Appendix 36

Whale Tail 2023 Groundwater Management Monitoring Report

TECHNICAL MEMORANDUM

DATE 20 March 2024 **Project No.** CA0007108.1008-TM-MBK2024_003-Rev0

TO Marie-Pier Marcil
Agnico Eagle Mines Limited

CC Eric Haley

FROM Dale Holtze; Jennifer Levenick **EMAIL Dale.Holtze@wsp.com; Jennifer.Levenick@wsp.com**

WHALE TAIL MINE – 2023 GROUNDWATER MANAGEMENT MONITORING REPORT

Agnico Eagle Mines Limited – Meadowbank Complex (Agnico Eagle) received a Project Certificate No.008 from the Nunavut Impact Review Board for the development of the Whale Tail Mine, a satellite deposit located on the Amaruq Exploration Property. To comply with the Terms and Conditions No.15 and 16 included in the Project Certificate, a Groundwater Monitoring Plan (GWMP) was developed that included commitments made with respect to submissions provided during the technical review of the FEIS (Agnico Eagle 2019). The 2023 groundwater monitoring program was also completed as a requirement of the Water Licence no. 2AM-WTP1830 issued by the Nunavut Water Board (NWB).

This memorandum provides a compilation and review of the site-specific data collection in 2023 and the review of 2023 groundwater monitoring data. The data collected and the relevant sections of the GWMP that are addressed by the data collection are as follows:

- Section 1 of the report summarizes the open pit and underground mine operations interacting with groundwater.
- Section 2 of this report provides site-specific data collected in 2023 including thermistor data (Section 3.1 of the GWMP), groundwater quantity data (Section 4.1 of the GWMP), groundwater quality data (Section 4.2 of the GWMP) and hydraulic head monitoring (Section 3.1 of the GWMP).
- Section 3 discusses the mine inflow monitoring data and presents a comparison of these data to model predictions (Section 5 of the GWMP), which were updated in 2022.

1.0 WHALE TAIL SITE

The project consists of mining from the Whale Tail and IVR Pits and underground operations. Of these developments only Whale Tail Pit and the underground operations are expected to intercept saline groundwater over the permitted life of mine and in 2023, only Whale Tail Pit intercepted groundwater. The IVR pit is in permafrost and is not expected to interact with the deeper groundwater flow system until closure, when the formation of the pit lake will slowly degrade the permafrost underlying the open pit. The Whale Tail underground is still located within permafrost as of present.

The mining of Whale Tail Mine required the dewatering of the North Basin of Whale Tail Lake (North Basin) and the construction of the Whale Tail Dike (WTD), which was completed by 15 May 2020. Prior to dewatering, mining occurred in the portions of the Whale Tail Mine that are outside of the North Basin within permafrost. The eastern portion was referred to as Quarry 1, and the western area as Whale Tail (Starter) Pit. During the dewatering period, Quarry 1, located in permafrost, was the established attenuation pond on site. Starting in the spring of 2020, Quarry 1 and the Whale Tail (Starter) Pit merged to form the Whale Tail Pit. The Quarry 1 attenuation pond was replaced by the Whale Tail Attenuation Pond in June 2020, which is in the dewatered North Basin of Whale Tail Lake between the Dike and the South Basin of Whale Tail Pit. In May 2021, the IVR Attenuation Pond was also established to manage contact water. Throughout 2023, the Whale Tail Attenuation Pond continued to receive inflows from Whale Tail Pit as well as WTD seepage from the WTD seepage interception system, Whale Tail Camp, Whale Tail waste rock storage facility pond (May and July through October only), the northwestern sump (May to September only) and surface water runoff. The Whale Tail Attenuation Pond also received flows from IVR Pit and IVR Attenuation Pond in October and November 2023.

2.0 MONITORING DATA COLLECTION

2.1 Westbay Well Sampling and Assessment of Groundwater Quality

In accordance with Section 3.1 of the GWMP, hydrostatic pressures were measured in September 2023 at Westbay Well AMQ16-626 to monitor hydraulic heads and changes in groundwater flow conditions. Following the pressure measurements, groundwater samples were collected to monitor the TDS and groundwater quality. A technical memorandum documenting this work, sampling results and historical monitoring from AMQ16-626 is included in Attachment A (WSP 2023), and a summary of the results is presented below. The location of AMQ16-626 is illustrated on Figure 1.

Water samples were collected from Ports 3 and 4 of AMQ16-626 in September 2023 to assess groundwater quality. During drilling and installation of the well, the drilling fluid was tagged with fluorescein. During collection of the water samples, the fluorescein concentration was measured to estimate the proportion of the sample attributed to drilling fluid versus formation groundwater. Groundwater quality at each port sampled was estimated using a mass balance calculation on analytical results and initial drilling brine composition to remove the proportion of residual drill fluid from the collected samples.

Given AMQ16-626 had to be installed through permafrost (Golder 2016), removal of groundwater for well development, purging and sampling must be carried out using a small volume sampler which substantially lengthens the time requirement for these activities for each port (months). The sampling program prioritizes key ports that optimized groundwater quality data collection, though each port is accessed for hydraulic pressure measurements. The rational for ports selected for sampling is provided below.

- Ports 4 and 3 were targeted for sampling based on their port elevation relative to planned underground infrastructure and because these intervals had been substantially developed since 2016 (i.e., drill water had been largely removed from the interval). These ports are used to assess groundwater quality for the Whale Tail Pit.
- Port 6, located within the cryopeg, has not been targeted for sampling since 2021 when it was observed the Formation pressure is taking longer to recover between 1 L sample runs compared to previous years (gradual decrease over time since 2016). This results in a pressure differential at the monitoring port being exceeded,

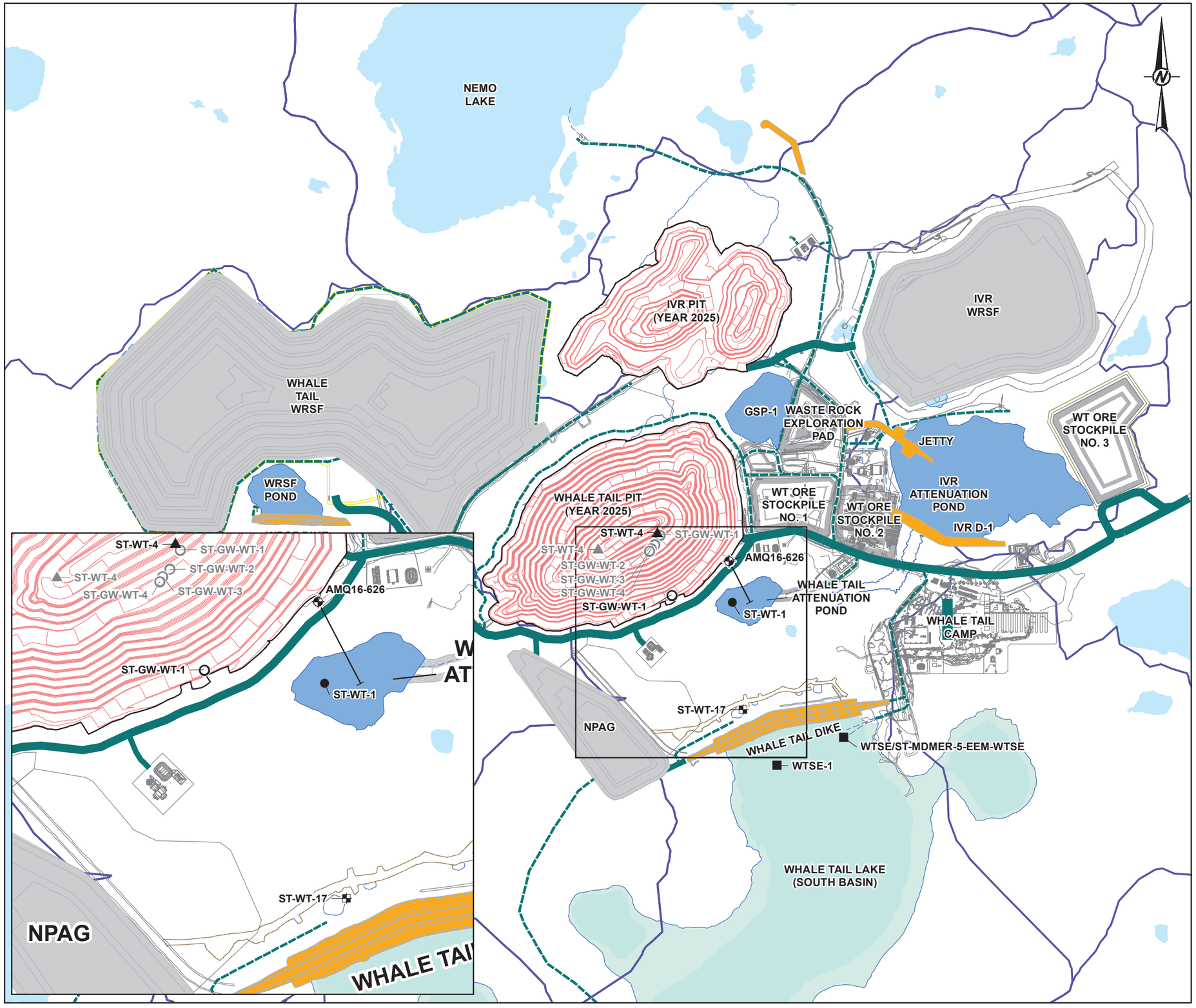
which allows for small amounts of Westbay casing water to enter the Formation and compromise the integrity of the water quality samples being collected.

- Ports 1 and 2 were not sampled in the 2022 and 2023 programs as they have not been sufficiently developed to yield an accurate estimate of groundwater quality. Multiple weeks of 24-hour development would likely be required to remove the residual drill fluid content in these Ports to be below the target of 5% residual drill fluid for a workable estimation of Formation water quality. The baseline TDS profile developed for the Whale Tail Mine only include water quality data from Ports 6, 4 and 3, and not the deeper Ports 1 and 2.
- Port 5 was never intended for groundwater sampling and was installed for pressure measurements only.

Based on 2023 data from Ports 3 and 4, the calculated TDS content of Formation water is estimated to range between 1,887 and 2,414 mg/L near these ports. The TDS in samples from Ports 3 and 4 is slightly less saline than historical sampling results in 2016, which may reflect the lower residual drilling fluid content in the collected samples and therefore inferred higher accuracy is the calculated Formation water quality. Overall, although slightly less saline than the Whale Tail TDS profile adopted for the FEIS, the results do not deviate significantly from FEIS assumptions (see Figure 5 in Attachment A).

Arsenic, which is a constituent of interest in the ore and waste rock to be mined, occurs in groundwater at concentrations that are low and consistent with previous reliable data collected from the well. Radium-226 in groundwater measured in 2023 at Ports 3 and 4 were below the Federal MDMER Effluent criteria.

The assumptions for the conceptual model for the site are considered unchanged by 2023 groundwater quality monitoring at AMQ16-626.



LEGEND

WATER SAMPLING STATIONS 2023

- WESTBAY SYSTEM
- DIKE SEEPAGE
- WALL SEEPAGE
- LAKE
- POND
- SUMP

WATER SAMPLING STATIONS (PRIOR TO 2023)

- WALL SEEPAGE
- SUMP
- ACCESS ROAD
- PIT EXTENT
- ROAD
- WT WRSF CONTACT WATER COLLECTION SYSTEM
- DIKE
- POND
- WATERBODY
- WATERSHED
- WHALE TAIL LAKE (SOUTH BASIN)

0 300 600

1:15,000 METRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED SHOWING PLANNED WHALE TAIL MINE OPERATIONS TO 2025. DESIGN INFRASTRUCTURE HAS SINCE BEEN MODIFIED.
2. WATERBODY DATA OBTAINED FROM PHOTOSAT.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

WATER SAMPLING STATIONS

CONSULTANT

wsp

YYYY-MM-DD	2024-02-01
DESIGNED	NU
PREPARED	CDB
REVIEWED	JL
APPROVED	JL

PROJECT NO.	DOC.	REV.	FIGURE
CA0007108.1008	2024MBK_003	0	1

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2.2 Thermal Monitoring Related to Groundwater Flow Interpretation

Whale Tail Mine thermal monitoring is documented in Attachment B, which includes the 2023 Whale Tail Mine Thermal Monitoring Report (Agnico Eagle 2024) and a subset of data from thermistor PSW3-DDH1 located within the south area of the Whale Tail Pit. There are currently eighty-five (85) active thermistors at the Whale Tail Mine site, and their approximate locations are presented in Appendix A of Attachment B and Figure 2 for thermistor PSW3-DDH1 (same location as piezometer PSW3-DDH1). Seven (7) thermistors were installed in 2023, of which three (3) were installed within the Whale Tail Dike (WTD) and four (4) within the IVR waste rock storage facility.

Under the GWMP, AMQ17-1233 and AMQ17-1337 were located outside of the pit footprint and were intended to monitor permafrost conditions between Nemo Lake and Whale Tail Mine (verify the presence of permafrost and the restricted horizontal movement of groundwater below the active layer due to permafrost in the upper 450 to 520 m of bedrock). These thermistors are no longer functioning due to mining activity but were showing permafrost conditions until they stopped functioning in 2019. Thermistor IVR long V651A TH was installed to the southeast of IVR Pit in 2019 to continue to monitor permafrost conditions. Many of the shallow beads installed in V651A TH malfunctioned in 2022 and the data is unavailable, however the deeper thermistor beads confirm permafrost is present at depth up to approximately 450 to 500 metres below ground surface.

Nine thermistors (PSW-DH2 TH, PSW-DH3 TH, PSW-DH6 TH, PSW-DH7 and PSW-DH-10 through PSW-DH14 TH) were installed in 2020 to monitor the talik zone near the south wall of the Whale Tail Pit. In August 2021 these thermistors were dismantled due to mining activity in the sector and data is no longer available. While active, these thermistors were used to evaluate if during open pit mining and with the dewatering of the North Basin, the closed talik zone progressively freezes back. Through the year 2021 until their dismantling in August 2021, some freeze-back was observed in the upper bedrock in thermistors PSW-DH2 TH, PSW-DH3 TH, PSW-DH7 TH and PSW-DH10 TH (refer to Appendix A of Attachment B), resulting in minor changes to the talik zone. The available 2023 data collected from thermistor PSW3-DDH1 TH indicates a slow decrease in temperature progression within the talik zone near the south wall of Whale Tail Pit (refer to Appendix A of Attachment B).

As part of the Whale Tail Dike Operation Maintenance and Surveillance manual, performance of the Whale Tail Dike (WTD) was monitored with thermistors located downstream and/or upstream (U/S) of the WTD (0+110, US 0+130, WAC 0+130, 0+142, 0+190 U/S, 0+210, 0+240, 0+260, 0+276 U/S, 0+310, 0+336 U/S, 0+340 DS West, 0+360, 0+380, 0+407, 0+425, 0+453, 0+475, 0+500, 0+520, 0+530, 0+550, 0+580, 0+596, 0+607, 0+618 DS East, 0+635, 0+645, 0+665, 0+675, 0+685, 0+695, 0+707.5, 0+710 U/S, 0+720, 0+740, 0+750, 0+772 U/S, EAC 0+781, 0+790). Similar to observations last year in 2022, Agnico Eagle indicates that the trend of permafrost degradation noted at the abutments in 2021 did not progress laterally based on the 2023 thermistor readings, however, they did note field observations indicative of further degradation (observed settlement upstream and downstream of the east and west abutments) (Agnico Eagle 2024). The thermal regime in this area is interpreted to have not yet reached an equilibrium.

2.3 Hydraulic Head Monitoring and Definition of Horizontal and Vertical Groundwater Flow

Hydraulic head was estimated from pressure data recorded in 2023 from the Westbay Well AMQ16-626 (Attachment A) and from piezometers (refer to Figure 2) installed to monitor the south wall of the Whale Tail pit and the performance of the WTD (Attachment C). The Whale Tail pit is located in the dewatered North Basin. The talik in the pit area is closed at depth but transitions to open talik towards the South Basin due to the increased

width and depth of Whale Tail Lake towards the south. Due to the dewatering activities, some freeze back of the talik in the North Basin is possible as mining progresses, and some alteration in vertical hydraulic gradients will have occurred.

Permafrost underlies the land surrounding the lake, which restricts the lateral flow of groundwater to the talik and restricts the recharge of the sub-permafrost groundwater flow system by precipitation. Regionally groundwater flow is controlled by surface water elevations in lakes with open talik; water moves vertically through the open talik to the underlying sub-permafrost groundwater flow system. Local influences are observed due to dewatering of the North Basin and the Whale Tail Mine development. Conceptually, lakes with open taliks in continuous permafrost regions are equivalent to large monitoring wells.

AMQ16-626 was installed to evaluate groundwater quality and the hydraulic gradient in the unfrozen bedrock as part of baseline characterization. Freshwater hydraulic heads were derived from the formation pressures measured at each monitoring port installed along the well prior to development or sampling. The 2023 calculated freshwater hydraulic heads are lower than those measured prior to mine development (2018 and 2019) and have continued to decrease each year as the pit has been developed, which reflects the dewatering of the North Basin and the mining of Whale Tail Pit. In the pre-development years (2018 and 2019) there was a downward hydraulic gradient observed between Ports 4 and 1, which measured 0.008 m/m in 2018 and 0.006 m/m in 2019. The hydraulic gradients are calculated using the freshwater hydraulic heads and the distance between the sampling interval midpoints. Overall TDS is low and correction of this gradient for buoyancy effects would be within 0.001 – 0.002 and would not alter the interpreted groundwater flow direction.

After dewatering of the North Basin of Whale Tail Lake and excavation of the open pit, the gradient is no longer consistently downward. An upward gradient is present at shallow depths (between Port 4 and 5) and a downward gradient is present at depth (between Port 1 and 4). The downward hydraulic gradient observed between Ports 4 and 1 measured approximately 0.001 m/m in 2020 and 2021, and 0.002 in 2022, and most recently 0.006 in 2023. The shift in gradient is inferred to reflect the influence of dewater of the Whale Tail pit and north basin of Whale Tail Lake.

As part of pit and WTD surveillance monitoring, hydraulic data is collected from a series of vibrating wire piezometers installed upstream and downstream of the WTD. Water levels are also monitored in the Whale Tail Lake South Basin and in the Whale Tail Attenuation Pond, located between the WTD and the Whale Tail Pit. Due to mining activities in the sector, piezometers installed near the south wall of the Whale Tail Pit were decommissioned between August 21 and 23, 2021 (PSW-DH01 to PSW-DH14). Multilevel piezometer PSW3-DDH1 was installed in September 2022 to monitor hydraulic head data collected in the south wall of the Whale Tail Pit. The approximate locations of the historical and existing piezometers are illustrated in Figure 2 and the collected 2023 data is presented in Attachment C. This data can support future model recalibration efforts if required for the Project and support the understanding of changes in groundwater flow conditions between the South Basin of Whale Tail Lake and Whale Tail Pit as mining progresses.

Hydraulic heads measured in the multilevel piezometer PSW3-DDH1 decreased in response to the advanced mining operations throughout 2023 (Figure C-1 in Attachment C). Temporal variations are observed in the data in response to multiple influences, including precipitation, blasting and variations in surface water levels in the Whale Tail Attenuation Pond. The correlation of hydraulic heads measured to surface water levels in the pond is strongest in the shallower piezometers installed in PSW3-DDH1 and decreased throughout the 2023 mining activities in Whale Tail Pit south wall area as expected.

NEMO LAKE

IVR PIT (YEAR 2025)

IVR WRSF

WHALE TAIL WRSF

WRSF POND

WHALE TAIL PIT (YEAR 2025)

GSP-1

WASTE ROCK EXPLORATION PAD

JETTY

WT ORE STOCKPILE NO. 3

WT ORE STOCKPILE NO. 1

WT ORE STOCKPILE NO. 2

IVR ATTENUATION POND

IVR D-1

PSW-DH14

PSW-DH12

PSW-DH13

PSW3-DDH1

PSW-DH06

PSW-DH03

AMQ16-626

ST-WT-1

PSW-DH11

PSW-DH10

PSW-DH09

WHALE TAIL ATTENUATION POND

WHALE TAIL CAMP

WTD-440-P1
WTD-440-P2
WTD-440-P3

WTD-360-P1
WTD-360-P2
WTD-360-P3

WTD-550-P1
WTD-550-P2
WTD-550-P3

WTD-701-P1
WTD-701-P2
WTD-701-P3

WTD-260-P1
WTD-260-P2
WTD-260-P3

NPAG

WHALE TAIL DIKE

WHALE TAIL LAKE (SOUTH BASIN)

PSW-DH13.Pz

PSW-DH14
PSW-DH12
PWS-DH11
PSW-DH10
PSW-DH13.Pz
PSW3-DDH1
PSW-DH06
PSW-DH03
PSW-DH09
AMQ16-626
ST-WT-1
WTD-440-P1
WTD-440-P2
WTD-440-P3
WTD-360-P1
WTD-360-P2
WTD-360-P3
WTD-260-P1
WTD-260-P2
WTD-260-P3
NPAG

LEGEND

HYDRAULIC HEAD MONITORING STATIONS (2023)

- WESTBAY SYSTEM
- PIEZOMETER
- POND

HYDRAULIC HEAD MONITORING STATIONS (PRIOR TO 2023)

- PIEZOMETER
- ACCESS ROAD
- PIT EXTENT
- ROAD
- WT WRSF CONTACT WATER COLLECTION SYSTEM
- DIKE
- POND
- WATERBODY
- WATERSHED
- WHALE TAIL LAKE (SOUTH BASIN)

0 300 600

1:15,000 METRES

REFERENCE(S)

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2. WATERBODY DATA OBTAINED FROM PHOTOSAT.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT

2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

HYDRAULIC HEAD MONITORING STATIONS

CONSULTANT

wsp

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DESIGNED	DH
PREPARED	CDB
REVIEWED	JL
APPROVED	JL

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Downward vertical gradients were observed in the shallower sensors installed in PSW3-DDH1 (C through E). Close to the bottom of the pit, PSW3-DDH1 reverts to an upward hydraulic gradient between the two deepest sensors (A and B) located below the base of the pit, which reflects the influence of pit depressurization on the groundwater flow system.

2.4 Whale Tail Mine Inflow Quantity and Quality

2.4.1 Whale Tail Pit Sump Inflow Quantity

In accordance with Section 4.1 of the GWMP, pit inflow quantity during the 2023 Whale Tail Pit operations was monitored by Agnico Eagle. Water that accumulates in the pit sump consists of groundwater inflow, surface water runoff and direct precipitation. Total monthly volumes of water pumped from the sump during the winter months (i.e., October to April) is assumed to predominantly represent groundwater inflow as freezing temperatures restricts surface water runoff and the influence of direct precipitation.

The total and average daily volume of water pumped per month from the Whale Tail pit sump in 2023 is presented in Table 1. Inflow to Whale Tail Pit is a mixture of surface water inputs (runoff and direct precipitation) and groundwater inflow. The groundwater inflow is a mixture of saline groundwater and subsurface seepage from the Whale Tail Attenuation Pond and South Basin of Whale Tail Lake. For 2023, flow measurements recorded in the winter months are considered the best estimate of groundwater inflows to the pit as surface water inflows should be minimal. The flow observed in the months of January, February, March, April, October, November, and December ranged between 1,024 m^3/day to 2,757 m^3/day, with an average flow rate of 2,060 m^3/day. These six months are considered to be representative of winter conditions when inflow to the pit from sources other than groundwater would be reduced.

Table 1: 2023 Monthly Total Volumes of Water Pumped from Whale Tail Pit Sump

Operations	Month	Total Volume Pumped (m^3)	Average Daily Volume (m^3/day)
Mining	January	31,759	1,024
	February	53,139	1,898
	March	63,914	2,062
	April	59,079	1,969
	May	70,992	2,290
	June	95,468	3,182
	July	70,959	2,289
	August	72,473	2,338
	September	77,201	2,573
	October	72,666	2,344
	November	70,979	2,366
	December	85,453	2,757

m^3 = cubic metres

2.4.2 Seepage Surveys

The Whale Tail Mine is in its fourth year of operations. Per the GWMP, a seepage survey is only required once per year in August following the first year of operations. The objective of the seepage surveys is to identify preferential groundwater flow pathways in the walls of the open pit, if present, and to determine their relative contribution to the groundwater inflow to the pit with respect to water quantity and quality.

Agnico Eagle notes that seepage has consistently been observed in the southeast wall in 2023 (herein referred to as south wall), and the seepage forms ice in the pit walls during the winter. The seepage is attributed to a highly weathered zone near surface as opposed to faults, which is consistent with the original conceptual model for the Whale Tail Mine and the prediction of a seepage face in the south wall. All of the groundwater seepage observed in the south wall is intercepted by Whale Tail Pit sumps.

The seepage area observed in the south wall continues to increase with the pit operations, where the lateral extent varies per bench. December 2023, Agnico Eagle notes the ice wall extends for a total height of 70 metres (mine grid elevation 5116 metres relative level (mRL) to active mining floor, 5046 mRL), with a lateral extent of about 200 metres. The majority of the south wall seepage reports to the main sump (ST-WT-4, refer to Figures 1 and 3) located at the base of pit wall at 5081 mRL. At the beginning of 2023, an estimated 30 to 40% of the south wall seepage reported to a peripheral sump located at 5077 mRL, which also received some water leaking from the main sump as a result of blast-induced damaged rock mass. To concentrate seepage to the main sump (ST-WT-4) and mitigate the potential ice wall below the sump during winter months, three drain holes (DU_4, DU_5 and DU_6) were advanced with an underground drill rig between seepage station ST-GW-WT-1 and the pit sump in July 2023 (refer to Figure 3). Following installation, a seepage flow rate of 18 cubic meters per hour (432 m^3/day) was recorded by Agnico Eagle. This seepage is approximately 20% of the total average groundwater inflow to the pit, as estimated from the sump flow measurements recorded in the winter months (Section 2.4.1).

Figure 3 shows the location of specific seeps noted by Agnico Eagle in the south wall during 2023. A photograph of the seepage along the Whale Tail Pit south wall near main sump (ST-WT-4) on 16 March 2023 is presented in Attachment D. Seepage monitoring was limited by mining operations (drill and blasting, mucking and/or scaling) or accessibility due to safety concerns (loose material requiring safety offset, indication of potential rockfall, etc.).

Seepage water quality analysis is discussed in Section 2.4.3.

2.4.3 Whale Tail Pit Inflow Quality

In accordance with Section 4.2 of the GWMP, Agnico Eagle collected water samples from the following locations in 2023.

- **Whale Tail Pit sump station ST-WT-4.** Water from the pit sump (ST-WT-4) reflects the combined influences of groundwater inflow, surface water runoff and precipitation, and pit development (blasting). Of the sump samples, water quality measurements in the winter months (October to April) will be the most representative of groundwater as surface water inflows will be near their minimum. Some influences of blasting and mine excavation will be present.

- **Whale Tail Pit seepage station ST-GW-WT-1.** Water from pit wall seep ST-GW-WT-1 is a reflection of the groundwater inflow to the pit, which is a mixture of groundwater inflow from saline groundwater and subsurface seepage from the Whale Tail Attenuation Pond and South Basin of Whale Tail Lake. In comparison to the pit sump, the seeps are a better estimate of groundwater inflow quality as the direct surface water inputs to the pit do not influence the seep water quality.
- Although not required under the GWMP, water quality samples are also collected from the Whale Tail Attenuation Pond (ST-WT-1), and from Whale Tail Dike Seepage (ST-WT-17) and are discussed in this section for comparison to pit inflow data.
- Water quality from the Whale Tail pit sump (ST-WT-4) and Whale Tail Attenuation Pond (ST-WT-1) was monitored on a weekly to a monthly basis for Group 1 chemical parameters listed in Table 1 Schedule I of NWB Water Licence Number 2AM-WTP1830 and for additional parameters of interest including electrical conductivity, select major ions, select dissolved metals, ortho-phosphate and total phosphorus. ST-WT-4 samples collected from January to June 2023 were not analyzed for bicarbonate alkalinity, carbonate alkalinity, dissolved organic carbon, reactive silica, total kjeldahl nitrogen and total organic carbon. These parameters are useful for assessing water quality and checking laboratory TDS. Field measured parameters including dissolved oxygen, electrical conductivity, pH, temperature, and turbidity were recorded during sampling. A summary of the TDS and chloride measured at the pit sump (ST-WT-4) and Whale Tail Attenuation Pond (ST-WT-1) is presented in Attachment E, along with data from the pit wall seepage samples and WTD seepage (described further below). Full water quality results from the Whale Tail Attenuation Pond (ST-WT-1), the Whale Tail pit sump (ST-WT-4), and the Whale Tail Dike (ST-WT-17) are presented in the 2023 Meadowbank Complex Annual Report (Agnico Eagle 2023).

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607000
607500
608000
7256000
7255500
7255000
7254500

GSP-1
WASTE ROCK EXPLORATION PAD
JETTY
IVR ATTENUATION POND
WHALE TAIL PIT
ST-WT-4
WT ORE STOCKPILE NO. 1
WT ORE STOCKPILE NO. 2
IVR D-1
DU_4
DU_5
DU_6
1
ST-GW-WT-1
WHALE TAIL ATTENUATION POND
WHALE TAIL CAMP
NPAG
WHALE TAIL DIKE
WHALE TAIL LAKE (SOUTH BASIN)

LEGEND

- DRAIN HOLE (2023)
- WALL SEEPAGE (2023)
- SUMP
- 1 PHOTO LOCATION (REFER TO ATTACHMENT D PHOTO 3)
- TOPOGRAPHY (DECEMBER 2023 SURVEY)

0 150 300
1:7,500 METRES

REFERENCE(S)
1. WHALE TAIL PIT CONTOURS (DECEMBER 2021) OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. ST-GW-WT-1 SAME LOCATION AS DRILL HOLE-1 DURING 2021 AND 2022 MONITORING PERIODS. ST-GW-WT-1 RELOCATED IN 2023 DUE TO SAFETY CONCERNS.
3. SEEPAGE LOCATIONS VARY IN TIME AS THE WALL IS FREEZING AND THAWING THROUGHOUT THE COURSE OF THE YEAR.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

CLIENT
AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

PROJECT
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
SEEPAGE LOCATIONS NOTED BY AGNICO EAGLE IN 2023

CONSULTANT
wsp

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Fourteen (14) pit wall seepage samples were collected from ST-GW-WT-1 in 2023 (Table 2). No samples were collected in February, March, April, May, June, November and December due to accessibility issues related to operations and/or safety concerns. The seepage samples collected at ST-GW-WT-1 were collected from wall runoff directly below the observed discharge. No accessible open fracture could be located that was suitable for the insertion of a piece of low-density polyethylene tubing, which can be used to prevent the sample from contacting the atmosphere or exposed pit wall (which may contain residuals associated with blasting and loading from the exposed rock).

Pit wall seepage samples were submitted to Bureau Veritas Laboratories (BV) for laboratory analysis of parameters including the Group 1 chemical parameters listed in Table 1 Schedule I of the Water Licence, and for additional parameters of interest included in the GWMP (bicarbonate alkalinity, carbonate alkalinity, dissolved organic carbon, electrical conductivity, major ions, select total/dissolved metals, ortho-phosphate, reactive silica, total kjeldahl nitrogen, total phosphorus and total organic carbon). Analytical results for the ST-GW-WT-1 are included in Attachment E.

Water quality from the WTD seepage (ST-WT-17) was monitored on a weekly to monthly basis for the same parameter suite as the pit wall seepage samples. Station ST-WT-17 consists of water that accumulates in the collector ditch located at the toe of the WTD structure and the water can be partly diluted with surface runoff. The approximate location of ST-WT-17 is shown on Figure 1. A channel located downstream of the toe diverts the WTD seepage to the Whale Tail Attenuation Pond by gravity.

Table 2: Summary of 2023 Whale Tail Pit Seepage Samples

Station ID	UTM Zone	Easting (m)	Northing (m)	Sampling Date(s)[a]	Analytical Parameters[b,c]
ST-GW-WT-1	14W	606959	7255230	7-Jan-23 16-Jan-23 23-Jan-23 4-July-23 9-July-23 16-July-23 6-Aug-23 4-Sep-23 17-Sep-23 24-Sep-23 1-Oct-23 8-Oct-23 15-Oct-23 23-Oct-23	Group 1 chemical parameters listed in Table 1 Schedule I of NWB Water Licence Number 2AM-WTP1830 and additional parameters listed in GWMP (electrical conductivity, select major ions, select dissolved metals, ortho-phosphate, total phosphorus, and Radium-226)

m = metres

a) Pit wall seepage samples could not be collected in February, March, April, May, June, November and December 2023 due to accessibility issues related to operations and/or safety concerns.

b) Fluoride (Group 1 Water Licence parameter) and Radium-226 were not analyzed in the pit wall seepage samples collected on 23 January, 17 and 24 September 2023.

c) Salinity (additional parameter listed in GWMP) was not analyzed in any of the pit wall seepage samples collected in 2023.

Figure E-1 and E-2 of Appendix E show the variation in TDS and chloride in the above monitoring stations throughout 2023. TDS measured in the pit sump was variable and ranged from approximately 155 mg/L to 1,020 mg/L. The variability reflects the temporal interactions of surface water runoff, pit wall runoff, blasting and

groundwater inflow, with the winter months providing the best estimate of the contribution from groundwater. The TDS in the pit sump is lowest in the winter, when surface water inputs (precipitation and runoff containing drilling, blasting and/or construction debris) will be negligible. In 2023, concentrations of TDS and chloride in the pit sump tend to be lowest in the winter, when surface water inputs are low. Maximum concentrations of TDS and chloride in the pit sump were observed in September 2023.

TDS in the Whale Tail Attenuation Pond follows a similar trend to the TDS in the pit sump, although concentrations are slightly lower. Similar to the pit sump, concentrations of TDS in the Whale Tail Attenuation Pond were generally lower during the winter months. Lower still is the seepage water collected from the Whale Tail Dike Seepage. The elevated TDS in the Whale Tail Attenuation Pond reflects the relative contributions of groundwater inflow, surface water inputs including flow that is pumped back to the Whale Tail Attenuation Pond.

The TDS measured in the pit wall seepage in 2023 ranged from approximately 150 to 475 mg/L and were similar to the TDS measured in the pit sump during the winter months, when surface influences are low and the sump water quality is most representative of groundwater inflow. This reflects the interpretation that the pit wall seepage is derived from shallow groundwater flow. The seepage water quality is also similar to measurements in the Whale Tail Attenuation Pond at the time the seepage samples were collected. This is consistent with the understanding that seepage loss from the Whale Tail Attenuation Pond makes up a significant portion of the inflow to the Whale Tail Pit (see Section 3).

3.0 MEASURED VERSUS PREDICTED GROUNDWATER INFLOW AND TDS QUALITY

3.1 Predicted Groundwater Inflow and TDS Groundwater Concentrations

Table 3 presents a summary of the predicted average annual groundwater inflow to the Whale Tail Pit during operations, as documented in the updated FEIS Environmental Assessment (EA) Scenario (Golder 2019). Water discharging to the pit is a mixture of saline groundwater and subsurface seepage from the Whale Tail Attenuation Pond South Basin of Whale Tail Lake. Contributions of TDS in the groundwater from Whale Tail Attenuation Pond seepage and seepage from the South Basin are assumed to be zero in the groundwater model and were accounted for in the Site-Wide Surface Water Balance and Water Quality Models, along with the direct influences of surface water additions in the pit (runoff and precipitation). This means that predicted TDS values in Table 3 from the groundwater model will be lower than the TDS measured directly in the sumps and seepage wall samples, as these water quality samples include TDS loading from the Whale Tail Attenuation Pond and South Basin of Whale Tail Lake (which are not zero). The Whale Tail Attenuation Pond is somewhat of a feedback loop as flow from the pit is pumped to the pond, where it mixes with other water and a portion reinfiltrates and seeps back to the pit. The Water Balance and Water Quality Models account for this mixing.

Table 3: FEIS Predicted Groundwater Inflow and Groundwater Quality During Mining of Whale Tail Pit (Golder 2019)

Phase	Simulated Period Time	Whale Tail Modeled Predictions – EA Scenario			
		Groundwater Inflow (m^3/day)	Groundwater Inflow TDS Concentration (mg/L)[a]	Portion of Inflow from Attenuation Pond (%)	Portion of Inflow from South Basin of Whale Tail Lake (%)
Lake Dewatering (Q1-Q3)	2019	1,330	80	NA	NA
Mining	August – December 2019[b]	970	120	1%	<1%
	2020	1,170	50	64%	<1%
	2021	1,320	30	79%	3%
	2022	1,360	20	81%	9%
	2023	1,360	20	82%	12%
	2024	1,350	10	82%	14%
	2025	1,350	10	82%	15%

NA = not applicable; TDS = total dissolved solids; m3/day = cubic metres per day; mg/L = milligrams per litre; % = percent;

a) TDS concentrations do not account for loading from the South Basin of Whale Tail lake and Whale Tail Attenuation Pond (model assumes a TDS of 0 mg/L for these seepage sources). TDS from these sources to be accounted for in Site-Wide Water Quality analysis.

b) Mining prior to Q4 2019 was anticipated to be within permafrost and groundwater inflow was predicted to be negligible.

In 2021, inflow measurements were trending 50% higher than predicted for based on the groundwater model developed for the FEIS (Golder, 2019), triggering a review and update of the groundwater model. On this basis, Lorax (2023) completed a model update and recalibrated the model to operational data (2021 average winter pumping rates from the Whale Tail Sump and hydraulic heads measured at Westbay AMQ16-626). Documentation of the model update is provided in Attachment F, and a summary of the updated groundwater inflow predictions based on the recalibrated model are provided in Table 4.

Table 4: Updated Groundwater Inflow Predictions (Lorax 2023).

Year	2022 Groundwater Model - Base Case				
	Whale Tail Pit Inflow	Inflow from Whale Tail Attenuation Pond		Inflow From Whale Tail South Basin[1]	
	(m^3/d)[1]	%	m^3/d	%	m^3/d
2022	3,070	33%	1,013	67%	2,057
2023	3,740	35%	1,309	65%	2,431
2024	3,750	35%	1,313	65%	2,438
2025	3,750	35%	1,313	65%	2,438

a) Approximately 10% of the inflow to Whale Tail Pit travels from the Whale Tail South Basin to the Whale Tail Attenuation Pond and then on to the pit. This flow is included in the percentage/flow rate originating from the Whale Tail South Basin.

3.2 Comparison of Model Predicted Values to Measured Values

In accordance with the GWMP, measured groundwater inflow rates are to be compared to model predictions on an annual basis. If significant variations from model predictions are observed, the assumptions behind the data will be reviewed and the analysis updated if required. In addition, updates to the groundwater model should be made if operational changes occur as the open pit advances which could significantly alter groundwater inflow or groundwater quality (TDS).

Variations that would be considered significant and that would trigger a review of the data include:

- Groundwater inflow quantity to the mine, based on rolling monthly average of inflow over six consecutive months, is 20% higher than predicted groundwater inflow. The six-month averaging period of observation is based on observed seasonal variations in inflow quantities in mines situated in continuous permafrost regions, where half the year there is virtually no surface water component of flow to the pit.
- Collected water samples that indicate that the TDS is more than 25% higher than the estimated water quality, based on a 6-month rolling average.
- Temperature profiles observed in the sentinel thermistors (AMQ17-1233 and AMQ17-337) located between Nemo Lake and Whale Tail Lake are showing sign of permafrost degradation below the active layer.
- Observed inflow quantity and quality is lower than expected would not be of concern and/or effect water management plans on-site. Model updates or analysis would therefore not be conducted if predicted inflow quantity and quality is higher than observed conditions.

The flow observed in the months of January, February, March, October, November and December ranged between 1,024 m^3/day to 2,757 m^3/day, with an average flow rate of 2,060 m^3/day. As previously discussed, flow measurements during the winter months are the best estimate of groundwater inflow rates to the Whale Tail Pit since surface water inflows should be minimal. The inflow in the winter will reflect saline groundwater inflow and seepage from the Whale Tail Attenuation Pond and South Basin of Whale Tail Lake, with input from the Whale Tail Attenuation Pond expected to be most significant. Overall, inflow measurements are trending 45% lower than the updated predictions for 2023, and no revision of the model based on the triggers is required.

As part of the updated groundwater modelling (Attachment F), groundwater inflow to the open pit was predicted to be composed of 35% inflow from the Whale Tail Attenuation Pond and 65% inflow from Whale Tail South Basin. Overall, TDS measured in pit wall seepage was similar to the TDS measured in the Whale Tail Attenuation Pond (within 50 mg/L). The TDS in the Whale Tail Pit sump tended to be slightly higher than both the pit wall seepage and the Whale Tail Attenuation Pond, which in turn was generally higher than the Whale Tail Dike Seepage. In the winter months the TDS in the Whale Tail Pit sump was generally similar and within 100 mg/L of the TDS in the Whale Tail Attenuation Pond. These observations suggests that the source water proportions may be overpredicting the contribution of water from the Whale Tail Dike Seepage. Overall, measured groundwater inflow to the open pit in the winter was 45% lower than predicted values using the updated model for 2023, and its possible that the model is overpredicting inflow from the Whale Tail South Basin.

4.0 SUMMARY

The following presents a summary of the data contained in this document and how the data relate to relevant sections of the GWMP.

- Westbay Well AMQ16-626 was sampled in September 2023. TDS estimated from these samples were slightly lower than historical sampling but overall, the assumptions for the conceptual model for the site are considered unchanged by 2023 groundwater quality monitoring at AMQ16-626.
- Pressure monitoring at AMQ16-626 indicates that hydraulic heads have decreased since pre-mining conditions. An upward gradient is present at shallow depths (between Port 4 and 5) and a slight downward to near neutral gradient is present at depth (between Port 1 and 4). The downward hydraulic gradient observed between Ports 4 and 1 measured 0.006 m/m in 2023. The shift in gradient is inferred to reflect the influence of dewatering of the Whale Tail pit and north basin of Whale Tail Lake.
- Data from IVR long V651A indicates permafrost is present outside of the lake footprint in at least the upper 500 metres, which will restrict horizontal groundwater flow. Oscillations in temperature data observed in this thermistor should be reviewed in 2024.
- Some degradation of permafrost has been observed in the eastern and western abutments of the WTD, as indicated by observed settlement by Agnico Eagle. Thermistor monitoring of the Whale Tail Dike area will continue in 2024.
- The average 2023 inflow to the Whale Tail pit is estimated to be 2,060 m^3/day, based on the winter sump inflow measurements in January, February, March, October, November, and December. The average inflow rate is approximately 45% lower than predicted value by the updated model for 2023, and no revision of the model is required based on GWMP triggers.
- TDS measured in the pit sump was variable and ranged from approximately 155 to 1,020 mg/L. The TDS measured in the pit wall seepage in 2023 ranged from approximately 150 to 475 mg/L and were similar to the TDS measured in the pit sump during the winter months, when surface influences are low and the sump water quality is most representative of groundwater inflow. The seepage water quality is also similar to measurements in the Whale Tail Attenuation Pond at the time the seepage samples were collected. Groundwater modelling (Attachment F) predicted groundwater inflow to the open pit in 2023 will be composed of 35% inflow from the Whale Tail Attenuation Pond and 65% inflow from Whale Tail South Basin. The TDS measurements suggests that the source water proportions may be overpredicting the contribution of water from the Whale Tail South Basin via the Whale Tail Dike Seepage. This may be associated with the general over prediction of groundwater inflow to the pit.
- In 2023, sampling parameter requirements of the Water Licence were met for the pit sump and seepage wall samples, with the exception of fluoride was not analyzed in the pit wall seepage samples collected on 23 January, 17 and 24 September 2023. As recommended in the 2021 report, additional parameters of interest included in the GWMP (bicarbonate alkalinity, carbonate alkalinity, dissolved organic carbon, electrical conductivity, major ions, select total/dissolved metals, ortho-phosphate, total kjeldahl nitrogen, total phosphorus and total organic carbon) were analyzed for in 2023.

5.0 CLOSURE

We trust the above meets your needs, please contact the undersigned for any questions or concerns.

WSP Canada Inc.

ORIGINAL SIGNED

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Hydrogeologist

ORIGINAL SIGNED

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Senior Hydrogeologist

DH/JL/rk

Attachments: Attachment A – 2023 Westbay Well Sampling Technical Memorandum
Attachment B – 2023 Thermal Monitoring Report
Attachment C – 2023 Piezometric Monitoring Data
Attachment D – 2023 Seepage Survey Photograph
Attachment E – 2023 Supplemental Water Quality Data
Attachment F – 2022 Whale Tail Groundwater Model Update

6.0 REFERENCES

Agnico Eagle (Agnico Eagle Mines Limited). 2019. Whale Tail Pit Project Groundwater Monitoring Plan. Version 3_NWB. May 2019.

Agnico Eagle (Agnico Eagle Mines Limited). 2024. Meadowbank Complex Annual Report.

Agnico Eagle (Agnico Eagle Mines Limited). 2024. Whale Tail Mine Thermal Monitoring Report 2023. January 2024.

Golder (Golder Associates Ltd.). 2016. Westbay System Installation Summary – Whale Tail Pit Project, Nunavut. Dated July 7, 2016 (Reference 1649355-003-TM-Rev0-4000).

Golder. 2019. Updated Hydrogeological Assessment, Whale Tail Pit, Expansion Project. dated 6 May 2019. (Reference 18108905-291-TM-Rev0)

WSP. 2024. Whale Tail Project – 2023 Groundwater Monitoring of AMQ16-626. Dated 30 January 2024 (Reference CA0007108.1008-MBK2024_002-TM-Rev0).

ATTACHMENT A

2023 Westbay Well Sampling Technical Memorandum

TECHNICAL MEMORANDUM

DATE 30 January 2024 CA0007108.1008-MBK2024_002-TM-Rev0

TO Marie-Pier Marcil
Agnico Eagle Mines Limited

CC Eric Haley

FROM Nickie Unonius, Jennifer Levenick **EMAIL nickie.unonius@wsp.com; jennifer.levenick@wsp.com**

WHALE TAIL MINE – 2023 GROUNDWATER MONITORING OF WESTBAY WELL AMQ16-626

1.0 INTRODUCTION

Agnico Eagle Mines Limited – Meadowbank Complex (Agnico Eagle) is developing the Whale Tail Mine that was approved by the Nunavut Impact Review Board (NIRB). The property is a 408 square kilometre (km^2) site located on Inuit Owned Land approximately 150 kilometres (km) north of the hamlet of Baker Lake and approximately 50 km northwest of the Meadowbank Mine in the Kivalliq Region of Nunavut.

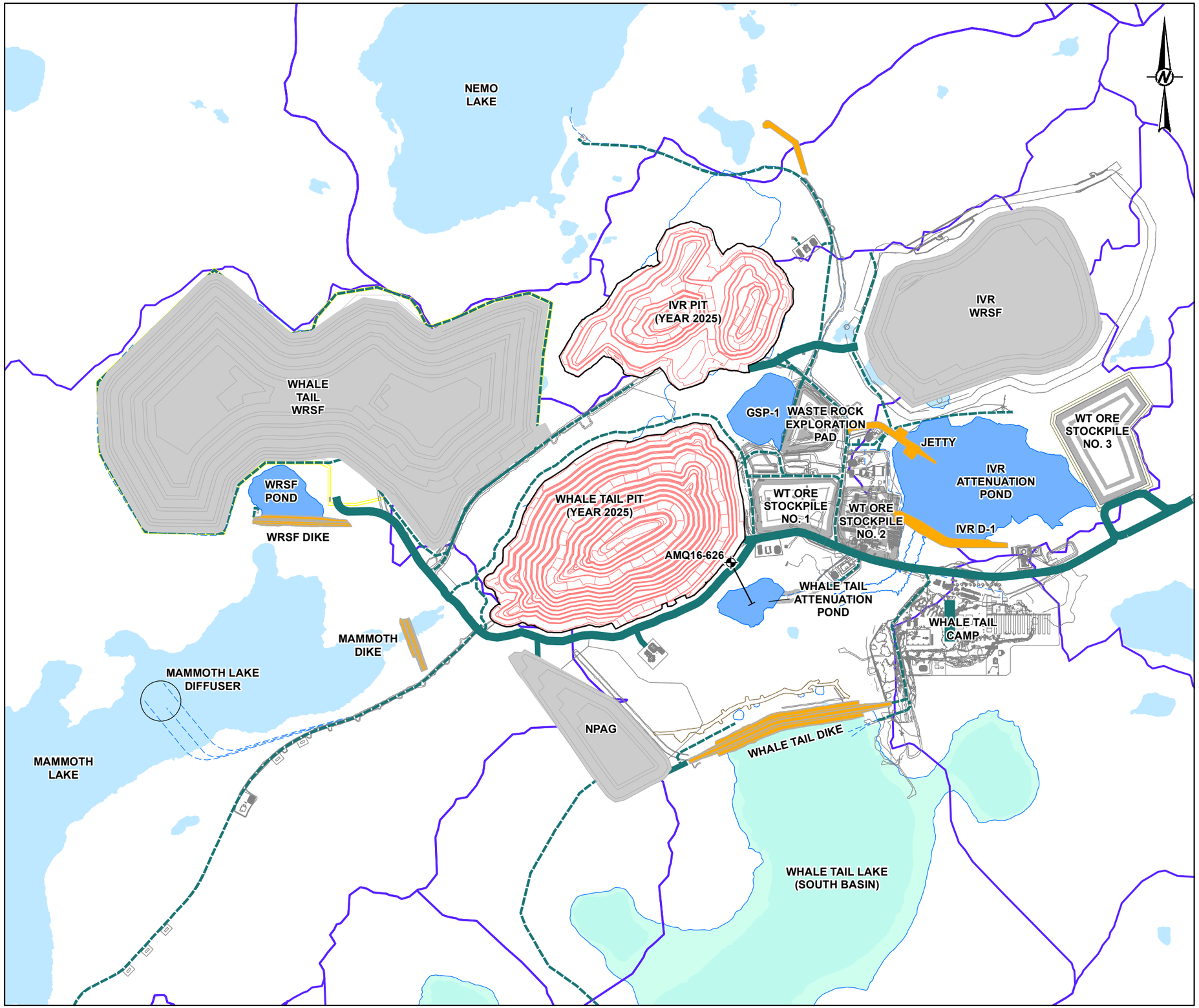
This report documents the 2023 groundwater monitoring of Westbay Well AMQ16-626. This well is monitored as a compliance requirement of Water License no. 2AM-WTP1830 associated with Whale Tail Project Certificate No. 008.

2.0 BACKGROUND

AMQ16-626 was installed between March and April in 2016 as part of baseline characterization for the Whale Tail mine. The well is located southeast Whale Tail Pit and extends at depth below the Whale Tail Attenuation Pond (Figure 1). The well is used to collect groundwater samples at multiple depths below ground surface and to measure vertical hydraulic gradients.

2.1 Well Installation and Sampling Zones

The well was installed through massive diorite at an inclination of -69 degrees, at an azimuth of 152.6 degrees and to a depth of 499 metres along the borehole (mah). A tagged 9% calcium chloride brine was used to displace the fresh water in the upper portion of the borehole to prevent freezing during the well installation. The well was designed to sample discrete zones of bedrock below the permafrost, as well as potential zones of higher hydraulic conductivity identified during drilling and well testing. Six sampling ports (as summarized in Table 1) were installed and of these six ports two are routinely sampled (Ports 3 and 4 located between 326 m to 357 metres below ground surface). Port 6 has also been monitored in the past; however, the port is suspected to be in cryopeg and therefore is not considered a representative estimate of the unfrozen bedrock groundwater conditions. A schematic of the AMQ16-626 well installation and sampling ports is included in Attachment A. Full installation records and associated hydraulic testing are documented in a separate report (Golder 2016b).



LEGEND

- WESTBAY SYSTEM
- ACCESS ROAD
- PIT
- ROAD
- WT WRSF CONTACT WATER COLLECTION SYSTEM
- DIKE
- POND
- WATERBODY
- WATERSHED
- WHALE TAIL LAKE (SOUTH BASIN)

0 300 600

1:15,000 METRES

REFERENCE(S)

1. INFRASTRUCTURE OBTAINED FROM AGNICO EAGLE MINES LIMITED SHOWING PLANNED WHALE TAIL MINE OPERATIONS TO 2025. DESIGN INFRASTRUCTURE HAS SINCE BEEN MODIFIED.
2. WATERBODY DATA OBTAINED FROM PHOTOSAT.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION

PROJECT

2023 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

SITE PLAN

CONSULTANT

wsp

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APPROVED	VJB

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Table 1: Borehole AMQ16-626 Westbay System Zones

Sampling Interval	Depth Along Borehole			Depth Below Ground Surface			Elevation		
	From	To	Length	From	To	Thickness	From	To	Thickness
	(mah)	(mah)	(m)	(mbgs)	(mbgs)	(m)	(masl)	(masl)	(m)
Port 6	276.0	287.4	11.4	257.7	268.3	10.6	-103.2	-113.9	10.6
Port 5	298.9	310.3	11.4	279.0	289.7	10.6	-124.6	-135.2	10.6
Port 4	349.3	359.1	9.8	326.1	335.2	9.1	-171.6	-180.8	9.1
Port 3	381.3	392.7	11.4	356.0	366.6	10.6	-201.5	-212.5	10.6
Port 2	440.8	452.2	11.4	411.5	422.2	10.6	-257.1	-267.1	10.6
Port 1	488.1	499.0	10.9	455.7	465.9	10.2	-301.2	-311.4	10.2

Notes:
Depth values were provided by Westbay Instruments Completion Report.
m = metres; mah = metres along the hole, relative to top of hole; mbgs = metres below ground surface; masl = metres above sea level.

2.2 Historical Monitoring Results and Interpretation

Following installation, the total dissolved solids (TDS) content in the Formation water was estimated from 2016 sampling results to range between 3,198 mg/L and 4,042 mg/L (Golder 2016a). Formation water refers to the natural groundwater in the rock formation, as opposed to the water collected from the sampling ports which is a mixture of residual drilling water and Formation water.

The 2016 groundwater quality estimates were used to predict the salinity of groundwater, which is an input to groundwater and thermal models that are used to predict the TDS in the groundwater inflow to the mine developments (Golder 2018a). Groundwater quality estimates were also an input to the Whale Tail pit lake hydrodynamic model (Golder 2018b). These models have been, and continue to be, utilised to assess potential effects of mining during development operations, closure and post closure.

The results of the compendium of modelling studies indicated that chemical mass transfer from the pit to the pit lake at post closure would be very low largely because the volume of groundwater seepage into and out of the pit lake would be negligible, particularly compared to surface water exchanged annually when flows between the flooded pit lake and downstream lakes are re-established. The combination of results suggested that the hydrogeological regime around the pit lake is not critical to pit lake water quality post-closure.

Supplemental pre-mining development sampling was conducted at the well in 2018 and 2019 (Golder 2019a; 2019b). Data collected since 2020 represents monitoring that has been conducted during active mining (Golder 2021; 2022). Port 3 and Port 4 data have been found to be in the same range as the 2016 baseline characterization when data quality was reliable. Data from Port 6 is generally unrepresentative of unfrozen bedrock conditions and for this reason in 2022 and 2023 no samples were recovered from this port.

3.0 2023 GROUNDWATER MONITORING PROGRAM

3.1 Objectives

The objectives of the program are as follows:

- Measure the pressure profile at AMQ16-626 ports to evaluate the vertical hydraulic gradient / groundwater flow direction. These data are used to evaluate changes in groundwater flow conditions during mining compared to pre-mining.
- Collect groundwater samples from Port 3 and 4 of AMQ16-626. Water quality analysis from these samples will add to the database of groundwater quality results used to monitor groundwater quality near Whale Tail Pit and underground.

3.2 Methodology

3.2.1 Hydraulic Head Measurements

Prior to purging and sampling, the pressure was recorded at each of the six sampling ports (Ports 1 to 6) on 9 September 2023 and converted to freshwater hydraulic heads using the density of freshwater. The formation pressure was measured using the Mosdax sampler manufactured and supplied by Westbay Instruments (refer to Attachment B for instrument calibration record).

3.2.2 Groundwater Sampling

As the upper part of the Westbay System is installed through permafrost, removal of groundwater for well development, purging and sampling must be carried out using a small volume sampler as opposed to the Westbay purge system. This substantially lengthens the time required to purge and sample at each port (months). Consequently, the sampling program prioritizes key ports that optimize groundwater quality data collection. The ports selection rationale for the 2023 program is provided below.

- Ports 4 and 3 were targeted for sampling based on their port elevation relative to planned underground infrastructure and because these intervals had been substantially developed since 2016 (i.e., drill water had been largely removed from the interval). These ports are used to assess groundwater quality for the Whale Tail Mine.
- Port 6, located within the cryopeg, has not been targeted for sampling since 2021 when it was observed the Formation pressure is taking longer to recover between 1 L sample runs compared to previous years (gradual decrease over time since 2016). This results in a pressure differential at the monitoring port being exceeded, which allows for small amounts of Westbay casing water to enter the Formation and compromise the integrity of the water quality samples being collected.
- Ports 1 and 2 were not sampled in the 2022 and 2023 programs as they have not been sufficiently developed to yield an accurate estimate of groundwater quality. Multiple weeks of 24-hour development would likely be required to remove the residual drill fluid content in these Ports to be below the target of 5% residual drill fluid for a workable estimation of Formation water quality. The baseline TDS profile developed for the Whale Tail Mine only include water quality data from Ports 6, 4 and 3, and not the deeper Ports 1 and 2.
- Port 5 was never intended for groundwater sampling and was installed for pressure measurements only.

Groundwater sampling was performed using the Westbay Mosdax sampler following a similar method as the previous monitoring events. The Mosdax sampler collects 1 Litre of groundwater at a time (per sampling instrument descent into the well, equivalent to one 'run'). Throughout the 2023 monitoring program, field chemical parameters (electrical conductivity, specific conductance, fluorescein content, pH, salinity, temperature and total dissolved solids) were measured during development and sampling of groundwater in order to track the removal of the fluid introduced into the Formation by drilling. It is assumed that drilling water is the only source of fluorescein introduced near borehole AMQ16-626 such that it is a reliable tracer of introduced water into the Formation.

Fluorescein content was measured using the AquaFluor handheld Fluorometer manufactured by Turner Designs. Temperature and pH and values were measured with a Hanna Combo tester (HI 98127). Electrical conductivity, specific conductance (temperature corrected electrical conductivity), salinity, temperature and total dissolved solids were measured using a YSI Pro 30 Conductivity Probe. A drilling water content of less than 5 to 10% original drill brine content (estimated using fluorescein content) and removal of one Port interval volume at each sampling event, was targeted to provide a workable estimate of Formation water quality prior to collecting the water sample (i.e., purging at least one port interval volume: 5.43 Litres per metre in the annulus based on the known dimensions of the 38-millimeter diameter Westbay casing and the 96-millimeter diameter HQ outer hole). Water quality data from samples containing a higher residual drilling fluid content can be investigated but provides an imprecise estimation of Formation water quality.

Collected groundwater samples from Ports 3 and 4 were analyzed for the parameters listed in Section 4.2 of the GWMP and in Schedule I Table 2 of the Whale Tail Water License, as follows:

- Hardness, pH, conductivity, salinity, total suspended solids (TSS), total dissolved solids (TDS) and turbidity.
- Anions and nutrients, including alkalinity, ammonia, bicarbonate, bromide, carbonate, chloride, dissolved organic carbon (DOC), total kjeldahl nitrogen (TKN), total organic carbon (TOC), fluoride, nitrate, nitrite, ortho-phosphate, total phosphorus, reactive silica and sulphate.
- Metals (dissolved and total), including aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, potassium, selenium, sodium, strontium, thallium, tin, titanium, uranium, vanadium and zinc. Additional metals were also analyzed by the laboratory as part of the metals package, however they are not of interest to the project and will not be discussed herein out: bismuth, cobalt, silicon and sulfur.
- Total and free cyanide as well as Weak Acid Dissociable (WAD) cyanide.
- Radium 226.

Radium 226 is not included in the Whale Tail Water License; however, it was analyzed as it previously occurred at concentrations higher than the Canadian effluent guidelines at some sample ports during previous sampling events and is regulated under the Metal and Diamond Mining Effluent Regulations (MDMER). Radium 226 is a naturally occurring element in deep bedrock groundwater.

Groundwater samples were collected from Ports 3 and 4 at the end of purging and submitted for laboratory analysis. To protect against data loss from key wells in event of bottle breakage or loss during shipping to the lab, a triplicate sample set was held on site for Ports 3 and 4 and discarded once the samples submitted to the analytical laboratory were received.

As part of the quality assurance / quality control a field blank and trip blank were also collected for analysis of the full suite of parameters. The laboratory chemical and physical analyses were performed by Bureau Veritas Laboratories (BV) located in Mississauga, Ontario and/or at the other various BV locations. Certificates of analysis from BV are included in Attachment C.

3.3 Evaluation of Formation Water Quality

The accuracy of the calculation of Formation water quality and salinity is contingent on the quantity of residual drilling fluid present in the sampling interval, identified by fluorescein content (the lowest fluorescein content in the sample). Drilling fluids must be removed as much as possible by purging, and the lower the drill fluid content the more reliable the calculation of Formation water quality. The amount of drilling fluid present in the Formation is estimated from the difference between the concentration of fluorescein in the raw water sample from the port interval, and the fluorescein content of the drilling fluid used. The original amount of fluorescein added to drill water varied, and an average of the remaining fluorescein at the port depth prior to development was used as indicative of the 'initial' fluorescein content for that port interval. In 2016, the sampling intervals were purged to remove as much of the drilling fluid as possible within the task schedule, prior to collecting a sample for chemical analysis. Purging continues to be required each year to further decrease the content of residual drilling fluid.

The fluorescein and electrical conductivity of groundwater were monitored in the field during sampling and were compared to data from the end of purging activities in past years to assess whether there is reasonable confidence in the accuracy of the groundwater salinity evaluated from the collected sample. The following summarizes the calculations made to estimate true Formation water quality and TDS from field measurements of electrical conductivity and laboratory analytical results of raw groundwater samples in 2023 and drilling water fluid in 2016.

1) **Estimation of the chemistry of the drilling fluid introduced in the Formation during the 2016 well borehole drilling and installation activities.** The drilling fluid consisted of very low TDS lake water to which was added a concentrated brine. The range of composition of the drill fluid (the dilute brine) was estimated by comparing the initial and maximum conductivity values measured in samples from the Formation (for each Port 6, 4, 3 and 2 the electrical conductivity of water varied between sampling ports) against the conductivity of the concentrated brine[1]. This Dilute Brine Factor was used to calculate composition of the drilling fluid introduced into the sampling interval during the 2016 drilling and well installation activities as per equation (1) below.

$$(1)\quad Dilute\ Brine\ Factor_{Port\ i} = \frac{Field\ Conductivity_{Port\ i}}{Brine\ Conductivity_{calculated}}$$

This calculation assumes an insignificant proportion of Formation water is present immediately after drilling, which is a fair assumption given that a high volume of drilling fluid was lost to the Formation (Golder, 2016a).

2) The drilling brine composition for each parameter was calculated from the product of the dilution brine factors and the chemistry of the drilling brine fluid for each port per equation (2).

[1] Brine conductivity was estimated from the calculated TDS of the drilling brine fluid using a conversion factor of 0.75 which is appropriate for brine solutions (Rusydi, 2017). Brine TDS was calculated to be 130,500 mg/L based on constituent concentrations (refer to Table D-1). Laboratory-reported TDS (36,946 mg/L) and conductivity (55.42 mS/cm) were not reliable as they exceeded instrument calibration.

$$(2)\quad Dilute\ Brine_{Port\ i} = Laboratory\ Result_{Brine} \times Dilution\ Brine\ Factor_{Port\ i}$$

3) **Calculation of the proportion of drill brine remaining in the Formation upon sampling.** This was calculated based on the amount of residual fluorescein measured upon sample collection at each port in 2023 compared to the initial fluorescein content of the drilling fluid measured in 2016 (i.e., 512.7 ppb).

4) **Removal of the drilling fluid chemistry from the raw groundwater sample analysis.** The concentration of constituents from the drilling fluid are removed from the reported analytical results for each chemical constituent per the below equation (3).

$$(3)\ Groundwater\ Quality_{corrected} = \frac{Laboratory\ Result - Proportion\ of\ Drill\ Brine \times Dilute\ Brine\ Chemistry}{Proportion\ of\ Formation\ Water}$$

The estimated chemistry of the drilling brine, proportion of residual drilling brine and Formation water for each sampling port are summarized in Table D-1 of Attachment D. The calculated Formation water quality for Ports 3 and 4 are summarized in Table D-2. The original drill brine fluid was not analyzed for the complete suite of parameters listed in Schedule I Table 2 of the Water License such as ammonia, cyanide species (total, free and WAD), DOC, TKN, orthophosphate, total phosphorus, reactive silica, sodium adsorption ration, TOC and turbidity. The calculated Formation water quality assumed concentrations of these parameters to be negligible (zero).

4.0 RESULTS AND DISCUSSION

4.1 Hydraulic Head Profile and Groundwater Flow Direction Below Whale Tail Lake

The Whale Tail Pit is located within the North Basin of Whale Tail Lake. The talik near the pit is believed to be closed at depth but to transition to an open talik towards the South Basin because of the increased width and depth of the lake towards the south. The initial pre-mining water table below both basins is equivalent to the lake surface elevation. Dewatering of the lake in the North Basin, along with dewatering of the Whale Tail pit, has locally lowered the water table near the pit relative to pre-mining conditions.

Permafrost underlies the land surrounding the lake, which restricts the lateral flow of groundwater to the talik and restricts the recharge of the sub-permafrost groundwater flow system by precipitation. Regionally groundwater flow is controlled by surface water elevations in lakes with open talik; water moves vertically through the open talik to the underlying sub-permafrost groundwater flow system. Conceptually lakes with open taliks in continuous permafrost regions are equivalent to large monitoring wells.

AMQ16-626 was installed to evaluate groundwater quality and the hydraulic gradient in the unfrozen bedrock as part of baseline characterization. The hydraulic gradient, in combination with the bedrock hydraulic conductivity, can be used to estimate the potential groundwater flux to or from Whale Tail Lake, and the flooded Whale Tail Pit post-closure.

Table 2 summarizes the calculated freshwater hydraulic heads based on the measured pressure in each sampling port in 2023 along with historical measurements. Although Port 6 (shallowest interval) is included in Table 2, it is interpreted that this port is within or near the cryopeg. The deeper ports (Ports 1 to 5) are in unfrozen rock and were used to assess the vertical hydraulic gradient.

Table 2: AMQ16-626 Estimated Freshwater Hydraulic Heads and Vertical Hydraulic Gradients

Port	Port Position (masl)	Calculated Freshwater Hydraulic Heads at Port (masl)					
		Pre-Development		Operations			
		9-Nov-18	16-Mar-19	9-Oct-20	2-Nov-21	8-Sep-22	9-Sep-23
6	-103.4	154.0	153.1	148.3	147.6	145.8	142.1
5	-124.8	--	--	149.0	148.2	147.7	147.5
4	-171.8	153.6	153.1	150.5	150.1	149.6	149.3
3	-201.7	153.4	153.7	150.5	150.0	149.6	149.3
2	-257.2	152.9	152.5	150.4	149.8	149.4	148.8
1	-301.4	152.5	152.3	150.4	150.0	149.3	148.7

Notes:
mbgs = metres below ground surface (vertical down from surface); masl = metres above sea level (elevation); -- = not measured.

The calculated freshwater hydraulic heads measured in 2023 are lower than those measured prior to mine development (2018 and 2019) and have continued to decrease each year as the pit has been developed. The lower hydraulic heads are attributed to the dewatering of the North Basin and the ongoing excavation of the open pit.

In the pre-development years (2018 and 2019) there was a downward hydraulic gradient observed between Ports 4 and 1, which measured 0.008 m/m in 2018 and 0.006 m/m in 2019. The hydraulic gradients are calculated using the freshwater hydraulic heads and the distance between the sampling interval midpoints. Overall TDS is low and correction of this gradient for buoyancy effects would be within 0.001 – 0.002 and would not alter the interpreted groundwater flow direction.

After dewatering of the North Basin of Whale Tail Lake and excavation of the open pit, the gradient is no longer consistently downward. An upward gradient is present at shallow depths (between Port 4 and 5) and a downward gradient is present at depth (between Port 1 and 4). The downward hydraulic gradient observed between Ports 4 and 1 measured 0.001 m/m in 2020 and 2021, and 0.002 in 2022, and most recently 0.0059 in 2023. The shift in gradient is inferred to reflect the influence of dewater of the Whale Tail pit and north basin of Whale Tail Lake.

4.2 Groundwater Quality

Table 3 and Table 4 presents information on each of the Ports that were monitored and sampled in 2023. The field measured electrical conductivity and fluorescein concentrations in water collected from Ports 1, 2, 3, 4 and 6 since sampling began in 2016, are illustrated in Figure 2. No water was retrieved from Ports 1, 2, and 6 in the 2023 monitoring program. The sequence of measurements collected during the 2023 field program is shown on Figure 3. Field measurements of electrical conductivity, salinity, pH, fluorescein and TDS concentrations recorded at the time of sampling are summarized in Table 4. The values are averages from the subsamples collected from multiple ‘runs’ to obtain the required volume of water for analysis.

Table 3: Annual Purging and Field Monitoring Data at AMQ16-626 2016 to 2023

Port	6			4			3			2			1		
Sample Port Interval (mbgs)	257.7 to 268.3			326.1 to 335.2			356.0 to 366.6			411.5 to 422.2			455.7 to 465.9		
Final Field Parameters / Year	F	EC	Vol.	F	EC	Vol.	F	EC	Vol.	F	EC	Vol.	F	EC	Vol.
2016	48 [9%]	4.6	282	93 [18%]	4.9	1,855	114 [22%]	7.5	177.0	120 [23%]	23	423	550 [107%]	4.8	50.0
2018	87 [17%]	9.0	8.25	73 [14%]	14.8	13.25	97 [19%]	7.6	12.5	78 [15%]	17.7	6.25	248 [48%]	9.4	0.25
2019	63 [12%]	9.6	9.0	120 [22%]	22.1	41	44 [9%]	5.3	76.0	202 [39%]	32.5	8.0	137 [27%]	10.7	2.0
2020	33 [6%]	6.6	15.0	34 [7%]	4.8	48	41 [8%]	3.4	46.0	81 [16%]	17.7	15.0	146 [29%]	3.2	17.0
2021	109 [21%]	3.6	12.0	17 [3%]	2.4	22	29 [6%]	4.4	20.0	92 [18%]	15	22.7	155 [30%]	4.1	1.0
2022	84 [16%]	4.2	2.0	30 [6%]	2.6	71.25	15 [3%]	2.9	65.5	32 [6%]	5.4	2.0	93 [18%]	3.7	2.0
2023	-	-	0	20 [4%]	2.5	77.0	7 [1%]	2.5	66.0	-	-	0	-	-	0
Cumulative Volume Removed (L)	328.25			2,127.5			463.0			477.0			72.25		

Notes:

mbgs = metres below ground surface, relative to ground surface; F = fluorescein content (ppb); [%] = estimated percent drill fluid remaining; EC = electrical conductivity (mS/cm); Vol. = volume of water removed from Port in a given year measured in Litres (L)

2016 Sampling Targets – 10% drill fluid remaining was not achieved during the allocated development period. Sample collected upon stabilization of field parameters (EC and F)

2018 Sampling Targets – document groundwater chemistry to compare against future monitoring years, with the understanding that it might still contain drilling fluids

2019 Sampling Targets – Port 3 (50 ppb, 10% target of initial F measured in 2016), Port 4 (coupled decreasing trends of F and EC as time permits) and Ports 2 and 6 (document groundwater quality information).

2020 and 2021 Sampling Targets – Ports 3 and 4 (50 ppb, 10% initial F measurement in 2016) and Ports 1, 2 and 6 (document groundwater quality)

2022 and 2023 Sampling Target – Ports 3 and 4 (50 ppb and removal of at least one interval volume prior to sampling).
(-) indicates no groundwater was retrieved from this sampling port (well) interval.

Table 4: Summary of AMQ16-626 Westbay Well 2023 Monitoring Program Data from Samples of Port 3 and Port 4 Collected for Chemical Analysis

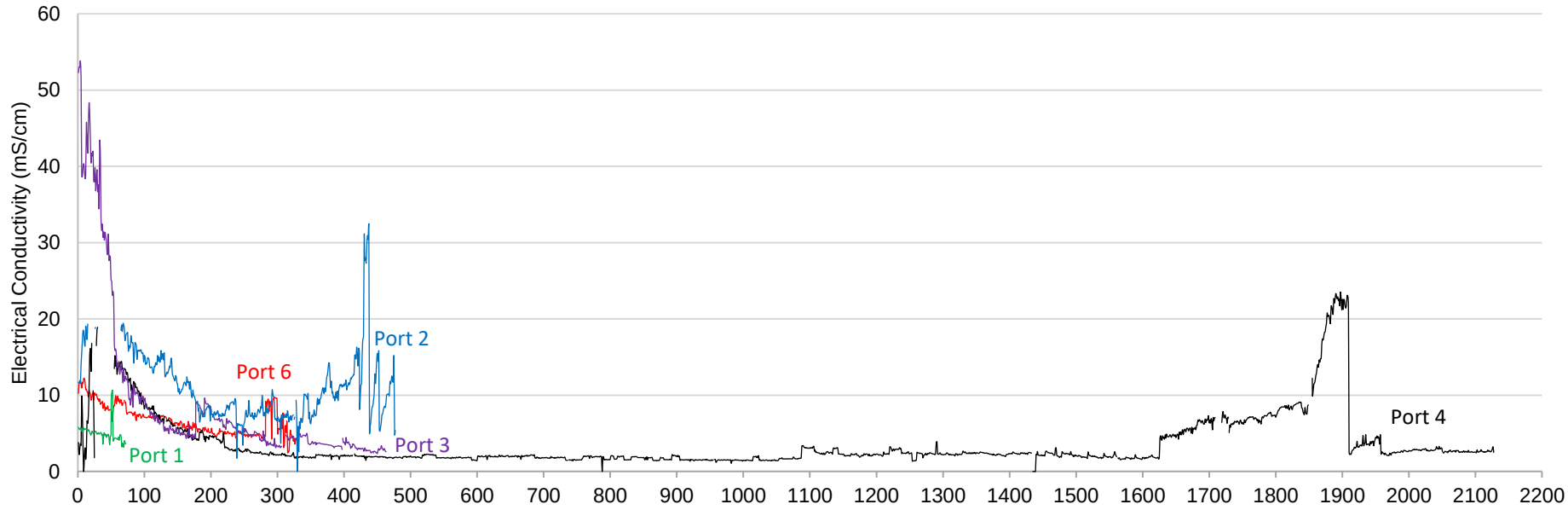
Port	Sample Date	Sample ID	Average Field Measured Parameters at Sampling Period[(a)]					Analytical Parameters[(b)]
			F	EC	TDS	Salinity	pH	
4	21-Sep-23	Port 4-A, Port 4-B, Port 4-C	18.0 ± 2.7	2.72	2,329	1.9	7.4	Schedule I Table 2
3	15-Sep-23	Port 3-A, Port 3-B, Port 3-C	4.3 ± 2.2	2.93	2,454	2.0	7.1	Schedule I Table 2

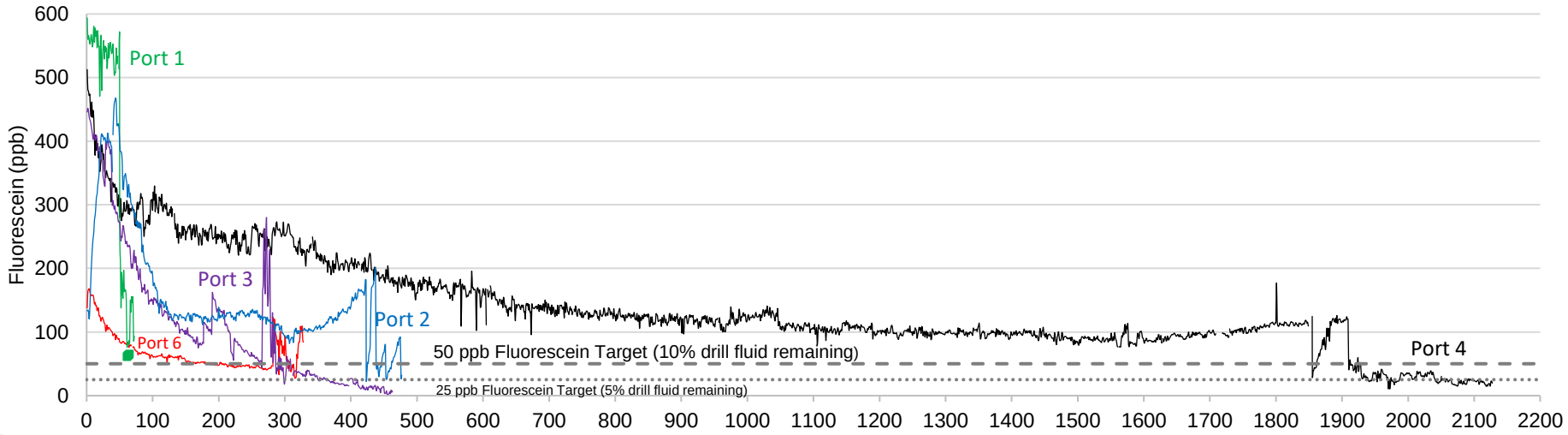
Notes:

F = fluorescein content (ppb) ± standard deviation; EC = electrical conductivity (mS/cm); TDS = total dissolved solids (mg/L); salinity units (ppt)

(a) Average field measurement for all runs for the sample collected (i.e., between 3 and 10 runs per sample ID).

(b) Ports 3 and 4 sampled and analysed for parameters listed in Section 4.2 of the GWMP and in Schedule I Table 2 of the Water License.





Total Volume Extracted from 2016 to 2023 (L)

Notes:
1. Marker denotes sample collected and submitted for laboratory analysis (approximate 1 Litre volume).
2.

Port	Cumulative Volume Removed, 2016 to 2023 (Litres)	Volume Removed in 2023 (Litres)
6	328.2	0
4	2127.5	77
3	463.0	66
2	477.0	0
1	72.2	0

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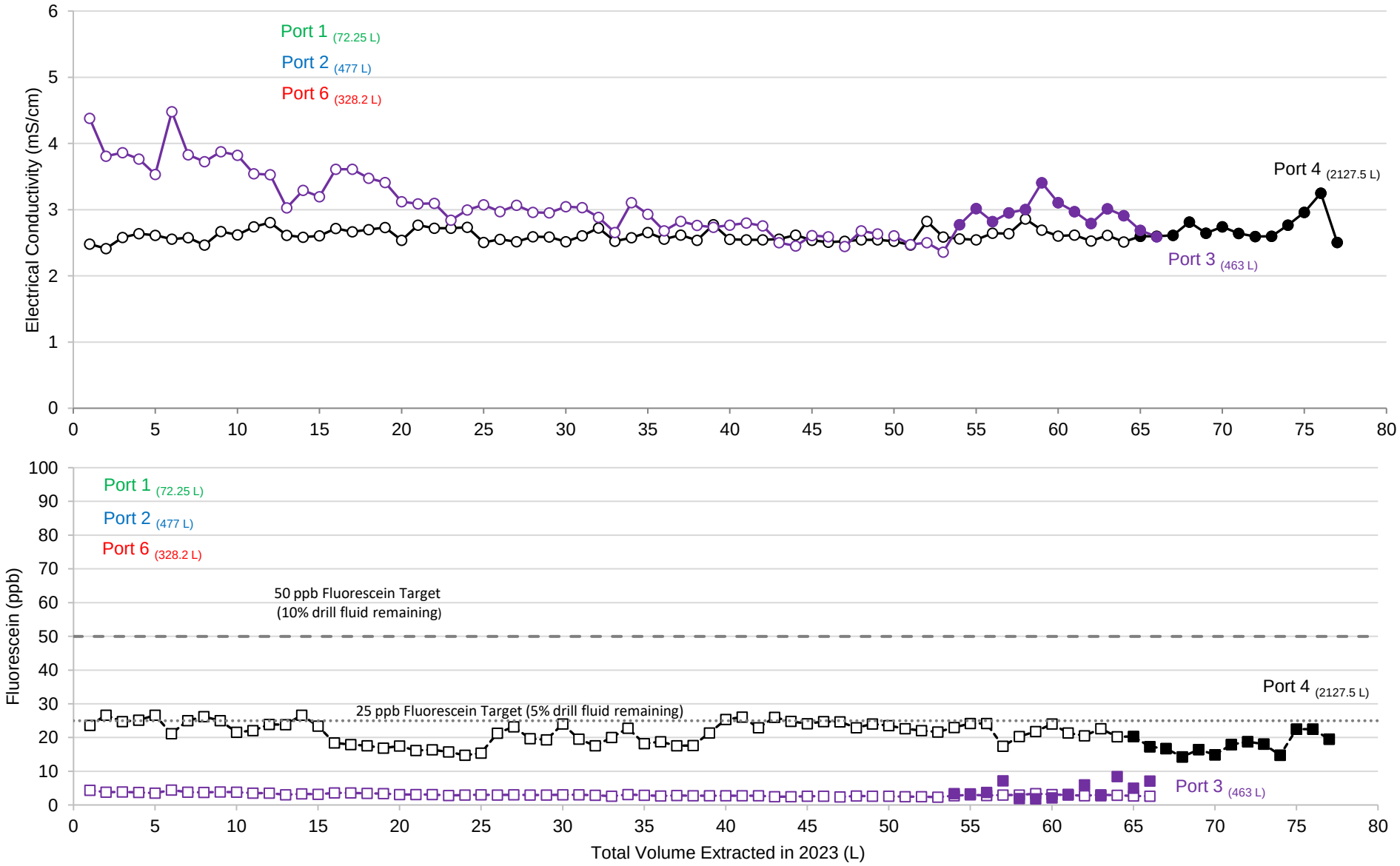
YYYY-MM-DD	DH	2023-09-27
PREPARED	NU	
DESIGN	JL	
REVIEW	--	
APPROVED	JL	

PROJECT
2023 WESTBAY WELL SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
2016 to 2023 AMQ16-626 DEVELOPMENT RECORD

PROJECT No.	DOC.	Rev.	FIGURE
CA0007108.1008	2024MBK_002	1	2



Notes:

1. Conductivity
2. Fluorescein
3. Open symbol denotes 1 Litre removed during Port purging.
4. Closed symbol denotes sample collected, where 'sample' represents 1 Litre volume extracted from Port for analysis of select parameter suite.
5. (1234) denotes total volume extracted from 2016 to 2023 in Litres (L).
6. In 2023 no water was removed from Port 1, Port 2 and Port 6.

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YYYY-MM-DD	DH	2023-09-27
PREPARED	NU	
DESIGN	JL	
REVIEW	--	
APPROVED	JL	

PROJECT

2023 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

2023 AMQ16-626 DEVELOPMENT RECORD

PROJECT No.	DOC.	Rev.	FIGURE
CA0007108.1008	2024MBK_002	0	3

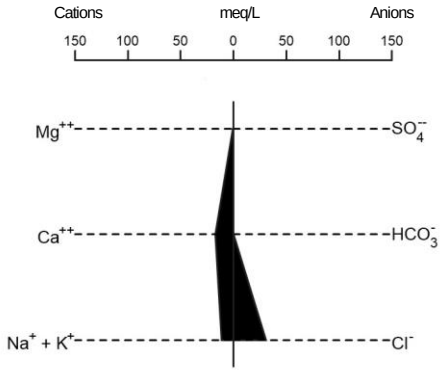
Stiff diagrams for the 2023 calculated (drill fluid removed) Formation water quality is presented in Figure 4, along with the 2016 brine fluid chemistry. Stiff diagrams are used to illustrate the major ion composition of a water sample to rapidly compare ‘signatures’ from different sources, such as natural groundwater compared to brine fluid water chemistry. Figure 4 also includes stiff diagrams of the laboratory result for raw water samples from Ports 3 and 4 (uncorrected for the contribution of drill brine) for comparison. The stiff diagrams illustrate how the major ion composition of the sample collected from Ports 3 and 4 is dominated by the chloride anion; the dominant cation at Port 4 and Port 3 is calcium. As shown in Figure 4, the Port 4 and Port 3 stiff diagrams are similar for the corrected and uncorrected for drill brine fluid, although the calcium and chloride values are less pronounced as expected with the lower influence of the drill fluid. Groundwater quality at depth in the Canadian Shield, away from the influence of sea water, such as at Meadowbank and Whale Tail, are expected to be dominated by calcium and chloride (Gascoyne, 2000; Frape and Fritz, 1987). In general, the 2023 stiff diagrams are similar to previous years, though there is a decrease in calcium and chloride peaks since initial sampling, likely related to continued purging/natural flushing.

Calculated Formation water quality for Ports 3 and 4 are shown in Table D-2 of Attachment D and include the calculated range of constituent concentrations of Formation water at each Port sampled in 2016, 2018, 2019 (Ports 3 and 6 only), 2020, 2021, 2022 and 2023 (Ports 3 and 4 only). The 2023 laboratory results of raw groundwater samples (uncorrected for drill fluid content) are included in Table D-3 and the analytical reports are included in Attachment C.

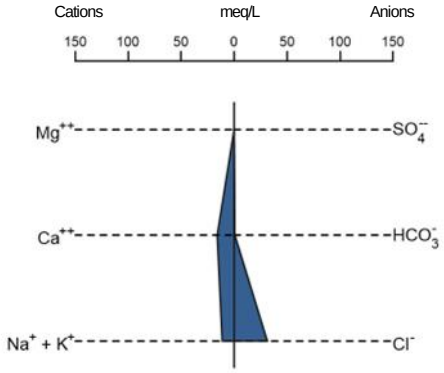
The 2023 field schedule did not allow for purging of Ports 1, 2 and 6 and associated collection of water to record field parameters at these Ports. These three ports are not the targeted sampling depths and have not been fully developed. When possible, field parameters are monitored in the ports to evaluate if natural flushing of the drill fluid is occurring. The following provides further information on water quality at Ports 3 and 4 based on the 2023 monitoring program.

Corrected Water Quality (drilling fluid removed)

PORT 4 – 331 m

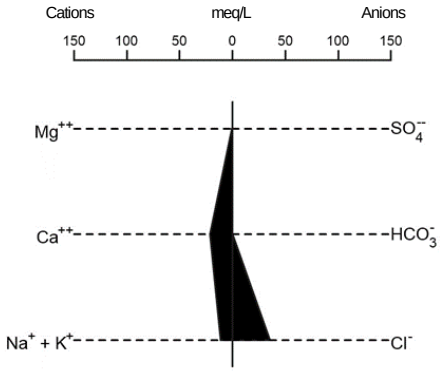


PORT 3 – 361 m

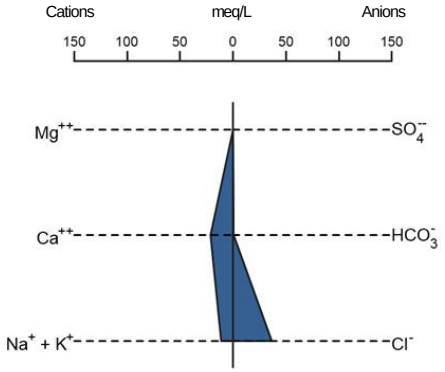


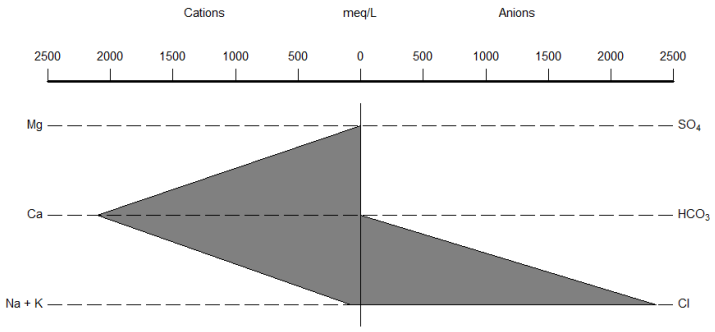
Raw Water Quality (uncorrected laboratory result)

PORT 4 – 331 m



PORT 3 – 361 m





NOTE(S)

[1] Stiff diagrams illustrate calculated 2023 water quality (drill fluid removed) for Ports 3 and 4 (left column) and uncorrected water quality (no drill fluid removed) for Ports 3 and 4 (right column) and the 2016 drill fluid.
[2] Average (Minimum and Maximum) result shown for Ports 3 and 4.
[3] Average depth in metres (m) shown for Ports 3 and 4.
[4] Drill fluid sample collected April 17, 2016.
[5] Ports 3 and 4 presented on a scale of 0 to 150 meq/L and drill fluid 0 to 2500 meq/L..

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YYYY-MM-DD	2023-11-28
PREPARED	YW
DESIGNED	--
REVIEWED	VJB
APPROVED	XX

PROJECT
2023 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
2023 WESTBAY SYSTEM AMQ16-626 AND 2016 DRILL FLUID STIFF PLOTS

PROJECT NO.	DOC	REV.	FIGURE
CA0007108.1008	2024MBK_002	1	4

Port 4

The 2023 field-measured groundwater fluorescein content and electrical conductivity at Port 4 at the end of sampling were lower than values recorded at the end of the previous groundwater monitoring programs. An increasing trend was observed in 2018 and 2019, followed by a sharp decline in 2020, where conductivity and fluorescein trended toward stabilization and remained relatively consistent from 2021 and 2023 (refer to Figure 3). In general, the lower proportion of drilling fluid in the Formation and in the samples collected results in an increase reliability of calculated Formation water quality (drill fluid removed) for recent years.

The estimated 2023 water quality results are within the same magnitude of those reported in 2016, albeit slightly lower with the exception of reactive silica and Radium-226. The concentration of cyanide, trace metals and arsenic in groundwater is low. Concentrations of cyanide (WAD) were not detected in the Port 4 sample, while free cyanide was present in trace amounts. The 2023 calculated Radium-226 concentration is estimated to be between 0.19 and 0.20 Bq/L, which, for comparative purposes, is below the MDMER limit of 0.37 Bq/L and slightly higher than the 2016 concentration value (of 0.13 Bq/L).

Port 4 2023 data is considered to be reliable in representing Formation water quality. The port had corrected TDS range of 1,958 and 2,414 mg/L and a residual fluorescein content of 18 ppb.

Port 3

Concentrations of fluorescein have been decreasing since 2016, with the fluorescence content at the end of 2023 sampling reduced to 3% (from 22% in 2016). A similar trend, but less pronounced trend, is observed in electrical conductivity. This suggests that only a small amount of residual drilling water is present in the Formation water near this zone.

The 2023 Formation water quality data are within the same order of magnitude to those reported in 2016, albeit slightly lower except for a few parameters. The concentration of cyanide, trace metals and arsenic in groundwater is low. Concentrations of cyanide (WAD) was not detected in the Port 3 sample, while free cyanide was presented in trace amounts. For comparative purposes only, the calculated Radium-226 concentration is estimated to be between 0.17 and 0.18 Bq/L and below the MDMER limit of 0.37 Bq/L.

Port 3 2023 data is considered to be reliable in representing Formation water quality. The port had a corrected TDS range of 1,887 and 1,896 mg/L and a residual fluorescein content of 4.3 ppb.

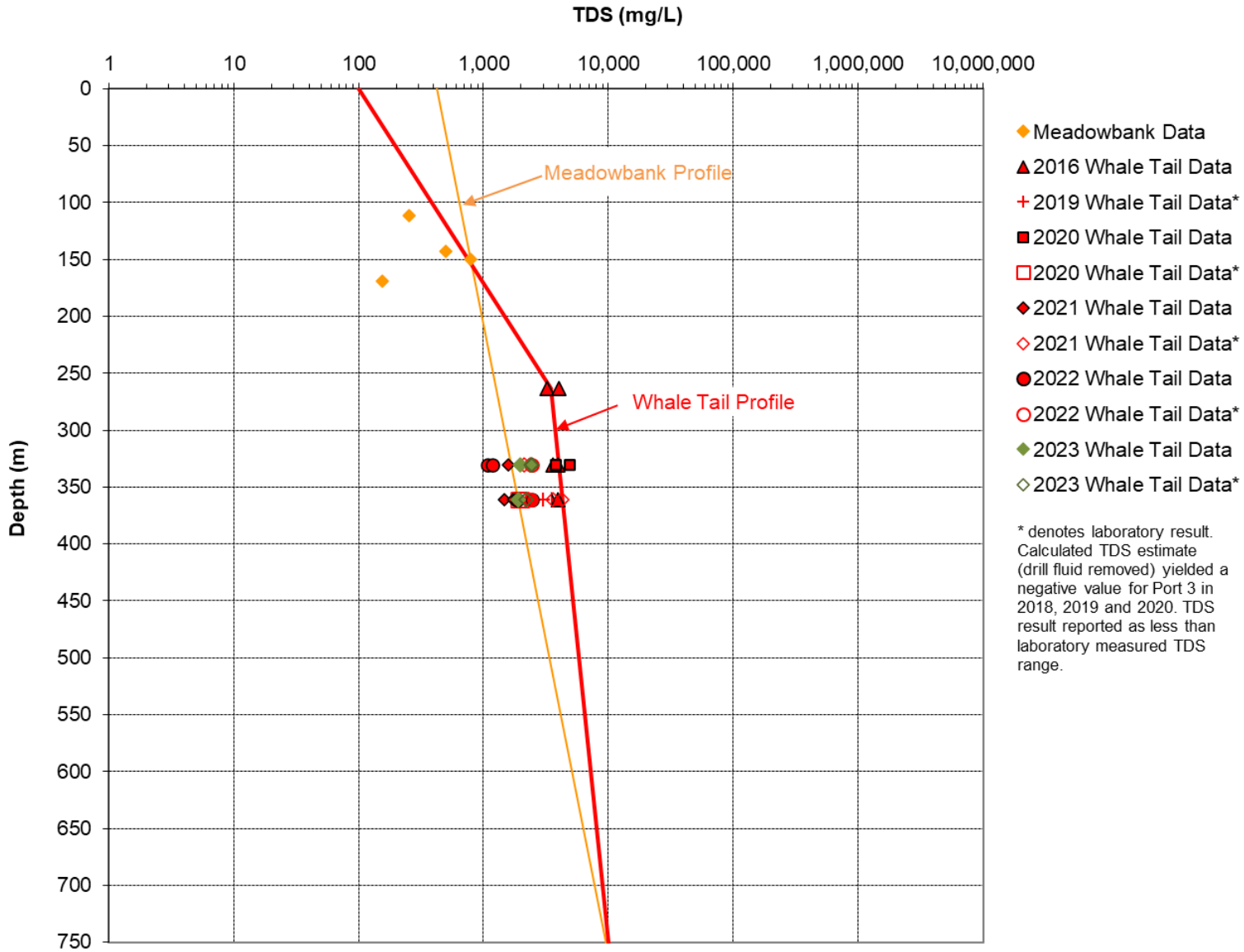
Summary

Based on the 2023 groundwater monitoring program, the 2023 formation water quality calculated from Ports 3 and 4 are considered to be reliable for the purpose of evaluating salinity and general trends in chemical contents and can be used to assess Formation water quality at these depths. The precision of the estimated Formation water quality remains affected by the presence of residual brine in the intervals sampled, although this effect has decreased significantly with purging and sampling activities at Ports 3 and 4. Fluorescein content now indicates that the estimated percent of drill fluid remaining is less than 5% for both Port 3 and Port 4.

Based on 2023 data from Ports 3 and 4, the calculated TDS content of Formation water is estimated to range between 1,887 and 2,414 mg/L. The TDS profile that was adopted in the FEIS for the Approved Project is presented in Figure 5, along with the supplemental reliable TDS collected since its submission. Figure 5 presents the 2019 to 2023 calculated Formation TDS.

As illustrated on Figure 5, the TDS in samples from Ports 3 and 4 is similar to measurements in recent years and slightly less saline than historical sampling results in 2016, which may reflect the lower residual drilling fluid content in the collected samples and therefore inferred higher accuracy is the calculated Formation water quality. Overall, although slightly less saline than the Whale Tail TDS profile adopted for the FEIS, the results do not deviate significantly from FEIS assumptions.

Arsenic, which is a constituent of interest in the ore and waste rock to be mined, occurs in groundwater at concentrations that are low and consistent with previous reliable data collected from the well. Radium-226 in groundwater measured in 2023 at Ports 3 and 4 were below the Federal MDMER Effluent criteria.



* denotes laboratory result. Calculated TDS estimate (drill fluid removed) yielded a negative value for Port 3 in 2018, 2019 and 2020. TDS result reported as less than laboratory measured TDS range.

Notes:

1. Closed symbol represents calculated Formation water (drill fluid removed). Open symbol represents laboratory measured result (uncorrected for drill fluid). Removal of drill fluid proportion yielded negative or low TDS estimate.
2. Whale Tail Data from Golder (2016, 2019d, 2021b).
3. Meadowbank Data from Golder (2004).
4. TDS result plotted as midpoint of sample interval depth where applicable: Port 6 (263 m), Port 4 (331 m) and Port 3 (361 m).

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CONSULTANT

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YYYY-MM-DD	DH	2023-11-24
PREPARED	NU	
DESIGN	JL	
REVIEW	--	
APPROVED	JL	

PROJECT

2023 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

TDS PROFILE

PROJECT No.	DOC.	Rev.	FIGURE
CA0007108.1008	2024MBK_002	0	5

5.0 QUALITY ASSURANCE/QUALITY CONTROL

Duplicate samples collected from Ports 3 and 4 were submitted to the analytical laboratory as part of the quality assurance/quality control ('QA/QC') protocol. A trip blank and field blank were also submitted for analysis of the full parameter suite, with the exception of unionized ammonia (NH_3 - calculated value based on temperature and pH of sample). The analytical laboratory performs equipment blanks as a method of internal QA/QC verification.

Analytical repeatability was tested by assessing the similarity between duplicate pairs of results. For each duplicate pairs of analysis where both results were higher than 5 times the method detection limit (MDL), the relative percent difference (RPD) was calculated as follows:

$$RPD = \frac{\text{absolute [difference (concentration of a given parameter)]}}{\text{[average (concentration of a given parameter)]}} \times 100$$

Per USEPA recommended methods (USEPA, 1994), an RPD of 20% or less is considered acceptable. Where one or both results of the duplicate pair are less than 5 times the MDL, a margin of +/- MDL is considered acceptable.

Table D-4 of Attachment D presents the RPD or +/- MDL value calculated from the duplicate pair of results. Approximately 50% of duplicate pairs of analyses have one or both results below the method detection limit and consequently cannot be assessed for repeatability. QA/QC results for the duplicate samples are within acceptable tolerance limits (RPD or +/- MDL) except for duplicate concentrations of turbidity and dissolved zinc in Port 4 (sample IDs: Port 4-A and Port 4-B) as well as duplicate concentrations of total arsenic, total lead, total manganese, total nickel and total zinc in Port 3 (sample IDs: Port 3-A and Port 3-B). The reason for the deviations in concentrations of these parameters is unknown but may be attributed to the presence of trace sediments in the sample. The concentrations of dissolved constituents are generally similar to or lower than their total counterparts, and the dissolved metals were field filtered.

The trip blank (sample ID: TB) returned concentrations that are low or below the laboratory detection limits for each parameter analyzed with the exception of dissolved aluminum (0.00063 mg/L) and dissolved zinc (0.00033 mg/L), which were 2 to 3 times the laboratory method detection limit. These detected concentrations are overall low in comparison to the reported groundwater concentrations and would not alter the conclusions of this assessment. In the field blank samples, bicarbonate, alkalinity, fluoride, dissolved aluminum, dissolved chromium, dissolved iron, dissolved zinc and total zinc were detected at concentrations that are from one to three orders of magnitude higher than the laboratory detection limit (bicarbonate – 5.8 mg/L, alkalinity – 5.9 mg/L, fluoride – 0.24 mg/L, dissolved aluminum – 0.0013 mg/L, dissolved chromium – 0.00011 mg/L, dissolved iron – 0.001 mg/L, dissolved zinc – 0.00025 mg/L, and total zinc – 0.00025 mg/L). This suggests possible contamination of the sample from dust, the deionized water used in the collection of the field blank, or from the filtering or preservative addition. Results from these parameters may be biased slightly high in the Port 3 and Port 4 samples.

During the 2022 field program, cyanide was detected in the Trip Blank, but this was not observed in 2023. Cyanide analysis was sent to two labs in 2023 to help assess if the cyanide concentrations observed in the groundwater samples were representative of groundwater concentrations or laboratory error/interference, as indicated by the Trip Blank. In 2023, free cyanide was detected in both Port 3 and Port 4, in trace concentrations just above the laboratory method detection limit but not in the trip or equipment blank. At the second laboratory - SGS Canada Inc. (SGS), the method detection limit was higher and above the detected concentrations in the sample analysed at the Bureau Veritas Canada Inc. laboratory (BV). It is recommended that monitoring continue

to evaluate if cyanide concentrations are increasing in groundwater. If the second lab can lower its detection limits, it is recommended that during the next monitoring program, in addition to the field and trip blank analyses, an additional sample of Port 3 and Port 4 waters be collected for analysis of free, WAD and total cyanide at another laboratory.

Uncertainty in the calculated Formation water quality stems from 1) variability in drill water composition at the time of drilling and 2) possible mixing between aquifer zones having different levels of development (purging of drill water). These have an influence on the accuracy of the calculated Formation water quality, the effect of which is decreased with lower drilling brine proportion. The 2023 data remain adequate to estimate water quality at Ports 3 and 4.

6.0 CONCLUSION

The 2023 AMQ16-626 monitoring program was carried out in support of the Whale Tail Mine Certificate No. 008, Water License no. 2AM-WTP1830 and in accordance with Section 3.1 of the Whale Tail Pit Project Groundwater Monitoring Plan Version 3_NWB dated May 2019. The hydraulic head and groundwater quality data were used to monitor Formation water quality and the hydraulic gradient near the mine development areas throughout the stages of mining.

Hydraulic heads measured at the well ports continue to decrease from the pre-development phase. The continue decrease in most ports is attributed to the dewatering of the North Basin and Whale Tail Pit. An upward gradient is present at shallow depths (between Port 4 and 5) and a downward to near neutral gradient is present at depth (between Port 1 and 4) since dewatering of the Whale Tail pit and north basin of Whale Tail Lake commenced.

Formation water quality was estimated from the samples collected in 2023 by removing the effect of residual drilling water still present in the raw water sample collected. The 2023 program estimated that Formation water quality at Ports 3 and 4 are in the same range, but less saline than the TDS estimated in 2016. The data collected from Ports 3 and 4 in 2023 are considered reliable and the assumptions for the conceptual model related to flow direction and TDS water quality, which were developed based on 2016 pre-mining data, are still considered to be appropriate. Changes to the water quality model or the water management plan are not considered necessary based on the data presented in this report. The slightly lower TDS in Ports 3 and 4 since 2016 likely reflects improved reliability in the sample results are due to reduced drill fluid content. Overall, the results do not deviate significantly from the FEIS assumptions.

The concentrations of metals and arsenic in groundwater at Ports 3 and 4 continue to be low. Given that the arsenic concentrations remain similar to the assumptions adopted in the geochemical models (low arsenic in Formation water), the contention is still valid that the natural content of arsenic in groundwater is not likely to have a significant effect on mine surface water quality nor the pit lake water quality.

7.0 RECOMMENDATIONS

Monitoring should continue at Port 1 and 2 during each planned monitoring program to evaluate if natural flushing is occurring. Additional development and groundwater sampling should be carried out at Port 1 and 2 if time permits and if underground mining intends to progress below the permafrost. Sampling from Ports 1 and 2 would support the evaluation of potential up-welling of deeper saline water into the underground mine openings at depth.

8.0 STUDY LIMITATIONS

This technical memorandum was prepared for the exclusive use of Agnico Eagle Mines Limited. The technical memorandum, which specifically includes all tables and attachments, is based on data and information collected by WSP Canada Inc. (WSP) and is based solely on the conditions at the sampling locations at the time of the work, supplemented by historical information and data as described in this technical memorandum.

WSP has relied in good faith on all information provided by others and does not accept responsibility for any deficiency, misstatements, or inaccuracies contained in the technical memorandum as a result of omissions, misinterpretation, or fraudulent acts of the persons contacted or errors or omissions in the reviewed documentation.

The services performed, as described in this technical memorandum, were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this technical memorandum, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this technical memorandum.

The findings and conclusions of this technical memorandum are valid only as of the date of this technical memorandum and for the locations investigated. If new information is discovered in future work, including excavations, borings, or other studies, WSP should be requested to re-evaluate the conclusions of this technical memorandum and provide amendments as required.

9.0 CLOSURE

We trust this technical memorandum meets your current requirements. If you have any questions regarding this technical memorandum, please contact the undersigned.

WSP Canada Inc.

ORIGINAL SIGNED

Nickie Unonius, M.Sc.
Hydrogeologist

ORIGINAL SIGNED

Jennifer Levenick, P.Eng.
Principal Hydrogeologist

NU/JL

Attachments: Attachment A – AQM16-626 Westbay System Installation Details
Attachment B – Westbay Instruments Mosdax Sampler Calibration Reports
Attachment C – 2023 Laboratory Certificates of Analysis
Attachment D – Water Quality Results

https://wsponlinecan.sharepoint.com/sites/ca-ca00071081008/shared documents/06. deliverables/02 wt/westbay 2023/rev 0/ca0007108.1008-mbk2024_002-tm-2023 wt westbay gw monitoring_29jan2024-rev0.docx

10.0 REFERENCES

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Golder. 2021. 2020 Whale Tail Project AMQ16-626 Westbay Groundwater Monitoring Investigation, Amaruq, Nunavut. Submitted to Agnico Eagle Mines Limited. (Reference No. 20148777-506-Rev1). Dated April 8, 2021.

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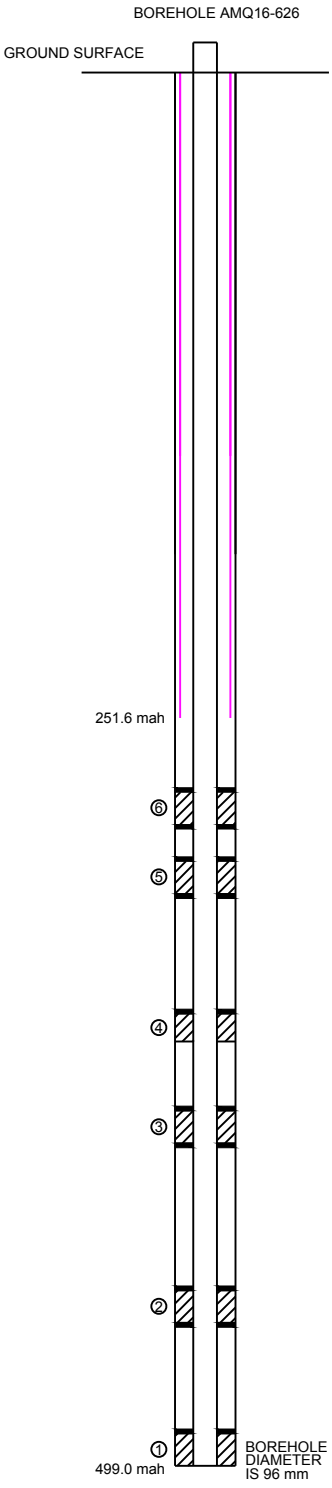
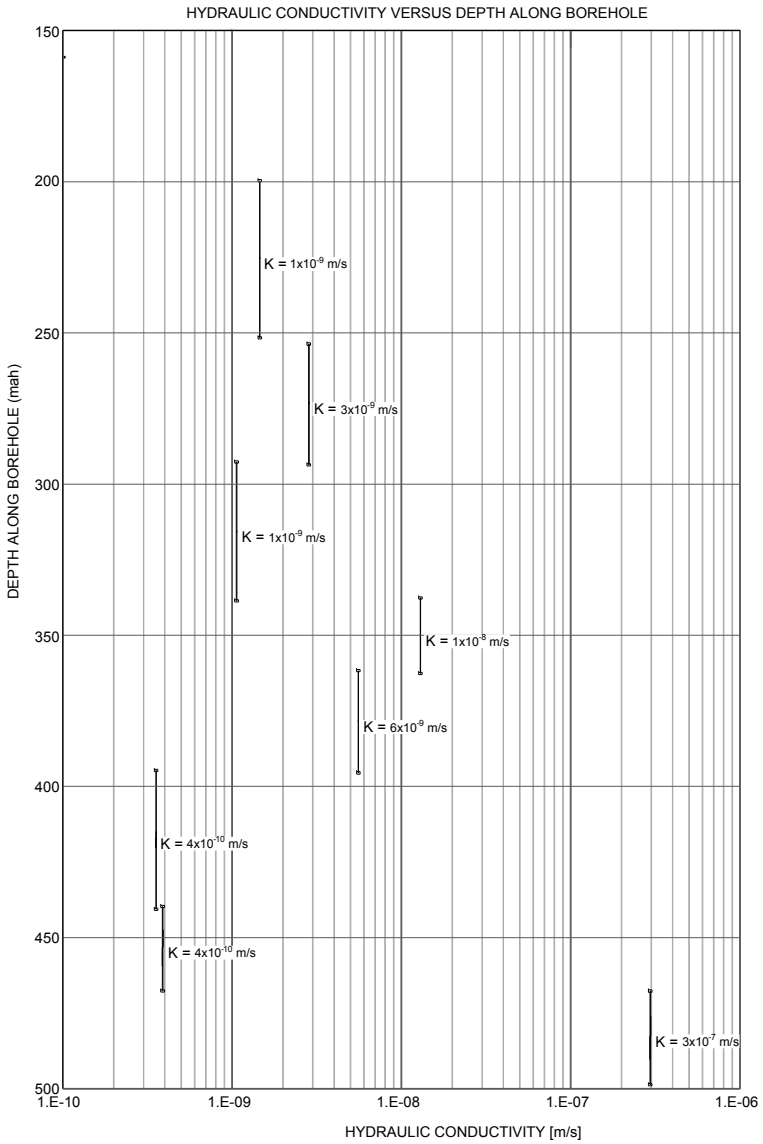
WSP 2023. 2022 Whale Tail Mine - Groundwater Monitoring of Westbay Well AMQ16-626. Submitted to Agnico Eagle Mines Limited. (Reference No. 22525330-577-TM-Rev0). Dated 14 March 2023.

ATTACHMENT A

AQM16-626 Westbay System Installation Details



WESTBAY SYSTEM ZONE DEPTH SUMMARY						
ZONE	DEPTH ALONG HOLE			VERTICAL DEPTH		
	FROM	TO	LENGTH	FROM	TO	THICKNESS
	(mah)	(mah)	(m)	(mbgs)	(mbgs)	(m)
6	276.0	287.4	11.4	257.7	268.3	10.6
5	298.9	310.3	11.4	279	289.7	10.6
4	349.3	359.1	9.8	326.1	335.2	9.1
3	381.3	392.7	11.4	356.0	366.6	10.6
2	440.8	452.2	11.4	411.5	422.2	10.6
1	488.1	499.0	10.9	455.7	465.9	10.2



LEGEND

	PACKER	K	HYDRAULIC CONDUCTIVITY
①	WESTBAY MONITORING ZONE	mah	METRES ALONG BOREHOLE, RELATIVE TO GROUND SURFACE
	STEEL CASING	mbgs	METRES BELOW GROUND SURFACE
		m/s	METRES PER SECOND

NOTES

1. ALL UNITS ARE IN METERS UNLESS OTHERWISE NOTED
2. PERMAFROST ASSUMED 200 m ALONG HOLE ALIGNMENT.
3. DRILL RODS TO 251.6 m ALONG HOLE.
4. BOREHOLE LOCATED IN UTM NAD 83 ZONE 14, N =7255363.5 E = 607181.68 ELEVATION = 154.46 m.
5. AVERAGE BOREHOLE INCLINATION IS 69°.

NOT TO SCALE
SCHEMATIC ONLY

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2016-07-06	ISSUED FOR FINAL	JJ	PP	DV	DC
A	2016-05-27	ISSUED FOR REVIEW	JJ	PP		

PROJECT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED
WHALE TAIL PIT PROJECT
NUNAVUT, CANADA

TITLE

AMQ16-626 WESTBAY SYSTEM INSTALLATION DETAILS

Golder Associates

PROJECT No.	1649355.4000.3000		FILE No.	1649355-4000-3000-03	
DESIGN	JJ	2016-07-06	SCALE	NOT TO SCALE	
CADD	PP	2016-07-06	FIGURE	A-1	
CHECK	DV	2016-07-06			
REVIEW	DC	2016-07-06			

ATTACHMENT B

Westbay Instruments Mosdax Sampler Calibration Reports

MOSDAX Calibration Report 1: EMS - 2652 Module 3008

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\6JULY2~1\02652

Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

EMS - 2652 Jul 05 17:19:28 2023
Range 1 Temp 3.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.573	-0.110	-0.006
192.279	0.008	0.000
393.105	0.053	0.003
593.025	-0.041	-0.002
792.260	-0.022	-0.001
991.663	-0.043	-0.002
1191.216	-0.111	-0.006
1389.161	-0.104	-0.005
1588.084	-0.068	-0.003
1788.774	-0.022	-0.001
1993.339	0.233	0.012
1807.661	0.101	0.005
1608.890	0.050	0.002
1407.448	-0.005	0.000
1218.077	-0.003	0.000
1013.242	0.146	0.007
818.153	0.176	0.009
606.811	0.163	0.008
406.168	0.181	0.009
206.339	0.147	0.007
14.559	-0.011	-0.001

EMS - 2652 Jul 05 22:06:02 2023
Range 2 Temp 10.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.573	-0.001	0.000
194.786	0.090	0.005
393.038	0.193	0.010
593.264	0.127	0.006
787.777	0.135	0.007
990.897	0.162	0.008
1190.640	0.078	0.004
1389.141	0.107	0.005
1588.836	0.153	0.008
1788.500	0.253	0.013
1993.474	0.452	0.023
1819.044	0.401	0.020
1608.471	0.357	0.018
1407.594	0.203	0.010
1207.088	0.194	0.010
1017.357	0.359	0.018
807.679	0.286	0.014
614.413	0.288	0.014
405.759	0.274	0.014
206.263	0.198	0.010
14.575	0.001	0.000

EMS - 2652 Jul 06 02:54:50 2023
Range 3 Temp 20.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.568	-0.090	-0.004
192.451	0.044	0.002
393.530	0.026	0.001
588.739	0.063	0.003
792.771	0.038	0.002
991.852	0.024	0.001
1190.704	-0.098	-0.005
1389.987	-0.030	-0.001
1588.812	-0.051	-0.003
1788.504	0.037	0.002
1993.692	0.237	0.012
1819.288	0.239	0.012
1607.955	0.173	0.009
1408.360	0.074	0.004
1206.639	0.175	0.009
1006.977	0.198	0.010
808.025	0.206	0.010
606.629	0.196	0.010
405.752	0.185	0.009
205.882	0.095	0.005
14.580	-0.021	-0.001

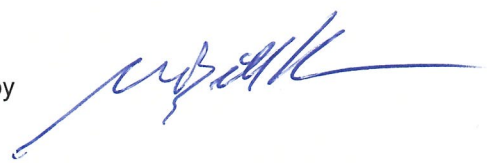
EMS - 2652 Jul 06 07:51:58 2023
Range 4 Temp 30.2° C

Ref Pres (psia)	Error (psia)	(% FS)
14.583	0.041	0.002
192.152	0.023	0.001
392.766	0.077	0.004
590.327	0.079	0.004
791.954	0.076	0.004
991.820	-0.038	-0.002
1190.999	-0.181	-0.009
1390.452	-0.167	-0.008
1582.832	-0.166	-0.008
1789.033	-0.038	-0.002
1994.293	0.141	0.007
1817.812	0.064	0.003
1607.315	0.040	0.002
1407.540	-0.015	-0.001
1218.759	0.005	0.000
1006.808	0.183	0.009
818.997	0.258	0.013
606.998	0.259	0.013
405.988	0.194	0.010
205.977	0.181	0.009
14.596	0.041	0.002

EMS - 2652 Jul 06 13:05:52 2023
Range 5 Temp 40.1° C

Ref Pres (psia)	Error (psia)	(% FS)
14.563	0.000	0.000
191.811	0.059	0.003
392.994	0.113	0.006
589.625	0.112	0.006
792.177	0.092	0.005
992.140	0.045	0.002
1191.043	-0.021	-0.001
1390.803	-0.033	-0.002
1582.650	-0.028	-0.001
1789.282	0.111	0.006
1994.595	0.392	0.020
1817.983	0.246	0.012
1608.943	0.157	0.008
1408.136	0.125	0.006
1207.957	0.159	0.008
1006.412	0.412	0.021
808.351	0.368	0.018
606.579	0.291	0.015
406.572	0.234	0.012
206.047	0.175	0.009
14.565	0.002	0.000

Issued by



Westbay Instruments

MOSDAX Calibration Report 2: EMS - 2652 Module 3008

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\6JULY2~1\02652

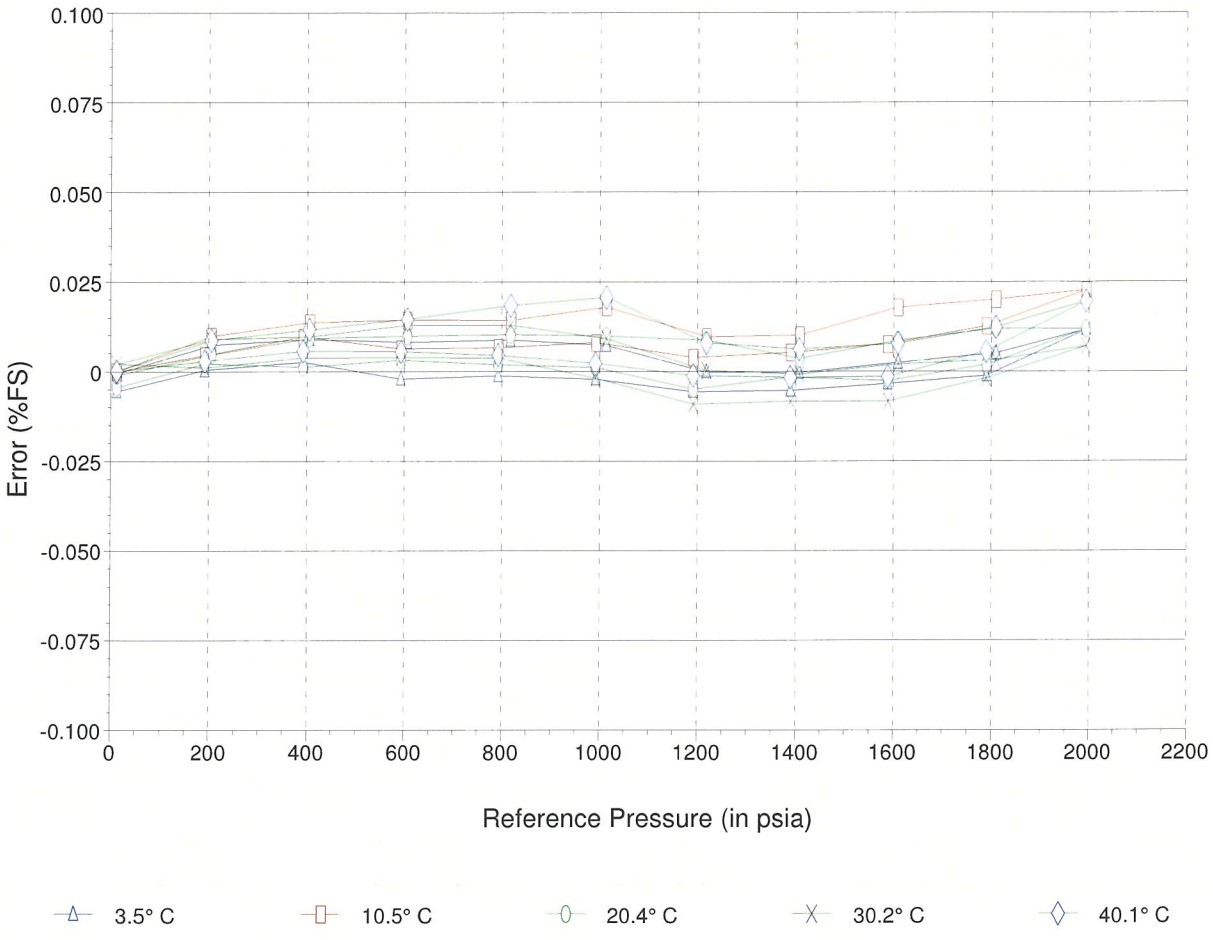
Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

Plot of Error vs. Reference Pressure

EMS - 2652 Module 3008



Comments

Issued by

Westbay Instruments

As Received MOSDAX Cal. Report 1: EMS - 2652 Module 3008

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\6JULY2~1\02652

Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

EMS - 2652 Jul 05 17:19:28 2023
Range 1 Temp 3.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.573	-0.043	-0.002
192.279	0.069	0.003
393.105	0.106	0.005
593.025	0.004	0.000
792.260	0.015	0.001
991.663	-0.016	-0.001
1191.216	-0.094	-0.005
1389.161	-0.098	-0.005
1588.084	-0.073	-0.004
1788.774	-0.041	-0.002
1993.339	0.200	0.010
1807.661	0.081	0.004
1608.890	0.043	0.002
1407.448	0.000	0.000
1218.077	0.012	0.001
1013.242	0.172	0.009
818.153	0.211	0.011
606.811	0.207	0.010
406.168	0.233	0.012
206.339	0.208	0.010
14.559	0.057	0.003

EMS - 2652 Jul 05 22:06:02 2023
Range 2 Temp 10.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.573	0.086	0.004
194.786	0.170	0.008
393.038	0.264	0.013
593.264	0.189	0.009
787.777	0.189	0.009
990.897	0.207	0.010
1190.640	0.115	0.006
1389.141	0.137	0.007
1588.836	0.175	0.009
1788.500	0.267	0.013
1993.474	0.460	0.023
1819.044	0.415	0.021
1608.471	0.378	0.019
1407.594	0.232	0.012
1207.088	0.230	0.012
1017.357	0.403	0.020
807.679	0.339	0.017
614.413	0.349	0.017
405.759	0.344	0.017
206.263	0.277	0.014
14.575	0.088	0.004

EMS - 2652 Jul 06 02:54:50 2023
Range 3 Temp 20.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.568	0.002	0.000
192.451	0.127	0.006
393.530	0.098	0.005
588.739	0.127	0.006
792.771	0.094	0.005
991.852	0.073	0.004
1190.704	-0.053	-0.003
1389.987	0.011	0.001
1588.812	-0.013	-0.001
1788.504	0.074	0.004
1993.692	0.274	0.014
1819.288	0.276	0.014
1607.955	0.212	0.011
1408.360	0.115	0.006
1206.639	0.220	0.011
1006.977	0.248	0.012
808.025	0.262	0.013
606.629	0.260	0.013
405.752	0.257	0.013
205.882	0.177	0.009
14.580	0.071	0.004

EMS - 2652 Jul 06 07:51:58 2023
Range 4 Temp 30.2° C

Ref Pres (psia)	Error (psia)	(% FS)
14.583	0.109	0.005
192.152	0.081	0.004
392.766	0.125	0.006
590.327	0.119	0.006
791.954	0.111	0.006
991.820	-0.007	0.000
1190.999	-0.152	-0.008
1390.452	-0.138	-0.007
1582.832	-0.136	-0.007
1789.033	-0.004	0.000
1994.293	0.180	0.009
1817.812	0.098	0.005
1607.315	0.071	0.004
1407.540	0.014	0.001
1218.759	0.034	0.002
1006.808	0.214	0.011
818.997	0.292	0.015
606.998	0.299	0.015
405.988	0.242	0.012
205.977	0.239	0.012
14.596	0.109	0.005

EMS - 2652 Jul 06 13:05:52 2023
Range 5 Temp 40.1° C

Ref Pres (psia)	Error (psia)	(% FS)
14.563	0.015	0.001
191.811	0.064	0.003
392.994	0.111	0.006
589.625	0.104	0.005
792.177	0.081	0.004
992.140	0.033	0.002
1191.043	-0.033	-0.002
1390.803	-0.042	-0.002
1582.650	-0.032	-0.002
1789.282	0.113	0.006
1994.595	0.404	0.020
1817.983	0.250	0.012
1608.943	0.153	0.008
1408.136	0.117	0.006
1207.957	0.148	0.007
1006.412	0.399	0.020
808.351	0.357	0.018
606.579	0.283	0.014
406.572	0.231	0.012
206.047	0.180	0.009
14.565	0.017	0.001

Issued by

Westbay Instruments

As Received MOSDAX Cal. Report 2: EMS - 2652 Module 3008

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\6JULY2~1\02652

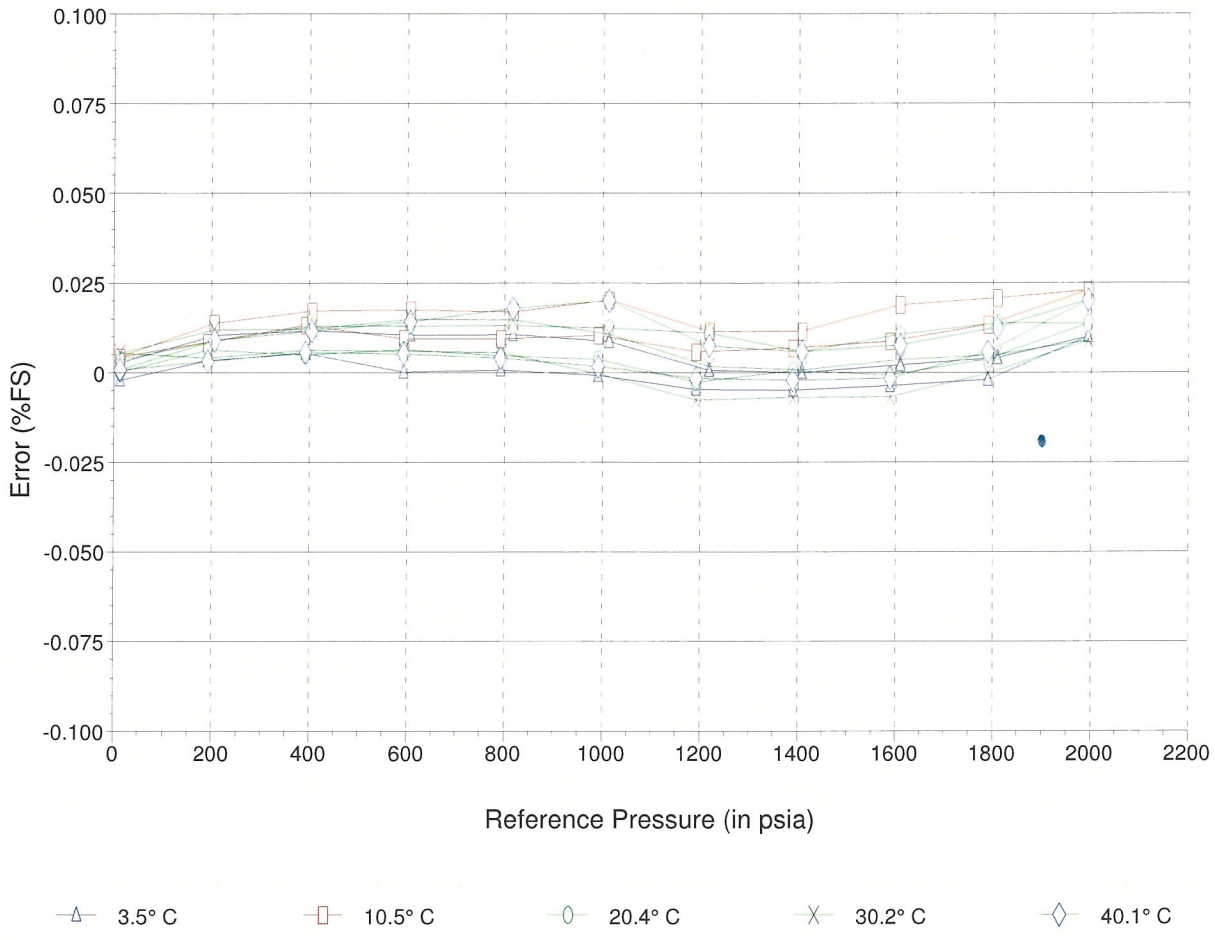
Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

Plot of Error vs. Reference Pressure

EMS - 2652 Module 3008



Comments

Issued by

Westbay Instruments

MOSDAX Calibration Report 1: EMS - 4954 Module 1774

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\18MAY2~1\04954

Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

EMS - 4954 May 15 19:13:34 2023
Range 1 Temp 3.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.556	-0.139	-0.007
193.396	-0.014	-0.001
389.937	0.022	0.001
589.483	0.063	0.003
788.080	-0.002	0.000
991.534	-0.038	-0.002
1191.039	-0.085	-0.004
1390.074	-0.185	-0.009
1589.506	-0.081	-0.004
1788.849	0.017	0.001
1993.256	0.158	0.008
1817.987	-0.069	-0.003
1609.745	-0.114	-0.006
1408.040	-0.092	-0.005
1219.225	-0.133	-0.007
1010.421	0.025	0.001
818.081	0.012	0.001
606.343	0.015	0.001
406.496	0.077	0.004
205.672	0.068	0.003
14.577	-0.118	-0.006

EMS - 4954 May 15 23:52:00 2023
Range 2 Temp 10.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.608	-0.229	-0.011
193.251	-0.074	-0.004
392.361	0.001	0.000
592.856	-0.060	-0.003
791.895	0.047	0.002
986.107	-0.002	0.000
1190.569	-0.098	-0.005
1389.745	-0.035	-0.002
1590.100	0.016	0.001
1789.020	0.113	0.006
1993.284	0.249	0.012
1816.969	0.152	0.008
1608.567	0.086	0.004
1408.485	0.109	0.005
1219.672	-0.020	-0.001
1011.660	0.200	0.010
807.982	0.030	0.002
606.811	0.069	0.003
406.217	0.095	0.005
206.102	-0.021	-0.001
14.655	-0.119	-0.006

EMS - 4954 May 16 04:28:23 2023
Range 3 Temp 20.3° C

Ref Pres (psia)	Error (psia)	(% FS)
14.663	-0.145	-0.007
193.265	0.023	0.001
390.512	0.040	0.002
593.022	0.023	0.001
792.139	-0.003	0.000
991.249	0.002	0.000
1191.250	-0.116	-0.006
1390.272	-0.119	-0.006
1589.466	-0.078	-0.004
1788.385	0.056	0.003
1992.937	0.149	0.007
1819.289	0.104	0.005
1609.010	-0.047	-0.002
1406.941	-0.062	-0.003
1219.462	0.004	0.000
1014.064	-0.001	0.000
808.198	0.050	0.003
606.512	0.059	0.003
405.739	0.069	0.003
205.941	-0.009	0.000
14.667	-0.141	-0.007

EMS - 4954 May 16 09:06:44 2023
Range 4 Temp 30.1° C

Ref Pres (psia)	Error (psia)	(% FS)
14.687	-0.162	-0.008
192.517	-0.005	0.000
389.763	0.006	0.000
593.328	-0.063	-0.003
787.193	-0.034	-0.002
992.086	-0.069	-0.003
1191.060	-0.136	-0.007
1390.101	-0.200	-0.010
1588.986	-0.144	-0.007
1788.533	-0.043	-0.002
1993.285	0.024	0.001
1817.197	-0.121	-0.006
1607.106	-0.097	-0.005
1408.729	-0.122	-0.006
1208.456	-0.163	-0.008
1007.367	0.012	0.001
809.278	-0.020	-0.001
607.033	0.027	0.001
406.187	0.023	0.001
206.309	0.093	0.005
14.702	-0.147	-0.007

EMS - 4954 May 18 13:57:37 2023
Range 5 Temp 40.0° C

Ref Pres (psia)	Error (psia)	(% FS)
14.594	-0.089	-0.004
194.503	-0.025	-0.001
393.667	0.025	0.001
592.568	0.027	0.001
787.640	0.006	0.000
990.660	0.100	0.005
1184.365	-0.007	0.000
1388.789	-0.062	-0.003
1587.518	-0.049	-0.002
1789.189	0.077	0.004
1994.237	0.234	0.012
1806.644	0.102	0.005
1607.715	0.024	0.001
1404.933	0.026	0.001
1205.848	-0.034	-0.002
1006.369	0.176	0.009
808.334	0.009	0.000
606.418	0.042	0.002
406.689	0.053	0.003
205.916	0.007	0.000
14.602	-0.031	-0.002

Issued by

Westbay Instruments

MOSDAX Calibration Report 2: EMS - 4954 Module 1774

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\18MAY2~1\04954

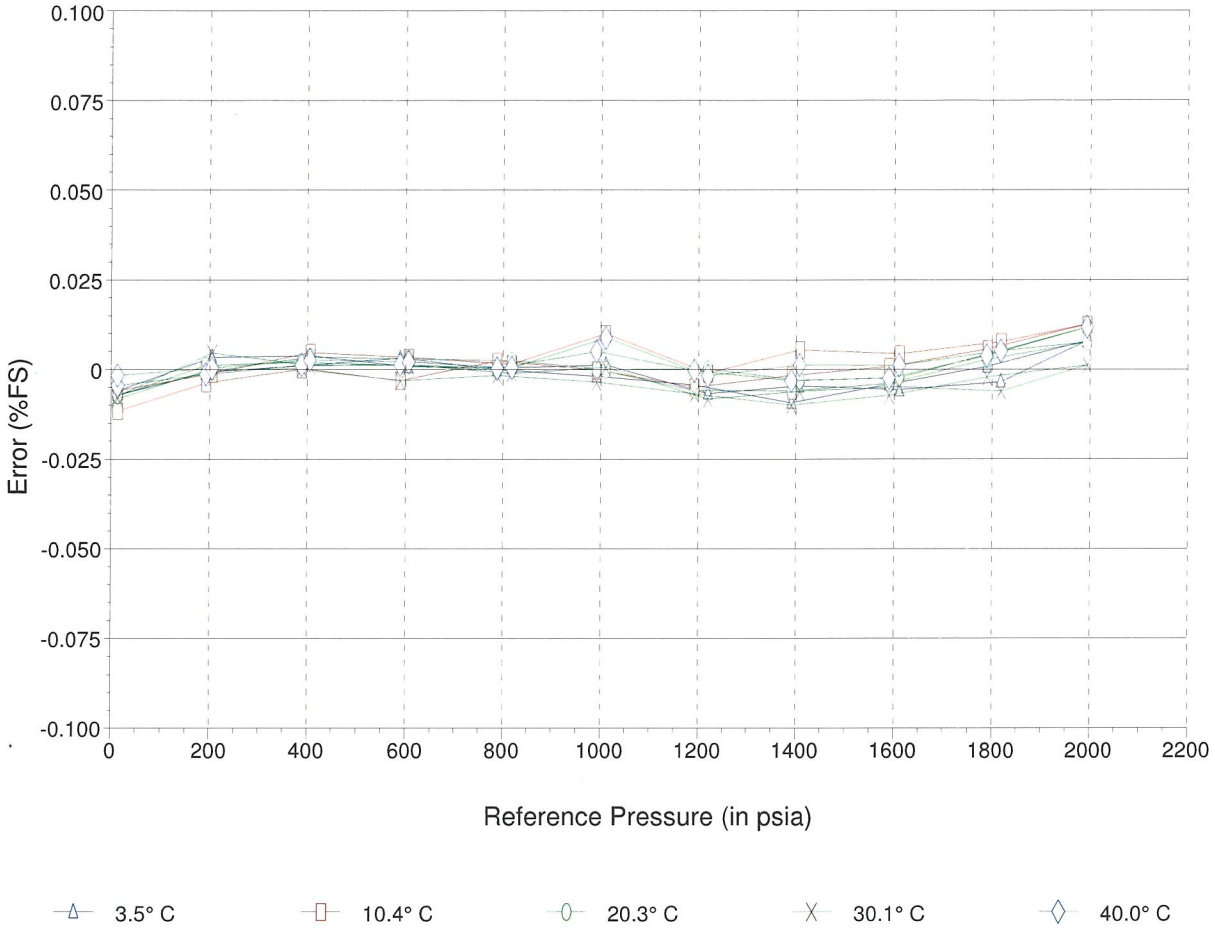
Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

Plot of Error vs. Reference Pressure

EMS - 4954 Module 1774



Comments

Issued by

Westbay Instruments

As Received MOSDAX Cal. Report 1: EMS - 4954 Module 1774

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\18MAY2~1\04954

Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

EMS - 4954 May 15 19:13:34 2023
Range 1 Temp 3.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.556	-0.010	0.000
193.396	0.072	0.004
389.937	0.062	0.003
589.483	0.061	0.003
788.080	-0.043	-0.002
991.534	-0.117	-0.006
1191.039	-0.200	-0.010
1390.074	-0.333	-0.017
1589.506	-0.262	-0.013
1788.849	-0.193	-0.010
1993.256	-0.082	-0.004
1817.987	-0.284	-0.014
1609.745	-0.298	-0.015
1408.040	-0.243	-0.012
1219.225	-0.253	-0.013
1010.421	-0.058	-0.003
818.081	-0.036	-0.002
606.343	0.010	0.001
406.496	0.115	0.006
205.672	0.151	0.008
14.577	0.011	0.001

EMS - 4954 May 15 23:52:00 2023
Range 2 Temp 10.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.608	-0.117	-0.006
193.251	-0.007	0.000
392.361	0.024	0.001
592.856	-0.078	-0.004
791.895	-0.007	0.000
986.107	-0.088	-0.004
1190.569	-0.214	-0.011
1389.745	-0.176	-0.009
1590.100	-0.147	-0.007
1789.020	-0.068	-0.003
1993.284	0.053	0.003
1816.969	-0.031	-0.002
1608.567	-0.079	-0.004
1408.485	-0.035	-0.002
1219.672	-0.140	-0.007
1011.660	0.110	0.005
807.982	-0.027	-0.001
606.811	0.048	0.002
406.217	0.116	0.006
206.102	0.044	0.002
14.655	-0.008	0.000

EMS - 4954 May 16 04:28:23 2023
Range 3 Temp 20.3° C

Ref Pres (psia)	Error (psia)	(% FS)
14.663	-0.066	-0.003
193.265	0.064	0.003
390.512	0.043	0.002
593.022	-0.010	0.000
792.139	-0.065	-0.003
991.249	-0.087	-0.004
1191.250	-0.226	-0.011
1390.272	-0.248	-0.012
1589.466	-0.220	-0.011
1788.385	-0.096	-0.005
1992.937	-0.009	0.000
1819.289	-0.049	-0.002
1609.010	-0.190	-0.010
1406.941	-0.192	-0.010
1219.462	-0.110	-0.005
1014.064	-0.092	-0.005
808.198	-0.015	-0.001
606.512	0.025	0.001
405.739	0.069	0.003
205.941	0.030	0.001
14.667	-0.062	-0.003

EMS - 4954 May 16 09:06:44 2023
Range 4 Temp 30.1° C

Ref Pres (psia)	Error (psia)	(% FS)
14.687	-0.124	-0.006
192.517	0.008	0.000
389.763	-0.007	0.000
593.328	-0.101	-0.005
787.193	-0.093	-0.005
992.086	-0.150	-0.008
1191.060	-0.235	-0.012
1390.101	-0.315	-0.016
1588.986	-0.273	-0.014
1788.533	-0.184	-0.009
1993.285	-0.128	-0.006
1817.197	-0.264	-0.013
1607.106	-0.228	-0.011
1408.729	-0.239	-0.012
1208.456	-0.264	-0.013
1007.367	-0.070	-0.003
809.278	-0.082	-0.004
607.033	-0.013	-0.001
406.187	0.008	0.000
206.309	0.104	0.005
14.702	-0.109	-0.005

EMS - 4954 May 18 13:57:37 2023
Range 5 Temp 40.0° C

Ref Pres (psia)	Error (psia)	(% FS)
14.594	-0.098	-0.005
194.503	-0.040	-0.002
393.667	0.002	0.000
592.568	-0.007	0.000
787.640	-0.041	-0.002
990.660	0.037	0.002
1184.365	-0.088	-0.004
1388.789	-0.165	-0.008
1587.518	-0.174	-0.009
1789.189	-0.074	-0.004
1994.237	0.054	0.003
1806.644	-0.051	-0.003
1607.715	-0.104	-0.005
1404.933	-0.079	-0.004
1205.848	-0.118	-0.006
1006.369	0.111	0.006
808.334	-0.040	-0.002
606.418	0.007	0.000
406.689	0.030	0.001
205.916	-0.007	0.000
14.602	-0.040	-0.002

Issued by

Westbay Instruments

As Received MOSDAX Cal. Report 2: EMS - 4954 Module 1774

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2023\2K\18MAY2~1\04954

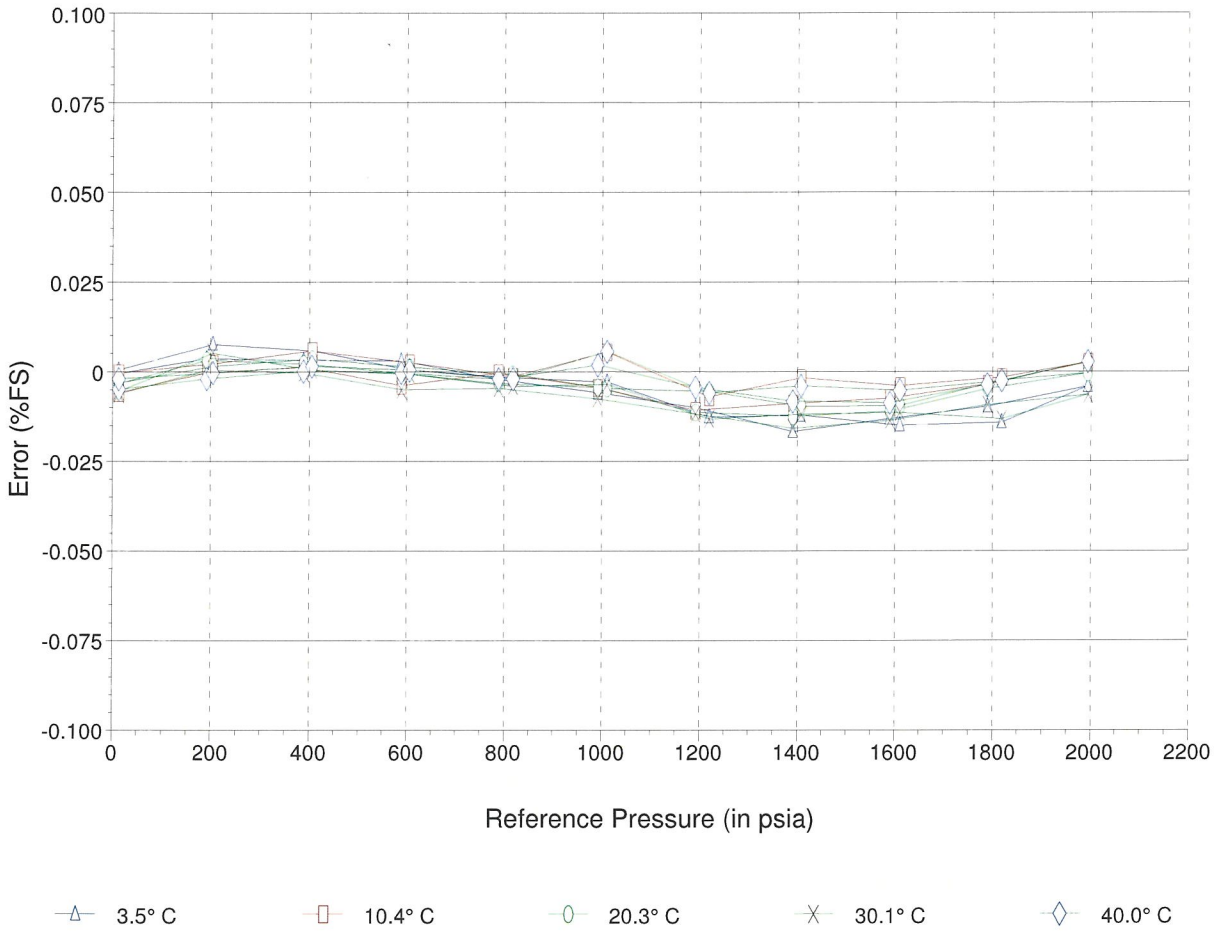
Pressure Reference: Paroscientific Model 42K-101 S/N 59937

Range: 2K PSI

Date of last reference to traceable standard: Sept 9 2021

Plot of Error vs. Reference Pressure

EMS - 4954 Module 1774



Comments

Issued by

Westbay Instruments

ATTACHMENT C

2023 Laboratory Certificates of Analysis

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

mbk

Project : PO#OL-1257351

27-September-2023

Agnico Eagle Mines Limited
Attn : Eric Haley

Meadowbank Division 20, Route 395
Cadillac, QC
J0Y 1C0, Canada

Phone: (819) 759-3555
Fax:(819) 759-3663

Date Rec. : 25 September 2023
LR Report: **CA12917-SEP23**

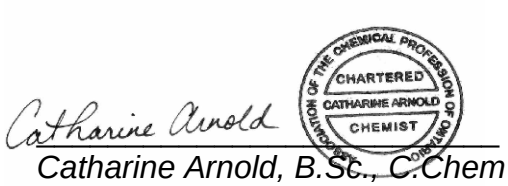
Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: Port 3 (A)
Sample Date & Time					15-Sep-23 07:30
Temp Upon Receipt [°C]	---	---	---	---	22.0
CN(T) [mg/L]	26-Sep-23	08:24	26-Sep-23	15:52	< 0.01
CN(F) [mg/L]	26-Sep-23	08:24	26-Sep-23	15:52	< 0.005
CNWAD [mg/L]	26-Sep-23	08:24	26-Sep-23	15:52	< 0.01

Turbidity recieved past the 48 hour holding time.



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003480816

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

mbk

Project : PO#OL-1257351

02-October-2023

Agnico Eagle Mines Limited
Attn : Eric Haley

Meadowbank Division 20, Route 395
Cadillac, QC
J0Y 1C0, Canada

Phone: (819) 759-3555
Fax:(819) 759-3663

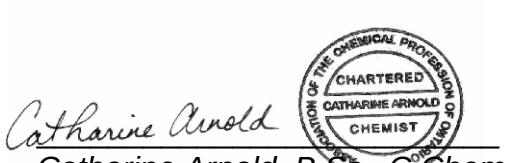
Date Rec. : 28 September 2023
LR Report: **CA15838-SEP23**
Reference: PO#OL-1257351

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Port 4 (A)
Sample Date & Time					21-Sep-23 07:30
Temp Upon Receipt [°C]	---	---	---	---	20.0
CN(T) [mg/L]	29-Sep-23	10:11	02-Oct-23	08:15	< 0.01
CN(F) [mg/L]	29-Sep-23	10:11	02-Oct-23	08:15	< 0.005
CNWAD [mg/L]	29-Sep-23	10:11	02-Oct-23	08:15	< 0.01



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003486533

Your P.O. #: 1248940
Site Location: AMQ
Your C.O.C. #: 768576

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2023/10/24
Report #: R7876782
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3T3278
Received: 2023/09/21, 09:09

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity (1)	2	N/A	2023/09/25	CAM SOP-00448	SM 23 2320 B m
Carbonate, Bicarbonate and Hydroxide (1)	2	N/A	2023/09/25	CAM SOP-00102	APHA 4500-CO2 D
Conductivity (1)	2	N/A	2023/09/25	CAM SOP-00414	SM 23 2510 m
Dissolved Organic Carbon (DOC) (1, 5)	2	N/A	2023/09/25	CAM SOP-00446	SM 23 5310 B m
Fluoride (1)	2	2023/09/23	2023/09/25	CAM SOP-00449	SM 23 4500-F C m
Dissolved Mercury (low level) (1)	2	2023/09/26	2023/09/27	CAM SOP-00453	EPA 7470 m
Mercury (low level) (1)	2	2023/09/26	2023/09/27	CAM SOP-00453	EPA 7470 m
Low Level Chloride and Sulphate by AC (2)	2	N/A	2023/10/04	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (Free) (2)	2	N/A	2023/10/03	CAL SOP-00266	EPA 9016d R0 m
Cyanide, Strong Acid Dissociable (SAD) (2)	2	2023/10/02	2023/10/02	CAL SOP-00270	SM 23 4500-CN m
Cyanide WAD (weak acid dissociable) (2)	2	N/A	2023/10/02	CAL SOP-00270	SM 23 4500-CN m
Hardness Total (calculated as CaCO3) (3, 6)	2	N/A	2023/10/03	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (3)	2	N/A	2023/09/28	BBY WI-00033	Auto Calc
Bromide as Bromine (Br) by ICPMS (3)	2	N/A	2023/10/04	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.) (3)	2	N/A	2023/09/28	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved) (3, 7)	2	N/A	2023/09/28	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (3)	2	N/A	2023/10/03	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total) (3)	2	N/A	2023/09/28	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (2)	1	N/A	2023/10/10	AB SOP-00007	SM 24 4500 NH3 A G m
Ammonia-N Low Level (2)	1	N/A	2023/10/18	AB SOP-00007	SM 24 4500 NH3 A G m
Orthophosphate LL by Automated Analyzer (2)	2	N/A	2023/10/04	AB SOP-00025	SM 23 4500-P A, F m
Silica (Reactive) (2)	2	N/A	2023/10/04	AB SOP-00011	EPA 370.1 R1978 m
Total Phosphorus Low Level Total (2)	2	2023/10/04	2023/10/05	AB SOP-00024	SM 24 4500-P A,B,F m
Total Ammonia (as NH3) (1)	2	N/A	2023/10/24	Auto Calc.	
Nitrate & Nitrite as Nitrogen in Water (1, 8)	2	N/A	2023/09/25	CAM SOP-00440	SM 23 4500-NO3I/NO2B
pH (1)	2	2023/09/23	2023/09/25	CAM SOP-00413	SM 4500H+ B m
Radium-226 Low Level (4, 9)	2	N/A	2023/10/06	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry
Total Dissolved Solids (1)	2	2023/09/26	2023/09/27	CAM SOP-00428	SM 23 2540C m
Total Kjeldahl Nitrogen in Water (1)	2	2023/09/25	2023/09/26	CAM SOP-00938	OMOE E3516 m

Your P.O. #: 1248940
Site Location: AMQ
Your C.O.C. #: 768576

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2023/10/24
Report #: R7876782
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3T3278
Received: 2023/09/21, 09:09

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Organic Carbon (TOC) (1, 10)	2	N/A	2023/09/26	CAM SOP-00446	SM 23 5310B m
Low Level Total Suspended Solids (1)	2	2023/09/27	2023/09/27	CAM SOP-00428	SM 23 2540D m
Turbidity (1)	2	N/A	2023/09/23	CAM SOP-00417	SM 23 2130 B 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, MELCCFP, 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.

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
(2) This test was performed by Bureau Veritas Calgary (19th), 4000 19th Street NE , Calgary, AB, T2E 6P8
(3) This test was performed by Bureau Veritas Burnaby, 4606 Canada Way , Burnaby, BC, V5G 1K5
(4) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Road, Unit 4 , Mississauga, ON, L5N 5L9
(5) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(6) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(7) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(8) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(9) Radium-226 results have not been corrected for blanks.

Your P.O. #: 1248940
Site Location: AMQ
Your C.O.C. #: 768576

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2023/10/24
Report #: R7876782
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3T3278

Received: 2023/09/21, 09:09

(10) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
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 Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XBM703			XBM703			XBM704		
Sampling Date		2023/09/15 07:30			2023/09/15 07:30			2023/09/15 07:30		
COC Number		768576			768576			768576		
	UNITS	Port-3 (A)	RDL	QC Batch	Port-3 (A) Lab-Dup	RDL	QC Batch	Port-3 (B)	RDL	QC Batch
CONVENTIONALS										
Total Nitrogen (Ammonia Nitrogen)	mg/L	0.041	0.0050	8989297				0.041	0.0050	8989299
Calculated Parameters										
Total Ammonia (as NH3)	mg/L	0.050	0.0061	8935108				0.050	0.0061	8935108
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	22	1.0	8934626				22	1.0	8934626
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8934626				<1.0	1.0	8934626
Dissolved Hardness (CaCO3)	mg/L	1100	0.50	8963974				1080	0.50	8942207
Inorganics										
Conductivity	mS/cm	4.06	0.001	8937287				3.95	0.001	8937287
Free Cyanide (CN)	ug/L	<2.0 (1)	2.0	8989284				2.1 (1)	2.0	8989284
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8957072				<0.00050 (2)	0.00050	8957072
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8962898				<0.00050 (3)	0.00050	8962898
Total Dissolved Solids	mg/L	2210	10	8940623				2210	10	8940623
Fluoride (F-)	mg/L	0.92	0.10	8937288				0.89	0.10	8937288
Total Kjeldahl Nitrogen (TKN)	mg/L	0.39	0.20	8938387				0.29	0.20	8938387
Dissolved Organic Carbon	mg/L	290	2.0	8937047	300	2.0	8937047	300	2.0	8937047
Total Organic Carbon (TOC)	mg/L	280	2.0	8938356				280	2.0	8938356
Orthophosphate (P)	mg/L	<0.0010	0.0010	8989296				0.0012	0.0010	8989296
pH	pH	6.86		8937282				6.67		8937282
Total Phosphorus (P)	mg/L	0.0012	0.0010	8965904				0.0013	0.0010	8965904
Reactive Silica (SiO2)	mg/L	8.2 (4)	0.10	8962896				7.7 (4)	0.10	8962896
Total Suspended Solids	mg/L	2	1	8941709				3	1	8941709
Turbidity	NTU	0.5	0.1	8936710				0.5	0.1	8936710
Alkalinity (Total as CaCO3)	mg/L	22	1.0	8937285				22	1.0	8937285
Dissolved Chloride (Cl-)	mg/L	1300	13	8965903				1300	13	8965903
Nitrite (N)	mg/L	<0.010	0.010	8936889				<0.010	0.010	8936889

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Sample was analyzed after holding time expired.
(2) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(3) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.
(4) Detection limits raised due to matrix interference.

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

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XBM703			XBM703			XBM704		
Sampling Date		2023/09/15 07:30			2023/09/15 07:30			2023/09/15 07:30		
COC Number		768576			768576			768576		
	UNITS	Port-3 (A)	RDL	QC Batch	Port-3 (A) Lab-Dup	RDL	QC Batch	Port-3 (B)	RDL	QC Batch
Nitrate (N)	mg/L	<0.10	0.10	8936889				<0.10	0.10	8936889
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8965903				<0.50	0.50	8965903
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	8936889				<0.10	0.10	8936889
Metals										
Dissolved Aluminum (Al)	ug/L	10.1	2.5	8963973				13.2	2.5	8963973
Total Aluminum (Al)	ug/L	15.6	2.5	8961512				13.4	2.5	8961512
Dissolved Antimony (Sb)	ug/L	0.38	0.10	8963973				0.38	0.10	8963973
Total Antimony (Sb)	ug/L	0.71	0.10	8961512				0.36	0.10	8961512
Dissolved Arsenic (As)	ug/L	1.16	0.10	8963973				1.09	0.10	8963973
Total Arsenic (As)	ug/L	1.61	0.10	8961512				1.08	0.10	8961512
Dissolved Barium (Ba)	ug/L	49.1	0.10	8963973				48.3	0.10	8963973
Total Barium (Ba)	ug/L	52.9	0.10	8961512				49.3	0.10	8961512
Dissolved Beryllium (Be)	ug/L	<0.050	0.050	8963973				<0.050	0.050	8963973
Total Beryllium (Be)	ug/L	<0.050	0.050	8961512				<0.050	0.050	8961512
Dissolved Bismuth (Bi)	ug/L	<0.025	0.025	8963973				<0.025	0.025	8963973
Total Bismuth (Bi)	ug/L	<0.025	0.025	8961512				<0.025	0.025	8961512
Dissolved Boron (B)	ug/L	685	50	8963973				643	50	8963973
Total Boron (B)	ug/L	683	50	8961512				668	50	8961512
Dissolved Cadmium (Cd)	ug/L	<0.025	0.025	8963973				<0.025	0.025	8963973
Total Cadmium (Cd)	ug/L	<0.025	0.025	8961512				<0.025	0.025	8961512
Dissolved Chromium (Cr)	ug/L	<0.50	0.50	8963973				<0.50	0.50	8963973
Total Chromium (Cr)	ug/L	<0.50	0.50	8961512				<0.50	0.50	8961512
Dissolved Cobalt (Co)	ug/L	<0.025	0.025	8963973				<0.025	0.025	8963973
Total Cobalt (Co)	ug/L	0.037	0.025	8961512				<0.025	0.025	8961512
Dissolved Copper (Cu)	ug/L	<0.25	0.25	8963973				<0.25	0.25	8963973
Total Copper (Cu)	ug/L	0.54	0.25	8961512				<0.25	0.25	8961512
Dissolved Iron (Fe)	ug/L	<5.0	5.0	8963973				21.1	5.0	8963973
Total Iron (Fe)	ug/L	19.8	5.0	8961512				13.1	5.0	8961512
Dissolved Lead (Pb)	ug/L	<0.025	0.025	8963973				0.096	0.025	8963973
Total Lead (Pb)	ug/L	0.139	0.025	8961512				0.349	0.025	8961512

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

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XBM703			XBM703			XBM704		
Sampling Date		2023/09/15 07:30			2023/09/15 07:30			2023/09/15 07:30		
COC Number		768576			768576			768576		
	UNITS	Port-3 (A)	RDL	QC Batch	Port-3 (A) Lab-Dup	RDL	QC Batch	Port-3 (B)	RDL	QC Batch
Dissolved Lithium (Li)	ug/L	136	2.5	8963973				132	2.5	8963973
Total Lithium (Li)	ug/L	171	2.5	8961512				140	2.5	8961512
Dissolved Manganese (Mn)	ug/L	5.30	0.25	8963973				5.13	0.25	8963973
Total Manganese (Mn)	ug/L	6.74	0.25	8961512				5.13	0.25	8961512
Dissolved Molybdenum (Mo)	ug/L	0.93	0.25	8963973				0.93	0.25	8963973
Total Molybdenum (Mo)	ug/L	1.12	0.25	8961512				0.88	0.25	8961512
Dissolved Nickel (Ni)	ug/L	0.53	0.10	8963973				0.64	0.10	8963973
Total Nickel (Ni)	ug/L	6.33	0.10	8961512				0.65	0.10	8961512
Dissolved Selenium (Se)	ug/L	<0.20	0.20	8963973				<0.20	0.20	8963973
Total Silicon (Si)	ug/L	2810	250	8961512				2740	250	8961512
Total Selenium (Se)	ug/L	<0.20	0.20	8961512				<0.20	0.20	8961512
Dissolved Silicon (Si)	ug/L	2690	250	8963973				2650	250	8963973
Dissolved Silver (Ag)	ug/L	<0.025	0.025	8963973				<0.025	0.025	8963973
Total Silver (Ag)	ug/L	<0.025	0.025	8961512				<0.025	0.025	8961512
Dissolved Strontium (Sr)	ug/L	6860	0.25	8963973				6640	0.25	8963973
Total Strontium (Sr)	ug/L	7480	0.25	8961512				6820	0.25	8961512
Dissolved Thallium (Tl)	ug/L	<0.010	0.010	8963973				<0.010	0.010	8963973
Total Thallium (Tl)	ug/L	<0.010	0.010	8961512				<0.010	0.010	8961512
Dissolved Tin (Sn)	ug/L	<1.0	1.0	8963973				<1.0	1.0	8963973
Total Tin (Sn)	ug/L	<1.0	1.0	8961512				<1.0	1.0	8961512
Dissolved Titanium (Ti)	ug/L	<2.5	2.5	8963973				<2.5	2.5	8963973
Total Titanium (Ti)	ug/L	<2.5	2.5	8961512				<2.5	2.5	8961512
Dissolved Uranium (U)	ug/L	0.019	0.010	8963973				0.027	0.010	8963973
Total Uranium (U)	ug/L	0.019	0.010	8961512				0.026	0.010	8961512
Dissolved Vanadium (V)	ug/L	<1.0	1.0	8963973				<1.0	1.0	8963973
Total Vanadium (V)	ug/L	<1.0	1.0	8961512				<1.0	1.0	8961512
Dissolved Zinc (Zn)	ug/L	0.71	0.50	8963973				102	0.50	8963973
Total Zinc (Zn)	ug/L	254	0.50	8961512				104	0.50	8961512
Total Zirconium (Zr)	ug/L	<0.50	0.50	8961512				<0.50	0.50	8961512
Dissolved Calcium (Ca)	mg/L	436	0.25	8963975				427	0.25	8963975

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

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XBM703			XBM703			XBM704		
Sampling Date		2023/09/15 07:30			2023/09/15 07:30			2023/09/15 07:30		
COC Number		768576			768576			768576		
	UNITS	Port-3 (A)	RDL	QC Batch	Port-3 (A) Lab-Dup	RDL	QC Batch	Port-3 (B)	RDL	QC Batch
Total Calcium (Ca)	mg/L	487	0.25	8961514				439	0.25	8961514
Dissolved Magnesium (Mg)	mg/L	3.66	0.25	8963975				3.49	0.25	8963975
Total Magnesium (Mg)	mg/L	3.19	0.25	8961514				3.56	0.25	8961514
Dissolved Potassium (K)	mg/L	8.67	0.25	8963975				8.50	0.25	8963975
Total Potassium (K)	mg/L	15.2	0.25	8961514				8.76	0.25	8961514
Dissolved Sodium (Na)	mg/L	263	0.25	8963975				258	0.25	8963975
Total Sodium (Na)	mg/L	268	0.25	8961514				266	0.25	8961514
Dissolved Sulphur (S)	mg/L	<15	15	8963975				<15	15	8963975
Total Sulphur (S)	mg/L	<15	15	8961514				<15	15	8961514
Dissolved Tellurium (Te)	ug/L	<0.10	0.10	8963973				<0.10	0.10	8963973
Total Tellurium (Te)	ug/L	<0.10	0.10	8961512				<0.10	0.10	8961512
RADIONUCLIDE										
Radium-226	Bq/L	0.17	0.0050	8957200				0.18	0.0050	8957200

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

Bureau Veritas ID		XBM704		
Sampling Date		2023/09/15 07:30		
COC Number		768576		
	UNITS	Port-3 (B) Lab-Dup	RDL	QC Batch
Inorganics				
Total Kjeldahl Nitrogen (TKN)	mg/L	0.32	0.20	8938387

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

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		XBM703			XBM703			XBM704		
Sampling Date		2023/09/15 07:30			2023/09/15 07:30			2023/09/15 07:30		
COC Number		768576			768576			768576		
	UNITS	Port-3 (A)	RDL	QC Batch	Port-3 (A) Lab-Dup	RDL	QC Batch	Port-3 (B)	RDL	QC Batch
ANIONS										
Bromide (Br-)	mg/L	13.6	0.10	8998507				13.0	0.10	8998507
Calculated Parameters										
Total Hardness (CaCO3)	mg/L	1230	0.50	8957622				1110	0.50	8957622
Metals										
Mercury (Hg)	mg/L	<0.00001	0.00001	8941806				<0.00001	0.00001	8941806
Dissolved Mercury (Hg)	mg/L	<0.00001	0.00001	8941799	<0.00001	0.00001	8941799	<0.00001	0.00001	8941799

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

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

TEST SUMMARY

Bureau Veritas ID: XBM703
Sample ID: Port-3 (A)
Matrix: Water

Collected: 2023/09/15
Shipped:
Received: 2023/09/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8937285	N/A	2023/09/25	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8934626	N/A	2023/09/25	Automated Statchk
Conductivity	AT	8937287	N/A	2023/09/25	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8937047	N/A	2023/09/25	Gyulshen Idriz
Fluoride	ISE	8937288	2023/09/23	2023/09/25	Surinder Rai
Dissolved Mercury (low level)	CV/AA	8941799	2023/09/26	2023/09/27	Indira HarryPaul
Mercury (low level)	CV/AA	8941806	2023/09/26	2023/09/27	Indira HarryPaul
Low Level Chloride and Sulphate by AC	KONE	8965903	N/A	2023/10/04	Tyler Orr
Cyanide (Free)	SPEC	8989284	N/A	2023/10/03	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8957072	2023/10/02	2023/10/02	Ming Dong
Cyanide WAD (weak acid dissociable)	TECH	8962898	N/A	2023/10/02	Ming Dong
Hardness Total (calculated as CaCO3)	CALC	8957622	N/A	2023/10/03	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8963974	N/A	2023/09/28	Automated Statchk
Bromide as Bromine (Br) by ICPMS	ICP/MS	8998507	N/A	2023/10/04	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8963975	N/A	2023/09/28	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/MS	8963973	N/A	2023/09/28	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8961514	N/A	2023/10/03	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/MS	8961512	N/A	2023/09/28	Andrew An
Ammonia-N Low Level	KONE/UVVS	8989297	N/A	2023/10/10	Adam Fishleigh
Orthophosphate LL by Automated Analyzer	KONE	8989296	N/A	2023/10/04	Carlo Truong
Silica (Reactive)	KONE	8962896	N/A	2023/10/04	Shanna McKort
Total Phosphorus Low Level Total	KONE	8965904	2023/10/04	2023/10/05	Carlo Truong
Total Ammonia (as NH3)	CALC	8935108	N/A	2023/10/24	Automated Statchk
Nitrate & Nitrite as Nitrogen in Water	LACH	8936889	N/A	2023/09/25	Chandra Nandlal
pH	AT	8937282	2023/09/23	2023/09/25	Surinder Rai
Radium-226 Low Level	AS	8957200	N/A	2023/10/06	Sarah Simpson
Total Dissolved Solids	BAL	8940623	2023/09/26	2023/09/27	Razieh Tabesh
Total Kjeldahl Nitrogen in Water	SKAL	8938387	2023/09/25	2023/09/26	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8938356	N/A	2023/09/26	Gyulshen Idriz
Low Level Total Suspended Solids	BAL	8941709	2023/09/27	2023/09/27	Shaneil Hall
Turbidity	AT	8936710	N/A	2023/09/23	Leily Karimi

Bureau Veritas ID: XBM703 Dup
Sample ID: Port-3 (A)
Matrix: Water

Collected: 2023/09/15
Shipped:
Received: 2023/09/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8937047	N/A	2023/09/25	Gyulshen Idriz
Dissolved Mercury (low level)	CV/AA	8941799	2023/09/26	2023/09/27	Indira HarryPaul

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

TEST SUMMARY

Bureau Veritas ID: XBM704
Sample ID: Port-3 (B)
Matrix: Water

Collected: 2023/09/15
Shipped:
Received: 2023/09/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8937285	N/A	2023/09/25	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8934626	N/A	2023/09/25	Automated Statchk
Conductivity	AT	8937287	N/A	2023/09/25	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8937047	N/A	2023/09/25	Gyulshen Idriz
Fluoride	ISE	8937288	2023/09/23	2023/09/25	Surinder Rai
Dissolved Mercury (low level)	CV/AA	8941799	2023/09/26	2023/09/27	Indira HarryPaul
Mercury (low level)	CV/AA	8941806	2023/09/26	2023/09/27	Indira HarryPaul
Low Level Chloride and Sulphate by AC	KONE	8965903	N/A	2023/10/04	Tyler Orr
Cyanide (Free)	SPEC	8989284	N/A	2023/10/03	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8957072	2023/10/02	2023/10/02	Ming Dong
Cyanide WAD (weak acid dissociable)	TECH	8962898	N/A	2023/10/02	Ming Dong
Hardness Total (calculated as CaCO3)	CALC	8957622	N/A	2023/10/03	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8942207	N/A	2023/09/28	Automated Statchk
Bromide as Bromine (Br) by ICPMS	ICP/MS	8998507	N/A	2023/10/04	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8963975	N/A	2023/09/28	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/MS	8963973	N/A	2023/09/28	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8961514	N/A	2023/10/03	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/MS	8961512	N/A	2023/09/28	Andrew An
Ammonia-N Low Level	KONE/UVVS	8989299	N/A	2023/10/18	Adam Fishleigh
Orthophosphate LL by Automated Analyzer	KONE	8989296	N/A	2023/10/04	Carlo Truong
Silica (Reactive)	KONE	8962896	N/A	2023/10/04	Shanna McKort
Total Phosphorus Low Level Total	KONE	8965904	2023/10/04	2023/10/05	Carlo Truong
Total Ammonia (as NH3)	CALC	8935108	N/A	2023/10/24	Automated Statchk
Nitrate & Nitrite as Nitrogen in Water	LACH	8936889	N/A	2023/09/25	Chandra Nandlal
pH	AT	8937282	2023/09/23	2023/09/25	Surinder Rai
Radium-226 Low Level	AS	8957200	N/A	2023/10/06	Sarah Simpson
Total Dissolved Solids	BAL	8940623	2023/09/26	2023/09/27	Razieh Tabesh
Total Kjeldahl Nitrogen in Water	SKAL	8938387	2023/09/25	2023/09/26	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8938356	N/A	2023/09/26	Gyulshen Idriz
Low Level Total Suspended Solids	BAL	8941709	2023/09/27	2023/09/27	Shaneil Hall
Turbidity	AT	8936710	N/A	2023/09/23	Leily Karimi

Bureau Veritas ID: XBM704 Dup
Sample ID: Port-3 (B)
Matrix: Water

Collected: 2023/09/15
Shipped:
Received: 2023/09/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Kjeldahl Nitrogen in Water	SKAL	8938387	2023/09/25	2023/09/26	Rajni Tyagi

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	13.3°C

Sample XBM703 [Port-3 (A)] : TOC< DOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.
TDS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
Sample was analyzed past method specified hold time for Cyanide (total). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). Sample was analyzed past method specified hold time for Cyanide (Free). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

Sample XBM704 [Port-3 (B)] : TOC< DOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.
TDS/TSS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
Sample was analyzed past method specified hold time for Cyanide (total). Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). Sample was analyzed past method specified hold time for Cyanide (Free). Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer.

RESULTS OF ANALYSES OF WATER

Sample XBM704 [Port-3 (B)] Ammonia-N Low Level:
Sample was not submitted in an appropriate container for this analysis.

Results relate only to the items tested.

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

Bureau Veritas Job #: C3T3278
Report Date: 2023/10/24

QUALITY ASSURANCE REPORT

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

			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
8936710	Turbidity	2023/09/23			97	80 - 120	<0.1	NTU	1.7	20		
8936889	Nitrate (N)	2023/09/25	85	80 - 120	94	80 - 120	<0.10	mg/L	2.8	20		
8936889	Nitrite (N)	2023/09/25	97	80 - 120	100	80 - 120	<0.010	mg/L	2.7	20		
8937047	Dissolved Organic Carbon	2023/09/25	NC	80 - 120	95	80 - 120	<0.40	mg/L	1.7	20		
8937282	pH	2023/09/25			102	98 - 103			0.24	N/A		
8937285	Alkalinity (Total as CaCO3)	2023/09/25			98	85 - 115	<1.0	mg/L	0.13	20		
8937287	Conductivity	2023/09/25			103	85 - 115	<0.001	mS/cm	1.3	10		
8937288	Fluoride (F-)	2023/09/25	108	80 - 120	106	80 - 120	<0.10	mg/L	7.1	20		
8938356	Total Organic Carbon (TOC)	2023/09/26	98	80 - 120	99	80 - 120	<0.40	mg/L	0.37	20		
8938387	Total Kjeldahl Nitrogen (TKN)	2023/09/26	103	80 - 120	97	80 - 120	<0.10	mg/L	9.8	20	103	80 - 120
8940623	Total Dissolved Solids	2023/09/27			100	90 - 110	<10	mg/L	3.8	20		
8941709	Total Suspended Solids	2023/09/27			96	85 - 115	<1	mg/L	NC	20		
8941799	Dissolved Mercury (Hg)	2023/09/27	101	75 - 125	103	80 - 120	<0.00001	mg/L	NC	20		
8941806	Mercury (Hg)	2023/09/27	24 (1)	75 - 125	103	80 - 120	<0.00001	mg/L	NC	20		
8957072	Strong Acid Dissoc. Cyanide (CN)	2023/10/02	90	80 - 120	104	80 - 120	<0.00050	mg/L				
8957200	Radium-226	2023/10/06			89	85 - 115	<0.0050	Bq/L	NC	N/A		
8961512	Total Aluminum (Al)	2023/09/28	99	80 - 120	102	80 - 120	<0.50	ug/L	2.6	20		
8961512	Total Antimony (Sb)	2023/09/28	101	80 - 120	102	80 - 120	<0.020	ug/L				
8961512	Total Arsenic (As)	2023/09/28	100	80 - 120	101	80 - 120	<0.020	ug/L	2.6	20		
8961512	Total Barium (Ba)	2023/09/28	98	80 - 120	100	80 - 120	<0.020	ug/L				
8961512	Total Beryllium (Be)	2023/09/28	100	80 - 120	102	80 - 120	<0.010	ug/L				
8961512	Total Bismuth (Bi)	2023/09/28	97	80 - 120	99	80 - 120	<0.0050	ug/L				
8961512	Total Boron (B)	2023/09/28	100	80 - 120	103	80 - 120	<10	ug/L				
8961512	Total Cadmium (Cd)	2023/09/28	100	80 - 120	100	80 - 120	<0.0050	ug/L	NC	20		
8961512	Total Chromium (Cr)	2023/09/28	91	80 - 120	92	80 - 120	<0.10	ug/L	NC	20		
8961512	Total Cobalt (Co)	2023/09/28	97	80 - 120	99	80 - 120	<0.0050	ug/L	7.6	20		
8961512	Total Copper (Cu)	2023/09/28	93	80 - 120	94	80 - 120	<0.050	ug/L	3.9	20		
8961512	Total Iron (Fe)	2023/09/28	101	80 - 120	101	80 - 120	<1.0	ug/L	1.7	20		
8961512	Total Lead (Pb)	2023/09/28	98	80 - 120	101	80 - 120	<0.0050	ug/L	9.5	20		
8961512	Total Lithium (Li)	2023/09/28	99	80 - 120	102	80 - 120	<0.50	ug/L				
8961512	Total Manganese (Mn)	2023/09/28	91	80 - 120	93	80 - 120	<0.050	ug/L	2.5	20		
8961512	Total Molybdenum (Mo)	2023/09/28	101	80 - 120	102	80 - 120	<0.050	ug/L	4.3	20		

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
8961512	Total Nickel (Ni)	2023/09/28	96	80 - 120	98	80 - 120	<0.020	ug/L	8.9	20		
8961512	Total Selenium (Se)	2023/09/28	100	80 - 120	98	80 - 120	<0.040	ug/L	NC	20		
8961512	Total Silicon (Si)	2023/09/28	104	80 - 120	104	80 - 120	<50	ug/L				
8961512	Total Silver (Ag)	2023/09/28	99	80 - 120	99	80 - 120	<0.0050	ug/L				
8961512	Total Strontium (Sr)	2023/09/28	102	80 - 120	95	80 - 120	<0.050	ug/L				
8961512	Total Tellurium (Te)	2023/09/28	99	80 - 120	102	80 - 120	<0.020	ug/L				
8961512	Total Thallium (Tl)	2023/09/28	99	80 - 120	101	80 - 120	<0.0020	ug/L	NC	20		
8961512	Total Tin (Sn)	2023/09/28	98	80 - 120	101	80 - 120	<0.20	ug/L				
8961512	Total Titanium (Ti)	2023/09/28	98	80 - 120	99	80 - 120	<0.50	ug/L				
8961512	Total Uranium (U)	2023/09/28	100	80 - 120	101	80 - 120	<0.0020	ug/L	4.5	20		
8961512	Total Vanadium (V)	2023/09/28	94	80 - 120	94	80 - 120	<0.20	ug/L				
8961512	Total Zinc (Zn)	2023/09/28	98	80 - 120	99	80 - 120	<0.10	ug/L	7.3	20		
8961512	Total Zirconium (Zr)	2023/09/28	98	80 - 120	98	80 - 120	<0.10	ug/L				
8962896	Reactive Silica (SiO2)	2023/10/04	NC	80 - 120	105	80 - 120	<0.050	mg/L	1.1	20		
8962898	Weak Acid Dissoc. Cyanide (CN)	2023/10/02	104	80 - 120	103	80 - 120	<0.00050	mg/L				
8963973	Dissolved Aluminum (Al)	2023/09/28	103	80 - 120	100	80 - 120	<0.50	ug/L	0.074	20		
8963973	Dissolved Antimony (Sb)	2023/09/28	103	80 - 120	102	80 - 120	<0.020	ug/L	9.4	20		
8963973	Dissolved Arsenic (As)	2023/09/28	103	80 - 120	101	80 - 120	<0.020	ug/L	7.0	20		
8963973	Dissolved Barium (Ba)	2023/09/28	99	80 - 120	99	80 - 120	<0.020	ug/L	1.4	20		
8963973	Dissolved Beryllium (Be)	2023/09/28	103	80 - 120	99	80 - 120	<0.010	ug/L	NC	20		
8963973	Dissolved Bismuth (Bi)	2023/09/28	97	80 - 120	96	80 - 120	<0.0050	ug/L	NC	20		
8963973	Dissolved Boron (B)	2023/09/28	108	80 - 120	98	80 - 120	<10	ug/L	NC	20		
8963973	Dissolved Cadmium (Cd)	2023/09/28	102	80 - 120	101	80 - 120	<0.0050	ug/L	4.0	20		
8963973	Dissolved Chromium (Cr)	2023/09/28	92	80 - 120	92	80 - 120	<0.10	ug/L	NC	20		
8963973	Dissolved Cobalt (Co)	2023/09/28	99	80 - 120	99	80 - 120	<0.0050	ug/L	0.43	20		
8963973	Dissolved Copper (Cu)	2023/09/28	93	80 - 120	94	80 - 120	<0.050	ug/L	8.1	20		
8963973	Dissolved Iron (Fe)	2023/09/28	100	80 - 120	100	80 - 120	<1.0	ug/L	0.11	20		
8963973	Dissolved Lead (Pb)	2023/09/28	98	80 - 120	97	80 - 120	<0.0050	ug/L	3.6	20		
8963973	Dissolved Lithium (Li)	2023/09/28	99	80 - 120	95	80 - 120	<0.50	ug/L	3.8	20		
8963973	Dissolved Manganese (Mn)	2023/09/28	NC	80 - 120	92	80 - 120	<0.050	ug/L	0.29	20		
8963973	Dissolved Molybdenum (Mo)	2023/09/28	103	80 - 120	100	80 - 120	<0.050	ug/L	9.3	20		
8963973	Dissolved Nickel (Ni)	2023/09/28	97	80 - 120	98	80 - 120	<0.020	ug/L	7.8	20		

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
8963973	Dissolved Selenium (Se)	2023/09/28	103	80 - 120	103	80 - 120	<0.040	ug/L	NC	20		
8963973	Dissolved Silicon (Si)	2023/09/28	NC	80 - 120	103	80 - 120	<50	ug/L	2.3	20		
8963973	Dissolved Silver (Ag)	2023/09/28	100	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20		
8963973	Dissolved Strontium (Sr)	2023/09/28	102	80 - 120	93	80 - 120	<0.050	ug/L	0.86	20		
8963973	Dissolved Tellurium (Te)	2023/09/28	101	80 - 120	101	80 - 120	<0.020	ug/L				
8963973	Dissolved Thallium (Tl)	2023/09/28	99	80 - 120	98	80 - 120	<0.0020	ug/L	11	20		
8963973	Dissolved Tin (Sn)	2023/09/28	101	80 - 120	101	80 - 120	<0.20	ug/L	NC	20		
8963973	Dissolved Titanium (Ti)	2023/09/28	99	80 - 120	98	80 - 120	<0.50	ug/L	NC	20		
8963973	Dissolved Uranium (U)	2023/09/28	101	80 - 120	98	80 - 120	<0.0020	ug/L	14	20		
8963973	Dissolved Vanadium (V)	2023/09/28	95	80 - 120	94	80 - 120	<0.20	ug/L	NC	20		
8963973	Dissolved Zinc (Zn)	2023/09/28	100	80 - 120	99	80 - 120	<0.10	ug/L	4.7	20		
8965903	Dissolved Chloride (Cl-)	2023/10/04	92	80 - 120	99	80 - 120	<0.50	mg/L				
8965903	Dissolved Sulphate (SO4)	2023/10/04	NC	80 - 120	102	80 - 120	<0.50	mg/L				
8965904	Total Phosphorus (P)	2023/10/05	99	80 - 120	98	80 - 120	<0.0010	mg/L			84	80 - 120
8989284	Free Cyanide (CN)	2023/10/03	80	80 - 120	91	80 - 120	<2.0	ug/L				
8989296	Orthophosphate (P)	2023/10/04	NC	80 - 120	103	80 - 120	<0.0010	mg/L				
8989297	Total Nitrogen (Ammonia Nitrogen)	2023/10/10	100	N/A	99	N/A	<0.0050	mg/L				
8989299	Total Nitrogen (Ammonia Nitrogen)	2023/10/18	100	N/A	102	N/A	<0.0050	mg/L				

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 #: C3T3278
Report Date: 2023/10/24

Agnico Eagle
Site Location: AMQ
Your P.O. #: 1248940
Sampler Initials: RW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Cristina Carriere, Senior Scientific Specialist

David Huang, BBY Scientific Specialist

Danish Samad, MSc., C.Chem, Miss.-Kitimat, Laboratory Supervisor

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics

Suwan (Sze Yeung) Fock, B.Sc., 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 Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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

Your P.O. #: 1248940
Your C.O.C. #: 772535

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2023/11/01
Report #: R7889291
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3U0209
Received: 2023/09/27, 12:00

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	3	N/A	2023/10/02	CAM SOP-00448	SM 23 2320 B m
Alkalinity	1	N/A	2023/10/03	CAM SOP-00448	SM 23 2320 B m
Carbonate, Bicarbonate and Hydroxide	3	N/A	2023/10/03	CAM SOP-00102	APHA 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	1	N/A	2023/10/04	CAM SOP-00102	APHA 4500-CO2 D
Conductivity	3	N/A	2023/10/02	CAM SOP-00414	SM 23 2510 m
Conductivity	1	N/A	2023/10/04	CAM SOP-00414	SM 23 2510 m
Dissolved Organic Carbon (DOC) (4)	2	N/A	2023/10/02	CAM SOP-00446	SM 23 5310 B m
Dissolved Organic Carbon (DOC) (4)	2	N/A	2023/10/03	CAM SOP-00446	SM 23 5310 B m
Fluoride	1	2023/10/04	2023/10/04	CAM SOP-00449	SM 23 4500-F C m
Fluoride	3	2023/09/30	2023/10/02	CAM SOP-00449	SM 23 4500-F C m
Dissolved Mercury (low level)	4	2023/10/03	2023/10/03	CAM SOP-00453	EPA 7470 m
Mercury (low level)	4	2023/10/03	2023/10/03	CAM SOP-00453	EPA 7470 m
Low Level Chloride and Sulphate by AC (1)	4	N/A	2023/10/06	AB SOP-00020	SM24-4500-Cl/SO4-E m
Cyanide (Free) (1)	4	N/A	2023/10/05	CAL SOP-00266	EPA 9016d R0 m
Cyanide, Strong Acid Dissociable (SAD) (1)	1	2023/10/24	2023/10/24	CAL SOP-00270	SM 23 4500-CN m
Cyanide, Strong Acid Dissociable (SAD) (1)	3	2023/10/04	2023/10/04	CAL SOP-00270	SM 23 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	1	N/A	2023/10/24	CAL SOP-00270	SM 23 4500-CN m
Cyanide WAD (weak acid dissociable) (1)	3	N/A	2023/10/04	CAL SOP-00270	SM 23 4500-CN m
Hardness Total (calculated as CaCO3) (2, 5)	4	N/A	2023/10/06	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3) (2)	4	N/A	2023/10/17	BBY WI-00033	Auto Calc
Bromide as Bromine (Br) by ICPMS (1)	4	N/A	2023/10/18	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.) (2)	4	N/A	2023/10/17	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved) (2, 6)	4	N/A	2023/10/15	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (dissolved) (2, 6)	1	N/A	2023/10/18	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (2)	4	N/A	2023/10/06	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total) (2)	4	N/A	2023/10/05	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (1)	4	N/A	2023/10/04	AB SOP-00007	SM 24 4500 NH3 A G m
Orthophosphate LL by Automated Analyzer (1)	4	N/A	2023/10/07	AB SOP-00025	SM 23 4500-P A, F m
Silica (Reactive) (1)	4	N/A	2023/10/04	AB SOP-00011	EPA 370.1 R1978 m
Total Phosphorus Low Level Total (1)	3	2023/10/16	2023/10/17	AB SOP-00024	SM 24 4500-P A,B,F m

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Your P.O. #: 1248940
Your C.O.C. #: 772535

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2023/11/01
Report #: R7889291
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3U0209
Received: 2023/09/27, 12:00

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus Low Level Total (1)	1	2023/10/21	2023/10/24	AB SOP-00024	SM 24 4500-P A,B,F m
Total Ammonia (as NH3)	4	N/A	2023/10/03	Auto Calc.	
Total Ammonia-N	4	N/A	2023/10/03	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (7)	2	N/A	2023/10/02	CAM SOP-00440	SM 23 4500-NO3I/NO2B
Nitrate & Nitrite as Nitrogen in Water (7)	2	N/A	2023/10/04	CAM SOP-00440	SM 23 4500-NO3I/NO2B
pH	1	2023/10/04	2023/10/04	CAM SOP-00413	SM 4500H+ B m
pH	3	2023/09/30	2023/10/02	CAM SOP-00413	SM 4500H+ B m
Radium-226 Low Level (3, 8)	4	N/A	2023/10/25	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry
Total Dissolved Solids	4	2023/09/30	2023/10/02	CAM SOP-00428	SM 23 2540C m
Total Kjeldahl Nitrogen in Water	4	2023/10/02	2023/10/03	CAM SOP-00938	OMOE E3516 m
Total Organic Carbon (TOC) (9)	4	N/A	2023/10/03	CAM SOP-00446	SM 23 5310B m
Total Suspended Solids	2	2023/10/03	2023/10/03	CAM SOP-00428	SM 23 2540D m
Low Level Total Suspended Solids	2	2023/10/02	2023/10/02	CAM SOP-00428	SM 23 2540D m
Turbidity	4	N/A	2023/09/30	CAM SOP-00417	SM 23 2130 B 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, MELCCFP, 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 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Your P.O. #: 1248940
Your C.O.C. #: 772535

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2023/11/01
Report #: R7889291
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3U0209
Received: 2023/09/27, 12:00

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 Calgary (19th), 4000 19th Street NE , Calgary, AB, T2E 6P8
(2) This test was performed by Bureau Veritas Burnaby, 4606 Canada Way , Burnaby, BC, V5G 1K5
(3) This test was performed by Bureau Veritas Kitimat, 6790 Kitimat Road, Unit 4 , Mississauga, ON, L5N 5L9
(4) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(5) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(6) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(7) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(8) Radium-226 results have not been corrected for blanks.
(9) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.

Encryption Key

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

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA433			XDA434			XDA434		
Sampling Date		2023/09/21			2023/09/21			2023/09/21		
COC Number		772535			772535			772535		
	UNITS	Port 4-A	RDL	QC Batch	Port 4-B	RDL	QC Batch	Port 4-B Lab-Dup	RDL	QC Batch
CONVENTIONALS										
Total Nitrogen (Ammonia Nitrogen)	mg/L	0.058	0.0050	9009621	0.063	0.0050	9009621			
Calculated Parameters										
Total Ammonia (as NH3)	mg/L	<0.061	0.061	8951390	<0.061	0.061	8951390			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	9.0	1.0	8946907	9.4	1.0	8946907			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8946907	<1.0	1.0	8946907			
Dissolved Hardness (CaCO3)	mg/L	1110	0.50	8964830	1100	0.50	8964830			
Inorganics										
Total Ammonia-N	mg/L	<0.050	0.050	8955530	<0.050	0.050	8955530			
Conductivity	mS/cm	3.61	0.001	8953576	3.65	0.001	8953576	3.63	0.001	8953576
Free Cyanide (CN)	ug/L	<2.0 (1)	2.0	8967267	2.3	2.0	8967267			
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8964929	<0.00050 (2)	0.00050	8964929			
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8964930	<0.00050 (3)	0.00050	8964930			
Total Dissolved Solids	mg/L	2400	10	8951900	2430	10	8951900			
Fluoride (F-)	mg/L	0.39	0.10	8953573	0.37	0.10	8953573	0.38	0.10	8953573
Total Kjeldahl Nitrogen (TKN)	mg/L	0.40	0.10	8954963	0.49	0.10	8954963			
Dissolved Organic Carbon	mg/L	260	2.0	8952643	260	2.0	8952656			
Total Organic Carbon (TOC)	mg/L	250	2.0	8956961	240	2.0	8956961			
Orthophosphate (P)	mg/L	<0.0010	0.0010	9009620	<0.0010	0.0010	9009620			
pH	pH	6.42		8953574	6.35		8953574	6.50		8953574
Total Phosphorus (P)	mg/L	0.0026	0.0010	8987640	<0.0010	0.0010	8987640			
Reactive Silica (SiO2)	mg/L	9.7	0.050	8984028	6.1 (4)	0.10	8984028			
Total Suspended Solids	mg/L	2	1	8954248	2	1	8954248			
Turbidity	NTU	1.0	0.1	8952942	0.7	0.1	8952942			
Alkalinity (Total as CaCO3)	mg/L	9.0	1.0	8953572	9.4	1.0	8953572	10	1.0	8953572
Dissolved Chloride (Cl-)	mg/L	1200	13	8969447	1300	13	8969447			
Nitrite (N)	mg/L	<0.010	0.010	8952607	<0.010	0.010	8952607			

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

(1) Interference checks not performed at the time of sampling. The lab cannot guarantee that interferences were not present at the time of sampling and that there is no low bias in results.

(2) SAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(3) WAD Cyanide < Free Cyanide: Both values fall within the method uncertainty for duplicates and are likely equivalent.

(4) Detection limits raised due to matrix interference.

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA433			XDA434			XDA434		
Sampling Date		2023/09/21			2023/09/21			2023/09/21		
COC Number		772535			772535			772535		
	UNITS	Port 4-A	RDL	QC Batch	Port 4-B	RDL	QC Batch	Port 4-B Lab-Dup	RDL	QC Batch
Nitrate (N)	mg/L	<0.10	0.10	8952607	<0.10	0.10	8952607			
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8969447	0.58	0.50	8969447			
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	8952607	<0.10	0.10	8952607			
Metals										
Dissolved Aluminum (Al)	ug/L	6.7	1.0	8992807	6.3	1.0	8992807			
Total Aluminum (Al)	ug/L	9.0	1.0	8982307	8.7	1.0	8982307			
Dissolved Antimony (Sb)	ug/L	0.593	0.040	8992807	0.612	0.040	8992807			
Total Antimony (Sb)	ug/L	0.624	0.040	8982307	0.604	0.040	8982307			
Dissolved Arsenic (As)	ug/L	1.66	0.040	8992807	1.59	0.040	8992807			
Total Arsenic (As)	ug/L	1.91	0.040	8982307	1.83	0.040	8982307			
Dissolved Barium (Ba)	ug/L	95.6	0.040	8992807	94.7	0.040	8992807			
Total Barium (Ba)	ug/L	93.0	0.040	8982307	95.0	0.040	8982307			
Dissolved Beryllium (Be)	ug/L	<0.020	0.020	8992807	<0.020	0.020	8992807			
Total Beryllium (Be)	ug/L	<0.020	0.020	8982307	<0.020	0.020	8982307			
Dissolved Bismuth (Bi)	ug/L	<0.010	0.010	8992807	<0.010	0.010	8992807			
Total Bismuth (Bi)	ug/L	<0.010	0.010	8982307	<0.010	0.010	8982307			
Dissolved Boron (B)	ug/L	483	20	8992807	489	20	8992807			
Total Boron (B)	ug/L	471	20	8982307	480	20	8982307			
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	8992807	<0.010	0.010	8992807			
Total Cadmium (Cd)	ug/L	<0.010	0.010	8982307	<0.010	0.010	8982307			
Dissolved Chromium (Cr)	ug/L	<0.20	0.20	8992807	<0.20	0.20	8992807			
Total Chromium (Cr)	ug/L	0.30	0.20	8982307	<0.20	0.20	8982307			
Dissolved Cobalt (Co)	ug/L	0.028	0.010	8992807	0.026	0.010	8992807			
Total Cobalt (Co)	ug/L	0.034	0.010	8982307	0.031	0.010	8982307			
Dissolved Copper (Cu)	ug/L	<0.10	0.10	8992807	<0.10	0.10	8992807			
Total Copper (Cu)	ug/L	<0.10	0.10	8982307	<0.10	0.10	8982307			
Dissolved Iron (Fe)	ug/L	16.1	2.0	8992807	19.5	2.0	8992807			
Total Iron (Fe)	ug/L	33.9	2.0	8982307	35.3	2.0	8982307			
Dissolved Lead (Pb)	ug/L	0.074	0.010	8992808	0.024	0.010	8992807			
Total Lead (Pb)	ug/L	0.044	0.010	8982307	0.020	0.010	8982307			
Dissolved Lithium (Li)	ug/L	76.3	1.0	8992807	77.0	1.0	8992807			
Total Lithium (Li)	ug/L	76.1	1.0	8982307	76.8	1.0	8982307			

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

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA433			XDA434			XDA434		
Sampling Date		2023/09/21			2023/09/21			2023/09/21		
COC Number		772535			772535			772535		
	UNITS	Port 4-A	RDL	QC Batch	Port 4-B	RDL	QC Batch	Port 4-B Lab-Dup	RDL	QC Batch
Dissolved Manganese (Mn)	ug/L	17.9	0.10	8992807	17.5	0.10	8992807			
Total Manganese (Mn)	ug/L	17.7	0.10	8982307	17.6	0.10	8982307			
Dissolved Molybdenum (Mo)	ug/L	0.71	0.10	8992807	0.68	0.10	8992807			
Total Molybdenum (Mo)	ug/L	0.72	0.10	8982307	0.66	0.10	8982307			
Dissolved Nickel (Ni)	ug/L	1.87	0.040	8992807	1.81	0.040	8992807			
Total Nickel (Ni)	ug/L	2.05	0.040	8982307	2.00	0.040	8982307			
Dissolved Selenium (Se)	ug/L	<0.080	0.080	8992807	<0.080	0.080	8992807			
Total Silicon (Si)	ug/L	3040	100	8982307	2960	100	8982307			
Total Selenium (Se)	ug/L	<0.080	0.080	8982307	<0.080	0.080	8982307			
Dissolved Silicon (Si)	ug/L	3020	100	8992807	3050	100	8992807			
Dissolved Silver (Ag)	ug/L	<0.010	0.010	8992807	<0.010	0.010	8992807			
Total Silver (Ag)	ug/L	<0.010	0.010	8982307	<0.010	0.010	8982307			
Dissolved Strontium (Sr)	ug/L	6320	0.10	8992807	6290	0.10	8992807			
Total Strontium (Sr)	ug/L	6200	0.10	8982307	6250	0.10	8982307			
Dissolved Thallium (Tl)	ug/L	<0.0040	0.0040	8992807	<0.0040	0.0040	8992807			
Total Thallium (Tl)	ug/L	<0.0040	0.0040	8982307	<0.0040	0.0040	8982307			
Dissolved Tin (Sn)	ug/L	<0.40	0.40	8992807	<0.40	0.40	8992807			
Total Tin (Sn)	ug/L	<0.40	0.40	8982307	<0.40	0.40	8982307			
Dissolved Titanium (Ti)	ug/L	<1.0	1.0	8992807	<1.0	1.0	8992807			
Total Titanium (Ti)	ug/L	<1.0	1.0	8982307	<1.0	1.0	8982307			
Dissolved Uranium (U)	ug/L	<0.0040	0.0040	8992807	<0.0040	0.0040	8992807			
Total Uranium (U)	ug/L	<0.0040	0.0040	8982307	<0.0040	0.0040	8982307			
Dissolved Vanadium (V)	ug/L	<0.40	0.40	8992807	<0.40	0.40	8992807			
Total Vanadium (V)	ug/L	<0.40	0.40	8982307	<0.40	0.40	8982307			
Dissolved Zinc (Zn)	ug/L	31.7	0.20	8992807	7.57	0.20	8992807			
Total Zinc (Zn)	ug/L	198	0.20	8982307	197	0.20	8982307			
Total Zirconium (Zr)	ug/L	<0.20	0.20	8982307	<0.20	0.20	8982307			
Dissolved Calcium (Ca)	mg/L	432	0.10	8982303	429	0.10	8982303			
Total Calcium (Ca)	mg/L	422	0.10	8982306	423	0.10	8982306			
Dissolved Magnesium (Mg)	mg/L	6.67	0.10	8982303	6.53	0.10	8982303			
Total Magnesium (Mg)	mg/L	6.59	0.10	8982306	6.63	0.10	8982306			
Dissolved Potassium (K)	mg/L	7.49	0.10	8982303	7.40	0.10	8982303			

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

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA433			XDA434			XDA434		
Sampling Date		2023/09/21			2023/09/21			2023/09/21		
COC Number		772535			772535			772535		
	UNITS	Port 4-A	RDL	QC Batch	Port 4-B	RDL	QC Batch	Port 4-B Lab-Dup	RDL	QC Batch
Total Potassium (K)	mg/L	7.29	0.10	8982306	7.38	0.10	8982306			
Dissolved Sodium (Na)	mg/L	255	0.10	8982303	250	0.10	8982303			
Total Sodium (Na)	mg/L	251	0.10	8982306	250	0.10	8982306			
Dissolved Sulphur (S)	mg/L	<6.0	6.0	8982303	<6.0	6.0	8982303			
Total Sulphur (S)	mg/L	<6.0	6.0	8982306	<6.0	6.0	8982306			
Dissolved Tellurium (Te)	ug/L	<0.040	0.040	8992807	<0.040	0.040	8992807			
Total Tellurium (Te)	ug/L	0.049	0.040	8982307	<0.040	0.040	8982307			
RADIONUCLIDE										
Radium-226	Bq/L	0.18	0.0050	8999042	0.19	0.0050	8999042			

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

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA435		XDA436			XDA436		
Sampling Date		2023/09/21		2023/09/21			2023/09/21		
COC Number		772535		772535			772535		
	UNITS	Westbay TB	QC Batch	Westbay FB	RDL	QC Batch	Westbay FB Lab-Dup	RDL	QC Batch
CONVENTIONALS									
Total Nitrogen (Ammonia Nitrogen)	mg/L	<0.0050	9009621	<0.0050	0.0050	9009621			
Calculated Parameters									
Total Ammonia (as NH3)	mg/L	<0.061	8951390	<0.061	0.061	8951390			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	8946907	5.8	1.0	8946907			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	8946907	<1.0	1.0	8946907			
Dissolved Hardness (CaCO3)	mg/L	<0.50	8964830	<0.50	0.50	8964830			
Inorganics									
Total Ammonia-N	mg/L	<0.050	8955530	<0.050	0.050	8955530			
Conductivity	mS/cm	0.001	8953576	0.127	0.001	8960503			
Free Cyanide (CN)	ug/L	<2.0 (1)	8967267	<2.0 (2)	2.0	8967267			
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	9003877	<0.00050	0.00050	8964929			
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	9009622	<0.00050	0.00050	8964930			
Total Dissolved Solids	mg/L	<10	8951900	<10	10	8951900			
Fluoride (F-)	mg/L	<0.10	8953573	0.24	0.10	8960526			
Total Kjeldahl Nitrogen (TKN)	mg/L	0.10	8954963	<0.10	0.10	8954963			
Dissolved Organic Carbon	mg/L	<0.40	8952643	<0.40	0.40	8952656			
Total Organic Carbon (TOC)	mg/L	<0.40	8956961	<0.40	0.40	8956961			
Orthophosphate (P)	mg/L	<0.0010	9009620	<0.0010	0.0010	9009620			
pH	pH	5.78	8953574	7.54		8960523			
Total Phosphorus (P)	mg/L	<0.0010	8987640	<0.0010	0.0010	9003878			
Reactive Silica (SiO2)	mg/L	<0.050	8984028	<0.050	0.050	9009623			
Total Suspended Solids	mg/L	<50	8956290	<50	50	8956290			
Turbidity	NTU	<0.1	8952942	<0.1	0.1	8952942			
Alkalinity (Total as CaCO3)	mg/L	<1.0	8953572	5.9	1.0	8952959			
Dissolved Chloride (Cl-)	mg/L	<0.50	8969447	<0.50	0.50	8969447			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Interference checks not performed at the time of sampling. The lab cannot guarantee that interferences were not present at the time of sampling and that there is no low bias in results.
Results may have a high bias due to decomposition of hexacyanoferrate and some other metal-cyanide complexes to free cyanide.
(2) Interference checks not performed at the time of sampling. The lab cannot guarantee that interferences were not present at the time of sampling and that there is no low bias in results.

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA435		XDA436			XDA436		
Sampling Date		2023/09/21		2023/09/21			2023/09/21		
COC Number		772535		772535			772535		
	UNITS	Westbay TB	QC Batch	Westbay FB	RDL	QC Batch	Westbay FB Lab-Dup	RDL	QC Batch
Nitrite (N)	mg/L	<0.010	8952937	<0.010	0.010	8952937			
Nitrate (N)	mg/L	<0.10	8952937	<0.10	0.10	8952937			
Dissolved Sulphate (SO4)	mg/L	<0.50	8969447	<0.50	0.50	8969447			
Nitrate + Nitrite (N)	mg/L	<0.10	8952937	<0.10	0.10	8952937			
Metals									
Dissolved Aluminum (Al)	ug/L	0.63	8992807	1.30	0.50	8992807			
Total Aluminum (Al)	ug/L	<0.50	8982307	<0.50	0.50	8982307	<0.50	0.50	8982307
Dissolved Antimony (Sb)	ug/L	<0.020	8992807	<0.020	0.020	8992807			
Total Antimony (Sb)	ug/L	<0.020	8982307	<0.020	0.020	8982307	<0.020	0.020	8982307
Dissolved Arsenic (As)	ug/L	<0.020	8992807	<0.020	0.020	8992807			
Total Arsenic (As)	ug/L	<0.020	8982307	<0.020	0.020	8982307	<0.020	0.020	8982307
Dissolved Barium (Ba)	ug/L	<0.020	8992807	<0.020	0.020	8992807			
Total Barium (Ba)	ug/L	<0.020	8982307	<0.020	0.020	8982307	<0.020	0.020	8982307
Dissolved Beryllium (Be)	ug/L	<0.010	8992807	<0.010	0.010	8992807			
Total Beryllium (Be)	ug/L	<0.010	8982307	<0.010	0.010	8982307	<0.010	0.010	8982307
Dissolved Bismuth (Bi)	ug/L	<0.0050	8992807	<0.0050	0.0050	8992807			
Total Bismuth (Bi)	ug/L	<0.0050	8982307	<0.0050	0.0050	8982307	<0.0050	0.0050	8982307
Dissolved Boron (B)	ug/L	<10	8992807	<10	10	8992807			
Total Boron (B)	ug/L	<10	8982307	<10	10	8982307	<10	10	8982307
Dissolved Cadmium (Cd)	ug/L	<0.0050	8992807	<0.0050	0.0050	8992807			
Total Cadmium (Cd)	ug/L	<0.0050	8982307	<0.0050	0.0050	8982307	<0.0050	0.0050	8982307
Dissolved Chromium (Cr)	ug/L	<0.10	8992807	0.11	0.10	8992807			
Total Chromium (Cr)	ug/L	<0.10	8982307	<0.10	0.10	8982307	<0.10	0.10	8982307
Dissolved Cobalt (Co)	ug/L	<0.0050	8992807	<0.0050	0.0050	8992807			
Total Cobalt (Co)	ug/L	<0.0050	8982307	<0.0050	0.0050	8982307	<0.0050	0.0050	8982307
Dissolved Copper (Cu)	ug/L	<0.050	8992807	<0.050	0.050	8992807			
Total Copper (Cu)	ug/L	<0.050	8982307	<0.050	0.050	8982307	<0.050	0.050	8982307
Dissolved Iron (Fe)	ug/L	<1.0	8992807	<1.0	1.0	8992807			
Total Iron (Fe)	ug/L	<1.0	8982307	<1.0	1.0	8982307	<1.0	1.0	8982307
Dissolved Lead (Pb)	ug/L	<0.0050	8992807	<0.0050	0.0050	8992807			
Total Lead (Pb)	ug/L	<0.0050	8982307	<0.0050	0.0050	8982307	<0.0050	0.0050	8982307
Dissolved Lithium (Li)	ug/L	<0.50	8992807	<0.50	0.50	8992807			

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

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA435		XDA436			XDA436		
Sampling Date		2023/09/21		2023/09/21			2023/09/21		
COC Number		772535		772535			772535		
	UNITS	Westbay TB	QC Batch	Westbay FB	RDL	QC Batch	Westbay FB Lab-Dup	RDL	QC Batch
Total Lithium (Li)	ug/L	<0.50	8982307	<0.50	0.50	8982307	<0.50	0.50	8982307
Dissolved Manganese (Mn)	ug/L	<0.050	8992807	<0.050	0.050	8992807			
Total Manganese (Mn)	ug/L	<0.050	8982307	<0.050	0.050	8982307	<0.050	0.050	8982307
Dissolved Molybdenum (Mo)	ug/L	<0.050	8992807	<0.050	0.050	8992807			
Total Molybdenum (Mo)	ug/L	<0.050	8982307	<0.050	0.050	8982307	<0.050	0.050	8982307
Dissolved Nickel (Ni)	ug/L	<0.020	8992807	<0.020	0.020	8992807			
Total Nickel (Ni)	ug/L	<0.020	8982307	<0.020	0.020	8982307	<0.020	0.020	8982307
Dissolved Selenium (Se)	ug/L	<0.040	8992807	<0.040	0.040	8992807			
Total Silicon (Si)	ug/L	<50	8982307	<50	50	8982307	<50	50	8982307
Total Selenium (Se)	ug/L	<0.040	8982307	<0.040	0.040	8982307	<0.040	0.040	8982307
Dissolved Silicon (Si)	ug/L	<50	8992807	<50	50	8992807			
Dissolved Silver (Ag)	ug/L	<0.0050	8992807	<0.0050	0.0050	8992807			
Total Silver (Ag)	ug/L	<0.0050	8982307	<0.0050	0.0050	8982307	<0.0050	0.0050	8982307
Dissolved Strontium (Sr)	ug/L	<0.050	8992807	<0.050	0.050	8992807			
Total Strontium (Sr)	ug/L	<0.050	8982307	<0.050	0.050	8982307	<0.050	0.050	8982307
Dissolved Thallium (Tl)	ug/L	<0.0020	8992807	<0.0020	0.0020	8992807			
Total Thallium (Tl)	ug/L	<0.0020	8982307	<0.0020	0.0020	8982307	<0.0020	0.0020	8982307
Dissolved Tin (Sn)	ug/L	<0.20	8992807	<0.20	0.20	8992807			
Total Tin (Sn)	ug/L	<0.20	8982307	<0.20	0.20	8982307	<0.20	0.20	8982307
Dissolved Titanium (Ti)	ug/L	<0.50	8992807	<0.50	0.50	8992807			
Total Titanium (Ti)	ug/L	<0.50	8982307	<0.50	0.50	8982307	<0.50	0.50	8982307
Dissolved Uranium (U)	ug/L	<0.0020	8992807	<0.0020	0.0020	8992807			
Total Uranium (U)	ug/L	<0.0020	8982307	<0.0020	0.0020	8982307	<0.0020	0.0020	8982307
Dissolved Vanadium (V)	ug/L	<0.20	8992807	<0.20	0.20	8992807			
Total Vanadium (V)	ug/L	<0.20	8982307	<0.20	0.20	8982307	<0.20	0.20	8982307
Dissolved Zinc (Zn)	ug/L	0.33	8992807	0.25	0.10	8992807			
Total Zinc (Zn)	ug/L	0.28	8982307	0.25	0.10	8982307	0.24	0.10	8982307
Total Zirconium (Zr)	ug/L	<0.10	8982307	<0.10	0.10	8982307	<0.10	0.10	8982307
Dissolved Calcium (Ca)	mg/L	<0.050	8982303	<0.050	0.050	8982303			
Total Calcium (Ca)	mg/L	<0.050	8982306	<0.050	0.050	8982306			
Dissolved Magnesium (Mg)	mg/L	<0.050	8982303	<0.050	0.050	8982303			
Total Magnesium (Mg)	mg/L	<0.050	8982306	<0.050	0.050	8982306			

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

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		XDA435		XDA436			XDA436		
Sampling Date		2023/09/21		2023/09/21			2023/09/21		
COC Number		772535		772535			772535		
	UNITS	Westbay TB	QC Batch	Westbay FB	RDL	QC Batch	Westbay FB Lab-Dup	RDL	QC Batch
Dissolved Potassium (K)	mg/L	<0.050	8982303	<0.050	0.050	8982303			
Total Potassium (K)	mg/L	<0.050	8982306	<0.050	0.050	8982306			
Dissolved Sodium (Na)	mg/L	<0.050	8982303	<0.050	0.050	8982303			
Total Sodium (Na)	mg/L	<0.050	8982306	<0.050	0.050	8982306			
Dissolved Sulphur (S)	mg/L	<3.0	8982303	<3.0	3.0	8982303			
Total Sulphur (S)	mg/L	<3.0	8982306	<3.0	3.0	8982306			
Dissolved Tellurium (Te)	ug/L	<0.020	8992807	<0.020	0.020	8992807			
Total Tellurium (Te)	ug/L	<0.020	8982307	<0.020	0.020	8982307	<0.020	0.020	8982307
RADIONUCLIDE									
Radium-226	Bq/L	<0.0050	8999042	<0.0050	0.0050	8999042			

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

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ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		XDA433	XDA434		XDA435	XDA436		
Sampling Date		2023/09/21	2023/09/21		2023/09/21	2023/09/21		
COC Number		772535	772535		772535	772535		
	UNITS	Port 4-A	Port 4-B	RDL	Westbay TB	Westbay FB	RDL	QC Batch
ANIONS								
Bromide (Br-)	mg/L	12.8	12.9	0.10	<0.010	<0.010	0.010	8990765
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	1080	1080	0.50	<0.50	<0.50	0.50	8964828
Metals								
Mercury (Hg)	mg/L	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	0.00001	8957414
Dissolved Mercury (Hg)	mg/L	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	0.00001	8957432

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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TEST SUMMARY

Bureau Veritas ID: XDA433
Sample ID: Port 4-A
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8953572	N/A	2023/10/02	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8946907	N/A	2023/10/03	Automated Statchk
Conductivity	AT	8953576	N/A	2023/10/02	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8952643	N/A	2023/10/03	Gyulshen Idriz
Fluoride	ISE	8953573	2023/09/30	2023/10/02	Surinder Rai
Dissolved Mercury (low level)	CV/AA	8957432	2023/10/03	2023/10/03	Thuy Linh Nguyen
Mercury (low level)	CV/AA	8957414	2023/10/03	2023/10/03	Thuy Linh Nguyen
Low Level Chloride and Sulphate by AC	KONE	8969447	N/A	2023/10/06	Marjolen Busslinger
Cyanide (Free)	SPEC	8967267	N/A	2023/10/05	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8964929	2023/10/04	2023/10/04	Ming Dong
Cyanide WAD (weak acid dissociable)	TECH	8964930	N/A	2023/10/04	Ming Dong
Hardness Total (calculated as CaCO3)	CALC	8964828	N/A	2023/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8964830	N/A	2023/10/17	Automated Statchk
Bromide as Bromine (Br) by ICPMS	ICP/MS	8990765	N/A	2023/10/18	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8982303	N/A	2023/10/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/MS	8992808	N/A	2023/10/18	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8982306	N/A	2023/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/MS	8982307	N/A	2023/10/05	Megan Mak
Ammonia-N Low Level	KONE/UVVS	9009621	N/A	2023/10/04	Adam Fishleigh
Orthophosphate LL by Automated Analyzer	KONE	9009620	N/A	2023/10/07	Carlo Truong
Silica (Reactive)	KONE	8984028	N/A	2023/10/04	Shanna McKort
Total Phosphorus Low Level Total	KONE	8987640	2023/10/16	2023/10/17	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8951390	N/A	2023/10/03	Automated Statchk
Total Ammonia-N	LACH/NH4	8955530	N/A	2023/10/03	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	8952607	N/A	2023/10/04	Chandra Nandlal
pH	AT	8953574	2023/09/30	2023/10/02	Surinder Rai
Radium-226 Low Level	AS	8999042	N/A	2023/10/25	Magdalena Onderco
Total Dissolved Solids	BAL	8951900	2023/09/30	2023/10/02	Darshan Patel
Total Kjeldahl Nitrogen in Water	SKAL	8954963	2023/10/02	2023/10/03	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8956961	N/A	2023/10/03	Gyulshen Idriz
Low Level Total Suspended Solids	BAL	8954248	2023/10/02	2023/10/02	Razieh Tabesh
Turbidity	AT	8952942	N/A	2023/09/30	Leily Karimi

Bureau Veritas ID: XDA434
Sample ID: Port 4-B
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8953572	N/A	2023/10/02	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8946907	N/A	2023/10/03	Automated Statchk
Conductivity	AT	8953576	N/A	2023/10/02	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8952656	N/A	2023/10/02	Gyulshen Idriz
Fluoride	ISE	8953573	2023/09/30	2023/10/02	Surinder Rai
Dissolved Mercury (low level)	CV/AA	8957432	2023/10/03	2023/10/03	Thuy Linh Nguyen
Mercury (low level)	CV/AA	8957414	2023/10/03	2023/10/03	Thuy Linh Nguyen

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

TEST SUMMARY

Bureau Veritas ID: XDA434
Sample ID: Port 4-B
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Low Level Chloride and Sulphate by AC	KONE	8969447	N/A	2023/10/06	Marjolen Busslinger
Cyanide (Free)	SPEC	8967267	N/A	2023/10/05	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8964929	2023/10/04	2023/10/04	Ming Dong
Cyanide WAD (weak acid dissociable)	TECH	8964930	N/A	2023/10/04	Ming Dong
Hardness Total (calculated as CaCO3)	CALC	8964828	N/A	2023/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8964830	N/A	2023/10/17	Automated Statchk
Bromide as Bromine (Br) by ICPMS	ICP/MS	8990765	N/A	2023/10/18	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8982303	N/A	2023/10/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/MS	8992807	N/A	2023/10/15	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8982306	N/A	2023/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/MS	8982307	N/A	2023/10/05	Megan Mak
Ammonia-N Low Level	KONE/UVVS	9009621	N/A	2023/10/04	Adam Fishleigh
Orthophosphate LL by Automated Analyzer	KONE	9009620	N/A	2023/10/07	Carlo Truong
Silica (Reactive)	KONE	8984028	N/A	2023/10/04	Shanna McKort
Total Phosphorus Low Level Total	KONE	8987640	2023/10/16	2023/10/17	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8951390	N/A	2023/10/03	Automated Statchk
Total Ammonia-N	LACH/NH4	8955530	N/A	2023/10/03	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	8952607	N/A	2023/10/04	Chandra Nandlal
pH	AT	8953574	2023/09/30	2023/10/02	Surinder Rai
Radium-226 Low Level	AS	8999042	N/A	2023/10/25	Magdalena Onderco
Total Dissolved Solids	BAL	8951900	2023/09/30	2023/10/02	Darshan Patel
Total Kjeldahl Nitrogen in Water	SKAL	8954963	2023/10/02	2023/10/03	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8956961	N/A	2023/10/03	Gyulshen Idriz
Low Level Total Suspended Solids	BAL	8954248	2023/10/02	2023/10/02	Razieh Tabesh
Turbidity	AT	8952942	N/A	2023/09/30	Leily Karimi

Bureau Veritas ID: XDA434 Dup
Sample ID: Port 4-B
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8953572	N/A	2023/10/02	Surinder Rai
Conductivity	AT	8953576	N/A	2023/10/02	Surinder Rai
Fluoride	ISE	8953573	2023/09/30	2023/10/02	Surinder Rai
pH	AT	8953574	2023/09/30	2023/10/02	Surinder Rai

Bureau Veritas ID: XDA435
Sample ID: Westbay TB
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8953572	N/A	2023/10/02	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8946907	N/A	2023/10/03	Automated Statchk
Conductivity	AT	8953576	N/A	2023/10/02	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8952643	N/A	2023/10/03	Gyulshen Idriz

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TEST SUMMARY

Bureau Veritas ID: XDA435
Sample ID: Westbay TB
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE	8953573	2023/09/30	2023/10/02	Surinder Rai
Dissolved Mercury (low level)	CV/AA	8957432	2023/10/03	2023/10/03	Thuy Linh Nguyen
Mercury (low level)	CV/AA	8957414	2023/10/03	2023/10/03	Thuy Linh Nguyen
Low Level Chloride and Sulphate by AC	KONE	8969447	N/A	2023/10/06	Marjolen Busslinger
Cyanide (Free)	SPEC	8967267	N/A	2023/10/05	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	9003877	2023/10/24	2023/10/24	Ming Dong
Cyanide WAD (weak acid dissociable)	TECH	9009622	N/A	2023/10/24	Ming Dong
Hardness Total (calculated as CaCO3)	CALC	8964828	N/A	2023/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8964830	N/A	2023/10/17	Automated Statchk
Bromide as Bromine (Br) by ICPMS	ICP/MS	8990765	N/A	2023/10/18	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8982303	N/A	2023/10/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/MS	8992807	N/A	2023/10/15	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8982306	N/A	2023/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/MS	8982307	N/A	2023/10/05	Megan Mak
Ammonia-N Low Level	KONE/UVVS	9009621	N/A	2023/10/04	Adam Fishleigh
Orthophosphate LL by Automated Analyzer	KONE	9009620	N/A	2023/10/07	Carlo Truong
Silica (Reactive)	KONE	8984028	N/A	2023/10/04	Shanna McKort
Total Phosphorus Low Level Total	KONE	8987640	2023/10/16	2023/10/17	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8951390	N/A	2023/10/03	Automated Statchk
Total Ammonia-N	LACH/NH4	8955530	N/A	2023/10/03	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	8952937	N/A	2023/10/02	Chandra Nandlal
pH	AT	8953574	2023/09/30	2023/10/02	Surinder Rai
Radium-226 Low Level	AS	8999042	N/A	2023/10/25	Magdalena Onderco
Total Dissolved Solids	BAL	8951900	2023/09/30	2023/10/02	Darshan Patel
Total Kjeldahl Nitrogen in Water	SKAL	8954963	2023/10/02	2023/10/03	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8956961	N/A	2023/10/03	Gyulshen Idriz
Total Suspended Solids	BAL	8956290	2023/10/03	2023/10/03	Razieh Tabesh
Turbidity	AT	8952942	N/A	2023/09/30	Leily Karimi

Bureau Veritas ID: XDA436
Sample ID: Westbay FB
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8952959	N/A	2023/10/03	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	8946907	N/A	2023/10/04	Automated Statchk
Conductivity	AT	8960503	N/A	2023/10/04	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8952656	N/A	2023/10/02	Gyulshen Idriz
Fluoride	ISE	8960526	2023/10/04	2023/10/04	Nachiketa Gohil
Dissolved Mercury (low level)	CV/AA	8957432	2023/10/03	2023/10/03	Thuy Linh Nguyen
Mercury (low level)	CV/AA	8957414	2023/10/03	2023/10/03	Thuy Linh Nguyen
Low Level Chloride and Sulphate by AC	KONE	8969447	N/A	2023/10/06	Marjolen Busslinger
Cyanide (Free)	SPEC	8967267	N/A	2023/10/05	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8964929	2023/10/04	2023/10/04	Ming Dong
Cyanide WAD (weak acid dissociable)	TECH	8964930	N/A	2023/10/04	Ming Dong

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

TEST SUMMARY

Bureau Veritas ID: XDA436
Sample ID: Westbay FB
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8964828	N/A	2023/10/06	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8964830	N/A	2023/10/17	Automated Statchk
Bromide as Bromine (Br) by ICPMS	ICP/MS	8990765	N/A	2023/10/18	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8982303	N/A	2023/10/17	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/MS	8992807	N/A	2023/10/15	Megan Mak
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8982306	N/A	2023/10/06	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/MS	8982307	N/A	2023/10/05	Megan Mak
Ammonia-N Low Level	KONE/UVVS	9009621	N/A	2023/10/04	Adam Fishleigh
Orthophosphate LL by Automated Analyzer	KONE	9009620	N/A	2023/10/07	Carlo Truong
Silica (Reactive)	KONE	9009623	N/A	2023/10/04	Shanna McKort
Total Phosphorus Low Level Total	KONE	9003878	2023/10/21	2023/10/24	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8951390	N/A	2023/10/03	Automated Statchk
Total Ammonia-N	LACH/NH4	8955530	N/A	2023/10/03	Prabhjot Kaur
Nitrate & Nitrite as Nitrogen in Water	LACH	8952937	N/A	2023/10/02	Chandra Nandlal
pH	AT	8960523	2023/10/04	2023/10/04	Nachiketa Gohil
Radium-226 Low Level	AS	8999042	N/A	2023/10/25	Magdalena Onderco
Total Dissolved Solids	BAL	8951900	2023/09/30	2023/10/02	Darshan Patel
Total Kjeldahl Nitrogen in Water	SKAL	8954963	2023/10/02	2023/10/03	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8956961	N/A	2023/10/03	Gyulshen Idriz
Total Suspended Solids	BAL	8956290	2023/10/03	2023/10/03	Razieh Tabesh
Turbidity	AT	8952942	N/A	2023/09/30	Leily Karimi

Bureau Veritas ID: XDA436 Dup
Sample ID: Westbay FB
Matrix: Water

Collected: 2023/09/21
Shipped:
Received: 2023/09/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/MS	8982307	N/A	2023/10/05	Megan Mak

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	3.7°C
Package 3	3.0°C
Package 4	3.3°C
Package 5	7.0°C

Revised Report [2023/11/01]: Split report per client request.

Sample XDA433 [Port 4-A] : TSS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
TDS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results. TOC< DOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample XDA434 [Port 4-B] : TSS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
TDS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
TOC< DOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample XDA435 [Westbay TB] : TDS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
TSS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Cyanide (total). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample XDA436 [Westbay FB] : TDS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results.
TSS Analysis: Analysis was performed past sample holding time. This may increase the variability associated with these results. Sample was analyzed past method specified hold time for Orthophosphate LL by Automated Analyzer. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample was analyzed past method specified hold time for Total Phosphorus Low Level Total.
Sample XDA433, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

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Bureau Veritas Job #: C3U0209
Report Date: 2023/11/01

QUALITY ASSURANCE REPORT

Agnico Eagle
Your P.O. #: 1248940
Sampler Initials: EL

			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
8951900	Total Dissolved Solids	2023/10/02			100	90 - 110	<10	mg/L	3.9	20		
8952607	Nitrate (N)	2023/10/04	105	80 - 120	104	80 - 120	<0.10	mg/L	0.98	20		
8952607	Nitrite (N)	2023/10/04	NC	80 - 120	108	80 - 120	<0.010	mg/L	5.4	20		
8952643	Dissolved Organic Carbon	2023/10/03	94	80 - 120	97	80 - 120	<0.40	mg/L	4.7	20		
8952656	Dissolved Organic Carbon	2023/10/02	94	80 - 120	98	80 - 120	<0.40	mg/L	10	20		
8952937	Nitrate (N)	2023/10/02	97	80 - 120	99	80 - 120	<0.10	mg/L	NC	20		
8952937	Nitrite (N)	2023/10/02	107	80 - 120	108	80 - 120	<0.010	mg/L	NC	20		
8952942	Turbidity	2023/09/30			100	80 - 120	<0.1	NTU	20	20		
8952959	Alkalinity (Total as CaCO3)	2023/10/03			101	85 - 115	1.5, RDL=1.0	mg/L	2.5	20		
8953572	Alkalinity (Total as CaCO3)	2023/10/02			96	85 - 115	<1.0	mg/L	6.8	20		
8953573	Fluoride (F-)	2023/10/02	76 (1)	80 - 120	100	80 - 120	<0.10	mg/L	1.4	20		
8953574	pH	2023/10/02			102	98 - 103			2.3	N/A		
8953576	Conductivity	2023/10/02			101	85 - 115	<0.001	mS/cm	0.56	10		
8954248	Total Suspended Solids	2023/10/02			99	85 - 115	<1	mg/L	3.1	20		
8954963	Total Kjeldahl Nitrogen (TKN)	2023/10/03	105	80 - 120	96	80 - 120	<0.10	mg/L	0	20	91	80 - 120
8955530	Total Ammonia-N	2023/10/03	NC	75 - 125	103	80 - 120	<0.050	mg/L	2.2	20		
8956290	Total Suspended Solids	2023/10/03			97	85 - 115	<10	mg/L	NC	20		
8956961	Total Organic Carbon (TOC)	2023/10/03	93	80 - 120	96	80 - 120	<0.40	mg/L	3.3	20		
8957414	Mercury (Hg)	2023/10/03	106	75 - 125	105	80 - 120	<0.00001	mg/L	NC	20		
8957432	Dissolved Mercury (Hg)	2023/10/03	107	75 - 125	104	80 - 120	<0.00001	mg/L	NC	20		
8960503	Conductivity	2023/10/04			101	85 - 115	<0.001	mS/cm	0.51	10		
8960523	pH	2023/10/04			102	98 - 103			0.74	N/A		
8960526	Fluoride (F-)	2023/10/04	93	80 - 120	102	80 - 120	<0.10	mg/L	3.8	20		
8964929	Strong Acid Dissoc. Cyanide (CN)	2023/10/04	61 (1)	80 - 120	102	80 - 120	<0.00050	mg/L				
8964930	Weak Acid Dissoc. Cyanide (CN)	2023/10/04	106	80 - 120	108	80 - 120	<0.00050	mg/L				
8967267	Free Cyanide (CN)	2023/10/05	91	80 - 120	87	80 - 120	<2.0	ug/L				
8969447	Dissolved Chloride (Cl-)	2023/10/06	NC	80 - 120	97	80 - 120	<0.50	mg/L				
8969447	Dissolved Sulphate (SO4)	2023/10/06	NC	80 - 120	99	80 - 120	<0.50	mg/L	2.1	20		
8982307	Total Aluminum (Al)	2023/10/05	107	80 - 120	102	80 - 120	<0.50	ug/L	NC	20		
8982307	Total Antimony (Sb)	2023/10/05	108	80 - 120	101	80 - 120	<0.020	ug/L	NC	20		
8982307	Total Arsenic (As)	2023/10/05	105	80 - 120	102	80 - 120	<0.020	ug/L	NC	20		

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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
8982307	Total Barium (Ba)	2023/10/05	105	80 - 120	101	80 - 120	<0.020	ug/L	NC	20		
8982307	Total Beryllium (Be)	2023/10/05	109	80 - 120	104	80 - 120	<0.010	ug/L	NC	20		
8982307	Total Bismuth (Bi)	2023/10/05	103	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20		
8982307	Total Boron (B)	2023/10/05	112	80 - 120	105	80 - 120	<10	ug/L	NC	20		
8982307	Total Cadmium (Cd)	2023/10/05	105	80 - 120	101	80 - 120	<0.0050	ug/L	NC	20		
8982307	Total Chromium (Cr)	2023/10/05	104	80 - 120	100	80 - 120	<0.10	ug/L	NC	20		
8982307	Total Cobalt (Co)	2023/10/05	103	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20		
8982307	Total Copper (Cu)	2023/10/05	101	80 - 120	97	80 - 120	<0.050	ug/L	NC	20		
8982307	Total Iron (Fe)	2023/10/05	107	80 - 120	102	80 - 120	<1.0	ug/L	NC	20		
8982307	Total Lead (Pb)	2023/10/05	104	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20		
8982307	Total Lithium (Li)	2023/10/05	110	80 - 120	104	80 - 120	<0.50	ug/L	NC	20		
8982307	Total Manganese (Mn)	2023/10/05	103	80 - 120	99	80 - 120	<0.050	ug/L	NC	20		
8982307	Total Molybdenum (Mo)	2023/10/05	107	80 - 120	101	80 - 120	<0.050	ug/L	NC	20		
8982307	Total Nickel (Ni)	2023/10/05	103	80 - 120	98	80 - 120	<0.020	ug/L	NC	20		
8982307	Total Selenium (Se)	2023/10/05	104	80 - 120	99	80 - 120	<0.040	ug/L	NC	20		
8982307	Total Silicon (Si)	2023/10/05	114	80 - 120	109	80 - 120	<50	ug/L	NC	20		
8982307	Total Silver (Ag)	2023/10/05	102	80 - 120	99	80 - 120	<0.0050	ug/L	NC	20		
8982307	Total Strontium (Sr)	2023/10/05	105	80 - 120	101	80 - 120	<0.050	ug/L	NC	20		
8982307	Total Tellurium (Te)	2023/10/05	108	80 - 120	102	80 - 120	<0.020	ug/L	NC	20		
8982307	Total Thallium (Tl)	2023/10/05	103	80 - 120	100	80 - 120	<0.0020	ug/L	NC	20		
8982307	Total Tin (Sn)	2023/10/05	99	80 - 120	100	80 - 120	<0.20	ug/L	NC	20		
8982307	Total Titanium (Ti)	2023/10/05	105	80 - 120	99	80 - 120	<0.50	ug/L	NC	20		
8982307	Total Uranium (U)	2023/10/05	103	80 - 120	99	80 - 120	<0.0020	ug/L	NC	20		
8982307	Total Vanadium (V)	2023/10/05	104	80 - 120	99	80 - 120	<0.20	ug/L	NC	20		
8982307	Total Zinc (Zn)	2023/10/05	105	80 - 120	100	80 - 120	<0.10	ug/L	5.0	20		
8982307	Total Zirconium (Zr)	2023/10/05	96	80 - 120	93	80 - 120	<0.10	ug/L	NC	20		
8984028	Reactive Silica (SiO2)	2023/10/04	NC	80 - 120	100	80 - 120	<0.050	mg/L				
8987640	Total Phosphorus (P)	2023/10/17	107	80 - 120	103	80 - 120	<0.0010	mg/L			89	80 - 120
8990765	Bromide (Br-)	2023/10/18	NC	78 - 120	94	80 - 120	<0.0030	mg/L				
8992807	Dissolved Aluminum (Al)	2023/10/15	102	80 - 120	102	80 - 120	<0.50	ug/L				
8992807	Dissolved Antimony (Sb)	2023/10/15	101	80 - 120	104	80 - 120	<0.020	ug/L				

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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
8992807	Dissolved Arsenic (As)	2023/10/15	104	80 - 120	105	80 - 120	<0.020	ug/L				
8992807	Dissolved Barium (Ba)	2023/10/15	100	80 - 120	101	80 - 120	<0.020	ug/L				
8992807	Dissolved Beryllium (Be)	2023/10/15	102	80 - 120	101	80 - 120	<0.010	ug/L				
8992807	Dissolved Bismuth (Bi)	2023/10/15	98	80 - 120	101	80 - 120	<0.0050	ug/L				
8992807	Dissolved Boron (B)	2023/10/15	104	80 - 120	103	80 - 120	<10	ug/L				
8992807	Dissolved Cadmium (Cd)	2023/10/15	103	80 - 120	105	80 - 120	<0.0050	ug/L				
8992807	Dissolved Chromium (Cr)	2023/10/15	102	80 - 120	102	80 - 120	<0.10	ug/L				
8992807	Dissolved Cobalt (Co)	2023/10/15	101	80 - 120	103	80 - 120	<0.0050	ug/L				
8992807	Dissolved Copper (Cu)	2023/10/15	100	80 - 120	100	80 - 120	<0.050	ug/L				
8992807	Dissolved Iron (Fe)	2023/10/15	106	80 - 120	106	80 - 120	<1.0	ug/L				
8992807	Dissolved Lead (Pb)	2023/10/15	100	80 - 120	101	80 - 120	<0.0050	ug/L				
8992807	Dissolved Lithium (Li)	2023/10/15	100	80 - 120	99	80 - 120	<0.50	ug/L				
8992807	Dissolved Manganese (Mn)	2023/10/15	101	80 - 120	101	80 - 120	<0.050	ug/L				
8992807	Dissolved Molybdenum (Mo)	2023/10/15	105	80 - 120	105	80 - 120	<0.050	ug/L				
8992807	Dissolved Nickel (Ni)	2023/10/15	101	80 - 120	100	80 - 120	<0.020	ug/L				
8992807	Dissolved Selenium (Se)	2023/10/15	106	80 - 120	108	80 - 120	<0.040	ug/L				
8992807	Dissolved Silicon (Si)	2023/10/15	112	80 - 120	110	80 - 120	<50	ug/L				
8992807	Dissolved Silver (Ag)	2023/10/15	100	80 - 120	102	80 - 120	<0.0050	ug/L				
8992807	Dissolved Strontium (Sr)	2023/10/15	102	80 - 120	104	80 - 120	<0.050	ug/L				
8992807	Dissolved Tellurium (Te)	2023/10/15	97	80 - 120	101	80 - 120	<0.020	ug/L				
8992807	Dissolved Thallium (Tl)	2023/10/15	100	80 - 120	101	80 - 120	<0.0020	ug/L				
8992807	Dissolved Tin (Sn)	2023/10/15	101	80 - 120	104	80 - 120	<0.20	ug/L				
8992807	Dissolved Titanium (Ti)	2023/10/15	102	80 - 120	101	80 - 120	<0.50	ug/L				
8992807	Dissolved Uranium (U)	2023/10/15	102	80 - 120	104	80 - 120	<0.0020	ug/L				
8992807	Dissolved Vanadium (V)	2023/10/15	101	80 - 120	102	80 - 120	<0.20	ug/L				
8992807	Dissolved Zinc (Zn)	2023/10/15	103	80 - 120	104	80 - 120	<0.10	ug/L				
8992808	Dissolved Lead (Pb)	2023/10/18			99	80 - 120	<0.0050	ug/L				
8999042	Radium-226	2023/10/25			102	85 - 115	<0.0050	Bq/L	NC	N/A		
9003877	Strong Acid Dissoc. Cyanide (CN)	2023/10/24	95	80 - 120	102	80 - 120	<0.00050	mg/L				
9003878	Total Phosphorus (P)	2023/10/24	91	80 - 120	93	80 - 120	<0.0010	mg/L			83	80 - 120
9009620	Orthophosphate (P)	2023/10/07	96	80 - 120	105	80 - 120	<0.0010	mg/L				

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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
9009621	Total Nitrogen (Ammonia Nitrogen)	2023/10/04	99	N/A	98	N/A	<0.0050	mg/L				
9009622	Weak Acid Dissoc. Cyanide (CN)	2023/10/24	101	80 - 120	102	80 - 120	<0.00050	mg/L				
9009623	Reactive Silica (SiO2)	2023/10/04	97	80 - 120	102	80 - 120	<0.050	mg/L				

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.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere, Senior Scientific Specialist

David Huang, BBY Scientific Specialist

Danish Samad, MSc., C.Chem, Miss.-Kitimat, Laboratory Supervisor

Sandy Yuan, M.Sc., QP, 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 Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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ATTACHMENT D

Water Quality Results

Table D-1
Drilling Brine Composition Westbay System AMQ16-626
Agnico Eagle Mines Limited, Whale Tail Mine, Nunavut

Sample	Units	Brine Fluid	Calculated Dilute Brine Port 6		Calculated Dilute Brine Port 4		Calculated Dilute Brine Port 3	
			Initial Brine	Maximum Brine	Initial Brine	Maximum Brine	Initial Brine	Maximum Brine
Date		17-Apr-16	21-Jul-16	21-Jul-16	24-Apr-16	27-Apr-16	02-Sep-16	02-Sep-16
Field measured parameters								
Fluorescein Concentration	mg/L	512.70	138.00	158.10	512.70	341.90	445.90	437.20
Drilling Fluid Proportion		1.00	0.27	0.31	1.00	0.67	0.87	0.85
Formation Water Proportion		0.00	0.73	0.69	0.00	0.33	0.13	0.15
Initial Conductivity Reading	uS/cm	0	10240	12210	3810	19400	52280	53800
Dilution of Brine Factor in Port		0.00	0.06	0.07	0.02	0.11	0.30	0.31
Conventional Parameters								
Alkalinity (Total as CaCO3)	mg $CaCO_3$/L	145.0	8.5	38.0	3.2	16.2	43.6	44.8
Alkalinity, bicarbonate (as CaCO3)	mg $CaCO_3$/L	27.0	1.6	1.9	0.6	3.0	8.1	8.3
Alkalinity, carbonate (as CaCO3)	mg CaCO3/L	--	--	--	--	--	--	--
Alkalinity, hydroxide (as CaCO3)	mg CaCO3/L	--	--	--	--	--	--	--
Chemical oxygen demand [COD]	mg/L	--	--	--	--	--	--	--
Conductivity (calculated)	uS/cm	174000	10240	12210	3810	19400	52280	53800
Conductivity (lab)	uS/cm	55420	--	--	--	--	--	--
Hardness (as CaCO3), from dissolved Ca/Mg	mg $CaCO_3$/L	105554	6212	7407	2311	11769	31715	32637
pH	S.U.	10	11.25	7.40	11.68	10.97	10.54	10.53
Total Dissolved Solids (calculated)	mg/L	130500	7680	9158	2858	14550	39210	40350
Total Dissolved Solids (lab)	mg/L	36946	--	--	--	--	--	--
Total Suspended Solids (TSS)	mg/L	--	--	--	--	--	--	--
Turbidity	NTU	--	--	--	--	--	--	--
Anions and Nutrients								
Ammonia, total (as N)	mg/L	--	--	--	--	--	--	--
Bromide (Br)	mg/L	1066	63	75	23	119	320	330
Chloride (Cl)	mg/L	83700	4926	5873	1833	9332	25149	25880
Dissolved Organic Carbon (DOC)	mg/L	--	--	--	--	--	--	--
Fluoride (F)	mg/L	0.06	0.004	0.004	0.001	0.01	0.02	0.02
Kjeldahl nitrogen, total [TKN]	mg/L	--	--	--	--	--	--	--
Nitrate + nitrite (as N)	mg/L	--	--	--	--	--	--	--
Nitrates (NO3)	mg/L	0.54	0.03	0.04	0.01	0.06	0.2	0.2
Nitrites (NO2)	mg/L	0.06	0.004	0.004	0.001	0.007	0.02	0.02
Phosphate, ortho-, dissolved (as P)	mg/L	--	--	--	--	--	--	--
Phosphorus, total	mg/L	--	--	--	--	--	--	--
Silicate (as SiO2)	mg/L	--	--	--	--	--	--	--
Sulphate (SO4)	mg/L	<0.6	0	0	0	0	0	0
Total Organic Carbon (TOC)	mg/L	--	--	--	--	--	--	--
Metals (dissolved)								
Aluminium (Al)	mg/L	0.5	0.03	0.03	0.01	0.06	0.1	0.2
Antimony (Sb)	mg/L	0.035	0.002	0.002	0.001	0.004	0.011	0.011
Arsenic (As)	mg/L	0.8	0.05	0.05	0.02	0.09	0.2	0.2
Barium (Ba)	mg/L	0.1	0.007	0.008	0.002	0.01	0.03	0.03
Beryllium (Be)	mg/L	<0.0005	0	0	0	0	0	0
Boron (B)	mg/L	13.2	0.8	0.9	0.3	1.5	4.0	4.1
Cadmium (Cd)	mg/L	<0.00002	0	0	0	0	0	0
Calcium (Ca)	mg/L	42266	2487	2966	925	4712	12699	13068
Chromium (Cr)	mg/L	<0.0006	0	0	0	0	0	0
Cobalt (Co)	mg/L	0.0406	0.002	0.003	0.001	0.005	0.012	0.013
Copper (Cu)	mg/L	0.0039	0.0002	0.0003	0.0001	0.0004	0.0012	0.0012
Iron (Fe)	mg/L	2.6	0.2	0.2	0.1	0.3	0.8	0.8
Lead (Pb)	mg/L	<0.0003	0	0	0	0	0	0
Lithium (Li)	mg/L	34.52	2.0	2.4	0.8	3.8	10.4	10.7
Magnesium (Mg)	mg/L	3.9	0.2	0.3	0.1	0.4	1.2	1.2
Manganese (Mn)	mg/L	<0.0005	0	0	0	0	0	0
Dissolved Mercury (Hg)	mg/L	--	0.00002	0.00003	0.00001	0.00004	0.00012	0.00012
Molybdenum (Mo)	mg/L	<0.0005	0	0	0	0	0	0
Nickel (Ni)	mg/L	1.35	0.08	0.09	0.03	0.15	0.41	0.42
Potassium (K)	mg/L	1717	101	120	38	191	516	531
Selenium (Se)	mg/L	3.83	0.23	0.27	0.08	0.43	1.15	1.18
Silicon (Si)	mg/L	2.93	0.17	0.21	0.06	0.33	0.88	0.91
Silver (Ag)	mg/L	<0.0001	0	0	0	0	0	0
Sodium (Na)	mg/L	838	49	59	18	93	252	259
Strontium (Sr)	mg/L	656.0	38.61	46.03	14.36	73.14	197.1	202.83
Tellurium (Te)	mg/L	<0.0005	0	0	0	0	0	0
Thallium (Tl)	mg/L	<0.002	0	0	0	0	0	0
Tin (Sn)	mg/L	<0.001	0	0	0	0	0	0
Titanium (Ti)	mg/L	45.2	2.66	3.17	0.99	5.04	13.58	13.98
Uranium (U)	mg/L	-	0	0	0	0	0	0
Vanadium (V)	mg/L	<0.001	0	0	0	0	0	0
Zinc (Zn)	mg/L	<0.0005	0	0	0	0	0	0
Radioactive Ions								
Radium (Ra 226)	Bq/L	<0.066	0	0	0	0	0	0
Hydrocarbons								
Hydrocarbons (C10-C50)	mg/L	0	0	0	0	0	0	0
QA/QC								
Calculated TDS (lab)	-	130500	--	--	--	--	--	--
Lab measured vs Calculated TDS	-	28%	--	--	--	--	--	--
Lab measured TDS vs Conductivity	-	0.7	--	--	--	--	--	--
Calculated TDS vs Calculated Conductivity	-	0.8	--	--	--	--	--	--

Notes:
-- denotes parameter was not analyzed

Table D-2
Westbay System AMQ16-626 Rock Formation Groundwater Quality Corrected to Remove Residual Drilling Water Whale Tail Lake Talik
Agnico Eagle Mines Limited, Whale Tail Mine, Nunavut

Sample		Port 6										Port 4												Port 3											
Date		2-Aug-2016		13-Nov-2018		3-Apr-2019		18-Oct-2020		10-Nov-2021		20-Jul-2016		11-Nov-2018		19-Oct-2020		5/6-Nov-21		19-Sep-2022		21-Sep-2023		14-Sep-2016		12-Nov-2018		29-Mar-2019		13-Oct-2020		8/9-Nov-2021		13-Sep-2022		15-Sep-2023	
Drilling Fluid Proportion		0.04	0.24	0.16		0.14		0.08		0.19		0.09	0.18	0.13		0.06		0.04		0.04		0.04		0.08	0.18	0.20		0.11		0.09		0.07	0.06	0.03		0.01	
Formation Water Proportion		0.96	0.76	0.84		0.86		0.92		0.81		0.91	0.82	0.87		0.94		0.96		0.96		0.96		0.92	0.82	0.80		0.89		0.91		0.93	0.94	0.97		0.99	
Sampling interval depth (metres along borehole)		276.0 m - 287.4 m										349.3 m - 359.1 m												381.3 m - 392.7 m											
Sampling interval vertical depth (metres)		257.7 m - 268.3 m																																	
Estimated concentration range (calculated)		minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	mininum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum
Conventional parameters																																			
Alkalinity	mg $CaCO_3$/L	40	51	30	31	34	34	24	28	41	41	18	20	9	11	24	25	23	27	12	13	9	10	52	58	51	52	54	54	56	58	52	55	40	40	22	22
Alkalinity, bicarbonate (as CaCO3)	mg/L	40	51	31	32	35	35	27.3	28.4	42.5	42.6	18	20	11	12	24.9	25.5	24	24	12	13	9	10	52	58	60	61	58	59	59	61	55	57	41	41	22	22
Alkalinity, carbonate (as CaCO3)	mg/L	-	-	<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	<1.0	<1.0	<1.0	< 1.0	< 1.0	-	-	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chemical oxygen demand [COD]	mg/L	-	-	-	-	-	-	3100	3200	-	-	-	-	-	-	580	633	-	-	-	-	-	-	-	-	-	-	-	-	1100	1120	-	-	-	-	-	-
Conductivity (lab)	uS/cm	4797	6042	8041	8496	8388	8720	9084	9390	6197	6644	5366	5938	13084	15511	6394	7695	3326	4071	3547	4291	3035	3644	5220	5866	<7350	<7530	<4660	<4730	1275	1527	3419	3590	2783	2835	3527	3638
Hardness (as CaCO3)	mg $CaCO_3$/L	2397	3030	2883	3127	3167	3369	3498	3391	2379	2651	2627	2910	4169	5582	2148	2789	800	1277	748	1181	712	1056	1680	1891	<2600	<2740	<1300	<1320	<1890	<1950	382	484	152	225	812	833
pH	S.U.	7.41	7.27	6.50	6.57	6.29	6.29	6.16	6.53	6.60	6.62	7.87	7.82	6.88	6.91	6.32	6.50	6.51	6.81	6.43	6.52	6.16	6.25	7.96	7.91	7.31	7.41	6.73	6.84	6.77	6.79	6.58	6.61	6.67	6.69	6.64	6.83
Salinity	ppt	-	-	-	-	-	-	-	-	3.1	4.5	-	-	-	-	-	-	1.5	2.3	-	-	-	-	-	-	-	-	-	-	-	-	3.9	4	-	-	-	-
Total dissolved Solids (TDS)	mg/L	3198	4042	4681	5171	5712	5962	5066	4934	5349	6827	3581	3966	7970	9945	3779	4904	1593	2069	1866	2431	1958	2414	3483	3918	<4980	<5100	<2980	<2990	<3770	<4040	1417*	1741	1079	1170	1887	1896
Total Suspended Solids (TSS)	mg/L	-	-	8.3	9.5	5.1	5.1	<3.0	<3.0	10	10	-	-	20.3	24.3	<3.0	<3.0	2.1	2.1	2.0	3.0	2.0	2.0	-	-	7.5	7.9	<3.0	<3.0	<3.0	<3.0	2.1	3.2	2.0	2.0	2.0	3.0
Turbidity	mg/L	-	-	-	-	-	-	2.6	2.7	3.4	3.4	-	-	-	-	2.0	2.1	1	1	1	1	1	1	-	-	-	-	-	-	0.96	0.99	0.5	0.5	0.7	1.2	0.5	0.5
Anions and Nutrients																																			
Ammonia, total (as N)	mg/L	-	-	<0.437	<0.443	<0.466	<0.466	0.510	0.517	0.121	0.121	-	-	<0.157	<0.158	0.129	0.129	0.076	0.078	<0.050	<0.050	0.058	0.063	-	-	0.169	0.173	0.103	0.106	0.0854	0.086	0.08	0.082	<0.050	<0.050	0.05	0.05
Bromide (Br)	mg/L	25	32	34	37	40	42	40	41	24	26	32	35	51	77	22	29	6	10	9	15	9	13	22	25	<32.5	<32.7	<17	<18.2	<17.7	<17.8	4	5	3	4	10	11
Chloride (Cl)	mg/L	2089	2641	2453	2697	2959	3119	3027	3111	1856	2072	2582	2860	3818	5722	1879	2405	844	1278	933	1276	904	1281	1714	1929	<2700	<2700	<1580	<1580	<1900	<1910	700	968	465	490	1092	1098
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	-	-	-	-	<14000	<14000	-	-	-	-	-	-	334	344	272	282	269	269	-	-	-	-	-	-	-	-	234	255	393	393	292	303
Fluoride (F)	mg/L	0.21	0.27	<1.0	<1.0	<1.0	<1.0	<1.00	<1.00	0.21	0.21	0.5	0.5	<1.0	<1.0	<1.00	<1.00	0.5	0.5	0.4	0.5	0.4	0.4	1.1	1.2	<1.0	<1.0	<0.80	<0.80	<1.00	<1.00	1.0	1.1	1.1	1.1	0.9	0.9
Kjeldahl nitrogen, total [TKN]	mg/L	-	-	-	-	-	-	0.892	0.900	<10	<10	-	-	-	-	0.325	0.349	0.324	0.449	0.250	0.290	0.400	0.490	-	-	-	-	-	-	0.294	0.295	0.660	0.750	0.320	0.360	0.290	0.390
Nitrates (NO3)	mg/L	0.063	0.079	<0.25	<0.25	<0.25	<0.25	<0.250	<0.250	<0.10	<0.10	0.06	0.06	<0.25	<0.25	<0.250	<0.250	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.016	0.018	<0.25	<0.25	<0.10	<0.10	<0.250	<0.250	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrites (NO2)	mg/L	0.010	0.013	<0.050	<0.050	<0.050	<0.050	<0.0500	<0.0500	0.02	0.02	0.011	0.012	<0.050	<0.050	<0.0500	<0.0500	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.038	0.043	<0.050	<0.050	<0.020	<0.020	<0.0500	<0.0500	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
phosphate, ortho-, dissolved (as P)	mg/L	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	0.0012
phosphorus, total	mg/L	0.021	0.026	<0.0043	<0.0043	<0.0020	<0.0020	<0.0020	<0.0020	0.01	0.01	0.011	0.012	0.01	0.01	0.008	0.010	0.004	0.008	<0.0010	<0.0010	<0.0010	<0.0010	0.049	0.055	0.01	0.01	0.003	0.005	0.0064	0.0067	0.005	0.011	0.002	0.003	0.0012	0.0013
Reactive Silica	mg/L	-	-	-	-	<50	<50	7.0	7.3	10.2	10.2	<0.1	<0.1	-	-	6.1	6.2	8.3	8.6	6.6	9.9	6.1	9.7	-	-	-	-	7.5	7.6	6.31	6.33	8.8	10.1	8.9	9.5	7.7	8.2
Sulphate (SO_4)	mg/L	-	-	<15	<15	<15	<15	<15.0	<15.0	2.1	2.1	-	-	<15	<15	<15.0	<15.0	0.85	<1.0	0.59	1.36	< 0.50	0.60	-	-	<15	<15	<6.0	<6.0	<15.0	<15.0	1.0	1.3	<0.50	<0.50	<0.50	<0.50
Total Organic Carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	<14000	<14000	-	-	-	-	-	-	324	334	293	293	249	259	-	-	-	-	-	-	-	-	397	408	383	393	282	282
Metals (dissolved)																																			
Aluminium (Al)	mg/L	<0.006	<0.006	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	0.003	0.001	0.002	-	-	0.0005	0.008	0.005	0.008	0.004	0.007	0.004	0.007	0.005	0.006	-	-	<0.0115	<0.0126	<0.0067	<0.0069	<0.0084	<0.0092	0.0036	<0.0083	<0.015	<0.015	0.0089	0.0120
Antimony (Sb)	mg/L	0.0002	0.0003	0.001	0.001	<0.0010	<0.0010	<0.00100	0.00045	<0.00042	0.00004	0.003	0.004	0.001	0.002	0.001	0.002	0.001	0.001	<0.0010	<0.0010	0.000	0.001	0.0026	0.0029	0.001	0.001	0.00001	0.0002	0.0001	0.0002	0.0005	0.0006	<0.0025	<0.0025	0.0003	0.0003
Arsenic (As)	mg/L	0.0050	0.0063	<0.0021	<0.0024	<0.0025	<0.0025	<0.00272	<0.00278	<0.00413	<0.00413	0.0031	0.0035	<0.0020	<0.0020	0.002	<0.00311	0.0026	<0.0032	0.00000	0.0016	0.0010	<0.00166	<0.0005	<0.0005	<0.0034	<0.0034	<0.002	<0.002	<0.00174	<0.00177	<0.00195	<0.00259	<0.00113	<0.00121	<0.00109	<0.00116
Barium (Ba)	mg/L	0.528	0.667	0.947	0.976	0.999	0.999	0.880	0.978	0.823	0.823	0.134	0.148	0.533	0.561	0.187	0.191	0.094	0.096	0.109	0.111	0.098	0.099	0.057	0.065	0.098	0.104	0.064	0.065	0.075	0.075	0.078	0.084	0.049	0.054	0.048	0.049
Beryllium (Be)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	<0.0005	<0.0005	<0.00100	<0.00100	<0.00010	<0.00010	<0.0005	<0.0005	<0.00050	<0.00050	<0.000100	<0.000100	<0.000050	<0.000050	<0.00020	<0.00020	< 0.00002	< 0.00002	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.000200	<0.000200	<0.000050	<0.000050	<0.00050	<0.00050	<0.000050	<0.000050
Boron (B)	mg/L	0.3	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.6	0.6	0.8	1.0	0.5	0.6	0.5	0.5	0.4	0.5	0.4	0.5	0.5	0.6	0.3	0.3	0.3	0.4	0.460	0.508	0.672	0.724	0.688	0.744	0.614	0.656
Cadmium (Cd)	mg/L	-	0.00003	<0.000050	<0.000050	0.00002	0.00002	<0.0000500	<0.0000500	<0.000050	<0.000050	<0.00002	<0.00002	<0.000050	<0.000050	<0.0000250	<0.0000250	<0.000025	<0.000025	<0.000020	<0.000020	< 0.000010	< 0.000010	<0.00002	<0.00002	<0.000050	<0.000050	<0.000010	<0.000010	<0.0000100	<0.0000100	<0.000025	<0.000025	<0.000050	<0.000050	<0.000025	<0.000025
Calcium (Ca)	mg/L	960	1213	1071	1164	1194	1275	1293	1368	885	993	1032	1143	1563	2125	846	1101	304	501	290	475	273	376	671	756	<1040	<1090	<521	<529	151	194	47	67	121	130	320	329
Chromium (Cr)	mg/L	0.007	0.009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00100	<0.00100	<0.00010	<0.00010	0.005	0.006	<0.00050	<0.00050	<0.00250	<0.00250	<0.00050	<0.00050	<0.0020	<0.0020	< 0.0002	< 0.0002	0.005	0.005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	0.00026	<0.00050	<0.00050	<0.0050	<0.0050	<0.00050	<0.00050
Cobalt (Co)	mg/L	0.002	0.002	<0.000050	<0.000050	<0.000050	<0.000050	<0.00100	<0.00100	<0.000349	<0.000349	0.002	0.002	<0.000050	<0.000050	<0.00050	<0.00050	<0.000097	<0.000102	<0.00040	<0.00040	<0.000026	<0.000028	0.001	0.001	<0.000050	<0.000050	<0.000050	<0.000050	<0.00020	<0.00020	<0.000188	<0.000255	<0.0010	<0.0010	<0.000025	<0.000025
Copper (Cu)	mg/L	0.005	0.007	<0.00050	<0.00050	<0.00020	<0.00020	<0.00200	<0.00200	<0.00050	<0.00050	0.0020	0.0023	<0.00050	<0.00050	<0.00100	<0.00100	<0.00025	<0.00025	<0.00040	<0.00040	< 0.00010	< 0.00010	0.0046	0.0052	<0.00050	<0.00050	<0.00020	<0.00020	<0.00040	<0.00040	<0.00025	<0.00025	<0.0010	<0.0010	<0.00025	<0.00025
Iron (Fe)	mg/L	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.8	0.8	0.1	0.2	0.1	0.1	<0.050	<0.050	0.014	0.026	0.001	0.015	0.006	0.018	0.1	0.1	<0.018	<0.019	<0.010	<0.010	<0.020	<0.020	<0.0071	<0.0217	<0.025	<0.025	<0.0005	0.015
Lead (Pb)	mg/L	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.000500	<0.000500	0.000171	0.000171	0.0027	0.003	<0.00030	<0.00030	<0.000250	<0.000250	<0.000025	<0.000025	<0.00040	<0.00040	0.000025	0.000077	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.000100	<0.000100	<0.000025	<0.000025	<0.0010	<0.0010	<0.00025	0.0001
Lithium (Li)	mg/L	0.3	0.4	0.1	0.2	0.1	0.2	0.2	0.3	0.1	<0.4	0.6	0.7	1.1	1.6	0.4	0.7	<0.124	<0.133	0.1	<0.113	0.1	<0.077	0.3	0.3	<0.749	<0.779	<0.156	<0.163	<0.334	<0.35	<0.43	<0.449	<0.153	<0.166	0.043	0.047
Magnesium (Mg)	mg/L	22	27	51	51	44	44	41	42	37	37	12	14	62	66	8	9	5	5	6	6	7	7	1	1	1	1	<1.0	<1.0	1	1	1	1	1	1	4	4
Manganese (Mn)	mg/L	0.04	0.05	0.11	0.12	0.11	0.11	0.10	0.10	0.12	0.12	0.02	0.02	0.09	0.10	0.03	0.03	<0.0147	<0.015	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.005	0.01	0.008	0.010	0.012	0.014	<0.0050	<0.0050	0.005	0.005
Dissolved Mercury (Hg)	mg/L	0.0005	0.0006	<0.0000010	<0.0000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	0.0031	0.0034	<0.0000010	<0.0000010	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	< 0.00001	< 0.00001	0.00217	0.00244	<0.0000010	<0.0000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo)	mg/L	0.02	0.02	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	<0.00086	<0.00089	<0.0020	<0.0020	0.000705	0.000736	0.02	0.02	0.02	0.02	0.005	0.005	0.002	0.002	0.003	0.004	<0.0050	<0.0050	0.001	0.001
Nickel (Ni)	mg/L	0.05	0.06	<0.00050	<0.00050	<0.00050	<0.00050	<0.00500	<0.00500	<0.00128	<0.00128	0.05	0.05	<0.00050	<0.00050	<0.00250	<0.00250	<0.00135	<0.00136	<0.0020	<0.0020	0.001	<0.00187	0.04	0.05	<0.00050	<0.00050	<0.00050	<0.00050	<0.00100	<0.00100	<0.00073	<0.00124	<0.0050	<0.0050	<0.00053	<0.00064
Phosphorus (P)	mg/L	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.500	<0.500	<0.02	<0.02	0.0027	0.0030	<0.00030	<0.00030	<0.250	<0.250	<0.01	<0.01	-	< 0.0010	0.0026	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.100	<0.100	<0.01	0.018	-	-	0.0012	0.0013
Potassium (K)	mg/L	8	10	<20	<20	11	11	1	3	<13.5	<13.5	38	42	67	67	22	35	3	10	1	8	0.7	6.3	16	18	<38	<40	<11.5	<11.8	<15.8	<17	<22.1	<23	<8.8	<9.9	4.1	4.2
Selenium (Se)	mg/L	0.1	0.1	<0.0020	<0.0020	<0.00050	<0.00050	<0.0025	<0.000658	<0.00177	<0.00177	0.12	0.13	<0.0020	<0.0020	<0.000250	0	<0.00020	<0.00020	<0.00027	<0.00032	< 0.00008	< 0.00008	0.08	0.09	<0.0020	<0.0020	<0.00074	<0.00081	<0.000275	<0.000364	<0.00020	<0.00020	<0.00137	<0.00266	<0.00020	<0.00020
Silicon (Si)	mg/L	4.0	5.1	3.2	3.3	3.2	3.2	3.4	3.5	3.1	3.1	4.2	4.6	2.5	2.6	3.0	3.1	3.5	3.7	2.8	2.9	3.1	3.2	4.3	4.8	3.5	3.5	3.5	3.6	3.2	3.3	3.0	3.3	3.2	3.3	2.66	2.71
Silver (Ag)	mg/L	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.000100	<0.000100	<0.000050	<0.000050	<0.0001	<0.0001	<0.00010	<0.00010	<0.000050	<0.000050	<0.000025	<0.000025	<0.000040	<0.000040	< 0.00001	< 0.00001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.000020	<0.000020	<0.000025	0.0000000	<0.00010	<0.00010	<0.000025	<0.000025
Sodium (Na)	mg/L	232	293	287	293	308	310	304	306	262	264	267	296	341	365	279	290	263	277	266	272	256	261	306	344	285	313	323	332	293	316	309	310	264	293	258	263
Strontium (Sr)	mg/L	13.2	16.7	14.3	16.0	16.0	17.2	20.1	21.8	14.1	15.8	18.9	20.9	27.7	36.5	13.0	18.8	4.7	7.6	4.6	7.3	3.9	6.0	12.7	14.2	<16.9	<17.2	<8.7	<8.8	<12.8	<13.2	1.7	3.0	0.5	1.6	5.0	5.2
Tellurium (Te)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	0.001	0.001	<0.00200	0.001	<0.00020	<0.00020	<0.0005	<0.0005	<0.00050	<0.00050	0.002	0.002	<0.00010	<0.00010	<0.0020	<0.0020	< 0.00004	< 0.00004	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	0.001	0.001	0.00011	0.00014	<0.0050	<0.0050	<0.00010	<0.00010
Thallium (Tl)	mg/L	<0.0008	<0.0008	<0.000050	<0.000050	<0.000050	<0.000050	<0.000100	<0.000100	<0.000020	<0.000020	<0.0008	<0.0008	<0.000050	<0.000050	<0.000050	<0.000050	<0.000010	<0.000010	<0.000020	<0.000020	< 0.000004	< 0.000004	<0.0008	<0.0008	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000010	<0.000010	<0.000050	<0.000050	<0.000010	<0.000010
Tin (Sn)	mg/L	0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00100	<0.0020	<0.0020	0.0011	0.0012	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010	<0.0010	<0.010	<0.010	< 0.0004	< 0.0004	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.0010	<0.0010	<0.025	<0.025	<0.00010	<0.00010
Titanium (Ti)	mg/L	0.3	0.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.00150	<0.00300	<0.0050	<0.0050	0.3	0.4	<0.0050	<0.0050	<0.00150	<0.00150	<0.0025	<0.0025	<0.010	<0.010	< 0.001	< 0.001	0.2	0.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.00150	<0.00150	<0.0025	<0.0025	<0.025	<0.025	<0.0025	<0.0025
Uranium (U)	mg/L	<0.001	<0.001	0.02	0.03	0.03	0.03	<0.000050	<0.000100	<0.000020	<0.000020	<0.001	<0.001	0.05	0.05	0.000	0.000	<0.000010	<0.000010	<0.00020	<0.00020	< 0.000004	< 0.000004	0.06	0.07	0.09	0.09	<0.000050	<0.000050	<0.000020	0.000024	0.000	0.000023	<0.00050	<0.00050	0.000019	0.000027
Vanadium (V)	mg/L	0.002	0.002	<0.000050	<0.000050	<0.000050	<0.000050	<0.00250	<0.00500	<0.0020	<0.0020	<0.0005	<0.0005	<0.000050	<0.000050	<0.00250	<0.00250	<0.0010	<0.0010	<0.010	<0.010	< 0.0004	< 0.0004	<0.001	<0.001	0.00020	0.00020	<0.00050	<0.00050	<0.00100	<0.00100	<0.0010	<0.0010	<0.025	<0.025	<0.0010	<0.0010
Zinc (Zn)	mg/L	1.3	1.7	<0.00050	<0.00050	<0.00050	<0.00050	0.026	0.026	2.2	2.2	0.63	0.70	<0.00050	<0.00050	0.010	0.014	0.018	0.018	<0.010	0.026	0.008	0.033	<0.0005	<0.0005	<0.00050	<0.00050	0.004	0.005	<0.0020	<0.0020	0.002	0.058	<0.025	<0.025	0.001	0.103
Radioactive Ions																																			
Radium (Ra226)	Bq/L	0.43	0.52	-	-	0.99	0.99	0.72	1.20	0.28	0.28	0.13	0.13	-	-	0.31	0.38	0.19	0.21	0.19	0.22	0.19	0.20	0.15	0.16	-	-	0.21	0.22	0.30	0.36	0.32	0.40	0.20	0.22	0.17	0.18
Hydrocarbons																																			
Hydrocarbons (C10-C50)	mg/L	0.2	0.2	-	-	<0.52	<0.52	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	0.27	0.31	-	-	<0.52	<0.52	-	-	-	-	-	-	-	-
Cyanide																																			
Cyanide - BV Lab	mg/l	-	-	-	-	-	-	-	-	<0.0050	<0.0050	-	-	-	-	-	-	<0.00050	<0.00050	0.00111	0.00191	<0.0005	<0.0005	-	-	-	-	-	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide - SGS Lab	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01
Cyanide (free) - BV Lab	mg/l	-	-	-	-	-	-	-	-	<0.0022	<0.0022	-	-	-	-	-	-	<0.0013	<0.0013	<0.0020	<0.0020	<0.0020	0.0023	-	-	-	-	-	-	-	-	<0.0022	<0.0022	<0.0020	<0.0020	<0.0020	0.0021
Cyanide (free) - SGS Lab	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005
Cyanide (WAD) - BV Lab	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.00050	<0.00050	<0.00050	<0.00050	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide (WAD) - SGS Lab	mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01

Notes:
Underline denotes estimated formation water quality (Golder 2016a)
- denotes parameter was not analyzed
* denotes calculated TDS using calculated Formation water dissolved constituents (mg/L). Corrected laboratory measured TDS result biased low. Calculated reported result below detection limit assumed to be negligible (zero) in the calculated TDS value.
Less than laboratory result is report for calculated formation water that yields negative values.
2019 Port 4 corrected sample was not representative of Formation groundwater quality due to elevated electrical conductivity and fluorescein content in sample (120 ppb, 23% drill fluid remaining)
2021 Port 6 water samples contain mixture of Formation water and Westbay well casing fluid. Higher degree of uncertainty in calculated Formation water due to presence of casing water and higher fluorecein content in sample (95 ppb, 19% drill fluid remaining)

Table D-3
Westbay System AMQ16-626 Raw Groundwater Sample Whale Tail Lake Talik
Agnico Eagle Mines Limited, Whale Tail Mine, Nunavut

Location		AMQ16-626 PORT 3		AMQ16-626 PORT 4	
Date		15-Sep-2023	15-Sep-2023	21-Sep-2023	21-Sep-2023
Golder Sample ID		PORT-3A	PORT-3B	PORT-4A	PORT-4B
Sampling interval vertical depth (metres)		381.3 - 392.7		349.3 - 359.1	
Average Field measured parameters	**Units**				
Fluorescein Concentration	ppb	4.31		18	
Drilling Fluid Proportion	-	0.01		0.04	
Formation Water Proportion	-	0.99		0.96	
Electrical Conductivty	uS/cm	2930		2720	
Specific Conductance	uS/cm	3780		3590	
Total Dissolved Solids (TDS)	mg/L	2454		2330	
pH	S.U.	7.1		7.4	
Salinity	ppt	2.1		1.9	
Conventional Parameters					
Alkalinity	mg $CaCO_3$/L	22	22	9	9.4
Alkalinity, bicarbonate (as CaCO3)	mg $CaCO_3$/L	22	22	9	9.4
Alkalinity, carbonate (as CaCO3)	mg CaCO3/L	<1.0	<1.0	< 1.0	< 1.0
Electrical Conductivty	uS/cm	4060	3950	3610	3650
Hardness, Calcium Carbonate	mg/L	1100	1080	1110	1100
pH	-	6.86	6.67	6.42	6.35
Sodium Adsorption Ratio	-	-	-	-	-
Total dissolved solids (lab)	mg/L	2210	2210	2400	2430
Total Suspended Solids (TSS)	mg/L	2	3	2	2
Turbidity	NTU	0.5	0.5	1	0.7
Anions and Nutrients					
Ammonia, total (as N)	mg/L	0.05	0.05	0.058	0.063
Bromide (Br)	mg/L	13.6	13	12.8	12.9
Chloride (Cl)	mg/L	1300	1300	1200	1300
Dissolved Organic Carbon	mg/L	290	300	260	260
Fluoride (F)	mg/L	0.92	0.89	0.39	0.37
Kjeldahl nitrogen, total [TKN]	mg/L	0.39	0.29	0.4	0.49
Nitrate + nitrite (as N)	mg/L	<0.10	<0.10	<0.10	<0.10
Nitrates (NO3)	mg/L	<0.10	<0.10	<0.10	<0.10
Nitrites (NO2)	mg/L	<0.010	<0.010	<0.010	<0.010
Phosphate, ortho-, dissolved (as P)	mg/L	<0.0010	0.0012	< 0.0010	< 0.0010
Phosphorus, total	mg/L	0.0012	0.0013	0.0026	< 0.0010
Silicate (as SiO2)	mg/L	8.2	7.7	9.7	6.1
Sulphate (SO4)	mg/L	<0.50	<0.50	< 0.50	0.58
Total Organic Carbon	mg/L	280	280	250	240
Metals (dissolved)					
Aluminium (Al)	mg/L	0.0101	0.0132	0.0067	0.0063
Antimony (Sb)	mg/L	0.00038	0.00038	0.000593	0.000612
Arsenic (As)	mg/L	0.00116	0.00109	0.00166	0.00159
Barium (Ba)	mg/L	0.0491	0.0483	0.0956	0.0947
Beryllium (Be)	mg/L	<0.000050	<0.000050	< 0.000020	< 0.000020
Boron (B)	mg/L	0.685	0.643	0.483	0.489
Cadmium (Cd)	mg/L	<0.000025	<0.000025	< 0.000010	< 0.000010
Calcium (Ca)	mg/L	436	427	432	429
Chromium (Cr)	mg/L	<0.00050	<0.00050	< 0.00020	< 0.00020
Cobalt (Co)	mg/L	<0.000025	<0.000025	0.000028	0.000026
Copper (Cu)	mg/L	<0.00025	<0.00025	< 0.00010	< 0.00010
Iron (Fe)	mg/L	<0.0005	0.0211	0.0161	0.0195
Lead (Pb)	mg/L	<0.00025	0.000096	0.000074	0.000024
Lithium (Li)	mg/L	0.136	0.132	0.0763	0.077
Magnesium (Mg)	mg/L	3.66	3.49	6.67	6.53
Manganese (Mn)	mg/L	0.0053	0.00513	0.0179	0.0175
Dissolved Mercury (Hg)	mg/L	<0.00001	<0.00001	< 0.00001	< 0.00001
Molybdenum (Mo)	mg/L	0.00093	0.00093	0.00071	0.00068
Nickel (Ni)	mg/L	0.00053	0.00064	0.00187	0.00181
Potassium (K)	mg/L	8.67	8.5	7.49	7.4
Selenium (Se)	mg/L	<0.00020	<0.00020	< 0.000080	< 0.000080
Silicon (Si)	mg/L	2.69	2.65	3.02	3.05
Silver (Ag)	mg/L	<0.000025	<0.000025	< 0.000010	< 0.000010
Sodium (Na)	mg/L	263	258	255	250
Strontium (Sr)	mg/L	6.86	6.64	6.32	6.29
Tellurium (Te)	mg/L	<0.00010	<0.00010	< 0.000040	< 0.000040
Thallium (Tl)	mg/L	<0.000010	<0.000010	< 0.0000040	< 0.0000040
Tin (Sn)	mg/L	<0.00010	<0.00010	< 0.00040	< 0.00040
Titanium (Ti)	mg/L	<0.0025	<0.0025	< 0.0010	< 0.0010
Uranium (U)	mg/L	0.000019	0.000027	< 0.0000040	< 0.0000040
Vanadium (V)	mg/L	<0.0010	<0.0010	< 0.00040	< 0.00040
Zinc (Zn)	mg/L	0.00071	0.102	0.0317	0.00757
Metals (total)					
Aluminum	mg/l	0.0156	0.0134	0.009	0.0087
Antimony	mg/l	0.00071	0.00036	0.000624	0.000604
Arsenic	mg/l	0.00161	0.00108	0.00191	0.00183
Barium	mg/l	0.0529	0.0493	0.093	0.095
Beryllium	mg/l	<0.000050	<0.000050	<0.000020	<0.000020
Boron	mg/l	0.683	0.668	0.471	0.48
Cadmium	mg/l	<0.000025	<0.000025	<0.000010	<0.000010
Calcium	mg/l	487	439	422	423
Chromium	mg/l	<0.00050	<0.00050	0.0003	<0.00020
Cobalt	mg/l	0.000037	<0.000025	0.000034	0.000031
Copper	mg/l	0.00054	<0.00025	<0.00010	<0.00010
Iron	mg/l	0.0198	0.0131	0.0339	0.0353
Lead	mg/l	0.000139	0.000349	0.000044	0.00002
Lithium	mg/l	0.171	0.14	0.0761	0.0768

Table D-3
Westbay System AMQ16-626 Raw Groundwater Sample Whale Tail Lake Talik
Agnico Eagle Mines Limited, Whale Tail Mine, Nunavut

Location		AMQ16-626 PORT 3		AMQ16-626 PORT 4	
Date		**15-Sep-2023**	**15-Sep-2023**	**21-Sep-2023**	**21-Sep-2023**
Golder Sample ID		**PORT-3A**	**PORT-3B**	**PORT-4A**	**PORT-4B**
Sampling interval vertical depth (metres)		**381.3 - 392.7**		**349.3 - 359.1**	
Magnesium	mg/l	3.19	3.56	6.59	6.63
Manganese	mg/l	0.00674	0.00513	0.0177	0.0176
Mercury	mg/l	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/l	0.00112	0.00088	0.00072	0.00066
Nickel	mg/l	0.00633	0.00065	0.00205	0.002
Potassium	mg/l	0.0152	0.00876	7.29	7.38
Selenium	mg/l	<0.00020	<0.00020	<0.000080	<0.000080
Silicon	mg/l	2.81	2.74	3.04	2.96
Silver	mg/l	<0.000025	<0.000025	<0.000010	<0.000010
Sodium	mg/l	268	266	251	250
Strontium	mg/l	7.48	6.82	6.2	6.25
Tellurium	mg/l	<0.00010	<0.00010	0.000049	<0.000040
Thallium	mg/l	<0.000010	<0.000010	<0.0000040	<0.0000040
Tin	mg/l	<0.00010	<0.00010	<0.00040	<0.00040
Titanium	mg/l	<0.0025	<0.0025	<0.0010	<0.0010
Uranium	mg/l	0.000019	0.000026	<0.0000040	<0.0000040
Vanadium	mg/l	<0.0010	<0.0010	<0.00040	<0.00040
Zinc	mg/l	0.254	0.104	0.198	0.197
Radioactive Ions					
Radium (Ra 226)	Bq/L	0.17	0.18	0.18	0.19
Cyanide					
Cyanide - BV Lab	mg/l	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide - SGS Lab	mg/l	<0.01	-	<0.01	-
Cyanide (free) - BV Lab	mg/l	<0.0020	0.0021	<0.0020	0.0023
Cyanide (free) - SGS Lab	mg/l	<0.005	-	<0.005	-
Cyanide (WAD) - BV Lab	mg/l	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide (WAD) - SGS Lab	mg/l	<0.01	-	<0.01	-
QA/QC					
Calculated TDS	mg/L	1887	1896	1958	2414
Calculated TDS VS Lab Measured TDS	%	106%	107%	82%	99%

Table D-4
QA/QC of Westbay System AMQ16-626 Raw Groundater Sample Whale Tail Lake Talik
Agnico Eagle Mines Limited, Whale Tail Mine, Nunavut

Bureau Veritas ID			XDA433	XDA434			XBM703	XBM704			XDA435	XDA436
Sampling Date			9/21/2023	9/21/2023			9/15/2023	9/15/2023			9/21/2023	9/21/2023
COC Number			772535	772535			768576	768576			772535	772535
Sample ID	UNITS	MDL	Port 4-A	Port 4-B	RPD	MDL	Port 3-A	Port 3-B	RPD	MDL	FB	TB
Calculated Parameters												
Total Ammonia (as NH3)	mg/L	0.061	<0.061	<0.061	--	0.0061	0.05	0.05	0%	0.061	<0.061	<0.061
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	1	9	9.4	4%	1	22	22	0%	1	5.8	<1.0
Carb. Alkalinity (calc. as CaCO3)	mg/L	1	<1.0	<1.0	--	1	<1.0	<1.0	--	1	<1.0	<1.0
Total Hardness (CaCO3)	mg/L	0.5	1110	1100	1%	0.5	1100	1080	2%	0.5	<0.50	<0.50
Inorganics												
Total Ammonia-N [2]	mg/L	0.005	0.058	0.063	8%	0.005	0.041	0.041	0%	0.005	<0.005	<0.005
		0.05	<0.05	<0.05	--				<MDL	0.05	<0.05	<0.05
Alkalinity (Total as CaCO3)	mg/L	1	9	9.4	4%	1	22	22	0%	1	5.9	<1.0
Bromide (Br-)	mg/L	0.1	12.8	12.9	1%	0.1	13.6	13	5%	0.01	<0.010	<0.010
Conductivity	mS/cm	0.001	3.61	3.65	1%	0.001	4.06	3.95	3%	0.001	0.127	0.001
Dissolved Chloride (Cl-)	mg/L	13	1200	1300	8%	13	1300	1300	0%	0.5	<0.50	<0.50
Dissolved Organic Carbon	mg/L	2	260	260	0%	2	290	300	3%	0.4	<0.40	<0.40
Dissolved Sulphate (SO4)	mg/L	0.5	<0.50	0.58	--	0.5	<0.50	<0.50	--	0.5	<0.50	<0.50
Fluoride (F-)	mg/L	0.1	0.39	0.37	<MDL	0.1	0.92	0.89	3%	0.1	0.24	<0.10
Free Cyanide (CN)	mg/L	0.0020	<0.0020	0.0023	--	0.0020	<0.0020	<0.0021	--	0.0020	<0.0020	<0.0020
Free Cyanide (CN) - SGS Lab [3]	mg/L	0.0050	<0.005	--	--	0.0050	<0.005	--	--	--	--	--
Nitrate (N)	mg/L	0.1	<0.10	<0.10	--	0.1	<0.10	<0.10	--	0.1	<0.10	<0.10
Nitrate + Nitrite (N)	mg/L	0.1	<0.10	<0.10	--	0.1	<0.10	<0.10	--	0.1	<0.10	<0.10
Nitrite (N)	mg/L	0.01	<0.010	<0.010	--	0.01	<0.010	<0.010	--	0.01	<0.010	<0.010
Orthophosphate (P)	mg/L	0.001	< 0.0010	< 0.0010	--	0.001	<0.0010	0.0012	--	0.001	<0.0010	<0.0010
pH	pH		6.42	6.35	1%		6.86	6.67	3%		7.54	5.78
Reactive Silica (SiO2)	mg/L	0.05 / 0.1	9.7	6.1	--	0.1	8.2	7.7	6%	0.05	<0.050	<0.050
Total Cyanide (CN)	mg/L	0.0005	< 0.00050	< 0.00050	--	0.0005	<0.00050	<0.00050	--	0.0005	<0.00050	<0.00050
Total Cyanide (CN) - SGS Lab [3]	mg/L	0.01	<0.01	--	--	0.01	<0.01	--	--	--	--	--
Total Dissolved Solids	mg/L	10	2400	2430	1%	10	2210	2210	0%	10	<10	<10
Total Kjeldahl Nitrogen (TKN)	mg/L	0.1	0.4	0.49	<MDL	0.2	0.39	0.29	<MDL	0.1	<0.10	0.10
Total Organic Carbon (TOC)	mg/L	2	260	260	0%	2	280	280	0%	0.4	<0.40	<0.40
Total Phosphorus (P)	mg/L	0.001	0.0026	< 0.0010	--	0.001	0.0012	0.0013	<MDL	0.001	<0.0010	<0.0010
Total Suspended Solids	mg/L	1	2	2	<MDL	1	2	3	<MDL	50	<50	<50
Turbidity	NTU	0.1	1	0.7	35.3%	0.1	0.5	0.5	0%	0.1	<0.1	<0.1
WAB Cyanide (CN)	mg/L	0.0005	<0.00050	<0.00050	--	0.0005	<0.00050	<0.00050	--	0.0005	<0.00050	<0.00050
WAB Cyanide (CN) - SGS Lab [3]	mg/L	0.01	<0.01	--	--	0.01	<0.01	--	--	--	--	--
Dissolved Metals												
Dissolved Aluminum (Al)	mg/L	0.001	0.0067	0.0063	<MDL	0.0025	0.0101	0.0132	>MDL	0.0005	0.0013	0.00063
Dissolved Antimony (Sb)	mg/L	0.00004	0.000593	0.000612	3%	0.0001	0.00038	0.00038	<MDL	0.00002	<0.000020	<0.000020
Dissolved Arsenic (As)	mg/L	0.00004	0.00166	0.00159	4%	0.0001	0.00116	0.00109	6%	0.00002	<0.000020	<0.000020
Dissolved Barium (Ba)	mg/L	0.00004	0.0956	0.0947	1%	0.0001	0.0491	0.0483	2%	0.00002	<0.000020	<0.000020
Dissolved Beryllium (Be)	mg/L	0.00002	<0.000020	<0.000020	--	0.00005	<0.000050	<0.000050	--	0.00001	<0.000010	<0.000010
Dissolved Bismuth (Bi)	mg/L	0.00001	<0.000010	<0.000010	--	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	<0.0000050
Dissolved Boron (B)	mg/L	0.02	0.483	0.489	1%	0.05	0.685	0.643	6%	0.01	<0.01	<0.01
Dissolved Cadmium (Cd)	mg/L	0.00001	<0.000010	<0.000010	--	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	<0.0000050
Dissolved Calcium (Ca)	mg/L	0.1	432	429	1%	0.25	436	427	2%	0.05	<0.050	<0.050
Dissolved Chromium (Cr)	mg/L	0.0002	<0.00020	<0.00020	--	0.0005	<0.00050	<0.00050	--	0.0001	0.00011	<0.00010
Dissolved Cobalt (Co)	mg/L	0.00001	0.000028	0.000026	<MDL	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	<0.0000050
Dissolved Copper (Cu)	mg/L	0.0001	<0.00010	<0.00010	--	0.00025	<0.00025	<0.00025	--	0.00005	<0.000050	<0.000050
Dissolved Iron (Fe)	mg/L	0.002	0.0161	0.0195	<MDL	0.005	<0.0005	0.0211	--	0.001	0.001	<0.0010
Dissolved Lead (Pb)	mg/L	0.00001	0.000074	0.000024	>MDL	0.00003	<0.00025	0.000096	--	5E-06	<0.0000050	<0.0000050
Dissolved Lithium (Li)	mg/L	0.001	0.0763	0.077	1%	0.0025	0.136	0.132	3%	0.0005	<0.00050	<0.00050
Dissolved Magnesium (Mg)	mg/L	0.1	6.67	6.53	2%	0.25	3.66	3.49	5%	0.05	<0.050	<0.050
Dissolved Manganese (Mn)	mg/L	0.0001	0.0179	0.0175	2%	0.00025	0.0053	0.00513	3%	0.00005	<0.000050	<0.000050
Dissolved Mercury (Hg)	mg/L	0.00001	<0.00001	<0.00001	--	0.00001	<0.00001	<0.00001	--	0.00001	<0.00001	<0.00001
Dissolved Molybdenum (Mo)	mg/L	0.0001	0.00071	0.00068	<MDL	0.00025	0.00093	0.00093	<MDL	0.00005	<0.000050	<0.000050
Dissolved Nickel (Ni)	mg/L	0.00004	0.00187	0.00181	3%	0.0001	0.00053	0.00064	19%	0.00002	<0.000020	<0.000020
Dissolved Potassium (K)	mg/L	0.1	7.49	7.4	1%	0.25	8.67	8.5	2%	0.05	<0.050	<0.050
Dissolved Selenium (Se)	mg/L	0.00008	<0.000080	<0.000080	--	0.0002	<0.00020	<0.00020	--	0.00004	<0.000040	<0.000040
Dissolved Silicon (Si)	mg/L	0.1	3.02	3.05	1%	0.25	2.69	2.65	1%	0.05	<0.05	<0.05
Dissolved Silver (Ag)	mg/L	0.00001	<0.000010	<0.000010	--	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	0.000005
Dissolved Sodium (Na)	mg/L	0.1	255	250	2%	0.25	263	258	2%	0.05	<0.050	<0.050
Dissolved Strontium (Sr)	mg/L	0.0001	6.32	6.29	0%	0.00025	6.86	6.64	3%	0.00005	<0.000050	<0.000050
Dissolved Sulphur (S)	mg/L	6	<6.0	<6.0	--	15	<15	<15	--	3	<3.0	<3.0
Dissolved Tellurium (Te)	mg/L	0.00004	<0.000040	<0.000040	--	0.0001	<0.00010	<0.00010	--	0.00002	<0.000020	<0.000020
Dissolved Thallium (Tl)	mg/L	4E-06	<0.0000040	<0.0000040	--	0.00001	<0.000010	<0.000010	--	2E-06	<0.0000020	<0.0000020
Dissolved Tin (Sn)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.00010	<0.00010	--	0.0002	<0.00020	<0.00020
Dissolved Titanium (Ti)	mg/L	0.001	<0.0010	<0.0010	--	0.0025	<0.0025	<0.0025	--	0.0005	<0.00050	<0.00050
Dissolved Uranium (U)	mg/L	4E-06	<0.0000040	<0.0000040	--	0.00001	0.000019	0.000027	<MDL	2E-06	<0.0000020	<0.0000020
Dissolved Vanadium (V)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.00020
Dissolved Zinc (Zn)	mg/L	0.0002	0.0317	0.00757	123%	0.0005	0.00071	0.102	>MDL	0.0001	0.00025	0.00033
Total Metals												
Total Aluminum (Al)	mg/L	0.001	0.009	0.0087	3%	0.0025	0.0156	0.0134	15%	0.0005	<0.00050	<0.00050
Total Antimony (Sb)	mg/L	0.00004	0.000624	0.000604	<MDL	0.0001	0.00071	0.00036	>MDL	0.00002	<0.000020	<0.000020
Total Arsenic (As)	mg/L	0.00004	0.00191	0.00183	<MDL	0.0001	0.00161	0.00108	39%	0.00002	<0.000020	<0.000020
Total Barium (Ba)	mg/L	0.00004	0.093	0.095	2%	0.0001	0.0529	0.0493	7%	0.00002	<0.000020	<0.000020
Total Beryllium (Be)	mg/L	0.00002	<0.000020	<0.000020	--	0.00005	<0.000050	<0.000050	--	0.00001	<0.000010	<0.000010
Total Bismuth (Bi)	mg/L	0.00001	<0.000010	<0.000010	--	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	<0.0000050
Total Boron (B)	mg/L	0.02	0.471	0.48	2%	0.05	0.683	0.668	2%	0.01	<0.01	<0.01
Total Cadmium (Cd)	mg/L	0.00001	<0.000010	<0.000010	--	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	<0.0000050
Total Calcium (Ca)	mg/L	0.1	422	423	0%	0.25	487	439	10%	0.05	<0.050	<0.050
Total Chromium (Cr)	mg/L	0.0002	0.0003	<0.00020	--	0.0005	<0.00050	<0.00050	--	0.0001	<0.00010	<0.00010
Total Cobalt (Co)	mg/L	0.00001	0.000034	0.000031	<MDL	0.000025	0.000037	<0.000025	--	5E-06	<0.0000050	<0.0000050
Total Copper (Cu)	mg/L	0.0001	<0.00010	<0.00010	--	0.00025	0.00054	<0.00025	--	0.00005	<0.000050	<0.000050
Total Iron (Fe)	mg/L	0.002	0.0339	0.0353	4%	0.005	0.0198	0.0131	>MDL	0.001	<0.0010	<0.0010
Total Lead (Pb)	mg/L	0.00001	0.000044	0.00002	<MDL	0.000025	0.000139	0.000349	86%	5E-06	<0.0000050	<0.0000050
Total Lithium (Li)	mg/L	0.001	0.0761	0.0768	1%	0.0025	0.171	0.14	20%	0.0005	<0.00050	<0.00050
Total Magnesium (Mg)	mg/L	0.1	6.59	6.63	1%	0.25	3.19	3.56	11%	0.05	<0.050	<0.050
Total Manganese (Mn)	mg/L	0.0001	0.0177	0.0176	1%	0.00025	0.00674	0.00513	27%	0.00005	<0.000050	<0.000050
Mercury (Hg)	mg/L	0.00001	<0.00001	<0.00001	--	0.00001	<0.00001	<0.00001	--	0.00001	<0.00001	<0.00001

Table D-4
QA/QC of Westbay System AMQ16-626 Raw Groundater Sample Whale Tail Lake Talik
Agnico Eagle Mines Limited, Whale Tail Mine, Nunavut

Bureau Veritas ID			XDA433	XDA434			XBM703	XBM704			XDA435	XDA436
Sampling Date			9/21/2023	9/21/2023			9/15/2023	9/15/2023			9/21/2023	9/21/2023
COC Number			772535	772535			768576	768576			772535	772535
Sample ID	UNITS	MDL	Port 4-A	Port 4-B	RPD	MDL	Port 3-A	Port 3-B	RPD	MDL	FB	TB
Calculated Parameters												
Total Molybdenum (Mo)	mg/L	0.0001	0.00072	0.00066	<MDL	0.00025	0.00112	0.00088	<MDL	0.00005	<0.000050	<0.000050
Total Nickel (Ni)	mg/L	0.00004	0.00205	0.002	<MDL	0.0001	0.00633	0.00065	163%	0.00002	<0.000020	<0.000020
Total Potassium (K)	mg/L	0.1	7.29	7.38	1%	0.25	0.0152	0.00876	<MDL	0.05	<0.050	<0.050
Total Selenium (Se)	mg/L	0.00008	<0.000080	<0.000080	--	0.0002	<0.00020	<0.00020	--	0.00004	<0.000040	<0.000040
Total Silicon (Si)	mg/L	0.1	3.04	2.96	3%	0.25	2.81	2.74	3%	0.05	<0.05	<0.05
Total Silver (Ag)	mg/L	0.00001	<0.000010	<0.000010	--	0.000025	<0.000025	<0.000025	--	5E-06	<0.0000050	<0.0000050
Total Sodium (Na)	mg/L	0.1	251	250	0%	0.25	268	266	1%	0.05	<0.050	<0.050
Total Strontium (Sr)	mg/L	0.0001	6.2	6.25	1%	0.00025	7.48	6.82	9%	0.00005	<0.000050	<0.000050
Total Sulphur (S)	mg/L	6	<6.0	<6.0	--	15	<0.015	<0.015	--	3	<3.0	<3.0
Total Tellurium (Te)	mg/L	0.00004	0.000049	<0.000040	--	0.0001	<0.00010	<0.00010	--	0.00002	<0.000020	<0.000020
Total Thallium (Tl)	mg/L	4E-06	<0.0000040	<0.0000040	--	0.00001	<0.000010	<0.000010	--	2E-06	<0.0000020	<0.0000020
Total Tin (Sn)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.00010	<0.00010	--	0.0002	<0.00020	<0.00020
Total Titanium (Ti)	mg/L	0.001	<0.0010	<0.0010	--	0.0025	<0.0025	<0.0025	--	0.0005	<0.00050	<0.00050
Total Uranium (U)	mg/L	4E-06	<0.0000040	<0.0000040	--	0.00001	0.000019	0.000026	<MDL	2E-06	<0.0000020	<0.0000020
Total Vanadium (V)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.00020
Total Zinc (Zn)	mg/L	0.0002	0.198	0.197	1%	0.0005	0.254	0.104	84%	0.0001	0.00025	0.00028
Radionuclide												
Radium-226	Bq/L	0.005	0.18	0.19	5%	0.005	0.17	0.18	6%	0.005	<0.0050	<0.0050

Notes:

MDL = method detection limit

RPD = relative percent difference

N/A = Not applicable

Shaded denotes RPD value exceeds 20% or duplicate outside of MDL tolerance (both samples are between the MDL and 5 times the MDL)

-- denotes not calculated (one or both result below MDL)

(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

(2) Ammonia Nitrogen (as N): one or more duplicate values were found.

(3) In addition to the field and trip blank analyses, an additional sample of Port 3 and Port 4 waters was collected for analysis of free, WAD and total cyanide at SGS laboratory.

ATTACHMENT B

2023 Thermal Monitoring Report (prepared by Agnico Eagle) and Thermistor PSW3-DDH1 Data

AGNICO EAGLE

WHALE TAIL MINE

Thermal Monitoring Report 2023

In Accordance with
Project Certificate No. 008, T&C 14

Prepared by:
Agnico Eagle Mines Limited – Meadowbank Division

January 2024

TABLE OF CONTENTS

1 INTRODUCTION

Agnico Eagle Mines Limited – Meadowbank Division (Agnico Eagle) is developing the Whale Tail Mine (Project), a satellite deposit located on the Amaruq property, to continue mine operations and milling at Meadowbank Mine.

This document presents the Thermal Monitoring Report including the following mine facilities and natural locations as described in the Thermal Monitoring Plan:

- Whale Tail Waste Rock Storage Facility (WRSF) and IVR WRSF
- Water management facilities including Whale Tail Dike, Mammoth Dike, IVR Dike, WRSF Dike, and the Whale Tail and IVR Attenuation Ponds
- Whale Tail Pit and IVR Pit

The Thermal Monitoring Report provides the instrumentation data and their interpretation. Refer to the Thermal Monitoring Plan for a general description of the different facilities, the anticipated impact of operation of the facilities on the permafrost, and the general guidelines that are used to define instrumentation needs for each facility.

2 AVAILABLE DATA

There are currently 84 active thermistors at the Whale Tail Mine site.

The location, installation summary, and status of all the thermistors installed within the Whale Tail Mine site are presented in the table in Appendix A. Figure 1 shows locations of active thermistors. Data are collected from the thermistors by data loggers every three hours or by using manual readout units.

Results of active thermistors are presented in Appendix A.

3 THERMAL MONITORING RESULT

This section presents a summary of the expected thermal effects as well as interpretation of the instrumentation data gathered for the reporting period.

3.1 WASTE ROCK STORAGE FACILITY

3.1.1 Expected Thermal Effects on Permafrost

Construction of the WRSF on the permafrost is expected to result in aggradation of permafrost into the pile. The permafrost under the pile would remain, but temperatures in the upper permafrost zone are expected to evolve towards a thermal equilibrium established with the active layer and zero-amplitude zone moving upwards within the waste rock pile. Convective cooling is common in waste rock material and is expected to promote freeze-back within the pile.

The waste rock pile itself is expected to freeze back with time and have an active layer formed in the upper portion (O'Kane, 2021). Climate change in the long term is expected to extend the depth of the active layer in the pile, but the thick waste rock pile will constitute a protection to the underlying permafrost. If heat generation occurs from the oxidation of sulphide-bearing minerals within the pile, the freeze-back process would be delayed. Depending on the location of the heat generation source, the upper portion of the permafrost foundation could be impacted.

3.1.2 Thermal Monitoring Results

For the thermistors installed in the foundation of the Whale Tail WRSF, the instrumentation data is showing thermal behaviour along the expected trend (permafrost aggradation).

The instruments installed at mid-elevation in the PAG of the first bench are covered in waste rock and lots of beads have been lost especially in the NPAG. The available data indicate that the active layer did not reach the PAG waste rock.

For the instruments located in the second instrumented cross section installed at 40 m above the ground elevation on top of the second bench, two years of data have now been collected. The available data indicates that the active layer did not reach the PAG waste rock.

In late 2022 and early 2023, ten new thermistors were installed in the foundation of the IVR WRSF. Data collection has only been ongoing since installation, so it is too early to assess the extent of the active layer. The 2024 Thermal Monitoring Report will assess this as two years of data will have been collected allowing enough time for the instruments to stabilize and show trends.

3.2 WATER MANAGEMENT FACILITIES

3.2.1 Expected Thermal Effects on Permafrost

The Whale Tail Dike is constructed within a lake, overlaying an open talik. The construction of the Whale Tail Dike is expected to have a cooling effect on the underlying ground due to exposure to lower temperature than lake water. Minimal effects to the permafrost at the abutment areas are expected.

Following lake dewatering and the beginning of operations, natural ground in the downstream of the Whale Tail Dike are expected to freeze back progressively. Upstream of the dike, the lake bed and underlying talik is expected to remain unfrozen.

After the dike is breached in the final stages of closure, the Whale Tail Lake will be restored, causing frozen zones located downstream of the dike to thaw, progressively restoring the original lake talik.

The other dewatering dike areas are expected to have similar thermal impacts on the permafrost associated with construction, operation, and closure of the dikes.

The WRSF Dike will periodically contain a pond formed from runoff water flowing at the toe of the WRSF facility. Depending on pond conditions (volume, temperature, duration before pumping) there would be possible thawing of a shallow upper permafrost zone underlying the pond. However, due to the small pond size and the low operational level, this issue is unlikely.

The talik zone under the Whale Tail Attenuation Pond would remain. The areas surrounding the pond are expected to freeze back progressively after dewatering but would restore to talik conditions after breaching of the dewatering dikes and flooding of the area.

As for the IVR Attenuation Pond, with the maximum water elevation of the pond above the former lake elevation, some minor localized thawing of the permafrost is expected to occur outside of the original lake footprint.

3.2.2 Thermal Monitoring Results

Mammoth Dike

The instrumentation data are showing thermal behaviour along the expected trend at Mammoth Dike. The active layer is contained in the rockfill shell. The foundation and key trench are in permafrost condition.

WRSF Dike

A degradation of the thermal conditions in the key trench of WRSF Dike was observed in the summer of 2019 leading to seepage. In 2023, the instrument data show that the foundation and key trench remained frozen all year long with signs of permafrost aggradation. This indicates that the mitigation measures implemented in 2020 continue to be successful. The active layer is contained within the rockfill and upstream thermal capping.

Whale Tail Dike

Similar to 2022, in 2023 the thermistors at Whale Tail Dike are showing cyclical trends associated with seasonal lake water temperature. The West abutment at 0+110 is frozen, and the East abutment is frozen at 0+790. The remaining thermistors remain primarily unfrozen below the active layer. On the East abutment the active layer thermal behavior has altered, with the warming trend persisting and potentially connecting to the seepage flow at depth (> 0°C), possibly due to longer sustained warmer temperatures this year. New thermistors at both the East and West abutment capping indicate that the overburden and bedrock have remained frozen since the summer.

IVR Dike D-1

The thermistors installed in IVR Dike D-1 show that there is a 2m active layer contained within the rockfill portion or in the overburden, while the key trench, filters system, and bedrock remained in permafrost for the entire 2023 period.

3.3 OPEN PIT

3.3.1 Expected Effects on Permafrost

Whale Tail Pit will be excavated through an upper closed talik zone and underlying permafrost. During operations of the pit, the talik zone is expected to freeze back progressively. The permafrost surrounding the pit shell is expected to undergo cooling from air temperature exposure, with the exception of seasonal thawing a shallow active zone adjacent to the walls.

Upon closure and subsequent flooding of the Whale Tail Pit, permafrost areas underneath the pit lake are expected to gradually thaw. Thermal assessments have indicated this process would take hundreds of years. The pit lake would eventually reduce the permafrost depth in the pit surrounding ground, but this process could take significantly longer time (in the order of 10,000 years) to complete.

IVR Pit is excavated through permafrost. Mining activities will cause a similar effect than for Whale Tail Pit: seasonal warming against the pit walls during operation and warming after operations due to the closure pit lake.

3.3.2 Thermal Monitoring Results

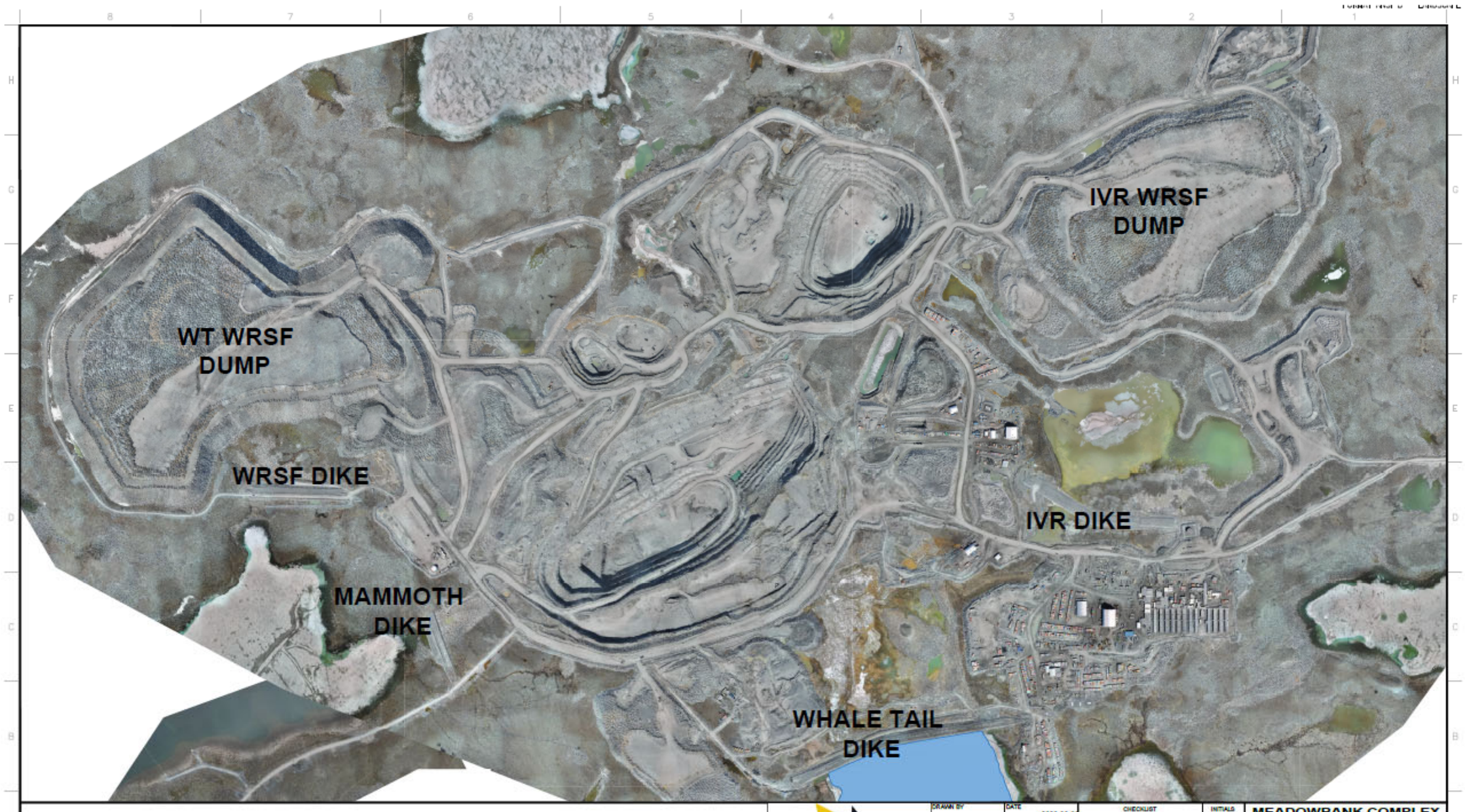
Thermistors were installed in 2020 in the closed talik zone near the south wall of the Whale Tail Pit. Through the year 2021 until their dismantling in August 2021 it was possible to observe a freeze back of the upper bedrock area.

The previous thermistors installed in the IVR area are no longer functioning due to mining activity in the sector but were showing permafrost conditions until the instrument was decommissioned. A deep thermistor has been installed in 2020 in that area (IVR long TH) and shows permafrost conditions down to 500 m below ground surface, to El. 9600 m (mining datum).

4 REFERENCES

1. O'Kane Consultants Inc. (O'Kane), 2021. Whale Tail Project - Thermal Modelling of the Whale Tail and IVR WRSFs. January 8, 2021.

APPENDIX A – WHALE TAIL THERMAL MONITORING DATA



AGNICO EAGLE
MEADOWBANK

DRAWN BY | DATE 2022-06-06
CHECKLIST | INITIALS

MEADOWBANK COMPLEX

AMARUQ

SCALE N.T.S. | DATE | FILE DWG

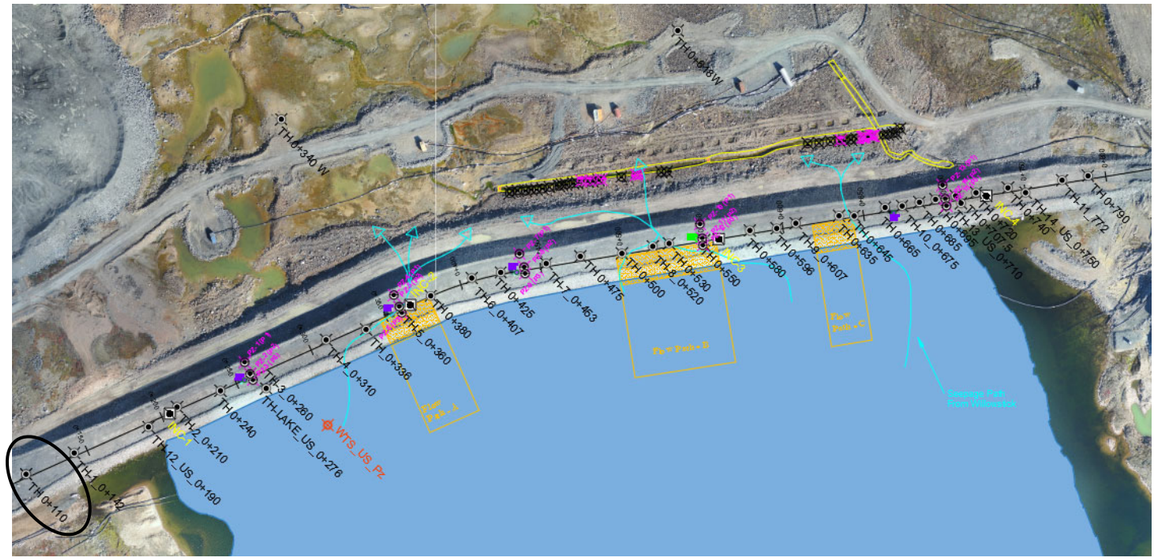
TABLE 1: Instruments Coordinates

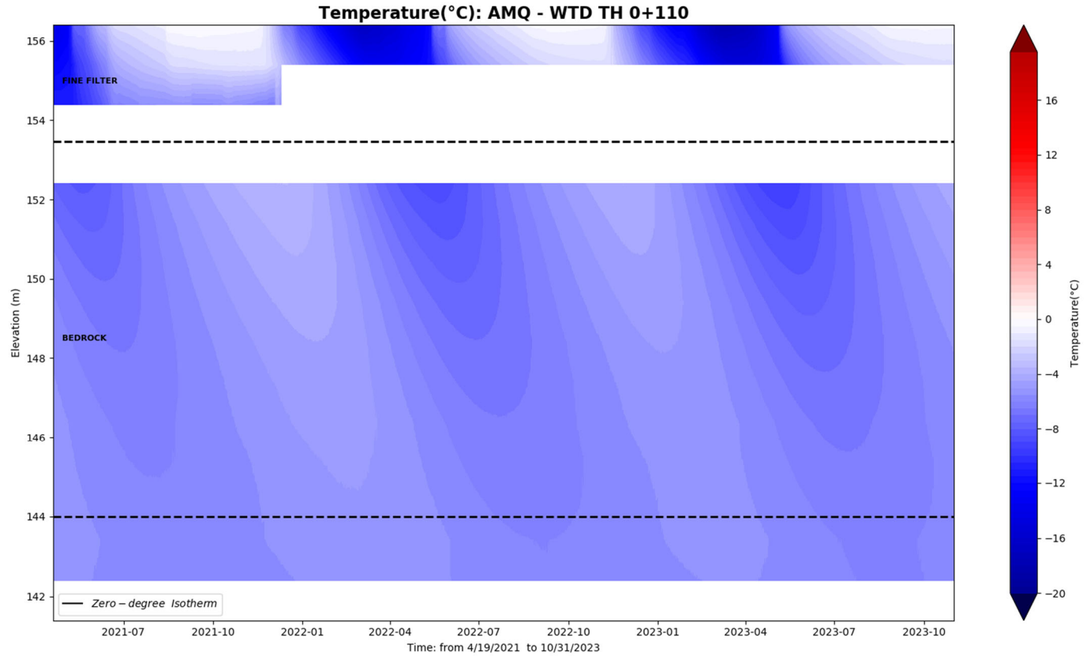
Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
1	WTD 0+110	WTD	607090.500	7254625.000	156.40		-90	2020	Y (13/16) beads)
2	WTD 0+142	WTD	607119.94	7254637.98	156.75		-90	2018	Y (10/13) beads
3	WTD 0+190 U/S	WTD	607165.34	7254653.83	157.42		-90	2018	Y (10/13) beads)
4	WTD 0+210	WTD	607182.85	7254666.19	157		-90	2018	Y
5	WTD 0+240	WTD	607209.40	7254676.80	158.1		-90	2020	Y
6	WTD 0+260	WTD	607227.51	7254686.28	157		-90	2018	Y (11/13) beads
7	WTD 0+276 U/S	WTD	607237.2	7254677.3	157		-90	2018	Y
8	WTD 0+310	WTD	607237.98	7254707.09	157		-90	2018	Y
9	WTD 0+336 U/S	WTD	607298.44	7254713.45	157		-90	2018	Y
10	WTD 0+340 DS West	WTD	607246.597	7254841.993	149.6		-90	2020	Y
11	WTD 0+360	WTD	607318.81	7254727.15	157		-90	2018	Y (10/13) beads
12	WTD-0+380	WTD	607338.0	7254734.4	157.1		-90	2020	Y
13	WTD 0+407	WTD	607363.08	7254744.86	157		-90	2018	Y (11/13) beads
14	WTD-0+425	WTD	607380.8	7254380.8	158.5		-90	2020	Y
15	WTD 0+453	WTD	607408.60	7254753.72	157		-90	2018	Y (12/13) beads
16	WTD 0+475	WTD	607429.5	7254758.2	161		-90	2020	Y
17	WTD 0+500	WTD	607454.9	7254759.9	157.1		-90	2020	Y
18	WTD 0+520	WTD	607473.78	7254764.22	157		-90	2018	Y (12/13) beads
19	WTD 0+530	WTD	607483.77	7254766.00	159		-90	2020	Y
20	WTD 0+550	WTD	607505.20	7254768.00	157.9		-90	2020	Y
21	WTD 0+580	WTD	607533.163	7254773.95	158		-90	2020	Y
22	WTD 0+596	WTD	607549.60	7254775.20	157.8		-90	2020	Y
23	WTD 0+607	WTD	607561.24	7254778.35	157		-90	2018	Y (9/13) beads
24	WTD 0+618 DS East	WTD	607548.9	7254905.6	152.1		-90	2020	Y (9/16) beads
25	WTD 0+635	WTD	607587.7	7254782.9	158.3		-90	2020	Y
26	WTD 0+645	WTD	607597.30	7254782.8	158.6		-90	2020	Y
27	WTD 0+665	WTD	607617.0	7254788.0	158.3		-90	2020	Y
28	WTD 0+675	WTD	607262.31	7254788.86	157		-90	2018	Y
29	WTD 0+685	WTD	607636.9	7254791.2	160.5		-90	2020	Y
30	WTD 0+695	WTD	607646.7	7254792.9	157.5		-90	2020	Y
31	WTD 0+707.5	WTD	607659.0	7254795.1	158		-90	2020	Y
32	WTD 0+710 U/S	WTD	607662.32	7254790.63	157		-90	2018	Y (15/16) beads
33	WTD 0+720	WTD	607671.5	7254797.1	160		-90	2020	Y
34	WTD 0+740	WTD	607691.0	7254800.0	160		-90	2020	Y
35	WTD 0+750	WTD	607701.81	7254797.04	157		-90	2018	Y (15/16) beads
36	WTD 0+772 U/S	WTD	607724.15	7254804.63	157		-90	2018	Y (3/13) beads
37	WTD 0+790	WTD	607740.0	7254807.3	157.2		-90	2020	Y (14/16) beads

Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
38	WTD US 0+130	WTD	607110.7990	7254629.0290	159.116		-90	2023	Y
39	WTD WAC 0+130	WTD	607118.5390	7254611.4820	159.250		-90	2023	Y
40	WTD EAC 0+781	WTD	607736.6400	7254776.5960	158.955		-90	2023	Y
41	WT WRSF TH01	WRSF	615797.25	7238129.77	161.546		-90	2019	Y
42	WT WRSF TH02	WRSF	615861.49	7238133.24	162.053		-90	2019	N (since 2020)
43	WT WRSF TH03	WRSF	615814.31 to 615799.6	7238118.6 to 7238117	162.744 to 162.042		0	2019	Y (9/16) beads)
44	WT WRSF TH04	WRSF	615813.38 to 615797.7	7238134.1to 7238132.8	162.138 to 161.619		0	2019	Y (8/16) beads)
45	WT WRSF TH05	WRSF	615860.9 to 615800.3	71238133.3 to 7238126	162.202		0	2019	Y (9/16) beads)
46	WT WRSF TH06	WRSF	-	-	-		-	2021	NOT INSTALLED
47	WT WRSF TH07	WRSF	14041.823/822.075(AMQ)	14051.510/8232.486(AMQ)	199.6		0	2021	Y
48	WT WRSF TH08	WRSF	14029.392/14039.081(AMQ)	8227.543/8238.974(AMQ)	199.7		0	2021	Y
49	WT WRSF TH09	WRSF	14035.675/14189.86(AMQ)	8224.663/8407.910 (AMQ)	200.2		0	2021	Y
50	WT WRSF TH10	WRSF	14259.183 (AMQ)	8479.248 (AMQ)	199.484-195.386		-37	2021	Y
51	WT WRSF TH11	WRSF	14259.183	8479.249	198.637-168.637		0	2021	Y
52	WT WRSF TH12	WRSF	14241.323/14231.698 (AMQ)	8481.427/8469.988 (AMQ)	200.2		0	2021	Y
53	WT WRSF TH13	WRSF	14521.240/14241.576 (AMQ)	8471.614/8460.159 (AMQ)	200.1		-90	2021	Y
54	WT WRSF TH14	WRSF	14245.84/14101.278	8476.032/8304.453	200.2		0	2021	Y
55	WT WRSF TH15	WRSF	14254.017/14248.950	8481.414/8477.225	200.2		-37	2021	Y
56	WT WRSF TH16	WRSF	14259.183	8479.248	167.637-152.637		-90	2021	Y
57	IVR WRSF TH01	IVR WRSF	608314.124	7256135.152	203.547		-90	2023	Y
58	IVR WRSF TH02	IVR WRSF	594598.883/594599.565	7257568.182/7257583.178	204.064		0	2022	Y
59	IVR WRSF TH03	IVR WRSF	594612.906/594613.468	7257567.520/7257582.555	204.061		0	2022	Y
60	IVR WRSF TH04	IVR WRSF	594605.898/594612.305	7257567.947/7257718.148	203.972		0	2022	Y
61	IVR WRSF TH05	IVR WRSF	608314.201	7256135.534	203.489		-90	2023	y
62	IVR WRSF TH06	IVR WRSF	608391.937	7256721.531	204.298		-90	2023	Y
63	IVR WRSF TH07	IVR WRSF	608395.025/608399.173	7256707.151/7256692.531	204.924		0	2022	Y
64	IVR WRSF TH08	IVR WRSF	608408.682/608412.721	7256710.367/7256695.844	204.936		0	2022	Y
65	IVR WRSF TH09	IVR WRSF	608401.559/608440.755	7256708.91/7256564.158	204.761		0	2022	Y
66	IVR WRSF TH10	IVR WRSF	7256721.5310	726721.5310	204.298		-90	2023	Y
67	MD-TH01	MD	Slope	Slope	-		Slope	2019	Y
68	MD-TH02	MD	605926.19	7255102.52	154.9		-90	2019	Y
69	MD-TH03	MD	605926.74	7255102.6	154.9		-90	2019	Y
70	WRSFD TH01	WRSF Dike	Slope	Slope	-		Slope	2019	Y

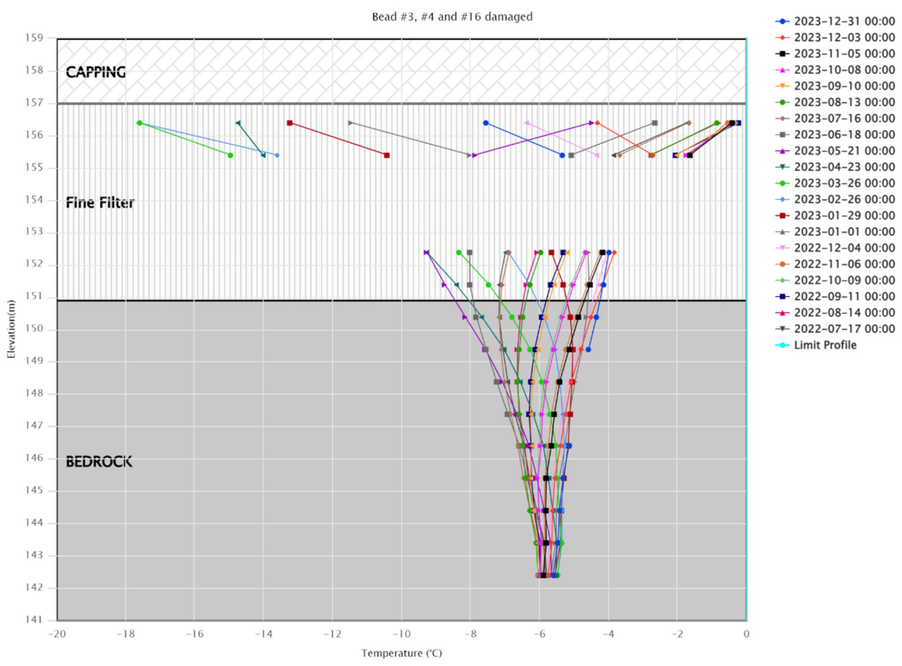
Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
71	WRSFD TH02	WRSF Dike	605416.44	7255526.7	159.07		-90	2019	Y
72	WRSFD TH03	WRSF Dike	605414.98	7255545.01	155.29		-90	2019	Y
73	WRSFD TH04	WRSF Dike	605387.14	7255524.47	158.15		-90	2019	Y
74	WRSFD TH05	WRSF Dike	605428.59	7255566.21	153.63		-90	2019	Y
75	WRSFD TH06	WRSF Dike	605435.56	7255544.29	155.35		-90	2019	Y
76	WRSFD TH07	WRSF Dike	605466.94	7255541.78	155.13		-90	2019	Y
77	WRSFD TH08	WRSF Dike	605384.991	7255544.818	159.886		-90	2019	Y (11/16) beads
78	WRSFD TH09	WRSF Dike	605425.1	7255546.038	160.037		-90	2019	Y
79	PSW DH2 TH	Pit South Wall	606998.837	7255127.783	149.02		-90	2020	N
80	PSW DH3 TH	Pit South Wall	607016.336	7255140.383	148.041		-90	2020	N
81	PSW DH6 TH	Pit South Wall	607058.391	7255184.293	148.181		-90	2020	N
82	PSW DH7 TH	Pit South Wall	607070.111	7255198.772	148.734		-90	2020	N
83	PSW DH10 TH	Pit South Wall	607142.218	7255272.101	150.109		-90	2020	N
84	PSW DH11 TH	Pit South Wall	607155.955	7255287.46	151.241		-50	2020	N
85	PSW DH12 TH	Pit South Wall	607168.065	7255293.87	151.934		-50	2020	N
86	PSW DH13 TH	Pit South Wall	606980.7	7255276.8	145.398		-90	2020	N
87	PSW DH14 Th	Pit South Wall	606937.5	7255411.5	130.761		-90	2020	N
88	AMQ15-324	WT PIT	606496.8	7254995.2	161.79	323.41	-55.46	2015	N
89	AMQ17-1233	IVR	606778.0	7256254.0	162.0	252.71	-59.06	2017	N
90	AMQ17-1337	IVR	607078.0	7256522.0	x				
91	V651A	IVR	607624.208	7256122.348	10163.28		-69	2019	Y
92	BH-T2	IVR	607850.8	7255563.9	164.303		-90	2019	N
93	BH-4	IVR	608048	7255442	163.982		-90	2019	N
94	IVR D1 TH1	IVR D1	607909.036	7255508.205	164.486		Liner	2021	Y
95	IVR D1 TH2	IVR D1	607908.144	7255506.309	164.895		-90	2021	Y
96	IVR D1 TH3	IVR D1	607912.603	7255515.354	165.1		90	2021	Y
97	IVR D1 TH4	IVR D1	607906.637	7255503.624	165.76		90	2021	Y
98	IVR D1 TH5	IVR D1	607899.06	7255512.94	159.666		Key Trench	2021	Y
99	IVR D1 TH6	IVR D1	607923.8	7255480.4	162.08		90	2021	Y
100	IVR D1 TH7	IVR D1	607930.032	7255525.355	162.12		90	2021	Y

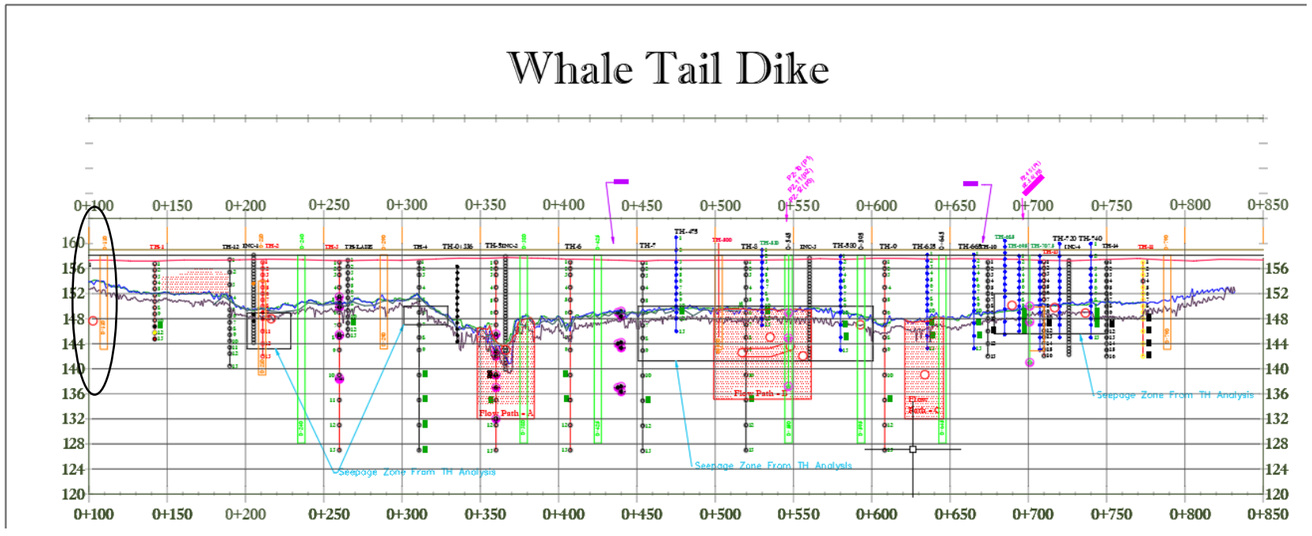
WTD-TH 0+110



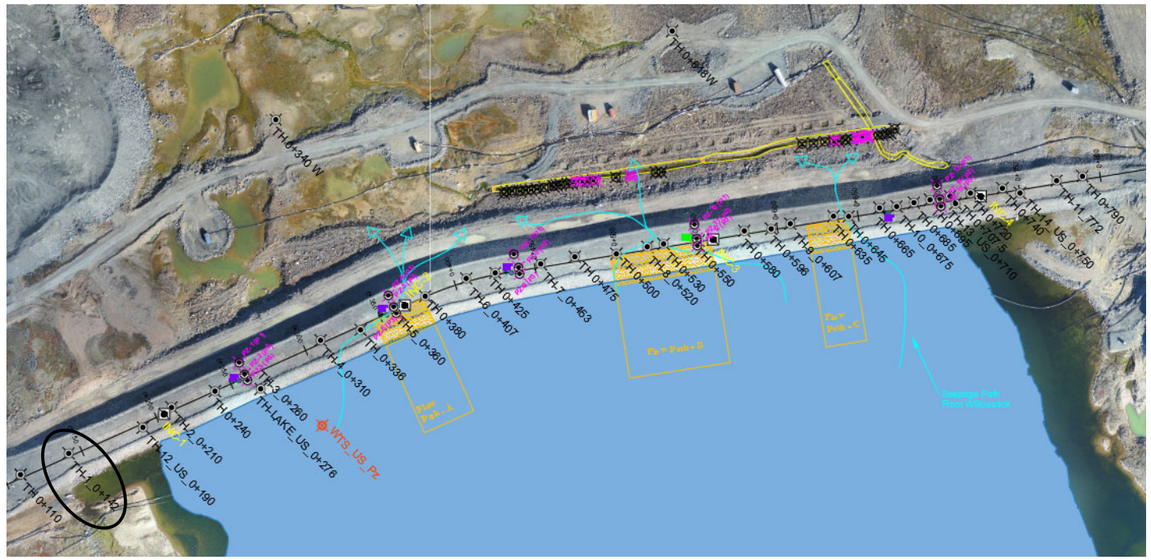


AMQ – WTD TH: 0+110





WTD-TH 0+142


TH-0+340 W
TH-0+390 W
TH-11_T12
TH-0+750
TH-14_US_0+730
TH-0+710
TH-0+675
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TH-0+645
TH-0+635
TH-0+607
TH-0+596
TH-0+580
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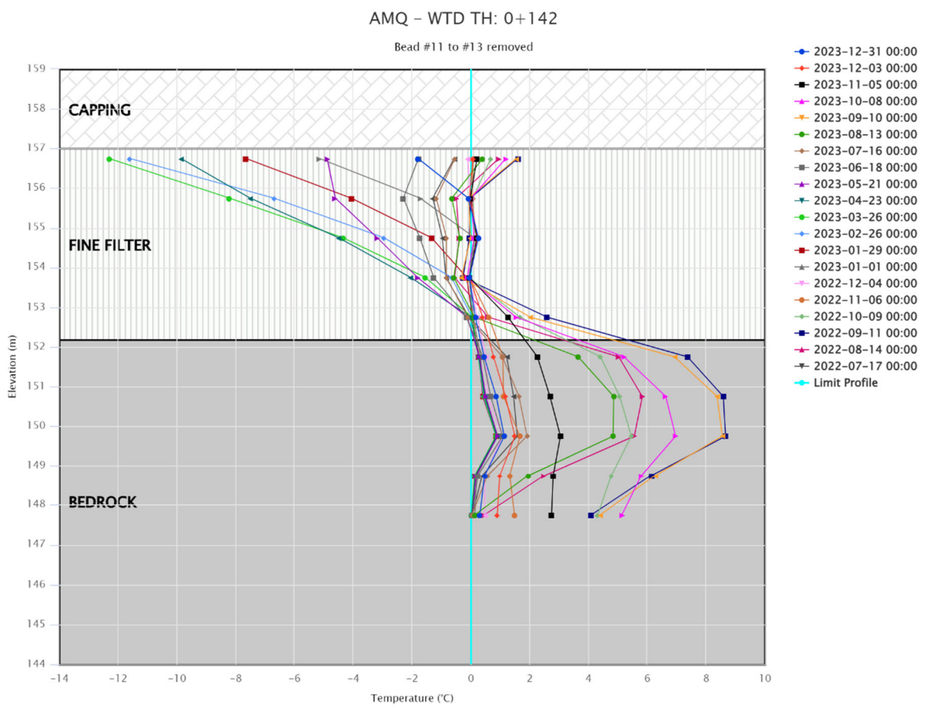
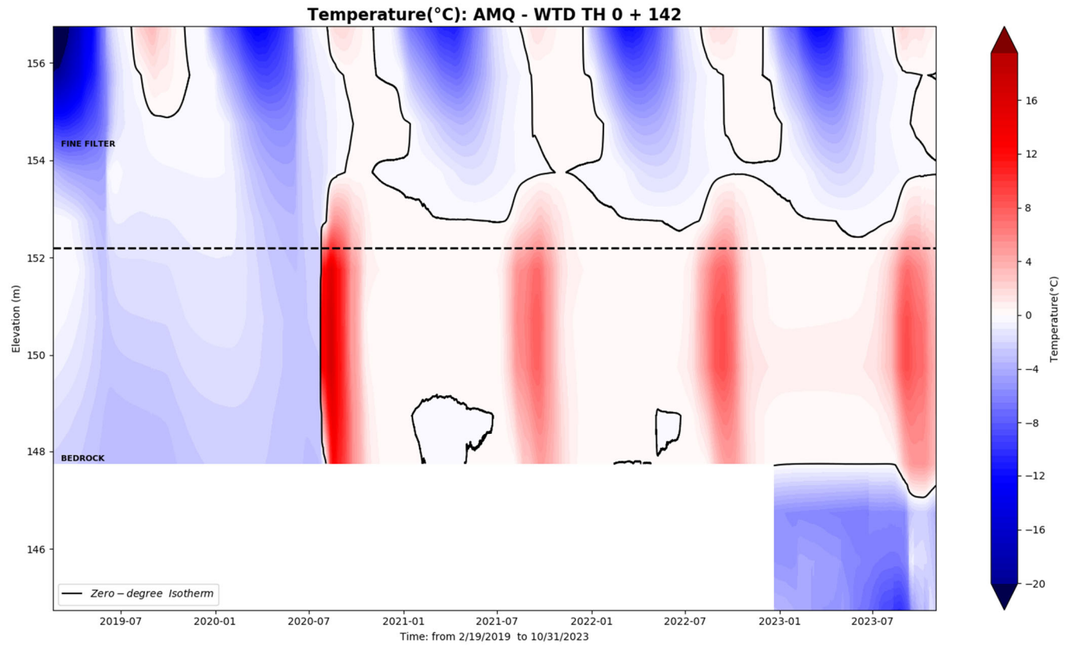
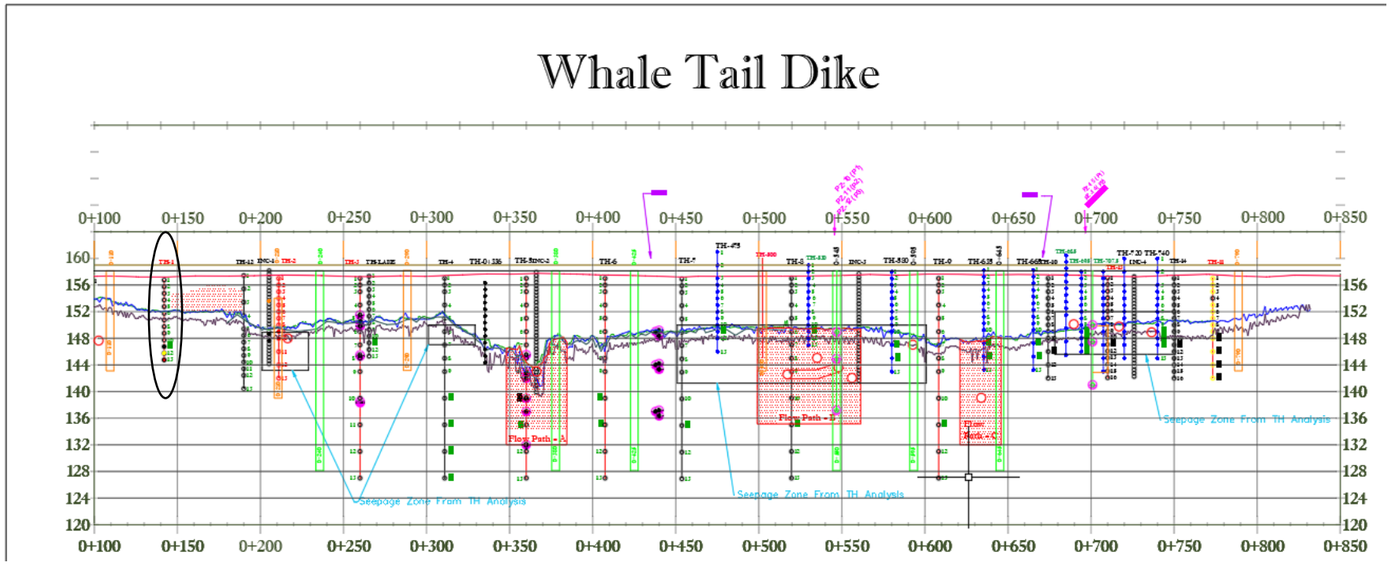
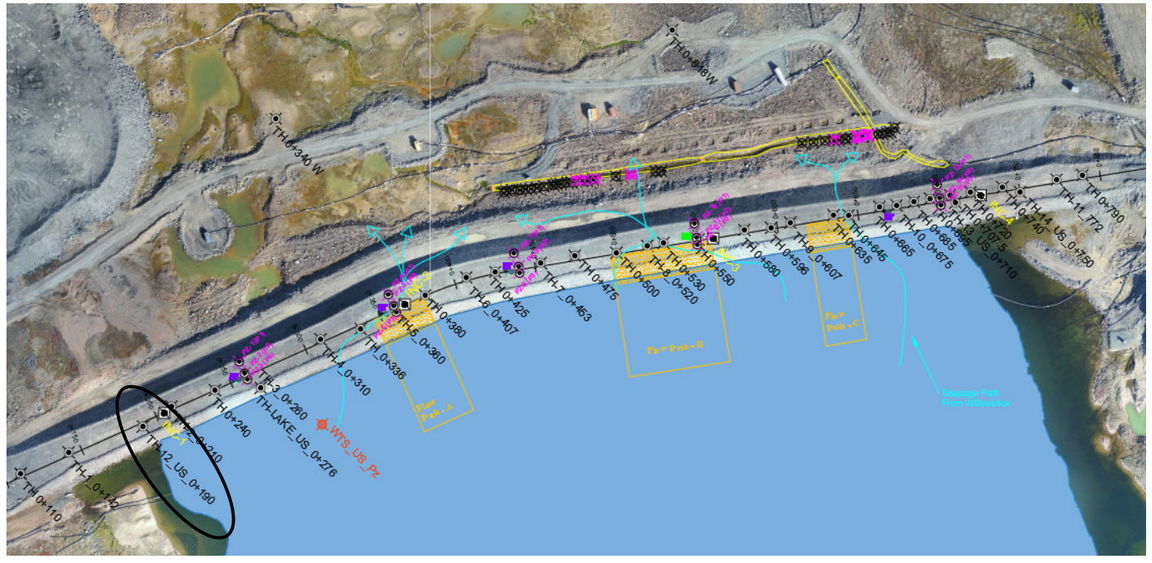
TH-9_0+407
TH-0+425
TH-0+390
TH-5_0+360
TH_0+336
TH-4_0+310
TH-3_0+260
TH-LAKE_US_0+276
TH-2_0+210
TH-0+240
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_PZ
Seepage Path From TH Analysis

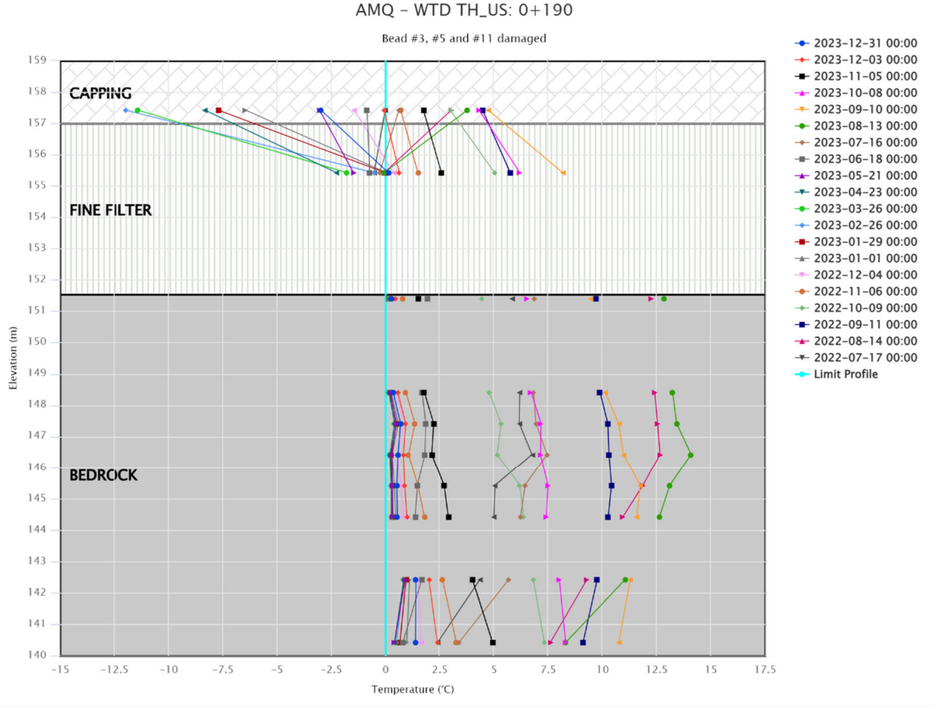

AMQ – WTD TH: 0+142
Bead #11 to #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

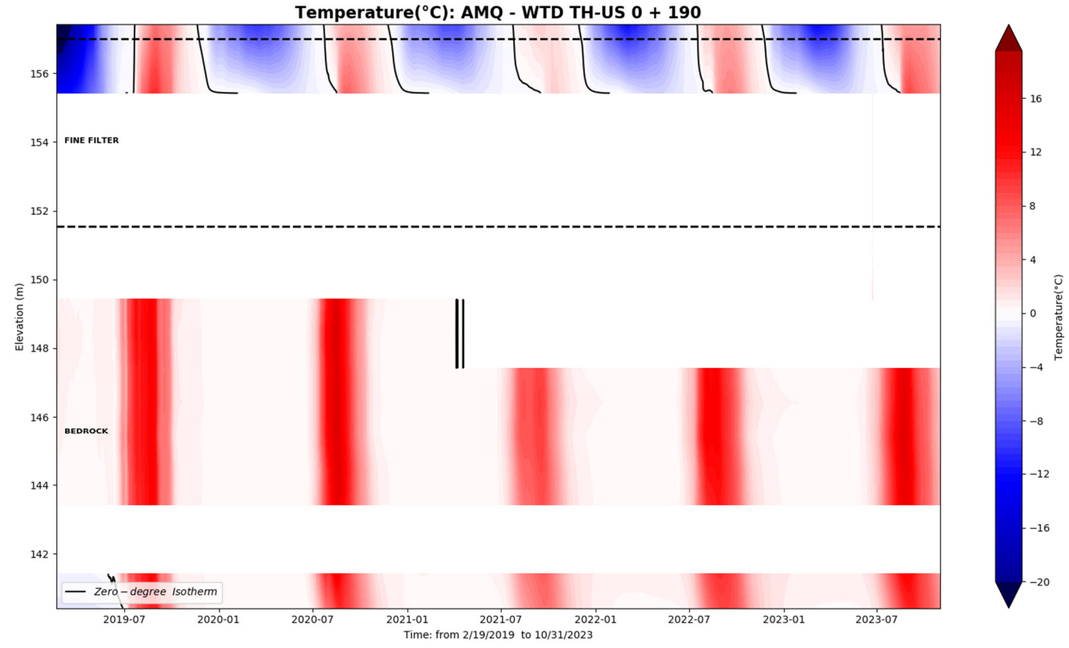

Temperature(°C): AMQ - WTD TH 0 + 142
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/31/2023
Temperature(°C)

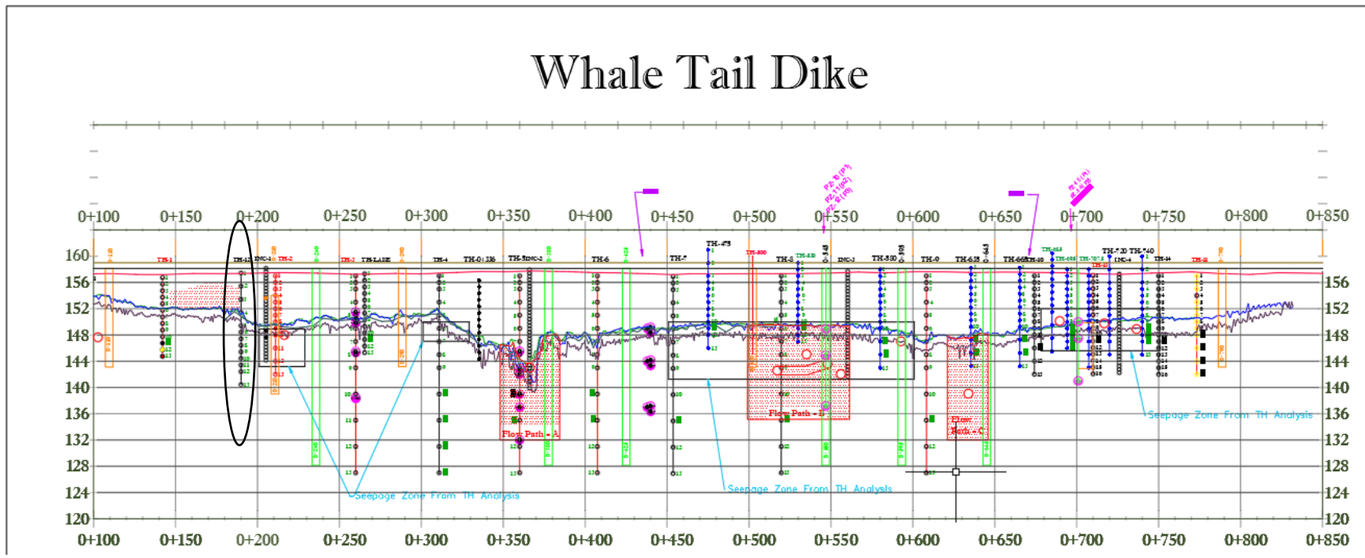

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+190 U/S

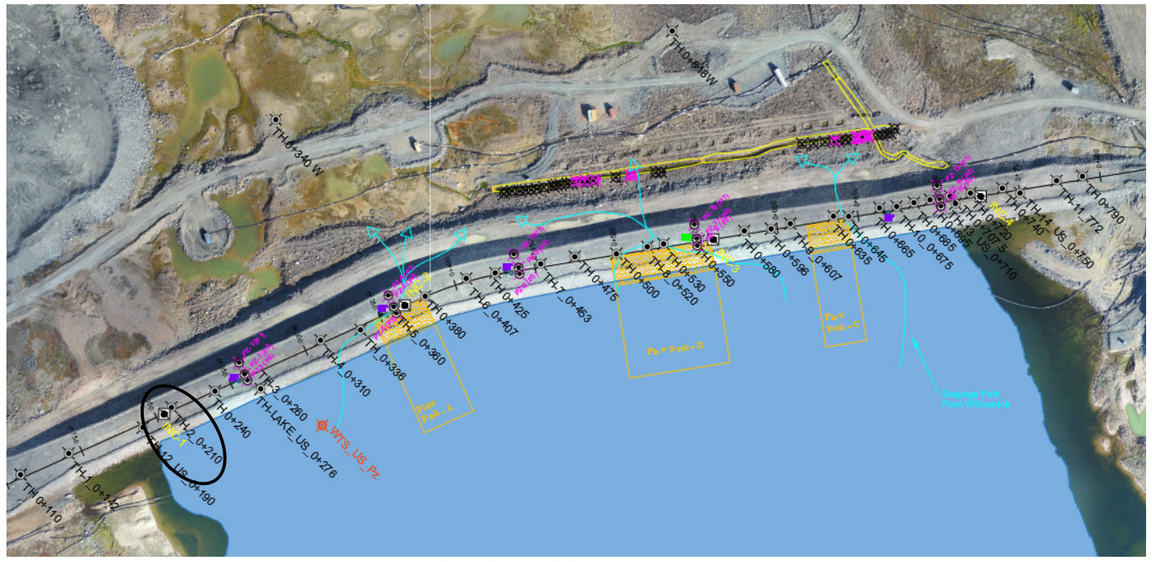




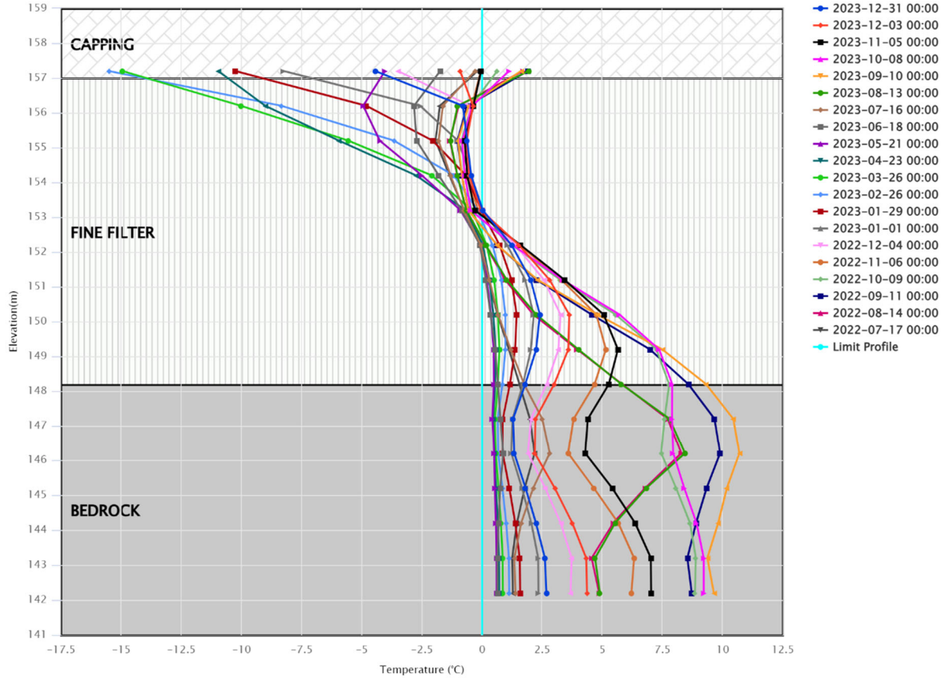


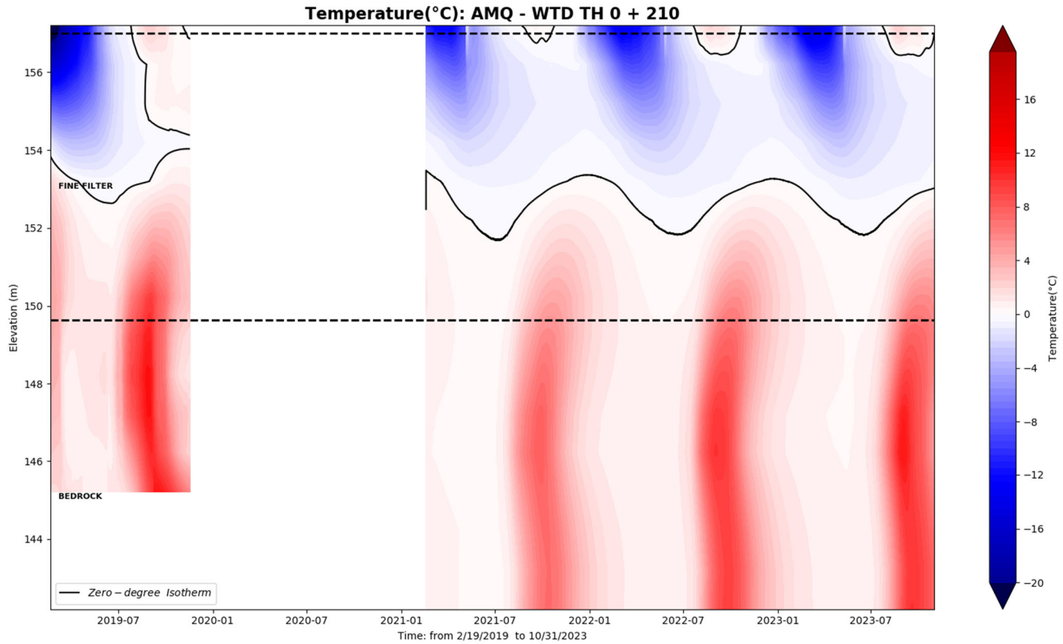


WTD-TH 0+210

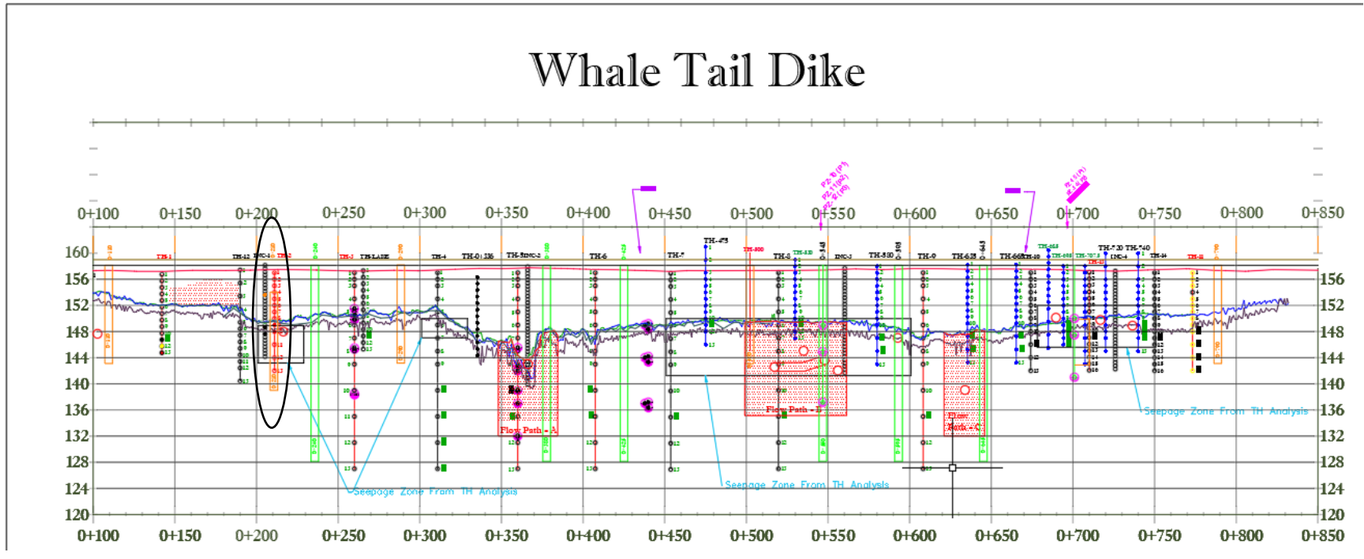


AMQ – WTD TH: 0+210_R

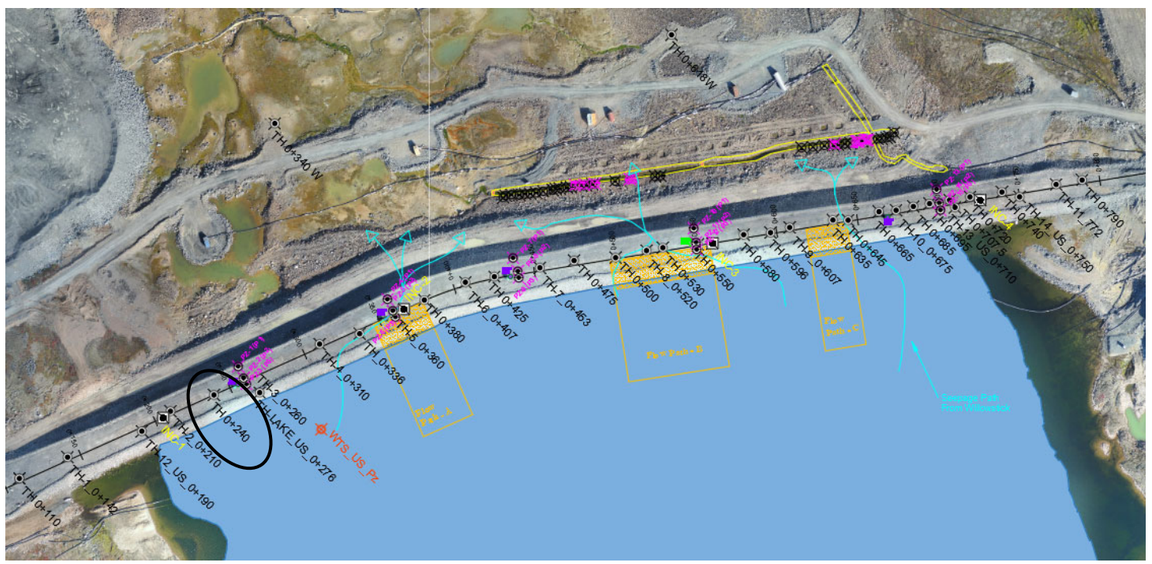




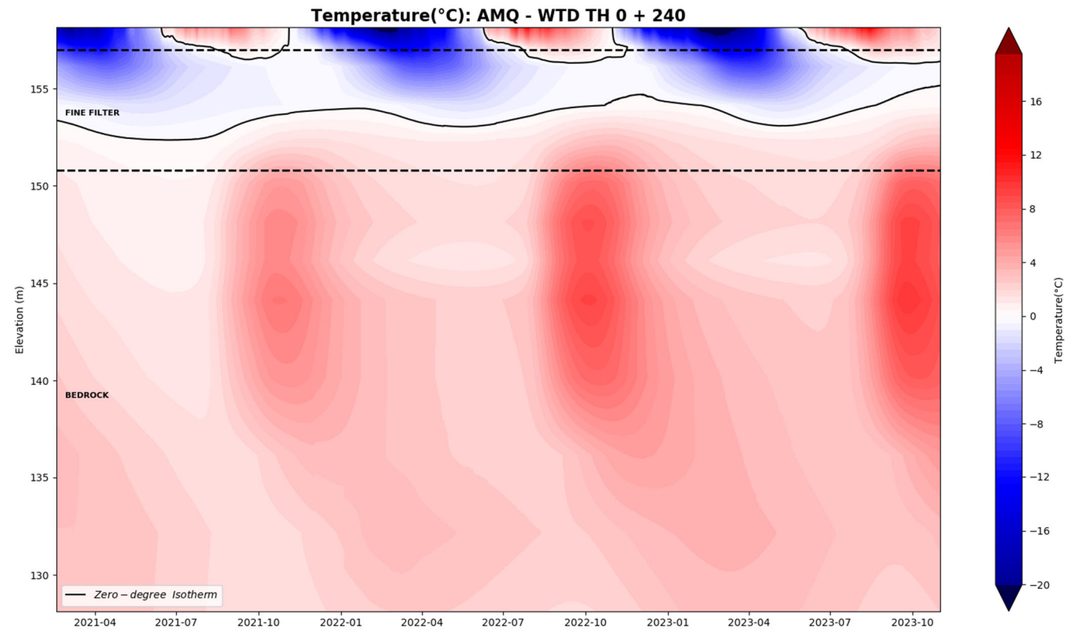
Thermistor string damaged by drilling. No dataset between Oct 2019 and February 2021. TH replaced

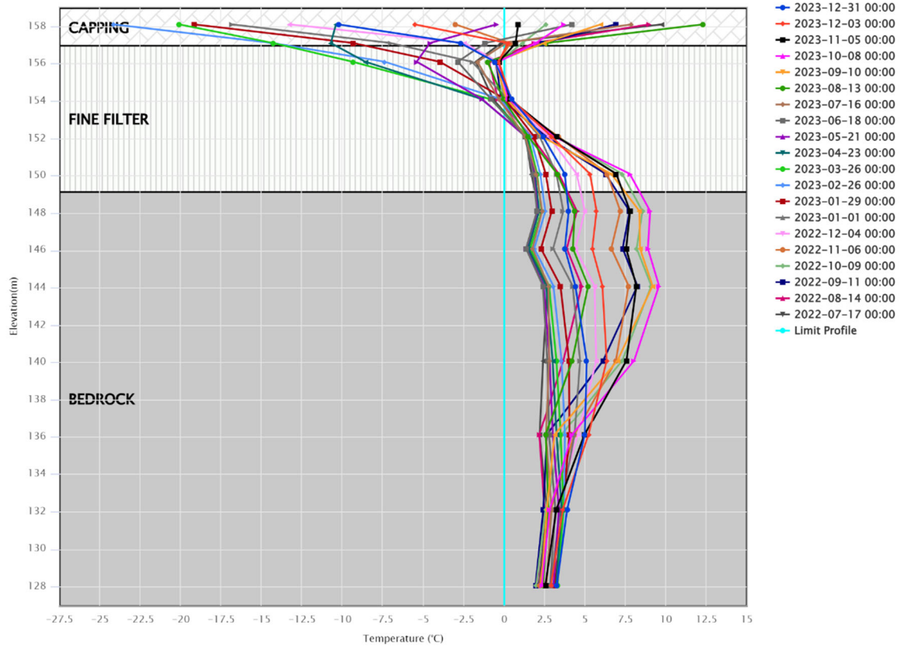


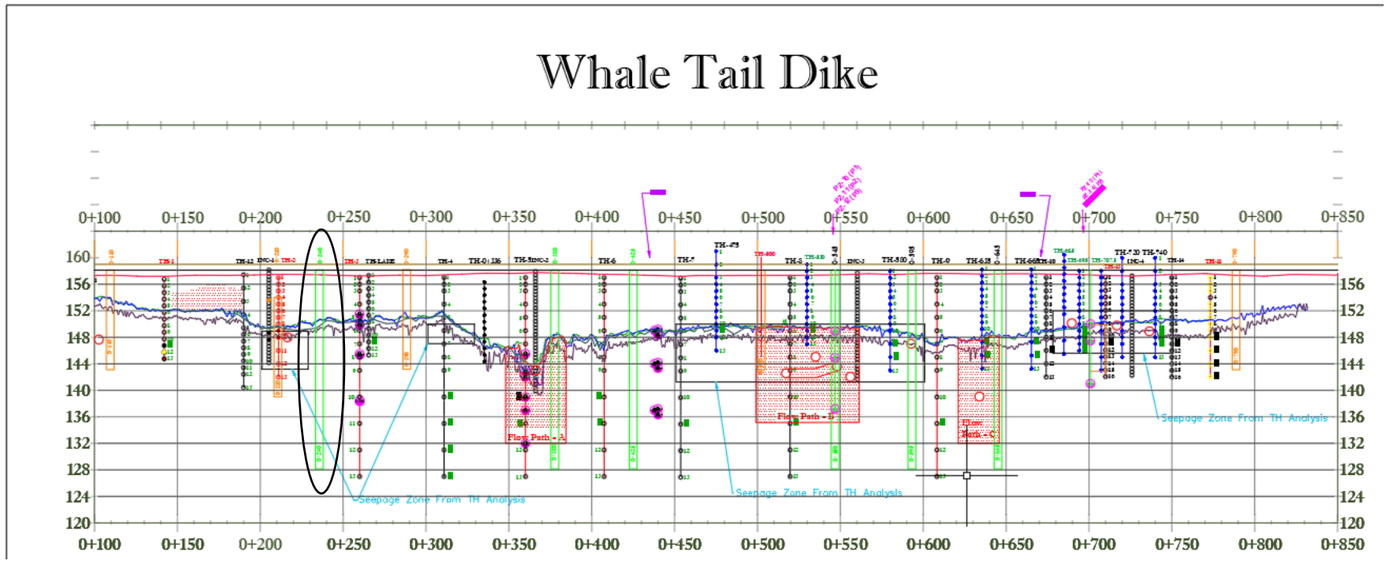
WTD-TH 0+240



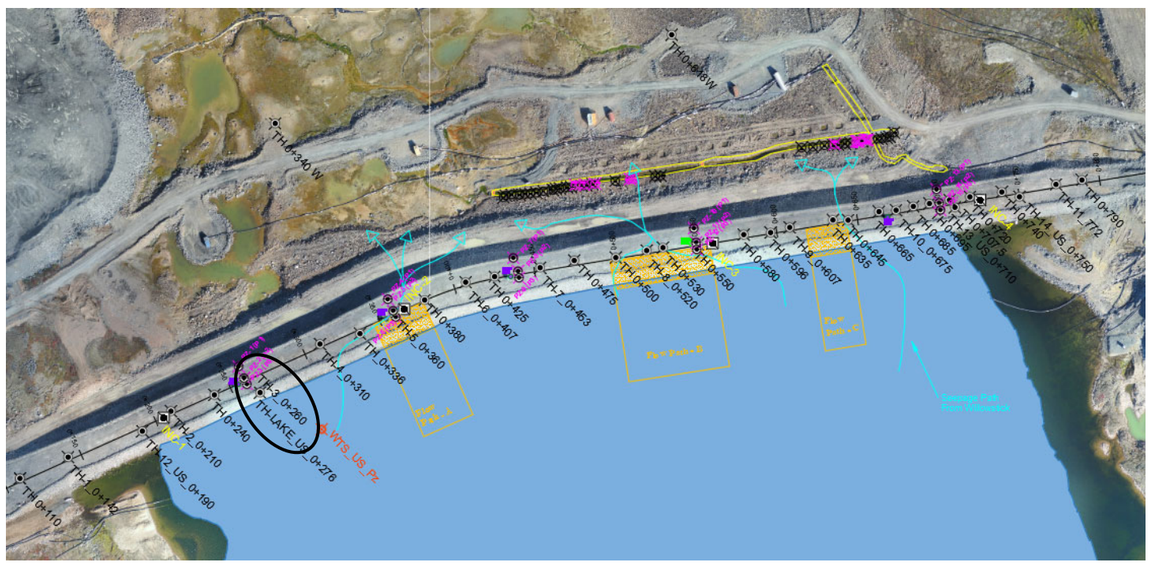
AMQ – WTD TH: 0+240







WTD-TH 0+260


TH-0+340 W
TH-0+486W
TH-0+110
TH-1_0+140
TH-12_US_0+190
TH-2_0+210
TH-0+240
TH-3_0+260
TH-LAKE_US_0+276
WTS_US_PZ
TH-4_0+310
TH-0+338
TH-5_0+380
TH-0+380
TH-6_0+407
TH-0+425
TH-7_0+463
TH-0+475
TH-8_0+500
TH-0+500
TH-8_0+520
TH-0+530
TH-0+550
TH-0+580
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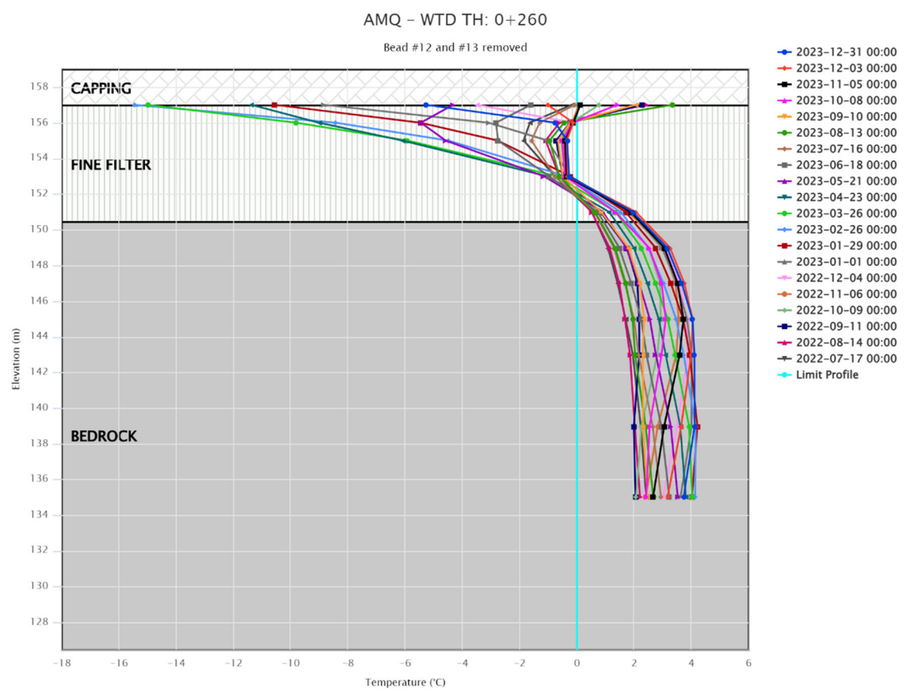
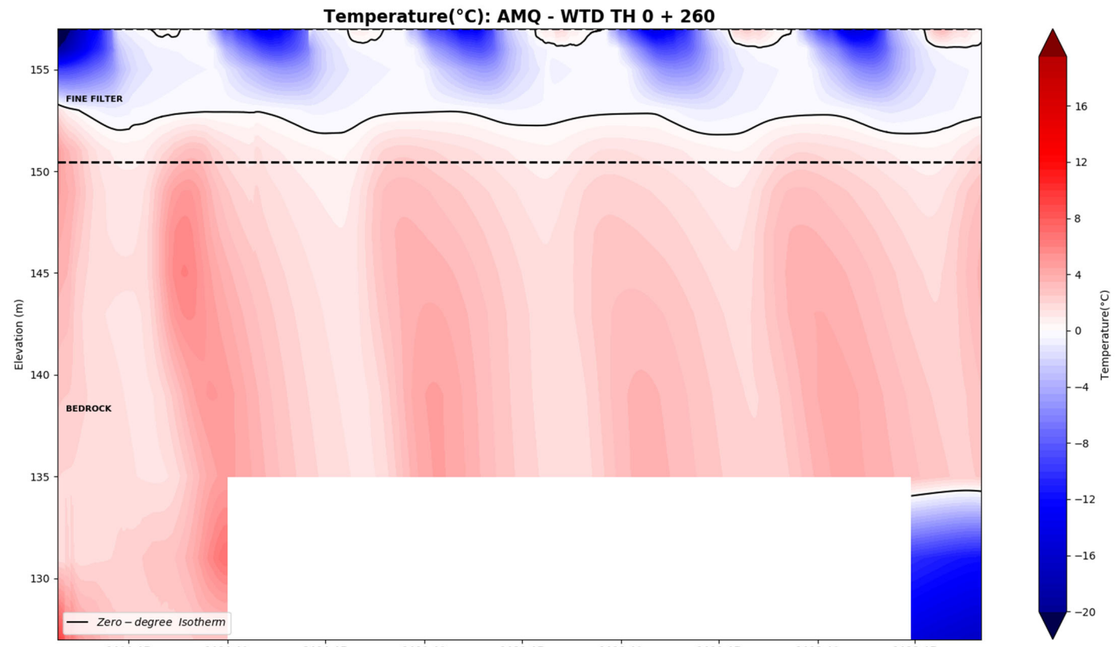
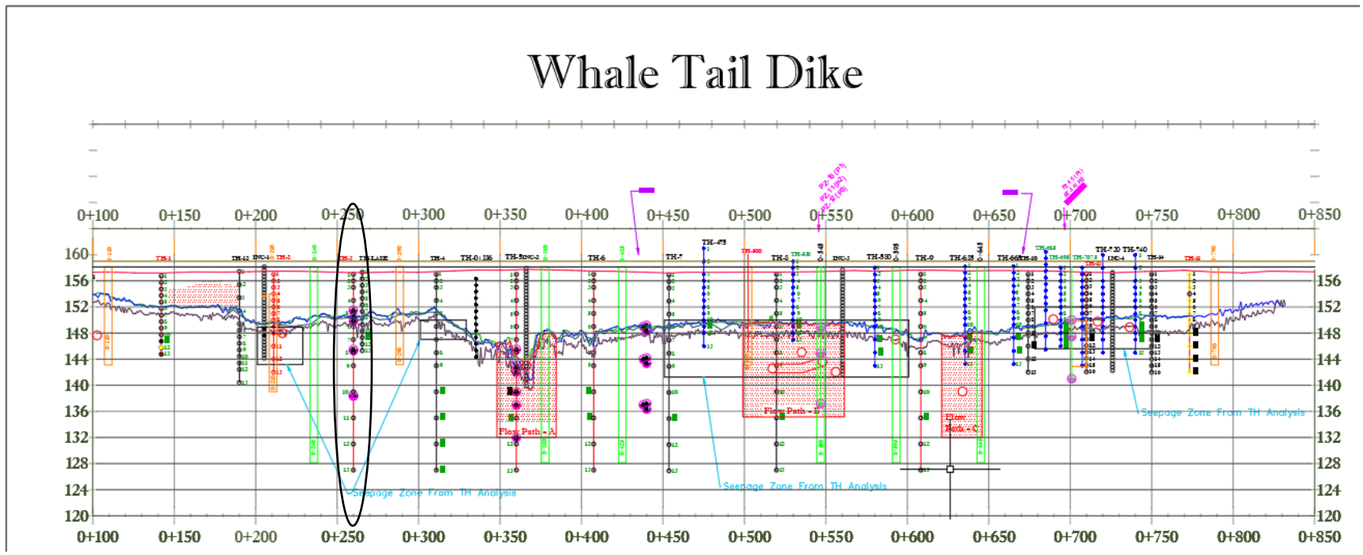
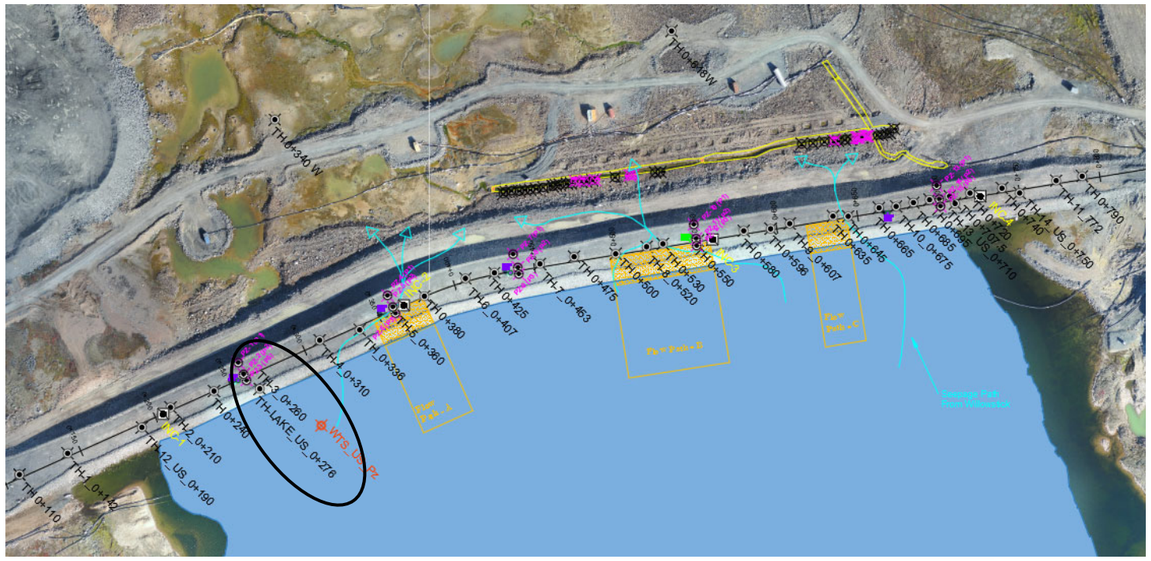
TH-0+720
TH-0+740
TH-14_US_0+750
TH-0+790
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis


AMQ – WTD TH: 0+260
Bead #12 and #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

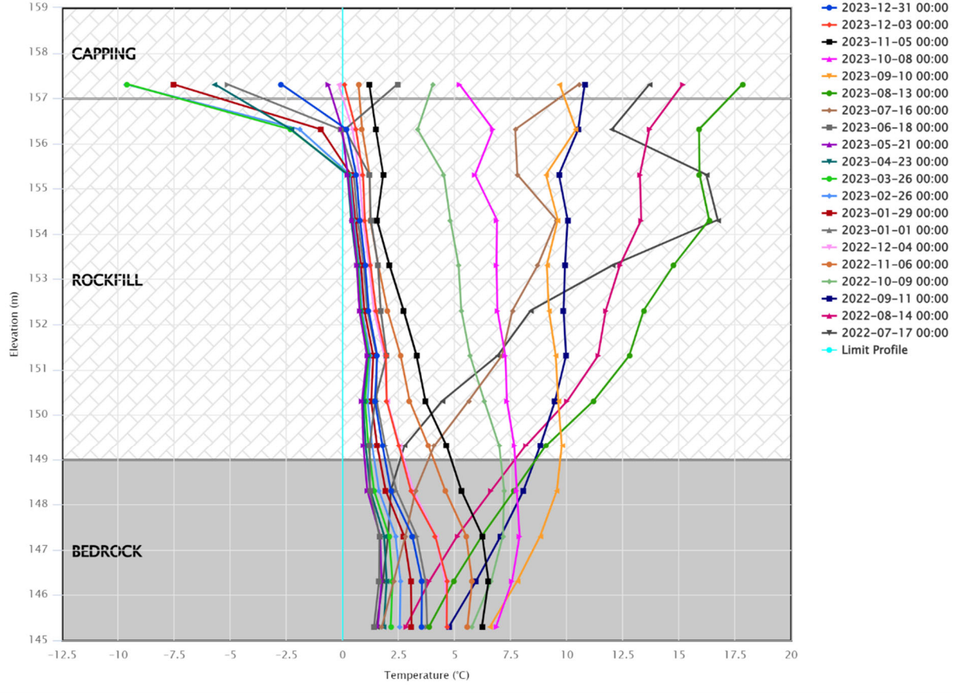

Temperature(°C): AMQ - WTD TH 0 + 260
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/19/2019 to 10/31/2023

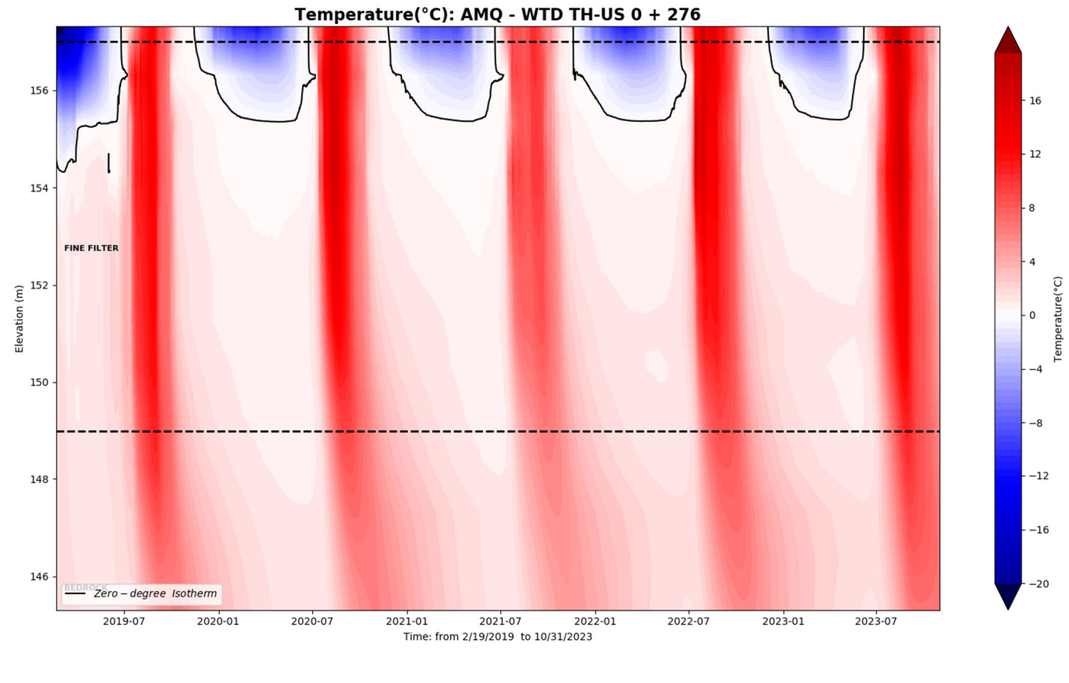

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

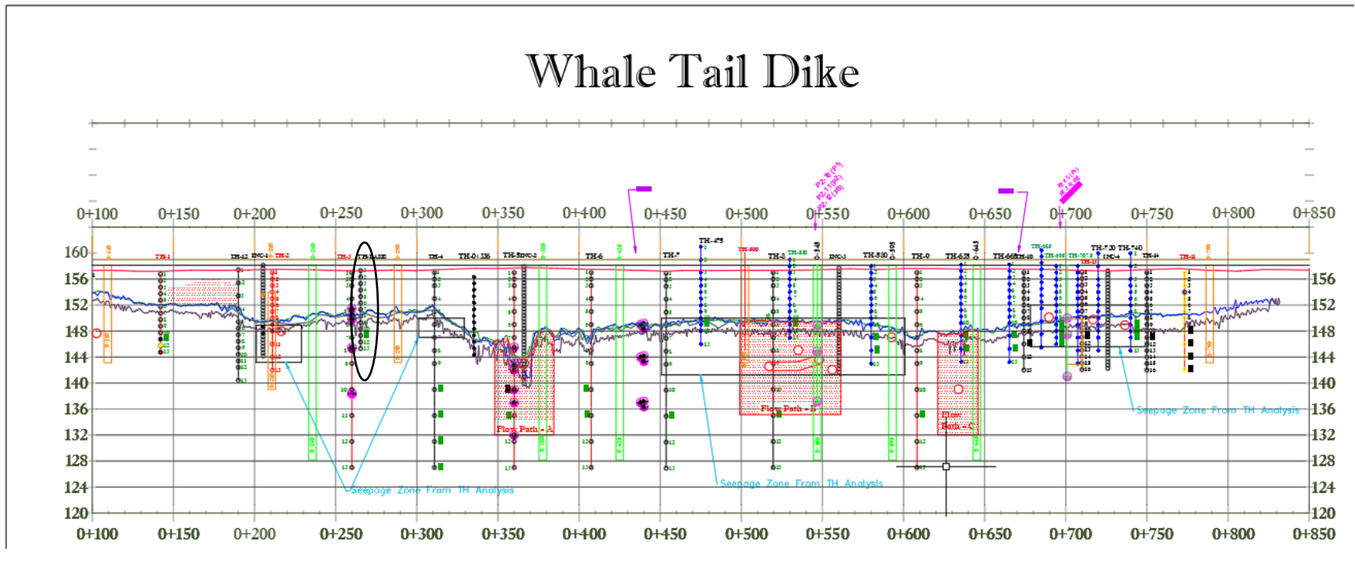
WTD-TH 0+276 U/S



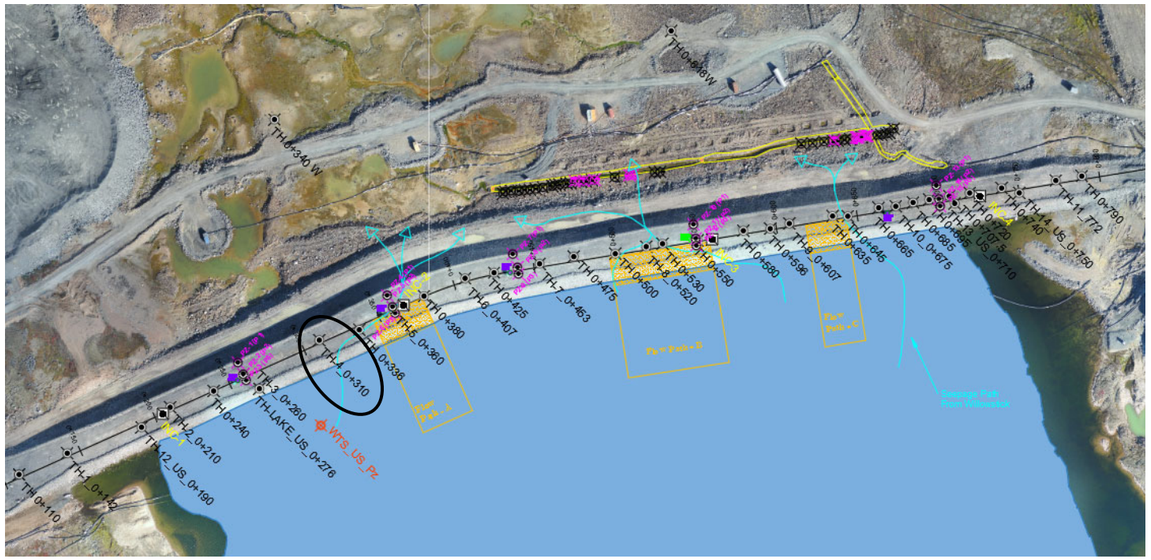
AMQ – WTD TH_US: 0+276



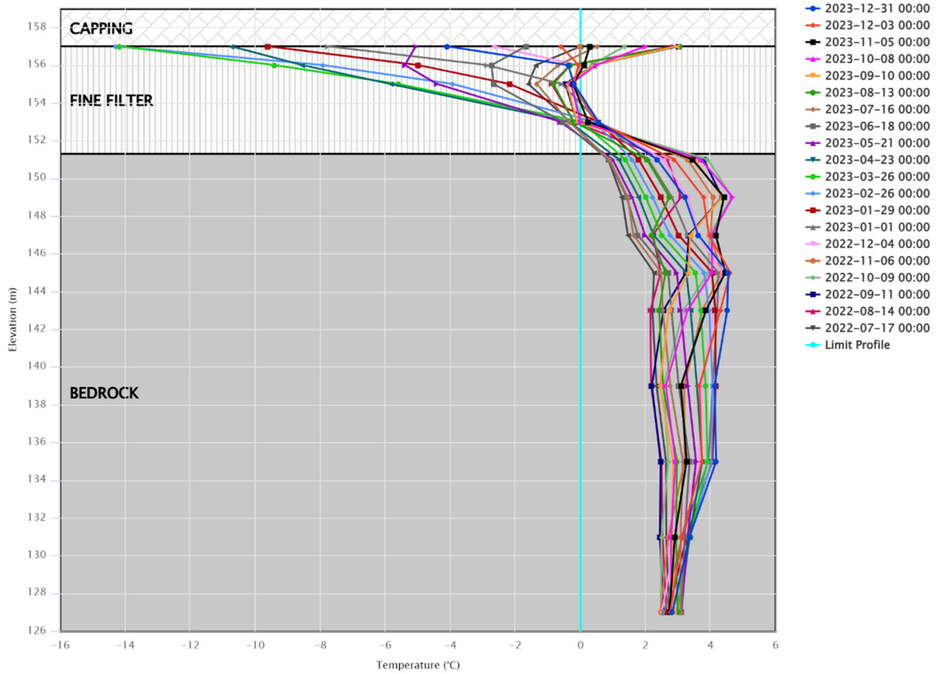


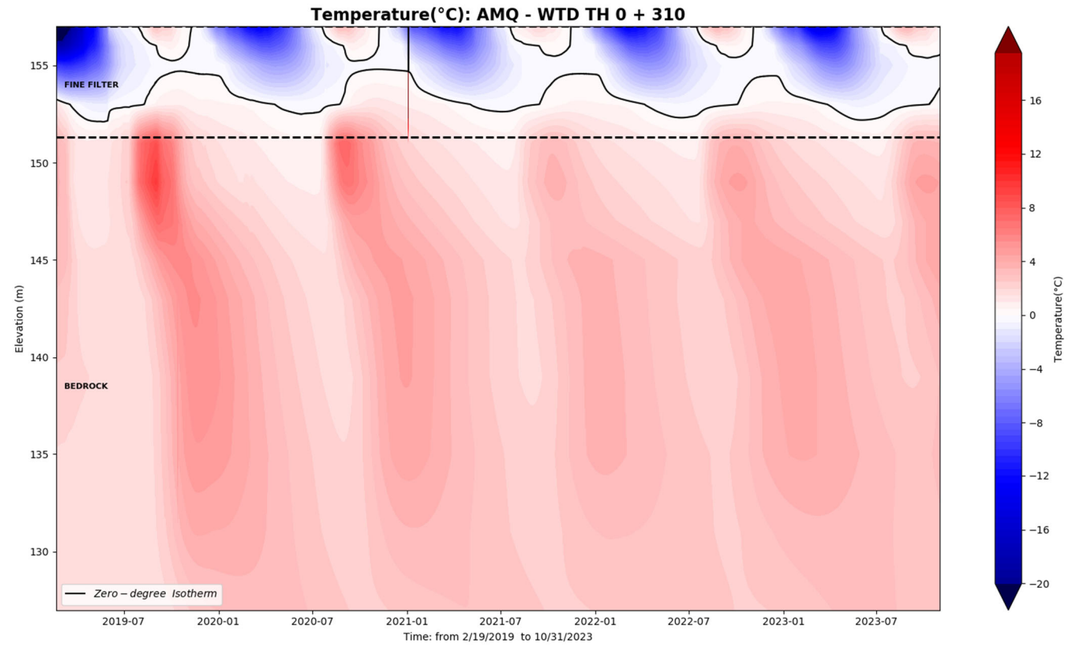


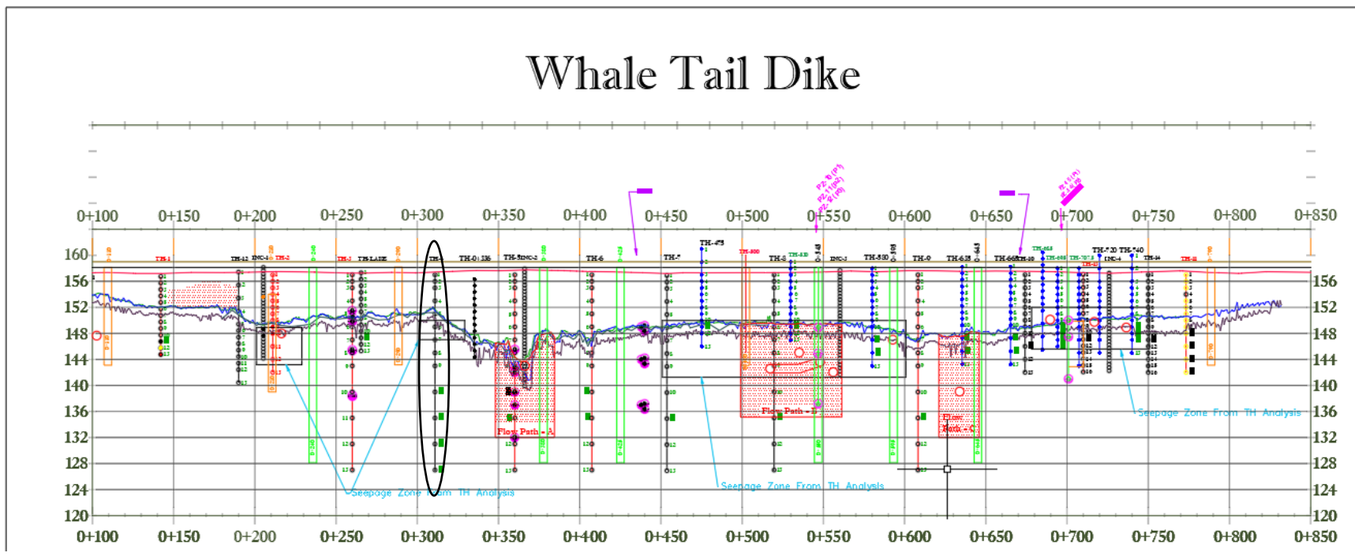
WTD-TH 0+310



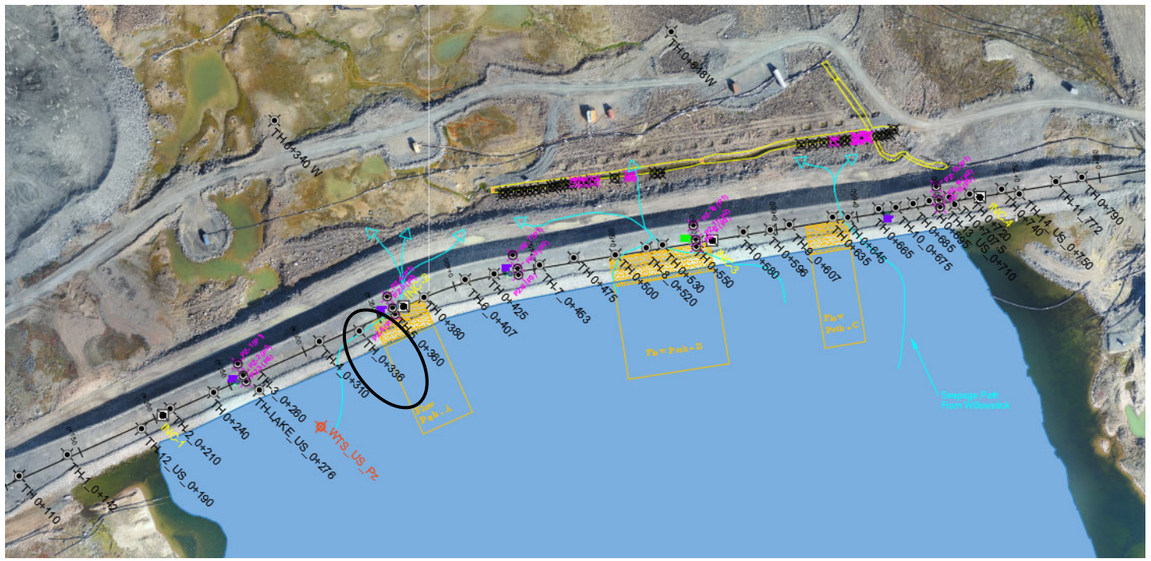
AMQ – WTD TH: 0+310



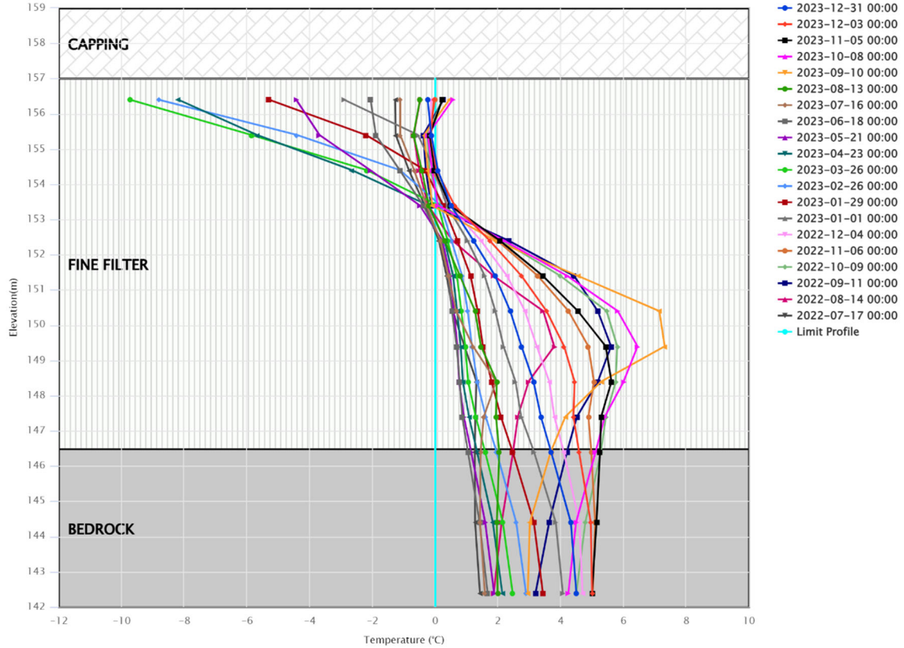


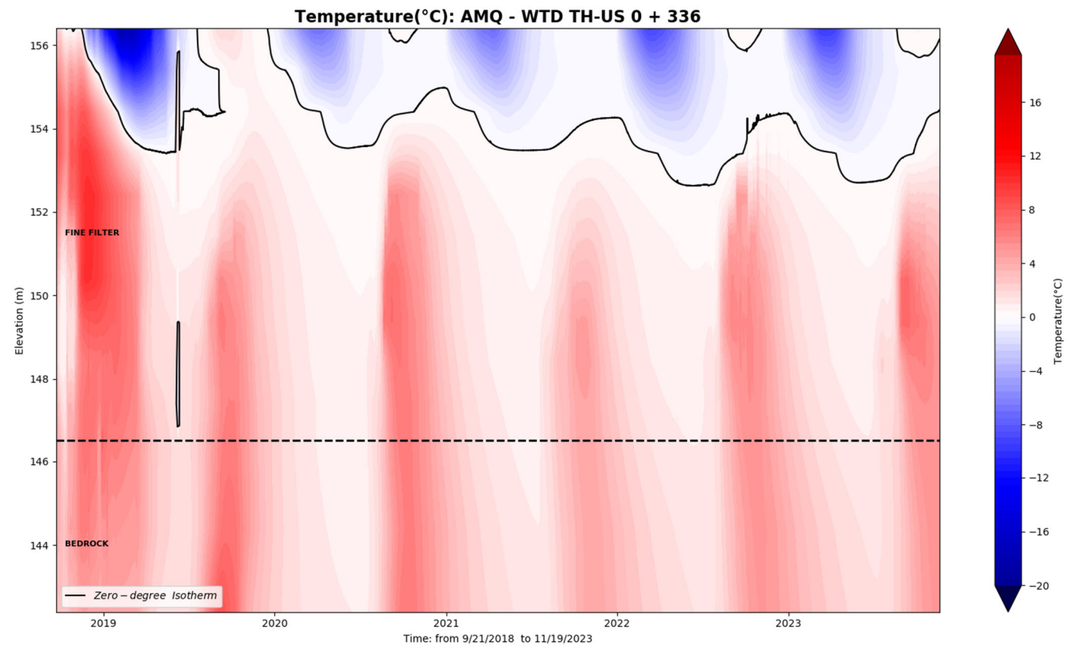


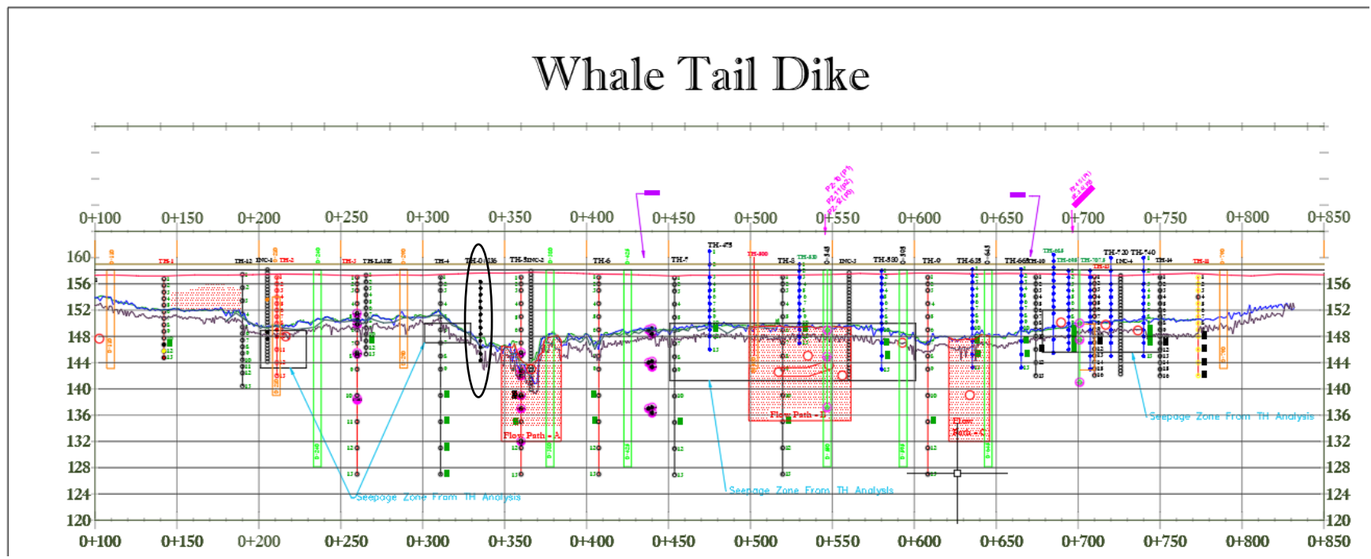
WTD-TH 0+336 U/S



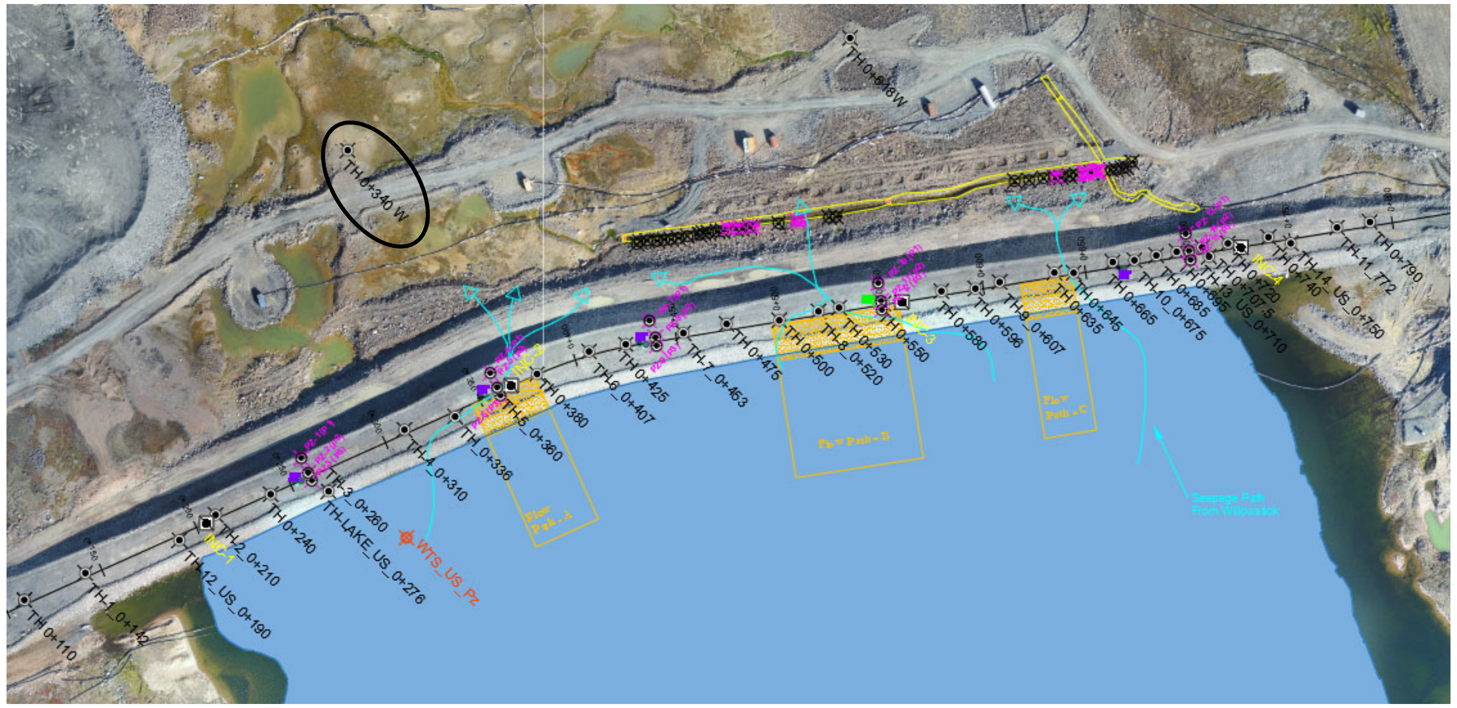
AMQ – WTD TH_US: 0+336

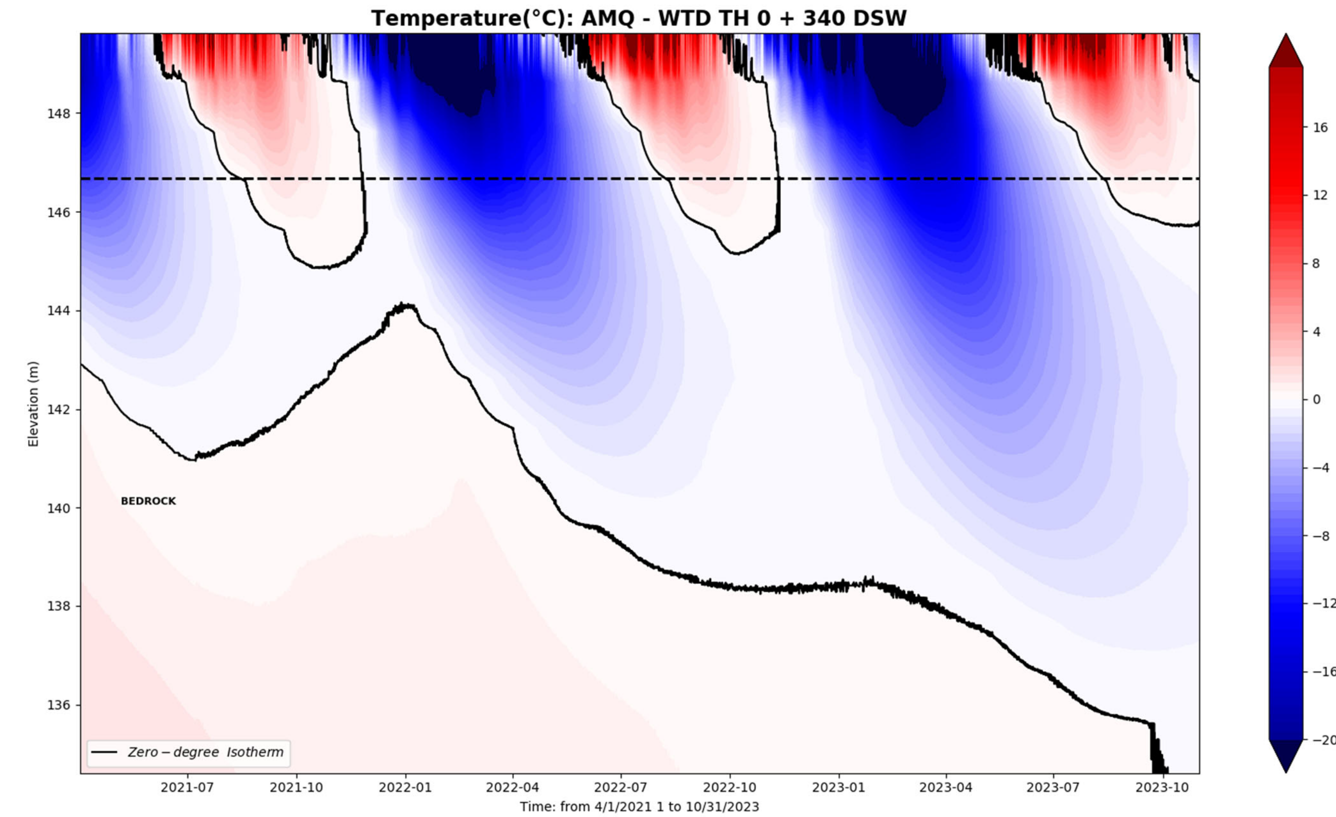


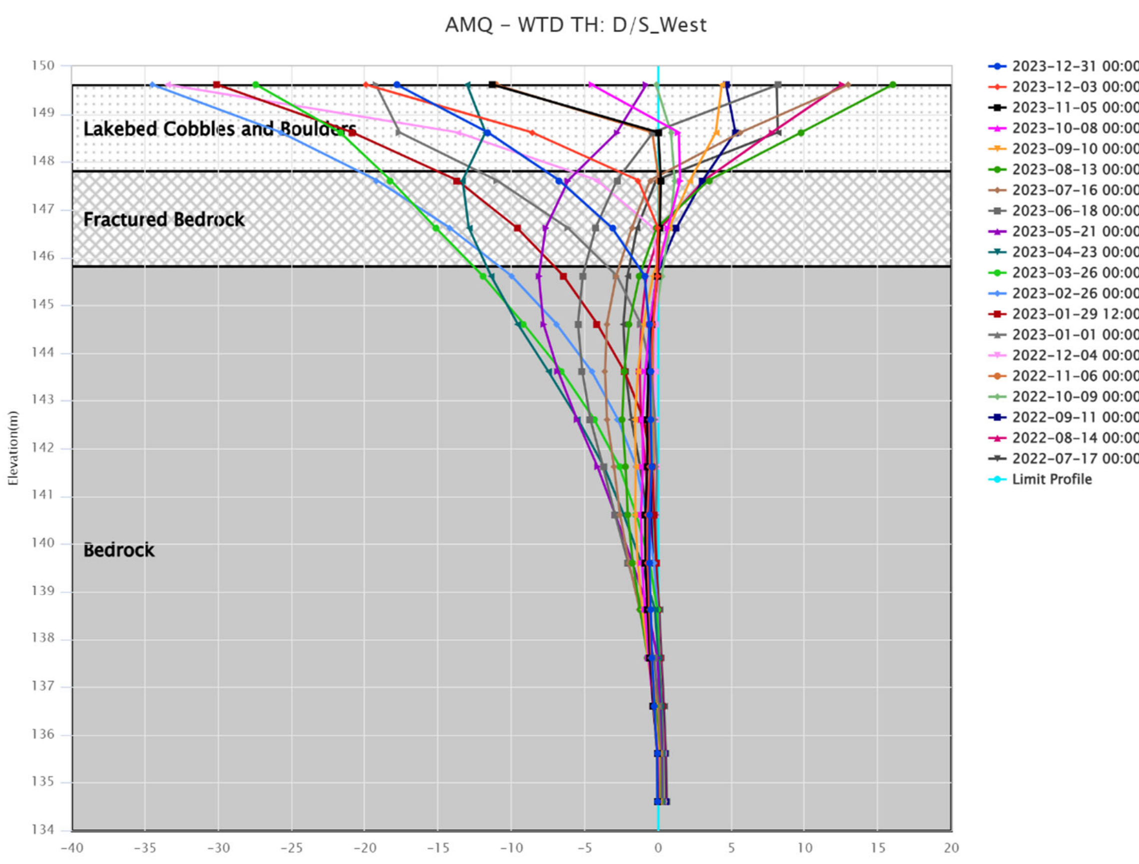




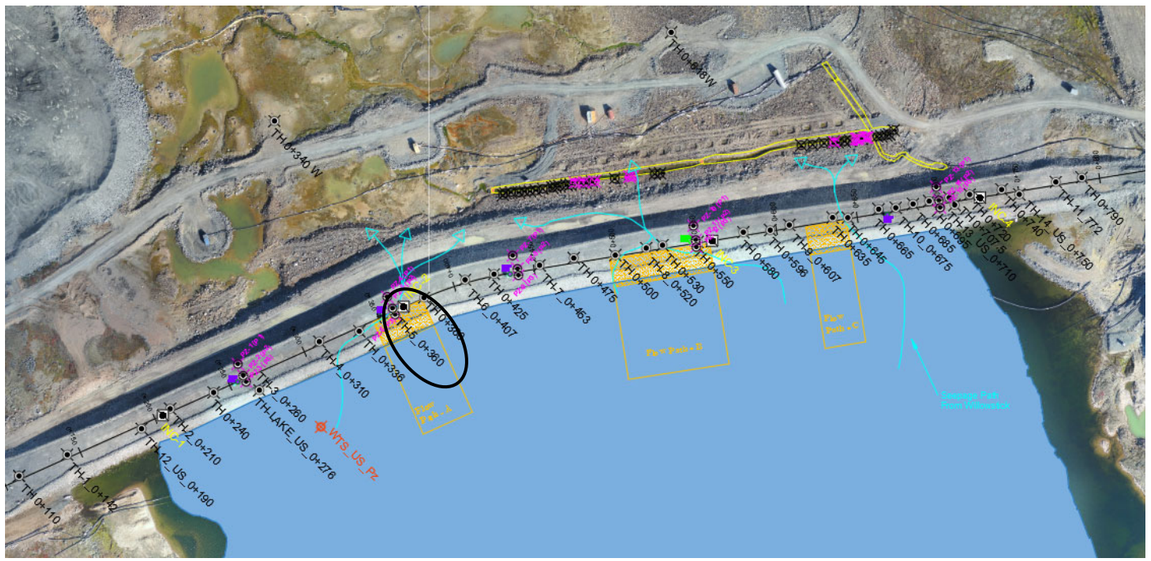
WTD-TH 0+340 DSW

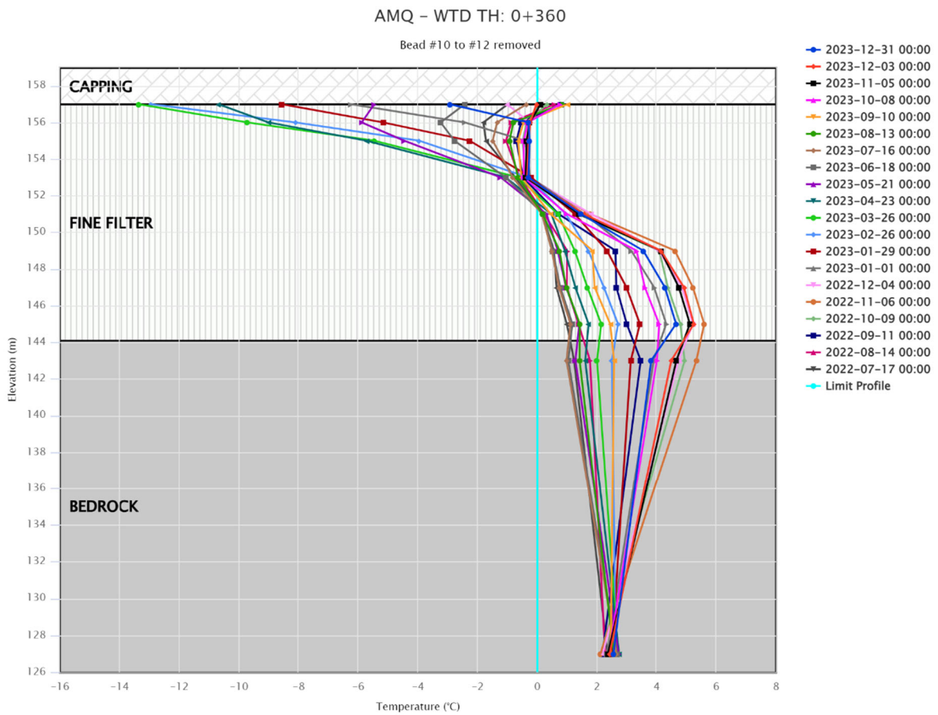


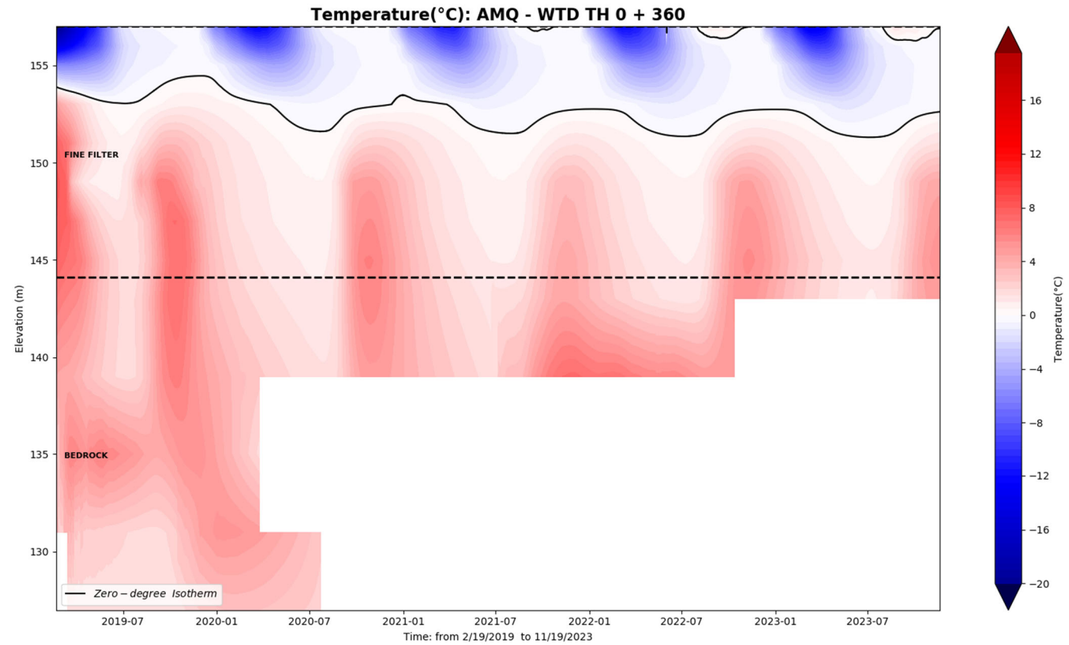


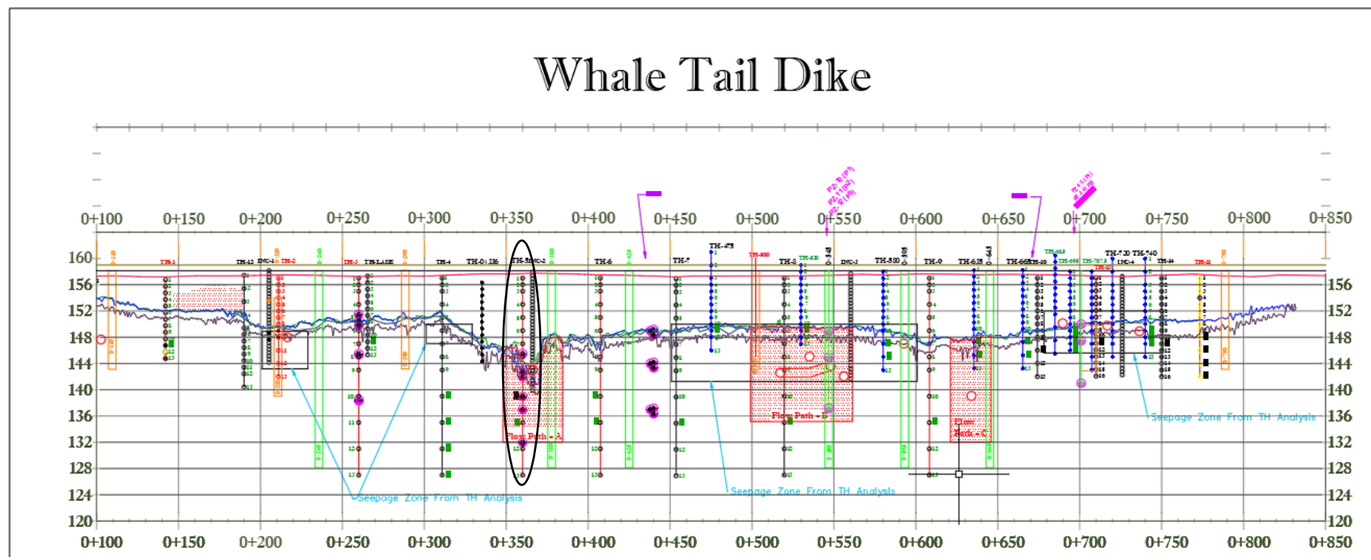


WTD-TH 0+360

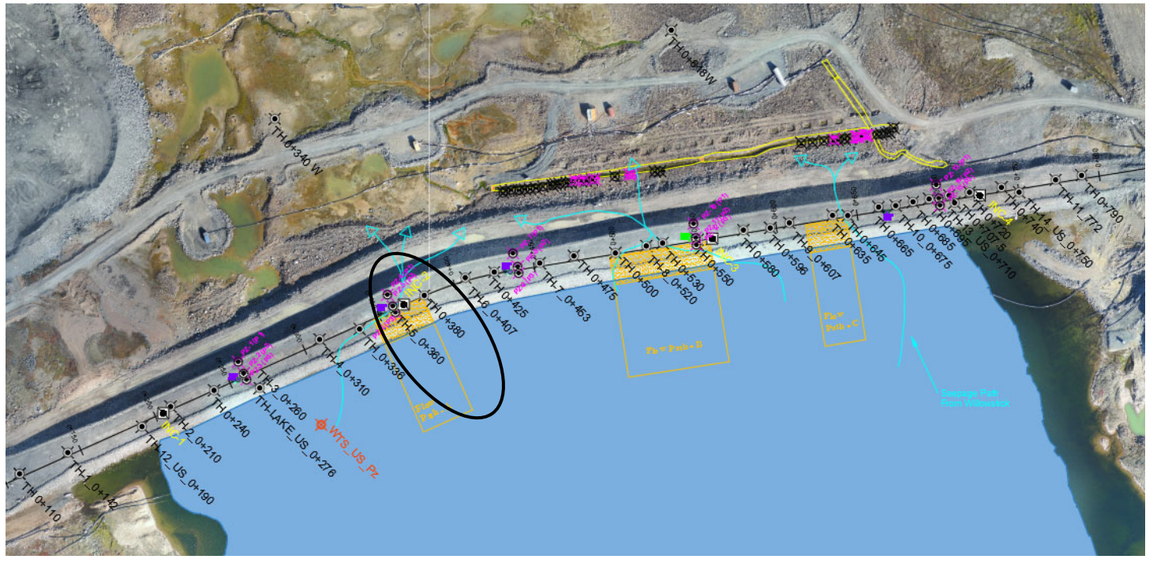

TH 0+340 W
TH 0+360 W
TH 0+790
TH-11_772
TH-14_US_0+750
TH-13_US_0+710
TH-12_US_0+190
TH 0+110
TH-LAKE_US_0+276
WTS_US_PZ
TH-1_0+360
TH-2_0+260
TH-3_0+310
TH-4_0+338
TH-5_0+407
TH-6_0+463
TH-7_0+475
TH-8_0+520
TH-9_0+550
TH-10_0+600
TH-11_0+607
TH-12_0+645
TH-13_0+675
TH-14_0+685
TH-15_0+695
TH-16_0+720
TH-17_0+740
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Flow From TH Analysis


AMQ – WTD TH: 0+360
Bead #10 to #12 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

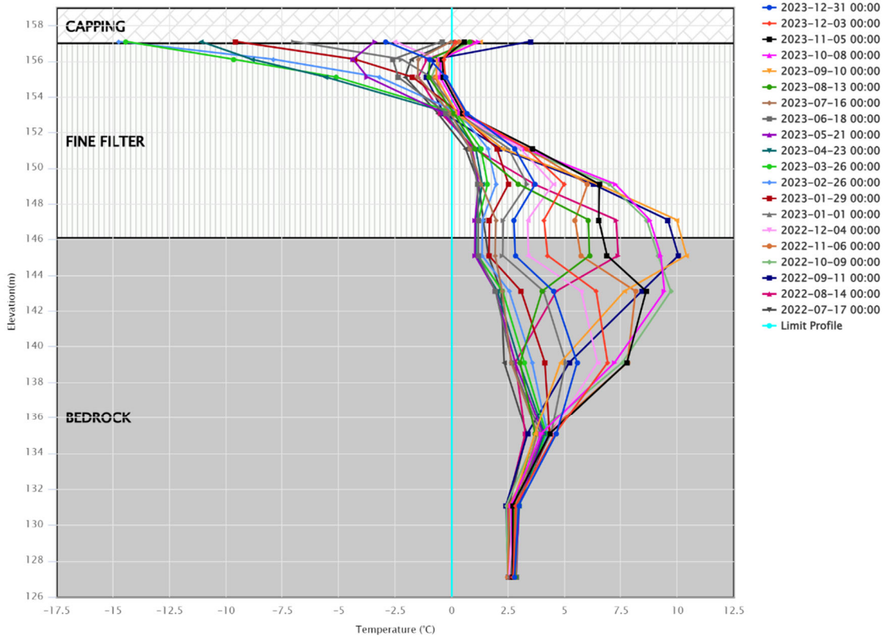

Temperature(°C): AMQ - WTD TH 0 + 360
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 11/19/2023
Temperature(°C)

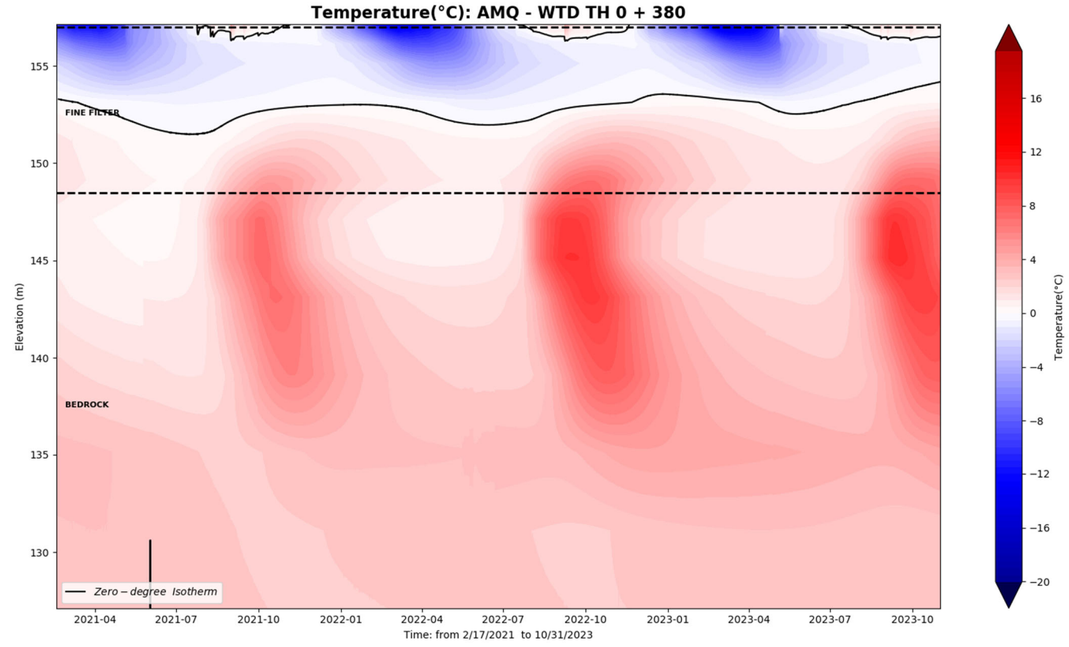

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

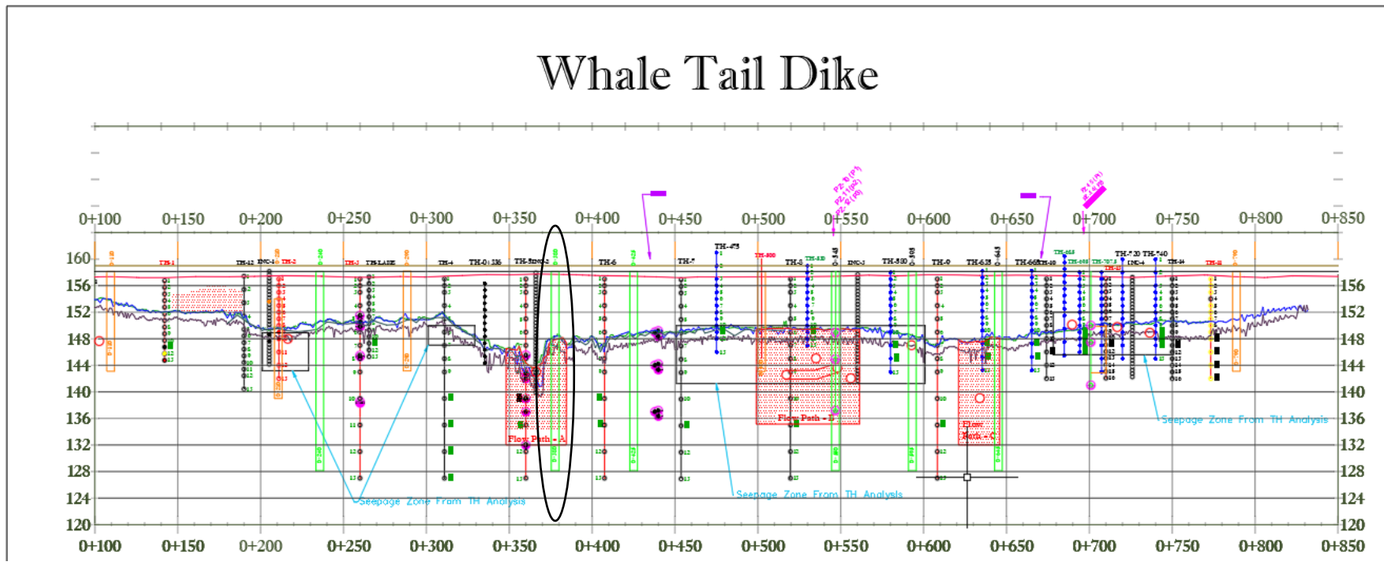
WTD-TH 0+380



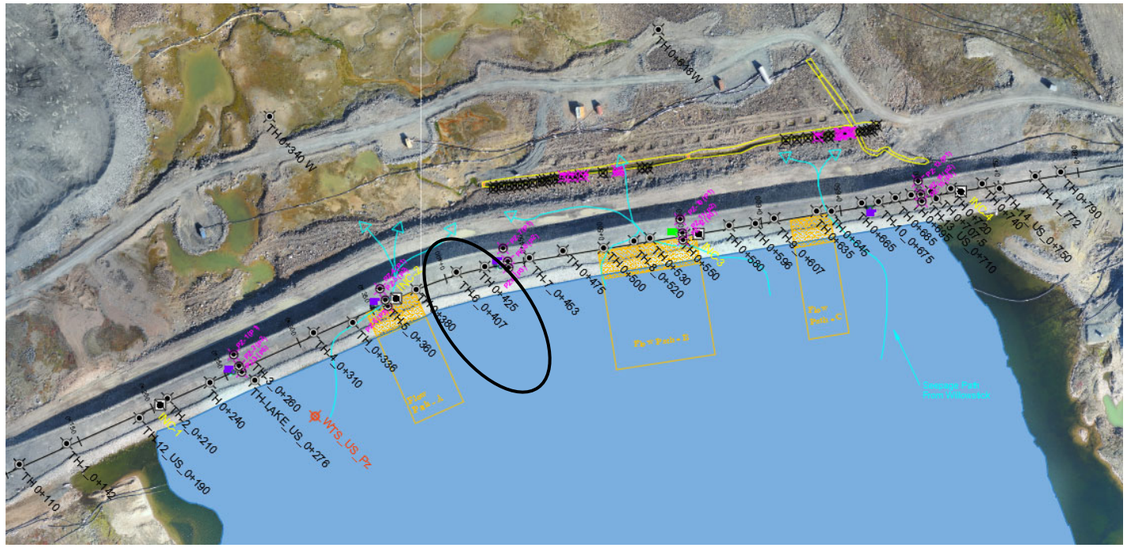
AMQ – WTD TH: 0+380

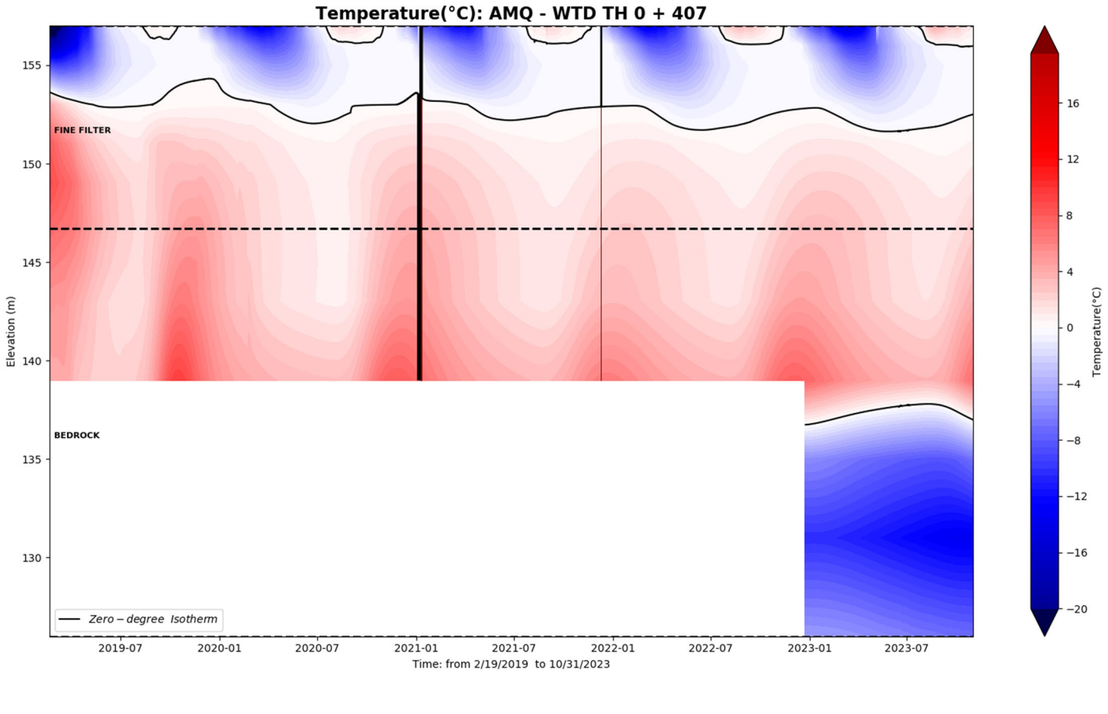


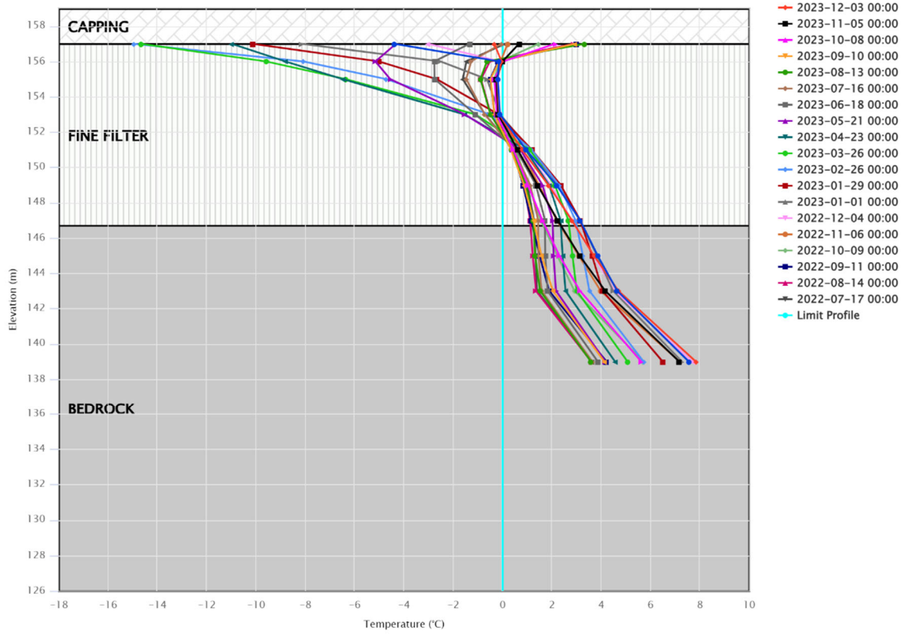


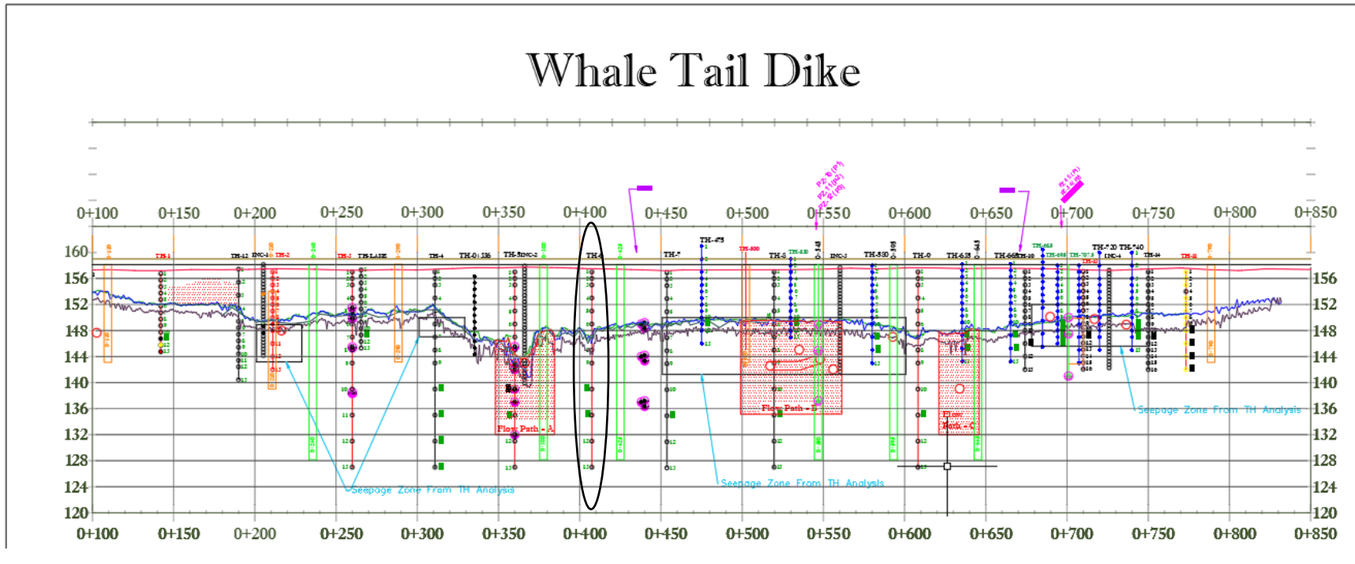


WTD-TH 0+407

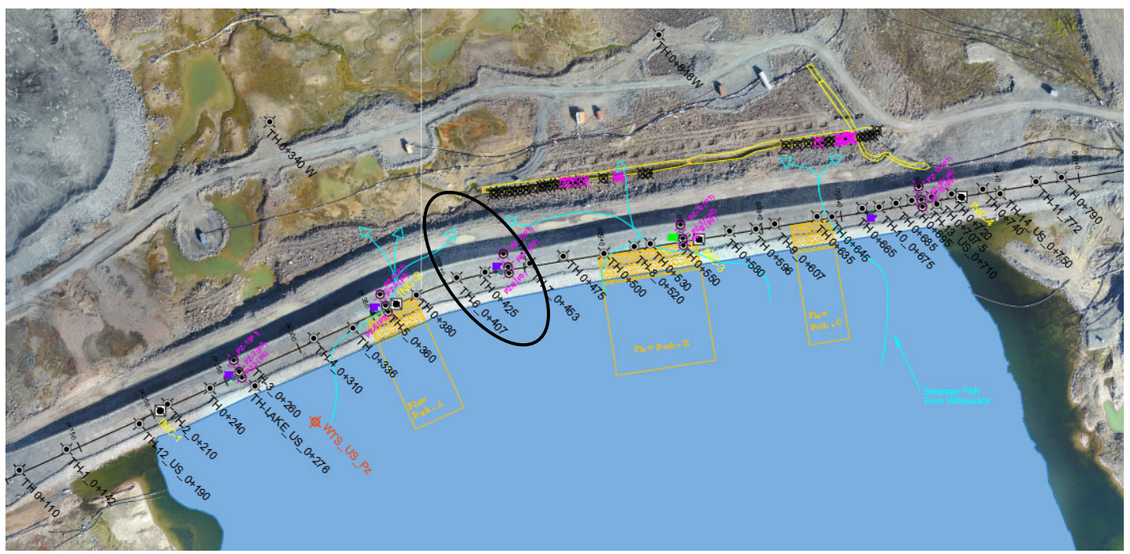

TH-0+340 W
TH-0+486W
TH-1_0+142
TH-2_0+210
TH-3_0+260
TH-4_0+310
TH-5_0+360
TH-6_0+380
TH-7_0+398
TH-8_0+425
TH-9_0+407
TH-10_0+453
TH-11_0+475
TH-12_0+500
TH-13_0+520
TH-14_0+530
TH-15_0+550
TH-16_0+590
TH-17_0+596
TH-18_0+607
TH-19_0+635
TH-20_0+645
TH-21_0+665
TH-22_0+675
TH-23_0+686
TH-24_0+696
TH-25_0+710
TH-26_0+720
TH-27_0+740
TH-28_0+772
TH-29_0+790
TH-LAKE_US_0+276
TH-12_US_0+190
TH-4_US_0+150
WTS_US_PZ
Seepage Path from Tailings Lake


Temperature(°C): AMQ - WTD TH 0 + 407
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/31/2023
Temperature(°C)

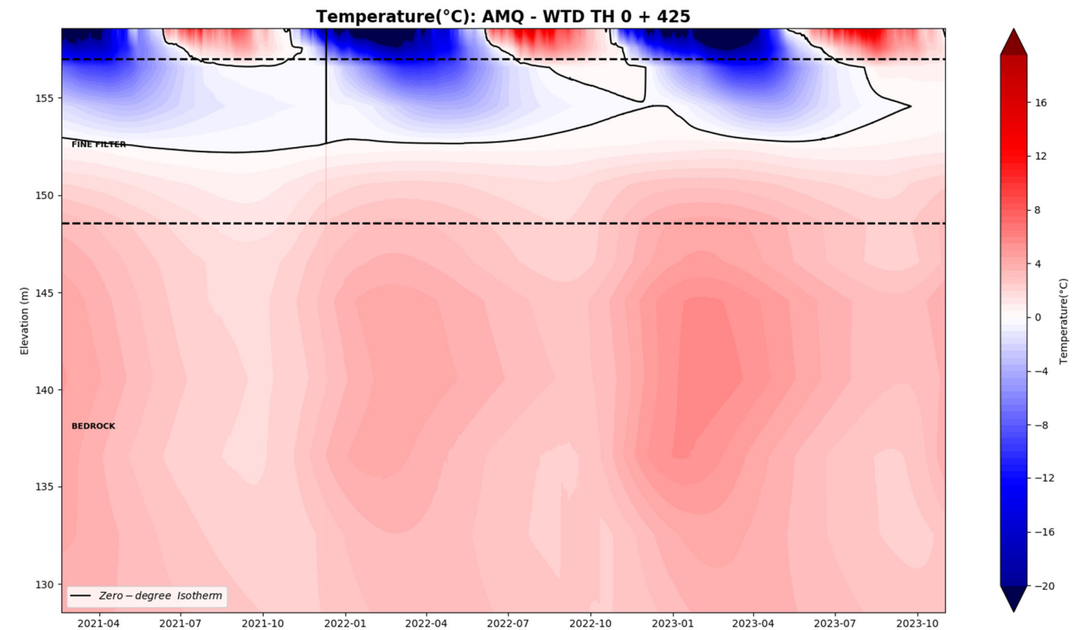

AMQ – WTD TH: 0+407
Bead #11 to #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

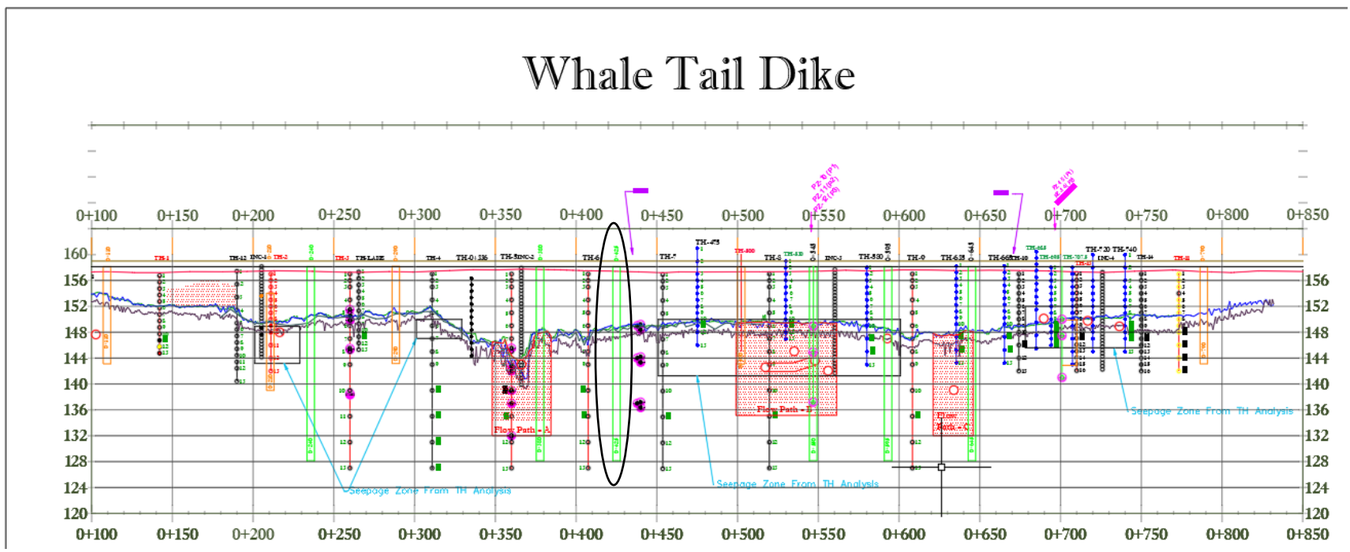

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+425

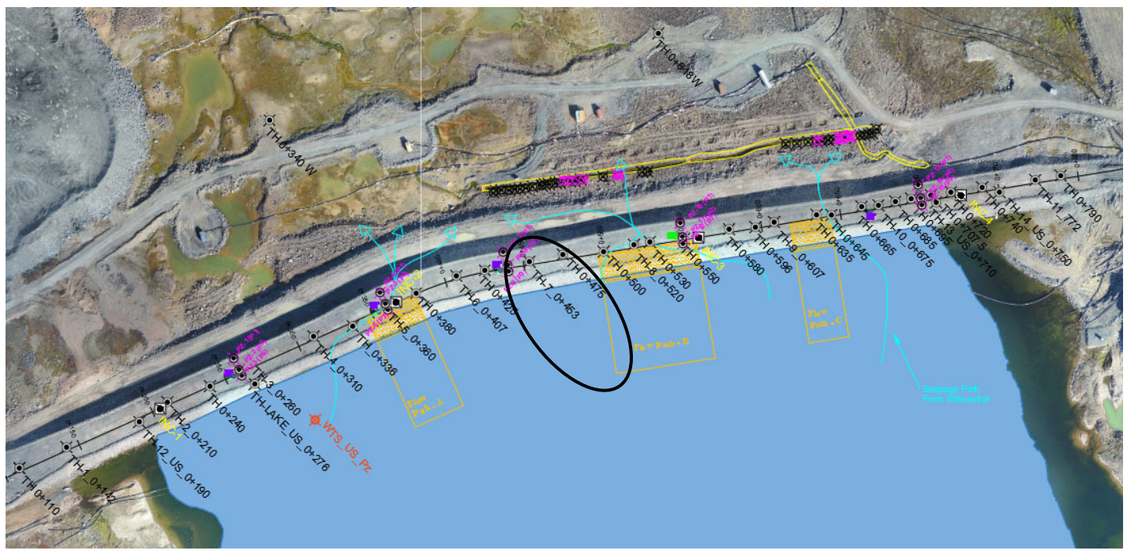


AMQ – WTD TH: 0+425

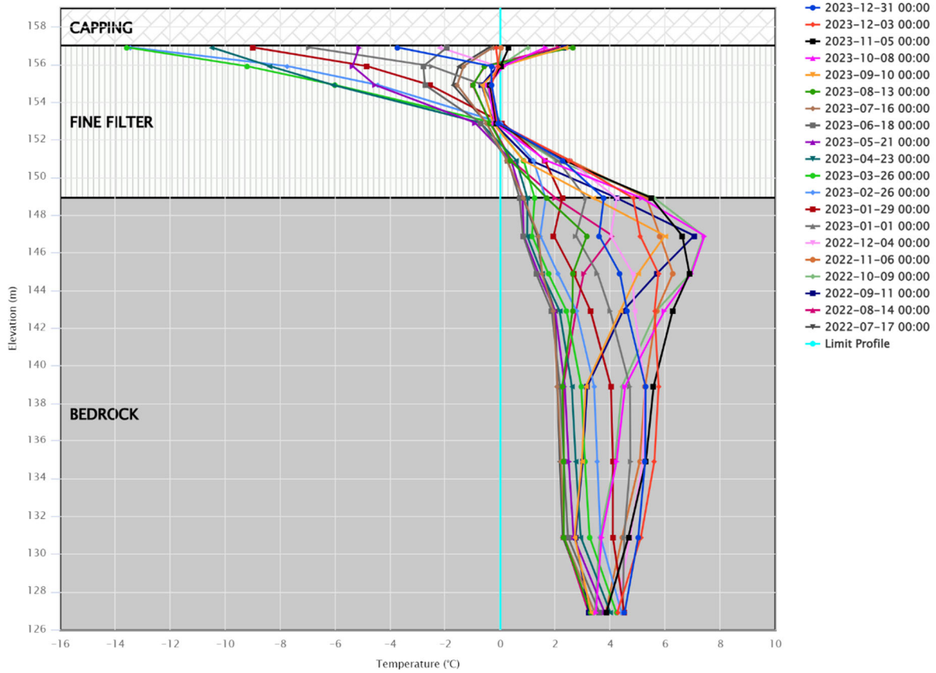


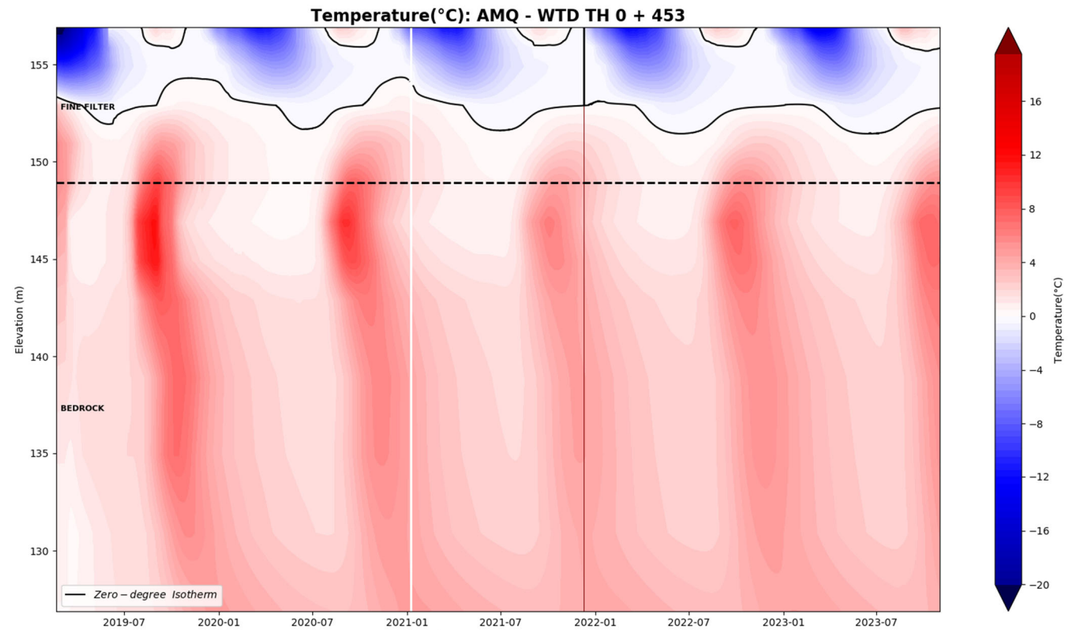


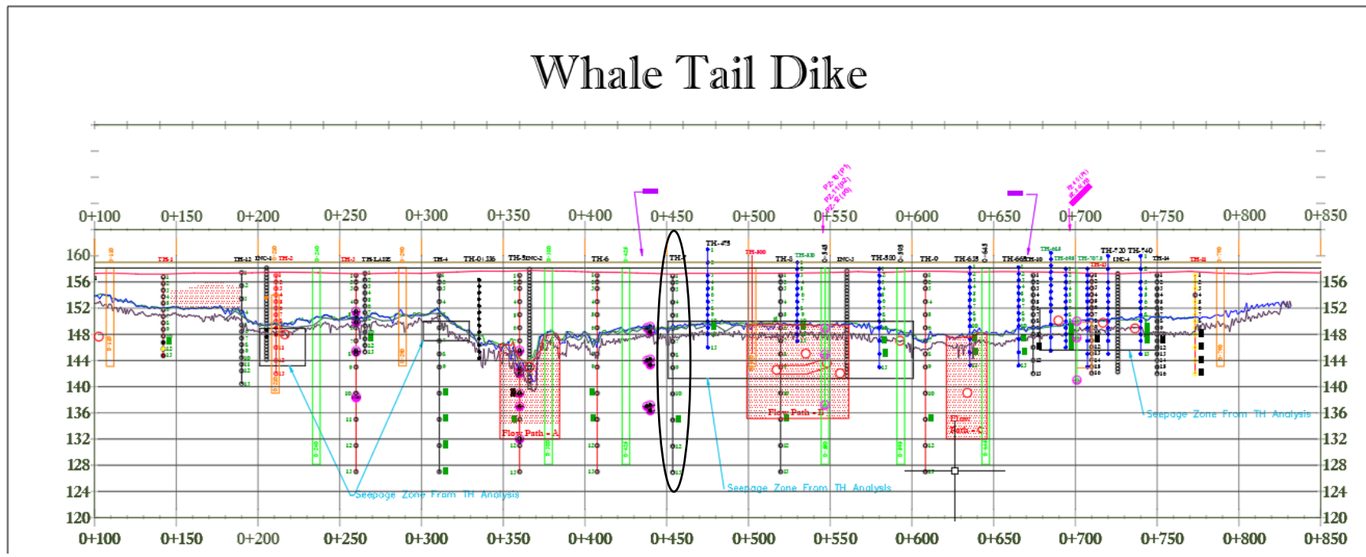
WTD-TH 0+453



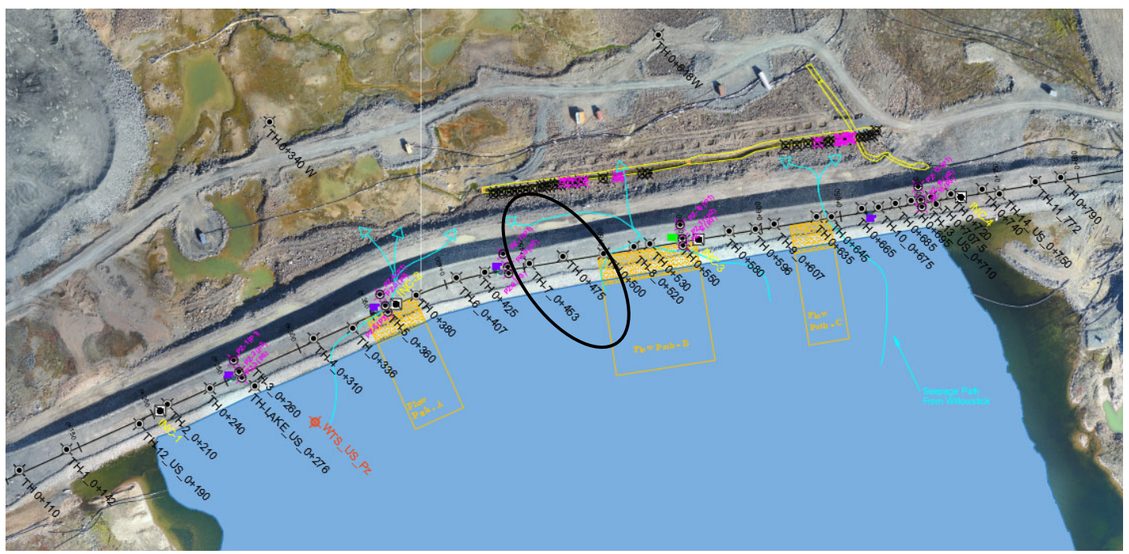
AMQ – WTD TH: 0+453



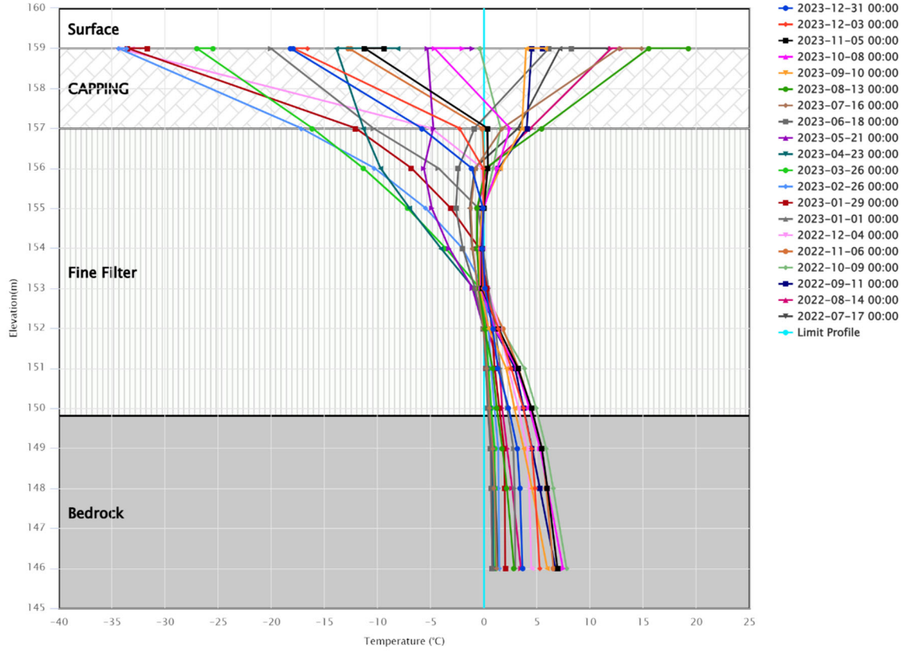


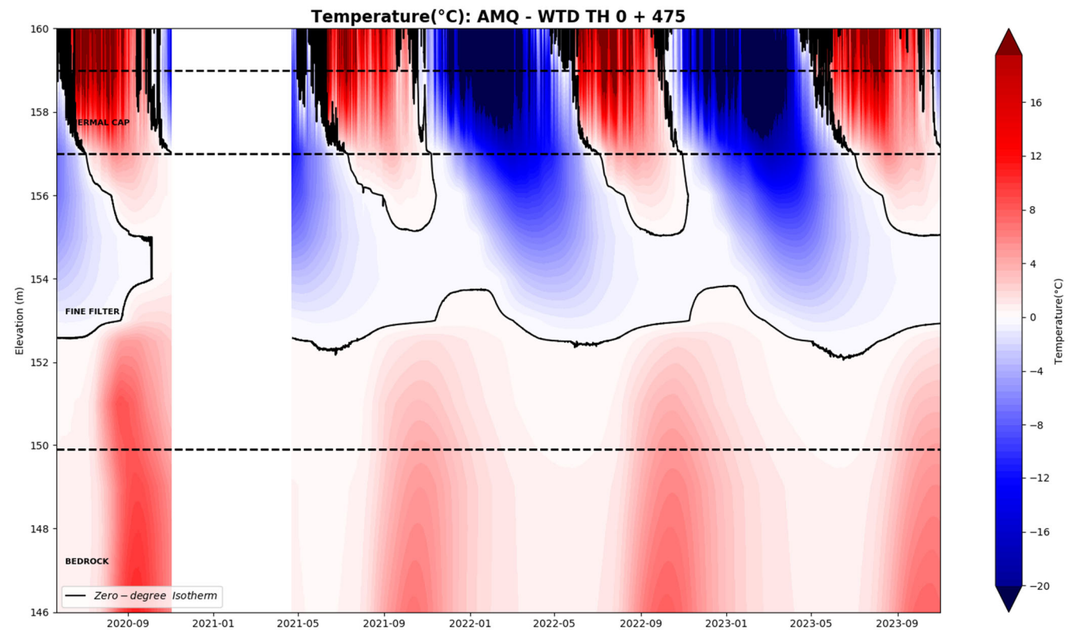


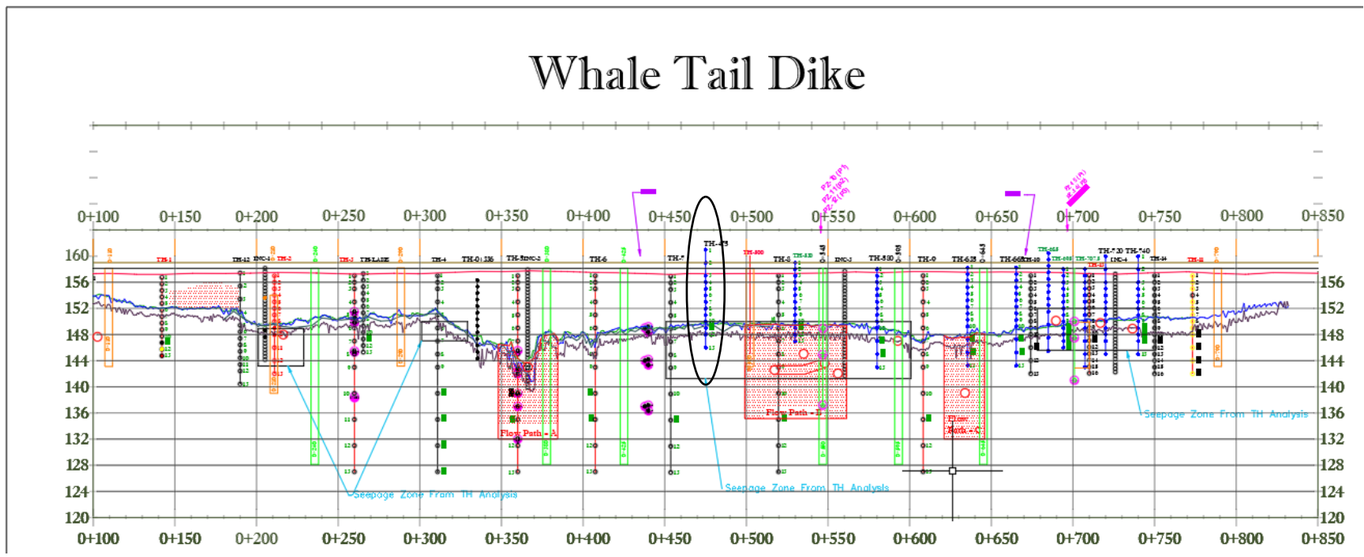
WTD-TH 0+475



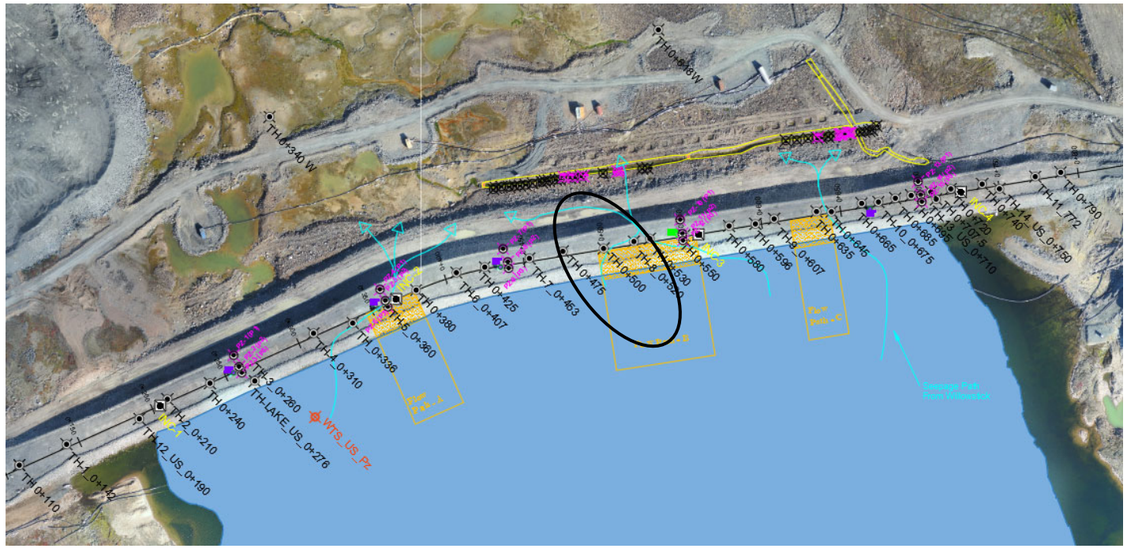
AMQ – WTD TH: 0+475_T

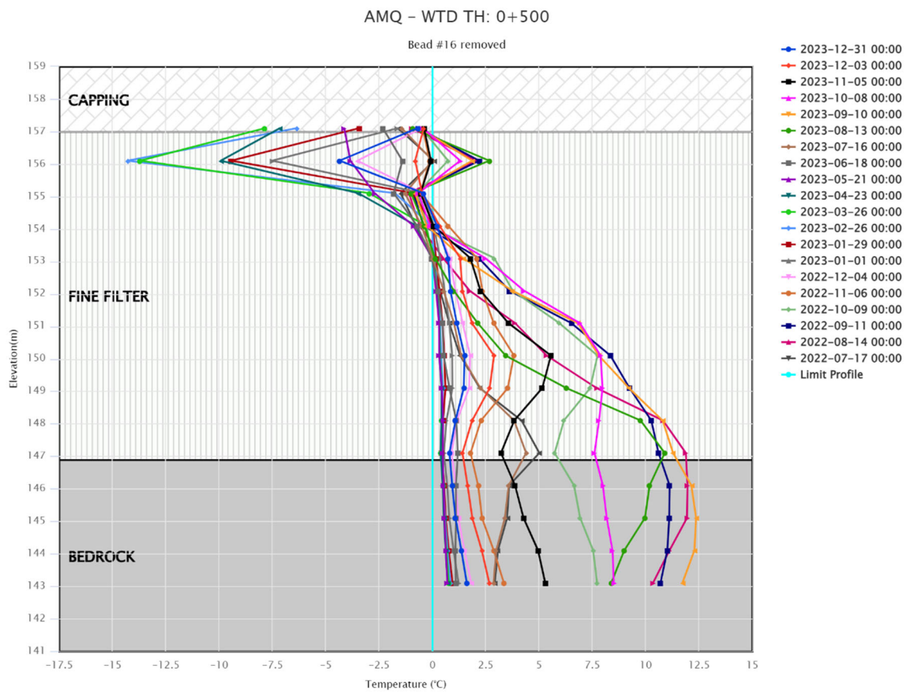


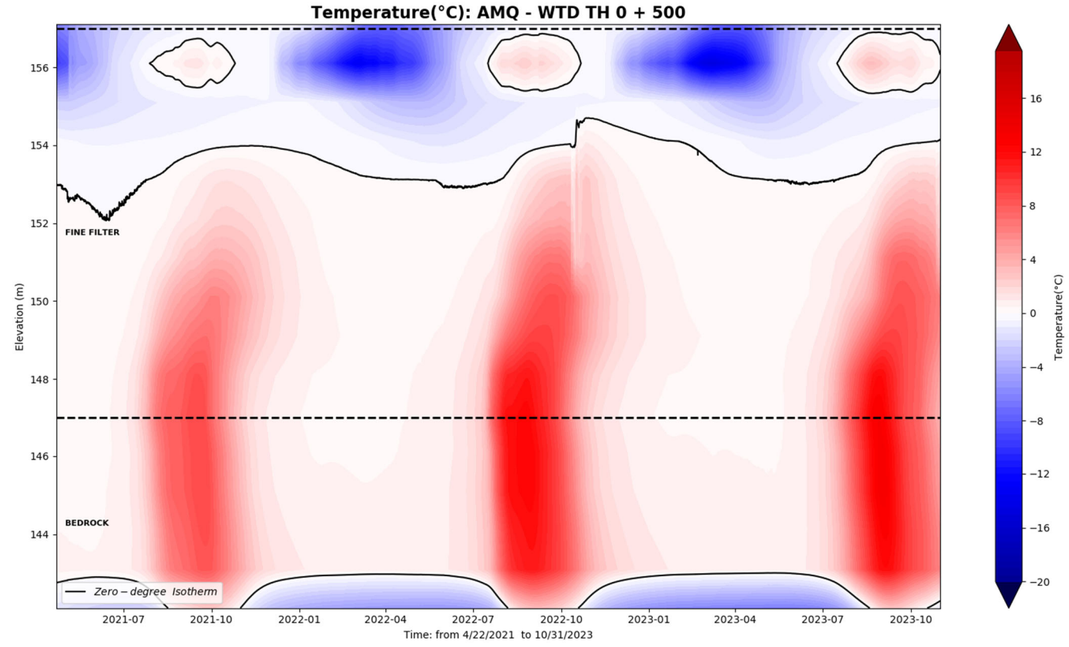


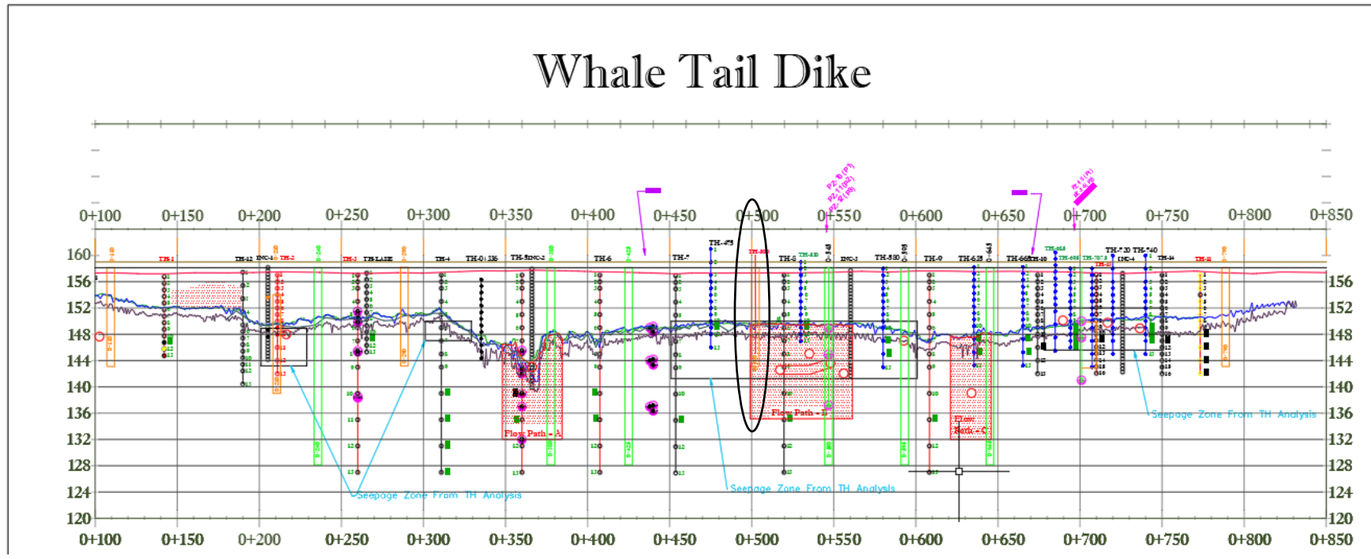


WTD-TH 0+500

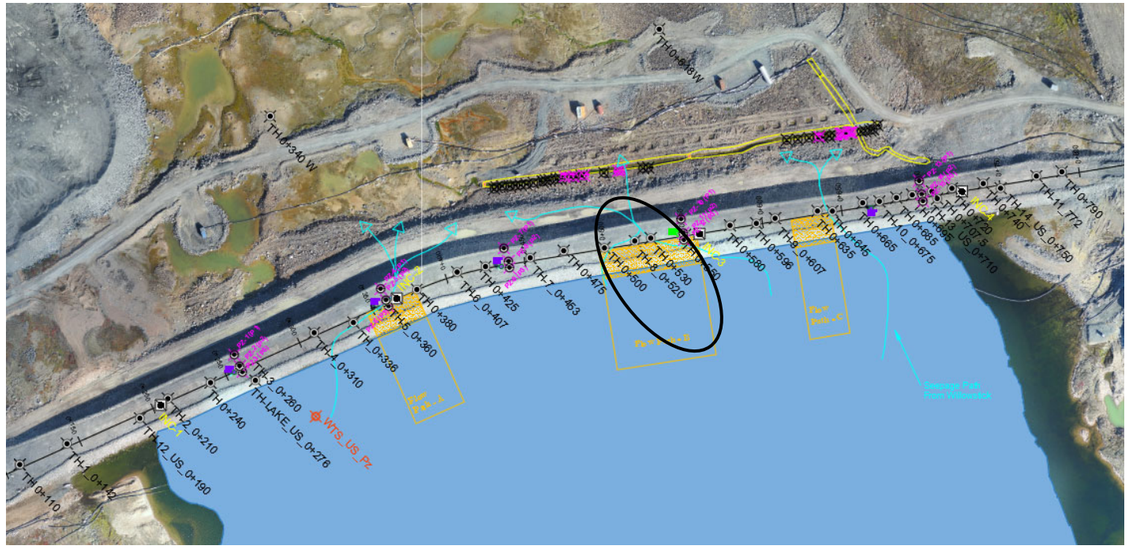

TH-0+340 W
TH-0+418W
TH-0+10
TH-1_0+142
TH-12_US_0+190
TH-2_0+210
TH-3_0+260
TH-LAKE_US_0+276
TH-4_0+310
TH-5_0+336
TH-5_0+380
TH-6_0+407
TH-6_0+425
TH-7_0+453
TH-8_0+475
TH-8_0+500
TH-8_0+520
TH-8_0+530
TH-9_0+550
TH-9_0+580
TH-9_0+598
TH-9_0+607
TH-10_0+635
TH-10_0+645
TH-10_0+665
TH-10_0+675
TH-10_0+685
TH-10_0+695
TH-10_0+720
TH-11_0+740
TH-11_772
TH-11_US_0+750
TH-0+780
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Whale Tail

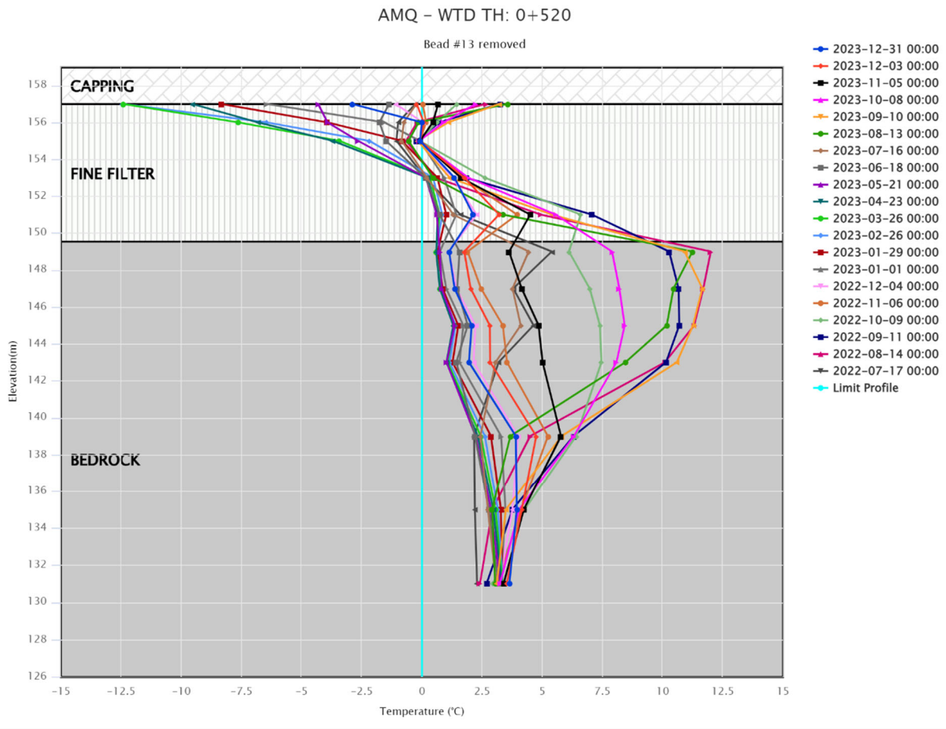

AMQ – WTD TH: 0+500
Bead #16 removed
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

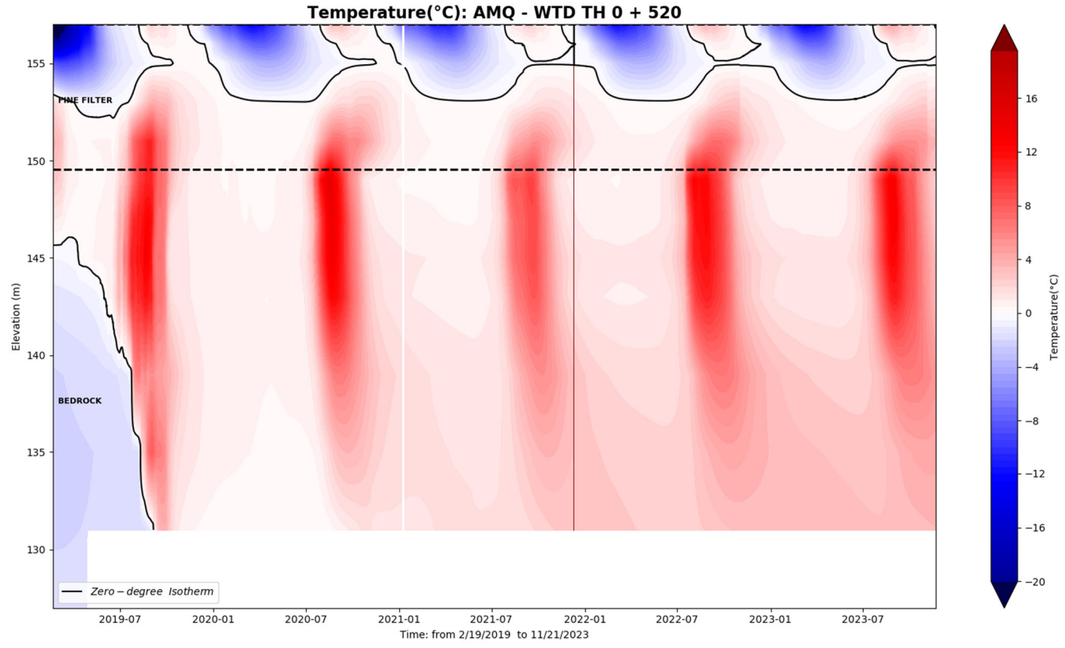

Temperature(°C): AMQ - WTD TH 0 + 500
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/22/2021 to 10/31/2023
Temperature(°C)

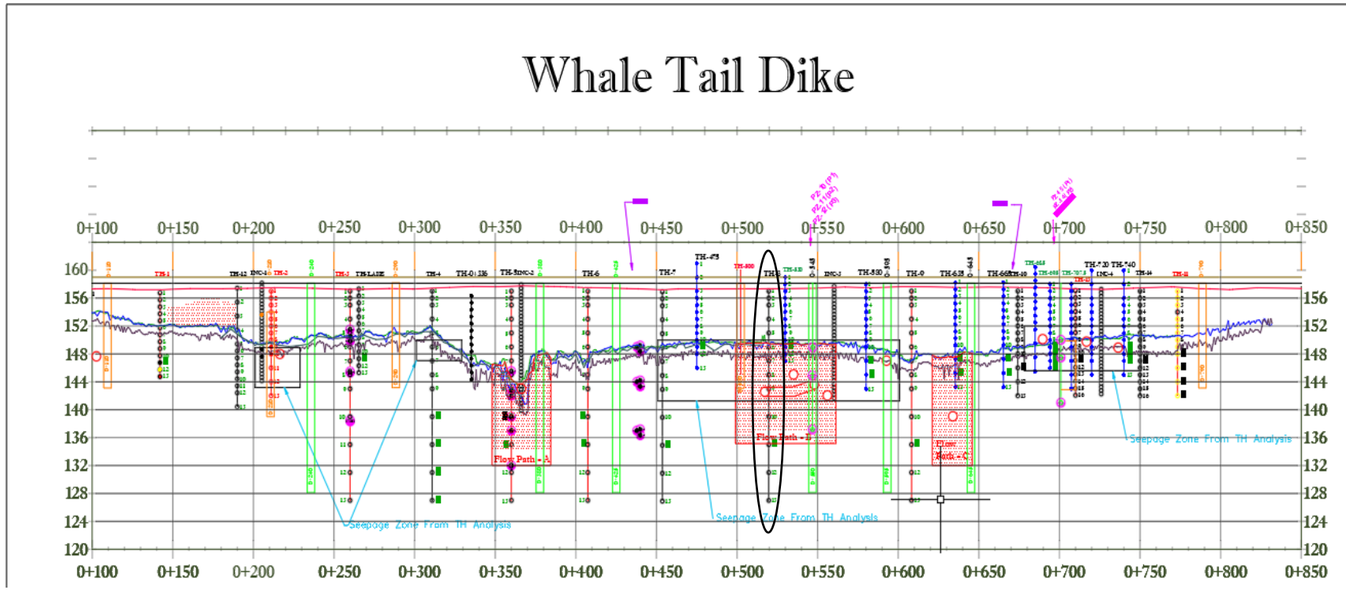

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+520

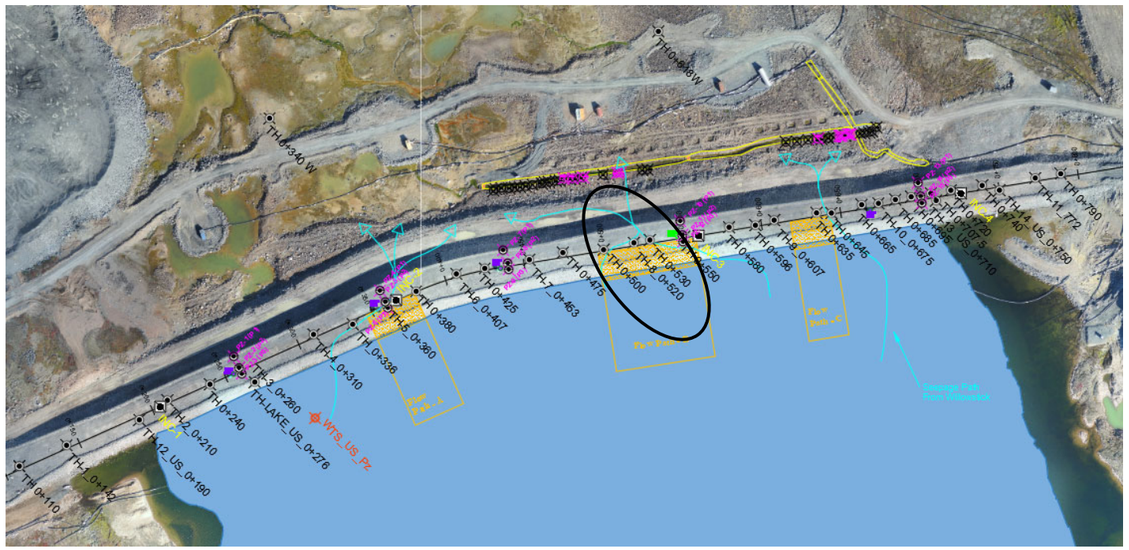

TH-0+340 W
TH-0+336 W
TH-0+110
TH-1_0+145
TH-2_0+210
TH-2_US_0+190
TH-0+240
TH-3_0+260
TH-LAKE_US_0+278
WTS_US_PZ
TH-1_0+310
TH_0+336
TH-5_0+360
TH-0+380
TH-0+425
TH-6_0+407
TH-7_0+453
TH-0+475
TH-0+500
TH-8_0+520
TH-0+530
TH-0+550
TH-9_0+596
TH-0+607
TH-0+645
TH-0+665
TH-10_0+675
TH-0+695
TH-0+705
TH-11_0+720
TH-11_772
TH-0+740
TH-11_US_0+710
TH-11_US_0+750
TH-0+790
Seepage Path From Whalebone


AMQ – WTD TH: 0+520
Bead #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

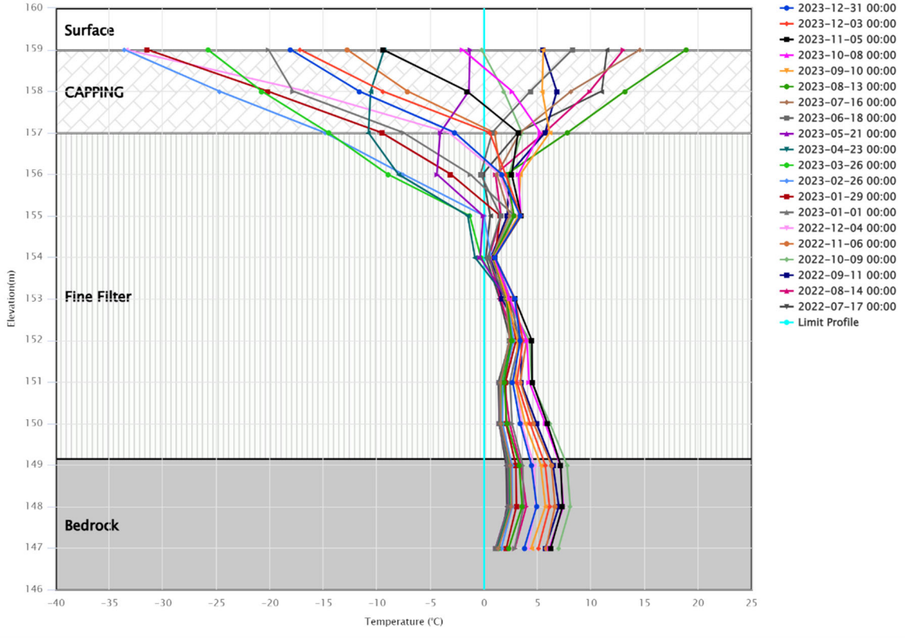

Temperature(°C): AMQ - WTD TH 0 + 520
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 2/19/2019 to 11/21/2023
Temperature(°C)

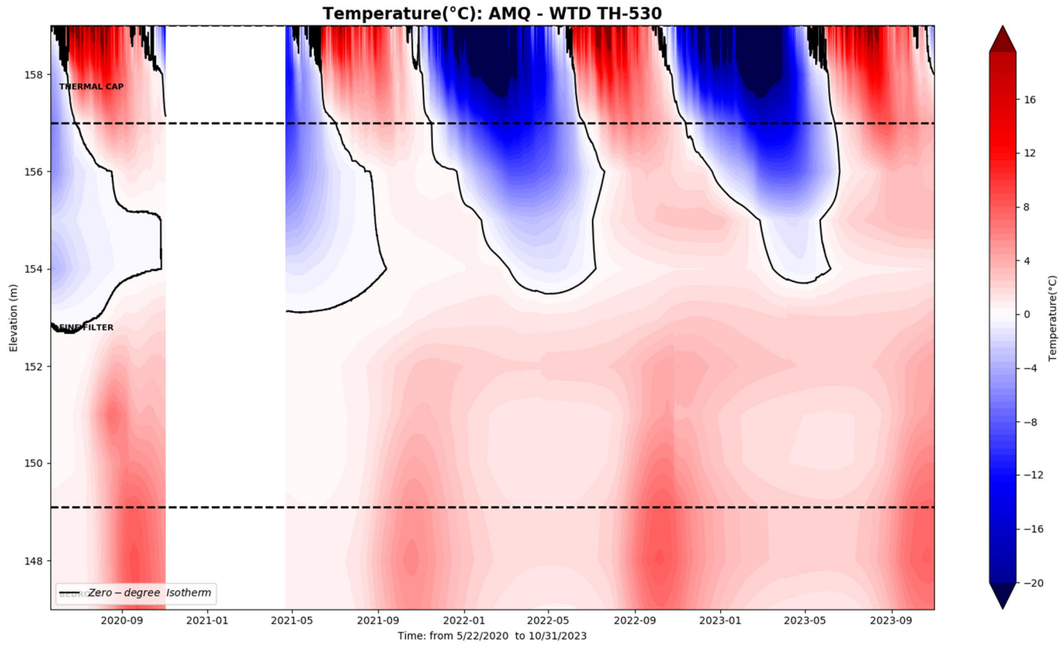

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis

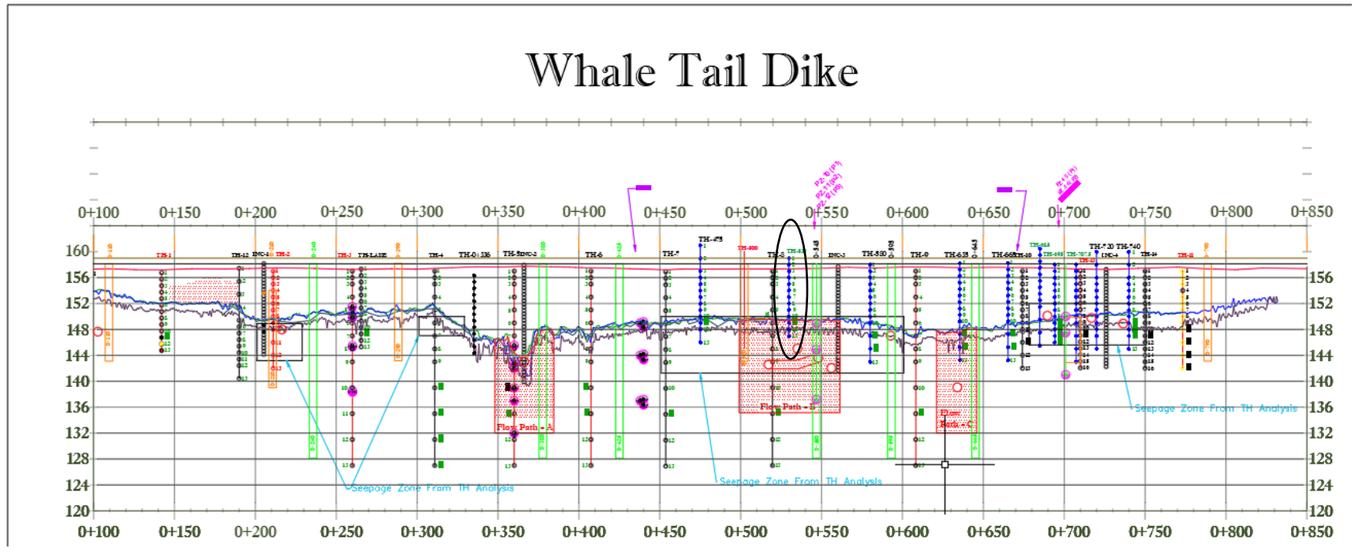
WTD-TH 0+530



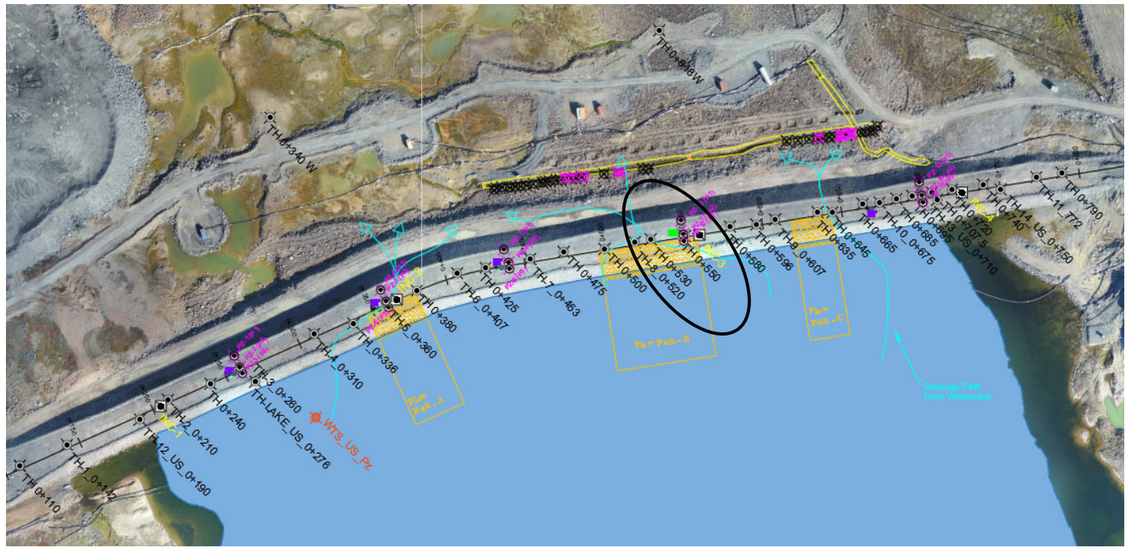
AMQ – WTD TH: 0+530_T

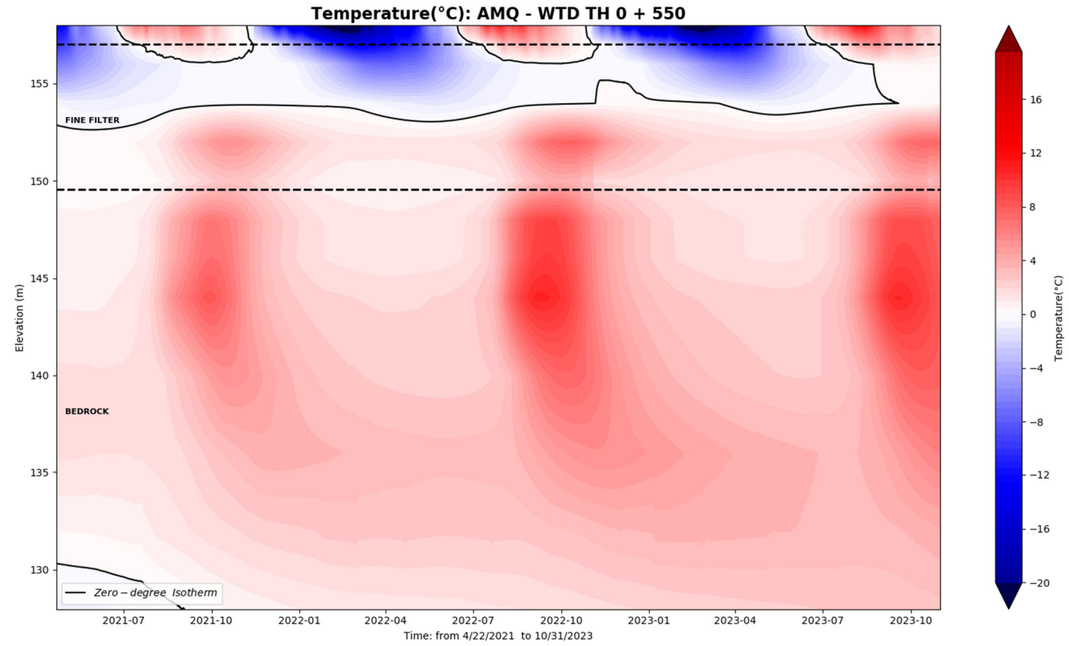


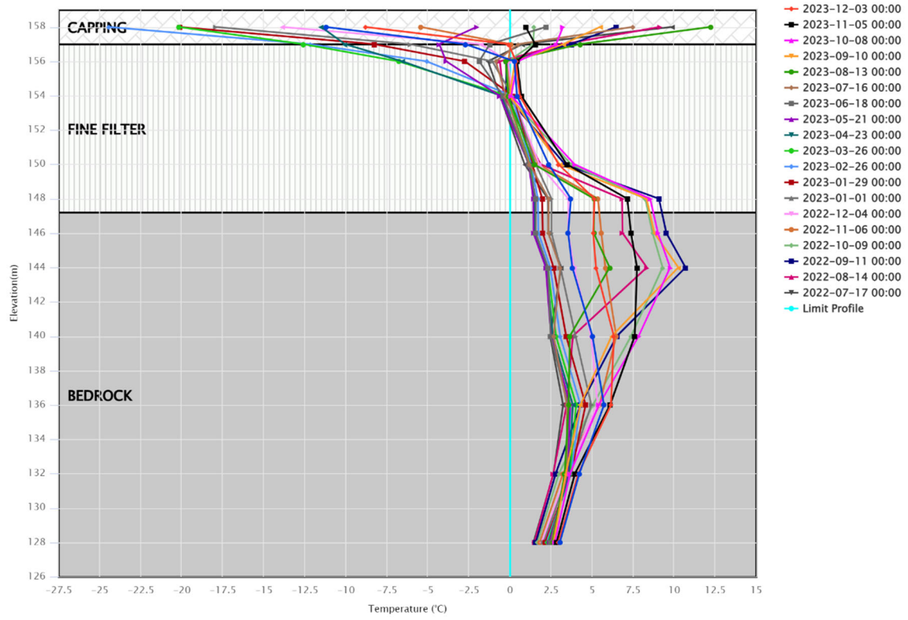


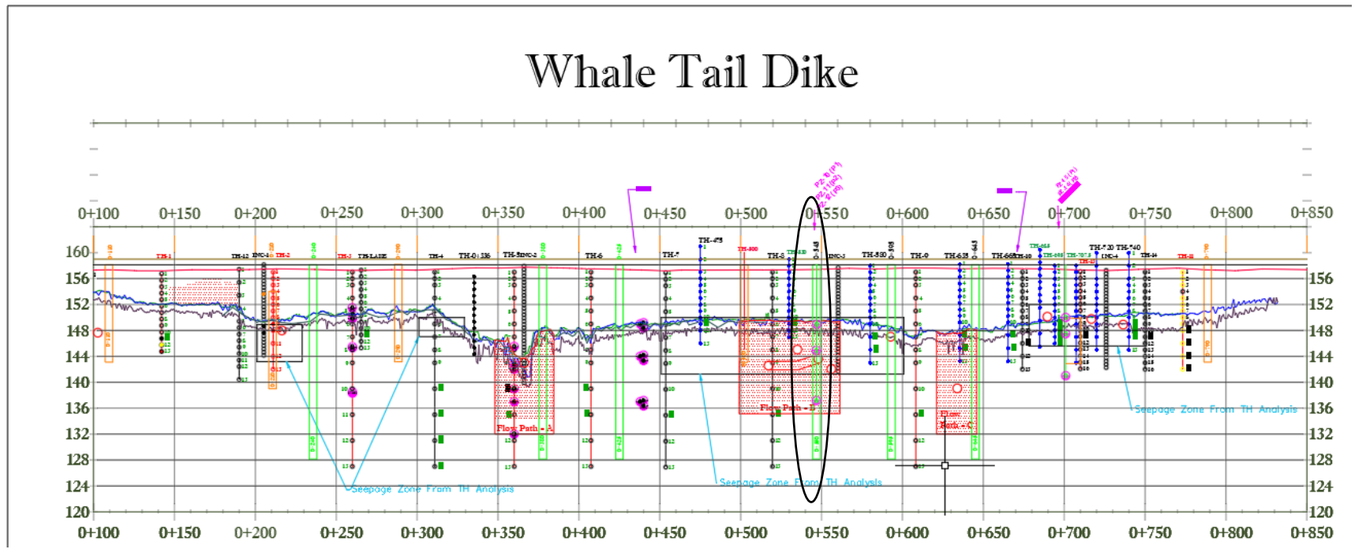


WTD-TH 0+550

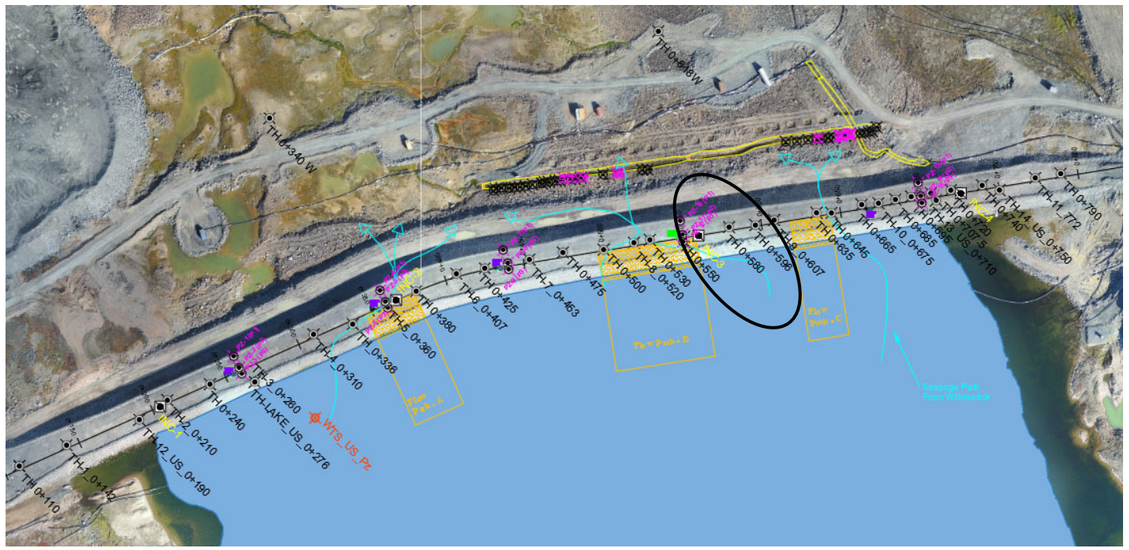

TH-0+340 W
TH-0+318W
TH-0+110
TH-1_0+142
TH-2_US_0+160
TH-2_0+210
TH-0+240
TH-3_0+260
TH-LAKE_US_0+276
WTS_US_Pz
TH-4_0+310
TH_0+336
TH-5_0+360
TH-0+380
TH-0+407
TH-0+425
TH-7_0+453
TH-0+475
TH-0+500
TH-9_0+520
TH-0+520
TH-0+550
TH-0+580
TH-0+598
TH-0+607
TH-0+635
TH-0+645
TH-0+665
TH-0+675
TH-0+685
TH-0+695
TH-0+705
TH-0+710
TH-0+720
TH-0+740
TH-14_US_0+750
TH-11_T72
TH-0+790
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Embankment


Temperature(°C): AMQ - WTD TH 0 + 550
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/22/2021 to 10/31/2023
Temperature(°C)

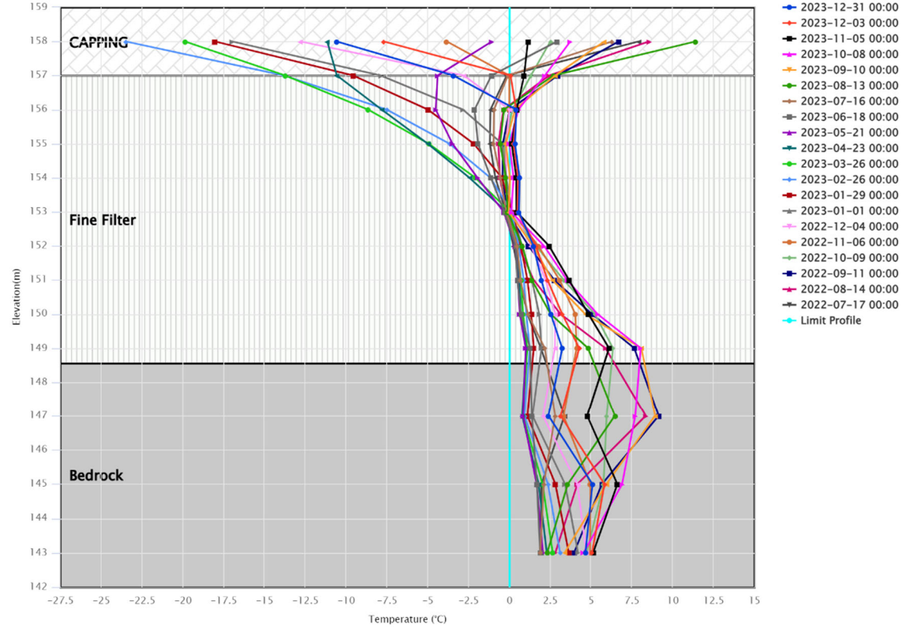

AMQ – WTD TH: 0+550
Bead #5 remove
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

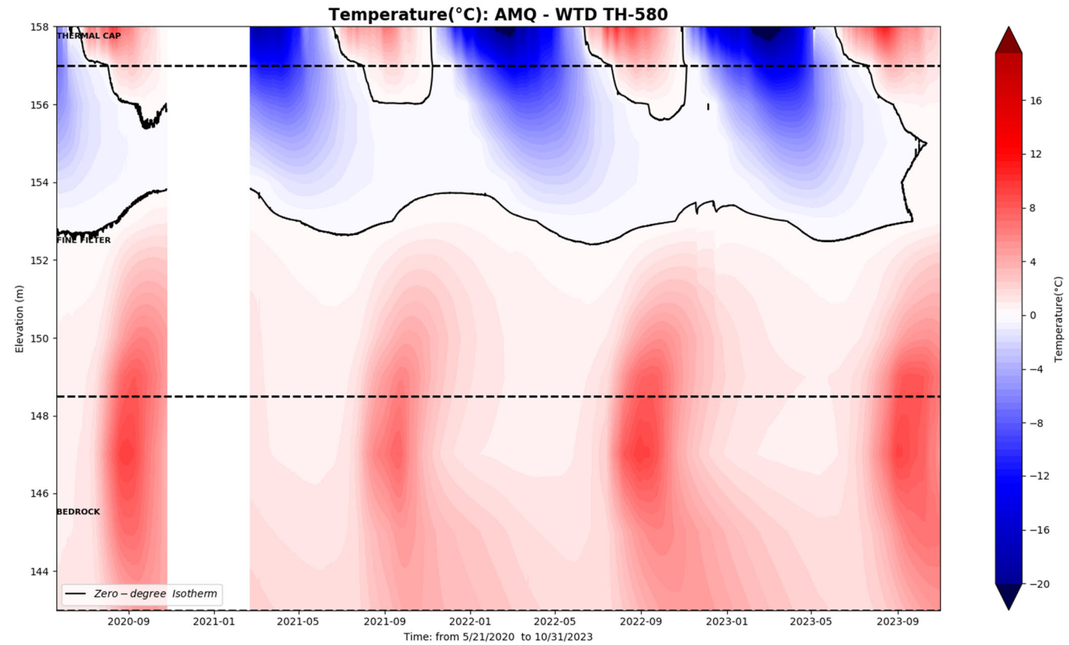

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

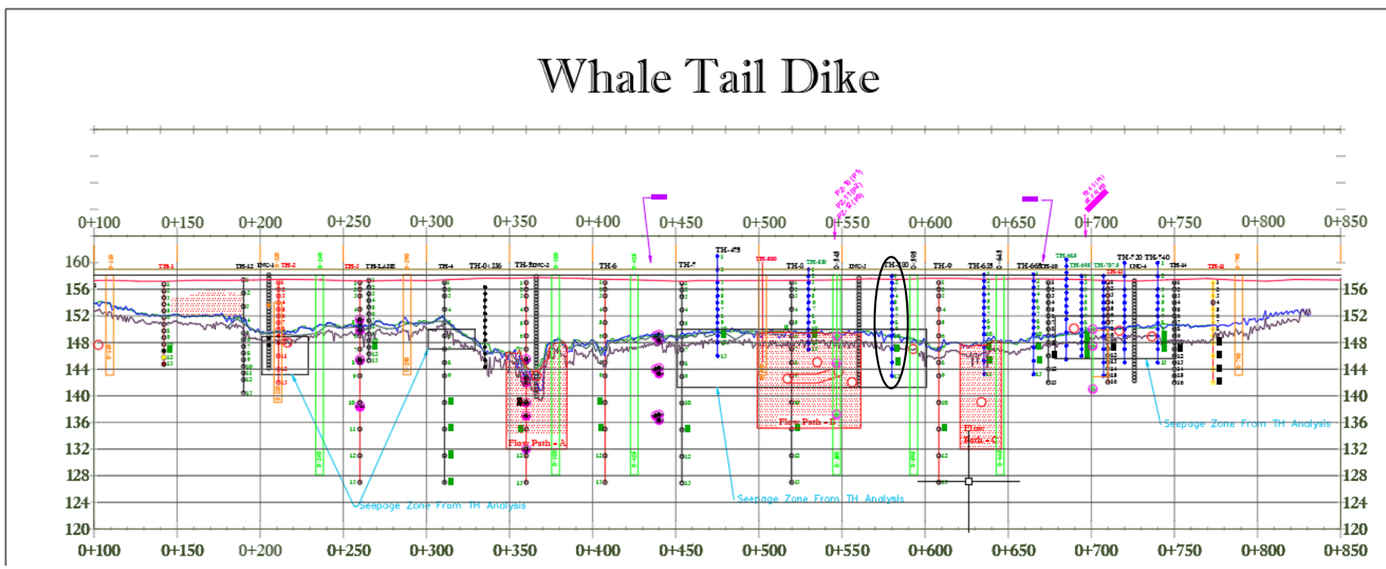
WTD-TH 0+580



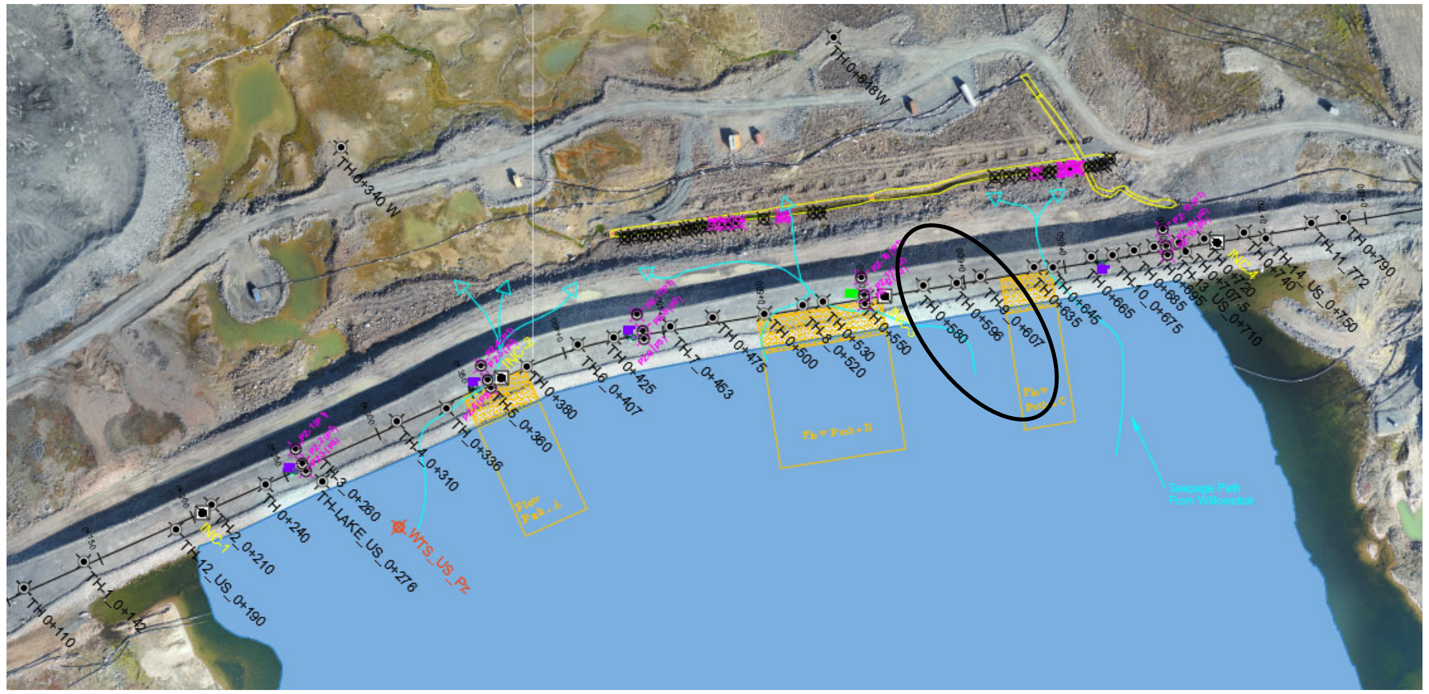
AMQ – WTD TH: 0+580_T

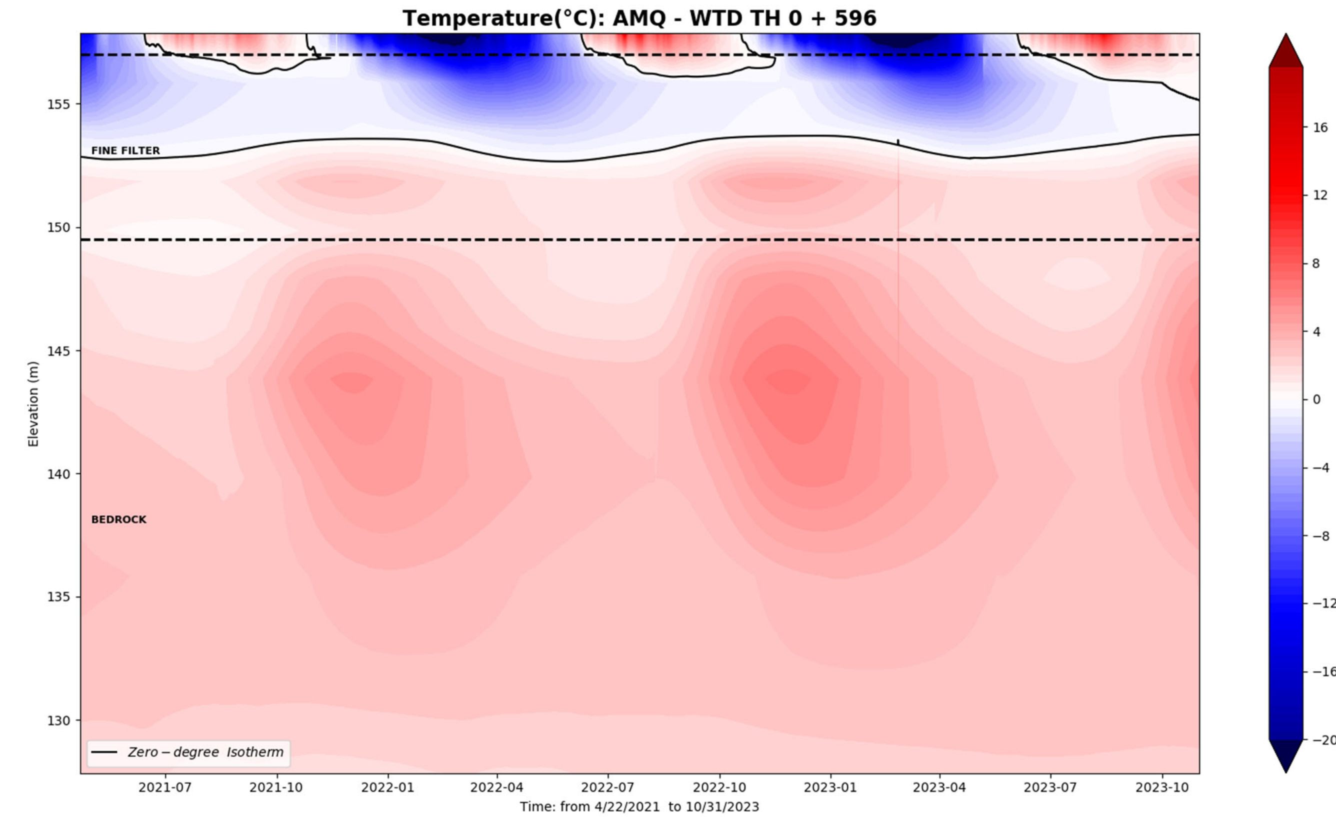


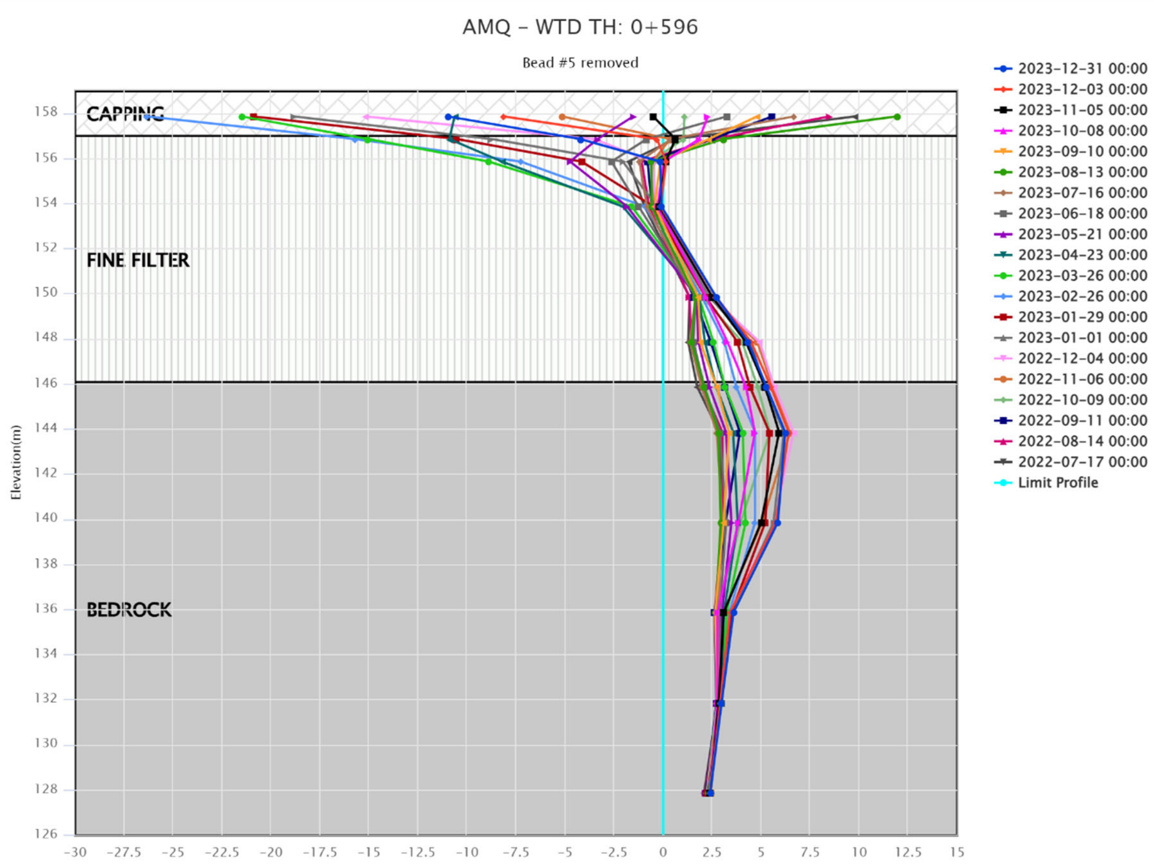


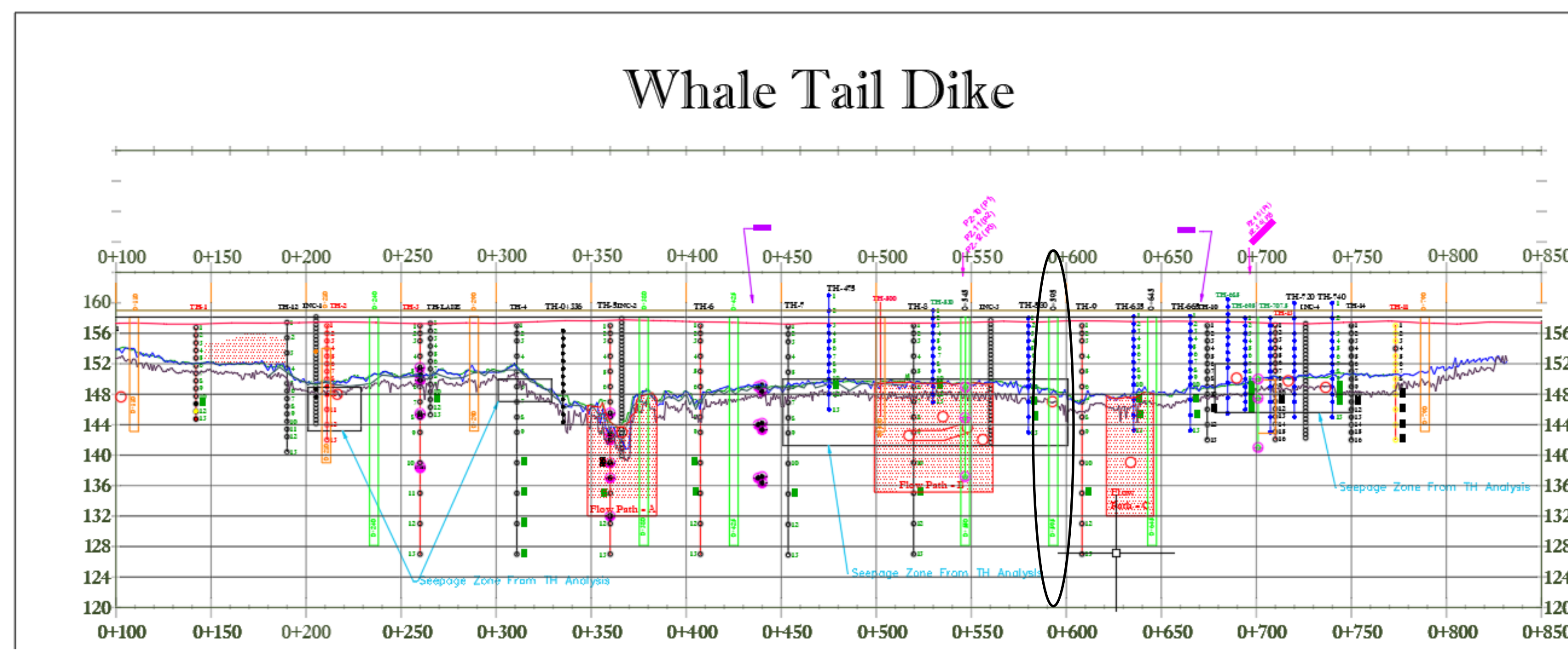


WTD-TH 0+596

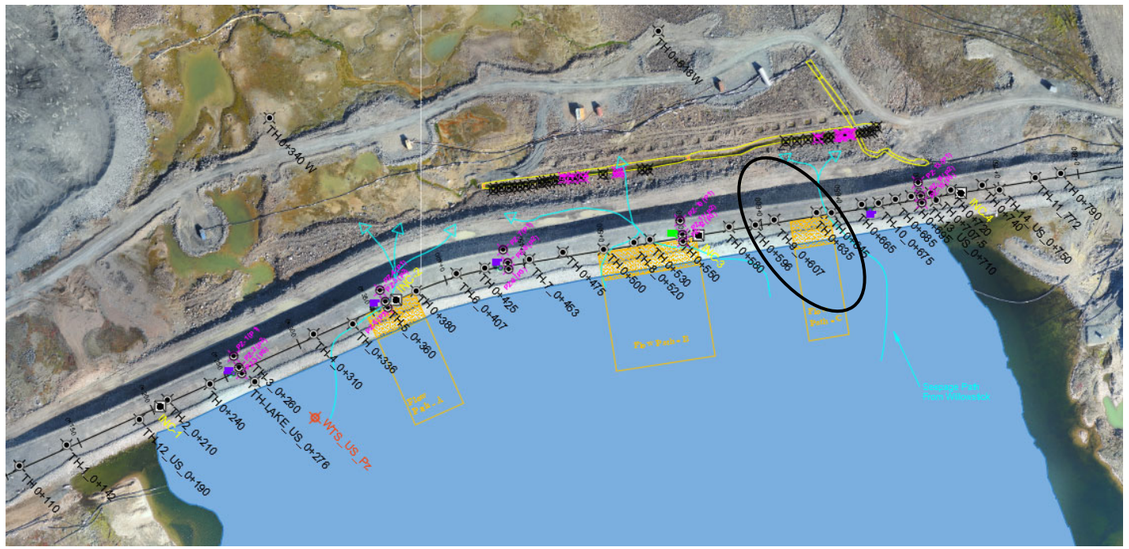


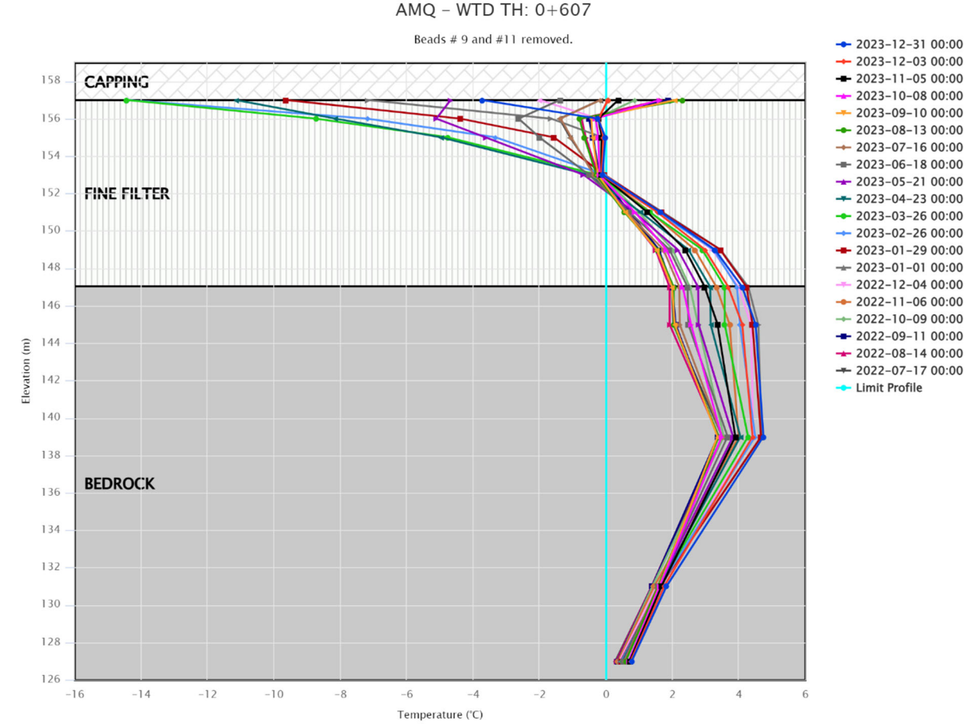

Temperature(°C): AMQ - WTD TH 0 + 596
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 4/22/2021 to 10/31/2023

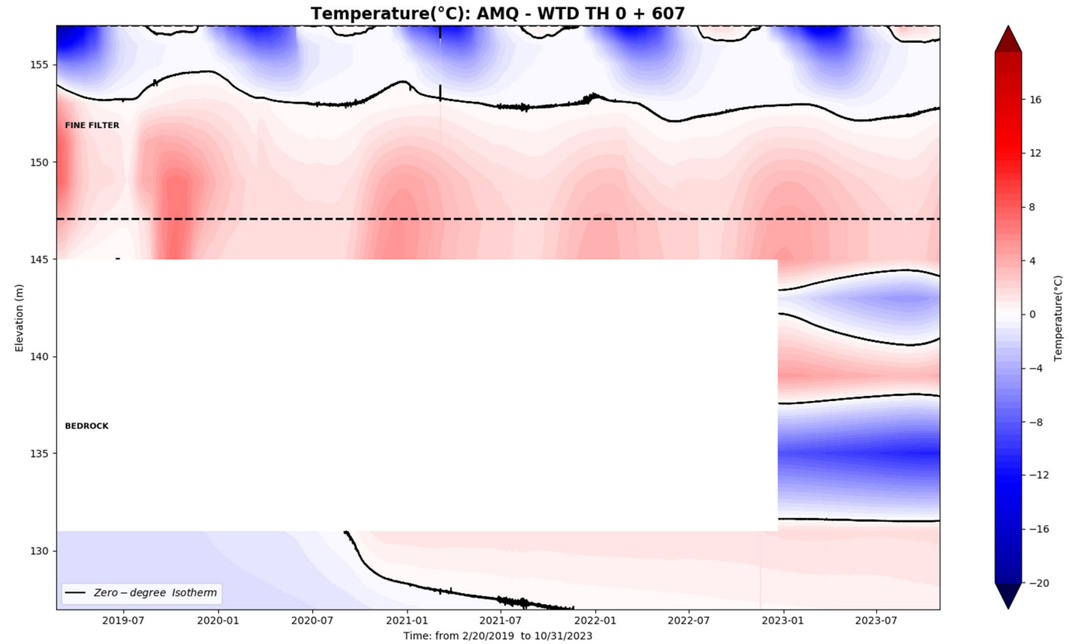

AMQ – WTD TH: 0+596
Bead #5 removed
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

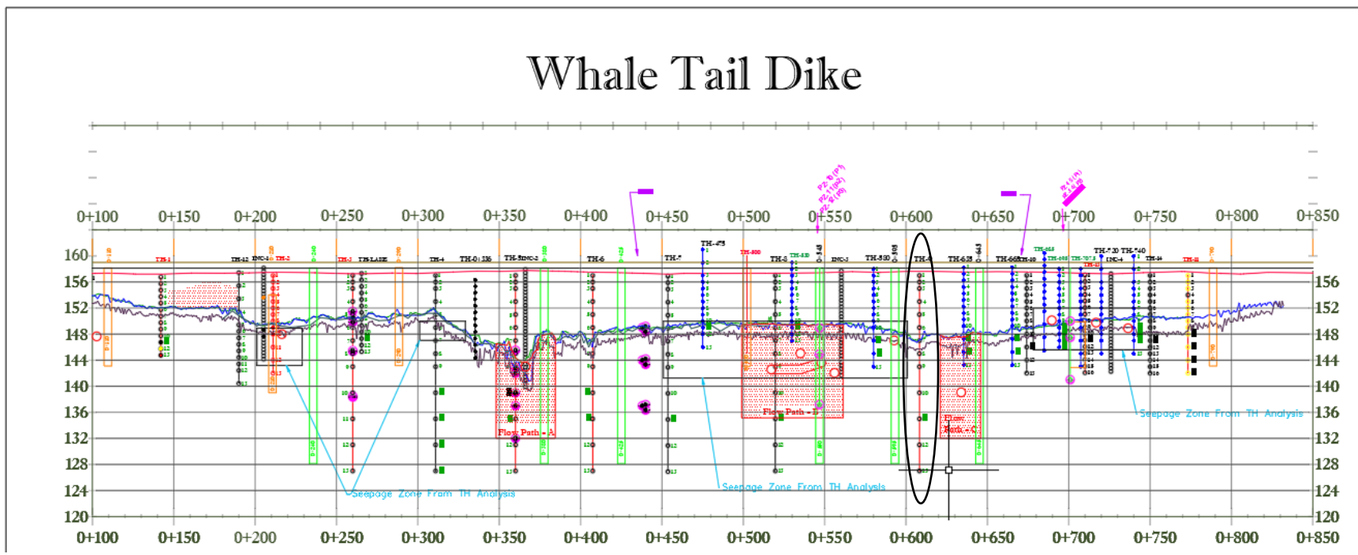

Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+607

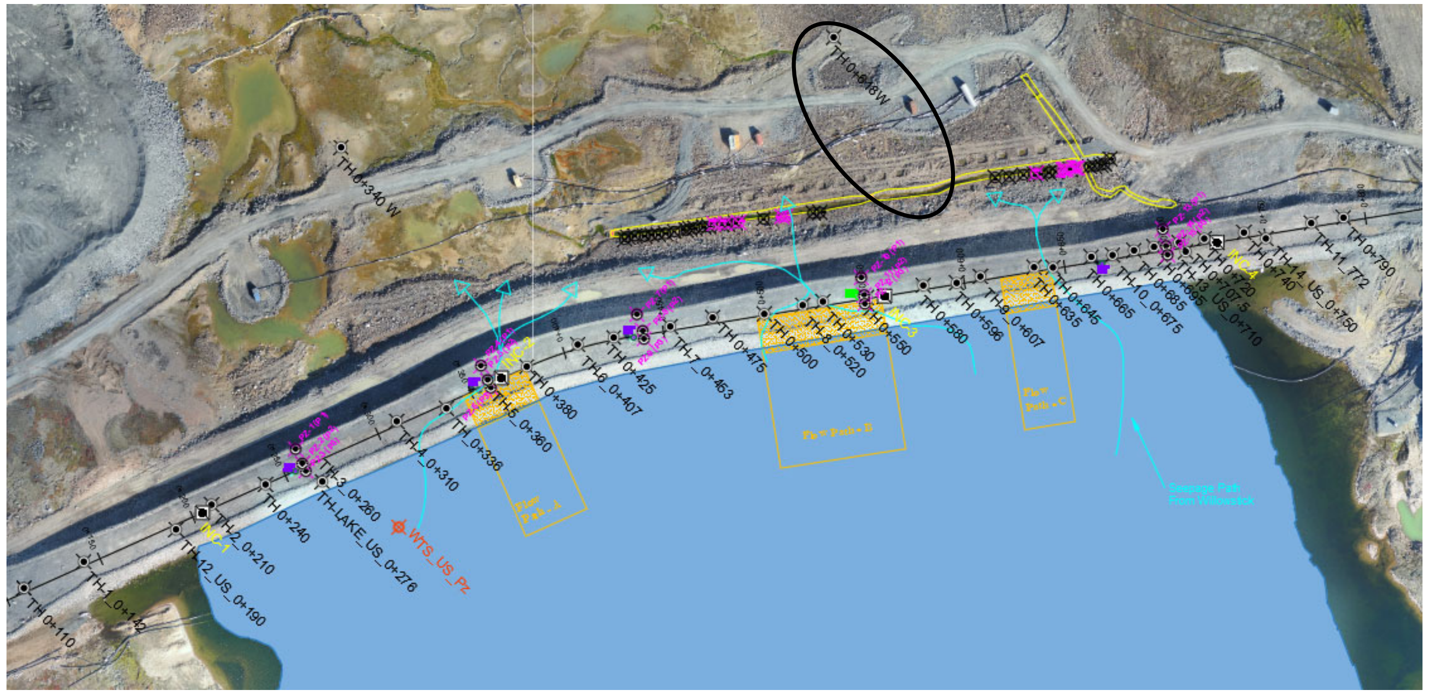

TH-0+340 W
TH-0+380 W
TH-1_T12
TH-11_T72
TH-11_US_0+150
TH-0+790
TH-0+740
TH-0+729
TH-0+710
TH-0+685
TH-0+675
TH-0+665
TH-0+635
TH-0+607
TH-0+598
TH-0+580
TH-8_0+550
TH-8_0+530
TH-8_0+520
TH-0+500
TH-0+475
TH-7_0+463
TH-9_0+425
TH-9_0+407
TH-5_0+380
TH-5_0+360
TH-5_0+336
TH-4_0+310
TH-2_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-12_US_0+180
TH-4_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis

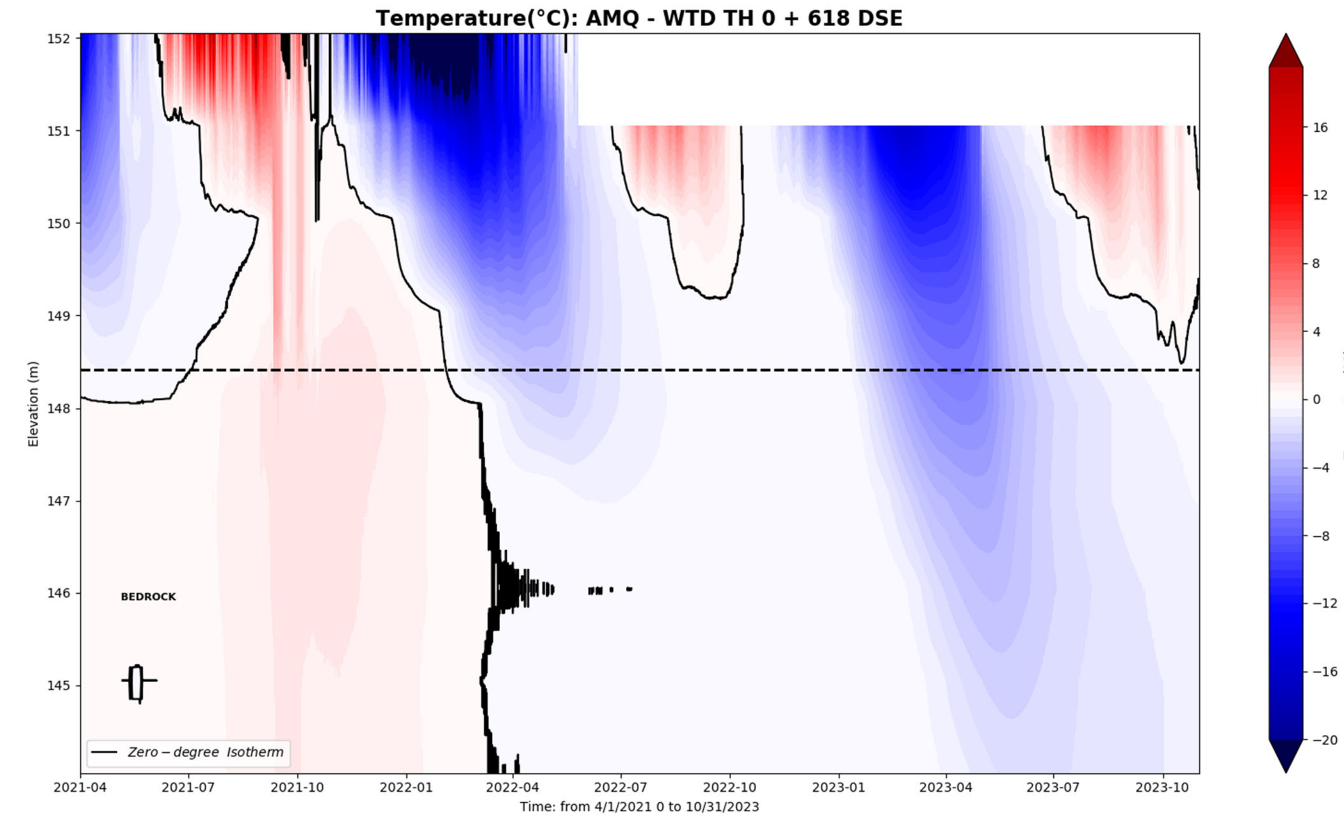

AMQ – WTD TH: 0+607
Beads # 9 and #11 removed.
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

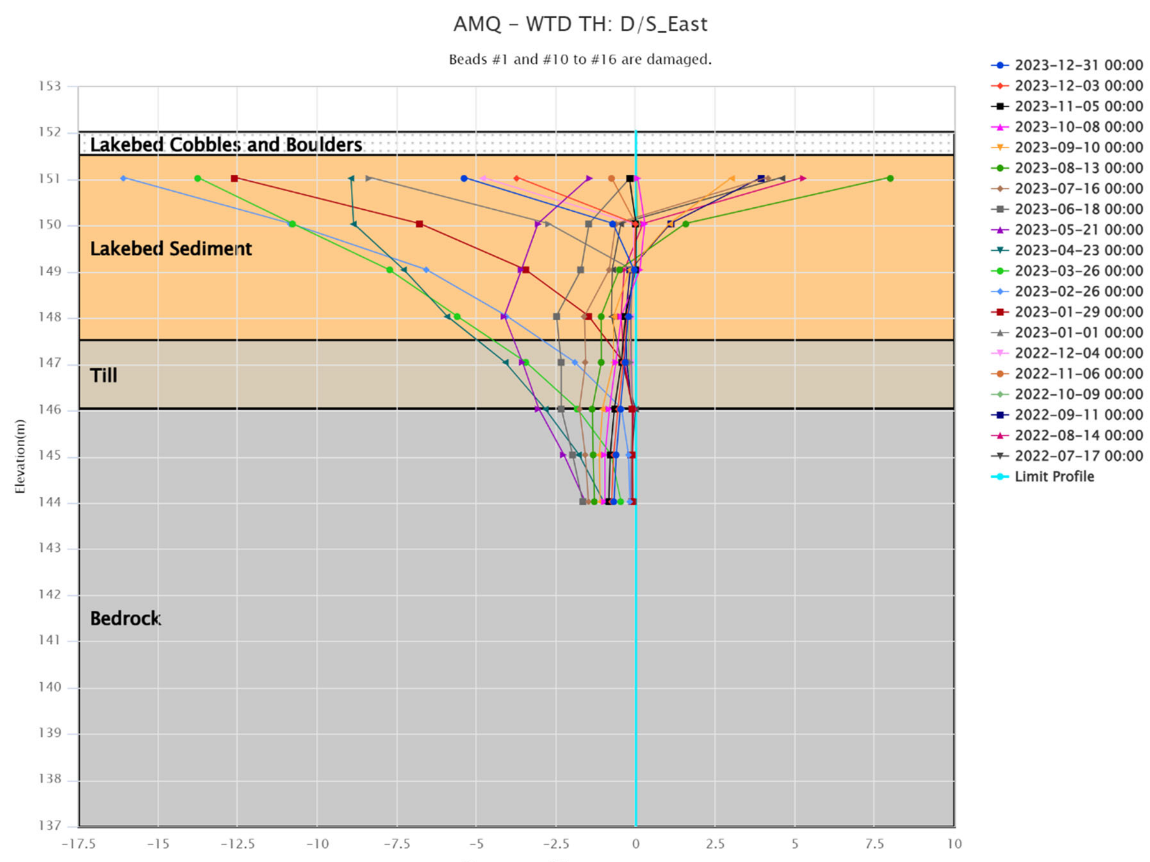

Temperature(°C): AMQ - WTD TH 0 + 607
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/20/2019 to 10/31/2023
Temperature(°C)


Whale Tail Dike
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - C

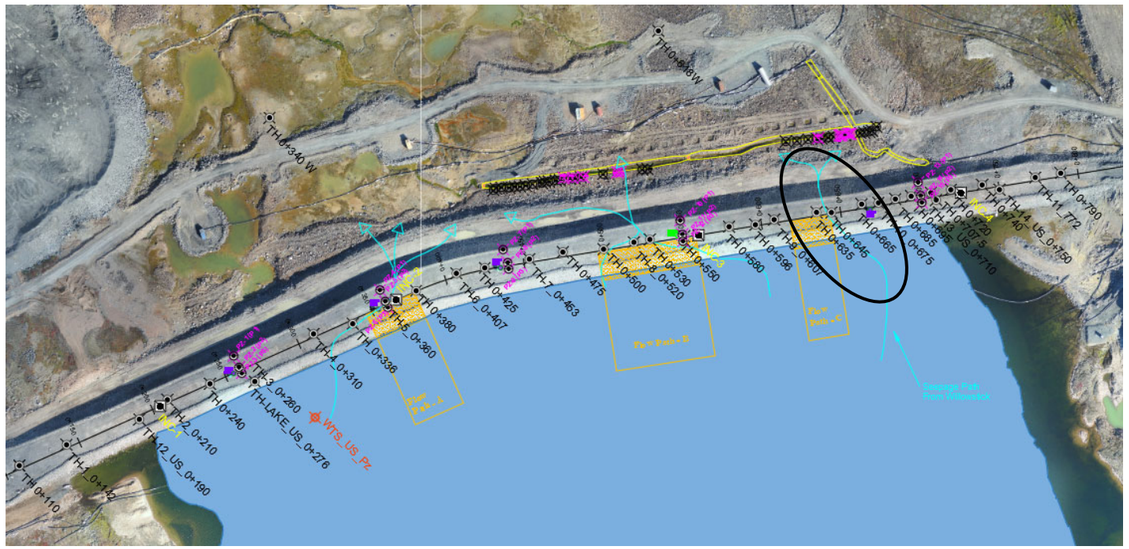
WTD-TH 0+618 DSE

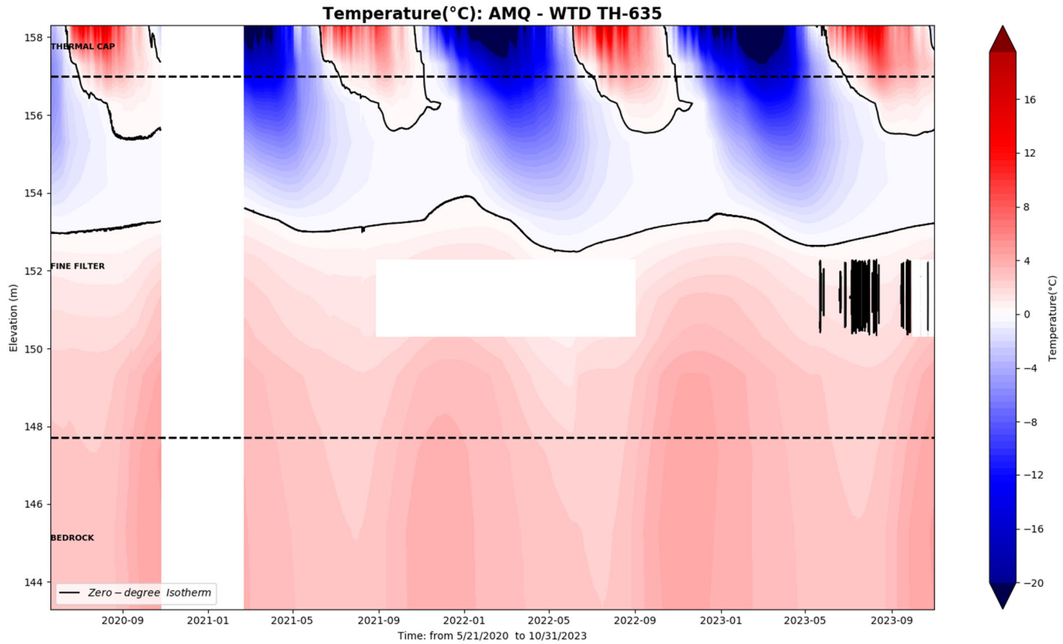


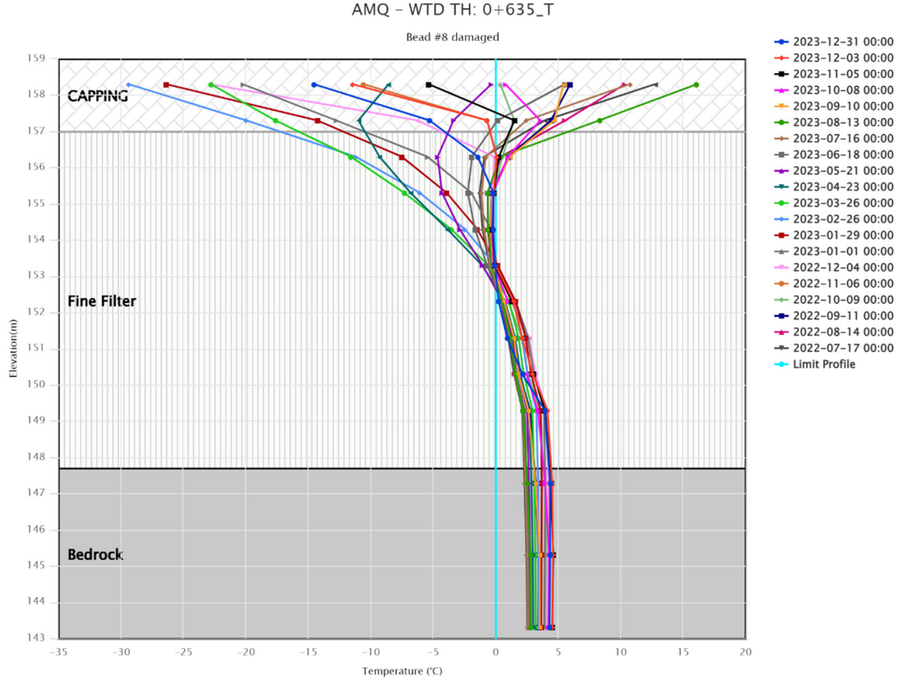


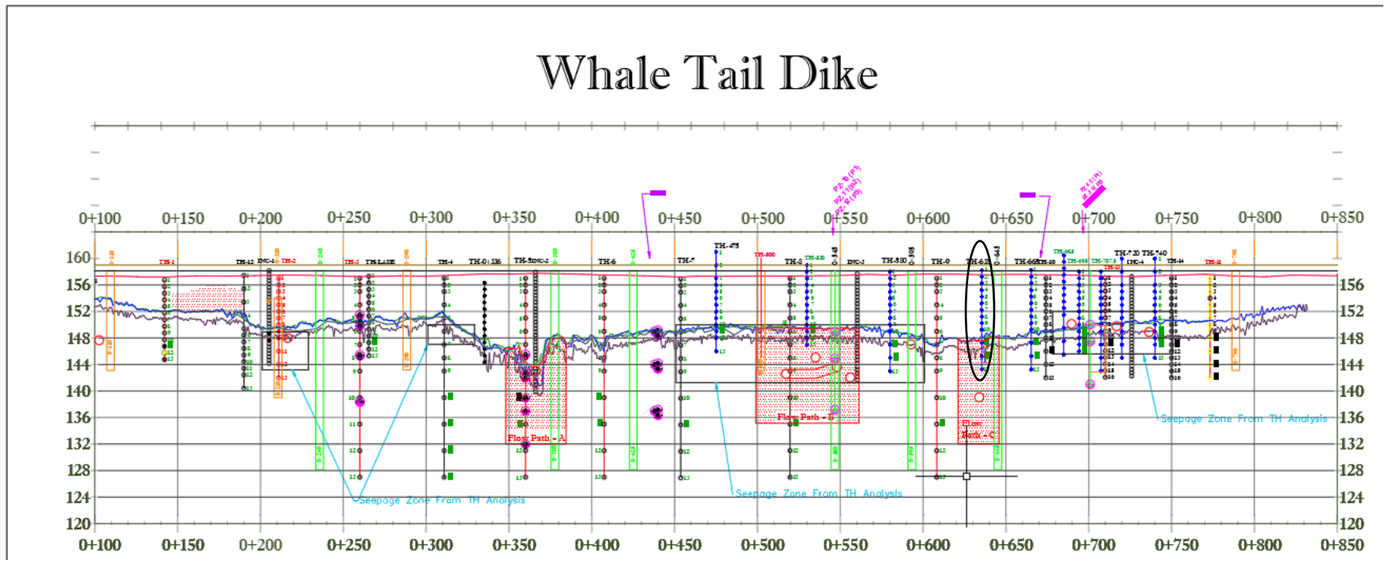


WTD-TH 0+635

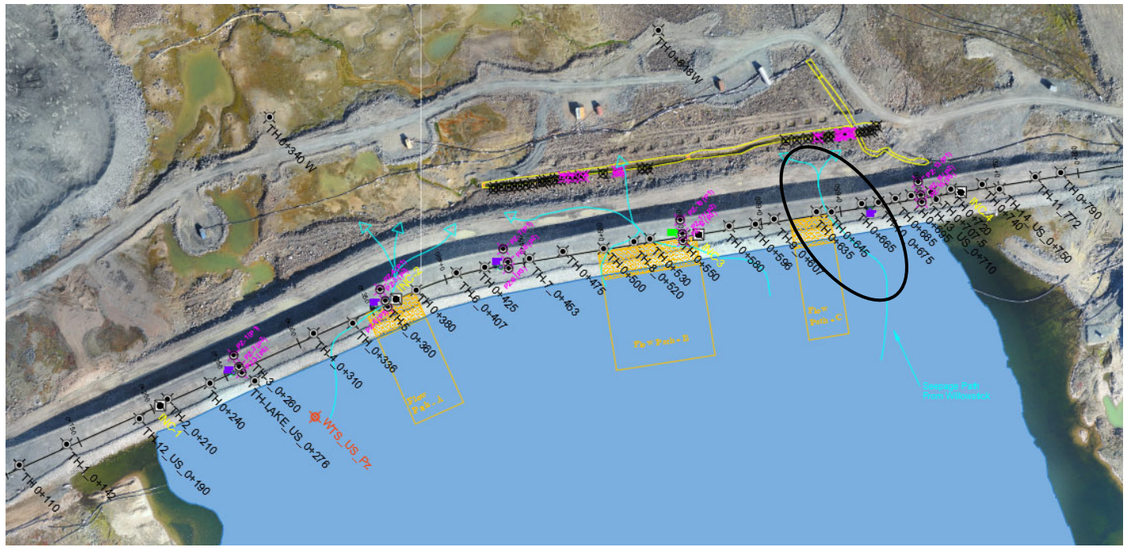

TH-0+340 W
TH-0+480W
TH-0+110
TH-1_0+142
TH-12_US_0+190
TH-2_0+210
TH-0+240
TH-3_0+260
TH-LAKE_US_0+276
WTS_US_Pz
TH-0+310
TH-0+336
TH-4_0+360
TH-0+380
TH-5_0+407
TH-0+425
TH-6_0+453
TH-0+475
TH-0+500
TH-8_0+520
TH-0+530
TH-0+580
TH-0+596
TH-0+601
TH-0+635
TH-0+645
TH-0+665
TH-0+675
TH-0+685
TH-0+695
TH-0+710
TH-0+729
TH-0+740
TH-11_T2
TH-0+790
TH-11_US_0+1150
Pz= Prism A
Pz= Prism B
Pz= Prism C
Seepage Path From Thermistors

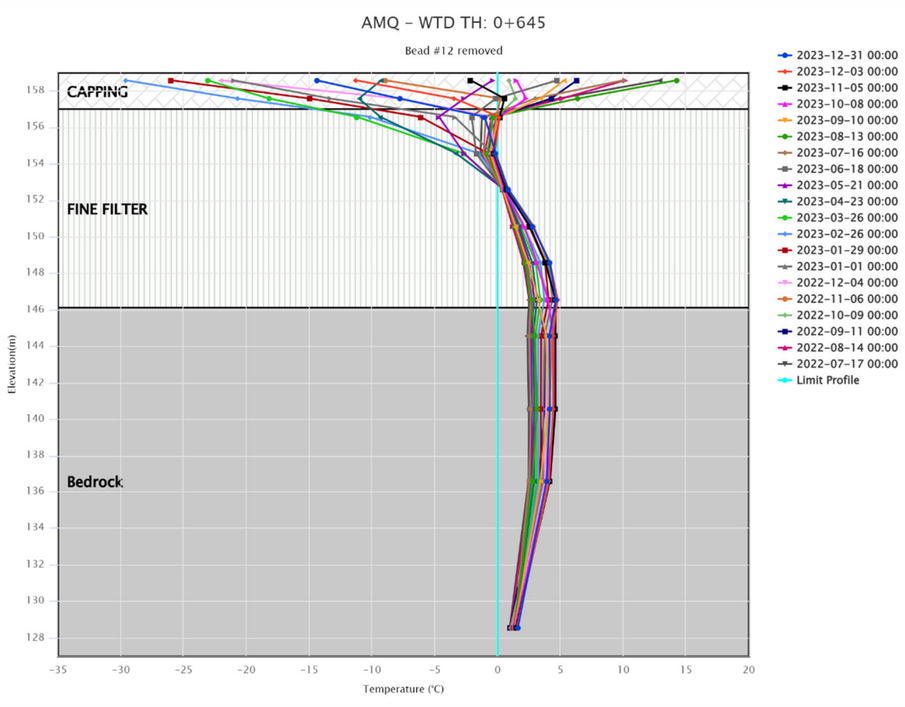

Temperature(°C): AMQ - WTD TH-635
THERMAL CAP
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 5/21/2020 to 10/31/2023
Temperature(°C)

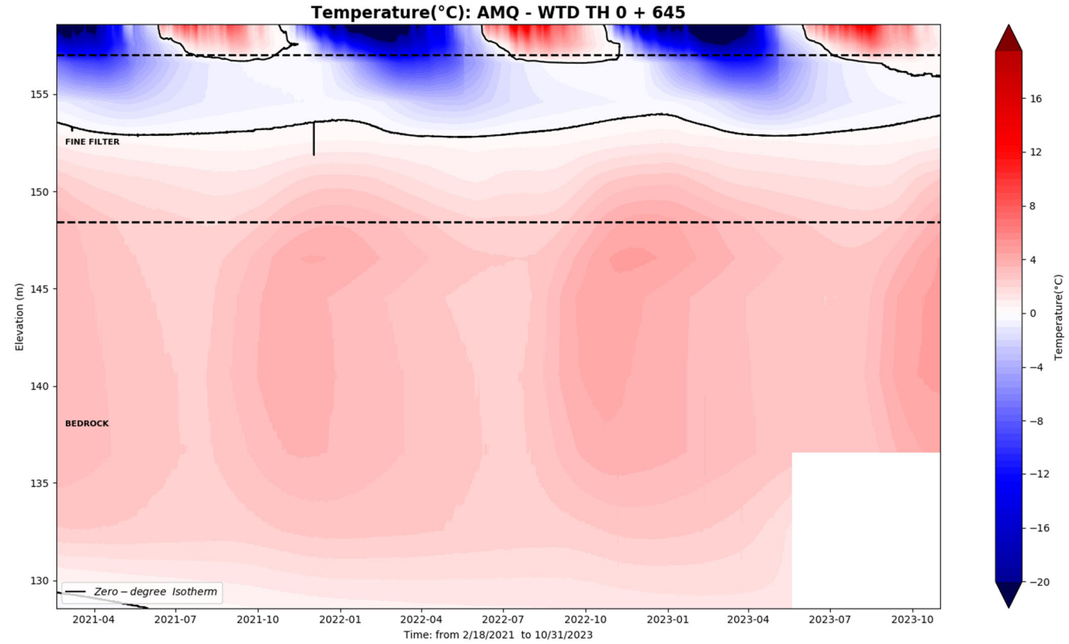

AMQ – WTD TH: 0+635_T
Bead #8 damaged
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

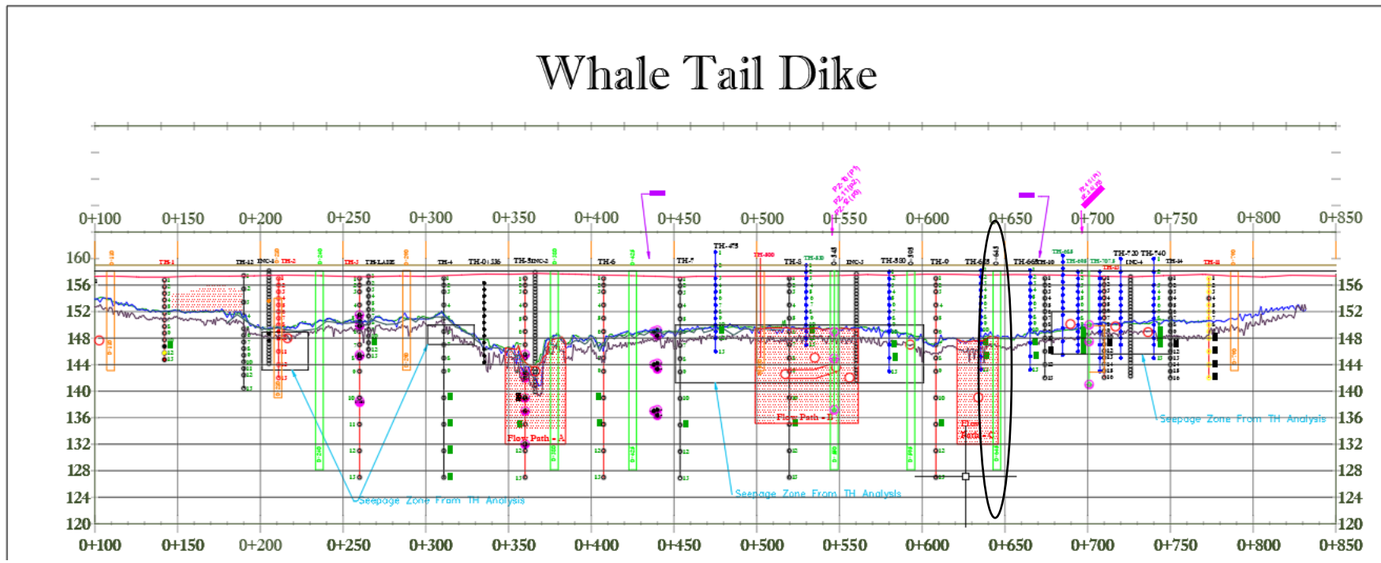

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+645

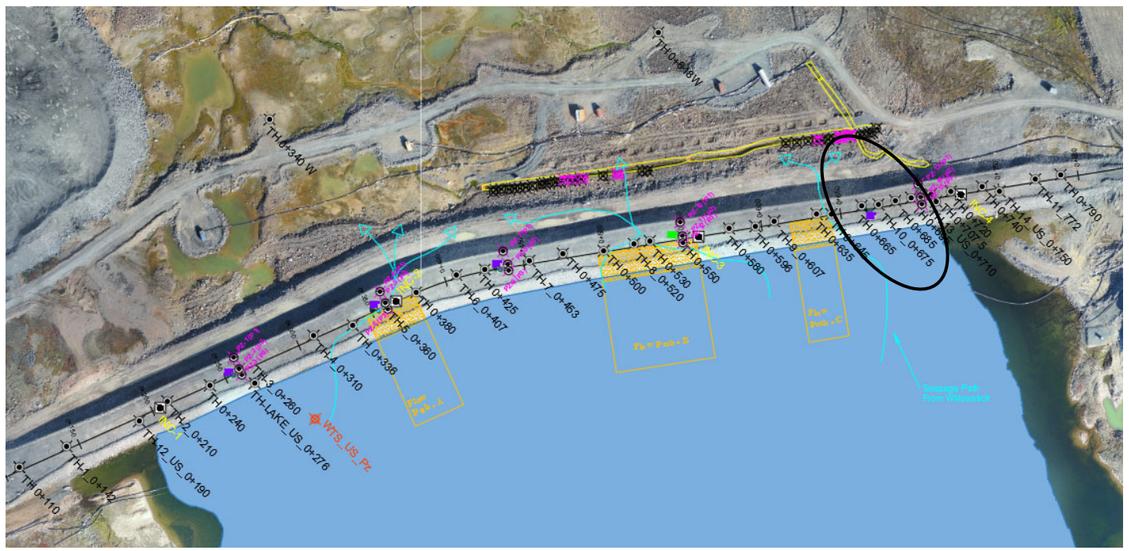

TH-0+340 W
TH-0+361 W
TH-1_0+790
TH-1_0+740_US_0+750
TH-1_0+725
TH-1_0+685
TH-1_0+675
TH-1_0+665
TH-1_0+635
TH-1_0+607
TH-8_0+598
TH-8_0+590
TH-8_0+550
TH-8_0+530
TH-8_0+520
TH-7_0+500
TH-7_0+475
TH-7_0+463
TH-6_0+425
TH-6_0+407
TH-5_0+380
TH-5_0+360
TH-4_0+336
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-2 US_0+190
TH-1_0+162
TH-0+110
WTS_US_PZ
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From TH Analysis


AMQ – WTD TH: 0+645
Bead #12 removed
CAPPING
FINE FILTER
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

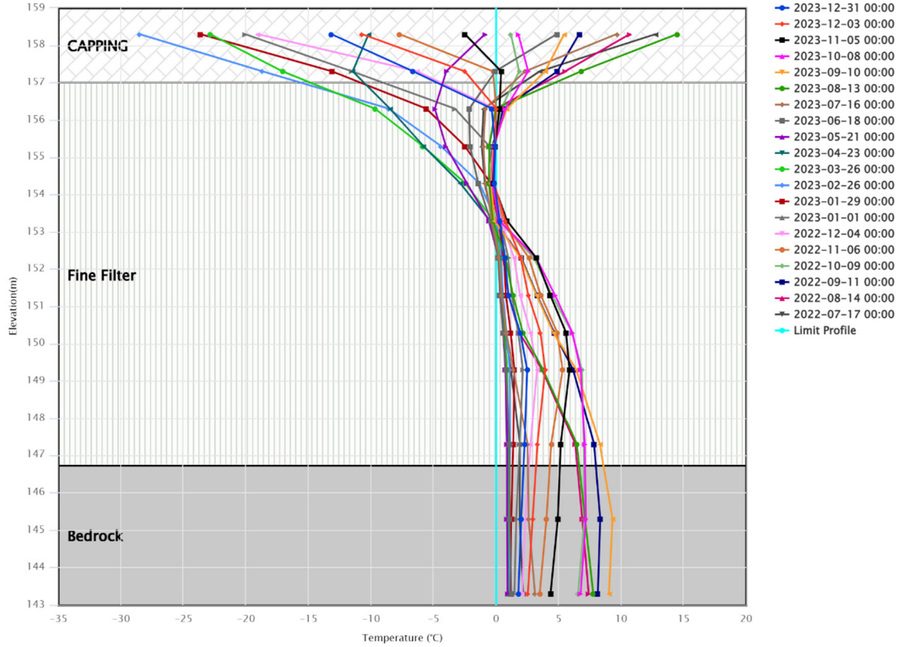

Temperature(°C): AMQ - WTD TH 0 + 645
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/18/2021 to 10/31/2023
Temperature(°C)

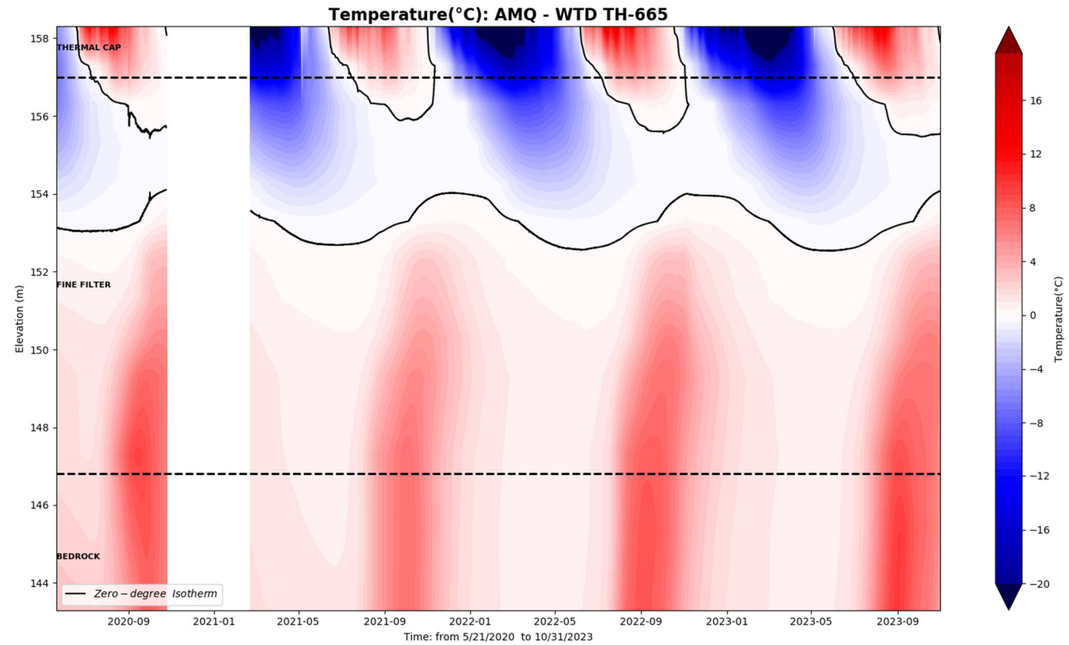

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

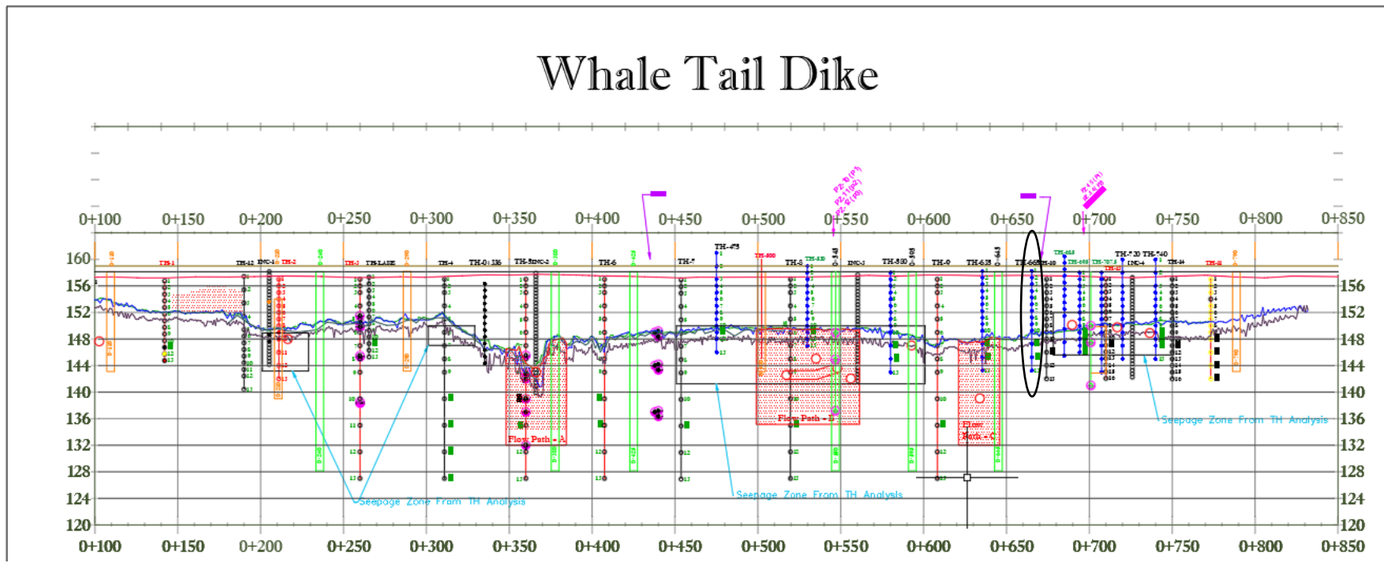
WTD-TH 0+665



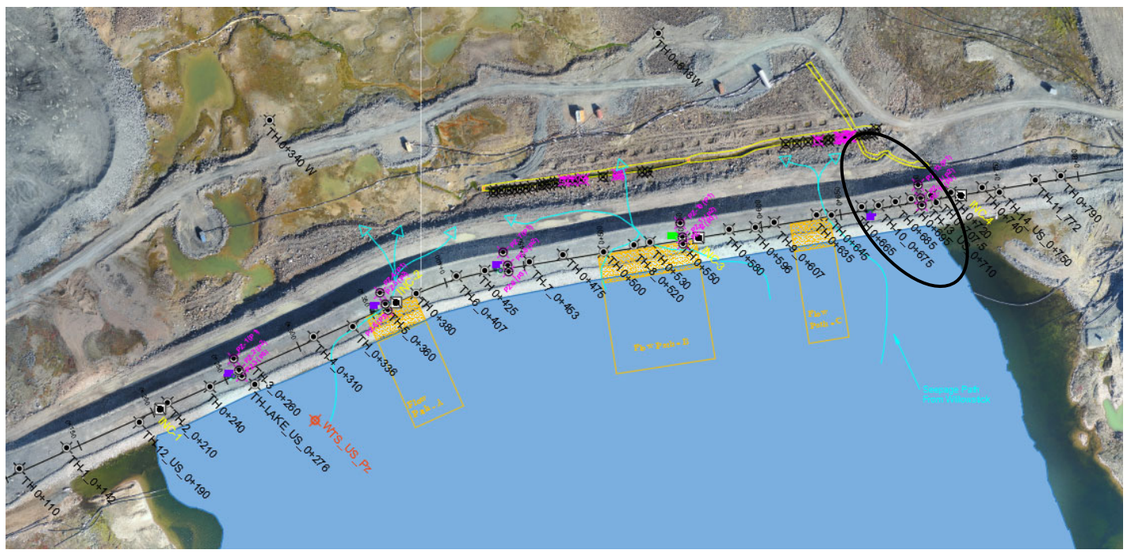
AMQ – WTD TH: 0+665_T



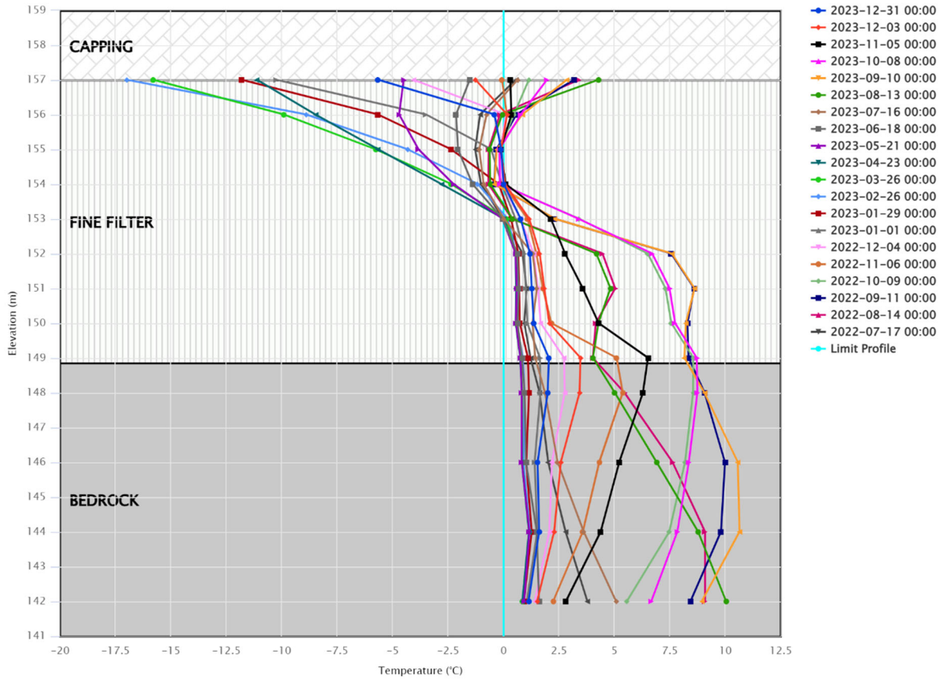


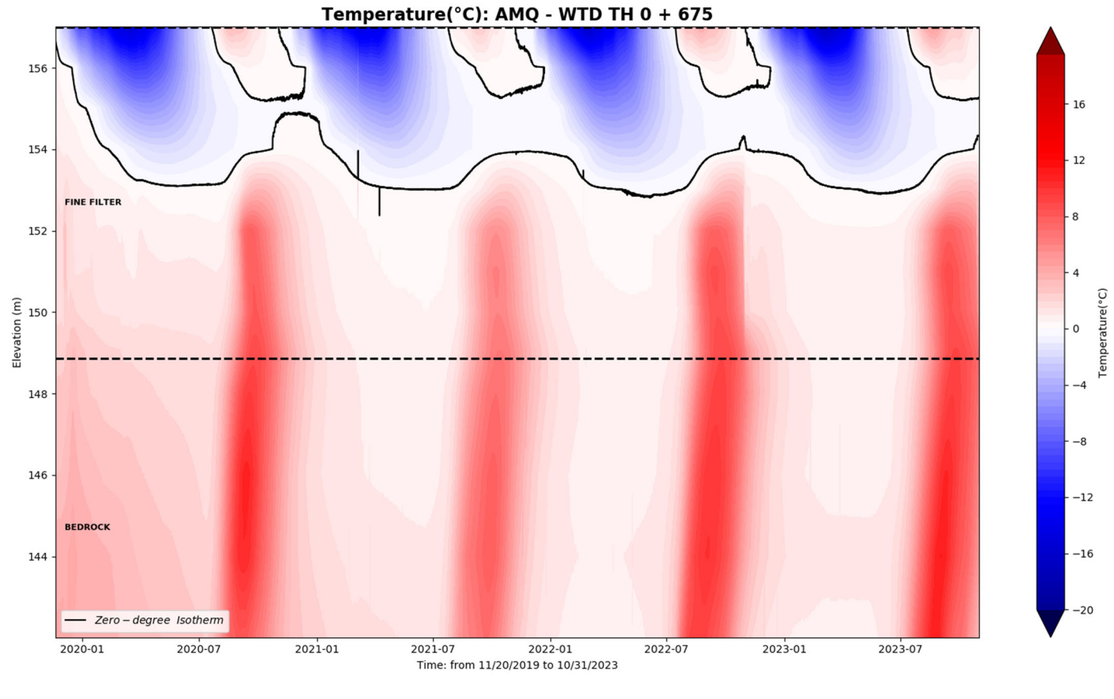


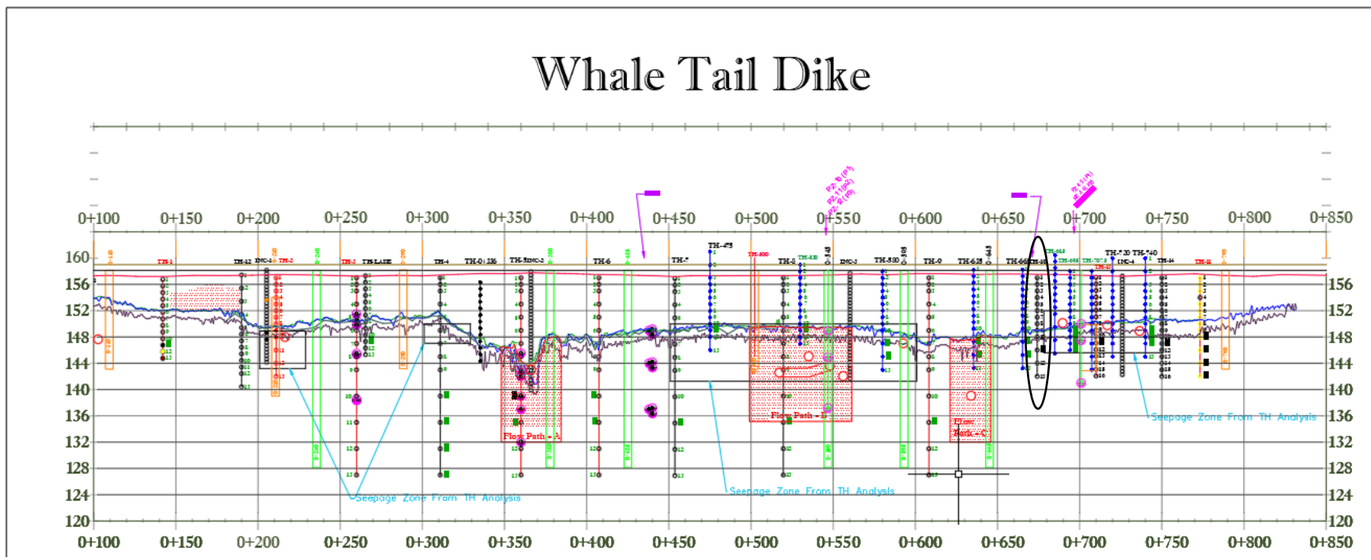
WTD-TH 0+675



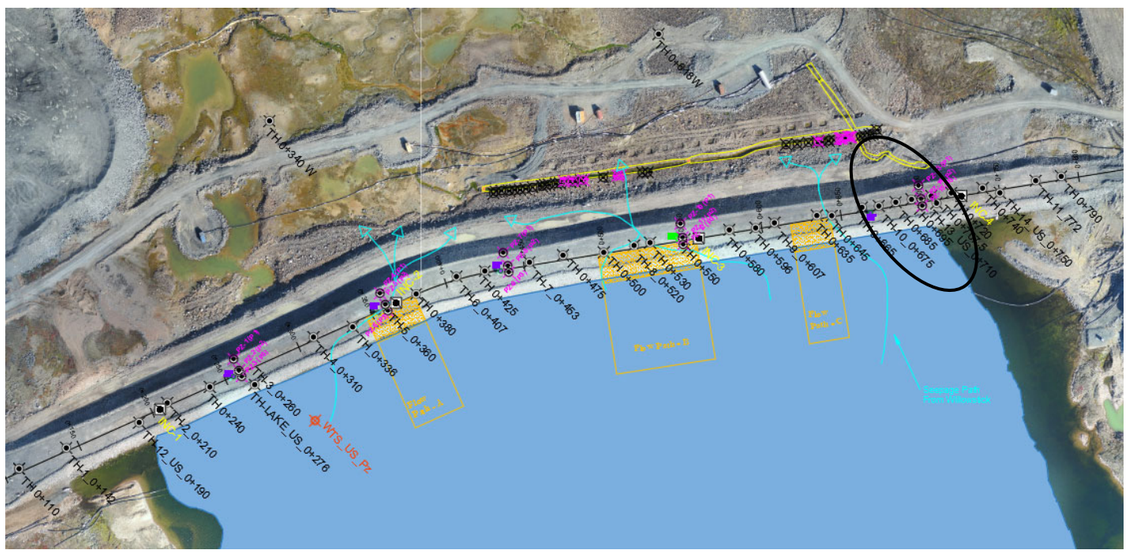
AMQ – WTD TH: 0+675



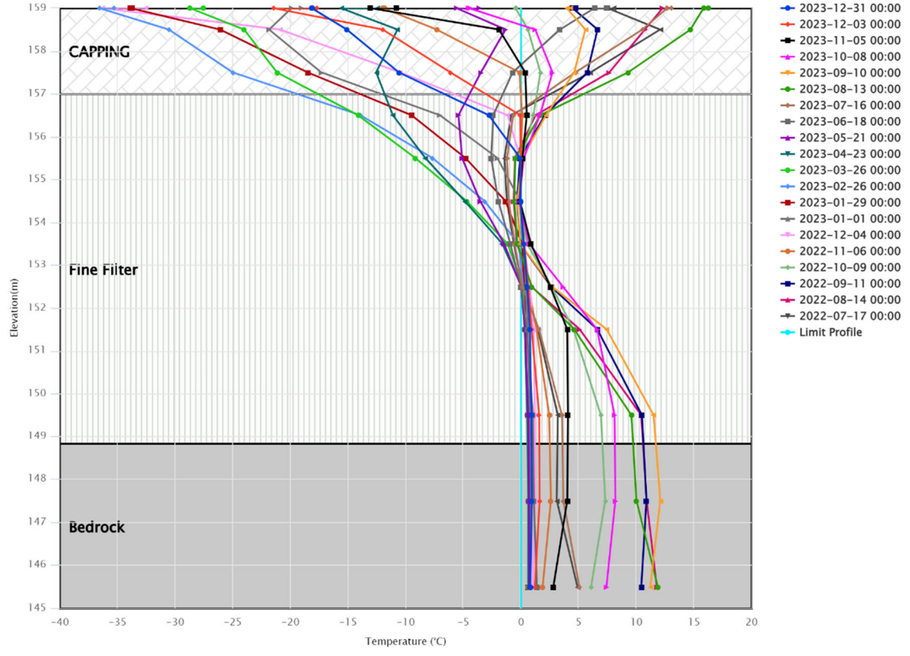


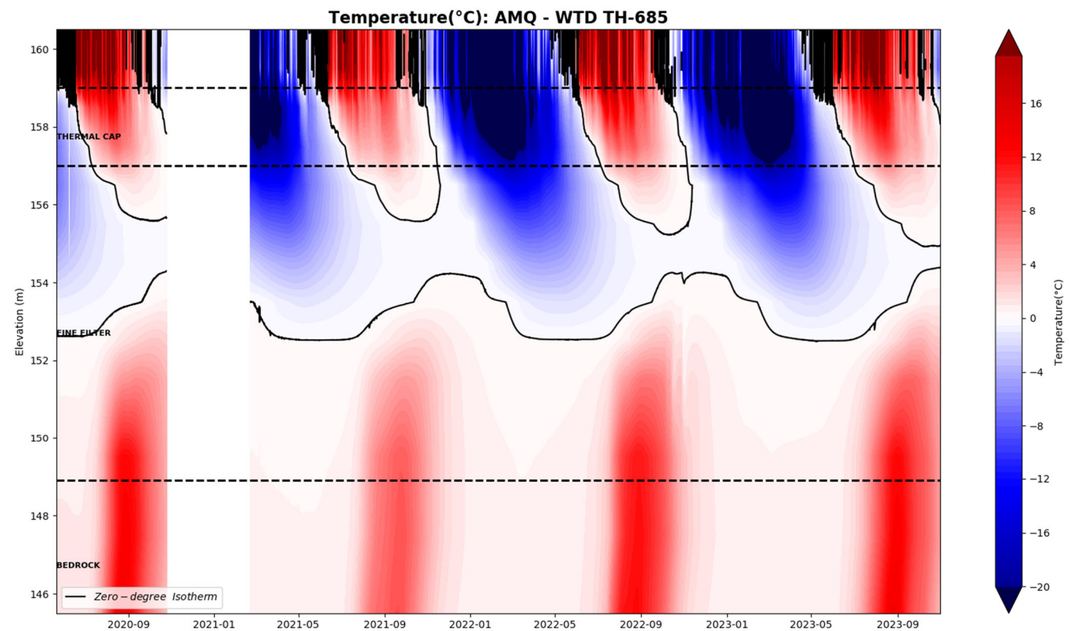


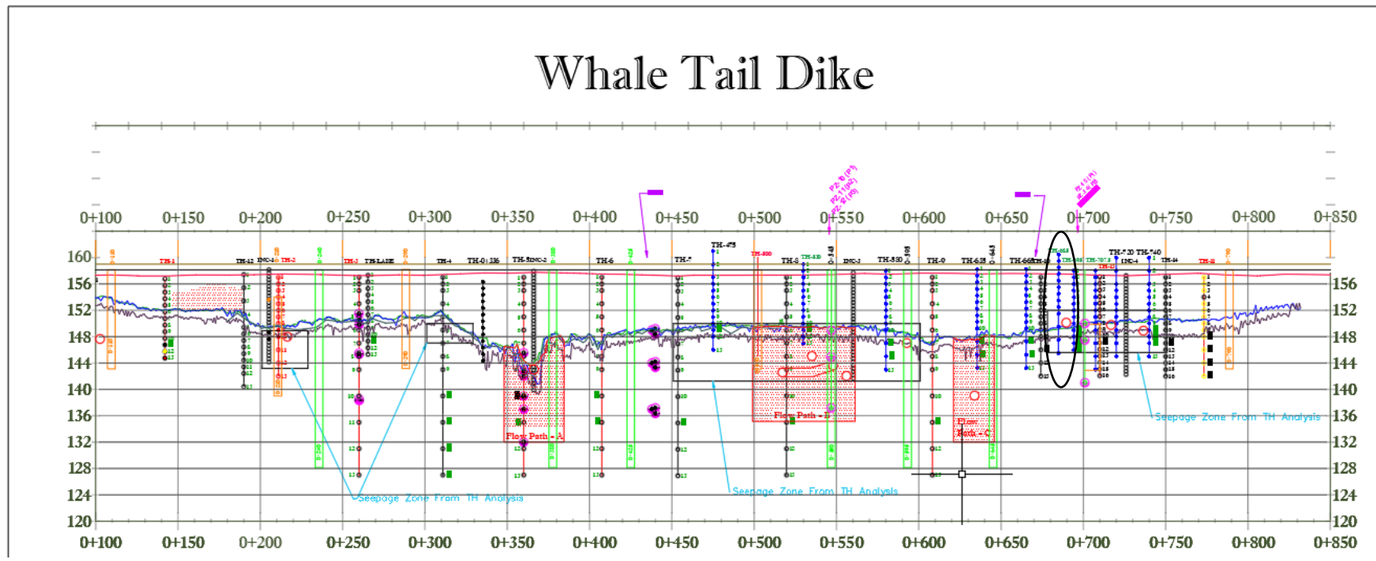
WTD-TH 0+685



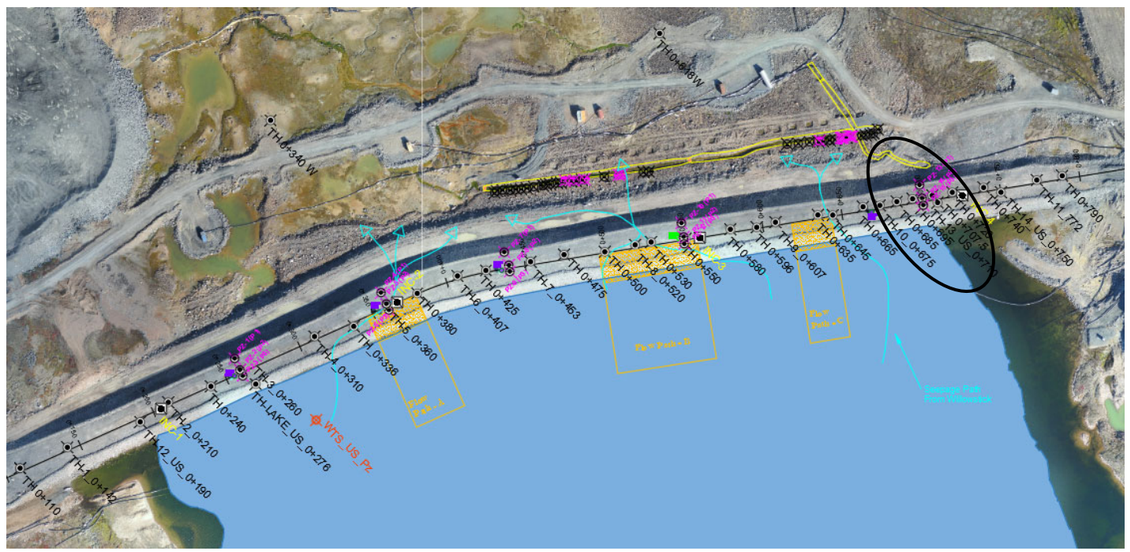
AMQ – WTD TH: 0+685_T



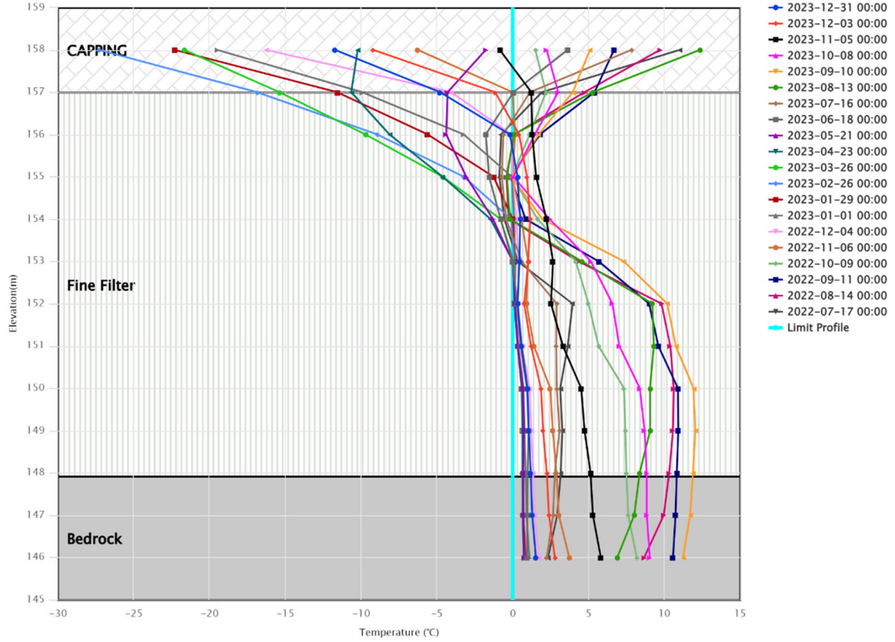


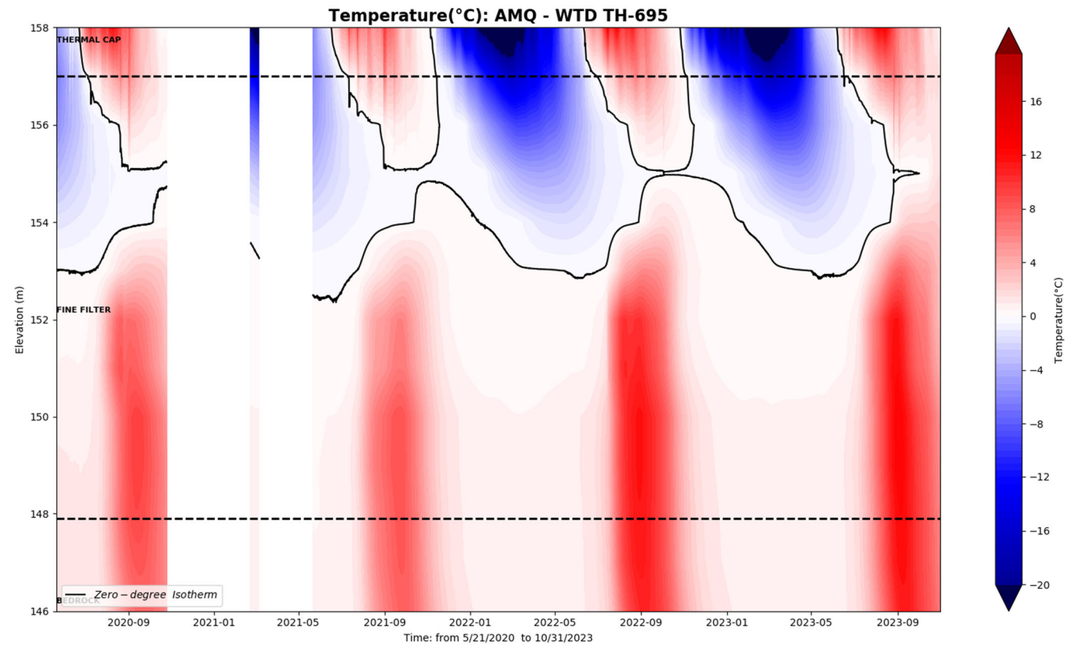


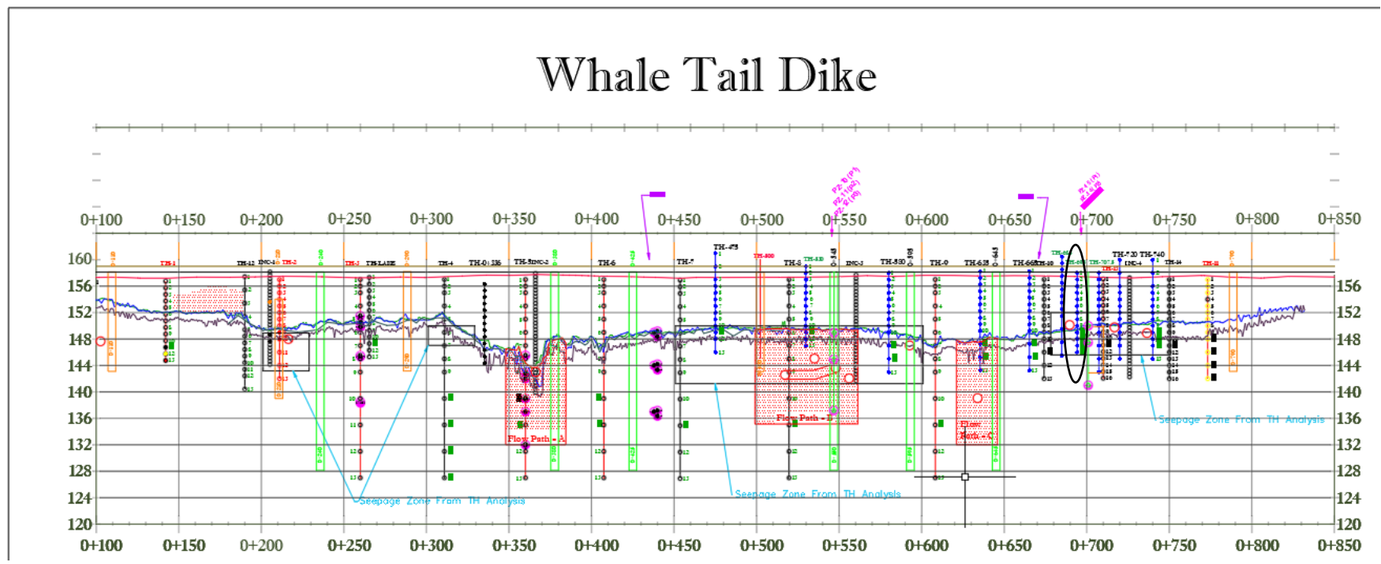
WTD-TH 0+695



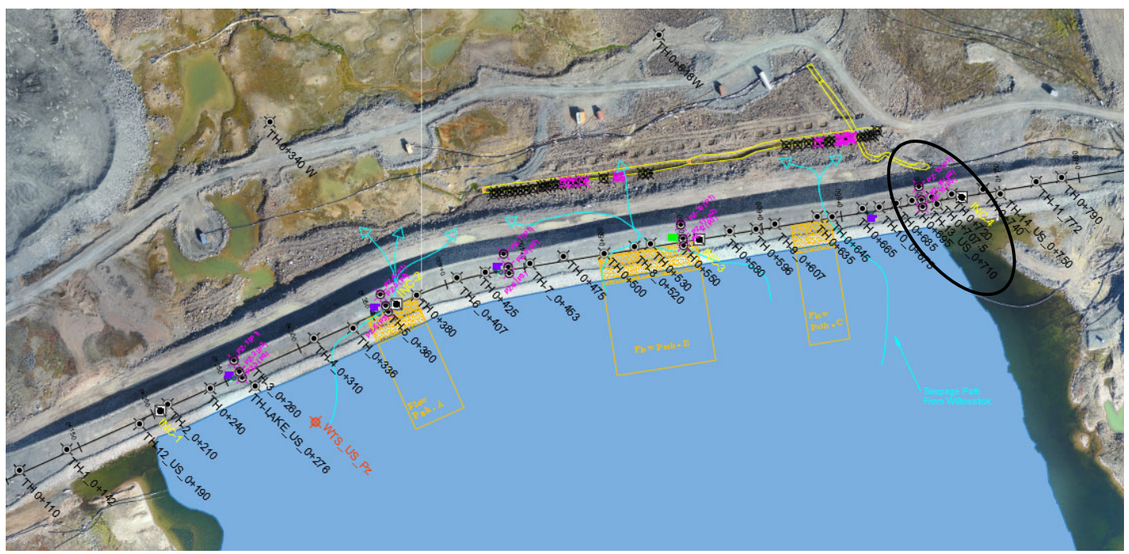
AMQ – WTD TH: 0+695_T



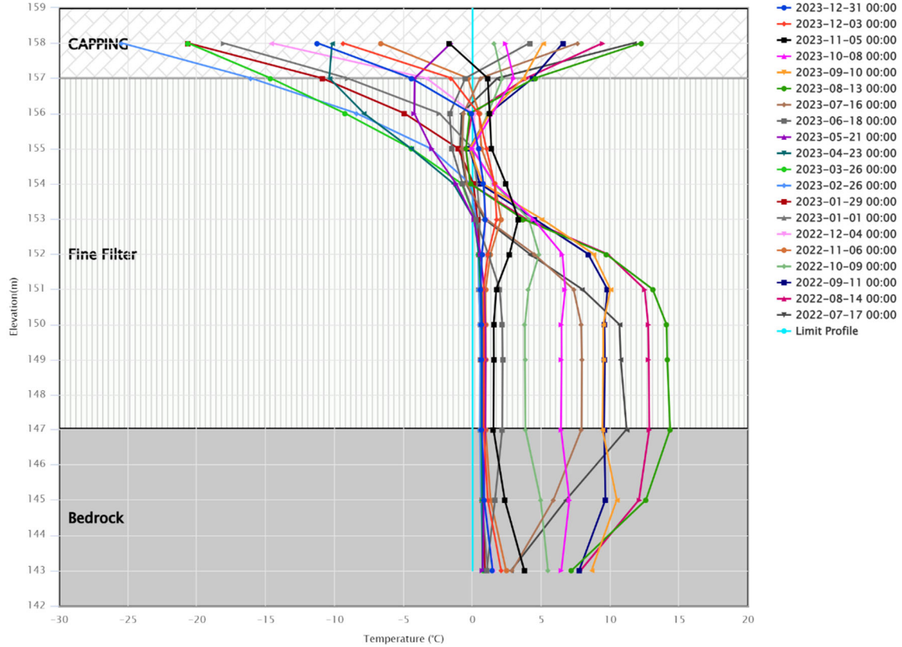


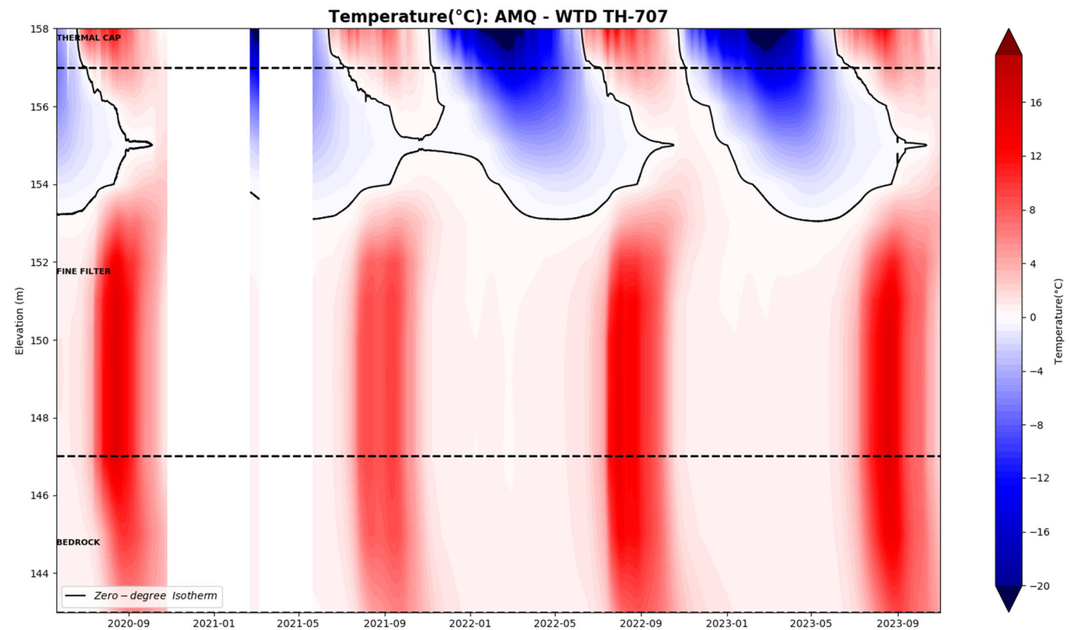


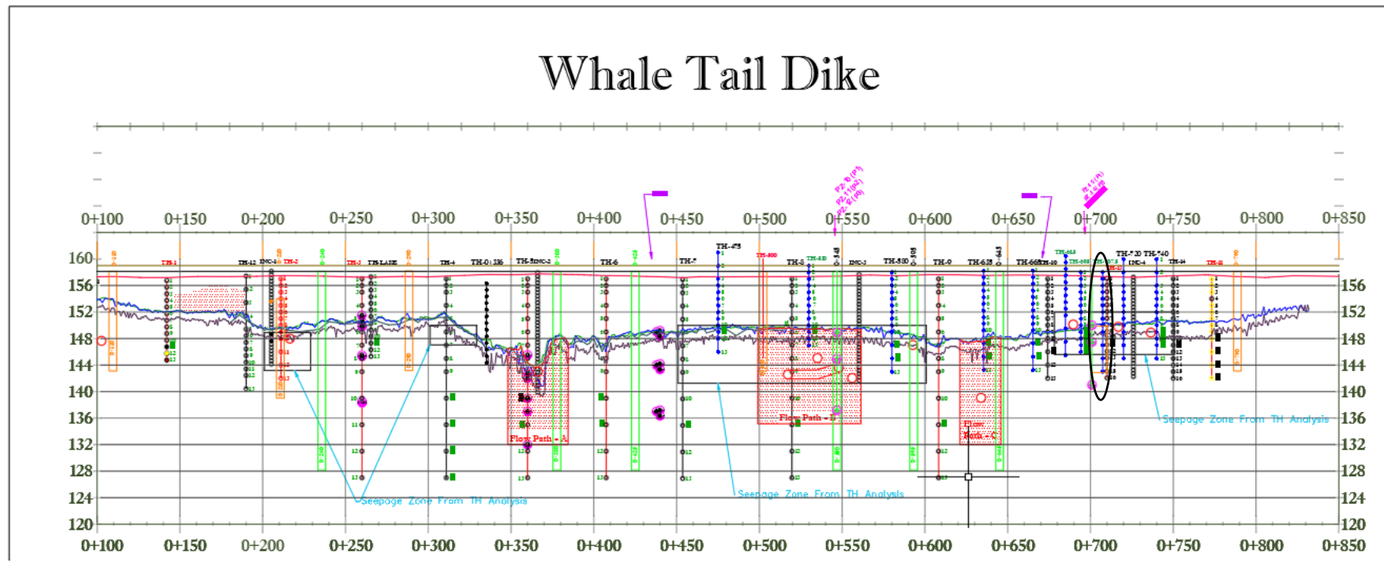
WTD-TH 0+707



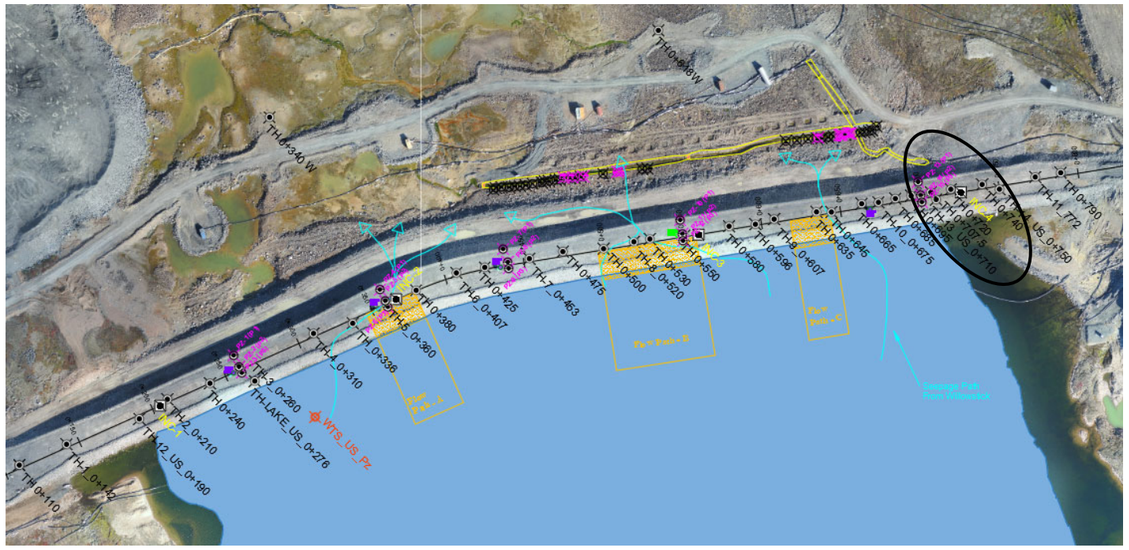
AMQ – WTD TH: 0+707_T

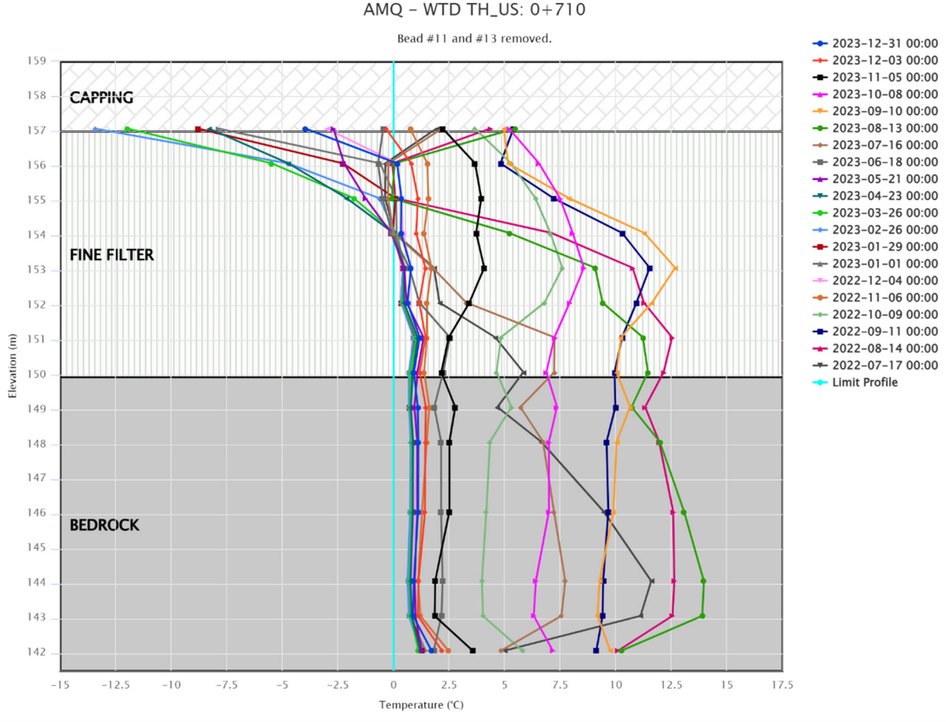


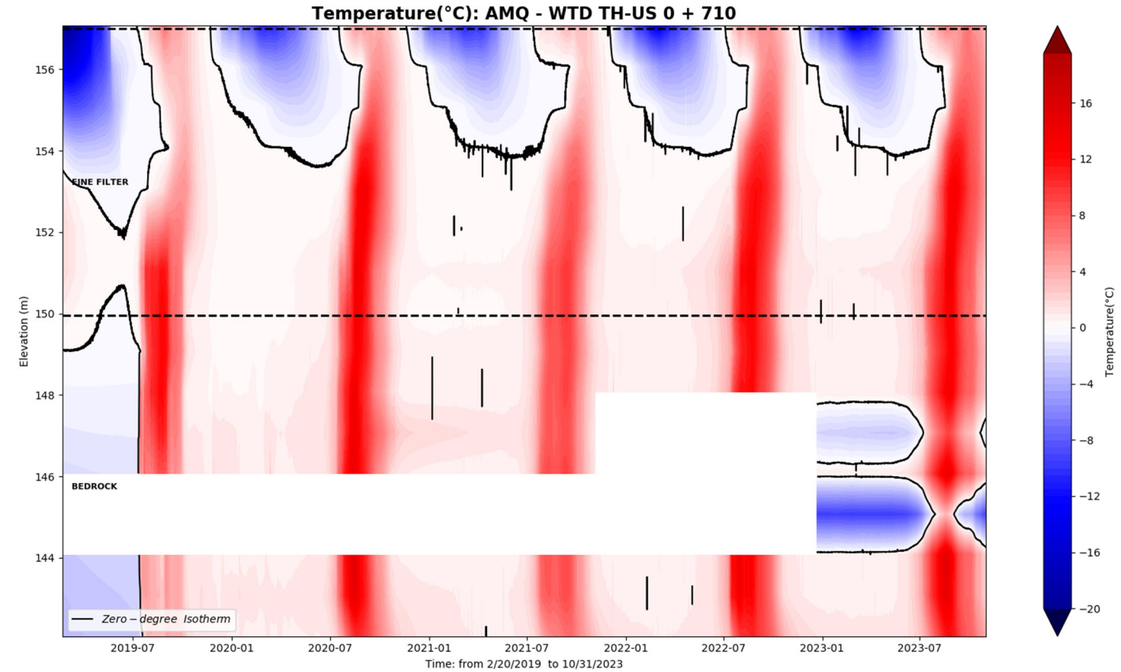


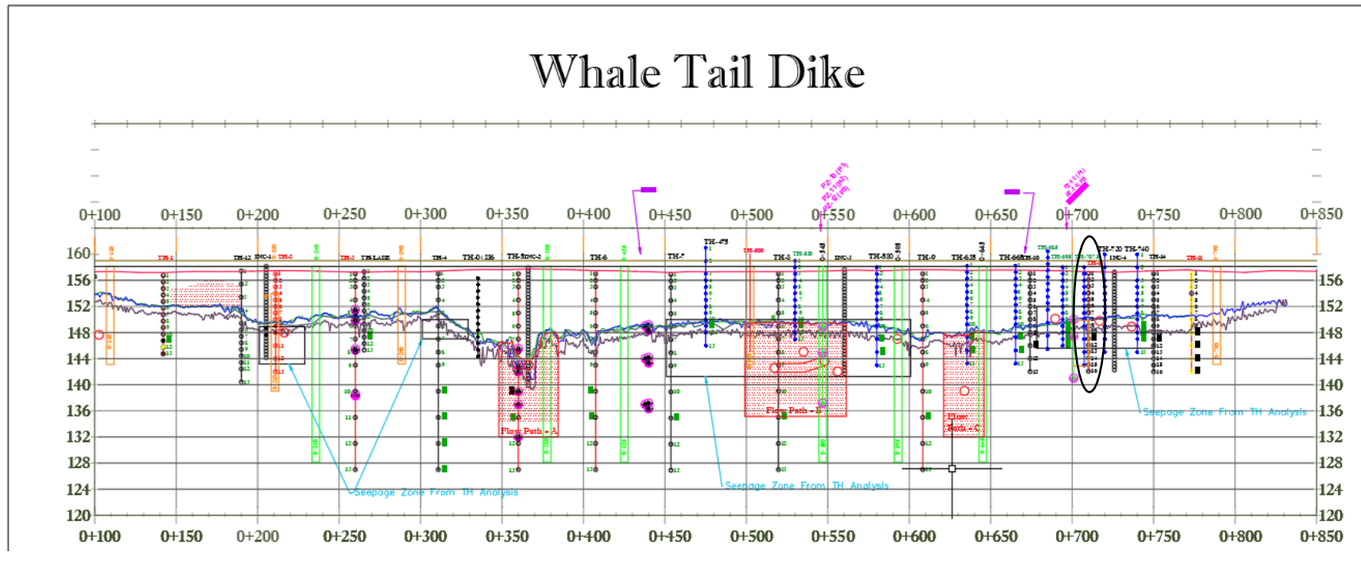


WTD-TH 0+710 U/S

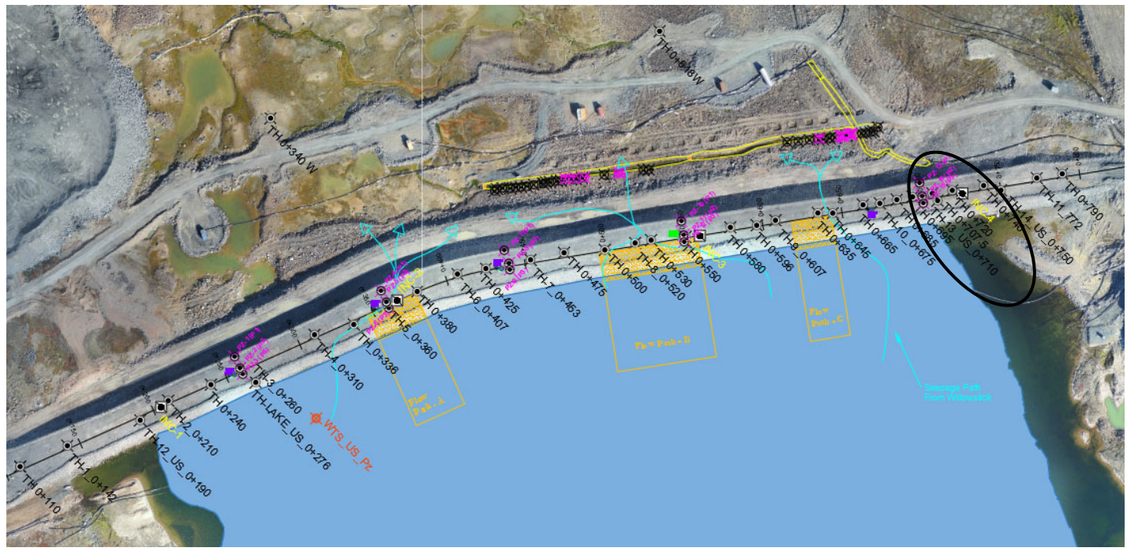




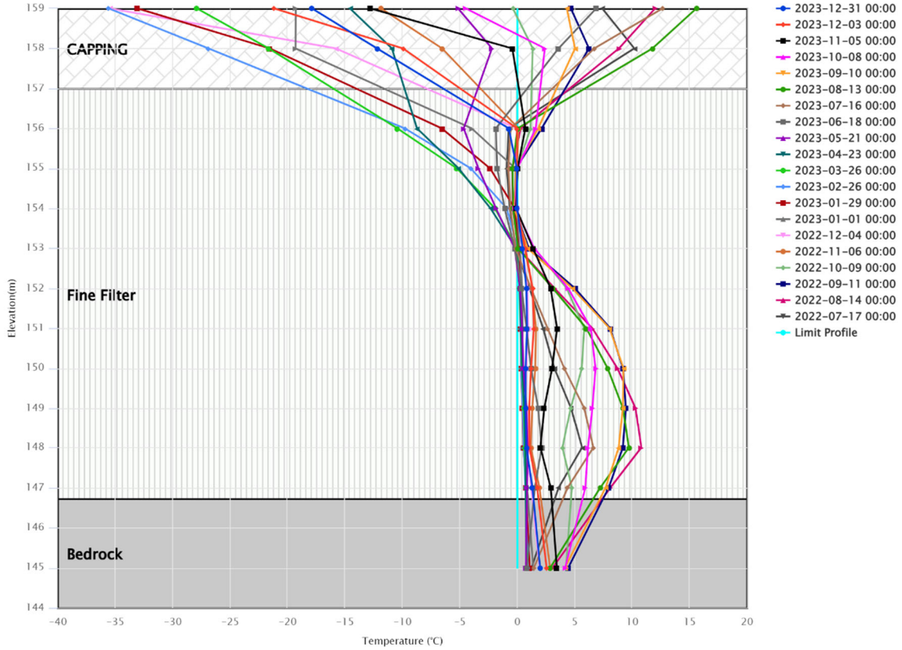


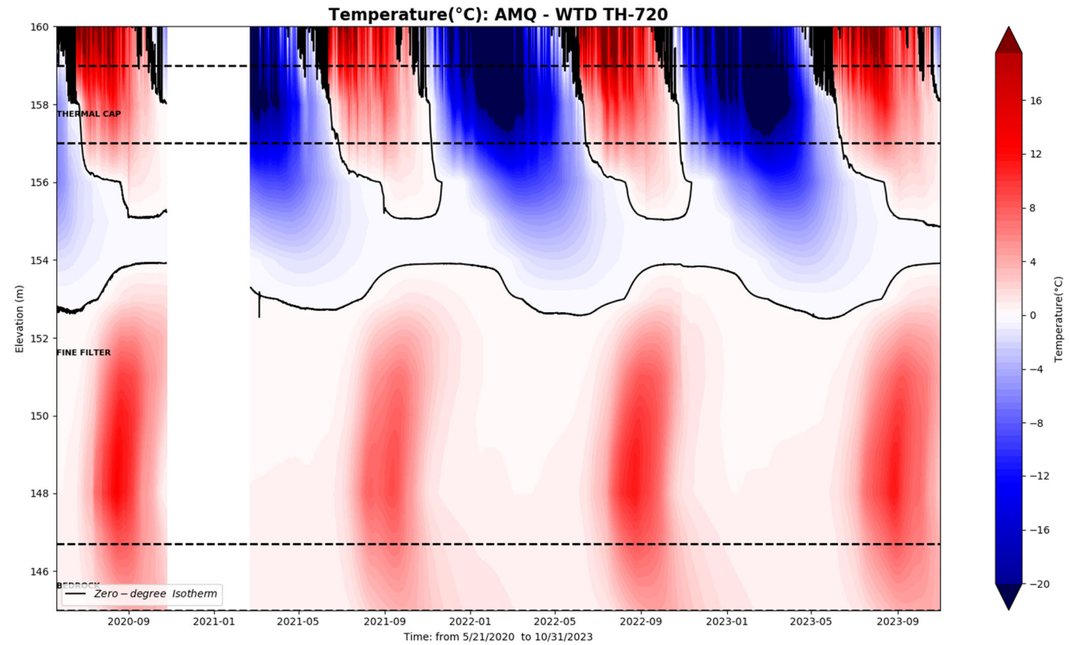


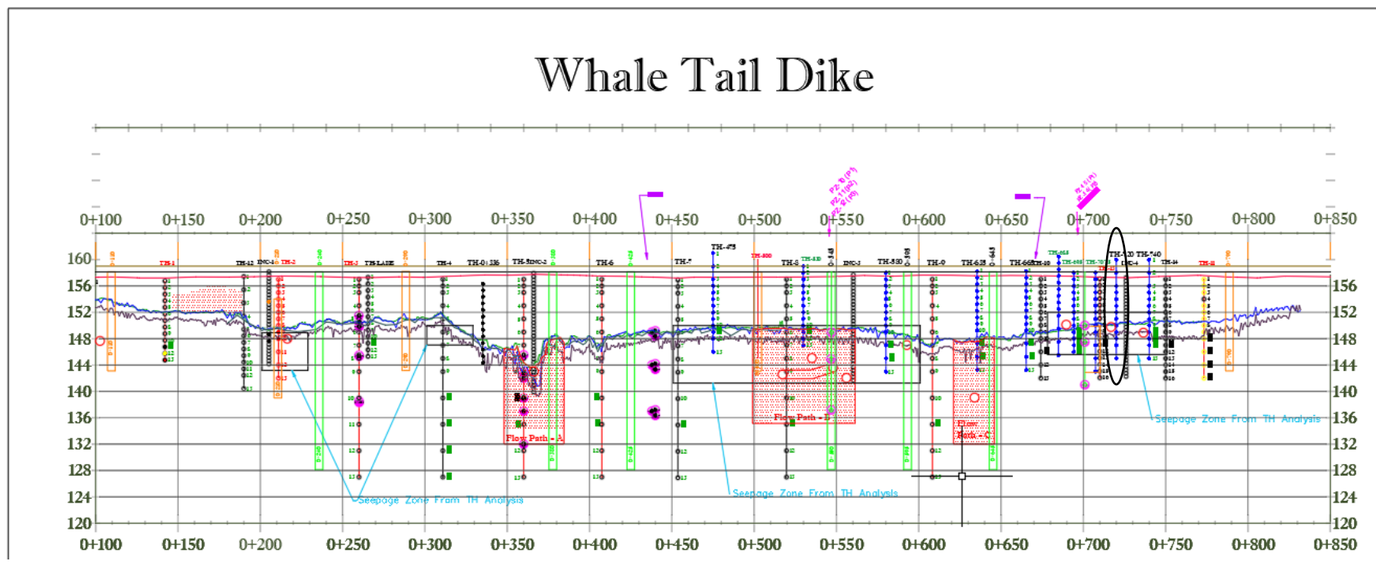
WTD-TH 0+720



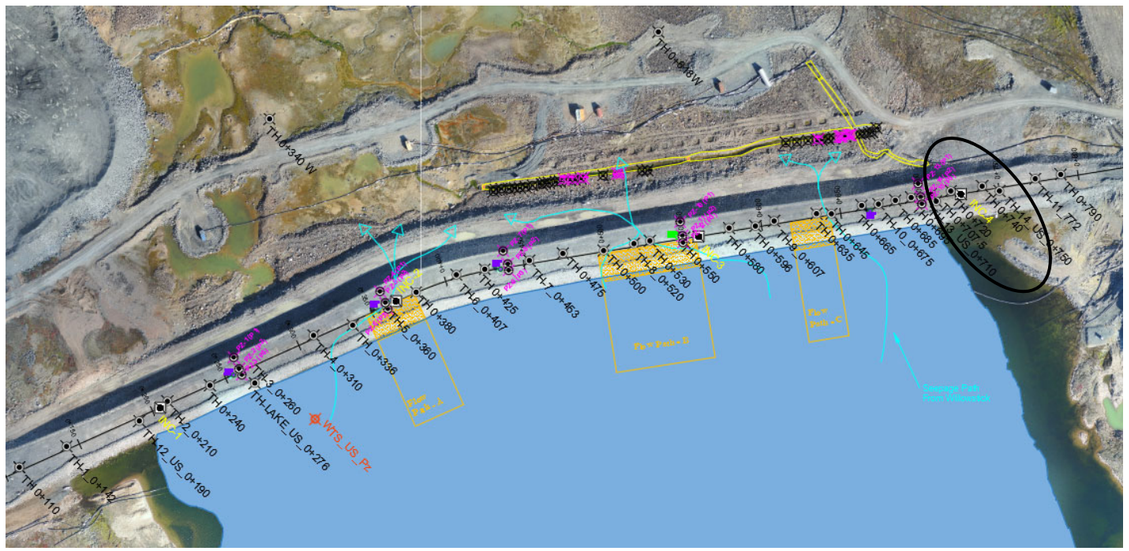
AMQ – WTD TH: 0+720_T

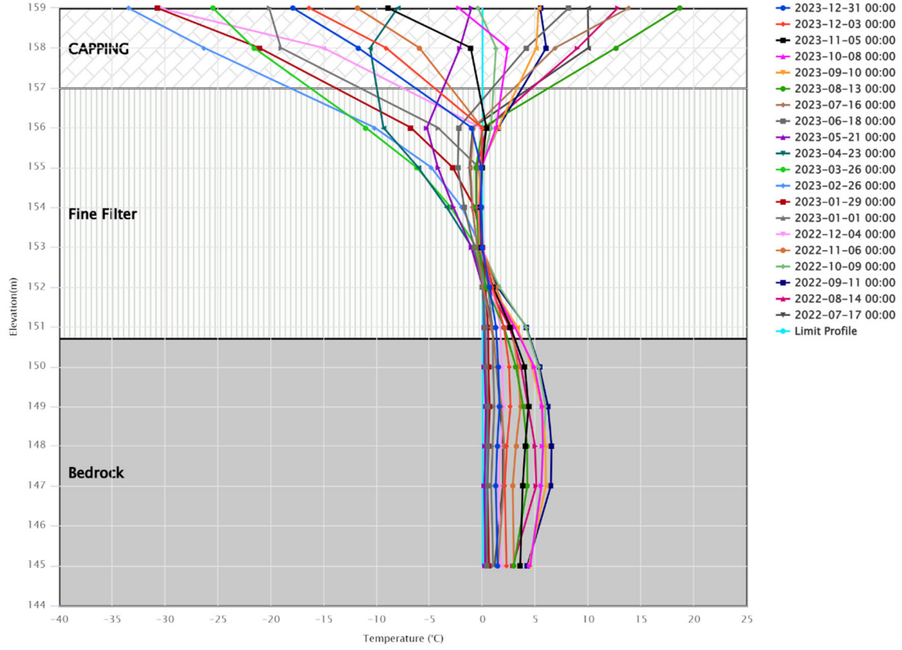


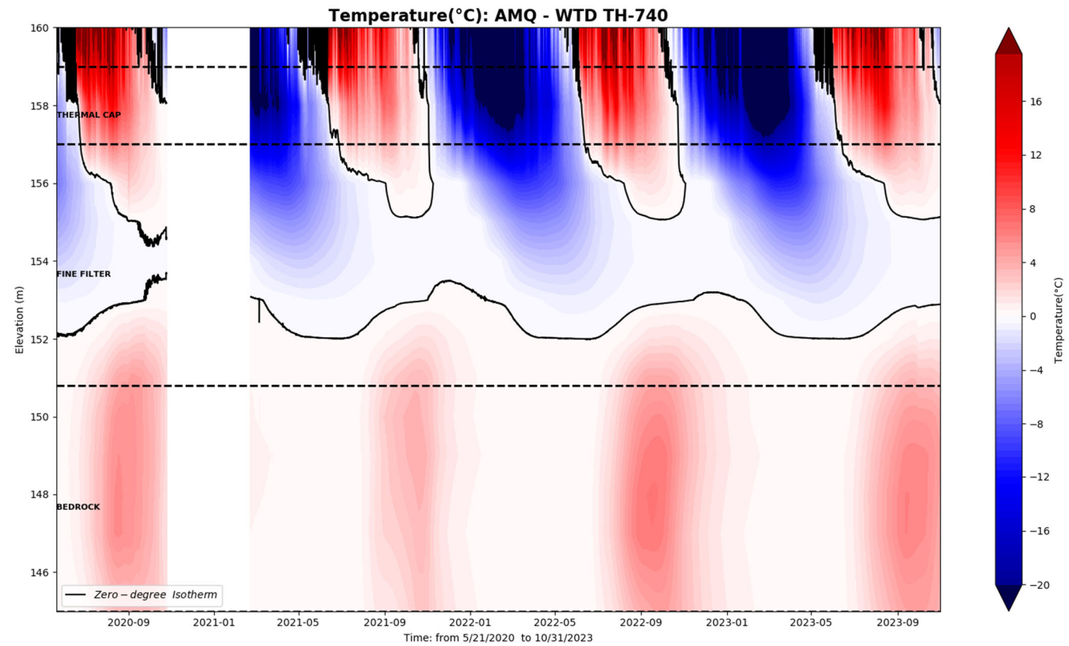


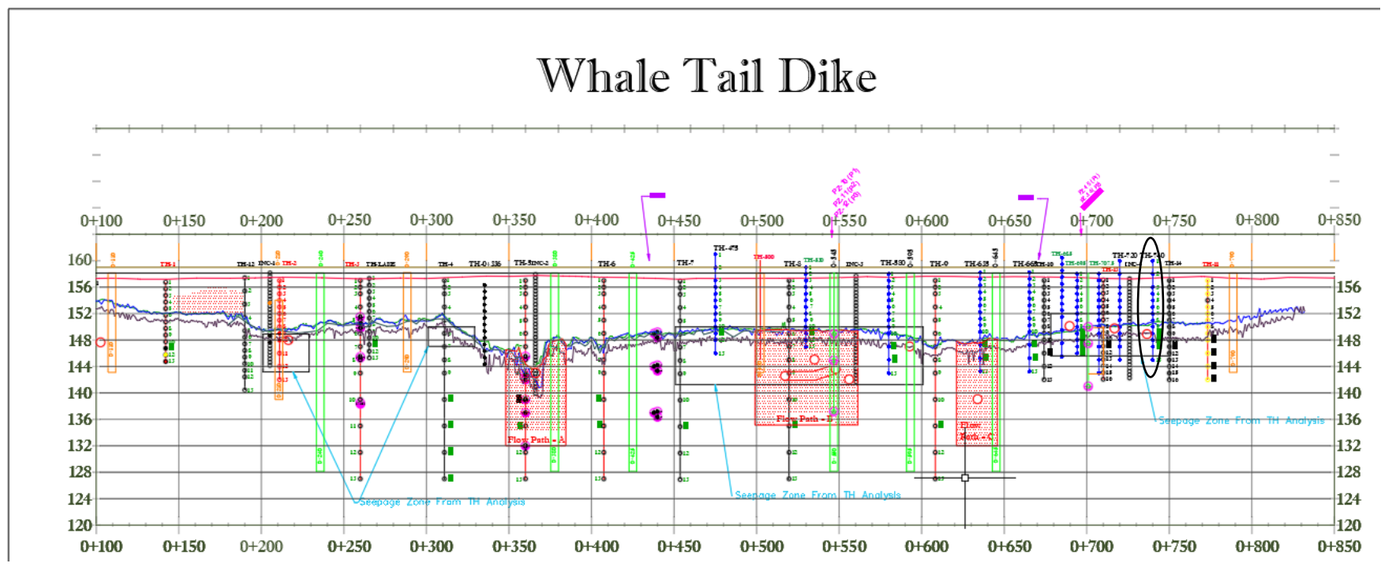


WTD-TH 0+740

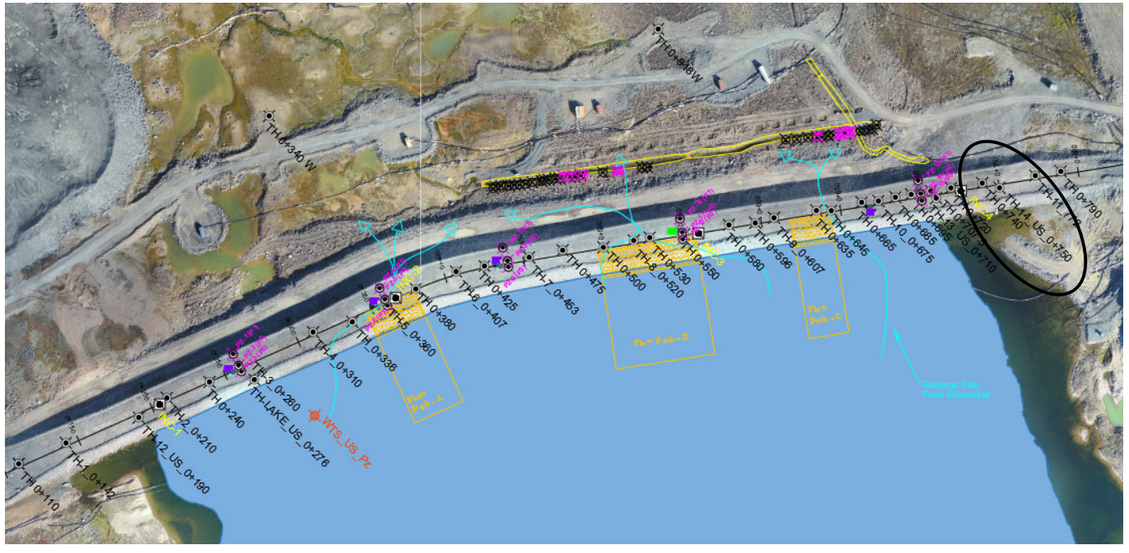

TH-0+340 W
TH-0+380 W
TH-11_T72
TH-11_US_0+150
TH-0+790
TH-0+740
TH-0+729
TH-0+715
TH-0+685
TH-0+675
TH-0+665
TH-0+645
TH-0+635
TH-0+607
TH-0+598
TH-0+580
TH-8_0+550
TH-8_0+530
TH-8_0+520
TH-0+500
TH-7_0+475
TH-7_0+463
TH-6_0+425
TH-6_0+407
TH-5_0+380
TH-5_0+360
TH-0+336
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Flow From TH Analysis

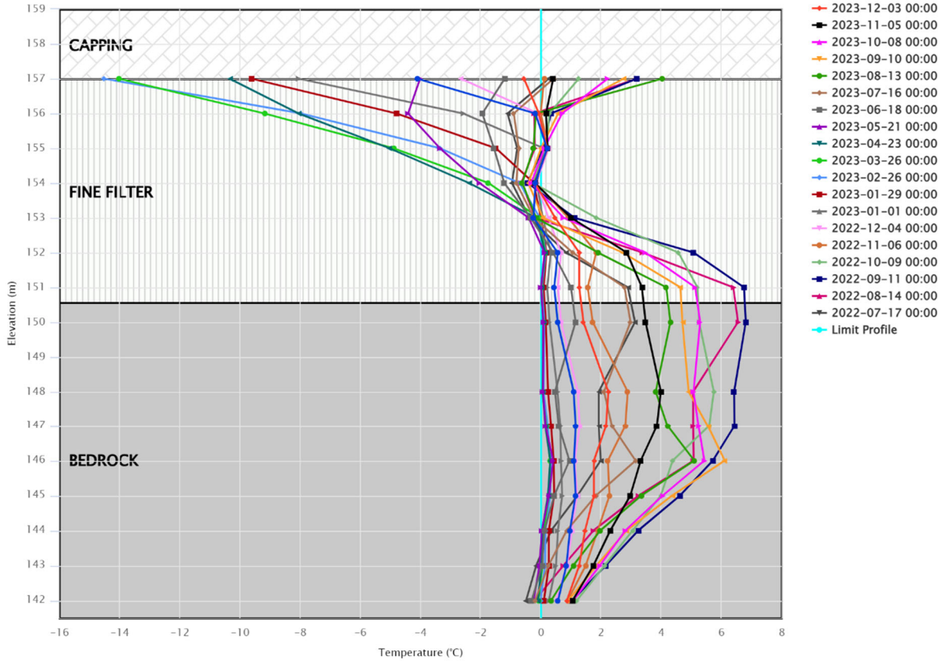

AMQ – WTD TH: 0+740_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

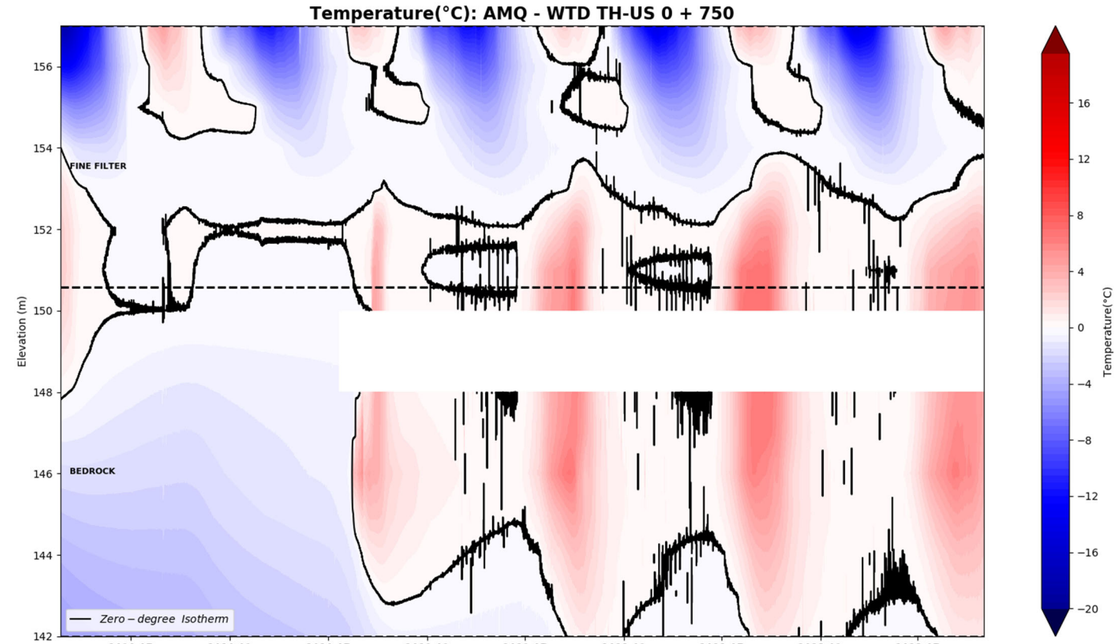

Temperature(°C): AMQ - WTD TH-740
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 10/31/2023
Temperature(°C)

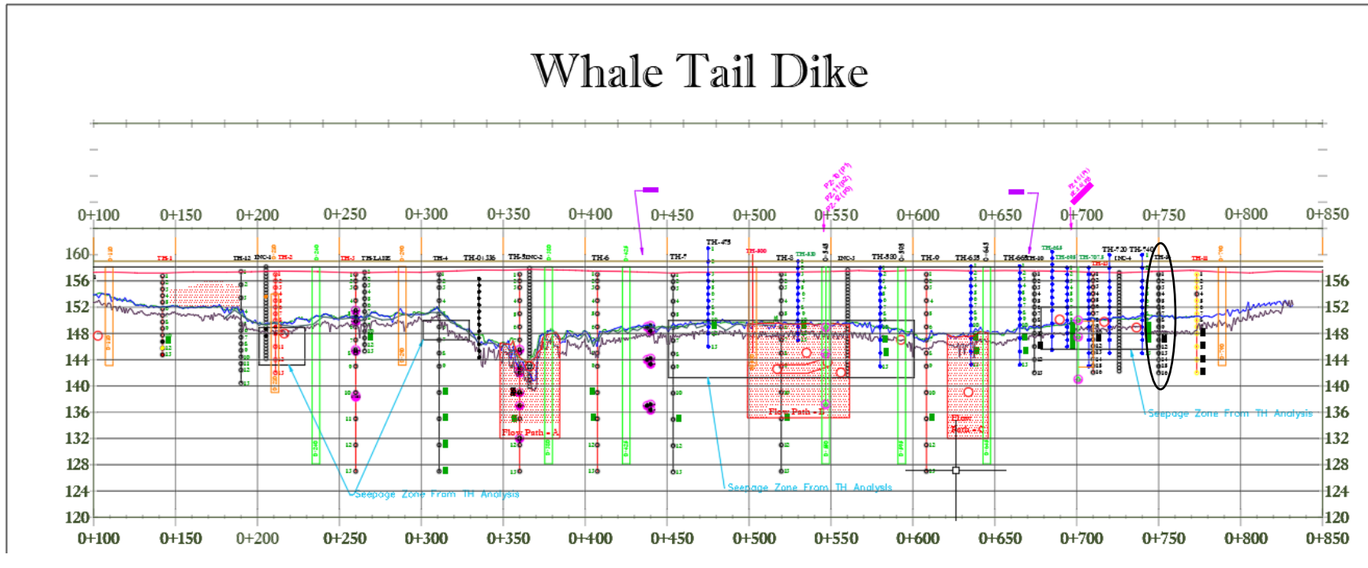

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+750

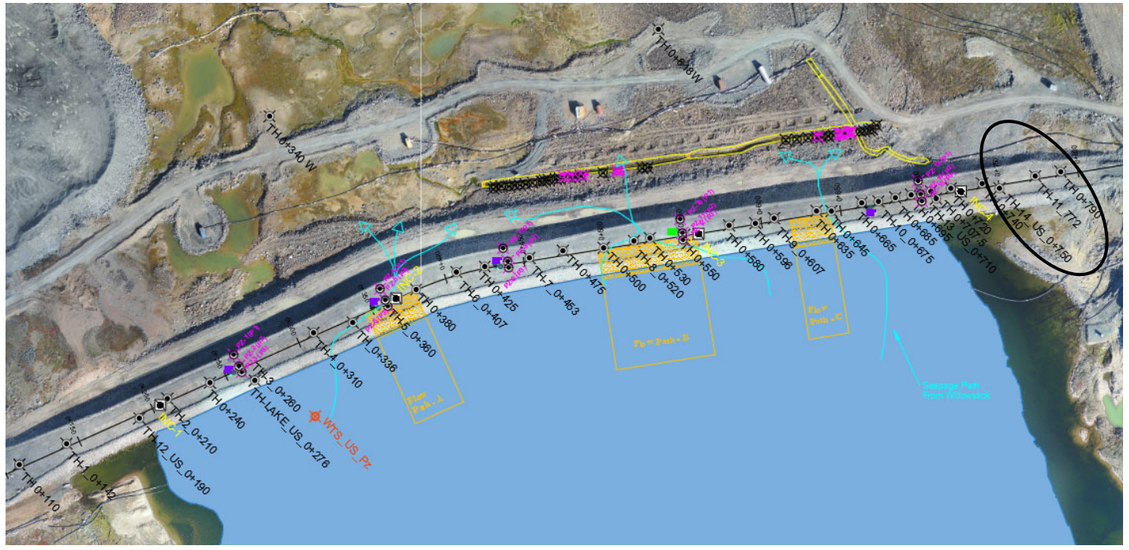

TH-0+340 W
TH-0+410W
TH-0+750
TH-11_PZ
TH-11_US_0+750
TH-0+740
TH-0+720
TH-0+710
TH-10_0+695
TH-10_0+675
TH-10_0+665
TH-0+645
TH-8_0+607
TH-0+590
TH-8_0+580
TH-0+550
TH-8_0+520
TH-0+500
TH-0+475
TH-_0+463
TH-9_0+425
TH-9_0+407
TH-5_0+380
TH-5_0+360
TH-4_0+338
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+278
TH-0+240
TH-2_0+210
TH-2_US_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis


AMQ – WTD TH_US: 0+750
Bead #9 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

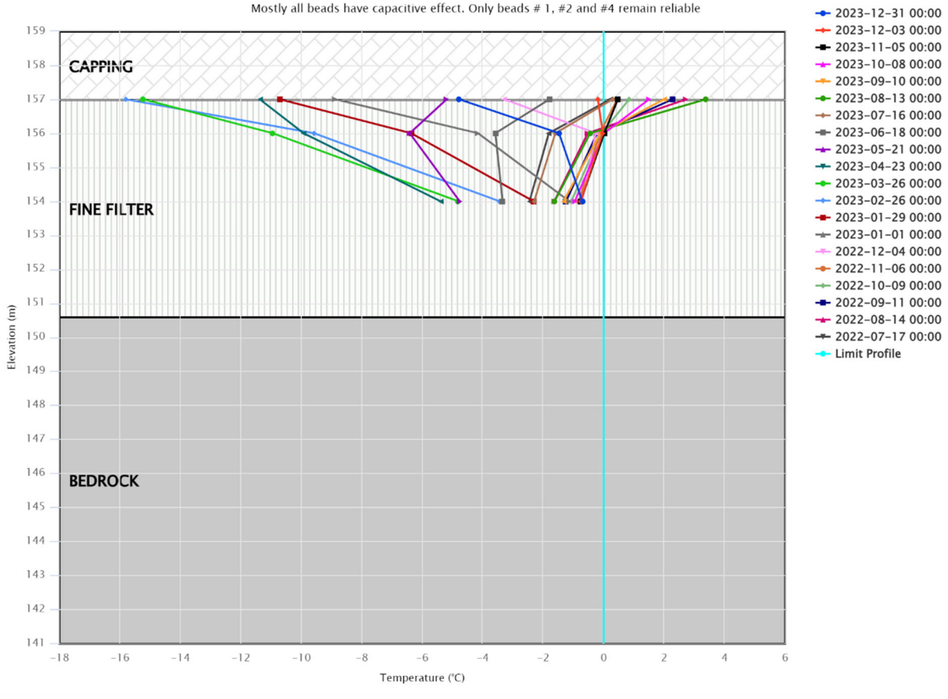

Temperature(°C): AMQ - WTD TH-US 0 + 750
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/20/2019 to 10/31/2023
Temperature(°C)

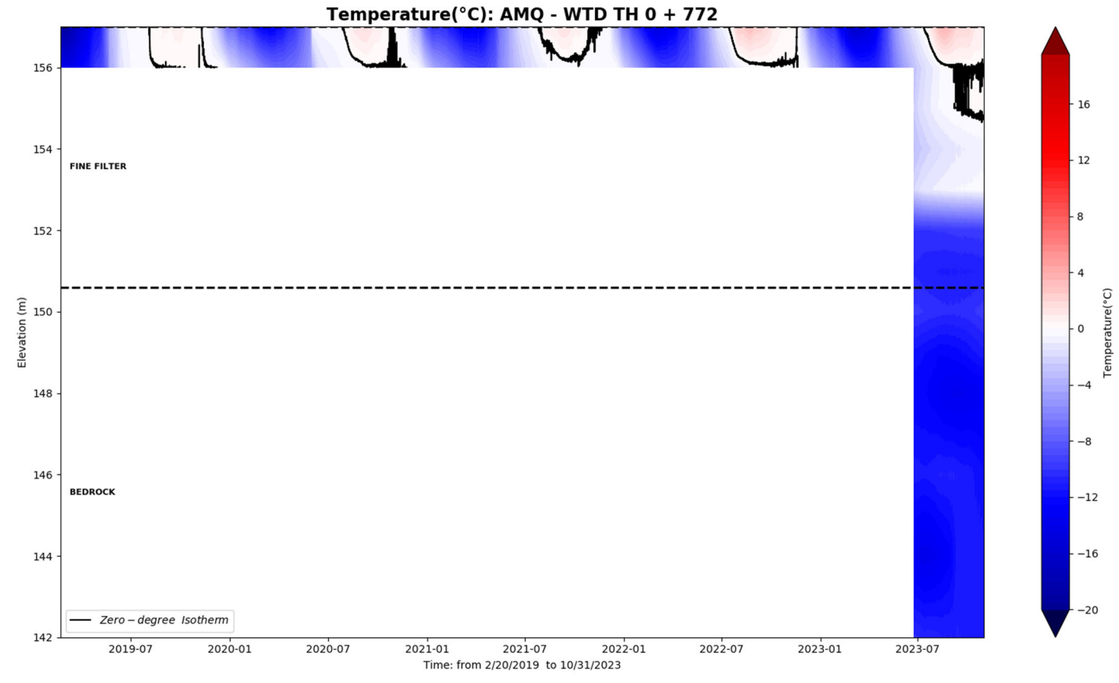

Whale Tail Dike
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

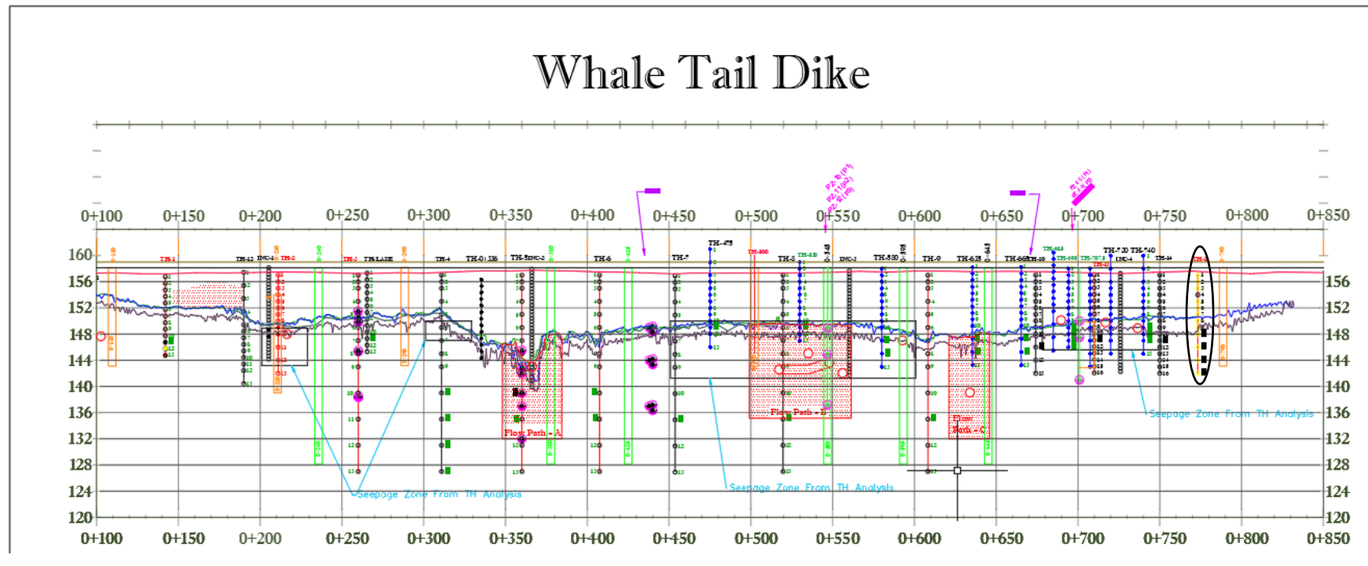
WTD-TH 0+772 U/S



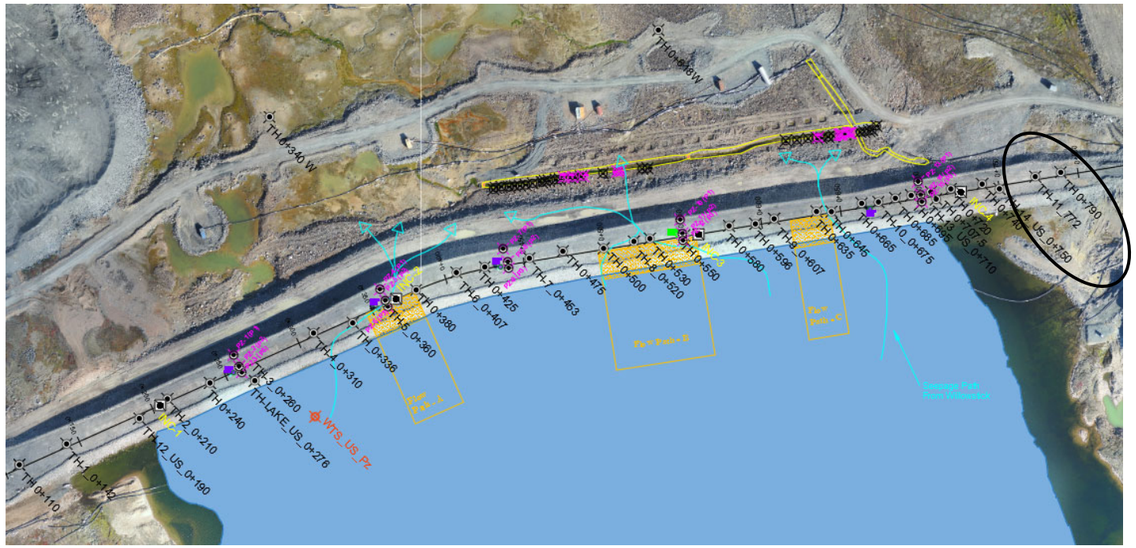
AMQ – WTD TH: 0+772

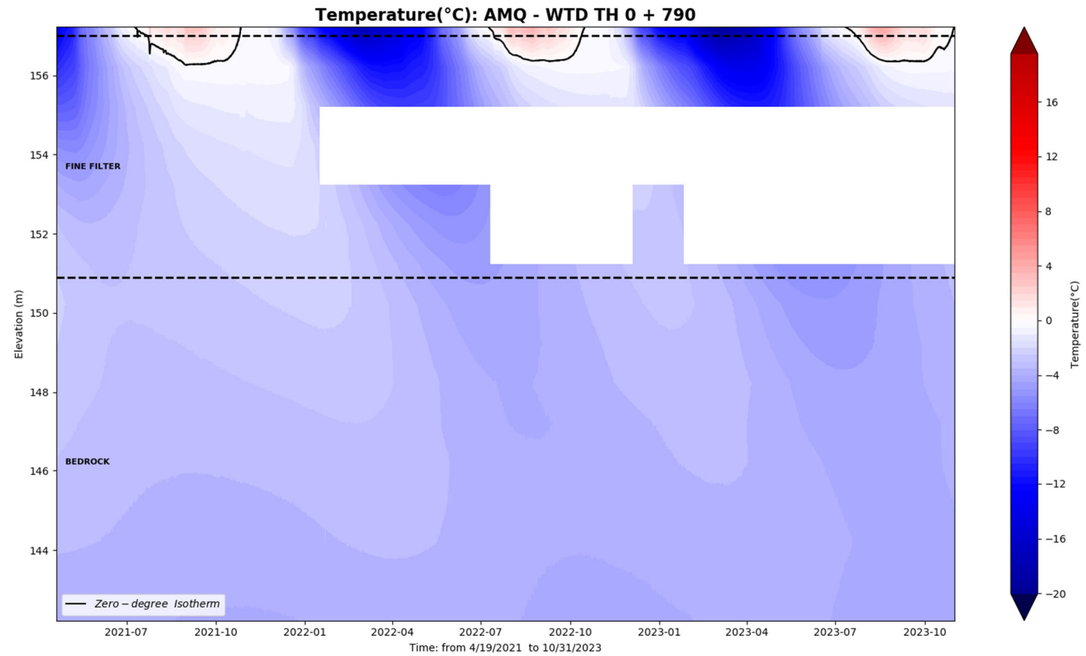


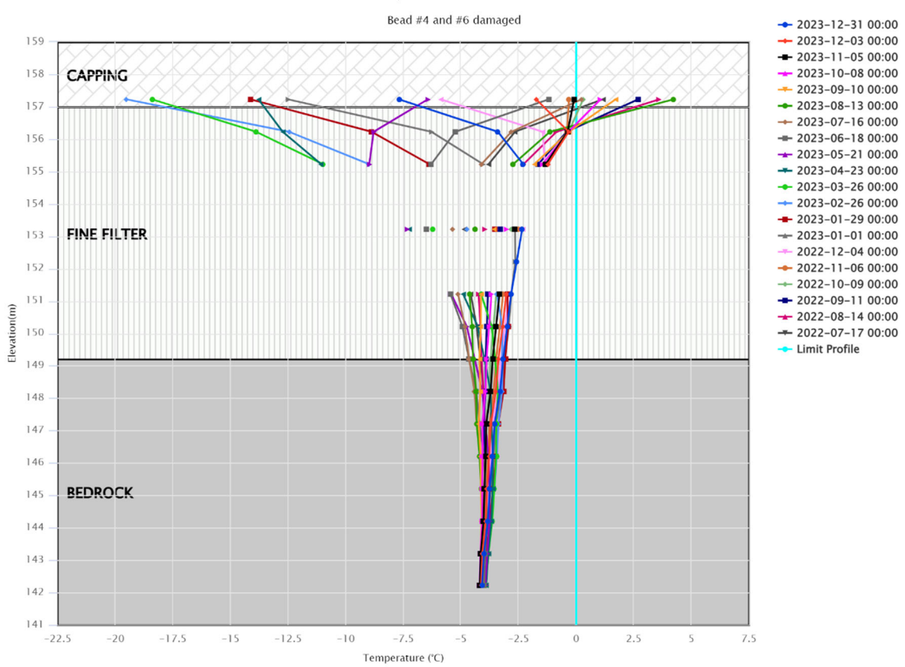


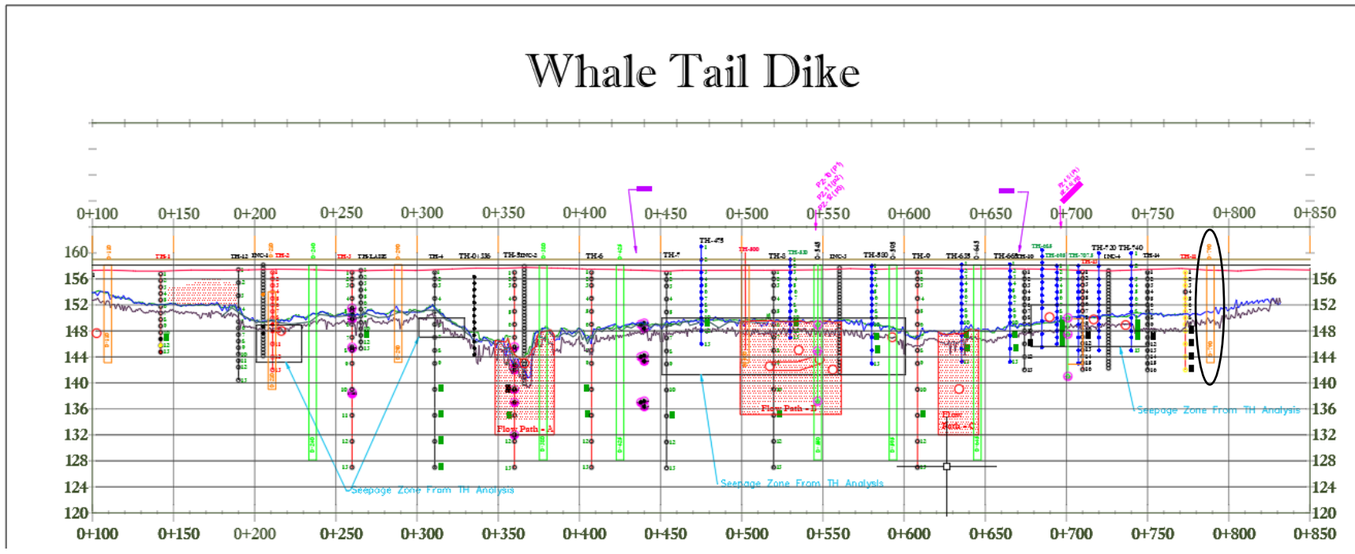


WTD-TH 0+790

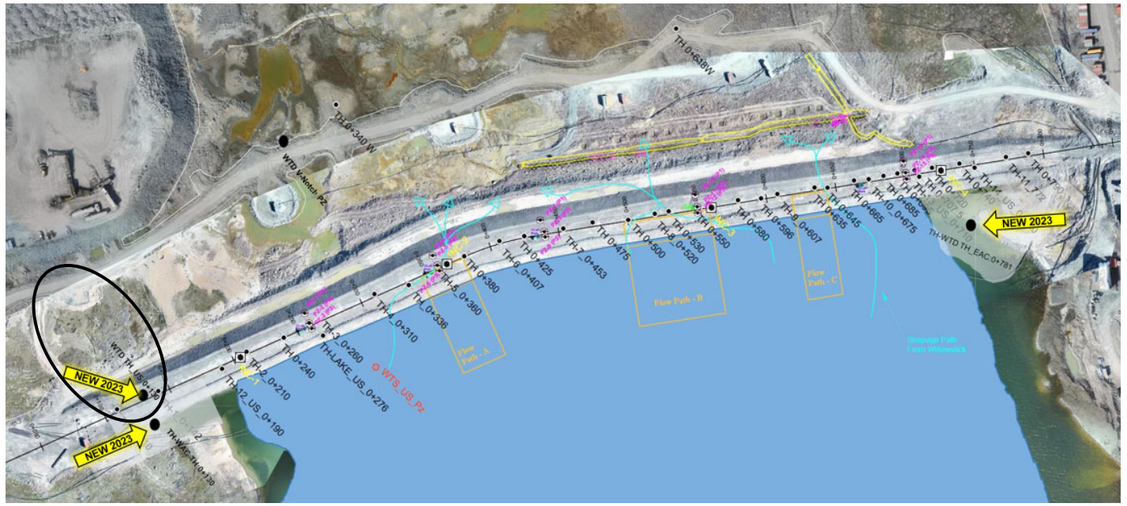

TH-0+340 W
TH-0+436W
TH-0+110
TH-1_0+149
TH-12_US_0+190
TH-2_0+210
TH-0+240
TH-LAKE_US_0+278
TH-2_0+260
TH-1_0+310
TH-0+336
TH-3_0+360
TH-0+380
TH-3_0+407
TH-0+425
TH-7_0+453
TH-0+475
TH-0+500
TH-3_0+520
TH-0+530
TH-0+550
TH-0+580
TH-0+596
TH-9_0+607
TH-0+635
TH-0+645
TH-10_0+665
TH-0+675
TH-0+686
TH-0+695
TH-11_US_0+710
TH-0+720
TH-11_T72
TH-0+750
TH-0+790
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Tailings

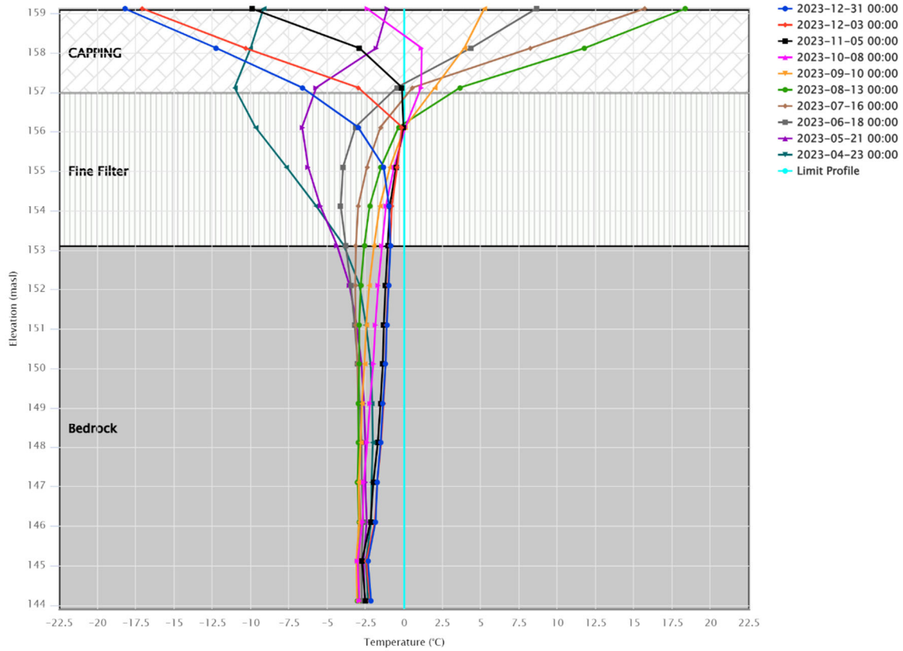

Temperature(°C): AMQ - WTD TH 0 + 790
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/19/2021 to 10/31/2023
Temperature(°C)


AMQ – WTD TH: 0+790
Bead #4 and #6 damaged
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

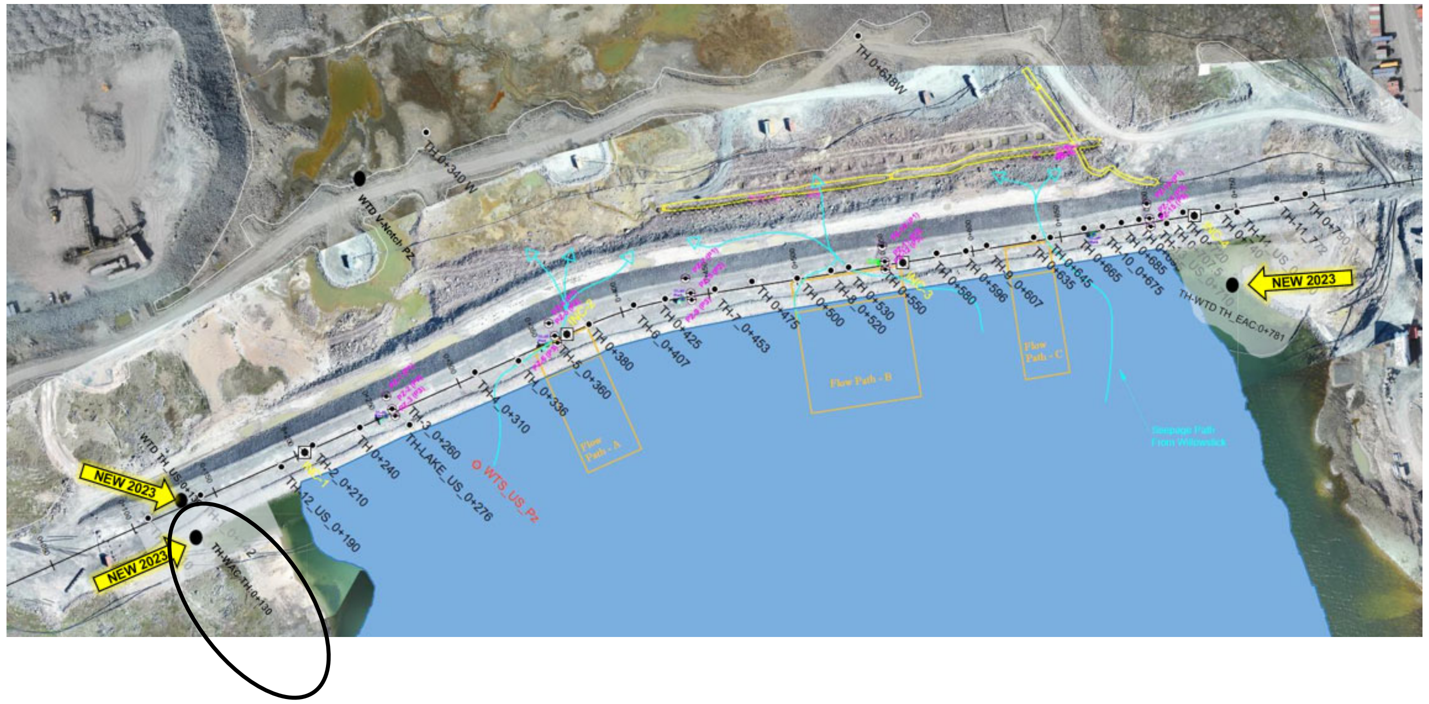

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

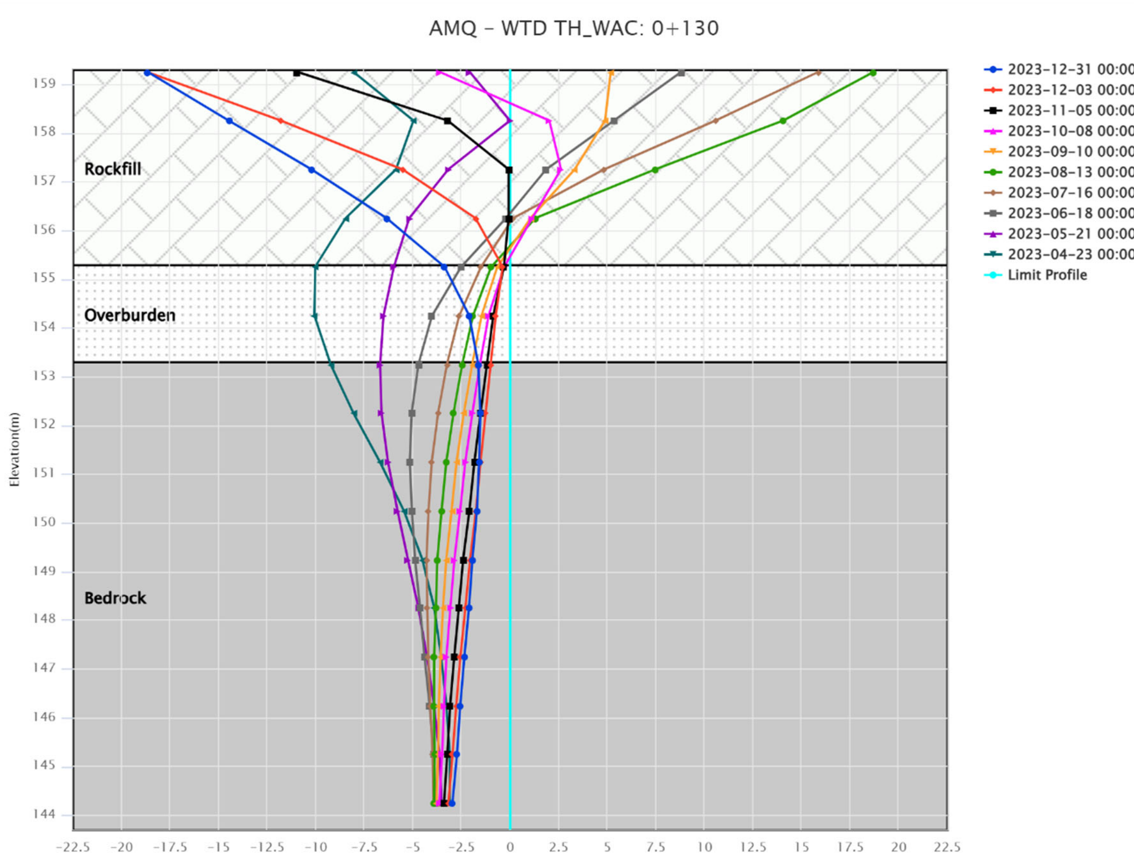
WTD US 0+130


TH-0+680W
TH-0+340 W
WTD Water Pz
NEW 2023
NEW 2023
TH-WTD TH_EAC-0+781
TH-WTD TH_US-0+130
TH-WTD TH_US-0+190
TH-LAKE_US-0+276
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Waterlock

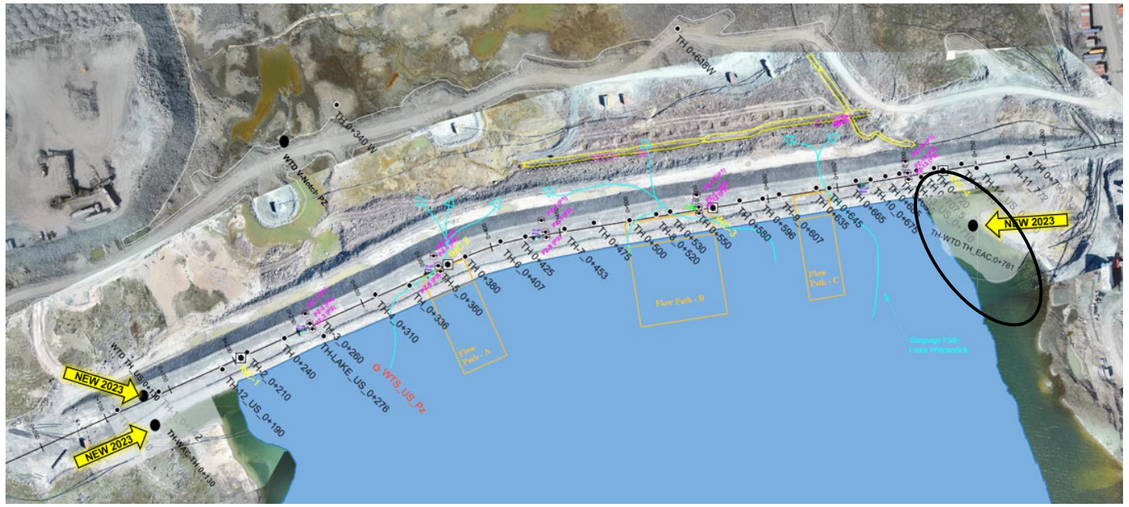

AMQ – WTD TH_US: 0+130
CAPPING
Fine Filter
Bedrock
Elevation (masl)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
Limit Profile

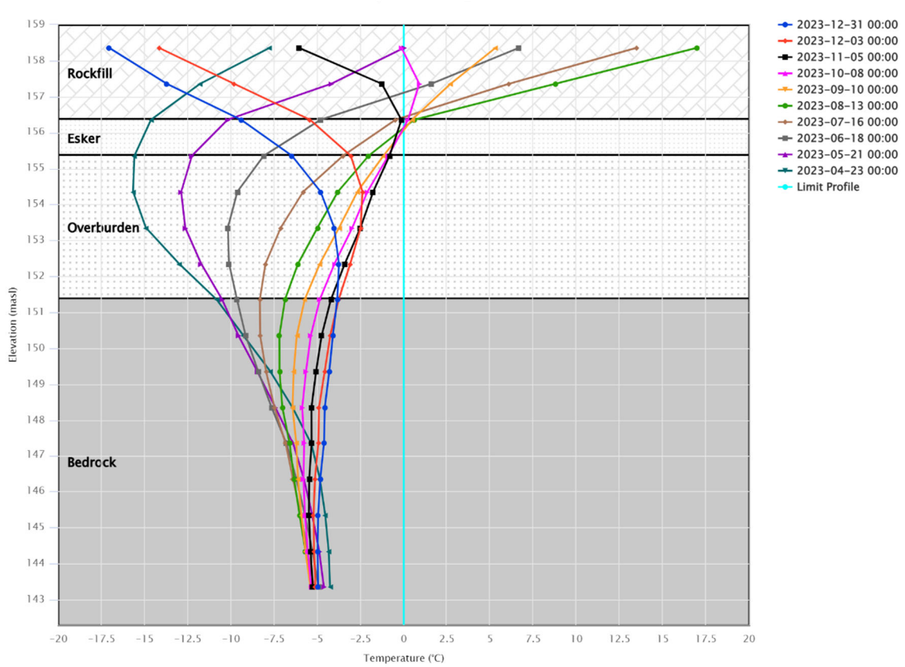
WTD WAC 0+130


NEW 2023
NEW 2023
NEW 2023


AMQ – WTD TH_WAC: 0+130
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
Limit Profile
Rockfill
Overburden
Bedrock
Elevation(m)
Temperature (°C)

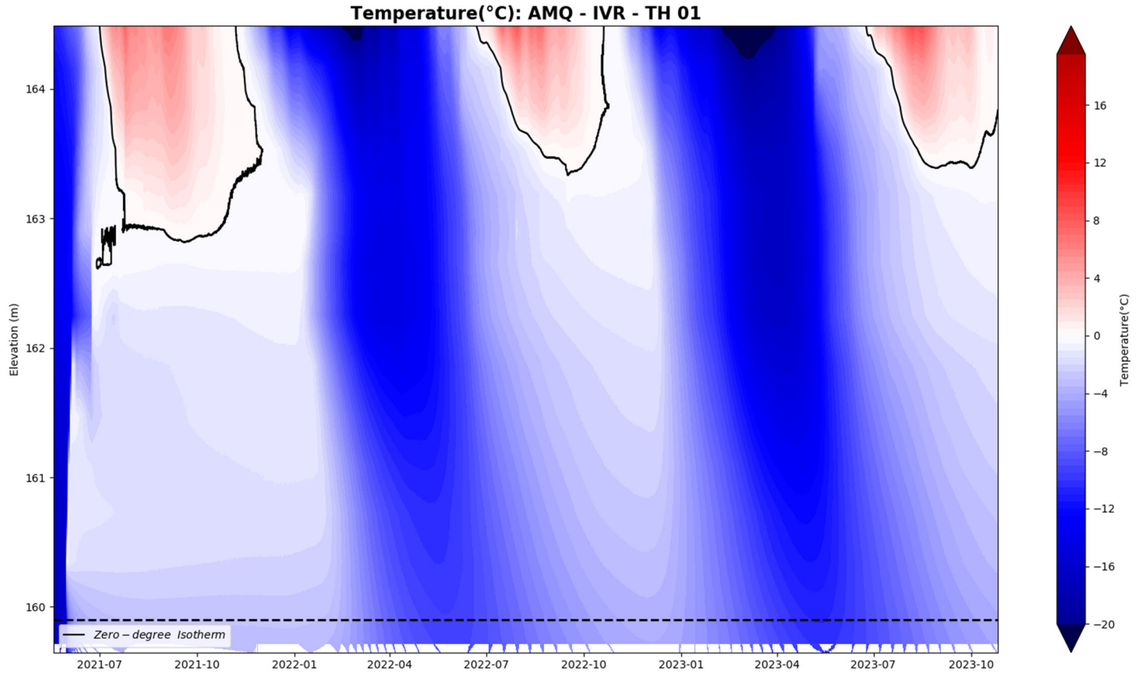
WTD EAC 0+781

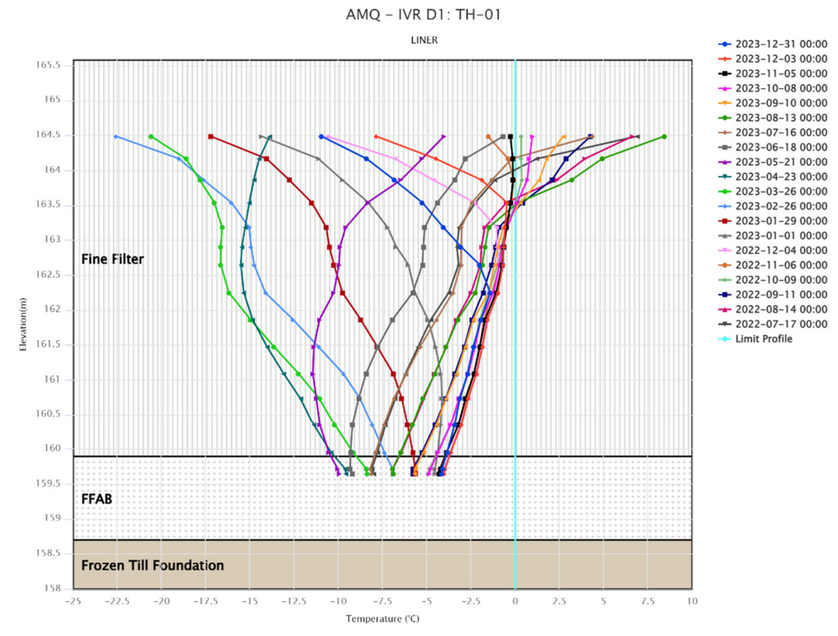

TH-0+618W
TH-0+340W
WTD Weather Pz
NEW 2023
NEW 2023
NEW 2023
TH-WTD TH_EAC-0+781
TH_0+645
TH_0+685
TH_0+607
TH_0+596
TH_0+580
TH_0+550
TH_0+530
TH_0+520
TH_0+500
TH_0+475
TH_0+453
TH_0+425
TH_0+407
TH_0+380
TH_0+360
TH_0+336
TH_0+310
TH_0+280
TH_0+260
TH_0+240
TH_0+210
TH_0+190
TH-LAKE_US-0+276
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Pitwalls

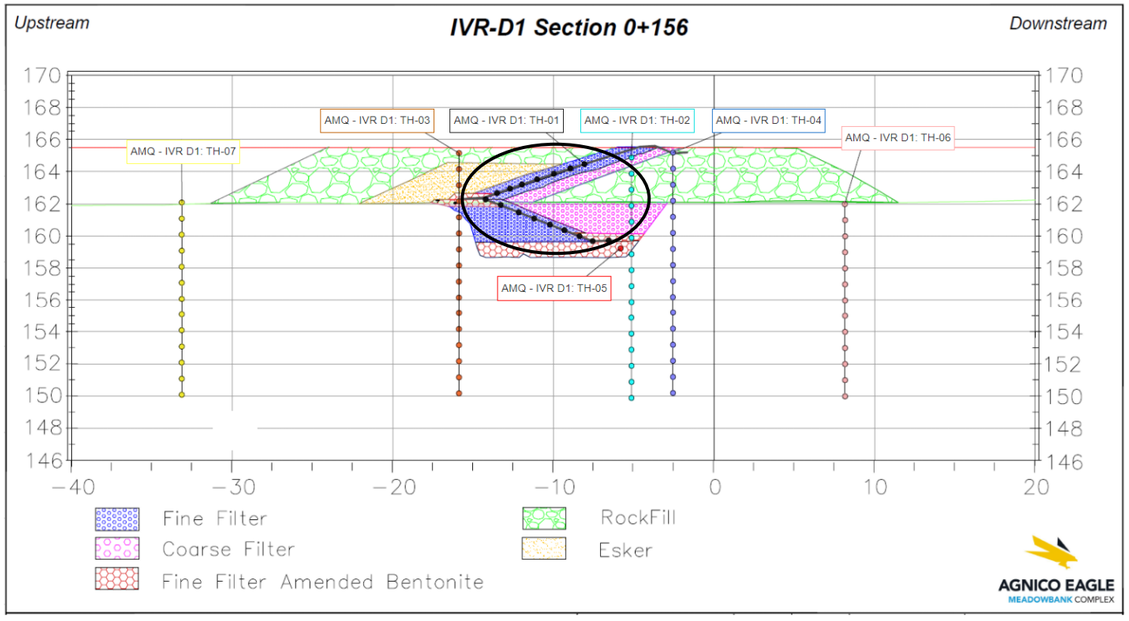

AMQ – WTD TH_EAC: 0+781
Rockfill
Esker
Overburden
Bedrock
Elevation (masl)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
Limit Profile

IVR-D1-TH1


0+030
0+020
0+000
0+020
0+040
0+054
0+100
0+200
0+300
IVRD-TH-07
IVRD-TH-03
IVRD-TH-02
IVRD-TH-01 (liner)
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06

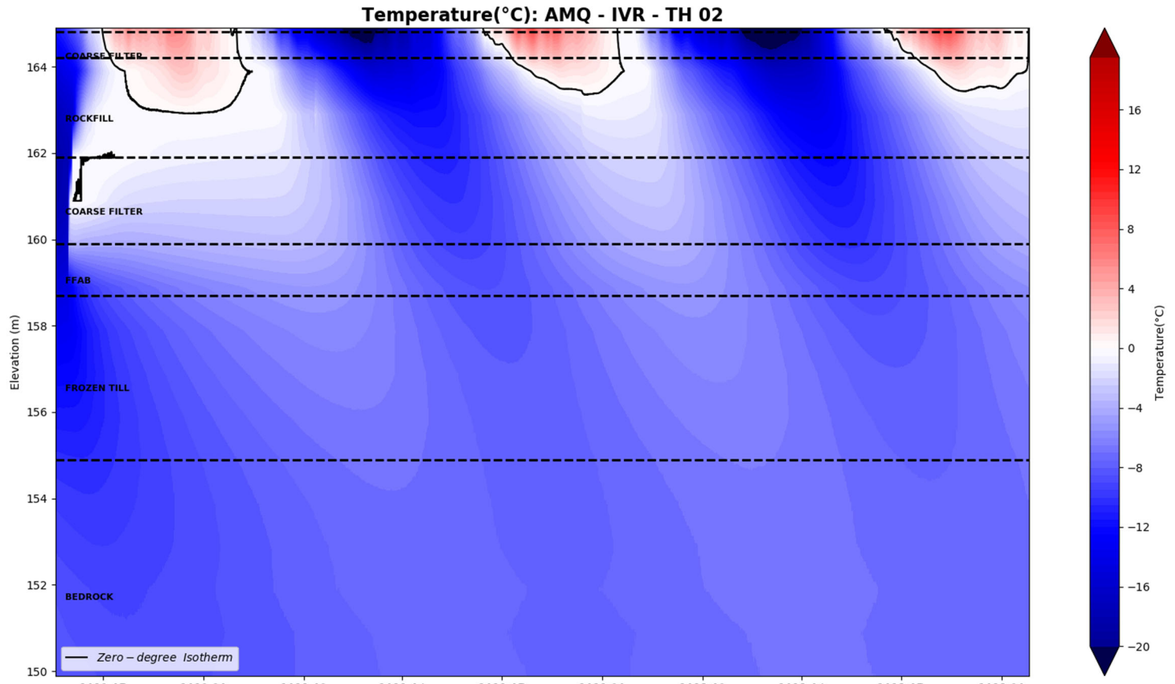

Temperature(°C): AMQ - IVR - TH 01
Elevation (m)
164
163
162
161
160
Zero – degree Isotherm
2021-07
2021-10
2022-01
2022-04
2022-07
2022-10
2023-01
2023-04
2023-07
2023-10
Time: from 5/18/2021 to 10/26/2023
Temperature(°C)
16
12
8
4
0
−4
−8
−12
−16
−20

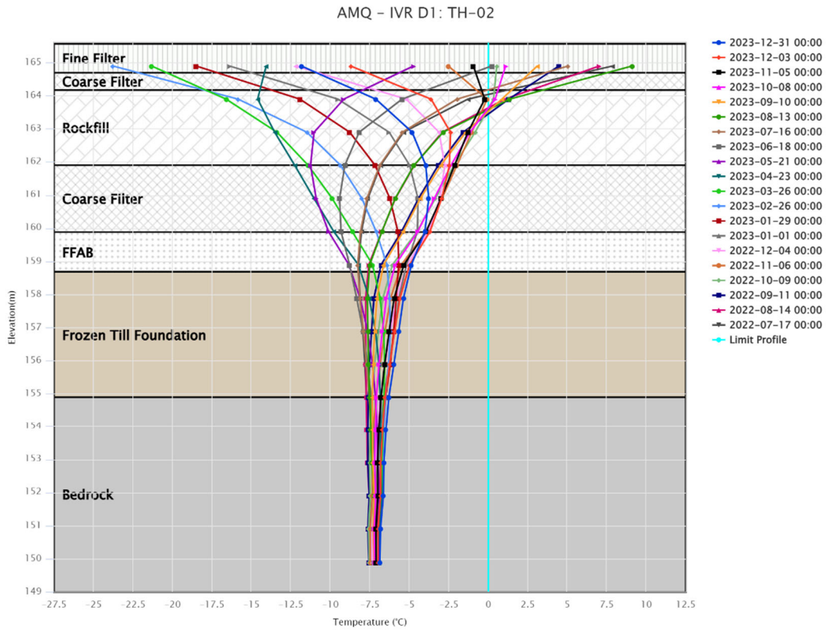

AMQ – IVR D1: TH-01
LINER
Fine Filter
FFAB
Frozen Till Foundation
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

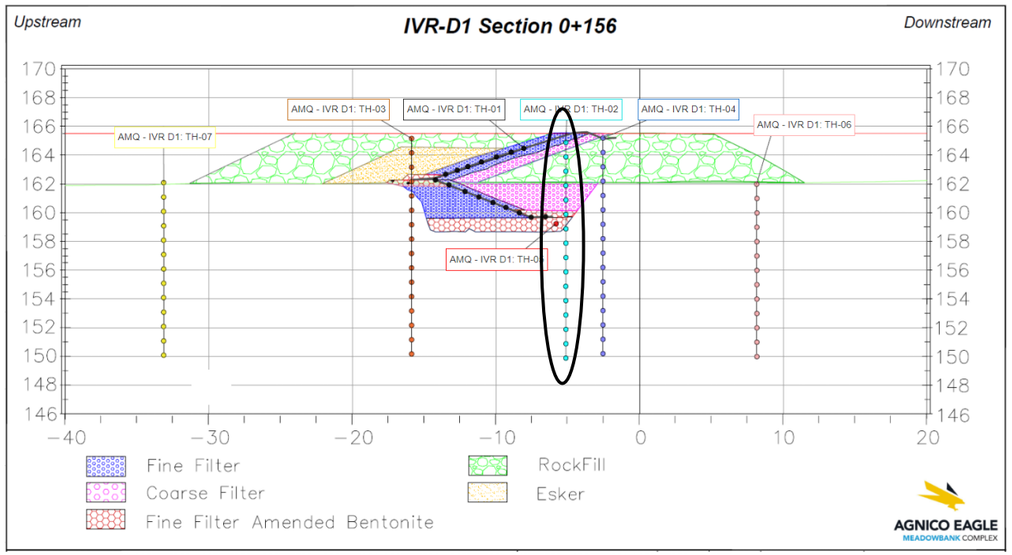

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH2

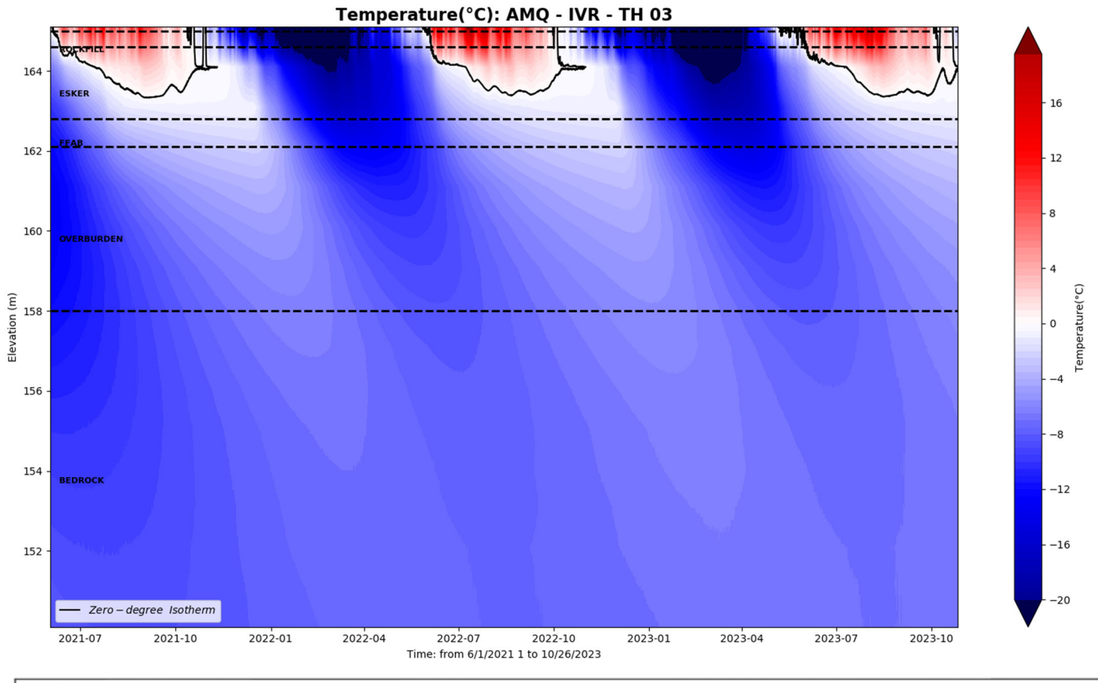

0+030
0+020
0+000
0+100
0+020
0+040
0+054
IVRD-TH-07
IVRD-TH-03
IVRD-TH-02
IVRD-TH-01 (liner)
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+200
0+300


Temperature(°C): AMQ - IVR - TH 02
COARSE FILTER
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/18/2021 to 10/26/2023

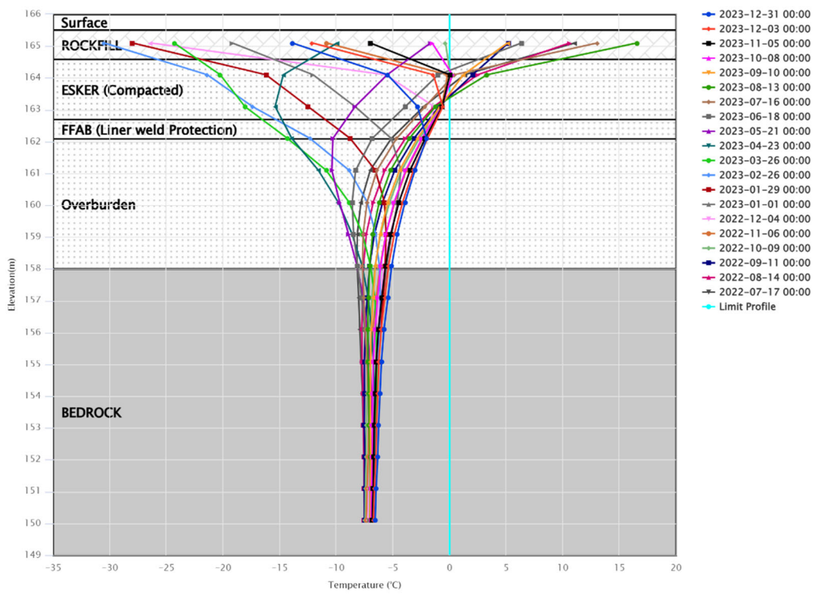

AMQ – IVR D1: TH-02
Fine Filter
Coarse Filter
Rockfill
Coarse Filter
FFAB
Frozen Till Foundation
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

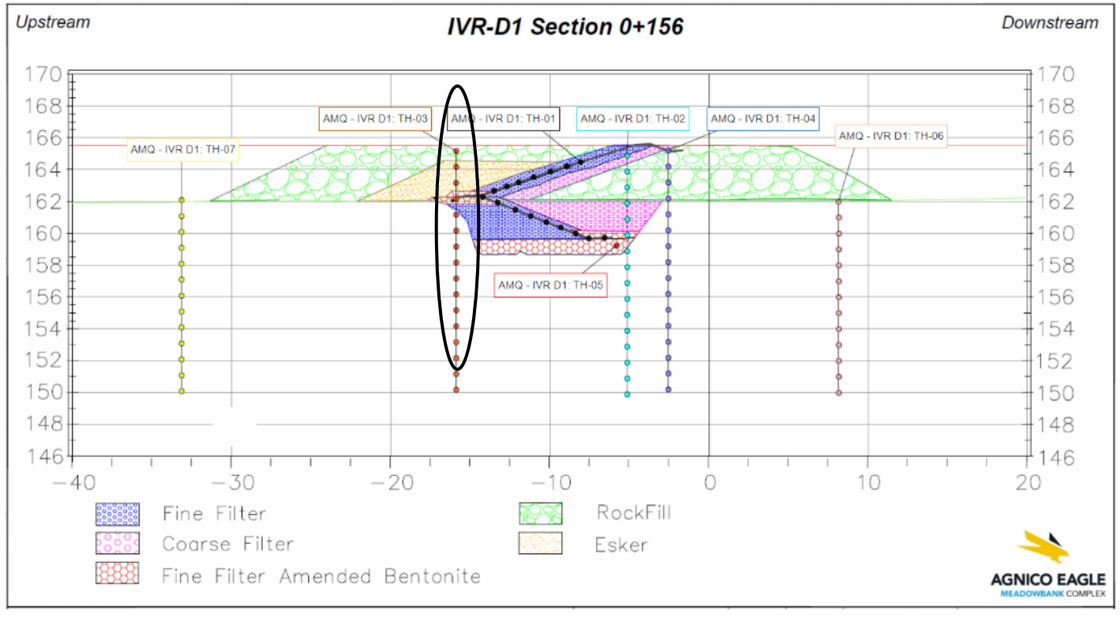

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH3



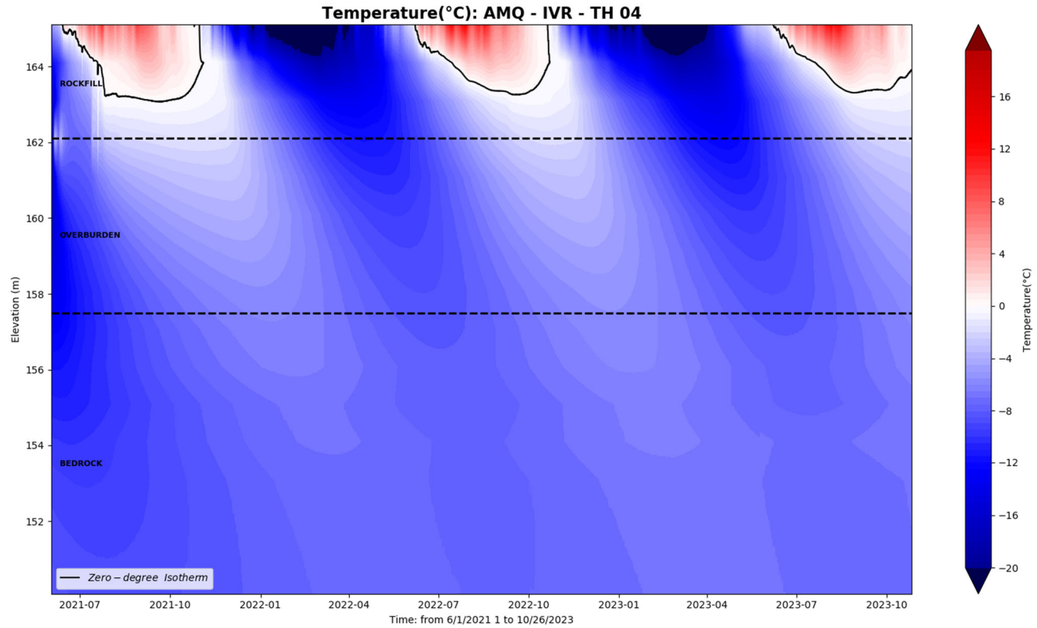
AMQ – IVR D1: TH-03

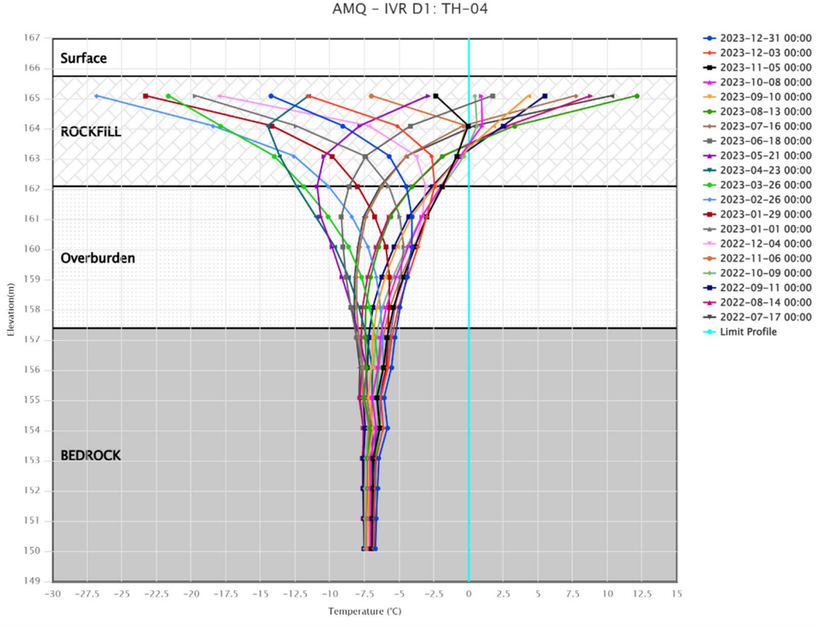


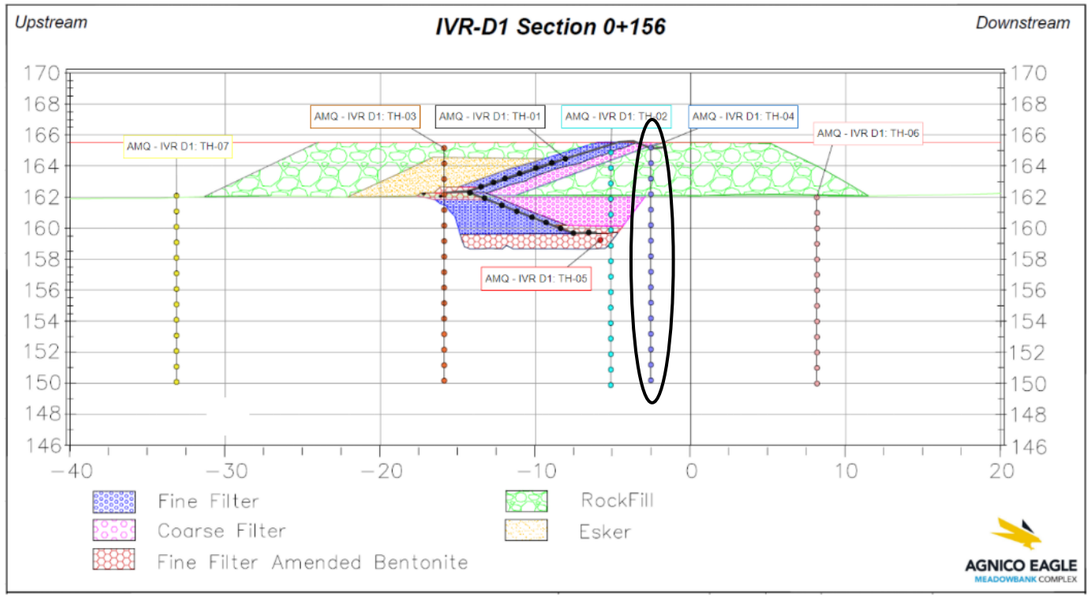


IVR-D1-TH4

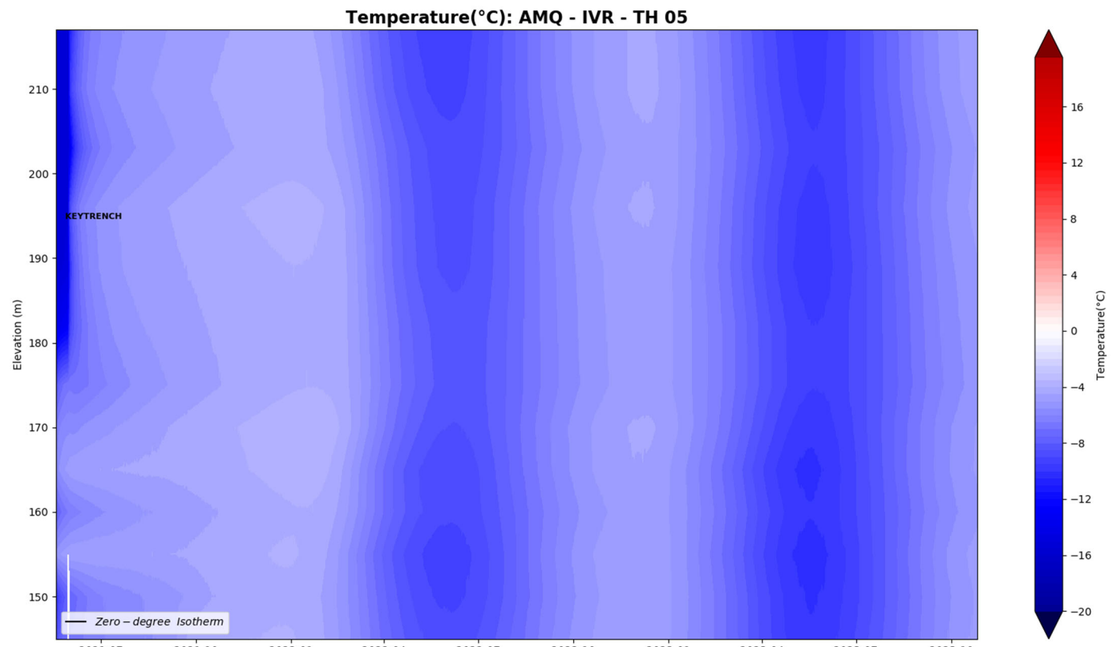

0+030
0+020
0+000
0+100
0+020
0+040
0+054
IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+200
0+300


Temperature(°C): AMQ - IVR - TH 04
ROCKFILL
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 6/1/2021 1 to 10/26/2023
Temperature(°C)

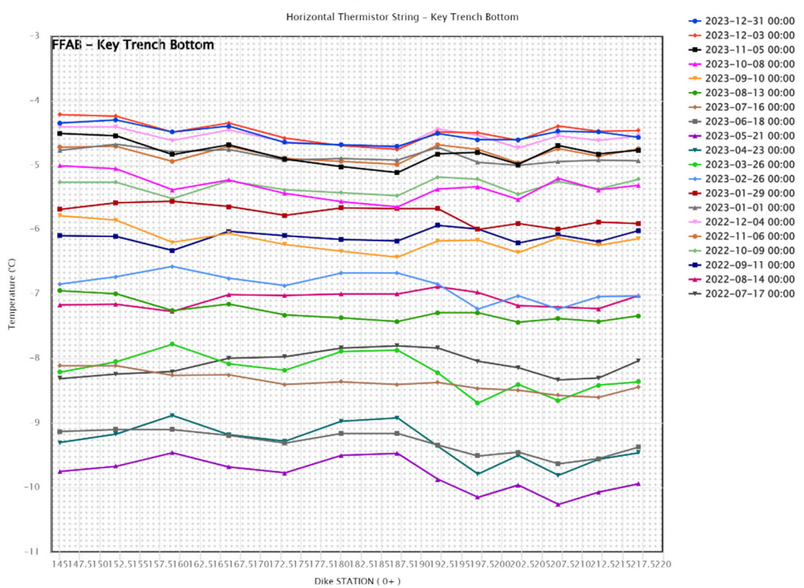

AMQ - IVR D1: TH-04
Surface
ROCKFILL
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

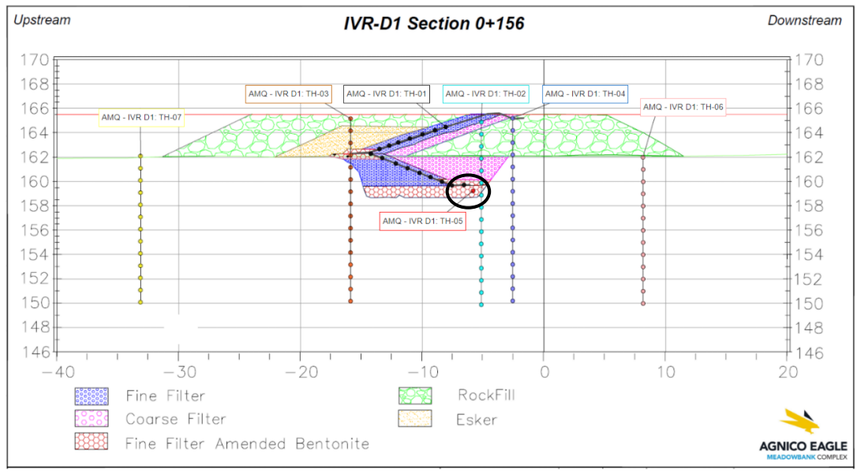

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH5



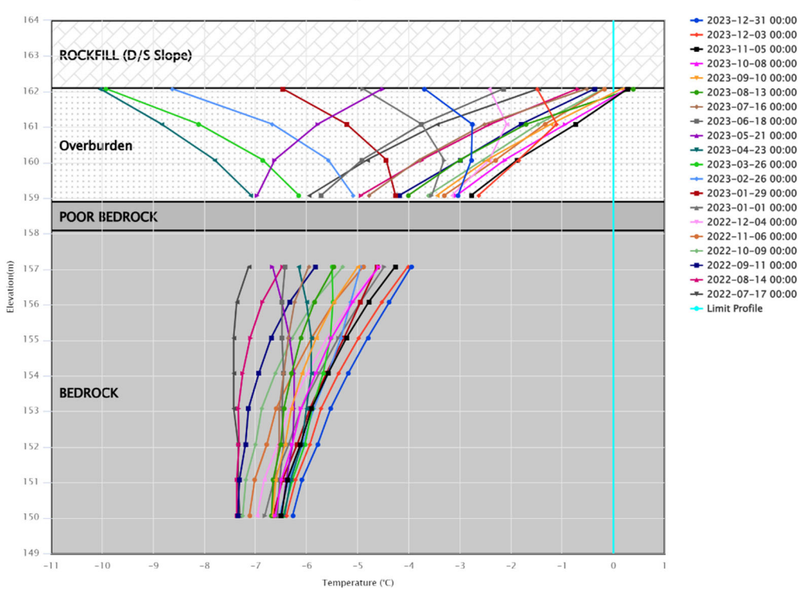
NOTE: This TH is horizontal and in Keytrench and must be reflected this way when reading the thermal graph

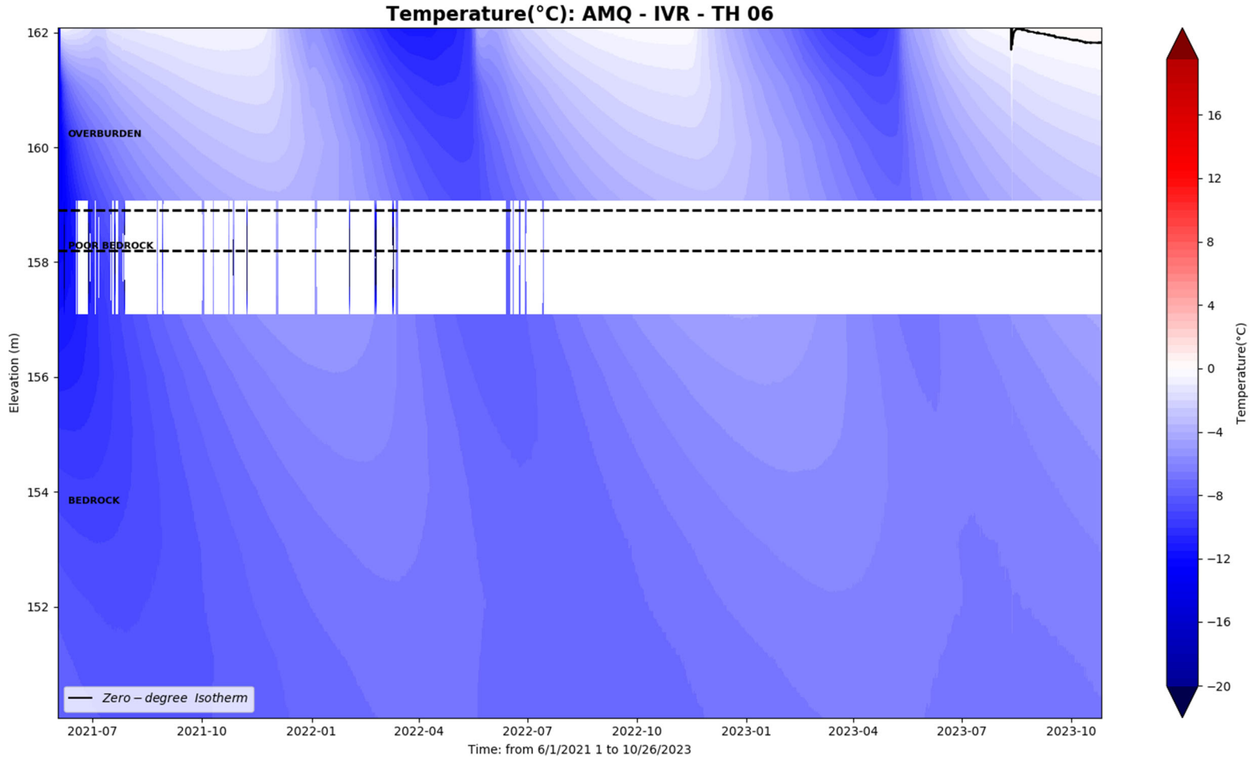


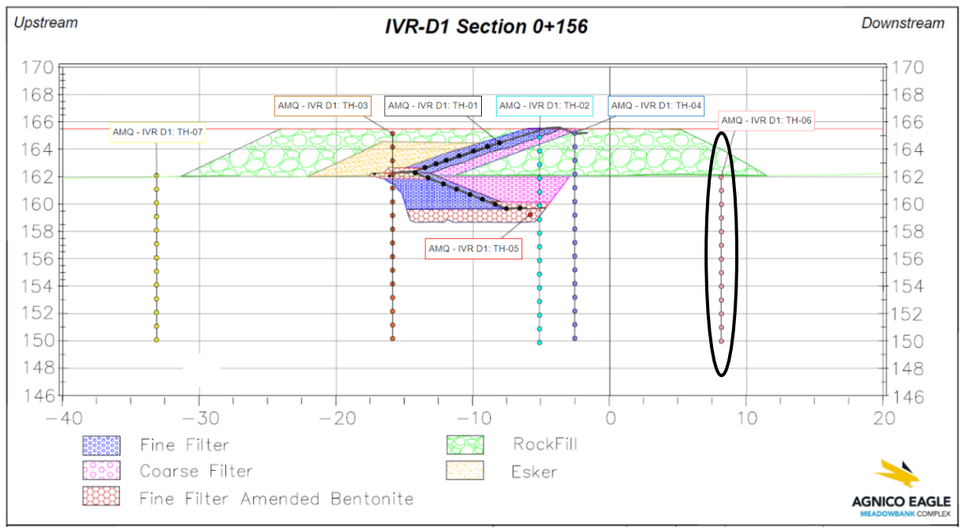


IVR-D1-TH6

AMQ – IVR D1: TH–06

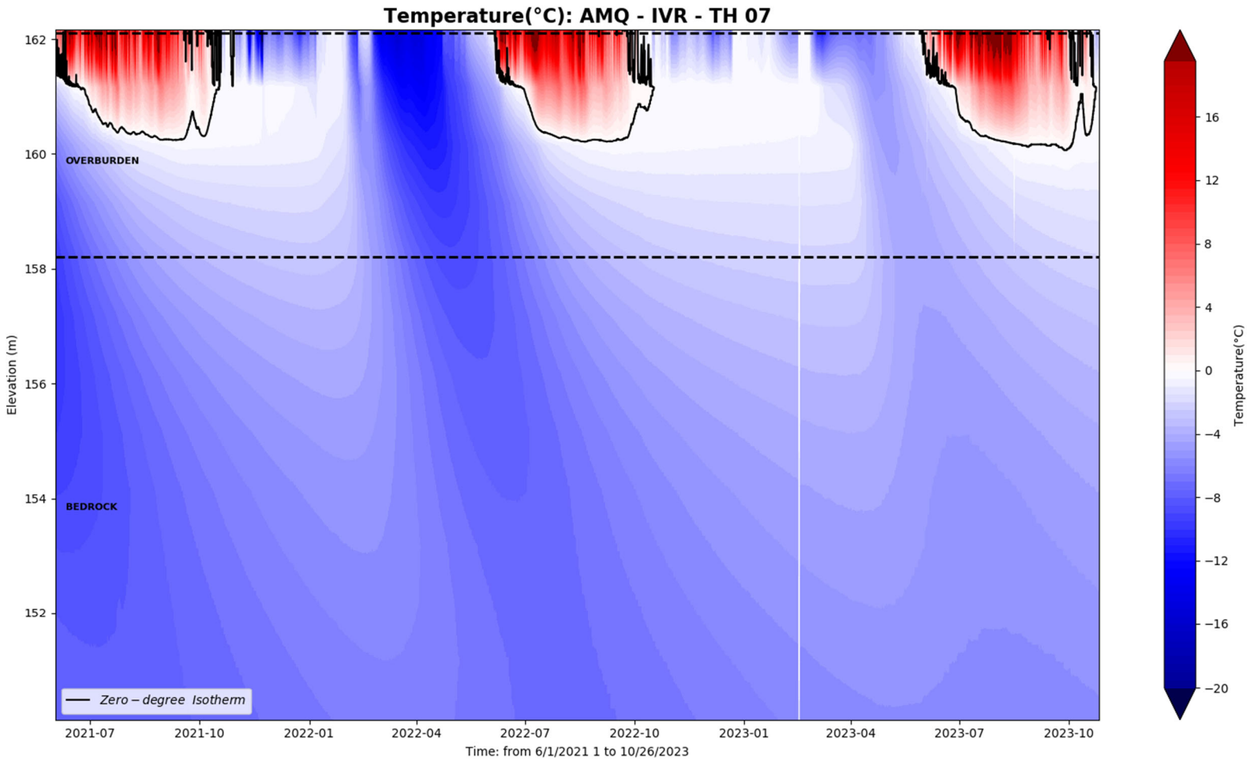


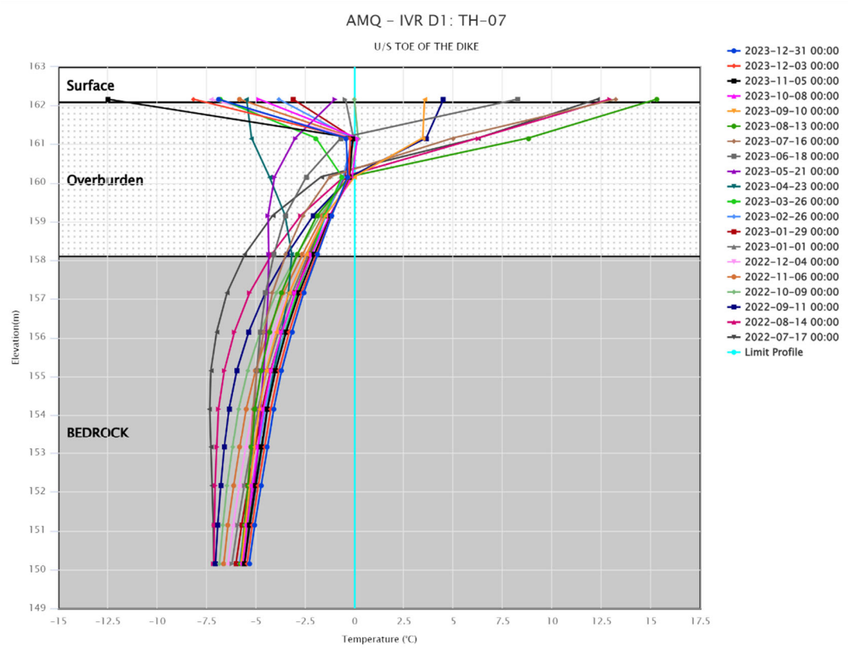


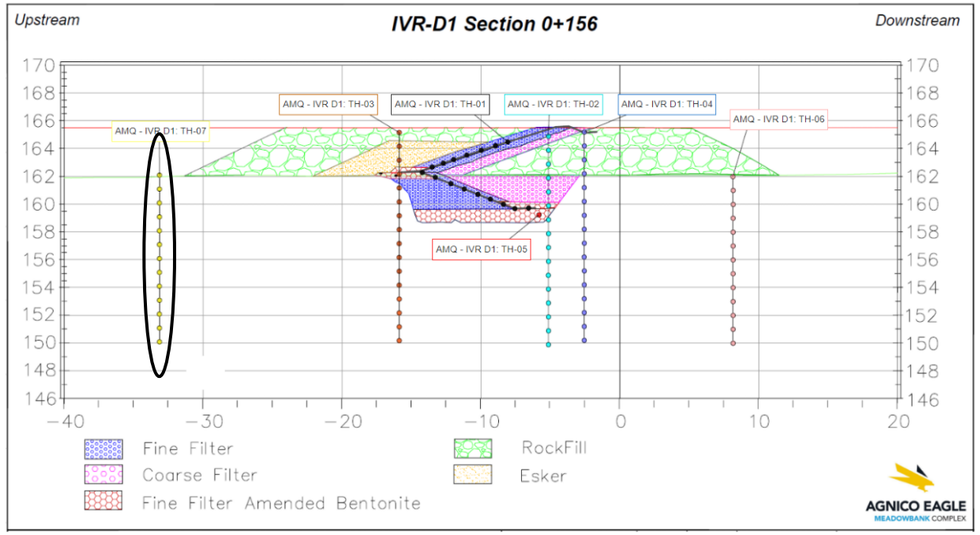


IVR-D1-TH7

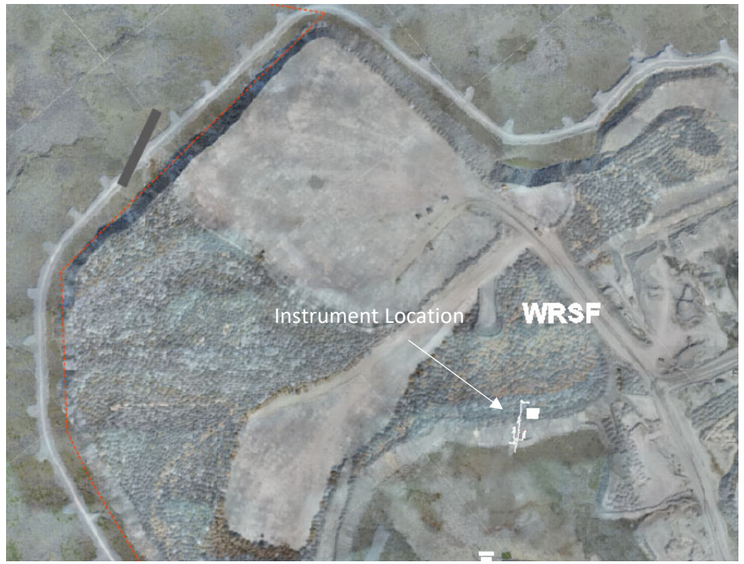

0+030
0+020
0+000
0+100
0+020
0+040
0+054
IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+200
0+300


Temperature(°C): AMQ - IVR - TH 07
Elevation (m)
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Temperature(°C)
Time: from 6/1/2021 1 to 10/26/2023

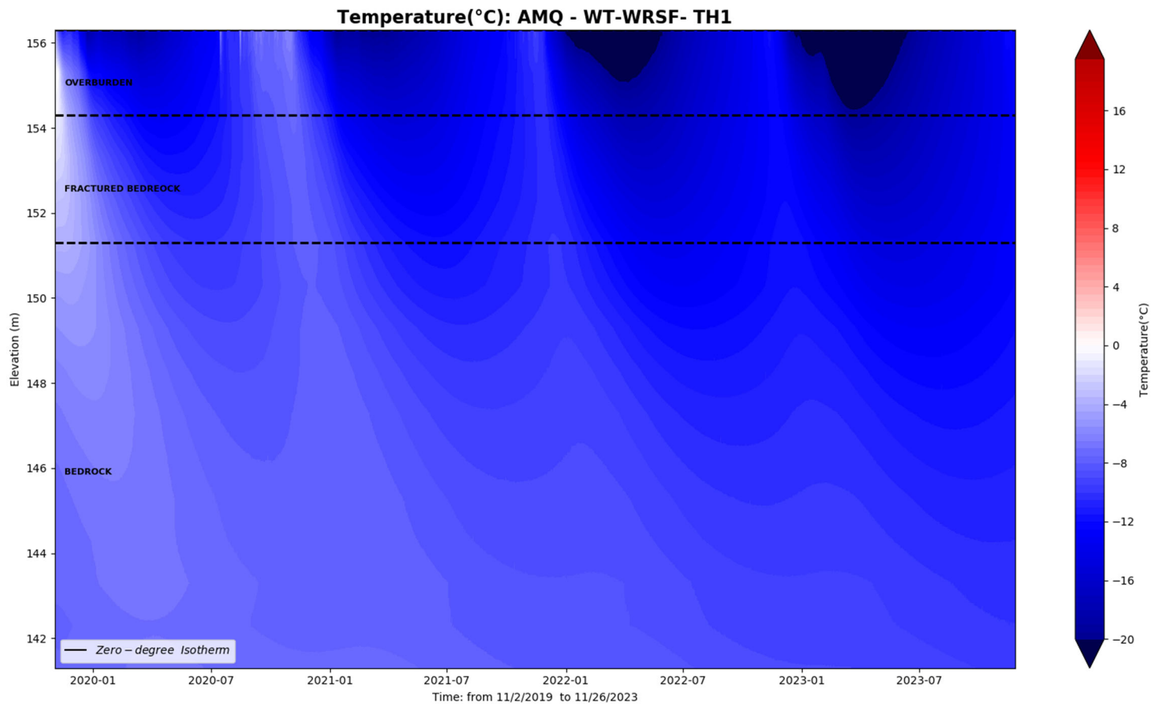

AMQ – IVR D1: TH-07
U/S TOE OF THE DIKE
Surface
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

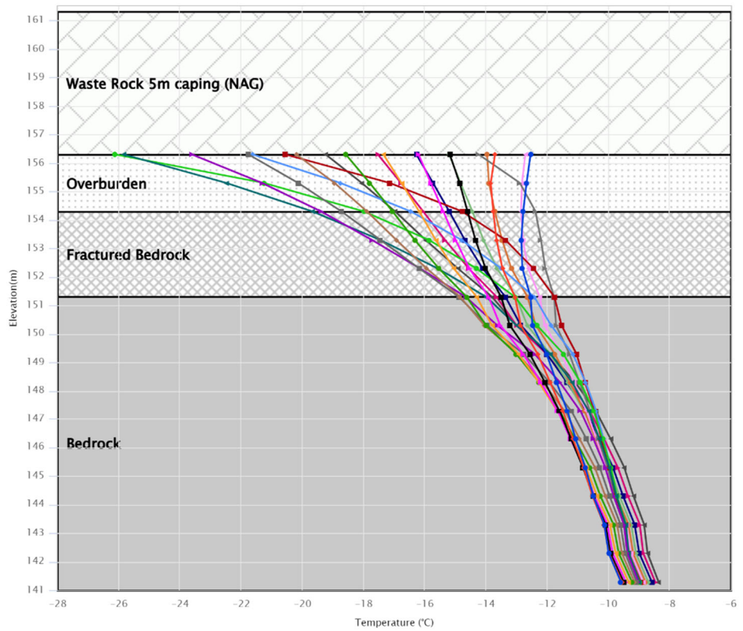

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

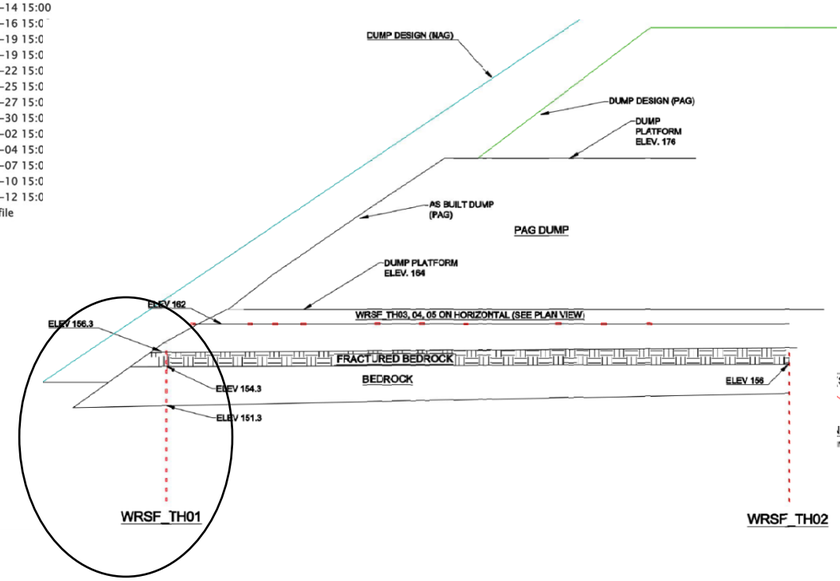
WT WRSF TH1

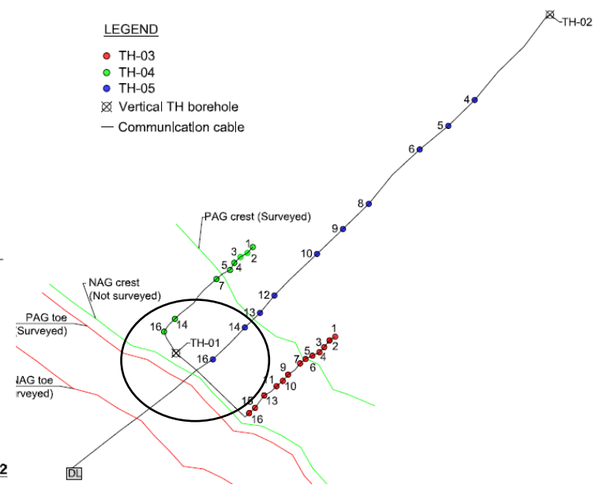


AMQ – WRSF – WT_TH_01

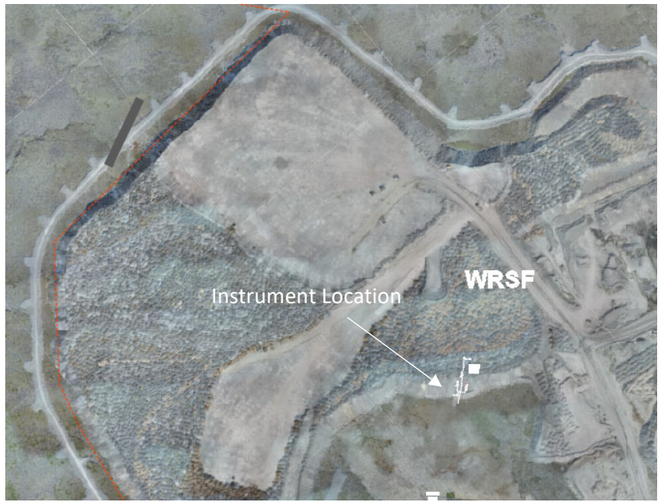




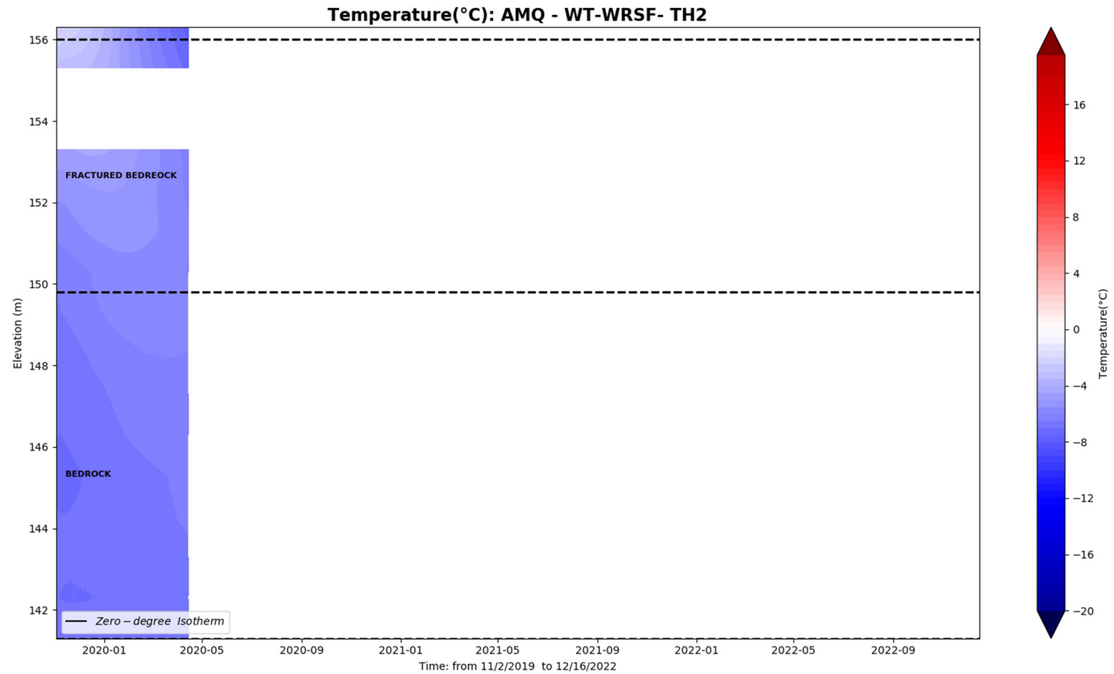


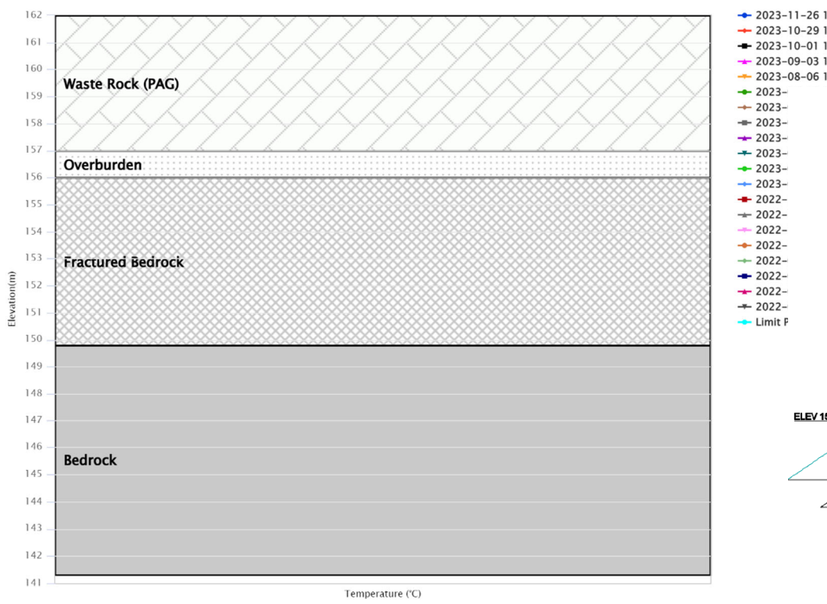


WT WRSF TH2

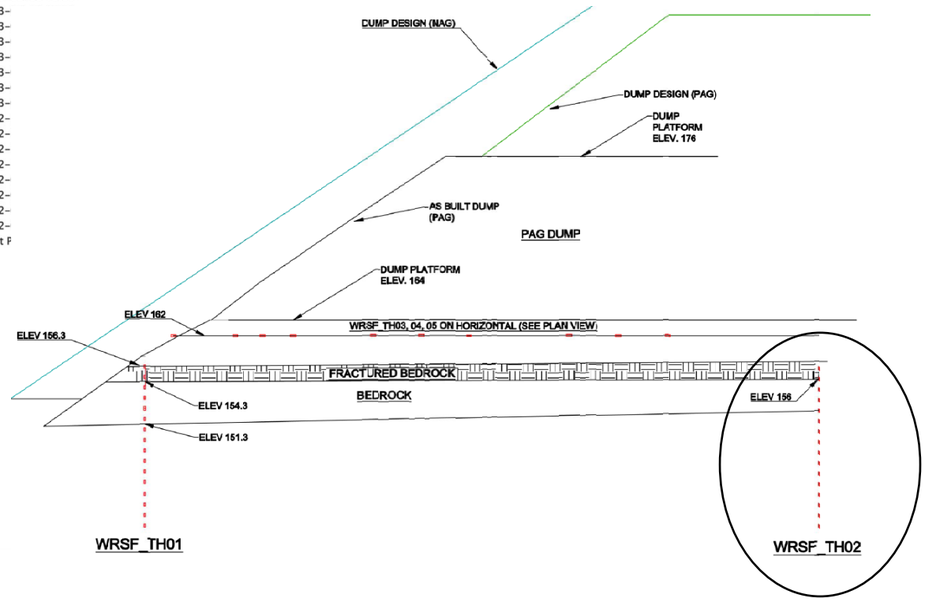


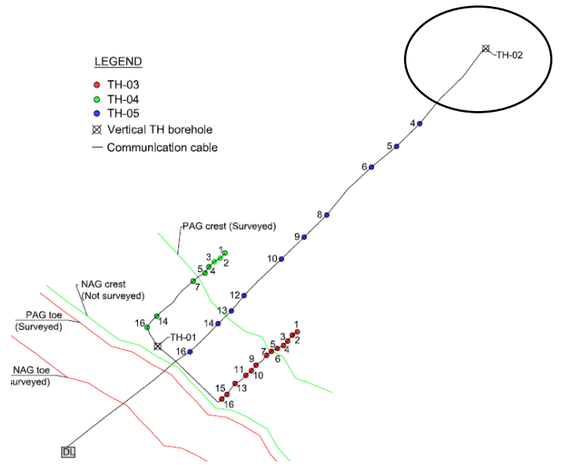
Last data May 2020



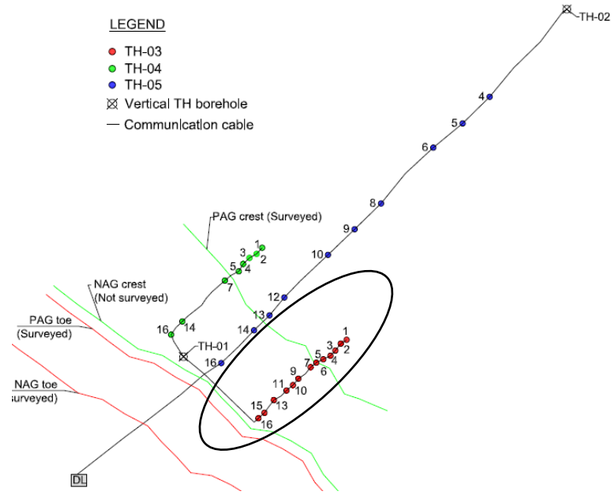


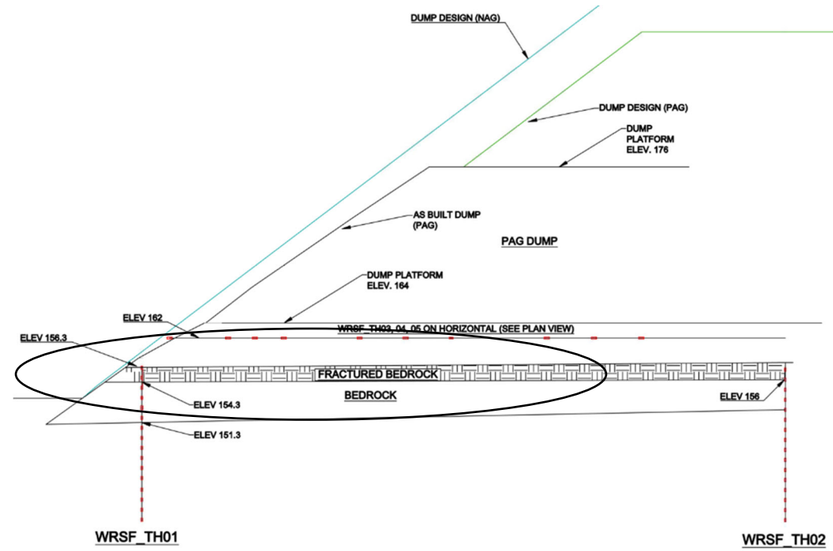
Last data May 2020



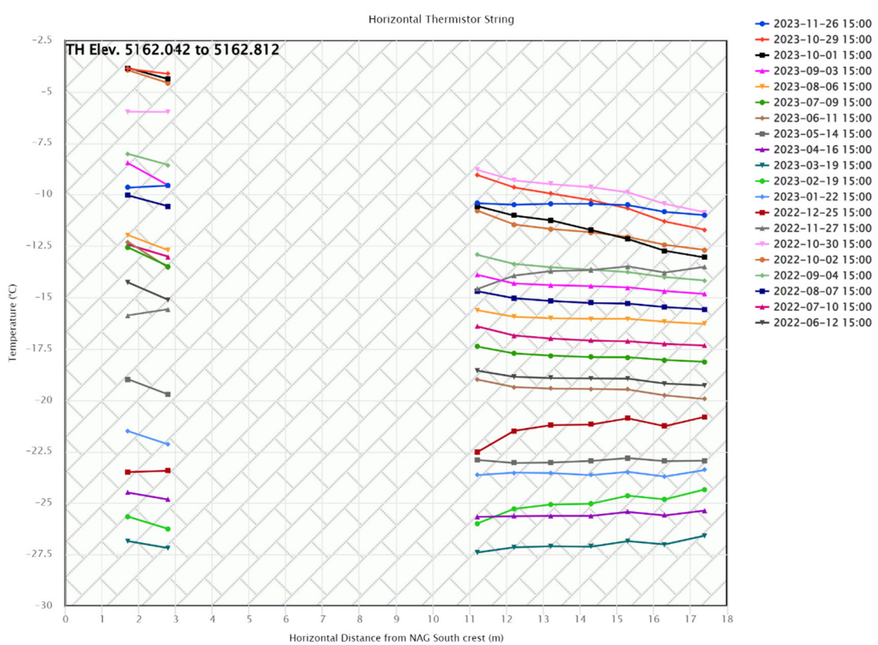


WT WRSF TH3





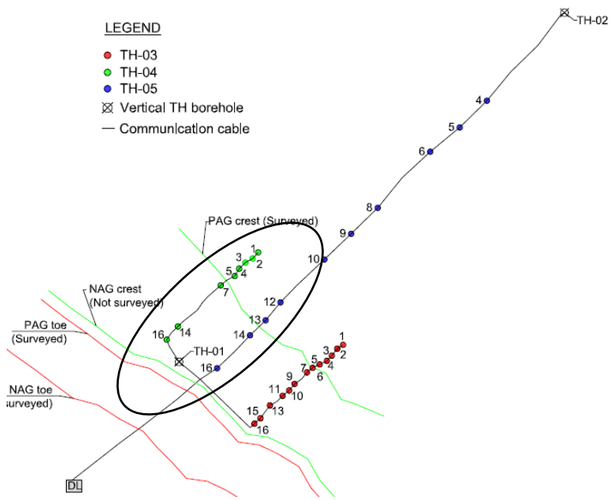
Thermistor in Waste Rock Elevation 162.042 to 162.812.

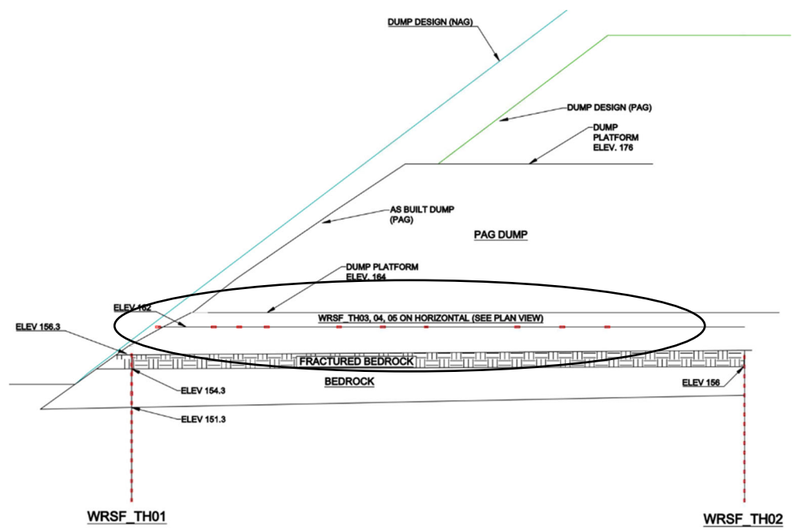


This instrument is installed horizontally and chart needs to be read accordingly

Beads 3 to 10 are not working

WT WRSF TH4

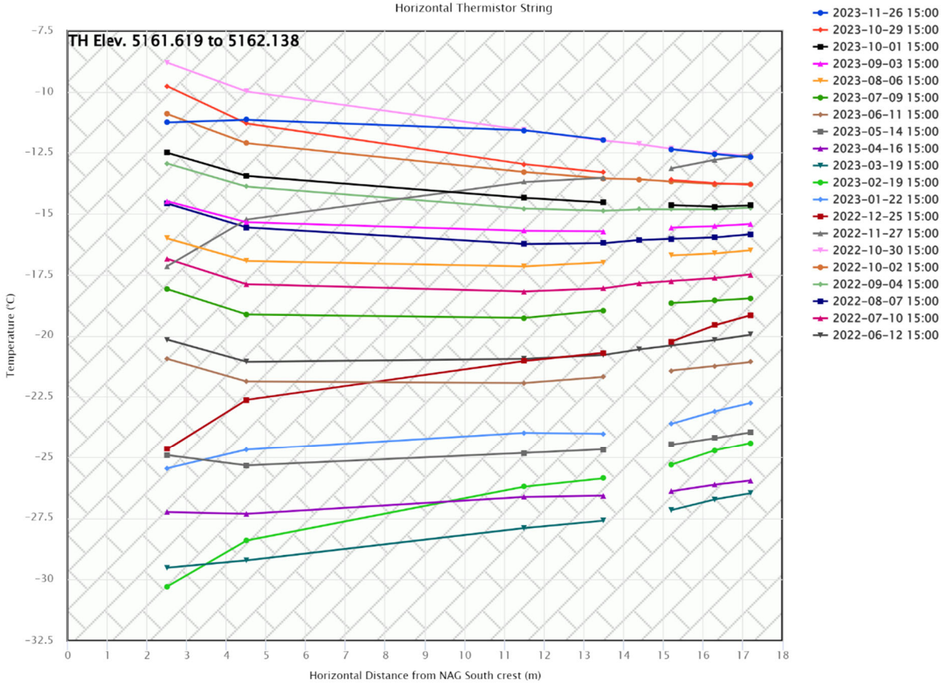




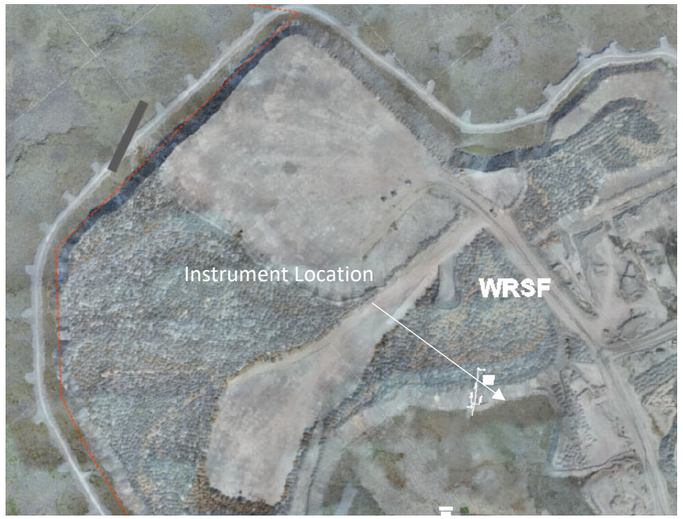
AMQ – WRSF – WT_TH_04

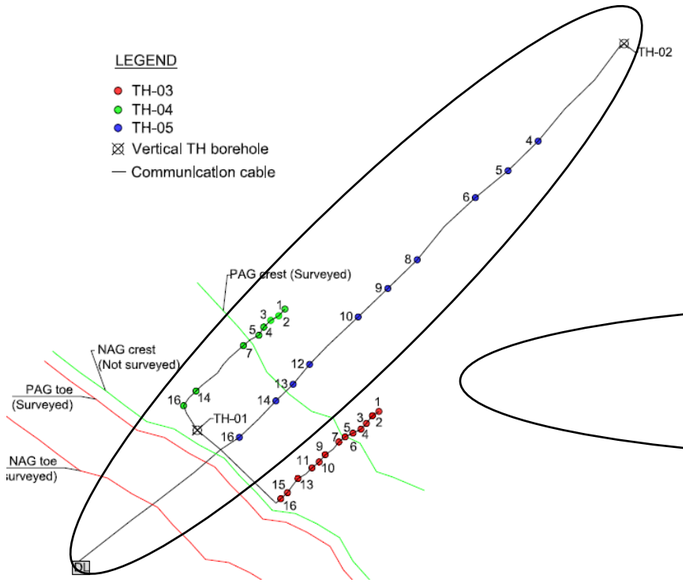
This instrument is installed horizontally and chart needs to be read accordingly

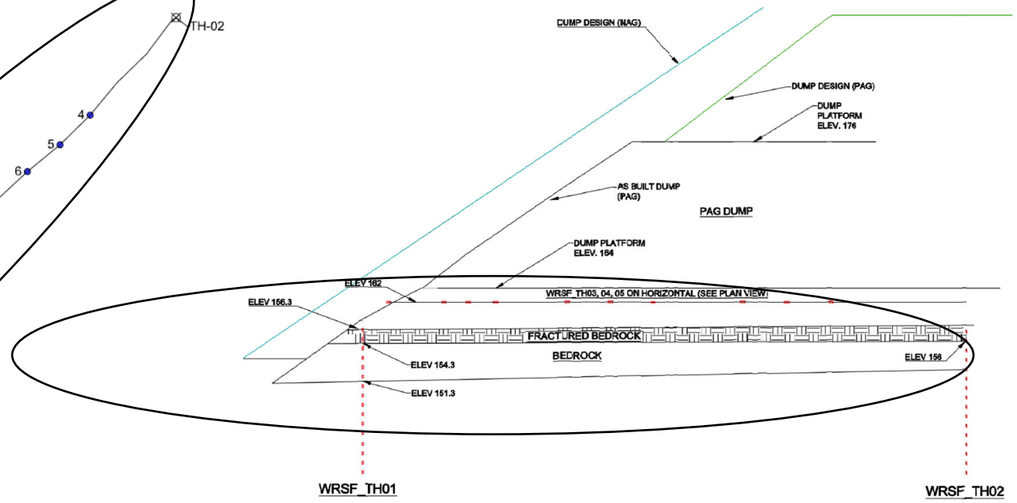
Beads 3 to 10 are not working



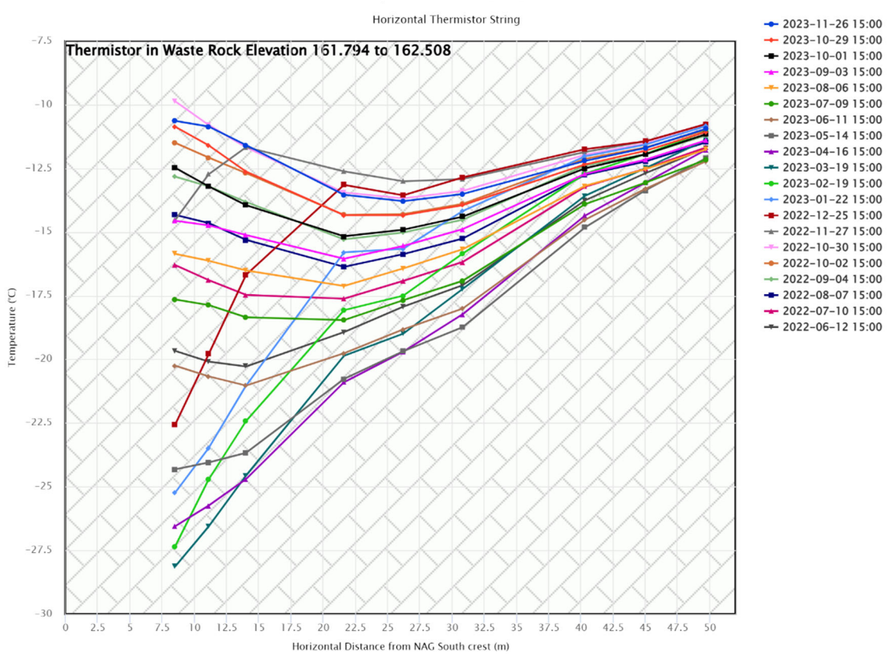
WT WRSF TH5



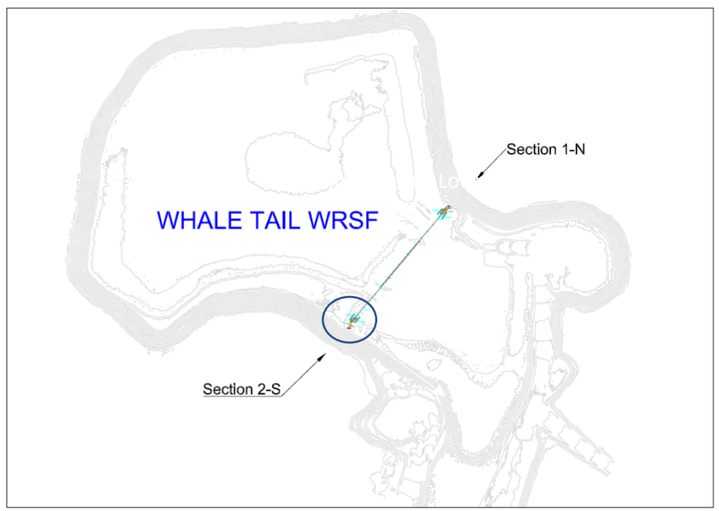




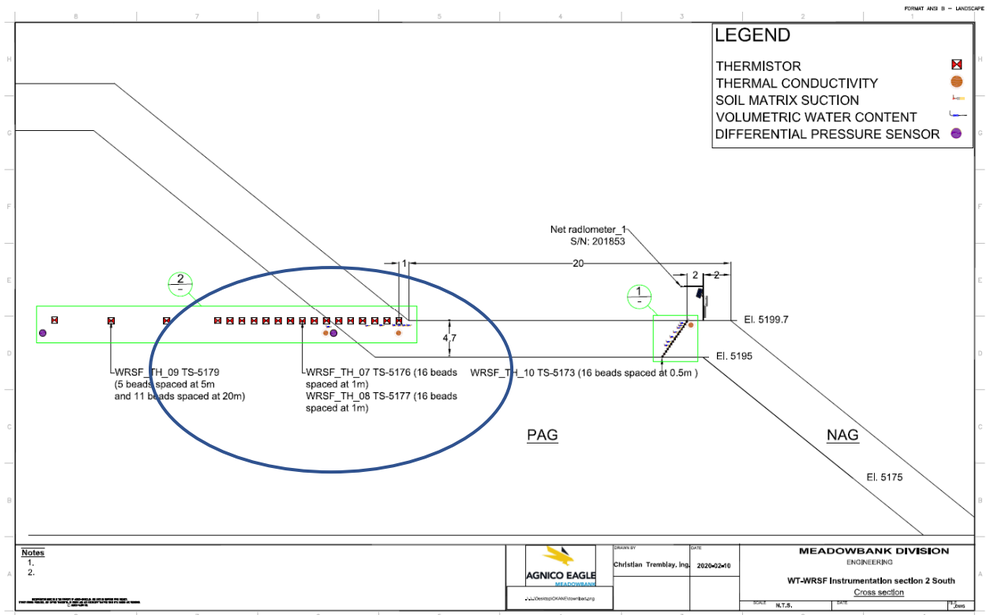
This instrument is installed horizontally and chart needs to be read accordingly

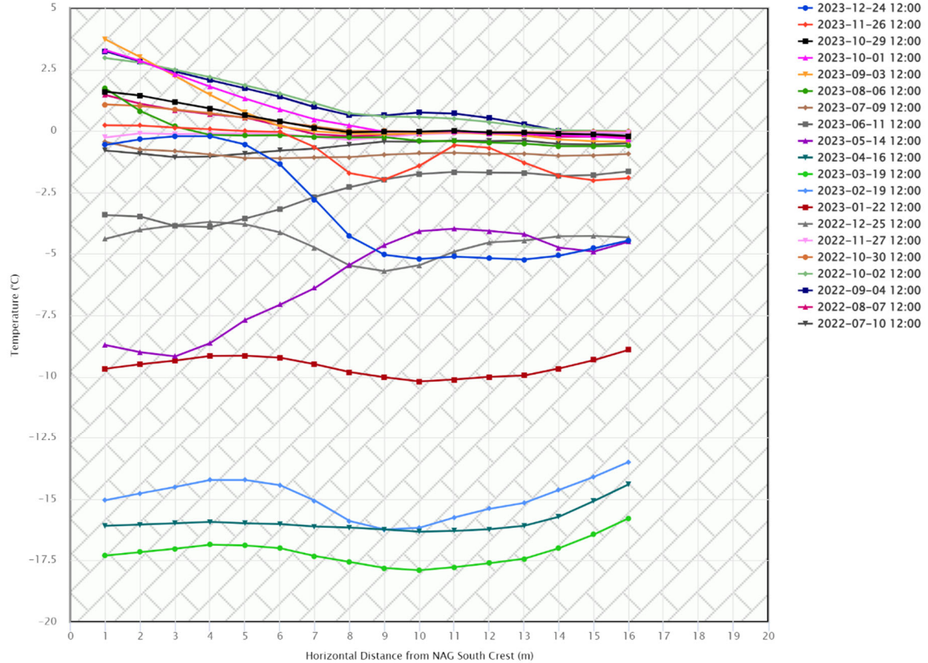


WT WRSF TH07

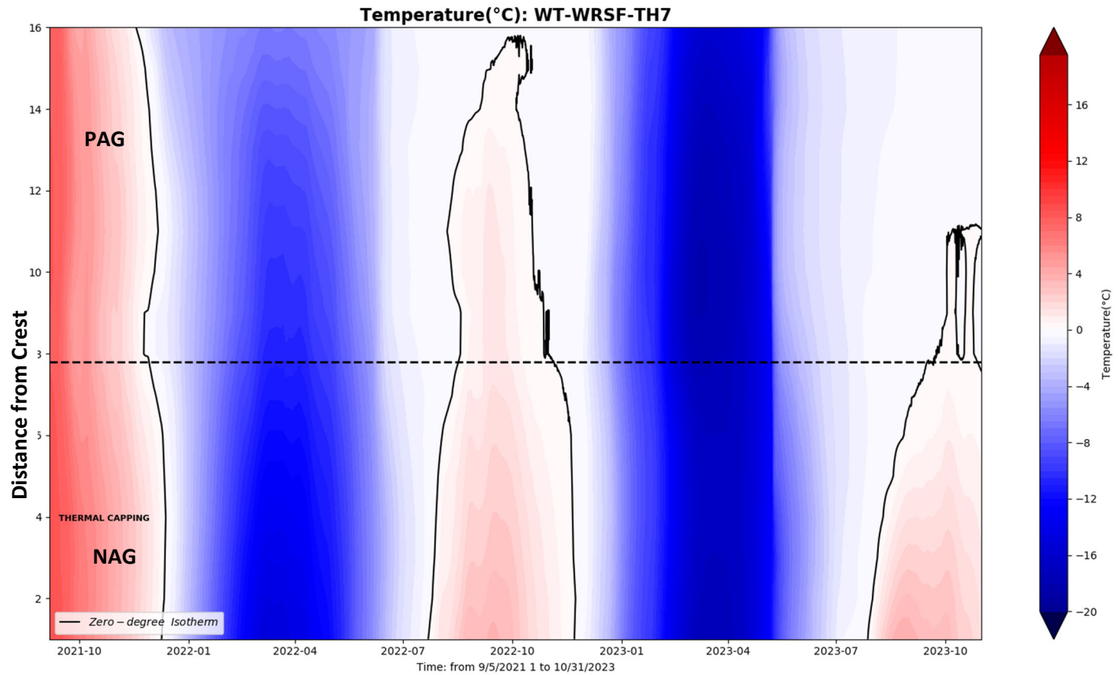


There was no data from Dec 20 to Feb 2 due to loss of battery power in the instrument.



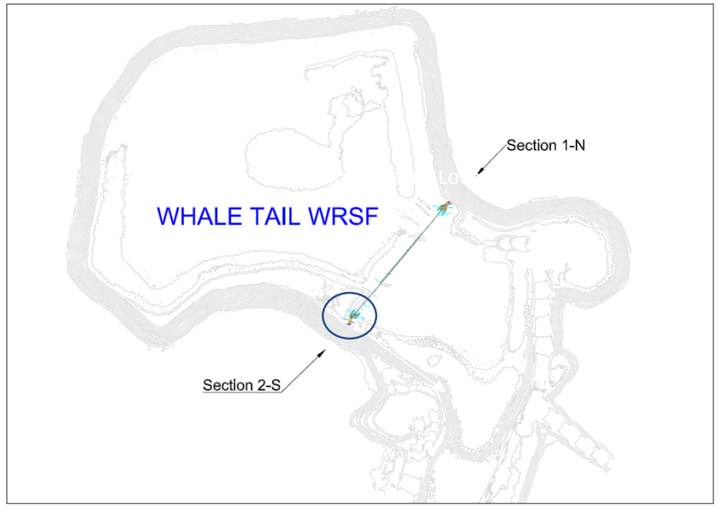


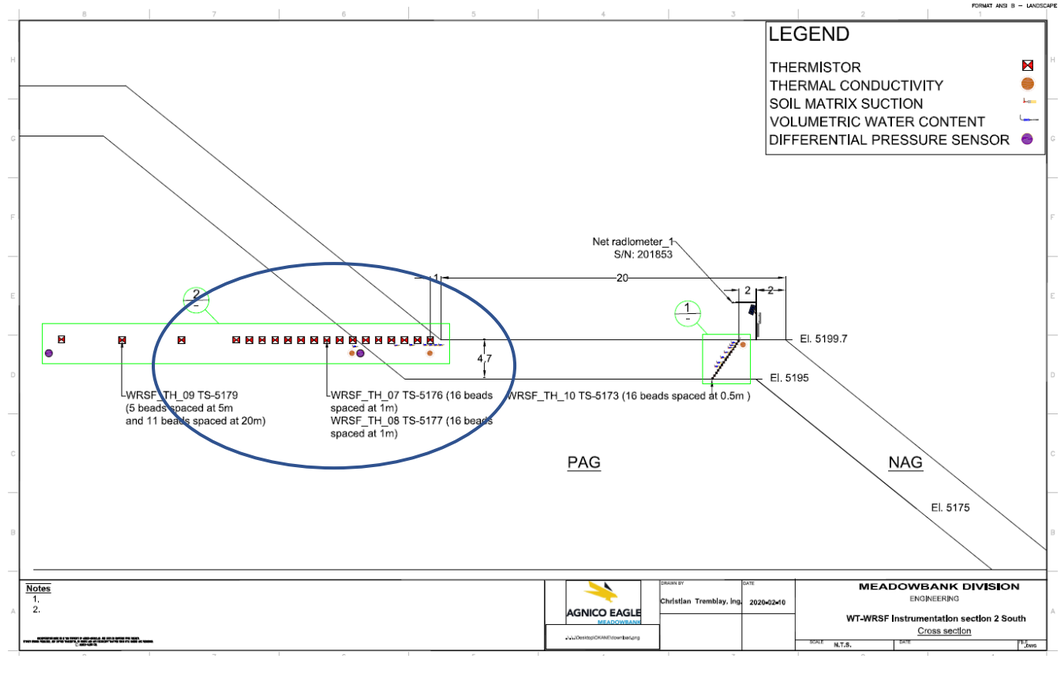
AMQ – WRSF – WT_TH_07

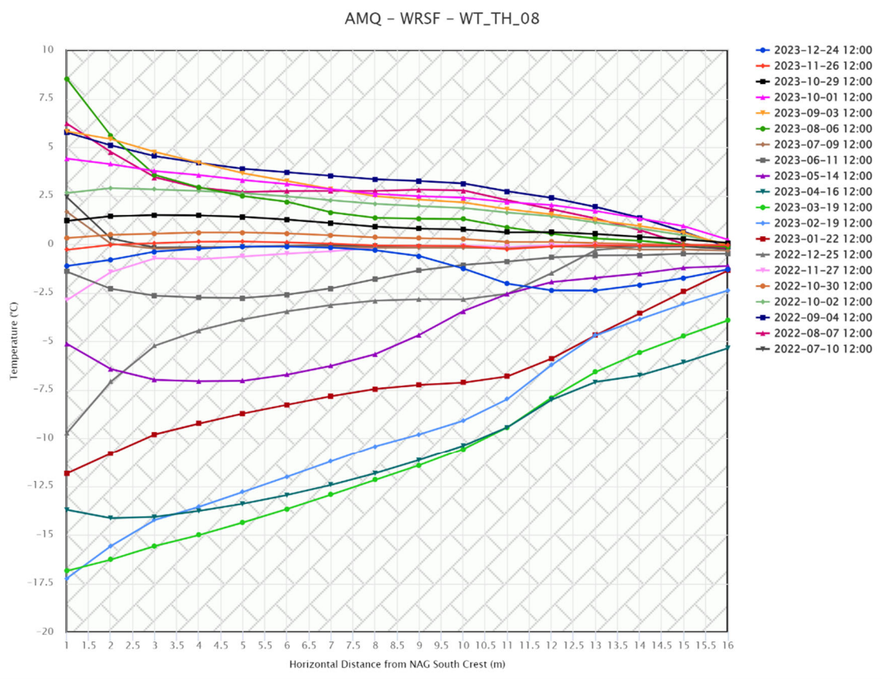


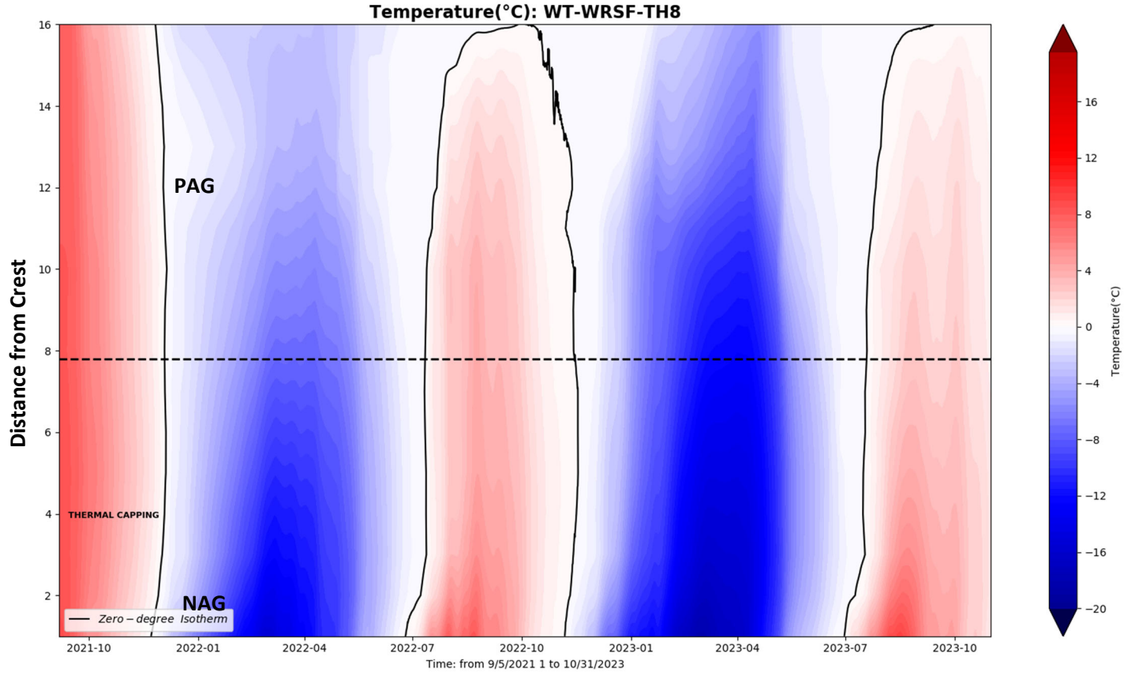
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH08



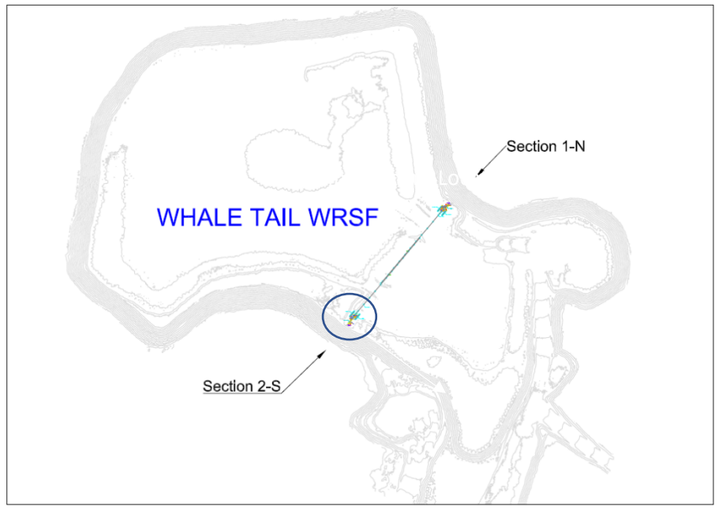


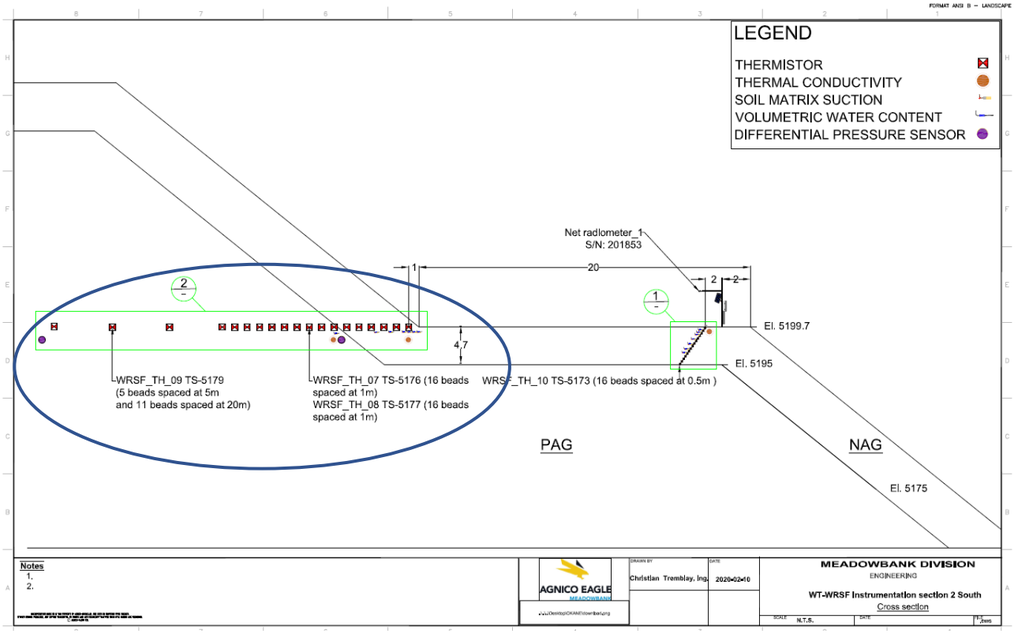


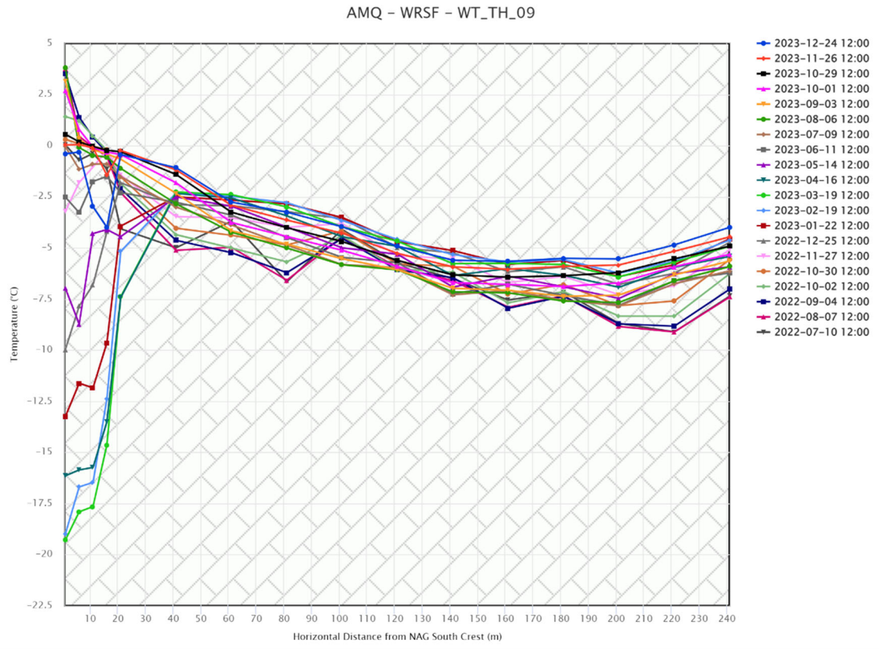


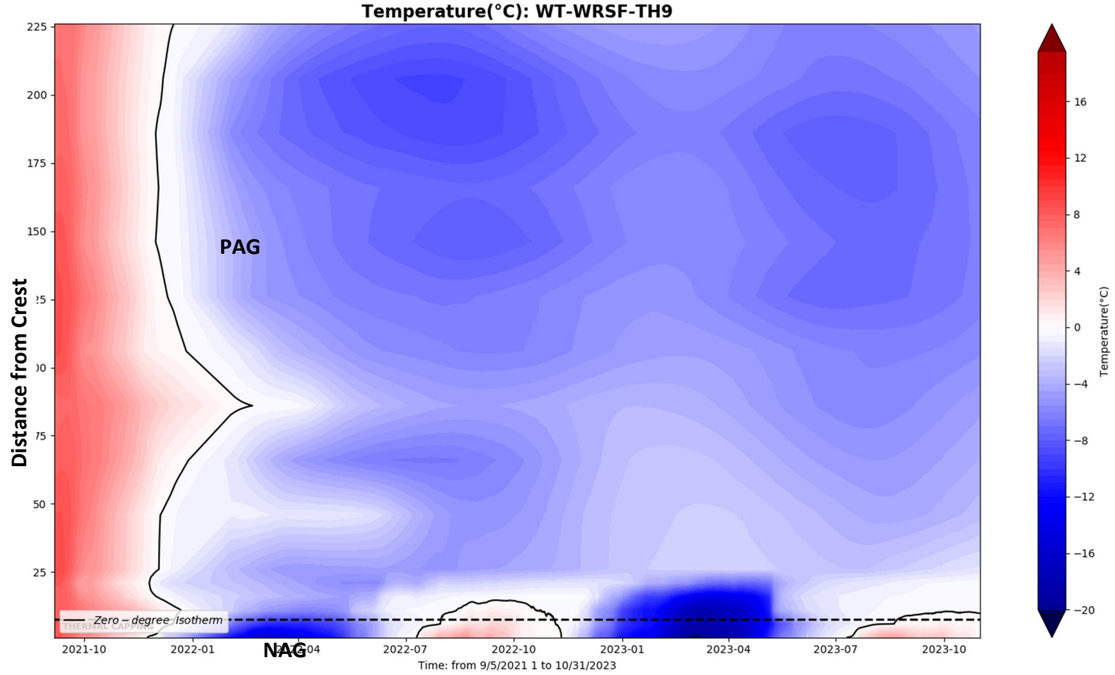
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH09



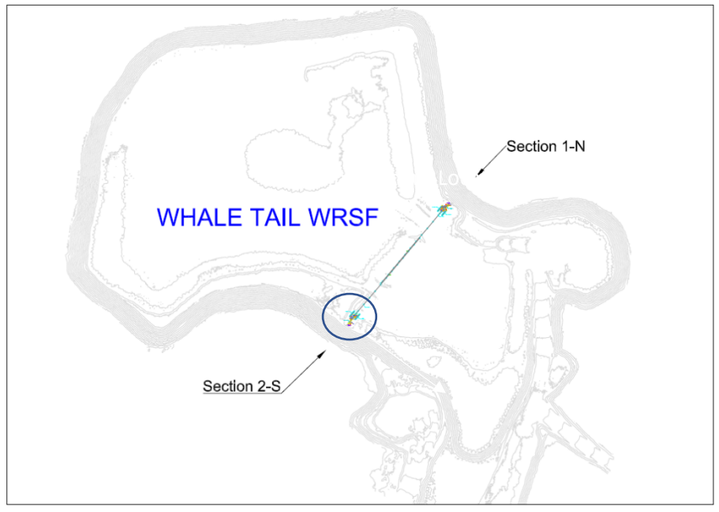


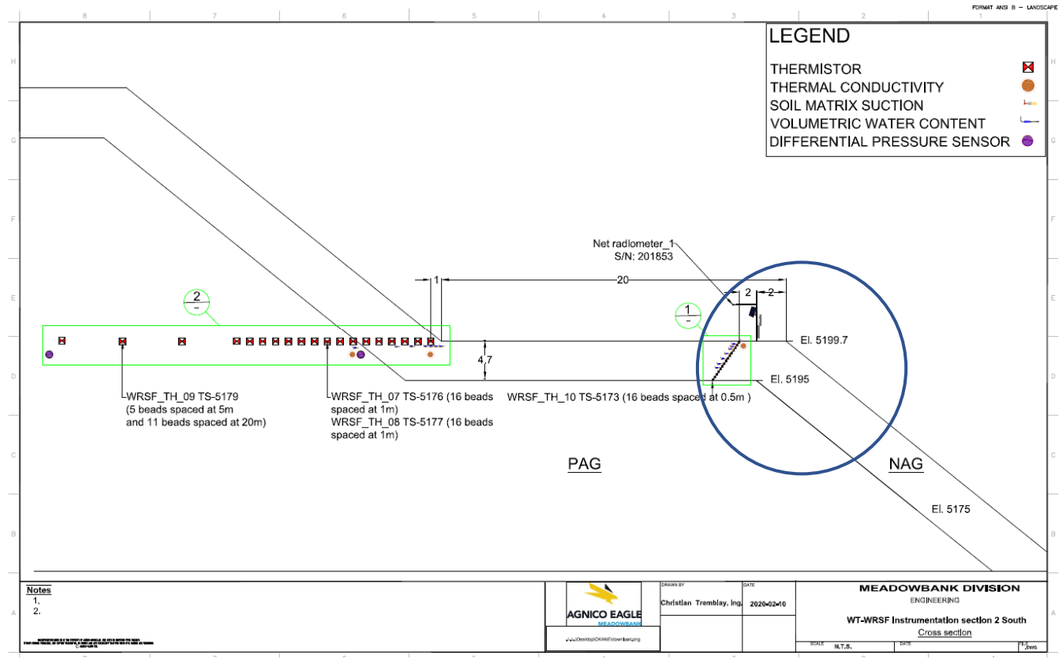


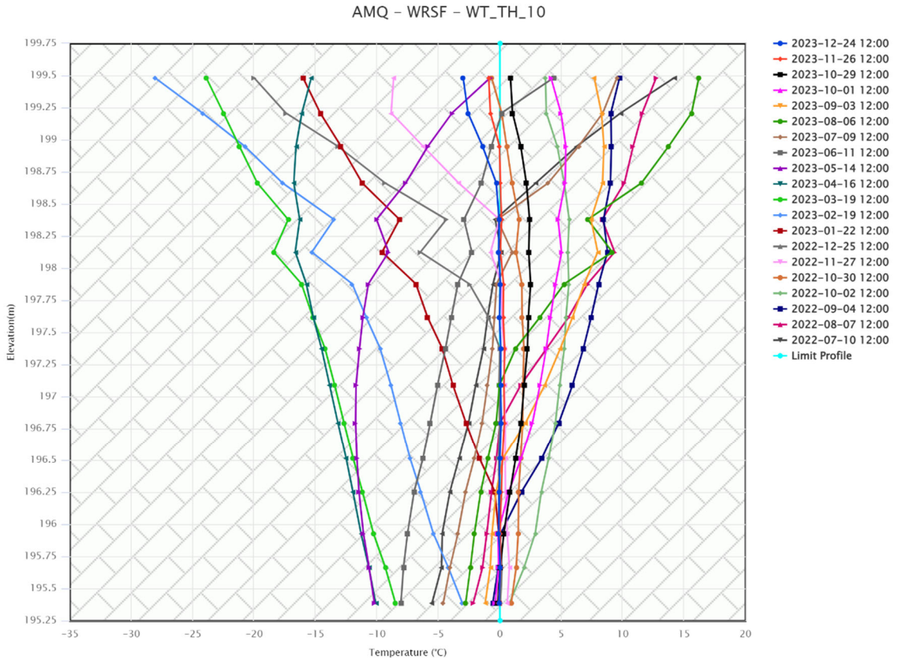


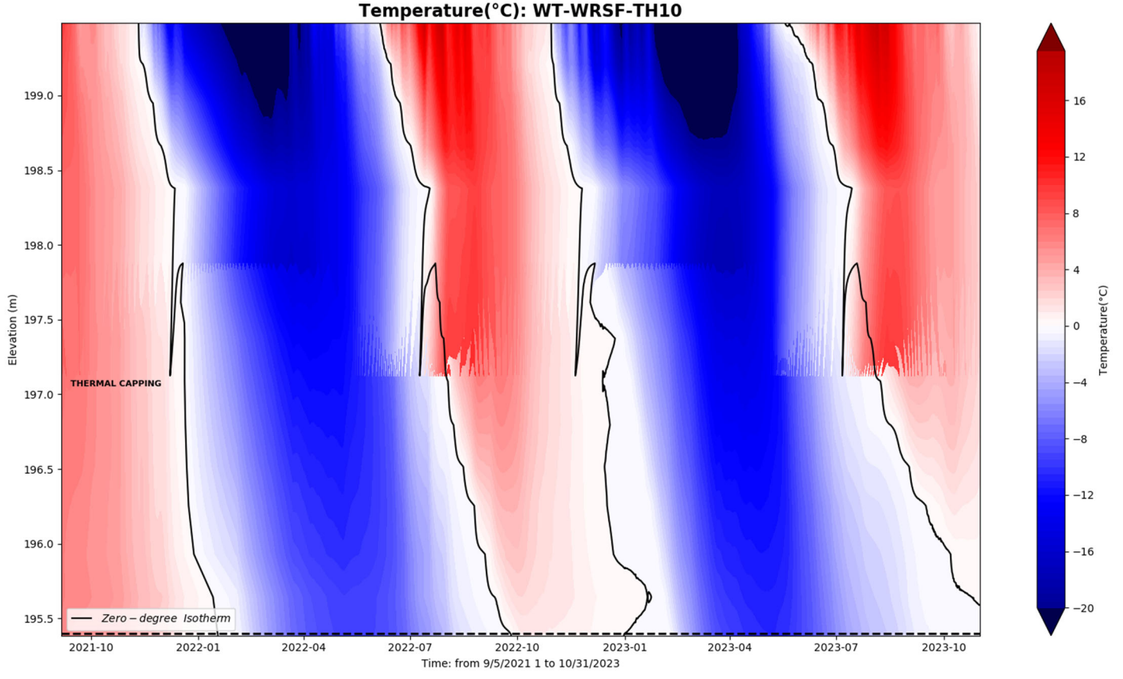
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH10

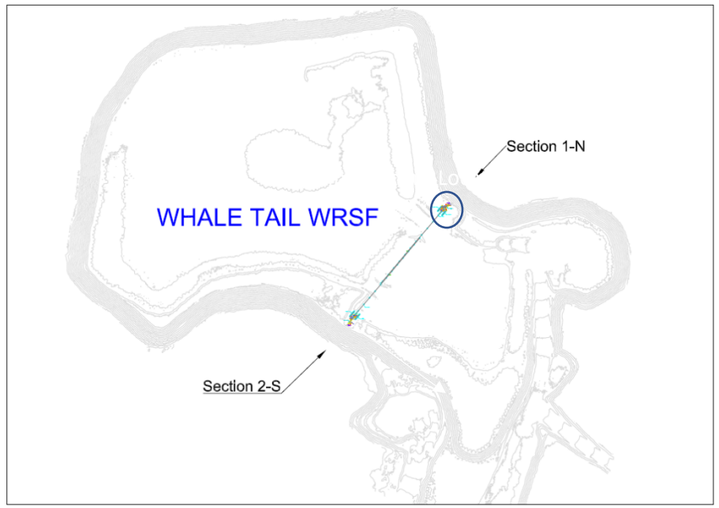

Section 1-N
WHALE TAIL WRSF
Section 2-S

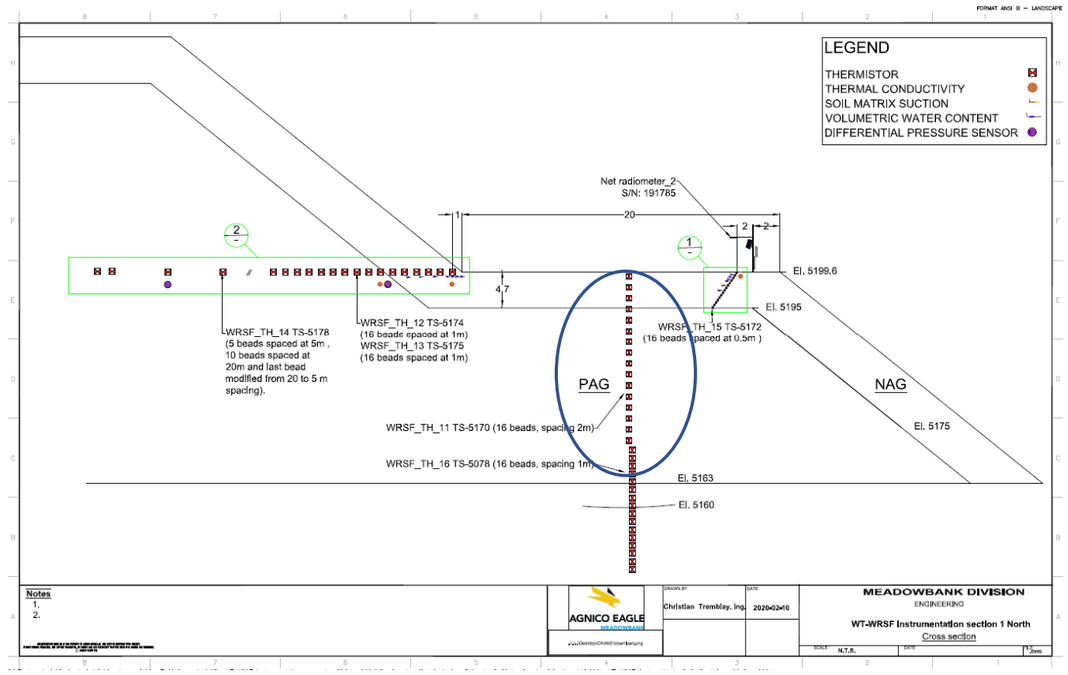

LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
Net radiometer_1
S/N: 201853
20
4.7
El. 5199.7
El. 5195
El. 5175
WRSF_TH_09 TS-5179
(5 beads spaced at 5m
and 11 beads spaced at 20m)
WRSF_TH_07 TS-5176 (16 beads
spaced at 1m)
WRSF_TH_08 TS-5177 (16 beads
spaced at 1m)
WRSF_TH_10 TS-5173 (16 beads spaced at 0.5m)
PAG
NAG
Notes
1.
2.
AGNICO EAGLE
MEADOWBANK
Christian Tremblay, Ing.
2020-02-10
MEADOWBANK DIVISION
ENGINEERING
WT-WRSF Instrumentation section 2 South
Cross section

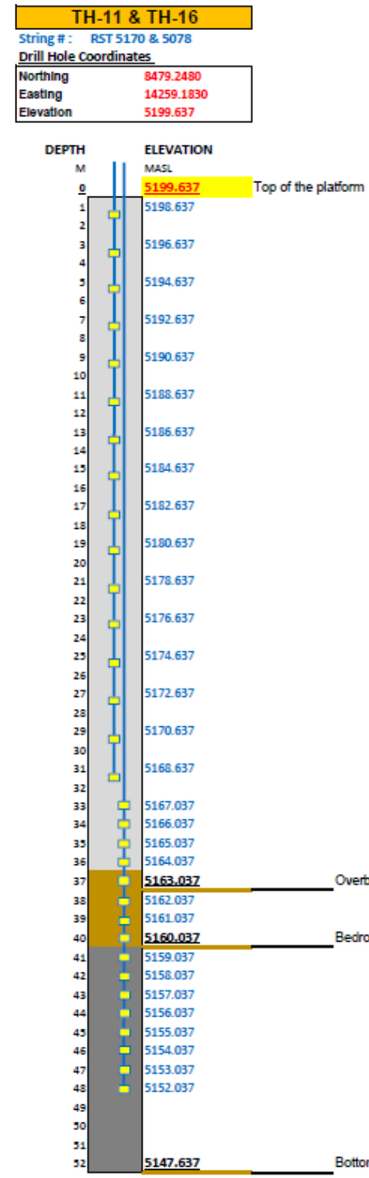

AMQ – WRSF – WT_TH_10
Elevation(m)
Temperature (°C)
2023-12-24 12:00
2023-11-26 12:00
2023-10-29 12:00
2023-10-01 12:00
2023-09-03 12:00
2023-08-06 12:00
2023-07-09 12:00
2023-06-11 12:00
2023-05-14 12:00
2023-04-16 12:00
2023-03-19 12:00
2023-02-19 12:00
2023-01-22 12:00
2022-12-25 12:00
2022-11-27 12:00
2022-10-30 12:00
2022-10-02 12:00
2022-09-04 12:00
2022-08-07 12:00
2022-07-10 12:00
Limit Profile

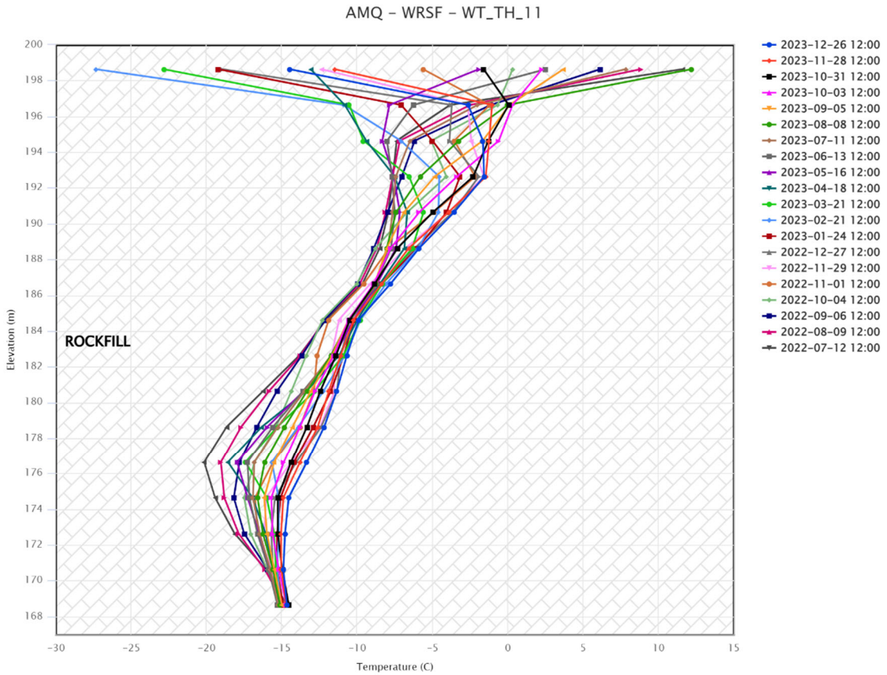

Temperature(°C): WT-WRSF-TH10
Elevation (m)
THERMAL CAPPING
Zero – degree Isotherm
Time: from 9/5/2021 1 to 10/31/2023
Temperature(°C)

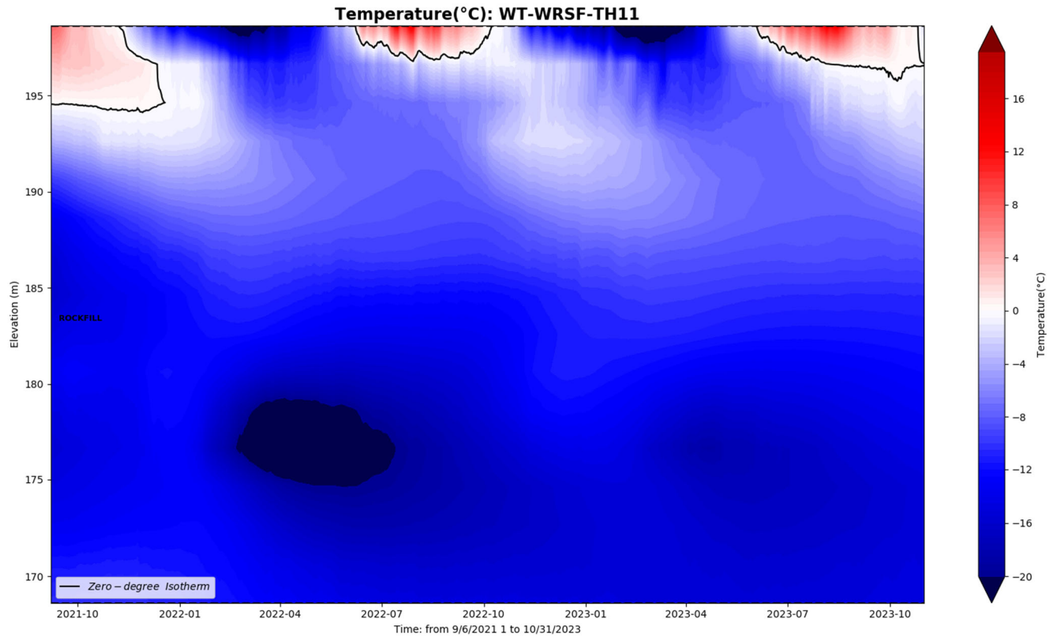
WT WRSF TH11


Section 1-N
WHALE TAIL WRSF
Section 2-S

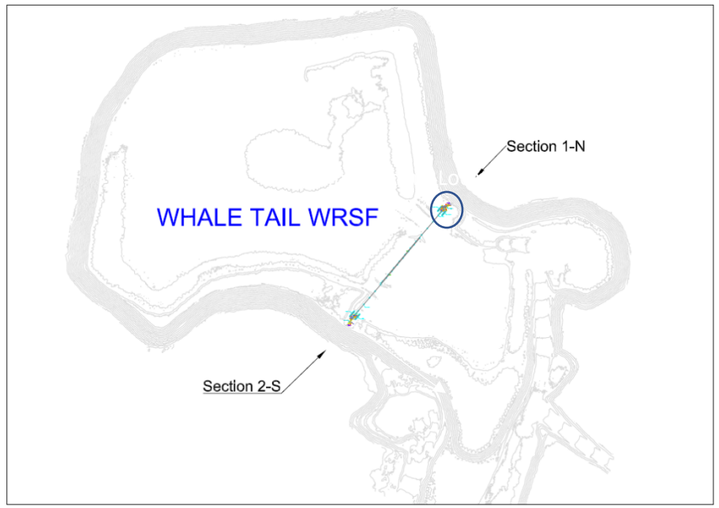

LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
Net radiometer_2
S/N: 191785
WRSF_TH_14 TS-5178
(5 beads spaced at 5m ,
10 beads spaced at
20m and last bead
modified from 20 to 5 m
spacing).
WRSF_TH_12 TS-5174
(16 beads spaced at 1m)
WRSF_TH_13 TS-5175
(16 beads spaced at 1m)
WRSF_TH_15 TS-5172
(16 beads spaced at 0.5m)
PAG
NAG
WRSF_TH_11 TS-5170 (16 beads, spacing 2m)
WRSF_TH_16 TS-5078 (16 beads, spacing 1m)
El. 5199,6
El. 5195
El. 5175
El. 5163
El. 5160
4,7
20
Notes
AGNICO EAGLE
MEADOWBANK DIVISION
ENGINEERING
WT-WRSF Instrumentation section 1 North
Cross section

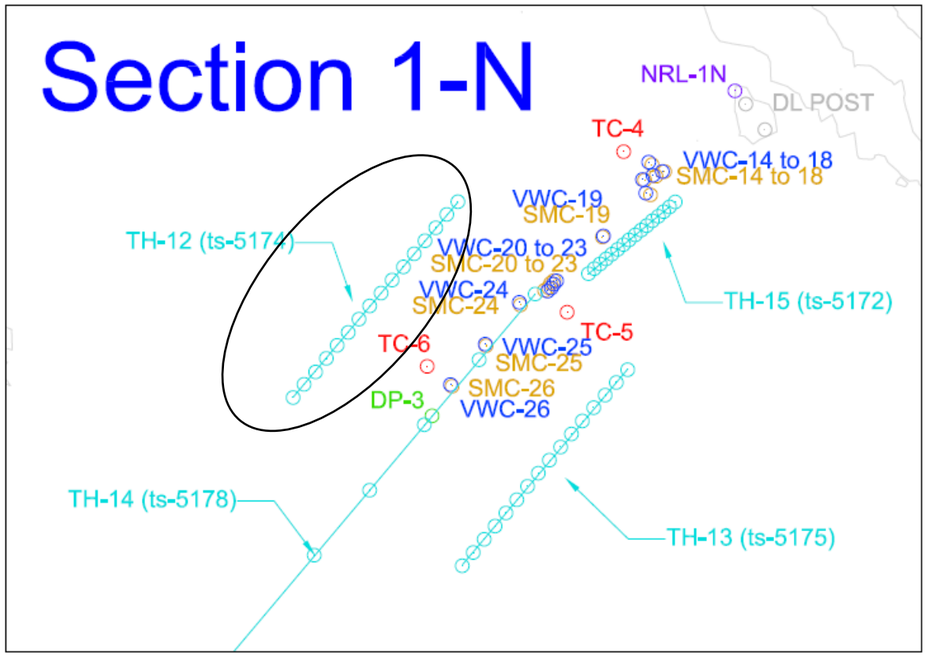

TH-11 & TH-16
String # : RST 5170 & 5078
Drill Hole Coordinates
Northing 8479.2480
Easting 14259.1830
Elevation 5199.637
DEPTH
ELEVATION
MASL
Top of the platform
Overburder
Bedrock
Bottom of tl

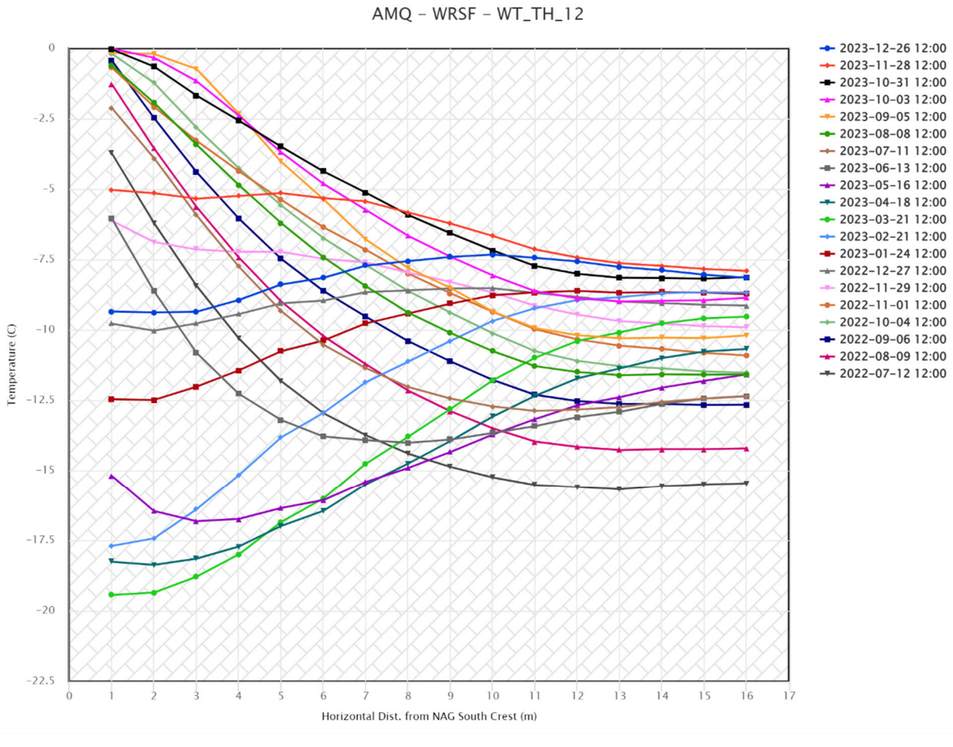

AMQ – WRSF – WT_TH_11
ROCKFILL
Elevation (m)
Temperature (C)
2023-12-26 12:00
2023-11-28 12:00
2023-10-31 12:00
2023-10-03 12:00
2023-09-05 12:00
2023-08-08 12:00
2023-07-11 12:00
2023-06-13 12:00
2023-05-16 12:00
2023-04-18 12:00
2023-03-21 12:00
2023-02-21 12:00
2023-01-24 12:00
2022-12-27 12:00
2022-11-29 12:00
2022-11-01 12:00
2022-10-04 12:00
2022-09-06 12:00
2022-08-09 12:00
2022-07-12 12:00


Temperature(°C): WT-WRSF-TH11
ROCKFILL
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 9/6/2021 1 to 10/31/2023

WT WRSF TH12

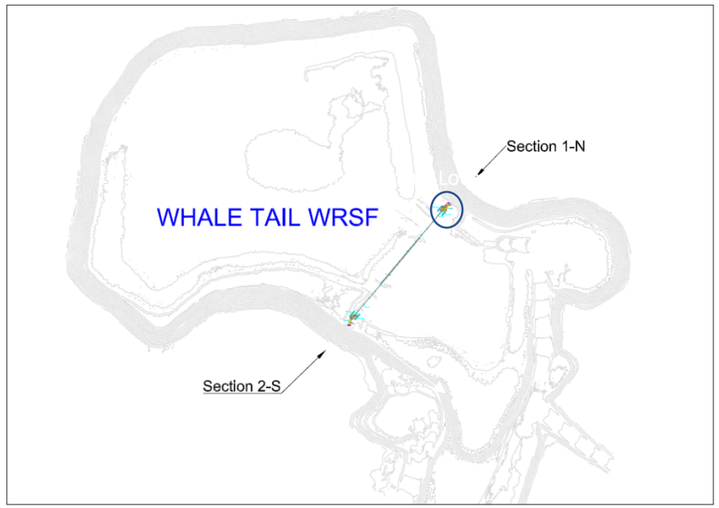


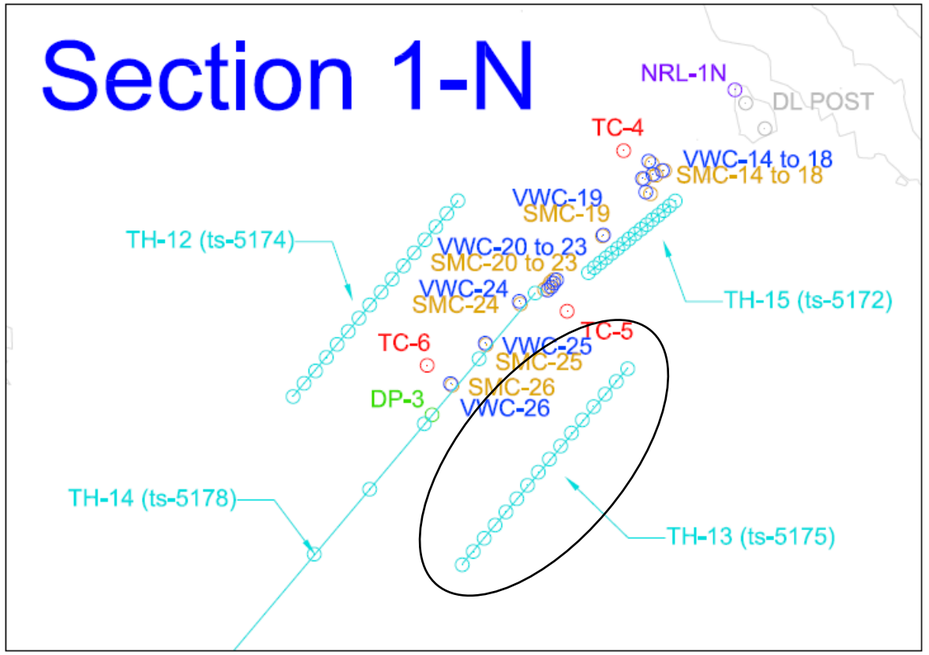


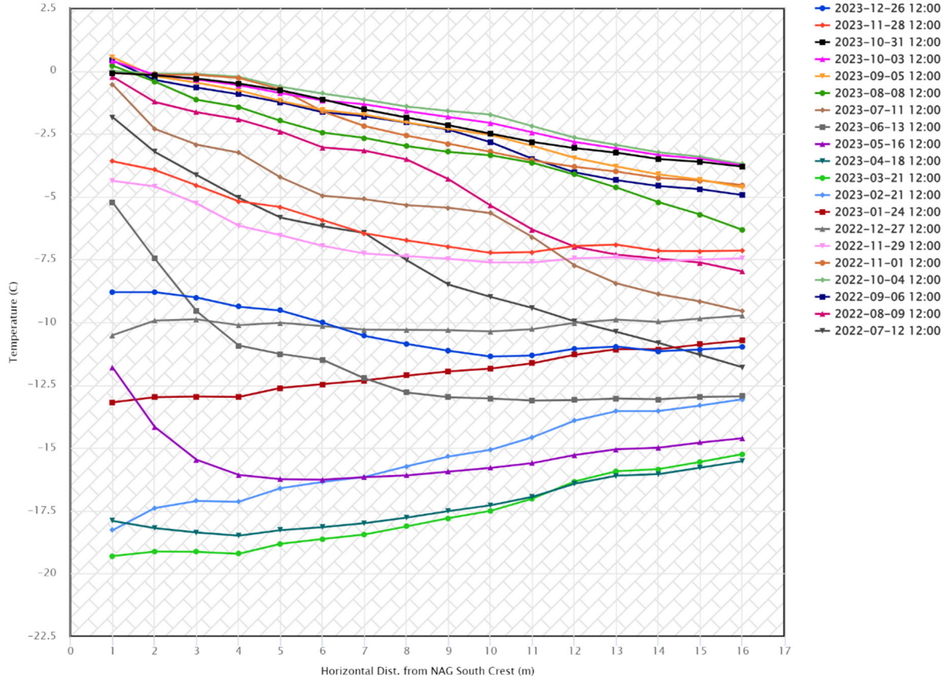


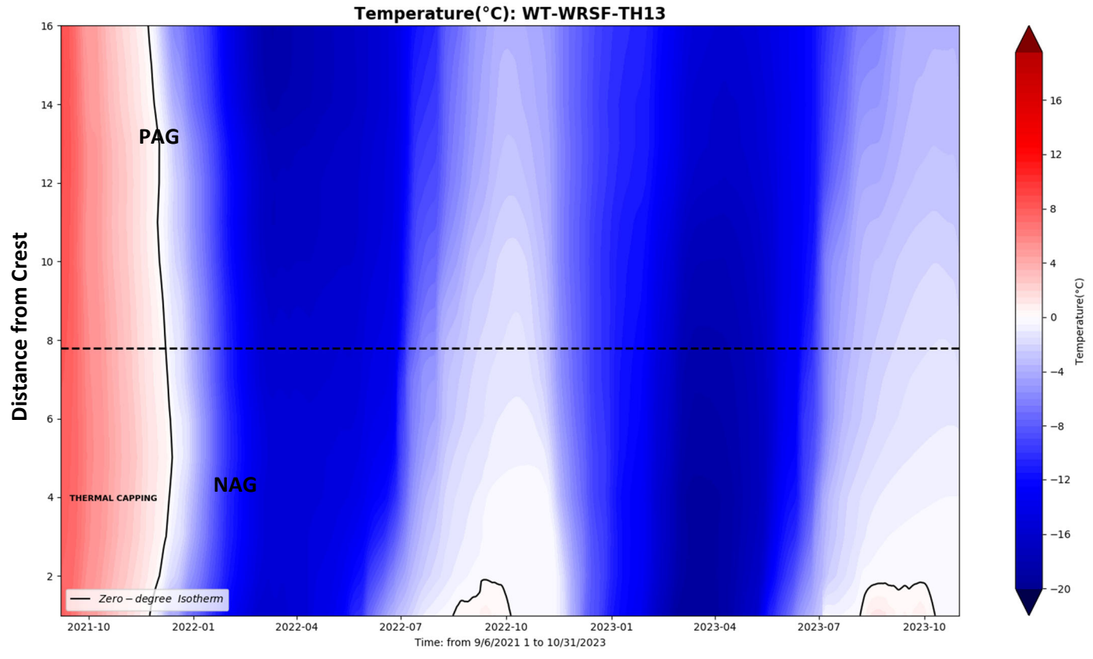
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH13



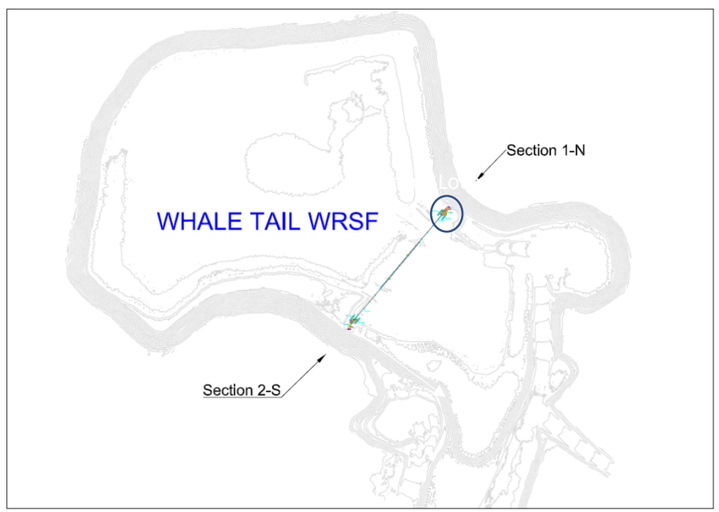


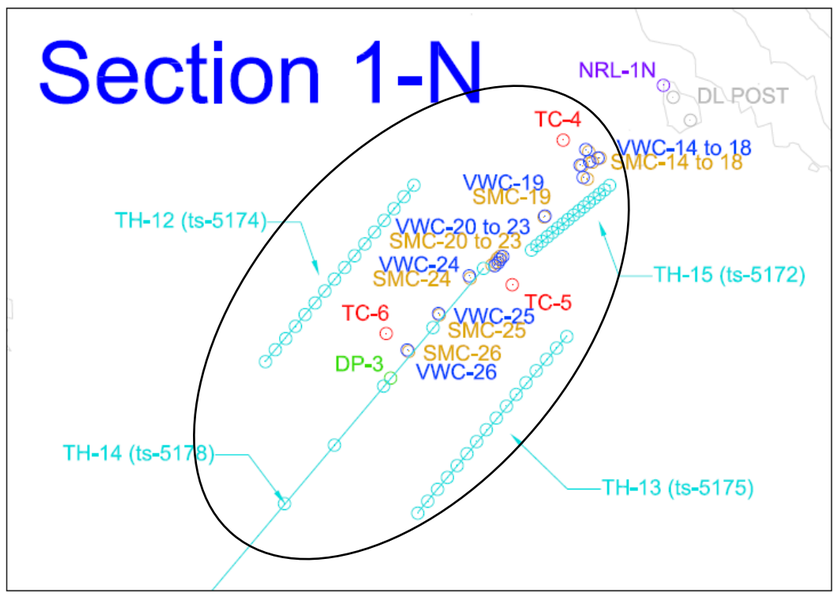




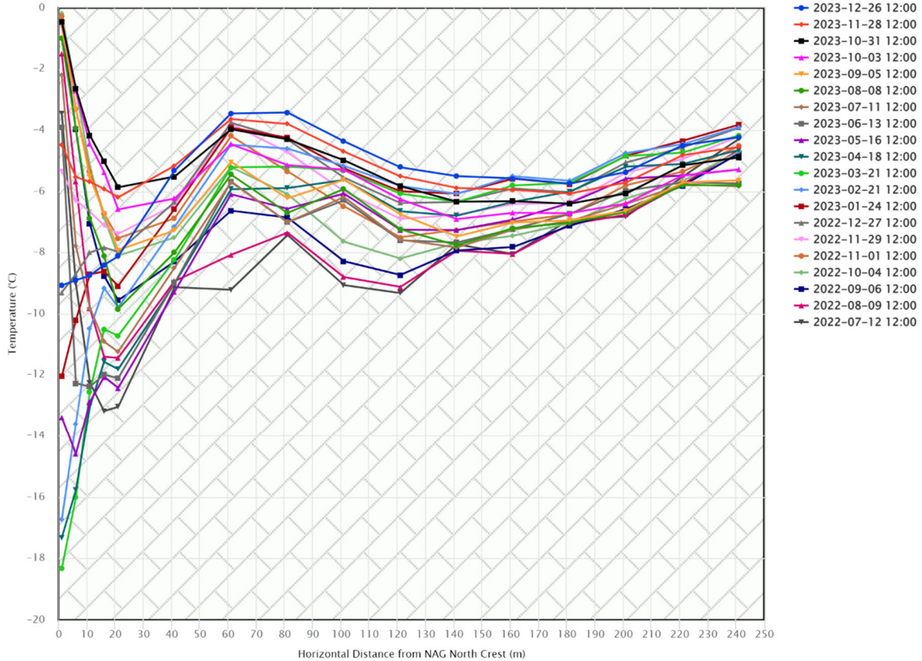
This instrument is installed horizontally and chart needs to be read accordingly

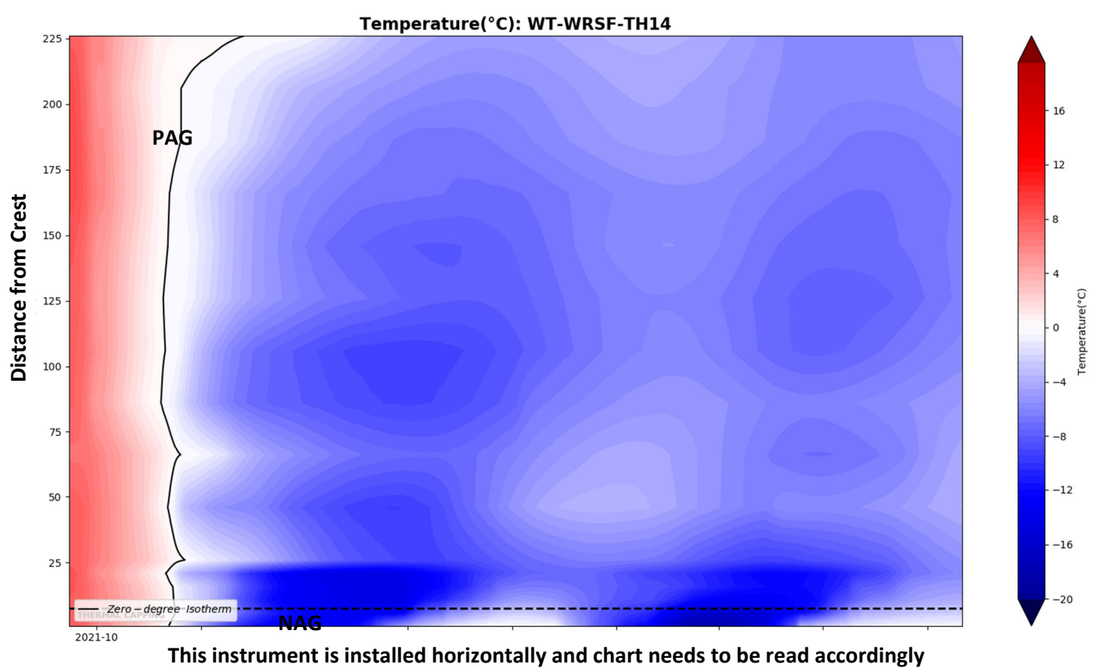
WT WRSF TH14





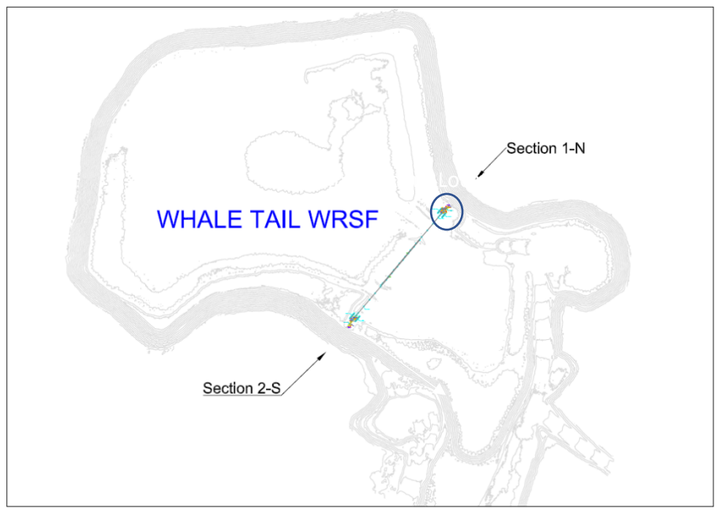
AMQ – WRSF – WT_TH_14

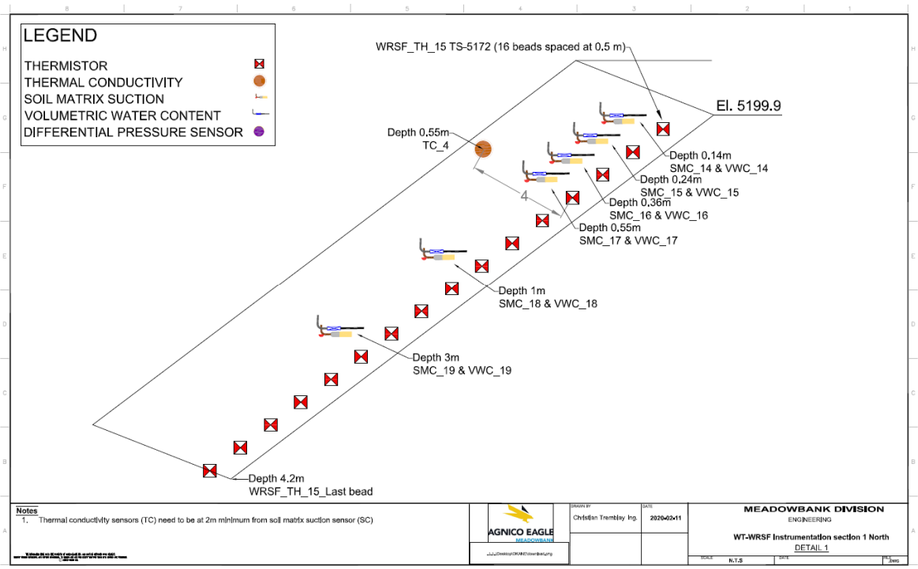




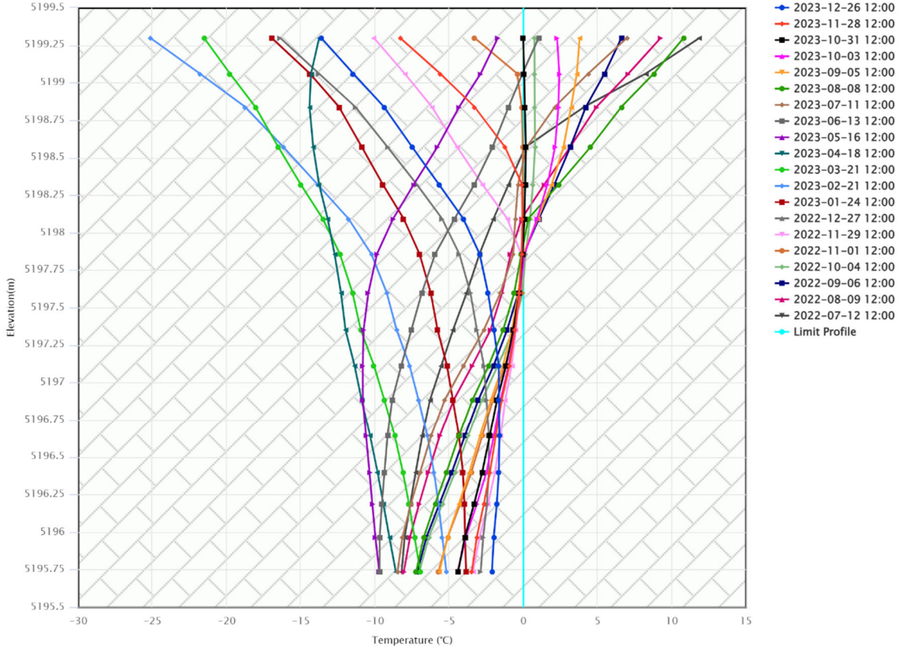
This instrument is installed horizontally and chart needs to be read accordingly

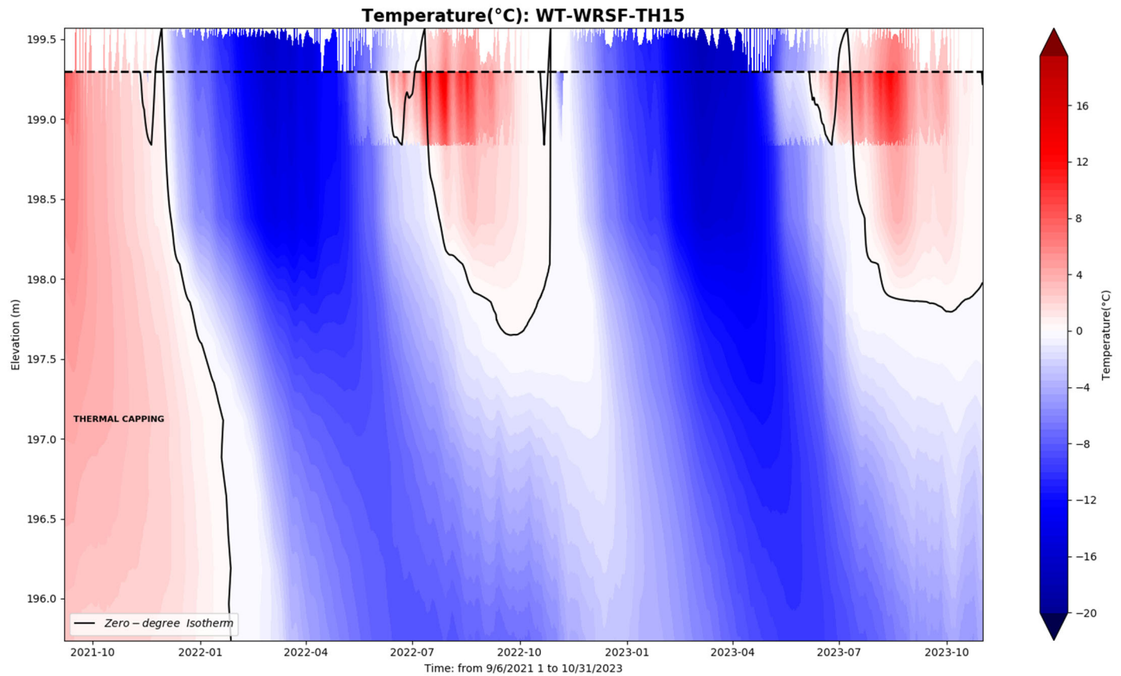
WT WRSF TH15



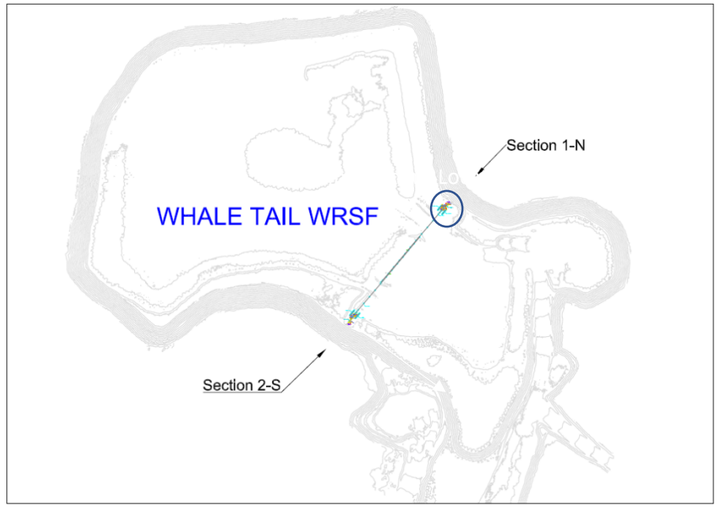


AMQ – WRSF – WT_TH_15

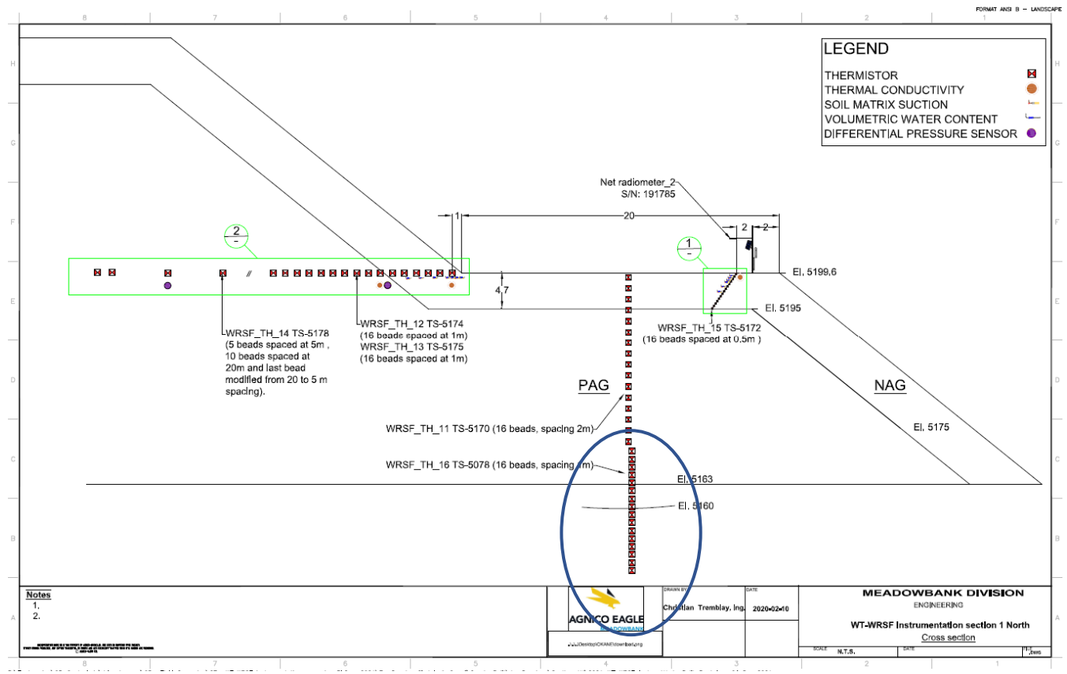


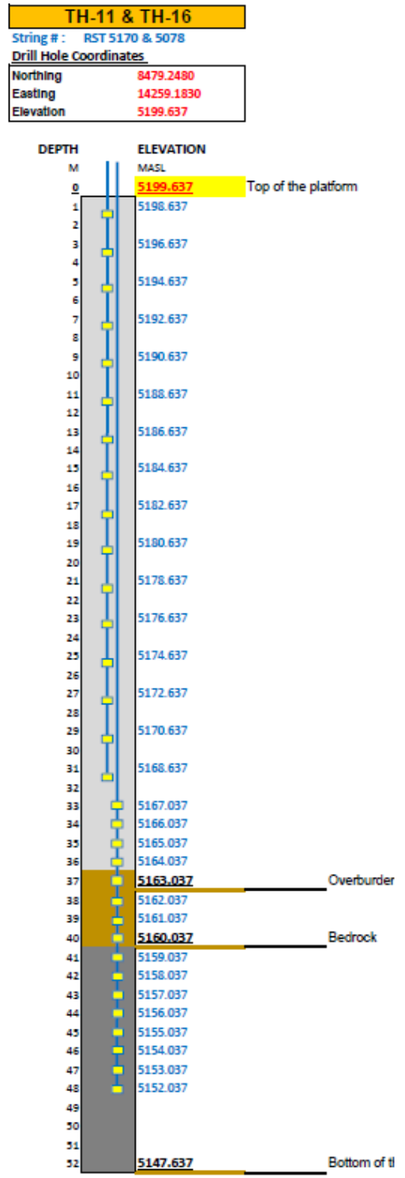


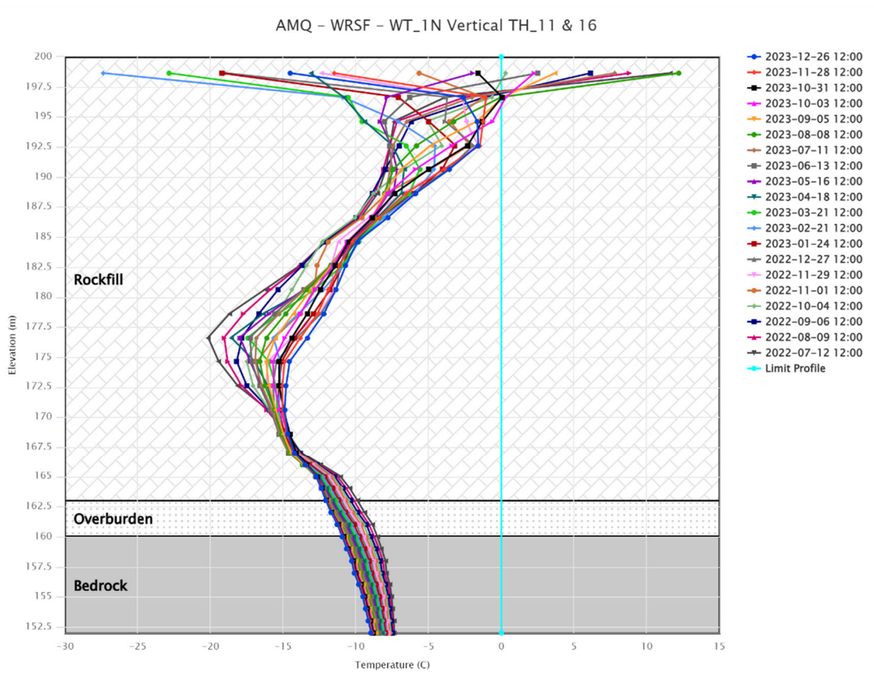
WT WRSF TH16

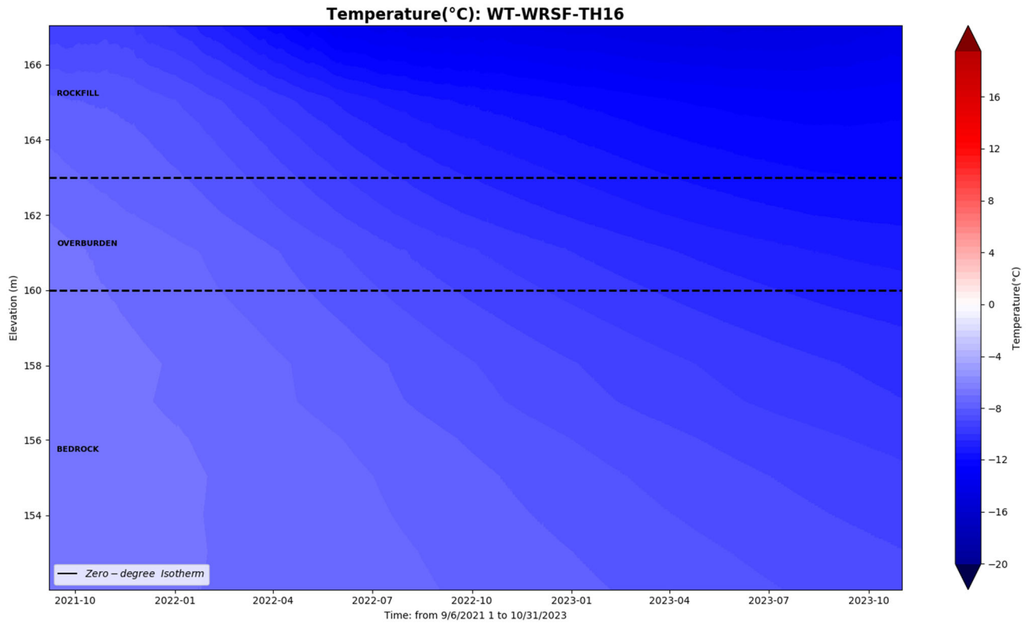


There was no data from Dec 20 to Feb 2 due to loss of battery power in the instrument.

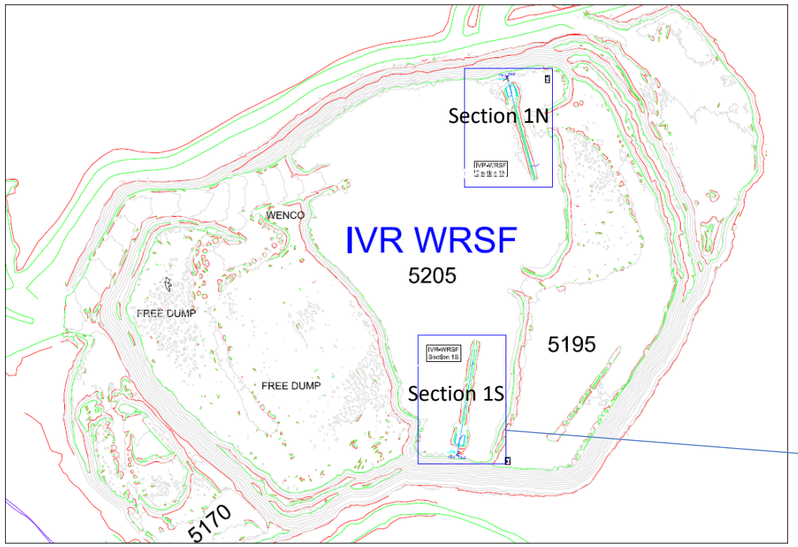


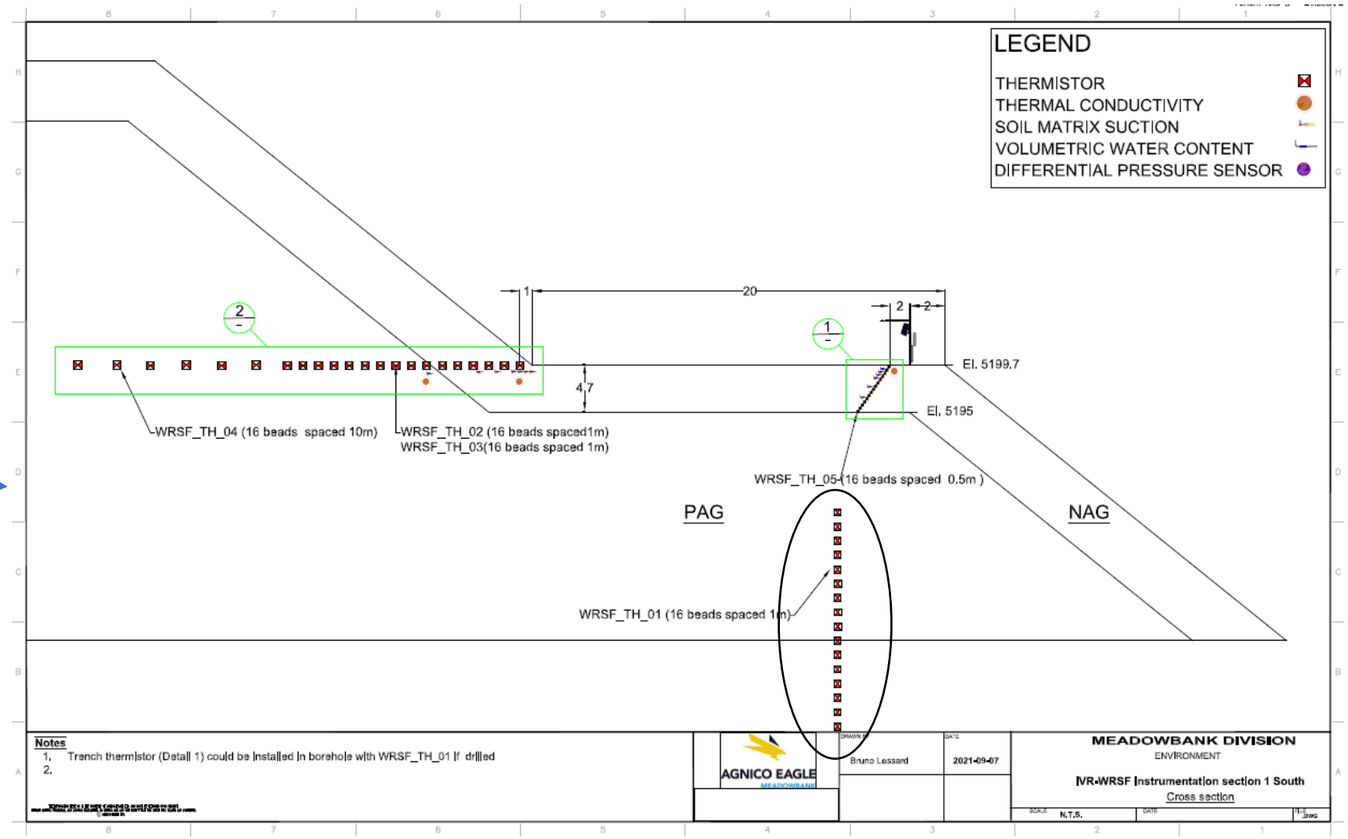


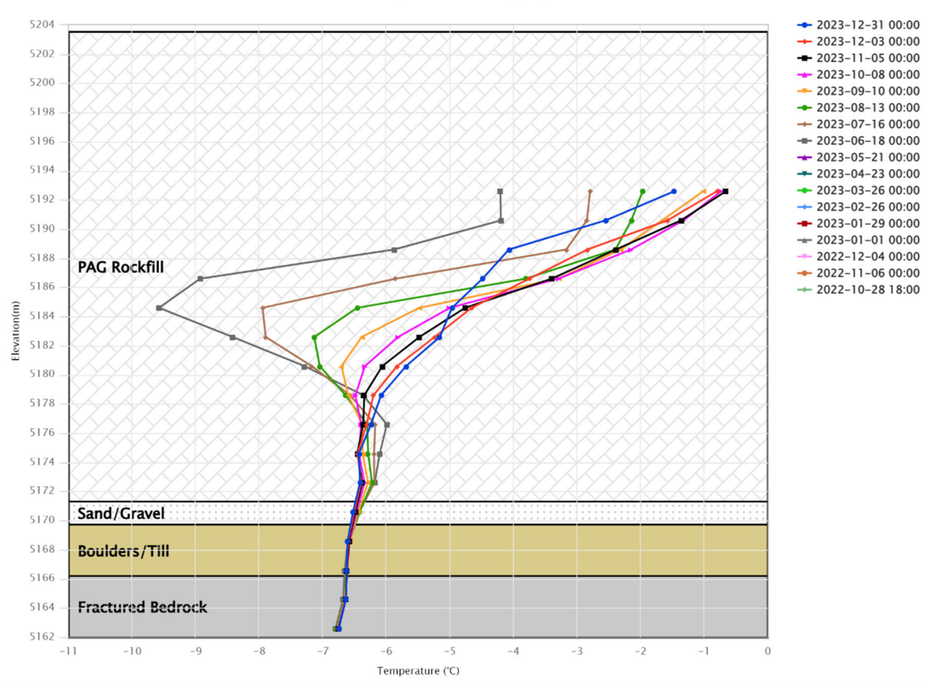




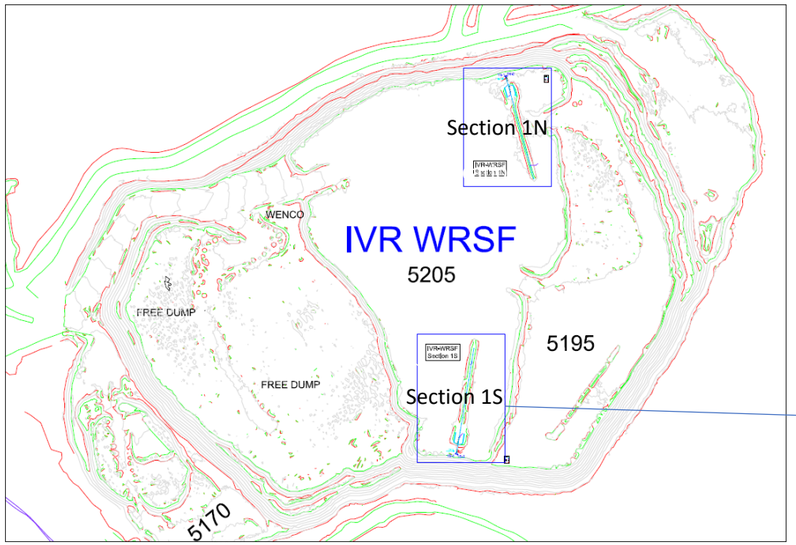
IVR WRSF TH01

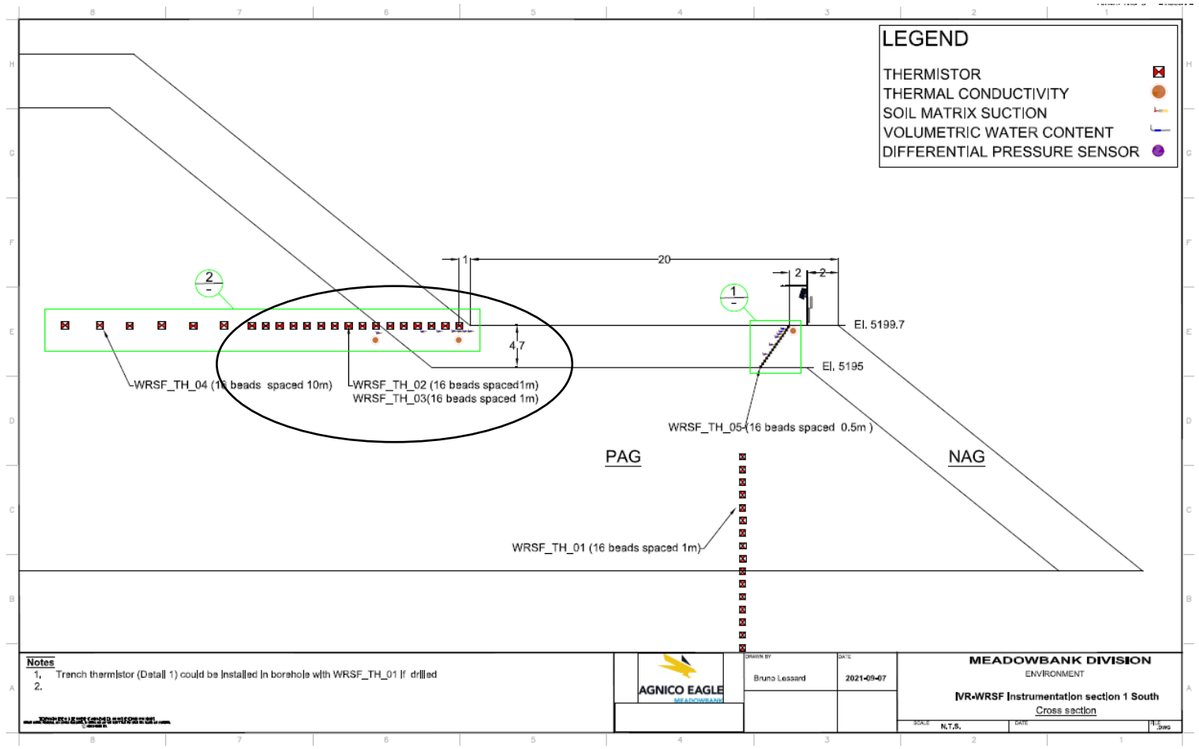


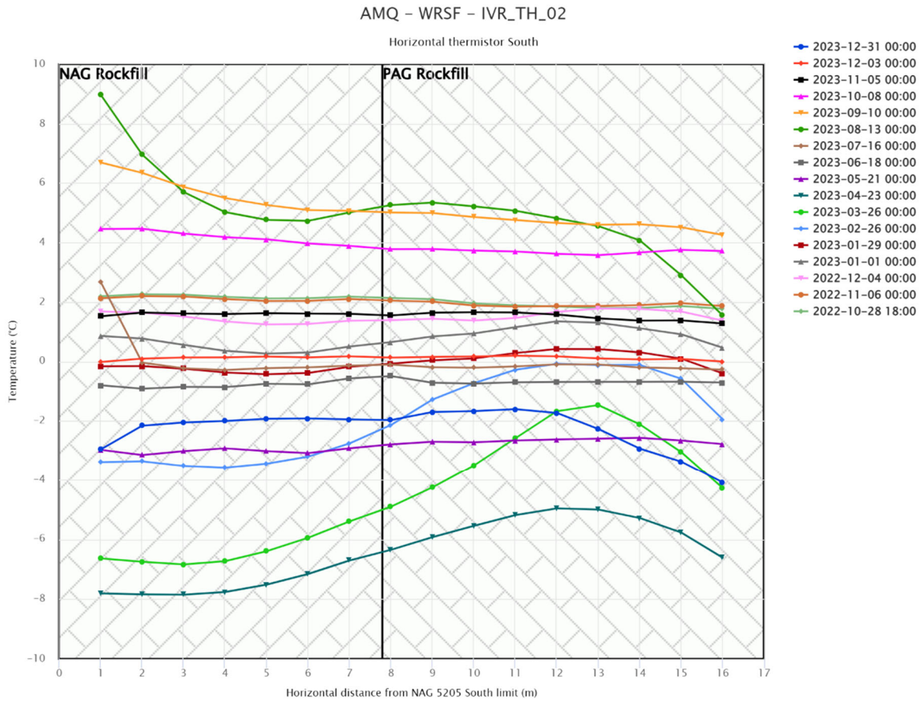




IVR WRSF TH02

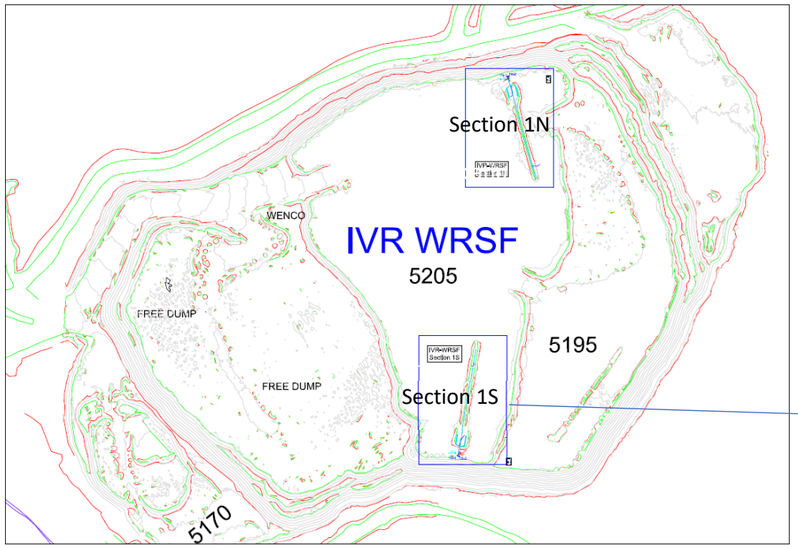


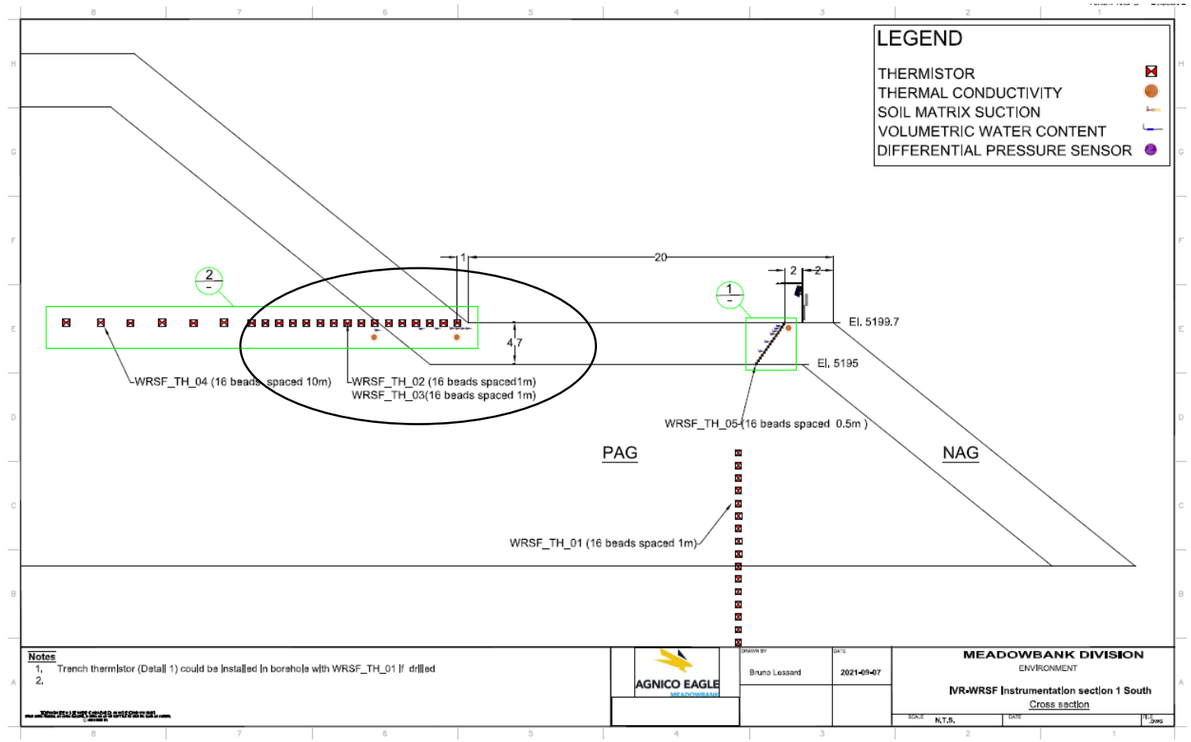


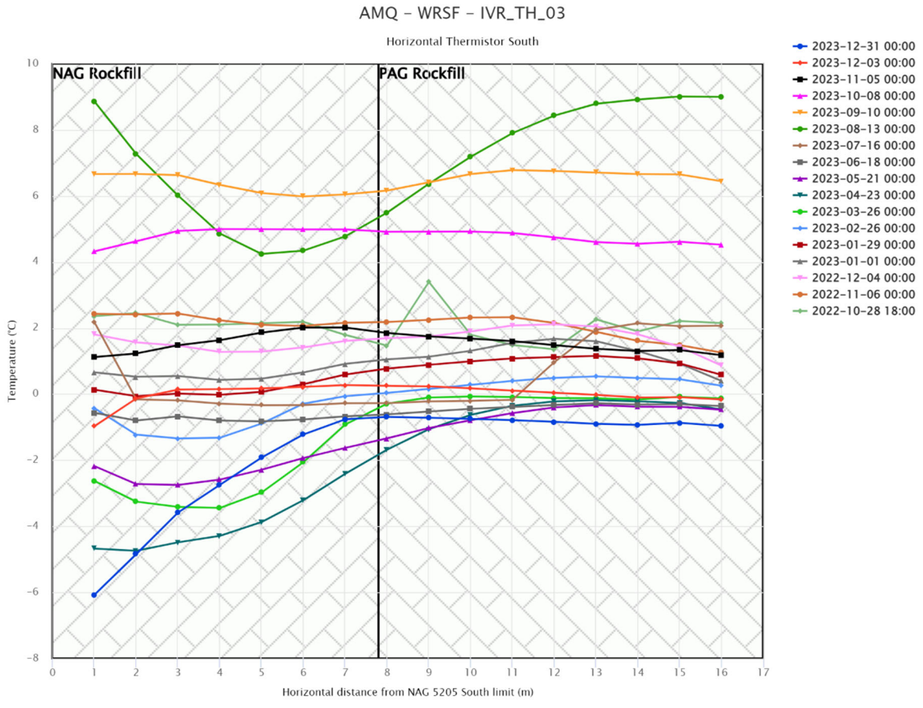


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH03

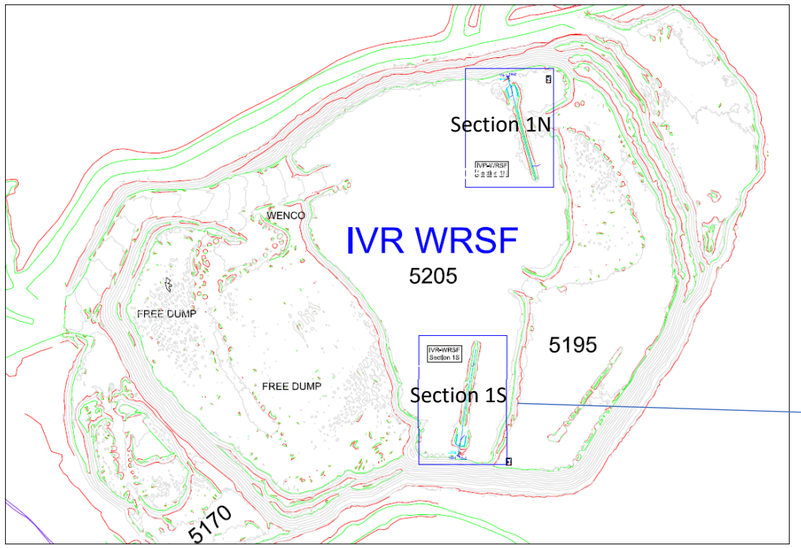


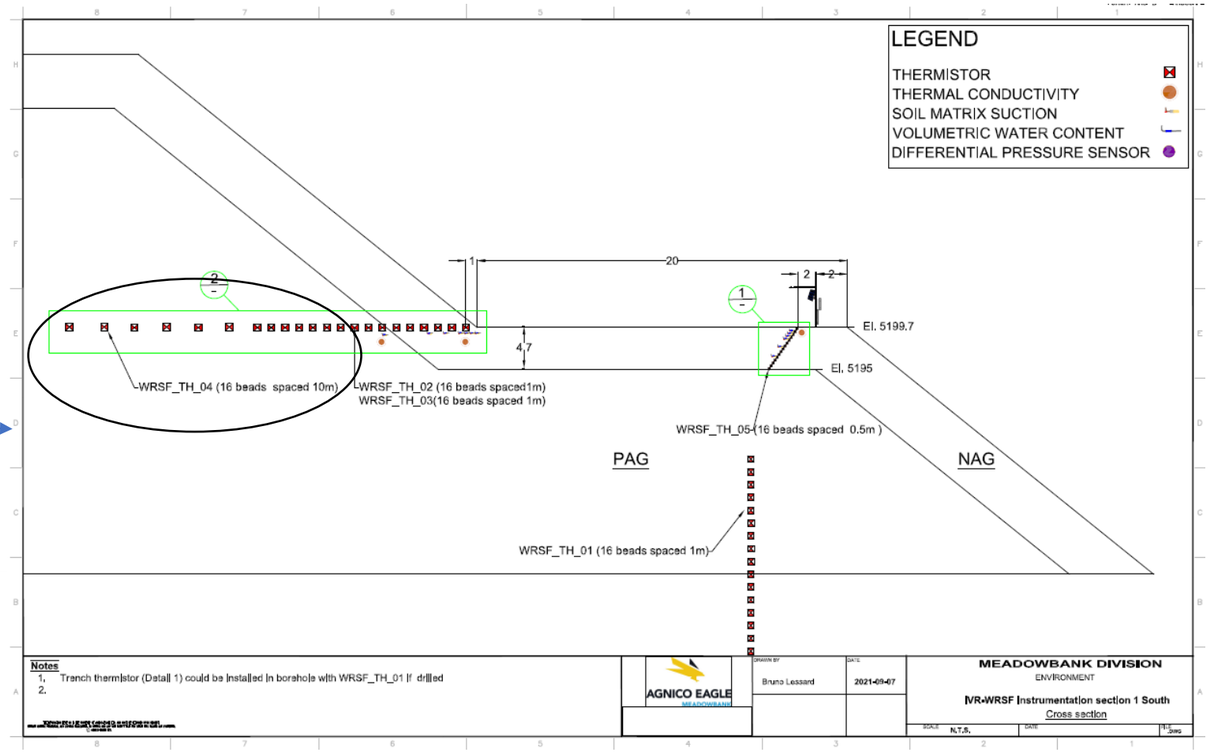


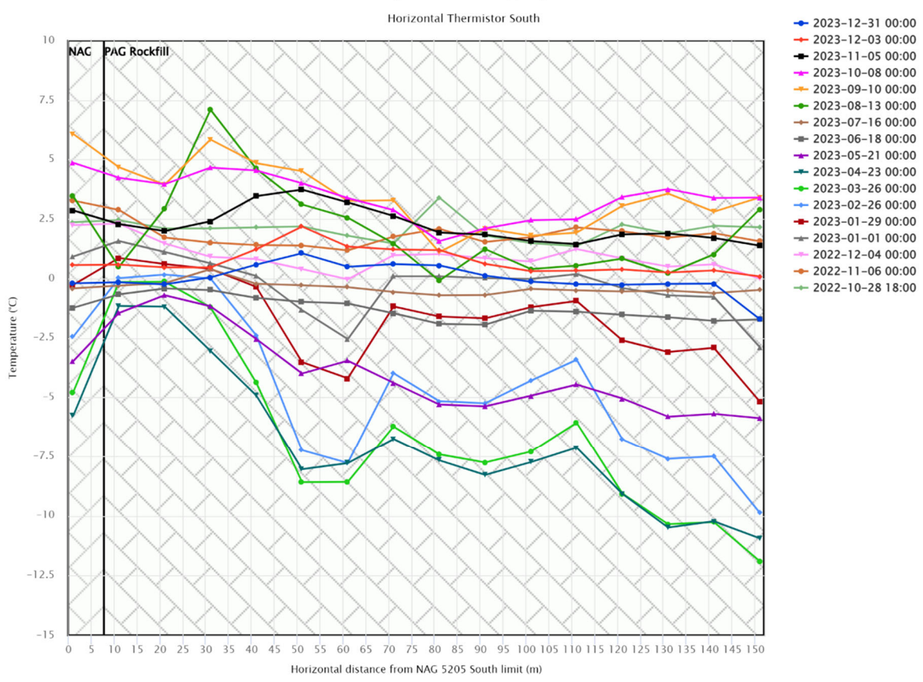


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH04

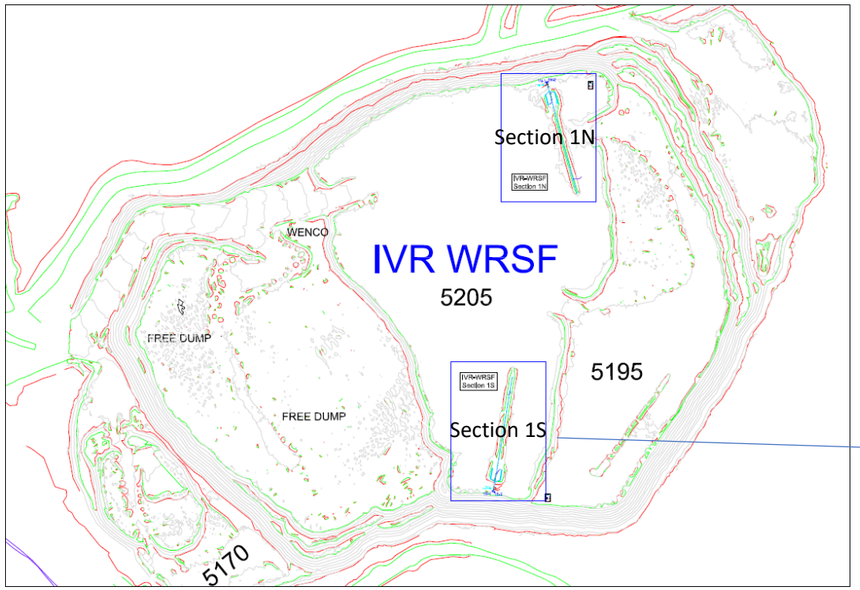


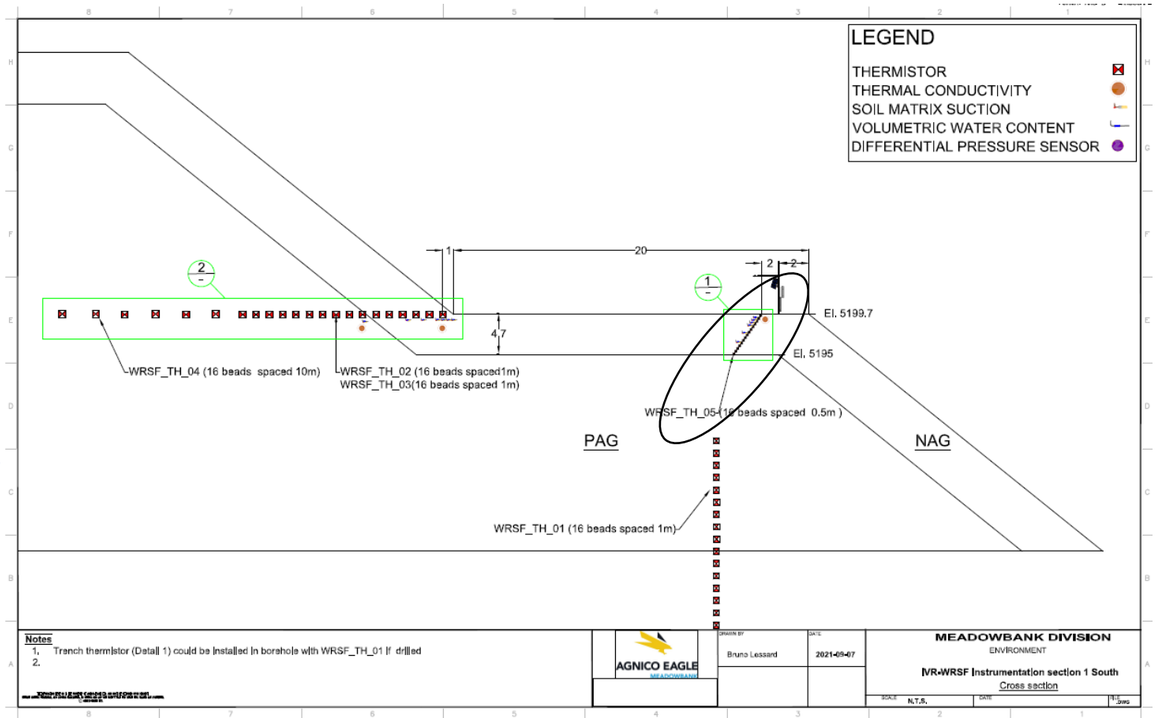


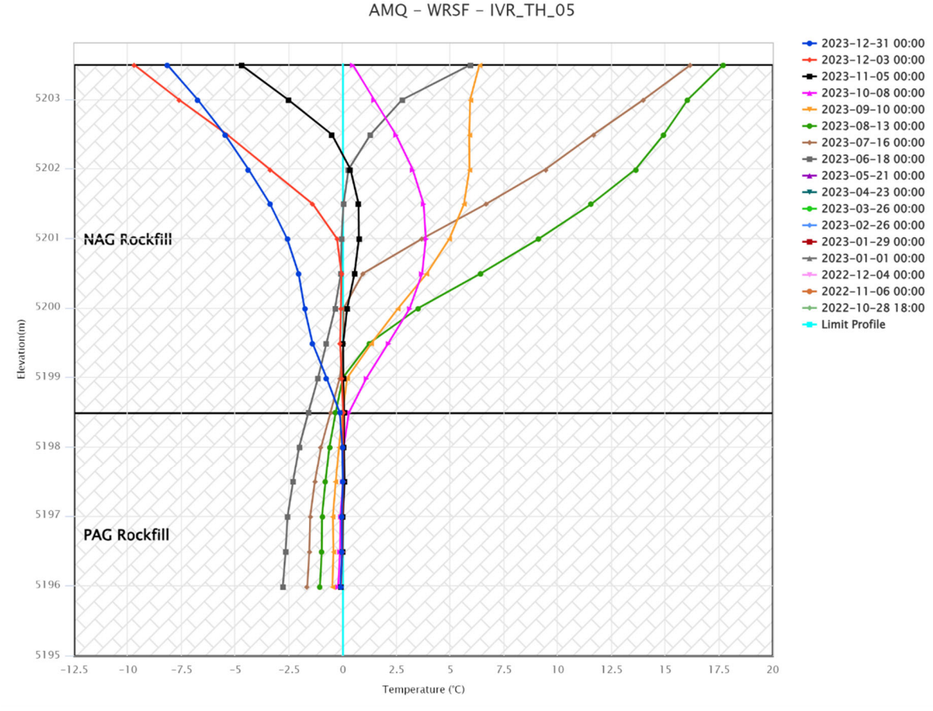


This instrument is installed horizontally and chart needs to be read accordingly

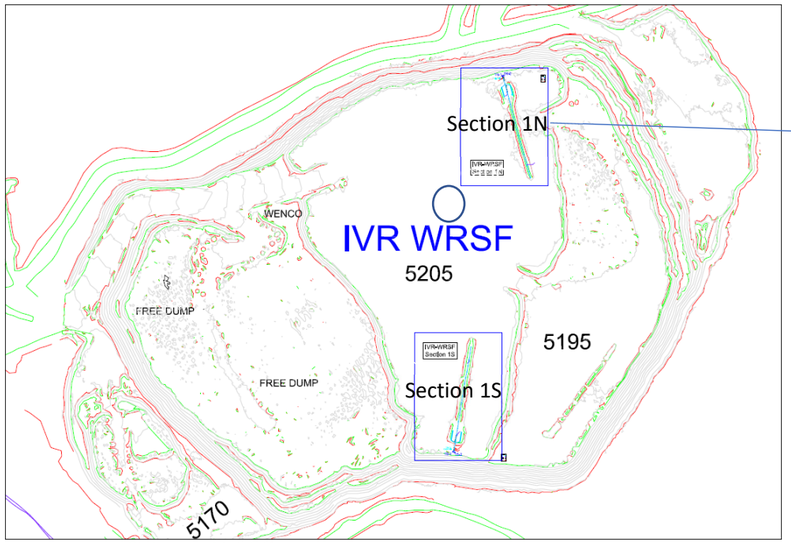
IVR WRSF TH05

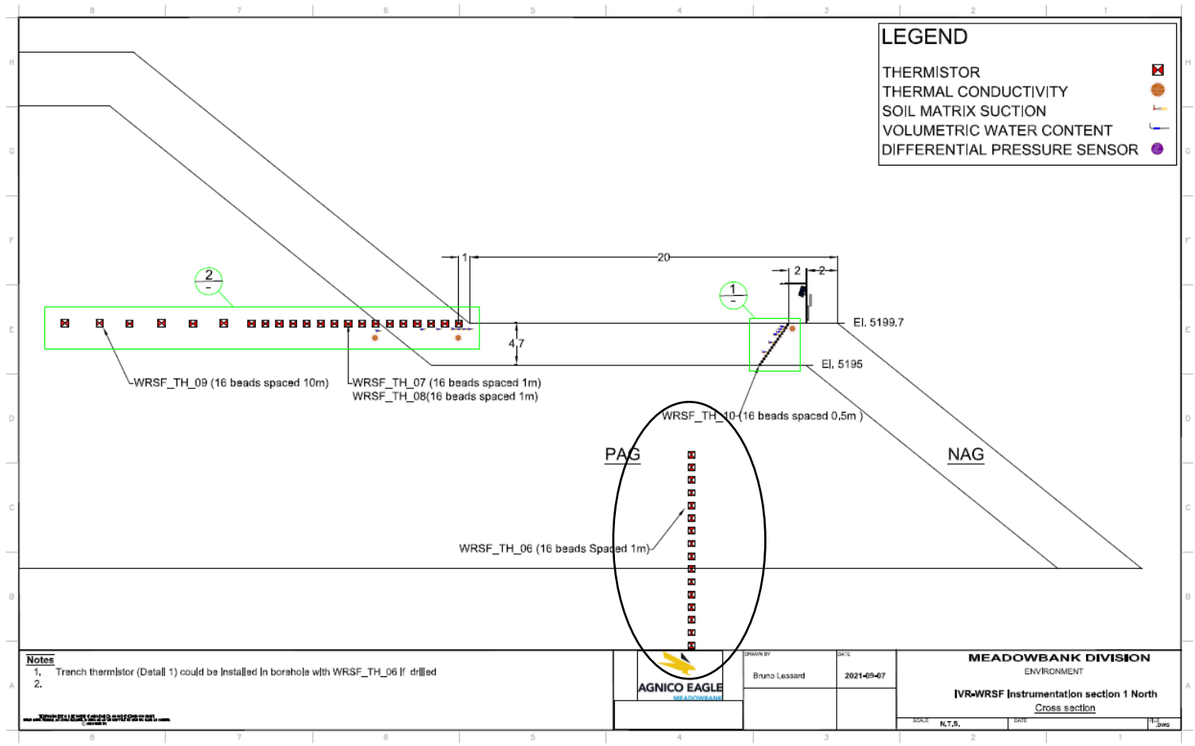




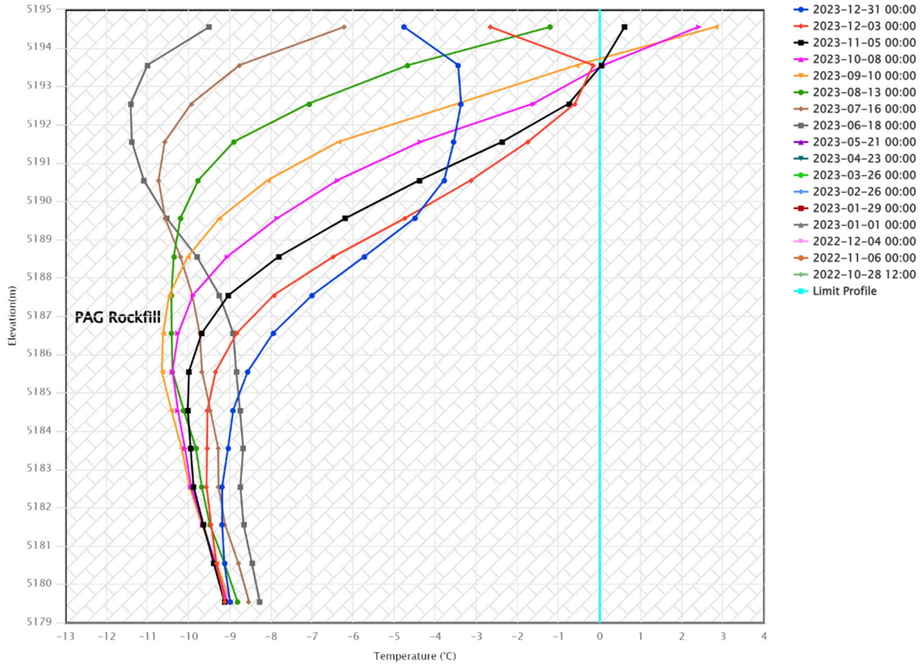


IVR WRSF TH06

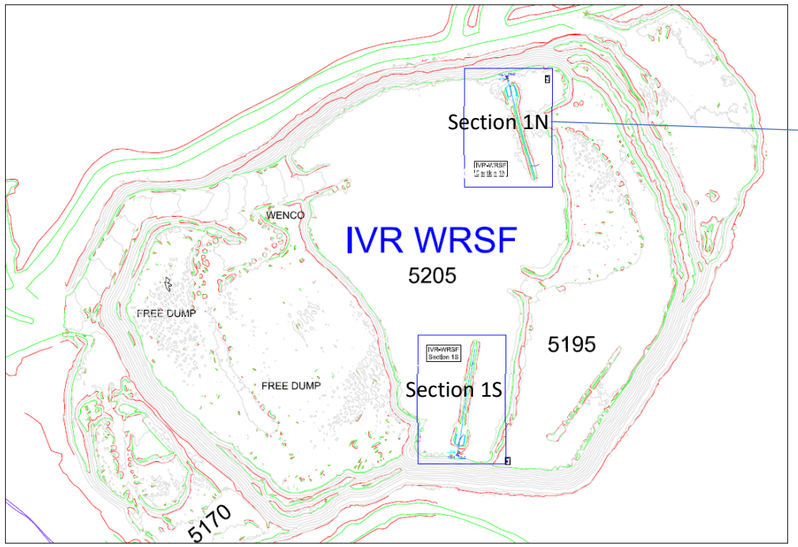


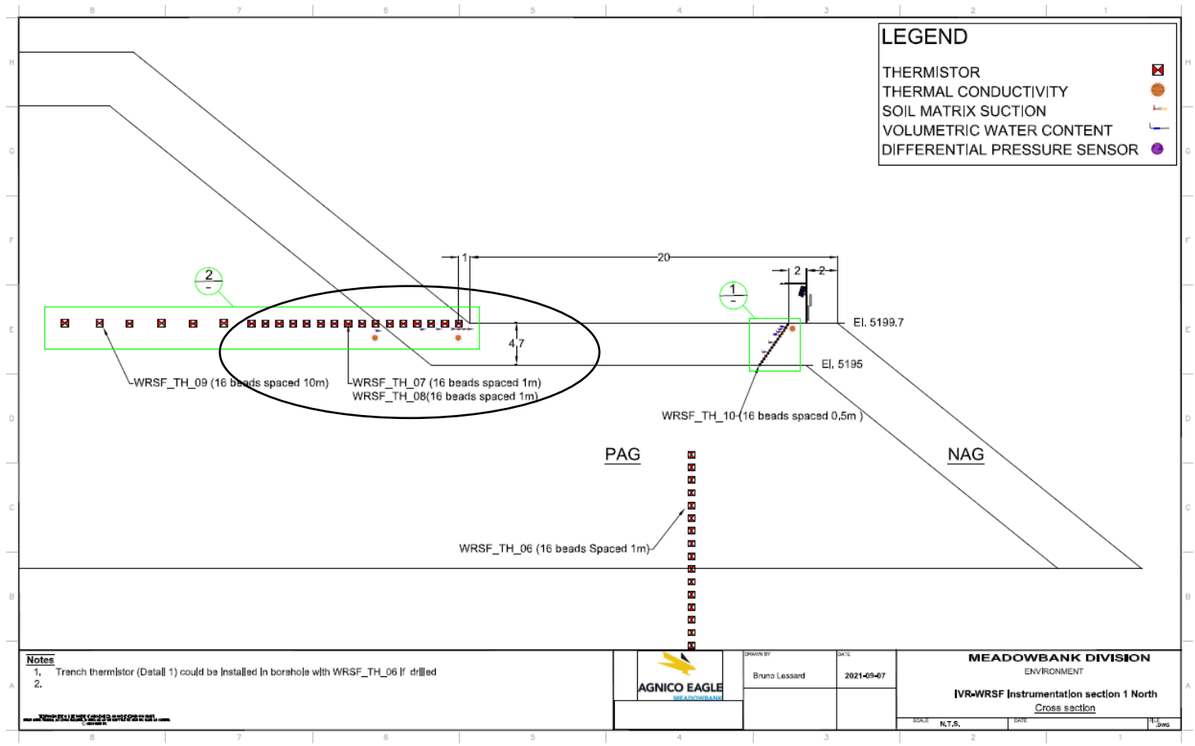


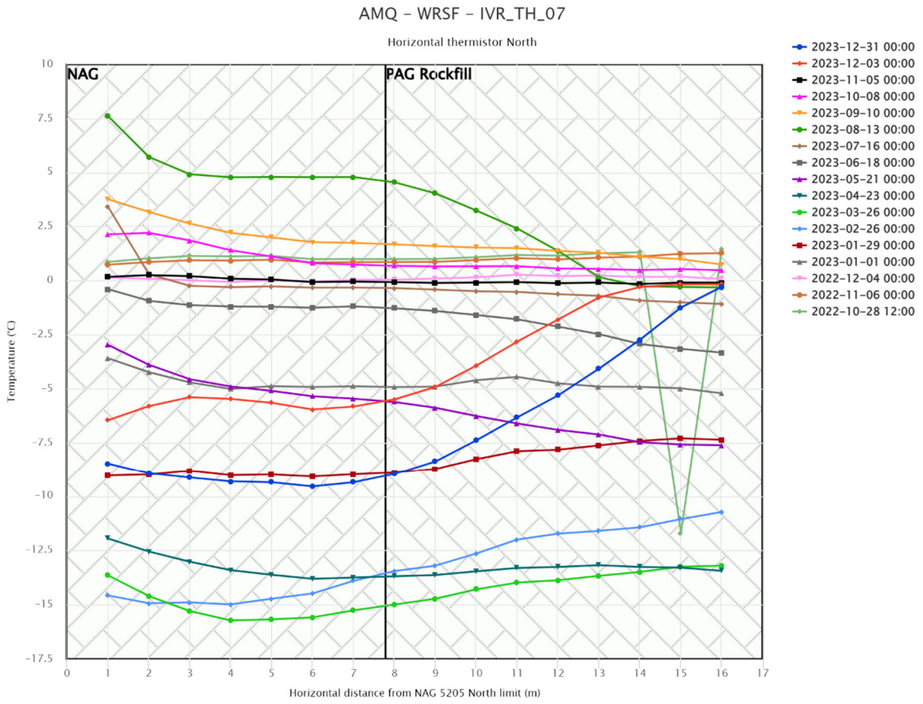
AMQ – WRSF – IVR_TH_06



IVR WRSF TH07

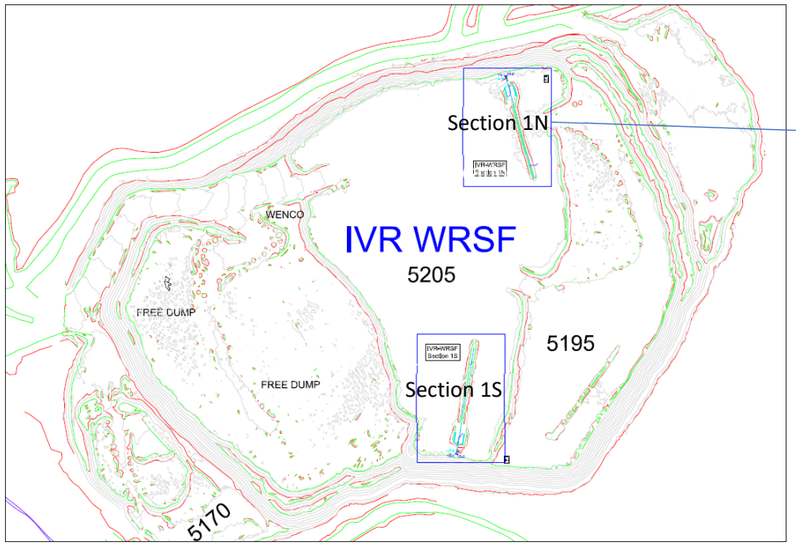


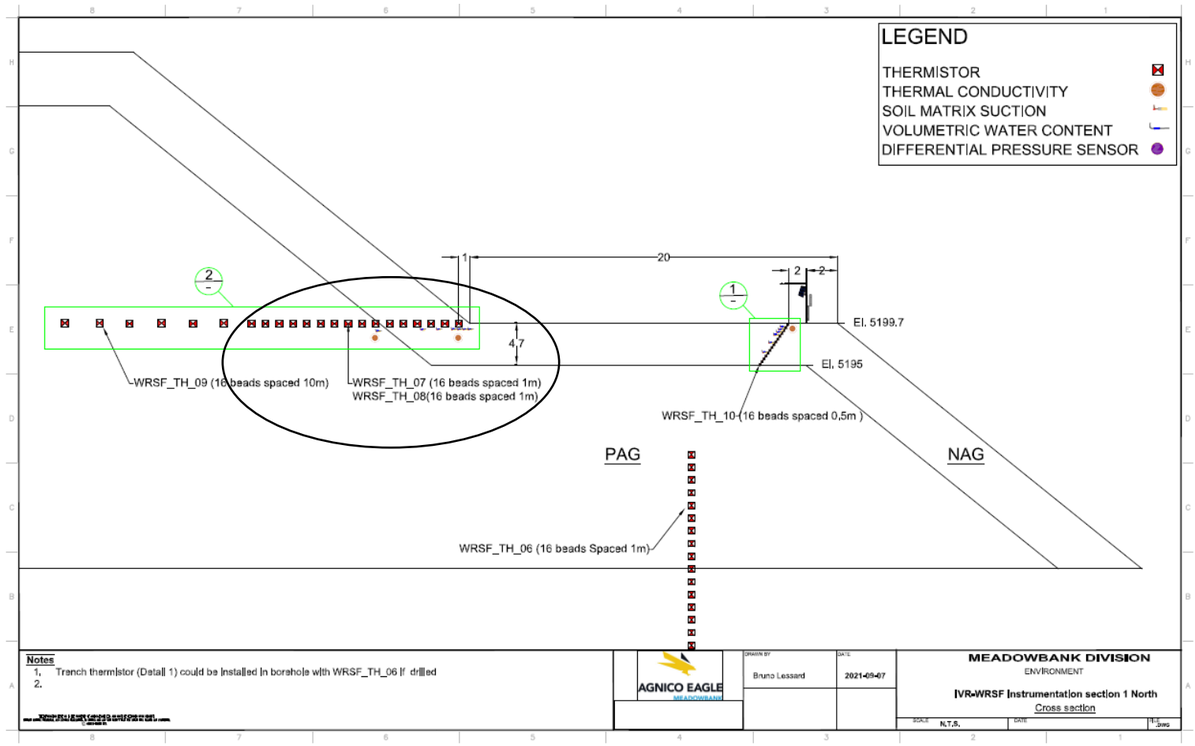


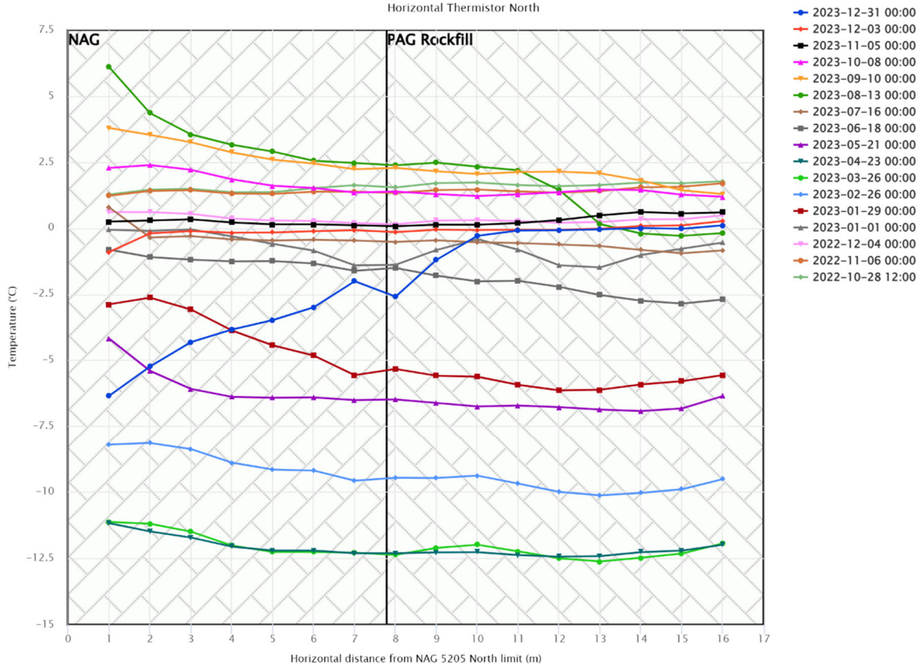


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH08

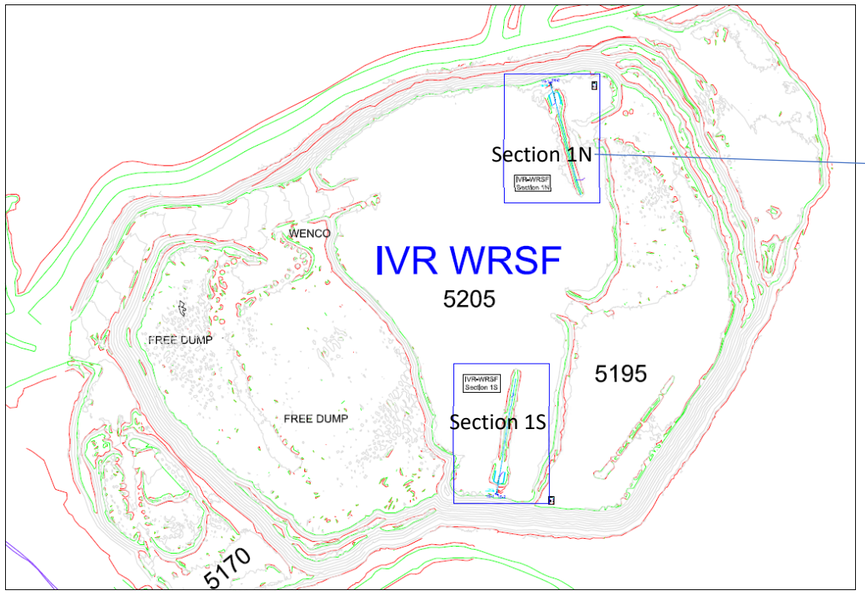


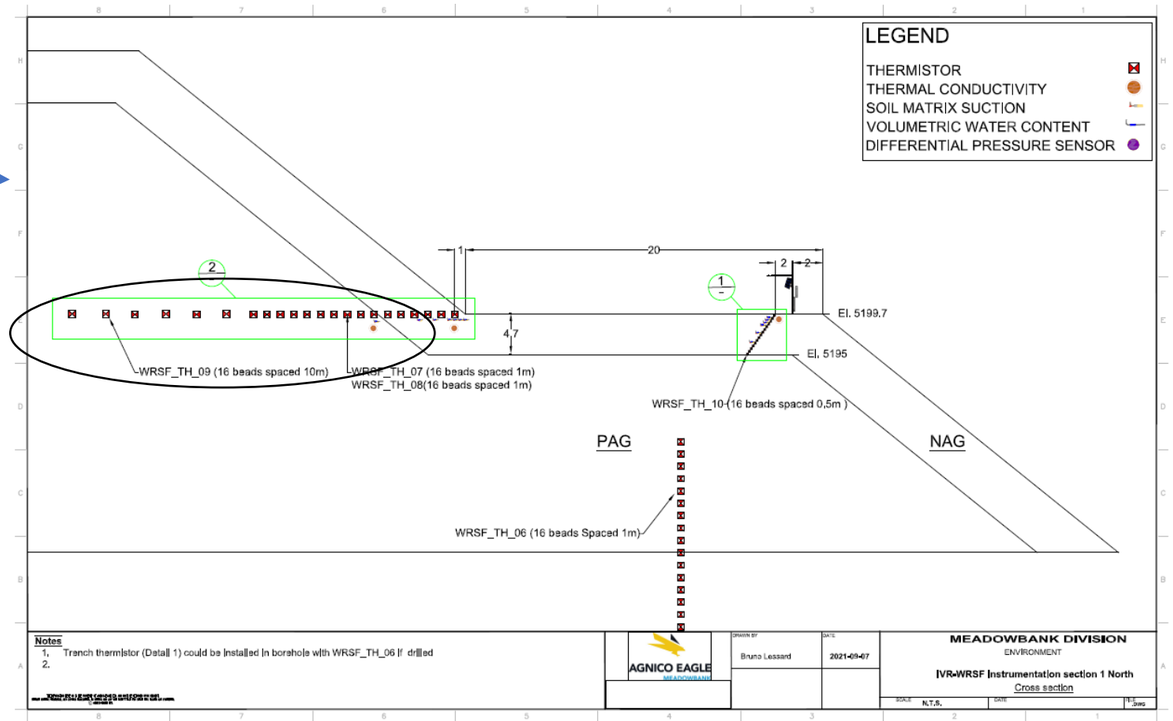




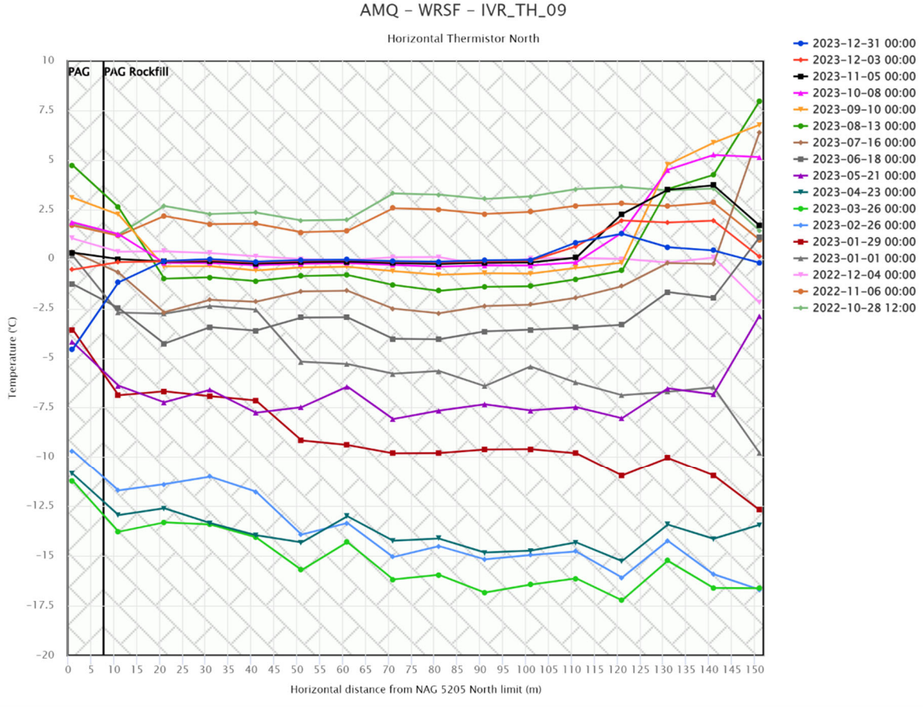
This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH09

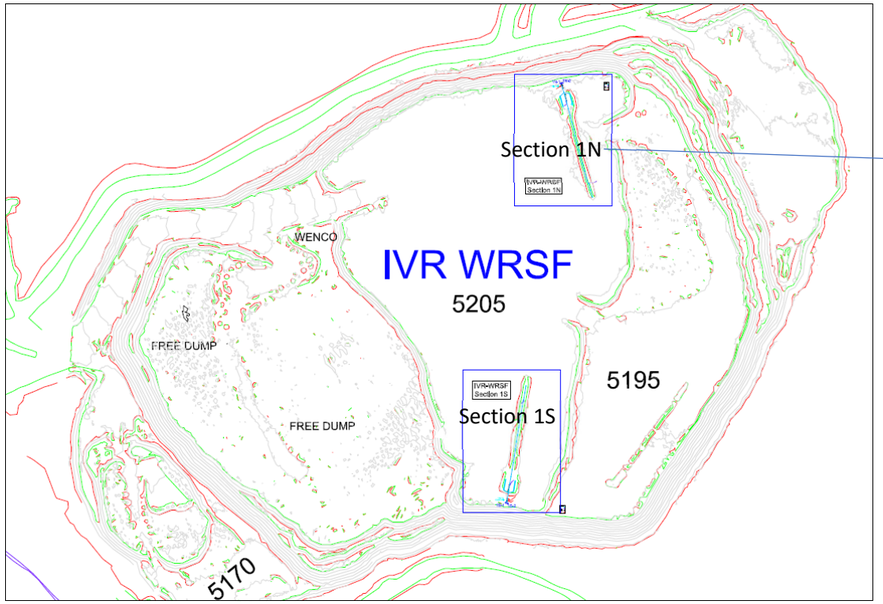


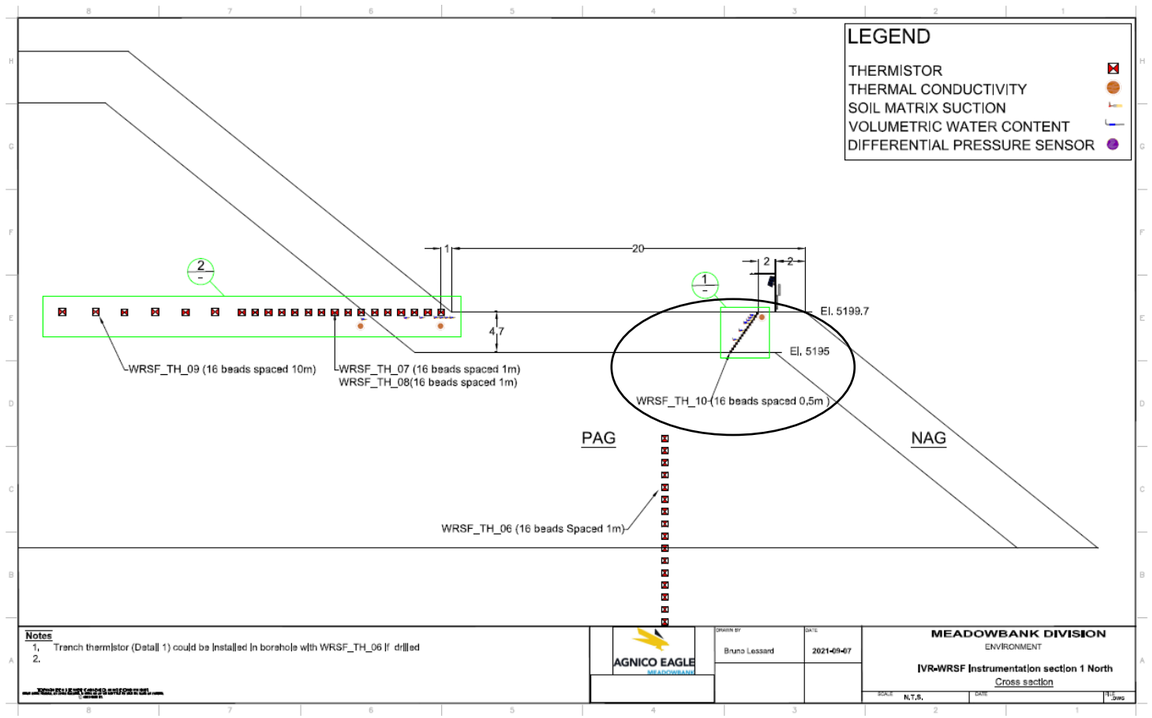


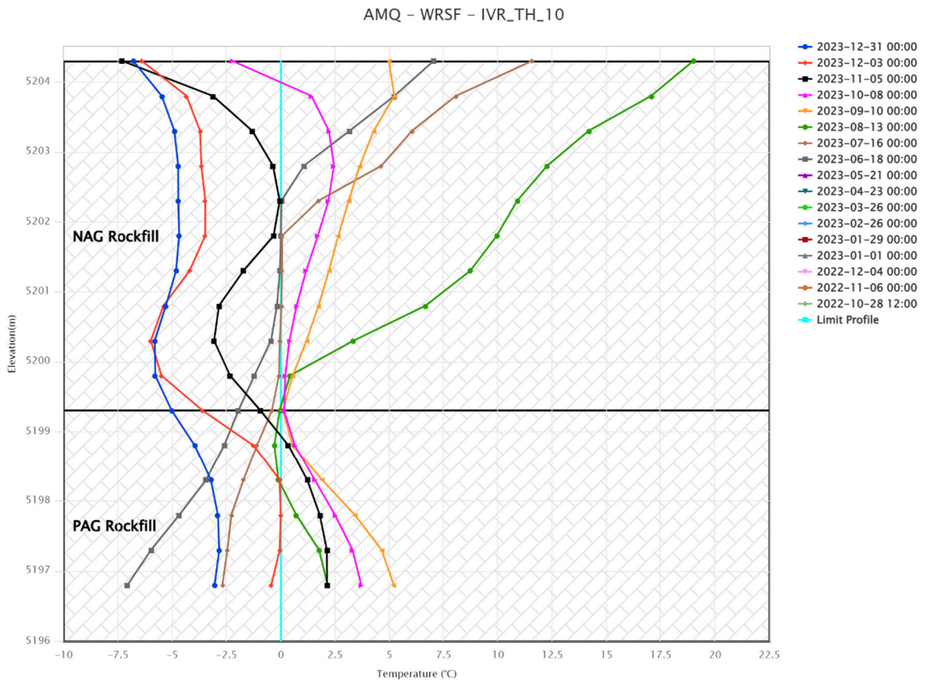
This instrument is installed horizontally and chart needs to be read accordingly



IVR WRSF TH10

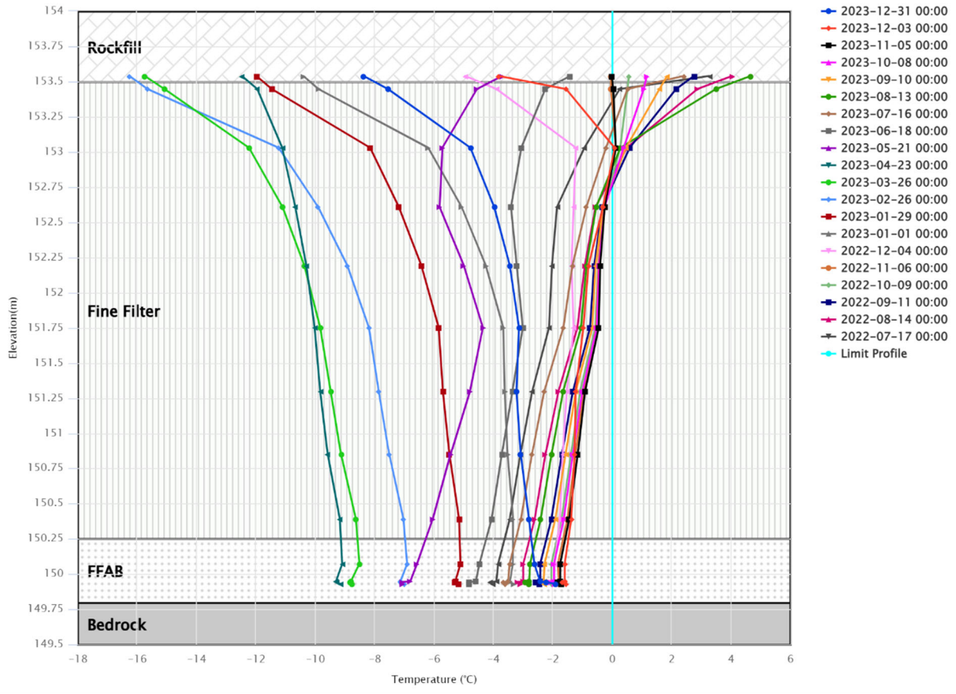


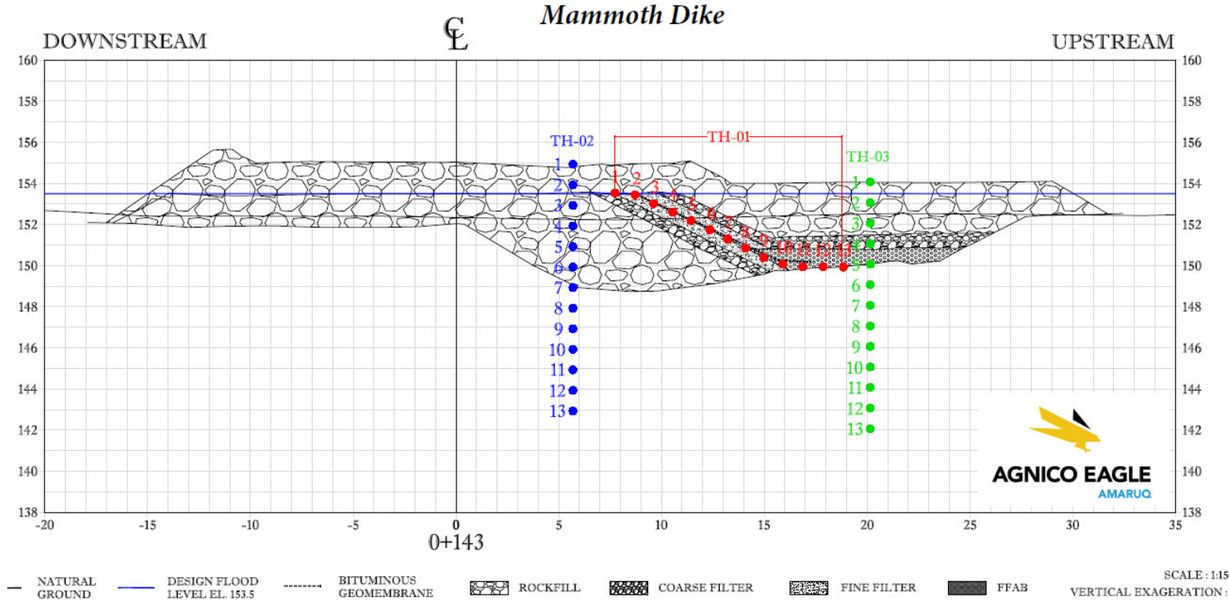




MD TH01

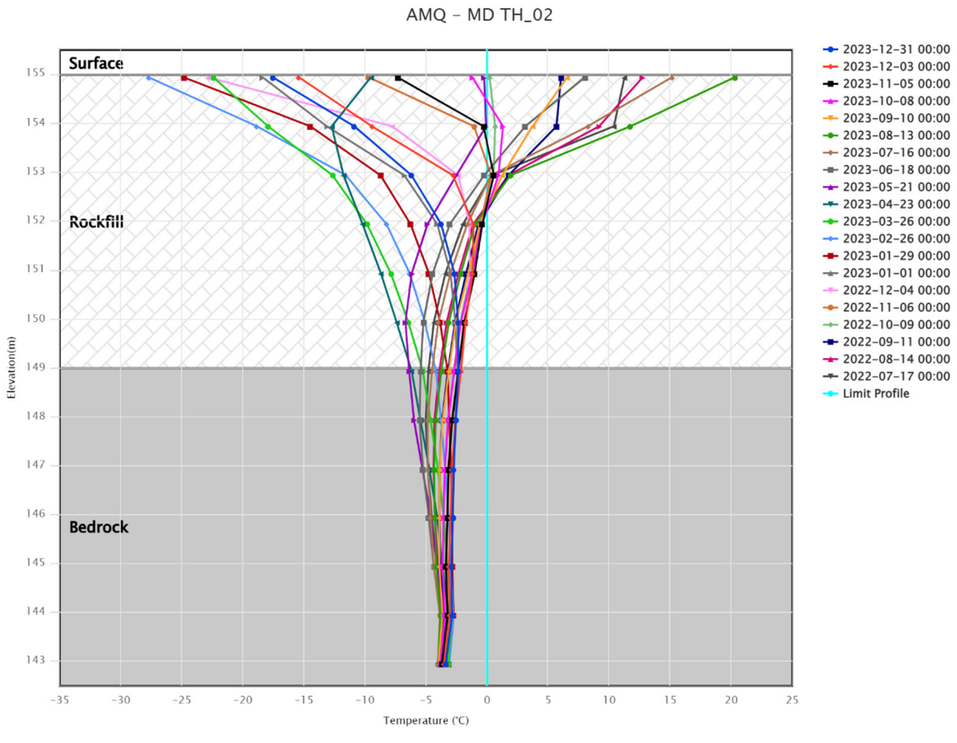
AMQ – MD TH_01

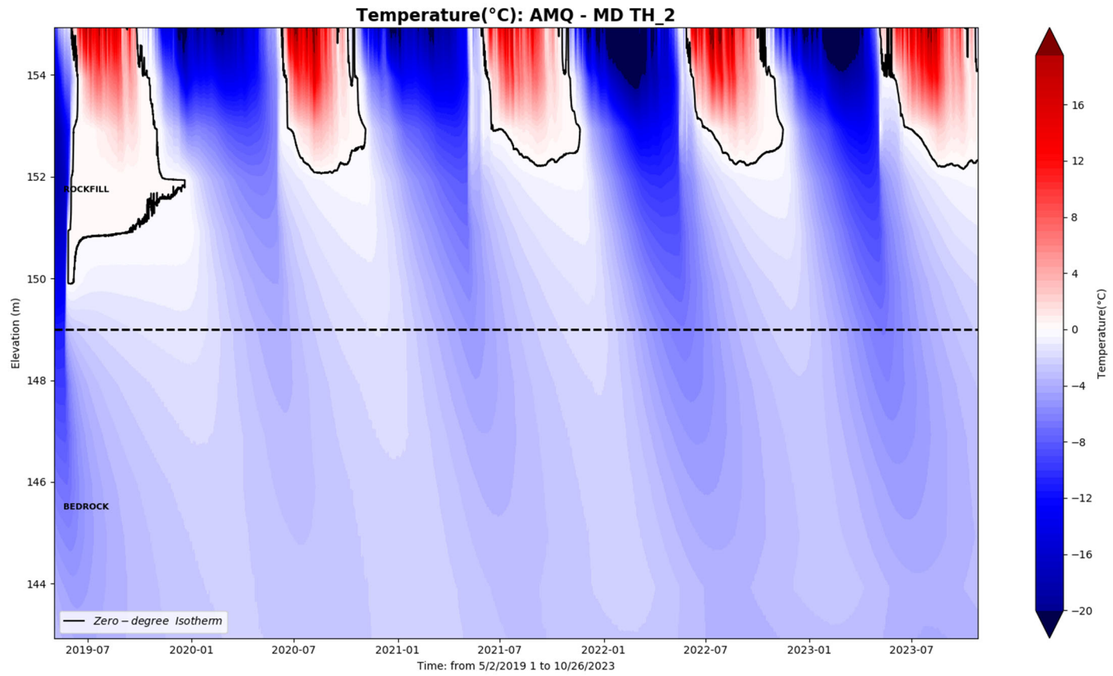


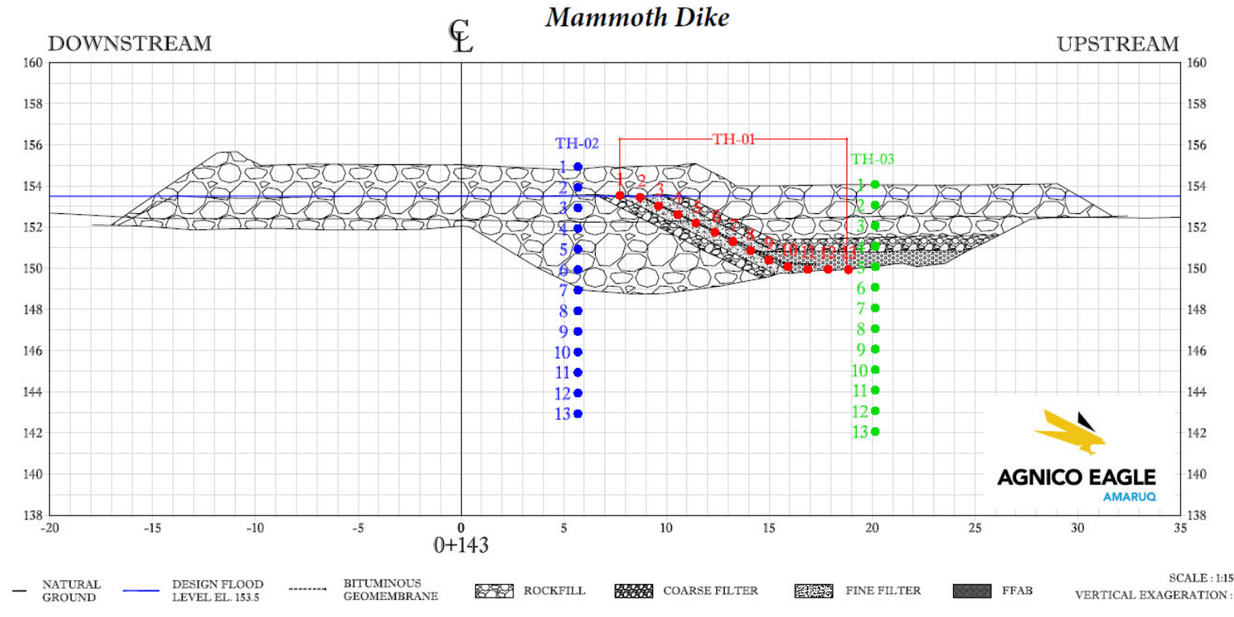


MD TH02


MD TH
01
MD TH
02
MD TH
03
MAMMOTH
DIKE

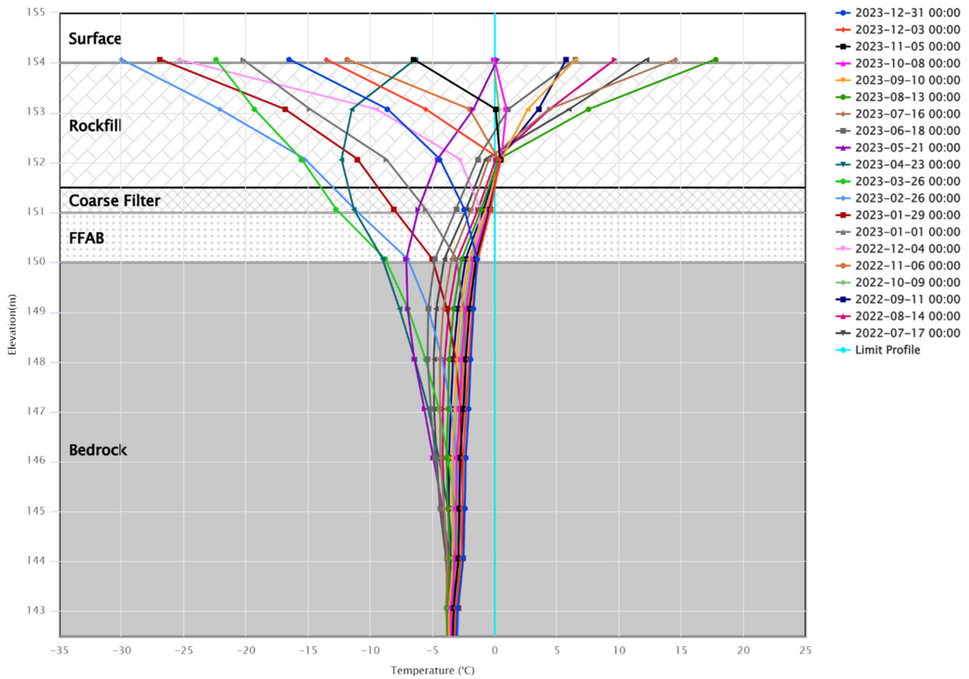

AMQ – MD TH_02
Surface
Rockfill
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

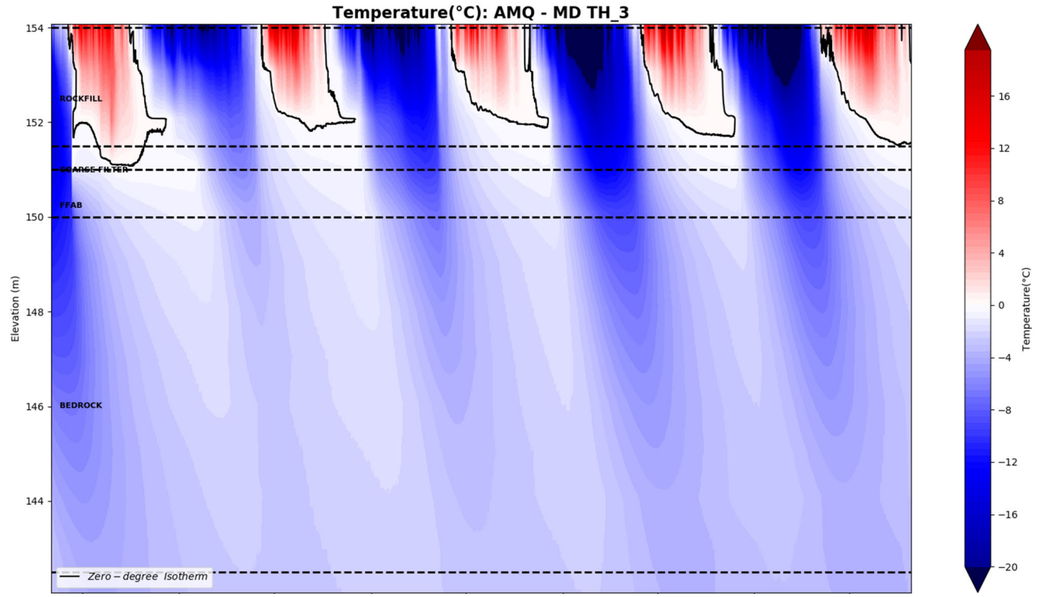

Temperature(°C): AMQ - MD TH_2
ROCKFILL
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/2/2019 1 to 10/26/2023

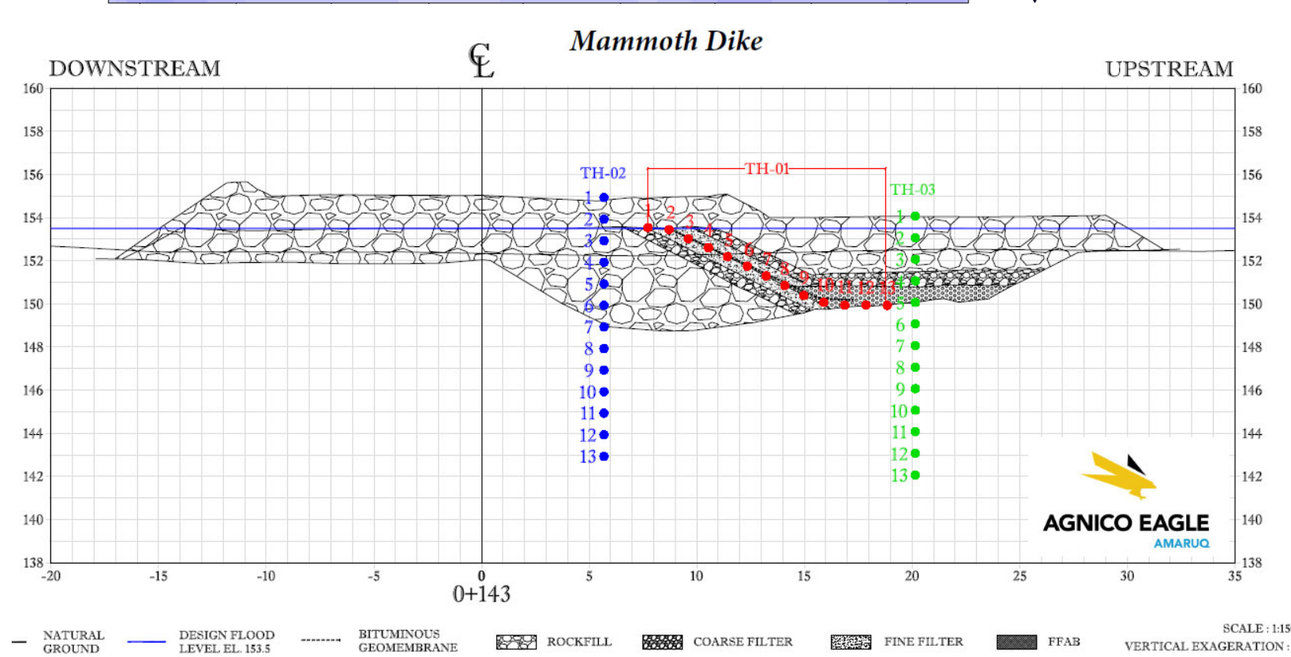

Mammoth Dike
DOWNSTREAM
UPSTREAM
TH-02
TH-01
TH-03
AGNICO EAGLE
AMARUQ
0+143
NATURAL GROUND
DESIGN FLOOD LEVEL EL. 153.5
BITUMINOUS GEOMEMBRANE
ROCKFILL
COARSE FILTER
FINE FILTER
FFAB
SCALE : 1:15
VERTICAL EXAGERATION :

MD TH03

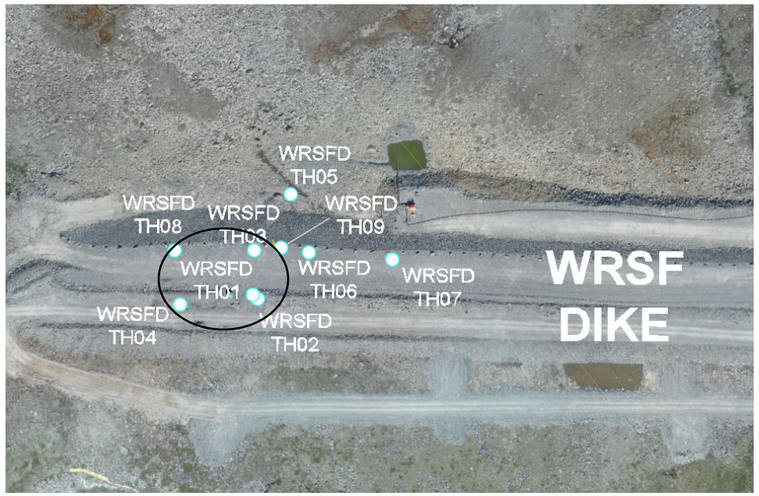
AMQ – MD TH_03



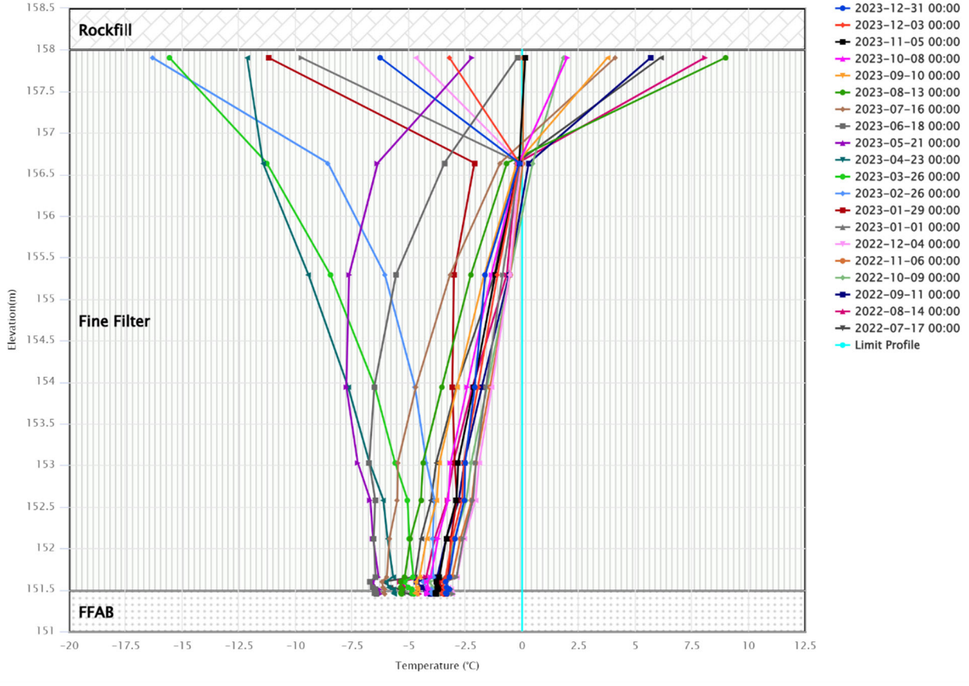


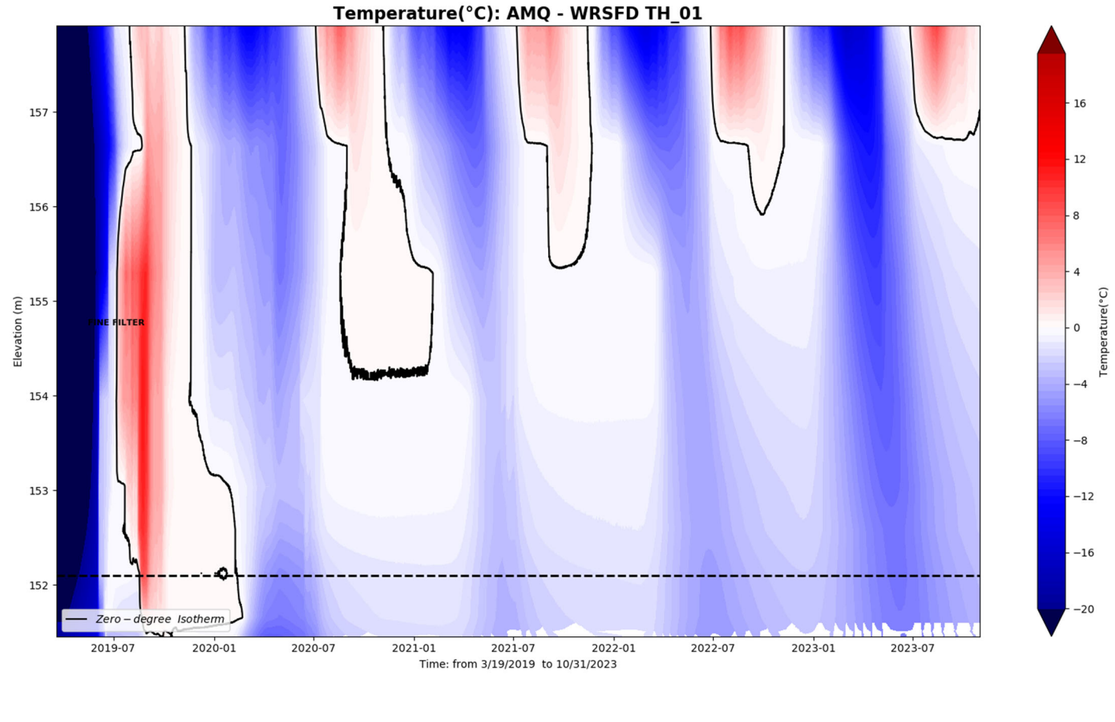


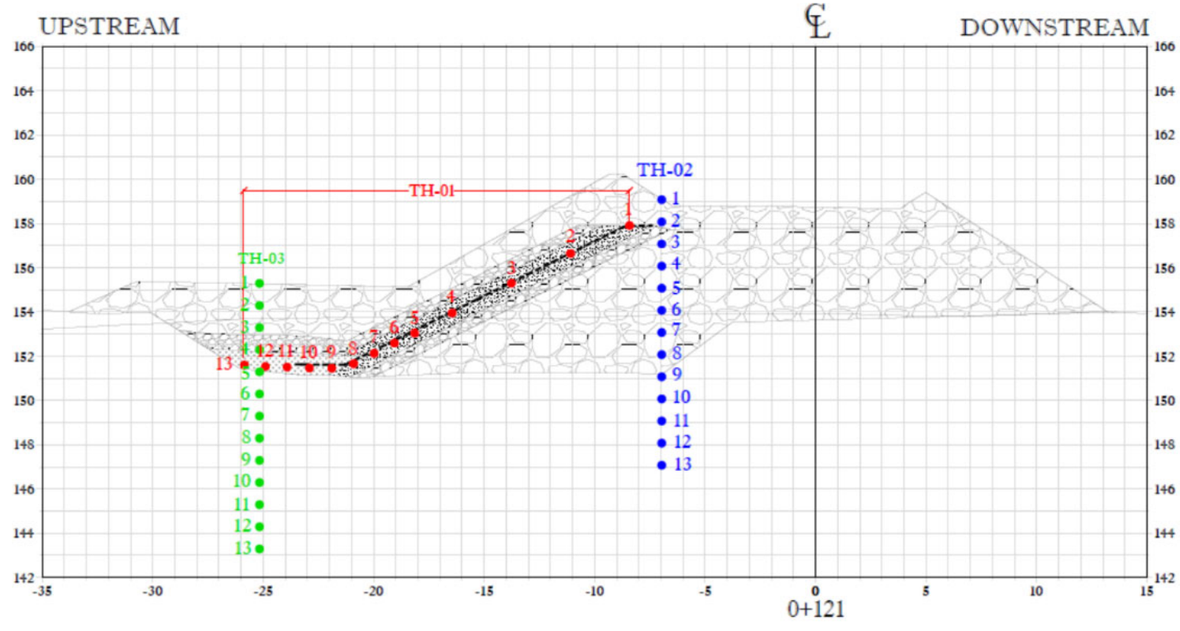
WRSFD TH01



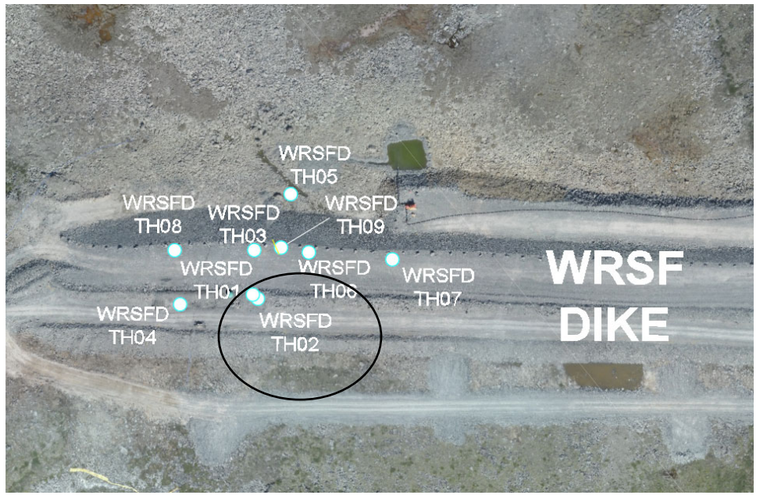
AMQ – WRSFD TH_01



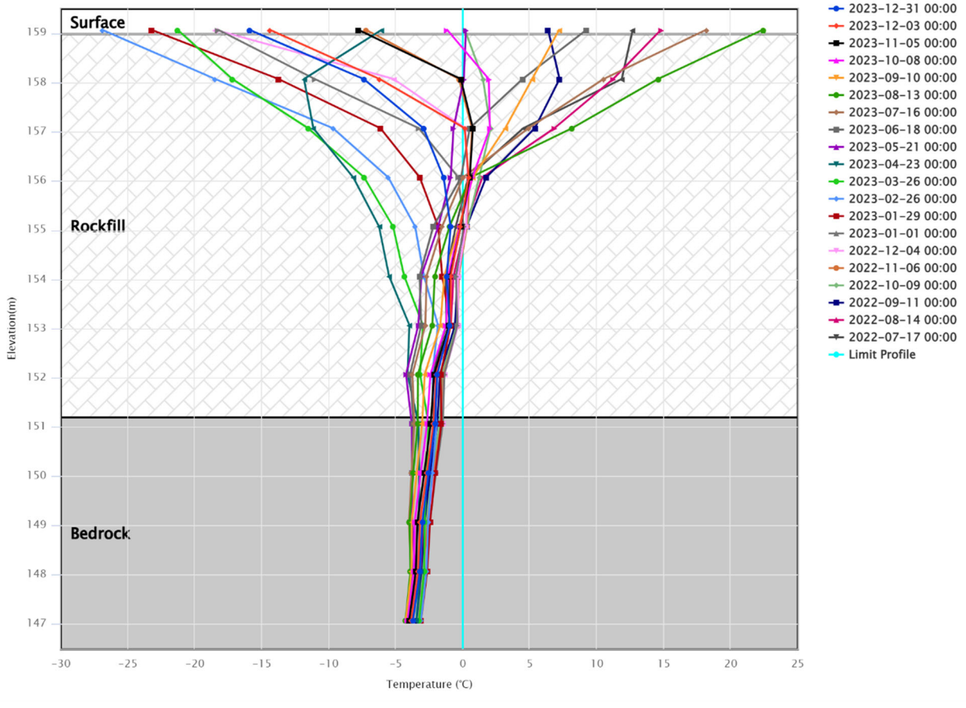


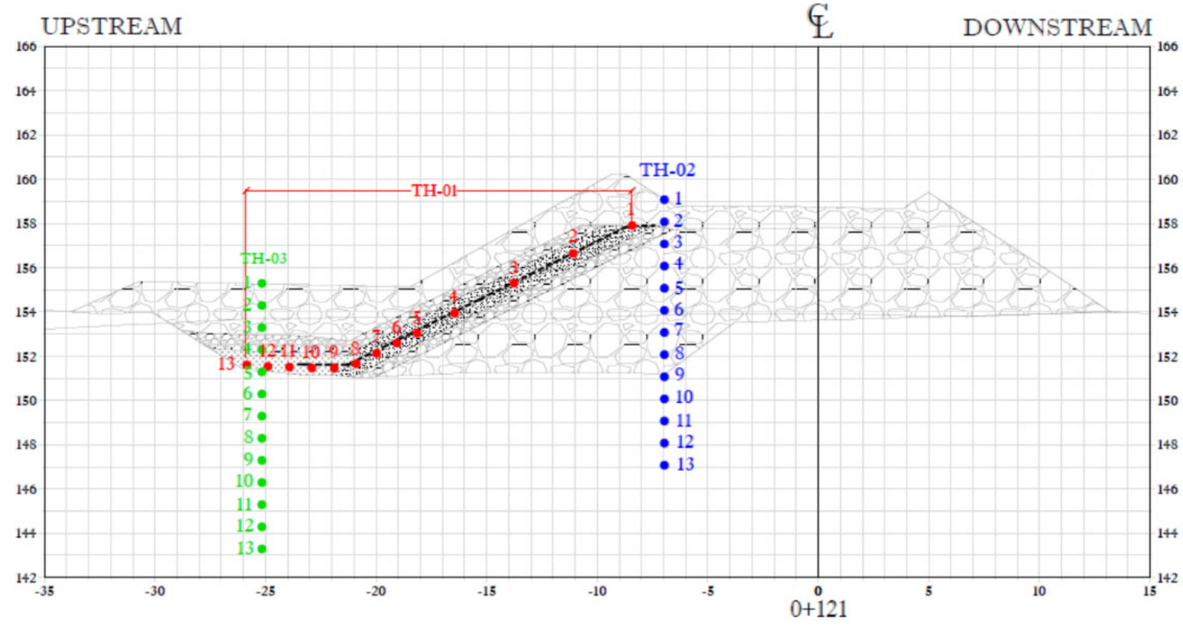


WRSFD TH02

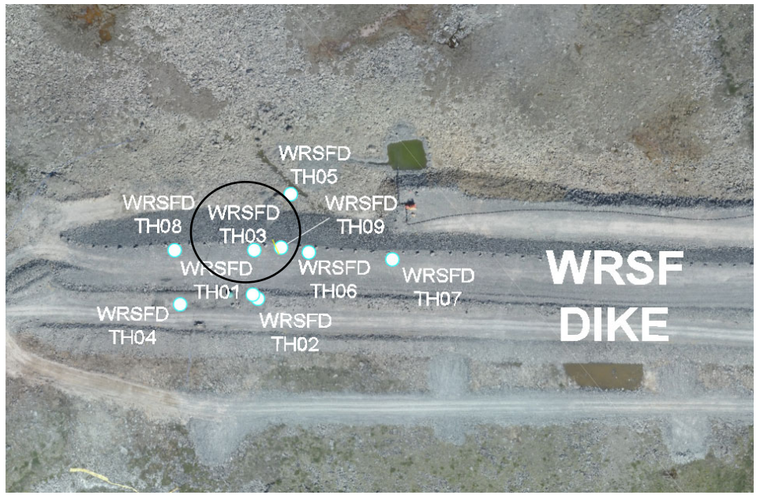


AMQ – WRSFD TH_02

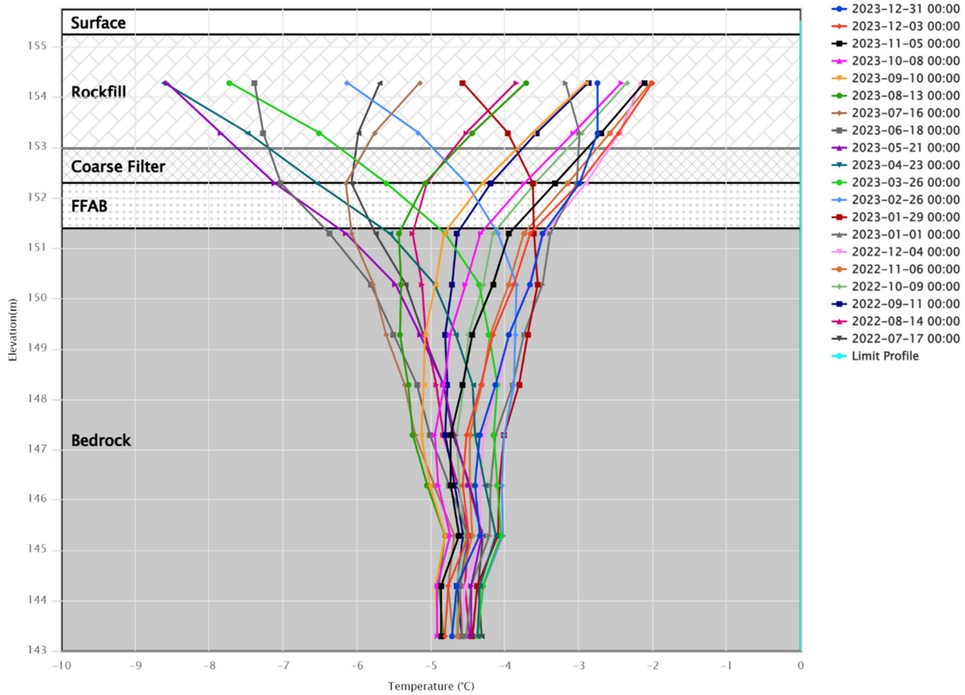


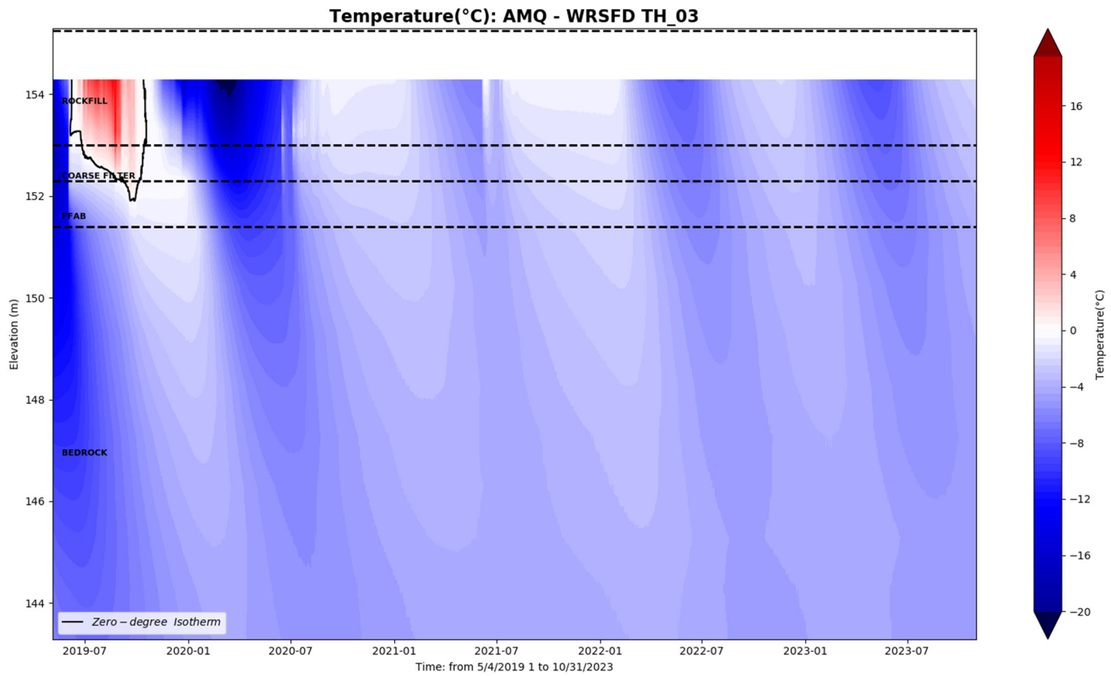


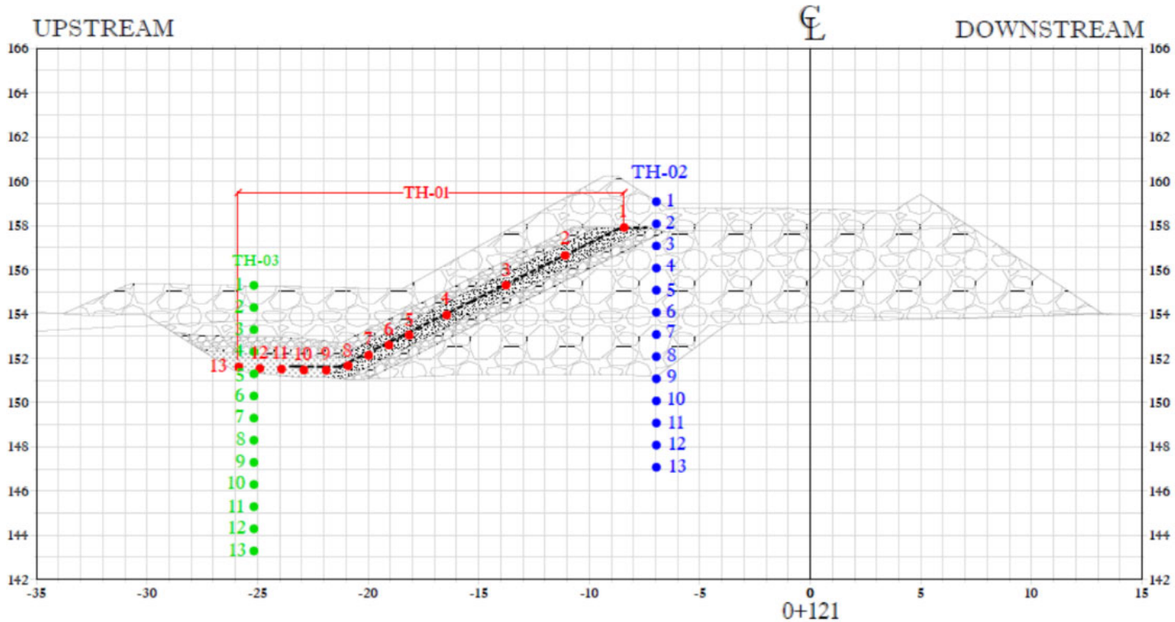
WRSFD TH03



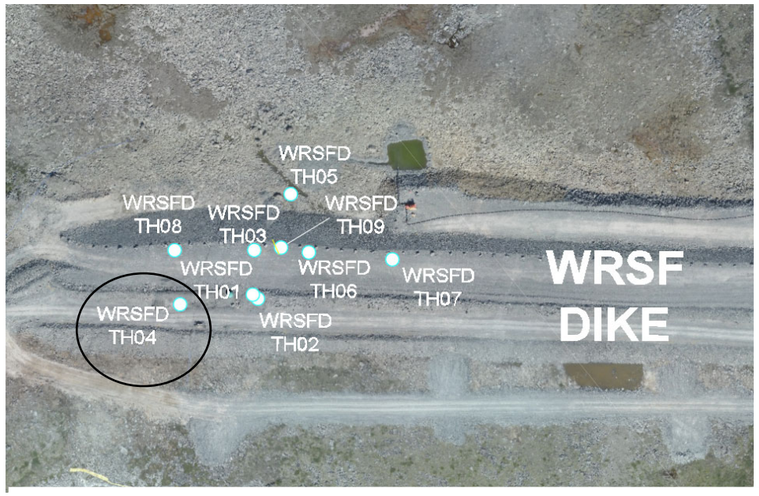
AMQ – WRSFD TH_03



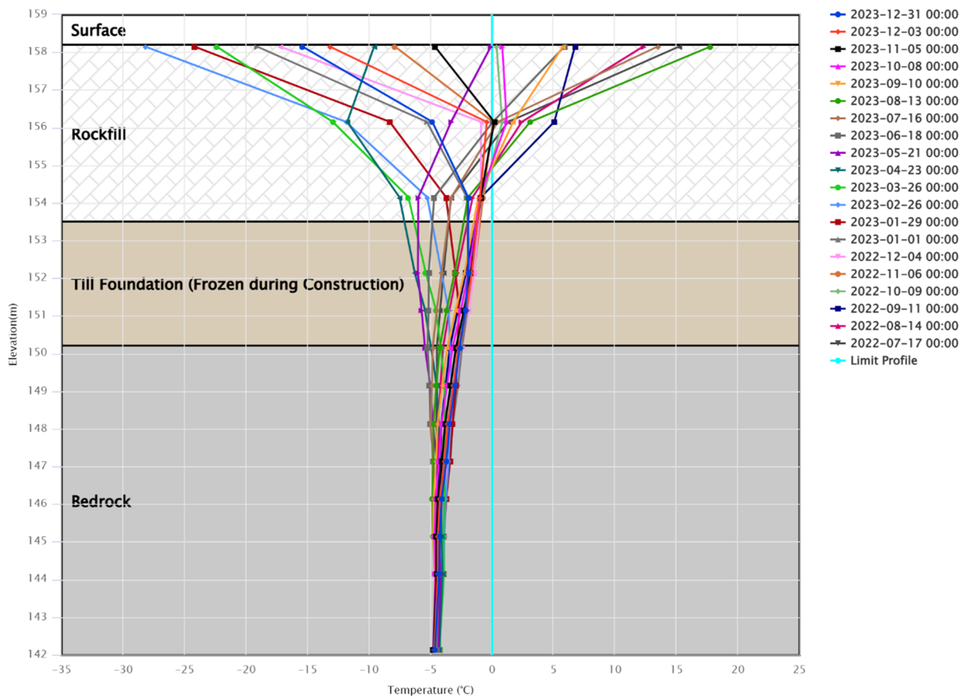


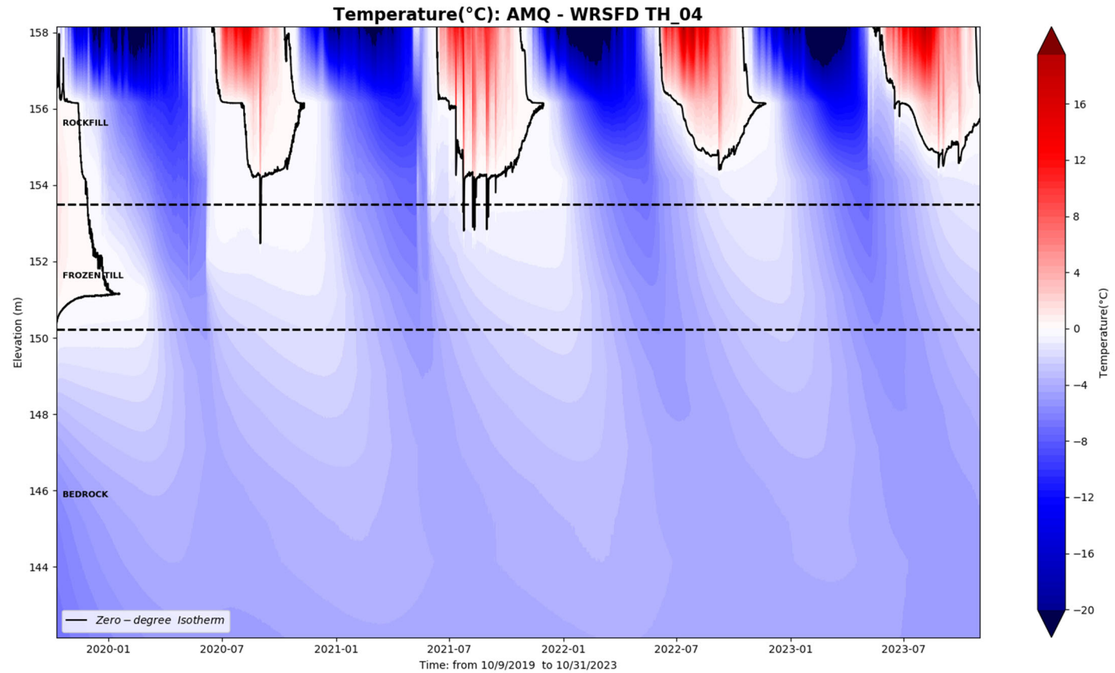


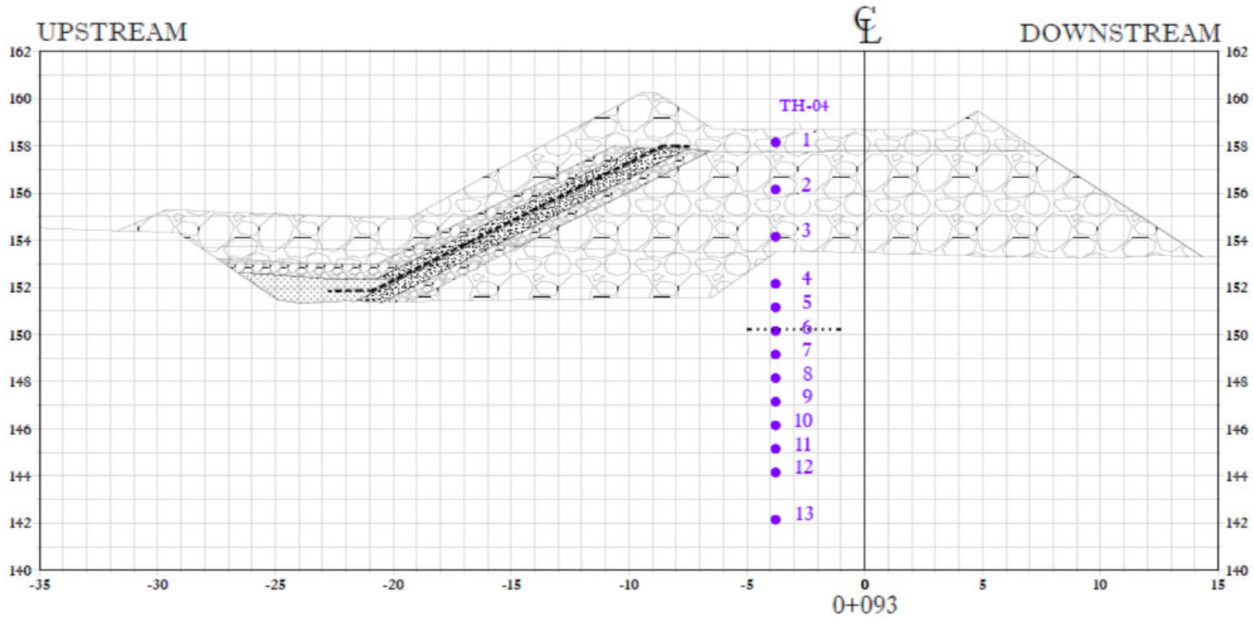
WRSFD TH04



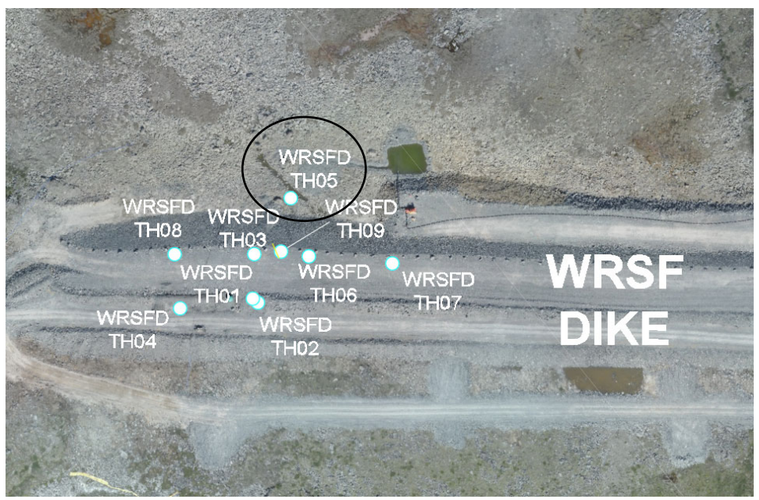
AMQ – WRSFD TH_04

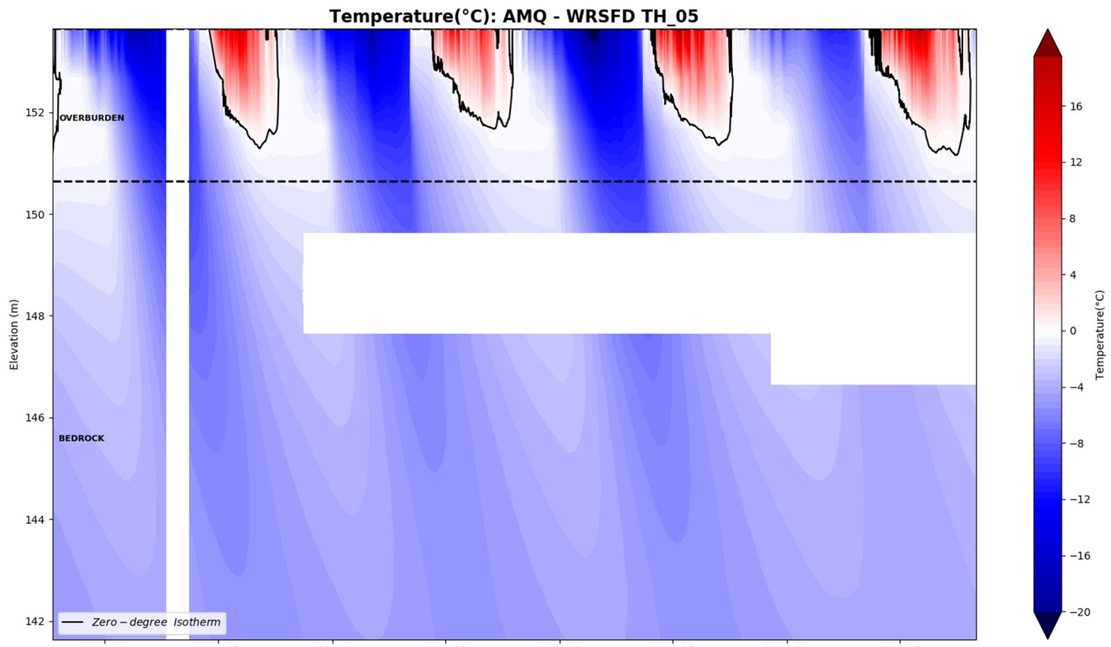


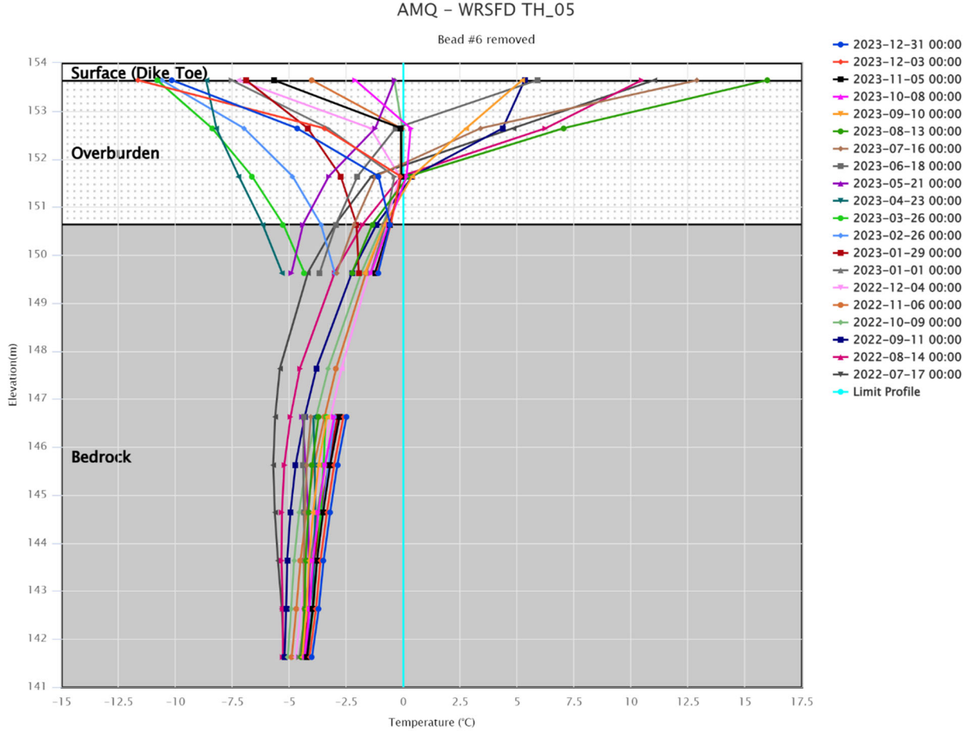


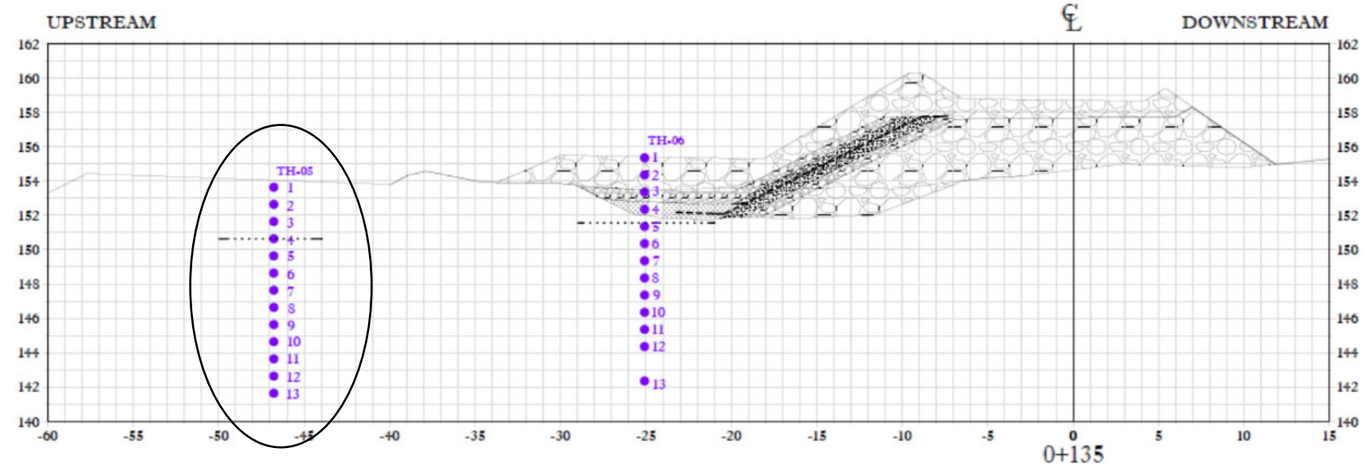


WRSFD TH05

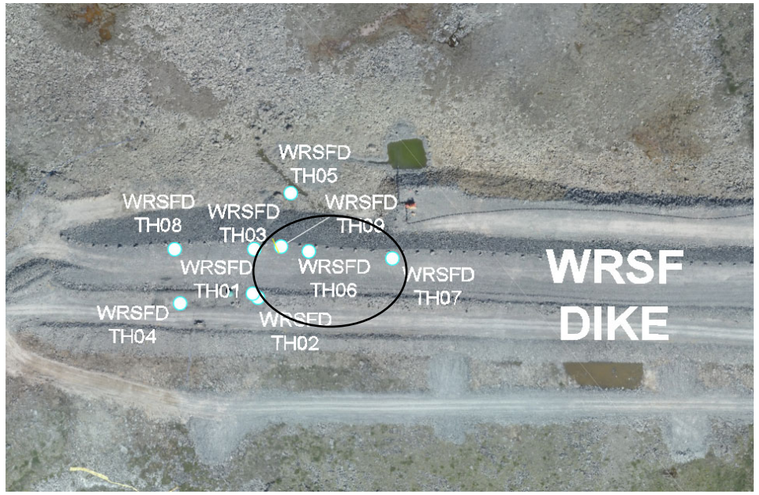

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE


Temperature(°C): AMQ - WRSFD TH_05
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 10/9/2019 to 10/31/2023

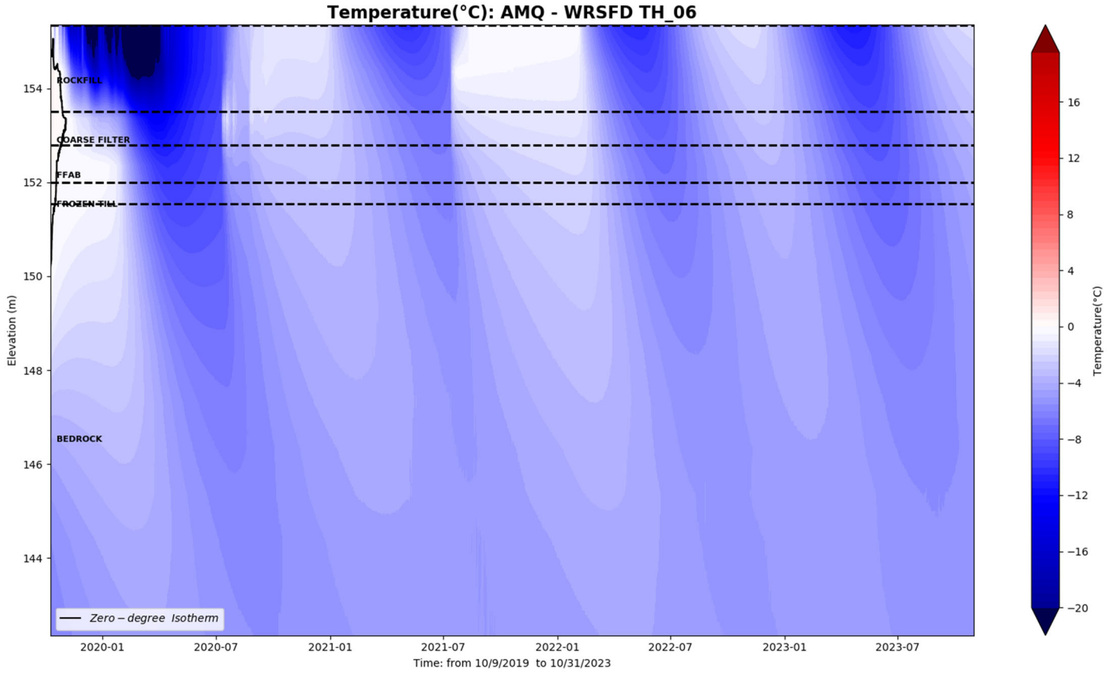

AMQ – WRSFD TH_05
Bead #6 removed
Surface (Dike Toe)
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

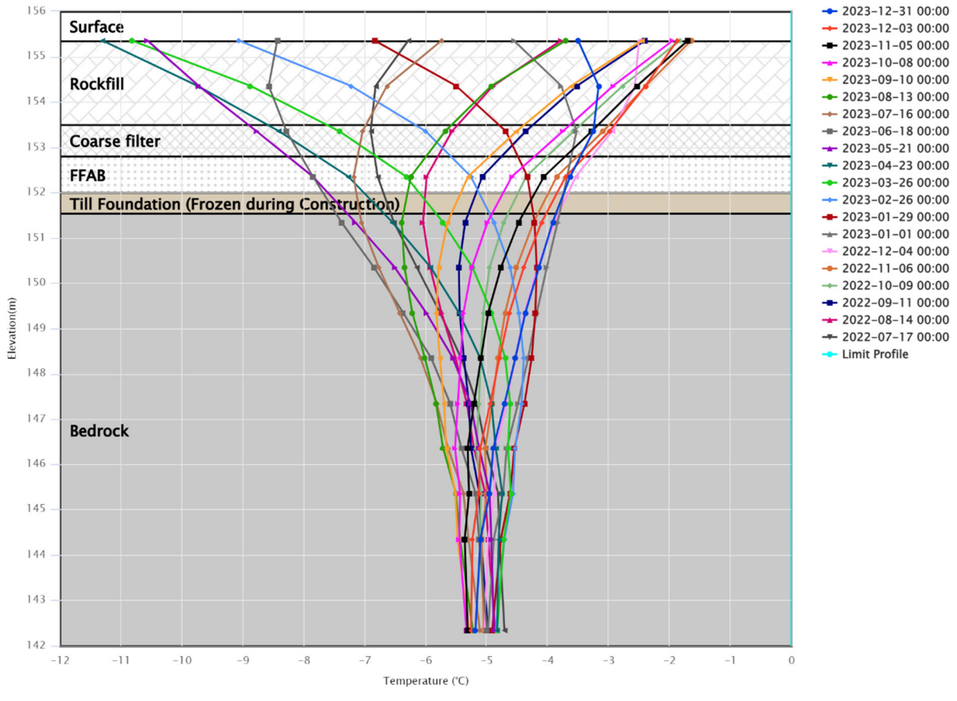

UPSTREAM
DOWNSTREAM
TH-05
TH-06
0+135

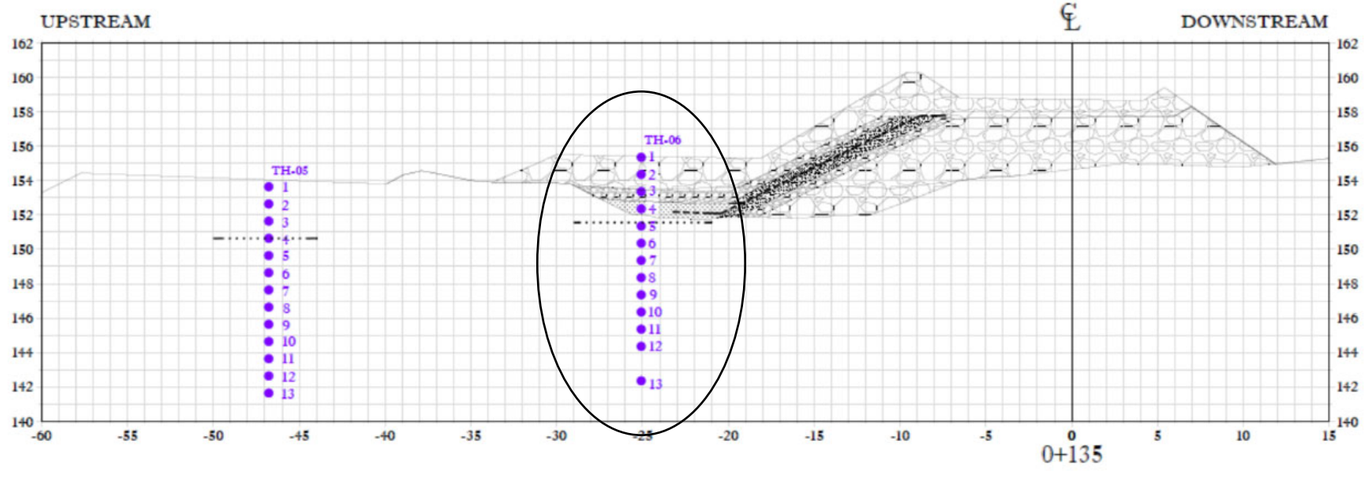
WRSFD TH06



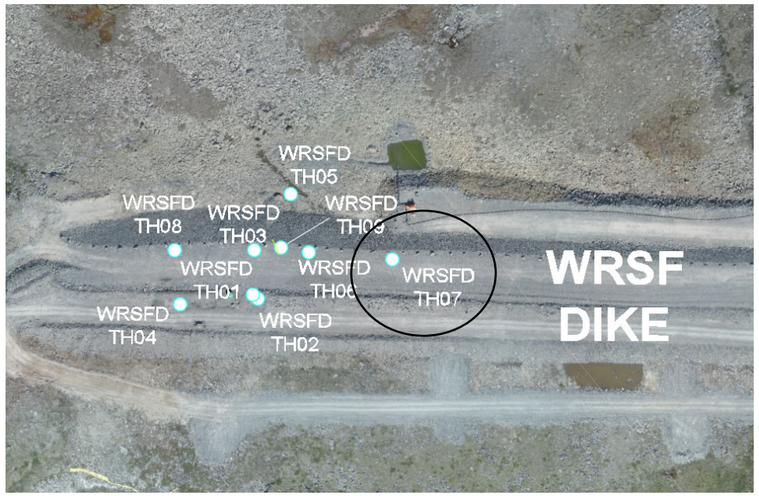
AMQ – WRSFD TH_06

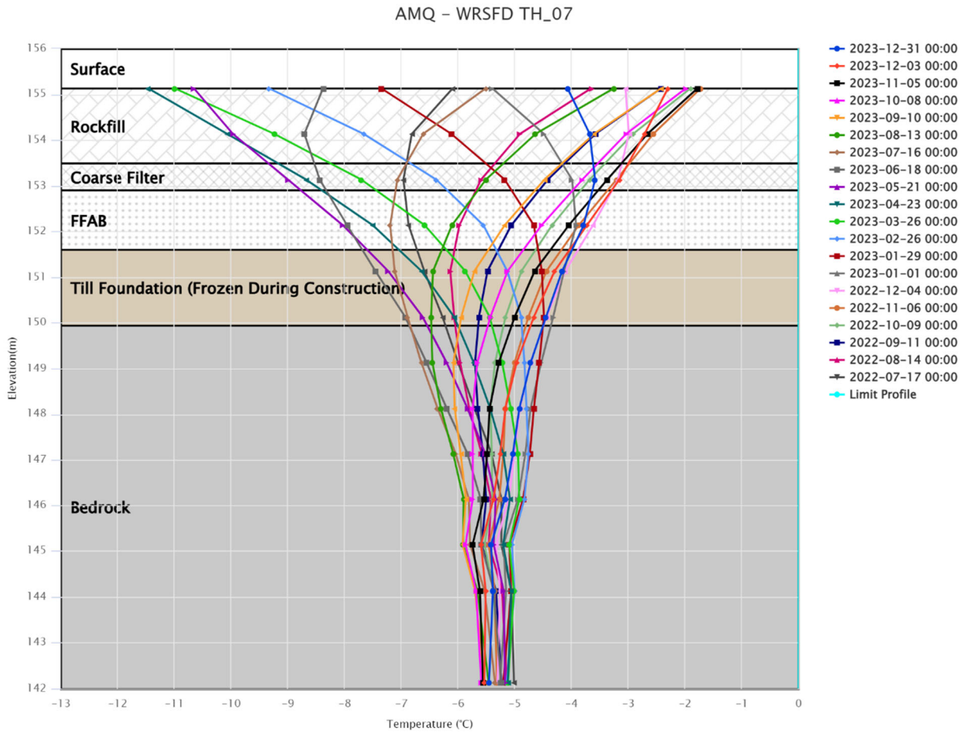


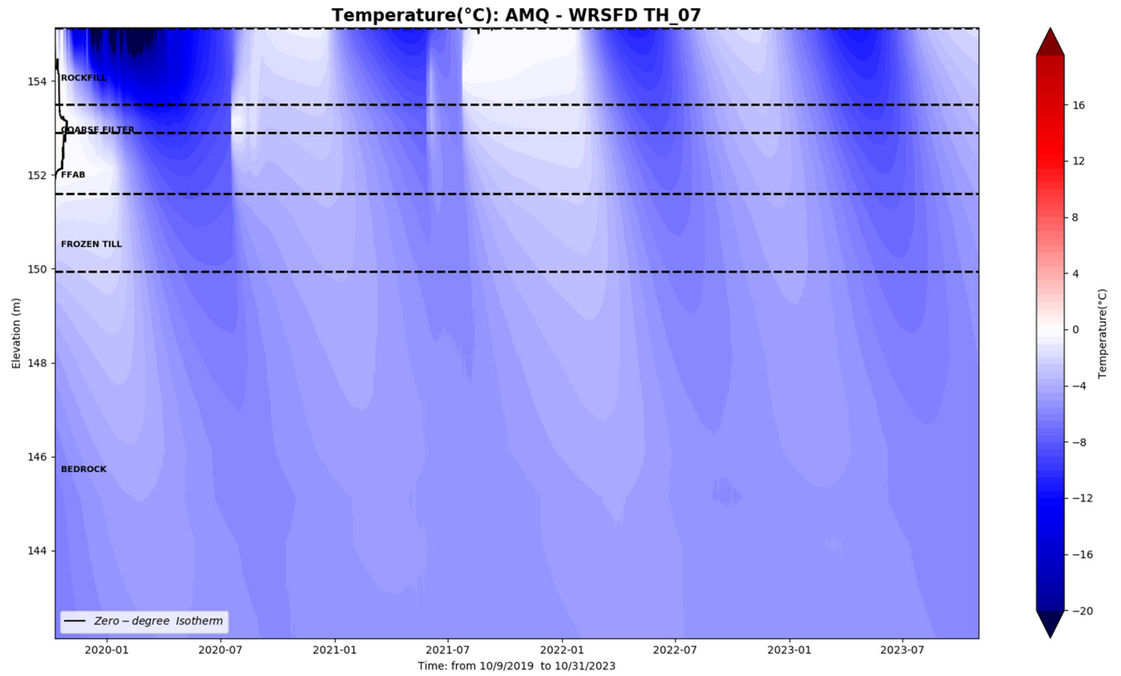


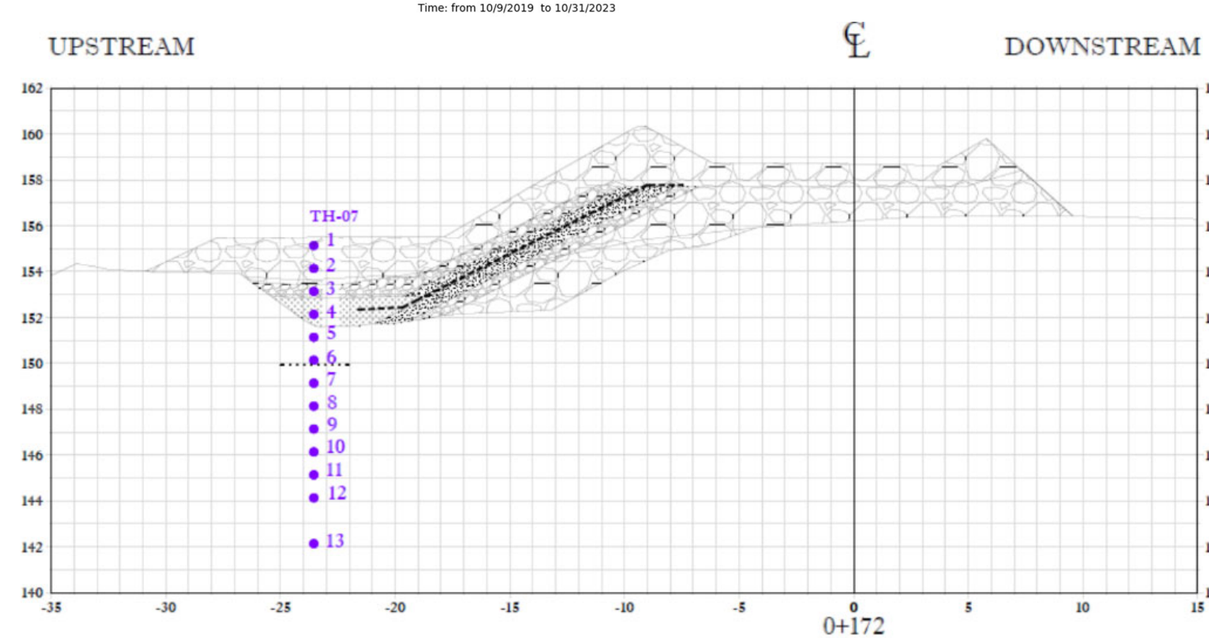


WRSFD TH07

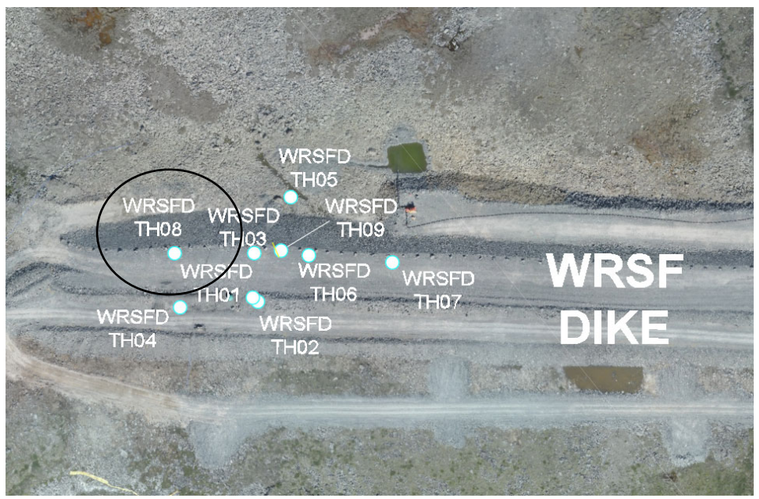

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE


AMQ – WRSFD TH_07
Surface
Rockfill
Coarse Filter
FFAB
Till Foundation (Frozen During Construction)
Bedrock
Elevation(m)
Temperature (°C)
2023-12-31 00:00
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
2022-10-09 00:00
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile


Temperature(°C): AMQ - WRSFD TH_07
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 10/9/2019 to 10/31/2023
Temperature(°C)

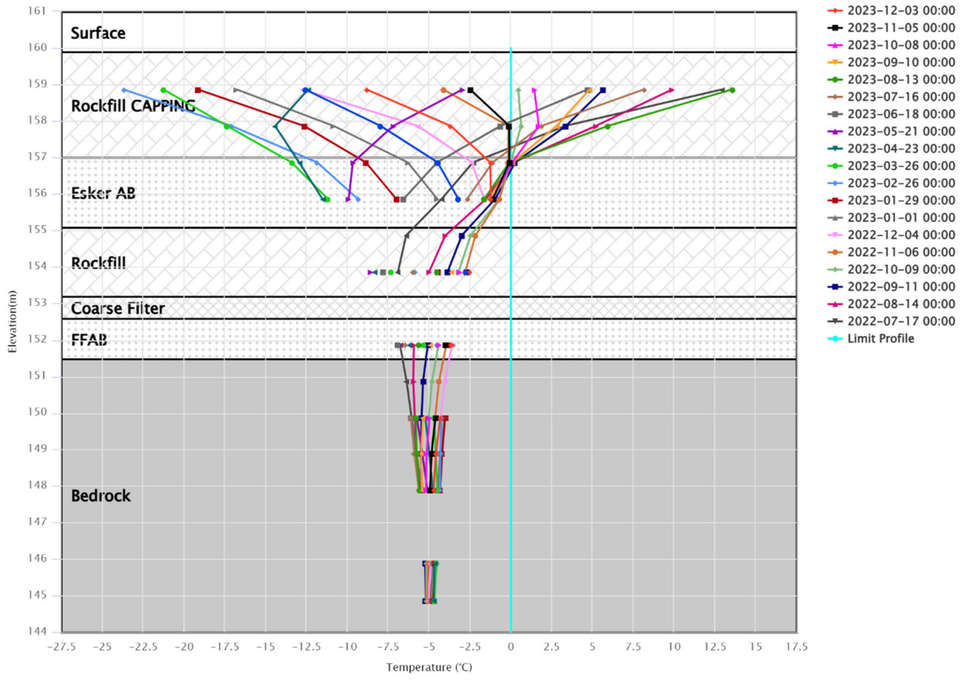

UPSTREAM
DOWNSTREAM
TH-07
1
2
3
4
5
6
7
8
9
10
11
12
13
0+172

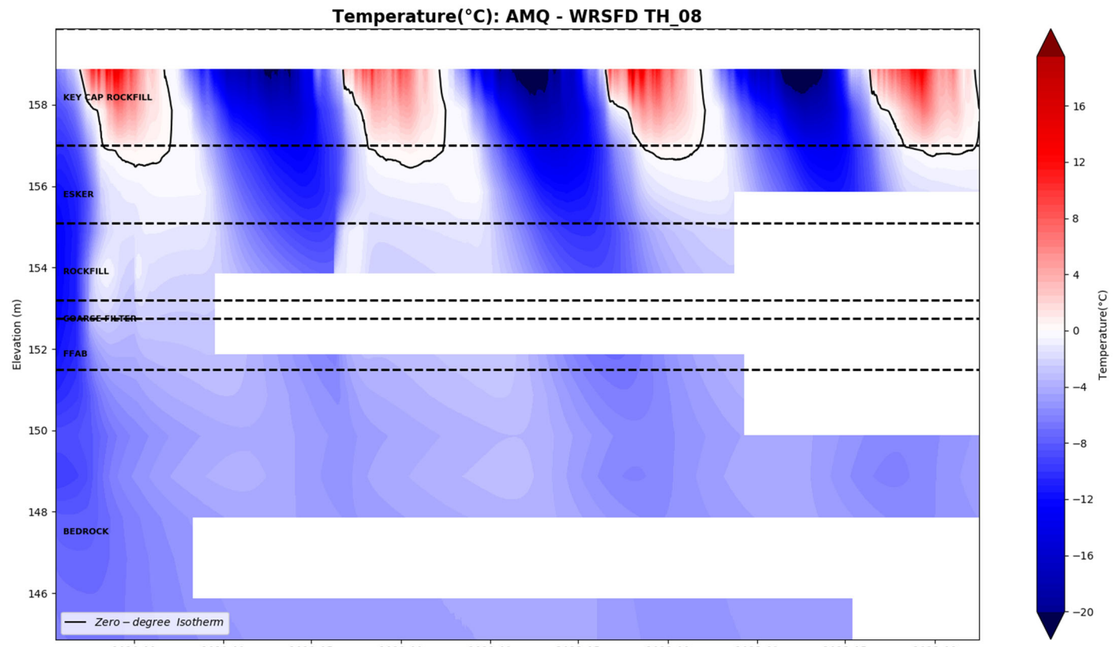
WRSFD TH08

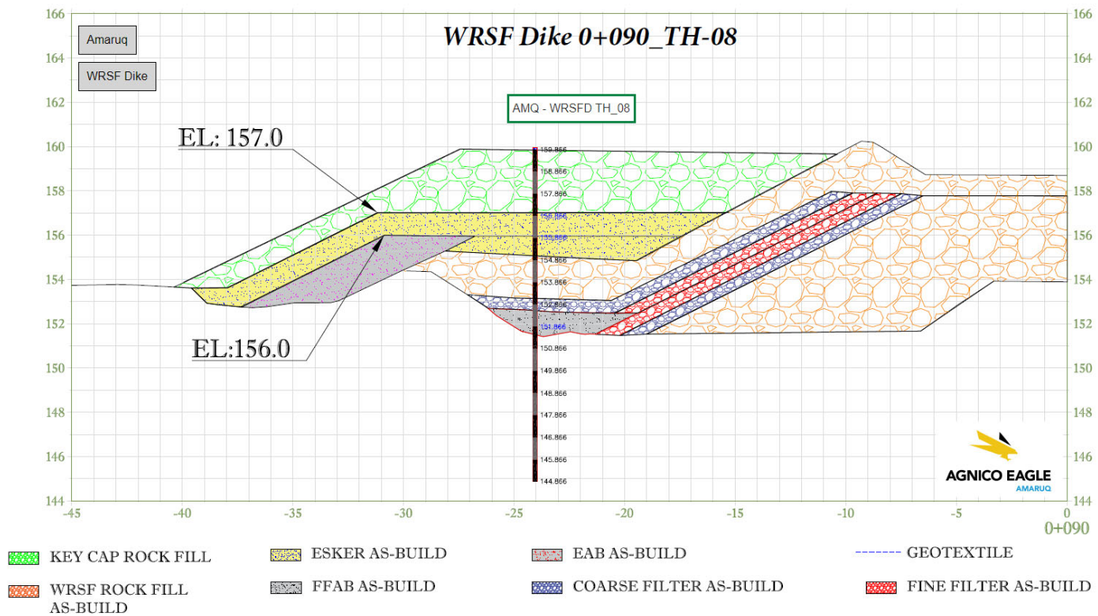


AMQ – WRSFD TH_08

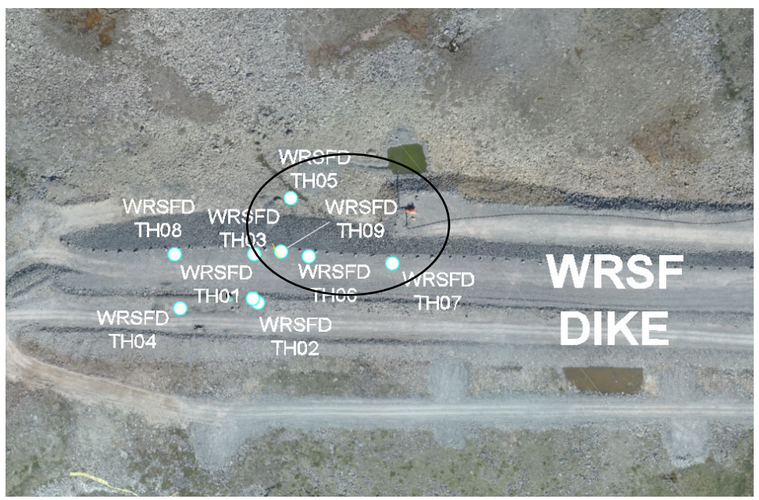
Bead #1, #6, #8, #10 and #14 Damaged

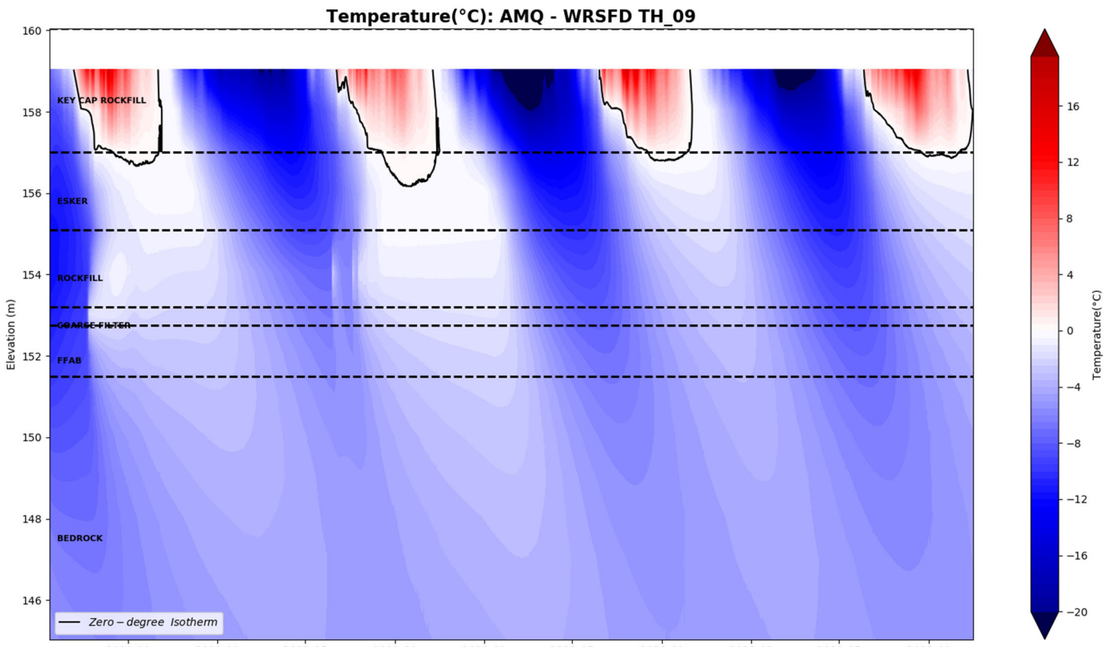


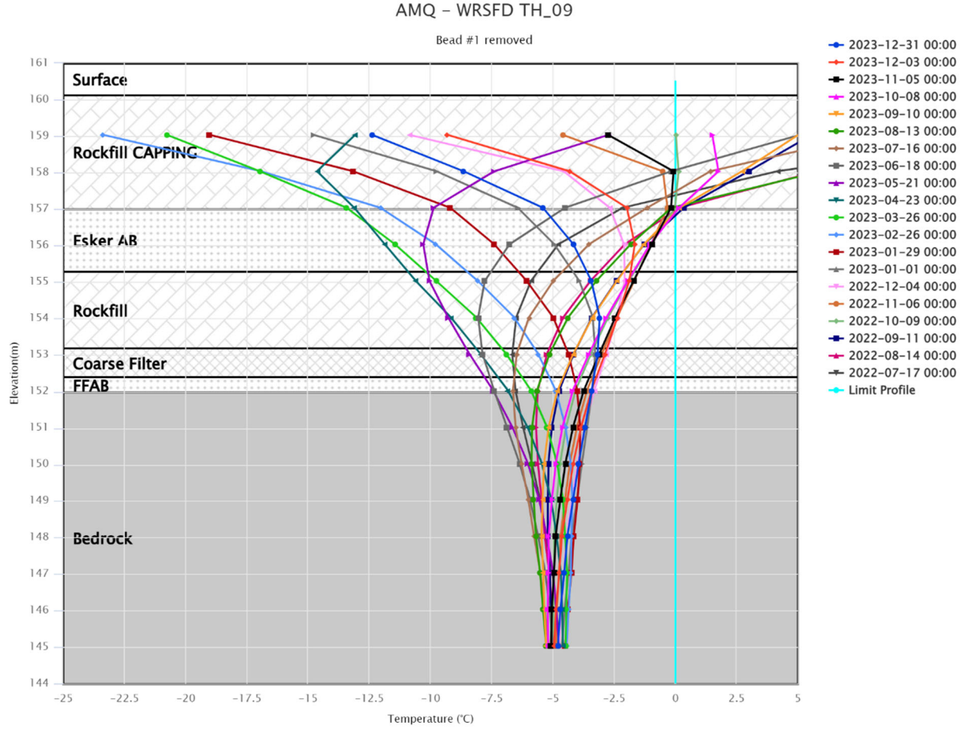




WRSFD TH09


WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE


Temperature(°C): AMQ - WRSFD TH_09
KEY CAP ROCKFILL
ESKER
ROCKFILL
COARSE FILTER
FFAB
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/16/2020 to 10/31/2023


AMQ – WRSFD TH_09
Bead #1 removed
Surface
Rockfill CAPPING
Esker AB
Rockfill
Coarse Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
2023-12-03 00:00
2023-11-05 00:00
2023-10-08 00:00
2023-09-10 00:00
2023-08-13 00:00
2023-07-16 00:00
2023-06-18 00:00
2023-05-21 00:00
2023-04-23 00:00
2023-03-26 00:00
2023-02-26 00:00
2023-01-29 00:00
2023-01-01 00:00
2022-12-04 00:00
2022-11-06 00:00
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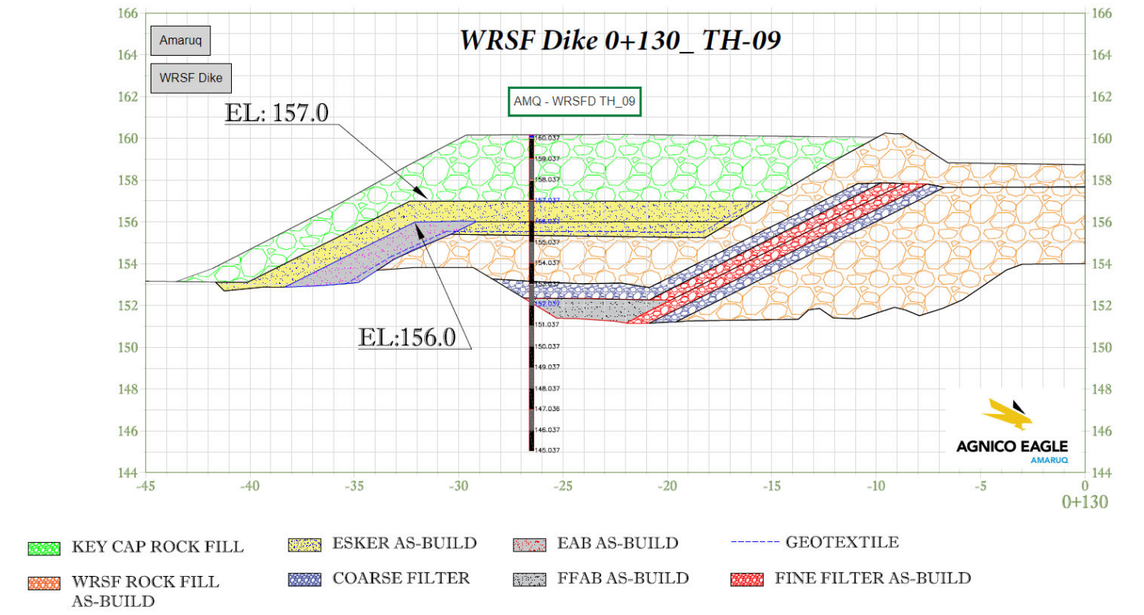
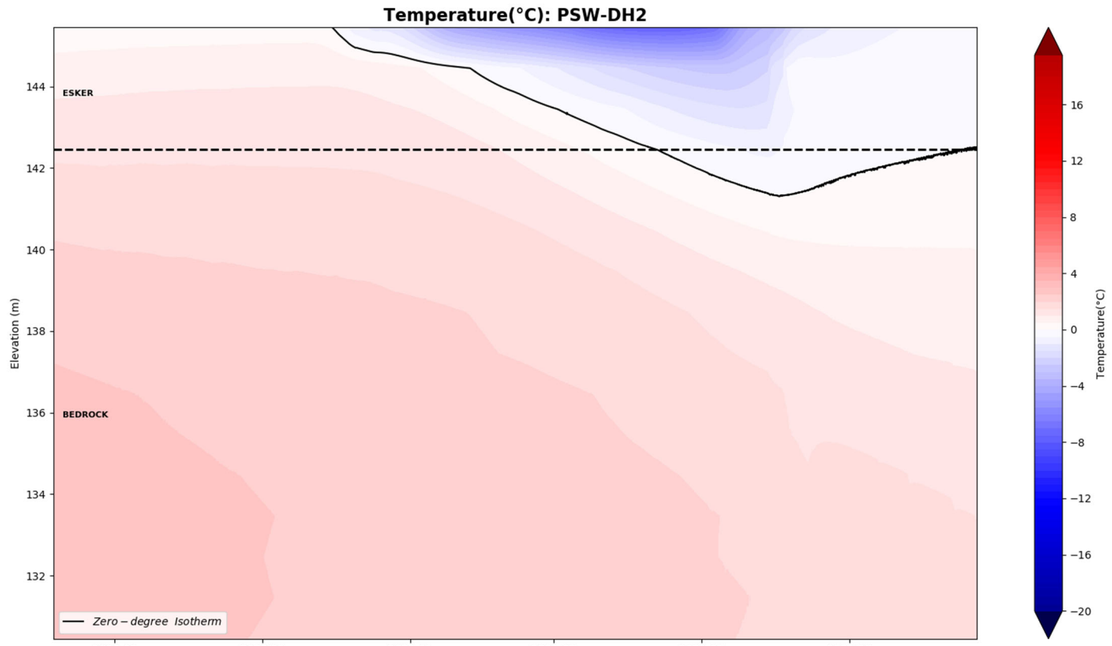
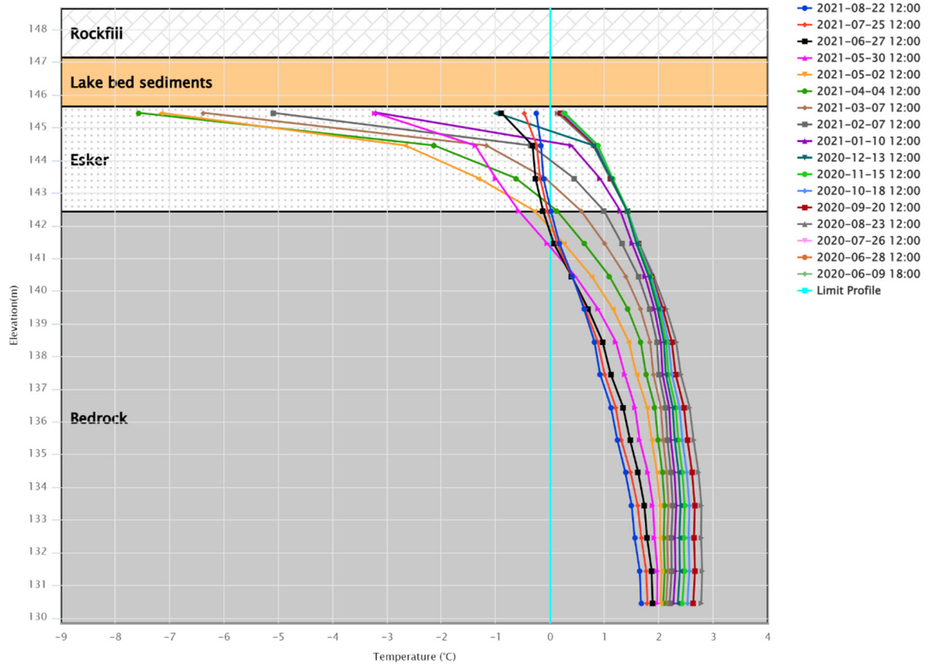
2022-09-11 00:00
2022-08-14 00:00
2022-07-17 00:00
Limit Profile

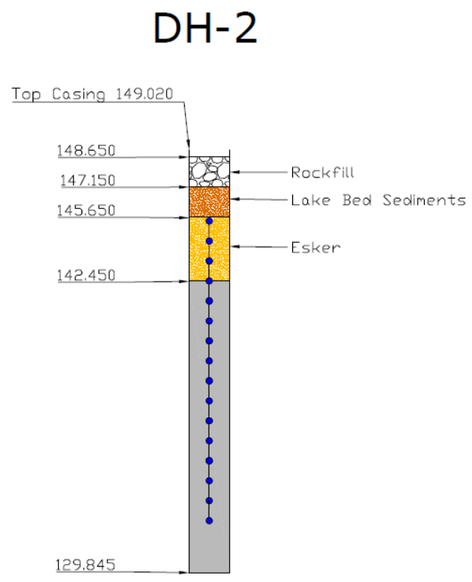

Amaruq
WRSF Dike
WRSF Dike 0+130_ TH-09
AMQ - WRSFD TH_09
EL: 157.0
EL:156.0
AGNICO EAGLE
AMARUQ
0+130
KEY CAP ROCK FILL
WRSF ROCK FILL AS-BUILD
ESKER AS-BUILD
COARSE FILTER
EAB AS-BUILD
FFAB AS-BUILD
GEOTEXTILE
FINE FILTER AS-BUILD

PSW – DH 2 TH

AMQ – PSW – DH02_TH

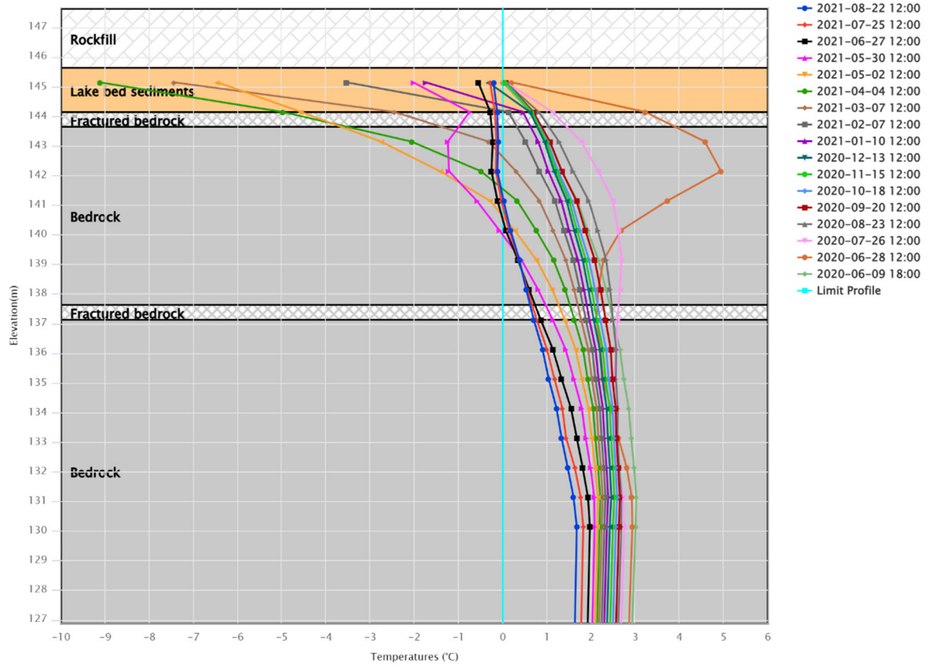


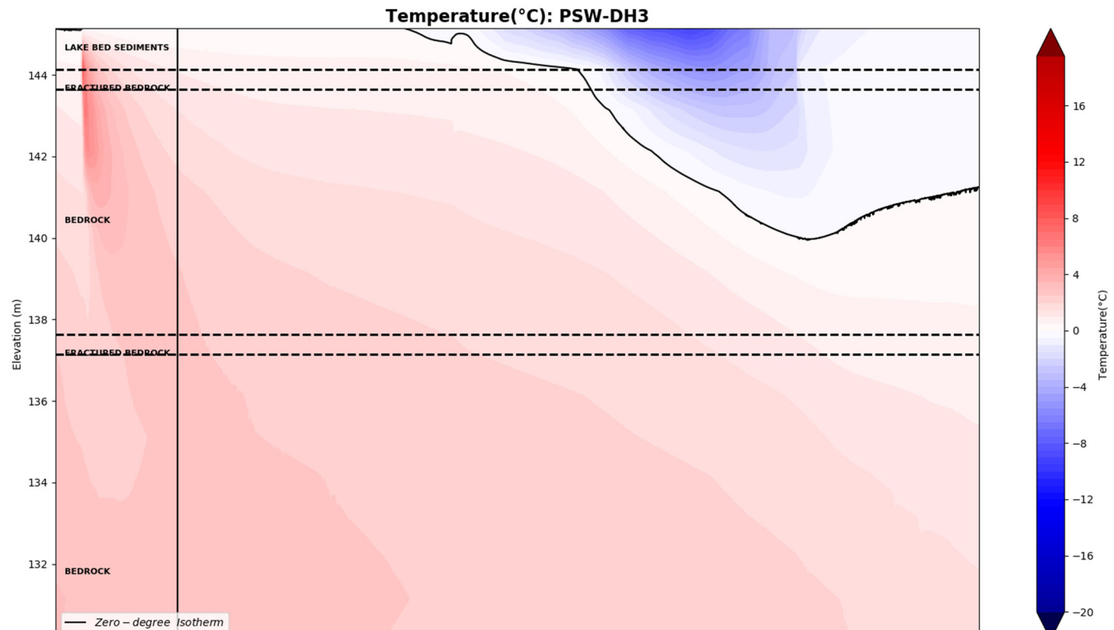


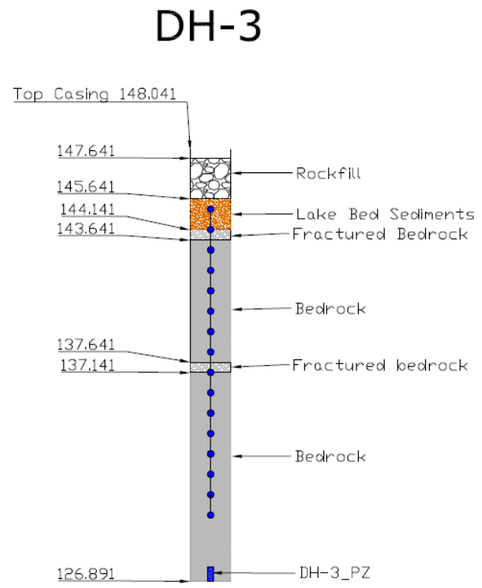


PSW – DH 3 TH

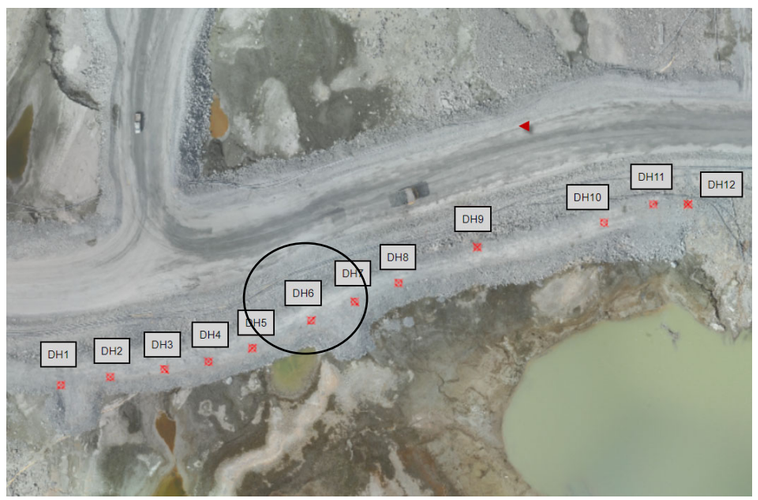
AMQ – PSW – DH03_TH



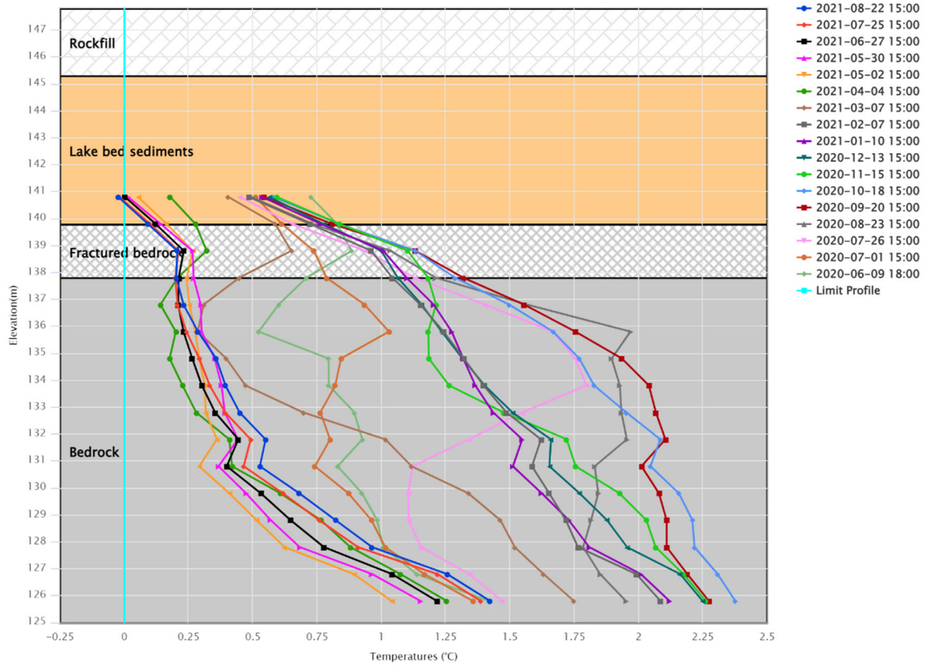


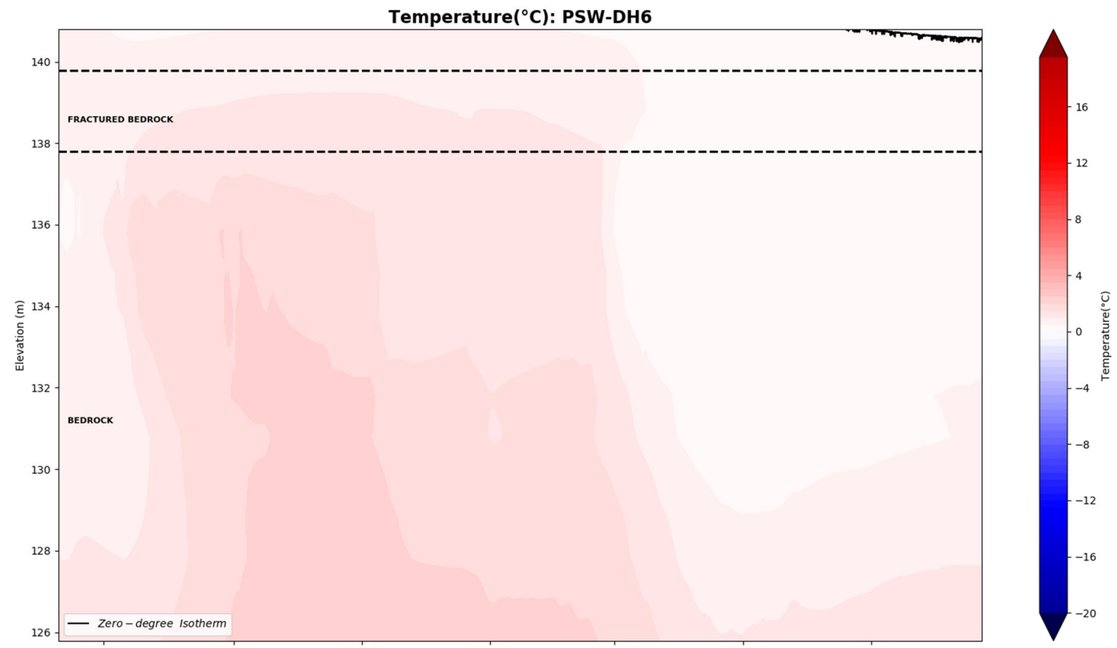


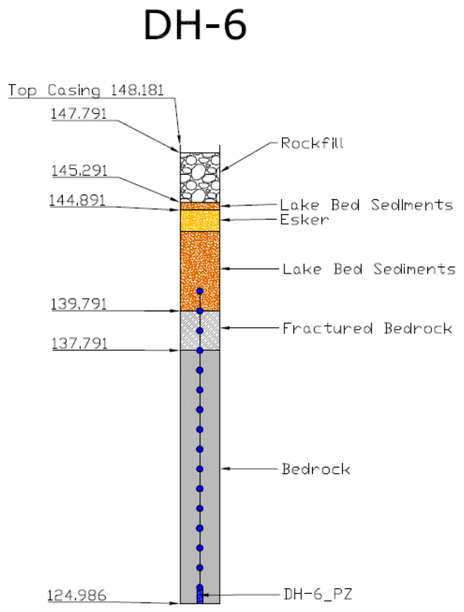
PSW – DH 6 TH



AMQ – PSW – DH06_TH

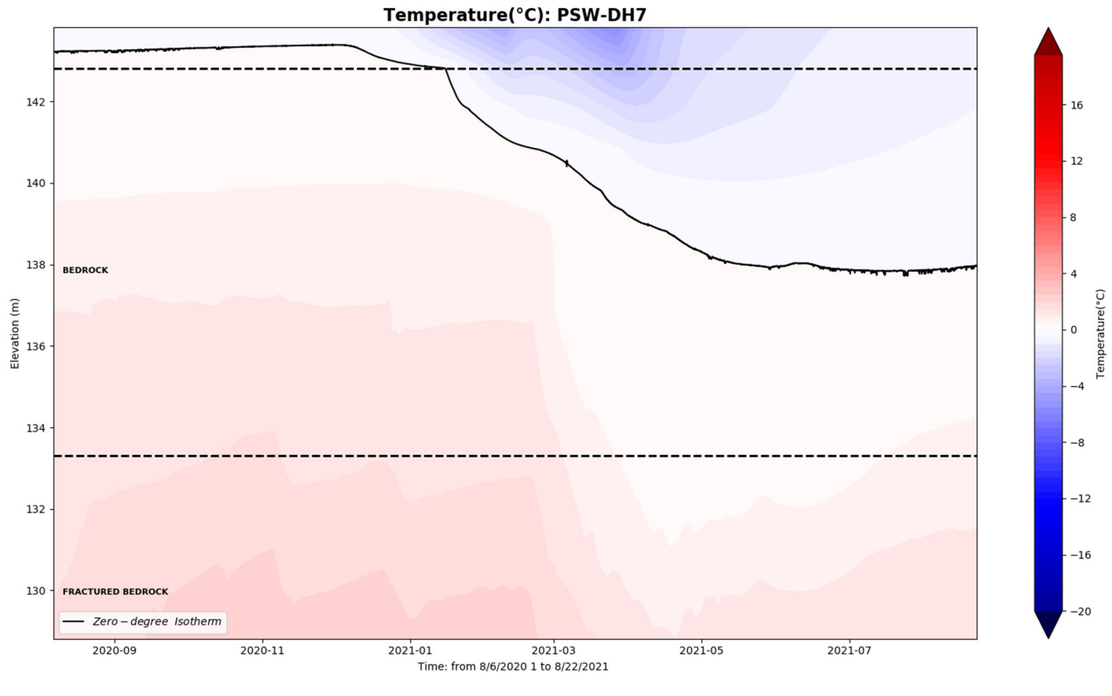


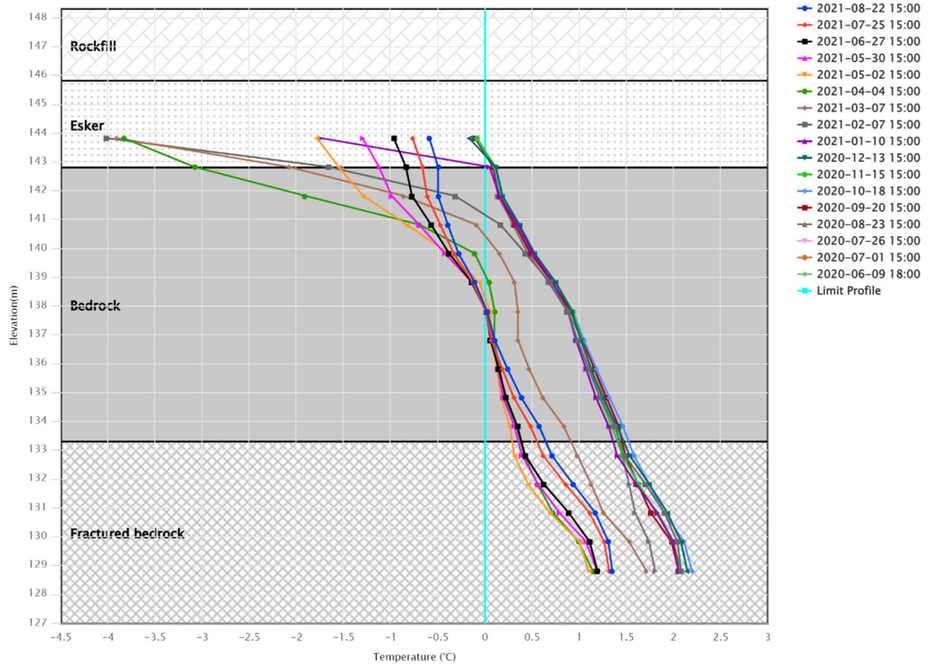


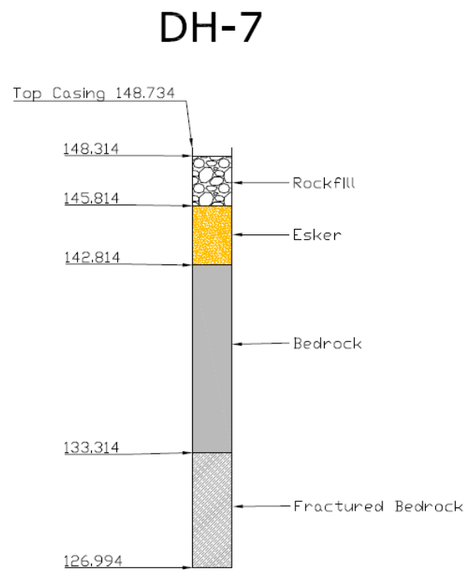


PSW – DH 7 TH

AMQ – PSW – DH07_TH

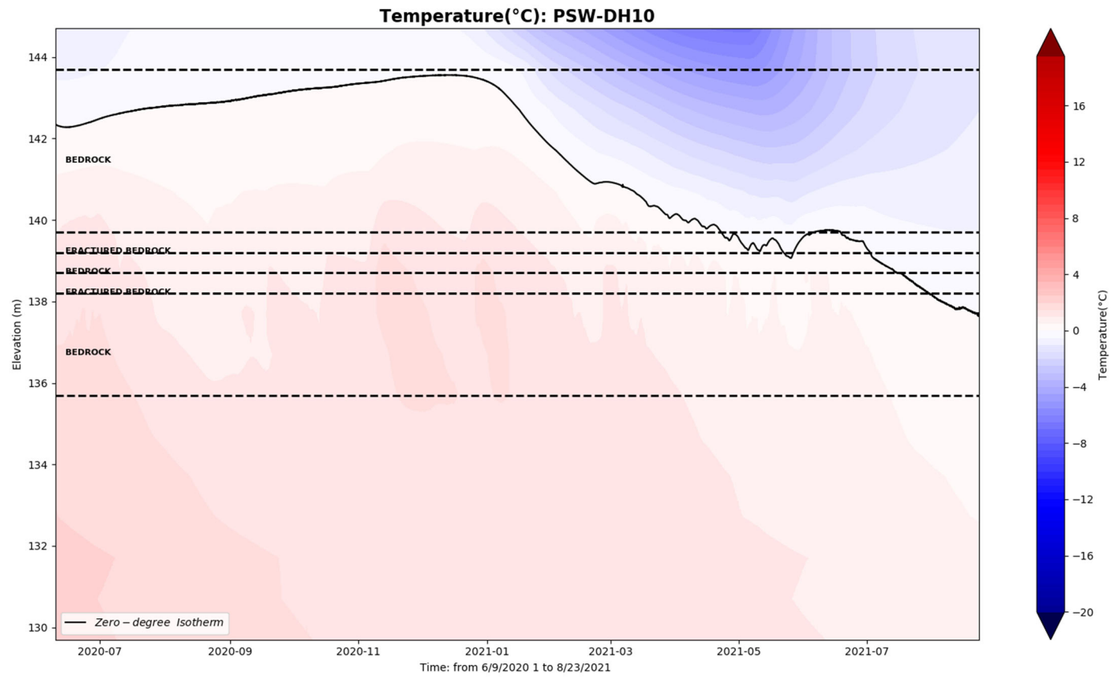


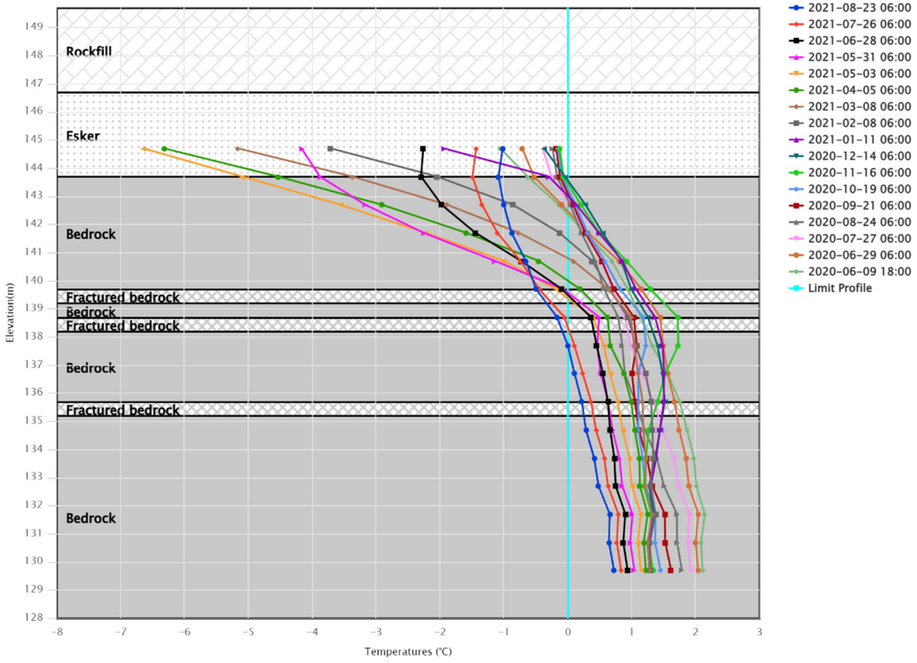


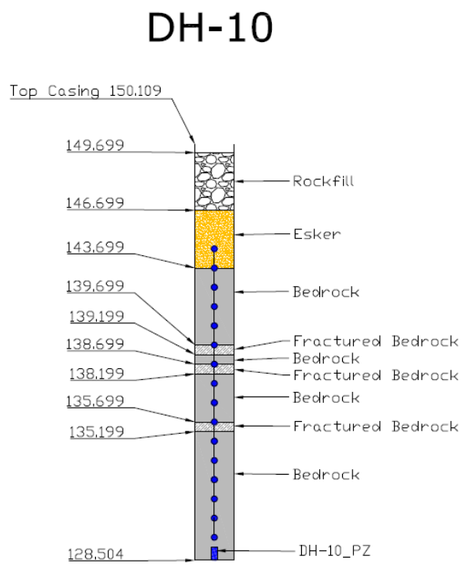


PSW – DH 10 TH

AMQ – PSW – DH10_TH

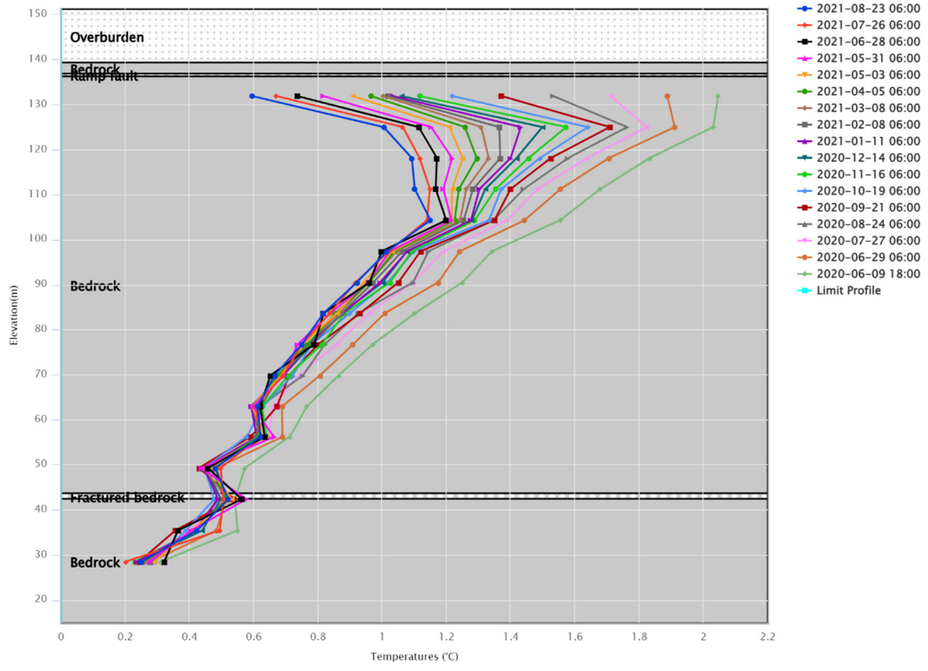


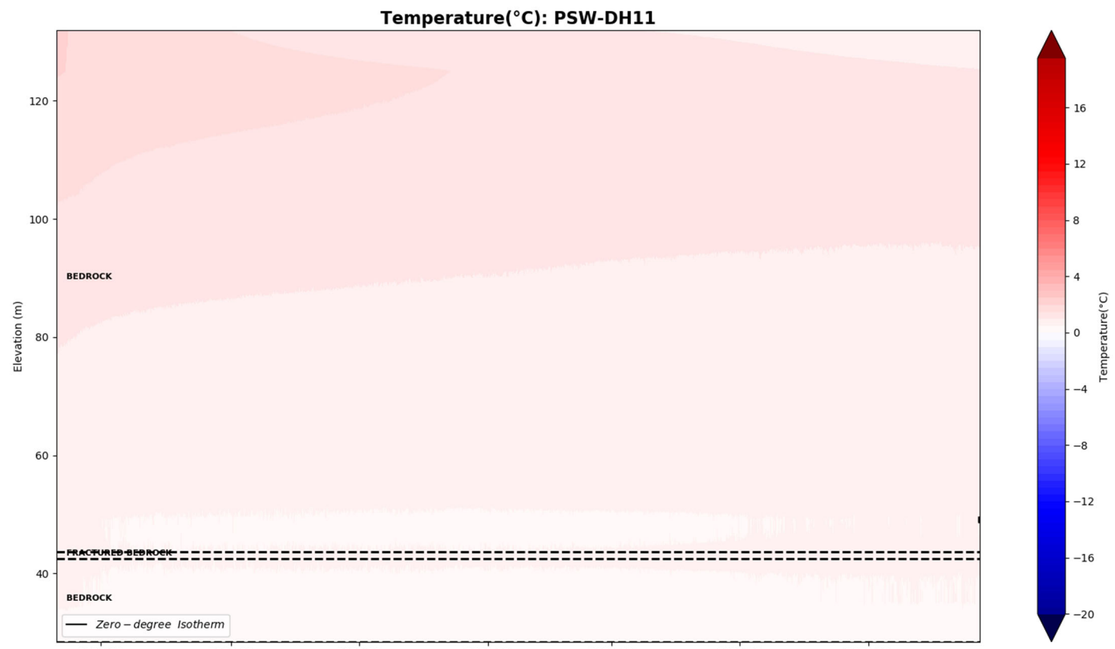


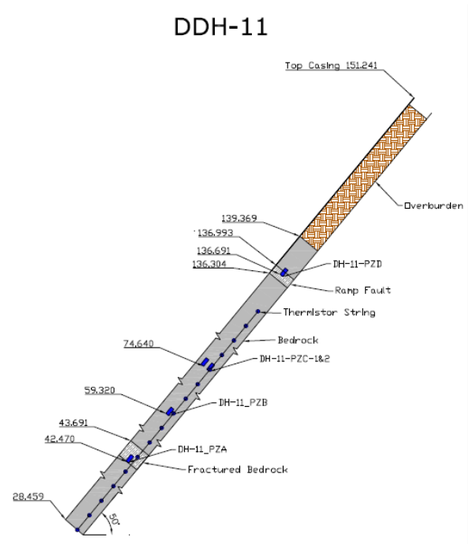


PSW – DH 11 TH

AMQ – PSW – DH11_TH

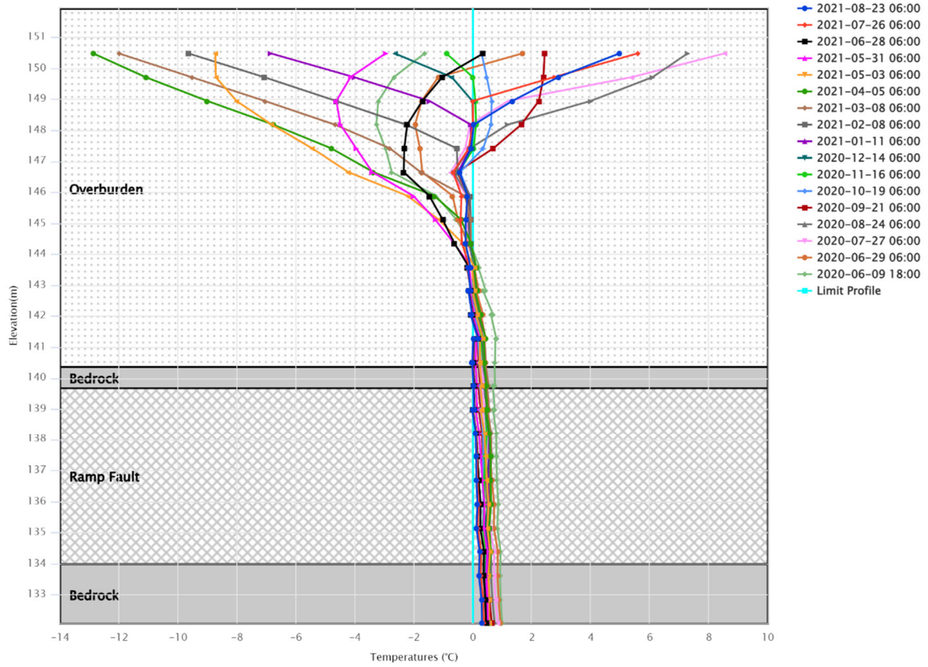


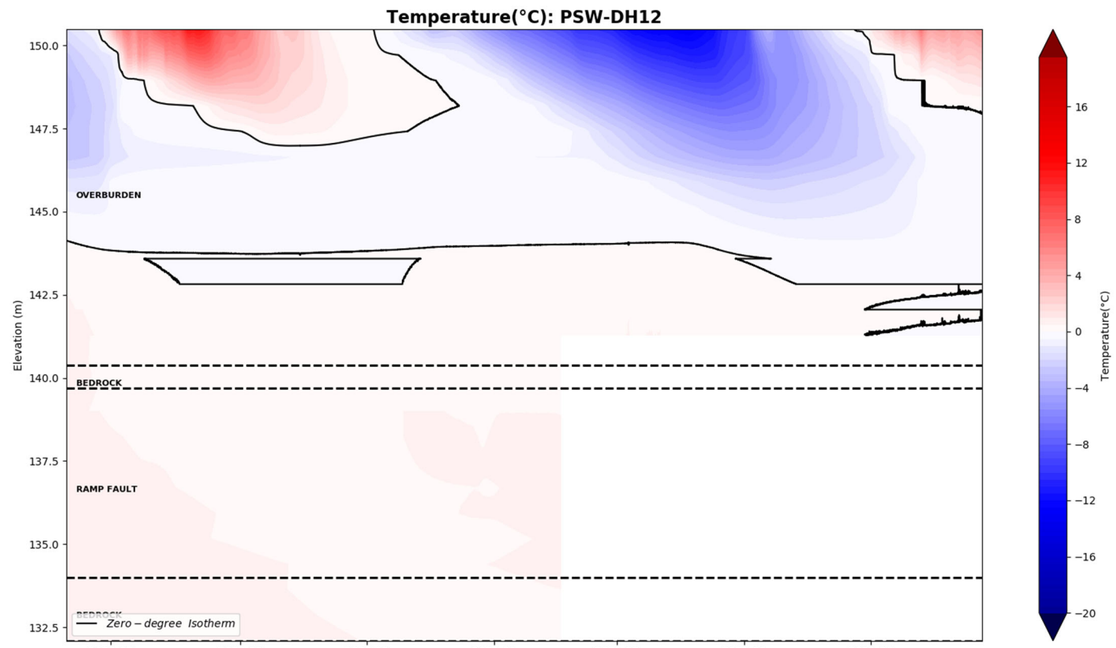


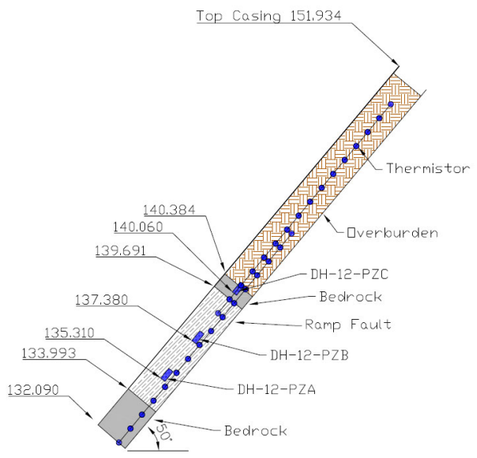


PSW – DH 12 TH

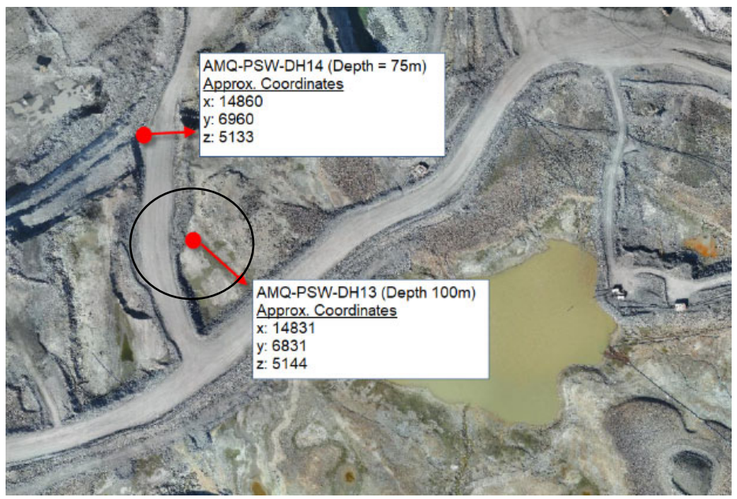
AMQ – PSW – DH12_TH



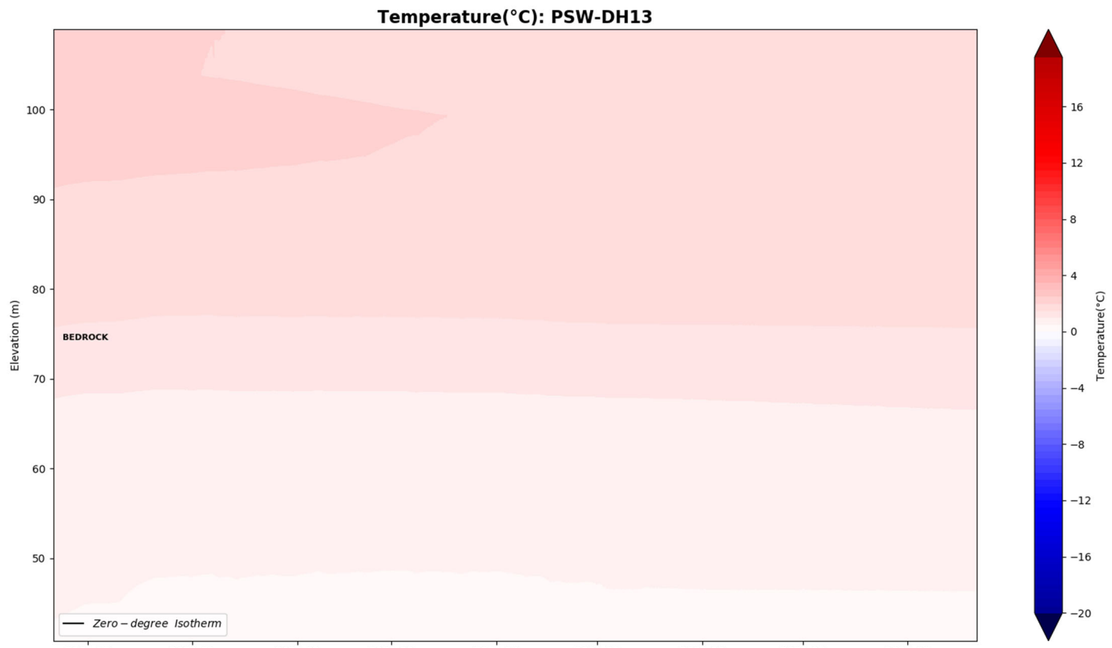


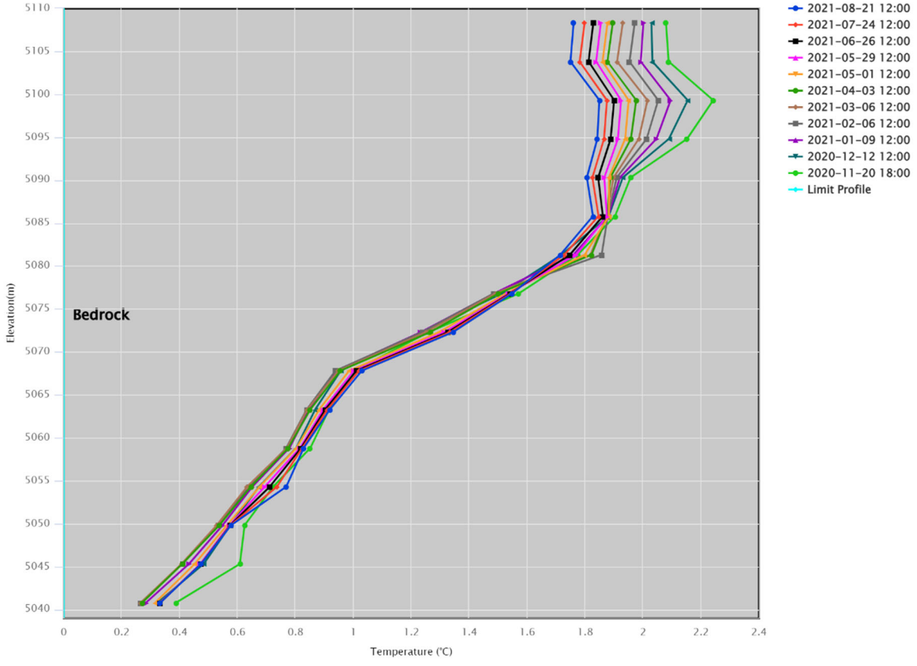


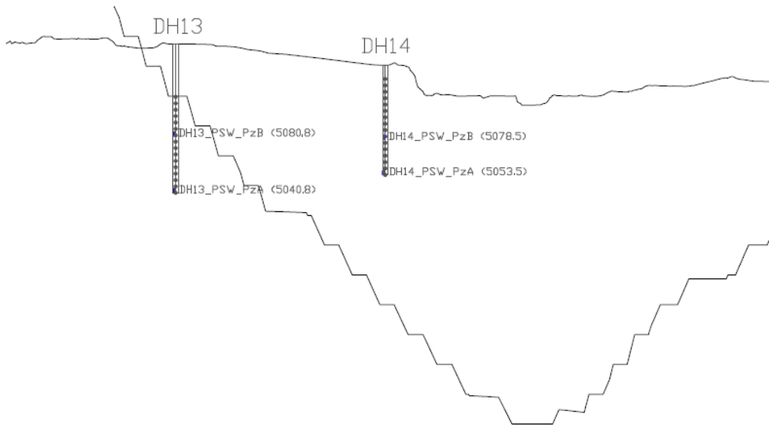
PSW – DH 13 TH



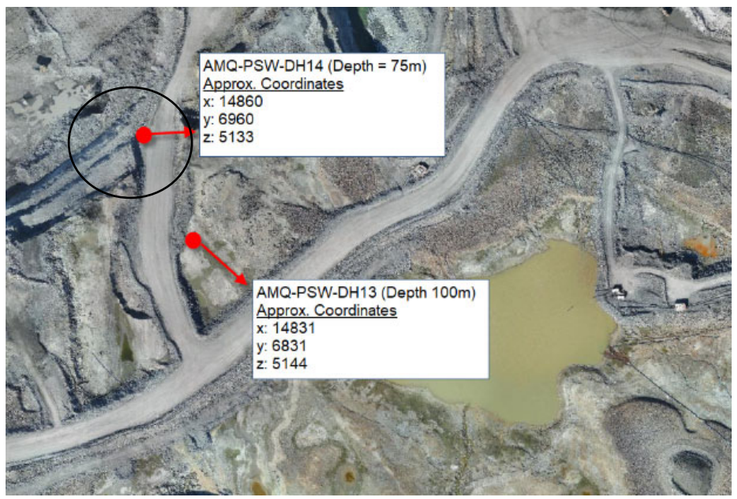
AMQ – PSW – DH13_TH



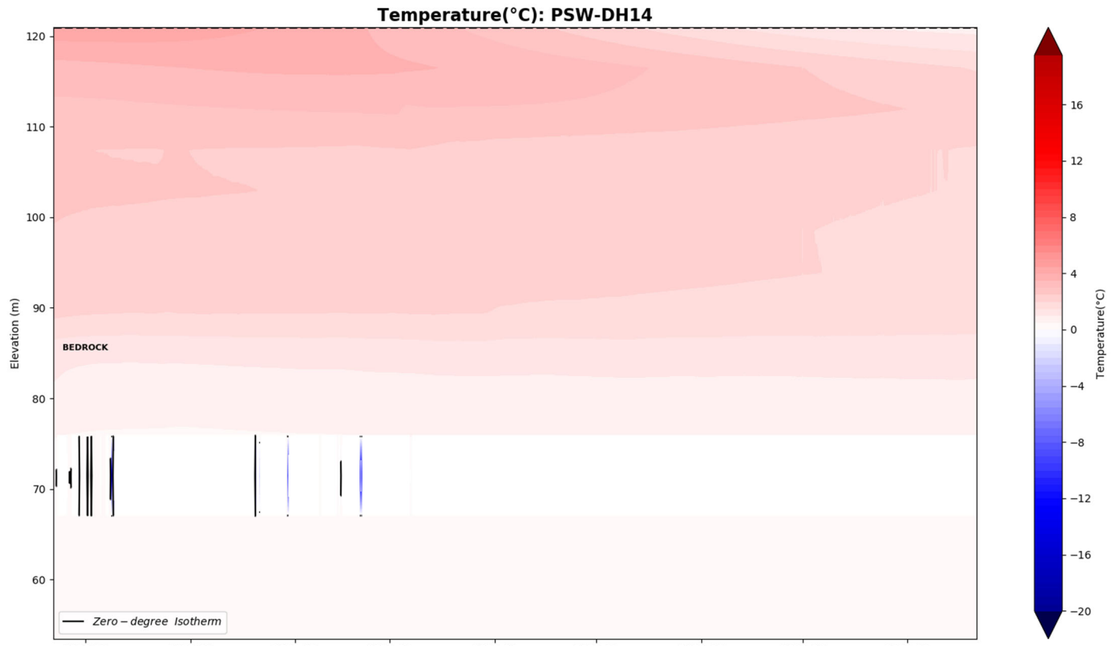


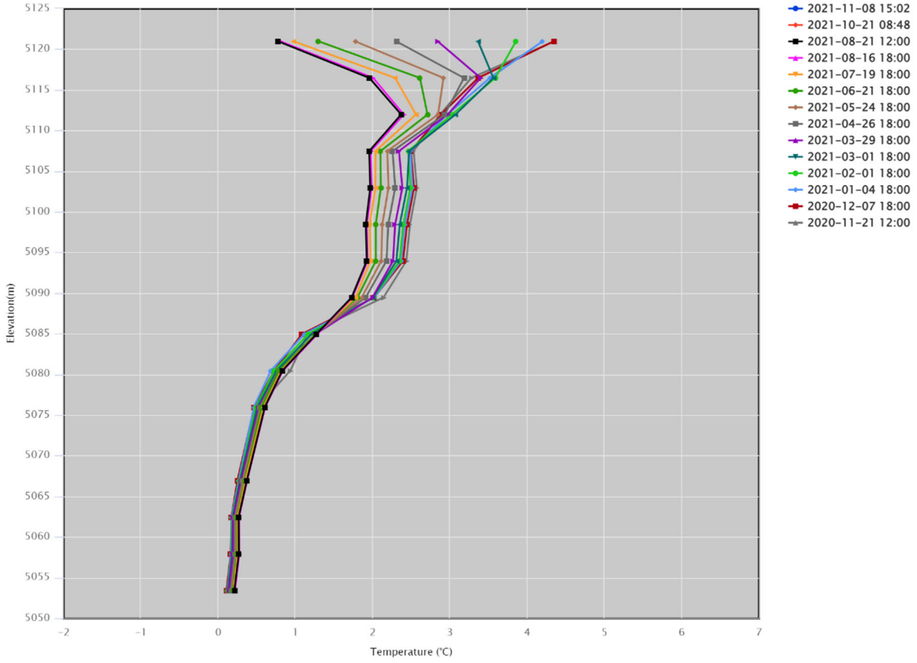


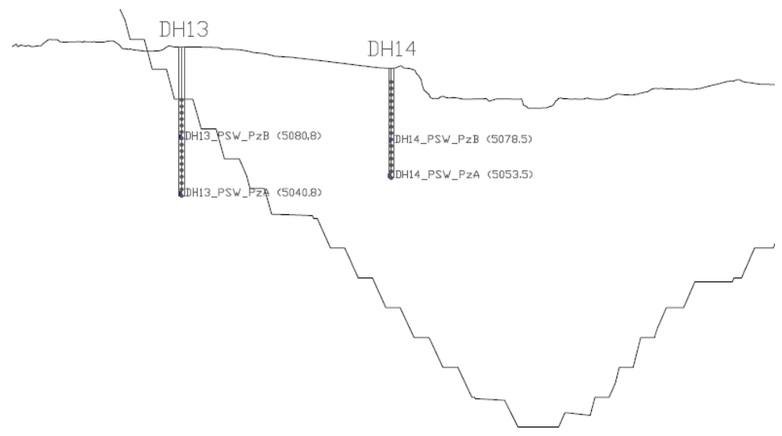
PSW – DH 14 TH



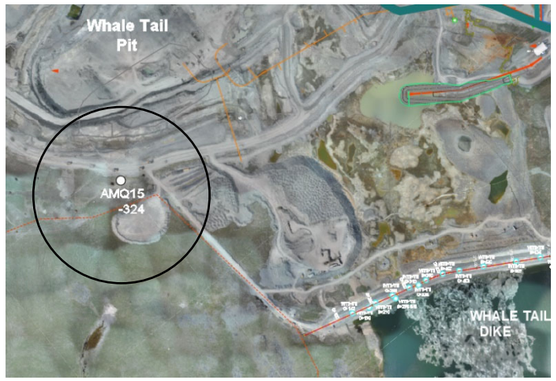
AMQ – PSW – DH14_TH

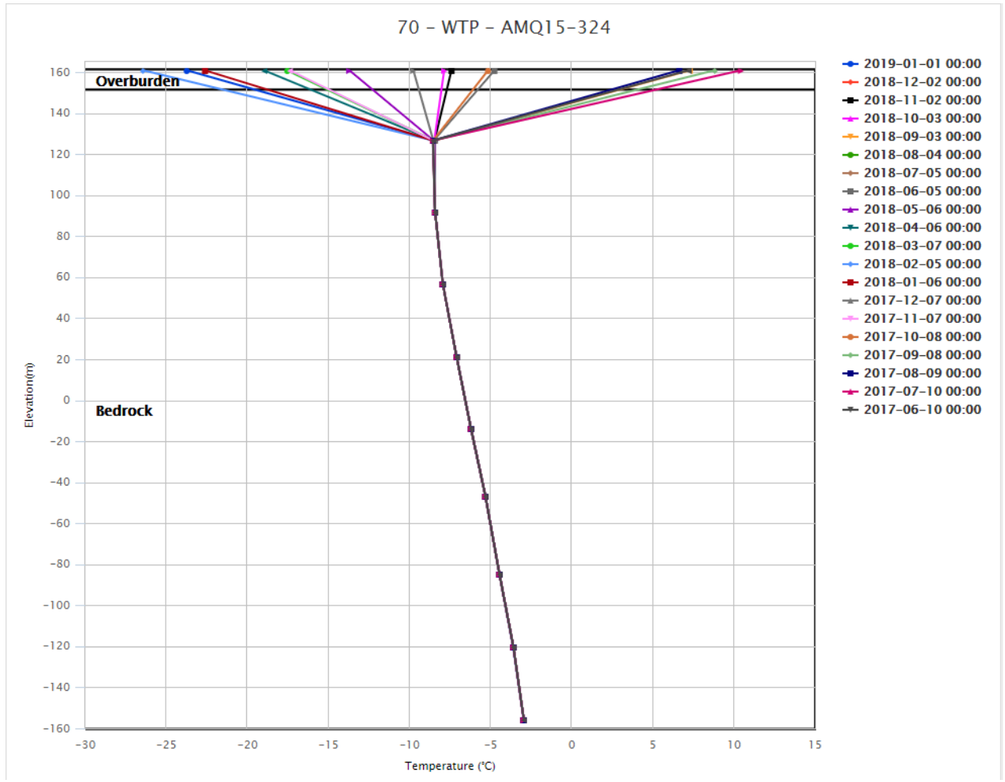


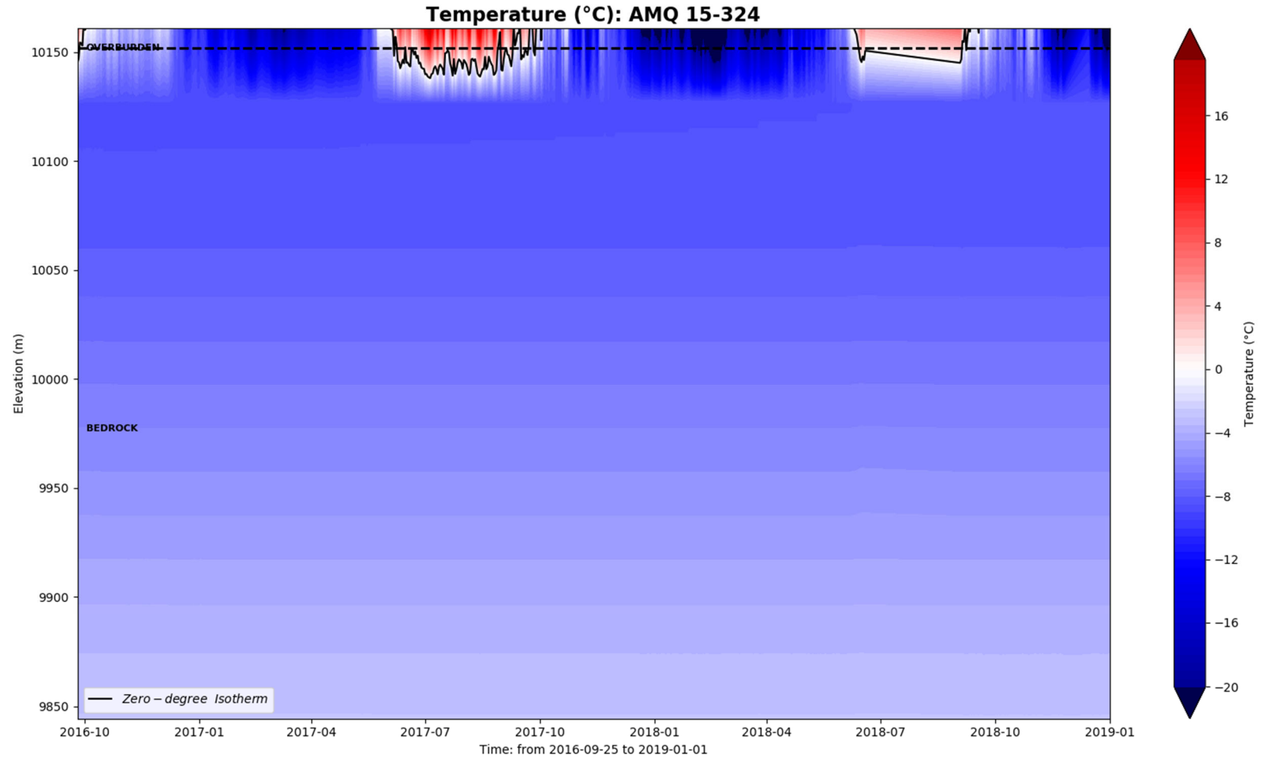




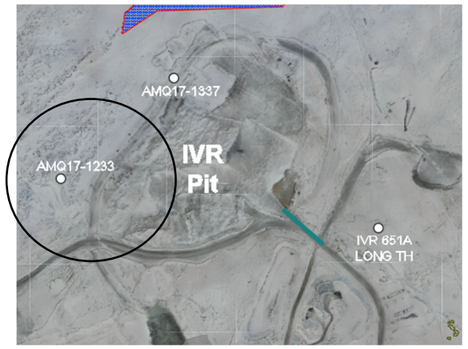
AMQ 15-324

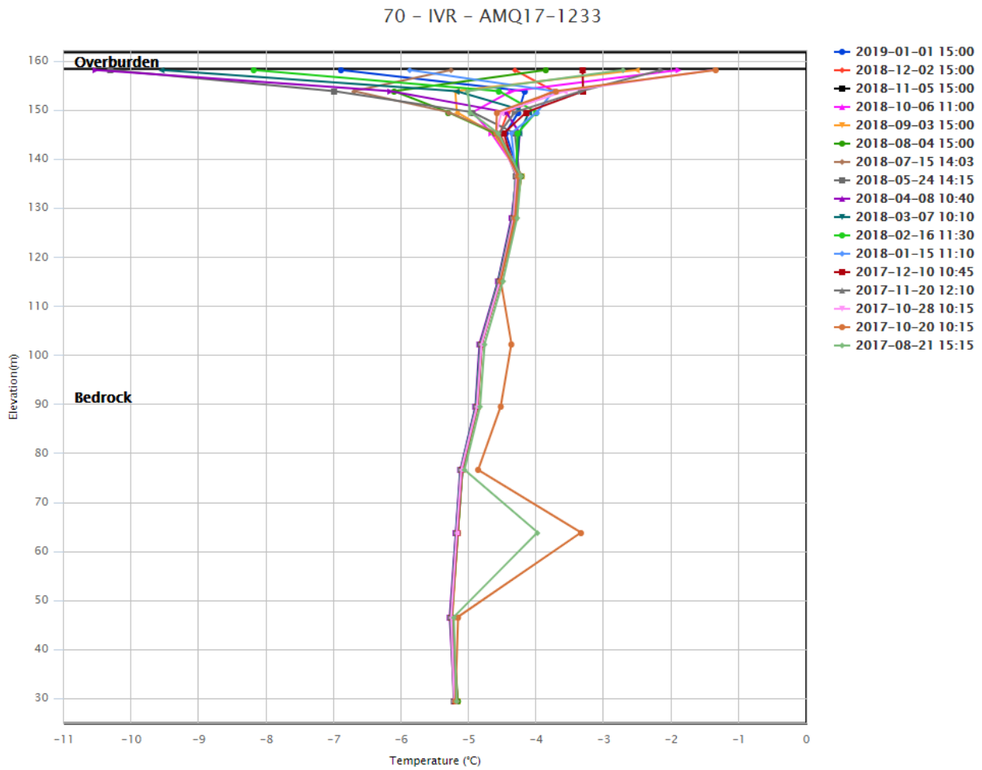

Whale Tail
Pit
AMQ15
-324
WHALE TAIL
DIKE

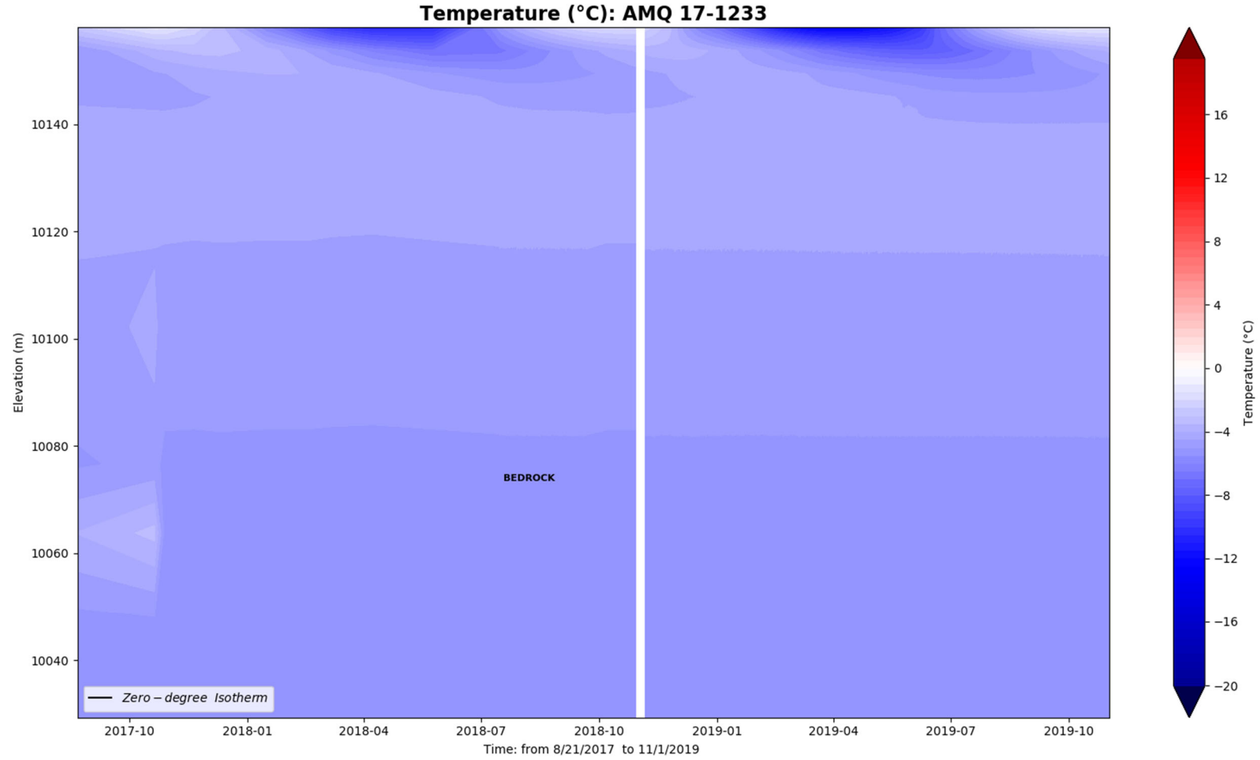

70 – WTP – AMQ15-324
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2019-01-01 00:00
2018-12-02 00:00
2018-11-02 00:00
2018-10-03 00:00
2018-09-03 00:00
2018-08-04 00:00
2018-07-05 00:00
2018-06-05 00:00
2018-05-06 00:00
2018-04-06 00:00
2018-03-07 00:00
2018-02-05 00:00
2018-01-06 00:00
2017-12-07 00:00
2017-11-07 00:00
2017-10-08 00:00
2017-09-08 00:00
2017-08-09 00:00
2017-07-10 00:00
2017-06-10 00:00


Temperature (°C): AMQ 15-324
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2016-09-25 to 2019-01-01
Temperature (°C)

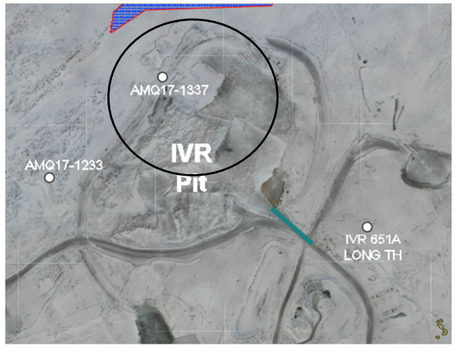
AMQ 17-1233

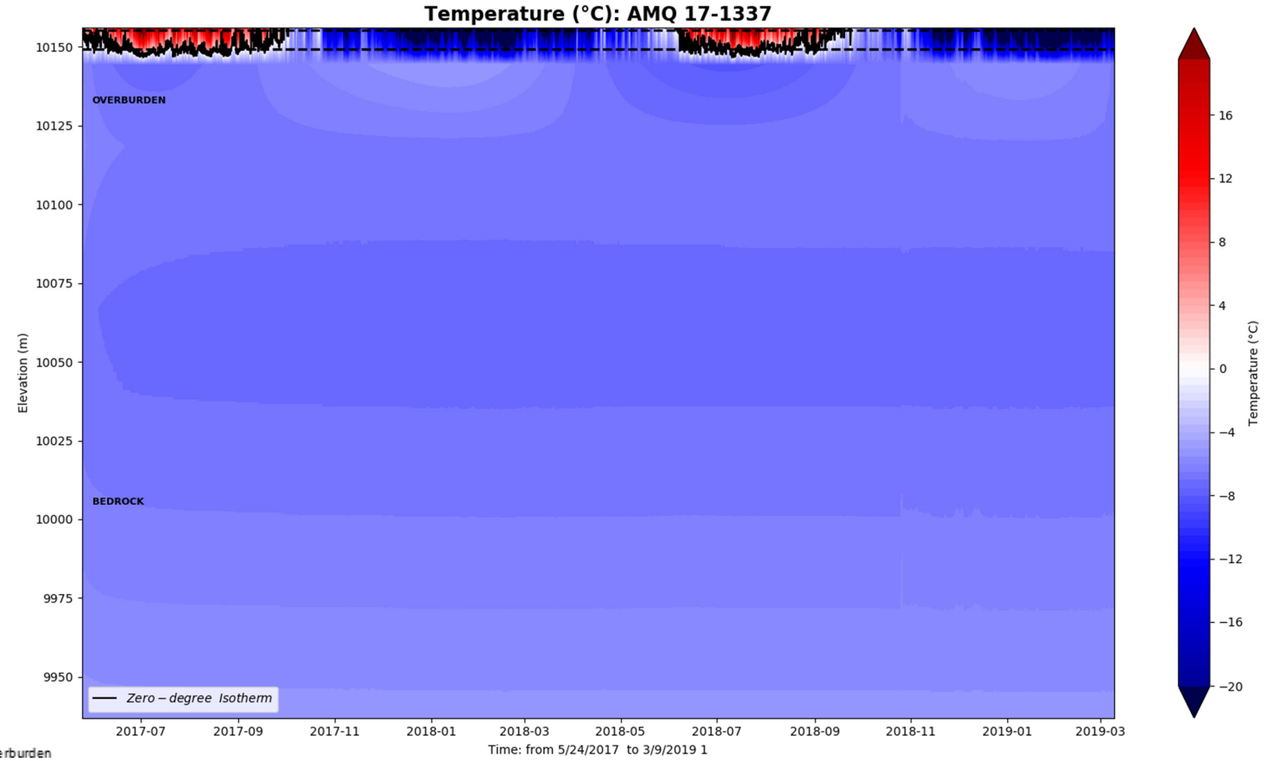

AMQ17-1337
AMQ17-1233
IVR
Pit
IVR 651A
LONG TH

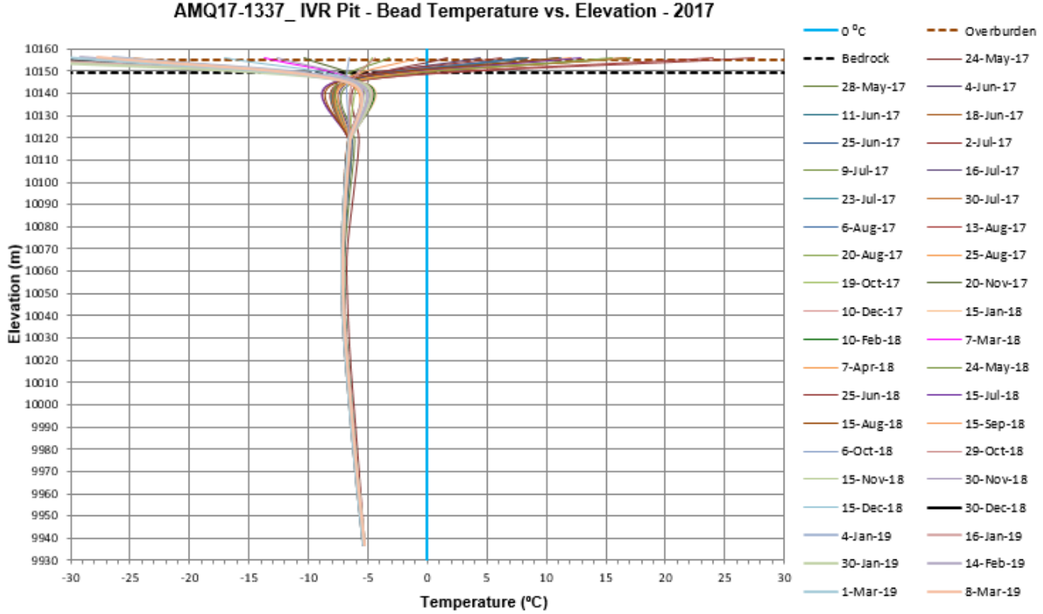

70 – IVR – AMQ17-1233
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2019-01-01 15:00
2018-12-02 15:00
2018-11-05 15:00
2018-10-06 11:00
2018-09-03 15:00
2018-08-04 15:00
2018-07-15 14:03
2018-05-24 14:15
2018-04-08 10:40
2018-03-07 10:10
2018-02-16 11:30
2018-01-15 11:10
2017-12-10 10:45
2017-11-20 12:10
2017-10-28 10:15
2017-10-20 10:15
2017-08-21 15:15


Temperature (°C): AMQ 17-1233
Elevation (m)
BEDROCK
Zero – degree Isotherm
Time: from 8/21/2017 to 11/1/2019
Temperature (°C)

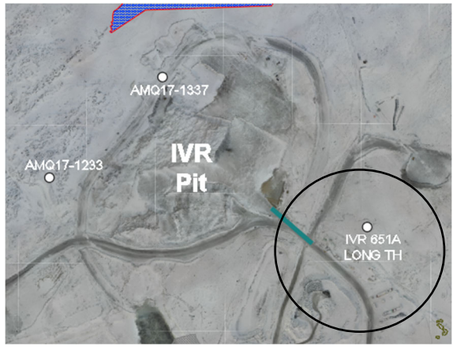
AMQ 17-1337


AMQ17-1337
IVR
Pit
AMQ17-1233
IVR 851A
LONG TH

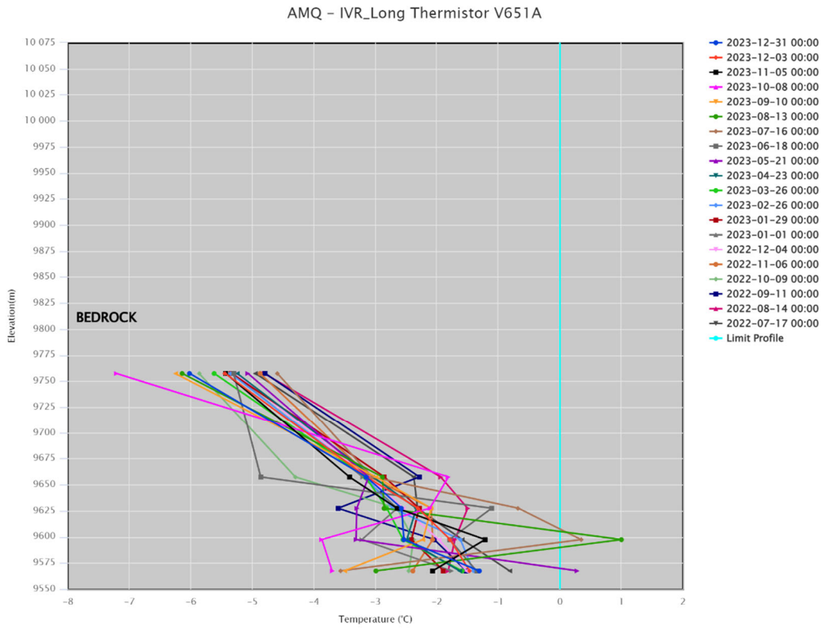

Temperature (°C): AMQ 17-1337
Elevation (m)
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Temperature (°C)
Time: from 5/24/2017 to 3/9/2019 1


AMQ17-1337_ IVR Pit - Bead Temperature vs. Elevation - 2017
Elevation (m)
Temperature (ºC)
0 ºC
Overburden
Bedrock
24-May-17
28-May-17
4-Jun-17
11-Jun-17
18-Jun-17
25-Jun-17
2-Jul-17
9-Jul-17
16-Jul-17
23-Jul-17
30-Jul-17
6-Aug-17
13-Aug-17
20-Aug-17
25-Aug-17
19-Oct-17
20-Nov-17
10-Dec-17
15-Jan-18
10-Feb-18
7-Mar-18
7-Apr-18
24-May-18
25-Jun-18
15-Jul-18
15-Aug-18
15-Sep-18
6-Oct-18
29-Oct-18
15-Nov-18
30-Nov-18
15-Dec-18
30-Dec-18
4-Jan-19
16-Jan-19
30-Jan-19
14-Feb-19
1-Mar-19
8-Mar-19

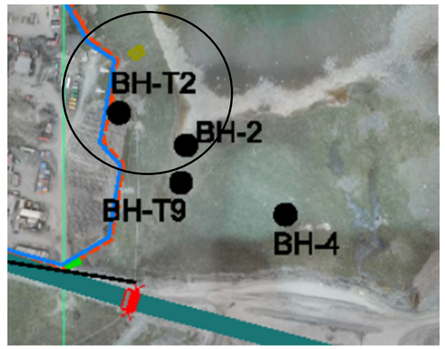
V651A Long TH

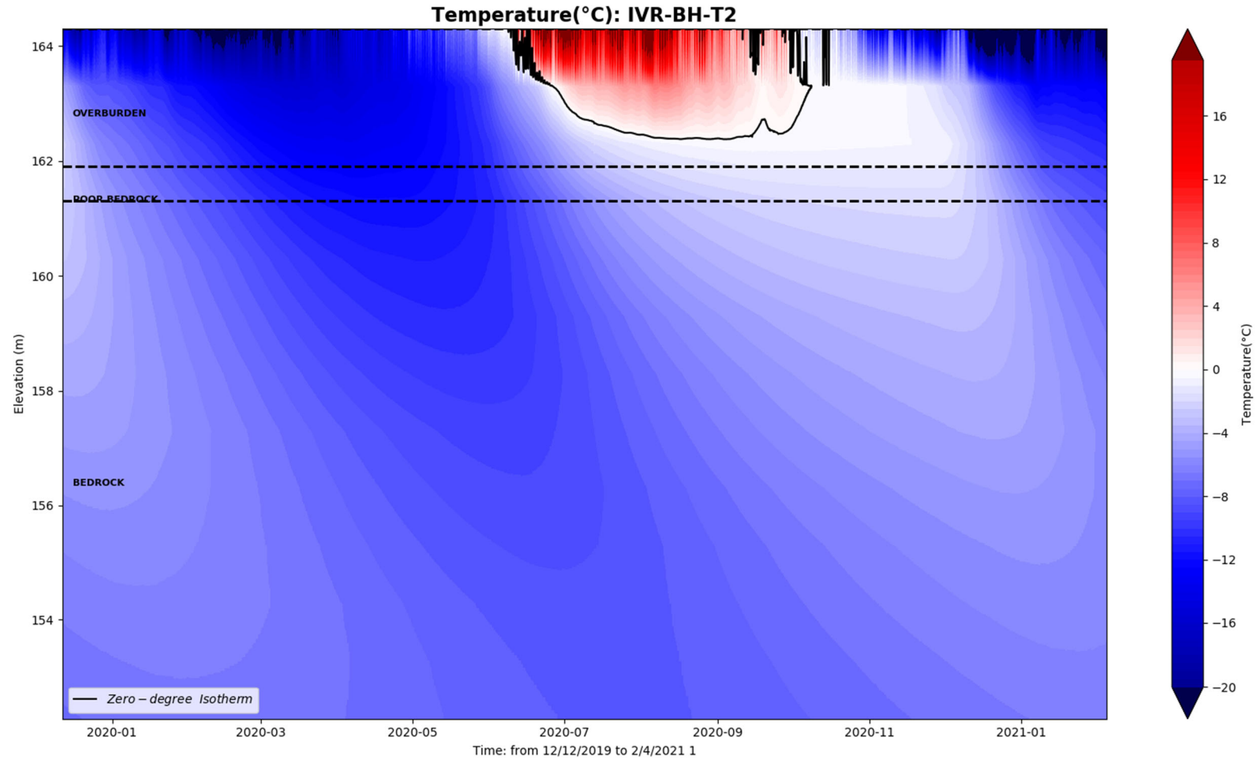


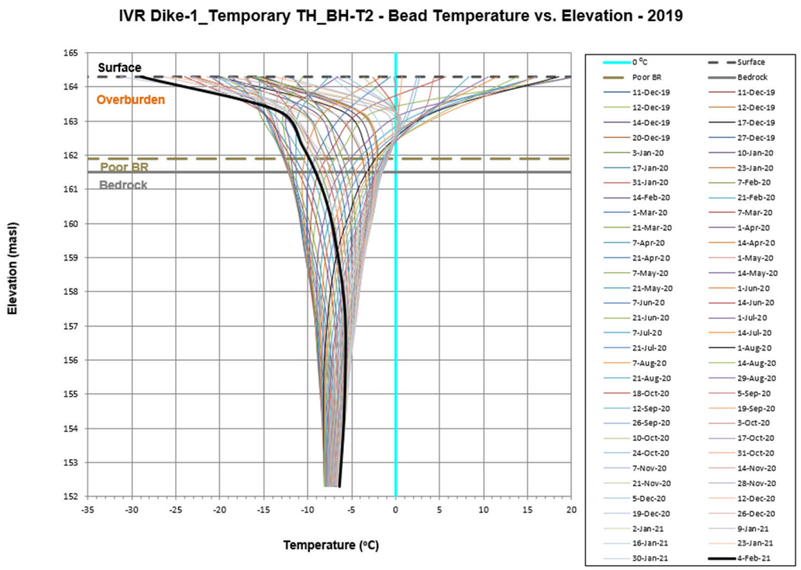
Note that readings are unstable and many beads are not functional



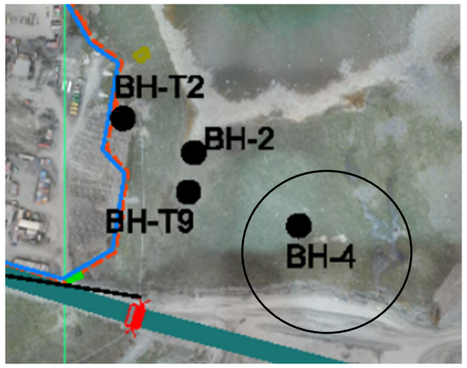
IVR-BH-T2

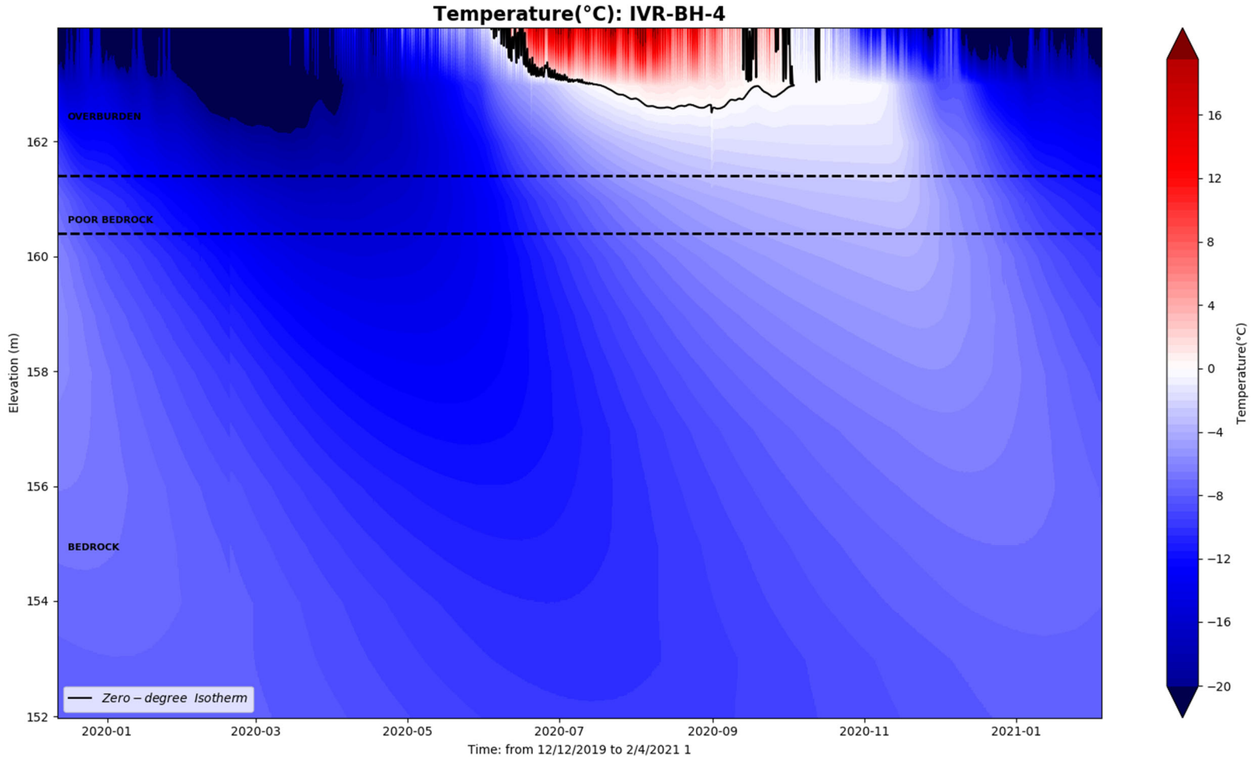

BH-T2
BH-2
BH-T9
BH-4

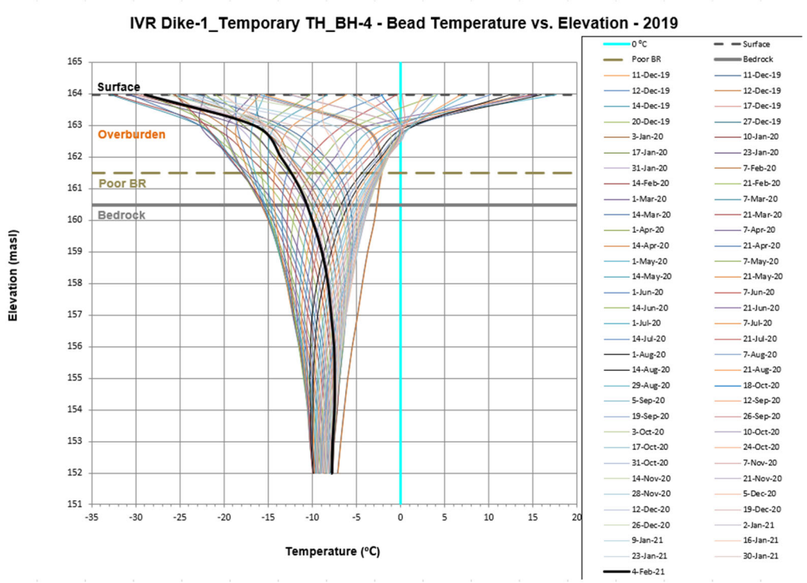

Temperature(°C): IVR-BH-T2
OVERBURDEN
POOR BEDROCK
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 12/12/2019 to 2/4/2021 1

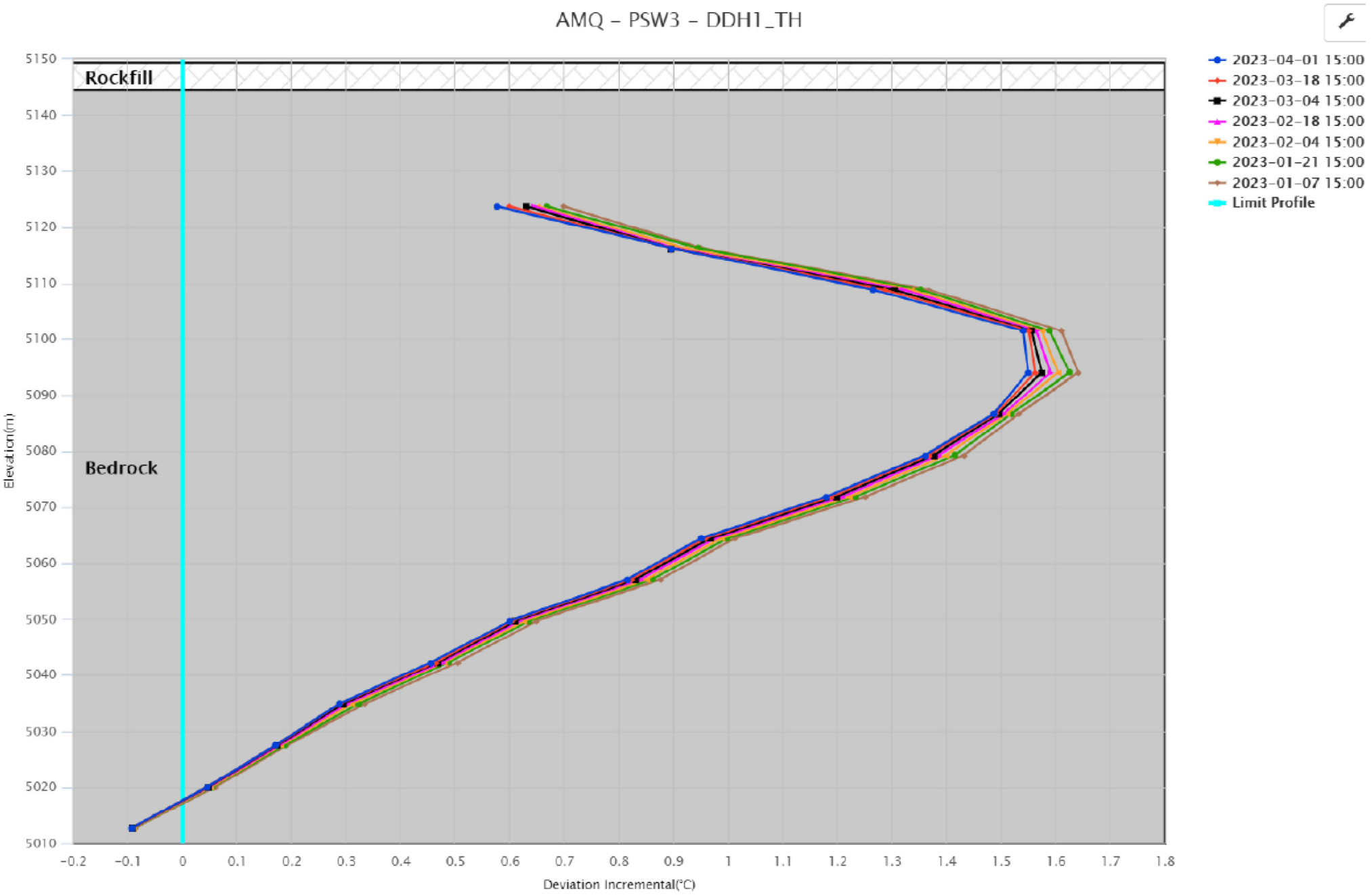

IVR Dike-1_Temporary TH_BH-T2 - Bead Temperature vs. Elevation - 2019
Surface
Overburden
Poor BR
Bedrock
Elevation (masl)
Temperature (°C)

IVR-BH-4


BH-T2
BH-2
BH-T9
BH-4

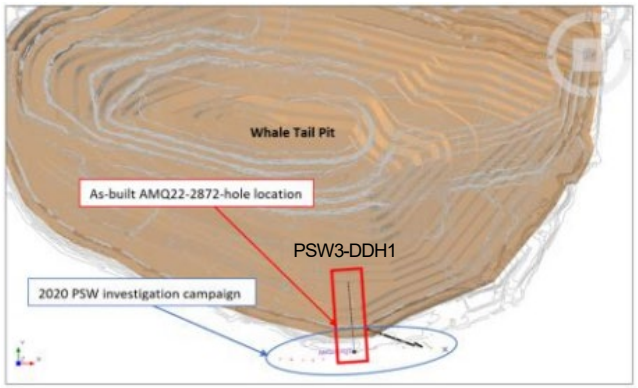

Temperature(°C): IVR-BH-4
OVERBURDEN
POOR BEDROCK
BEDROCK
Zero – degree Isotherm
Elevation (m)
162
160
158
156
154
152
2020-01
2020-03
2020-05
2020-07
2020-09
2020-11
2021-01
Time: from 12/12/2019 to 2/4/2021 1
Temperature(°C)
16
12
8
4
0
−4
−8
−12
−16
−20

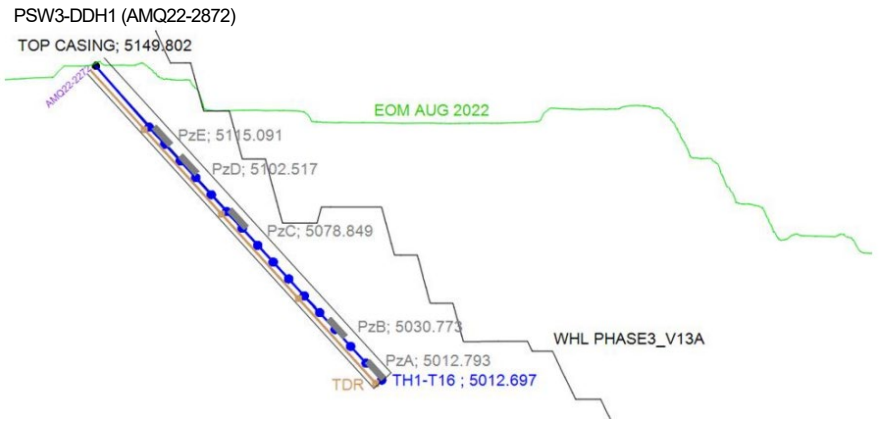

IVR Dike-1_Temporary TH_BH-4 - Bead Temperature vs. Elevation - 2019
Surface
Overburden
Poor BR
Bedrock
Elevation (masl)
Temperature (°C)
0 °C
Surface
Poor BR
Bedrock
11-Dec-19
12-Dec-19
14-Dec-19
17-Dec-19
20-Dec-19
27-Dec-19
3-Jan-20
10-Jan-20
17-Jan-20
23-Jan-20
31-Jan-20
7-Feb-20
14-Feb-20
21-Feb-20
1-Mar-20
7-Mar-20
14-Mar-20
21-Mar-20
1-Apr-20
7-Apr-20
14-Apr-20
21-Apr-20
1-May-20
7-May-20
14-May-20
21-May-20
1-Jun-20
7-Jun-20
14-Jun-20
21-Jun-20
1-Jul-20
7-Jul-20
14-Jul-20
21-Jul-20
1-Aug-20
7-Aug-20
14-Aug-20
21-Aug-20
29-Aug-20
18-Oct-20
5-Sep-20
12-Sep-20
19-Sep-20
26-Sep-20
3-Oct-20
10-Oct-20
17-Oct-20
24-Oct-20
31-Oct-20
7-Nov-20
14-Nov-20
21-Nov-20
28-Nov-20
5-Dec-20
12-Dec-20
19-Dec-20
26-Dec-20
2-Jan-21
9-Jan-21
16-Jan-21
23-Jan-21
30-Jan-21
4-Feb-21

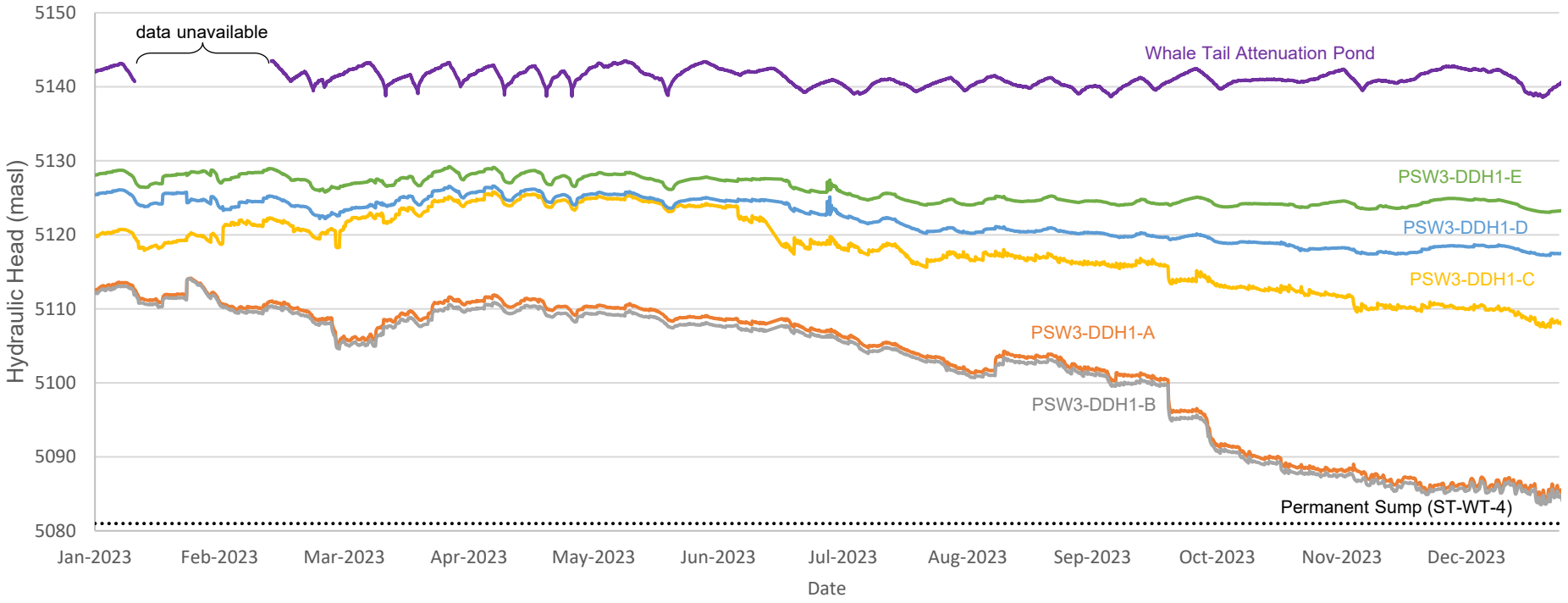

AMQ – PSW3 – DDH1_TH
Rockfill
Bedrock
Elevation(m)
5150
5140
5130
5120
5110
5100
5090
5080
5070
5060
5050
5040
5030
5020
5010
−0.2
−0.1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
Deviation Incremental(°C)
2023-04-01 15:00
2023-03-18 15:00
2023-03-04 15:00
2023-02-18 15:00
2023-02-04 15:00
2023-01-21 15:00
2023-01-07 15:00
Limit Profile

ATTACHMENT C

2023 Piezometric Data







Notes:
1) Borehole AMQ22-2872 (PSW3-DDH1) is instrumented with five multilevel piezometers (Pz), (A (deep) through E (shallow).
2) mRL – metres relative level (mine grid)
3) Whale Tail Attenuation Pond hydraulic head data unavailable between January 11 to February 13, 2023 due to equipment malfunction related to operations.
4) Whale Tail Pit permanent sump (ST-WT-4) located at 5081 mRL.

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AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

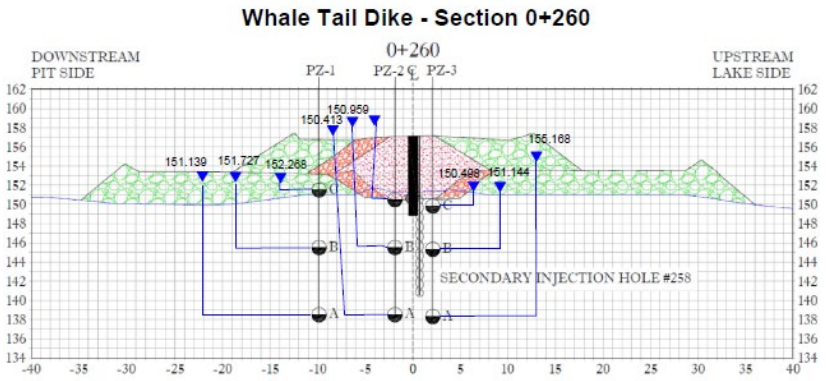
CONSULTANT
wsp

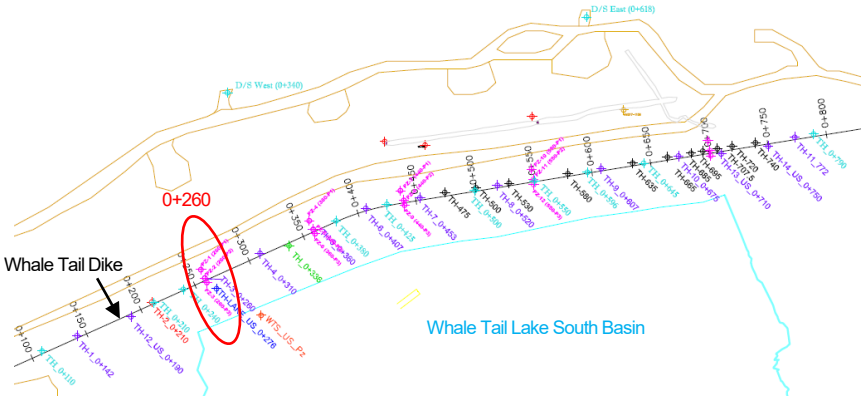
YYYY-MM-DD	2024-01-30
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

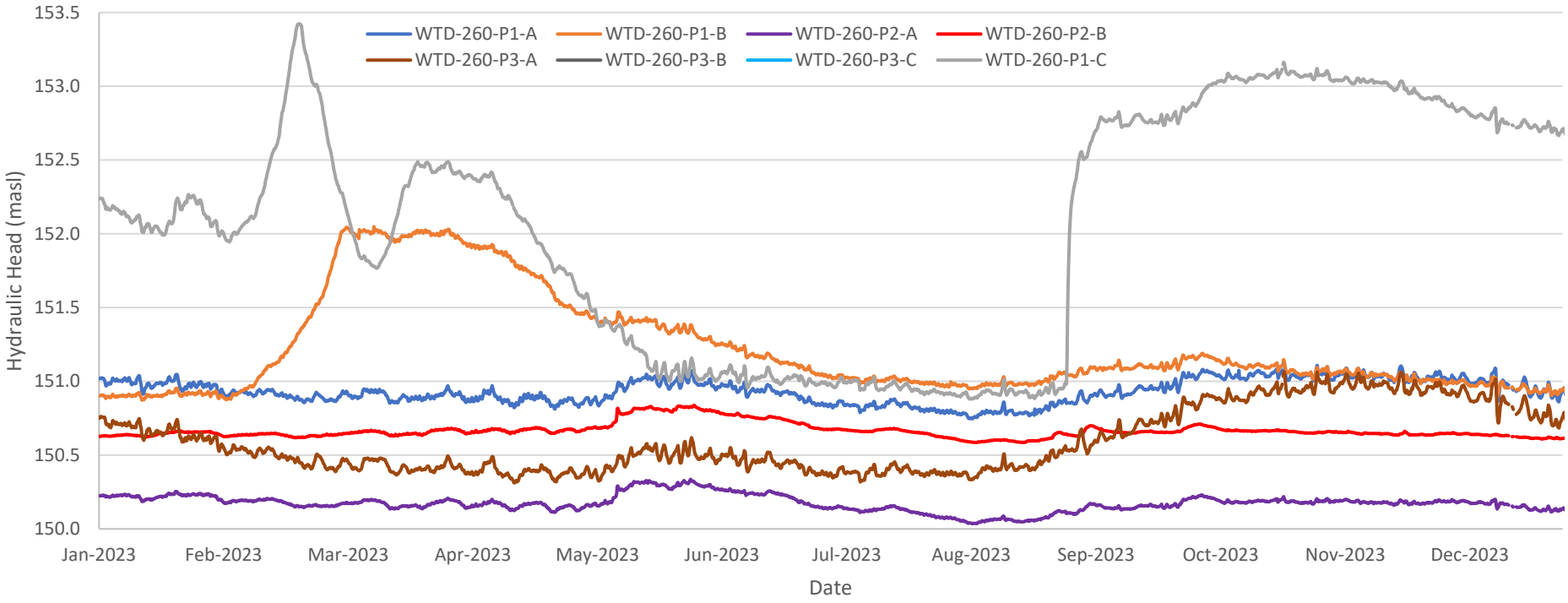
PROJECT
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

TITLE
WHALE TAIL PIT SOUTH WALL AND WHALE TAIL ATTENUATION POND HYDRAULIC HEAD DATA, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	MBK2024_003	0







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MEADOWBANK DIVISION

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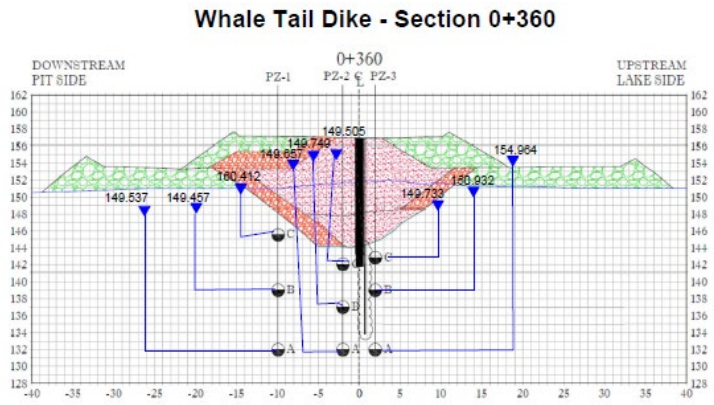
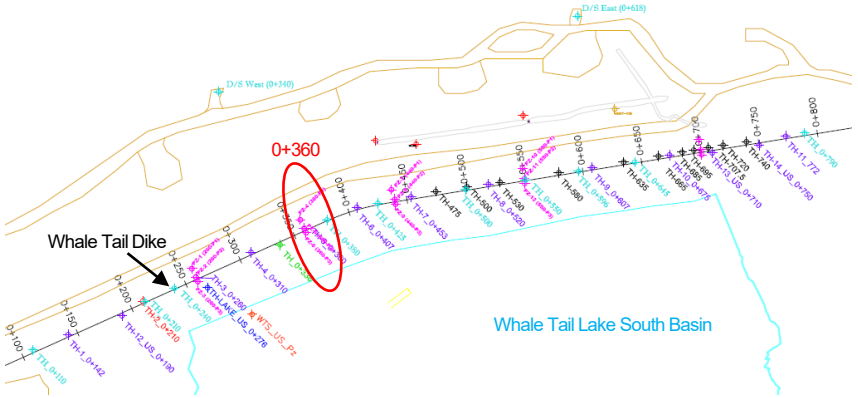
YYYY-MM-DD	2024-01-30
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

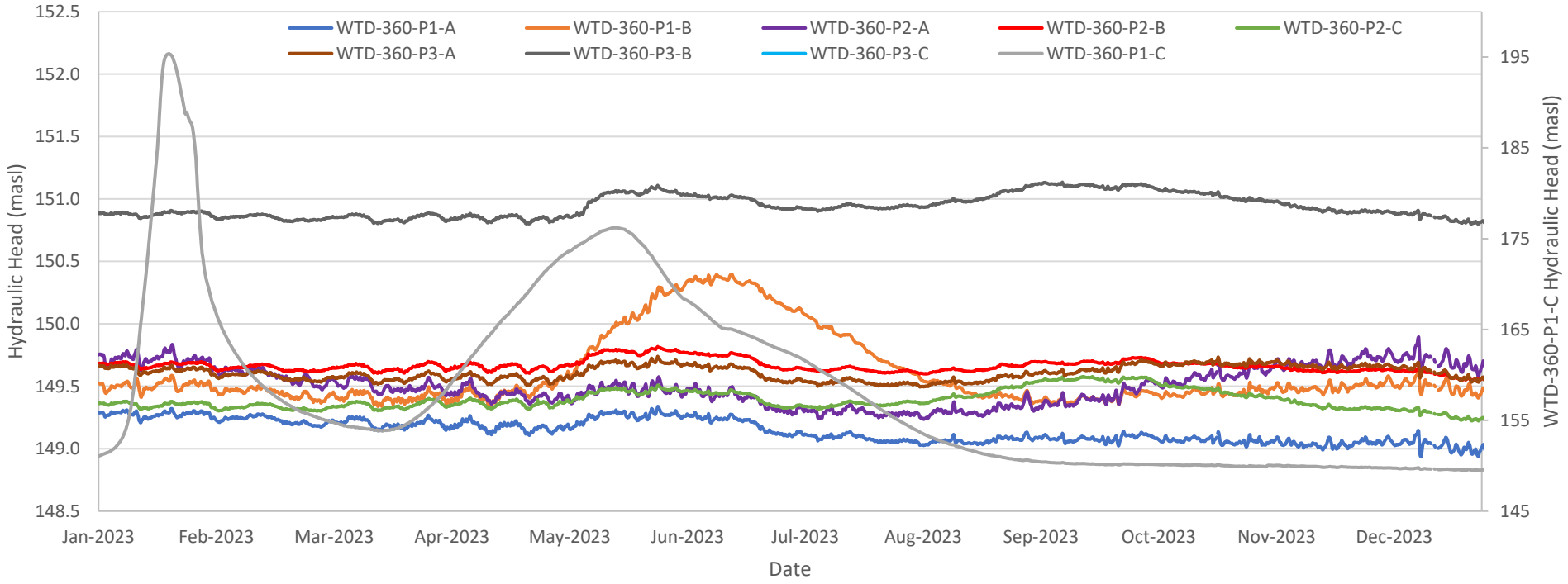
PROJECT
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

TITLE
HYDRAULIC HEADS MEASURED AT WTD-260 SERIES PEIZOMETERS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	MBK2024_003	0







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YYYY-MM-DD	2024-01-30
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

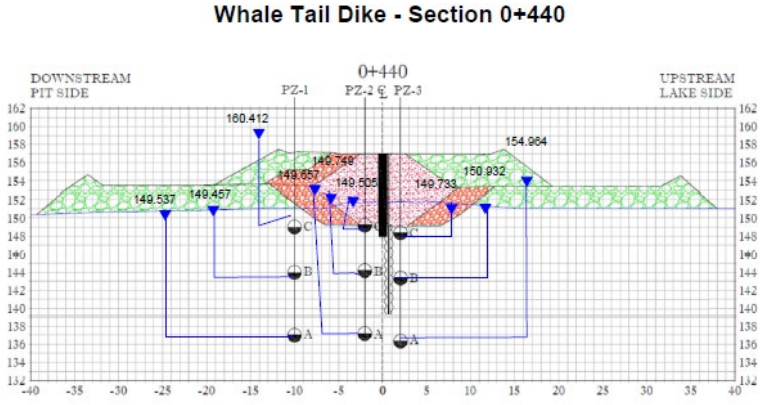
PROJECT

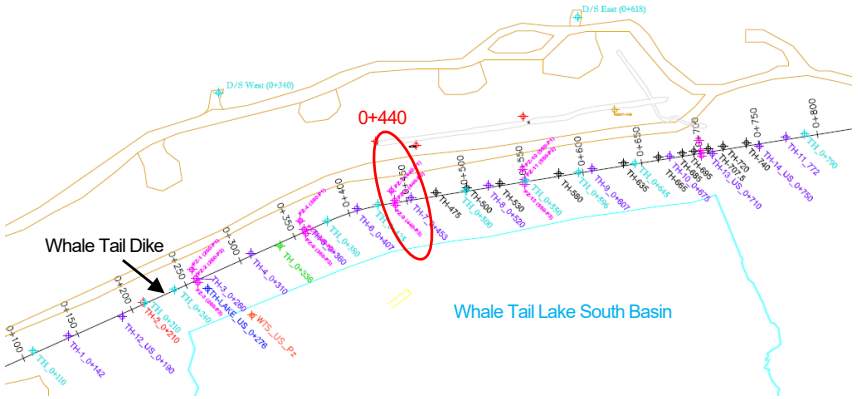
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

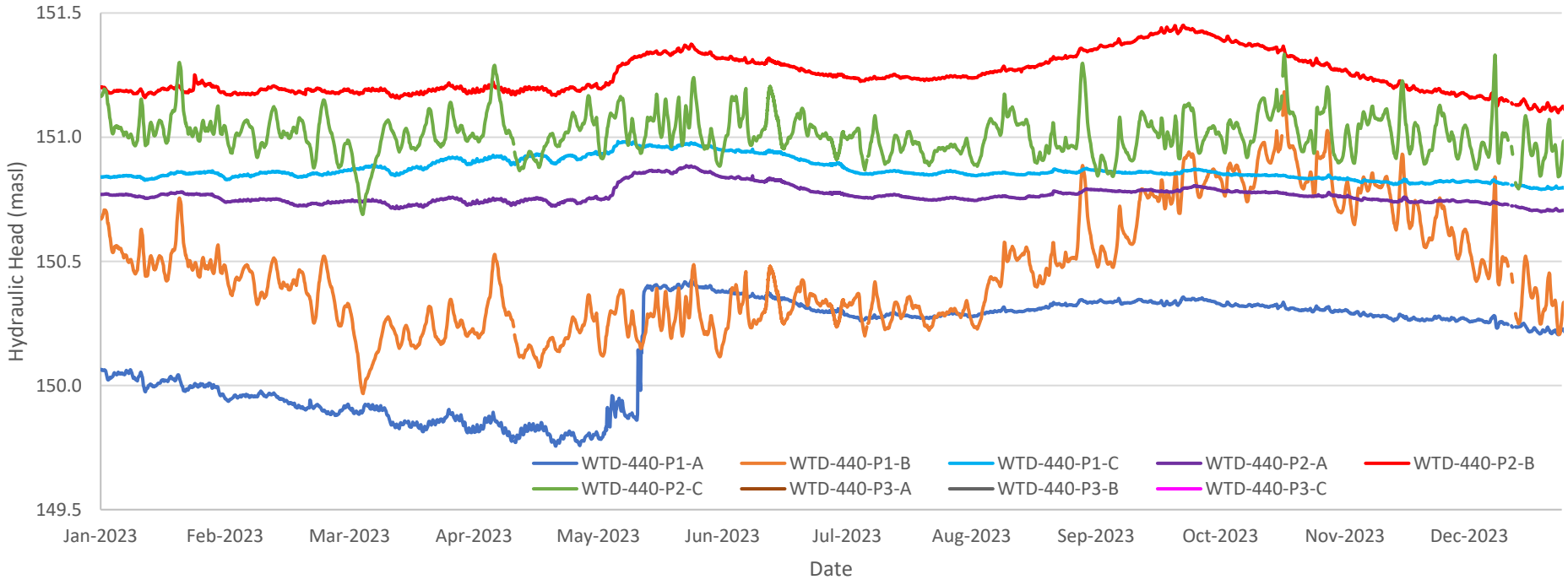
TITLE

HYDRAULIC HEADS MEASURED AT WTD-360 SERIES PEIZOMETERS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	MBK2024_003	0







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AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

CONSULTANT

wsp

YYYY-MM-DD	2024-01-30
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

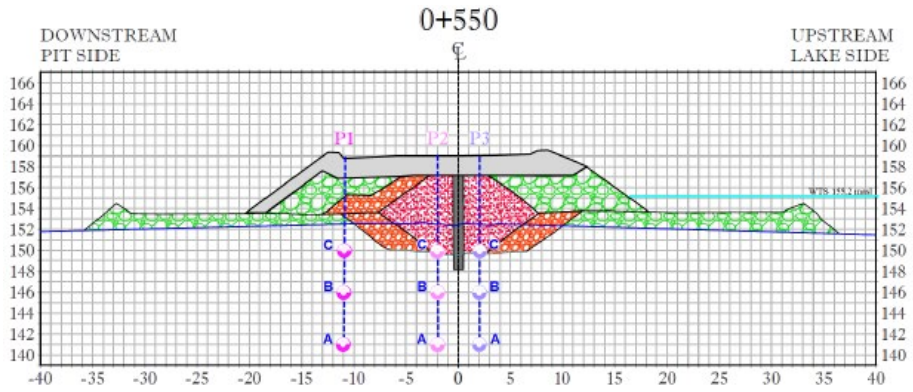
PROJECT

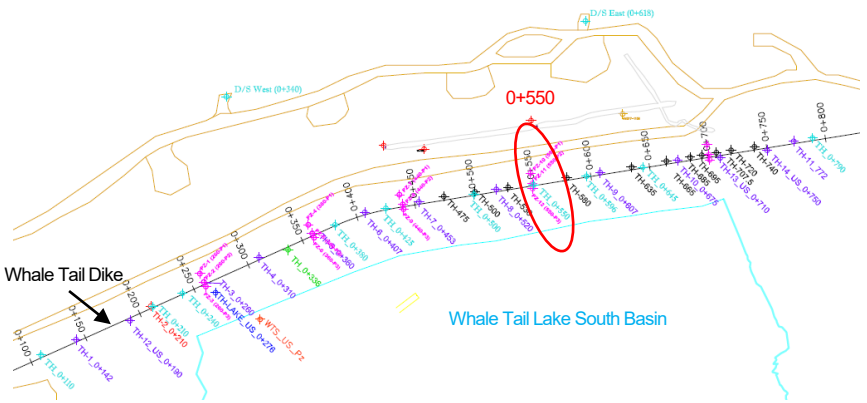
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

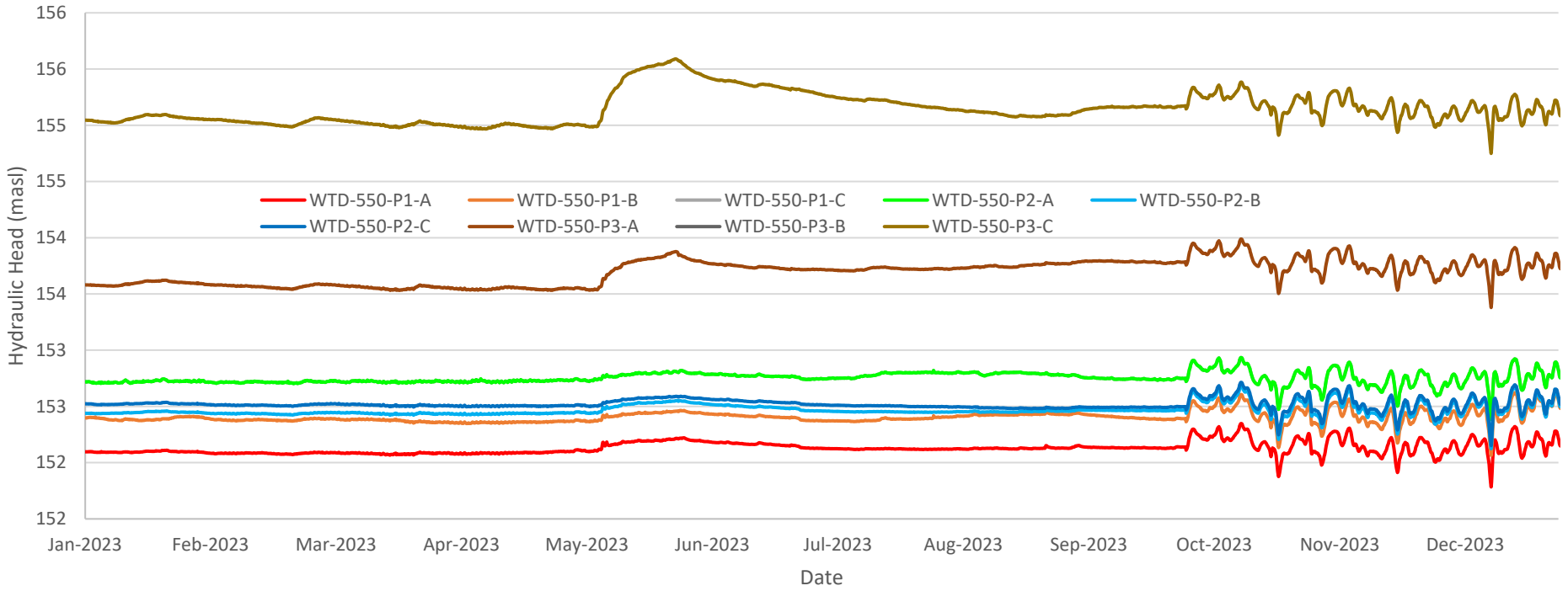
TITLE

HYDRAULIC HEADS MEASURED AT WTD-440 SERIES PEIZOMETERS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	MBK2024_003	0







CLIENT

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

CONSULTANT

YYYY-MM-DD	2024-01-30
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

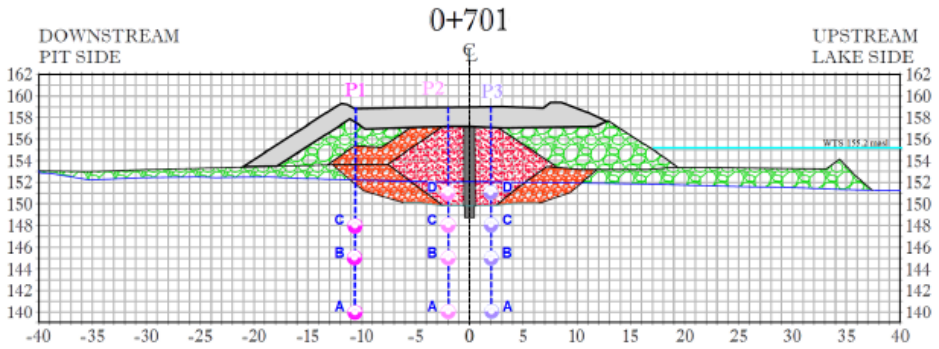
PROJECT

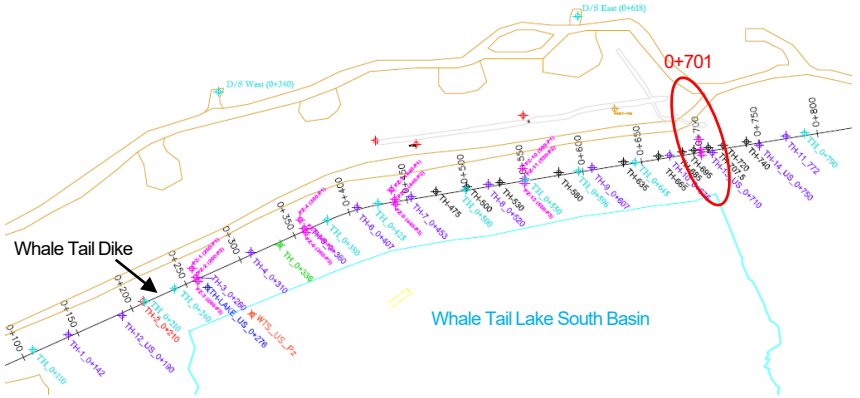
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

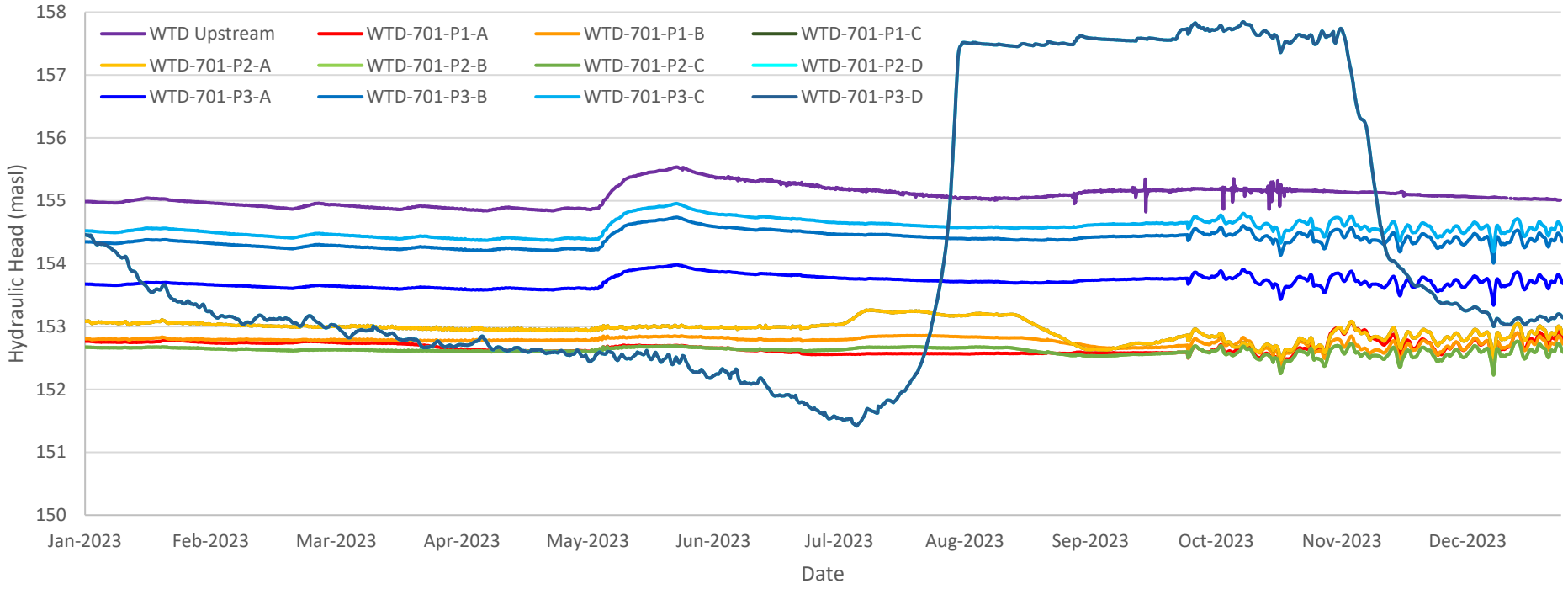
TITLE

HYDRAULIC HEADS MEASURED AT WTD-550 SERIES PEIZOMETERS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	MBK2024_003	0







CLIENT

AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

CONSULTANT

wsp

YYYY-MM-DD	2024-01-30
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

PROJECT

2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

TITLE

HYDRAULIC HEADS MEASURED AT WTD UPSTREAM AND WTD-701 SERIES PEIZOMETERS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	MBK2024_003	0

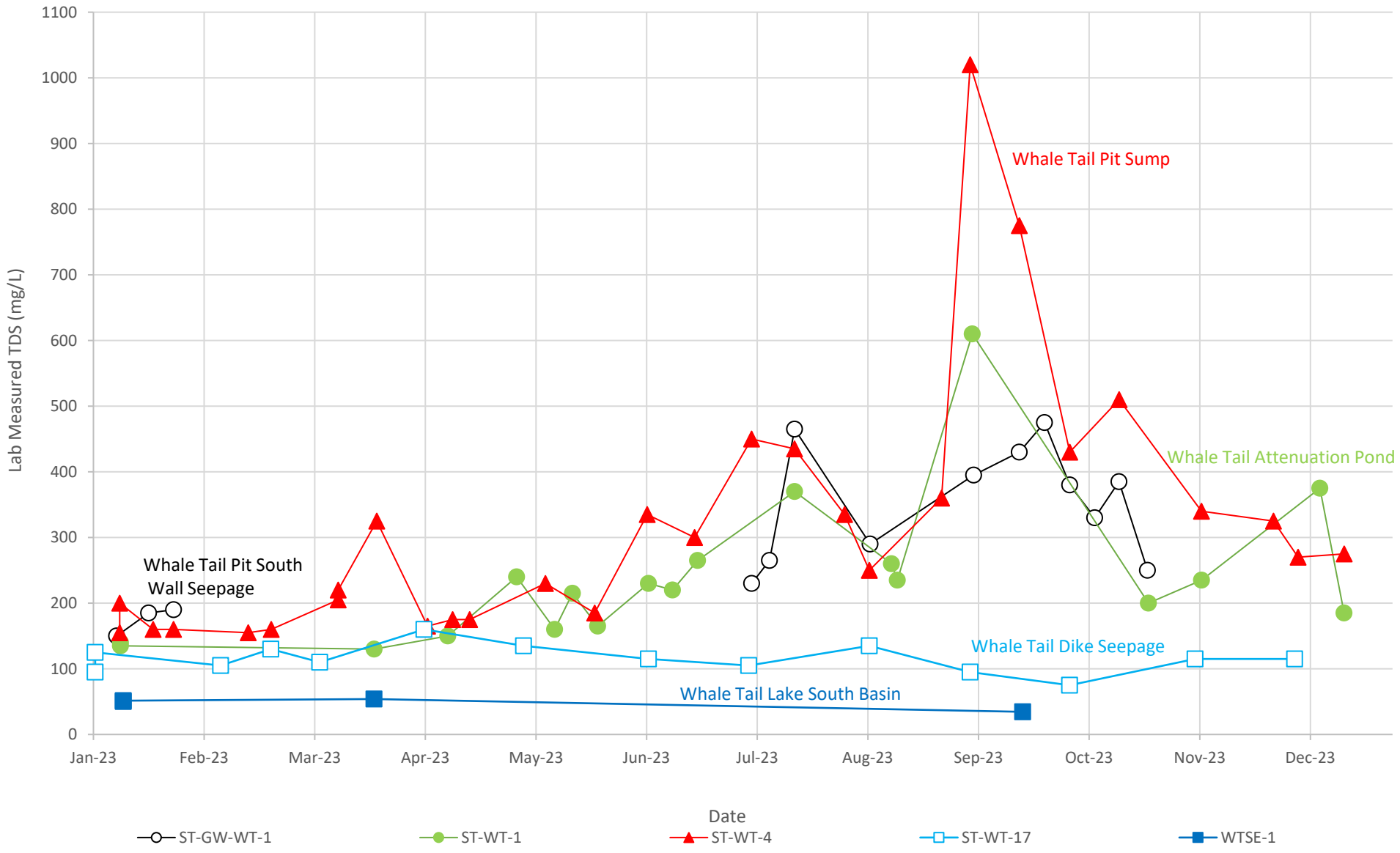
ATTACHMENT D

2023 Seepage Survey Photograph (provided by Agnico Eagle)

Photo 1: Seepage along Whale Tail Pit south wall, looking south toward pit 5081 mRL sump (ST-WT-4) on 16 March 2023.

ATTACHMENT E

2023 Supplemental Water Quality Data (provided by Agnico Eagle)



Notes:
Water quality samples collected by Agnico Eagle and analyzed by analytical laboratory Bureau Veritas.
* Calculated TDS is shown for the Whale Tail Lake South Basin as samples are not analyzed for TDS. TDS may be biased for Whale Tail Lake South Basin (WTSE-1) as lab analysis did not include calcium, magnesium, potassium and sodium.
Duplicates water quality results also shown for ST-WT-1, ST-WT-4, ST-WT-17 and WTSE-1.

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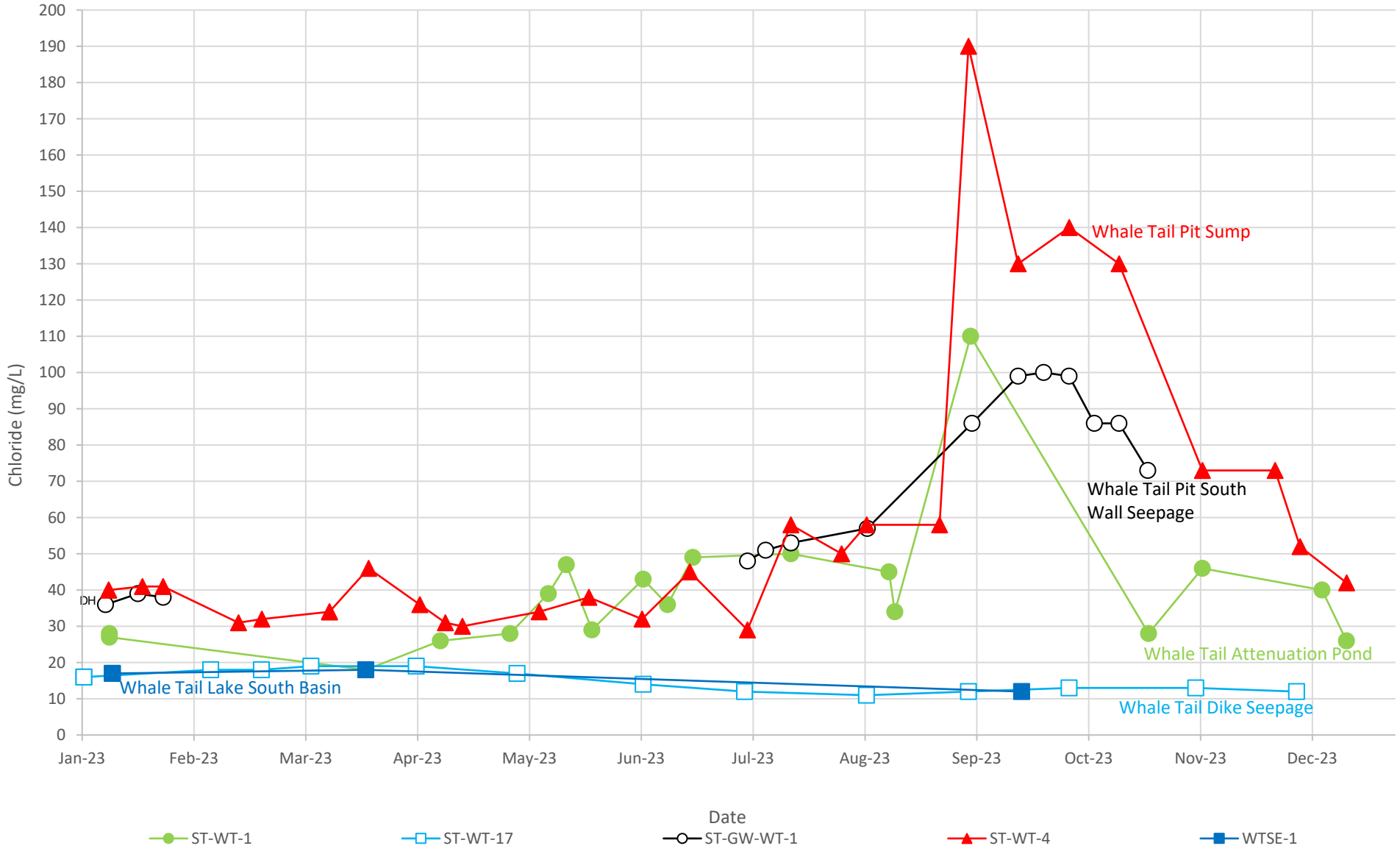
PROJECT
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

TITLE
TOTAL DISSOLVED SOLIDS (TDS) CONCENTRATIONS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	2024MBK_003	0



Notes:
Water quality samples collected by Agnico Eagle and analyzed by analytical laboratory Bureau Veritas.
Duplicates water quality results also shown for ST-WT-1, ST-WT-4, ST-WT-17 and WTSE-1.

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AGNICO EAGLE

AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

CONSULTANT
wsp

YYYY-MM-DD	2024-01-29
PREPARED	DH
DESIGN	--
REVIEW	JL
APPROVED	JL

PROJECT
2023 GROUNDWATER MONITORING PROGRAM
WHALE TAIL PIT PROJECT, NUNAVUT

TITLE
CLORIDE CONCENTRATIONS, JANUARY TO DECEMBER 2023

PROJECT No.	DOC.	Rev.
CA0007108.1008	2024MBK_003	0

E-2

Table E-1: 2023 Whale Tail Pit South Wall Seepage Water Quality
Whale Tail Pit, Nunavut

	Sample date	2023-01-07	2023-01-16	2023-01-23	2023-07-04	2023-07-09	2023-07-16	2023-08-06	2023-09-04	2023-09-17	2023-09-24	2023-10-01	2023-10-08	2023-10-15	2023-10-23
	Sample name	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1
	Sample type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter	**Unit**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WQ01- Field Measured															
Temperature	**°C**	1.5	0.2	-0.1	12.9	2.3	5	5	1.4	1.8	1.3	1.2	1.2	1.3	0.2
pH	**pH units**	7.87	7.55	7.35	7.73	7.17	7.44	7.55	7.21	7.86	7.11	6.97	6.95	6.84	6.44
Conductivity	**uS/cm**	295	277	106.3	318	370	357	357	521	554	533	617	527	513	467
Dissolved oxygen	**mg/L**	12.18	11.3	6.93	8.7	10.56	10.5	10.39	12.2	9.93	8.55	11.52	11.62	10.61	10.04
Dissolved oxygen	%	112.2	90.6	75.2	91.2	96.5	103.4	97.9	104.7	103.1	88.4	98.1	99.9	92.8	89.1
Turbidity	**NTU**	4.02	2.73	2.32	2.29	1.15	2.12	1.52	0.67	1.2	2.38	1.59	1.31	1.36	1.18
Field Salinity	**mg/L**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WQ02- Conventional Parameters															
pH	**pH units**	7.78	7.77	7.88	7.55	7.74	7.68	7.32	7.37	7.4	7.37	7.38	7.64	7.4	7.54
Turbidity	**NTU**	1.1	0.6	1.1	2.7	5.2	4.2	3.6	11	1.8	6.1	15	6.7	11	5.6
Conductivity	**ms/cm**	0.297	0.326	0.373	0.328	0.379	0.365	0.368	0.539	0.576	0.559	0.625	0.549	0.531	0.512
Hardness, as CaCO3	**mg/L**	107	115	125	114	121	112	133	166	225	221	216	191	195	177
Total alkalinity, as CaCO3	**mg/L**	55	53	66	48	48	47	46	43	50	50	46	52	54	52
Carbonate, as CaCO3	**mg/L**	< 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	< 1.0
Bicarbonate, as CaCO3	**mg/L**	54	53	66	47	48	47	46	43	49	50	46	52	54	51
TDS	**mg/L**	150	185	190	230	265	465	290	395	430	475	380	330	385	250
TSS	**mg/L**	2	< 1	1	1	2	1	< 1	3	3	4	6	3	3	2
Total organic carbon	**mg/L**	2.3	1.7	1.9	1.4	1.4	1.4	1.3	1.5	1.5	1.5	1.6	1.6	1.5	1.6
Dissolved organic carbon	**mg/L**	1.9	1.5	2.2	1.3	1.3	1.3	1.3	1.6	1.5	1.7	1.5	1.4	1.6	1.6
Salinity	**ppm**	-	-	-	-	NA	na	NA	NA	-	-	N/A	N/A	-	-
Sodium Adsorption Ratio (salinity in water)	-	0.32	0.34	-	0.28	0.25	0.3	0.25	0.25	-	-	0.25	0.25	0.25	0.25
WQ03- Major Ions															
Bromide	**mg/L**	< 1.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	1.4	-	-	1.5	1.3	1.3	1.1
Chloride	**mg/L**	36	39	38	48	51	53	57	86	99	100	99	86	86	73
Cyanide	**mg/L**	0.0042	0.00476	0.0456	0.0008	< 0.00050	0.00085	0.00061	< 0.00050	0.00121	0.00096	0.00181	0.00094	0.0014	< 0.00050
Cyanide (free)	**mg/L**	-	-	0.019	0.0038	0.0035	0.0076	0.0051	< 0.0020	0.0028	< 0.0020	< 0.0020	0.0026	< 0.0020	< 0.0020
Cyanide (WAD)	**mg/L**	-	-	-	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	-	-	0.00072	< 0.00050	0.0005	< 0.00050
Fluoride	**mg/L**	0.22	0.21	-	0.19	0.17	0.17	0.18	0.17	-	-	0.18	0.18	0.16	0.16
Silica	**mg/L**	10	9.6	9.3	10	9.9	11	11	11	10	11	10	11	11	11
Sulfate	**mg/L**	29	32	33	28	44	28	36	53	53	51	85	58	55	55
WQ04- Nutrients and Chlorophyll a															
Total Ammonia (as NH3)	**mg/L**	1.5	1.6	3.4	0.27	0.37	0.28	0.28	0.5	0.31	0.37	0.49	0.41	0.36	0.35
Ammonia Nitrogen (as N)	**mg/L**	1.2	1.3	2.8	0.22	0.31	0.23	0.23	0.41	0.25	0.3	0.4	0.33	0.29	0.29
Un-Ionized Ammonia, calculated	**mg/L**	-	-	-	0.0027	0.0005	0.0008	0.001	0.0006	-	-	< 0.0004	< 0.0004	< 0.0004	< 0.0004
Nitrate (as N)	**mg/L**	< 0.10	1.51	4.21	< 0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrite (as N)	**mg/L**	< 0.010	0.079	0.042	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Nitrate + nitrite (as N)	**mg/L**	< 0.10	1.59	4.26	< 0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Kjeldahl nitrogen	**mg/L**	1.3	1.4	2.8	0.33	0.34	0.27	0.31	0.38	0.29	0.39	0.55	0.5	0.38	0.42
Total phosphorus	**mg/L**	0.0055	0.0039	0.0014	0.007	0.0038	0.014	0.0095	0.0031	0.008	0.01	0.0082	0.0071	0.0077	0.011
Orthophosphate (P)	**mg/L**	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
WQ06- Total Metals															
Aluminum	**mg/L**	0.0196	0.0121	0.0147	< 0.0030	0.0152	0.0075	0.0114	0.0428	0.0084	0.0127	0.0192	0.0071	0.0066	0.0062
Antimony	**mg/L**	0.00133	0.00129	0.00133	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050
Arsenic	**mg/L**	0.0274	0.017	0.0207	0.0312	0.0566	0.0465	0.0302	0.0372	0.0438	0.0534	0.0266	0.042	0.0402	0.0356
Barium	**mg/L**	0.0741	0.0772	0.0937	0.0746	0.0785	0.0639	0.078	0.0976	0.131	0.134	0.133	0.123	0.122	0.112
Beryllium	**mg/L**	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00020	< 0.00010
Bismuth	**mg/L**	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	< 0.0010	< 0.0010	< 0.0020	< 0.0010
Boron	**mg/L**	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050
Cadmium	**mg/L**	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.000062	< 0.000010	< 0.000010	0.00001	< 0.000010	< 0.000020	< 0.000010
Calcium (total)	**mg/L**	32.6	35.3	37.8	33.9	36.3	33.4	40.1	48.8	67.5	66.3	64	57.3	58.6	53.1
Chromium	**mg/L**	< 0.0010	< 0.0010	0.0017	< 0.0010	0.0019	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.0010
Cobalt	**mg/L**	0.00044	< 0.00020	-	< 0.00020	0.00206	< 0.00020	0.00044	0.00359	-	-	0.00537	0.00092	0.0004	0.00047
Copper	**mg/L**	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	0.00099	< 0.00050	< 0.00050	< 0.0010	< 0.00050
Iron	**mg/L**	0.209	0.164	0.21	0.024	0.959	0.603	0.733	1.13	1.45	1.47	2.26	1.29	1.22	1.07
Lead	**mg/L**	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	0.0004	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00040	0.0003
Lithium	**mg/L**	0.0044	0.0048	0.0068	0.0038	0.0035	0.0034	0.0039	0.0074	0.0071	0.0079	0.0093	0.0077	0.0064	0.0063
Magnesium (total)	**mg/L**	6.22	6.61	7.36	7.26	7.25	6.93	7.88	10.7	13.7	13.5	13.7	11.7	11.9	10.9
Manganese	**mg/L**	0.151	0.13	0.147	0.115	0.29	0.236	0.298	0.453	0.53	0.523	0.611	0.488	0.477	0.428
Mercury	**mg/L**	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001

	Sample date	2023-01-07	2023-01-16	2023-01-23	2023-07-04	2023-07-09	2023-07-16	2023-08-06	2023-09-04	2023-09-17	2023-09-24	2023-10-01	2023-10-08	2023-10-15	2023-10-23
	Sample name	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1
	Sample type	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter	**Unit**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	**mg/L**	0.0258	0.0183	0.0213	0.0156	0.0142	0.0059	0.0084	0.0058	0.0071	0.0082	0.01	0.0085	0.0076	0.0076
Nickel	**mg/L**	0.0017	< 0.0010	0.0087	< 0.0010	0.0121	< 0.0010	0.0011	0.005	< 0.0010	0.0012	0.0078	0.0017	< 0.0020	0.0011
Potassium (total)	**mg/L**	3.01	3.06	4.19	2.35	2.48	1.93	2.42	2.57	3.04	3.22	3.36	3.14	3.14	2.95
Selenium	**mg/L**	0.00021	0.00023	0.00011	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00020	< 0.00010
Silicon	**mg/L**	4.52	4.1	-	4.97	3.8	4.49	4.84	4.34	-	-	4.52	4.9	5.15	4.87
Silver	**mg/L**	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000040	< 0.000020
Sodium (total)	**mg/L**	7.21	7.48	8.27	6.59	5.53	6.24	5.93	6.47	8.04	8	7.33	7.05	7.29	6.86
Strontium	**mg/L**	0.169	0.189	0.201	0.172	0.155	0.175	0.193	0.254	0.317	0.32	0.3	0.29	0.287	0.267
Sulphur	**mg/L**	7.9	7.9	-	7.3	11	7.6	9.8	13.8	-	-	25.5	16.7	17.2	16.2
Tellurium	**mg/L**	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	< 0.0010	< 0.0010	< 0.0020	< 0.0010
Thallium	**mg/L**	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000020	< 0.000010
Tin	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050
Titanium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050
Uranium	**mg/L**	0.00175	0.00164	0.00164	0.00018	0.00049	< 0.00010	0.00023	0.00029	0.00023	0.00025	0.00027	0.00018	0.00021	0.0002
Vanadium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050
Zinc	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0092	< 0.0050	< 0.0050	0.0401	< 0.0050	< 0.0050	0.0374	0.0083	< 0.010	< 0.0050
WQ07- Dissolved Metals															
Aluminum	**mg/L**	< 0.0030	0.0031	0.0033	< 0.0030	0.0052	< 0.0030	0.0041	0.0219	0.0065	0.0061	0.011	0.0097	0.0232	0.0048
Antimony	**mg/L**	0.00131	0.00128	0.00132	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic	**mg/L**	0.0204	0.0159	0.0199	0.0456	0.0587	0.0487	0.0296	0.0388	0.04	0.0503	0.0243	0.0426	0.036	0.0365
Barium	**mg/L**	0.0726	0.0736	0.0927	0.0783	0.0929	0.0731	0.0816	0.109	0.128	0.135	0.143	0.126	0.12	0.124
Beryllium	**mg/L**	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Bismuth	**mg/L**	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Boron	**mg/L**	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	**mg/L**	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	0.000016	< 0.000010	0.000011	< 0.000010	< 0.000010	< 0.000010
Calcium (Dissolved)	**mg/L**	31.2	33.9	-	35.7	43	39.8	40.6	56.9	-	-	72	59.2	58.8	61.4
Chromium	**mg/L**	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Cobalt	**mg/L**	0.00043	< 0.00020	-	< 0.00020	0.00238	< 0.00020	0.00051	0.00397	-	-	0.00586	0.00102	0.00051	0.00053
Copper	**mg/L**	0.00024	0.00209	0.00034	< 0.00020	< 0.00020	0.0004	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Iron	**mg/L**	0.0432	0.115	0.15	0.298	0.917	0.547	0.576	1.22	1.31	1.36	2.4	1.3	1.09	1.16
Lead	**mg/L**	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	**mg/L**	0.0047	0.0049	0.0072	0.0034	0.005	0.0039	0.0044	0.0077	0.007	0.0081	0.011	0.0057	0.0065	0.0071
Magnesium (Dissolved)	**mg/L**	6.34	6.66	-	6.88	8.68	8.03	8.79	11.9	-	-	15.4	12.3	12.4	12.3
Manganese	**mg/L**	0.143	0.127	0.16	0.246	0.36	0.28	0.304	0.485	0.527	0.557	0.63	0.527	0.489	0.472
Mercury	**mg/L**	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	**mg/L**	0.026	0.0179	0.0195	0.0157	0.0146	0.0072	0.0088	0.0066	0.007	0.0079	0.0109	0.0091	0.008	0.0077
Nickel	**mg/L**	0.0014	< 0.0010	0.0023	< 0.0010	0.0054	< 0.0010	0.0013	0.0057	0.0012	0.0011	0.0086	0.0022	0.0013	0.0014
Potassium (Dissolved)	**mg/L**	3.06	2.94	-	2.29	3.06	2.24	2.51	2.75	-	-	3.71	3.3	3.18	3.33
Selenium	**mg/L**	0.00024	0.00022	0.00013	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Silicon	**mg/L**	4.49	4.52	-	4.83	4.84	5.35	5.01	5.2	-	-	5.1	4.66	5.12	5.57
Silver	**mg/L**	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (Dissolved)	**mg/L**	7.31	7.61	-	6.54	6.91	7.35	6.42	7.09	-	-	8.24	7.42	7.46	7.64
Strontium	**mg/L**	0.164	0.182	0.224	0.168	0.201	0.192	0.191	0.27	0.321	0.324	0.334	0.288	0.294	0.312
Sulphur	**mg/L**	8.7	8.4	-	8.5	13.4	8.3	11	14.6	-	-	28.4	16.5	18	18.1
Tellurium	**mg/L**	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Thallium	**mg/L**	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Tin	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	**mg/L**	0.00178	0.00153	0.0015	0.0003	0.00062	0.00013	0.00028	0.00034	0.0003	0.00026	0.0003	0.00024	0.00025	0.00022
Vanadium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0084	< 0.0050	< 0.0050	0.0415	0.0078	< 0.0050	0.041	0.0126	< 0.0050	0.0074
WQ08- Radionuclides															
Radium-226	**Bq/l**	0.056	0.049	-	0.083	0.078	0.073	0.067	0.11	-	-	0.13	0.11	0.78	0.1
WR01- Acid-Base Accounting															
Sulphur (total)	**mg/L**	7.9	7.9	-	7.3	11	7.6	9.8	13.8	-	-	25.5	16.7	17.2	16.2
QA/QC															
Calculated TDS	**mg/L**	160	169	184	168	188	172	191	247	287	286	313	268	268	247
Lab Measured TDS	**mg/L**	150	185	190	230	265	465	290	395	430	475	380	330	385	250
TDS (Lab vs Calc)	**%**	107%	91%	97%	73%	71%	37%	66%	63%	67%	60%	82%	81%	70%	99%

Note: - denotes parameter was not analyzed

ATTACHMENT F

2022 Whale Tail Groundwater Model Update

TECHNICAL MEMORANDUM

To:	**Marie-Pier Marcil, Eric Haley (Agnico Eagle)**	**Date: Feb 22, 2023**
Cc:	**Angie Arbaiza (Agnico Eagle)**	
From:	**Laura-Lee Findlater, Joseph Xu, Justin Bourne (Lorax)**	**Project #: A634-8**
Subject:	**2022 Whale Tail Groundwater Model Update**	

1. Introduction

Agnico Eagle Mines Limited (Agnico Eagle) operates the Meadowbank Complex, a gold operation approximately 110 km north of Baker Lake by road in the Kivalliq District of Nunavut. Ore is mined from the Whale Tail site and processed at the Meadowbank mine site. The Whale Tail mine site is operated under Water Licence No. 2AM-WTP1830.

A numerical groundwater flow and transport model was initially developed in 2016 for Whale Tail Pit project assessment and permitting applications (Golder 2016). The model provided predictions of groundwater inflow and total dissolved solids (TDS) concentrations during operations and closure. The model was updated in 2019 to support the Expansion Project comprising a new underground development (Golder 2019a). The groundwater model update incorporated the revised mine plan and additional hydrogeological and thermal data and analyses compiled since 2016.

In accordance with the mine's Groundwater Monitoring Plan (GWMP), observed groundwater inflow rates are compared to model predictions in the Groundwater Management Monitoring Report appended to the Annual Report each year. In the most recently published Annual Report, WSP Golder (2022) indicates that 2021 winter inflow to the Whale Tail Pit was trending 50% higher than predictions (from Golder 2019a). This triggered a review and update of the groundwater model per the following conditions outlined in Section 5 of the GWMP:

- Groundwater inflow quantity to the mine, based on rolling monthly average of inflow over six consecutive months, is 20% higher than predicted groundwater inflow.

This memorandum briefly summarizes methods and results of the 2022 groundwater model update which comprised the following tasks:

- Rebuilding of the groundwater model to refine mesh in the area of interest and incorporate as-built mine extents;
- Calibration of the groundwater model to 2021 flow and water level data;
- Validation of the groundwater model; and,
- Predictions of future mine operations (2022-2025).

Areas where the 2022 groundwater model assumptions/parameterization differ from the 2019 groundwater model are discussed below. No transport simulations were undertaken under this mandate.

2. Numerical Methods

The 2022 groundwater model has been updated using the finite element modeling software FEFLOW (v.7.2) (DHI, 2022) which is the same modeling platform used to develop the 2019 groundwater model (Golder 2019a). The updated groundwater model domain covers similar lateral extents as the 2019 groundwater model except for a slight truncation of the model domain along the southwest margin. The model domain is divided into 35 layers of thickness ranging from 2 m to 80 m. The horizontal mesh size varies from approximately 12.5 m near the mine site to 25 m in more distal areas. Overall, the 2022 model has higher discretization than the 2019 model.

The 2022 groundwater model utilizes an updated permafrost distribution simulated by Golder which incorporated temperature data from more recent underground drillholes and expanded coverage into the northeast end of Kangislulik Lake (Golder 2021a) (Figure 1). The position of open and closed taliks did not change markedly between the 2021 thermal model and the 2019 version used to inform the 2019 groundwater model (Golder 2019b). The position of the closed talik extending into Whale Tail Pit was manually adjusted in the 2022 groundwater model to more accurately reflect temperature profiles measured from thermistors installed along the Whale Tail Pit south wall in 2020 (Figure 1).

Groundwater simulations were undertaken for current conditions and future operations. Mine extents for current operations (October 2021 and January 2022) were provided by Agnico Eagle. BBA Consultants provided end-of-year snapshots for 2022 through 2025 for future operations simulations. The model was run in steady-state mode for 2021 and 2022 simulations. For years 2023 through 2025, the model was run transiently to quantify groundwater released from aquifer storage to the underground.

For all 2021 through 2025 model runs, specified head boundary conditions of 155.5 m asl and 142 m asl were applied to the Whale Tail South Basin and Whale Tail Attenuation Pond, respectively. Of note, the top of the model domain has incorporated topographic data and Whale Tail Lake bathymetric data. The specific head boundary conditions were applied across multiple layers as dictated by lake depth. In contrast, the 2019 groundwater model assumed a uniform ground surface elevation of 148 m asl with specified head boundary conditions for the Whale Tail Lake and Attenuation Pond applied to the top layer only.

LEGEND

- Vibrating Wire Piezometer/Thermistor
- Westbay Installation
- Wall Seepage
- Sump (Flow and Water Quality)
- Drillhole Trace

Coordinate System: *NAD 1983 UTM Zone 14N*
Projection: *Transverse Mercator*
Datum: *North American 1983*
Units: *Meter*

1:8,000

0 100 200 Meters

DATE SAVED:	Jan 31, 2023
DRAWN BY:	GM
REVIEWED:	LF
VERSION:	1

CLIENT:

AGNICO EAGLE

LORAX ENVIRONMENTAL

PROJECT:

2022 Whale Tail Groundwater Model Update

TITLE:

Whale Tail Pit Monitoring Stations Informing Groundwater Model

PROJECT #: A634-8 *FIGURE:* 1

P:\@Drafting\Meadowbank\Drafting Figures\MXD\WT Groundwater Operation_20230130.mxd

3. Model Calibration and Validation

The 2022 groundwater model calibration benefitted from operational data not available for the 2019 model. Mining of the Whale Tail Pit, combined with prior dewatering of the north Whale Tail Lake basin, has served as a large-scale hydraulic stress upon which hydraulic parameters can be estimated.

The calibration data include 2021 average winter pumping rates from the Whale Tail Pit sump (Table 1) and November 2021 groundwater pressures measured at Westbay AMQ16-262 (Figure 1, Table 2). The groundwater model was calibrated in a steady-state simulation using the October 2021 pit extents, noting that the underground mining extents were limited to frozen ground and not interacting with the groundwater system. Since pit extents for earlier snapshots in 2021 were not readily available, the flow target used to calibrate the model was an average of flows measured between January-March and October-December 2021. This equated to an average target flow rate of 2059 m^3/d.

Table 1:
Volumes Pumped from the Whale Tail Pit Sump (2020-2021)

Month	Total Pumped Volume[1] (m^3)	Average Daily Pumping Rate (m^3/day)
Oct-20	57,836	1,866
Nov-20	44,744	1,491
Dec-20	57,945	1,869
Jan-21	62,721	2,023
Feb-21	43,703	1,561
Mar-21	71,320	2,301
Apr-21	48,680	1,623
May-21	49,484	1,596
Jun-21	126,825	4,228
Jul-21	121,399	3,916
Aug-21	135,056	4,357
Sep-21	124,540	4,151
Oct-21	74,035	2,388
Nov-21	75,828	2,528
Dec-21	48,161	1,554
Jan-March , Oct-Dec 2021 Average		2,059

Notes:
1. 2020 volumes from Golder (2021b), 2021 volumes from WSP Golder (2022).

Table 2:
Simulated and observed November 2021 freshwater elevations at Westbay AMQ16-626

Port	Port Position (m bgs)	Port Position (m asl)	Water Level Elevation (m asl)		Residual (Simulated-Observed) (m)
			Observed[1]	Simulated	
6*	257.9	-103.4	147.6	146.61	-0.99
5	289.7	-124.8	148.2	147.16	-1.04
4	326.3	-171.8	150.1	147.95	-2.15
3	356.2	-201.7	150.0	148.31	-1.69
2	411.7	-257.2	149.8	149.50	-0.30
1	455.9	-301.4	150.0	150.05	0.05

Notes:
mbgs = metres below ground surface (vertical down from surface); m asl = metres above sea level; -- = not measured
*Port 6 is suspected to be located within or near the cryopeg, which may influence measured hydraulic head (WSP Golder 2022).
1. Estimated freshwater hydraulic heads compute from November 2, 2021 pore pressure measurements. Reported in WSP Golder (2022).

Bedrock hydraulic conductivity was adjusted until the average pit inflow rate and Westbay water levels were reasonably approximated, based on modeler professional judgement. The 2022 calibrated hydraulic conductivity distribution is shown in Figure 2 with parameters listed in Table 3. Through the calibration process, it was found that the difference in water levels measured between Westbay ports supported the use of anisotropy in bedrock hydraulic conductivity values, hence the two lines representing horizontal (Kh) and vertical hydraulic conductivity (Kv) in Figure 2. Both lines represent the Base Case hydraulic conductivity distribution determined in the 2022 groundwater model update. The ratio of horizontal to vertical hydraulic conductivity ranges from 2.5-fold to 10-fold (Table 3). The 2019 groundwater model assumed isotropic hydraulic conductivity (Kh=Kv). The Upper Case hydraulic conductivity distribution from 2019 is also shown in Figure 2.

Both the 2019 and 2022 models simulate a trend of decreasing hydraulic conductivity with depth and do not differentiate between lithological units (*i.e.,* hydraulic conductivity for the layer is uniform across the model domain). In addition, neither model version simulates enhanced permeability zones as hydraulic testing information at the time of model development had not indicated widespread occurrence of such features.

The 2022 groundwater model simulates a 2021 Whale Tail Pit winter inflow rate of 2,058 m^3/d, which essentially matches the observed average winter flow rate target of 2,059 m^3/d (<0.05% difference). Simulated water levels at Westbay AMQ16-262 agree within 2.2 m of observed values. (Table 2). For this time period, flows reporting to the Whale Tail Pit sump are approximately 30% derived from the Whale Tail Attenuation Pond and 70% derived from moderately deep groundwater (10 m to approximately 200 m) draining the Whale Tail South

Basin. No groundwater originating from deeper bedrock (>200 m) is simulated to report to the Whale Tail Pit sump. The 2019 groundwater model predicted a higher proportion of flow (~80%) originating from the attenuation pond.

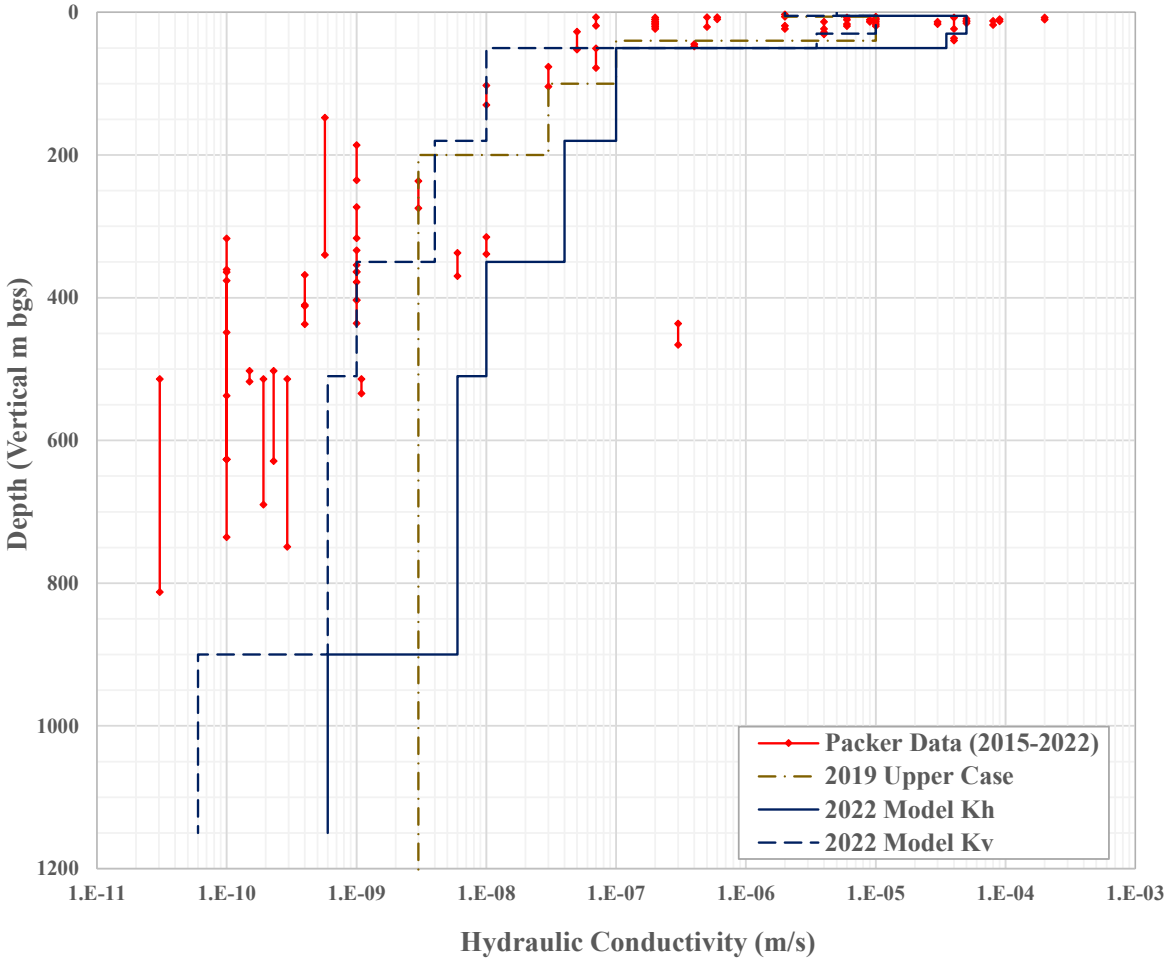

Figure 2: Simulated hydraulic conductivity distribution used in the 2019 and 2022 groundwater models.

4. Model Validation

The 2022 groundwater model was validated against four different data sources:

i. Flow rates measured from a drillhole advanced near the Whale Tail Pit Seep #1 (ST-WT-GW-1) in November 2021;

ii. January 2022 Whale Tail Pit sump flow rates;

iii. Baseline water levels collected at Westbay AMQ16-262; and

iv. August 2021 water levels collected from vibrating wire piezometers (VWPs) installed along the south wall of the Whale Tail Pit.

Table 3:
Calibrated hydraulic parameters from the 2022 groundwater model

Depth (mbgs)	2019 Model EA/Upper Case[1]	2022 Model				
	K (m/s)	K_h (m/s)	K_v (m/s)	K_h:K_v	Sy (-)	Ss (m^{-1})
2-6 (Overburden)	2.E-06	5E-06	2E-06	2.5	0.001	1E-04
6 – 30	1.E-05	5E-05	1E-05	5	0.01	1E-005
30 – 40	1.E-005	3.5E-05	3.5E-06	10	0.01	1E-05
40 – 50	1.E-07				0.01	1E-05
50 – 100	1.E-07	1E-07	1E-08	10	0.0006	1E-06
100 – 180	3.E-08				0.0006	1E-06
180 - 200	3.E-08	4E-08	4E-09	10	0.0006	1E-06
200 - 350	4.E-09				0.0006	1E-06
350 - 510	4.E-09	1E-08	1E-09	10	0.0006	1E-06
510 - 900		6E-09	6E-10	10	0.0006	1E-06
900 - 1150		6E-10	6E-11	10	0.0006	1E-06

Notes:
K= hydraulic conductivity, Sy = specific yield, Ss = specific storage
1. Per Golder (2019a)

4.1 ST-WT-GW-1 Drillhole Flow Rates

In an effort mitigate an ice wall which forms seasonally at the ST-WT-GW-1 seepage face, Agnico Eagle advanced an inclined borehole from the pit floor to concentrate the seepage. The borehole was drilled on October 21st, 2021, and flow rates measured on November 2nd and 8th, 2021 (Table 3, Figure 1). The drillhole was incorporated into the updated groundwater model and a steady state flow rate of 1,010 m^3/d was simulated. The simulated value agrees within 10% observed values.

Table 4:
Whale Tail Pit South Wall Flowing Drillhole Data

Borehole ID		ST-WT-GW-1 (DH1)
Drilled Date		October 21, 2021
Northing	m	7,255,424.88
Easting	m	606,877.59
Collar Elevation	m asl	140.91
Azimuth/Dip	degrees	180/30
Length	m	58.30
Flow Rate Nov 2, 2021	m^3/d	936
Flow Rate Nov 8, 2021	m^3/d	1,080

4.2 January 2022 Pit Inflow Rates

The January 2022 Whale Tail Pit extents were incorporated into a steady-state run of the updated groundwater model. The model simulated 2,354 m^3/d inflow to Whale Tail Pit, about 6% higher than the observed flow rate of 2,226 m^3/d.

4.3 Baseline Water Levels

Baseline water levels were measured at Westbay AMQ16-262 in November 2018, prior to the onset of lake dewatering and mining activities (Table 4). The updated groundwater model was configured to simulate baseline conditions with Whale Tail Lake occupying its pre-mine limits at an elevation 153 m. Simulated and observed water level elevations for Westbay AMQ16-262 are provided in Table 4 and agree within 0.31 m of observed levels.

Table 5:
Simulated and observed baseline freshwater elevations at Westbay AMQ16-626

Port	Port Position (m bgs)	Port Position (m asl)	Water Level Elevation (m asl)		Residual (Simulated-Observed) (m)
			Observed[1]	Simulated	
6*	257.9	-103.4	154.0	153.69	-0.31
5	289.7	-124.8	--	153.64	N/A
4	326.3	-171.8	153.6	153.52	-0.08
3	356.2	-201.7	153.4	153.43	0.03
2	411.7	-257.2	152.9	152.93	0.03
1	455.9	-301.4	152.5	152.71	0.21

Notes:
mbgs = metres below ground surface (vertical down from surface); m asl = metres above sea level; -- = not measured
*Port 6 is suspected to be located within or near the cryopeg, which may influence measured hydraulic head (WSP Golder 2022).
1. Estimated freshwater hydraulic heads compute from November 9, 2018 pore pressure measurements. Reported in WSP Golder (2022).

4.4 Whale Tail Pit South Wall VWPs

A series of thermistor strings nested with vibrating wire piezometers (VWPs) were installed along the south wall of the Whale Tail Pit in 2020 (Figure 1). These instruments collected water level data between June 2020 and August 2021 (Table 6) and were decommissioned thereafter on account of pit expansion. The water level in most piezometers dropped by several meters over the period of record on account of mining of the Whale Tail Pit. The water levels in the piezometers track closely with that of the Whale Tail Attenuation Pond but also respond to blasting in the pit (WSP Golder 2022).

Table 6:
Simulated and observed water levels at Pit South Wall VWPs

Sensor	Collar Co-ordinates (m UTM)		Collar El. (m asl)	Dip	Az.	Approx. Sensor Depth[1] (v m bgs)	Sensor Elevation (m asl)	August 2022 Water Level Elevation	Simulated October 2022 Water Level Elevation (m asl)	Residual (Simulated-Observed) (m asl)
	Easting	Northing								
DH3_PZ	607,016	7,255,140	147.6	90	0	20.8	126.89	129.22	134.54	5.32
DH6_PZ	607,058	7,255,184	147.8	90	0	22.8	124.99	134.89	134.45	-0.44
DH10_PZA	607,142	7,255,272	150.7	90	0	22.2	128.50	136.34	135.82	-0.52
DH11_PZA	607,156	7,255,287	151.2	50	0	108.8	42.47	131.37	130.04	-1.33
DH11_PZB	607,156	7,255,287	151.2	50	0	91.9	59.32	134.17	130.33	-3.84
DH11_PZC	607,156	7,255,287	151.2	50	0	76.6	74.64	133.63	130.66	-2.97
DH11_PZD	607,156	7,255,287	151.2	50	0	14.6	136.69	136.98	136.19	-0.79
DH12_PZA	607,168	7,255,294	151.9	50	0	16.6	135.31	137.46	136.73	-0.73
DH12_PZB	607,168	7,255,294	151.9	50	0	14.6	137.38	137.48	136.76	-0.72
DH12_PZC	607,168	7,255,294	151.9	50	0	11.9	140.06	139.00	136.80	-2.20
DH13_PZA	n/a	n/a	145.4	90	0	103.2	40.80	128.00	120.14	-7.87
DH13_PZB	n/a	n/a	145.4	90	0	63.2	80.80	135.24	123.18	-12.06
DH14_PZA	n/a	n/a	130.8	90	0	79.5	53.50	109.41	97.10	-12.31
DH14_PZB	n/a	n/a	130.8	90	0	54.5	78.50	108.34	101.52	-6.82

Notes:
n/a = not available, v m bgs = vertical metres below existing ground surface, m asl = metres above sea level
Wells in red were used to adjust shallow permafrost depth in 2022 groundwater model.

Observed August 2021 and simulated October 2021 water levels for the VWPs are provided in Table 6. In comparing the simulated and observed water levels, it should be noted that the August measurements occur during a high flow period while the groundwater model simulates a low flow period. Thus, the comparison is not truly a model validation, rather it is an independent check that the model is reasonably approximating water levels in this area. The simulated water levels are predominantly lower than the observed values, which is to be expected given the disparate flow seasons represented.

5. Model Predictions (2022-2025)

Simulated Whale Tail Pit and underground dewatering rates for future operations are provided in Table 7 and Table 8, respectively. Upper case predictions from the 2019 groundwater model are shown for reference. Overall, groundwater inflows to Whale Tail Pit are predicted to stabilize in 2023 as pit expansion is limited to frozen ground. Conservatively, neither the 2019 nor 2022 groundwater models simulate permafrost aggradation into the Whale Tail Pit south wall during this time, although experience at Meadowbank suggests that this is a possibility.

The 2022 groundwater model predicts pit inflow rates that are essentially double the 2019 Upper Case estimates (Table 7). This is attributed to a variety of factors, including higher hydraulic conductivity values (particularly Kh) used in the 2022 model over the upper 200 m interval (Figure 2); differences in pit representation on account of a higher resolution mesh in the 2022 model, adjustments to the depth of the closed talik in the pit (Section 2) and differences lake boundary condition implementation between the two models (Section 2).

The proportion of pit inflow derived from the Whale Tail South Basin and Attenuation Pond also differs between the 2019 and 2022 models (Table 7). The 2022 model predicts that most flow to the pit (~65-67%) is derived from the Whale Tail South Basin, which the 2019 model predicted to contribute 15% or less flow to the pit. Of the total flow the 2022 model predicts to report to the pit, 10% of this travels from the Whale Tail South Basin to the Attenuation Pond then onto the pit. This flow component is included in the portion of flow originating from the Whale Tail South Basin (columns 5 and 6 of Table 7). Using 2025 as an example, of the 2,438 m^3/d that is derived from the Whale Tail South Basin, 375 m^3/d (10% of 3,750 m^3/d) total pit inflow first reports to the Whale Tail Attenuation Pond, and then travels to the pit.

The underground dewatering rates predicted by 2022 groundwater model are generally lower than those predicted by the 2019 groundwater model (Table 8). This difference is attributed to a combination of factors, including lower vertical hydraulic conductivity and higher mesh refinement used in the 2022 model as well as modifications to the mine plan.

Table 7:
Simulated Whale Tail Pit Inflow for Future Operations (2022-2025)

Year	2022 Groundwater Model - Base Case					2019 Groundwater Model – Upper Case[2]				
	Whale Tail Pit Inflow	Inflow from Whale Tail Attenuation Pond		Inflow From Whale Tail South Basin[3]		Whale Tail Pit Inflow	Inflow from Whale Tail Attenuation Pond		Inflow From Whale Tail South Basin	
	(m^3/d)[1]	%	m^3/d	%	m^3/d	m^3/d	%	m^3/d	%	m^3/d
2022	3,070	33%	1,013	67%	2,057	1,360	81%	1,102	9%	122
2023	3,740	35%	1,309	65%	2,431	1,360	82%	1,115	12%	163
2024	3,750	35%	1,313	65%	2,438	1,350	82%	1,107	14%	189
2025	3,750	35%	1,313	65%	2,438	1,350	82%	1,107	15%	203

Notes:
1. Year 2022 simulated as a steady-state run using the end of year snapshot. All other years simulated in transient runs using end of year snapshots; inflow values represent and average of the year and include release from storage.
2. Per Golder (2019a).
3. Approximately 10% of the inflow to Whale Tail Pit travels from the Whale Tail South Basin to the Whale Tail Attenuation Pond and then on to the pit. This flow is included in the percentage/flow rate originating from the Whale Tail South Basin.

Table 8:
Simulated Whale Tail Underground Inflow for Future Operations (2022-2025)

Year	Underground Inflow (m^3/d)	
	2022 Groundwater Model – Base Case[1]	2019 Groundwater Model – Upper Case[1]
2022	10	250
2023	30	420
2024	60	410
2025	290	340

Notes:
1. Year 2022 simulated as a steady-state run using the end of year snapshot. All other years simulated in transient runs using end of year snapshots; inflow values represent an average of the year and include release from storage.
2. Per Golder (2019a).

6. Summary

The Whale Tail groundwater model was updated in 2022 to improve model performance against observed winter inflows to the Whale Tail Pit. The model update comprised refinement of the model mesh and incorporation of an updated permafrost surface determined by the 2021 thermal model update and observations from thermistors installed along the pit the south wall in 2020. The model was calibrated to winter 2021 flows (January-March and October-December) and November 2021 Westbay water levels while simulating the October 2021 as-built mine extents. The model essentially reproduces observed flows (2,058 m^3/d) and reasonably simulates Westbay water level data. The data supported the use of anisotropy in hydraulic conductivity, with Kh exceeding Kv by 2.5 to 10 times. In contrast, the 2019 groundwater model utilized isotropic hydraulic conductivity (Kh = Kv).

The 2022 model was validated against flow rates measured at a drillhole advanced near pit seep ST-WT-GW-1 in November 2021, January 2022 pit inflow rates (simulated with January 2022 pit extents) and baseline Westbay water levels. Model performance was also checked using open water season water levels at Whale Tail Pit south wall VWPs. The model provided acceptable results for all validation metrics.

The model predicts that open pit dewatering rates will stabilize around 3,750 m^3/d in 2024 while underground inflow rates are predicted to climb from 10 m^3/d in 2022 to 290 m^3/d in 2025. Flow reporting to the Whale Tail Pit is mostly derived the Whale Tail South Basin with the Whale Tail Attenuation Pond providing the balance of the flow. This is a reversal from the 2019 groundwater model which found the majority of flow to Whale Tail Pit originated from the Whale Tail Attenuation Pond. The differences in flow predictions between the 2019 and 2022 models can be attributed to a number of factors including the updated hydraulic conductivity distribution, refinements in model mesh and mine plan implementation, closed talik position in Whale Tail Pit, and differences in implementation of lake boundary conditions.

7. Closure

This memorandum has been prepared Lorax Environmental Services Ltd. (Lorax) for the exclusive use of Agnico Eagle. If any clarification or additional information is required, please contact the undersigned.

Yours very truly,

Lorax Environmental Services Ltd.

per:

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