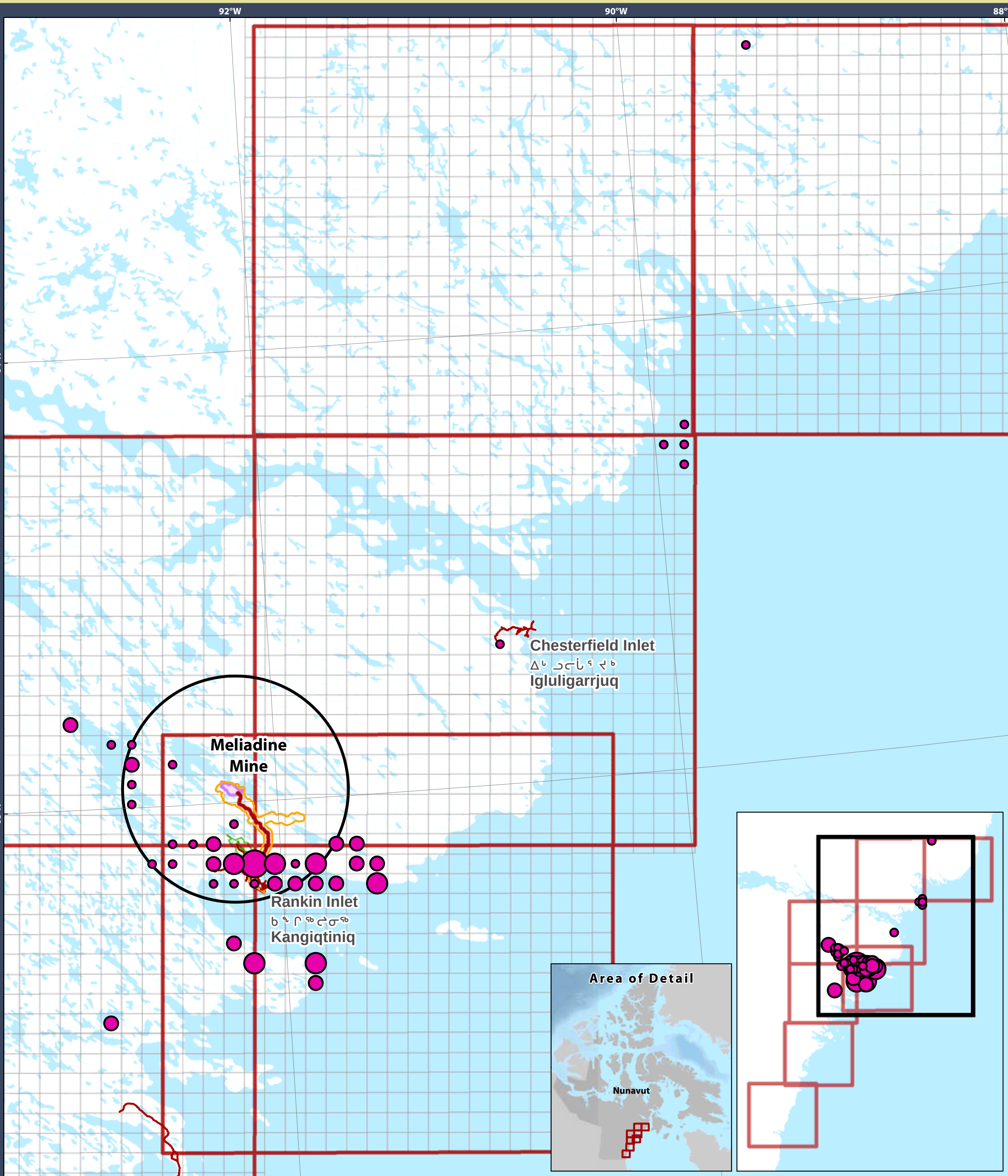
Total Number of Arctic Wolf and Wolverine Harvested in 2022

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING; Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023



Legend

- Roads
- HHS Extents
- Local Study Area
- Regional Study Area
- Production Lease
- Parks & Protected Areas

Total Bird Harvest

- 1 - 5
- 6 - 20
- 21 - 40
- >40

0 10 20 30 40

Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.9:

Total Number of Birds Harvested in 2022

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING; Nunavut ENVIRONMENTAL CONSULTING LTD

09/03/2023

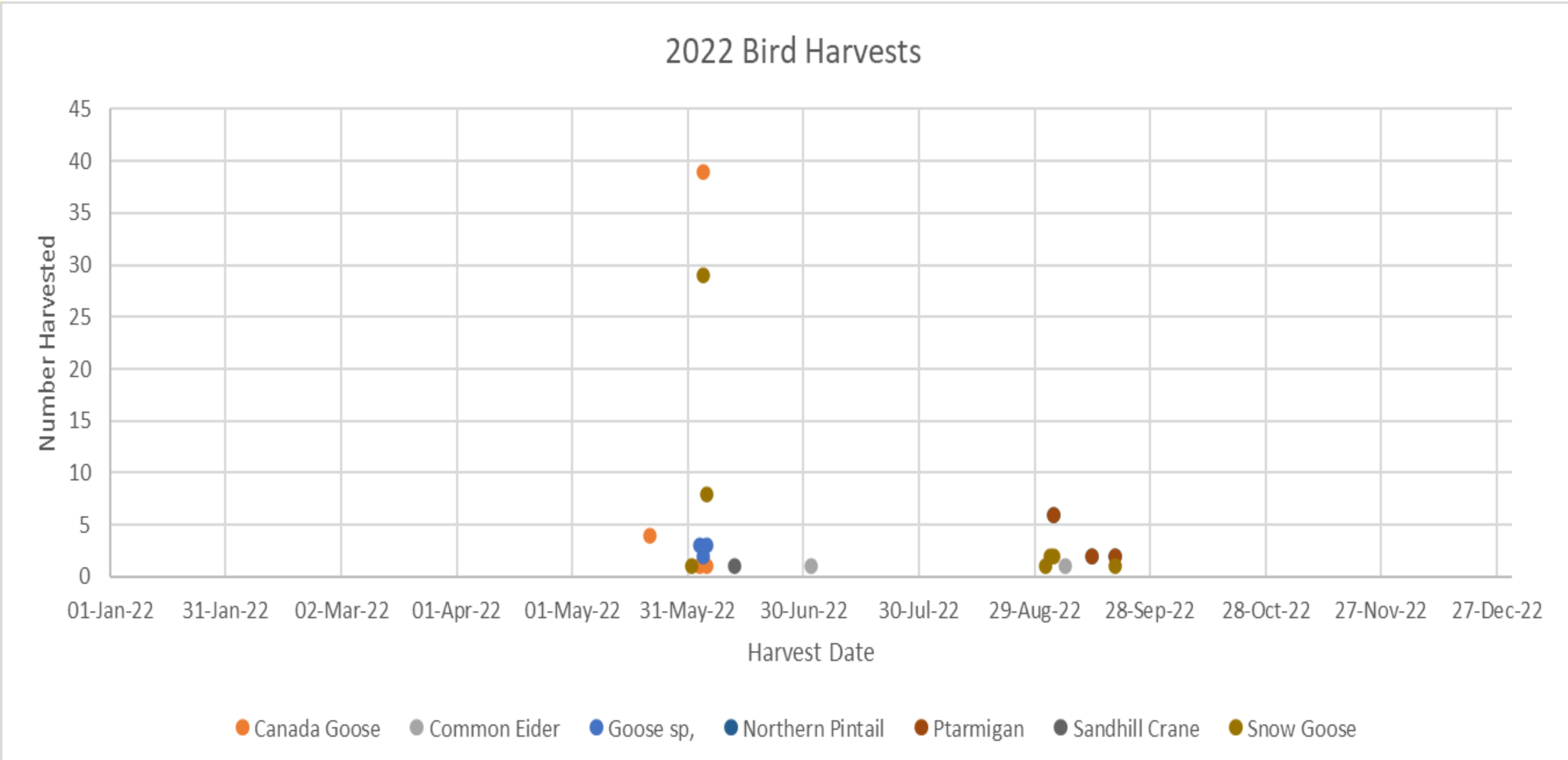
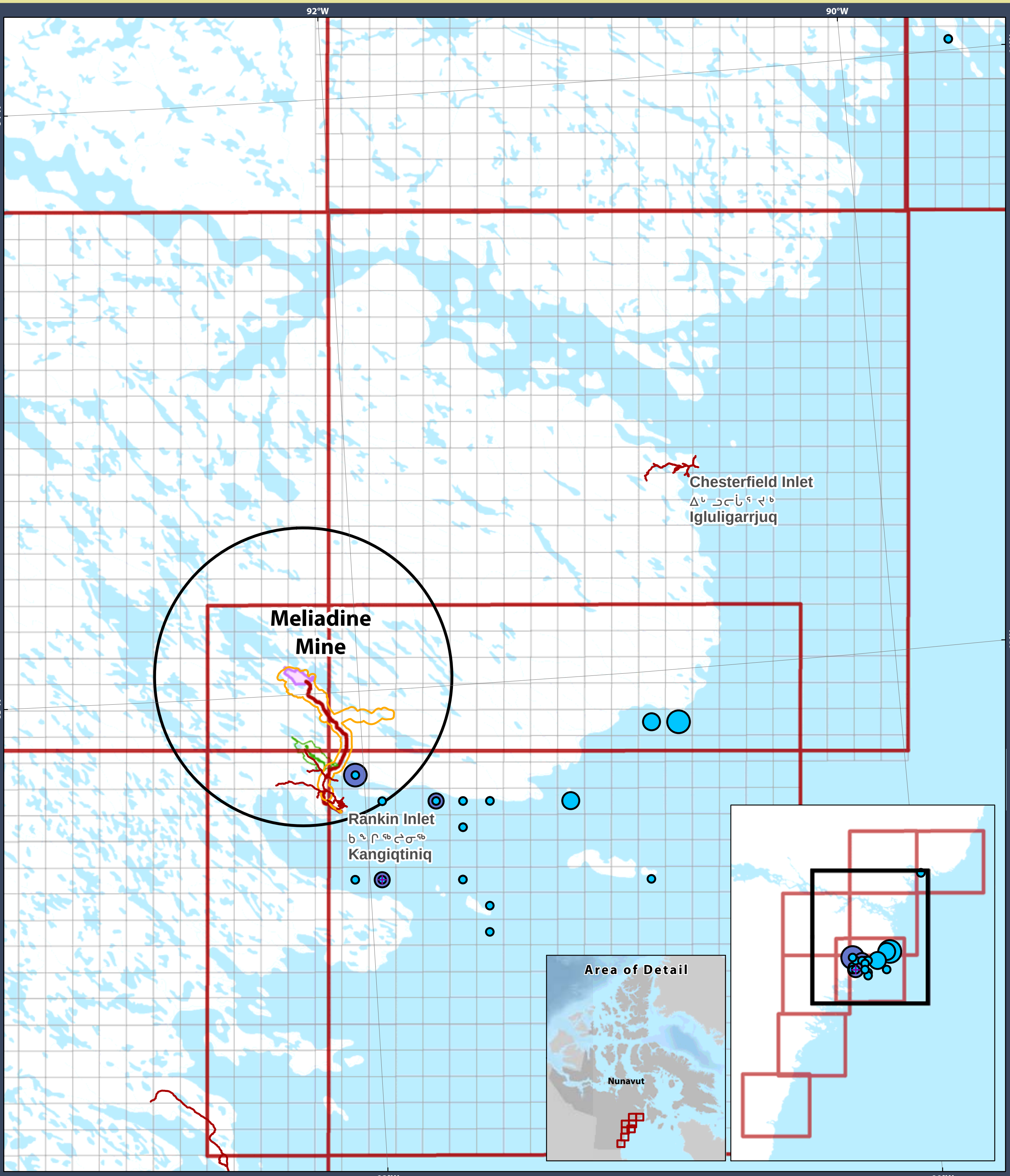


Figure 6.10: Seasonal Distribution and Number of Birds Harvested in 2022.



Legend

Roads
HHS Extents
Local Study Area
Regional Study Area
Production Lease
Parks & Protected Areas
Total Bearded Seal Harvest
+ 1

Total Beluga Harvest
1 - 2
3 - 5
>5
Total Ringed Seal Harvest
1
2
>3

0 10 20 30 40
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 6.11:

Total Number of Beluga, Bearded and Ringed Seal Harvested in 2022

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING
Nunavut ENVIRONMENTAL CONSULTING LTD

10/03/2023

6.4.2 Beluga and Narwhal

Other marine mammal species harvested included Beluga (27 individuals) and Narwhal (*Monodon monoceros*; 5). Walrus (*Odobenus rosmarus*) were not reported as being harvested in 2022 but three (3) individuals were harvested in 2021. Belugas were harvested in offshore areas north of Marble Island and in outer Rankin Inlet (Figure 6.11). Narwhal were harvested near Lyon Inlet and Navigat.

6.4.3 Mussels

One participant reported harvesting 816 mussels in 2022.

SECTION 7 • CREEL SURVEY RESULTS

7.1 NUMBER OF FISHERMEN

The number of fishermen reporting successful fishing trips in 2022 was 27, which is slightly higher than in 2021 (24). The highest numbers of fisherman reporting success in 2022 were in the May through August period (see Table 7.1) (see Section 7.4 Magnitude of Fishing).

Table 7.1: Number of Fisherman in Rankin Inlet who Recorded Fishing Success by Year and Month.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	0	0	0	4	19	10	6	4	3	2	3	1
2022	1	1	1	0	12	11	9	10	3	3	0	0
Total	**1**	**1**	**1**	**4**	**31**	**21**	**15**	**14**	**6**	**5**	**3**	**1**

7.2 COMPOSITION OF CATCH

The most common fish species captured, Arctic Char, represented 77% of the total catch in 2022 (Table 7.2; compared to 72% in 2021). Lake Trout (11%) were also captured at reasonably high numbers as were Arctic Cod (*Arctogadus glacialis*; 10%). The other two species that were the focus of the HHS, Arctic Grayling and Lake Whitefish, were caught at relatively low numbers.

Table 7.2: Total Number of Fish Caught in 2021 and 2022.

Species	2022	2021	Total
Arctic Char	878	628	1,506
Arctic Cod	115	12	127
Arctic Grayling	26	7	33
Burbot		2	2
Lake Trout	124	216	340
Lake Whitefish	2	3	5
Totals	**1,145**	**868**	**2,013**

7.3 DISTRIBUTION OF FISHING

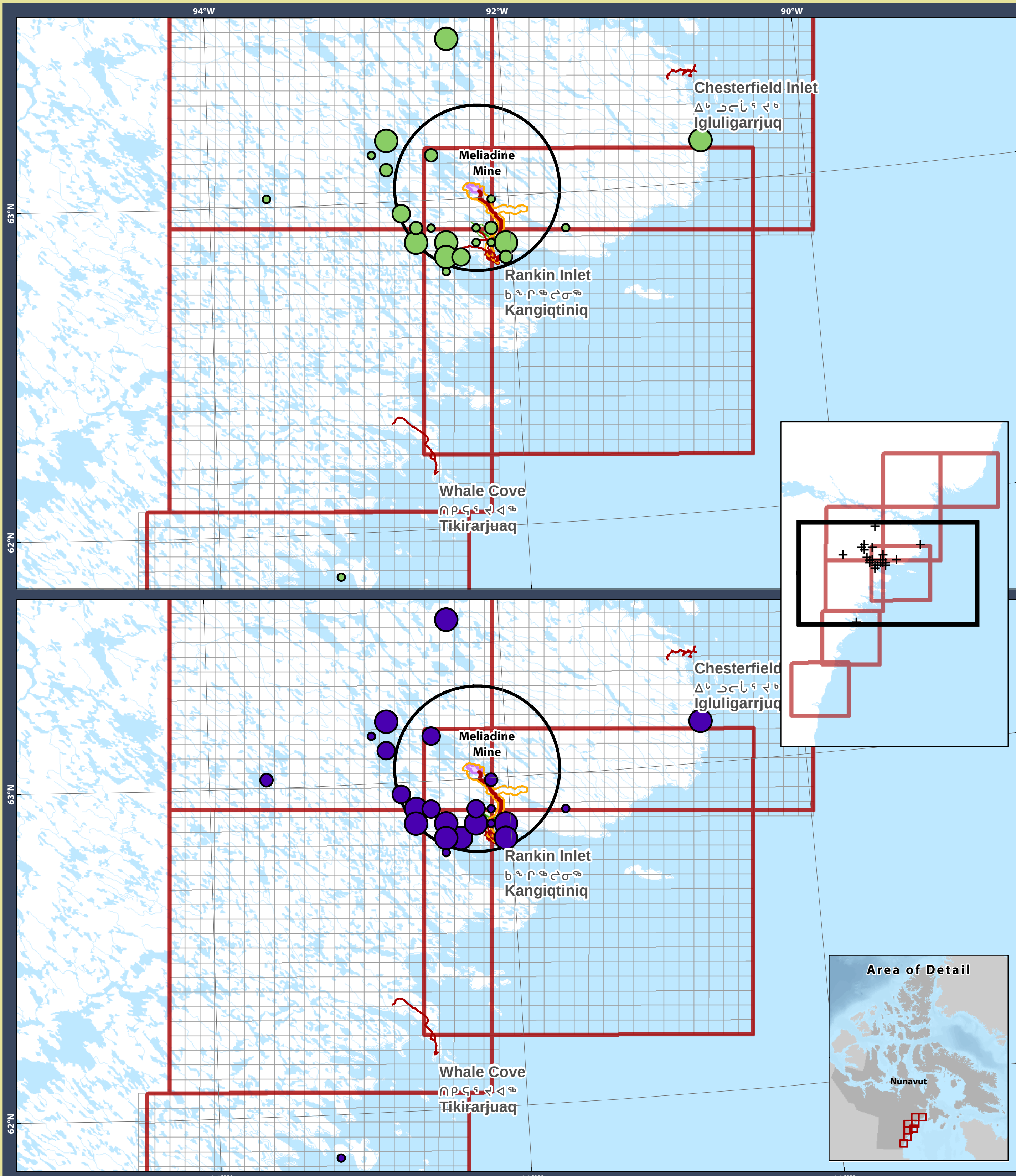
Fishing trips, regardless of success rate, generally occurred close to the Hamlet of Rankin Inlet and in lakes and rivers west of the community up to Peter Lake. Fishing by Rankin Inlet participants occurred to a lesser extent in the Chesterfield Inlet area (see Figure 7.1). (Figure 7.1). Results indicate that study participants rarely fished close to the Meliadine Mine AWAR.

7.4 MAGNITUDE OF FISHING

The total number of fish harvested per fisherman in each month was highest in June and August with moderate numbers in May and July (Figure 7.2). The higher numbers in June and August differed from what was observed in 2021 (Figure 7.2). In 2022, the most captured fish species, in order of abundance, were Arctic Char, Lake Trout, Arctic Cod, and Arctic Grayling (see Table 7.2).

7.5 SEASONAL TIMING OF FISHING

In 2022, fishing periods with the most active fisherman was from May through August (see Table 7.1) while the greatest number of fish caught was June and August (Figure 7.2).



Legend

Roads
HHS Extents
Local Study Area
Regional Study Area
Production Lease
Parks & Protected Areas

Total Fish Harvest	Average Number Fish per Trip
1 - 5	1 - 3
6 - 10	4 - 5
11 - 20	6 - 10
>20	>10

0 10 20 30 40
Kilometres

Projection:
Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Nunavut Environmental Consulting Ltd.
Caslys Consulting Ltd.

Figure 7.1:
Total Number of Fish Caught in 2022

Rankin Inlet Hunter Harvest Study

Prepared for: AGNICO-EAGLE

By: CASLYS CONSULTING; Nunavut Environmental Consulting Ltd

10/03/2023

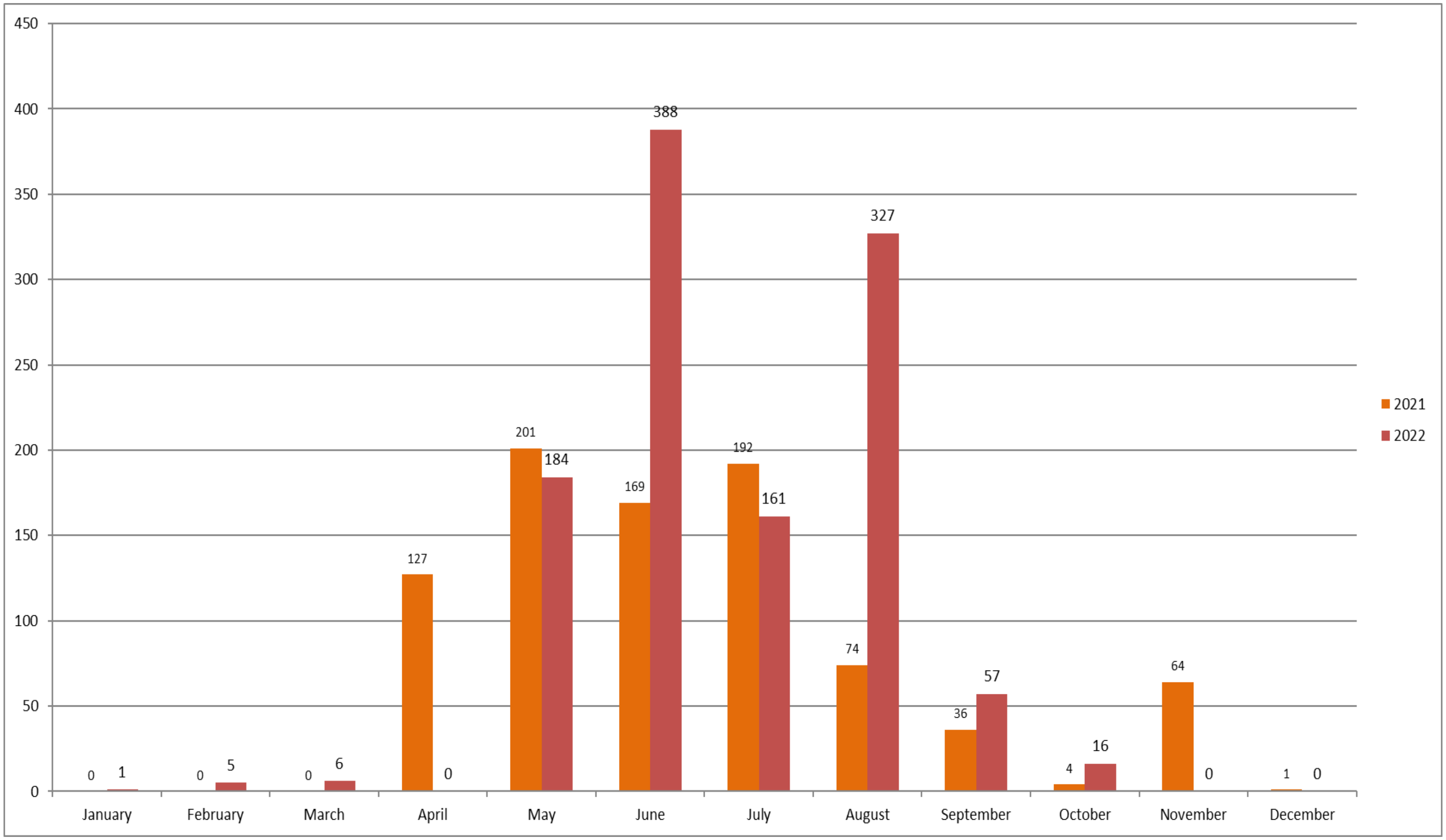


Figure 7.2: Total Number of Fish Caught by Month in 2021 and 2022.

SECTION 8 • ACCURACY OF IMPACT PREDICTIONS

The TEMMP indicates that threshold levels for Caribou harvest will be set after three full years of data from the HHS. As 2021 was the first year with a relatively comprehensive data set, HHS results from 2022 and 2023 will be required before threshold levels are set.

SECTION 9 • MANAGEMENT RECOMMENDATIONS

The Rankin Inlet Hunter Harvest Study and Creel Survey should be continued on an annual basis to monitor the hunting and fishing patterns of Rankin Inlet residents, and the potential effects of the mine and AWAR. Meetings with participants in 2023 will be particularly important in maintaining contact, building relationships, expanding the study, and collecting good harvest data.

Furthermore, ongoing collaboration with the KHTO will ensure that the HHS program runs smoothly, incorporates local IQ and TK and community concerns, and increases participant rates.

Participation rates can be maintained and enhanced by continuing to use social media platforms such as Facebook and Instagram, expanding connections on these platforms, ensuring that all participants are visited during the three scheduled field visits, and continuing with distribution of the well-received year-end prizes while in the community. In 2022, recruitment efforts resulted in new participants joining the study. Recruitment efforts should be ongoing to bring on other participants in 2023.

APPENDIX A

2022 Rankin Inlet Hunter Harvest Calendar

2022

Rankin Inlet Harvest Study

ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᖅᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Aurora Borealis

Kiligvak Tookoome

January | ᑕᕐᑮᓇᕐᔪᐊᖅ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᕐᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖓᔪᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᕐᑲᐃᑐᕐᓇᖅ
						1 New Year's Day
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

December 2021

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February 2022

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

Polar Bear Hunt

Nathaniel Kaludjak

February | ᐊᕗᓐᓂᕕᒃ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᖅᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖓᓱᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᑲᐃᑐᕐᓇᖅ
		1	2 Groundhog Day	3	4	5
6	7	8	9	10	11	12
13	14 Valentine's Day	15	16	17	18	19
20	21 Family Day	22	23	24	25	26
27	28					

January 2022

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

March 2022

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Wolf Hunt at the Treeline

Nathaniel Kaludjak

March | ᓇᑦᑎᐊᑦ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᕐᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᓚᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖕᓚᔪᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖃᐃᑐᕐᓇᖅ
		1	2 Ash Wednesday	3	4	5
6	7	8	9	10	11	12
13 Daylight Savings Time Starts	14	15	16	17 St. Patrick’s Day	18	19
20 First Day of Spring	21	22	23	24	25	26 Passover
27	28	29	30	31		

February 2022

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

April 2022

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Skinning a Muskox

Riley Lachance

April | ᑎᓇᒃᓗᐃᑦ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᕐᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᓚᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖓᓱᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᑲᐃᑐᕐᓇᖅ
					1	2
3	4	5	6	7	8	9
10 Palm Sunday	11	12	13	14	15 Good Friday	16
17 Easter Sunday	18 Easter Monday	19	20	21	22 Earth Day	23
24	25	26	27	28	29	30

March 2022

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

May 2022

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Fishing Spoons

Martin Gebauer

May | ᓄᕐᕋᐃᑦ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᕐᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖕᒐᓲᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᕿᐃᑐᕐᓇᖅ
1	2	3	4	5	6	7
8 Mother's Day	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23 Victoria Day	24	25	26	27	28
29	30	31				

April 2022

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

June 2022

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Tea Is On

Riley Lachance

June | ᒪᓐᓂᑦ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᖅᒥᑦ ᒪᖃᐃᑕᐅᓯᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓪᓕᖅ	Wednesday ᐱᖕᒐᓱᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓪᓕᒪᑦ	Saturday ᓂᖃᐃᑐᕐᓇᖅ
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19 Father's Day	20	21 National Aboriginal Day First Day of Summer	22	23	24	25
26	27	28	29	30		

May 2022

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

July 2022

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Common Eiders on Ice

Dylan White

July | ᓴᒡᒐᕈᑦ 2022

Rankin Inlet Harvest Study
ᑲᖕᑭᖅᖢᓂᕐᒥᑦ ᒪᖅᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖕᒐᔪᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᑲᐃᑐᕐᓇᖅ
					1 Canada Day	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June 2022

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

August 2022

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Prepping Dinner

Riley Lachance

August | ᐊᑯᓪᓕᕈᕐᕕᒃ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᖅᑲᐃᑕᐅᔪᓂᒃ ᖅᑲᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᓚᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖓᓲᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᑲᐃᑐᕐᓇᖅ
	1 Civic Holiday	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

July 2022

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 2022

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Ready for Soup

Riley Lachance

September | ᐊᒥᕋᐃᔭᕐᕕᒃ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᕐᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

August 2022

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

October 2022

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᓚᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖕᒐᔪᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᕿᐃᑐᕐᓇᖅ
				1	2	3
4	5 Labour Day	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22 First Day of Autumn	23	24
25	26	27	28	29	30	

Golden Sunset

Riley Lachance

October | ᐅᑭᐅᓛᑦ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᖅᑲᐃᑕᐅᔪᓂᒃ ᖅᑲᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖓᓲᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᑲᐃᑐᕐᓇᖅ
						1
2	3	4	5	6	7	8
9	10 Thanksgiving	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30 Halloween	31					

September 2022

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

November 2022

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

After the Hunt

Derek Zavadski

November | ᑲᑕᒑᓇᖕᕕᒃ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᕐᒥᑦ ᒪᕐᑲᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒪᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖓᓲᔪᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖅᑲᐃᑐᕐᓇᖅ
		1	2	3	4	5
6 Daylight Savings Time Ends	7	8	9	10	11 Remembrance Day	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

October 2022

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

December 2022

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Successful Hunt

Riley Lachance

December | ᐋᒡᔭᓚᕐᕕᒃ 2022

Rankin Inlet Harvest Study
ᑲᖏᖅᖠᓂᖅᒥᑦ ᒪᖅᑲᐃᑕᐅᔭᓂᒃ ᖃᐅᔨᓴᐃᓂᖅ

Sunday ᓴᓇᑕᐃᓕ	Monday ᓴᓇᑕᐃᓕᐅᒐᓂᓴᖅ	Tuesday ᑐᒃᓯᐊᕐᓇᖅ ᓯᕗᓕᖅ	Wednesday ᐱᖕᒐᔪᐊᑦ	Thursday ᓯᑕᒪᑦ	Friday ᑕᓕᒪᑦ	Saturday ᓂᖃᐃᑐᕐᓇᖅ
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20 First Day of Winter	21	22	23	24
25 Christmas Day	26 Boxing Day	27	28	29	30	31 New Year's Eve

November 2022

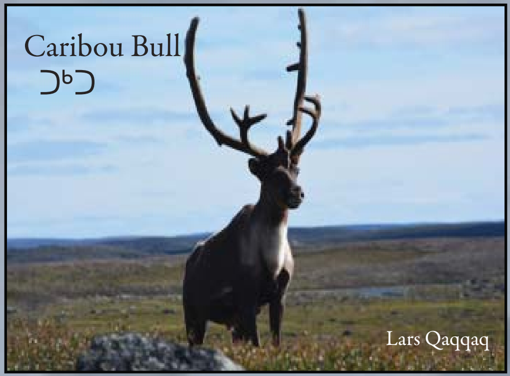
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

January 2023

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Please return the calendar to the Agnico-Eagle office for entry into the participant draw.

Wildlife and Fish Species of Interest



Caribou Bull
ᑐᒃᑐ

Lars Qaqqaq

Grizzly Bear
ᐊᒃᖤ

Tom Thomson

Muskox Bull
ᐅᒥᖕᒪᒃ

Martin Gebauer

Arctic Fox
ᑎᕆᒐᓂᐊᖅ

Dylan White

Polar Bear
ᓇᓄᖅ

Martin Gebauer

Wolverine
ᖃᕝᕕᒑᖅᔪᒃ

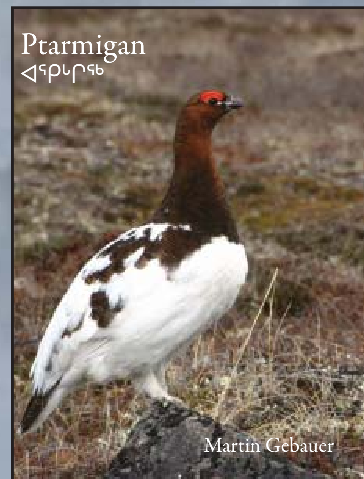
Jamie Kataluk

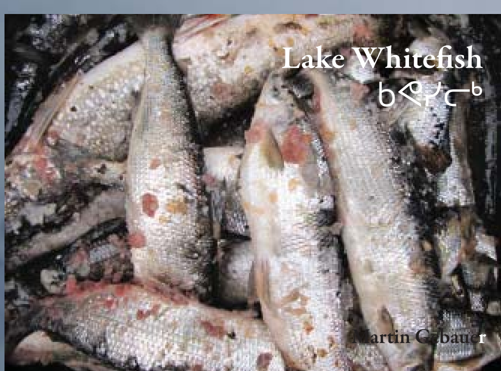
Wolf
ᐊᒪᕈᖅ

Paul Kabloona

Martin Gebauer

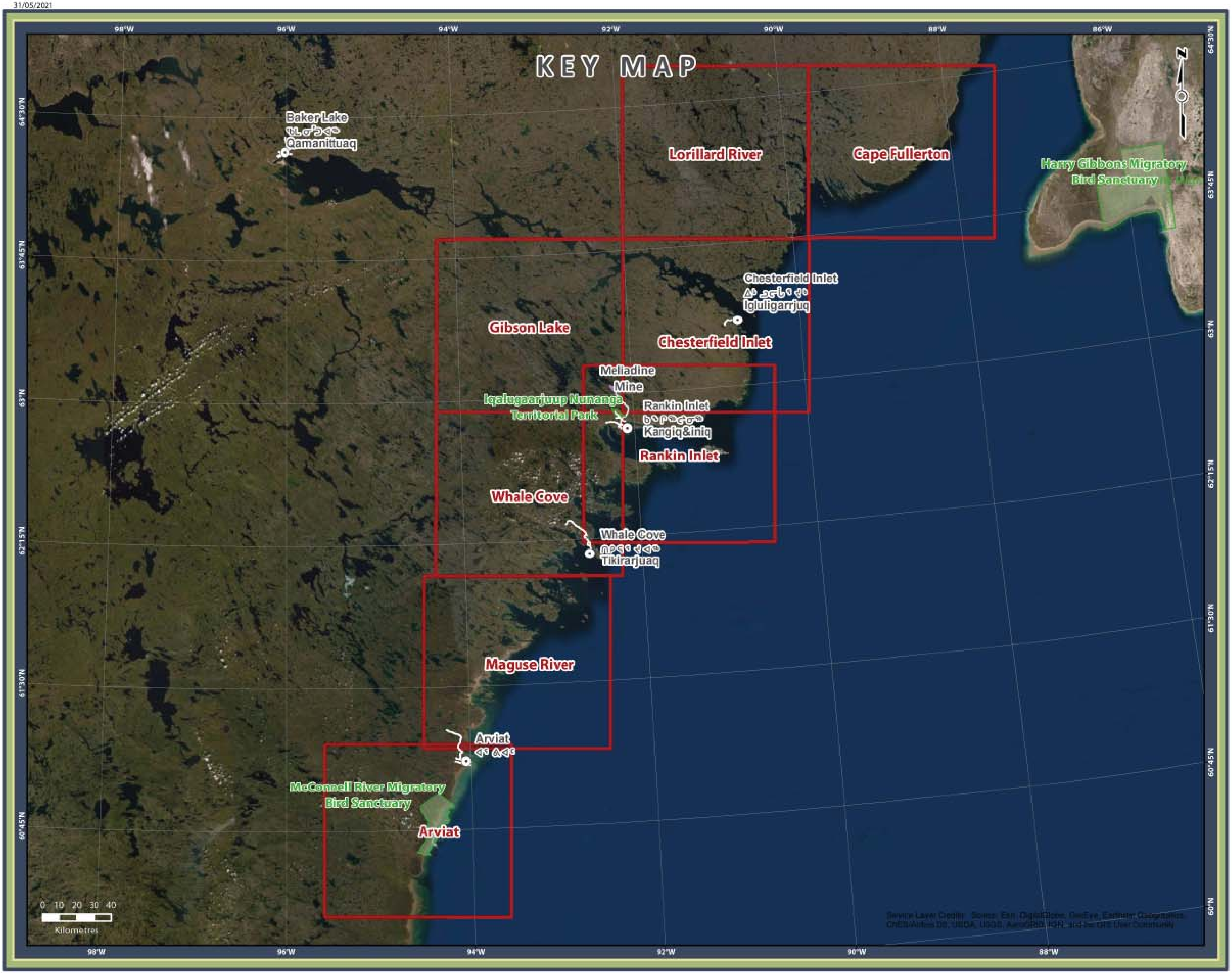
Wildlife and Fish Species of Interest



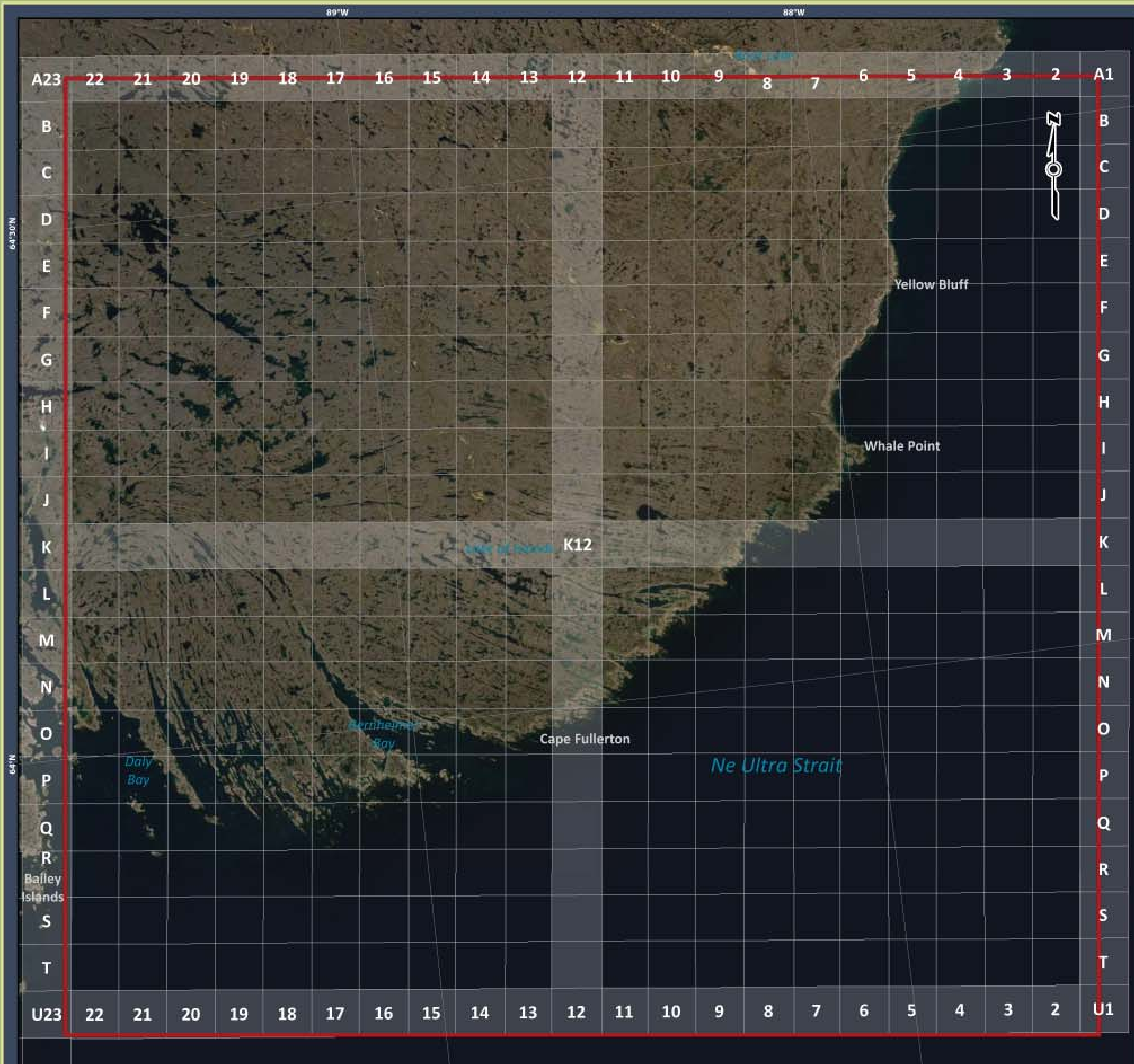


Martin Gebauer

31/05/2021

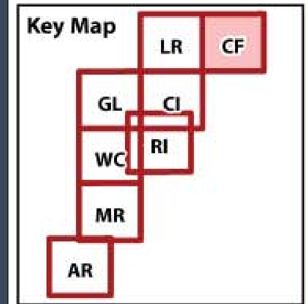

KEY MAP
Baker Lake
Qamanittuaq
Lorillard River
Cape Fullerton
Harry Gibbons Migratory Bird Sanctuary
Chesterfield Inlet
Igluligarrjuq
Gibson Lake
Chesterfield Inlet
Meliadine Mine
Iqalugaarjuup Nunanga Territorial Park
Rankin Inlet
Kangiq&iniq
Rankin Inlet
Whale Cove
Whale Cove
Tikirarjuaq
Maguse River
Arviat
McConnell River Migratory Bird Sanctuary
Arviat
0 10 20 30 40
Kilometres
98°W
96°W
94°W
92°W
90°W
88°W
86°W
64°30'N
63°45'N
63°N
62°15'N
61°30'N
60°45'N
60°N

28/05/2021



Rankin Inlet Harvest Study

Cape Fullerton



0 5 10 15

Kilometres

Projection: Canada Lambert Conformal Conic

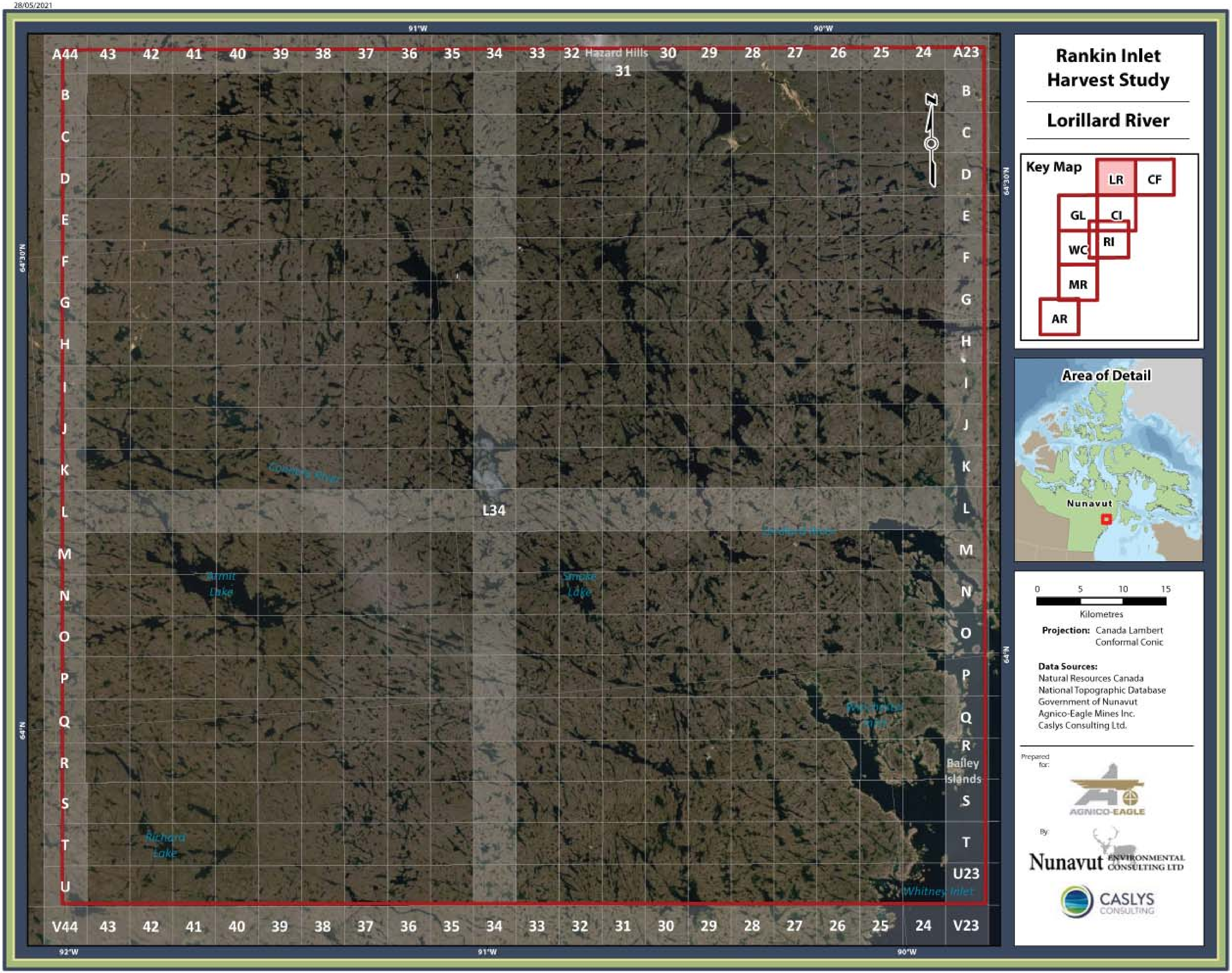
Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for: AGNICO-EAGLE

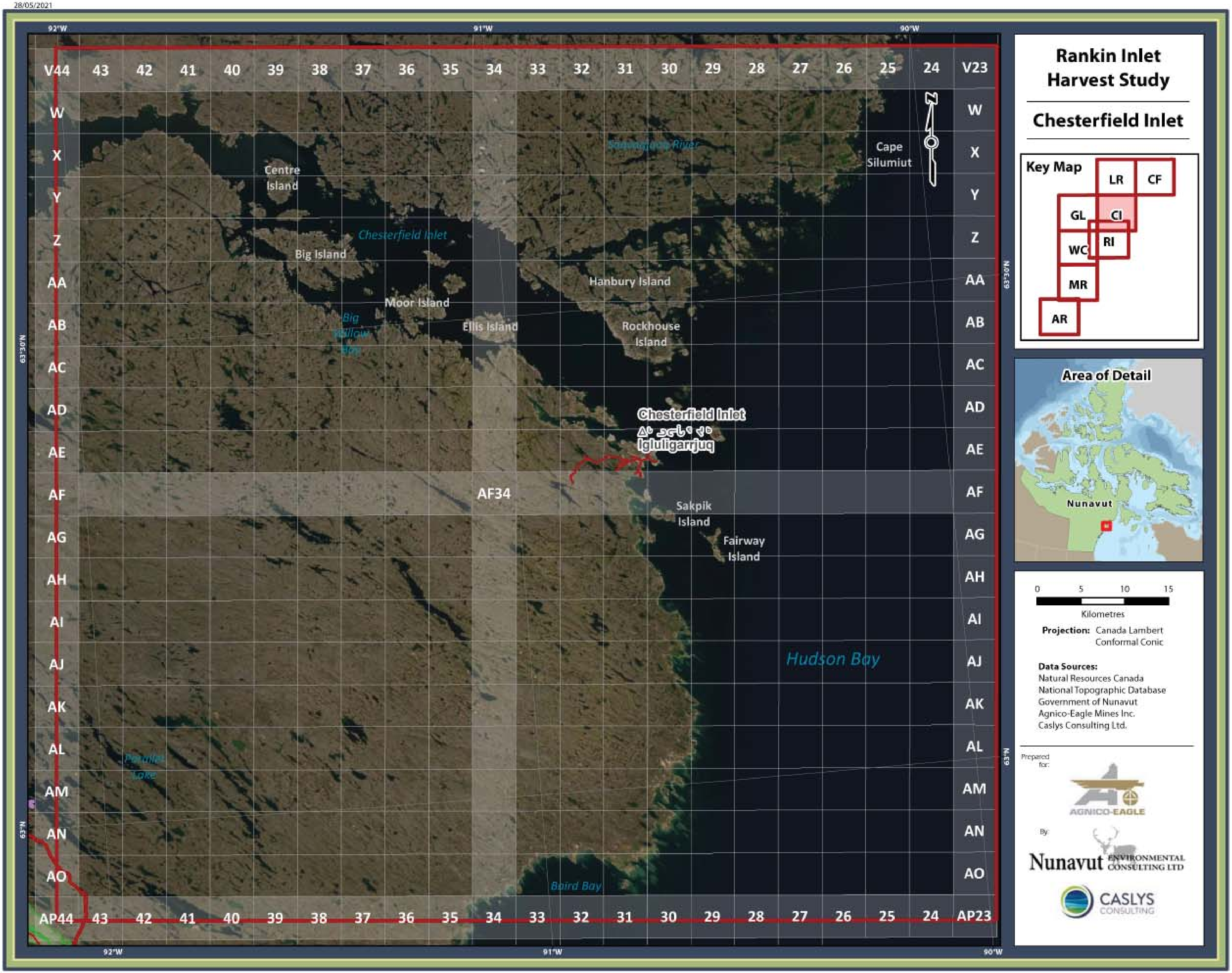
By: Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

28/05/2021

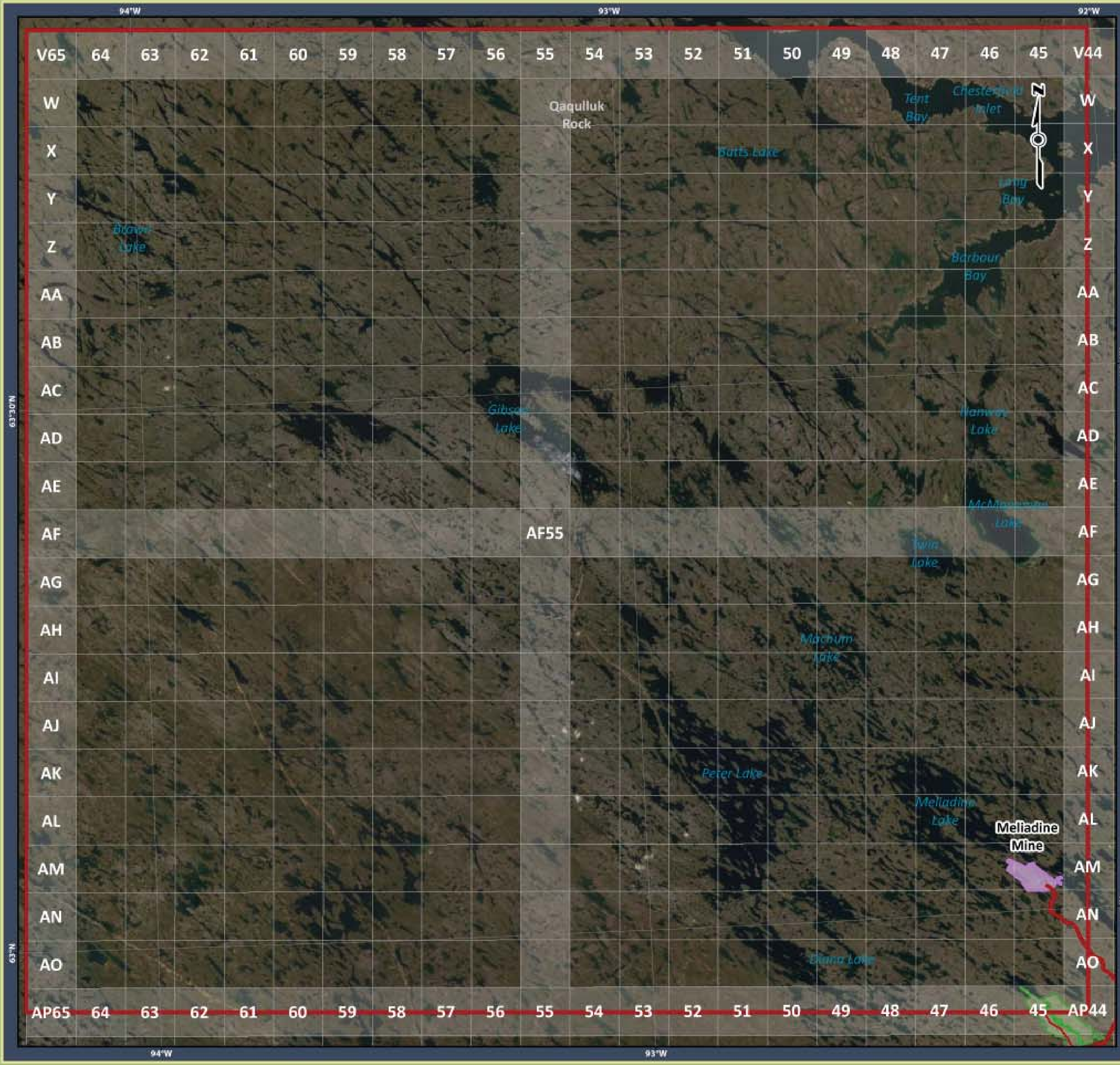

Rankin Inlet Harvest Study
Lorillard River
Key Map
LR
CF
GL
CI
WC
RI
MR
AR
Area of Detail
Nunavut
0 5 10 15
Kilometres
Projection: Canada Lambert Conformal Conic
Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.
Prepared for:
AGNICO-EAGLE
By:
Nunavut Environmental Consulting Ltd
CASLYS CONSULTING
91°W
90°W
92°W
64°30'N
64°N
A44 43 42 41 40 39 38 37 36 35 34 33 32 Hazard Hills 30 29 28 27 26 25 24 A23
31
B
C
D
E
F
G
H
I
J
K
L
L34
M
N
O
P
Q
R
Bailey Islands
S
T
U
U23
Whitney Inlet
V44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 V23

28/05/2021



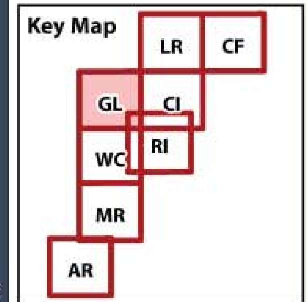
Rankin Inlet Harvest Study
Chesterfield Inlet
Key Map
LR
CF
GL
CI
RI
WC
MR
AR
Area of Detail
Nunavut
0 5 10 15
Kilometres
Projection: Canada Lambert Conformal Conic
Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.
Prepared for:
AGNICO-EAGLE
By
Nunavut Environmental Consulting Ltd
CASLYS CONSULTING
92°W
91°W
90°W
63°30'N
63°N
V44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 V23
W
X
Y
Z
AA
AB
AC
AD
AE
AF
AG
AH
AI
AJ
AK
AL
AM
AN
AO
AP44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 AP23
AF34
Cape Silumiut
Centre Island
Chesterfield Inlet
Big Island
Moor Island
Ellis Island
Hanbury Island
Rockhouse Island
Chesterfield Inlet
ᐃᒡᓗᓕᒑᕐᔪᒃ
Igluligarrjuq
Sakpik Island
Fairway Island
Hudson Bay
Baird Bay

28/05/2021



Rankin Inlet Harvest Study

Gibson Lake



0 5 10 15

Kilometres

Projection: Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:

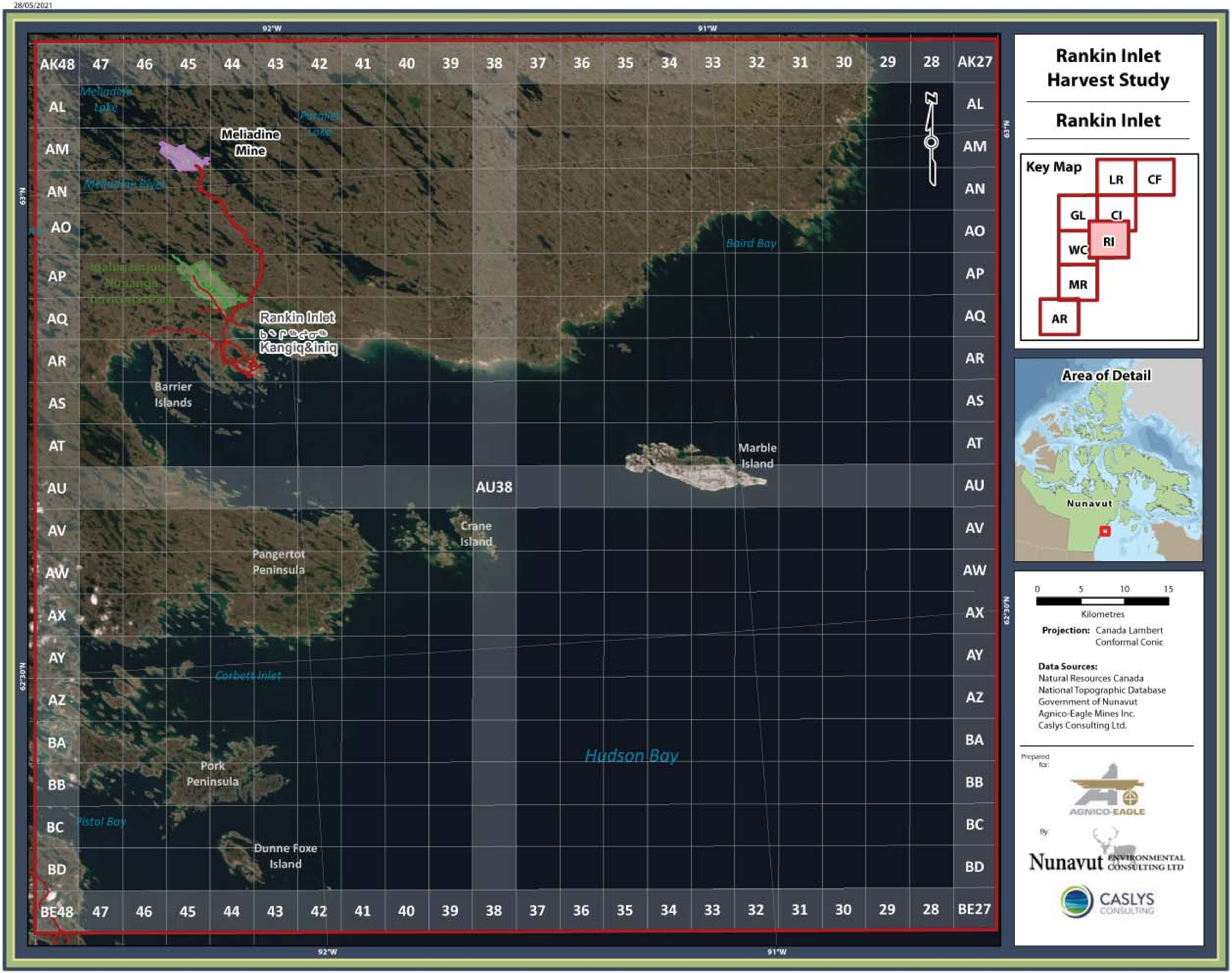
AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

28/05/2021



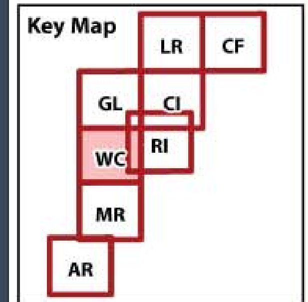
Rankin Inlet Harvest Study
Rankin Inlet
Key Map
LR
CF
GL
CI
RI
WC
MR
AR
Area of Detail
Nunavut
0 5 10 15
Kilometres
Projection: Canada Lambert Conformal Conic
Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.
Prepared for:
AGNICO-EAGLE
By:
Nunavut Environmental Consulting Ltd
CASLYS CONSULTING
92°W
91°W
63°N
62°30'N
AK48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 AK27
AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD
BE48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 BE27
AU38
Meliadine Lake
Parallel Lake
Meliadine Mine
Meliadine River
Rankin Inlet
Kangiq&iniq
Baird Bay
Barrier Islands
Marble Island
Crane Island
Pangertot Peninsula
Corbett Inlet
Hudson Bay
Pork Peninsula
Pistol Bay
Dunne Foxe Island

28/05/2021

Rankin Inlet Harvest Study

Whale Cove

Key Map



0 5 10 15

Kilometres

Projection: Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:

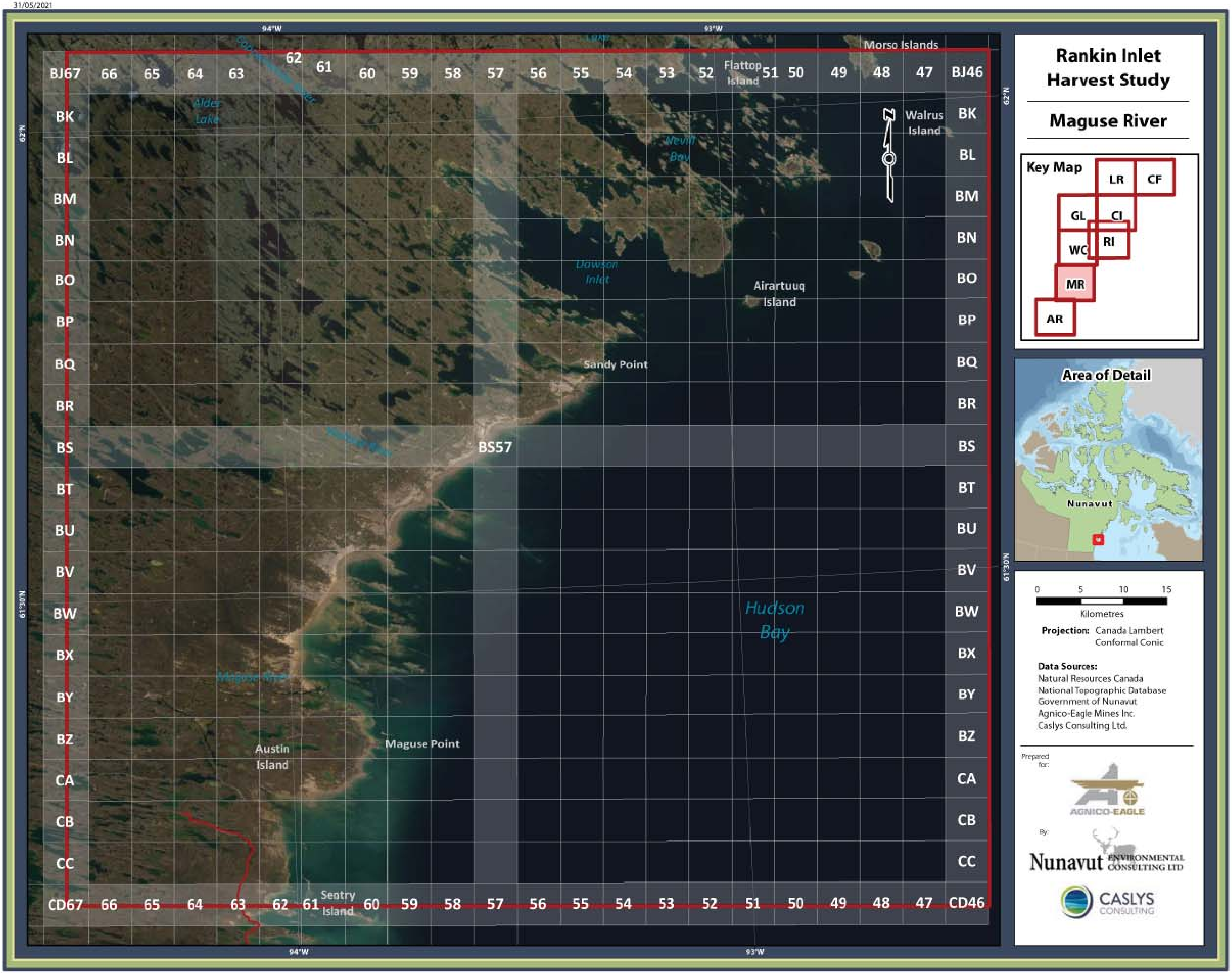
AGNICO-EAGLE

By:

Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

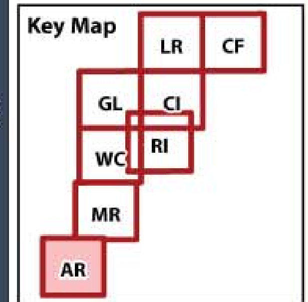
31/05/2021


Rankin Inlet Harvest Study
Maguse River
Key Map
LR
CF
GL
CI
RI
WC
MR
AR
Area of Detail
Nunavut
0 5 10 15
Kilometres
Projection: Canada Lambert Conformal Conic
Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.
Prepared for:
AGNICO-EAGLE
By:
Nunavut ENVIRONMENTAL CONSULTING LTD
CASLYS CONSULTING
94°W
93°W
62°N
61°30'N
Morso Islands
Flattop Island
Walrus Island
Alder Lake
Nevill Bay
Dawson Inlet
Airartuuq Island
Sandy Point
BS57
Hudson Bay
Maguse River
Austin Island
Maguse Point
Sentry Island
BJ67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 BJ46
BK
BL
BM
BN
BO
BP
BQ
BR
BS
BT
BU
BV
BW
BX
BY
BZ
CA
CB
CC
CD67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 CD46

31/05/2021

Rankin Inlet Harvest Study

Arviat



0 5 10 15
Kilometres

Projection: Canada Lambert Conformal Conic

Data Sources:
Natural Resources Canada
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Inc.
Caslys Consulting Ltd.

Prepared for:
AGNICO-EAGLE

By:
Nunavut Environmental Consulting Ltd

CASLYS CONSULTING

How to Use the Rankin Inlet Harvest Calendar

Agnico Eagle Mines Ltd. (Agnico), in cooperation with the Kangiqlinq Hunters and Trappers Organization (KHTO) of Rankin Inlet, want to understand hunting and fishing patterns by Rankin Inlet residents. Specifically, we want to understand how the Meliadine Project and the all-weather access road (AWAR), located north of Rankin Inlet, might influence traditional harvesting patterns. To ensure that traditional hunting and fishing activities are not negatively affected, we have developed this calendar where participants can record harvest information throughout the year.

Near the back of the calendar is a page that shows the animal and fish species that are included in the study. Please write down the species, number, sex, and location of animals or fish that you have harvested on each date on the calendar. When writing down the location, please use the XY coordinate system provided on the maps at the back of the calendar.

You will also be visited or contacted by the hunter harvest consultant or a KHTO member occasionally throughout the year. The consultant's or member's job will be much easier if you write down your harvest information in the calendar as soon as possible.

Please return the calendar to the Agnico or KHTO offices in Rankin Inlet at the end of the year or give the calendar to the consultant on the January 2023 visit.

Each participant will receive a gift (e.g., gas voucher) expressing our thanks, and additional prizes will be provided in January 2023 at the end of the study.

If you have any questions, please contact the Rankin Inlet Harvest Study Consultant, Dylan White at 1-266-500-4202 or dsgwhite@gmail.com. You can also contact a KHTO member in the community or email Martin Gebauer at martin@gebauerassociates.com.

ᖃᓄᖅ ᐊᑐᕆᐊᖃᕐᓂᖓ ᑲᙳᖅᓵᓂᕐᒥᑦ ᒪᖃᐃᑎᓄᑦ ᐅᐸᓗᖅᓯᐅᑎ

ᐊᒡᓃᑯᑉ ᐅᔭᕋᒃᑕᕆᐊᑦ ᓕᒥᑎᑦ (ᐊᒡᓃᑯᒃᑯᑦ), ᐱᓕᕆᖃᑎᒌᓪᓗᑎᑦ ᑲᙳᖅᓵᓂᕐᒥᑦ ᐆᒪᔪᓕᕆᔨᐊᓛᒃᑯᑦ, ᑐᑭᓯᐊᓕᕈᒪᔪᑦ ᑲᙳᖅᓵᓂᕐᒥᐅᑕᓄᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᓂᒃ ᒪᖃᐃᓐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐃᖃᓪᓕᐊᕐᓂᕐᒧᑦ. ᐱᓗᐊᖅᑐᒥᑦ, ᑐᑭᓯᐊᓕᕈᒪᔭᕗᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐱᓕᕆᐊᖅ ᐊᒻᒪᓗ ᐅᑭᐅᓗᒃᑖᖅ ᐊᕐᖁᑎ, ᐅᐊᙵᓐᖓᓂᑦ ᑲᙳᖅᓵᓂᐅᑉ, ᐱᔾᔪᑎᖃᑐᐃᓐᓇᕆᐊᖃᕐᒪᑦ ᐱᖅᑯᓯᒃᑯᑦ ᒪᖃᐃᓐᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᓂᒃ. ᐱᖅᑯᓯᒃᑯᑦ ᒪᖃᐃᓐᓃᑦ ᐊᒻᒪᓗ ᐃᖃᓪᓕᐊᕐᓃᑦ ᐱᐅᙱᑦᑐᒃᑯᑦ ᐊᒃᑐᖅᑕᐅᓂᖅᑯᙳᕆᓪᓗᑎᑦ, ᐋᖅᑭᒃᓯᓚᐅᖅᑐᒍᑦ ᐅᐸᓗᖅᓯᐅᑎᒥᒃ ᐃᓚᐅᖃᑕᐅᔪᑦ ᑎᑎᕋᕈᕆᓂᐊᕐᓗᒍ ᐅᑭᐅᑉ ᐃᓗᐊᓂᑦ ᒪᖃᐃᓐᓂᕐᒧᑦ ᑐᑭᓯᐅᒪᔾᔪᑎᓂᒃ.

ᐅᐸᓗᖅᓯᐅᑎᐅᑉ ᑐᓄᖅᐸᓯᐊᓃᑦᑐᖅ ᒪᒃᐱᖅᑐᒐᖅ ᑕᑯᔅᓴᐅᑎᑦᑎᔪᖅ ᓂᕐᔪᑎᓂᒃ ᐊᒻᒪᓗ ᐃᖃᓗᖕᓂᑦ ᐊᔾᔨᒌᙱᑦᑐᓂᒃ ᐃᓚᐅᔪᑦ ᖃᐅᔨᓴᐃᓂᕐᒥᑦ. ᑎᑎᕋᕐᓗᒋᑦ ᐅᐸᓗᖅᓯᐅᑎᒧᑦ ᓂᕐᔫᑎᑦ, ᖃᑉᓯᓂᒃ, ᐊᖑᓯᑦᓗᖅ/ᐊᕐᓇᓪᓗᖅ, ᐊᒻᒪᓗ ᓇᑭᑦ ᓂᕐᔫᑎᑦ ᐃᖃᓗᐃᓪᓘᓐᓃᑦ ᐱᑖᖅᑕᐅᓚᐅᕐᒪᖔᑕ ᐊᑐᓂ ᐅᐸᓗᕐᓂᑦ. ᑎᑎᕋᕐᓗᒋᑦ ᐃᓂᖓᑦ, ᐊᑐᕐᓗᑎᑦ ᐃᓂᓂᒃ ᓇᓗᓇᐃᖅᓯᔾᔪᑎᓂᒃ ᑕᐃᒪᐅᔪᑦ ᓄᓇᙳᐊᕐᒥᑦ ᐅᐸᓗᖅᓯᐅᑎᐅᑉ ᑐᓄᐊᓃᑦᑐᖅ.

ᖃᑯᑎᒃᑯᑦ ᐅᑭᐅᑉ ᐃᓗᐊᓂᑦ ᑕᑯᔭᖅᑐᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑎᑦ ᖃᐅᔨᓯᐊᕐᕕᐅᖃᑦᑕᖅᑐᒧᑦ ᐅᖃᓘᑎᓃᑦ ᐆᒪᔪᓕᕆᔨᐊᓛᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᖃᐅᔨᓯᐊᖅᑕᐅᓗᑎᓪᓘᓃᑦ ᓂᕐᔪᑎᓂᒃ ᒪᖃᐃᑕᕕᑦ ᒥᒃᓴᓄᑦ. ᖃᐅᔨᓯᐊᕐᕕᐅᖃᑦᑕᖅᑑᑉ ᐅᖃᓘᑎᓃᑦ ᑲᑎᒪᔨᐅᑉ ᐱᓕᕆᐊᖓ ᐊᔪᕐᓇᙱᓐᓂᖅᓴᐅᓂᐊᖅᑐᖅ ᑎᑎᕋᖃᐅᑎᕐᖃᑦᑕᒃᐸᑎᒃ ᒪᖃᐃᑕᑎᑦ ᐅᐸᓗᖅᓯᐅᑎᒧᑦ.

ᐅᑭᐅᖅ ᓄᙳᐊᓂᑦ ᐅᑎᖅᑎᓐᓂᐊᖅᐸᐃᑦ ᐅᐸᓗᖅᓯᐅᑎ ᐊᒡᓃᑯᒃᑯᓐᓄᑦ ᐅᕝᕙᓘᓐᓃᑦ ᑲᙳᖅᓵᓂᕐᒥᑦ ᐆᒪᔪᓕᕆᔨᐊᓛᒃᑯᑦ ᑎᑎᕋᕝᕕᖓᓄᑦ ᐅᕝᕙᓘᓐᓃᑦ ᑐᓂᓗᒍ ᐅᐸᓗᖅᓯᐅᑎ ᖃᐅᔨᓯᐊᖅᑕᕐᕕᐅᔨᒧᑦ ᑕᖅᑮᓐᓇᕐᔪᐊᖅ (ᔭᓄᐊᕆ) 2023-ᒥᑦ ᑕᐃᑯᙵᖅᐸᑦ.

ᐃᓚᐅᖃᑕᐅᔪᑦ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᐱᑖᕈᑎᒥᒃ (ᓖᕐᓗ, ᐅᖅᓱᖅᑖᕈᑎᒃᓴᖅ) ᖁᔭᓕᓗᑎᒍᑦ, ᐊᒻᒪᓗ ᐱᑖᒃᓴᒃᑲᓐᓂᑦ ᑕᐃᒪᐅᓂᐊᖅᑐᑦ ᑕᖅᑮᓐᓇᕐᔪᐊᖅ (ᔭᓄᐊᕆ) 2022-ᒥᑦ ᖃᐅᔨᓴᐃᓂᖅ ᐱᐊᓂᒃᐸᑦ.

ᐊᐱᖅᑯᑎᒃᓴᖃᕈᕕᑦ, ᖃᐅᔨᓯᐊᕐᕕᒋᓗᒋᑦ ᑲᙳᖅᓵᓂᕐᒥᑦ ᒪᖃᐃᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᖃᐅᔨᓯᐊᖅᑕᕐᕕᒃ, ᑎᓚᓐ ᐅᐊᐃᑦ ᐅᕙᓂ 1-266-500-4202 ᐅᕝᕙᓘᓐᓃᑦ ᑎᑎᕋᕐᓗᑎᑦ ᐅᕙᖓ dsgwhite@gmail.com. ᖃᐅᔨᓯᐊᕐᕕᒋᔪᓐᓇᕐᒥᔭᑎᑦ ᑲᙳᖅᓵᓂᕐᒥᑦ ᐆᒪᔪᓕᕆᔨᐊᓛᒃᑯᑦ ᐅᕝᕙᓘᓐᓃᑦ ᖃᕆᑕᐅᔭᒃᑯᑦ ᑎᑎᕋᕐᕕᒋᓗᒍ ᒫᑎᓐ ᒋᐸᐅ ᐅᕙᖓ martin@gebauerassociates.com.

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