Appendix 43

Whale Tail 2022 Groundwater Management Monitoring Report

TECHNICAL MEMORANDUM

DATE 29 March 2023 22525330-TM-578-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 – 2022 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 2022 groundwater monitoring program was also completed as a requirement of the Water License no. 2AM-WTP1830 issued by the Nunavut Water Board (NWB).

This memorandum provides a compilation and review of the site-specific data collection in 2022 and the review of 2022 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 2022 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 2022, 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 above the North Basin. 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.

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 2022 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 (Golder 2023a), 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 2022 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.

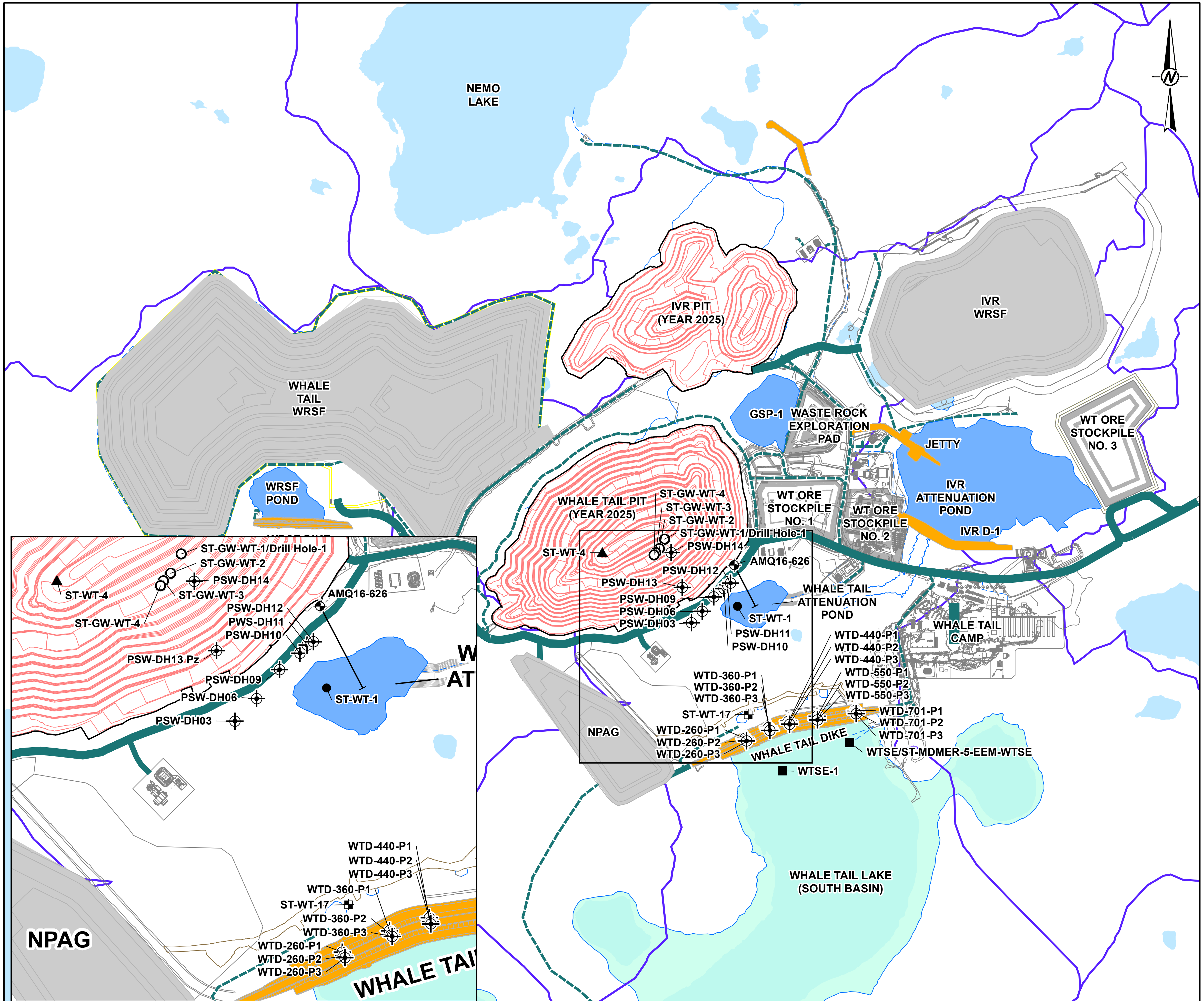
- Ports 4 and 3 were targeted for sampling based on their port elevation relative to planned underground infrastructure and because these intervals had been substantially developed since 2016 (i.e., drill water had been largely removed from the interval). These ports are used to assess groundwater quality for the Whale Tail Pit.
- Based on the findings of the 2021 field program, the collection of groundwater quality samples from Port 6 located within the cryopeg is no longer recommended since 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 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 Whale Tail only includes 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 the data from Ports 3 and 4, the calculated TDS content of Formation water is estimated to range between 1,079 mg/L and 2,431 mg/L. These TDS values are slightly less saline than historical sampling results, which may reflect the lower residual drilling fluid content in the collected samples and therefore inferred higher accuracy is the calculated Formation water quality but are overall reasonably consistent with the TDS profile adopted in the FEIS (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 2022 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 2022 groundwater quality monitoring at AMQ16-626.



LEGEND

WATER SAMPLING STATIONS 2021

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

2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

WATER SAMPLING STATIONS

CONSULTANT

wsp

YYYY-MM-DD	2023-03-27
DESIGNED	NU
PREPARED	CDB
REVIEWED	JL
APPROVED	JL

PROJECT NO.	DOC.	REV.	FIGURE
22525330	547	0	1

2.2 Thermal Monitoring Related to Groundwater Flow Interpretation

Thermal monitoring at the Site is documented in the Whale Tail Mine Thermal Monitoring Report 2022, dated January 2023 (Agnico Eagle 2023), which is included in Attachment B for reference. There are currently seventy-one (71) active thermistors at the Whale Tail Mine site, and their approximate locations are presented in Appendix A of Attachment B. No additional thermistors were installed in 2022.

Historical thermistors 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 and monitoring in 2022 indicates permafrost conditions down to 500 m 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 no data was available for 2022. 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, it was possible to observe some freeze-back of 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.

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+142, 0+190 U/S, 0+210, 0+260, 0+276 U/S, 0+310, 0+336 U/S, 0+360, 0+407, 0+520, 0+543, 0+550, 0+607, 0+675, 0+701, 0+710 U/S, 0+750, 0+772 U/S). Agnico Eagle indicates that the trend of permafrost degradation noted at the abutments in 2021 did not progress laterally based on the 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, 2023). The thermal regime in this area has not yet reach an equilibrium.

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

Hydraulic head was estimated from pressure data recorded in 2022 from the Westbay Well AMQ16-626 (Attachment A) and from piezometers (refer to Figure 1) installed to monitor the south wall of the Whale Tail Mine and the performance of the WTD (Attachment C). The Whale Tail pit is located below 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.

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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 2022 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 (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. The gradients have not been corrected for buoyancy effects, which will be low for the observed TDS concentrations. Buoyancy effects, if included, would only alter calculated gradients by approximately 0.001 to 0.002.

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 now present at shallow depths (generally 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 0.001 m/m in 2020 and 2021 and 0.002 in 2022, which is lower than pre-mining conditions and likely reflects the influence of dewatering 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, Whale Tail Attenuation Pond, located between the WTD and the Whale Tail Pit. Due to mining activities in the sector all piezometers installed near the south wall of the Whale Tail Pit were decommissioned between August 21 and 23, 2021 (PSW-DH01 to PSW-DH14). The approximate locations of the piezometers are illustrated in Figure 1 and the collected 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.

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 2022 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 March) is assumed to predominantly represent groundwater inflow as freezing temperatures restricts surface water runoff and the influence of direct precipitation. April 2022 was interpreted as not representative of winter conditions since the average daily flow rate in April 2022 was higher than each of the other months.

The total and average daily volume of water pumped per month from the Whale Tail pit sump in 2022 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 2022, 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, October, November and December ranged between 885 m^3/day to 2,309 m^3/day, with an average flow rate of 1,597 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: 2022 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	69,006	2,226
	February	24,781	885
	March	55,944	1,805
	April	129,973	4,332
	May	85,935	2,772
	June	69,891	2,330
	July	56,662	1,828
	August	85,059	2,744
	September	122,592	4,086
	October	35,133	1,133
	November	69,260	2,309
	December	38,012	1,226

m^3 = cubic metres

2.4.2 Seepage Surveys

As part of the GWMP, pit seepage assessments are to be completed twice a year for the first two years and once a year starting in the third year and continuing until the end of operations. In the first two years of pit development, one of the seepage surveys is to be conducted in early summer, following snow melt and any thawing of ice in the pit walls, and then again in late August. In the following years of mining, one survey will be conducted in August of each year. 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 2022 (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.

Attachment D presents photographs taken by Agnico Eagle of seepage locations in middle 2022 (July and August) and in late 2022 (September and November) and Figure 2 shows the location of specific seeps noted by Agnico Eagle in the south wall. In 2022 no seepage flow rates were recorded for Drill Hole-1/ST-GW-WT-1.

Seepage water quality analysis is discussed in Section 2.4.3.

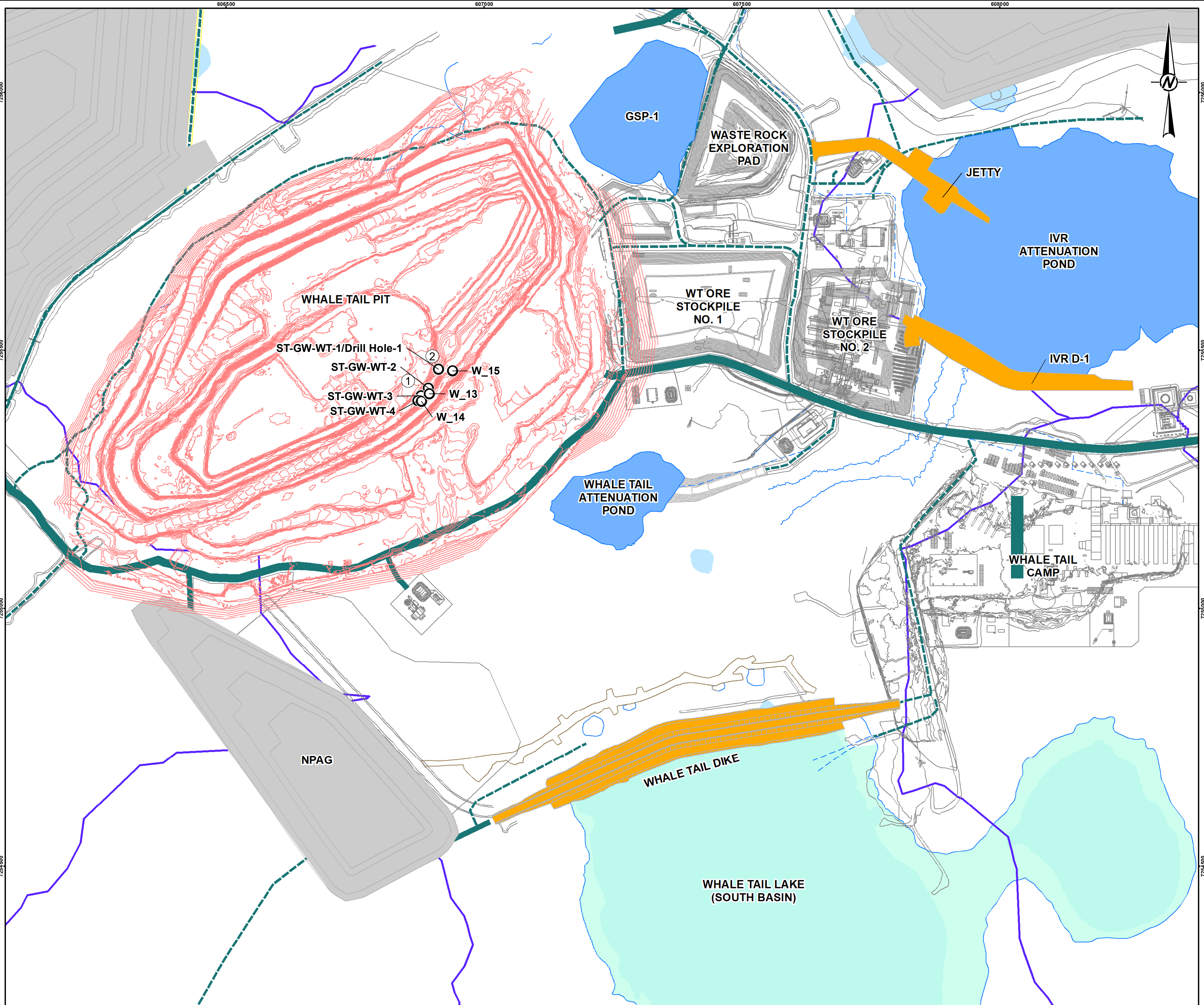
2.4.3 Whale Tail Pit Inflow Quality

In accordance with Section 4.2 of the GWMP, Agnico Eagle collected water samples from the following locations in 2022.

- **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 March) 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 stations ST-GW-WT-1 to ST-GW-WT-4.** Water from pit wall seeps (ST-GW-WT-1 through ST-GW-WT-4) 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. In 2022 no water samples were collected at stations ST-GW-WT-2, ST-GW-WT-3 and ST-GW-WT-4 due to safety concerns.

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 License 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 were not analyzed for bicarbonate alkalinity, carbonate alkalinity, dissolved organic carbon, reactive silica, total kjeldahl nitrogen and total organic carbon, but it is recommended to have them included in 2023. These parameters are useful for assessing water quality and in particular, 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 2022 Meadowbank Complex Annual Report (Agnico Eagle 2022).



LEGEND

- WALL SEEPAGE (2021)
- ① PHOTO LOCATION (REFER TO ATTACHMENT D PHOTOS 1 TO 6)
- ② PHOTO LOCATION (REFER TO ATTACHMENT D PHOTOS 7 TO 9)
- TOPOGRAPHY (DECEMBER 2021 SURVEY)

0 150 300
1:7,500 METRES

REFERENCE(S)

1. WHALE TAIL PIT CONTOURS (DECEMBER 2021) OBTAINED FROM AGNICO EAGLE MINES LIMITED.

DATUM: NAD 83 CSRS PROJECTION: UTM ZONE 14

CLIENT
AGNICO EAGLE
AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION

PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
SEEPAGE LOCATIONS NOTED BY AGNICO EAGLE IN 2022

CONSULTANT
wsp

YYYY-MM-DD	2023-03-27
DESIGNED	NU
PREPARED	CDB
REVIEWED	JL
APPROVED	JL

PROJECT NO.	DOC.	REV.	FIGURE
22525330	547	0	2

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Four (4) pit wall seepage samples were collected from ST-GW-WT-1 in 2022 (Table 2). No samples were collected in January, February, March, April, May, October, 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 license, with the exception of fluoride (September 2022 sample only) , 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 2022 Whale Tail Pit Wall Seepage Samples

Station ID	UTM Zone	Easting (m)	Northing (m)	Sampling Date(s)[(a)]	Analytical Parameters[(b)]
ST-GW-WT-1	14W	606912	7255464	13-Jun-22 18-Jul-22 9-Aug-22 6-Sep-22	Group 1 chemical parameters listed in Table 1 Schedule I of NWB Water License Number 2AM-WTP1830 and additional parameters listed in GWMP (electrical conductivity, select major ions, select dissolved metals, ortho-phosphate and total phosphorus)

m = metres

a) Pit wall seepage samples could not be collected in January, February, March, April, May, October, November and December 2022 due to accessibility issues related to operations and/or safety concerns.

b) Fluoride (Group 1 Water License parameter) was not analyzed in the pit wall seepage samples collected in June, July and August 2022.

Figure E-1 and E-2 of Appendix E show the variation in TDS and chloride in the above monitoring stations throughout 2022. TDS measured in the pit sump was variable and ranged from approximately 120 mg/L to 585 mg/L. The variability reflects the temporal interactions of surface water runoff, pit wall runoff, blasting and groundwater inflow. In 2022 the TDS in the pit wall sump was lower from January and May and presented the highest concentrations from mid June to mid November. In 2022 the lowest concentrations of chloride were also observed from January to mid May.

TDS in the Whale Tail Attenuation Pond follows a similar trend to the TDS in the pit sump, although concentrations are slightly lower. Lower still is the seepage water collected from the Whale Tail Dike Seepage. The elevated TDS may reflect groundwater inputs to the pit, as well as contributions from mine construction/blasting and pit wall runoff.

The TDS in the pit wall seepage is similar to the Whale Tail Attenuation Pond. The TDS measured in the pit wall seepage in 2022 ranged from approximately 185 to 260 mg/L, which is similar to the TDS measured in the pit sump during the winter months, when surface influences are low, and it was 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, 2022), 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 AMQ 16-262). 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 be 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 885 to 2,309 m^3/day, with an average flow rate of 1,597 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 48% lower than the updated predictions for 2022, 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 67% 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 slightly higher than both 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 were generally 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 48% lower than predicted values using the updated model for 2022, and its possible that the model is overpredicting inflow from the Whale Tail South Basin. Water quality predictions from the site wide water quality model should be reviewed in 2023 to further evaluate if the TDS observed in the pit sump and pit wall seepage is consistent with the proportions predicted by the groundwater model, or if there are surface water loading of TDS, such as from pit wall runoff.

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 2022. 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 2022 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 0.001 m/m in 2022, which is lower than pre-mining conditions and likely reflects the influence of dewatering 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 m, which will restrict horizontal groundwater flow. Oscillations in temperature data observed in this thermistor should be review in 2023. 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 2023.
- The average 2022 inflow to the Whale Tail pit is estimated to be 1,597 m^3/day, based on the winter sump inflow measurements in January, February, March, October, November, and December. The average inflow rate is approximately 48% lower than predicted value by the updated model for 2022, and therefore, and no revision of the model based on the triggers is required.
- TDS measured in the pit sump was variable and ranged from approximately 120 to 585 mg/L. The TDS measured in the pit wall seepage in 2022 ranged from approximately 185 to 260 mg/L, which is 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. 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 67% 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 Dike Seepage. Water quality predictions from the site wide water quality model should be reviewed in 2023 to further evaluate if the TDS observed in the pit sump and pit wall seepage is consistent with the proportions predicted by the groundwater model, or if there are surface water loading of TDS, such as from pit wall runoff.

- In 2022, parameters requirements of the Water License were met for the pit sump and seepage wall samples. 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 2022.

5.0 CLOSURE

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

WSP CANADA INC.

ORIGINAL SIGNED BY

ORIGINAL SIGNED BY

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Hydrogeologist

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NU/JL

https://golderassociates.sharepoint.com/sites/163043/project files/6 deliverables/02 wt/wt gwmp/rev0/22525330-578-tm-rev0-2022 wt gw monitoring-29march23_agnico.docx

Attachments: Attachment A – 2022 Westbay Well Sampling Technical Memorandum
Attachment B – 2022 Thermal Monitoring Report
Attachment C – 2022 Piezometric Monitoring Data
Attachment D – 2022 Seepage Survey Photographs
Attachment E – Supplemental 2022 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). 2022. Meadowbank Complex Annual Report.

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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)

Golder. 2022. Whale Tail Pit Project – 2021 Groundwater Management Monitoring Report. Dated 28 March 2022 (Reference 21452766-TM-547-Rev0).

Golder. 2023a. Whale Tail Project – 2022 Groundwater Monitoring of AMQ16-626. Dated 23 February 2023 (Reference 22525330-577-TM-RevA).

Lorax. 2023. Technical Memorandum - 2022 Whale Tail Groundwater Model Update. Lorax Environmental Services Ltd. - Dated February 22, 2023 (Reference A634-8).

ATTACHMENT A

2022 Westbay Well Sampling Technical Memorandum

TECHNICAL MEMORANDUM

DATE 14 March 2023 **Project No.** 22525330-577-TM-Rev1

TO Marie-Pier Marcil
Agnico Eagle Mines Limited

CC Eric Haley

FROM Nickie Unonius, Valérie Bertrand, and Jennifer Levenick **EMAIL** nickie.unonius@wsp.com; valerie.bertrand@wsp.com; jennifer.levenick@wsp.com

WHALE TAIL MINE – 2022 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 km^2 site located on Inuit Owned Land approximately 150 km north of the hamlet of Baker Lake and approximately 50 km northwest of the Meadowbank Mine in the Kivalliq Region of Nunavut.

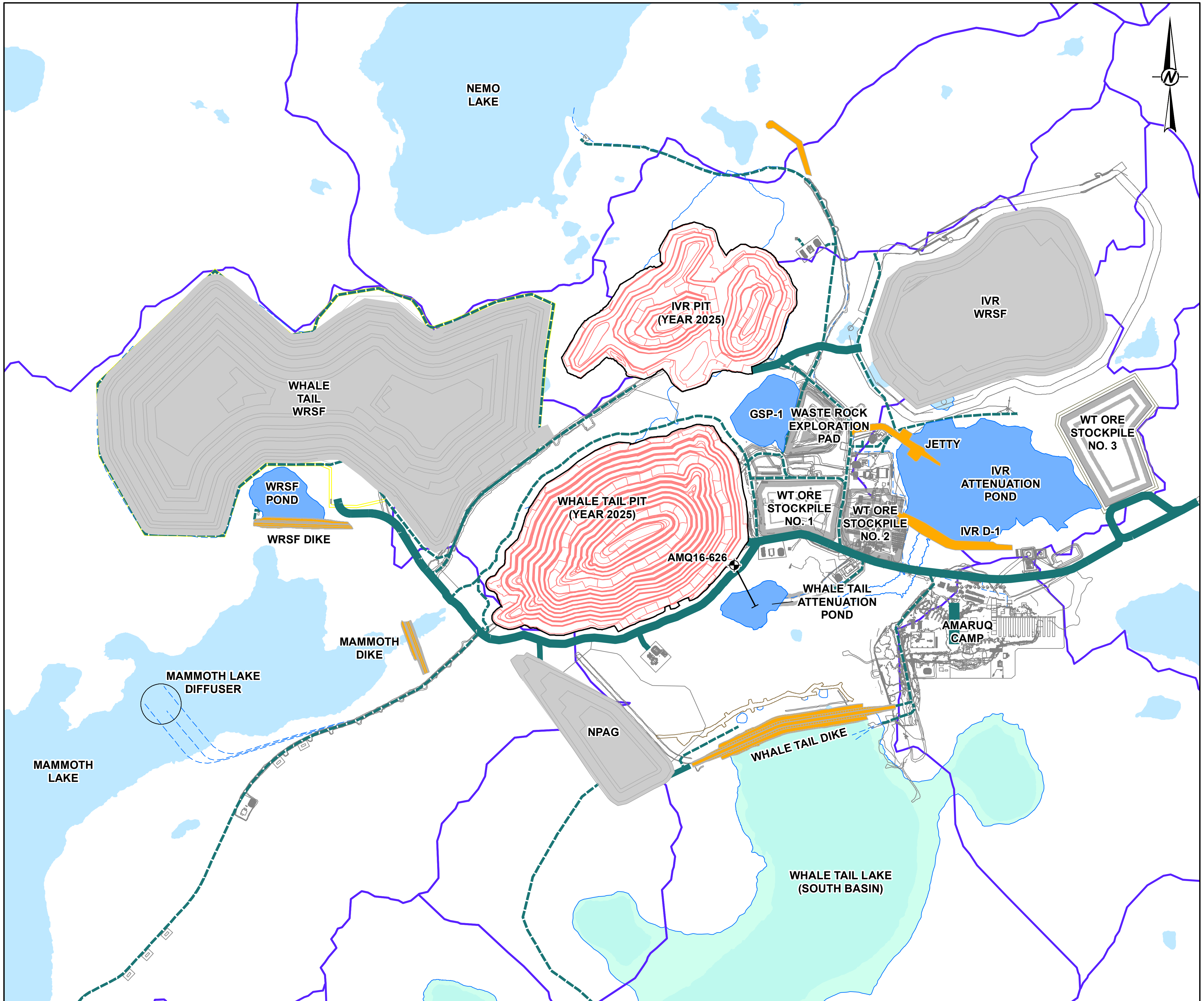
This report documents the 2022 groundwater monitoring of Westbay Well AMQ16-626. This well is monitored as a compliance requirement of Water License no. 2AM-WTP1830 associated with Whale Tail Project Certificate No. 008.

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

2022 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE

SITE PLAN

CONSULTANT

wsp

YYYY-MM-DD	2023-03-13
DESIGNED	DH
PREPARED	CDB
REVIEWED	DH
APPROVED	VJB

PROJECT NO.	DOC.	REV.	FIGURE
22525330	577	1	1

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

25mm

Table 1: Borehole AMQ16-626 Westbay System Zones

Sampling Interval	Depth Along Borehole			Depth Below Ground Surface			Elevation		
	From (mah)	To (mah)	Length (m)	From (mbgs)	To (mbgs)	Thickness (m)	From (masl)	To (masl)	Thickness (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, utilized 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 in 2021 the data was considered unreliable because of the probable influence of Westbay casing water in the samples recovered.

3.0 2022 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 8 September 2022 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 2022 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.
- Based on the findings of the 2021 field program, the collection of groundwater quality samples from Port 6 located within the cryopeg is no longer recommended since 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 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 Tale Mine only include water quality data from Ports 6, 4 and 3, and not the deeper Ports 1 and 2.

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 2022 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-mm 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. Sodium adsorption ratio (SAR) was also included in the analysis by Agnico Eagle.

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 was monitored in the field during sampling and was 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 2022 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.

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

[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.

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).

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

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 2022 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 2022 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
6	-103.4	154.0	153.1	148.3	147.6	145.8
5	-124.8	--	--	149.0	148.2	147.7
4	-171.8	153.6	153.1	150.5	150.1	149.6
3	-201.7	153.4	153.7	150.5	150.0	149.6
2	-257.2	152.9	152.5	150.4	149.8	149.4
1	-301.4	152.5	152.3	150.4	150.0	149.3

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

The calculated freshwater hydraulic heads measured in 2022 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 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 0.001 m/m in 2020 and 2021 and 0.002 in 2022, which is lower than pre-mining conditions and likely reflects the influence of dewatering 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/or sampled in 2022. 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. The sequence of measurements collected during the 2022 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 2021 – 2016 to 2022

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	120 [23%]	23	423	550 [107%]	4.8	50
2018	87 [17%]	9	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	120 [22%]	22.1	41	44 [9%]	5.3	76	202 [39%]	32.5	8	137 [27%]	10.7	2
2020	33 [6%]	6.6	15	34 [7%]	4.8	48	41 [8%]	3.4	46	81 [16%]	17.7	15	146 [29%]	3.2	17
2021	109 [21%]	3.6	12	17 [3%]	2.4	22	29 [6%]	4.4	20	92 [18%]	15	22.7	155 [30%]	4.1	1
2022	84 [16%]	4.2	2	30 [6%]	2.6	71.25	15 [3%]	2.9	65.5	32 [6%]	5.4	2	93 [18%]	3.7	2
Cumulative Volume Removed (L)	328.25			2,050.5			397.0			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 Sampling Target – Ports 3 and 4 (50 ppb and removal of at least one interval volume prior to sampling).

Table 4: Summary of AMQ16-626 Westbay Well 2022 Monitoring Program Data from Samples of Port 3 and Port 4 Collected for Chemical Analysis

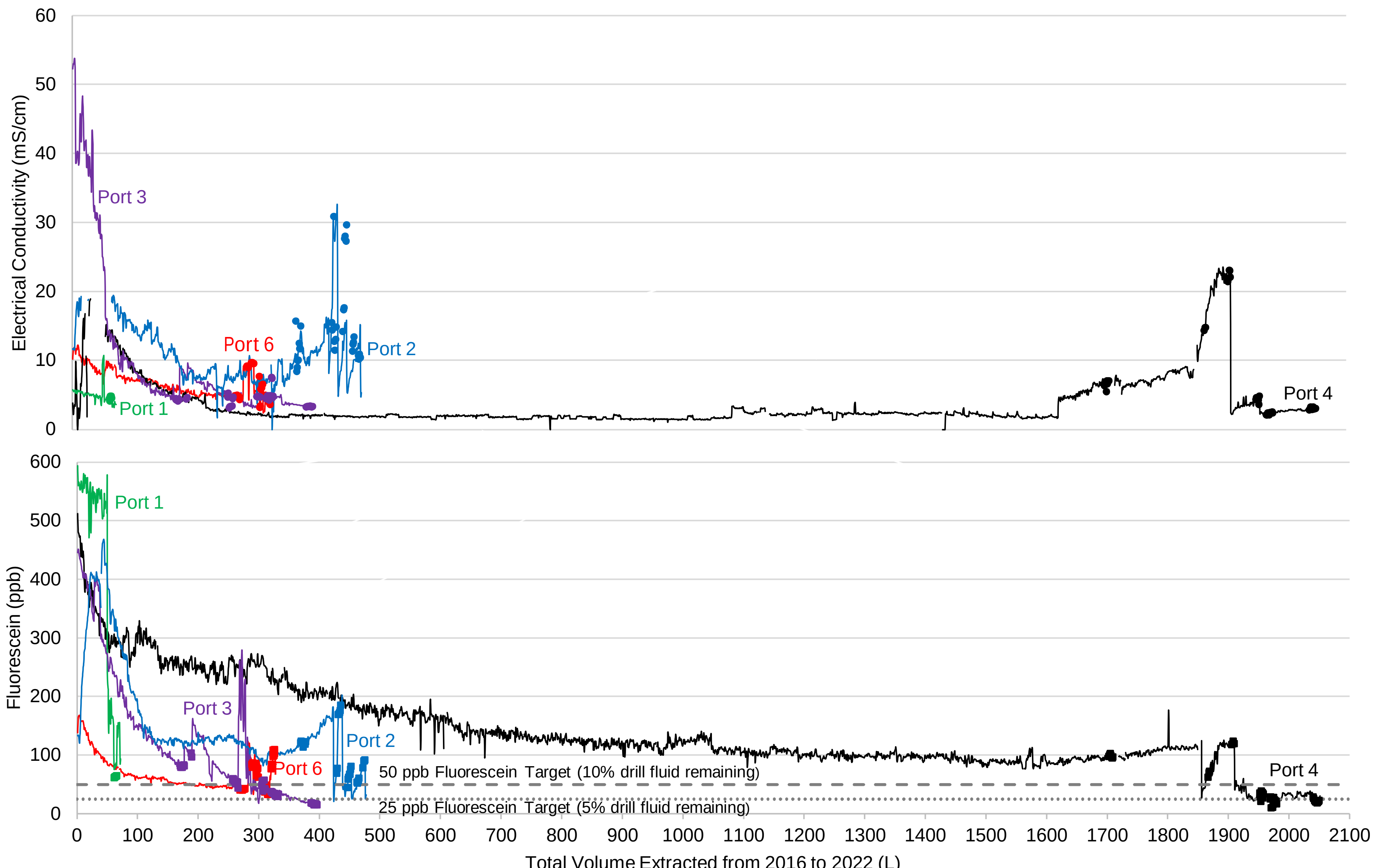
Port	Sample Date	Sample ID	Average Field Measured Parameters at Sampling Period[a]					Analytical Parameters[b]
			F	EC	TDS	Salinity	pH	
4	19-Sep-22	Port 4-A, Port 4-B	22.4 ± 2.8	3.04	2,578	2.4	6.5	Schedule I Table 2
3	13-Sep-22	Port 3-A, Port 3-B	16.9 ± 1.2	3.32	2,843	2.4	7.0	Schedule I Table 2

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 analyzed for parameters listed in Section 4.2 of the GWMP and in Schedule I Table 2 of the Water License.



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

Port	Cumulative Volume Removed, 2016 to 2022 (Litres)	Volume Removed in 2022 (Litres)
6	328.2	2
4	2,050.50	71.25
3	397	65.5
2	477	2
1	72.25	2

CLIENT
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AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

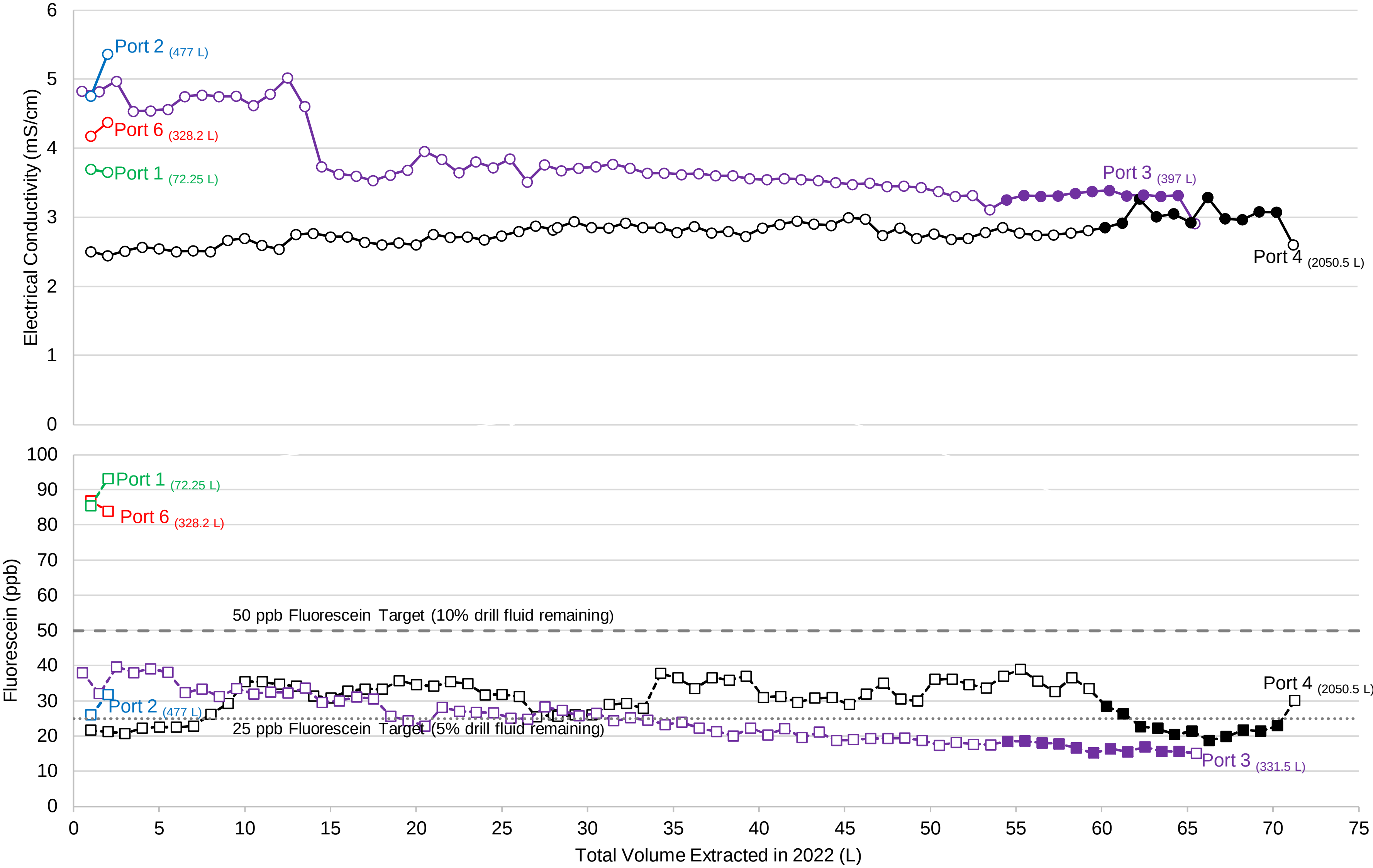
CONSULTANT
wsp

YYYY-MM-DD	DH	2023-03-07
PREPARED	NU	
DESIGN	JL	
REVIEW	--	
APPROVED	JL	

PROJECT
2022 WESTBAY WELL SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
2016 to 2022 AMQ16-626 DEVELOPMENT RECORD

PROJECT No.	DOC.	Rev.	FIGURE
22525330	577	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 2022 in Litres (L)
6. Port 6 interpreted to potentially depressurize during sampling. Collected water likely contains Westbay casing fluid (mixture of propylene glycol and water).

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MEADOWBANK DIVISION

CONSULTANT

wsp

YYYY-MM-DD	DH	2023-03-07
PREPARED	NU	
DESIGN	JL	
REVIEW	--	
APPROVED	JL	

PROJECT
2022 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
2022 AMQ16-626 DEVELOPMENT RECORD

PROJECT No.	DOC.	Rev.	FIGURE
22525330	577	1	3

Stiff diagrams for the 2022 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 is calcium whereas it is sodium and potassium at Port 3. As shown in Figure 4, the Port 4 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). The intensity of the peaks could also reflect some residual content of the calcium chloride brine fluid introduced into the Formation during well installation (Golder 2016b). In general, the 2022 stiff diagrams are consistent to previous years, however the calcium and chloride peaks are less pronounced in Ports 3 and 4 in 2022, likely related to continued purging/natural flushing.

Calculated Formation water quality for Ports 3, 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 and 2022 (Ports 3 and 4 only). The 2022 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.

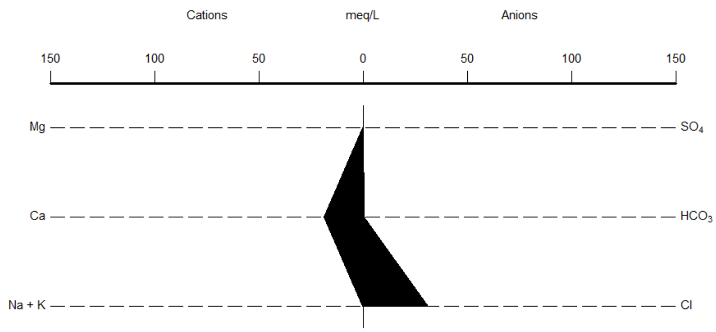
The 2022 field schedule did not allow for purging of Ports 1 and 2. Ports 1 and 2 were sampled for field parameters only to track the evolution of groundwater quality with natural flushing which, in time, is expected to displace drilling fluids and return the interval to pre-drilling groundwater quality. Field parameters were also measured in Port 6 to track the evolution of groundwater quality with flushing over time, however as previously discussed in Section 3.2.2 Port 6 is located in the cryopeg and sampling is no longer recommended since the formation pressure is taking longer to recover between 1 L sample runs compared to previous years (gradual decrease over time since 2016).

The following provides further information on water quality at each Ports 3 and 4 based on the 2022 monitoring program.

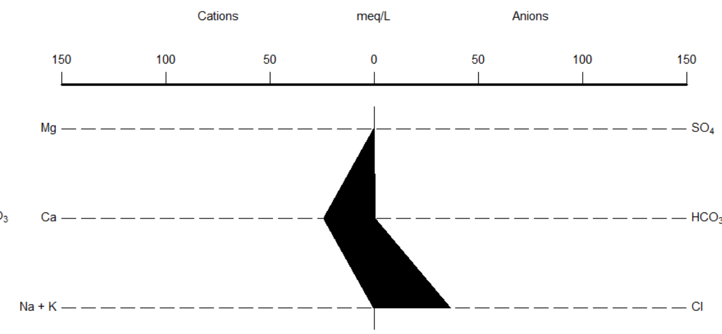
Corrected Water Quality
(drilling fluid removed)

Raw Water Quality
(uncorrected laboratory result)

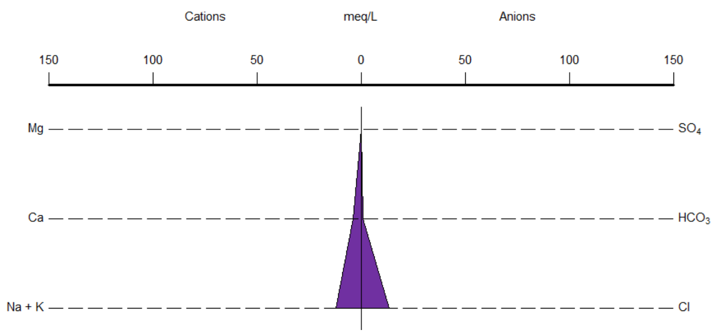
PORT 4 – 331 m



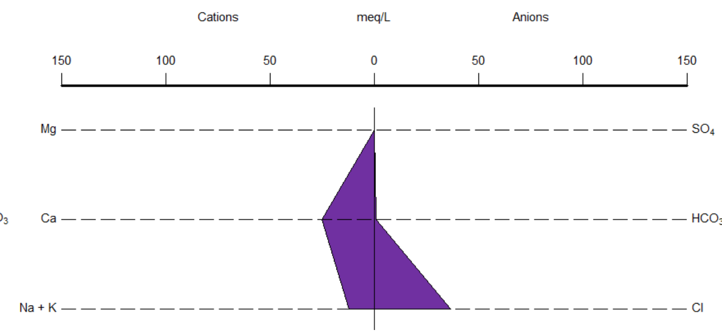
PORT 4 – 331 m



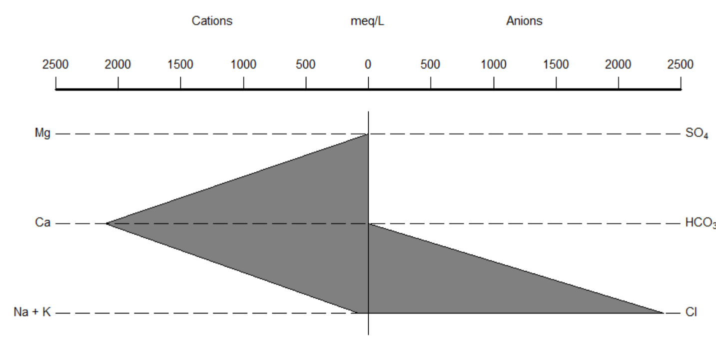
PORT 3 – 361 m



PORT 3 – 361 m



DRILLING FLUID



NOTE(S)

1 Stiff diagrams illustrate calculated 2022 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..

CLIENT
AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

AGNICO EAGLE

PROJECT
2022 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

CONSULTANT

wsp

YYYY-MM-DD	2022-02-28
PREPARED	DH
DESIGNED	--
REVIEWED	VJB
APPROVED	XX

TITLE
2022 WESTBAY SYSTEM AMQ16-626 AND 2016 DRILL FLUID STIFF PLOTS

PROJECT NO.	DOC	REV.	FIGURE
22525330	577	1	4

Port 4

The 2022 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 consistent in 2021 and 2022 (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).

The estimated 2022 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 species (free and WAD) were not detected in the Port 4 sample, while free cyanide was present in trace amounts. Total cyanide was present in the field and trip blank (refer to Section 5.0 and Table D-4 in Attachment D), and it is therefore uncertain if the observed cyanide is representative of groundwater at Whale Tail. As cyanide species have only been analyzed since 2021, future monitoring will be required to verify its presence. The 2022 calculated Radium-226 concentration is estimated to be between 0.19 and 0.22 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 2022 data is considered to be reliable in representing Formation water quality. The port had both a calculated TDS range (1,866 and 2,431 mg/L) and laboratory result TDS range (2,420 to 2,450 mg/L) that is similar but slightly lower than the previously reported calculated 2016 TDS range (3,581 to 3,966 mg/L). The slight change in TDS concentrations likely reflects improved representativeness of Formation water from reduced drill fluid content.

Port 3

The 2022 field-measured groundwater fluorescein content and electrical conductivity at Port 3 at the end of sampling were lower than values recorded at the end of the previous groundwater monitoring programs. Concentrations of fluorescein and electrical conductivity stabilized towards the end of the 2020 monitoring program in Port 3 and remained similar in 2022 (refer to Figure 3). This suggests that a steady state is established with the small amount of residual drilling water present in the Formation water in this zone.

The 2022 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. For comparative purposes only, the calculated Radium-226 concentration is estimated to be between 0.20 Bq/L and 0.22 Bq/L and below the MDMER limit of 0.37 Bq/L.

Port 3 2022 data is considered to be reliable in representing Formation water quality. The port had both a calculated TDS range (1,079 and 1,170 mg/L) and a laboratory TDS range (2,370 to 2,420 mg/L) that is lower than the previously reported calculated 2016 TDS range (3,483 to 3,918 mg/L). The 2022 Port 3 laboratory TDS result was lower compared to the calculated 2016 TDS results. The slight change in TDS concentrations likely reflects improved representativeness of Formation water from reduced drill fluid content.

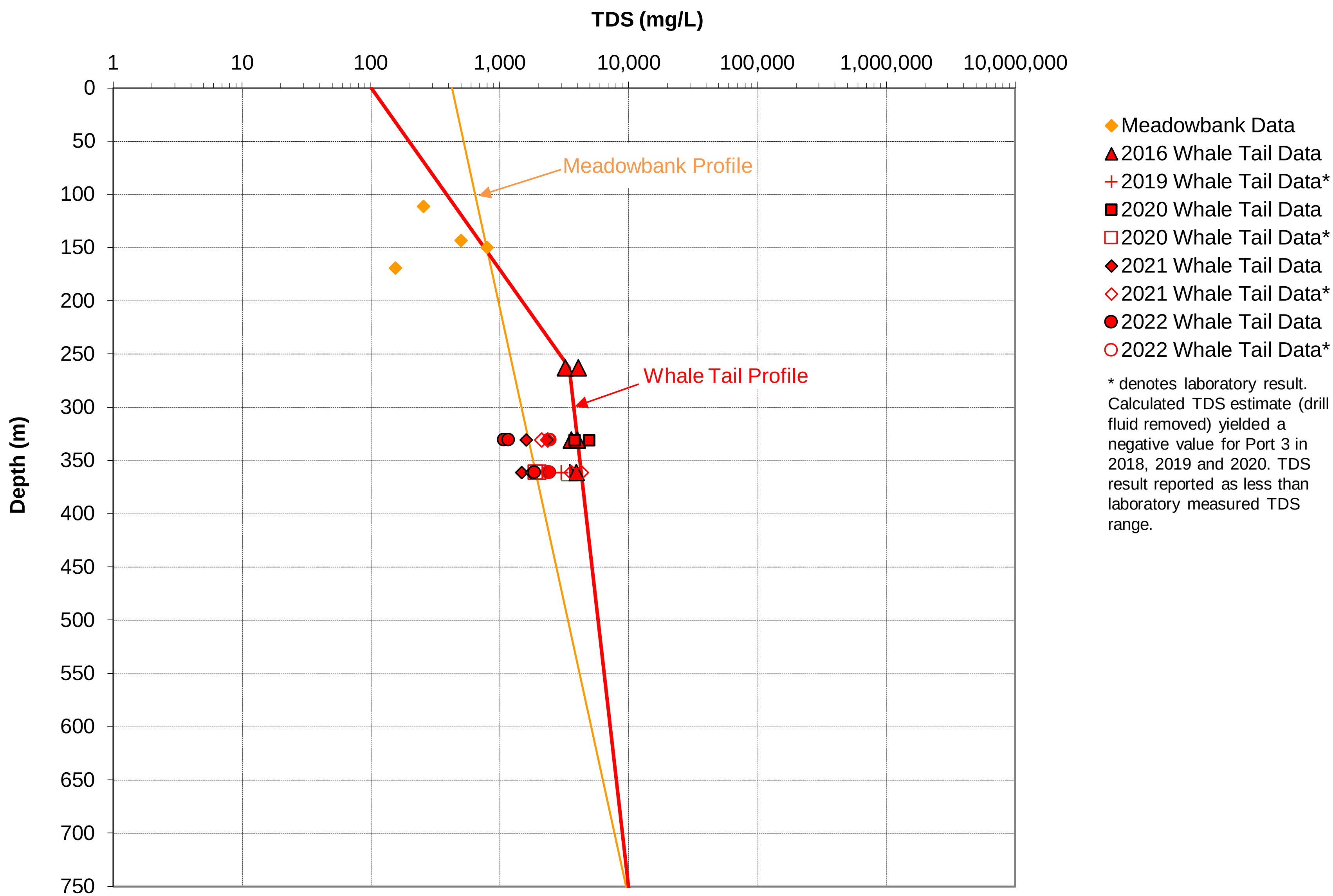
Summary

Based on the 2022 groundwater monitoring programs, the 2022 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 is decreasing with purging and sampling activities, particularly at Ports 3 and 4.

Based on 2022 data from Ports 3 and 4, the calculated TDS content of Formation water is estimated to range between 1,079 mg/L and 2,431 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 2022 calculated Formation TDS.

As illustrated on Figure 5, the TDS in samples from Ports 3 and 4 is slightly less saline than historical sampling results, 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 2022 at Ports 3 and 4 were below the Federal MDMER Effluent criteria.



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).

CLIENT	AGNICO EAGLE	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION	
CONSULTANT	wsp	YYYY-MM-DD	DH 2023-03-07
		PREPARED	NU
		DESIGN	JL
		REVIEW	--
		APPROVED	JL

PROJECT
2022 WESTBAY SYSTEM MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
TDS PROFILE

PROJECT No.	DOC.	Rev.	FIGURE
22525330	577	1	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 (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:

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

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 57% 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 sulphate and WAD cyanide in Port 4 (sample IDs: Port 4-A and Port 4-B) as well as duplicate concentrations of turbidity and dissolved selenium in Port 3 (sample IDs: Port 3-A and Port 3-B). All other trace components and major elements for samples are considered adequately repeatable. 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. Concentrations of dissolved constituents are consistently lower than their total counterparts and the dissolved metals were field filtered.

The trip blank (sample ID: TBKL) and field blank (sample ID: FB) returned concentrations that are low or below the laboratory detection limits for all parameters analyzed, with the exception of total cyanide. Total cyanide was detected in the trip blank and in the field blank at concentrations that are one and two orders of magnitude higher than the laboratory detection limit, respectively (trip blank – 0.00389 mg/L and field blank – 0.0168 mg/L). Free and WAD cyanide were not detected. In groundwater samples at Ports 3 and 4, most concentrations of cyanide species were below the detection limit, except total cyanide at Port 4 (0.00111 and 0.00191 mg/L). The total cyanide detection at Port 4 is below the concentrations measured in the trip blank and field bank. The reason for the total cyanide presence in the QA/QC samples and Port 4 sample may be related to laboratory error or interference on the analysis. 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 2022 data remain adequate to estimate water quality at Ports 3 and 4.

6.0 CONCLUSION

The 2022 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. This 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 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 0.001 m/m in 2020 and 2021 and 0.002 in 2022, which is lower than pre-mining conditions and likely reflects the influence of dewatering the Whale Tail pit and north basin of Whale Tail Lake.

Formation water quality was estimated from the samples collected in 2022 by removing the effect of residual drilling water still present in the raw water sample collected. The 2022 program estimated that Formation water quality at Ports 3 and 4 are in the same range, but slightly less saline than the predevelopment TDS estimated in 2016. The data collected from Ports 3 and 4 in 2022 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 reported in Ports 3 and 4 since 2021 may reflect improved reliability in the sample results 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, as stated from previous sample collection. 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 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.

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Hydrogeologist

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Senior Principal Geochemist-Geologist

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Attachments: Attachment A – AQM16-626 Westbay System Installation Details
Attachment B – Westbay Instruments Mosdax Sampler Calibration Reports
Attachment C – 2022 Laboratory Certificates of Analysis
Attachment D – Water Quality Results

https://golderassociates.sharepoint.com/sites/163043/project files/6 deliverables/02 wt/westbay/rev 1/22525330-577-tm-rev1-2022 wt westbay gw monitoring_13march2023.docx

PERMIT TO PRACTICE
WSP Canada Inc.
Signature
Date 14 Mar 2023
PERMIT NUMBER: P407
NT/NU Association of Professional Engineers and Geoscientists

10.0 REFERENCES

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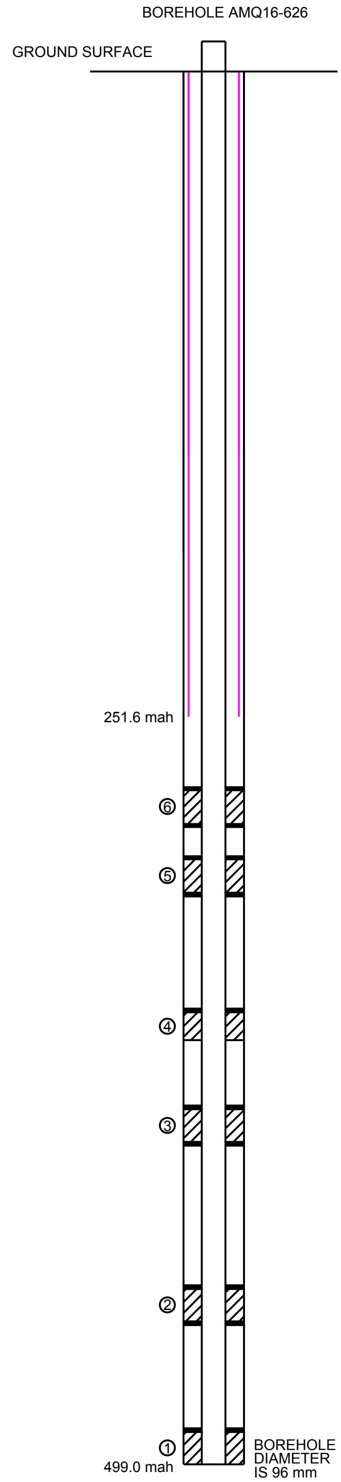
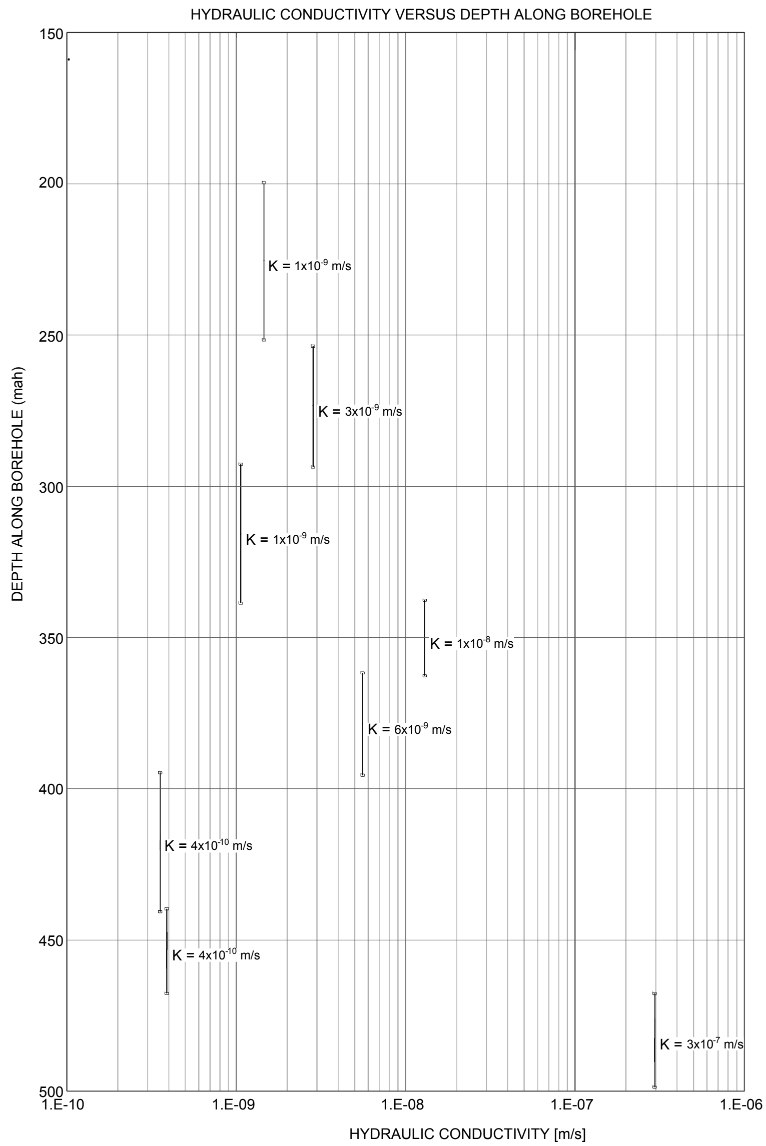
ATTACHMENT A

AQM16-626 Westbay System Installation Details



WESTBAY SYSTEM ZONE DEPTH SUMMARY						
ZONE	DEPTH ALONG HOLE			VERTICAL DEPTH		
	FROM (mah)	TO (mah)	LENGTH (m)	FROM (mbgs)	TO (mbgs)	THICKNESS (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 - 4954 Module 1774

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2022\2K'S\11MAY2~1\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 09 19:08:13 2022
Range 1 Temp 3.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.617	-0.148	-0.007
192.113	-0.035	-0.002
390.269	0.083	0.004
589.026	0.012	0.001
787.635	-0.071	-0.004
992.099	-0.015	-0.001
1184.161	-0.136	-0.007
1384.091	-0.138	-0.007
1589.729	-0.109	-0.005
1789.123	-0.098	-0.005
1994.316	0.076	0.004
1806.974	0.004	0.000
1607.669	-0.117	-0.006
1406.883	-0.085	-0.004
1207.207	-0.133	-0.007
1014.057	-0.085	-0.004
807.978	-0.020	-0.001
606.500	0.031	0.002
406.277	0.087	0.004
206.272	0.069	0.003
14.633	-0.178	-0.009

EMS - 4954 May 10 00:04:58 2022
Range 2 Temp 10.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.654	-0.212	-0.011
193.635	0.019	0.001
390.144	0.028	0.001
588.325	0.047	0.002
787.758	0.023	0.001
992.245	0.061	0.003
1191.241	-0.004	0.000
1382.979	0.007	0.000
1582.483	0.031	0.002
1789.699	0.148	0.007
1994.505	0.312	0.016
1807.550	0.243	0.012
1608.409	0.134	0.007
1406.649	0.044	0.002
1206.431	-0.023	-0.001
1012.260	0.026	0.001
816.831	0.081	0.004
606.509	0.101	0.005
406.570	0.002	0.000
206.033	0.042	0.002
14.660	-0.206	-0.010

EMS - 4954 May 10 05:07:23 2022
Range 3 Temp 20.3° C

Ref Pres (psia)	Error (psia)	(% FS)
14.684	-0.114	-0.006
192.719	-0.007	0.000
389.917	0.041	0.002
589.197	0.065	0.003
787.498	0.082	0.004
991.901	0.052	0.003
1191.380	-0.107	-0.005
1384.559	-0.053	-0.003
1589.661	-0.040	-0.002
1789.699	0.044	0.002
1994.173	0.273	0.014
1818.335	0.102	0.005
1617.449	0.086	0.004
1407.570	0.035	0.002
1214.179	0.016	0.001
1011.822	-0.025	-0.001
807.893	0.055	0.003
606.725	0.061	0.003
406.544	0.042	0.002
206.180	0.091	0.005
14.701	-0.097	-0.005

EMS - 4954 May 10 10:08:46 2022
Range 4 Temp 30.1° C

Ref Pres (psia)	Error (psia)	(% FS)
14.721	-0.101	-0.005
192.222	0.032	0.002
390.070	0.014	0.001
589.325	0.024	0.001
787.692	-0.041	-0.002
991.685	-0.065	-0.003
1191.271	-0.146	-0.007
1383.556	-0.167	-0.008
1589.576	-0.132	-0.007
1789.670	-0.057	-0.003
1994.522	0.048	0.002
1816.852	-0.071	-0.004
1608.218	-0.069	-0.003
1402.130	-0.089	-0.004
1207.548	-0.132	-0.007
1010.670	-0.142	-0.007
807.546	0.001	0.000
606.761	0.040	0.002
406.422	0.017	0.001
205.686	0.025	0.001
14.747	-0.124	-0.006

EMS - 4954 May 10 15:04:24 2022
Range 5 Temp 40.0° C

Ref Pres (psia)	Error (psia)	(% FS)
14.754	-0.057	-0.003
193.689	-0.029	-0.001
392.953	-0.001	0.000
592.648	0.068	0.003
787.689	0.057	0.003
991.687	0.070	0.003
1191.241	-0.073	-0.004
1390.066	-0.050	-0.003
1589.905	-0.016	-0.001
1789.188	0.128	0.006
1994.325	0.129	0.006
1819.328	0.082	0.004
1607.061	0.061	0.003
1409.046	0.037	0.002
1206.957	-0.016	-0.001
1013.957	-0.039	-0.002
807.753	0.091	0.005
606.703	0.066	0.003
406.418	0.084	0.004
205.944	0.021	0.001
14.752	-0.059	-0.003

Issued by

Westbay Instruments

MOSDAX Calibration Report 2: EMS - 4954 Module 1774

Full Scale: 2000 (psia)

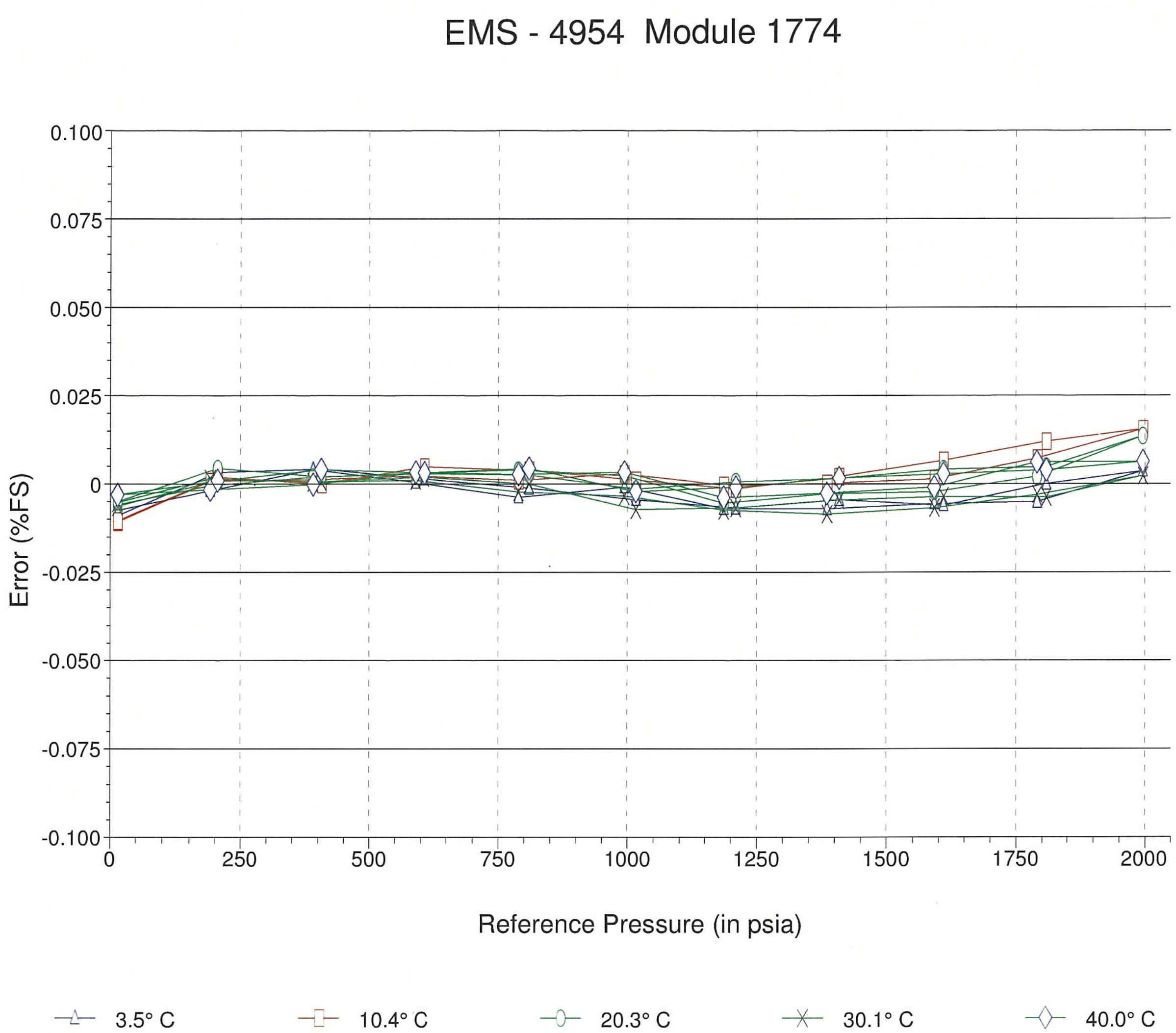
File: E:\DATA\CAL\0-2022\2K'S\11MAY2~1\04954

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



Comments

Issued by

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

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2022\2K'S\11MAY2~1\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 09 19:08:13 2022
Range 1 Temp 3.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.617	-0.145	-0.007
192.113	-0.079	-0.004
390.269	-0.009	0.000
589.026	-0.125	-0.006
787.635	-0.250	-0.012
992.099	-0.233	-0.012
1184.161	-0.386	-0.019
1384.091	-0.418	-0.021
1589.729	-0.415	-0.021
1789.123	-0.425	-0.021
1994.316	-0.268	-0.013
1806.974	-0.325	-0.016
1607.669	-0.425	-0.021
1406.883	-0.368	-0.018
1207.207	-0.387	-0.019
1014.057	-0.306	-0.015
807.978	-0.203	-0.010
606.500	-0.110	-0.005
406.277	-0.009	0.000
206.272	0.021	0.001
14.633	-0.176	-0.009

EMS - 4954 May 10 00:04:58 2022
Range 2 Temp 10.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.654	-0.272	-0.014
193.635	-0.074	-0.004
390.144	-0.099	-0.005
588.325	-0.113	-0.006
787.758	-0.168	-0.008
992.245	-0.159	-0.008
1191.241	-0.250	-0.013
1382.979	-0.262	-0.013
1582.483	-0.260	-0.013
1789.699	-0.164	-0.008
1994.505	-0.017	-0.001
1807.550	-0.070	-0.003
1608.409	-0.160	-0.008
1406.649	-0.229	-0.011
1206.431	-0.272	-0.014
1012.260	-0.197	-0.010
816.831	-0.114	-0.006
606.509	-0.062	-0.003
406.570	-0.128	-0.006
206.033	-0.053	-0.003
14.660	-0.266	-0.013

EMS - 4954 May 10 05:07:23 2022
Range 3 Temp 20.3° C

Ref Pres (psia)	Error (psia)	(% FS)
14.684	-0.249	-0.012
192.719	-0.162	-0.008
389.917	-0.135	-0.007
589.197	-0.132	-0.007
787.498	-0.136	-0.007
991.901	-0.185	-0.009
1191.380	-0.362	-0.018
1384.559	-0.325	-0.016
1589.661	-0.330	-0.016
1789.699	-0.262	-0.013
1994.173	-0.049	-0.002
1818.335	-0.206	-0.010
1617.449	-0.206	-0.010
1407.570	-0.239	-0.012
1214.179	-0.241	-0.012
1011.822	-0.264	-0.013
807.893	-0.164	-0.008
606.725	-0.138	-0.007
406.544	-0.136	-0.007
206.180	-0.065	-0.003
14.701	-0.232	-0.012

EMS - 4954 May 10 10:08:46 2022
Range 4 Temp 30.1° C

Ref Pres (psia)	Error (psia)	(% FS)
14.721	-0.295	-0.015
192.222	-0.177	-0.009
390.070	-0.210	-0.011
589.325	-0.215	-0.011
787.692	-0.294	-0.015
991.685	-0.332	-0.017
1191.271	-0.426	-0.021
1383.556	-0.459	-0.023
1589.576	-0.437	-0.022
1789.670	-0.374	-0.019
1994.522	-0.281	-0.014
1816.852	-0.390	-0.019
1608.218	-0.375	-0.019
1402.130	-0.382	-0.019
1207.548	-0.413	-0.021
1010.670	-0.410	-0.020
807.546	-0.253	-0.013
606.761	-0.200	-0.010
406.422	-0.208	-0.010
205.686	-0.184	-0.009
14.747	-0.319	-0.016

EMS - 4954 May 10 15:04:24 2022
Range 5 Temp 40.0° C

Ref Pres (psia)	Error (psia)	(% FS)
14.754	-0.297	-0.015
193.689	-0.284	-0.014
392.953	-0.272	-0.014
592.648	-0.217	-0.011
787.689	-0.240	-0.012
991.687	-0.240	-0.012
1191.241	-0.392	-0.020
1390.066	-0.377	-0.019
1589.905	-0.349	-0.017
1789.188	-0.211	-0.011
1994.325	-0.215	-0.011
1819.328	-0.258	-0.013
1607.061	-0.273	-0.014
1409.046	-0.290	-0.014
1206.957	-0.335	-0.017
1013.957	-0.349	-0.017
807.753	-0.208	-0.010
606.703	-0.220	-0.011
406.418	-0.188	-0.009
205.944	-0.236	-0.012
14.752	-0.299	-0.015

Issued by

Westbay Instruments

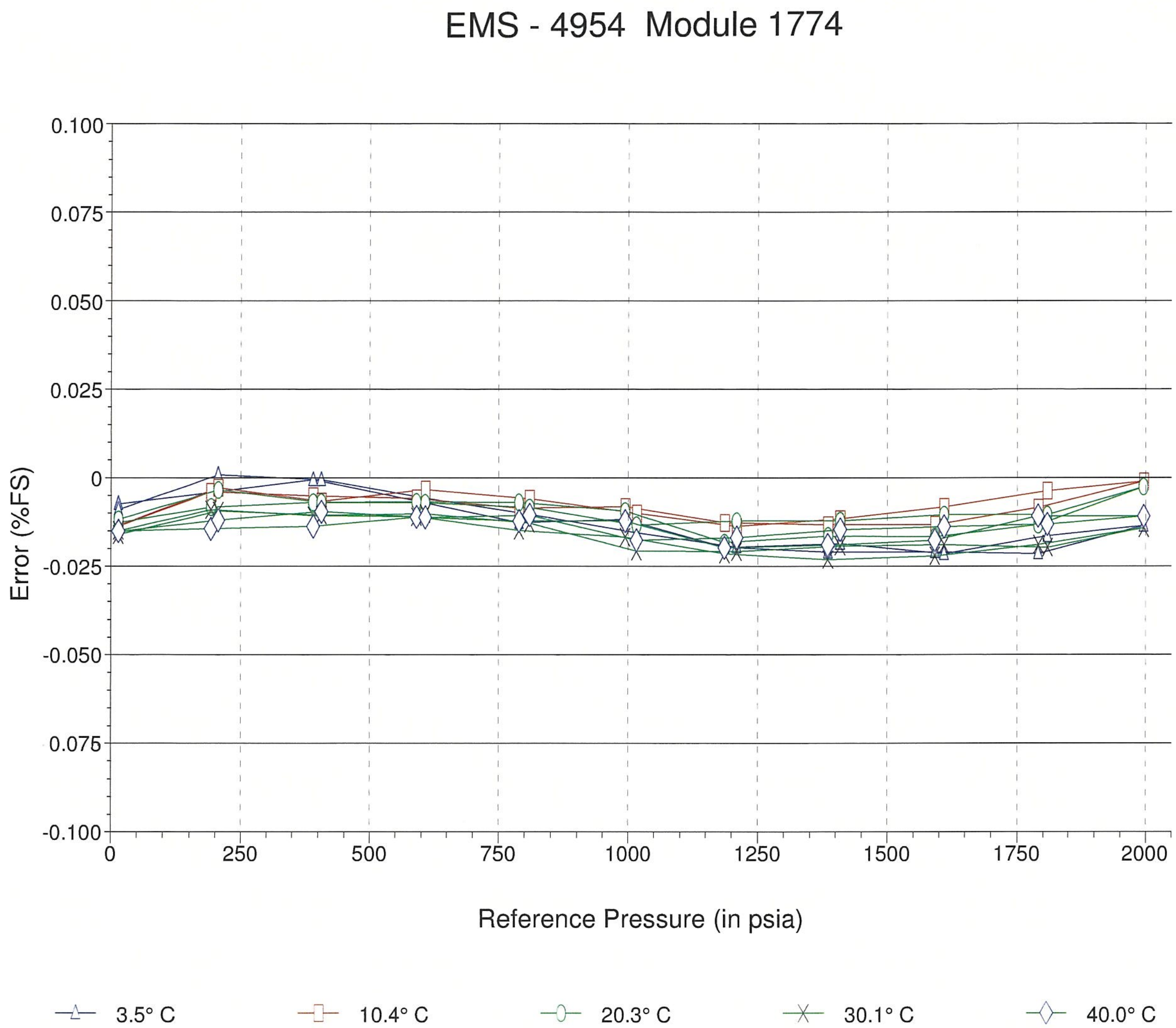
As Received MOSDAX Cal. Report 2: EMS - 4954 Module 1774

Full Scale: 2000 (psia)   File: E:\DATA\CAL\0-2022\2K'S\11MAY2~1\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



Comments

Issued by

Westbay Instruments

MOSDAX Calibration Report 1: EMS - 2652 Module 3008

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2022\2K'S\1JUNE2~1\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 May 31 19:33:03 2022
Range 1 Temp 3.6° C

Ref Pres (psia)	Error (psia)	(% FS)
14.687	-0.119	-0.006
193.003	-0.021	-0.001
397.692	0.067	0.003
590.481	0.011	0.001
789.715	-0.031	-0.002
987.738	-0.109	-0.005
1186.932	-0.150	-0.007
1386.316	-0.140	-0.007
1590.029	-0.147	-0.007
1788.328	0.025	0.001
1989.092	0.104	0.005
1817.205	0.004	0.000
1607.408	-0.067	-0.003
1419.943	-0.024	-0.001
1210.034	-0.077	-0.004
1008.045	0.054	0.003
806.919	0.157	0.008
609.060	0.176	0.009
405.787	0.137	0.007
206.101	0.140	0.007
14.694	-0.112	-0.006

EMS - 2652 Jun 01 00:08:25 2022
Range 2 Temp 10.6° C

Ref Pres (psia)	Error (psia)	(% FS)
14.675	-0.075	-0.004
192.881	0.010	0.001
391.117	0.150	0.007
591.261	0.111	0.006
792.378	0.093	0.005
988.206	0.079	0.004
1186.664	0.036	0.002
1391.433	0.008	0.000
1585.859	0.063	0.003
1787.791	0.241	0.012
1985.193	0.409	0.020
1818.469	0.226	0.011
1607.160	0.207	0.010
1418.671	0.152	0.008
1208.084	0.126	0.006
1008.202	0.220	0.011
807.601	0.248	0.012
606.292	0.256	0.013
405.840	0.167	0.008
205.940	0.108	0.005
14.686	-0.064	-0.003

EMS - 2652 Jun 01 04:46:56 2022
Range 3 Temp 20.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.670	-0.066	-0.003
192.692	0.012	0.001
391.572	0.077	0.004
591.395	0.102	0.005
789.812	-0.020	-0.001
988.852	0.025	0.001
1186.372	-0.099	-0.005
1391.284	-0.093	-0.005
1585.204	0.001	0.000
1786.877	0.163	0.008
1983.694	0.300	0.015
1817.593	0.182	0.009
1607.914	0.101	0.005
1419.411	0.072	0.004
1218.952	0.023	0.001
1007.801	0.201	0.010
806.793	0.230	0.011
606.181	0.211	0.011
406.011	0.218	0.011
205.566	0.145	0.007
14.677	-0.002	0.000

EMS - 2652 Jun 01 09:25:44 2022
Range 4 Temp 30.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.665	0.008	0.000
193.661	0.054	0.003
393.290	0.010	0.000
591.319	0.027	0.001
789.570	0.026	0.001
988.236	-0.042	-0.002
1187.306	-0.177	-0.009
1390.957	-0.149	-0.007
1585.969	-0.103	-0.005
1790.556	0.007	0.000
1990.021	0.060	0.003
1817.394	0.011	0.001
1617.108	0.045	0.002
1405.919	0.001	0.000
1217.319	0.027	0.001
1009.385	0.158	0.008
807.410	0.194	0.010
606.232	0.217	0.011
406.004	0.201	0.010
206.041	0.132	0.007
14.667	0.067	0.003

EMS - 2652 Jun 01 14:04:37 2022
Range 5 Temp 40.2° C

Ref Pres (psia)	Error (psia)	(% FS)
14.642	-0.009	0.000
197.999	-0.017	-0.001
391.855	0.100	0.005
591.022	0.074	0.004
789.193	0.068	0.003
988.802	0.084	0.004
1187.411	-0.069	-0.003
1385.169	-0.053	-0.003
1585.677	-0.010	0.000
1789.833	0.129	0.006
1988.463	0.381	0.019
1814.873	0.248	0.012
1607.928	0.173	0.009
1415.464	0.171	0.009
1211.804	0.098	0.005
1009.620	0.231	0.012
807.036	0.312	0.016
606.418	0.293	0.015
406.110	0.236	0.012
205.886	0.133	0.007
14.645	0.040	0.002

Issued by

Westbay Instruments

MOSDAX Calibration Report 2: EMS - 2652 Module 3008

Full Scale: 2000 (psia)

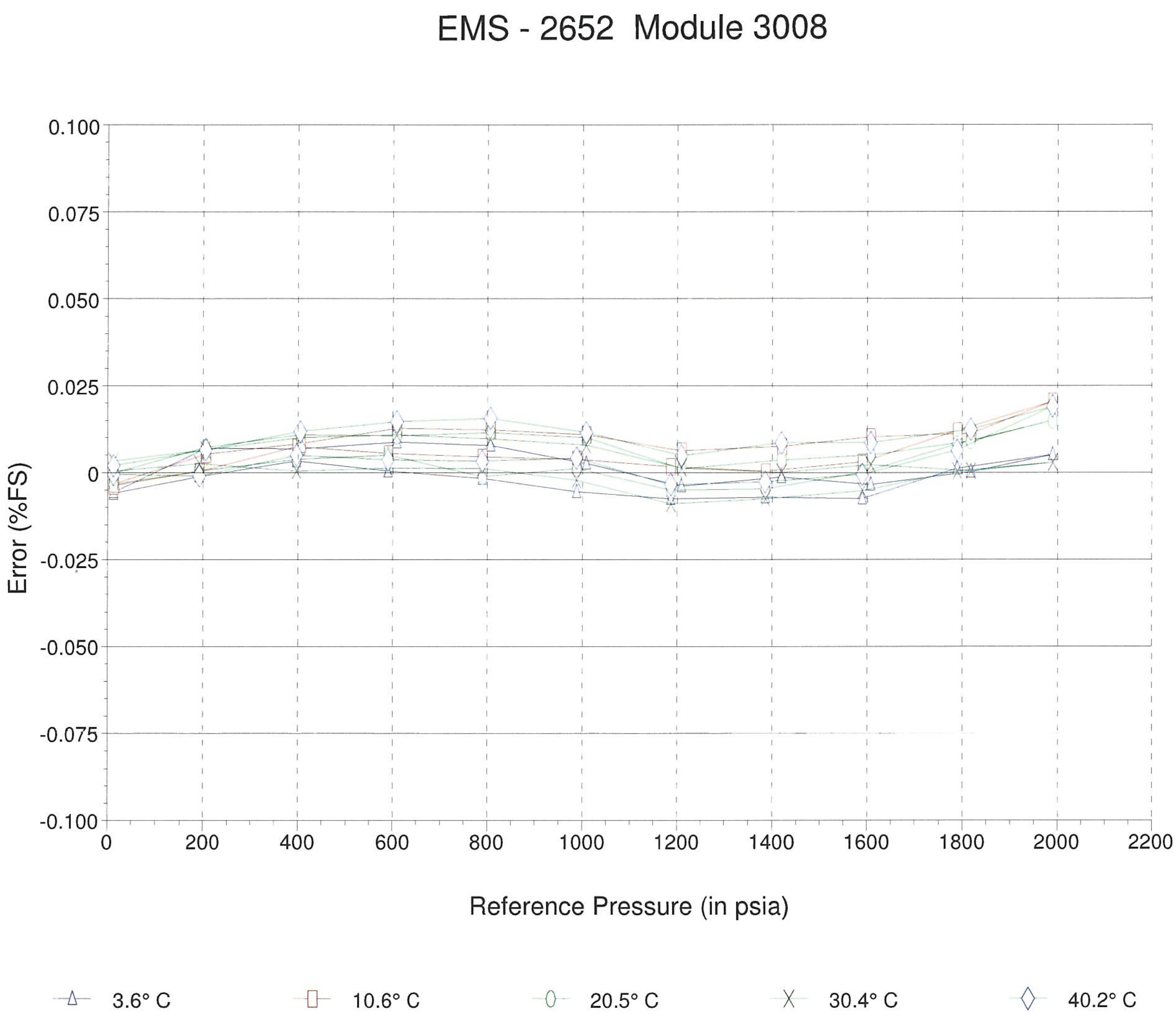
File: E:\DATA\CAL\0-2022\2K'S\1JUNE2~1\02652

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



Comments

Issued by

Document: 5CAL 9607

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

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2022\2K'S\1JUNE2~1\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 May 31 19:33:03 2022
Range 1 Temp 3.6° C

Ref Pres (psia)	Error (psia)	(% FS)
14.687	-0.145	-0.007
193.003	-0.055	-0.003
397.692	0.023	0.001
590.481	-0.043	-0.002
789.715	-0.094	-0.005
987.738	-0.182	-0.009
1186.932	-0.233	-0.012
1386.316	-0.235	-0.012
1590.029	-0.253	-0.013
1788.328	-0.092	-0.005
1989.092	-0.025	-0.001
1817.205	-0.114	-0.006
1607.408	-0.174	-0.009
1419.943	-0.120	-0.006
1210.034	-0.162	-0.008
1008.045	-0.020	-0.001
806.919	0.093	0.005
609.060	0.122	0.006
405.787	0.093	0.005
206.101	0.105	0.005
14.694	-0.138	-0.007

EMS - 2652 Jun 01 00:08:25 2022
Range 2 Temp 10.6° C

Ref Pres (psia)	Error (psia)	(% FS)
14.675	-0.131	-0.007
192.881	-0.057	-0.003
391.117	0.073	0.004
591.261	0.024	0.001
792.378	-0.004	0.000
988.206	-0.026	-0.001
1186.664	-0.077	-0.004
1391.433	-0.113	-0.006
1585.859	-0.065	-0.003
1787.791	0.106	0.005
1985.193	0.269	0.013
1818.469	0.091	0.005
1607.160	0.079	0.004
1418.671	0.030	0.002
1208.084	0.013	0.001
1008.202	0.115	0.006
807.601	0.150	0.008
606.292	0.169	0.008
405.840	0.089	0.004
205.940	0.040	0.002
14.686	-0.120	-0.006

EMS - 2652 Jun 01 04:46:56 2022
Range 3 Temp 20.5° C

Ref Pres (psia)	Error (psia)	(% FS)
14.670	-0.147	-0.007
192.692	-0.078	-0.004
391.572	-0.022	-0.001
591.395	-0.006	0.000
789.812	-0.136	-0.007
988.852	-0.098	-0.005
1186.372	-0.227	-0.011
1391.284	-0.227	-0.011
1585.204	-0.137	-0.007
1786.877	0.021	0.001
1983.694	0.155	0.008
1817.593	0.039	0.002
1607.914	-0.037	-0.002
1419.411	-0.063	-0.003
1218.952	-0.106	-0.005
1007.801	0.078	0.004
806.793	0.114	0.006
606.181	0.103	0.005
406.011	0.118	0.006
205.566	0.055	0.003
14.677	-0.083	-0.004

EMS - 2652 Jun 01 09:25:44 2022
Range 4 Temp 30.4° C

Ref Pres (psia)	Error (psia)	(% FS)
14.665	-0.075	-0.004
193.661	-0.034	-0.002
393.290	-0.084	-0.004
591.319	-0.072	-0.004
789.570	-0.078	-0.004
988.236	-0.152	-0.008
1187.306	-0.292	-0.015
1390.957	-0.270	-0.014
1585.969	-0.230	-0.011
1790.556	-0.125	-0.006
1990.021	-0.078	-0.004
1817.394	-0.122	-0.006
1617.108	-0.082	-0.004
1405.919	-0.120	-0.006
1217.319	-0.089	-0.004
1009.385	0.048	0.002
807.410	0.089	0.004
606.232	0.118	0.006
406.004	0.107	0.005
206.041	0.044	0.002
14.667	-0.016	-0.001

EMS - 2652 Jun 01 14:04:37 2022
Range 5 Temp 40.2° C

Ref Pres (psia)	Error (psia)	(% FS)
14.642	-0.069	-0.003
197.999	-0.075	-0.004
391.855	0.042	0.002
591.022	0.016	0.001
789.193	0.005	0.000
988.802	0.016	0.001
1187.411	-0.144	-0.007
1385.169	-0.136	-0.007
1585.677	-0.103	-0.005
1789.833	0.025	0.001
1988.463	0.264	0.013
1814.873	0.142	0.007
1607.928	0.079	0.004
1415.464	0.087	0.004
1211.804	0.022	0.001
1009.620	0.162	0.008
807.036	0.249	0.012
606.418	0.234	0.012
406.110	0.179	0.009
205.886	0.075	0.004
14.645	-0.020	-0.001

Issued by

Westbay Instruments

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

Full Scale: 2000 (psia)

File: E:\DATA\CAL\0-2022\2K'S\1JUNE2~1\02652

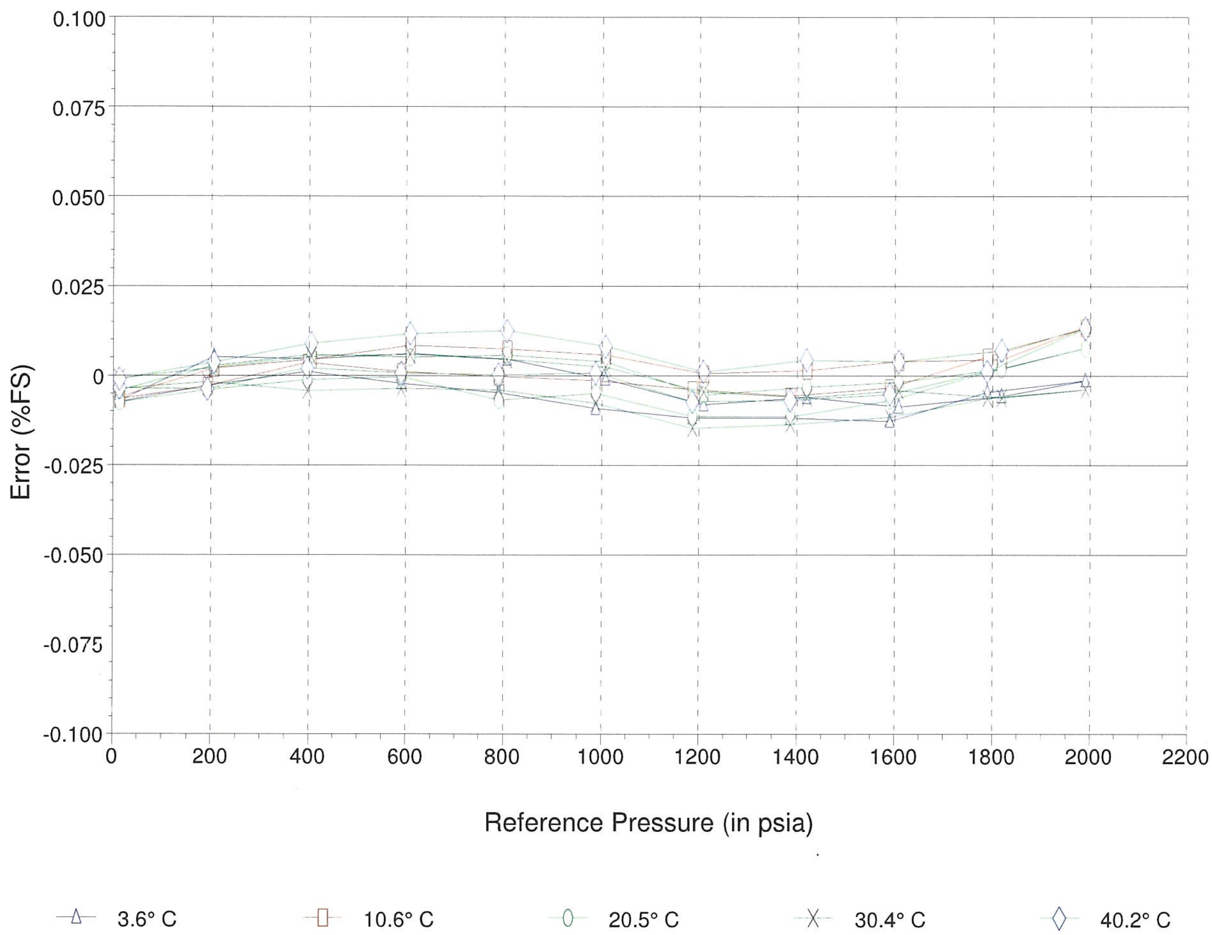
Pressure Reference: Paroscientific Model 42K-101 S/N 59937

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

ATTACHMENT C

2022 Laboratory Certificates of Analysis

Your P.O. #: 1121445
Your Project #: WESTBAY WELL
Your C.O.C. #: 572964

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2022/10/28
Report #: R7361636
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2Q8636
Received: 2022/09/16, 13:30

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity (1)	3	N/A	2022/09/20	CAM SOP-00448	SM 23 2320 B m
Carbonate, Bicarbonate and Hydroxide (1)	3	N/A	2022/09/21	CAM SOP-00102	APHA 4500-CO2 D
Anions (1)	3	N/A	2022/09/20	CAM SOP-00435	SM 23 4110 B m
Chloride by Automated Colourimetry (1)	3	N/A	2022/09/22	CAM SOP-00463	SM 23 4500-Cl E m
Conductivity (1)	3	N/A	2022/09/20	CAM SOP-00414	SM 23 2510 m
Dissolved Organic Carbon (DOC) (1, 5)	3	N/A	2022/09/21	CAM SOP-00446	SM 23 5310 B m
Field Measured Conductivity (1, 6)	2	N/A	2022/09/17		Field Meter
Field Measured TDS (1, 6)	2	N/A	2022/09/17		Field TDS Meter
Fluoride (1)	3	2022/09/19	2022/09/20	CAM SOP-00449	SM 23 4500-F C m
Dissolved Mercury (low level) (1)	3	2022/09/20	2022/09/21	CAM SOP-00453	EPA 7470 m
Mercury (low level) (1)	1	2022/09/20	2022/09/20	CAM SOP-00453	EPA 7470 m
Mercury (low level) (1)	2	2022/09/20	2022/09/21	CAM SOP-00453	EPA 7470 m
Lab Filtered Metals Analysis by ICP (1)	3	2022/09/19	2022/09/21	CAM SOP-00408	EPA 6010D m
Low Level Chloride and Sulphate by AC (2)	3	N/A	2022/09/21	AB SOP-00020 / AB SOP-00018	SM23 4500-CL/SO4-E m
Cyanide (Free) (2)	3	N/A	2022/10/21	CAL SOP-00266	EPA 9016d R0 m
Cyanide, Strong Acid Dissociable (SAD) (2)	3	N/A	2022/09/21	CAL SOP-00270	SM 23 4500-CN m
Cyanide WAD (weak acid dissociable) (2)	3	N/A	2022/10/20	CAL SOP-00270	SM 23 4500-CN m
Hardness Total (calculated as CaCO3) (3, 7)	2	N/A	2022/09/23	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (3, 7)	1	N/A	2022/09/26	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.) (3)	3	N/A	2022/09/27	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (dissolved) (3)	1	N/A	2022/09/23	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (dissolved) (3)	2	N/A	2022/09/27	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (3)	2	2022/09/17	2022/09/23	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (3)	1	2022/09/17	2022/09/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (total) (3)	3	2022/09/22	2022/09/23	BBY7SOP-00003/ BBY7SOP-00002	EPA 6020B R2 m
Silica (Reactive) (2)	2	N/A	2022/09/23	AB SOP-00011	EPA370.1 R1978 m
Silica (Reactive) (2)	1	N/A	2022/09/26	AB SOP-00011	EPA370.1 R1978 m
Total Phosphorus Low Level Total (2)	3	2022/09/27	2022/09/28	AB SOP-00024	SM 23 4500-P A,B,F m
Total Ammonia (as NH3) (1)	3	N/A	2022/09/21	Auto Calc.	

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

Your P.O. #: 1121445
Your Project #: WESTBAY WELL
Your C.O.C. #: 572964

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2022/10/28
Report #: R7361636
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2Q8636
Received: 2022/09/16, 13:30

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Ammonia-N (1)	3	N/A	2022/09/21	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1, 8)	3	N/A	2022/09/21	CAM SOP-00440	SM 23 4500-NO3I/NO2B
pH (1)	3	2022/09/19	2022/09/20	CAM SOP-00413	SM 4500H+ B m
Field Measured pH (1, 6)	2	N/A	2022/09/17		Field pH Meter
Orthophosphate (1)	3	N/A	2022/09/21	CAM SOP-00461	EPA 365.1 m
Radium-226 Low Level (4, 9)	3	N/A	2022/09/30	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry
Sodium Adsorption Ratio (SAR) (1)	3	N/A	2022/09/23	CAM SOP-00102	EPA 6010C
Total Dissolved Solids (Calc. from EC) (1)	3	N/A	2022/09/21		Auto Calc
Total Dissolved Solids (1)	3	2022/09/21	2022/09/22	CAM SOP-00428	SM 23 2540C m
Field Temperature (1, 6)	2	N/A	2022/09/17		Field Thermometer
Total Kjeldahl Nitrogen in Water (1)	1	2022/09/20	2022/09/20	CAM SOP-00938	OMOE E3516 m
Total Kjeldahl Nitrogen in Water (1)	2	2022/09/20	2022/09/21	CAM SOP-00938	OMOE E3516 m
Total Organic Carbon (TOC) (1, 10)	1	N/A	2022/09/21	CAM SOP-00446	SM 23 5310B m
Total Organic Carbon (TOC) (1, 10)	2	N/A	2022/09/22	CAM SOP-00446	SM 23 5310B m
Low Level Total Suspended Solids (1)	3	2022/09/21	2022/09/22	CAM SOP-00428	SM 23 2540D m
Turbidity (1)	3	N/A	2022/09/19	CAM SOP-00417	SM 23 2130 B m
Un-ionized Ammonia (as N) (1, 11)	2	2022/10/19	2022/10/28	Calculation	Calculation

Remarks:

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

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

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

Your P.O. #: 1121445
Your Project #: WESTBAY WELL
Your C.O.C. #: 572964

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2022/10/28
Report #: R7361636
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2Q8636
Received: 2022/09/16, 13:30

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) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.
(7) "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).
(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.
(10) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.
(11) Un-ionized ammonia is calculated using the total ammonia result and field data provided by the client for pH and temperature.

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

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM648			TTM648		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-A**	**RDL**	**QC Batch**	**Port 3-A Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters							
Total Ammonia (as NH3)	mg/L	<0.061	0.061	8231382			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	40	1.0	8231222			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8231222			
Total dissolved solids (calc., EC)	mg/L	3830	10	8231379			
Sodium Adsorption Ratio	N/A	3.8		8231383			
Field Measurements							
Field Measured Conductivity	uS/cm	3319	N/A	ONSITE			
Field Measured Dissolved Solids	mg/L	2760		ONSITE			
Field Temperature	Celsius	3.2	N/A	ONSITE			
Field Measured pH	pH	6.9		ONSITE			
Inorganics							
Total Ammonia-N	mg/L	<0.050	0.050	8235104			
Conductivity	mS/cm	4.48	0.001	8233116	4.43	0.001	8233116
Free Cyanide (CN)	ug/L	<2.0	2.0	8299592			
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8245282			
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8296343			
Total Dissolved Solids	mg/L	2370	10	8238155			
Fluoride (F-)	mg/L	1.1	0.10	8233102	1.1	0.10	8233102
Total Kjeldahl Nitrogen (TKN)	mg/L	0.32	0.10	8235030	0.35	0.10	8235030
Dissolved Organic Carbon	mg/L	380	2.0	8233473			
Total Organic Carbon (TOC)	mg/L	380	2.0	8235040			
Orthophosphate (P)	mg/L	<0.010	0.010	8234013			
pH	pH	6.82		8233152	6.92		8233152
Total Phosphorus (P)	mg/L	0.0023	0.0010	8253630			
Reactive Silica (SiO2)	mg/L	8.9	0.25	8247903			
Total Suspended Solids	mg/L	2	1	8237656			
Turbidity	NTU	0.7	0.1	8233064			
Alkalinity (Total as CaCO3)	mg/L	40	1.0	8233150	41	1.0	8233150

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM648			TTM648		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-A**	**RDL**	**QC Batch**	**Port 3-A Lab-Dup**	**RDL**	**QC Batch**
Dissolved Chloride (Cl-)	mg/L	1300	20	8234017			
Nitrite (N)	mg/L	<0.010	0.010	8234053			
Nitrate (N)	mg/L	<0.10	0.10	8234053			
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8245291			
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	8234053			
Bromide (Br-)	mg/L	14	1.0	8234058			
Un-ionized Ammonia (as N)	mg/L	<0.0004	0.0004	8292337			
Metals							
Dissolved Aluminum (Al)	mg/L	<0.015	0.015	8251066	<0.015	0.015	8251066
Total Aluminum (Al)	mg/L	0.0113	0.0030	8247301			
Dissolved Antimony (Sb)	mg/L	<0.0025	0.0025	8251066	<0.0025	0.0025	8251066
Total Antimony (Sb)	mg/L	0.00063	0.00050	8247301			
Dissolved Arsenic (As)	mg/L	0.00113	0.00050	8251066	0.00107	0.00050	8251066
Total Arsenic (As)	mg/L	0.00165	0.00010	8247301			
Dissolved Barium (Ba)	mg/L	0.0482	0.0050	8251066	0.0482	0.0050	8251066
Total Barium (Ba)	mg/L	0.0503	0.0010	8247301			
Dissolved Beryllium (Be)	mg/L	<0.00050	0.00050	8251066	<0.00050	0.00050	8251066
Total Beryllium (Be)	mg/L	<0.00010	0.00010	8247301			
Dissolved Bismuth (Bi)	mg/L	<0.0050	0.0050	8251066	<0.0050	0.0050	8251066
Total Bismuth (Bi)	mg/L	<0.0010	0.0010	8247301			
Dissolved Boron (B)	mg/L	0.80	0.25	8251066	0.82	0.25	8251066
Total Boron (B)	mg/L	0.817	0.050	8247301			
Dissolved Cadmium (Cd)	mg/L	<0.000050	0.000050	8251066	<0.000050	0.000050	8251066
Total Cadmium (Cd)	mg/L	<0.000010	0.000010	8247301			
Dissolved Chromium (Cr)	mg/L	<0.0050	0.0050	8251066	<0.0050	0.0050	8251066
Total Chromium (Cr)	mg/L	<0.0010	0.0010	8247301			
Dissolved Cobalt (Co)	mg/L	<0.0010	0.0010	8251066	<0.0010	0.0010	8251066
Total Cobalt (Co)	mg/L	<0.00020	0.00020	8247301			
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	8251066	<0.0010	0.0010	8251066
Total Copper (Cu)	mg/L	<0.00050	0.00050	8247301			

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

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM648			TTM648		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-A**	**RDL**	**QC Batch**	**Port 3-A Lab-Dup**	**RDL**	**QC Batch**
Dissolved Iron (Fe)	mg/L	<0.025	0.025	8251066	<0.025	0.025	8251066
Total Iron (Fe)	mg/L	0.011	0.010	8247301			
Dissolved Lead (Pb)	mg/L	<0.0010	0.0010	8251066	<0.0010	0.0010	8251066
Total Lead (Pb)	mg/L	<0.00020	0.00020	8247301			
Dissolved Lithium (Li)	mg/L	0.153	0.010	8251066	0.151	0.010	8251066
Total Lithium (Li)	mg/L	0.173	0.0020	8247301			
Dissolved Manganese (Mn)	mg/L	<0.0050	0.0050	8251066	<0.0050	0.0050	8251066
Total Manganese (Mn)	mg/L	0.0046	0.0010	8247301			
Dissolved Molybdenum (Mo)	mg/L	<0.0050	0.0050	8251066	<0.0050	0.0050	8251066
Total Molybdenum (Mo)	mg/L	0.0012	0.0010	8247301			
Dissolved Nickel (Ni)	mg/L	<0.0050	0.0050	8251066	<0.0050	0.0050	8251066
Total Nickel (Ni)	mg/L	<0.0010	0.0010	8247301			
Dissolved Selenium (Se)	mg/L	0.00137	0.00050	8253488			
Total Selenium (Se)	mg/L	<0.00010	0.00010	8247301			
Dissolved Silicon (Si)	mg/L	3.08	0.50	8251066	3.12	0.50	8251066
Total Silicon (Si)	mg/L	3.31	0.10	8247301			
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	8251066	<0.00010	0.00010	8251066
Total Silver (Ag)	mg/L	<0.000020	0.000020	8247301			
Dissolved Strontium (Sr)	mg/L	7.18	0.0050	8251066	7.06	0.0050	8251066
Total Strontium (Sr)	mg/L	7.77	0.0010	8247301			
Dissolved Tellurium (Te)	mg/L	<0.0050	0.0050	8251066	<0.0050	0.0050	8251066
Total Tellurium (Te)	mg/L	<0.0010	0.0010	8247301			
Dissolved Thallium (Tl)	mg/L	<0.000050	0.000050	8251066	<0.000050	0.000050	8251066
Total Thallium (Tl)	mg/L	<0.000010	0.000010	8247301			
Dissolved Tin (Sn)	mg/L	<0.025	0.025	8251066	<0.025	0.025	8251066
Total Tin (Sn)	mg/L	<0.0050	0.0050	8247301			
Dissolved Titanium (Ti)	mg/L	<0.025	0.025	8251066	<0.025	0.025	8251066
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8247301			
Dissolved Uranium (U)	mg/L	<0.00050	0.00050	8251066	<0.00050	0.00050	8251066
Total Uranium (U)	mg/L	<0.00010	0.00010	8247301			

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

BUREAU VERITAS

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM648			TTM648		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-A**	**RDL**	**QC Batch**	**Port 3-A Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.025	0.025	8251066	<0.025	0.025	8251066
Total Vanadium (V)	mg/L	<0.0050	0.0050	8247301			
Dissolved Zinc (Zn)	mg/L	<0.025	0.025	8251066	<0.025	0.025	8251066
Total Zinc (Zn)	mg/L	0.111	0.0050	8247301			
Dissolved Calcium (Ca)	mg/L	475	0.25	8251065			
Total Calcium (Ca)	mg/L	489	0.050	8247300			
Dissolved Magnesium (Mg)	mg/L	0.57	0.25	8251065			
Total Magnesium (Mg)	mg/L	0.628	0.050	8247300			
Dissolved Potassium (K)	mg/L	8.81	0.25	8251065			
Total Potassium (K)	mg/L	10.3	0.050	8247300			
Dissolved Sodium (Na)	mg/L	264	0.25	8251065			
Total Sodium (Na)	mg/L	272	0.050	8247300			
Dissolved Sulphur (S)	mg/L	<15	15	8251065			
Total Sulphur (S)	mg/L	<3.0	3.0	8247300			
RADIONUCLIDE							
Radium-226	Bq/L	0.21	0.0050	8247805			

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

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM649			TTM650		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-B**	**RDL**	**QC Batch**	**FB**	**RDL**	**QC Batch**
Calculated Parameters							
Total Ammonia (as NH3)	mg/L	<0.061	0.061	8231382	<0.061	0.061	8231382
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	40	1.0	8231222	<1.0	1.0	8231222
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8231222	<1.0	1.0	8231222
Total dissolved solids (calc., EC)	mg/L	3810	10	8231379	<10	10	8231379
Sodium Adsorption Ratio	N/A	3.8		8231383	NC (1)		8231383
Field Measurements							
Field Measured Conductivity	uS/cm	3319	N/A	ONSITE			
Field Measured Dissolved Solids	mg/L	2760		ONSITE			
Field Temperature	Celsius	3.2	N/A	ONSITE			
Field Measured pH	pH	6.9		ONSITE			
Inorganics							
Total Ammonia-N	mg/L	<0.050	0.050	8235104	<0.050	0.050	8235104
Conductivity	mS/cm	4.46	0.001	8233116	0.001	0.001	8233116
Free Cyanide (CN)	ug/L	<2.0	2.0	8299592	<2.0	2.0	8299592
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8245282	0.0168	0.00050	8245282
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8296343	<0.00050	0.00050	8296343
Total Dissolved Solids	mg/L	2420	10	8238155	<10	10	8238155
Fluoride (F-)	mg/L	1.1	0.10	8233102	<0.10	0.10	8233102
Total Kjeldahl Nitrogen (TKN)	mg/L	0.36	0.10	8235917	0.19	0.10	8235917
Dissolved Organic Carbon	mg/L	380	2.0	8233473	<0.40	0.40	8233473
Total Organic Carbon (TOC)	mg/L	370	2.0	8236274	<0.40	0.40	8236274
Orthophosphate (P)	mg/L	<0.010	0.010	8234013	<0.010	0.010	8234013
pH	pH	6.80		8233152	5.69		8233152
Total Phosphorus (P)	mg/L	0.0027	0.0010	8253630	<0.0010	0.0010	8253630
Reactive Silica (SiO2)	mg/L	9.5	0.050	8247903	<0.050	0.050	8247903
Total Suspended Solids	mg/L	2	1	8237656	<1	1	8237656
Turbidity	NTU	1.2	0.1	8232566	<0.1	0.1	8233064

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM649			TTM650		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-B**	**RDL**	**QC Batch**	**FB**	**RDL**	**QC Batch**
Alkalinity (Total as CaCO3)	mg/L	40	1.0	8233150	<1.0	1.0	8233150
Dissolved Chloride (Cl-)	mg/L	1300	20	8234017	<1.0	1.0	8234017
Nitrite (N)	mg/L	<0.010	0.010	8234053	<0.010	0.010	8234053
Nitrate (N)	mg/L	<0.10	0.10	8234053	<0.10	0.10	8234053
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8245291	<0.50	0.50	8245291
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	8234053	<0.10	0.10	8234053
Bromide (Br-)	mg/L	14	1.0	8234058	<1.0	1.0	8234058
Un-ionized Ammonia (as N)	mg/L	<0.0004	0.0004	8292337			
Metals							
Dissolved Aluminum (Al)	mg/L	<0.015	0.015	8251066	<0.0030	0.0030	8251066
Total Aluminum (Al)	mg/L	<0.015	0.015	8247301	<0.0030	0.0030	8244820
Dissolved Antimony (Sb)	mg/L	<0.0025	0.0025	8251066	<0.00050	0.00050	8251066
Total Antimony (Sb)	mg/L	<0.0025	0.0025	8247301	<0.00050	0.00050	8244820
Dissolved Arsenic (As)	mg/L	0.00121	0.00050	8251066	<0.00010	0.00010	8251066
Total Arsenic (As)	mg/L	0.00167	0.00050	8247301	<0.00010	0.00010	8244820
Dissolved Barium (Ba)	mg/L	0.0529	0.0050	8251066	<0.0010	0.0010	8251066
Total Barium (Ba)	mg/L	0.0530	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Beryllium (Be)	mg/L	<0.00050	0.00050	8251066	<0.00010	0.00010	8251066
Total Beryllium (Be)	mg/L	<0.00050	0.00050	8247301	<0.00010	0.00010	8244820
Dissolved Bismuth (Bi)	mg/L	<0.0050	0.0050	8251066	<0.0010	0.0010	8251066
Total Bismuth (Bi)	mg/L	<0.0050	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Boron (B)	mg/L	0.85	0.25	8251066	<0.050	0.050	8251066
Total Boron (B)	mg/L	0.84	0.25	8247301	<0.050	0.050	8244820
Dissolved Cadmium (Cd)	mg/L	<0.000050	0.000050	8251066	<0.000010	0.000010	8251066
Total Cadmium (Cd)	mg/L	<0.000050	0.000050	8247301	<0.000010	0.000010	8244820
Dissolved Chromium (Cr)	mg/L	<0.0050	0.0050	8251066	<0.0010	0.0010	8251066
Total Chromium (Cr)	mg/L	<0.0050	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Cobalt (Co)	mg/L	<0.0010	0.0010	8251066	<0.00020	0.00020	8251066
Total Cobalt (Co)	mg/L	<0.0010	0.0010	8247301	<0.00020	0.00020	8244820
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	8251066	<0.00020	0.00020	8251066
Total Copper (Cu)	mg/L	<0.0025	0.0025	8247301	<0.00050	0.00050	8244820
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

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Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM649			TTM650		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-B**	**RDL**	**QC Batch**	**FB**	**RDL**	**QC Batch**
Dissolved Iron (Fe)	mg/L	<0.025	0.025	8251066	<0.0050	0.0050	8251066
Total Iron (Fe)	mg/L	<0.050	0.050	8247301	<0.010	0.010	8244820
Dissolved Lead (Pb)	mg/L	<0.0010	0.0010	8251066	<0.00020	0.00020	8251066
Total Lead (Pb)	mg/L	<0.0010	0.0010	8247301	<0.00020	0.00020	8244820
Dissolved Lithium (Li)	mg/L	0.166	0.010	8251066	<0.0020	0.0020	8251066
Total Lithium (Li)	mg/L	0.168	0.010	8247301	<0.0020	0.0020	8244820
Dissolved Manganese (Mn)	mg/L	<0.0050	0.0050	8251066	<0.0010	0.0010	8251066
Total Manganese (Mn)	mg/L	<0.0050	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Molybdenum (Mo)	mg/L	<0.0050	0.0050	8251066	<0.0010	0.0010	8251066
Total Molybdenum (Mo)	mg/L	<0.0050	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Nickel (Ni)	mg/L	<0.0050	0.0050	8251066	<0.0010	0.0010	8251066
Total Nickel (Ni)	mg/L	<0.0050	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Selenium (Se)	mg/L	0.00266	0.00050	8253488	<0.00010	0.00010	8251066
Total Selenium (Se)	mg/L	<0.00050	0.00050	8247301	<0.00010	0.00010	8244820
Dissolved Silicon (Si)	mg/L	3.25	0.50	8251066	<0.10	0.10	8251066
Total Silicon (Si)	mg/L	3.33	0.50	8247301	<0.10	0.10	8244820
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	8251066	<0.000020	0.000020	8251066
Total Silver (Ag)	mg/L	<0.00010	0.00010	8247301	<0.000020	0.000020	8244820
Dissolved Strontium (Sr)	mg/L	8.06	0.0050	8251066	<0.0010	0.0010	8251066
Total Strontium (Sr)	mg/L	7.65	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Tellurium (Te)	mg/L	<0.0050	0.0050	8251066	<0.0010	0.0010	8251066
Total Tellurium (Te)	mg/L	<0.0050	0.0050	8247301	<0.0010	0.0010	8244820
Dissolved Thallium (Tl)	mg/L	<0.000050	0.000050	8251066	<0.000010	0.000010	8251066
Total Thallium (Tl)	mg/L	<0.000050	0.000050	8247301	<0.000010	0.000010	8244820
Dissolved Tin (Sn)	mg/L	<0.025	0.025	8251066	<0.0050	0.0050	8251066
Total Tin (Sn)	mg/L	<0.025	0.025	8247301	<0.0050	0.0050	8244820
Dissolved Titanium (Ti)	mg/L	<0.025	0.025	8251066	<0.0050	0.0050	8251066
Total Titanium (Ti)	mg/L	<0.025	0.025	8247301	<0.0050	0.0050	8244820
Dissolved Uranium (U)	mg/L	<0.00050	0.00050	8251066	<0.00010	0.00010	8251066
Total Uranium (U)	mg/L	<0.00050	0.00050	8247301	<0.00010	0.00010	8244820
Dissolved Vanadium (V)	mg/L	<0.025	0.025	8251066	<0.0050	0.0050	8251066

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		TTM649			TTM650		
Sampling Date		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964			572964		
	UNITS	**Port 3-B**	**RDL**	**QC Batch**	**FB**	**RDL**	**QC Batch**
Total Vanadium (V)	mg/L	<0.025	0.025	8247301	<0.0050	0.0050	8244820
Dissolved Zinc (Zn)	mg/L	<0.025	0.025	8251066	<0.0050	0.0050	8251066
Total Zinc (Zn)	mg/L	0.117	0.025	8247301	<0.0050	0.0050	8244820
Dissolved Calcium (Ca)	mg/L	534	0.25	8251065	<0.050	0.050	8251065
Total Calcium (Ca)	mg/L	503	0.25	8247300	<0.050	0.050	8247300
Dissolved Magnesium (Mg)	mg/L	0.60	0.25	8251065	<0.050	0.050	8251065
Total Magnesium (Mg)	mg/L	0.65	0.25	8247300	<0.050	0.050	8247300
Dissolved Potassium (K)	mg/L	9.90	0.25	8251065	<0.050	0.050	8251065
Total Potassium (K)	mg/L	10.6	0.25	8247300	<0.050	0.050	8247300
Dissolved Sodium (Na)	mg/L	292	0.25	8251065	<0.050	0.050	8251065
Total Sodium (Na)	mg/L	292	0.25	8247300	<0.050	0.050	8247300
Dissolved Sulphur (S)	mg/L	<15	15	8251065	<3.0	3.0	8251065
Total Sulphur (S)	mg/L	<15	15	8247300	<3.0	3.0	8247300
RADIONUCLIDE							
Radium-226	Bq/L	0.19	0.0050	8247805	<0.0050	0.0050	8247805

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		TTM648		TTM649			TTM649		
Sampling Date		2022/09/13 17:00		2022/09/13 17:00			2022/09/13 17:00		
COC Number		572964		572964			572964		
	UNITS	Port 3-A	QC Batch	Port 3-B	RDL	QC Batch	Port 3-B Lab-Dup	RDL	QC Batch
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	1220	8247299	1260	0.50	8247299			
Metals									
Dissolved Calcium (Ca)	mg/L	520	8234127	520	0.5	8234127			
Dissolved Magnesium (Mg)	mg/L	0.61	8234127	0.59	0.05	8234127			
Mercury (Hg)	mg/L	<0.00001	8235703	<0.00001	0.00001	8235341	<0.00001	0.00001	8235341
Dissolved Mercury (Hg)	mg/L	<0.00001	8235349	<0.00001	0.00001	8235349			
Dissolved Potassium (K)	mg/L	11	8234127	11	1	8234127			
Dissolved Sodium (Na)	mg/L	310	8234127	310	5	8234127			

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

Bureau Veritas ID		TTM650		
Sampling Date		2022/09/13 17:00		
COC Number		572964		
	UNITS	FB	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	<0.50	0.50	8247299
Metals				
Dissolved Calcium (Ca)	mg/L	<0.05	0.05	8234127
Dissolved Magnesium (Mg)	mg/L	<0.05	0.05	8234127
Mercury (Hg)	mg/L	<0.00001	0.00001	8235980
Dissolved Mercury (Hg)	mg/L	<0.00001	0.00001	8235349
Dissolved Potassium (K)	mg/L	<1	1	8234127
Dissolved Sodium (Na)	mg/L	<0.5	0.5	8234127

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

TEST SUMMARY

Bureau Veritas ID: TTM648
Sample ID: Port 3-A
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8233150	N/A	2022/09/20	Kien Tran
Carbonate, Bicarbonate and Hydroxide	CALC	8231222	N/A	2022/09/21	Automated Statchk
Anions	IC	8234058	N/A	2022/09/20	Lusine Khachatryan
Chloride by Automated Colourimetry	KONE	8234017	N/A	2022/09/22	Alina Dobreanu
Conductivity	AT	8233116	N/A	2022/09/20	Kien Tran
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8233473	N/A	2022/09/21	Nimarta Singh
Field Measured Conductivity	PH	ONSITE	N/A	2022/09/17	Dipika Singh
Field Measured Conductivity		ONSITE	N/A	2022/09/17	Dipika Singh
Fluoride	ISE	8233102	2022/09/19	2022/09/20	Kien Tran
Dissolved Mercury (low level)	CV/AA	8235349	2022/09/20	2022/09/21	Japneet Gill
Mercury (low level)	CV/AA	8235703	2022/09/20	2022/09/21	Japneet Gill
Lab Filtered Metals Analysis by ICP	ICP	8234127	2022/09/19	2022/09/21	Indira HarryPaul
Low Level Chloride and Sulphate by AC	KONE	8245291	N/A	2022/09/21	Carlo Truong
Cyanide (Free)	SPEC	8299592	N/A	2022/10/21	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8245282	N/A	2022/09/21	Zoe Wu
Cyanide WAD (weak acid dissociable)	TECH	8296343	N/A	2022/10/20	Zoe Wu
Hardness Total (calculated as CaCO3)	CALC	8247299	N/A	2022/09/26	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8251065	N/A	2022/09/27	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8251066	N/A	2022/09/23	Michelle Young
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8247300	2022/09/26	2022/09/26	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8247301	2022/09/22	2022/09/23	Sahar Omar Al-Abdalla-Inactive
Silica (Reactive)	KONE	8247903	N/A	2022/09/23	Shanna McKort
Total Phosphorus Low Level Total	KONE	8253630	2022/09/27	2022/09/28	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8231382	N/A	2022/09/21	Automated Statchk
Total Ammonia-N	LACH/NH4	8235104	N/A	2022/09/21	Anna-Kay Gooden
Nitrate & Nitrite as Nitrogen in Water	LACH	8234053	N/A	2022/09/21	Chandra Nandlal
pH	AT	8233152	2022/09/19	2022/09/20	Kien Tran
Field Measured Conductivity	PH	ONSITE	N/A	2022/09/17	Dipika Singh
Orthophosphate	KONE	8234013	N/A	2022/09/21	Samuel Law
Radium-226 Low Level	AS	8247805	N/A	2022/09/30	Ryan Wong
Sodium Adsorption Ratio (SAR)	CALC/MET	8231383	N/A	2022/09/23	Automated Statchk
Total Dissolved Solids (Calc. from EC)	CALC	8231379	N/A	2022/09/21	Automated Statchk
Total Dissolved Solids	BAL	8238155	2022/09/21	2022/09/22	Masood Siddiqui
Field Measured Conductivity	PH	ONSITE	N/A	2022/09/17	Dipika Singh
Total Kjeldahl Nitrogen in Water	SKAL	8235030	2022/09/20	2022/09/20	Massarat Jan
Total Organic Carbon (TOC)	TOCV/NDIR	8235040	N/A	2022/09/21	Nimarta Singh
Low Level Total Suspended Solids	BAL	8237656	2022/09/21	2022/09/22	Shaneil Hall
Turbidity	AT	8233064	N/A	2022/09/19	Roya Fathitil
Un-ionized Ammonia (as N)	CALC	8292337	2022/10/28	2022/10/28	Automated Statchk

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Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

TEST SUMMARY

Bureau Veritas ID: TTM648 Dup
Sample ID: Port 3-A
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8233150	N/A	2022/09/20	Kien Tran
Conductivity	AT	8233116	N/A	2022/09/20	Kien Tran
Fluoride	ISE	8233102	2022/09/19	2022/09/20	Kien Tran
Elements by CRC ICPMS (dissolved)	ICP/MS	8251066	N/A	2022/09/23	Michelle Young
pH	AT	8233152	2022/09/19	2022/09/20	Kien Tran
Total Kjeldahl Nitrogen in Water	SKAL	8235030	2022/09/20	2022/09/20	Massarat Jan

Bureau Veritas ID: TTM649
Sample ID: Port 3-B
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8233150	N/A	2022/09/20	Kien Tran
Carbonate, Bicarbonate and Hydroxide	CALC	8231222	N/A	2022/09/21	Automated Statchk
Anions	IC	8234058	N/A	2022/09/20	Lusine Khachatryan
Chloride by Automated Colourimetry	KONE	8234017	N/A	2022/09/22	Alina Dobreanu
Conductivity	AT	8233116	N/A	2022/09/20	Kien Tran
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8233473	N/A	2022/09/21	Nimarta Singh
Field Measured Conductivity	PH	ONSITE	N/A	2022/09/17	Dipika Singh
Field Measured Conductivity		ONSITE	N/A	2022/09/17	Dipika Singh
Fluoride	ISE	8233102	2022/09/19	2022/09/20	Kien Tran
Dissolved Mercury (low level)	CV/AA	8235349	2022/09/20	2022/09/21	Japneet Gill
Mercury (low level)	CV/AA	8235341	2022/09/20	2022/09/20	Japneet Gill
Lab Filtered Metals Analysis by ICP	ICP	8234127	2022/09/19	2022/09/21	Indira HarryPaul
Low Level Chloride and Sulphate by AC	KONE	8245291	N/A	2022/09/21	Carlo Truong
Cyanide (Free)	SPEC	8299592	N/A	2022/10/21	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8245282	N/A	2022/09/21	Zoe Wu
Cyanide WAD (weak acid dissociable)	TECH	8296343	N/A	2022/10/20	Zoe Wu
Hardness Total (calculated as CaCO3)	CALC	8247299	N/A	2022/09/23	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8251065	N/A	2022/09/27	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8251066	N/A	2022/09/27	Michelle Young
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8247300	2022/09/23	2022/09/23	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8247301	2022/09/22	2022/09/23	Sahar Omar Al-Abdalla-Inactive
Silica (Reactive)	KONE	8247903	N/A	2022/09/23	Shanna McKort
Total Phosphorus Low Level Total	KONE	8253630	2022/09/27	2022/09/28	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8231382	N/A	2022/09/21	Automated Statchk
Total Ammonia-N	LACH/NH4	8235104	N/A	2022/09/21	Anna-Kay Gooden
Nitrate & Nitrite as Nitrogen in Water	LACH	8234053	N/A	2022/09/21	Chandra Nandlal
pH	AT	8233152	2022/09/19	2022/09/20	Kien Tran
Field Measured Conductivity	PH	ONSITE	N/A	2022/09/17	Dipika Singh
Orthophosphate	KONE	8234013	N/A	2022/09/21	Samuel Law
Radium-226 Low Level	AS	8247805	N/A	2022/09/30	Ryan Wong
Sodium Adsorption Ratio (SAR)	CALC/MET	8231383	N/A	2022/09/23	Automated Statchk
Total Dissolved Solids (Calc. from EC)	CALC	8231379	N/A	2022/09/21	Automated Statchk
Total Dissolved Solids	BAL	8238155	2022/09/21	2022/09/22	Masood Siddiqui

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

TEST SUMMARY

Bureau Veritas ID: TTM649
Sample ID: Port 3-B
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Field Measured Conductivity	PH	ONSITE	N/A	2022/09/17	Dipika Singh
Total Kjeldahl Nitrogen in Water	SKAL	8235917	2022/09/20	2022/09/21	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8236274	N/A	2022/09/22	Nimarta Singh
Low Level Total Suspended Solids	BAL	8237656	2022/09/21	2022/09/22	Shaneil Hall
Turbidity	AT	8232566	N/A	2022/09/19	Roya Fathitil
Un-ionized Ammonia (as N)	CALC	8292337	2022/10/28	2022/10/28	Automated Statchk

Bureau Veritas ID: TTM649 Dup
Sample ID: Port 3-B
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (low level)	CV/AA	8235341	2022/09/20	2022/09/20	Japneet Gill

Bureau Veritas ID: TTM650
Sample ID: FB
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8233150	N/A	2022/09/20	Kien Tran
Carbonate, Bicarbonate and Hydroxide	CALC	8231222	N/A	2022/09/21	Automated Statchk
Anions	IC	8234058	N/A	2022/09/20	Lusine Khachatryan
Chloride by Automated Colourimetry	KONE	8234017	N/A	2022/09/22	Alina Dobreanu
Conductivity	AT	8233116	N/A	2022/09/20	Kien Tran
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8233473	N/A	2022/09/21	Nimarta Singh
Fluoride	ISE	8233102	2022/09/19	2022/09/20	Kien Tran
Dissolved Mercury (low level)	CV/AA	8235349	2022/09/20	2022/09/21	Japneet Gill
Mercury (low level)	CV/AA	8235980	2022/09/20	2022/09/21	Japneet Gill
Lab Filtered Metals Analysis by ICP	ICP	8234127	2022/09/19	2022/09/21	Indira HarryPaul
Low Level Chloride and Sulphate by AC	KONE	8245291	N/A	2022/09/21	Carlo Truong
Cyanide (Free)	SPEC	8299592	N/A	2022/10/21	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8245282	N/A	2022/09/21	Zoe Wu
Cyanide WAD (weak acid dissociable)	TECH	8296343	N/A	2022/10/20	Zoe Wu
Hardness Total (calculated as CaCO3)	CALC	8247299	N/A	2022/09/23	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8251065	N/A	2022/09/27	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8251066	N/A	2022/09/27	Michelle Young
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8247300	2022/09/23	2022/09/23	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8244820	2022/09/22	2022/09/23	Andrew An
Silica (Reactive)	KONE	8247903	N/A	2022/09/26	Shanna McKort
Total Phosphorus Low Level Total	KONE	8253630	2022/09/27	2022/09/28	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8231382	N/A	2022/09/21	Automated Statchk
Total Ammonia-N	LACH/NH4	8235104	N/A	2022/09/21	Anna-Kay Gooden
Nitrate & Nitrite as Nitrogen in Water	LACH	8234053	N/A	2022/09/21	Chandra Nandlal
pH	AT	8233152	2022/09/19	2022/09/20	Kien Tran
Orthophosphate	KONE	8234013	N/A	2022/09/21	Samuel Law

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

TEST SUMMARY

Bureau Veritas ID: TTM650
Sample ID: FB
Matrix: Water

Collected: 2022/09/13
Shipped:
Received: 2022/09/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Radium-226 Low Level	AS	8247805	N/A	2022/09/30	Ryan Wong
Sodium Adsorption Ratio (SAR)	CALC/MET	8231383	N/A	2022/09/23	Automated Statchk
Total Dissolved Solids (Calc. from EC)	CALC	8231379	N/A	2022/09/21	Automated Statchk
Total Dissolved Solids	BAL	8238155	2022/09/21	2022/09/22	Masood Siddiqui
Total Kjeldahl Nitrogen in Water	SKAL	8235917	2022/09/20	2022/09/21	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8236274	N/A	2022/09/22	Nimarta Singh
Low Level Total Suspended Solids	BAL	8237656	2022/09/21	2022/09/22	Shaneil Hall
Turbidity	AT	8233064	N/A	2022/09/19	Roya Fathitil

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

GENERAL COMMENTS

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

Package 1	11.7°C

Revised Report (2022/10/28): Un-ionized ammonia, Free and WAD cyanide added per client request

Sample TTM648 [Port 3-A] : Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). 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 (Free).

Sample TTM649 [Port 3-B] : TOC< DOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). 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 (Free).

Sample TTM650 [FB] : SAR Analysis: NC = Not Calculable as Calcium and Magnesium were not detected. Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). 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 (Free).

Sample TTM648, Elements by CRC ICPMS (dissolved): Test repeated.
Sample TTM649, Elements by CRC ICPMS (dissolved): Test repeated.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
8232566	Turbidity	2022/09/19			114	85 - 115	<0.1	NTU	0.95	20		
8233064	Turbidity	2022/09/19			114	85 - 115	<0.1	NTU	0.71	20		
8233102	Fluoride (F-)	2022/09/20	90	80 - 120	102	80 - 120	<0.10	mg/L	0.47	20		
8233116	Conductivity	2022/09/20			103	85 - 115	<0.001	mS/cm	0.92	25		
8233150	Alkalinity (Total as CaCO3)	2022/09/20			95	85 - 115	<1.0	mg/L	1.8	20		
8233152	pH	2022/09/20			102	98 - 103			1.5	N/A		
8233473	Dissolved Organic Carbon	2022/09/21	103	80 - 120	102	80 - 120	<0.40	mg/L	0.17	20		
8234013	Orthophosphate (P)	2022/09/21	108	75 - 125	103	80 - 120	<0.010	mg/L	NC	25		
8234017	Dissolved Chloride (Cl-)	2022/09/22	103	80 - 120	104	80 - 120	<1.0	mg/L	0.70	20		
8234053	Nitrate (N)	2022/09/21	NC	80 - 120	101	80 - 120	<0.10	mg/L	0.018	20		
8234053	Nitrite (N)	2022/09/21	NC	80 - 120	108	80 - 120	<0.010	mg/L	1.2	20		
8234058	Bromide (Br-)	2022/09/20	100	80 - 120	101	80 - 120	<1.0	mg/L	NC	20		
8234127	Dissolved Calcium (Ca)	2022/09/21	NC	80 - 120	95	80 - 120	<0.05	mg/L	1.7	25		
8234127	Dissolved Magnesium (Mg)	2022/09/21	NC	80 - 120	90	80 - 120	<0.05	mg/L	1.7	25		
8234127	Dissolved Potassium (K)	2022/09/21	NC	80 - 120	94	80 - 120	<1	mg/L	2.7	25		
8234127	Dissolved Sodium (Na)	2022/09/21	NC	80 - 120	91	80 - 120	<0.5	mg/L	1.8	25		
8235030	Total Kjeldahl Nitrogen (TKN)	2022/09/20	85	80 - 120	102	80 - 120	<0.10	mg/L	7.8	20	98	80 - 120
8235040	Total Organic Carbon (TOC)	2022/09/21	NC	80 - 120	100	80 - 120	<0.40	mg/L	0.40	20		
8235104	Total Ammonia-N	2022/09/21	80	75 - 125	100	80 - 120	<0.050	mg/L	2.4	20		
8235341	Mercury (Hg)	2022/09/20	95	75 - 125	102	80 - 120	<0.00001	mg/L	NC	20		
8235349	Dissolved Mercury (Hg)	2022/09/21	96	75 - 125	101	80 - 120	<0.00001	mg/L	NC	20		
8235703	Mercury (Hg)	2022/09/21	98	75 - 125	97	80 - 120	<0.00001	mg/L	NC	20		
8235917	Total Kjeldahl Nitrogen (TKN)	2022/09/21	NC	80 - 120	100	80 - 120	<0.10	mg/L	1.2	20	97	80 - 120
8235980	Mercury (Hg)	2022/09/21	95	75 - 125	96	80 - 120	<0.00001	mg/L	NC	20		
8236274	Total Organic Carbon (TOC)	2022/09/21	95	80 - 120	94	80 - 120	<0.40	mg/L	1.7	20		
8237656	Total Suspended Solids	2022/09/22					<1	mg/L	12	25	95	85 - 115
8238155	Total Dissolved Solids	2022/09/22					<10	mg/L	2.6	25	95	90 - 110
8244820	Total Aluminum (Al)	2022/09/23	103	80 - 120	101	80 - 120	<0.0030	mg/L				
8244820	Total Antimony (Sb)	2022/09/23	98	80 - 120	100	80 - 120	<0.00050	mg/L				
8244820	Total Arsenic (As)	2022/09/23	98	80 - 120	100	80 - 120	<0.00010	mg/L				
8244820	Total Barium (Ba)	2022/09/23	97	80 - 120	97	80 - 120	<0.0010	mg/L				

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
8244820	Total Beryllium (Be)	2022/09/23	94	80 - 120	94	80 - 120	<0.00010	mg/L				
8244820	Total Bismuth (Bi)	2022/09/23	95	80 - 120	98	80 - 120	<0.0010	mg/L				
8244820	Total Boron (B)	2022/09/23	94	80 - 120	99	80 - 120	<0.050	mg/L				
8244820	Total Cadmium (Cd)	2022/09/23	99	80 - 120	100	80 - 120	<0.000010	mg/L				
8244820	Total Chromium (Cr)	2022/09/23	97	80 - 120	99	80 - 120	<0.0010	mg/L				
8244820	Total Cobalt (Co)	2022/09/23	94	80 - 120	99	80 - 120	<0.00020	mg/L				
8244820	Total Copper (Cu)	2022/09/23	93	80 - 120	94	80 - 120	<0.00050	mg/L				
8244820	Total Iron (Fe)	2022/09/23	97	80 - 120	99	80 - 120	<0.010	mg/L				
8244820	Total Lead (Pb)	2022/09/23	98	80 - 120	100	80 - 120	<0.00020	mg/L				
8244820	Total Lithium (Li)	2022/09/23	88	80 - 120	89	80 - 120	<0.0020	mg/L				
8244820	Total Manganese (Mn)	2022/09/23	93	80 - 120	96	80 - 120	<0.0010	mg/L				
8244820	Total Molybdenum (Mo)	2022/09/23	101	80 - 120	102	80 - 120	<0.0010	mg/L				
8244820	Total Nickel (Ni)	2022/09/23	89	80 - 120	93	80 - 120	<0.0010	mg/L				
8244820	Total Selenium (Se)	2022/09/23	94	80 - 120	100	80 - 120	<0.00010	mg/L				
8244820	Total Silicon (Si)	2022/09/23	98	80 - 120	99	80 - 120	<0.10	mg/L				
8244820	Total Silver (Ag)	2022/09/23	95	80 - 120	97	80 - 120	<0.000020	mg/L				
8244820	Total Strontium (Sr)	2022/09/23	102	80 - 120	102	80 - 120	<0.0010	mg/L				
8244820	Total Tellurium (Te)	2022/09/23	103	80 - 120	104	80 - 120	<0.0010	mg/L				
8244820	Total Thallium (Tl)	2022/09/23	98	80 - 120	98	80 - 120	<0.000010	mg/L				
8244820	Total Tin (Sn)	2022/09/23	98	80 - 120	101	80 - 120	<0.0050	mg/L				
8244820	Total Titanium (Ti)	2022/09/23	97	80 - 120	99	80 - 120	<0.0050	mg/L				
8244820	Total Uranium (U)	2022/09/23	97	80 - 120	101	80 - 120	<0.00010	mg/L				
8244820	Total Vanadium (V)	2022/09/23	93	80 - 120	98	80 - 120	<0.0050	mg/L				
8244820	Total Zinc (Zn)	2022/09/23	95	80 - 120	102	80 - 120	<0.0050	mg/L				
8245282	Strong Acid Dissoc. Cyanide (CN)	2022/09/21	93	80 - 120	98	80 - 120	<0.00050	mg/L				
8245291	Dissolved Sulphate (SO4)	2022/09/21	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.59	20		
8247301	Total Aluminum (Al)	2022/09/23	102	80 - 120	100	80 - 120	<0.0030	mg/L				
8247301	Total Antimony (Sb)	2022/09/23	104	80 - 120	105	80 - 120	<0.00050	mg/L				
8247301	Total Arsenic (As)	2022/09/23	104	80 - 120	103	80 - 120	<0.00010	mg/L				
8247301	Total Barium (Ba)	2022/09/23	NC	80 - 120	98	80 - 120	<0.0010	mg/L				
8247301	Total Beryllium (Be)	2022/09/23	102	80 - 120	101	80 - 120	<0.00010	mg/L				

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
8247301	Total Bismuth (Bi)	2022/09/23	94	80 - 120	99	80 - 120	<0.0010	mg/L				
8247301	Total Boron (B)	2022/09/23	99	80 - 120	100	80 - 120	<0.050	mg/L				
8247301	Total Cadmium (Cd)	2022/09/23	102	80 - 120	101	80 - 120	<0.000010	mg/L				
8247301	Total Chromium (Cr)	2022/09/23	99	80 - 120	100	80 - 120	<0.0010	mg/L				
8247301	Total Cobalt (Co)	2022/09/23	98	80 - 120	99	80 - 120	<0.00020	mg/L				
8247301	Total Copper (Cu)	2022/09/23	95	80 - 120	97	80 - 120	<0.00050	mg/L				
8247301	Total Iron (Fe)	2022/09/23	98	80 - 120	102	80 - 120	<0.010	mg/L				
8247301	Total Lead (Pb)	2022/09/23	100	80 - 120	100	80 - 120	<0.00020	mg/L				
8247301	Total Lithium (Li)	2022/09/23	95	80 - 120	98	80 - 120	<0.0020	mg/L				
8247301	Total Manganese (Mn)	2022/09/23	99	80 - 120	99	80 - 120	<0.0010	mg/L				
8247301	Total Molybdenum (Mo)	2022/09/23	107	80 - 120	104	80 - 120	<0.0010	mg/L				
8247301	Total Nickel (Ni)	2022/09/23	95	80 - 120	98	80 - 120	<0.0010	mg/L				
8247301	Total Selenium (Se)	2022/09/23	103	80 - 120	101	80 - 120	<0.00010	mg/L				
8247301	Total Silicon (Si)	2022/09/23	104	80 - 120	109	80 - 120	<0.10	mg/L				
8247301	Total Silver (Ag)	2022/09/23	101	80 - 120	100	80 - 120	<0.000020	mg/L				
8247301	Total Strontium (Sr)	2022/09/23	NC	80 - 120	100	80 - 120	<0.0010	mg/L				
8247301	Total Tellurium (Te)	2022/09/23	104	80 - 120	101	80 - 120	<0.0010	mg/L				
8247301	Total Thallium (Tl)	2022/09/23	100	80 - 120	99	80 - 120	<0.000010	mg/L				
8247301	Total Tin (Sn)	2022/09/23	100	80 - 120	102	80 - 120	<0.0050	mg/L				
8247301	Total Titanium (Ti)	2022/09/23	101	80 - 120	102	80 - 120	<0.0050	mg/L				
8247301	Total Uranium (U)	2022/09/23	104	80 - 120	103	80 - 120	<0.00010	mg/L				
8247301	Total Vanadium (V)	2022/09/23	101	80 - 120	100	80 - 120	<0.0050	mg/L				
8247301	Total Zinc (Zn)	2022/09/23	100	80 - 120	100	80 - 120	<0.0050	mg/L				
8247805	Radium-226	2022/09/30			98	85 - 115	<0.0050	Bq/L	NC	N/A		
8247903	Reactive Silica (SiO2)	2022/09/23	NC	80 - 120	103	80 - 120	<0.050	mg/L				
8251066	Dissolved Aluminum (Al)	2022/09/23	98	80 - 120	105	80 - 120	<0.0030	mg/L	NC	20		
8251066	Dissolved Antimony (Sb)	2022/09/23	97	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20		
8251066	Dissolved Arsenic (As)	2022/09/23	102	80 - 120	105	80 - 120	<0.00010	mg/L	5.6	20		
8251066	Dissolved Barium (Ba)	2022/09/23	105	80 - 120	102	80 - 120	<0.0010	mg/L	0.013	20		
8251066	Dissolved Beryllium (Be)	2022/09/23	95	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20		
8251066	Dissolved Bismuth (Bi)	2022/09/23	92	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20		

BUREAU VERITAS

Bureau Veritas Job #: C2Q8636
Report Date: 2022/10/28

QUALITY ASSURANCE REPORT(CONT'D)

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

			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
8251066	Dissolved Boron (B)	2022/09/23	NC	80 - 120	115	80 - 120	<0.050	mg/L	1.5	20		
8251066	Dissolved Cadmium (Cd)	2022/09/23	95	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20		
8251066	Dissolved Chromium (Cr)	2022/09/23	96	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
8251066	Dissolved Cobalt (Co)	2022/09/23	90	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20		
8251066	Dissolved Copper (Cu)	2022/09/23	91	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20		
8251066	Dissolved Iron (Fe)	2022/09/23	106	80 - 120	106	80 - 120	<0.0050	mg/L	NC	20		
8251066	Dissolved Lead (Pb)	2022/09/23	93	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20		
8251066	Dissolved Lithium (Li)	2022/09/23	NC	80 - 120	98	80 - 120	<0.0020	mg/L	1.5	20		
8251066	Dissolved Manganese (Mn)	2022/09/23	95	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20		
8251066	Dissolved Molybdenum (Mo)	2022/09/23	108	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
8251066	Dissolved Nickel (Ni)	2022/09/23	92	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20		
8251066	Dissolved Selenium (Se)	2022/09/23	84	80 - 120	107	80 - 120	<0.00010	mg/L				
8251066	Dissolved Silicon (Si)	2022/09/23	115	80 - 120	120	80 - 120	<0.10	mg/L	1.2	20		
8251066	Dissolved Silver (Ag)	2022/09/23	86	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20		
8251066	Dissolved Strontium (Sr)	2022/09/23	NC	80 - 120	101	80 - 120	<0.0010	mg/L	1.6	20		
8251066	Dissolved Tellurium (Te)	2022/09/23	115	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20		
8251066	Dissolved Thallium (Tl)	2022/09/23	97	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20		
8251066	Dissolved Tin (Sn)	2022/09/23	96	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20		
8251066	Dissolved Titanium (Ti)	2022/09/23	96	80 - 120	106	80 - 120	<0.0050	mg/L	NC	20		
8251066	Dissolved Uranium (U)	2022/09/23	95	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20		
8251066	Dissolved Vanadium (V)	2022/09/23	98	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20		
8251066	Dissolved Zinc (Zn)	2022/09/23	91	80 - 120	107	80 - 120	<0.0050	mg/L	NC	20		
8253488	Dissolved Selenium (Se)	2022/09/28			99	80 - 120	<0.00010	mg/L				
8253630	Total Phosphorus (P)	2022/09/28	123 (1)	80 - 120	95	80 - 120	<0.0010	mg/L			82	80 - 120
8296343	Weak Acid Dissoc. Cyanide (CN)	2022/10/19	102	80 - 120	101	80 - 120	<0.00050	mg/L				

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
8299592	Free Cyanide (CN)	2022/10/21	88	80 - 120	91	80 - 120	<2.0	ug/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 #: C2Q8636
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: NU

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

Steven Simpson, Lab Director

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

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

Exceedance Summary Table – Metal Mining Effluent Reg

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

Your P.O. #: 1121445
Your Project #: WESTBAY WELL
Your C.O.C. #: 575770

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2022/10/28
Report #: R7361598
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2R5545
Received: 2022/09/22, 13:20

Sample Matrix: Ground Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity (1)	3	N/A	2022/09/27	CAM SOP-00448	SM 23 2320 B m
Carbonate, Bicarbonate and Hydroxide (1)	3	N/A	2022/09/28	CAM SOP-00102	APHA 4500-CO2 D
Anions (1)	3	N/A	2022/09/27	CAM SOP-00435	SM 23 4110 B m
Chloride by Automated Colourimetry (1)	3	N/A	2022/09/26	CAM SOP-00463	SM 23 4500-Cl E m
Conductivity (1)	3	N/A	2022/09/27	CAM SOP-00414	SM 23 2510 m
Dissolved Organic Carbon (DOC) (1, 5)	1	N/A	2022/09/26	CAM SOP-00446	SM 23 5310 B m
Dissolved Organic Carbon (DOC) (1, 5)	2	N/A	2022/09/27	CAM SOP-00446	SM 23 5310 B m
Fluoride (1)	3	2022/09/26	2022/09/27	CAM SOP-00449	SM 23 4500-F C m
Dissolved Mercury (low level) (1)	3	2022/09/26	2022/09/26	CAM SOP-00453	EPA 7470 m
Mercury (low level) (1)	3	2022/09/26	2022/09/26	CAM SOP-00453	EPA 7470 m
Lab Filtered Metals Analysis by ICP (1)	3	2022/09/27	2022/09/28	CAM SOP-00408	EPA 6010D m
Low Level Chloride and Sulphate by AC (2)	3	N/A	2022/09/28	AB SOP-00020 / AB SOP-00018	SM23 4500-CL/SO4-E m
Cyanide (Free) (2)	2	N/A	2022/10/21	CAL SOP-00266	EPA 9016d R0 m
Cyanide (Free) (2)	1	N/A	2022/10/24	CAL SOP-00266	EPA 9016d R0 m
Cyanide, Strong Acid Dissociable (SAD) (2)	3	N/A	2022/09/28	CAL SOP-00270	SM 23 4500-CN m
Cyanide WAD (weak acid dissociable) (2)	3	N/A	2022/10/20	CAL SOP-00270	SM 23 4500-CN m
Hardness Total (calculated as CaCO3) (3, 6)	2	N/A	2022/10/03	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (3, 6)	1	N/A	2022/09/29	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.) (3)	3	N/A	2022/09/28	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (dissolved) (3)	3	N/A	2022/09/27	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (3)	2	2022/09/23	2022/10/03	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total) (3)	1	2022/09/23	2022/09/29	BBY7SOP-00002	EPA 6020B R2 m
Elements by CRC ICPMS (total) (3)	3	2022/09/28	2022/09/29	BBY7SOP-00003/ BBY7SOP-00002	EPA 6020B R2 m
Silica (Reactive) (2)	3	N/A	2022/09/30	AB SOP-00011	EPA370.1 R1978 m
Total Phosphorus Low Level Total (2)	3	2022/10/02	2022/10/03	AB SOP-00024	SM 23 4500-P A,B,F m
Total Ammonia (as NH3) (1)	3	N/A	2022/09/27	Auto Calc.	
Total Ammonia-N (1)	3	N/A	2022/09/27	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1, 7)	2	N/A	2022/09/26	CAM SOP-00440	SM 23 4500-NO3I/NO2B
Nitrate & Nitrite as Nitrogen in Water (1, 7)	1	N/A	2022/09/28	CAM SOP-00440	SM 23 4500-NO3I/NO2B

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

Your P.O. #: 1121445
Your Project #: WESTBAY WELL
Your C.O.C. #: 575770

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2022/10/28
Report #: R7361598
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2R5545
Received: 2022/09/22, 13:20

Sample Matrix: Ground Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH (1)	3	2022/09/26	2022/09/27	CAM SOP-00413	SM 4500H+ B m
Field Measured pH (1, 8)	2	N/A	2022/10/28		Field pH Meter
Orthophosphate (1)	3	N/A	2022/09/26	CAM SOP-00461	EPA 365.1 m
Radium-226 Low Level (4, 9)	3	N/A	2022/10/18	BQL SOP-00006 BQL SOP-00017 BQL SOP-00032	Alpha Spectrometry
Sodium Adsorption Ratio (SAR) (1)	3	N/A	2022/09/28	CAM SOP-00102	EPA 6010C
Total Dissolved Solids (1)	3	2022/09/26	2022/09/27	CAM SOP-00428	SM 23 2540C m
Field Temperature (1, 8)	2	N/A	2022/10/28		Field Thermometer
Total Kjeldahl Nitrogen in Water (1)	3	2022/09/26	2022/09/27	CAM SOP-00938	OMOE E3516 m
Total Organic Carbon (TOC) (1, 10)	3	N/A	2022/09/28	CAM SOP-00446	SM 23 5310B m
Low Level Total Suspended Solids (1)	2	2022/09/26	2022/09/27	CAM SOP-00428	SM 23 2540D m
Low Level Total Suspended Solids (1)	1	2022/09/27	2022/09/28	CAM SOP-00428	SM 23 2540D m
Turbidity (1)	3	N/A	2022/09/26	CAM SOP-00417	SM 23 2130 B m
Un-ionized Ammonia (as N) (1, 11)	2	2022/10/19	2022/10/28	Calculation	Calculation

Remarks:

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

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

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

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

Your P.O. #: 1121445
Your Project #: WESTBAY WELL
Your C.O.C. #: 575770

Attention: Reporting

Agnico Eagle
Amaruq
Amaruq
Keewatin, NU
CANADA P0X 0A1

Report Date: 2022/10/28
Report #: R7361598
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2R5545
Received: 2022/09/22, 13:20

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) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(8) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.
(9) Radium-226 results have not been corrected for blanks.
(10) Total Organic Carbon (TOC) present in the sample should be considered as non-purgeable TOC.
(11) Un-ionized ammonia is calculated using the total ammonia result and field data provided by the client for pH and temperature.

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 #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX956			TUX957			TUX957		
Sampling Date		2022/09/19 17:00			2022/09/19 17:00			2022/09/19 17:00		
COC Number		575770			575770			575770		
	UNITS	**Port 4-A**	**RDL**	**QC Batch**	**Port 4-B**	**RDL**	**QC Batch**	**Port 4-B Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters										
Total Ammonia (as NH3)	mg/L	<0.061	0.061	8243704	<0.061	0.061	8243704			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	13	1.0	8244079	12	1.0	8244079			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8244079	<1.0	1.0	8244079			
Sodium Adsorption Ratio	N/A	3.7		8244081	3.6		8244081			
Field Measurements										
Field Temperature	Celsius	5.4	N/A	ONSITE	5.4	N/A	ONSITE			
Field Measured pH	pH	6.5		ONSITE	6.5		ONSITE			
Inorganics										
Total Ammonia-N	mg/L	<0.050	0.050	8247760	<0.050	0.050	8247760			
Conductivity	mS/cm	4.24	0.001	8247913	4.27	0.001	8247913	4.26	0.001	8247913
Free Cyanide (CN)	ug/L	<2.0	2.0	8299592	<2.0	2.0	8299592			
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00111	0.00050	8259677	0.00191	0.00050	8259677			
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8296343	<0.00050	0.00050	8296343			
Total Dissolved Solids	mg/L	2420	10	8247475	2450	10	8247475			
Fluoride (F-)	mg/L	0.46	0.10	8247892	0.41	0.10	8247892	0.41	0.10	8247892
Total Kjeldahl Nitrogen (TKN)	mg/L	0.25	0.10	8248566	0.29	0.10	8248566			
Dissolved Organic Carbon	mg/L	260	2.0	8246984	270	2.0	8248058			
Total Organic Carbon (TOC)	mg/L	280	2.0	8247251	280	2.0	8247251			
Orthophosphate (P)	mg/L	<0.010	0.010	8245557	<0.010	0.010	8245557			
pH	pH	6.71		8247907	6.66		8247907	6.71		8247907
Total Phosphorus (P)	mg/L	<0.0010	0.0010	8262051	<0.0010	0.0010	8262051			
Reactive Silica (SiO2)	mg/L	6.6	0.25	8258950	9.9	0.050	8258950			
Total Suspended Solids	mg/L	2	1	8247427	3	1	8247427			
Turbidity	NTU	0.8	0.1	8245538	0.8	0.1	8245538			
Alkalinity (Total as CaCO3)	mg/L	13	1.0	8247905	12	1.0	8247905	12	1.0	8247905
Dissolved Chloride (Cl-)	mg/L	1300	20	8245559	1300	20	8245559			
Nitrite (N)	mg/L	<0.010	0.010	8245481	<0.010	0.010	8245415			
Nitrate (N)	mg/L	<0.10	0.10	8245481	<0.10	0.10	8245415			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX956			TUX957			TUX957		
Sampling Date		2022/09/19 17:00			2022/09/19 17:00			2022/09/19 17:00		
COC Number		575770			575770			575770		
	UNITS	**Port 4-A**	**RDL**	**QC Batch**	**Port 4-B**	**RDL**	**QC Batch**	**Port 4-B Lab-Dup**	**RDL**	**QC Batch**
Dissolved Sulphate (SO4)	mg/L	1.3	0.50	8259676	0.56	0.50	8259676			
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	8245481	<0.10	0.10	8245415			
Bromide (Br-)	mg/L	14	1.0	8245439	15	1.0	8245439			
Un-ionized Ammonia (as N)	mg/L	<0.0004	0.0004	8292337	<0.0004	0.0004	8292337			
Metals										
Dissolved Aluminum (Al)	mg/L	0.0061	0.0060	8261394	0.0071	0.0060	8261394			
Total Aluminum (Al)	mg/L	<0.015	0.015	8261392	0.034	0.015	8261392			
Dissolved Antimony (Sb)	mg/L	<0.0010	0.0010	8261394	<0.0010	0.0010	8261394			
Total Antimony (Sb)	mg/L	<0.0025	0.0025	8261392	<0.0025	0.0025	8261392			
Dissolved Arsenic (As)	mg/L	0.00226	0.00020	8261394	0.00223	0.00020	8261394			
Total Arsenic (As)	mg/L	0.00260	0.00050	8261392	0.00263	0.00050	8261392			
Dissolved Barium (Ba)	mg/L	0.105	0.0020	8261394	0.106	0.0020	8261394			
Total Barium (Ba)	mg/L	0.107	0.0050	8261392	0.101	0.0050	8261392			
Dissolved Beryllium (Be)	mg/L	<0.00020	0.00020	8261394	<0.00020	0.00020	8261394			
Total Beryllium (Be)	mg/L	<0.00050	0.00050	8261392	<0.00050	0.00050	8261392			
Dissolved Bismuth (Bi)	mg/L	<0.0020	0.0020	8261394	<0.0020	0.0020	8261394			
Total Bismuth (Bi)	mg/L	<0.0050	0.0050	8261392	<0.0050	0.0050	8261392			
Dissolved Boron (B)	mg/L	0.48	0.10	8261394	0.49	0.10	8261394			
Total Boron (B)	mg/L	0.42	0.25	8261392	0.42	0.25	8261392			
Dissolved Cadmium (Cd)	mg/L	<0.000020	0.000020	8261394	<0.000020	0.000020	8261394			
Total Cadmium (Cd)	mg/L	<0.000050	0.000050	8261392	<0.000050	0.000050	8261392			
Dissolved Chromium (Cr)	mg/L	<0.0020	0.0020	8261394	<0.0020	0.0020	8261394			
Total Chromium (Cr)	mg/L	<0.0050	0.0050	8261392	<0.0050	0.0050	8261392			
Dissolved Cobalt (Co)	mg/L	<0.00040	0.00040	8261394	<0.00040	0.00040	8261394			
Total Cobalt (Co)	mg/L	<0.0010	0.0010	8261392	<0.0010	0.0010	8261392			
Dissolved Copper (Cu)	mg/L	<0.00040	0.00040	8261394	<0.00040	0.00040	8261394			
Total Copper (Cu)	mg/L	0.0034	0.0025	8261392	<0.0025	0.0025	8261392			
Dissolved Iron (Fe)	mg/L	0.014	0.010	8261394	0.017	0.010	8261394			
Total Iron (Fe)	mg/L	<0.050	0.050	8261392	<0.050	0.050	8261392			
Dissolved Lead (Pb)	mg/L	<0.00040	0.00040	8261394	<0.00040	0.00040	8261394			

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

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX956			TUX957			TUX957		
Sampling Date		2022/09/19 17:00			2022/09/19 17:00			2022/09/19 17:00		
COC Number		575770			575770			575770		
	UNITS	**Port 4-A**	**RDL**	**QC Batch**	**Port 4-B**	**RDL**	**QC Batch**	**Port 4-B Lab-Dup**	**RDL**	**QC Batch**
Total Lead (Pb)	mg/L	<0.0010	0.0010	8261392	<0.0010	0.0010	8261392			
Dissolved Lithium (Li)	mg/L	0.113	0.0040	8261394	0.111	0.0040	8261394			
Total Lithium (Li)	mg/L	0.105	0.010	8261392	0.103	0.010	8261392			
Dissolved Manganese (Mn)	mg/L	0.0148	0.0020	8261394	0.0149	0.0020	8261394			
Total Manganese (Mn)	mg/L	0.0163	0.0050	8261392	0.0152	0.0050	8261392			
Dissolved Molybdenum (Mo)	mg/L	<0.0020	0.0020	8261394	<0.0020	0.0020	8261394			
Total Molybdenum (Mo)	mg/L	<0.0050	0.0050	8261392	<0.0050	0.0050	8261392			
Dissolved Nickel (Ni)	mg/L	<0.0020	0.0020	8261394	<0.0020	0.0020	8261394			
Total Nickel (Ni)	mg/L	<0.0050	0.0050	8261392	<0.0050	0.0050	8261392			
Dissolved Selenium (Se)	mg/L	0.00032	0.00020	8261394	0.00027	0.00020	8261394			
Total Selenium (Se)	mg/L	<0.00050	0.00050	8261392	<0.00050	0.00050	8261392			
Dissolved Silicon (Si)	mg/L	2.67	0.20	8261394	2.73	0.20	8261394			
Total Silicon (Si)	mg/L	2.92	0.50	8261392	2.78	0.50	8261392			
Dissolved Silver (Ag)	mg/L	<0.000040	0.000040	8261394	<0.000040	0.000040	8261394			
Total Silver (Ag)	mg/L	<0.00010	0.00010	8261392	<0.00010	0.00010	8261392			
Dissolved Strontium (Sr)	mg/L	7.63	0.0020	8261394	7.65	0.0020	8261394			
Total Strontium (Sr)	mg/L	7.70	0.0050	8261392	7.29	0.0050	8261392			
Dissolved Tellurium (Te)	mg/L	<0.0020	0.0020	8261394	<0.0020	0.0020	8261394			
Total Tellurium (Te)	mg/L	<0.0050	0.0050	8261392	<0.0050	0.0050	8261392			
Dissolved Thallium (Tl)	mg/L	<0.000020	0.000020	8261394	<0.000020	0.000020	8261394			
Total Thallium (Tl)	mg/L	<0.000050	0.000050	8261392	<0.000050	0.000050	8261392			
Dissolved Tin (Sn)	mg/L	<0.010	0.010	8261394	<0.010	0.010	8261394			
Total Tin (Sn)	mg/L	<0.025	0.025	8261392	<0.025	0.025	8261392			
Dissolved Titanium (Ti)	mg/L	<0.010	0.010	8261394	<0.010	0.010	8261394			
Total Titanium (Ti)	mg/L	<0.025	0.025	8261392	<0.025	0.025	8261392			
Dissolved Uranium (U)	mg/L	<0.00020	0.00020	8261394	<0.00020	0.00020	8261394			
Total Uranium (U)	mg/L	<0.00050	0.00050	8261392	<0.00050	0.00050	8261392			
Dissolved Vanadium (V)	mg/L	<0.010	0.010	8261394	<0.010	0.010	8261394			
Total Vanadium (V)	mg/L	<0.025	0.025	8261392	<0.025	0.025	8261392			
Dissolved Zinc (Zn)	mg/L	<0.010	0.010	8261394	0.025	0.010	8261394			

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

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX956			TUX957			TUX957		
Sampling Date		2022/09/19 17:00			2022/09/19 17:00			2022/09/19 17:00		
COC Number		575770			575770			575770		
	UNITS	**Port 4-A**	**RDL**	**QC Batch**	**Port 4-B**	**RDL**	**QC Batch**	**Port 4-B Lab-Dup**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.134	0.025	8261392	0.124	0.025	8261392			
Dissolved Calcium (Ca)	mg/L	483	0.10	8261393	495	0.10	8261393			
Total Calcium (Ca)	mg/L	512	0.25	8261391	483	0.25	8261391			
Dissolved Magnesium (Mg)	mg/L	5.51	0.10	8261393	5.51	0.10	8261393			
Total Magnesium (Mg)	mg/L	5.41	0.25	8261391	5.19	0.25	8261391			
Dissolved Potassium (K)	mg/L	9.08	0.10	8261393	9.31	0.10	8261393			
Total Potassium (K)	mg/L	9.65	0.25	8261391	8.81	0.25	8261391			
Dissolved Sodium (Na)	mg/L	258	0.10	8261393	261	0.10	8261393			
Total Sodium (Na)	mg/L	262	0.25	8261391	246	0.25	8261391			
Dissolved Sulphur (S)	mg/L	<6.0	6.0	8261393	<6.0	6.0	8261393			
Total Sulphur (S)	mg/L	<15	15	8261391	<15	15	8261391			
RADIONUCLIDE										
Radium-226	Bq/L	0.18	0.0050	8271483	0.21	0.0050	8271483			

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

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX958		
Sampling Date		2022/09/19 17:00		
COC Number		575770		
	UNITS	**TBLK**	**RDL**	**QC Batch**
Calculated Parameters				
Total Ammonia (as NH3)	mg/L	<0.061	0.061	8243704
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8244079
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	8244079
Sodium Adsorption Ratio	N/A	NC (1)		8244081
Inorganics				
Total Ammonia-N	mg/L	<0.050	0.050	8247760
Conductivity	mS/cm	0.001	0.001	8247913
Free Cyanide (CN)	ug/L	<2.0 (2)	2.0	8303151
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00389	0.00050	8259677
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8296343
Total Dissolved Solids	mg/L	<10	10	8248112
Fluoride (F-)	mg/L	<0.10	0.10	8247892
Total Kjeldahl Nitrogen (TKN)	mg/L	0.13	0.10	8248566
Dissolved Organic Carbon	mg/L	<0.40	0.40	8248058
Total Organic Carbon (TOC)	mg/L	<0.40	0.40	8247251
Orthophosphate (P)	mg/L	<0.010	0.010	8245557
pH	pH	5.60		8247907
Total Phosphorus (P)	mg/L	<0.0010	0.0010	8262051
Reactive Silica (SiO2)	mg/L	<0.050	0.050	8258950
Total Suspended Solids	mg/L	<1	1	8249164

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

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

(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.
Results may have a high bias due to decomposition of hexacyanoferrate and some other metal-cyanide complexes to free cyanide.
Sample was analyzed after holding time expired.

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX958		
Sampling Date		2022/09/19 17:00		
COC Number		575770		
	UNITS	**TBLK**	**RDL**	**QC Batch**
Turbidity	NTU	<0.1	0.1	8245538
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	8247905
Dissolved Chloride (Cl-)	mg/L	<1.0	1.0	8245559
Nitrite (N)	mg/L	<0.010	0.010	8245408
Nitrate (N)	mg/L	<0.10	0.10	8245408
Dissolved Sulphate (SO4)	mg/L	2.7	0.50	8259676
Nitrate + Nitrite (N)	mg/L	<0.10	0.10	8245408
Bromide (Br-)	mg/L	<1.0	1.0	8245439
Metals				
Dissolved Aluminum (Al)	mg/L	<0.0030	0.0030	8255096
Total Aluminum (Al)	mg/L	<0.0030	0.0030	8261395
Dissolved Antimony (Sb)	mg/L	<0.00050	0.00050	8255096
Total Antimony (Sb)	mg/L	<0.00050	0.00050	8261395
Dissolved Arsenic (As)	mg/L	<0.00010	0.00010	8255096
Total Arsenic (As)	mg/L	<0.00010	0.00010	8261395
Dissolved Barium (Ba)	mg/L	<0.0010	0.0010	8255096
Total Barium (Ba)	mg/L	<0.0010	0.0010	8261395
Dissolved Beryllium (Be)	mg/L	<0.00010	0.00010	8255096
Total Beryllium (Be)	mg/L	<0.00010	0.00010	8261395
Dissolved Bismuth (Bi)	mg/L	<0.0010	0.0010	8255096
Total Bismuth (Bi)	mg/L	<0.0010	0.0010	8261395
Dissolved Boron (B)	mg/L	<0.050	0.050	8255096
Total Boron (B)	mg/L	<0.050	0.050	8261395
Dissolved Cadmium (Cd)	mg/L	<0.000010	0.000010	8255096
Total Cadmium (Cd)	mg/L	<0.000010	0.000010	8261395
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	8255096
Total Chromium (Cr)	mg/L	<0.0010	0.0010	8261395
Dissolved Cobalt (Co)	mg/L	<0.00020	0.00020	8255096
Total Cobalt (Co)	mg/L	<0.00020	0.00020	8261395
Dissolved Copper (Cu)	mg/L	<0.00020	0.00020	8255096
Total Copper (Cu)	mg/L	<0.00050	0.00050	8261395
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

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Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX958		
Sampling Date		2022/09/19 17:00		
COC Number		575770		
	UNITS	**TBLK**	**RDL**	**QC Batch**
Dissolved Iron (Fe)	mg/L	<0.0050	0.0050	8255096
Total Iron (Fe)	mg/L	<0.010	0.010	8261395
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	8255096
Total Lead (Pb)	mg/L	<0.00020	0.00020	8261395
Dissolved Lithium (Li)	mg/L	<0.0020	0.0020	8255096
Total Lithium (Li)	mg/L	<0.0020	0.0020	8261395
Dissolved Manganese (Mn)	mg/L	<0.0010	0.0010	8255096
Total Manganese (Mn)	mg/L	<0.0010	0.0010	8261395
Dissolved Molybdenum (Mo)	mg/L	<0.0010	0.0010	8255096
Total Molybdenum (Mo)	mg/L	<0.0010	0.0010	8261395
Dissolved Nickel (Ni)	mg/L	<0.0010	0.0010	8255096
Total Nickel (Ni)	mg/L	<0.0010	0.0010	8261395
Dissolved Selenium (Se)	mg/L	<0.00010	0.00010	8255096
Total Selenium (Se)	mg/L	<0.00010	0.00010	8261395
Dissolved Silicon (Si)	mg/L	<0.10	0.10	8255096
Total Silicon (Si)	mg/L	<0.10	0.10	8261395
Dissolved Silver (Ag)	mg/L	<0.000020	0.000020	8255096
Total Silver (Ag)	mg/L	<0.000020	0.000020	8261395
Dissolved Strontium (Sr)	mg/L	<0.0010	0.0010	8255096
Total Strontium (Sr)	mg/L	<0.0010	0.0010	8261395
Dissolved Tellurium (Te)	mg/L	<0.0010	0.0010	8255096
Total Tellurium (Te)	mg/L	<0.0010	0.0010	8261395
Dissolved Thallium (Tl)	mg/L	<0.000010	0.000010	8255096
Total Thallium (Tl)	mg/L	<0.000010	0.000010	8261395
Dissolved Tin (Sn)	mg/L	<0.0050	0.0050	8255096
Total Tin (Sn)	mg/L	<0.0050	0.0050	8261395
Dissolved Titanium (Ti)	mg/L	<0.0050	0.0050	8255096
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8261395
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	8255096
Total Uranium (U)	mg/L	<0.00010	0.00010	8261395
Dissolved Vanadium (V)	mg/L	<0.0050	0.0050	8255096

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		TUX958		
Sampling Date		2022/09/19 17:00		
COC Number		575770		
	UNITS	**TBLK**	**RDL**	**QC Batch**
Total Vanadium (V)	mg/L	<0.0050	0.0050	8261395
Dissolved Zinc (Zn)	mg/L	<0.0050	0.0050	8255096
Total Zinc (Zn)	mg/L	<0.0050	0.0050	8261395
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8261393
Total Calcium (Ca)	mg/L	<0.050	0.050	8261391
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8261393
Total Magnesium (Mg)	mg/L	<0.050	0.050	8261391
Dissolved Potassium (K)	mg/L	<0.050	0.050	8261393
Total Potassium (K)	mg/L	<0.050	0.050	8261391
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8261393
Total Sodium (Na)	mg/L	<0.050	0.050	8261391
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8261393
Total Sulphur (S)	mg/L	<3.0	3.0	8261391
RADIONUCLIDE				
Radium-226	Bq/L	<0.0050	0.0050	8271483

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

ELEMENTS BY ATOMIC SPECTROSCOPY (GROUND WATER)

Bureau Veritas ID		TUX956			TUX956			TUX957		
Sampling Date		2022/09/19 17:00			2022/09/19 17:00			2022/09/19 17:00		
COC Number		575770			575770			575770		
	UNITS	**Port 4-A**	**RDL**	**QC Batch**	**Port 4-A Lab-Dup**	**RDL**	**QC Batch**	**Port 4-B**	**RDL**	**QC Batch**
Calculated Parameters										
Total Hardness (CaCO3)	mg/L	1300	0.50	8261390				1230	0.50	8261390
Metals										
Dissolved Calcium (Ca)	mg/L	500	0.5	8251111				500	0.5	8251111
Dissolved Magnesium (Mg)	mg/L	5.9	0.05	8251111				5.8	0.05	8251111
Mercury (Hg)	mg/L	<0.00001	0.00001	8247728	<0.00001	0.00001	8247728	<0.00001	0.00001	8247728
Dissolved Mercury (Hg)	mg/L	<0.00001	0.00001	8247168				<0.00001	0.00001	8247168
Dissolved Potassium (K)	mg/L	11	1	8251111				10	1	8251111
Dissolved Sodium (Na)	mg/L	310	0.5	8251111				300	0.5	8251111

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

Bureau Veritas ID		TUX958		
Sampling Date		2022/09/19 17:00		
COC Number		575770		
	UNITS	**TBLK**	**RDL**	**QC Batch**
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	<0.50	0.50	8261390
Metals				
Dissolved Calcium (Ca)	mg/L	<0.05	0.05	8251111
Dissolved Magnesium (Mg)	mg/L	<0.05	0.05	8251111
Mercury (Hg)	mg/L	<0.00001	0.00001	8247728
Dissolved Mercury (Hg)	mg/L	<0.00001	0.00001	8247168
Dissolved Potassium (K)	mg/L	<1	1	8251111
Dissolved Sodium (Na)	mg/L	<0.5	0.5	8251111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

TEST SUMMARY

Bureau Veritas ID: TUX956
Sample ID: Port 4-A
Matrix: Ground Water

Collected: 2022/09/19
Shipped:
Received: 2022/09/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8247905	N/A	2022/09/27	Kien Tran
Carbonate, Bicarbonate and Hydroxide	CALC	8244079	N/A	2022/09/28	Automated Statchk
Anions	IC	8245439	N/A	2022/09/27	Lusine Khachatryan
Chloride by Automated Colourimetry	KONE	8245559	N/A	2022/09/26	Alina Dobreanu
Conductivity	AT	8247913	N/A	2022/09/27	Kien Tran
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8246984	N/A	2022/09/26	Nimarta Singh
Fluoride	ISE	8247892	2022/09/26	2022/09/27	Kien Tran
Dissolved Mercury (low level)	CV/AA	8247168	2022/09/26	2022/09/26	Japneet Gill
Mercury (low level)	CV/AA	8247728	2022/09/26	2022/09/26	Japneet Gill
Lab Filtered Metals Analysis by ICP	ICP	8251111	2022/09/27	2022/09/28	Thuy Linh Nguyen
Low Level Chloride and Sulphate by AC	KONE	8259676	N/A	2022/09/28	Carlo Truong
Cyanide (Free)	SPEC	8299592	N/A	2022/10/21	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8259677	N/A	2022/09/28	Zoe Wu
Cyanide WAD (weak acid dissociable)	TECH	8296343	N/A	2022/10/20	Zoe Wu
Hardness Total (calculated as CaCO3)	CALC	8261390	N/A	2022/10/03	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8261393	N/A	2022/09/28	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8261394	N/A	2022/09/27	Michelle Young
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8261391	2022/10/03	2022/10/03	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8261392	2022/09/28	2022/09/29	Michelle Young
Silica (Reactive)	KONE	8258950	N/A	2022/09/30	Shanna McKort
Total Phosphorus Low Level Total	KONE	8262051	2022/10/02	2022/10/03	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8243704	N/A	2022/09/27	Automated Statchk
Total Ammonia-N	LACH/NH4	8247760	N/A	2022/09/27	Anna-Kay Gooden
Nitrate & Nitrite as Nitrogen in Water	LACH	8245481	N/A	2022/09/26	Chandra Nandlal
pH	AT	8247907	2022/09/26	2022/09/27	Kien Tran
Field Measured pH	PH	ONSITE	N/A	2022/10/28	Katherine Szozda
Orthophosphate	KONE	8245557	N/A	2022/09/26	Samuel Law
Radium-226 Low Level	AS	8271483	N/A	2022/10/18	Ryan Wong
Sodium Adsorption Ratio (SAR)	CALC/MET	8244081	N/A	2022/09/28	Automated Statchk
Total Dissolved Solids	BAL	8247475	2022/09/26	2022/09/27	Masood Siddiqui
Field Measured pH	PH	ONSITE	N/A	2022/10/28	Katherine Szozda
Total Kjeldahl Nitrogen in Water	SKAL	8248566	2022/09/26	2022/09/27	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8247251	N/A	2022/09/28	Nimarta Singh
Low Level Total Suspended Solids	BAL	8247427	2022/09/26	2022/09/27	Masood Siddiqui
Turbidity	AT	8245538	N/A	2022/09/26	Roya Fathitil
Un-ionized Ammonia (as N)	CALC	8292337	2022/10/28	2022/10/28	Automated Statchk

Bureau Veritas ID: TUX956 Dup
Sample ID: Port 4-A
Matrix: Ground Water

Collected: 2022/09/19
Shipped:
Received: 2022/09/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (low level)	CV/AA	8247728	2022/09/26	2022/09/26	Japneet Gill

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Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

TEST SUMMARY

Bureau Veritas ID: TUX957
Sample ID: Port 4-B
Matrix: Ground Water

Collected: 2022/09/19
Shipped:
Received: 2022/09/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8247905	N/A	2022/09/27	Kien Tran
Carbonate, Bicarbonate and Hydroxide	CALC	8244079	N/A	2022/09/28	Automated Statchk
Anions	IC	8245439	N/A	2022/09/27	Lusine Khachatryan
Chloride by Automated Colourimetry	KONE	8245559	N/A	2022/09/26	Alina Dobreanu
Conductivity	AT	8247913	N/A	2022/09/27	Kien Tran
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8248058	N/A	2022/09/27	Nimarta Singh
Fluoride	ISE	8247892	2022/09/26	2022/09/27	Kien Tran
Dissolved Mercury (low level)	CV/AA	8247168	2022/09/26	2022/09/26	Japneet Gill
Mercury (low level)	CV/AA	8247728	2022/09/26	2022/09/26	Japneet Gill
Lab Filtered Metals Analysis by ICP	ICP	8251111	2022/09/27	2022/09/28	Thuy Linh Nguyen
Low Level Chloride and Sulphate by AC	KONE	8259676	N/A	2022/09/28	Carlo Truong
Cyanide (Free)	SPEC	8299592	N/A	2022/10/21	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8259677	N/A	2022/09/28	Zoe Wu
Cyanide WAD (weak acid dissociable)	TECH	8296343	N/A	2022/10/20	Zoe Wu
Hardness Total (calculated as CaCO3)	CALC	8261390	N/A	2022/10/03	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8261393	N/A	2022/09/28	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8261394	N/A	2022/09/27	Michelle Young
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8261391	2022/10/03	2022/10/03	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8261392	2022/09/28	2022/09/29	Michelle Young
Silica (Reactive)	KONE	8258950	N/A	2022/09/30	Shanna McKort
Total Phosphorus Low Level Total	KONE	8262051	2022/10/02	2022/10/03	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8243704	N/A	2022/09/27	Automated Statchk
Total Ammonia-N	LACH/NH4	8247760	N/A	2022/09/27	Anna-Kay Gooden
Nitrate & Nitrite as Nitrogen in Water	LACH	8245415	N/A	2022/09/26	Chandra Nandlal
pH	AT	8247907	2022/09/26	2022/09/27	Kien Tran
Field Measured pH	PH	ONSITE	N/A	2022/10/28	Katherine Szozda
Orthophosphate	KONE	8245557	N/A	2022/09/26	Samuel Law
Radium-226 Low Level	AS	8271483	N/A	2022/10/18	Ryan Wong
Sodium Adsorption Ratio (SAR)	CALC/MET	8244081	N/A	2022/09/28	Automated Statchk
Total Dissolved Solids	BAL	8247475	2022/09/26	2022/09/27	Masood Siddiqui
Field Measured pH	PH	ONSITE	N/A	2022/10/28	Katherine Szozda
Total Kjeldahl Nitrogen in Water	SKAL	8248566	2022/09/26	2022/09/27	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8247251	N/A	2022/09/28	Nimarta Singh
Low Level Total Suspended Solids	BAL	8247427	2022/09/26	2022/09/27	Masood Siddiqui
Turbidity	AT	8245538	N/A	2022/09/26	Roya Fathitil
Un-ionized Ammonia (as N)	CALC	8292337	2022/10/28	2022/10/28	Automated Statchk

Bureau Veritas ID: TUX957 Dup
Sample ID: Port 4-B
Matrix: Ground Water

Collected: 2022/09/19
Shipped:
Received: 2022/09/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8247905	N/A	2022/09/27	Kien Tran
Conductivity	AT	8247913	N/A	2022/09/27	Kien Tran
Fluoride	ISE	8247892	2022/09/26	2022/09/27	Kien Tran

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
Sampler Initials: RW

TEST SUMMARY

Bureau Veritas ID: TUX957 Dup
Sample ID: Port 4-B
Matrix: Ground Water

Collected: 2022/09/19
Shipped:
Received: 2022/09/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	8247907	2022/09/26	2022/09/27	Kien Tran

Bureau Veritas ID: TUX958
Sample ID: TBLK
Matrix: Ground Water

Collected: 2022/09/19
Shipped:
Received: 2022/09/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	8247905	N/A	2022/09/27	Kien Tran
Carbonate, Bicarbonate and Hydroxide	CALC	8244079	N/A	2022/09/28	Automated Statchk
Anions	IC	8245439	N/A	2022/09/27	Lusine Khachatryan
Chloride by Automated Colourimetry	KONE	8245559	N/A	2022/09/26	Alina Dobreanu
Conductivity	AT	8247913	N/A	2022/09/27	Kien Tran
Dissolved Organic Carbon (DOC)	TOCV/NDIR	8248058	N/A	2022/09/27	Nimarta Singh
Fluoride	ISE	8247892	2022/09/26	2022/09/27	Kien Tran
Dissolved Mercury (low level)	CV/AA	8247168	2022/09/26	2022/09/26	Japneet Gill
Mercury (low level)	CV/AA	8247728	2022/09/26	2022/09/26	Japneet Gill
Lab Filtered Metals Analysis by ICP	ICP	8251111	2022/09/27	2022/09/28	Thuy Linh Nguyen
Low Level Chloride and Sulphate by AC	KONE	8259676	N/A	2022/09/28	Carlo Truong
Cyanide (Free)	SPEC	8303151	N/A	2022/10/24	Amy Phan
Cyanide, Strong Acid Dissociable (SAD)	TECH/UVVS	8259677	N/A	2022/09/28	Zoe Wu
Cyanide WAD (weak acid dissociable)	TECH	8296343	N/A	2022/10/20	Zoe Wu
Hardness Total (calculated as CaCO3)	CALC	8261390	N/A	2022/09/29	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP	8261393	N/A	2022/09/28	Automated Statchk
Elements by CRC ICPMS (dissolved)	ICP/MS	8255096	N/A	2022/09/27	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP	8261391	2022/09/29	2022/09/29	Automated Statchk
Elements by CRC ICPMS (total)	ICP/MS	8261395	2022/09/28	2022/09/29	Michelle Young
Silica (Reactive)	KONE	8258950	N/A	2022/09/30	Shanna McKort
Total Phosphorus Low Level Total	KONE	8262051	2022/10/02	2022/10/03	Mary Anne Dela Cruz
Total Ammonia (as NH3)	CALC	8243704	N/A	2022/09/27	Automated Statchk
Total Ammonia-N	LACH/NH4	8247760	N/A	2022/09/27	Anna-Kay Gooden
Nitrate & Nitrite as Nitrogen in Water	LACH	8245408	N/A	2022/09/28	Chandra Nandlal
pH	AT	8247907	2022/09/26	2022/09/27	Kien Tran
Orthophosphate	KONE	8245557	N/A	2022/09/26	Samuel Law
Radium-226 Low Level	AS	8271483	N/A	2022/10/18	Ryan Wong
Sodium Adsorption Ratio (SAR)	CALC/MET	8244081	N/A	2022/09/28	Automated Statchk
Total Dissolved Solids	BAL	8248112	2022/09/26	2022/09/27	Masood Siddiqui
Total Kjeldahl Nitrogen in Water	SKAL	8248566	2022/09/26	2022/09/27	Rajni Tyagi
Total Organic Carbon (TOC)	TOCV/NDIR	8247251	N/A	2022/09/28	Nimarta Singh
Low Level Total Suspended Solids	BAL	8249164	2022/09/27	2022/09/28	Masood Siddiqui
Turbidity	AT	8245538	N/A	2022/09/26	Roya Fathitil

GENERAL COMMENTS

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

Package 1	15.3°C

Revised Report (2022/10/28): Un-ionized ammonia, Free and WAD cyanide added per client request

Sample TUX956 [Port 4-A] : Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). 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 (Free).

Sample TUX957 [Port 4-B] : Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). 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 (Free).

Sample TUX958 [TBLK] : SAR Analysis: NC = Not Calculable as Calcium and Magnesium were not detected. Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable). 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 (Free).

Results relate only to the items tested.

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

QUALITY ASSURANCE REPORT

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
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
8245408	Nitrate (N)	2022/09/28	103	80 - 120	103	80 - 120	<0.10	mg/L	0.28	20		
8245408	Nitrite (N)	2022/09/28	105	80 - 120	94	80 - 120	<0.010	mg/L	NC	20		
8245415	Nitrate (N)	2022/09/26	93	80 - 120	93	80 - 120	<0.10	mg/L	NC	20		
8245415	Nitrite (N)	2022/09/26	104	80 - 120	102	80 - 120	<0.010	mg/L	NC	20		
8245439	Bromide (Br-)	2022/09/27	103	80 - 120	102	80 - 120	<1.0	mg/L	NC	20		
8245481	Nitrate (N)	2022/09/26	93	80 - 120	91	80 - 120	<0.10	mg/L	0.23	20		
8245481	Nitrite (N)	2022/09/26	102	80 - 120	101	80 - 120	<0.010	mg/L	5.1	20		
8245538	Turbidity	2022/09/26			113	85 - 115	<0.1	NTU	0.94	20		
8245557	Orthophosphate (P)	2022/09/26	109	75 - 125	100	80 - 120	<0.010	mg/L	NC	25		
8245559	Dissolved Chloride (Cl-)	2022/09/26	NC	80 - 120	104	80 - 120	<1.0	mg/L	0.50	20		
8246984	Dissolved Organic Carbon	2022/09/26	96	80 - 120	96	80 - 120	<0.40	mg/L	0.52	20		
8247168	Dissolved Mercury (Hg)	2022/09/26	104	75 - 125	103	80 - 120	<0.00001	mg/L	NC	20		
8247251	Total Organic Carbon (TOC)	2022/09/28	95	80 - 120	96	80 - 120	<0.40	mg/L	1.3	20		
8247427	Total Suspended Solids	2022/09/27					<1	mg/L	7.4	25	95	85 - 115
8247475	Total Dissolved Solids	2022/09/27					<10	mg/L	0.99	25	100	90 - 110
8247728	Mercury (Hg)	2022/09/26	99	75 - 125	103	80 - 120	<0.00001	mg/L	NC	20		
8247760	Total Ammonia-N	2022/09/27	98	75 - 125	101	80 - 120	<0.050	mg/L	NC	20		
8247892	Fluoride (F-)	2022/09/27	83	80 - 120	102	80 - 120	<0.10	mg/L	0.95	20		
8247905	Alkalinity (Total as CaCO3)	2022/09/27			93	85 - 115	<1.0	mg/L	0.45	20		
8247907	pH	2022/09/27			102	98 - 103			0.68	N/A		
8247913	Conductivity	2022/09/27			102	85 - 115	<0.001	mS/cm	0.24	25		
8248058	Dissolved Organic Carbon	2022/09/27	94	80 - 120	95	80 - 120	<0.40	mg/L	3.4	20		
8248112	Total Dissolved Solids	2022/09/27					<10	mg/L	4.3	25	98	90 - 110
8248566	Total Kjeldahl Nitrogen (TKN)	2022/09/27	NC	80 - 120	93	80 - 120	<0.10	mg/L	NC	20	96	80 - 120
8249164	Total Suspended Solids	2022/09/28					<1	mg/L	0	25	99	85 - 115
8251111	Dissolved Calcium (Ca)	2022/09/28	NC	80 - 120	99	80 - 120	<0.05	mg/L	2.0	25		
8251111	Dissolved Magnesium (Mg)	2022/09/28	NC	80 - 120	100	80 - 120	<0.05	mg/L	2.4	25		
8251111	Dissolved Potassium (K)	2022/09/28	NC	80 - 120	101	80 - 120	<1	mg/L	3.6	25		
8251111	Dissolved Sodium (Na)	2022/09/28	NC	80 - 120	105	80 - 120	<0.5	mg/L	1.2	25		
8255096	Dissolved Aluminum (Al)	2022/09/27	99	80 - 120	105	80 - 120	<0.0030	mg/L				
8255096	Dissolved Antimony (Sb)	2022/09/27	97	80 - 120	102	80 - 120	<0.00050	mg/L				

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

QUALITY ASSURANCE REPORT(CONT'D)

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
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
8255096	Dissolved Arsenic (As)	2022/09/27	99	80 - 120	106	80 - 120	<0.00010	mg/L				
8255096	Dissolved Barium (Ba)	2022/09/27	92	80 - 120	98	80 - 120	<0.0010	mg/L				
8255096	Dissolved Beryllium (Be)	2022/09/27	100	80 - 120	105	80 - 120	<0.00010	mg/L				
8255096	Dissolved Bismuth (Bi)	2022/09/27	91	80 - 120	97	80 - 120	<0.0010	mg/L				
8255096	Dissolved Boron (B)	2022/09/27	101	80 - 120	103	80 - 120	<0.050	mg/L				
8255096	Dissolved Cadmium (Cd)	2022/09/27	97	80 - 120	102	80 - 120	<0.000010	mg/L				
8255096	Dissolved Chromium (Cr)	2022/09/27	90	80 - 120	100	80 - 120	<0.0010	mg/L				
8255096	Dissolved Cobalt (Co)	2022/09/27	96	80 - 120	102	80 - 120	<0.00020	mg/L				
8255096	Dissolved Copper (Cu)	2022/09/27	90	80 - 120	95	80 - 120	<0.00020	mg/L				
8255096	Dissolved Iron (Fe)	2022/09/27	99	80 - 120	101	80 - 120	<0.0050	mg/L				
8255096	Dissolved Lead (Pb)	2022/09/27	97	80 - 120	101	80 - 120	<0.00020	mg/L				
8255096	Dissolved Lithium (Li)	2022/09/27	97	80 - 120	102	80 - 120	<0.0020	mg/L				
8255096	Dissolved Manganese (Mn)	2022/09/27	90	80 - 120	96	80 - 120	<0.0010	mg/L				
8255096	Dissolved Molybdenum (Mo)	2022/09/27	100	80 - 120	104	80 - 120	<0.0010	mg/L				
8255096	Dissolved Nickel (Ni)	2022/09/27	93	80 - 120	99	80 - 120	<0.0010	mg/L				
8255096	Dissolved Selenium (Se)	2022/09/27	100	80 - 120	104	80 - 120	<0.00010	mg/L				
8255096	Dissolved Silicon (Si)	2022/09/27	103	80 - 120	102	80 - 120	<0.10	mg/L				
8255096	Dissolved Silver (Ag)	2022/09/27	94	80 - 120	98	80 - 120	<0.000020	mg/L				
8255096	Dissolved Strontium (Sr)	2022/09/27	NC	80 - 120	106	80 - 120	<0.0010	mg/L				
8255096	Dissolved Tellurium (Te)	2022/09/27	99	80 - 120	105	80 - 120	<0.0010	mg/L				
8255096	Dissolved Thallium (Tl)	2022/09/27	93	80 - 120	98	80 - 120	<0.000010	mg/L				
8255096	Dissolved Tin (Sn)	2022/09/27	96	80 - 120	102	80 - 120	<0.0050	mg/L				
8255096	Dissolved Titanium (Ti)	2022/09/27	96	80 - 120	101	80 - 120	<0.0050	mg/L				
8255096	Dissolved Uranium (U)	2022/09/27	98	80 - 120	102	80 - 120	<0.00010	mg/L				
8255096	Dissolved Vanadium (V)	2022/09/27	93	80 - 120	97	80 - 120	<0.0050	mg/L				
8255096	Dissolved Zinc (Zn)	2022/09/27	99	80 - 120	107	80 - 120	<0.0050	mg/L				
8258950	Reactive Silica (SiO2)	2022/09/30	104	80 - 120	107	80 - 120	<0.050	mg/L				
8259676	Dissolved Sulphate (SO4)	2022/09/28	101	80 - 120	108	80 - 120	<0.50	mg/L	19	20		
8259677	Strong Acid Dissoc. Cyanide (CN)	2022/09/28	91	80 - 120	101	80 - 120	<0.00050	mg/L				
8261392	Total Aluminum (Al)	2022/09/29	103	80 - 120	99	80 - 120	<0.0030	mg/L				
8261392	Total Antimony (Sb)	2022/09/29	104	80 - 120	101	80 - 120	<0.00050	mg/L				

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
8261392	Total Arsenic (As)	2022/09/29	108	80 - 120	102	80 - 120	<0.00010	mg/L				
8261392	Total Barium (Ba)	2022/09/29	102	80 - 120	99	80 - 120	<0.0010	mg/L				
8261392	Total Beryllium (Be)	2022/09/29	97	80 - 120	95	80 - 120	<0.00010	mg/L				
8261392	Total Bismuth (Bi)	2022/09/29	97	80 - 120	98	80 - 120	<0.0010	mg/L				
8261392	Total Boron (B)	2022/09/29	99	80 - 120	98	80 - 120	<0.050	mg/L				
8261392	Total Cadmium (Cd)	2022/09/29	102	80 - 120	100	80 - 120	<0.000010	mg/L				
8261392	Total Chromium (Cr)	2022/09/29	97	80 - 120	97	80 - 120	<0.0010	mg/L				
8261392	Total Cobalt (Co)	2022/09/29	96	80 - 120	97	80 - 120	<0.00020	mg/L				
8261392	Total Copper (Cu)	2022/09/29	91	80 - 120	94	80 - 120	<0.00050	mg/L				
8261392	Total Iron (Fe)	2022/09/29	NC	80 - 120	107	80 - 120	<0.010	mg/L				
8261392	Total Lead (Pb)	2022/09/29	101	80 - 120	102	80 - 120	<0.00020	mg/L				
8261392	Total Lithium (Li)	2022/09/29	95	80 - 120	93	80 - 120	<0.0020	mg/L				
8261392	Total Manganese (Mn)	2022/09/29	NC	80 - 120	98	80 - 120	<0.0010	mg/L				
8261392	Total Molybdenum (Mo)	2022/09/29	111	80 - 120	106	80 - 120	<0.0010	mg/L				
8261392	Total Nickel (Ni)	2022/09/29	96	80 - 120	98	80 - 120	<0.0010	mg/L				
8261392	Total Selenium (Se)	2022/09/29	105	80 - 120	102	80 - 120	<0.00010	mg/L				
8261392	Total Silicon (Si)	2022/09/29	NC	80 - 120	109	80 - 120	<0.10	mg/L				
8261392	Total Silver (Ag)	2022/09/29	99	80 - 120	98	80 - 120	<0.000020	mg/L				
8261392	Total Strontium (Sr)	2022/09/29	NC	80 - 120	102	80 - 120	<0.0010	mg/L				
8261392	Total Tellurium (Te)	2022/09/29	110	80 - 120	104	80 - 120	<0.0010	mg/L				
8261392	Total Thallium (Tl)	2022/09/29	100	80 - 120	98	80 - 120	<0.000010	mg/L				
8261392	Total Tin (Sn)	2022/09/29	102	80 - 120	100	80 - 120	<0.0050	mg/L				
8261392	Total Titanium (Ti)	2022/09/29	101	80 - 120	98	80 - 120	<0.0050	mg/L				
8261392	Total Uranium (U)	2022/09/29	100	80 - 120	99	80 - 120	<0.00010	mg/L				
8261392	Total Vanadium (V)	2022/09/29	101	80 - 120	99	80 - 120	<0.0050	mg/L				
8261392	Total Zinc (Zn)	2022/09/29	97	80 - 120	97	80 - 120	<0.0050	mg/L				
8261394	Dissolved Aluminum (Al)	2022/09/28	101	80 - 120	101	80 - 120	<0.0030	mg/L				
8261394	Dissolved Antimony (Sb)	2022/09/28	101	80 - 120	100	80 - 120	<0.00050	mg/L				
8261394	Dissolved Arsenic (As)	2022/09/28	105	80 - 120	104	80 - 120	<0.00010	mg/L				
8261394	Dissolved Barium (Ba)	2022/09/28	100	80 - 120	100	80 - 120	<0.0010	mg/L				
8261394	Dissolved Beryllium (Be)	2022/09/28	99	80 - 120	100	80 - 120	<0.00010	mg/L				

			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
8261394	Dissolved Bismuth (Bi)	2022/09/28	100	80 - 120	102	80 - 120	<0.0010	mg/L				
8261394	Dissolved Boron (B)	2022/09/28	114	80 - 120	114	80 - 120	<0.050	mg/L				
8261394	Dissolved Cadmium (Cd)	2022/09/28	101	80 - 120	100	80 - 120	<0.000010	mg/L				
8261394	Dissolved Chromium (Cr)	2022/09/28	100	80 - 120	99	80 - 120	<0.0010	mg/L				
8261394	Dissolved Cobalt (Co)	2022/09/28	100	80 - 120	99	80 - 120	<0.00020	mg/L				
8261394	Dissolved Copper (Cu)	2022/09/28	100	80 - 120	99	80 - 120	<0.00020	mg/L				
8261394	Dissolved Iron (Fe)	2022/09/28	103	80 - 120	104	80 - 120	<0.0050	mg/L				
8261394	Dissolved Lead (Pb)	2022/09/28	102	80 - 120	105	80 - 120	<0.00020	mg/L				
8261394	Dissolved Lithium (Li)	2022/09/28	94	80 - 120	97	80 - 120	<0.0020	mg/L				
8261394	Dissolved Manganese (Mn)	2022/09/28	100	80 - 120	99	80 - 120	<0.0010	mg/L				
8261394	Dissolved Molybdenum (Mo)	2022/09/28	103	80 - 120	106	80 - 120	<0.0010	mg/L				
8261394	Dissolved Nickel (Ni)	2022/09/28	98	80 - 120	98	80 - 120	<0.0010	mg/L				
8261394	Dissolved Selenium (Se)	2022/09/28	104	80 - 120	103	80 - 120	<0.00010	mg/L				
8261394	Dissolved Silicon (Si)	2022/09/28	105	80 - 120	107	80 - 120	<0.10	mg/L				
8261394	Dissolved Silver (Ag)	2022/09/28	100	80 - 120	101	80 - 120	<0.000020	mg/L				
8261394	Dissolved Strontium (Sr)	2022/09/28	101	80 - 120	103	80 - 120	<0.0010	mg/L				
8261394	Dissolved Tellurium (Te)	2022/09/28	111	80 - 120	100	80 - 120	<0.0010	mg/L				
8261394	Dissolved Thallium (Tl)	2022/09/28	102	80 - 120	103	80 - 120	<0.000010	mg/L				
8261394	Dissolved Tin (Sn)	2022/09/28	101	80 - 120	102	80 - 120	<0.0050	mg/L				
8261394	Dissolved Titanium (Ti)	2022/09/28	104	80 - 120	101	80 - 120	<0.0050	mg/L				
8261394	Dissolved Uranium (U)	2022/09/28	97	80 - 120	99	80 - 120	<0.00010	mg/L				
8261394	Dissolved Vanadium (V)	2022/09/28	100	80 - 120	100	80 - 120	<0.0050	mg/L				
8261394	Dissolved Zinc (Zn)	2022/09/28	105	80 - 120	101	80 - 120	<0.0050	mg/L				
8261395	Total Aluminum (Al)	2022/09/29	101	80 - 120	103	80 - 120	<0.0030	mg/L				
8261395	Total Antimony (Sb)	2022/09/29	104	80 - 120	103	80 - 120	<0.00050	mg/L				
8261395	Total Arsenic (As)	2022/09/29	104	80 - 120	104	80 - 120	<0.00010	mg/L				
8261395	Total Barium (Ba)	2022/09/29	102	80 - 120	103	80 - 120	<0.0010	mg/L				
8261395	Total Beryllium (Be)	2022/09/29	96	80 - 120	97	80 - 120	<0.00010	mg/L				
8261395	Total Bismuth (Bi)	2022/09/29	92	80 - 120	101	80 - 120	<0.0010	mg/L				
8261395	Total Boron (B)	2022/09/29	94	80 - 120	94	80 - 120	<0.050	mg/L				
8261395	Total Cadmium (Cd)	2022/09/29	101	80 - 120	102	80 - 120	<0.000010	mg/L				

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
8261395	Total Chromium (Cr)	2022/09/29	97	80 - 120	100	80 - 120	<0.0010	mg/L				
8261395	Total Cobalt (Co)	2022/09/29	97	80 - 120	101	80 - 120	<0.00020	mg/L				
8261395	Total Copper (Cu)	2022/09/29	94	80 - 120	98	80 - 120	<0.00050	mg/L				
8261395	Total Iron (Fe)	2022/09/29	106	80 - 120	109	80 - 120	<0.010	mg/L				
8261395	Total Lead (Pb)	2022/09/29	99	80 - 120	103	80 - 120	<0.00020	mg/L				
8261395	Total Lithium (Li)	2022/09/29	94	80 - 120	95	80 - 120	<0.0020	mg/L				
8261395	Total Manganese (Mn)	2022/09/29	99	80 - 120	102	80 - 120	<0.0010	mg/L				
8261395	Total Molybdenum (Mo)	2022/09/29	104	80 - 120	106	80 - 120	<0.0010	mg/L				
8261395	Total Nickel (Ni)	2022/09/29	98	80 - 120	103	80 - 120	<0.0010	mg/L				
8261395	Total Selenium (Se)	2022/09/29	102	80 - 120	105	80 - 120	<0.00010	mg/L				
8261395	Total Silicon (Si)	2022/09/29	108	80 - 120	110	80 - 120	<0.10	mg/L				
8261395	Total Silver (Ag)	2022/09/29	96	80 - 120	99	80 - 120	<0.000020	mg/L				
8261395	Total Strontium (Sr)	2022/09/29	102	80 - 120	103	80 - 120	<0.0010	mg/L				
8261395	Total Tellurium (Te)	2022/09/29	111	80 - 120	109	80 - 120	<0.0010	mg/L				
8261395	Total Thallium (Tl)	2022/09/29	99	80 - 120	102	80 - 120	<0.000010	mg/L				
8261395	Total Tin (Sn)	2022/09/29	102	80 - 120	102	80 - 120	<0.0050	mg/L				
8261395	Total Titanium (Ti)	2022/09/29	99	80 - 120	103	80 - 120	<0.0050	mg/L				
8261395	Total Uranium (U)	2022/09/29	97	80 - 120	102	80 - 120	<0.00010	mg/L				
8261395	Total Vanadium (V)	2022/09/29	100	80 - 120	104	80 - 120	<0.0050	mg/L				
8261395	Total Zinc (Zn)	2022/09/29	105	80 - 120	106	80 - 120	<0.0050	mg/L				
8262051	Total Phosphorus (P)	2022/10/03	101	80 - 120	99	80 - 120	<0.0010	mg/L			88	80 - 120
8271483	Radium-226	2022/10/17			98	85 - 115	<0.0050	Bq/L	NC	N/A		
8296343	Weak Acid Dissoc. Cyanide (CN)	2022/10/19	102	80 - 120	101	80 - 120	<0.00050	mg/L				
8299592	Free Cyanide (CN)	2022/10/21	88	80 - 120	91	80 - 120	<2.0	ug/L				

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
8303151	Free Cyanide (CN)	2022/10/24	96	80 - 120	90	80 - 120	<2.0	ug/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).

Bureau Veritas Job #: C2R5545
Report Date: 2022/10/28

Agnico Eagle
Client Project #: WESTBAY WELL
Your P.O. #: 1121445
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

David Huang, BBY Scientific Specialist

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Katherine Szozda

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Bureau Veritas Job #: C2R5545
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Client Project #: WESTBAY WELL
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VALIDATION SIGNATURE PAGE(CONT'D)

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

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist

Exceedance Summary Table – Metal Mining Effluent Reg

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

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									
Date		2-Aug-2016		13-Nov-2018		3-Apr-2019		18-Oct-2020		10-Nov-2021	
Drilling Fluid Proportion		0.04	0.24	0.16		0.14		0.08		0.19	
Formation Water Proportion		0.96	0.76	0.84		0.86		0.92		0.81	
Sampling interval depth (metres along borehole)		276.0 m - 287.4 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
Conventional parameters											
Alkalinity	mg CaCO$_3$/L	40	51	30	31	34	34	24	28	41	41
Alkalinity, bicarbonate (as CaCO3)	mg/L	40	51	31	32	35	35	27.3	28.4	42.5	42.6
Alkalinity, carbonate (as CaCO3)	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chemical oxygen demand [COD]	mg/L	-	-	-	-	-	-	3100	3200	-	-
Conductivity (lab)	uS/cm	4797	6042	8041	8496	8388	8720	9084	9390	6197	6644
Hardness (as CaCO3)	mg CaCO$_3$/L	2397	3030	2883	3127	3167	3369	3498	3391	2379	2651
pH	S.U.	7.41	7.27	6.50	6.57	6.29	6.29	6.16	6.53	6.60	6.62
Salinity	ppt	-	-	-	-	-	-	-	-	3.1	4.5
Total dissolved Solids (TDS)	mg/L	3198	4042	4681	5171	5712	5962	5066	4934	5349	6827
Total Suspended Solids (TSS)	mg/L	-	-	8.3	9.5	5.1	5.1	<3.0	<3.0	10	10
Turbidity	mg/L	-	-	-	-	-	-	2.6	2.7	3.4	3.4
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
Bromide (Br)	mg/L	25	32	34	37	40	42	40	41	24	26
Chloride (Cl)	mg/L	2089	2641	2453	2697	2959	3119	3027	3111	1856	2072
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	-	-	-	-	<14000	<14000
Fluoride (F)	mg/L	0.21	0.27	<1.0	<1.0	<1.0	<1.0	<1.00	<1.00	0.21	0.21
Kjeldahl nitrogen, total [TKN]	mg/L	-	-	-	-	-	-	0.892	0.900	<10	<10
Nitrates (NO3)	mg/L	0.063	0.079	<0.25	<0.25	<0.25	<0.25	<0.250	<0.250	<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
phosphate, ortho-, dissolved (as P)	mg/L	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
phosphorus, total	mg/L	0.021	0.026	<0.0043	<0.0043	<0.0020	<0.0020	<0.0020	<0.0020	0.01	0.01
Reactive Silica	mg/L	-	-	-	-	<50	<50	7.0	7.3	10.2	10.2
Sulphate (SO4)	mg/L	-	-	<15	<15	<15	<15	<15.0	<15.0	2.1	2.1
Total Organic Carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	<14000	<14000
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
Antimony (Sb)	mg/L	0.0002	0.0003	0.001	0.001	<0.0010	<0.0010	<0.00100	0.00045	<0.00042	0.00004
Arsenic (As)	mg/L	0.0050	0.0063	<0.0021	<0.0024	<0.0025	<0.0025	<0.00272	<0.00278	<0.00413	<0.00413
Barium (Ba)	mg/L	0.528	0.667	0.947	0.976	0.999	0.999	0.880	0.978	0.823	0.823
Beryllium (Be)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	<0.0005	<0.0005	<0.00100	<0.00100	<0.00010	<0.00010
Boron (B)	mg/L	0.3	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.2	0.2
Cadmium (Cd)	mg/L	-	0.00003	<0.000050	<0.000050	0.00002	0.00002	<0.0000500	<0.0000500	<0.000050	<0.000050
Calcium (Ca)	mg/L	960	1213	1071	1164	1194	1275	1293	1368	885	993
Chromium (Cr)	mg/L	0.007	0.009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00100	<0.00100	<0.0010	<0.0010
Cobalt (Co)	mg/L	0.002	0.002	<0.000050	<0.000050	<0.000050	<0.000050	<0.00100	<0.00100	<0.000349	<0.000349
Copper (Cu)	mg/L	0.005	0.007	<0.00050	<0.00050	<0.00020	<0.00020	<0.00200	<0.00200	<0.00050	<0.00050
Iron (Fe)	mg/L	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.8	0.8
Lead (Pb)	mg/L	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.000500	<0.000500	0.000171	0.000171
Lithium (Li)	mg/L	0.3	0.4	0.1	0.2	0.1	0.2	0.2	0.3	0.1	<0.4
Magnesium (Mg)	mg/L	22	27	51	51	44	44	41	42	37	37
Manganese (Mn)	mg/L	0.04	0.05	0.11	0.12	0.11	0.11	0.10	0.10	0.12	0.12
Dissolved Mercury (Hg)	mg/L	0.0005	0.0006	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<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
Nickel (Ni)	mg/L	0.05	0.06	<0.00050	<0.00050	<0.00050	<0.00050	<0.00500	<0.00500	<0.00128	<0.00128
Phosphorus (P)	mg/L	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.500	<0.500	<0.02	<0.02
Potassium (K)	mg/L	8	10	<20	<20	11	11	1	3	<13.5	<13.5
Selenium (Se)	mg/L	0.1	0.1	<0.0020	<0.0020	<0.00050	<0.00050	<0.0025	<0.000658	<0.00177	<0.00177
Silicon (Si)	mg/L	4.0	5.1	3.2	3.3	3.2	3.2	3.4	3.5	3.1	3.1
Silver (Ag)	mg/L	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.000100	<0.000100	<0.000050	<0.000050
Sodium (Na)	mg/L	232	293	287	293	308	310	304	306	262	264
Strontium (Sr)	mg/L	13.2	16.7	14.3	16.0	16.0	17.2	20.1	21.8	14.1	15.8
Tellurium (Te)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	0.001	0.001	<0.00200	0.001	<0.00020	<0.00020
Thallium (Tl)	mg/L	<0.0008	<0.0008	<0.000050	<0.000050	<0.000050	<0.000050	<0.000100	<0.000100	<0.000020	<0.000020
Tin (Sn)	mg/L	0.0010	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00100	<0.0020	<0.0020
Titanium (Ti)	mg/L	0.3	0.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.00150	<0.00300	<0.0050	<0.0050
Uranium (U)	mg/L	<0.001	<0.001	0.02	0.03	0.03	0.03	<0.000050	<0.000100	<0.000020	<0.000020
Vanadium (V)	mg/L	0.002	0.002	<0.000050	<0.000050	<0.000050	<0.000050	<0.00250	<0.00500	<0.0020	<0.0020
Zinc (Zn)	mg/L	1.3	1.7	<0.00050	<0.00050	<0.00050	<0.00050	0.026	0.026	2.2	2.2
Radioactive Ions											
Radium (Ra226)	Bq/L	0.43	0.52	-	-	0.99	0.99	0.72	1.20	0.28	0.28
Hydrocarbons											
Hydrocarbons (C10-C50)	mg/L	0.2	0.2	-	-	<0.52	<0.52	-	-	-	-
Cyanide											
Cyanide	mg/l	-	-	-	-	-	-	-	-	<0.0050	<0.0050
Cyanide (free)	mg/l	-	-	-	-	-	-	-	-	<0.0022	<0.0022
Cyanide (WAD)	mg/l	-	-	-	-	-	-	-	-	<0.001	<0.001

Sample		Port 4									
Date		20-Jul-2016		11-Nov-2018		19-Oct-2020		5/6-Nov-21		19-Sep-2022	
Drilling Fluid Proportion		0.09	0.18	0.13		0.06		0.04		0.04	
Formation Water Proportion		0.91	0.82	0.87		0.94		0.96		0.96	
Sampling interval depth (metres along borehole) / Sampling interval vertical depth (metres)		349.3 m - 359.1 m									
Estimated concentration range (calculated)		minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum
Conventional parameters											
Alkalinity	mg CaCO$_3$/L	18	20	9	11	24	25	23	27	12	13
Alkalinity, bicarbonate (as CaCO3)	mg/L	18	20	11	12	24.9	25.5	24	24	12	13
Alkalinity, carbonate (as CaCO3)	mg/L			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chemical oxygen demand [COD]	mg/L	-	-	-	-	580	633	-	-	-	-
Conductivity (lab)	uS/cm	5366	5938	13084	15511	6394	7695	3326	4071	3547	4291
Hardness (as CaCO3)	mg CaCO$_3$/L	2627	2910	4169	5582	2148	2789	800	1277	748	1181
pH	S.U.	7.87	7.82	6.88	6.91	6.32	6.50	6.51	6.81	6.43	6.52
Salinity	ppt	-	-	-	-	-	-	1.5	2.3	-	-
Total dissolved Solids (TDS)	mg/L	3581	3966	7970	9945	3779	4904	1593	2069	1866	2431
Total Suspended Solids (TSS)	mg/L	-	-	20.3	24.3	<3.0	<3.0	2.1	2.1	2.0	3.0
Turbidity	mg/L	-	-	-	-	2.0	2.1	1	1	1	1
Anions and Nutrients											
Ammonia, total (as N)	mg/L	-	-	<0.157	<0.158	0.129	0.129	0.076	0.078	<0.050	<0.050
Bromide (Br)	mg/L	32	35	51	77	22	29	6	10	9	15
Chloride (Cl)	mg/L	2582	2860	3818	5722	1879	2405	844	1278	933	1276
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	-	-	334	344	272	282
Fluoride (F)	mg/L	0.5	0.5	<1.0	<1.0	<1.00	<1.00	0.5	0.5	0.4	0.5
Kjeldahl nitrogen, total [TKN]	mg/L	-	-	-	-	0.325	0.349	0.324	0.449	0.250	0.290
Nitrates (NO3)	mg/L	0.06	0.06	<0.25	<0.25	<0.250	<0.250	<0.10	<0.10	<0.10	<0.10
Nitrites (NO2)	mg/L	0.011	0.012	<0.050	<0.050	<0.0500	<0.0500	<0.010	<0.010	<0.010	<0.010
phosphate, ortho-, dissolved (as P)	mg/L	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010
phosphorus, total	mg/L	0.011	0.012	0.01	0.01	0.008	0.010	0.004	0.008	<0.0010	<0.0010
Reactive Silica	mg/L	<0.1	<0.1	-	-	6.1	6.2	8.3	8.6	6.6	9.9
Sulphate (SO4)	mg/L	-	-	<15	<15	<15.0	<15.0	0.85	<1.0	0.59	1.36
Total Organic Carbon (TOC)	mg/L	-	-	-	-	-	-	324	334	293	293
Metals (dissolved)											
Aluminium (Al)	mg/L	-	-	0.0005	0.008	0.005	0.008	0.004	0.007	0.004	0.007
Antimony (Sb)	mg/L	0.003	0.004	0.001	0.002	0.001	0.002	0.001	0.001	<0.0010	<0.0010
Arsenic (As)	mg/L	0.0031	0.0035	<0.0020	<0.0020	0.002	<0.00311	0.0026	<0.0032	0.0000	0.0016
Barium (Ba)	mg/L	0.134	0.148	0.533	0.561	0.187	0.191	0.094	0.096	0.109	0.111
Beryllium (Be)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	<0.000100	<0.000100	<0.000050	<0.000050	<0.00020	<0.00020
Boron (B)	mg/L	0.6	0.6	0.8	1.0	0.5	0.6	0.5	0.5	0.4	0.5
Cadmium (Cd)	mg/L	<0.00002	<0.00002	<0.000050	<0.000050	<0.0000250	<0.0000250	<0.000025	<0.000025	<0.000020	<0.000020
Calcium (Ca)	mg/L	1032	1143	1563	2125	846	1101	304	501	290	475
Chromium (Cr)	mg/L	0.005	0.006	<0.00050	<0.00050	<0.00250	<0.00250	<0.00050	<0.00050	<0.0020	<0.0020
Cobalt (Co)	mg/L	0.002	0.002	<0.000050	<0.000050	<0.00050	<0.00050	<0.000097	<0.000102	<0.00040	<0.00040
Copper (Cu)	mg/L	0.0020	0.0023	<0.00050	<0.00050	<0.00100	<0.00100	<0.00025	<0.00025	<0.00040	<0.00040
Iron (Fe)	mg/L	0.1	0.2	0.1	0.1	<0.050	<0.050	0.014	0.026	0.001	0.015
Lead (Pb)	mg/L	0.0027	0.003	<0.00030	<0.00030	<0.000250	<0.000250	<0.000025	<0.000025	<0.00040	<0.00040
Lithium (Li)	mg/L	0.6	0.7	1.1	1.6	0.4	0.7	<0.124	<0.133	0.1	<0.113
Magnesium (Mg)	mg/L	12	14	62	66	8	9	5	5	6	6
Manganese (Mn)	mg/L	0.02	0.02	0.09	0.10	0.03	0.03	<0.0147	<0.015	0.02	0.02
Dissolved Mercury (Hg)	mg/L	0.0031	0.0034	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo)	mg/L	0.01	0.01	0.01	0.01	0.00	0.01	<0.00086	<0.00089	<0.0020	<0.0020
Nickel (Ni)	mg/L	0.05	0.05	<0.00050	<0.00050	<0.00250	<0.00250	<0.00135	<0.00136	<0.0020	<0.0020
Phosphorus (P)	mg/L	0.0027	0.0030	<0.00030	<0.00030	<0.250	<0.250	<0.01	<0.01	-	-
Potassium (K)	mg/L	38	42	67	67	22	35	3	10	1	8
Selenium (Se)	mg/L	0.12	0.13	<0.0020	<0.0020	<0.000250	0	<0.00020	<0.00020	<0.00027	<0.00032
Silicon (Si)	mg/L	4.2	4.6	2.5	2.6	3.0	3.1	3.5	3.7	2.8	2.9
Silver (Ag)	mg/L	<0.0001	<0.0001	<0.00010	<0.00010	<0.000050	<0.000050	<0.000025	<0.000025	<0.000040	<0.000040
Sodium (Na)	mg/L	267	296	341	365	279	290	263	277	266	272
Strontium (Sr)	mg/L	18.9	20.9	27.7	36.5	13.0	18.8	4.7	7.6	4.6	7.3
Tellurium (Te)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	0.002	0.002	<0.00010	<0.00010	<0.0020	<0.0020
Thallium (Tl)	mg/L	<0.0008	<0.0008	<0.000050	<0.000050	<0.000050	<0.000050	<0.000010	<0.000010	<0.000020	<0.000020
Tin (Sn)	mg/L	0.0011	0.0012	<0.0010	<0.0010	<0.00050	<0.00050	<0.0010	<0.0010	<0.010	<0.010
Titanium (Ti)	mg/L	0.3	0.4	<0.0050	<0.0050	<0.00150	<0.00150	<0.0025	<0.0025	<0.010	<0.010
Uranium (U)	mg/L	<0.001	<0.001	0.05	0.05	0.000	0.000	<0.000010	<0.000010	<0.00020	<0.00020
Vanadium (V)	mg/L	<0.0005	<0.0005	<0.000050	<0.000050	<0.00250	<0.00250	<0.0010	<0.0010	<0.010	<0.010
Zinc (Zn)	mg/L	0.63	0.70	<0.00050	<0.00050	0.010	0.014	0.018	0.018	<0.010	0.026
Radioactive Ions											
Radium (Ra226)	Bq/L	0.13	0.13	-	-	0.31	0.38	0.19	0.21	0.19	0.22
Hydrocarbons											
Hydrocarbons (C10-C50)	mg/L	<0.1	<0.1	-	-	-	-	-	-	-	-
Cyanide											
Cyanide	mg/l	-	-	-	-	-	-	<0.00050	<0.00050	0.00111	0.00191
Cyanide (free)	mg/l	-	-	-	-	-	-	<0.0013	<0.0013	<0.0020	<0.0020
Cyanide (WAD)	mg/l	-	-	-	-	-	-	<0.001	<0.001	<0.00050	<0.00050

Sample		Port 3											
Date		14-Sep-2016		12-Nov-2018		29-Mar-2019		13-Oct-2020		8/9-Nov-2021		13-Sep-2022	
Drilling Fluid Proportion		0.08	0.18	0.20		0.11		0.09		0.07	0.06	0.03	
Formation Water Proportion		0.92	0.82	0.80		0.89		0.91		0.93	0.94	0.97	
Sampling interval depth (metres along borehole) / Sampling interval vertical depth (metres)		381.3 m - 392.7 m											
Estimated concentration range (calculated)		mininum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum	maximum
Conventional parameters													
Alkalinity	mg CaCO$_3$/L	52	58	51	52	54	54	56	58	52	55	40	40
Alkalinity, bicarbonate (as CaCO3)	mg/L	52	58	60	61	58	59	59	61	55	57	41	41
Alkalinity, carbonate (as CaCO3)	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0
Chemical oxygen demand [COD]	mg/L	-	-	-	-	-	-	1100	1120	-	-	-	-
Conductivity (lab)	uS/cm	5220	5866	<7350	<7530	<4660	<4730	1275	1527	3419	3590	2783	2835
Hardness (as CaCO3)	mg CaCO$_3$/L	1680	1891	<2600	<2740	<1300	<1320	<1890	<1950	382	484	152	225
pH	S.U.	7.96	7.91	7.31	7.41	6.73	6.84	6.77	6.79	6.58	6.61	6.67	6.69
Salinity	ppt	-	-	-	-	-	-	-	-	3.9	4	-	-
Total dissolved Solids (TDS)	mg/L	3483	3918	<4980	<5100	<2980	<2990	<3770	<4040	1417*	1741	1079	1170
Total Suspended Solids (TSS)	mg/L	-	-	7.5	7.9	<3.0	<3.0	<3.0	<3.0	2.1	3.2	2.0	2.0
Turbidity	mg/L	-	-	-	-	-	-	0.96	0.99	0.5	0.5	0.7	1.2
Anions and Nutrients													
Ammonia, total (as N)	mg/L	-	-	0.169	0.173	0.103	0.106	0.0854	0.086	0.08	0.082	<0.050	<0.050
Bromide (Br)	mg/L	22	25	<32.5	<32.7	<17	<18.2	<17.7	<17.8	4	5	3	4
Chloride (Cl)	mg/L	1714	1929	<2700	<2700	<1580	<1580	<1900	<1910	700	968	465	490
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	-	-	-	-	234	255	393	393
Fluoride (F)	mg/L	1.1	1.2	<1.0	<1.0	<0.80	<0.80	<1.00	<1.00	1.0	1.1	1.1	1.1
Kjeldahl nitrogen, total [TKN]	mg/L	-	-	-	-	-	-	0.294	0.295	0.66	0.75	0.32	0.36
Nitrates (NO3)	mg/L	0.016	0.018	<0.25	<0.25	<0.10	<0.10	<0.250	<0.250	<0.10	<0.10	<0.10	<0.10
Nitrites (NO2)	mg/L	0.038	0.043	<0.050	<0.050	<0.020	<0.020	<0.0500	<0.0500	<0.010	<0.010	<0.010	<0.010
phosphate, ortho-, dissolved (as P)	mg/L	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010
phosphorus, total	mg/L	0.049	0.055	0.01	0.01	0.003	0.005	0.0064	0.0067	0.005	0.011	0.002	0.003
Reactive Silica	mg/L	-	-	-	-	7.5	7.6	6.31	6.33	8.8	10.1	8.9	9.5
Sulphate (SO4)	mg/L	-	-	<15	<15	<6.0	<6.0	<15.0	<15.0	1.0	1.3	<0.50	<0.50
Total Organic Carbon (TOC)	mg/L	-	-	-	-	-	-	-	-	397	408	383	393
Metals (dissolved)													
Aluminium (Al)	mg/L	-	-	<0.0115	<0.0126	<0.0067	<0.0069	<0.0084	<0.0092	0.0036	<0.0083	<0.015	<0.015
Antimony (Sb)	mg/L	0.0026	0.0029	0.001	0.001	0.00001	0.0002	0.0001	0.0002	0.0005	0.0006	<0.0025	<0.0025
Arsenic (As)	mg/L	<0.0005	<0.0005	<0.0034	<0.0034	<0.002	<0.002	<0.00174	<0.00177	<0.00195	<0.00259	<0.00113	<0.00121
Barium (Ba)	mg/L	0.057	0.065	0.098	0.104	0.064	0.065	0.075	0.075	0.078	0.084	0.049	0.054
Beryllium (Be)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.000200	<0.000200	<0.000050	<0.000050	<0.00050	<0.00050
Boron (B)	mg/L	0.5	0.6	0.3	0.3	0.3	0.4	0.460	0.508	0.672	0.724	0.688	0.744
Cadmium (Cd)	mg/L	<0.00002	<0.00002	<0.000050	<0.000050	<0.000010	<0.000010	<0.0000100	<0.0000100	<0.000025	<0.000025	<0.000050	<0.000050
Calcium (Ca)	mg/L	671	756	<1040	<1090	<521	<528	<755	<779	151	194	47	121
Chromium (Cr)	mg/L	0.005	0.005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	0.00026	<0.00050	<0.00050	<0.0050	<0.0050
Cobalt (Co)	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050	<0.000050	<0.00020	<0.00020	<0.000188	<0.000255	<0.0010	<0.0010
Copper (Cu)	mg/L	0.0046	0.0052	<0.00050	<0.00050	<0.00020	<0.00020	<0.00040	<0.00040	<0.00025	<0.00025	<0.0010	<0.0010
Iron (Fe)	mg/L	0.1	0.1	<0.018	<0.019	<0.010	<0.010	<0.020	<0.020	<0.0071	<0.0217	<0.025	<0.025
Lead (Pb)	mg/L	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.000100	<0.000100	<0.000025	<0.000025	<0.0010	<0.0010
Lithium (Li)	mg/L	0.3	0.3	<0.749	<0.779	<0.156	<0.163	<0.334	<0.35	<0.43	<0.449	<0.153	<0.166
Magnesium (Mg)	mg/L	1	1	1	1	<1.0	<1.0	1	1	1	1	1	1
Manganese (Mn)	mg/L	0.01	0.01	0.02	0.02	0.005	0.01	0.008	0.010	0.012	0.014	<0.0050	<0.0050
Dissolved Mercury (Hg)	mg/L	0.00217	0.00244	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo)	mg/L	0.02	0.02	0.02	0.02	0.005	0.005	0.002	0.002	0.003	0.004	<0.0050	<0.0050
Nickel (Ni)	mg/L	0.04	0.05	<0.00050	<0.00050	<0.00050	<0.00050	<0.00100	<0.00100	<0.00073	<0.00124	<0.0050	<0.0050
Phosphorus (P)	mg/L	<0.0003	<0.0003	<0.00030	<0.00030	<0.000050	<0.000050	<0.100	<0.100	<0.01	0.018	-	-
Potassium (K)	mg/L	16	18	<38	<40	<11.5	<11.8	<15.8	<17	<22.1	<23	<8.8	<9.9
Selenium (Se)	mg/L	0.08	0.09	<0.0020	<0.0020	<0.00074	<0.00081	<0.000275	<0.000364	<0.00020	<0.00020	<0.00137	<0.00266
Silicon (Si)	mg/L	4.3	4.8	3.5	3.5	3.5	3.6	3.2	3.3	3.0	3.3	3.2	3.3
Silver (Ag)	mg/L	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.000020	<0.000020	<0.000025	0.0000000	<0.00010	<0.00010
Sodium (Na)	mg/L	306	344	285	313	323	332	293	316	309	310	264	293
Strontium (Sr)	mg/L	12.7	14.2	<16.9	<17.2	<8.7	<8.8	<12.8	<13.2	1.7	3.0	0.5	1.6
Tellurium (Te)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	0.001	0.001	0.00011	0.00014	<0.0050	<0.0050
Thallium (Tl)	mg/L	<0.0008	<0.0008	<0.000050	<0.000050	<0.000050	<0.000050	<0.000020	<0.000020	<0.000010	<0.000010	<0.000050	<0.000050
Tin (Sn)	mg/L	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.00020	<0.00020	<0.0010	<0.0010	<0.025	<0.025
Titanium (Ti)	mg/L	0.2	0.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.00150	<0.00150	<0.0025	<0.0025	<0.025	<0.025
Uranium (U)	mg/L	0.06	0.07	0.09	0.09	<0.000050	<0.000050	<0.000020	0.000024	0.000	0.000023	<0.00050	<0.00050
Vanadium (V)	mg/L	<0.001	<0.001	0.00020	0.00020	<0.00050	<0.00050	<0.00100	<0.00100	<0.0010	<0.0010	<0.025	<0.025
Zinc (Zn)	mg/L	<0.0005	<0.0005	<0.00050	<0.00050	0.004	0.005	<0.0020	<0.0020	0.002	0.058	<0.025	<0.025
Radioactive Ions													
Radium (Ra226)	Bq/L	0.15	0.16	-	-	0.21	0.22	0.30	0.36	0.32	0.40	0.20	0.22
Hydrocarbons													
Hydrocarbons (C10-C50)	mg/L	0.27	0.31	-	-	<0.52	<0.52	-	-	-	-	-	-
Cyanide													
Cyanide	mg/l	-	-	-	-	-	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide (free)	mg/l	-	-	-	-	-	-	-	-	<0.0022	<0.0022	<0.0020	<0.0020
Cyanide (WAD)	mg/l	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.00050	<0.00050

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 neglible (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 4		AMQ16-626 PORT 3	
Date		05-Nov-2021	05-Nov-2021	08-Nov-2021	08-Nov-2021
Golder Sample ID		PORT-4-DUP1A	PORT-4A	PORT-3-DUP1A	PORT-3A
Sampling interval vertical depth (metres)		349.3 - 359.1		381.3 - 392.7	
Average Field measured parameters	**Units**				
Fluorescein Concentration	ppb	22.4		16.9	
Drilling Fluid Proportion	-	0.04		0.03	
Formation Water Proportion	-	0.96		0.97	
Electrical Conductivty	uS/cm	3040		3320	
Specific Conductance	uS/cm	3970		4370	
Total Dissolved Solids (TDS)	mg/L	2578		2843	
pH	S.U.	6.5		7	
Salinity	ppt	2.4		2.4	
Conventional Parameters					
Alkalinity	mg $CaCO_3$/L	13	12	40	40
Alkalinity, bicarbonate (as CaCO3)	mg $CaCO_3$/L	13	12	40	40
Alkalinity, carbonate (as CaCO3)	mg CaCO3/L	<1.0	<1.0	<1.0	<1.0
Electrical Conductivty	uS/cm	4240	4270	4480	4460
Hardness, Calcium Carbonate	mg/L	1230	1300	1260	1220
pH	-	6.71	6.66	6.82	6.8
Sodium Adsorption Ratio	-	3.7	3.6	3.8	3.8
Total dissolved solids (lab)	mg/L	2420	2450	2370	2420
Total Suspended Solids (TSS)	mg/L	2	3	2	2
Turbidity	NTU	0.8	0.8	0.7	1.2
Anions and Nutrients					
Ammonia, total (as N)	mg/L	<0.050	<0.050	<0.050	<0.050
Bromide (Br)	mg/L	14	15	14	14
Chloride (Cl)	mg/L	1300	1300	1300	1300
Dissolved Organic Carbon	mg/L	260	270	380	380
Fluoride (F)	mg/L	0.46	0.41	1.1	1.1
Kjeldahl nitrogen, total [TKN]	mg/L	0.25	0.29	0.32	0.36
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	<0.010	<0.010	<0.010	<0.010
Phosphorus, total	mg/L	<0.0010	<0.0010	0.0023	0.0027
Silicate (as SiO2)	mg/L	6.6	9.9	8.9	9.5
Sulphate (SO4)	mg/L	1.3	0.56	<0.50	<0.50
Total Organic Carbon	mg/L	280	280	380	370
Metals (dissolved)					
Aluminium (Al)	mg/L	0.0061	0.0071	<0.015	<0.015
Antimony (Sb)	mg/L	<0.0010	<0.0010	<0.0025	<0.0025
Arsenic (As)	mg/L	0.00226	0.00223	0.00113	0.00121
Barium (Ba)	mg/L	0.105	0.106	0.0482	0.0529
Beryllium (Be)	mg/L	<0.00020	<0.00020	<0.00050	<0.00050
Boron (B)	mg/L	0.48	0.49	0.8	0.85
Cadmium (Cd)	mg/L	<0.000020	<0.000020	<0.000050	<0.000050
Calcium (Ca)	mg/L	483	495	475	534
Chromium (Cr)	mg/L	<0.0020	<0.0020	<0.0050	<0.0050
Cobalt (Co)	mg/L	<0.00040	<0.00040	<0.0010	<0.0010
Copper (Cu)	mg/L	<0.00040	<0.00040	<0.0010	<0.0010
Iron (Fe)	mg/L	0.014	0.017	<0.025	<0.025
Lead (Pb)	mg/L	<0.00040	<0.00040	<0.0010	<0.0010
Lithium (Li)	mg/L	0.113	0.111	0.153	0.166
Magnesium (Mg)	mg/L	5.51	5.51	0.57	0.6
Manganese (Mn)	mg/L	0.0148	0.0149	<0.0050	<0.0050
Dissolved Mercury (Hg)	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo)	mg/L	<0.0020	<0.0020	<0.0050	<0.0050
Nickel (Ni)	mg/L	<0.0020	<0.0020	<0.0050	<0.0050
Potassium (K)	mg/L	9.08	9.31	8.81	9.9
Selenium (Se)	mg/L	0.00032	0.00027	0.00137	0.00266
Silicon (Si)	mg/L	2.67	2.73	3.08	3.25
Silver (Ag)	mg/L	<0.000040	<0.000040	<0.00010	<0.00010
Sodium (Na)	mg/L	258	261	264	292
Strontium (Sr)	mg/L	7.63	7.65	7.18	8.06
Tellurium (Te)	mg/L	<0.0020	<0.0020	<0.0050	<0.0050
Thallium (Tl)	mg/L	<0.000020	<0.000020	<0.000050	<0.000050
Tin (Sn)	mg/L	<0.010	<0.010	<0.025	<0.025
Titanium (Ti)	mg/L	<0.010	<0.010	<0.025	<0.025
Uranium (U)	mg/L	<0.00020	<0.00020	<0.00050	<0.00050
Vanadium (V)	mg/L	<0.010	<0.010	<0.025	<0.025
Zinc (Zn)	mg/L	<0.010	0.025	<0.025	<0.025
Metals (total)					
Aluminum	mg/l	0.034	<0.015	<0.015	0.0113
Antimony	mg/l	<0.0025	<0.0025	<0.0025	0.00063
Arsenic	mg/l	0.00263	0.0026	0.00167	0.00165
Barium	mg/l	0.101	0.107	0.053	0.0503
Beryllium	mg/l	<0.00050	<0.00050	<0.00050	<0.00010
Boron	mg/l	0.42	0.42	0.84	0.817
Cadmium	mg/l	<0.000050	<0.000050	<0.000050	<0.000010
Calcium	mg/l	483	512	503	489
Chromium	mg/l	<0.0050	<0.0050	<0.0050	<0.0010
Cobalt	mg/l	<0.0010	<0.0010	<0.0010	<0.00020
Copper	mg/l	<0.0025	0.0034	<0.0025	<0.00050
Iron	mg/l	<0.050	<0.050	<0.050	0.011
Lead	mg/l	<0.0010	<0.0010	<0.0010	<0.00020
Lithium	mg/l	0.103	0.105	0.168	0.173

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 4		AMQ16-626 PORT 3	
Date		05-Nov-2021	05-Nov-2021	08-Nov-2021	08-Nov-2021
Golder Sample ID		PORT-4-DUP1A	PORT-4A	PORT-3-DUP1A	PORT-3A
Sampling interval vertical depth (metres)		349.3 - 359.1		381.3 - 392.7	
Magnesium	mg/l	5.19	5.41	0.65	0.628
Manganese	mg/l	0.0152	0.0163	<0.0050	0.0046
Mercury	mg/l	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum	mg/l	<0.0050	<0.0050	<0.0050	0.0012
Nickel	mg/l	<0.0050	<0.0050	<0.0050	<0.0010
Potassium	mg/l	8.81	9.65	10.6	10.3
Selenium	mg/l	<0.00050	<0.00050	<0.00050	<0.00010
Silicon	mg/l	2.78	2.92	3.33	3.31
Silver	mg/l	<0.00010	<0.00010	<0.00010	<0.000020
Sodium	mg/l	246	262	292	272
Strontium	mg/l	7.29	7.7	7.65	7.77
Tellurium	mg/l	<0.0050	<0.0050	<0.0050	<0.0010
Thallium	mg/l	<0.000050	<0.000050	<0.000050	<0.000010
Tin	mg/l	<0.025	<0.025	<0.025	<0.0050
Titanium	mg/l	<0.025	<0.025	<0.025	<0.0050
Uranium	mg/l	<0.00050	<0.00050	<0.00050	<0.00010
Vanadium	mg/l	<0.025	<0.025	<0.025	<0.0050
Zinc	mg/l	0.124	0.134	0.117	0.111
Radioactive Ions					
Radium (Ra 226)	Bq/L	0.18	0.21	0.21	0.19
Cyanide					
Cyanide	mg/l	0.00111	0.00191	<0.00050	<0.00050
Cyanide (free)	mg/l	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide (WAD)	mg/l	<0.00050	<0.00050	<0.00050	<0.00050
QA/QC					
Calculated TDS	mg/L	2362	2390	2504	2594
Calculated TDS VS Lab Measured TDS	%	98%	98%	106%	107%

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			TUX956	TUX957			TTM648	TTM649			TTM650	TUX958
Sampling Date			2022-09-19	2022-09-19			2022-09-13	2022-09-13			2022-09-13	2022-09-19
COC Number			575770	575770			572964	572964			572964	575770
Sample ID	UNITS	MDL	Port 4-A	Port 4-B	RPD	MDL	Port 3-A	Port 3-B	RPD	MDL	FB	TBLK
Calculated Parameters												
Total Ammonia (as NH3)	mg/L	0.061	<0.061	<0.061	--	0.061	<0.061	<0.061	--	0.061	<0.061	<0.061
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	1	13	12	8%	1	40	40	0%	1	<1.0	<1.0
Carb. Alkalinity (calc. as CaCO3)	mg/L	1	<1.0	<1.0	--	1	<1.0	<1.0	--	1	<1.0	<1.0
Sodium Adsorption Ratio	N/A		3.7	3.6	3%		3.8	3.8	0%		(1)	(1)
Total Hardness (CaCO3)	mg/L	0.5	1300	1230	6%	0.5	1220	1260	3%	0.5	<0.50	<0.50
Inorganics												
Total Ammonia-N	mg/L	0.05	<0.050	<0.050	--	0.05	<0.050	<0.050	--	0.05	<0.050	<0.050
Alkalinity (Total as CaCO3)	mg/L	1	13	12	8%	1	40	40	0%	1	<1.0	<1.0
Bromide (Br-)	mg/L	1	14	15	7%	1	14	14	0%	1	<1.0	<1.0
Conductivity	mS/cm	0.001	4.24	4.27	1%	0.001	4.48	4.46	0%	0.001	0.001	0.001
Dissolved Chloride (Cl-)	mg/L	20	1300	1300	0%	20	1300	1300	0%	1	<1.0	<1.0
Dissolved Organic Carbon	mg/L	2	260	270	4%	2	380	380	0%	0.4	<0.40	<0.40
Dissolved Sulphate (SO4)	mg/L	0.5	1.3	0.56	>MDL	0.5	<0.50	<0.50	--	0.5	<0.50	2.7
Fluoride (F-)	mg/L	0.1	0.46	0.41	<MDL	0.1	1.1	1.1	0%	0.1	<0.10	<0.10
Free Cyanide (CN)	mg/L	0.0020	<0.0020	<0.0020	--	0.0020	<0.0020	<0.0020	--	0.0020	<0.0020	<0.0020
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	0.01	<0.010	<0.010	--	0.01	<0.010	<0.010	--	0.01	<0.010	<0.010
pH	pH		6.71	6.66	1%		6.82	6.8	0%		5.69	5.6
Reactive Silica (SiO2)	mg/L	0.25	6.6	9.9	40%	0.25	8.9	9.5	7%	0.05	<0.050	<0.050
Total Cyanide (CN)	mg/L	0.0005	0.00111	0.00191	>MDL	0.0005	<0.00050	<0.00050	--	0.0005	0.0168	0.00389
Total Dissolved Solids	mg/L	10	2420	2450	1%	10	2370	2420	2%	10	<10	<10
Total Kjeldahl Nitrogen (TKN)	mg/L	0.1	0.25	0.29	<MDL	0.1	0.32	0.36	<MDL	0.1	0.19	0.13
Total Organic Carbon (TOC)	mg/L	2	280	280	0%	2	380	370	3%	0.4	<0.40	<0.40
Total Phosphorus (P)	mg/L	0.001	<0.0010	<0.0010	--	0.001	0.0023	0.0027	<MDL	0.001	<0.0010	<0.0010
Total Suspended Solids	mg/L	1	2	3	<MDL	1	2	2	<MDL	1	<1	<1
Turbidity	NTU	0.1	0.8	0.8	0.0%	0.1	0.7	1.2	53%	0.1	<0.1	<0.1
Un-ionized Ammonia (as N)	mg/L	0.0004	<0.0004	<0.0004	--	0.0004	<0.0004	<0.0004	--	--	--	--
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.0005	<0.00050	<0.00050	--	0.0005	<0.00050	<0.00050	--	0.0005	<0.00050	<0.00050
Dissolved Metals												
Dissolved Aluminum (Al)	mg/L	0.006	0.0061	0.0071	<MDL	0.015	<0.015	<0.015	--	0.003	<0.0030	<0.0030
Dissolved Antimony (Sb)	mg/L	0.001	<0.0010	<0.0010	--	0.0025	<0.0025	<0.0025	--	0.0005	<0.00050	<0.00050
Dissolved Arsenic (As)	mg/L	0.0002	0.00226	0.00223	1%	0.0005	0.00113	0.00121	<MDL	0.0001	<0.00010	<0.00010
Dissolved Barium (Ba)	mg/L	0.002	0.105	0.106	1%	0.005	0.0482	0.0529	9%	0.001	<0.0010	<0.0010
Dissolved Beryllium (Be)	mg/L	0.0002	<0.00020	<0.00020	--	0.0005	<0.00050	<0.00050	--	0.0001	<0.00010	<0.00010
Dissolved Bismuth (Bi)	mg/L	0.002	<0.0020	<0.0020	--	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0010
Dissolved Boron (B)	mg/L	0.1	0.48	0.49	<MDL	0.25	0.8	0.85	<MDL	0.05	<0.050	<0.050
Dissolved Cadmium (Cd)	mg/L	0.00002	<0.000020	<0.000020	--	0.00005	<0.000050	<0.000050	--	0.00001	<0.000010	<0.000010
Dissolved Calcium (Ca)	mg/L	0.1	483	495	2%	0.25	475	534	12%	0.05	<0.050	<0.050
Dissolved Chromium (Cr)	mg/L	0.002	<0.0020	<0.0020	--	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0010
Dissolved Cobalt (Co)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.00020
Dissolved Copper (Cu)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.00020
Dissolved Iron (Fe)	mg/L	0.01	0.014	0.017	<MDL	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.0050
Dissolved Lead (Pb)	mg/L	0.0004	<0.00040	<0.00040	--	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.00020
Dissolved Lithium (Li)	mg/L	0.004	0.113	0.111	2%	0.01	0.153	0.166	8%	0.002	<0.0020	<0.0020
Dissolved Magnesium (Mg)	mg/L	0.1	5.51	5.51	0%	0.25	0.57	0.6	<MDL	0.05	<0.050	<0.050
Dissolved Manganese (Mn)	mg/L	0.002	0.0148	0.0149	1%	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0010
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	0.002	<0.0020	<0.0020	--	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0010
Dissolved Nickel (Ni)	mg/L	0.002	<0.0020	<0.0020	--	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0010
Dissolved Potassium (K)	mg/L	0.1	9.08	9.31	3%	0.25	8.81	9.9	12%	0.05	<0.050	<0.050
Dissolved Selenium (Se)	mg/L	0.0002	0.00032	0.00027	<MDL	0.0005	0.00137	0.00266	>MDL	0.0001	<0.00010	<0.00010
Dissolved Silicon (Si)	mg/L	0.2	2.67	2.73	2%	0.5	3.08	3.25	5%	0.1	<0.10	<0.10
Dissolved Silver (Ag)	mg/L	0.00004	<0.000040	<0.000040	--	0.0001	<0.00010	<0.00010	--	0.00002	<0.000020	<0.000020
Dissolved Sodium (Na)	mg/L	0.1	258	261	1%	0.25	264	292	10%	0.05	<0.050	<0.050
Dissolved Strontium (Sr)	mg/L	0.002	7.63	7.65	0%	0.005	7.18	8.06	12%	0.001	<0.0010	<0.0010
Dissolved Sulphur (S)	mg/L	6	<6.0	<6.0	--	15	<15	<15	--	3	<3.0	<3.0
Dissolved Tellurium (Te)	mg/L	0.002	<0.0020	<0.0020	--	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0010
Dissolved Thallium (Tl)	mg/L	0.00002	<0.000020	<0.000020	--	0.00005	<0.000050	<0.000050	--	0.00001	<0.000010	<0.000010
Dissolved Tin (Sn)	mg/L	0.01	<0.010	<0.010	--	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.0050
Dissolved Titanium (Ti)	mg/L	0.01	<0.010	<0.010	--	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.0050
Dissolved Uranium (U)	mg/L	0.0002	<0.00020	<0.00020	--	0.0005	<0.00050	<0.00050	--	0.0001	<0.00010	<0.00010
Dissolved Vanadium (V)	mg/L	0.01	<0.010	<0.010	--	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.0050
Dissolved Zinc (Zn)	mg/L	0.01	<0.010	0.025	--	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.0050
Total Metals												
Total Aluminum (Al)	mg/L	0.015	<0.015	0.034	--	0.003	0.0113	<0.015	--	0.003	<0.0030	<0.0030
Total Antimony (Sb)	mg/L	0.0025	<0.0025	<0.0025	--	0.0005	0.00063	<0.0025	--	0.0005	<0.00050	<0.00050
Total Arsenic (As)	mg/L	0.0005	0.0026	0.00263	1%	0.0001	0.00165	0.00167	1%	0.0001	<0.00010	<0.00010
Total Barium (Ba)	mg/L	0.005	0.107	0.101	6%	0.001	0.0503	0.053	5%	0.001	<0.0010	<0.0010
Total Beryllium (Be)	mg/L	0.0005	<0.00050	<0.00050	--	0.0001	<0.00010	<0.00050	--	0.0001	<0.00010	<0.00010
Total Bismuth (Bi)	mg/L	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0050	--	0.001	<0.0010	<0.0010
Total Boron (B)	mg/L	0.25	0.42	0.42	<MDL	0.05	0.817	0.84	3%	0.05	<0.050	<0.050
Total Cadmium (Cd)	mg/L	0.00005	<0.000050	<0.000050	--	0.00001	<0.000010	<0.000050	--	0.00001	<0.000010	<0.000010
Total Calcium (Ca)	mg/L	0.25	512	483	6%	0.05	489	503	3%	0.05	<0.050	<0.050
Total Chromium (Cr)	mg/L	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0050	--	0.001	<0.0010	<0.0010
Total Cobalt (Co)	mg/L	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.0010	--	0.0002	<0.00020	<0.00020
Total Copper (Cu)	mg/L	0.0025	0.0034	<0.0025	--	0.0005	<0.00050	<0.0025	--	0.0005	<0.00050	<0.00050
Total Iron (Fe)	mg/L	0.05	<0.050	<0.050	--	0.01	0.011	<0.050	--	0.01	<0.010	<0.010
Total Lead (Pb)	mg/L	0.001	<0.0010	<0.0010	--	0.0002	<0.00020	<0.0010	--	0.0002	<0.00020	<0.00020
Total Lithium (Li)	mg/L	0.01	0.105	0.103	2%	0.002	0.173	0.168	3%	0.002	<0.0020	<0.0020
Total Magnesium (Mg)	mg/L	0.25	5.41	5.19	4%	0.05	0.628	0.65	3%	0.05	<0.050	<0.050
Total Manganese (Mn)	mg/L	0.005	0.0163	0.0152	<MDL	0.001	0.0046	<0.0050	--	0.001	<0.0010	<0.0010
Mercury (Hg)	mg/L	0.00001	<0.00001	<0.00001	--	0.00001	<0.00001	<0.00001	--	0.00001	<0.00001	<0.00001
Total Molybdenum (Mo)	mg/L	0.005	<0.0050	<0.0050	--	0.001	0.0012	<0.0050	--	0.001	<0.0010	<0.0010
Total Nickel (Ni)	mg/L	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0050	--	0.001	<0.0010	<0.0010
Total Potassium (K)	mg/L	0.25	9.65	8.81	9%	0.05	10.3	10.6	3%	0.05	<0.050	<0.050
Total Selenium (Se)	mg/L	0.0005	<0.00050	<0.00050	--	0.0001	<0.00010	<0.00050	--	0.0001	<0.00010	<0.00010
Total Silicon (Si)	mg/L	0.5	2.92	2.78	5%	0.1	3.31	3.33	1%	0.1	<0.10	<0.10
Total Silver (Ag)	mg/L	0.0001	<0.00010	<0.00010	--	0.00002	<0.000020	<0.00010	--	0.00002	<0.000020	<0.000020
Total Sodium (Na)	mg/L	0.25	262	246	6%	0.05	272	292	7%	0.05	<0.050	<0.050
Total Strontium (Sr)	mg/L	0.005	7.7	7.29	5%	0.001	7.77	7.65	2%	0.001	<0.0010	<0.0010

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			TUX956	TUX957			TTM648	TTM649			TTM650	TUX958
Sampling Date			2022-09-19	2022-09-19			2022-09-13	2022-09-13			2022-09-13	2022-09-19
COC Number			575770	575770			572964	572964			572964	575770
Sample ID	UNITS	MDL	Port 4-A	Port 4-B	RPD	MDL	Port 3-A	Port 3-B	RPD	MDL	FB	TBLK
Calculated Parameters												
Total Sulphur (S)	mg/L	15	<15	<15	--	3	<3.0	<15	--	3	<3.0	<3.0
Total Tellurium (Te)	mg/L	0.005	<0.0050	<0.0050	--	0.001	<0.0010	<0.0050	--	0.001	<0.0010	<0.0010
Total Thallium (Tl)	mg/L	0.00005	<0.000050	<0.000050	--	0.00001	<0.000010	<0.000050	--	0.00001	<0.000010	<0.000010
Total Tin (Sn)	mg/L	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.025	--	0.005	<0.0050	<0.0050
Total Titanium (Ti)	mg/L	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.025	--	0.005	<0.0050	<0.0050
Total Uranium (U)	mg/L	0.0005	<0.00050	<0.00050	--	0.0001	<0.00010	<0.00050	--	0.0001	<0.00010	<0.00010
Total Vanadium (V)	mg/L	0.025	<0.025	<0.025	--	0.005	<0.0050	<0.025	--	0.005	<0.0050	<0.0050
Total Zinc (Zn)	mg/L	0.025	0.134	0.124	<MDL	0.005	0.111	0.117	5%	0.005	<0.0050	<0.0050
Radionuclide												
Radium-226	Bq/L	0.005	0.18	0.21	15%	0.005	0.21	0.19	10%	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.

ATTACHMENT B

2022 Thermal Monitoring Report

WHALE TAIL MINE

Thermal Monitoring Report 2022

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

Prepared by:
Agnico Eagle Mines Limited – Meadowbank Division

January 2023

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)
- 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 71 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 increase gradually until a thermal equilibrium is established with the active zone and zero-amplitude zone moving upward and being located within the waste rock pile. Convective cooling conditions often occur in waste piles and would potentially offset some of the temperature increase in the permafrost.

The waste rock pile itself is expected to freeze back with time and have an active layer formed on the upper portion (Okane 2019b). 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 associated with the oxidation of sulphide-bearing minerals within the pile, the process of freeze-back would be delayed and, 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 WT 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 NAG. 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, only just over a year of data has been collected so it is too early to assess the extent of the active layer. The 2023 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 the lake where talik is anticipated to exist. The construction of the Whale Tail Dike is expected to have a cooling effect on the lake ground underneath the dike due to exposure to lower dike temperature than lake water. Minimal effects to the permafrost at the abutment areas are expected.

Following lake dewatering and the beginning of operations, areas downstream of the Whale Tail Dike are expected to freeze back progressively, and the upstream area of the dike 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 depth and operational conditions there would be an impact with possible thawing of a shallow upper permafrost zone underlying the pond. However, due to the operational pond level that is normally maintained low to reduce the hydraulic gradient, this issue is unlikely.

The talik zone under the Whale Tail Attenuation Pond would remain. The surrounding areas to the pond would freeze back progressively after dewatering but would restore to talik condition 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 in areas never exposed to water before outside of the dike footprint.

3.2.2 Thermal Monitoring Results

Mammoth Dike

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

WRSF Dike

A degradation of the thermal condition in the key trench of WRSF Dike was observed in the summer of 2019 leading to seepage. In 2022, the instruments show that the foundation and key trench remained frozen all year long with signs of permafrost aggradation which indicate that the mitigation measures implemented in 2020 continue to be successful. The active layer is contained within the rockfill.

Whale Tail Dike

The trend of permafrost degradation at the abutments did not progress laterally in 2022 according to the instruments; however, observations in the field in 2022 indicated increased effects from permafrost degradation on both the abutments. The effects of degradation in the form of settlement can be seen on the upstream and downstream of the West abutment and downstream of the East abutment. This signifies that the thermal regime following the dike construction and the South Whale Tail Channel commissioning has not yet reached a steady state.

The thermistors show that limited freeze back is happening in deep bedrock in some areas (0+142, 0+200, 0+260, 0+360, 0+407, 0+520, 0+607).

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 2022 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 and the lower permafrost zone surrounding the pit walls will, in general, experience a reduction in temperature other than at a shallow active zone adjacent to the pit walls subjected to seasonal thawing during summer.

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 (Golder, 2018). 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 and will not be re-flooded so the mining activities are not expected to impact the thermal regime of that area.

3.3.2 Thermal Monitoring Results

Thermistors were installed in 2020 in the 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 freezing 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 they stopped working. 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).

APPENDIX A – WHALE TAIL THERMAL MONITORING DATA

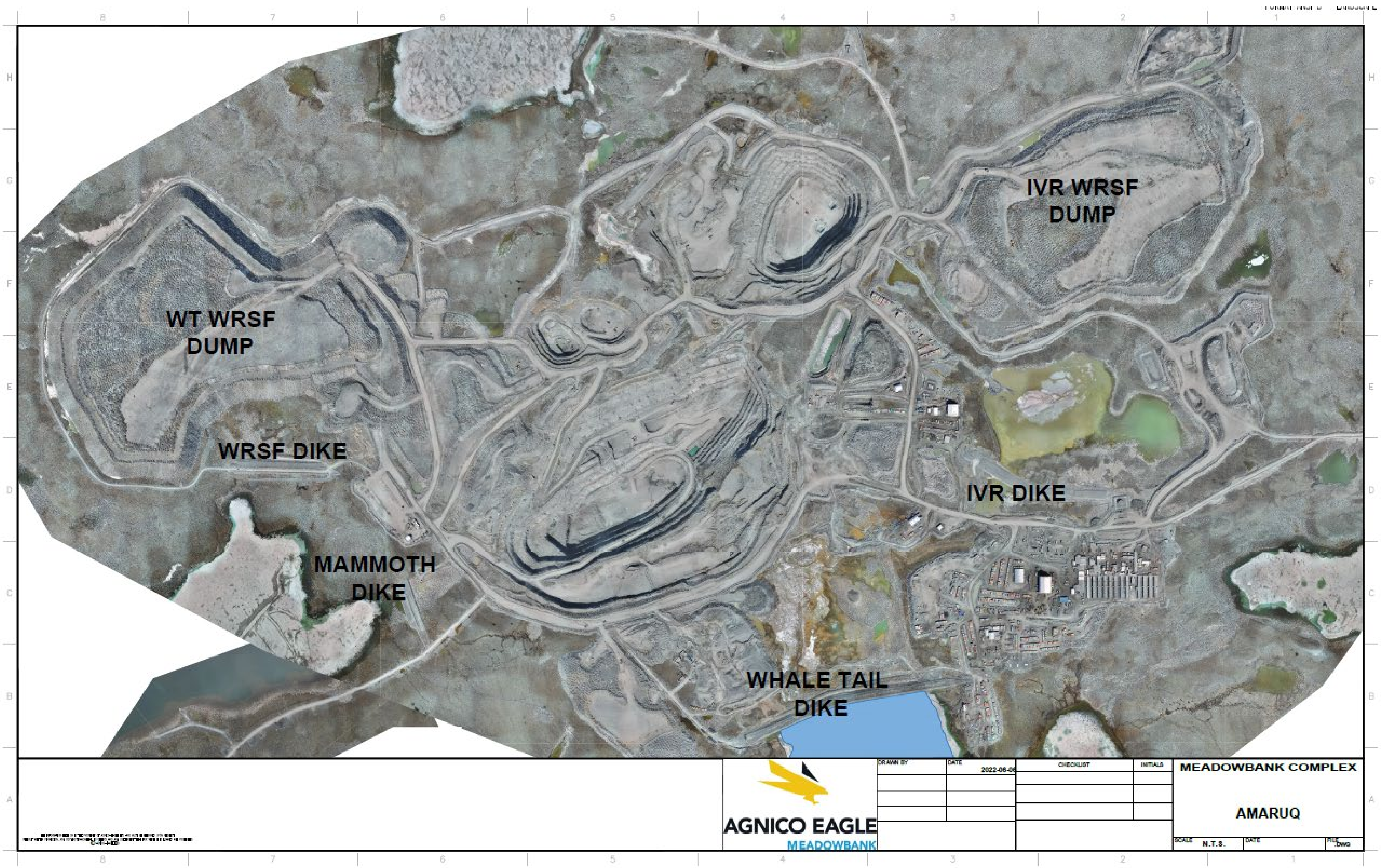

IVR WRSF
DUMP
WT WRSF
DUMP
WRSF DIKE
IVR DIKE
MAMMOTH
DIKE
WHALE TAIL
DIKE
AGNICO EAGLE
MEADOWBANK
DRAWN BY
DATE
2022-06-06
CHECKLIST
INITIALS
MEADOWBANK COMPLEX
AMARUQ
SCALE
N.T.S.
DATE
FILE
.DWG

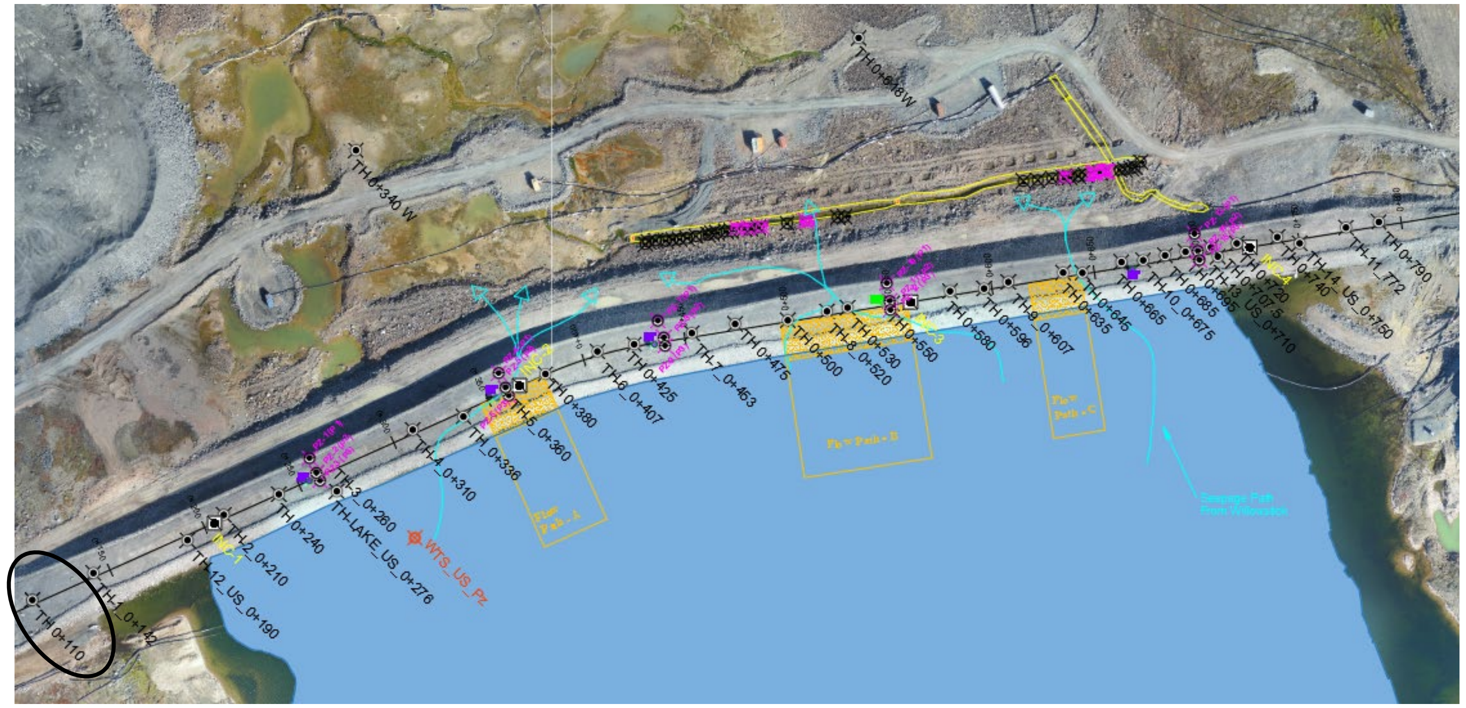
TABLE 1: Instruments Coordinates

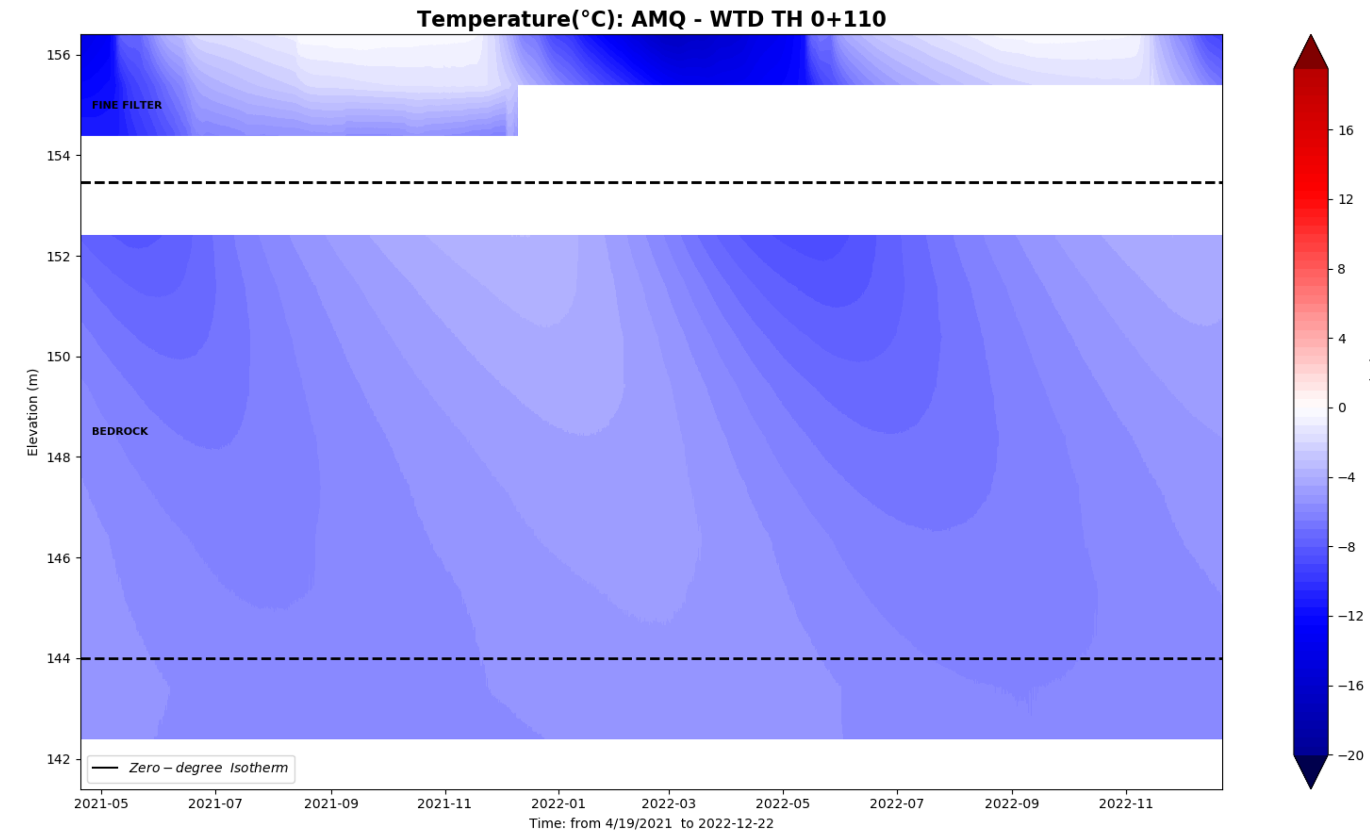
Line #	*Name*	*Area*	*Easting (X)*	*Northing (Y)*	*Elevation (Z)*	*Azimuth*	*Dip*	*Installed*	*Active (Y) or (N)*
1	*WTD 0+110*	WTD	**607090.500**	**7254625.000**	**156.40**		-90	2020	Y (13/16) beads)
2	*WTD 0+142*	WTD	**607119.94**	**7254637.98**	**156.75**		-90	2018	Y (10/13) beads
3	*WTD 0+190 U/S*	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

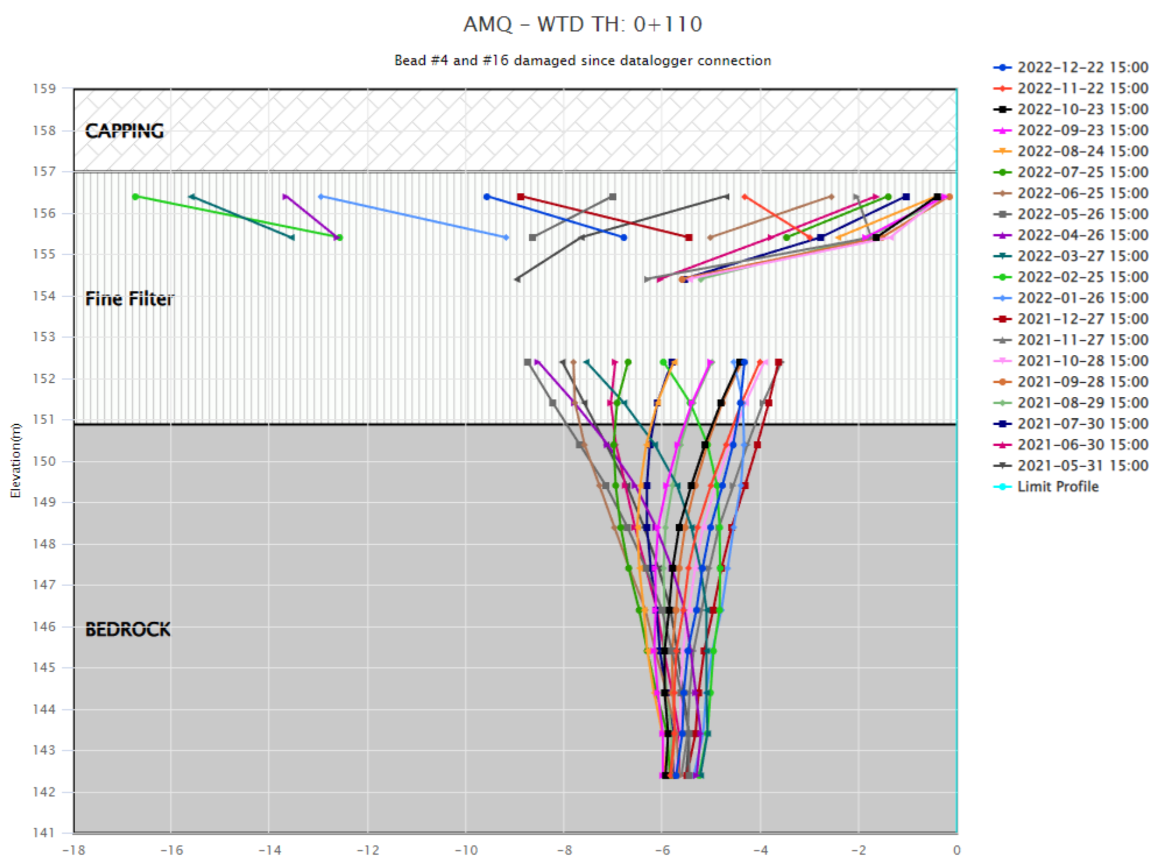
Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
38	WT WRSF TH01	WRSF	615797.25	7238129.77	161.546		-90	2019	Y
39	WT WRSF TH02	WRSF	615861.49	7238133.24	162.053		-90	2019	N (since 2020)
40	WT WRSF TH03	WRSF	615814.31 to 615799.6	7238118.6 to 7238117	162.744 to 162.042		0	2019	Y (9/16) beads)
41	WT WRSF TH04	WRSF	615813.38 to 615797.7	7238134.1to 7238132.8	162.138 to 161.619		0	2019	Y (8/16) beads)
42	WT WRSF TH05	WRSF	615860.9 to 615800.3	71238133.3 to 7238126	162.202		0	2019	Y (9/16) beads)
43	WT WRSF TH06	WRSF	-	-	-		-	2021	NOT INSTALLED
44	WT WRSF TH07	WRSF	14041.823/822.075(AMQ)	14051.510/8232.486(AMQ)	199.6		0	2021	Y
45	WT WRSF TH08	WRSF	14029.392/14039.081(AMQ)	8227.543/8238.974(AMQ)	199.7		0	2021	Y
46	WT WRSF TH09	WRSF	14035.675/14189.86(AMQ)	8224.663/8407.910 (AMQ)	200.2		0	2021	Y
47	WT WRSF TH10	WRSF	14259.183 (AMQ)	8479.248 (AMQ)	199.484-195.386		-37	2021	Y
48	WT WRSF TH11	WRSF	14259.183	8479.249	198.637-168.637		0	2021	Y
49	WT WRSF TH12	WRSF	14241.323/14231.698 (AMQ)	8481.427/8469.988 (AMQ)	200.2		0	2021	Y
50	WT WRSF TH13	WRSF	14521.240/14241.576 (AMQ)	8471.614/8460.159 (AMQ)	200.1		-90	2021	Y
51	WT WRSF TH14	WRSF	14245.84/14101.278	8476.032/8304.453	200.2		0	2021	Y
52	WT WRSF TH15	WRSF	14254.017/14248.950	8481.414/8477.225	200.2		-37	2021	Y
53	WT WRSF TH16	WRSF	14259.183	8479.248	167.637-152.637		-90	2021	Y
54	MD-TH01	MD	Slope	Slope	-		Slope	2019	Y
55	MD-TH02	MD	605926.19	7255102.52	154.9		-90	2019	Y
56	MD-TH03	MD	605926.74	7255102.6	154.9		-90	2019	Y
57	WRSFD TH01	WRSF Dike	Slope	Slope	-		Slope	2019	Y
58	WRSFD TH02	WRSF Dike	605416.44	7255526.7	159.07		-90	2019	Y
59	WRSFD TH03	WRSF Dike	605414.98	7255545.01	155.29		-90	2019	Y
60	WRSFD TH04	WRSF Dike	605387.14	7255524.47	158.15		-90	2019	Y
61	WRSFD TH05	WRSF Dike	605428.59	7255566.21	153.63		-90	2019	Y
62	WRSFD TH06	WRSF Dike	605435.56	7255544.29	155.35		-90	2019	Y
63	WRSFD TH07	WRSF Dike	605466.94	7255541.78	155.13		-90	2019	Y
64	WRSFD TH08	WRSF Dike	605384.991	7255544.818	159.886		-90	2019	Y (11/16) beads
65	WRSFD TH09	WRSF Dike	605425.1	7255546.038	160.037		-90	2019	Y
66	PSW DH2 TH	Pit South Wall	606998.837	7255127.783	149.02		-90	2020	N
67	PSW DH3 TH	Pit South Wall	607016.336	7255140.383	148.041		-90	2020	N
68	PSW DH6 TH	Pit South Wall	607058.391	7255184.293	148.181		-90	2020	N
69	PSW DH7 TH	Pit South Wall	607070.111	7255198.772	148.734		-90	2020	N
70	PSW DH10 TH	Pit South Wall	607142.218	7255272.101	150.109		-90	2020	N

Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
71	*PSW DH11 TH*	Pit South Wall	**607155.955**	**7255287.46**	**151.241**		-50	2020	N
72	*PSW DH12 TH*	Pit South Wall	**607168.065**	**7255293.87**	**151.934**		-50	2020	N
73	*PSW DH13 TH*	Pit South Wall	**606980.7**	**7255276.8**	**145.398**		-90	2020	N
74	*PSW DH14 Th*	Pit South Wall	**606937.5**	**7255411.5**	**130.761**		-90	2020	N
75	*AMQ15-324*	WT PIT	**606496.8**	**7254995.2**	**161.79**	323.41	-55.46	2015	N
76	*AMQ17-1233*	IVR	**606778.0**	**7256254.0**	**162.0**	252.71	-59.06	2017	N
77	*AMQ17-1337*	IVR	**607078.0**	**7256522.0**	**x**				
78	*V651A*	IVR	**607624.208**	**7256122.348**	**10163.28**		-69	2019	Y
79	*BH-T2*	IVR	**607850.8**	**7255563.9**	**164.303**		-90	2019	N
80	*BH-4*	IVR	**608048**	**7255442**	**163.982**		-90	2019	N
81	*IVR D1 TH1*	IVR D1	**607909.036**	**7255508.205**	**164.486**		Liner	2021	Y
82	*IVR D1 TH2*	IVR D1	**607908.144**	**7255506.309**	**164.895**		-90	2021	Y
83	*IVR D1 TH3*	IVR D1	**607912.603**	**7255515.354**	**165.1**		90	2021	Y
84	*IVR D1 TH4*	IVR D1	**607906.637**	**7255503.624**	**165.76**		90	2021	Y
85	*IVR D1 TH5*	IVR D1	**607899.06**	**7255512.94**	**159.666**		Key Trench	2021	Y
86	*IVR D1 TH6*	IVR D1	**607923.8**	**7255480.4**	**162.08**		90	2021	Y
87	*IVR D1 TH7*	IVR D1	**607930.032**	**7255525.355**	**162.12**		90	2021	Y

WTD-TH 0+110




Temperature(°C): AMQ - WTD TH 0+110
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
2021-05
2021-07
2021-09
2021-11
2022-01
2022-03
2022-05
2022-07
2022-09
2022-11
Time: from 4/19/2021 to 2022-12-22
Temperature(°C)


AMQ – WTD TH: 0+110
Bead #4 and #16 damaged since datalogger connection
CAPPING
Fine Filter
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-22 15:00
2022-11-22 15:00
2022-10-23 15:00
2022-09-23 15:00
2022-08-24 15:00
2022-07-25 15:00
2022-06-25 15:00
2022-05-26 15:00
2022-04-26 15:00
2022-03-27 15:00
2022-02-25 15:00
2022-01-26 15:00
2021-12-27 15:00
2021-11-27 15:00
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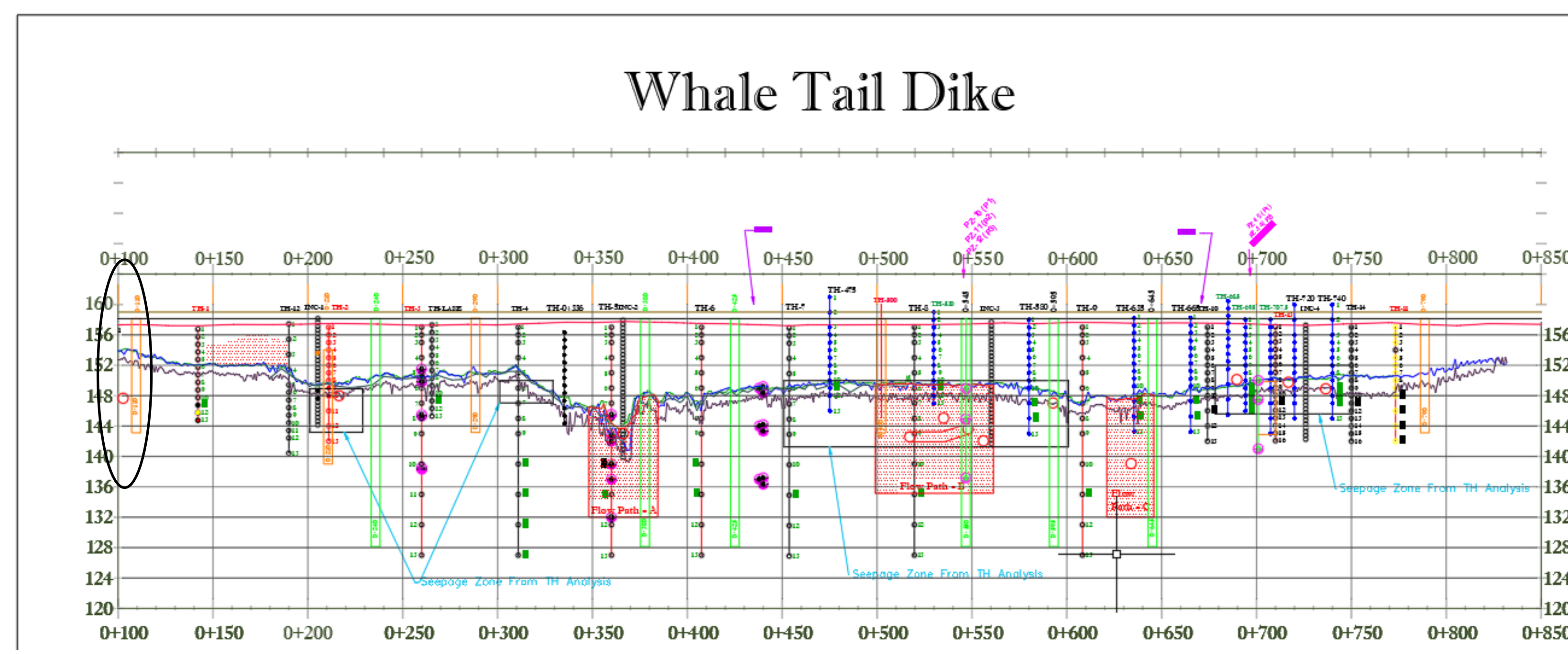
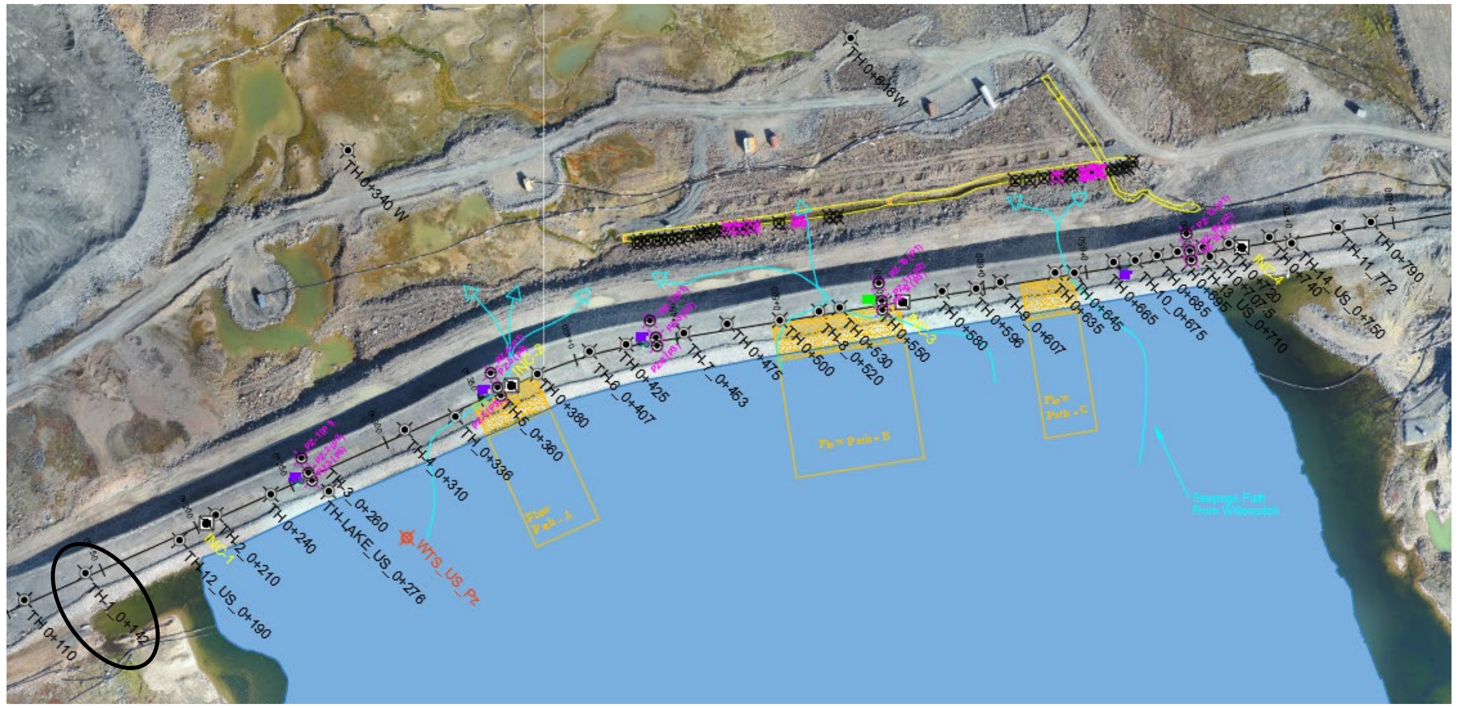
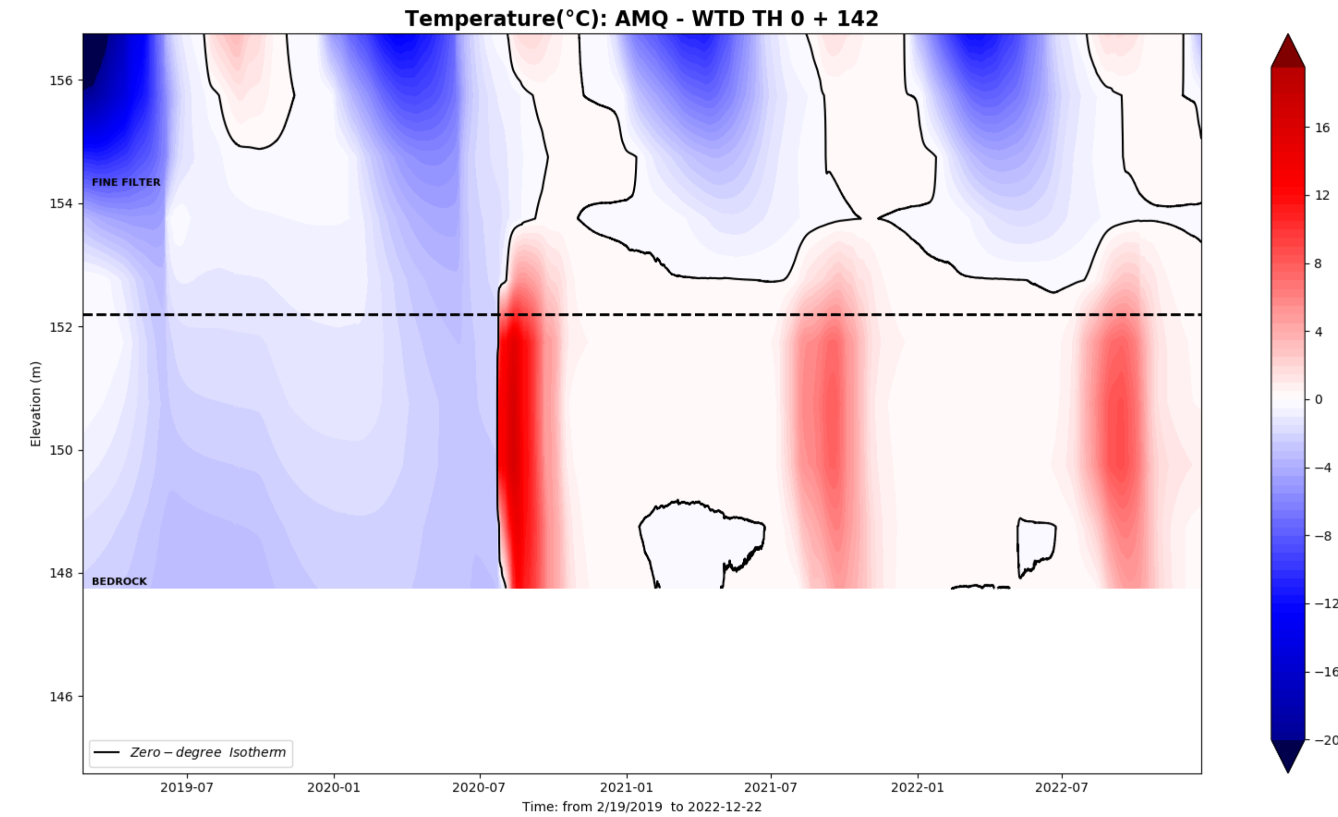
Limit Profile


Whale Tail Dike
0+100
0+150
0+200
0+250
0+300
0+350
0+400
0+450
0+500
0+550
0+600
0+650
0+700
0+750
0+800
0+850
Seepage Zone From TH Analysis

WTD-TH 0+142

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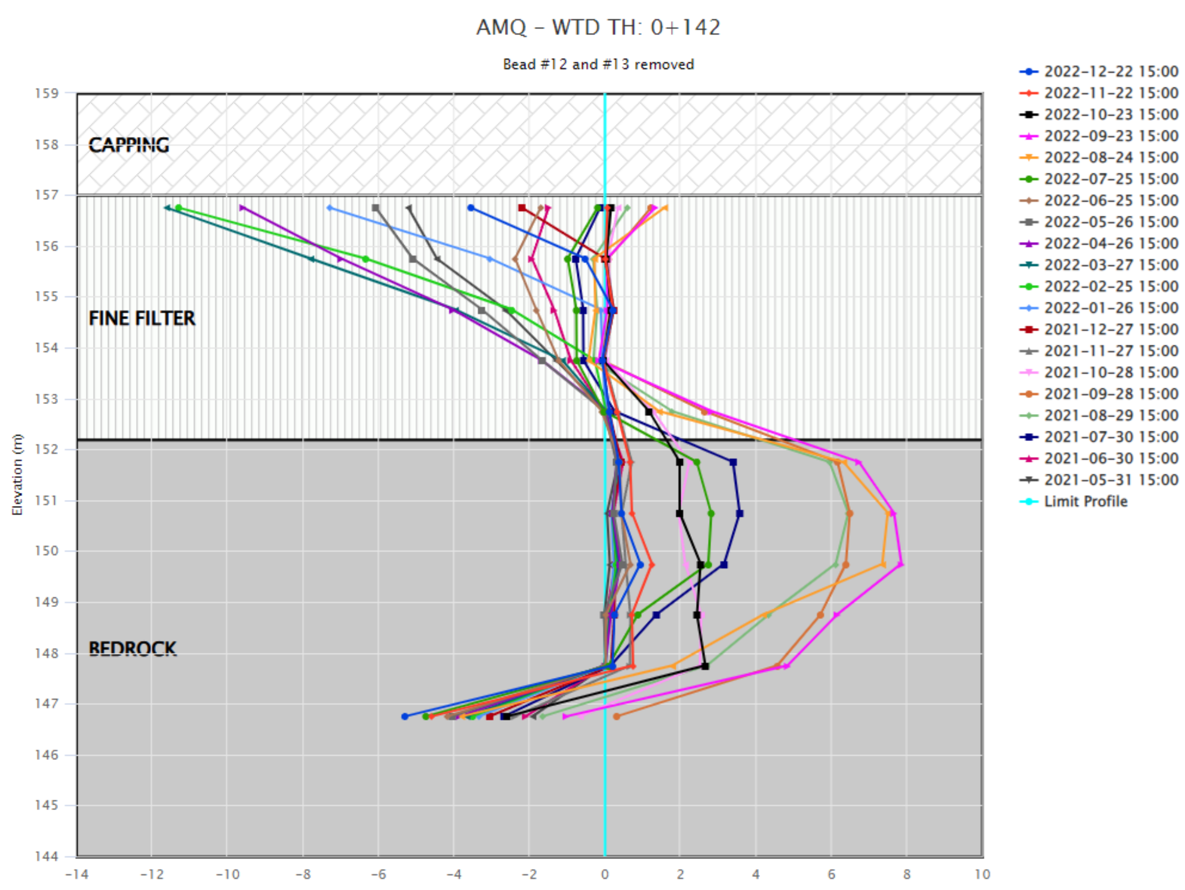
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
2019-07
2020-01
2020-07
2021-01
2021-07
2022-01
2022-07
Time: from 2/19/2019 to 2022-12-22
Temperature(°C)


AMQ – WTD TH: 0+142
Bead #12 and #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-22 15:00
2022-11-22 15:00
2022-10-23 15:00
2022-09-23 15:00
2022-08-24 15:00
2022-07-25 15:00
2022-06-25 15:00
2022-05-26 15:00
2022-04-26 15:00
2022-03-27 15:00
2022-02-25 15:00
2022-01-26 15:00
2021-12-27 15:00
2021-11-27 15:00
2021-10-28 15:00
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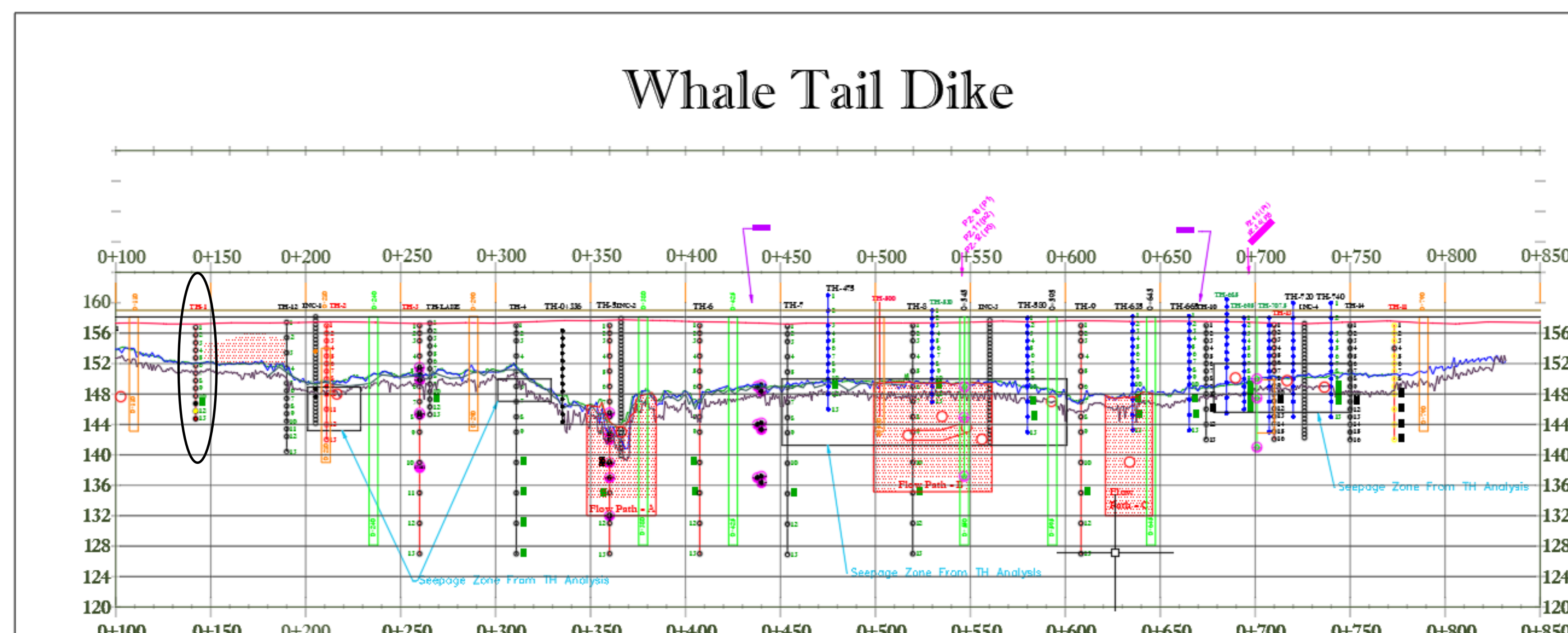
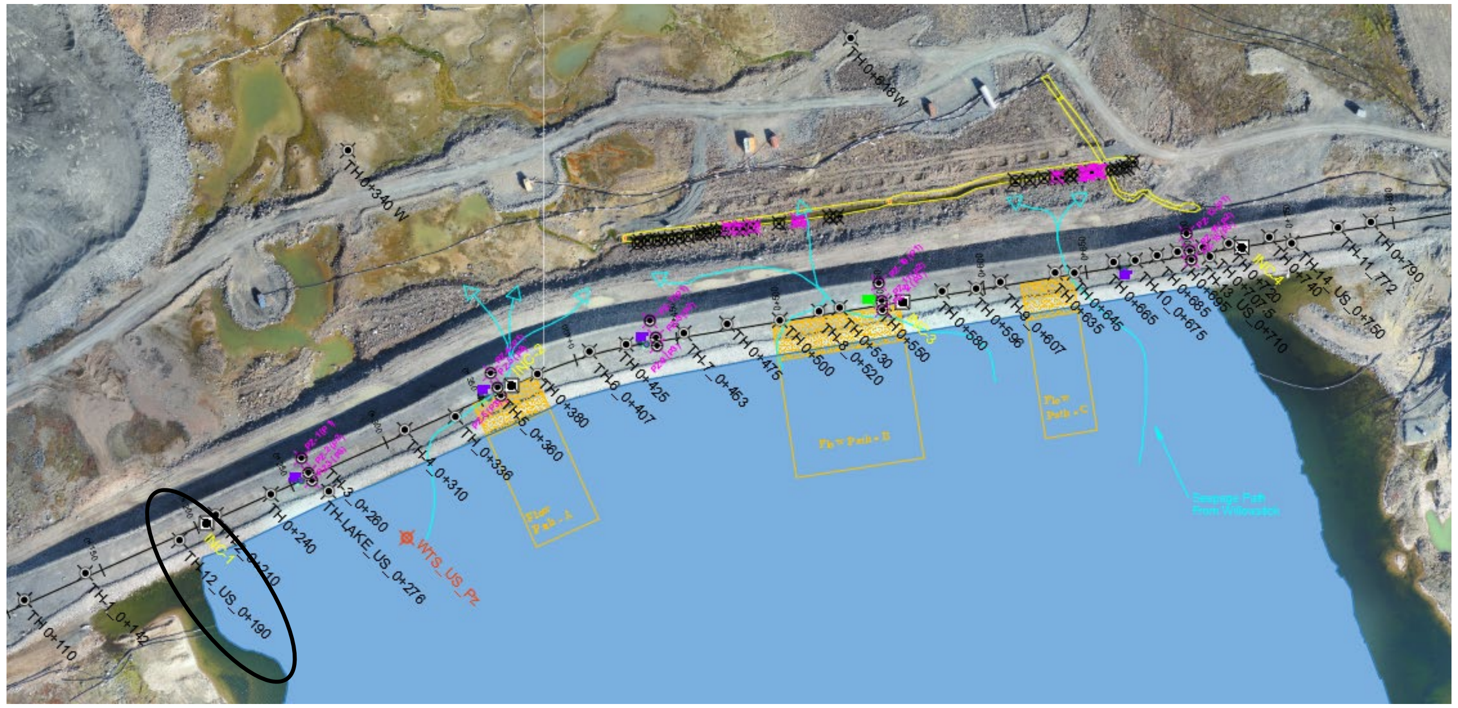
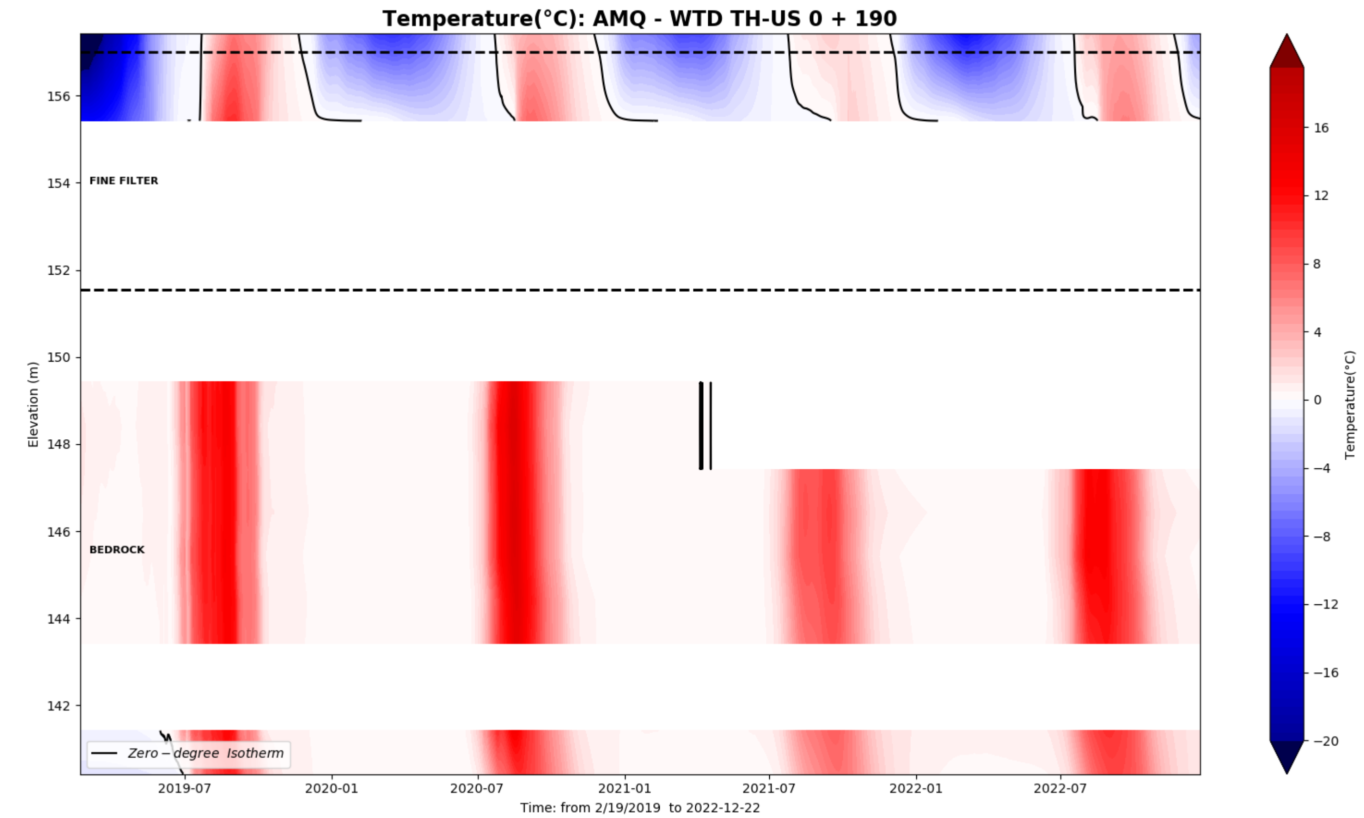
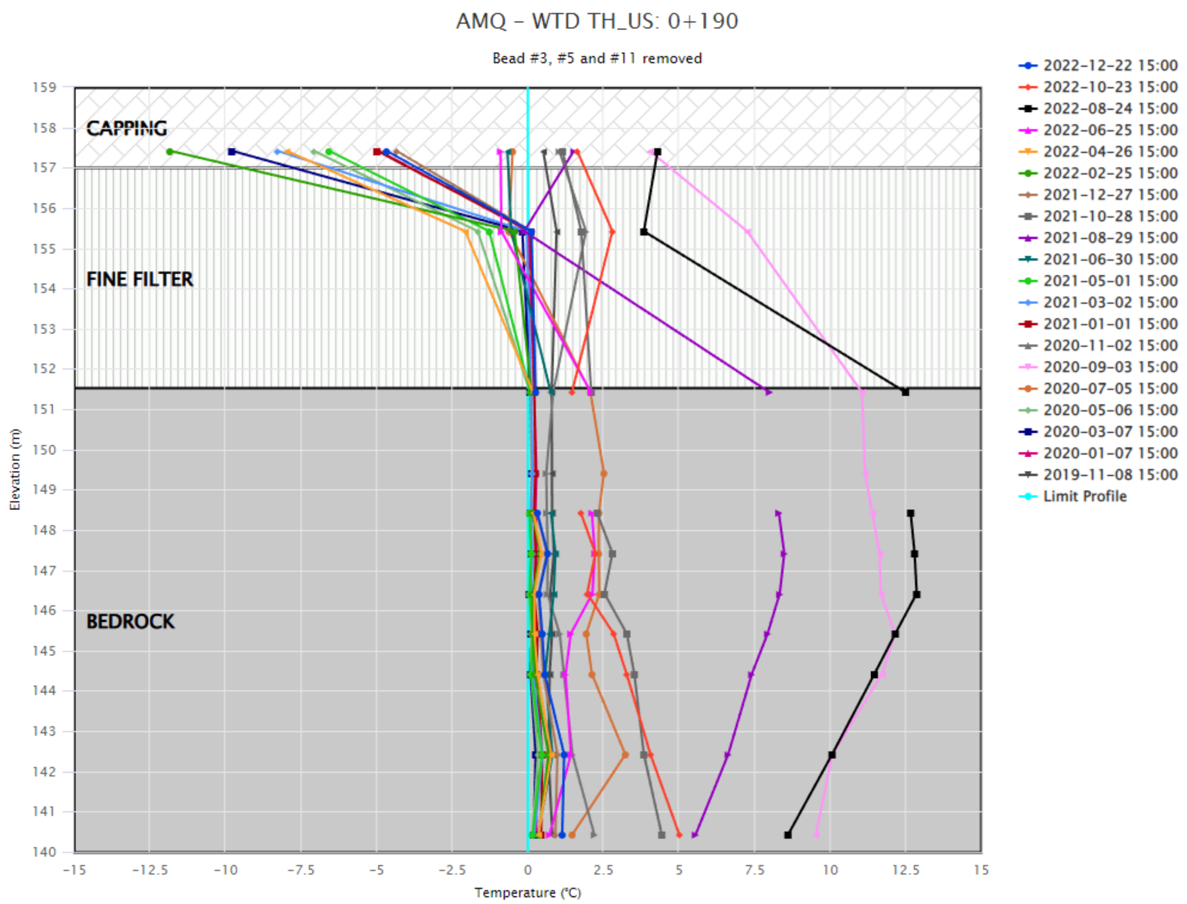
2021-05-31 15:00
Limit Profile

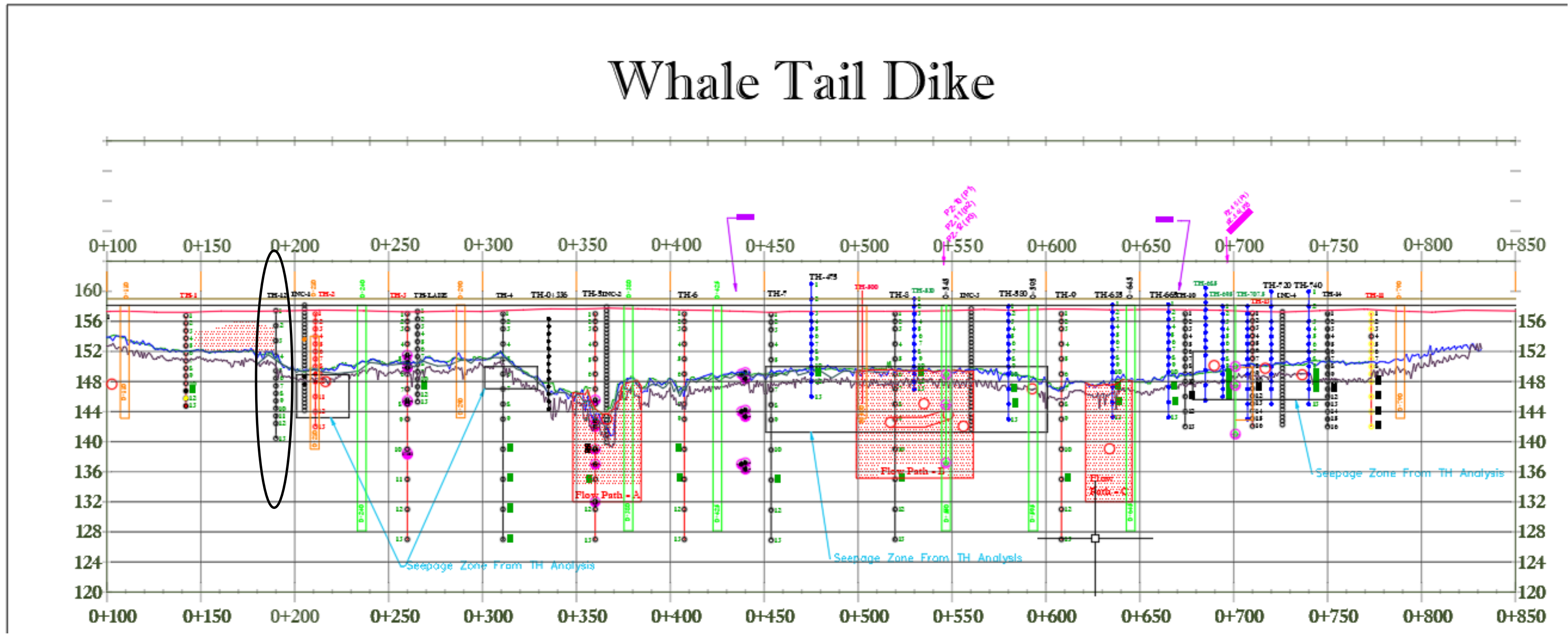

Whale Tail Dike
0+100
0+150
0+200
0+250
0+300
0+350
0+400
0+450
0+500
0+550
0+600
0+650
0+700
0+750
0+800
0+850
Seepage Zone From TH Analysis

WTD-TH 0+190 U/S

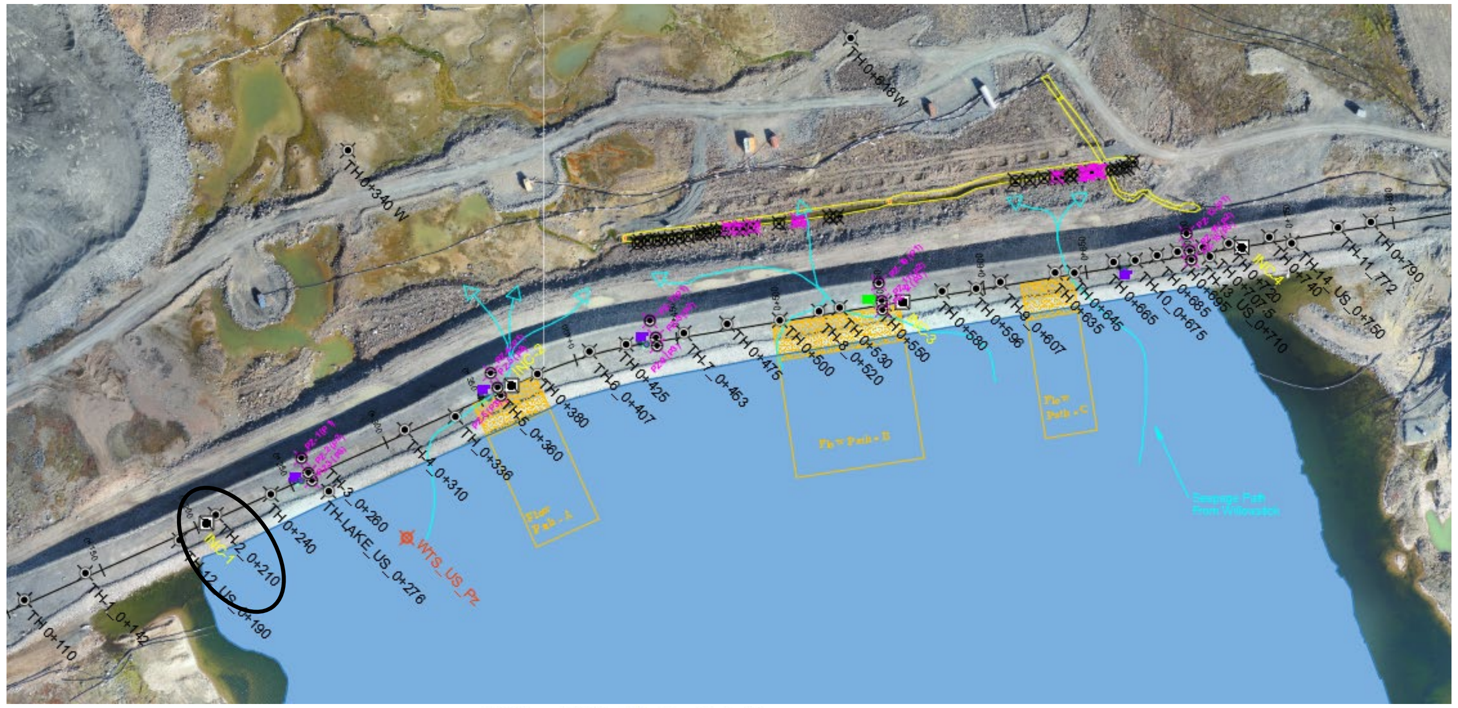


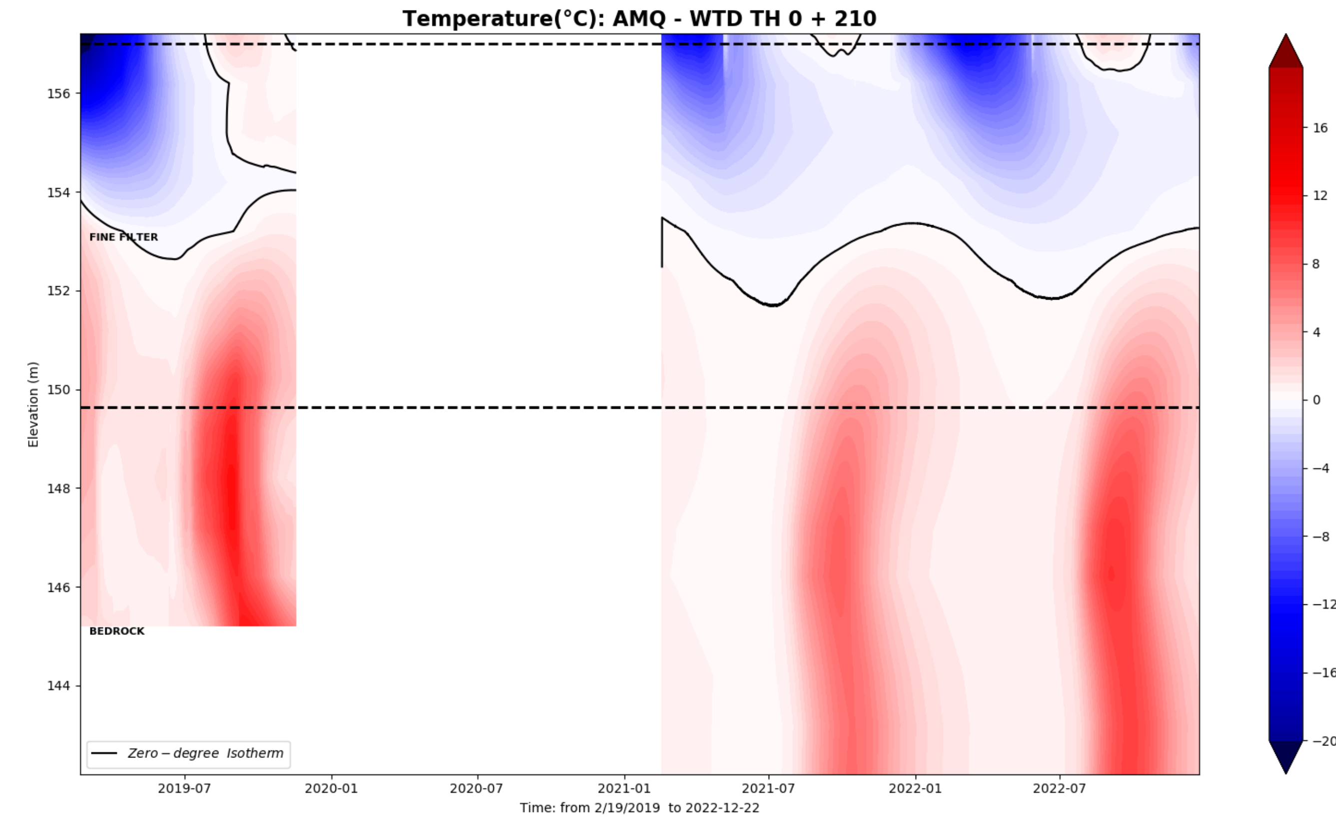


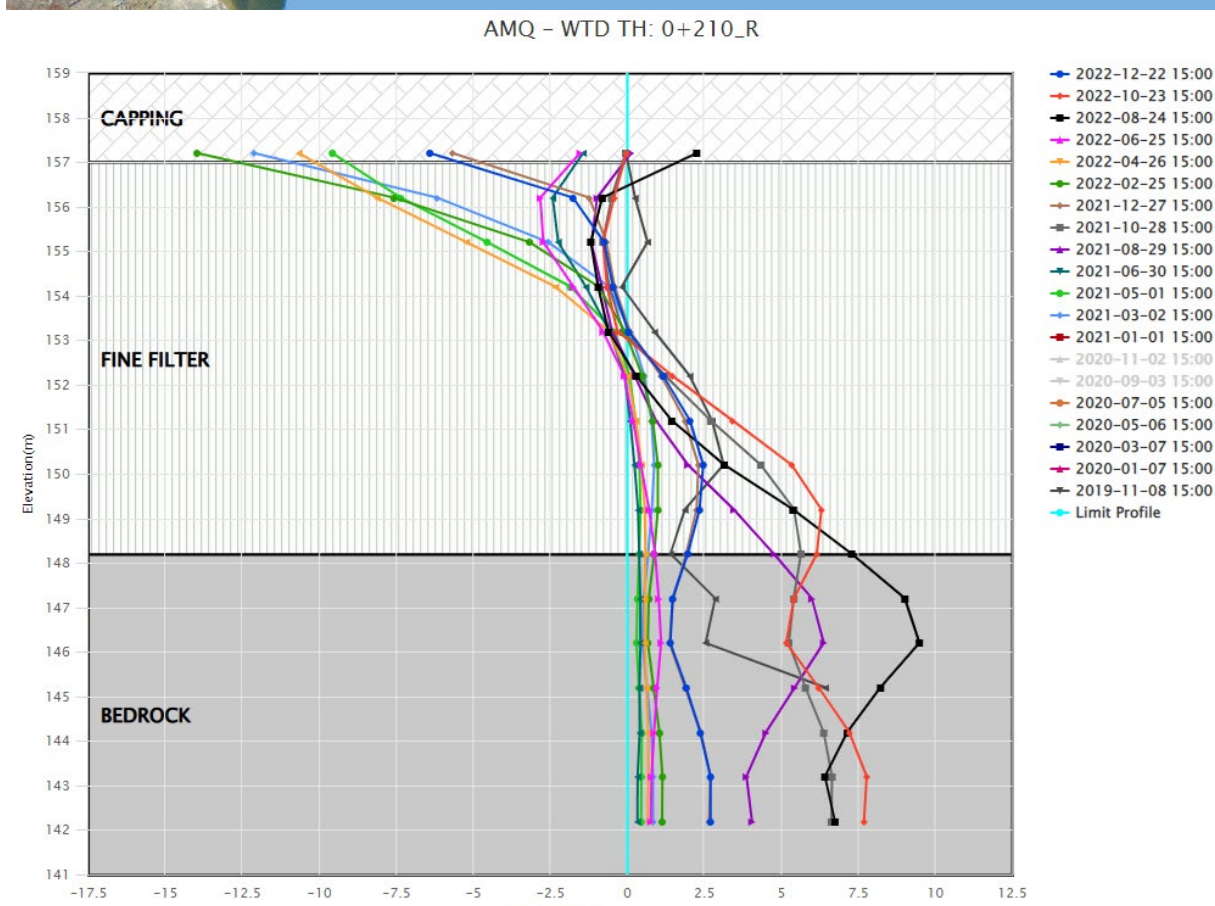




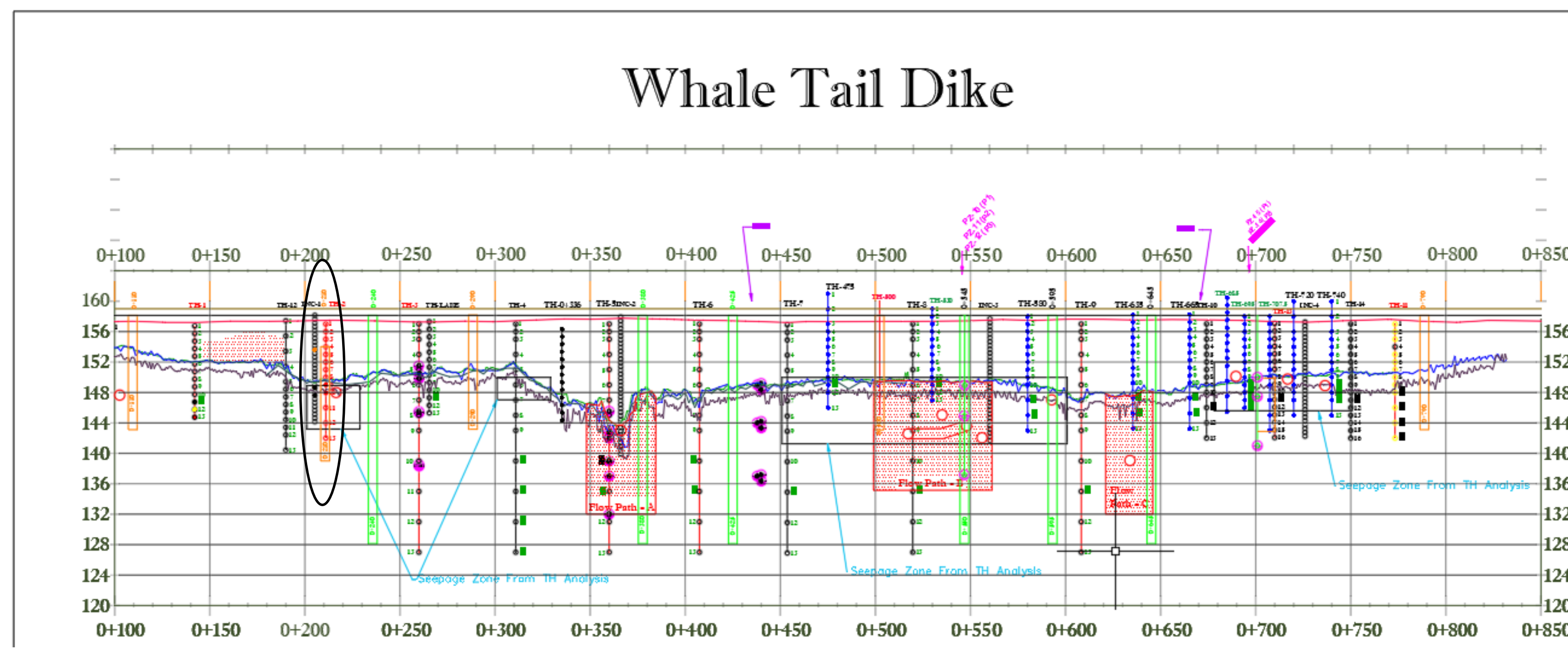
WTD-TH 0+210



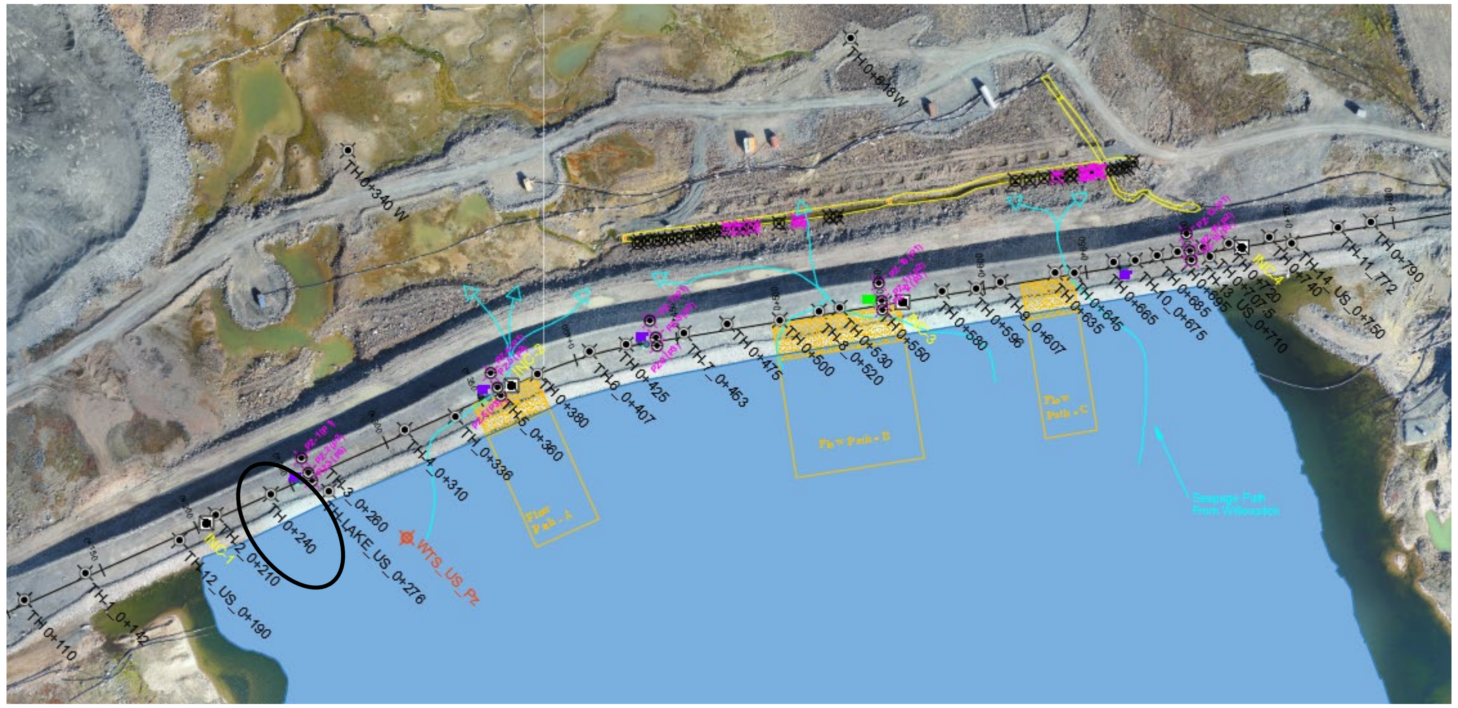


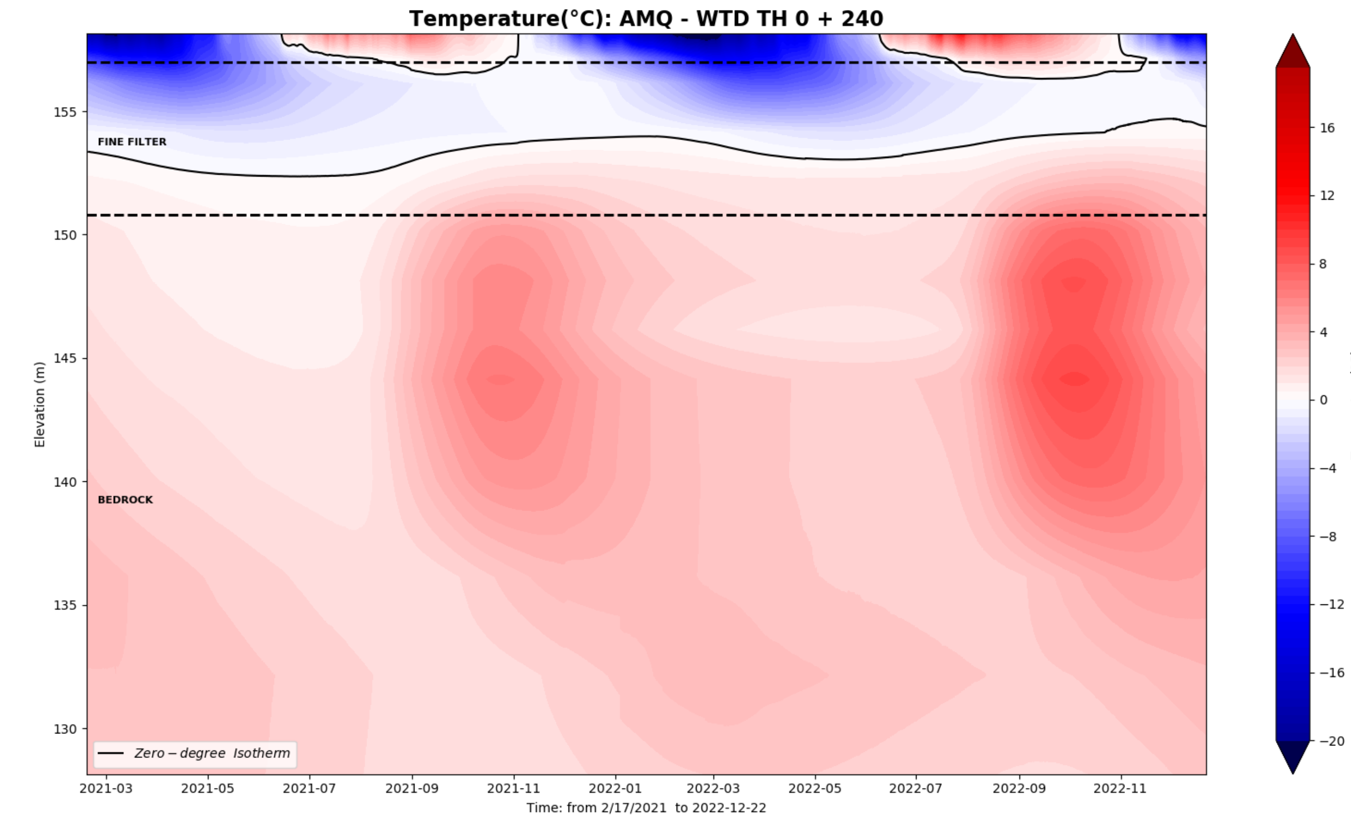


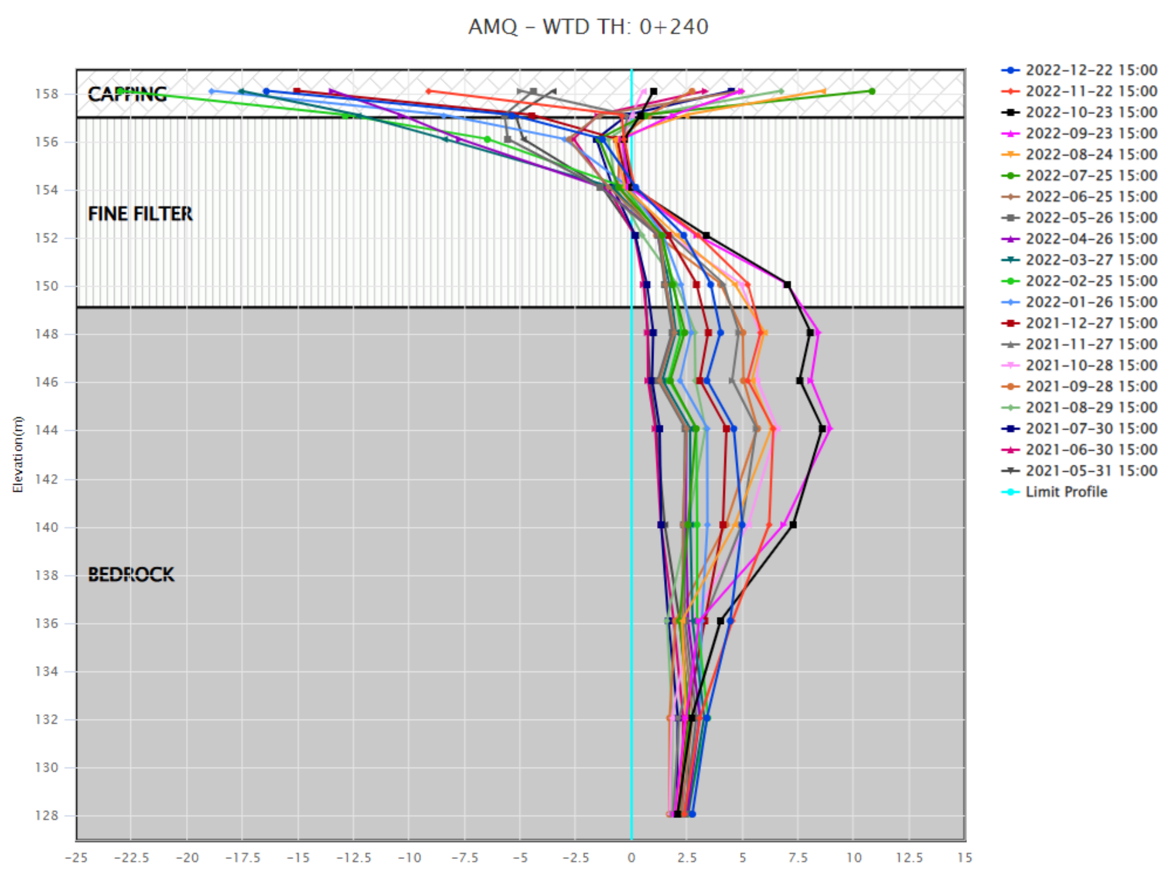
Thermistor string damaged by drilling. No dataset between Oct 2019 and February 2021. TH replaced



WTD-TH 0+240




Temperature(°C): AMQ - WTD TH 0 + 240
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/17/2021 to 2022-12-22


AMQ - WTD TH: 0+240
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-22 15:00
2022-11-22 15:00
2022-10-23 15:00
2022-09-23 15:00
2022-08-24 15:00
2022-07-25 15:00
2022-06-25 15:00
2022-05-26 15:00
2022-04-26 15:00
2022-03-27 15:00
2022-02-25 15:00
2022-01-26 15:00
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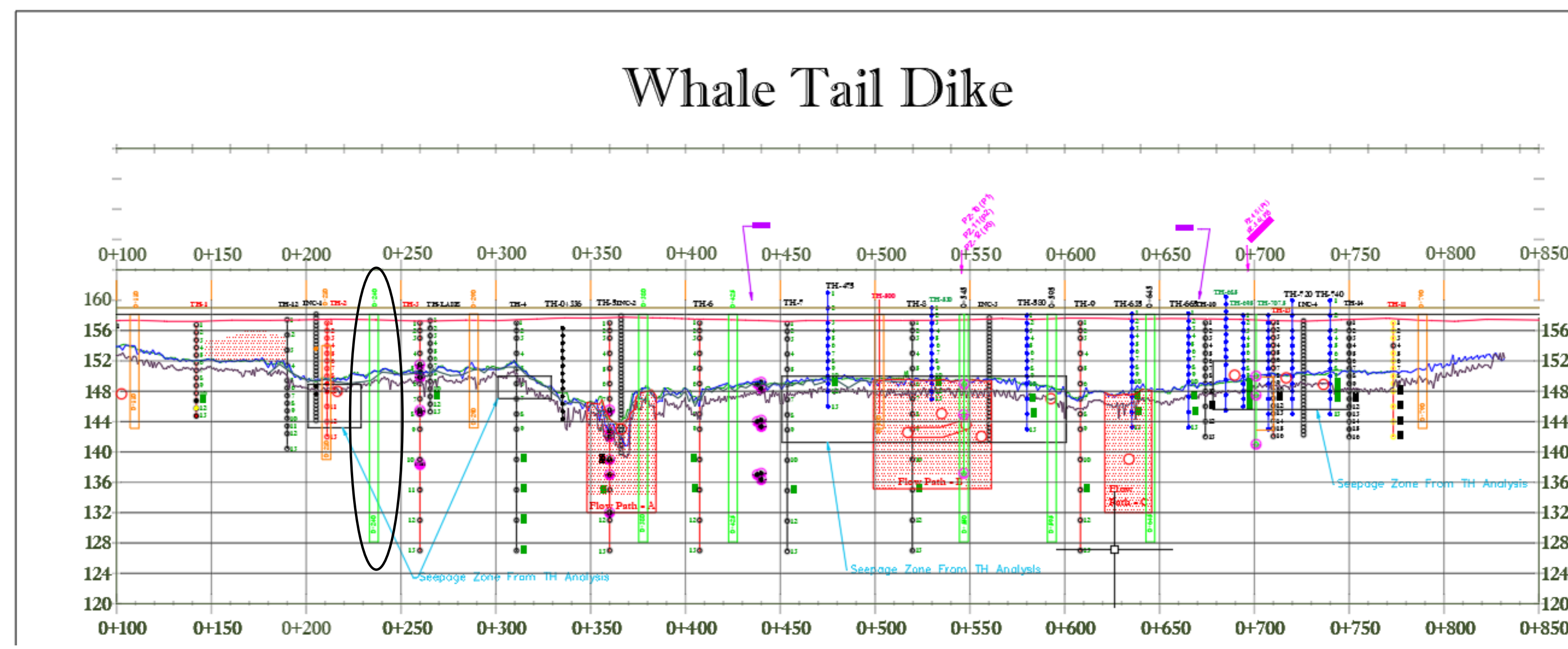
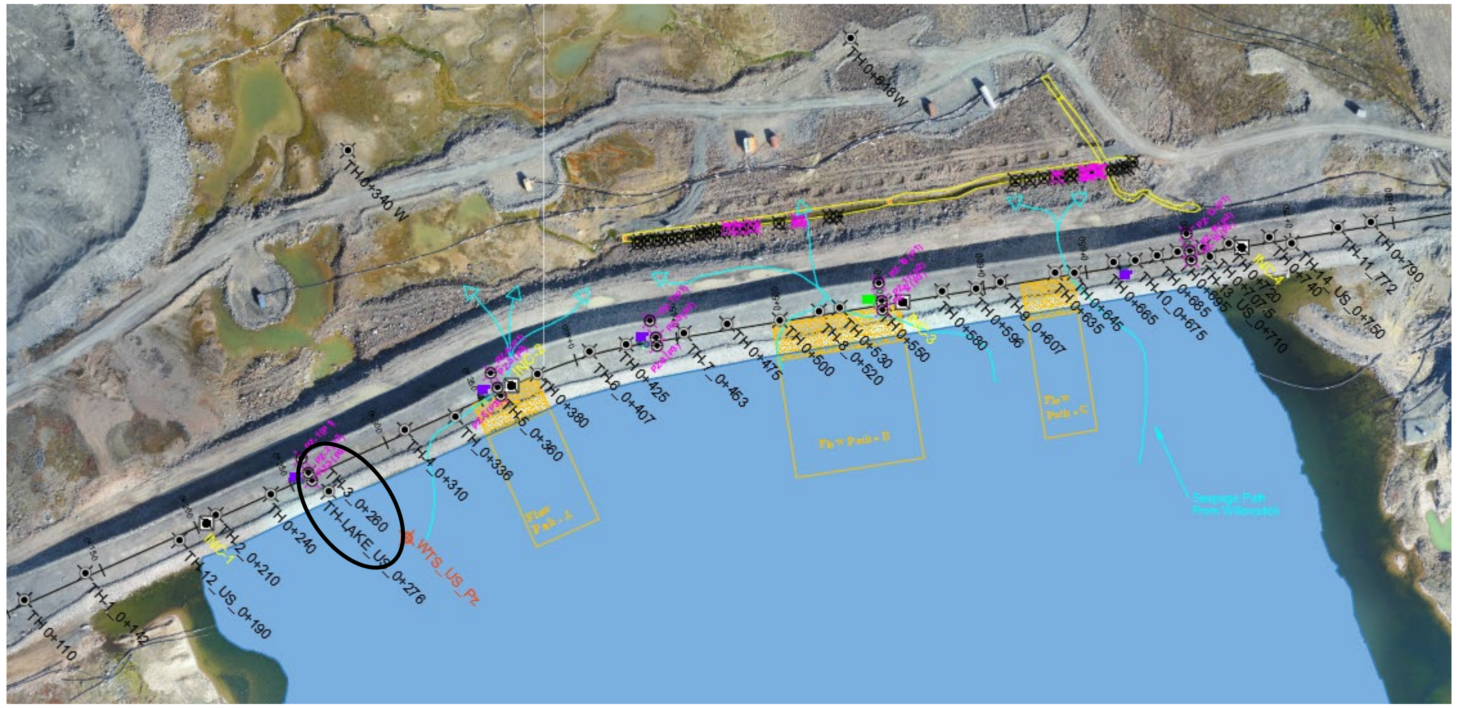
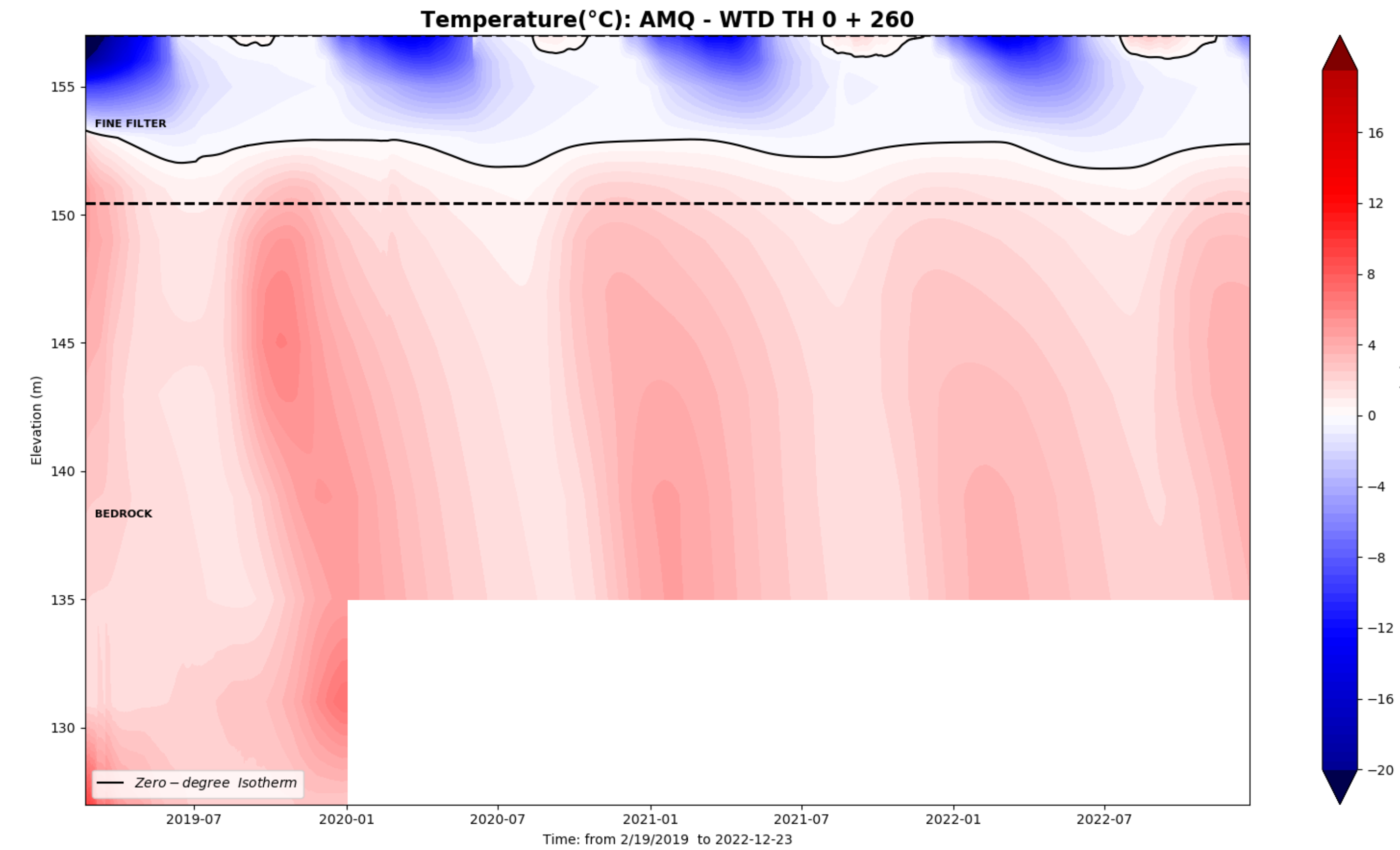
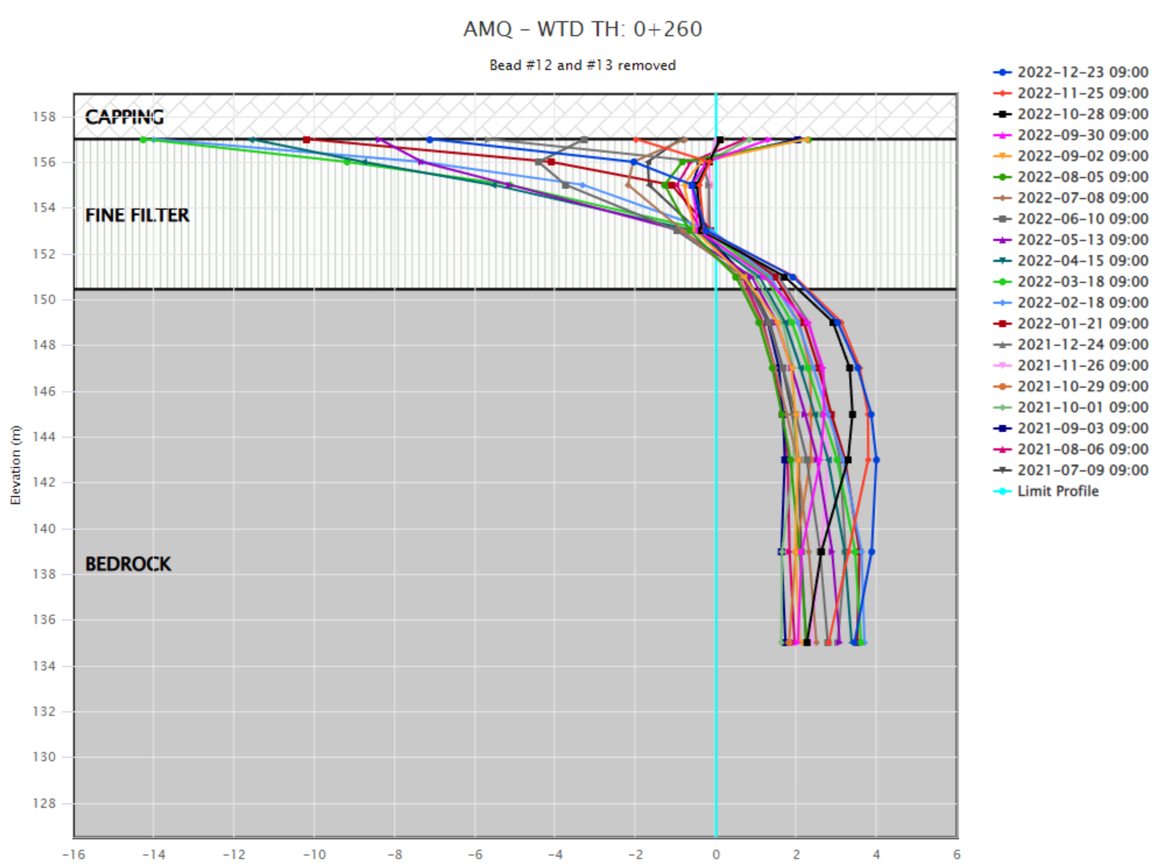
2021-05-31 15:00
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+260




Temperature(°C): AMQ - WTD TH 0 + 260
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/19/2019 to 2022-12-23


AMQ – WTD TH: 0+260
Bead #12 and #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
2022-10-28 09:00
2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
2022-07-08 09:00
2022-06-10 09:00
2022-05-13 09:00
2022-04-15 09:00
2022-03-18 09:00
2022-02-18 09:00
2022-01-21 09:00
2021-12-24 09:00
2021-11-26 09:00
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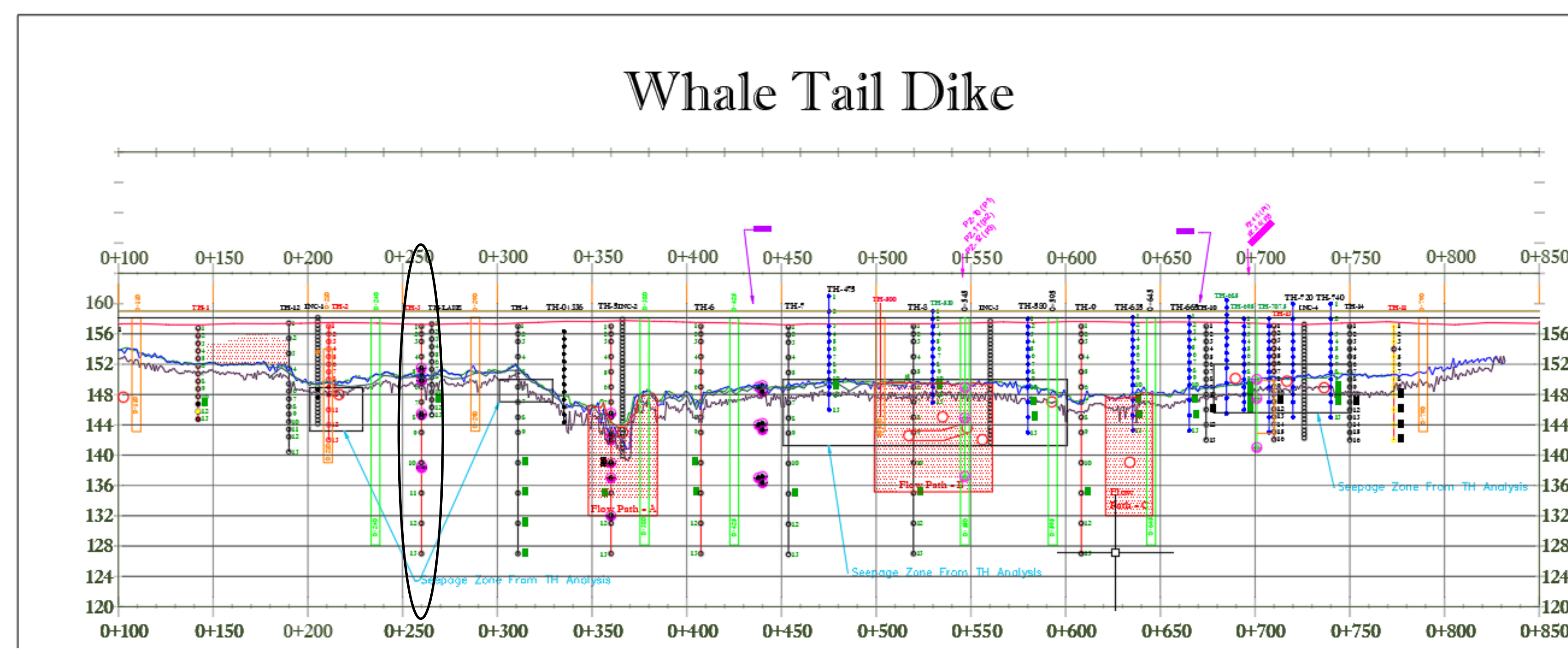
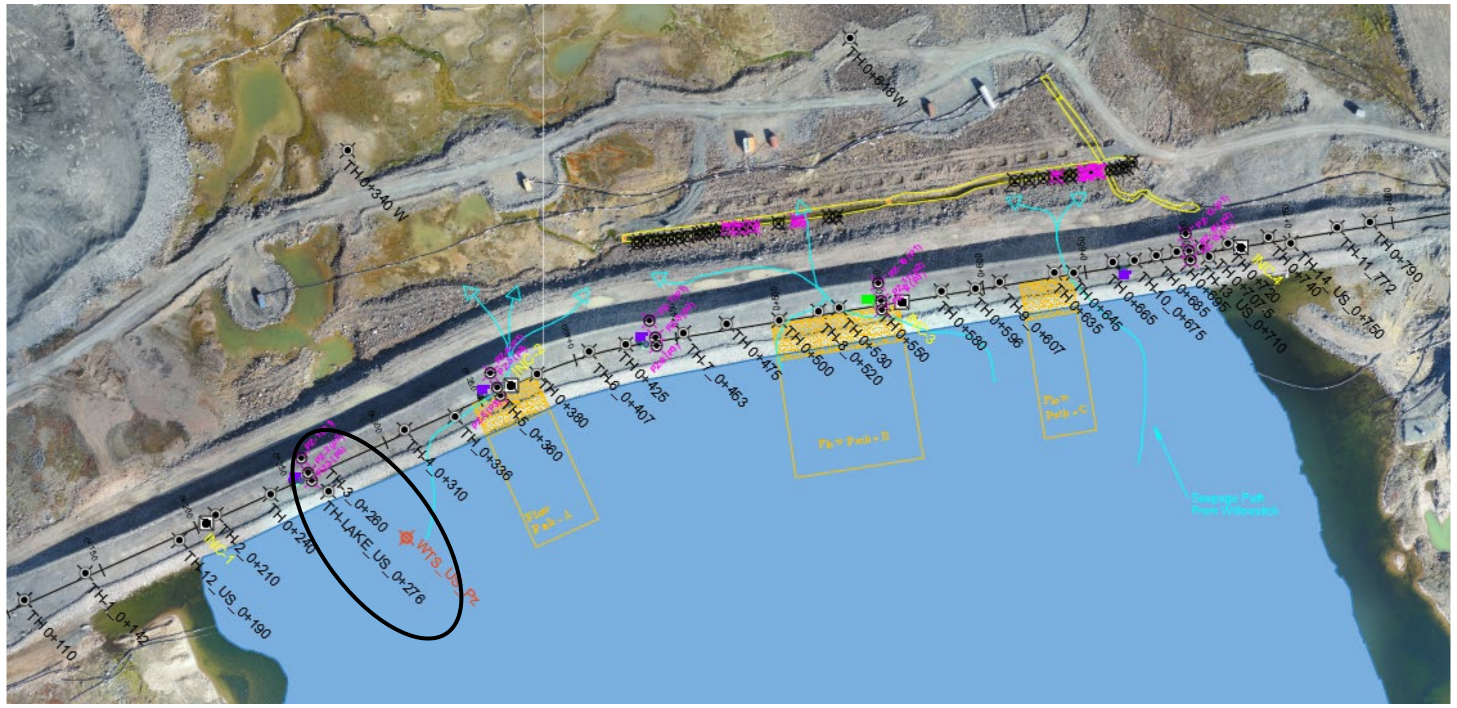
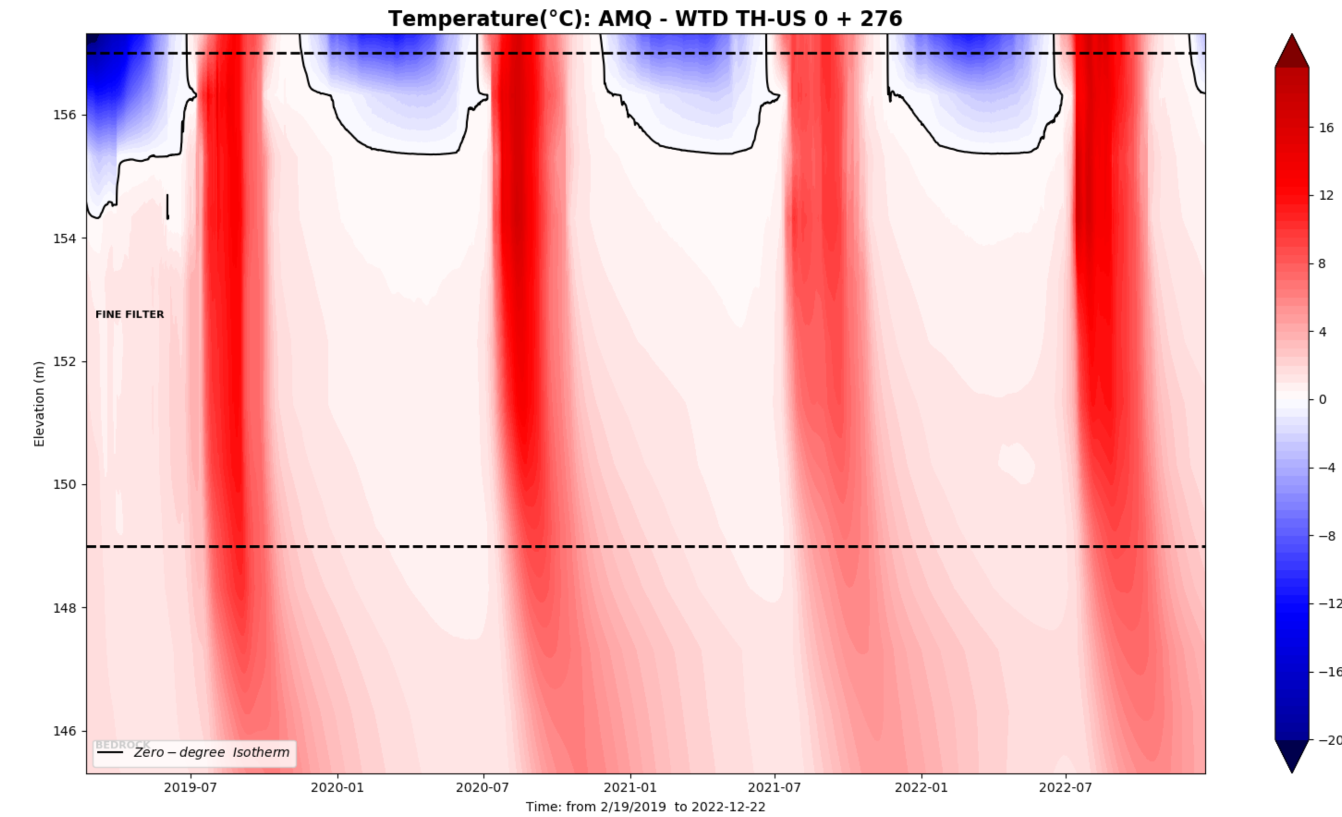
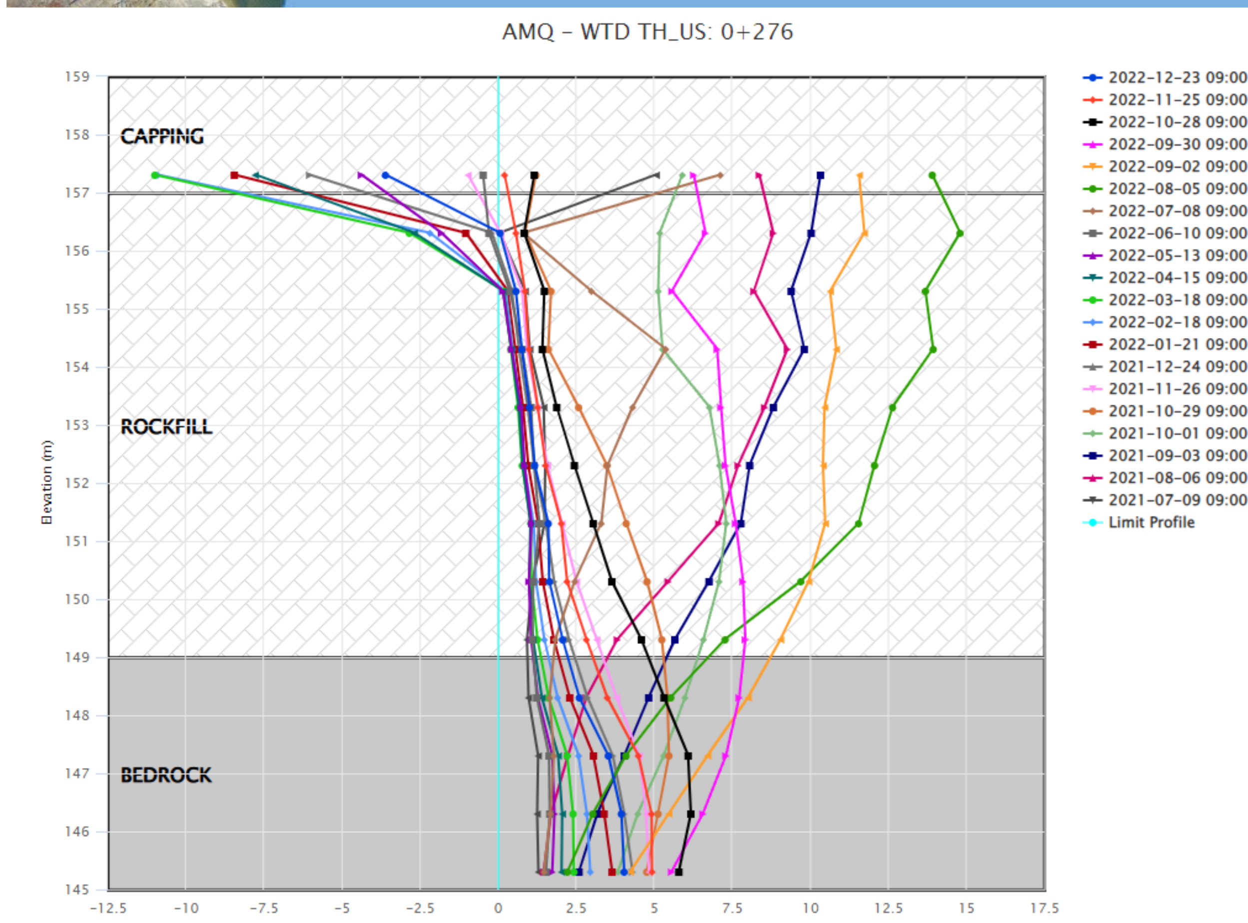
2021-07-09 09:00
Limit Profile

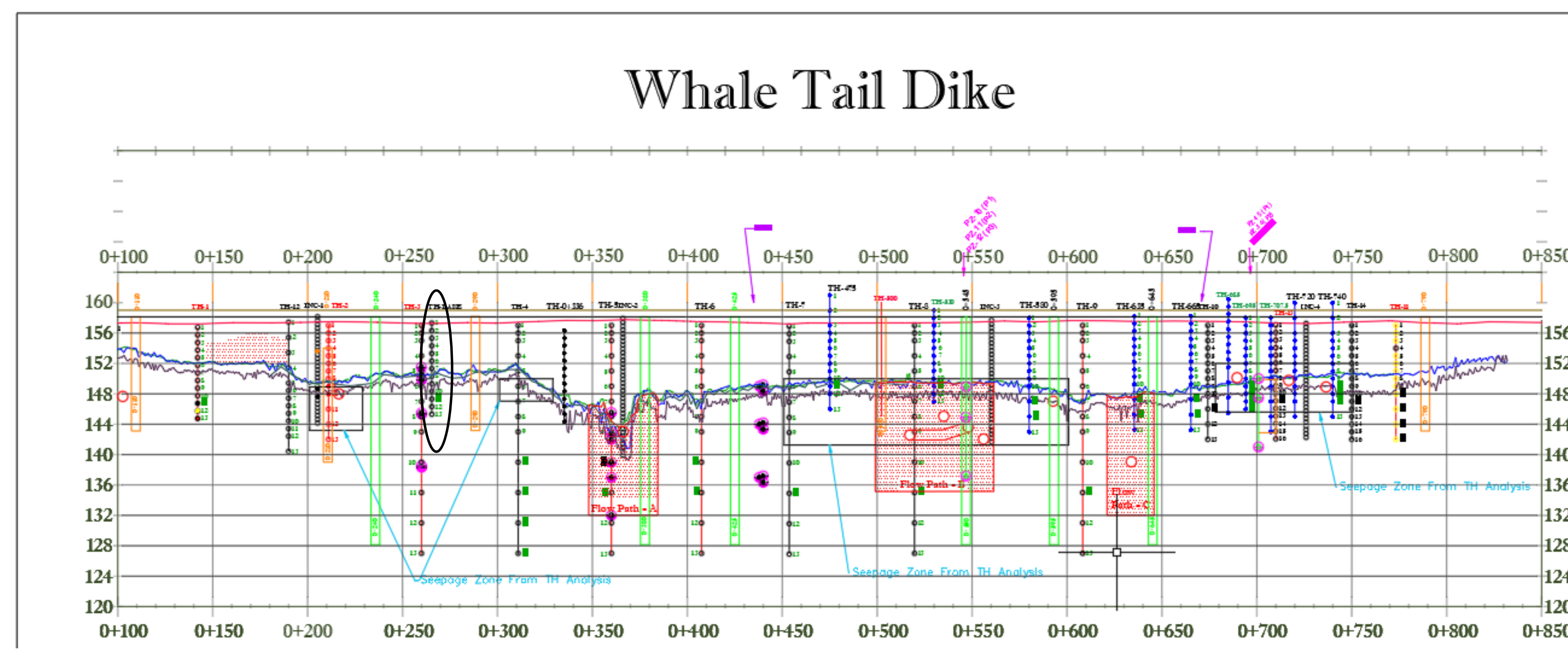

Whale Tail Dike
Flow Path - A
Flow Path - B
Seepage Zone From TH Analysis

WTD-TH 0+276 U/S

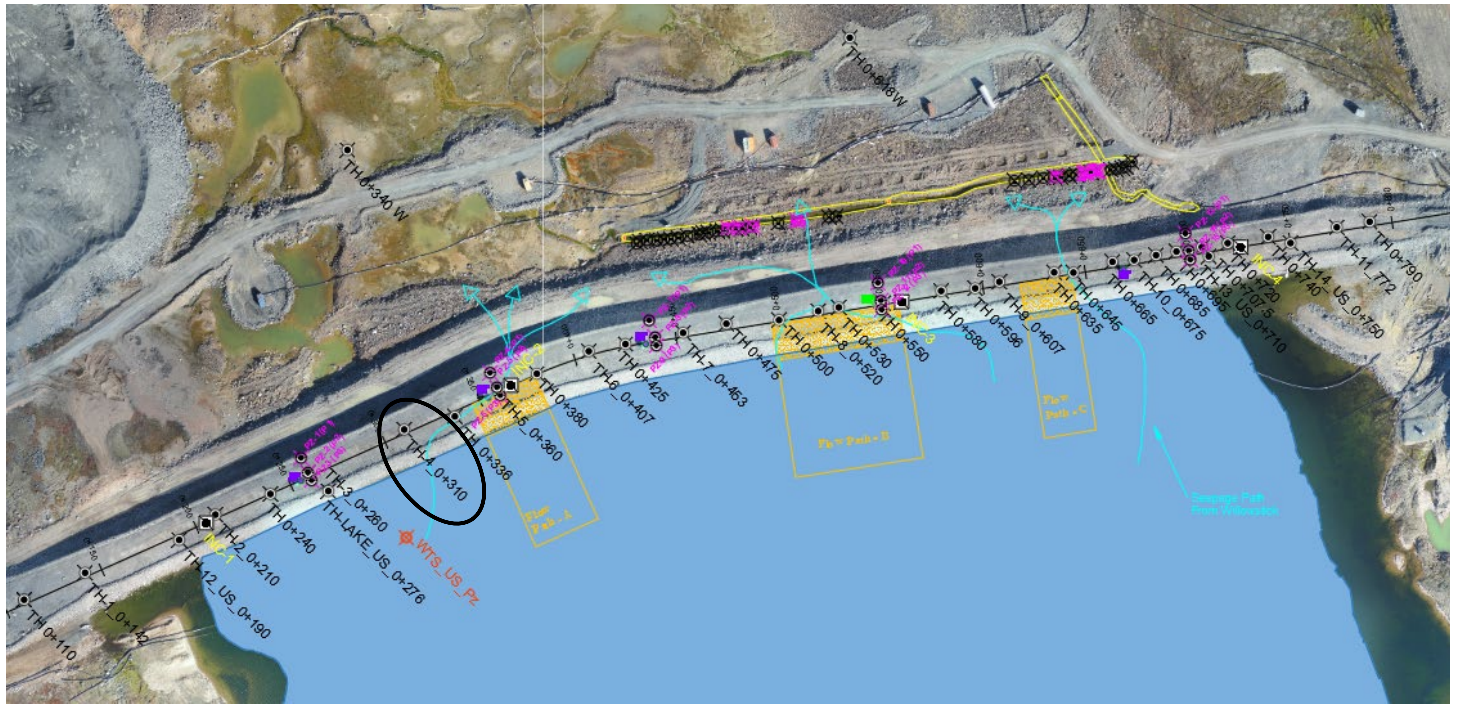


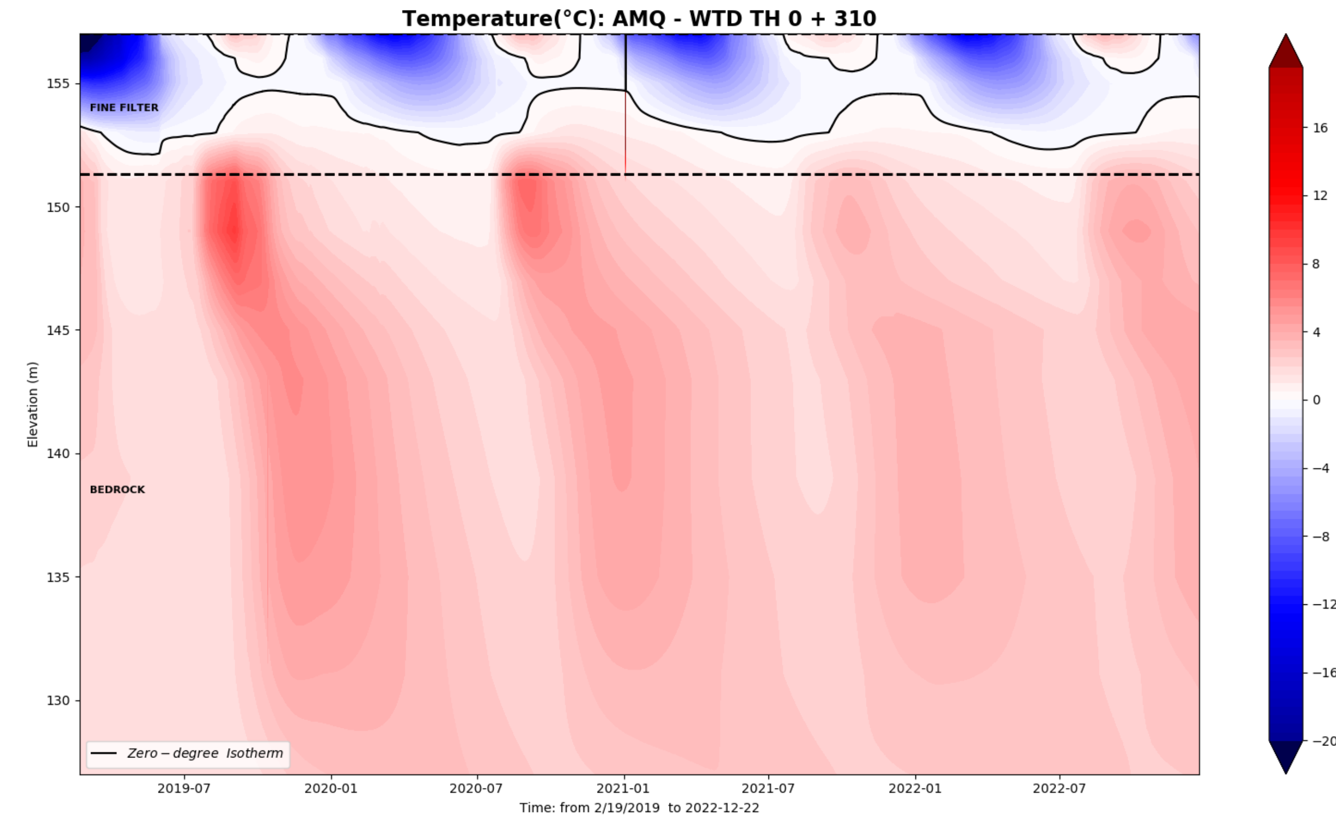


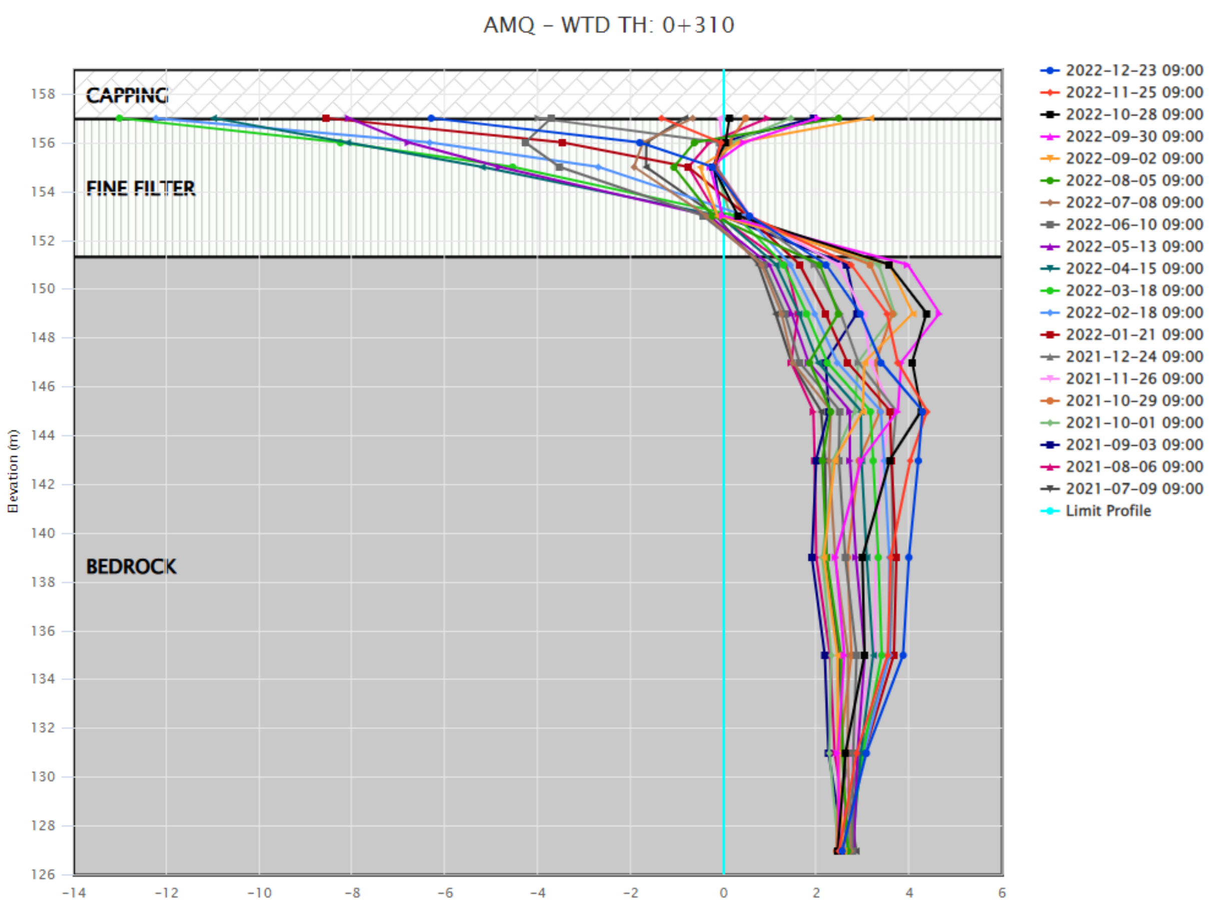




WTD-TH 0+310




Temperature(°C): AMQ - WTD TH 0 + 310
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/19/2019 to 2022-12-22


AMQ – WTD TH: 0+310
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
2022-10-28 09:00
2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
2022-07-08 09:00
2022-06-10 09:00
2022-05-13 09:00
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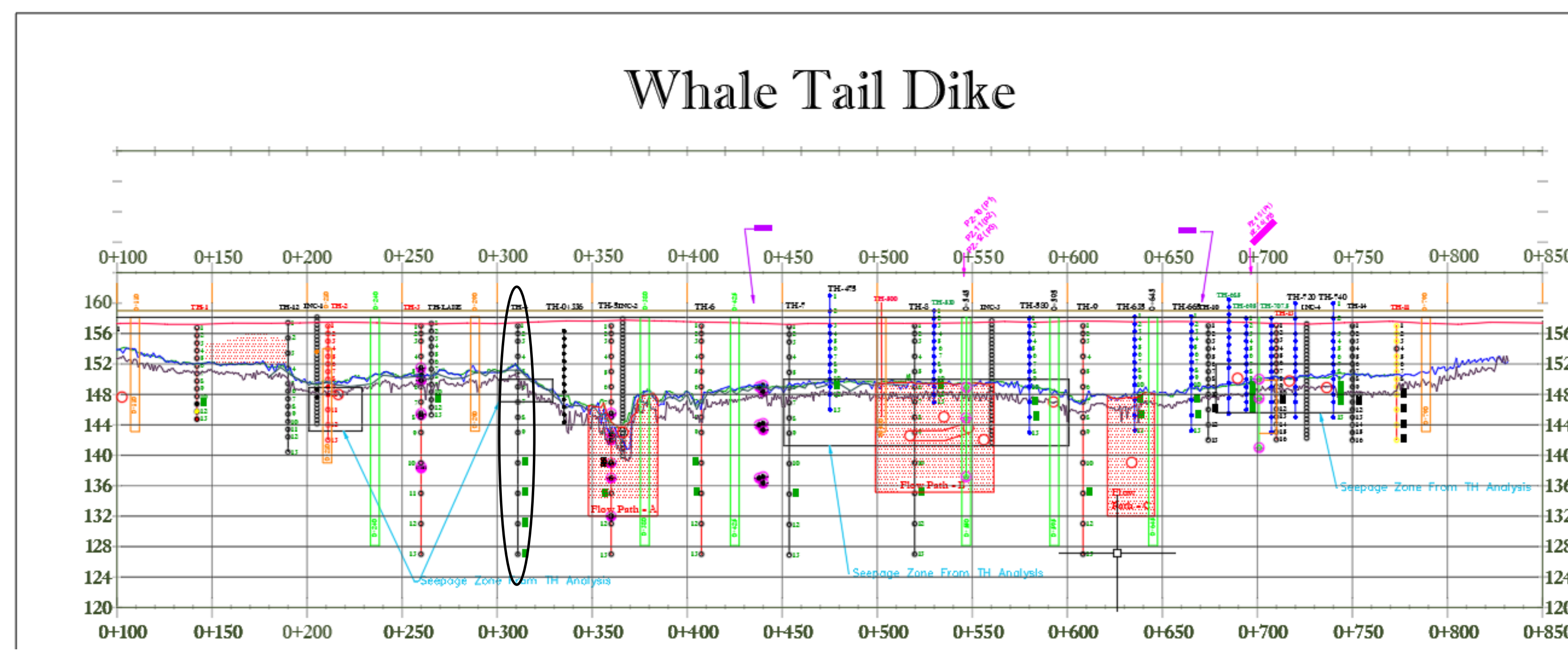
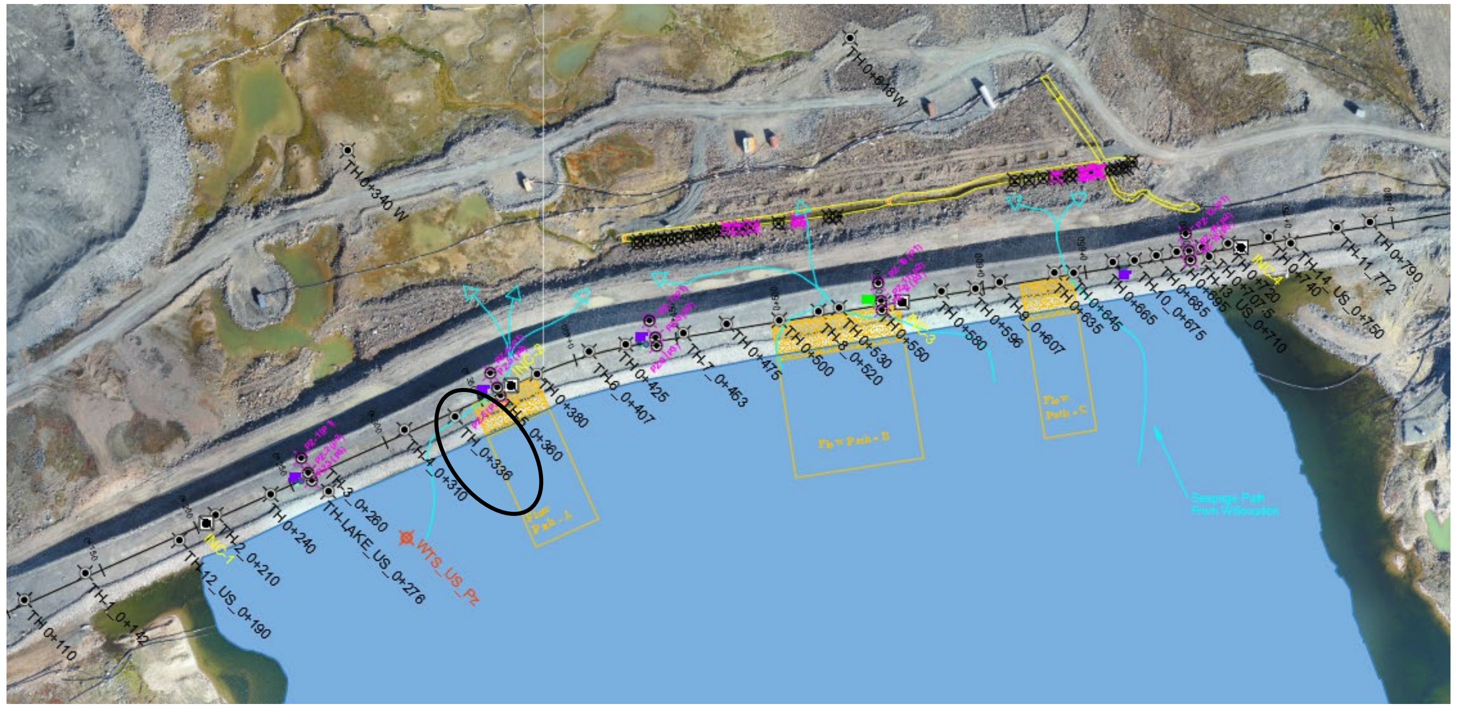
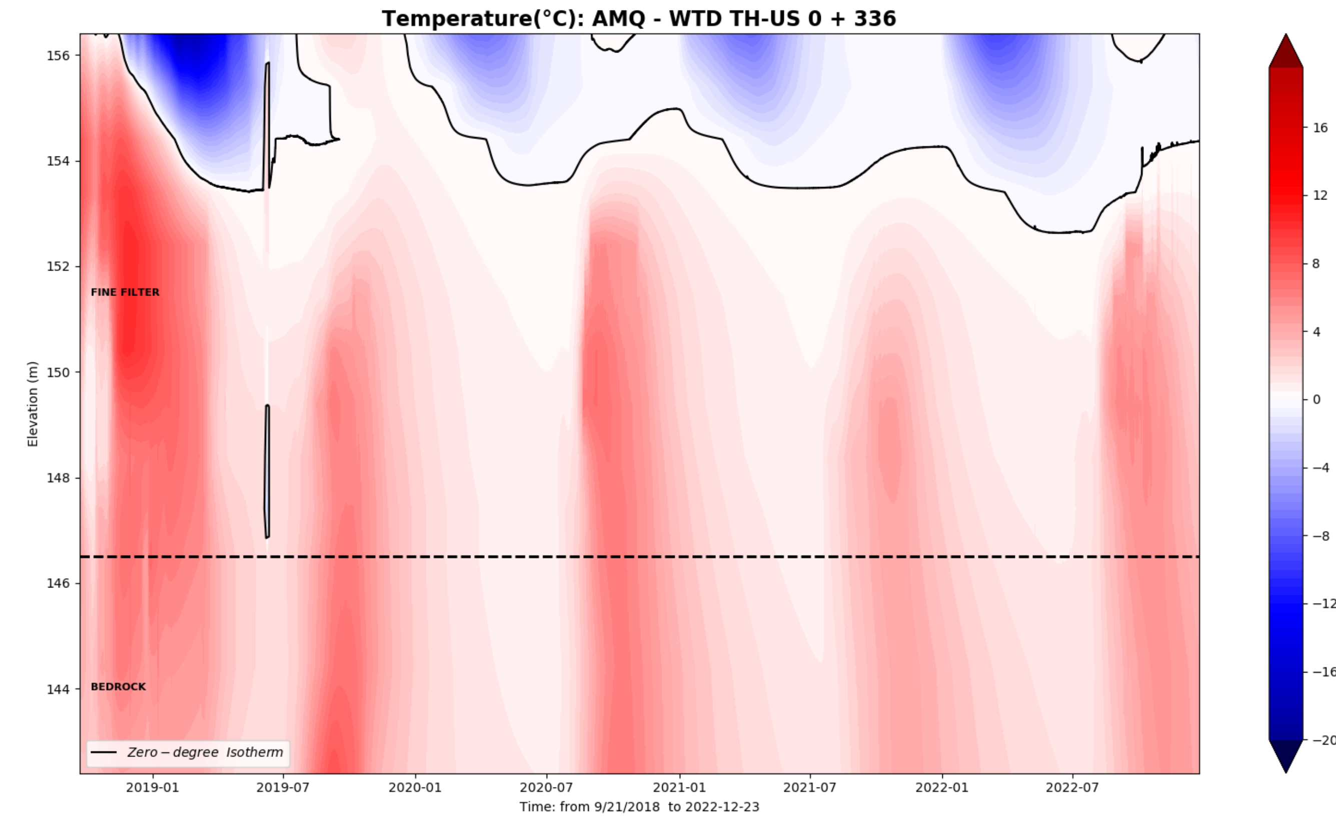
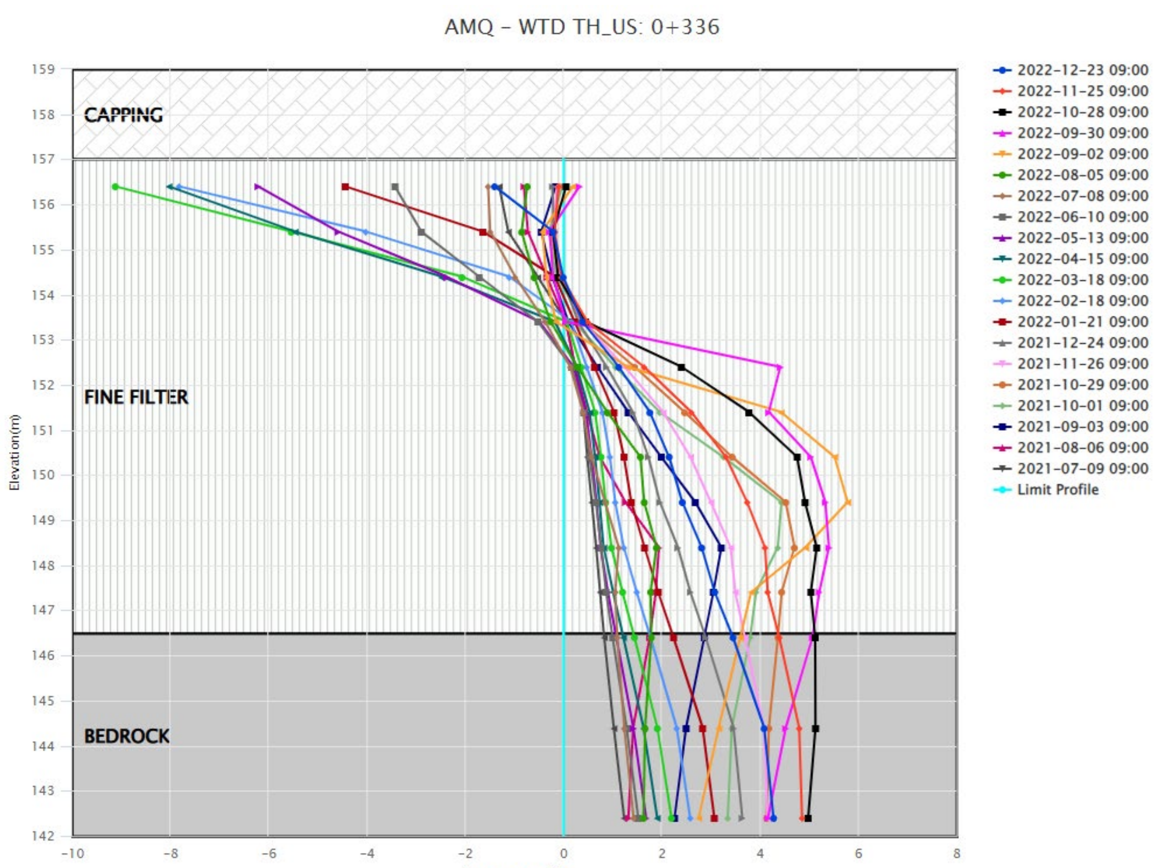
2021-07-09 09:00
Limit Profile

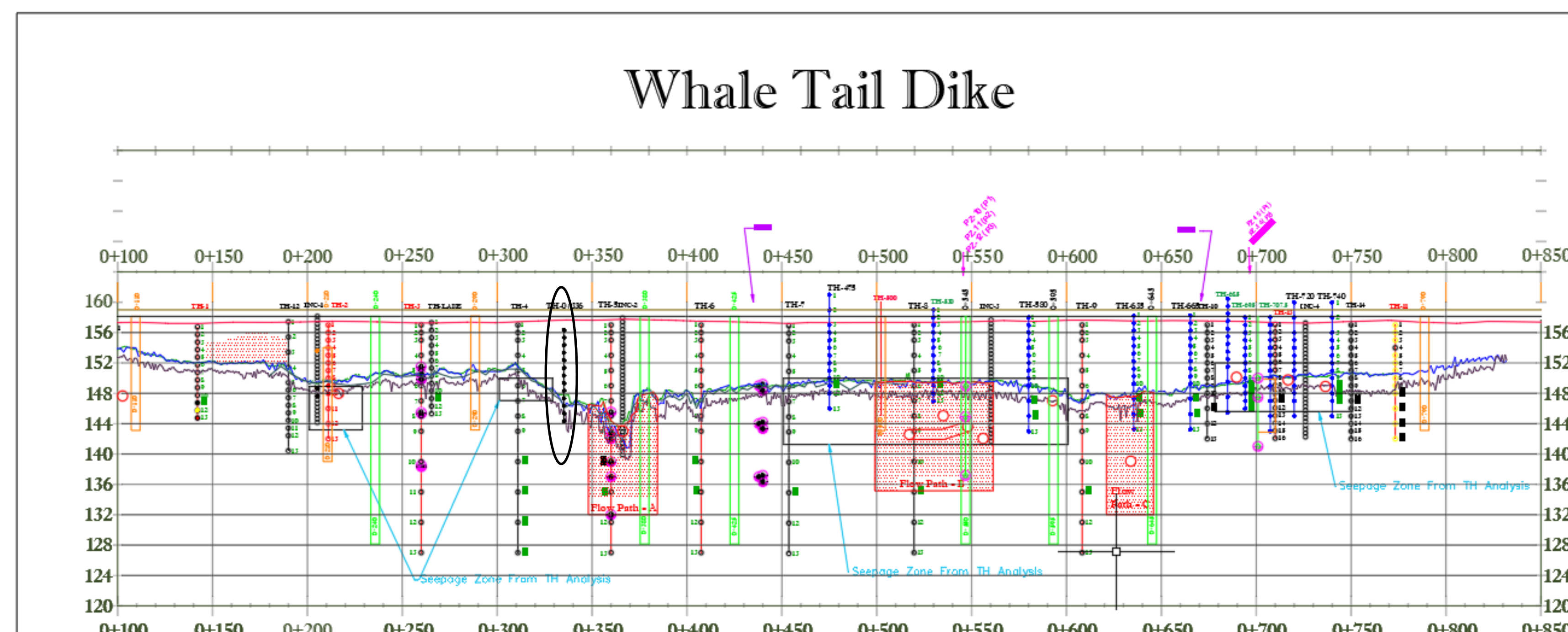

Whale Tail Dike
Flow Path - A
Flow Path - B
Seepage Zone From TH Analysis

WTD-TH 0+336 U/S

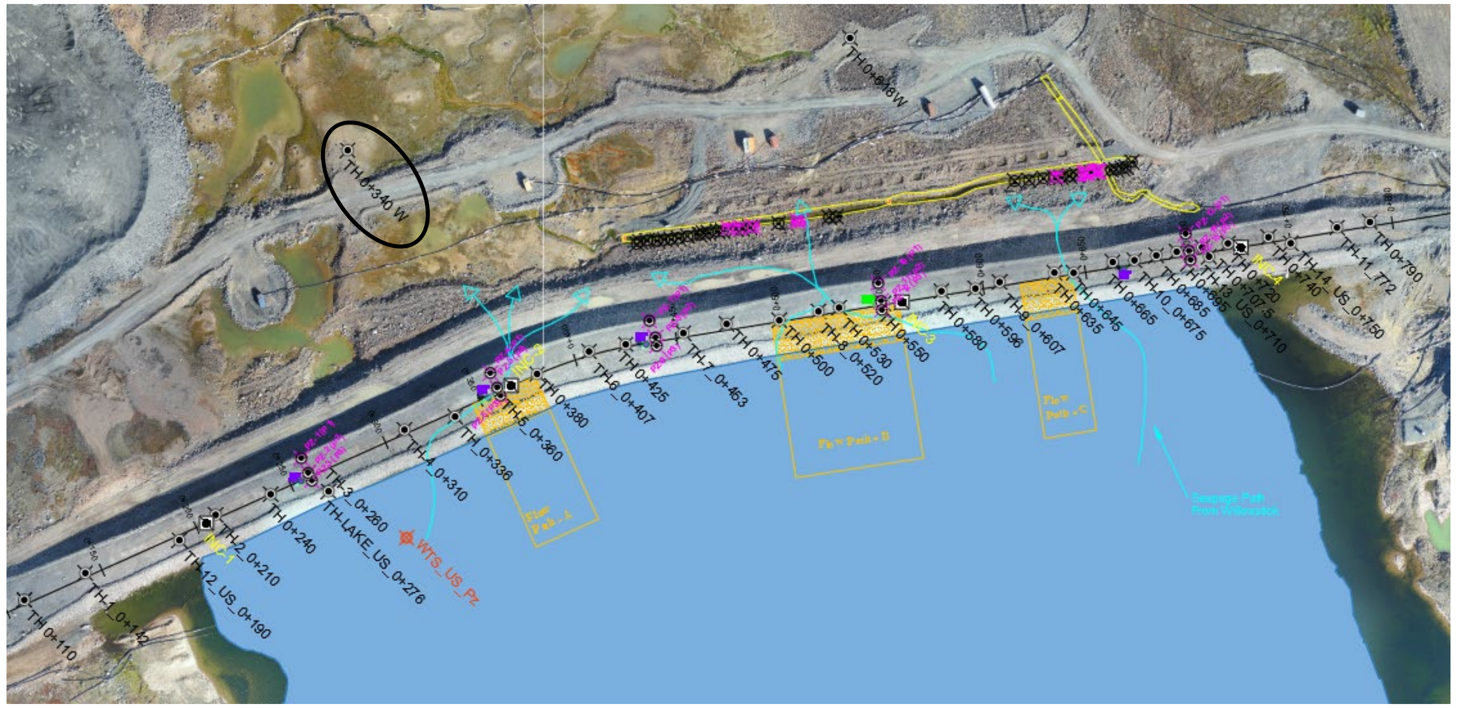


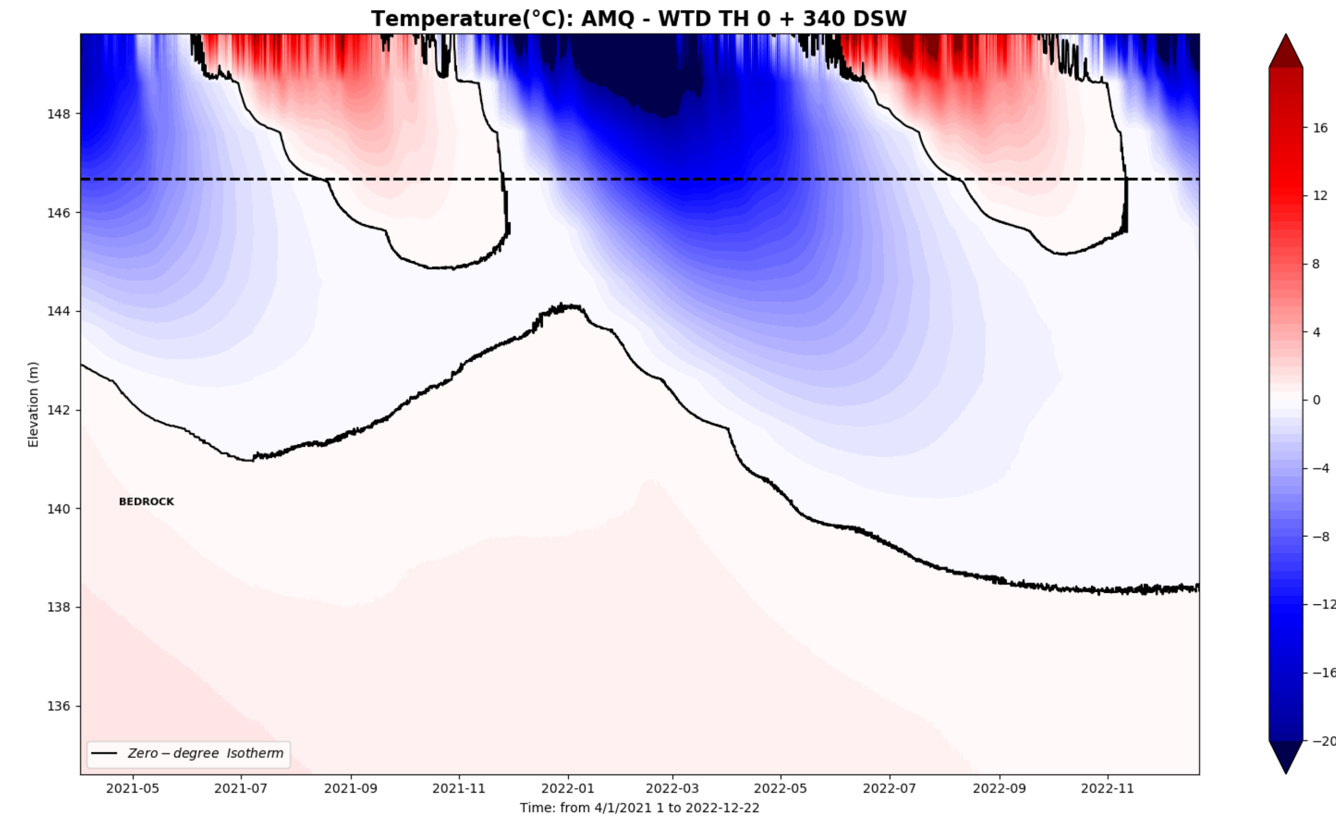


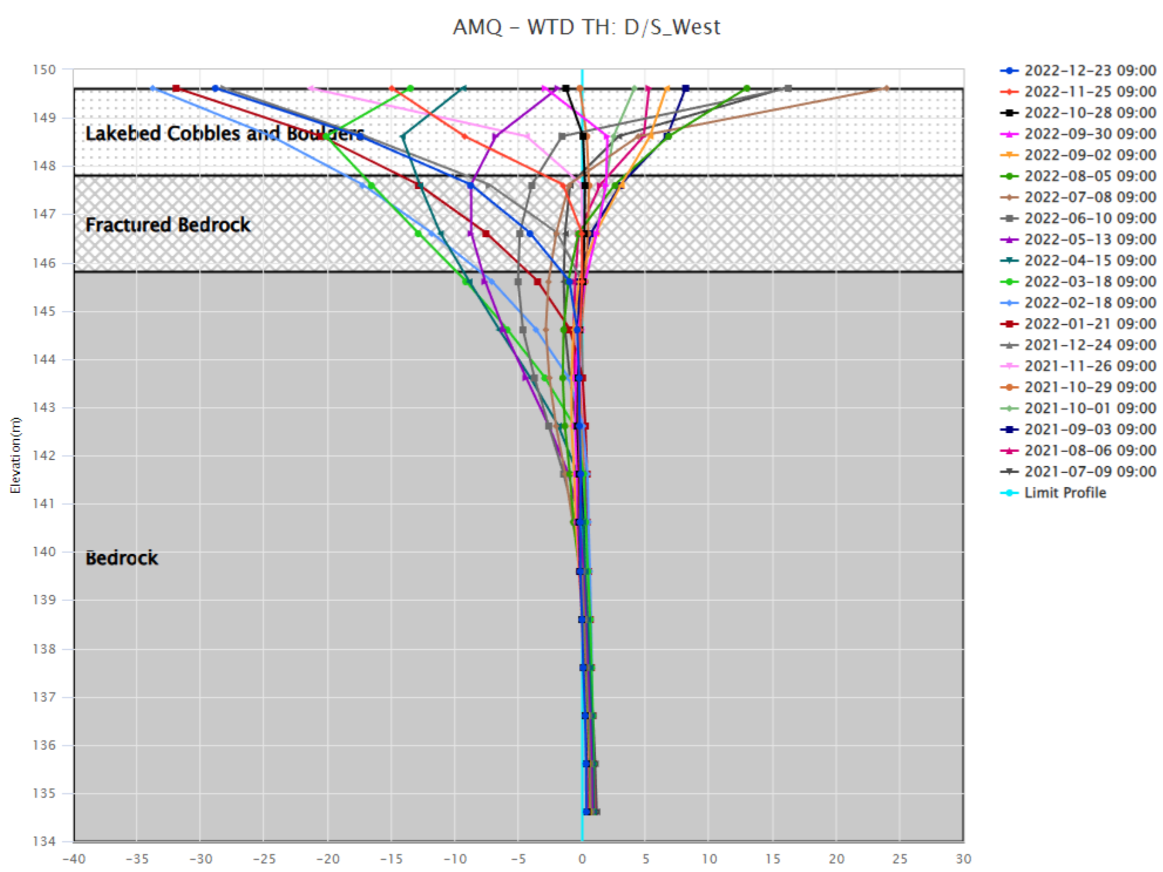




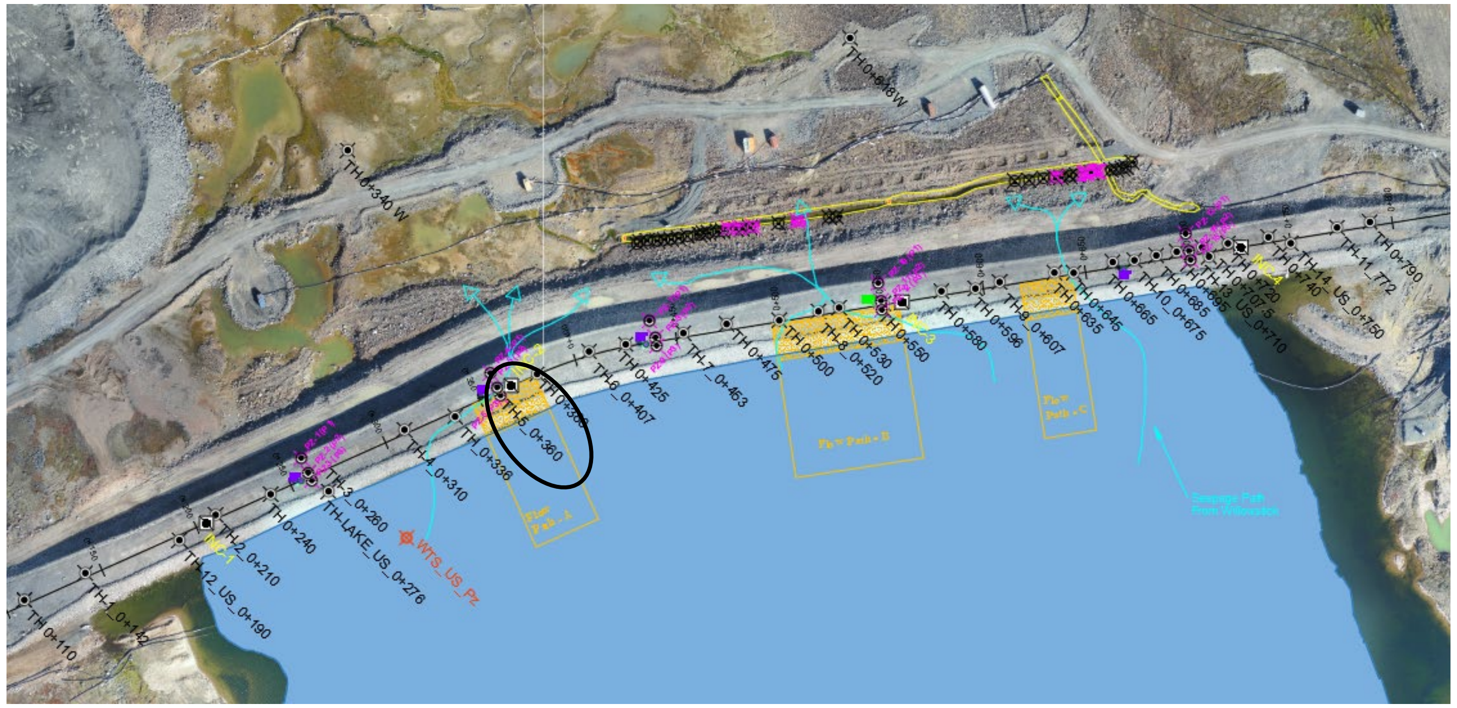
WTD-TH 0+340 DSW

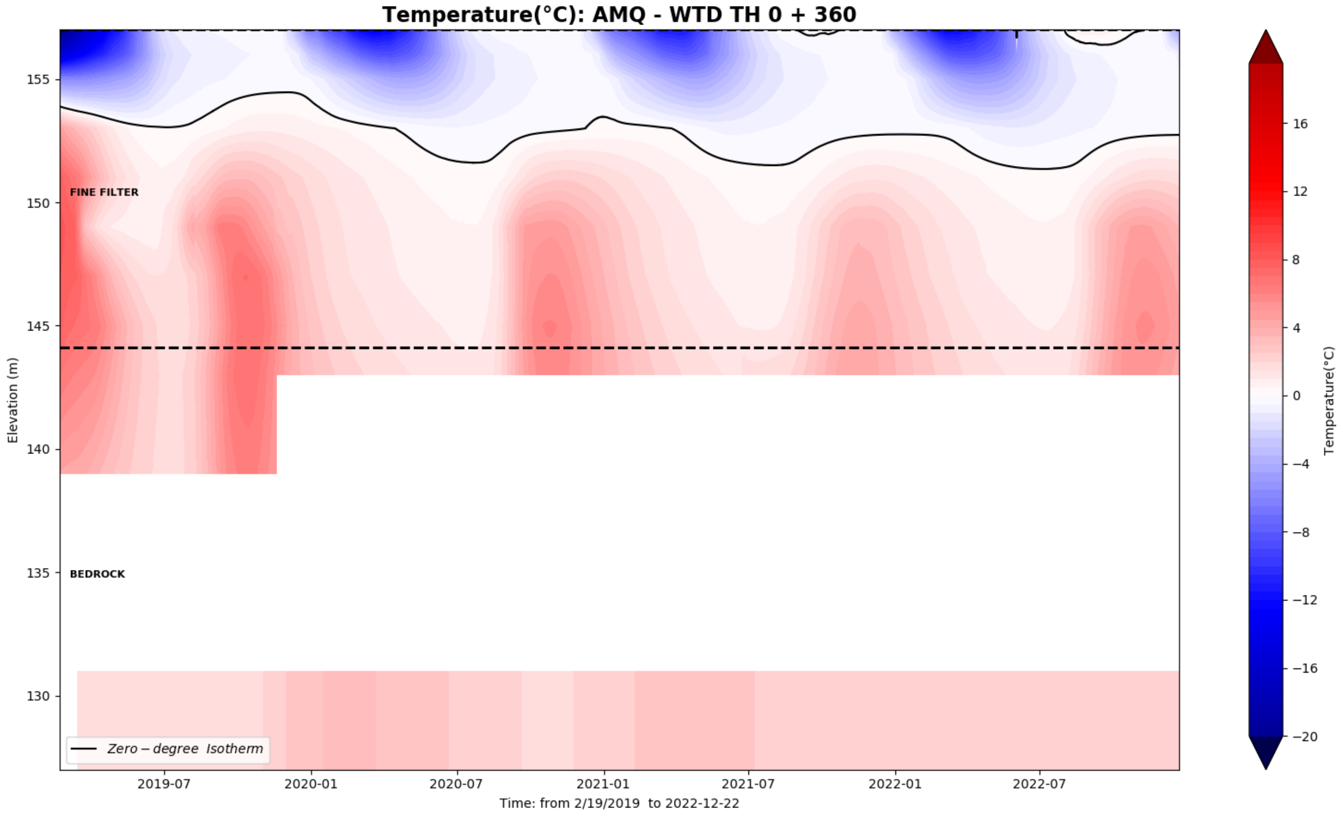




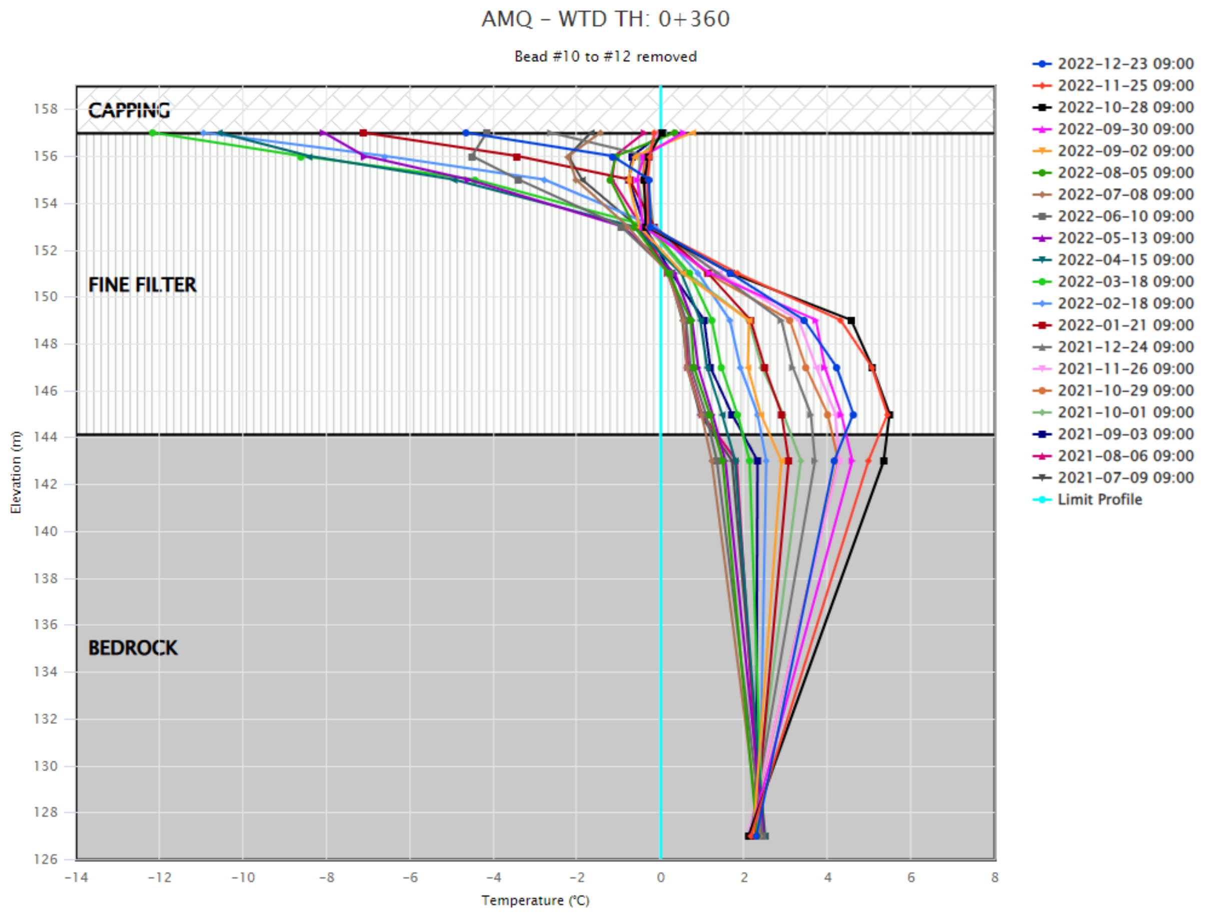


WTD-TH 0+360





Temperature(°C): AMQ - WTD TH 0 + 360
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/19/2019 to 2022-12-22



AMQ – WTD TH: 0+360
Bead #10 to #12 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
2022-10-28 09:00
2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
2022-07-08 09:00
2022-06-10 09:00
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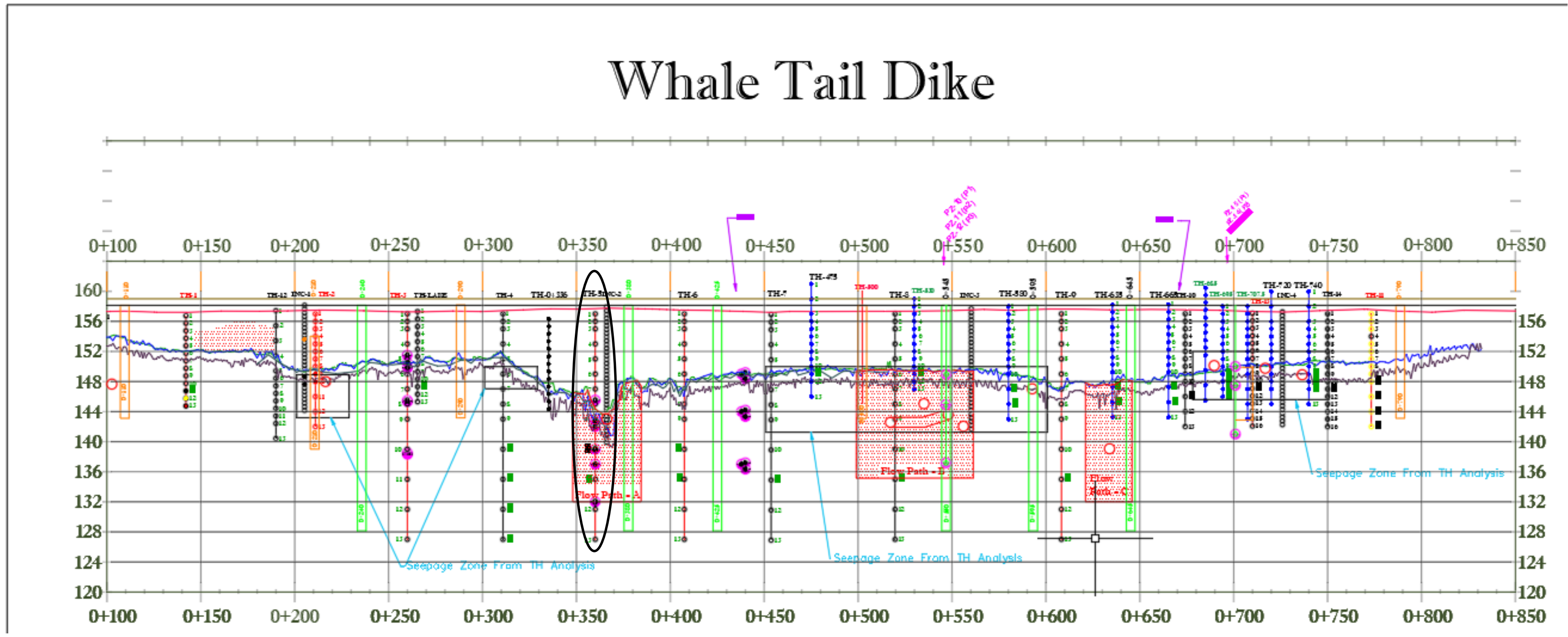
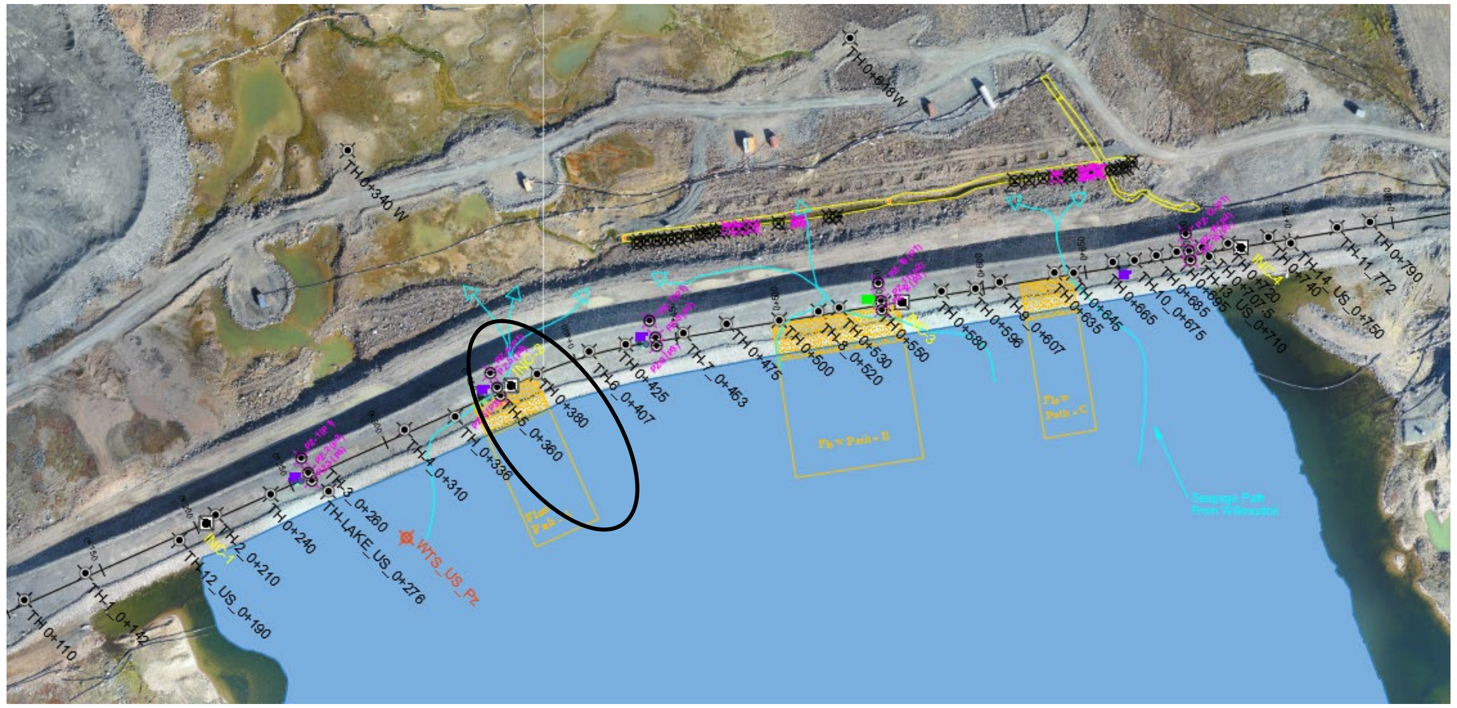
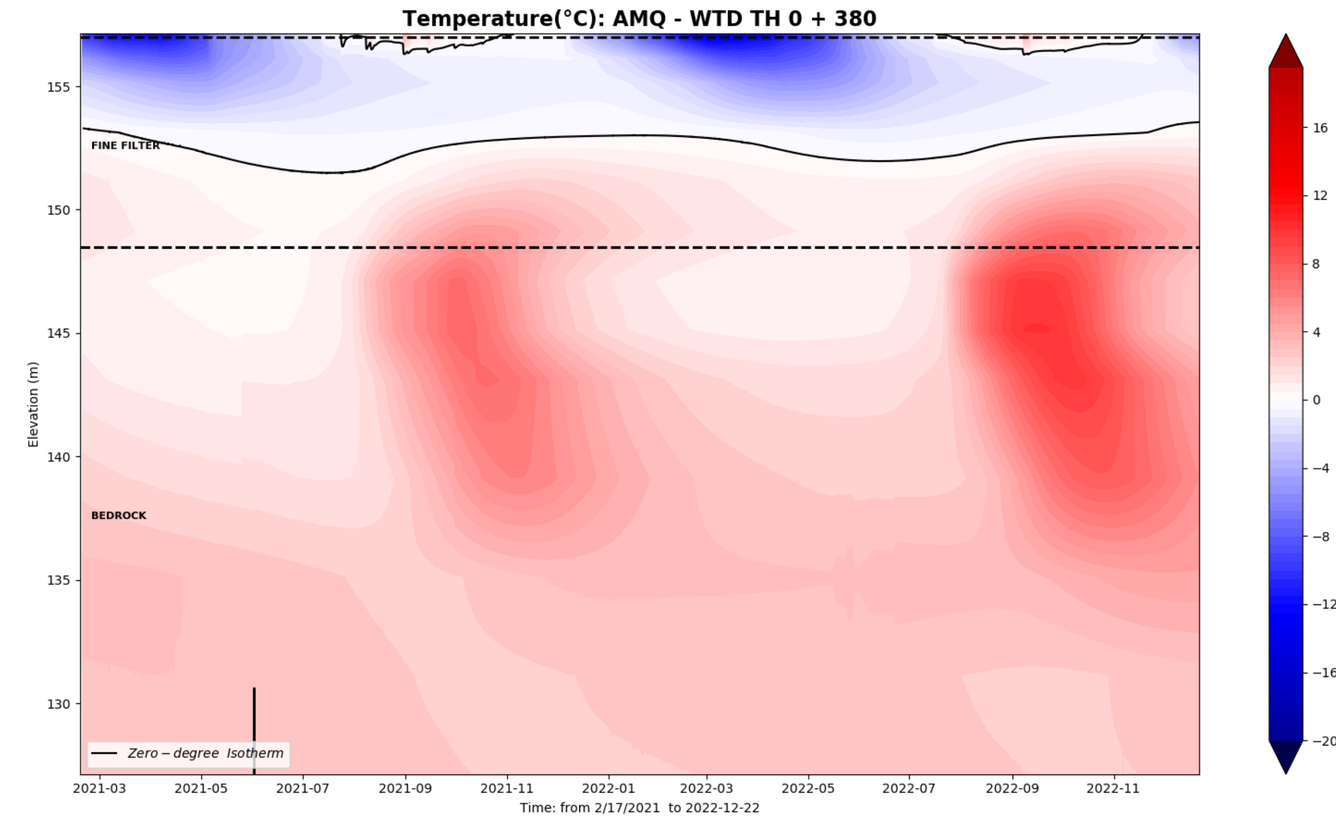
2021-07-09 09:00
Limit Profile

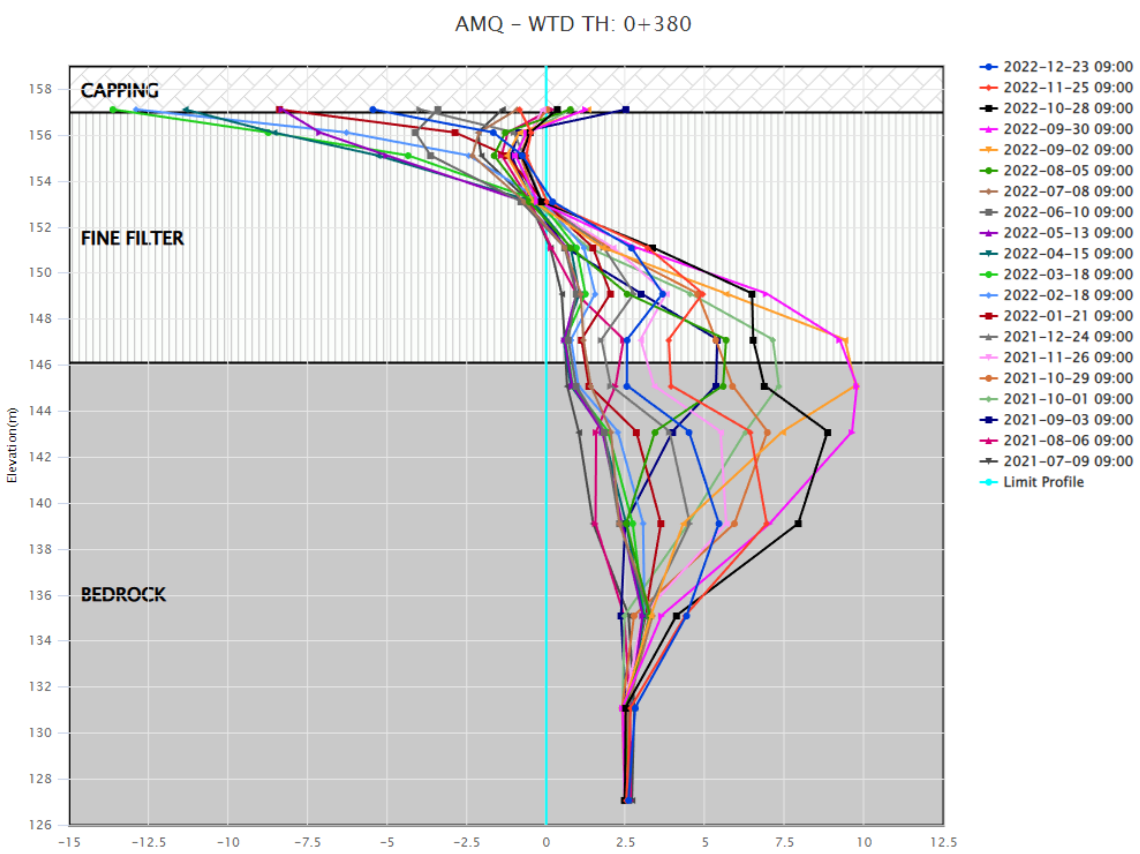


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+380




Temperature(°C): AMQ - WTD TH 0 + 380
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/17/2021 to 2022-12-22


AMQ - WTD TH: 0+380
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
2022-10-28 09:00
2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
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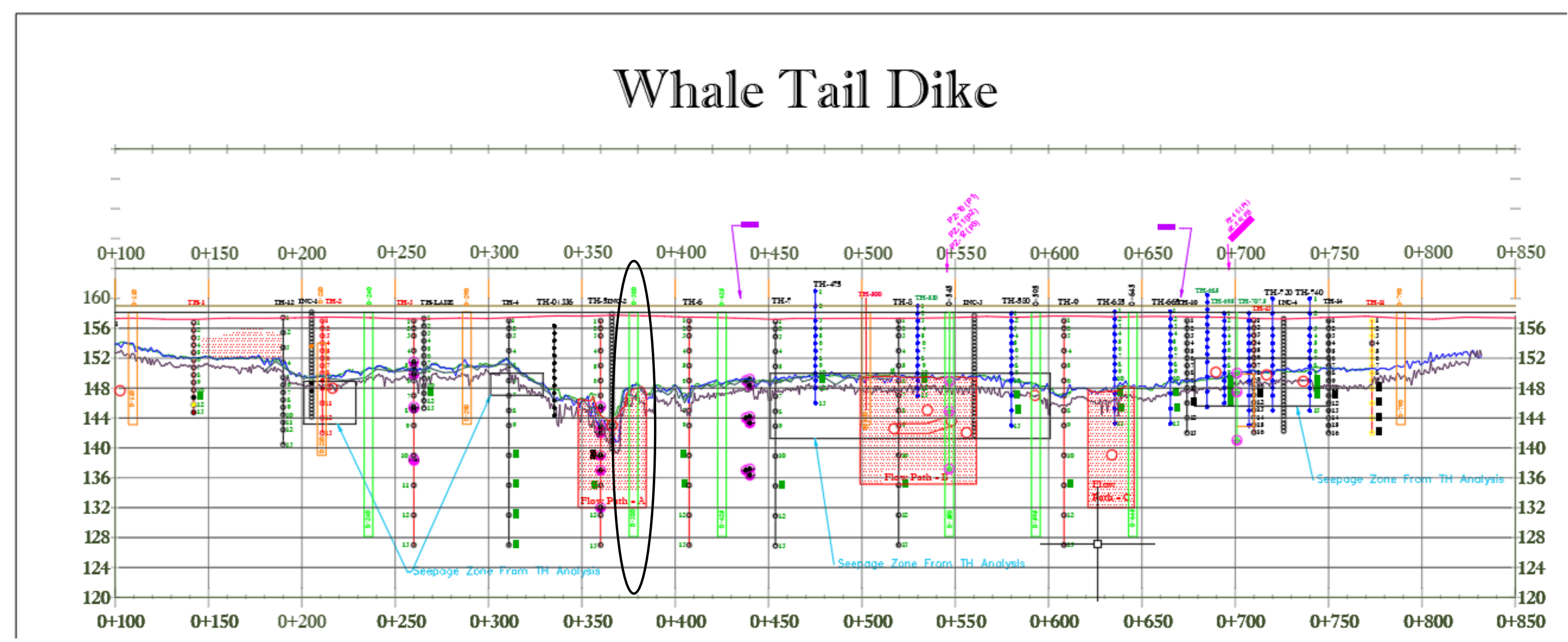
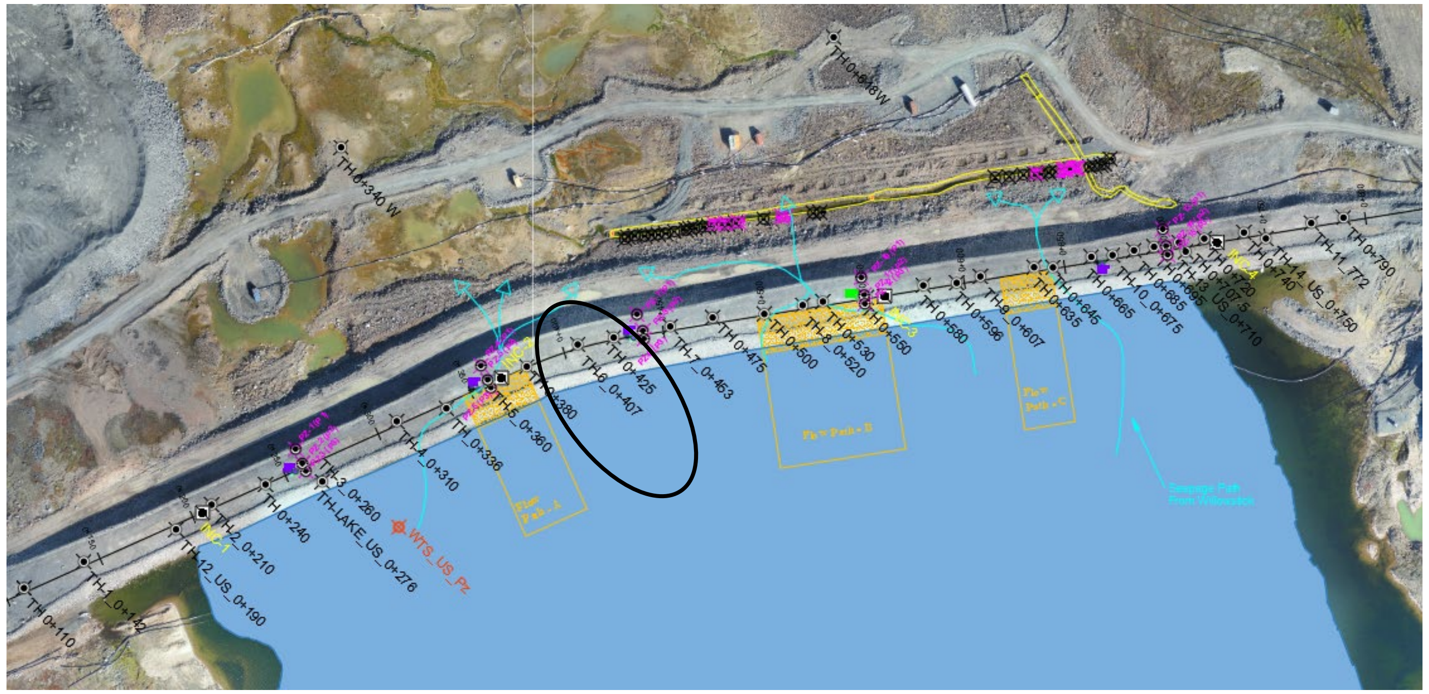
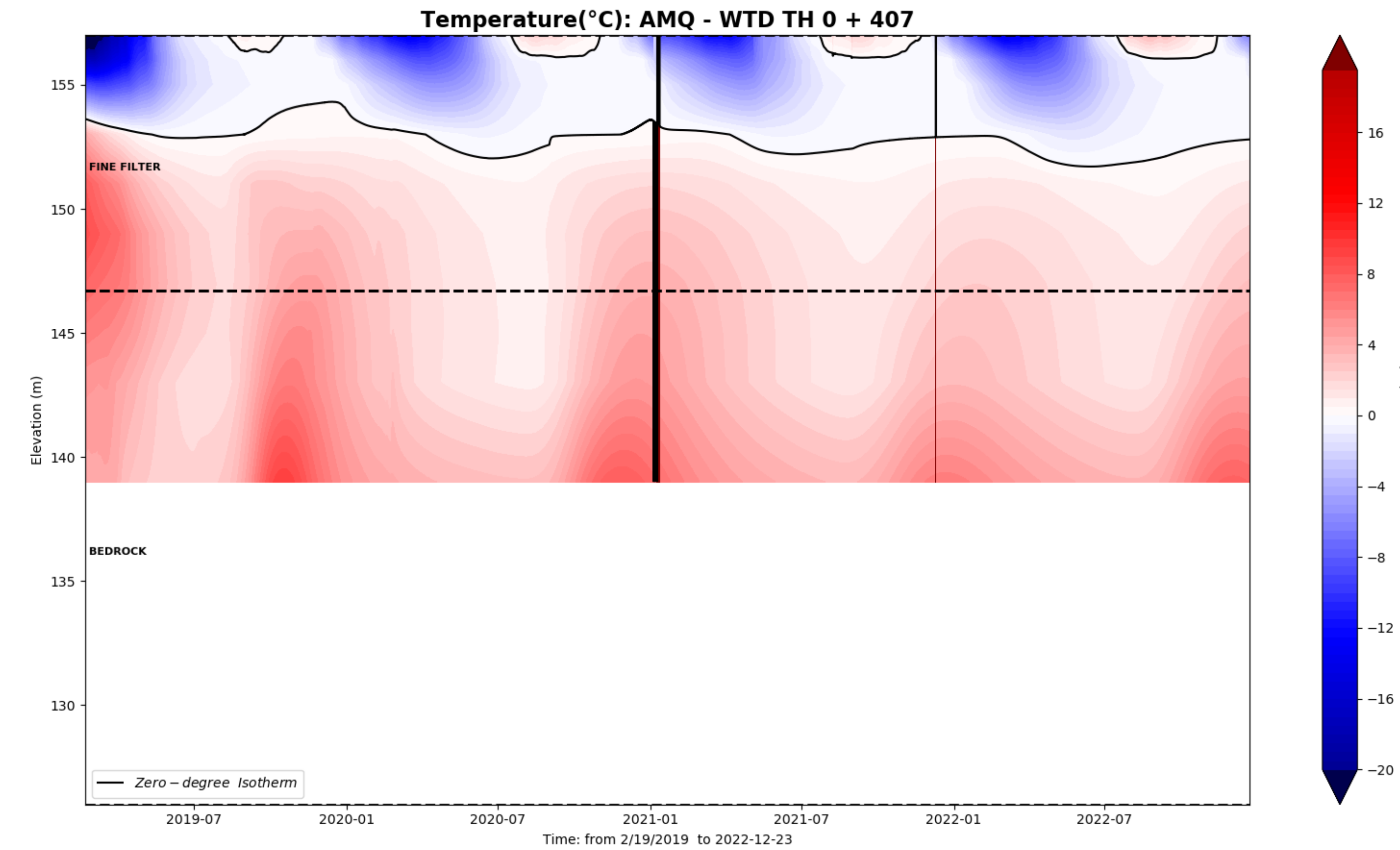
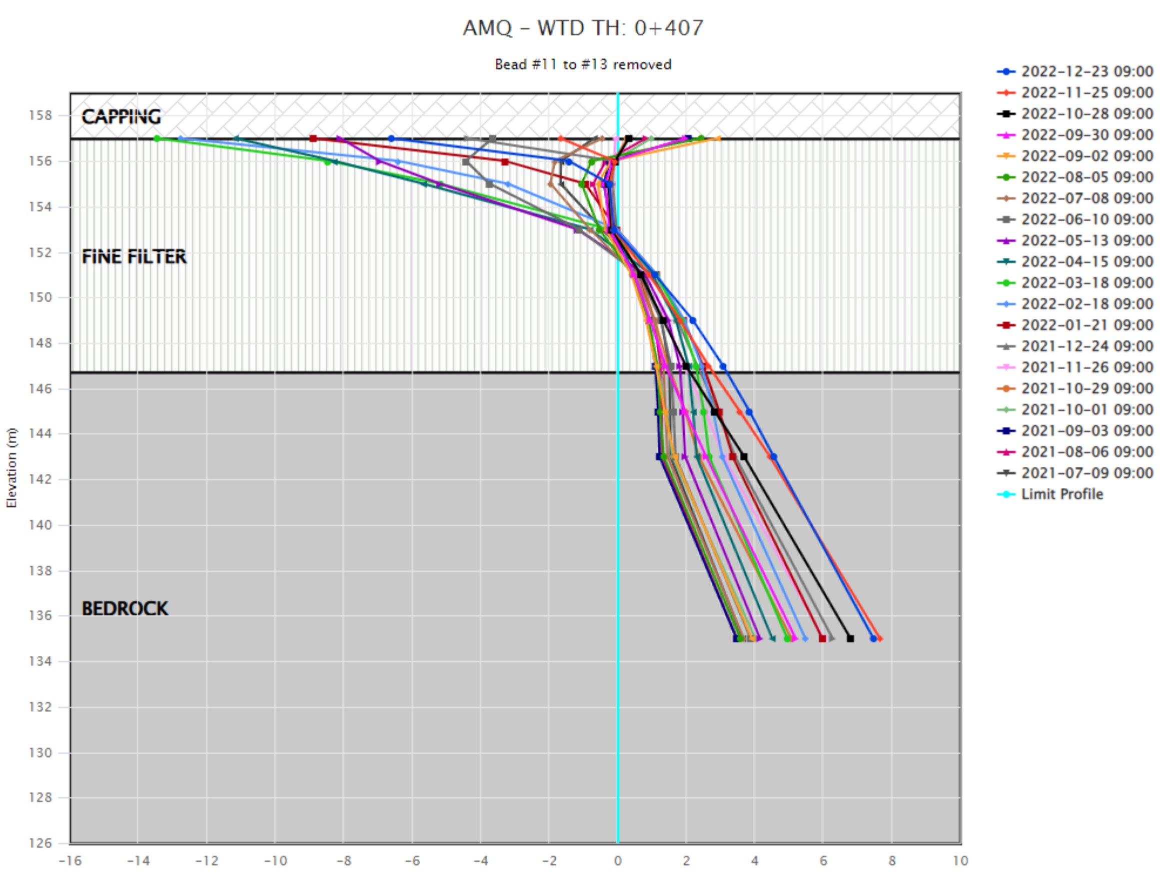
2021-07-09 09:00
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+407




Temperature(°C): AMQ - WTD TH 0 + 407
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
Time: from 2/19/2019 to 2022-12-23
2019-07
2020-01
2020-07
2021-01
2021-07
2022-01
2022-07


AMQ - WTD TH: 0+407
Bead #11 to #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
2022-10-28 09:00
2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
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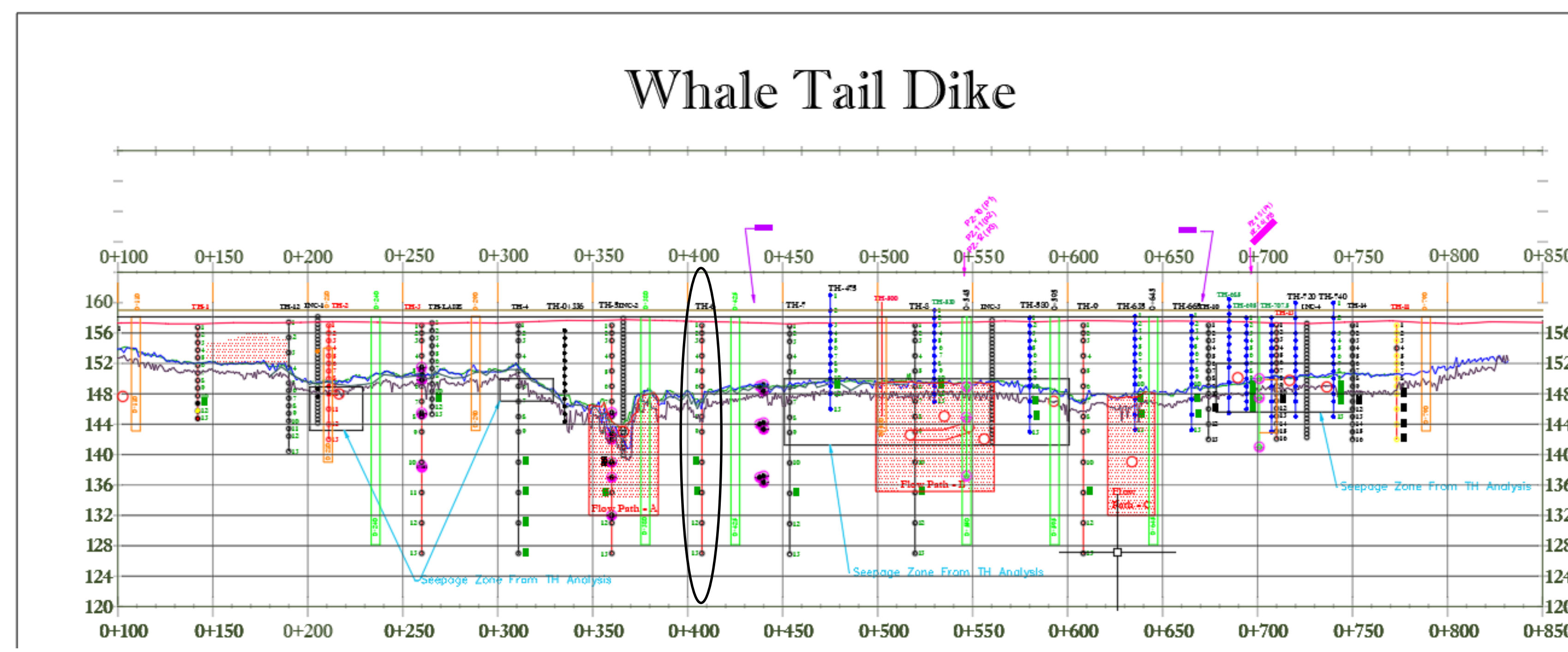
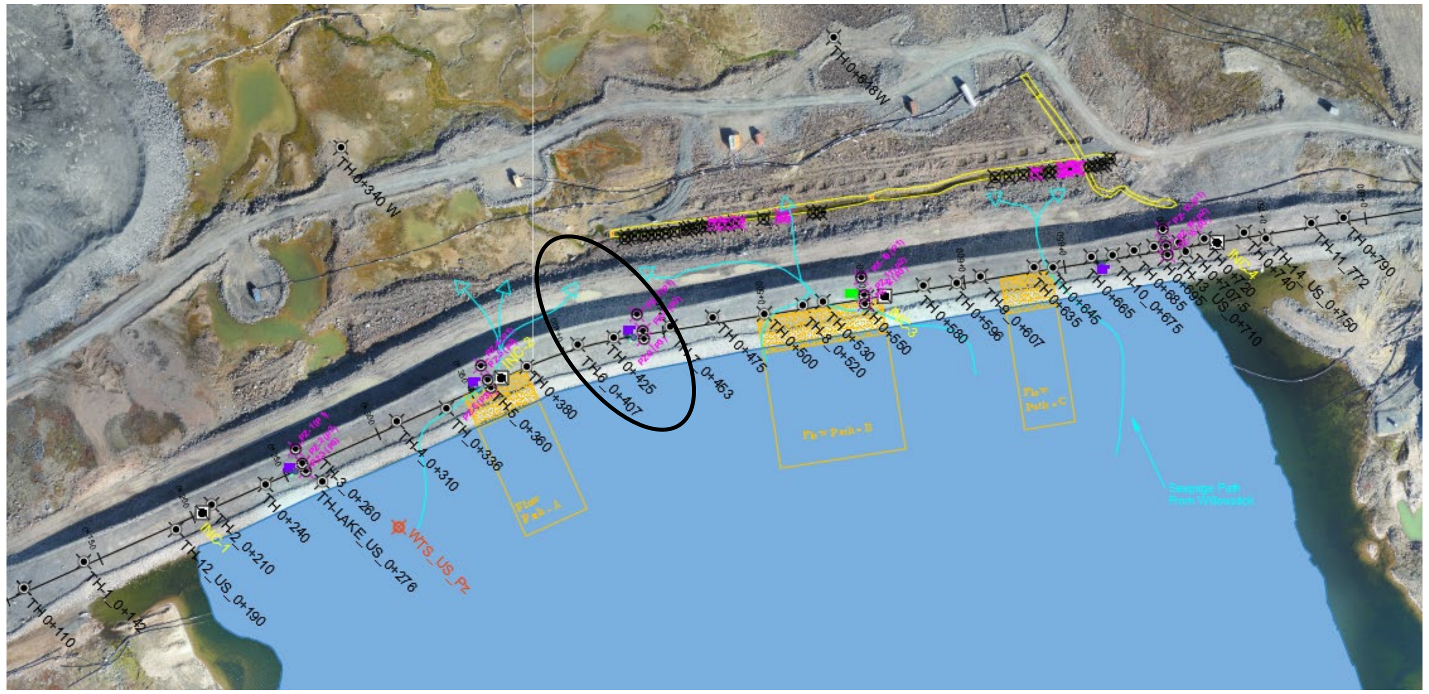
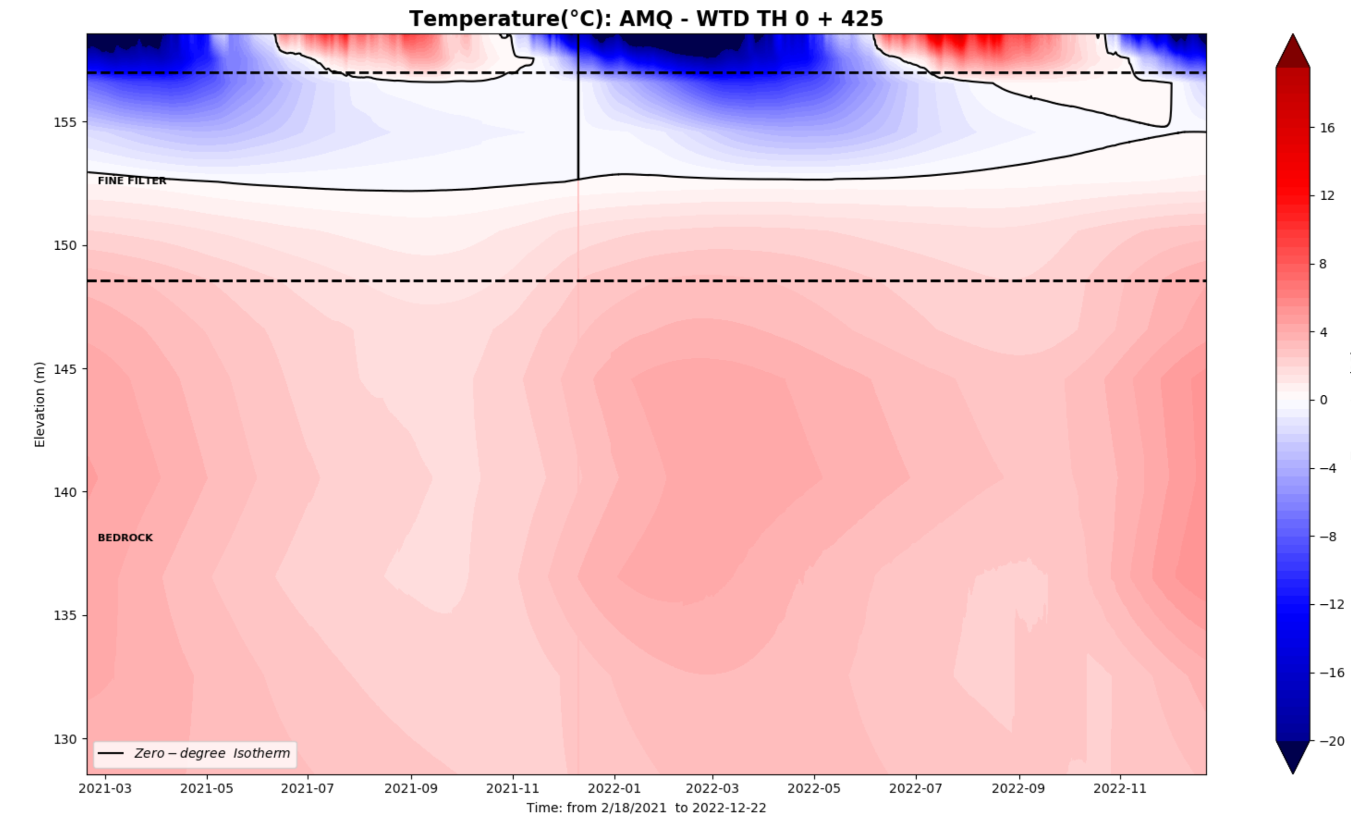
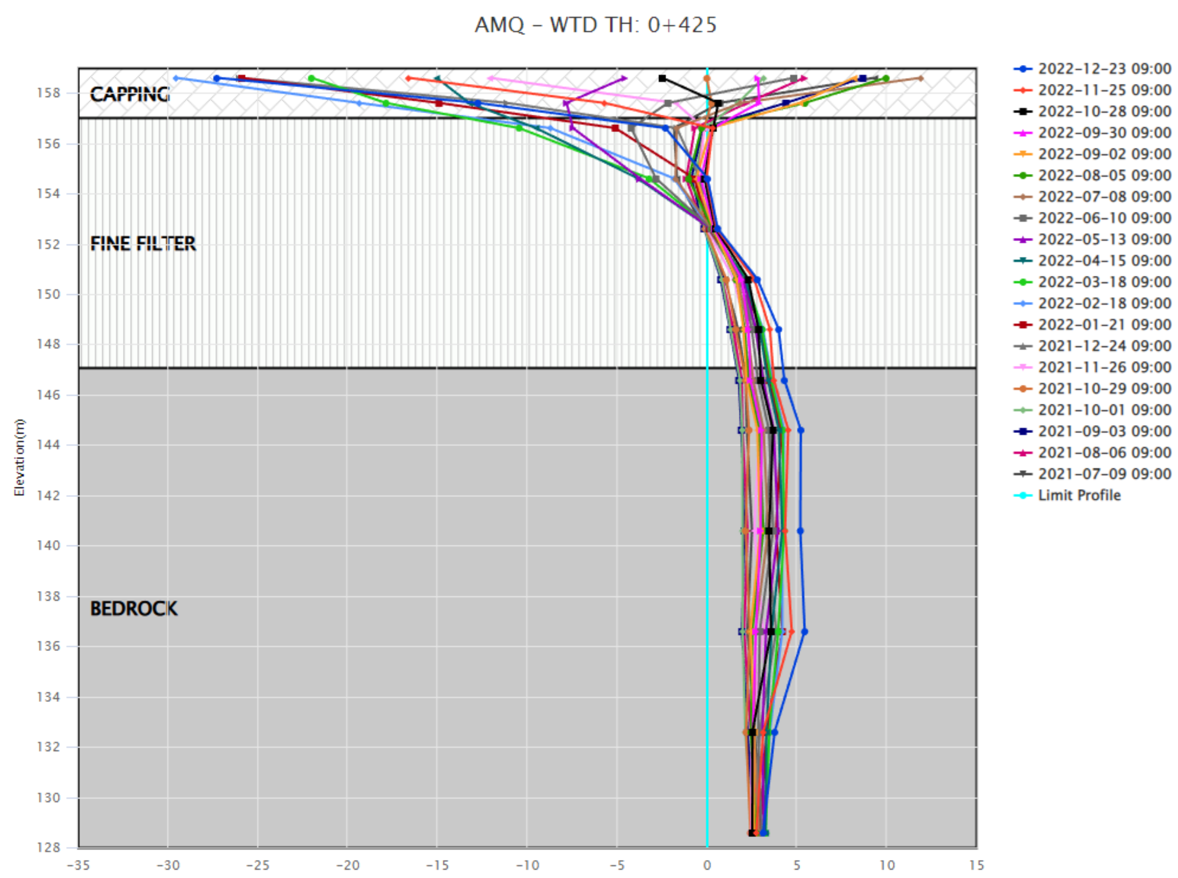
2021-07-09 09:00
Limit Profile


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

WTD-TH 0+425




Temperature(°C): AMQ - WTD TH 0 + 425
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/18/2021 to 2022-12-22


AMQ - WTD TH: 0+425
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
2022-10-28 09:00
2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
2022-07-08 09:00
2022-06-10 09:00
2022-05-13 09:00
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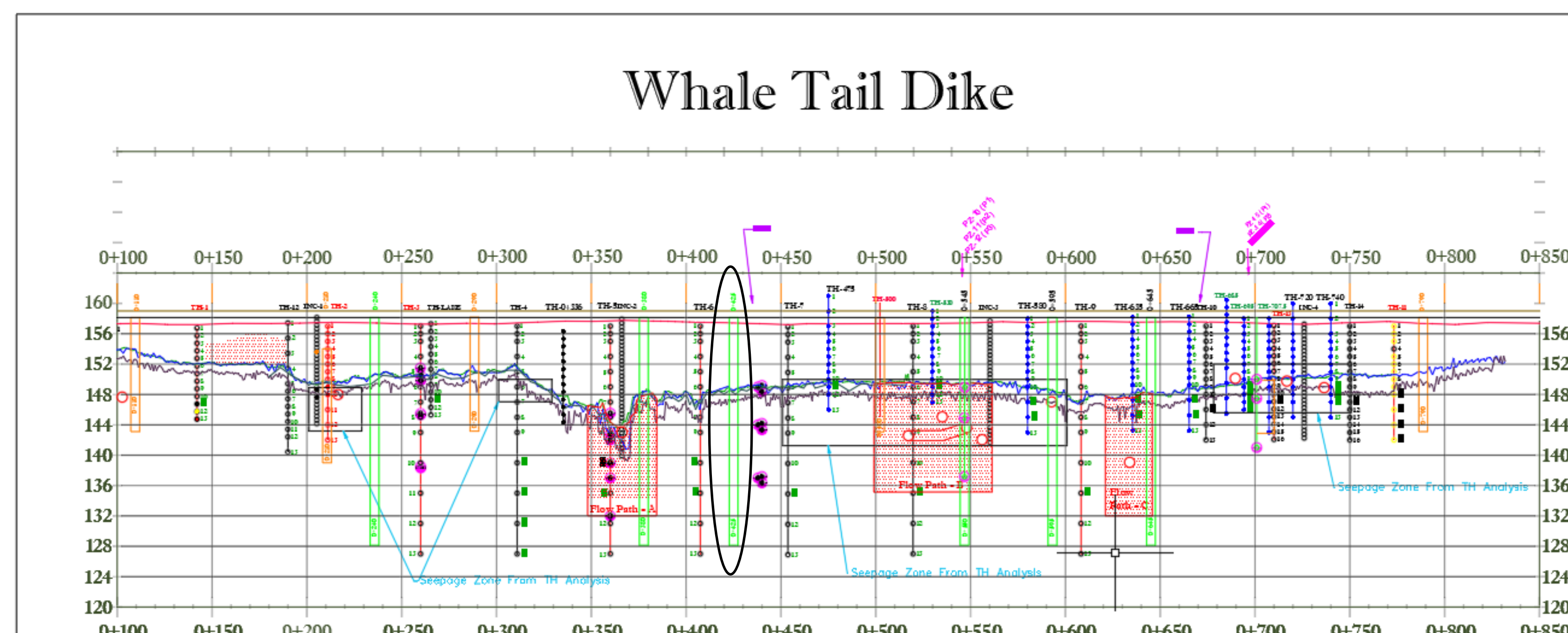
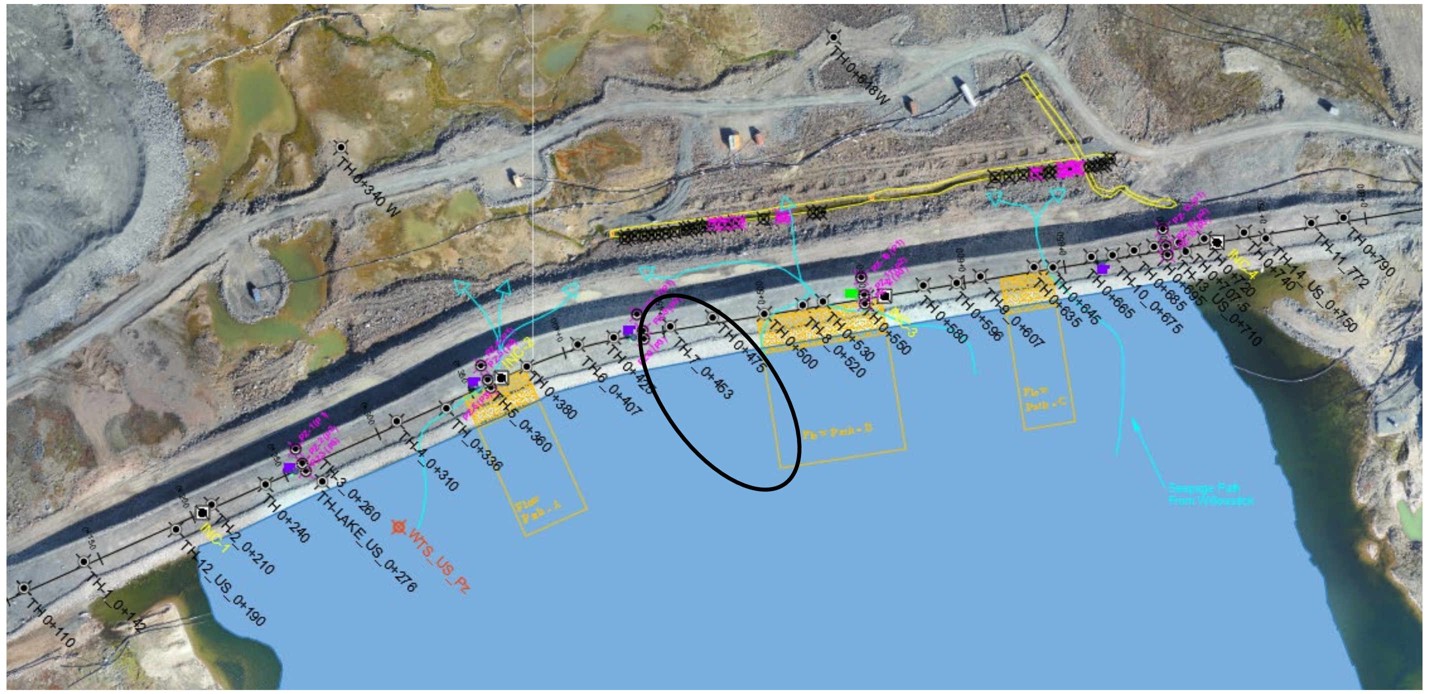
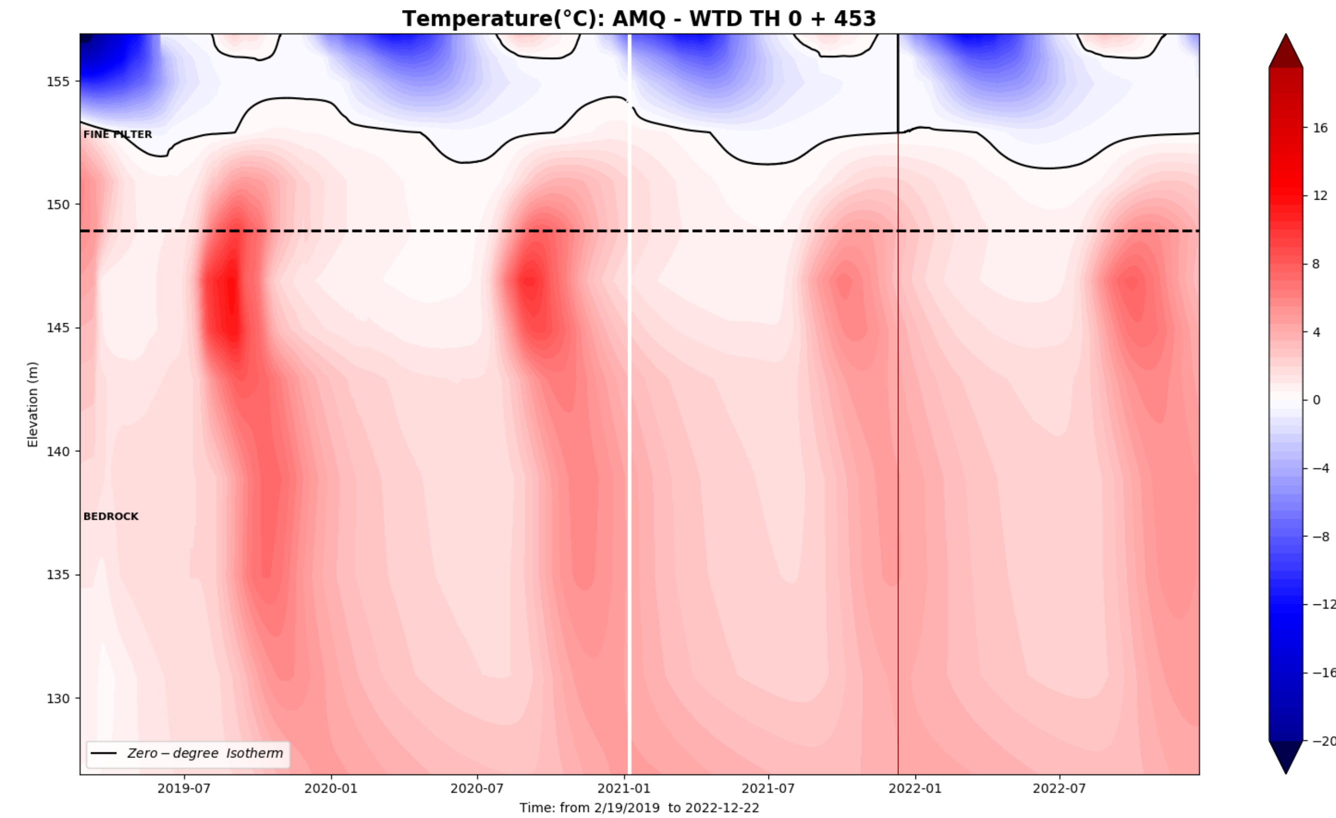
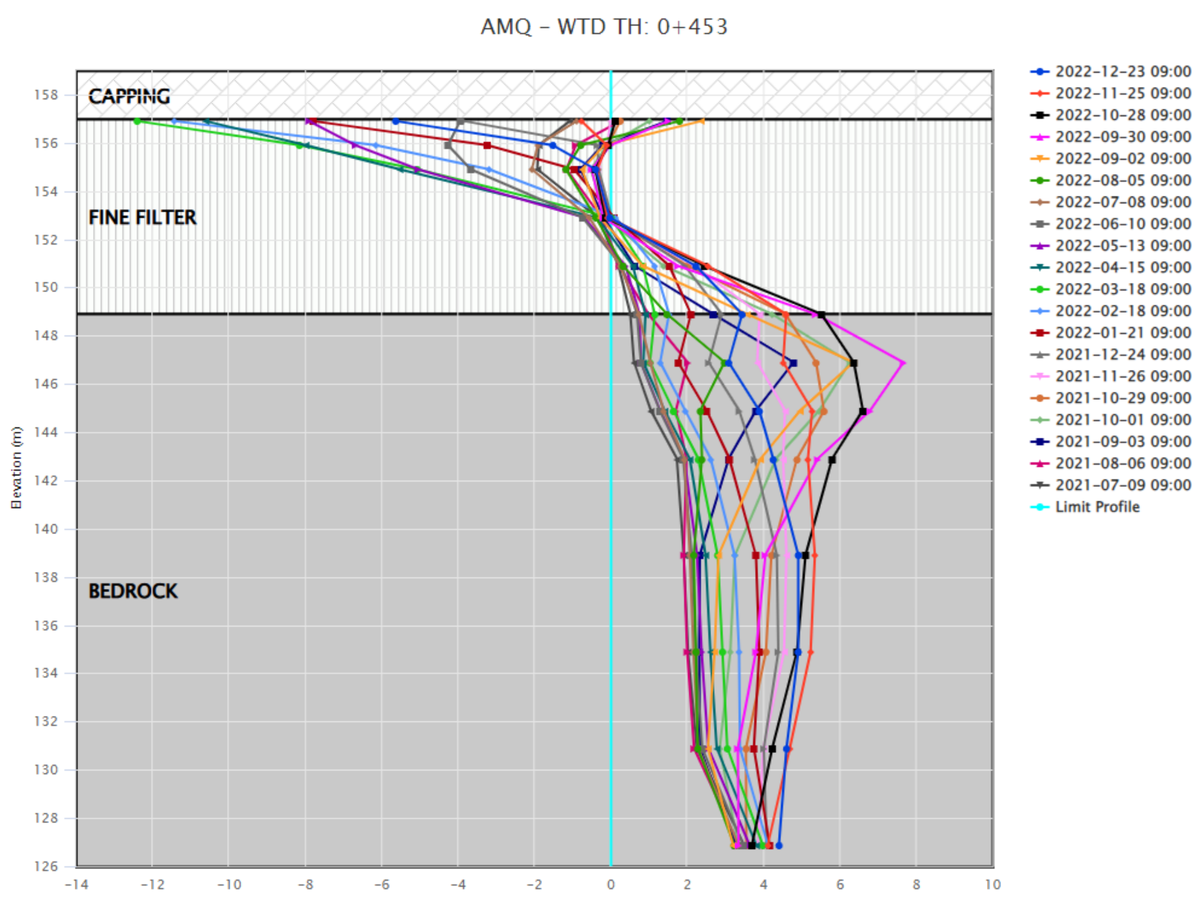
2022-02-18 09:00
2022-01-21 09:00
2021-12-24 09:00
2021-11-26 09:00
2021-10-29 09:00
2021-10-01 09:00
2021-09-03 09:00
2021-08-06 09:00
2021-07-09 09:00
Limit Profile


Whale Tail Dike

WTD-TH 0+453




Temperature(°C): AMQ - WTD TH 0 + 453
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 2022-12-22
Temperature(°C)


AMQ – WTD TH: 0+453
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
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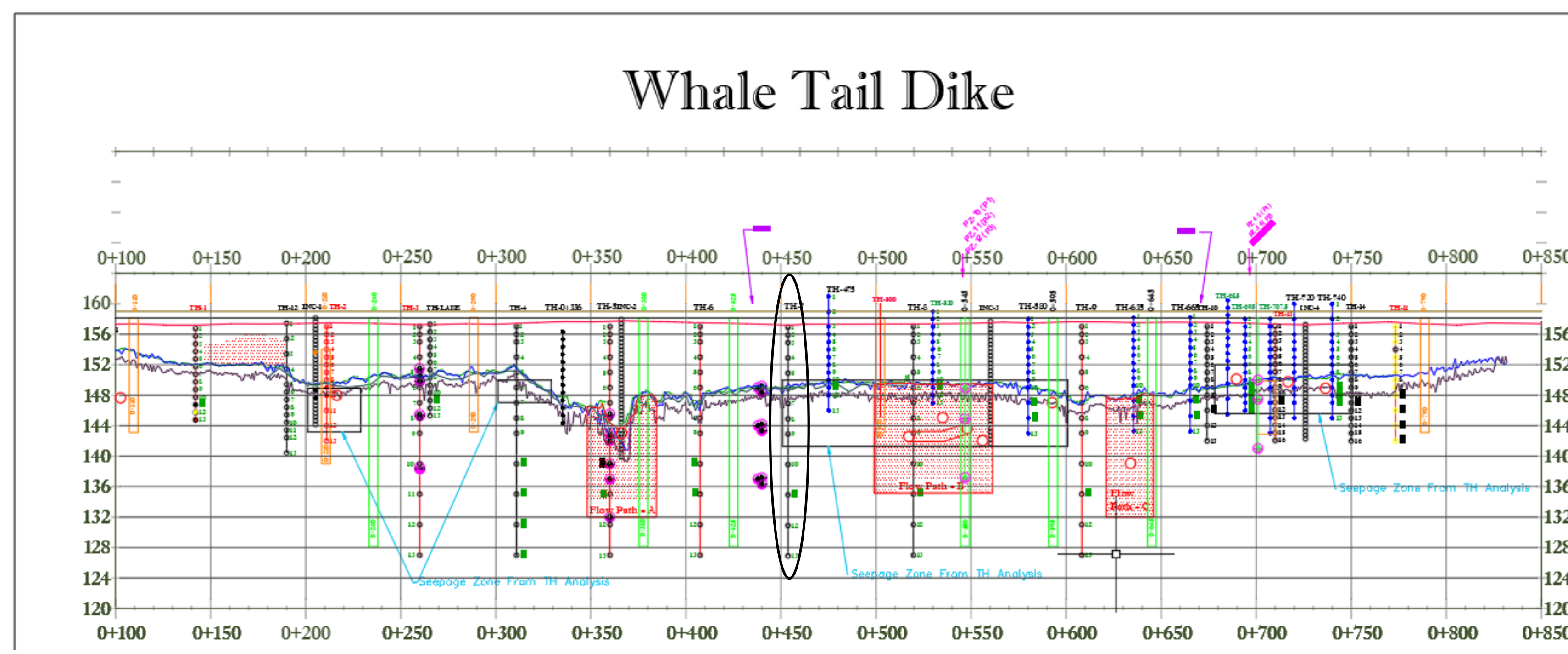
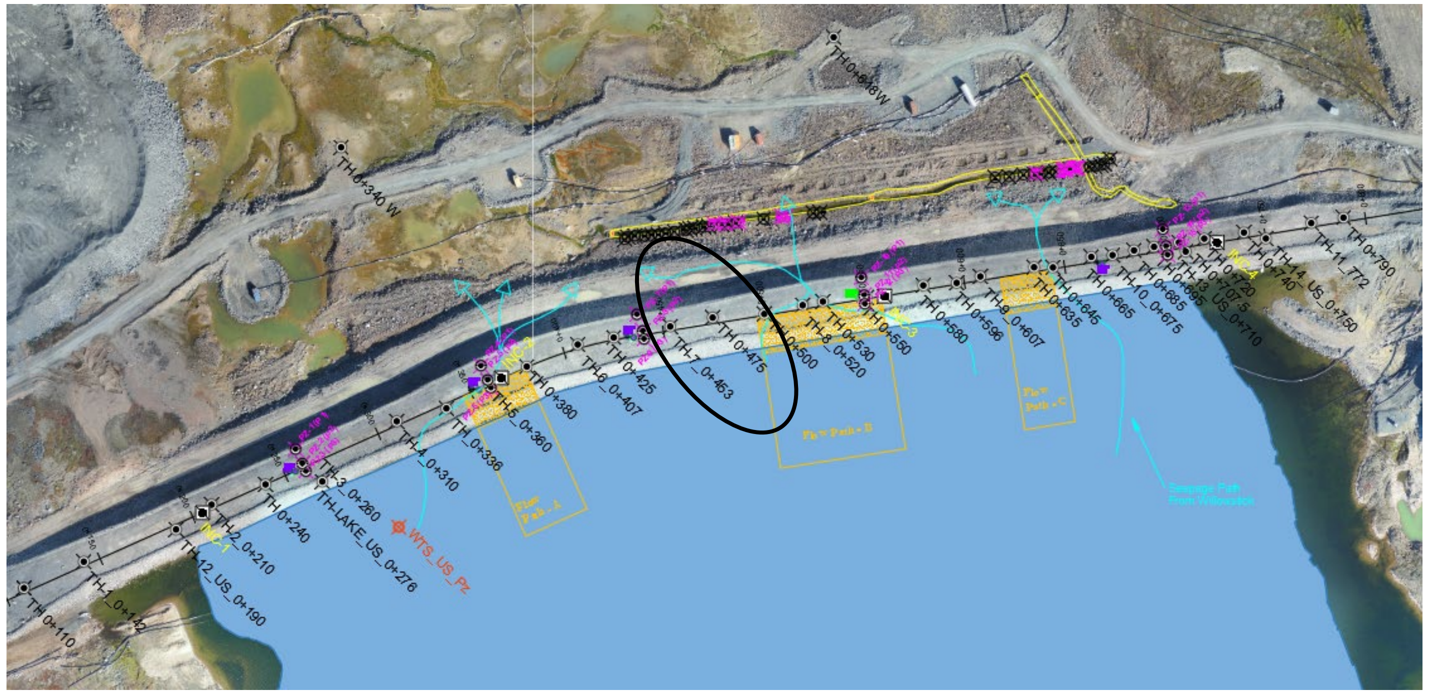
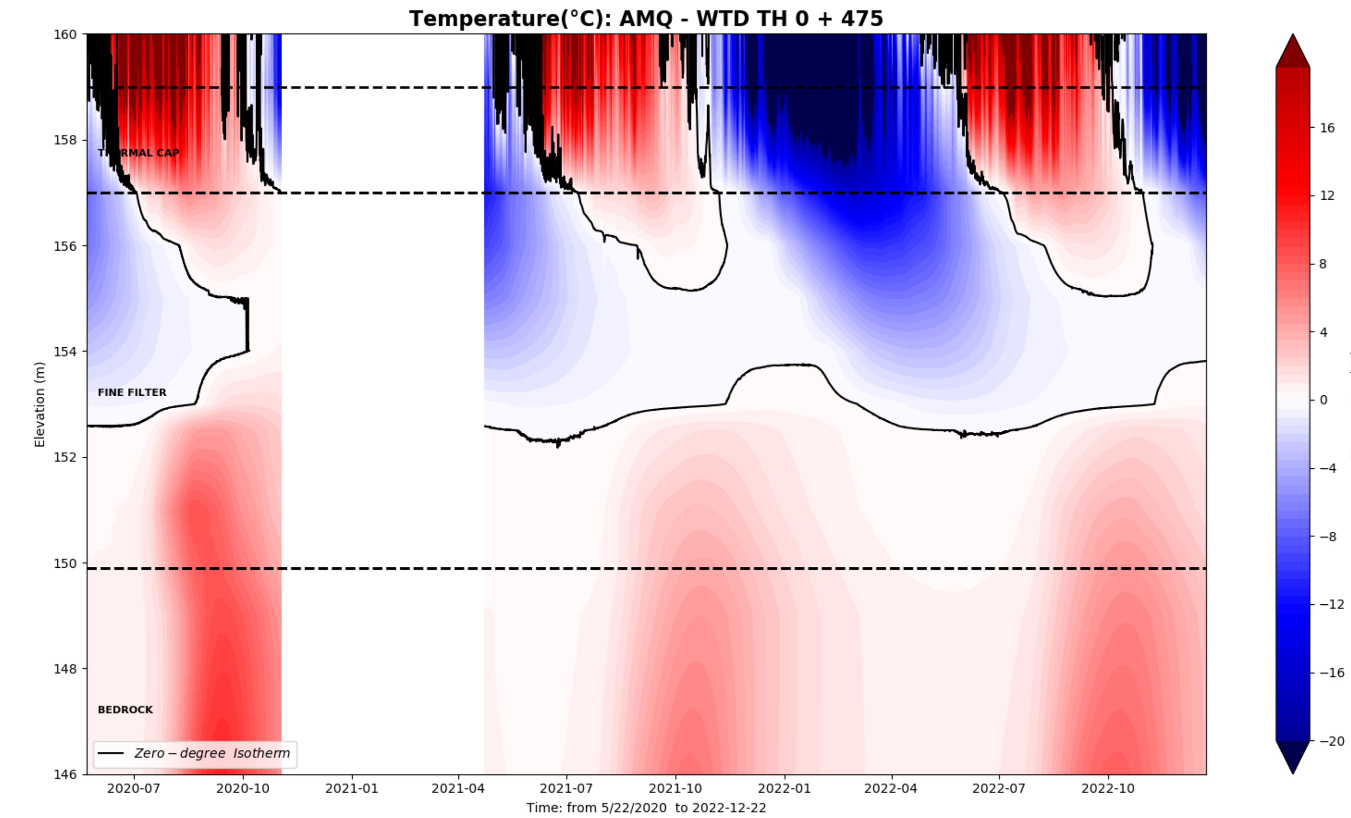
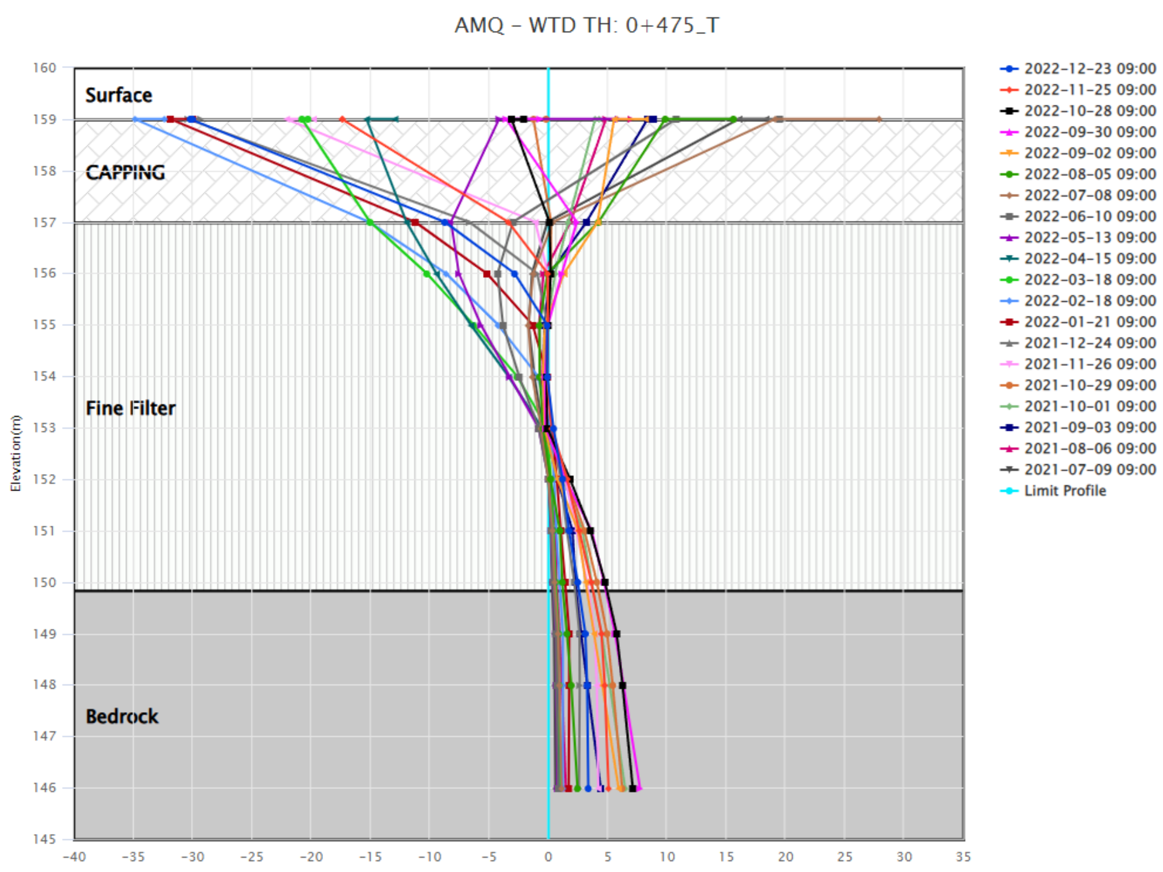
Limit Profile


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

WTD-TH 0+475




Temperature(°C): AMQ - WTD TH 0 + 475
THERMAL CAP
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/22/2020 to 2022-12-22


AMQ – WTD TH: 0+475_T
Surface
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
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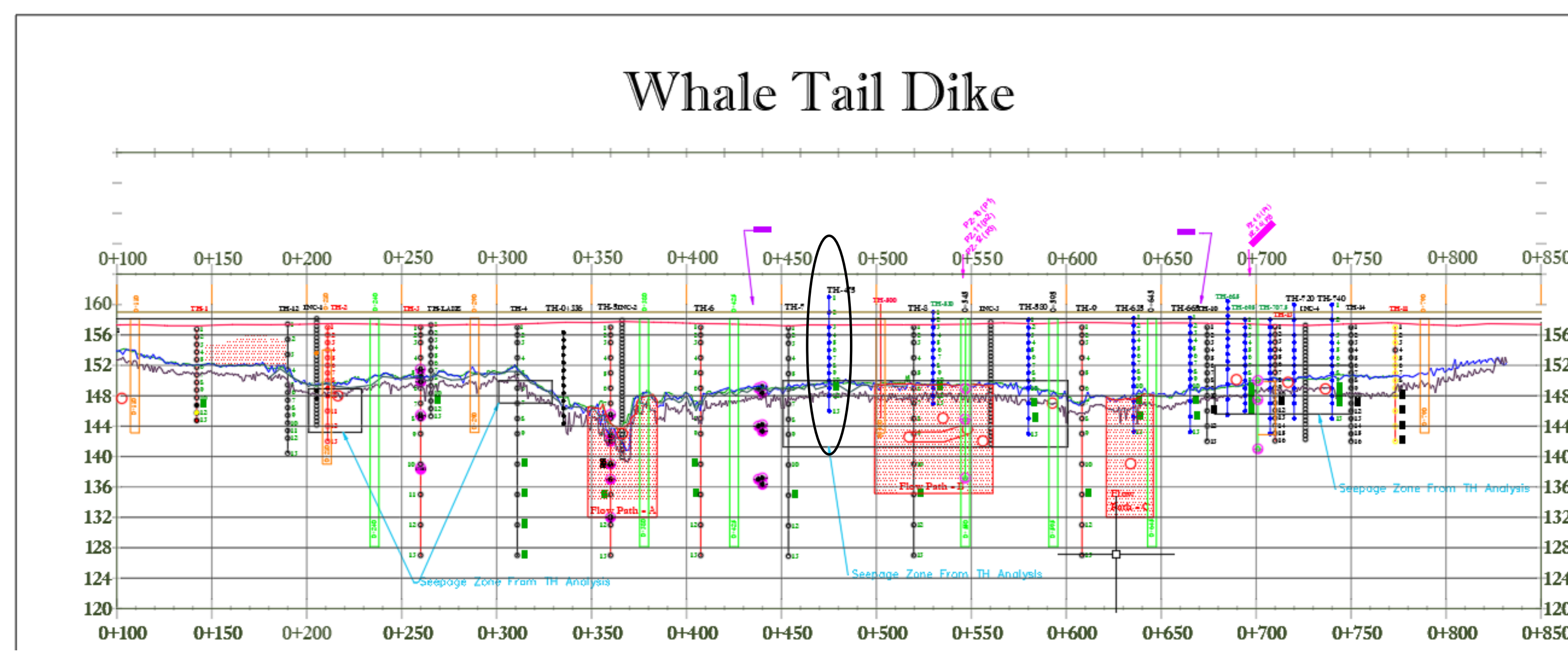
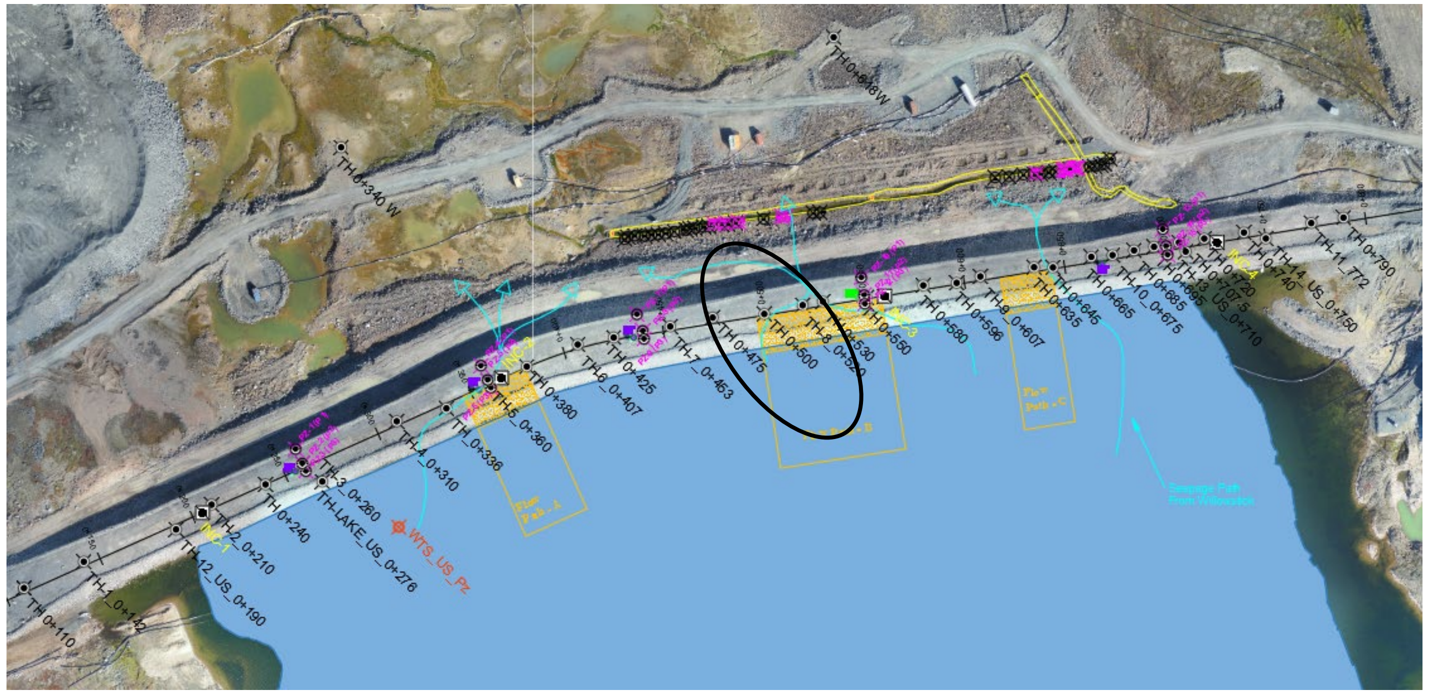
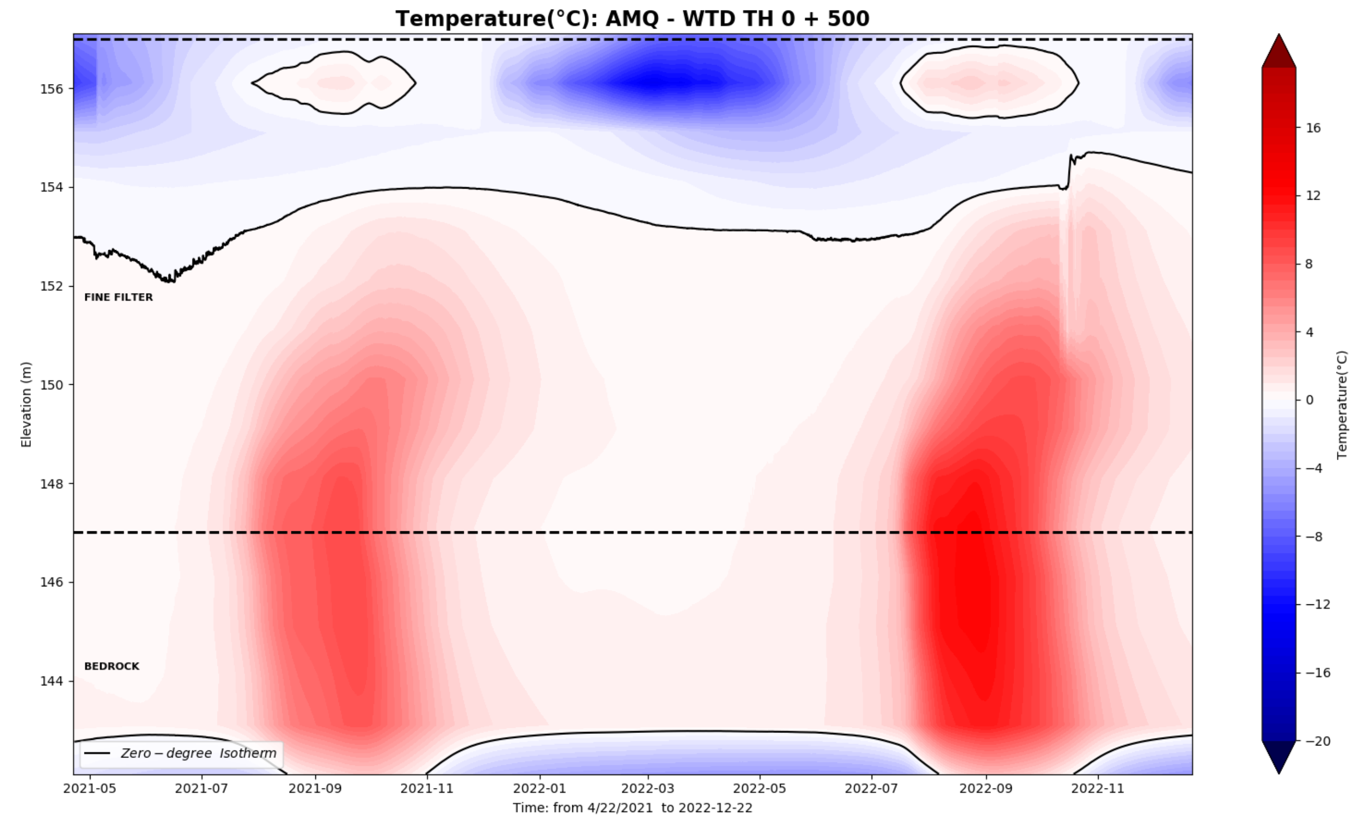
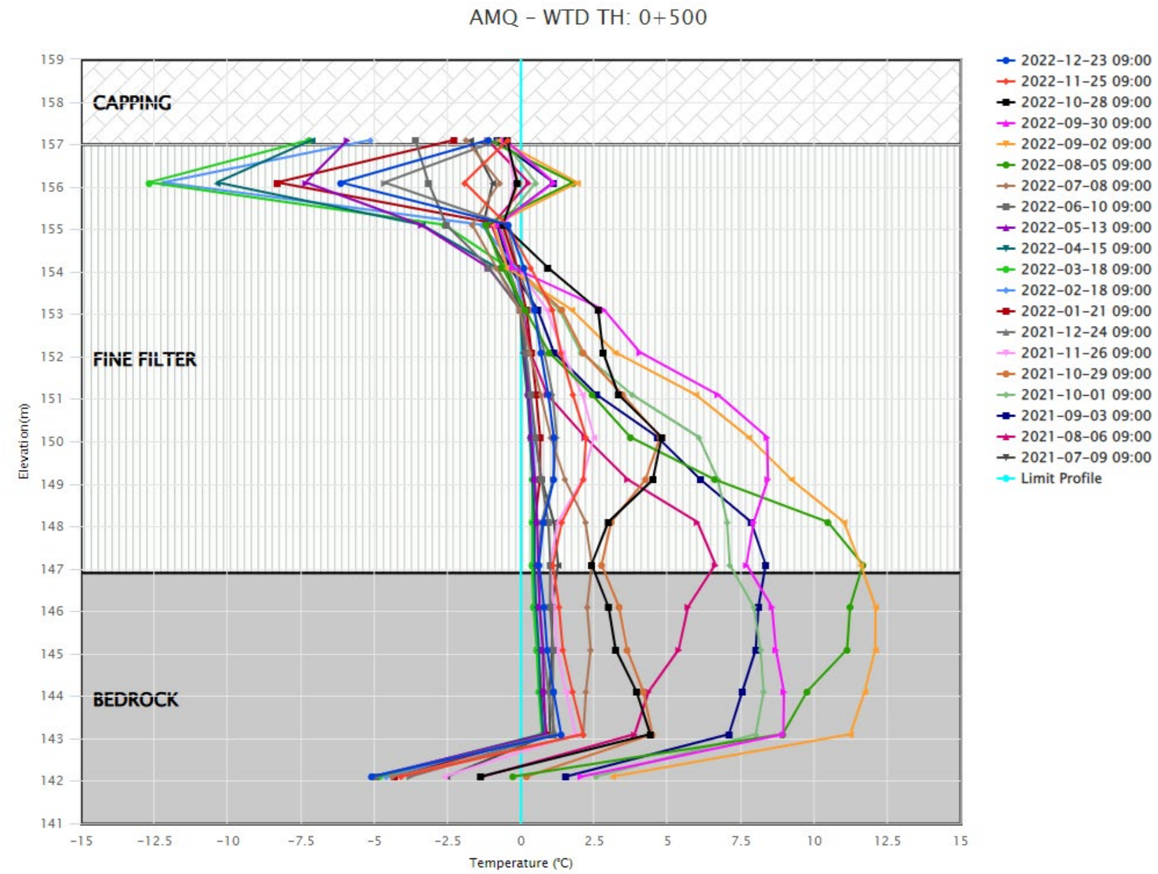
2021-07-09 09:00
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+500




Temperature(°C): AMQ - WTD TH 0 + 500
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 4/22/2021 to 2022-12-22


AMQ - WTD TH: 0+500
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (C)
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2022-11-25 09:00
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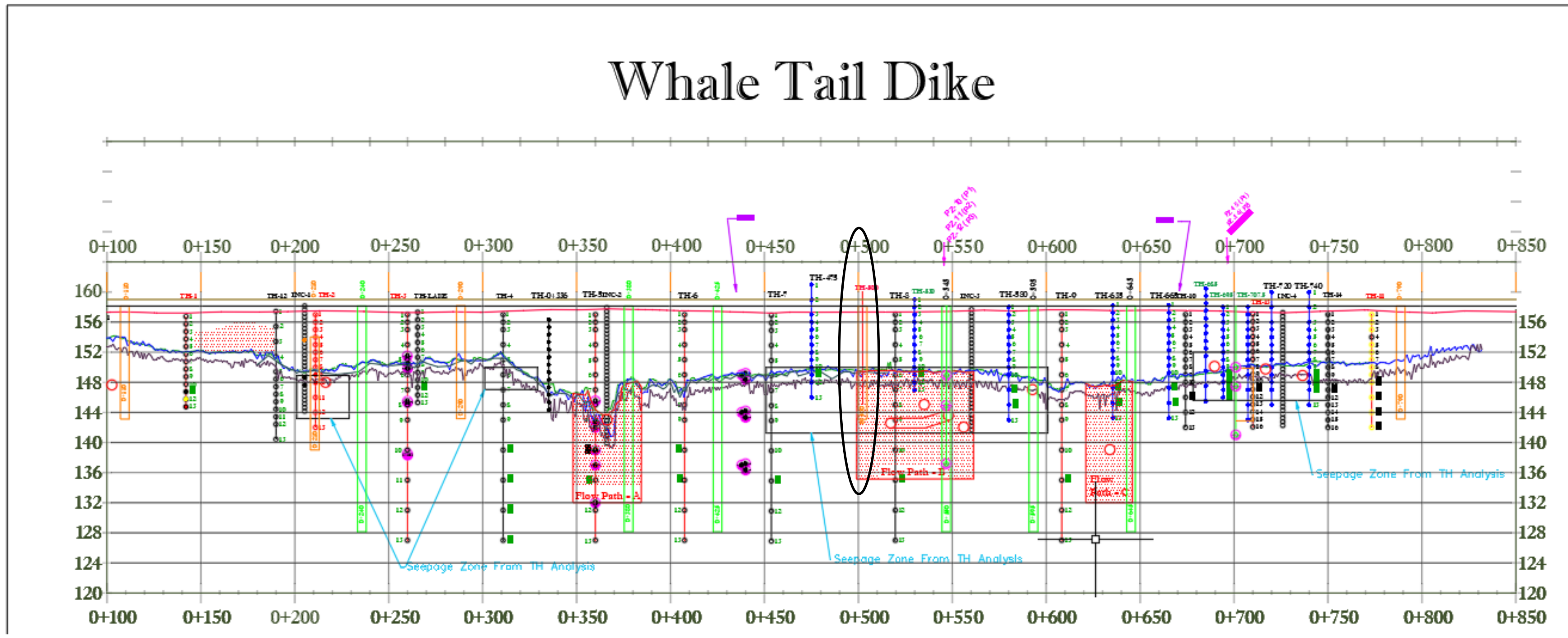
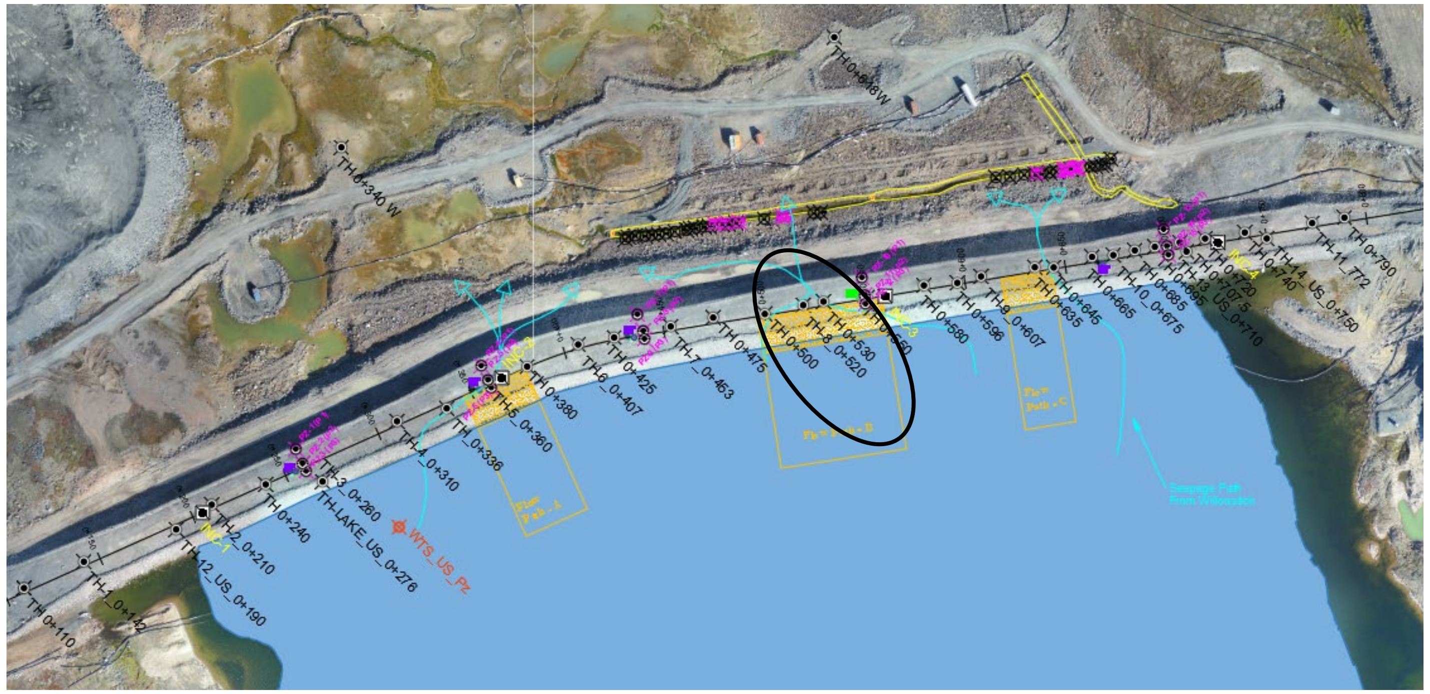
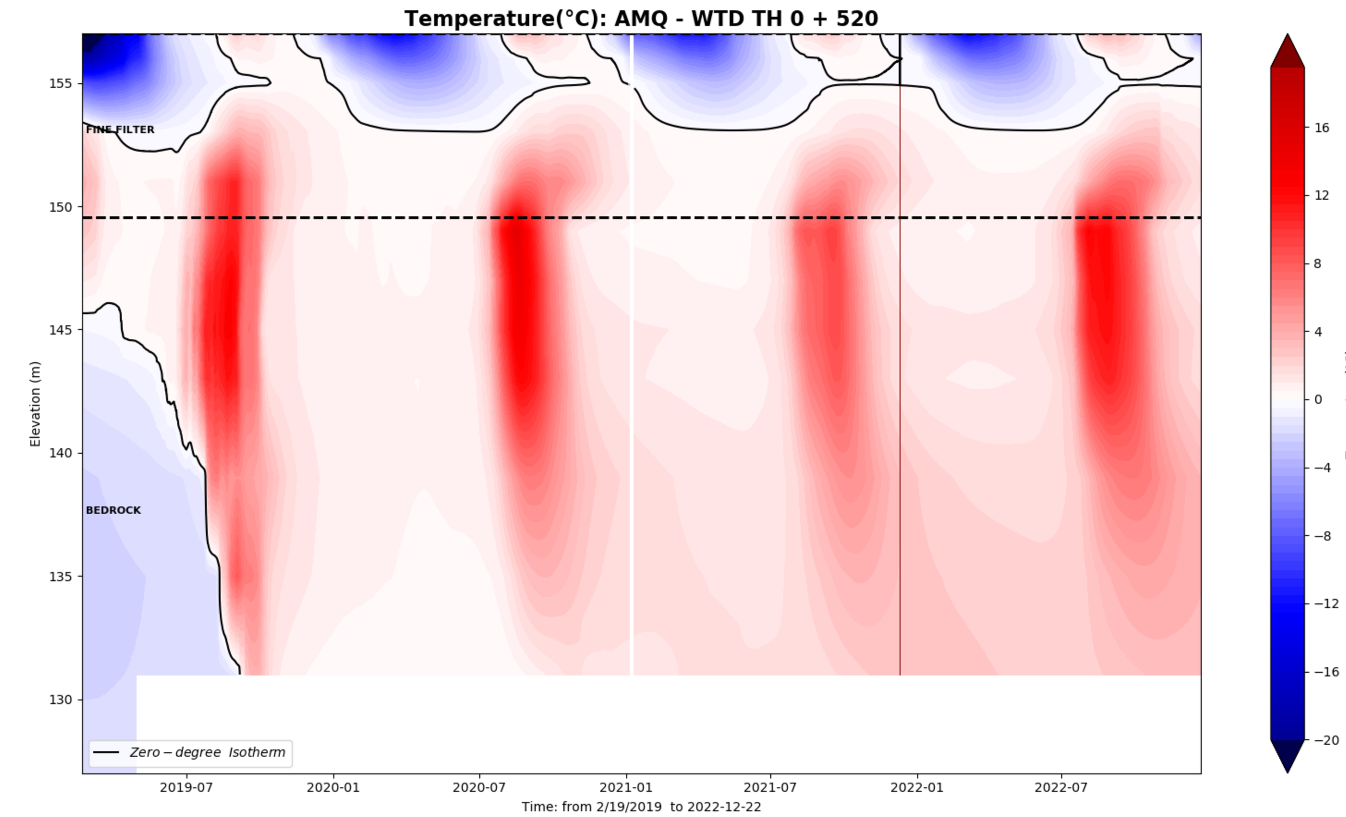
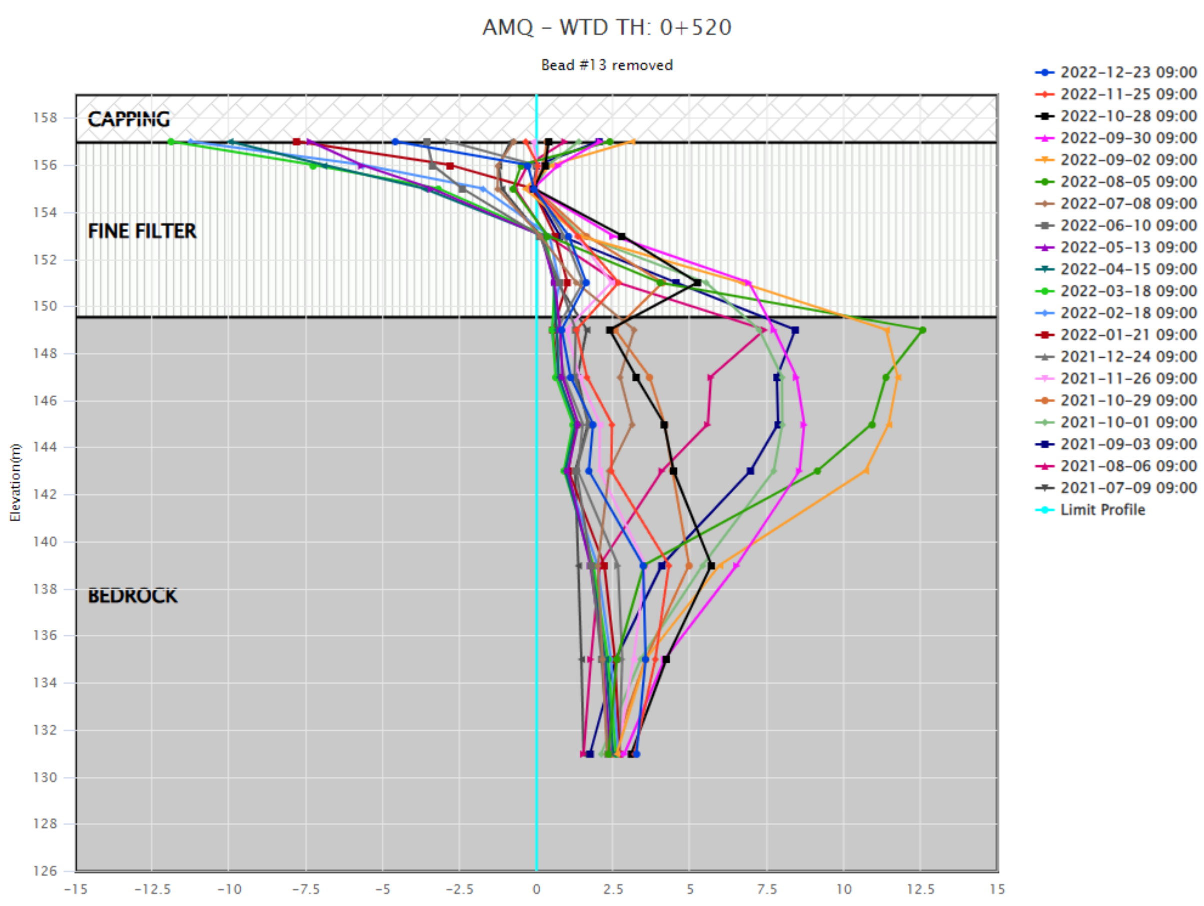
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+520




Temperature(°C): AMQ - WTD TH 0 + 520
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 2/19/2019 to 2022-12-22
Temperature(°C)


AMQ - WTD TH: 0+520
Bead #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
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2022-11-25 09:00
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2022-09-30 09:00
2022-09-02 09:00
2022-08-05 09:00
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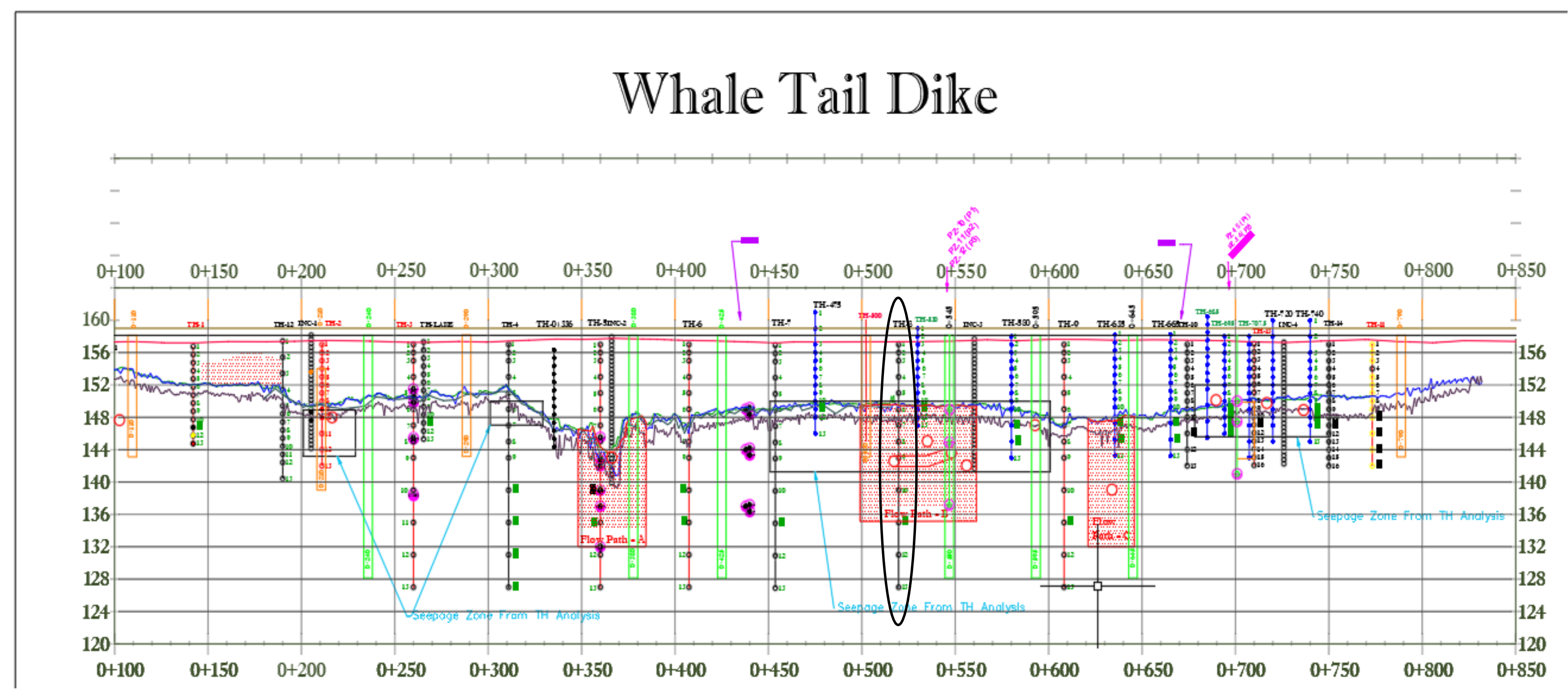
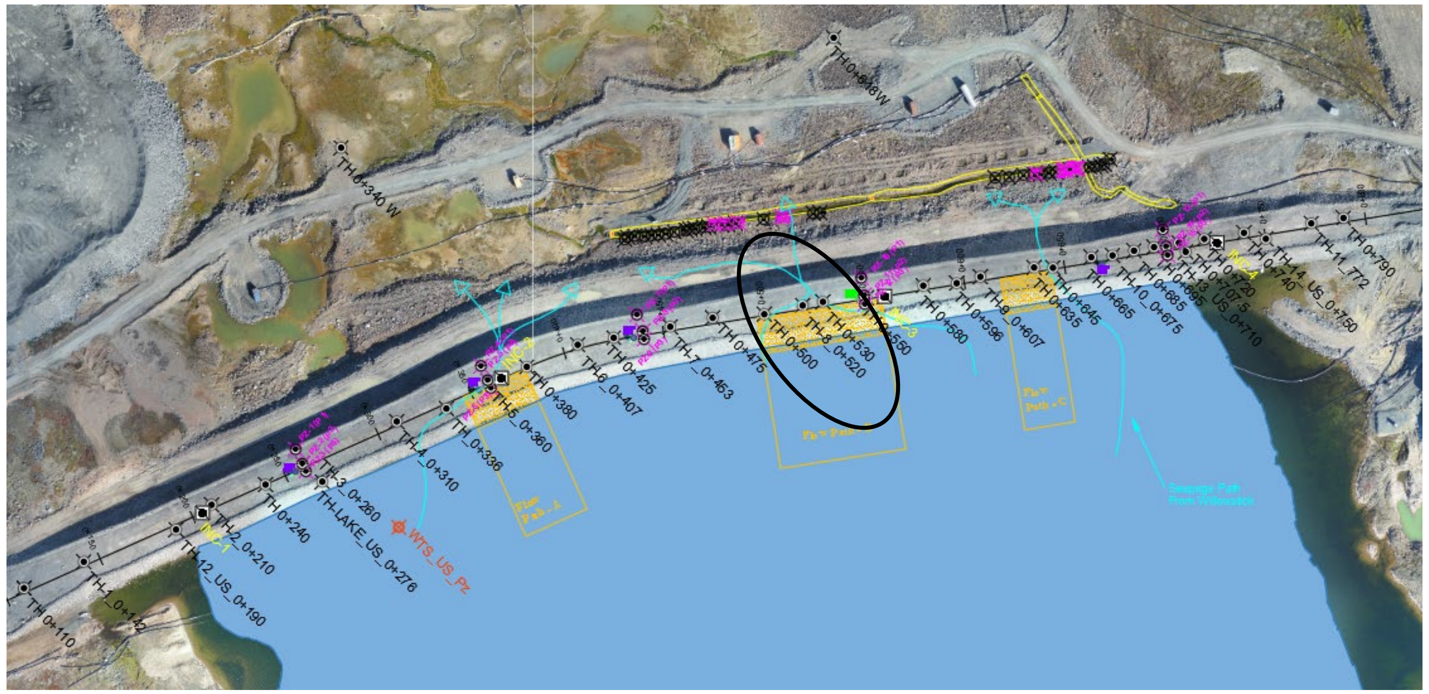
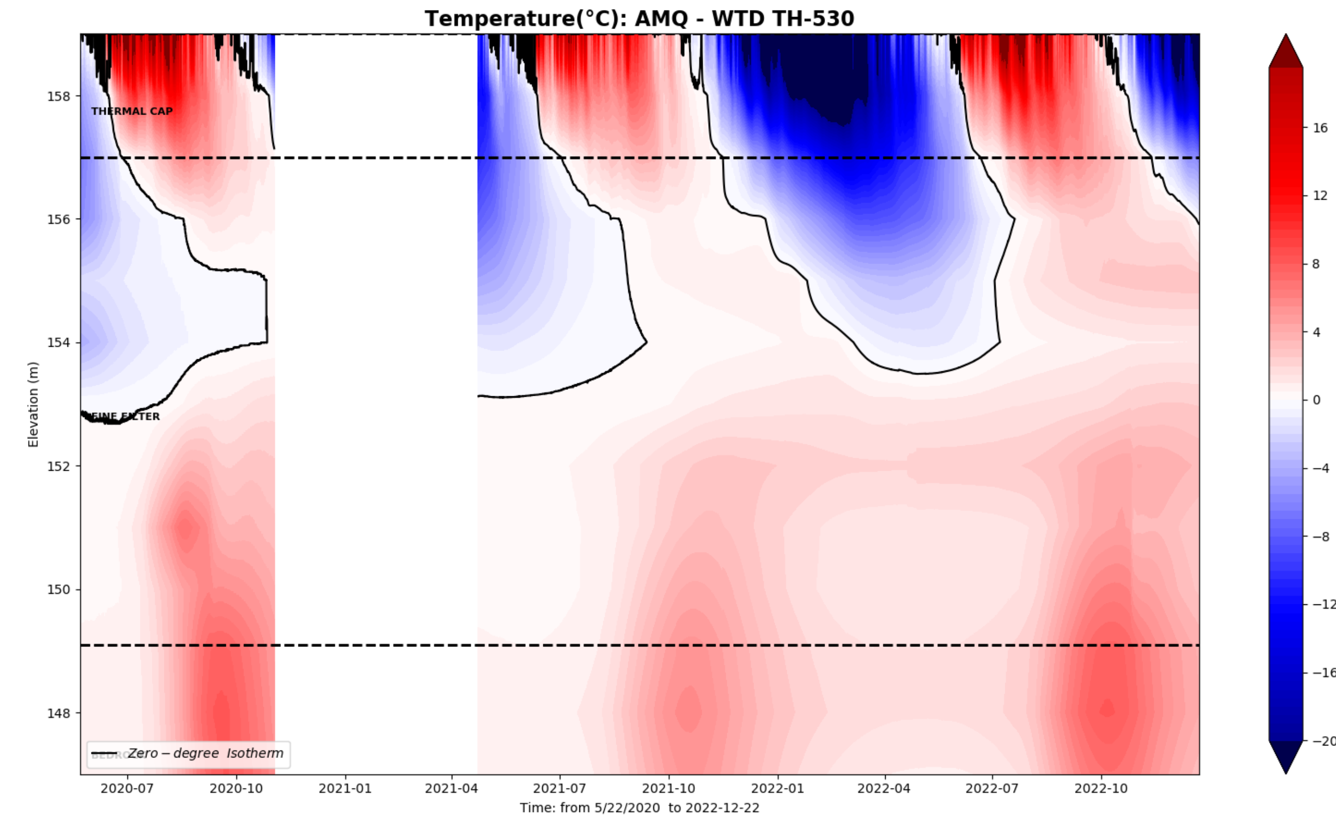
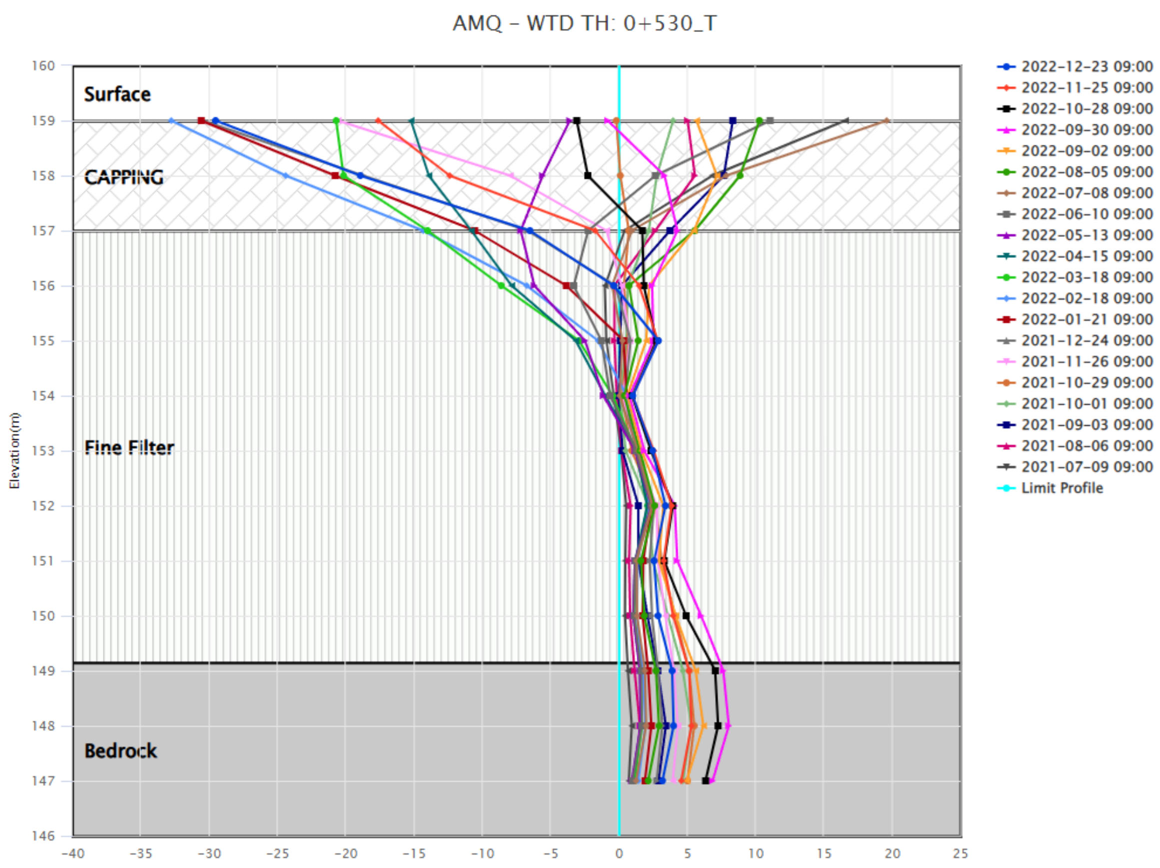
Limit Profile


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

WTD-TH 0+530




Temperature(°C): AMQ - WTD TH-530
THERMAL CAP
FINE FILTER
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/22/2020 to 2022-12-22


AMQ - WTD TH: 0+530_T
Surface
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
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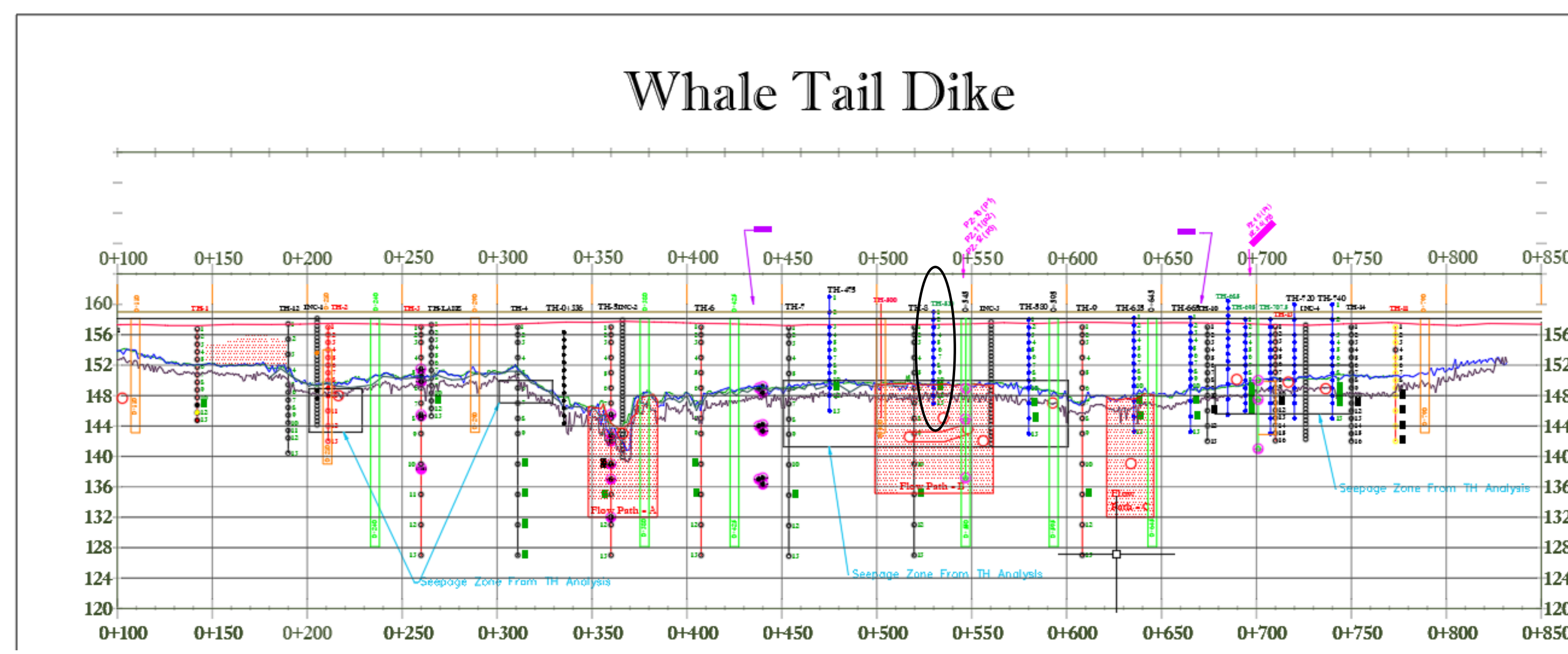
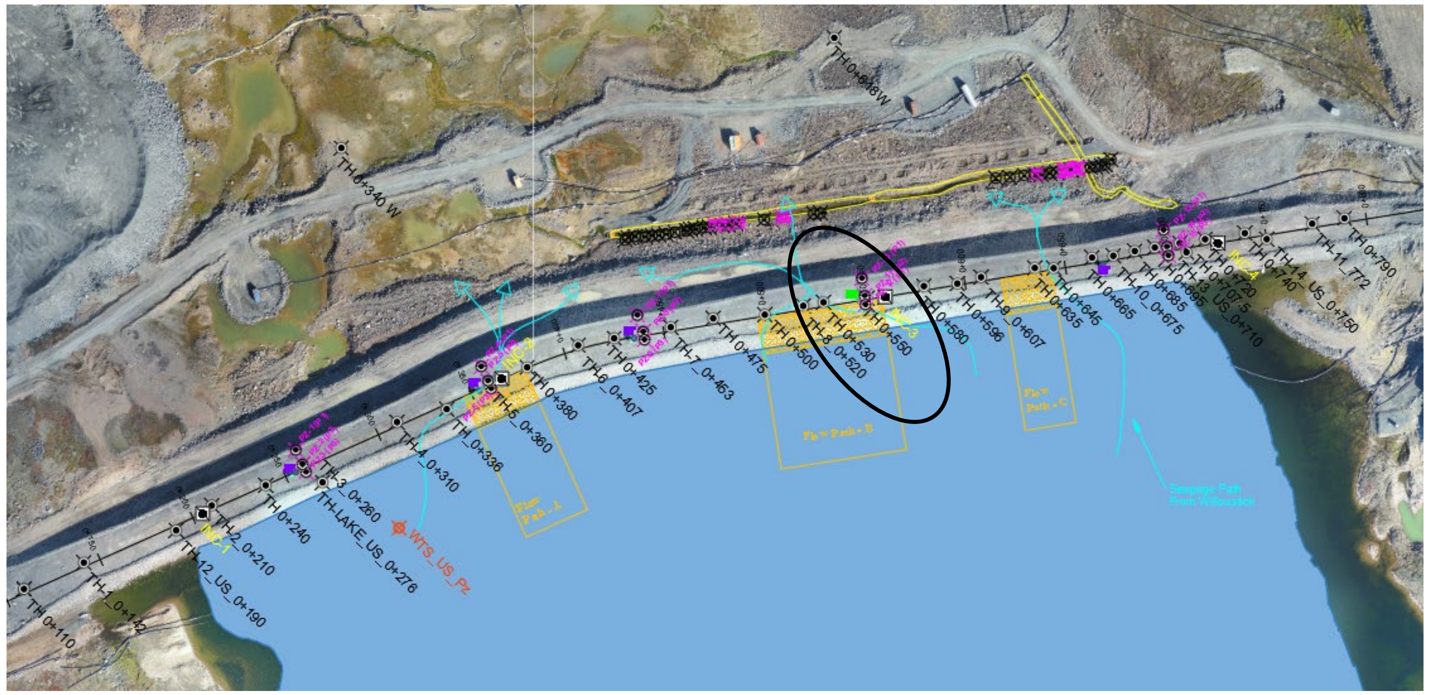
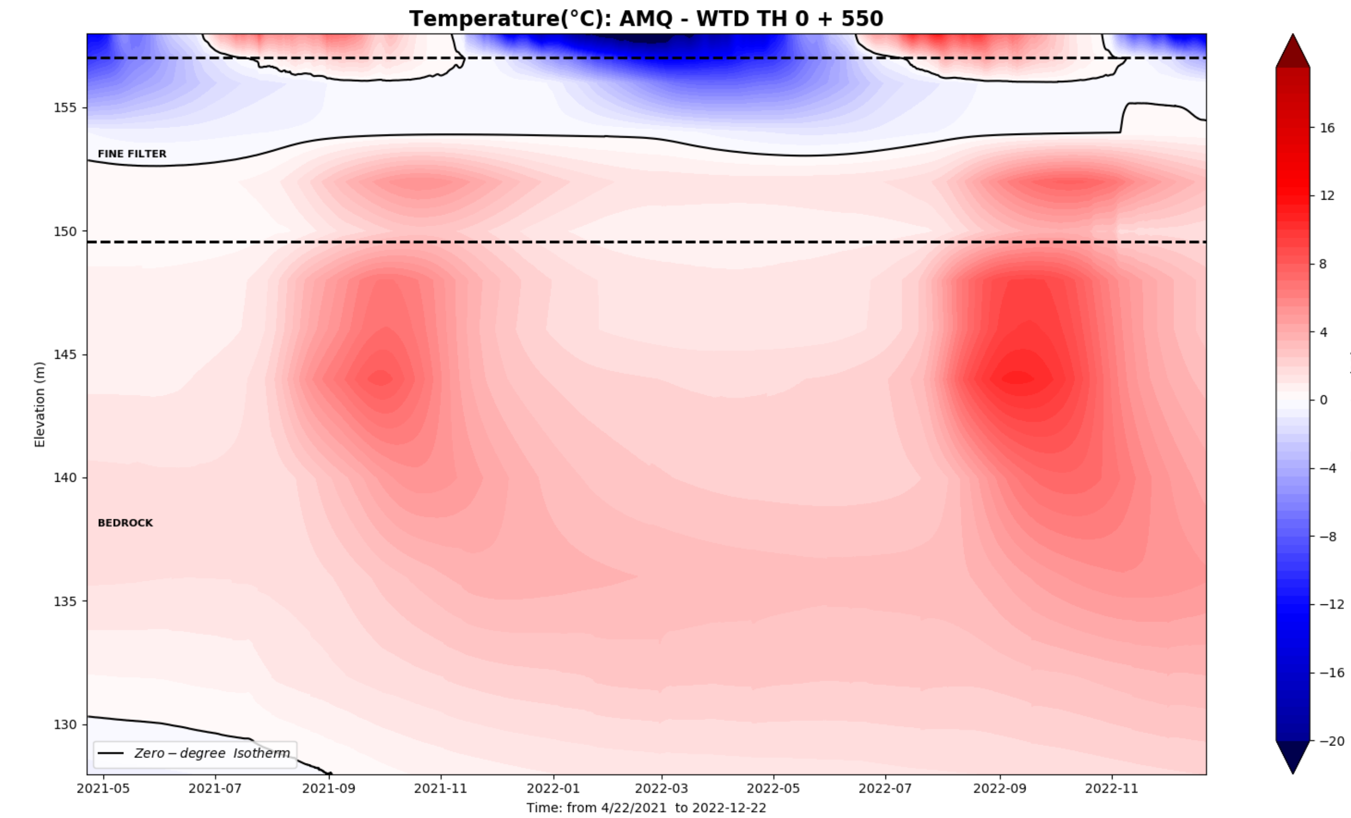
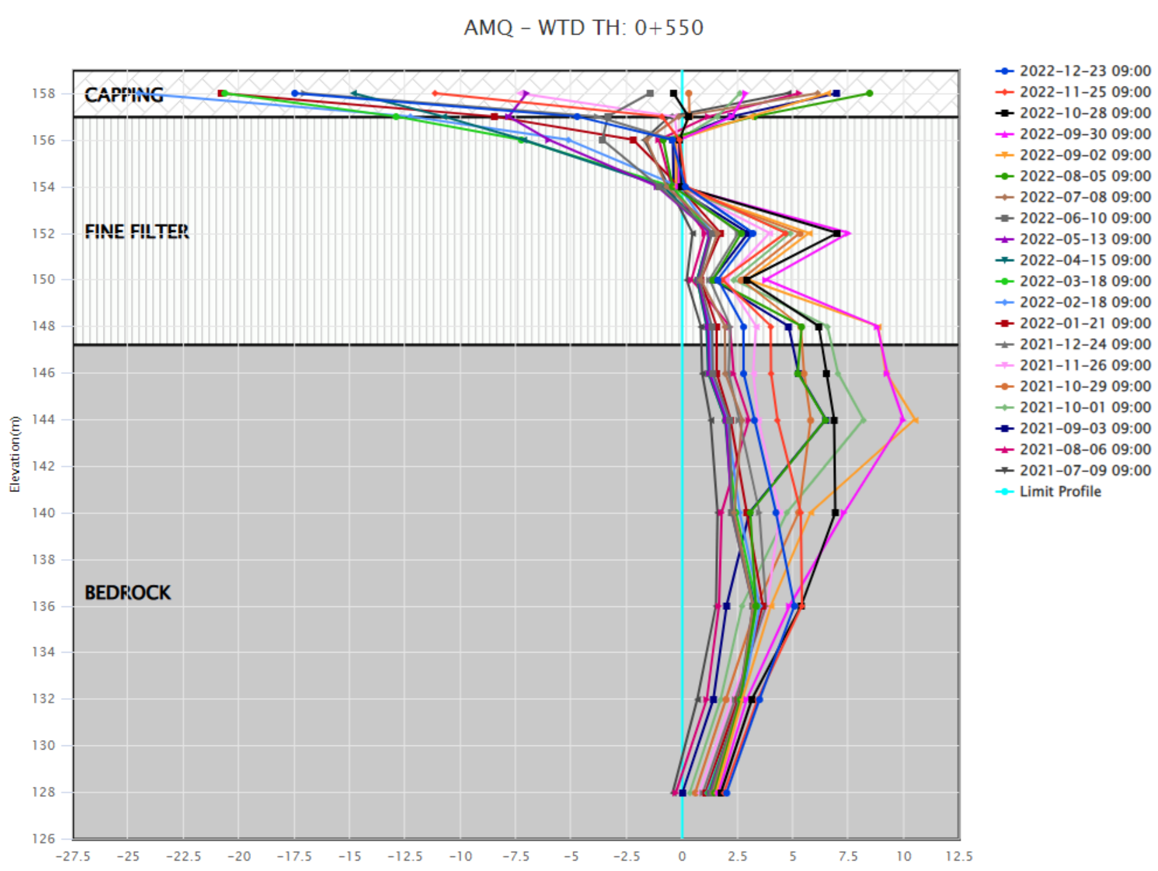
Limit Profile


Whale Tail Dike

WTD-TH 0+550




Temperature(°C): AMQ - WTD TH 0 + 550
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/22/2021 to 2022-12-22
Temperature(°C)


AMQ - WTD TH: 0+550
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
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2022-11-25 09:00
2022-10-28 09:00
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2022-09-02 09:00
2022-08-05 09:00
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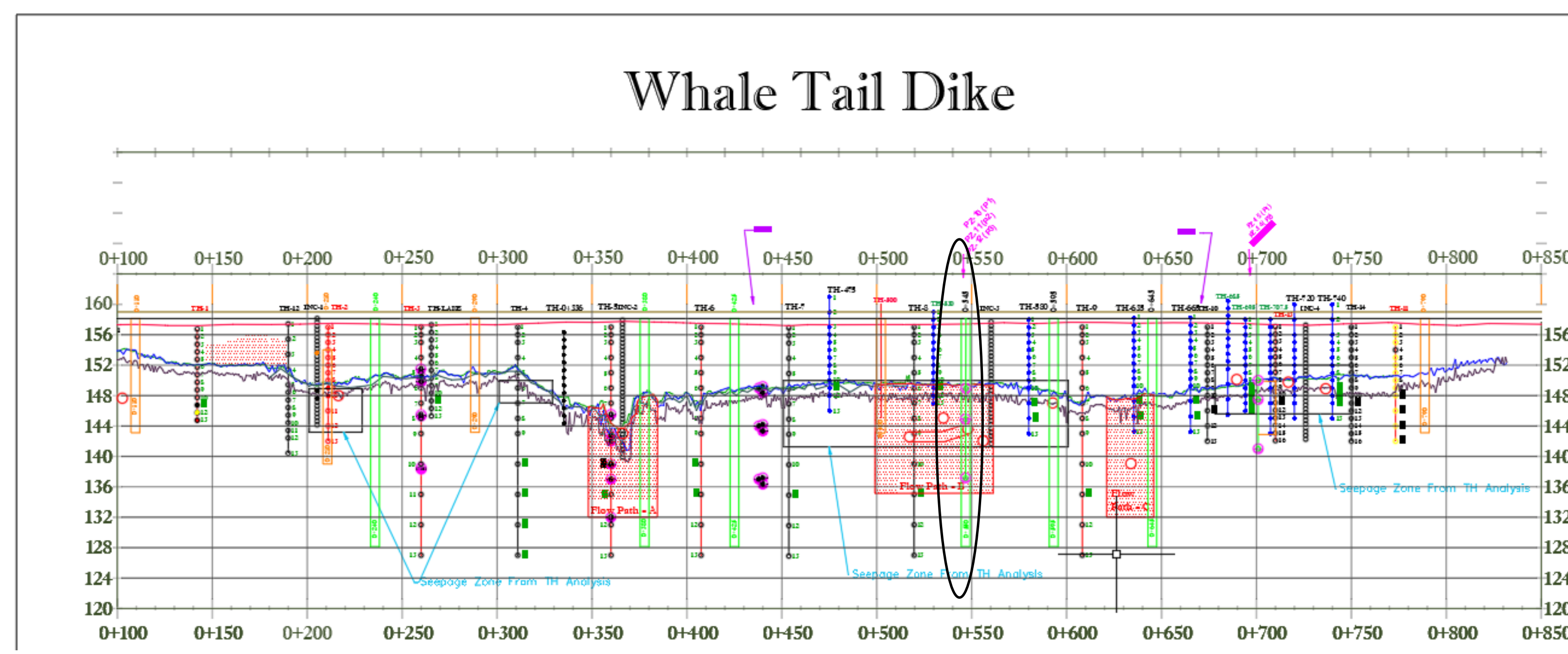
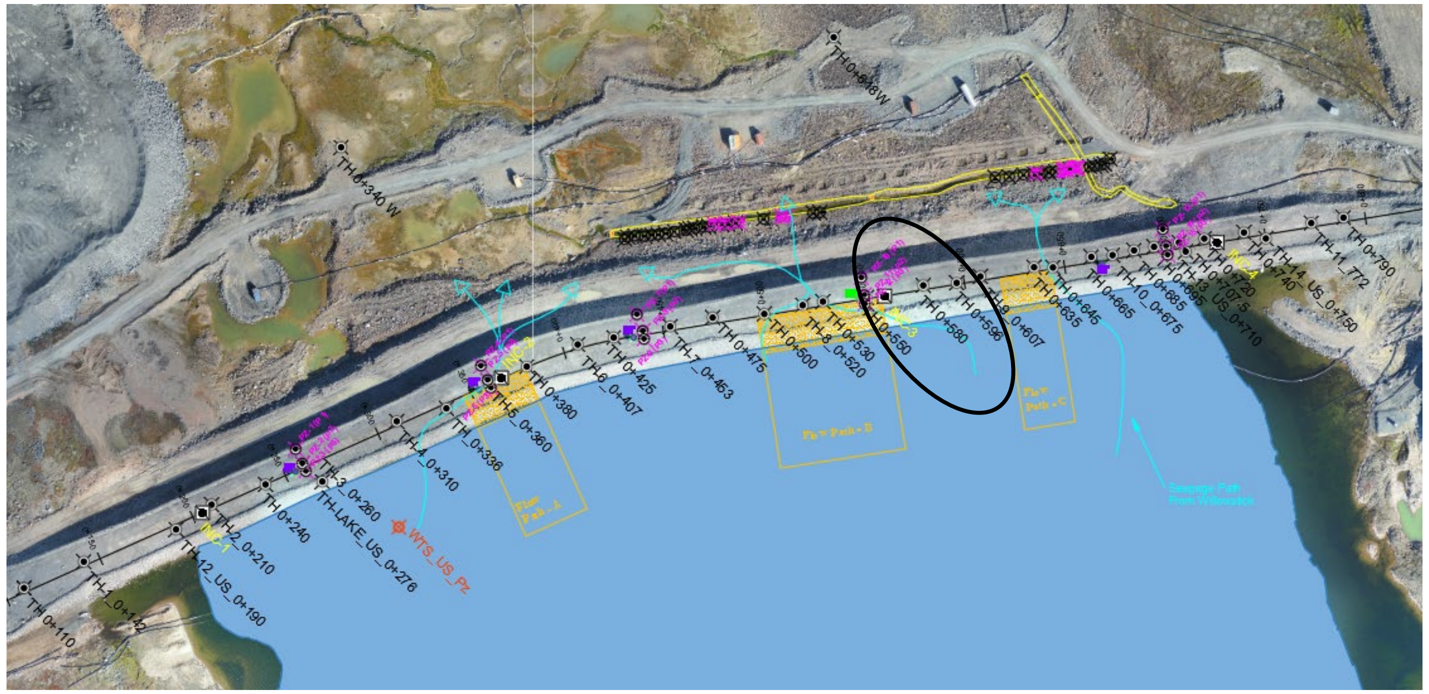
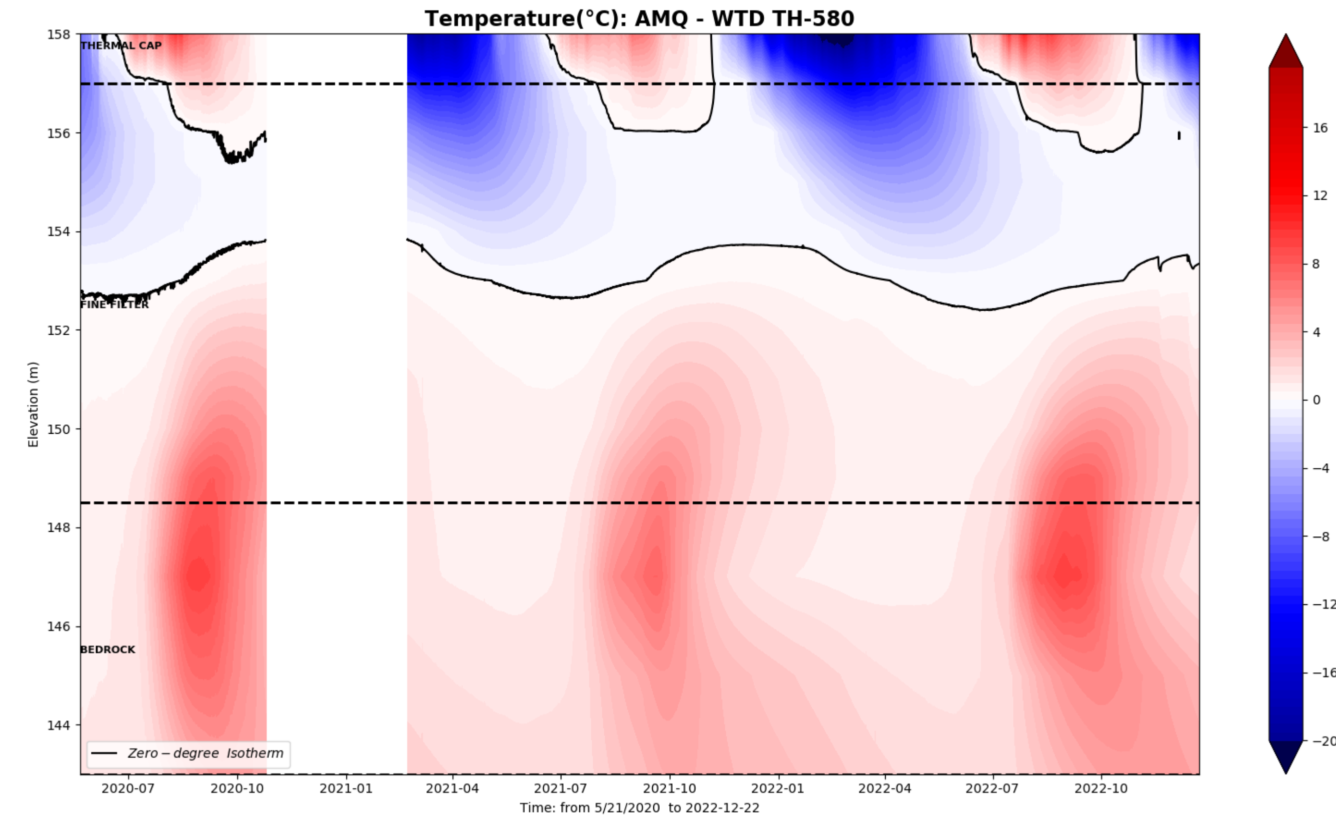
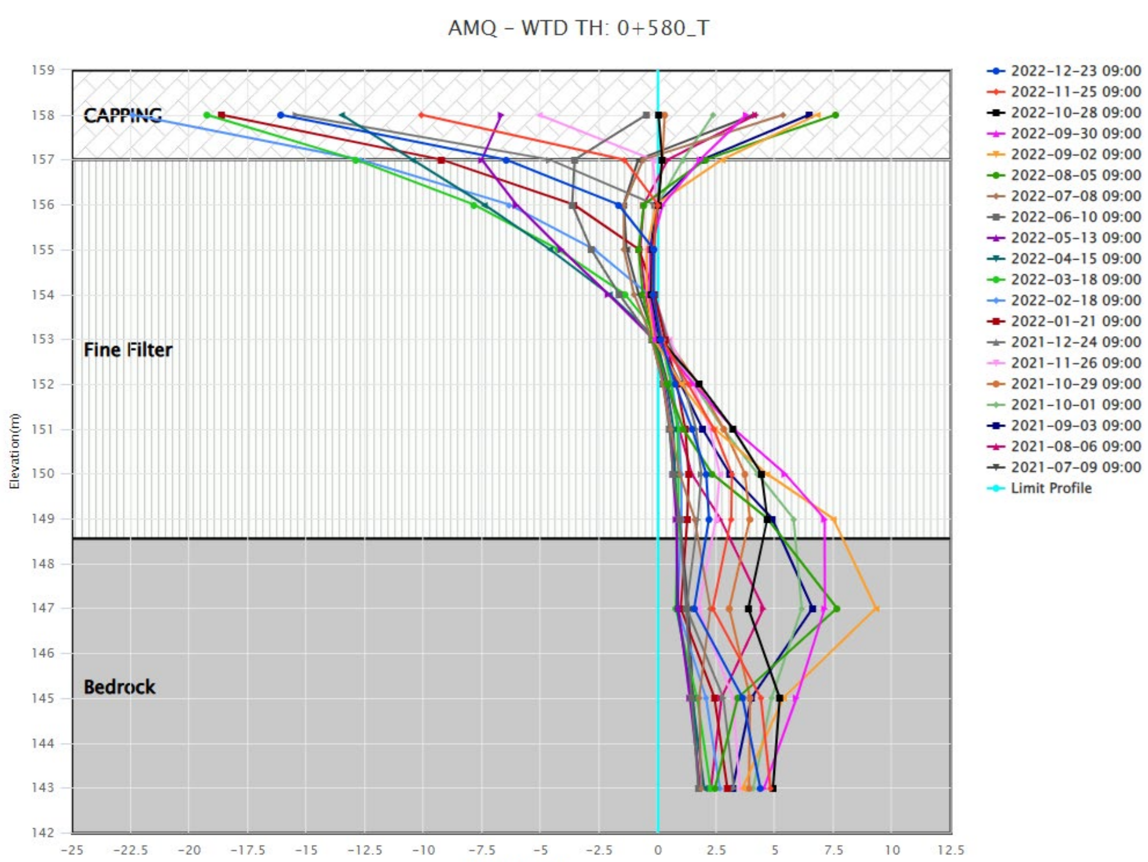
Limit Profile


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

WTD-TH 0+580




Temperature(°C): AMQ - WTD TH-580
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 2022-12-22
Temperature(°C)


AMQ - WTD TH: 0+580_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
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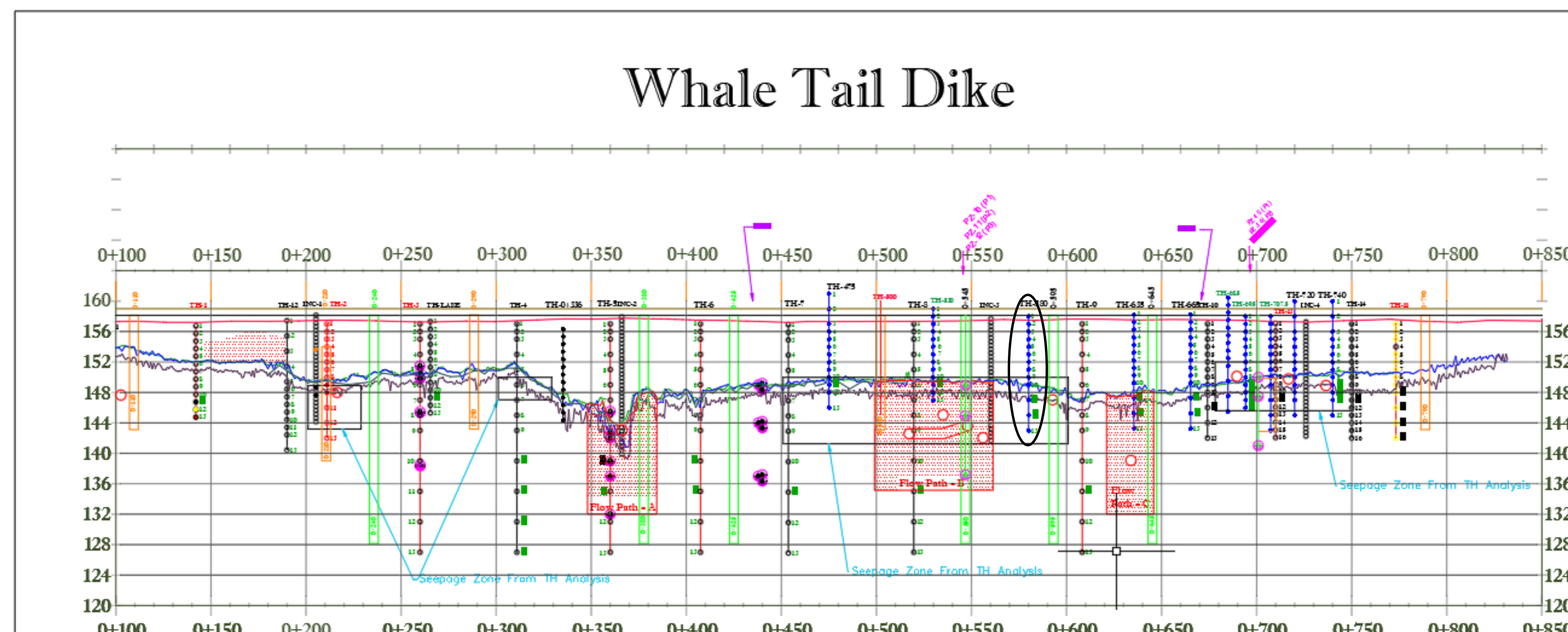
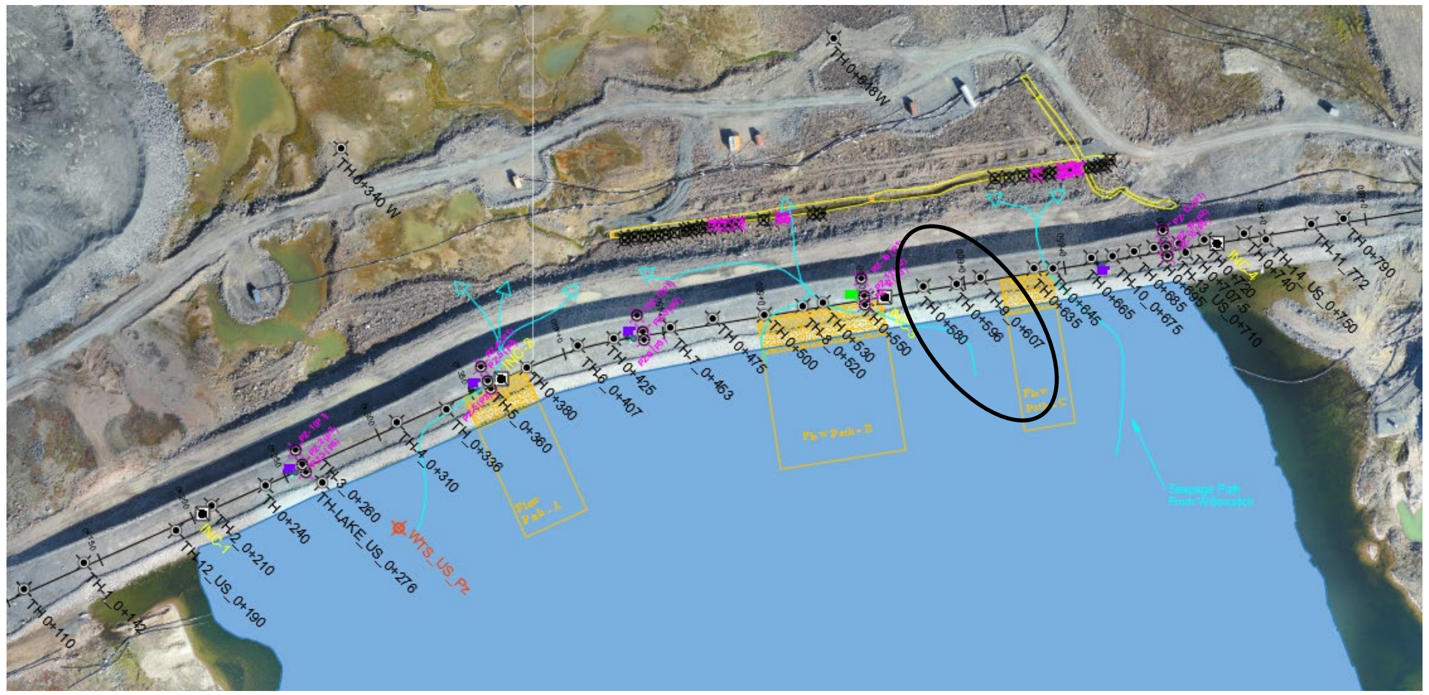
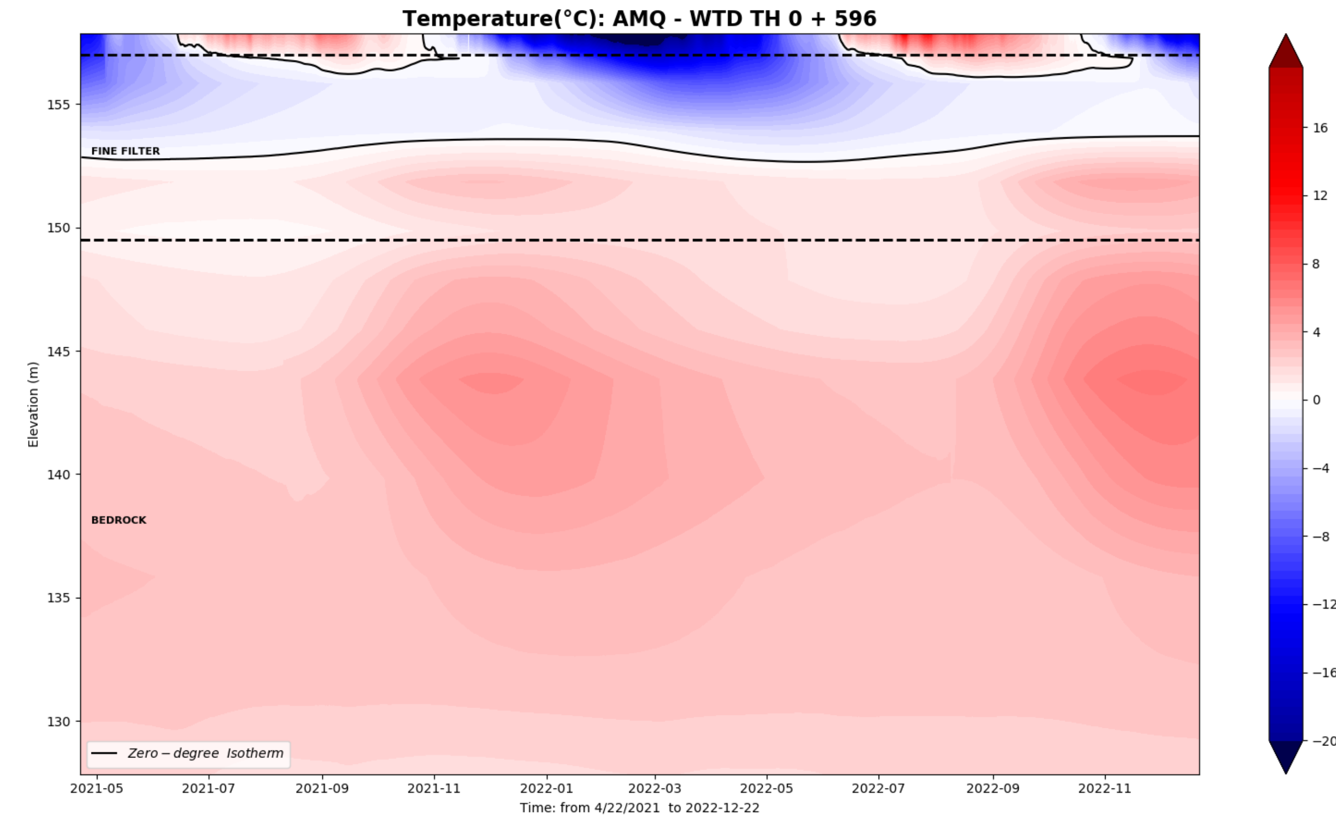
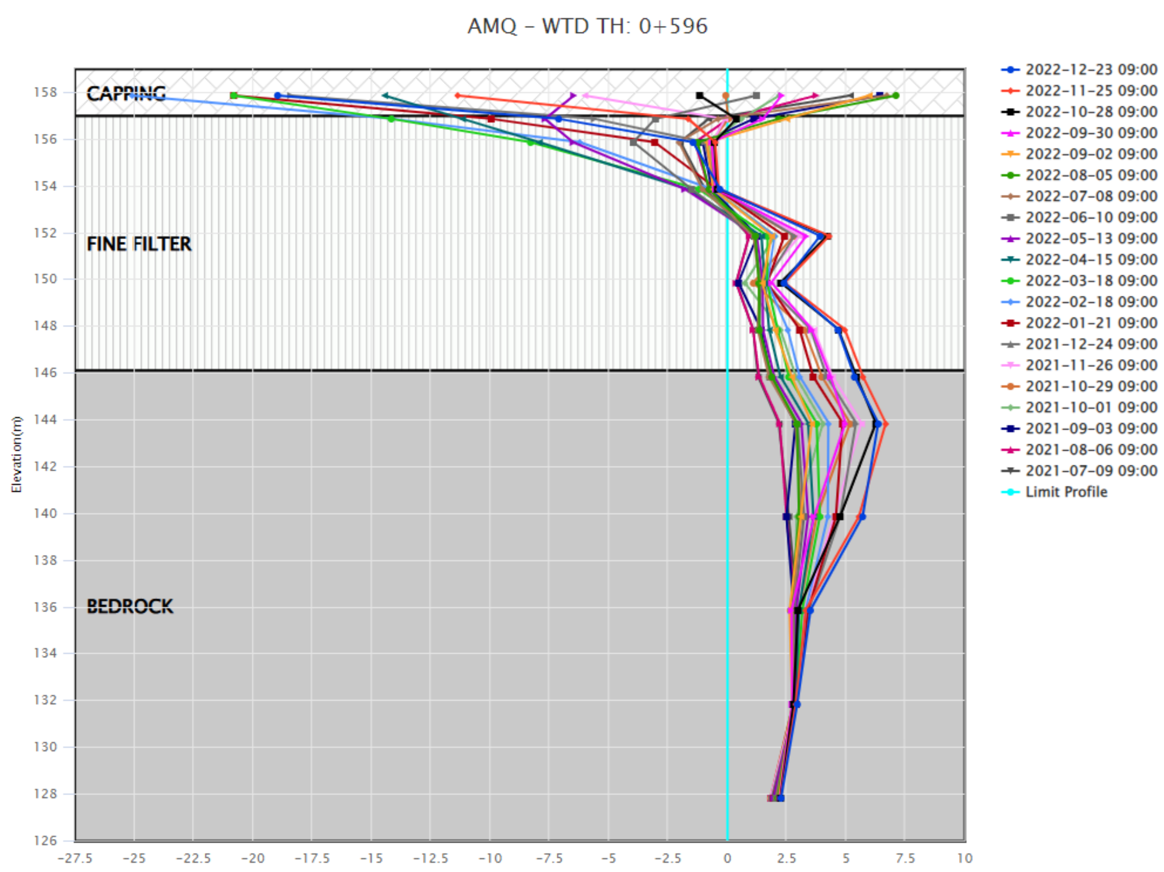
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

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 2022-12-22


AMQ - WTD TH: 0+596
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 09:00
2022-11-25 09:00
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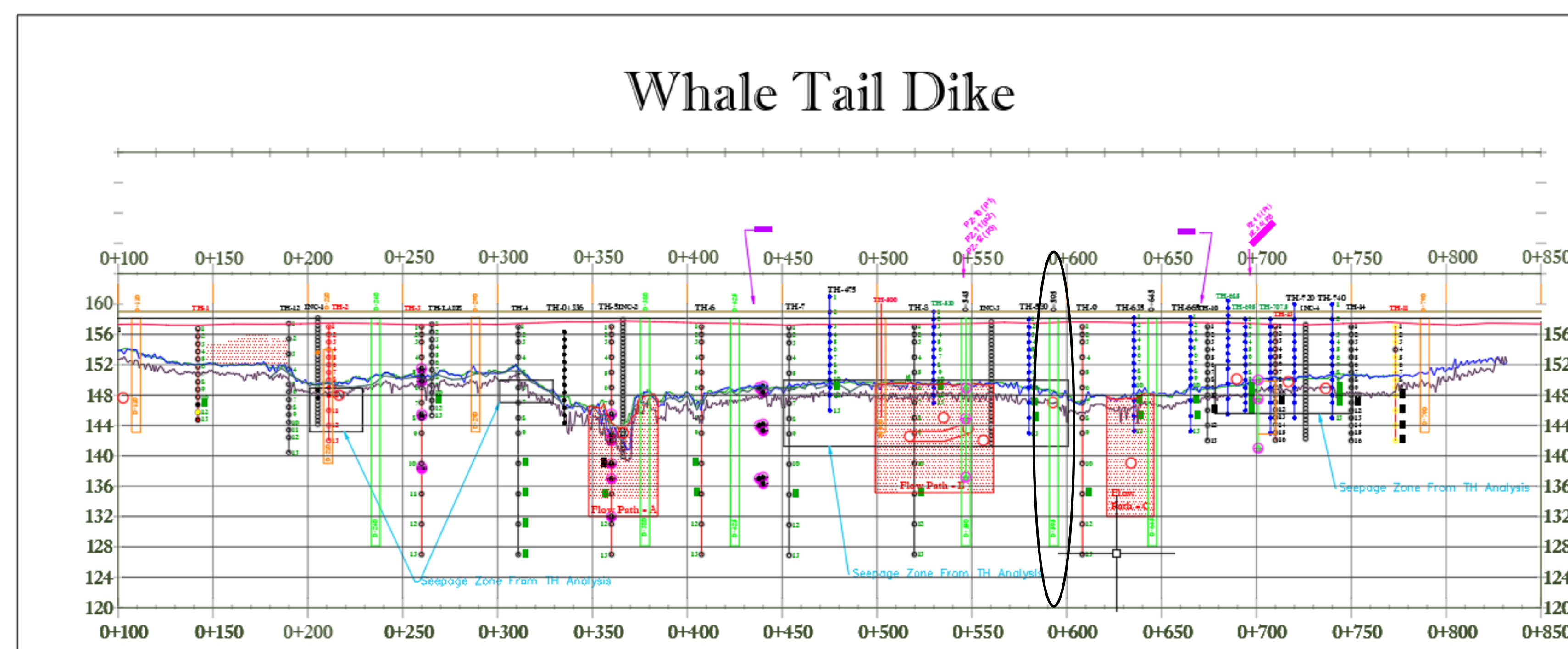
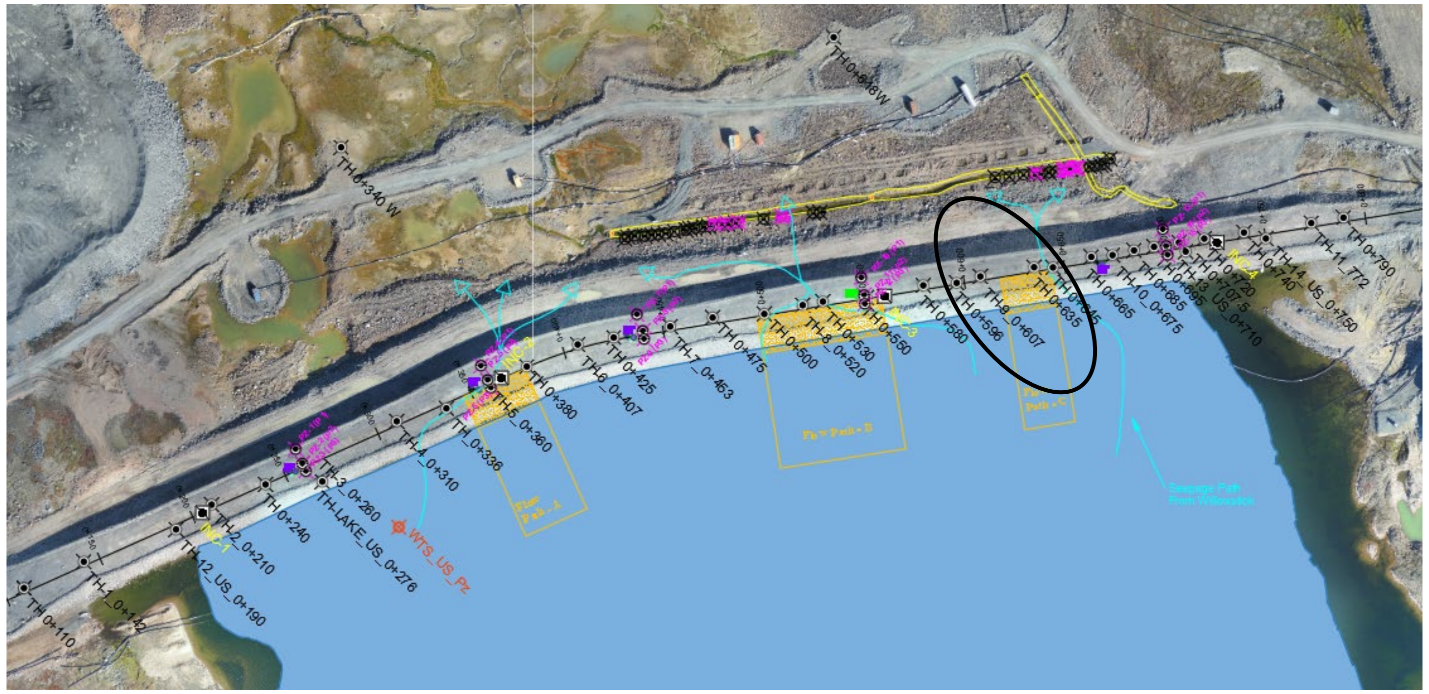
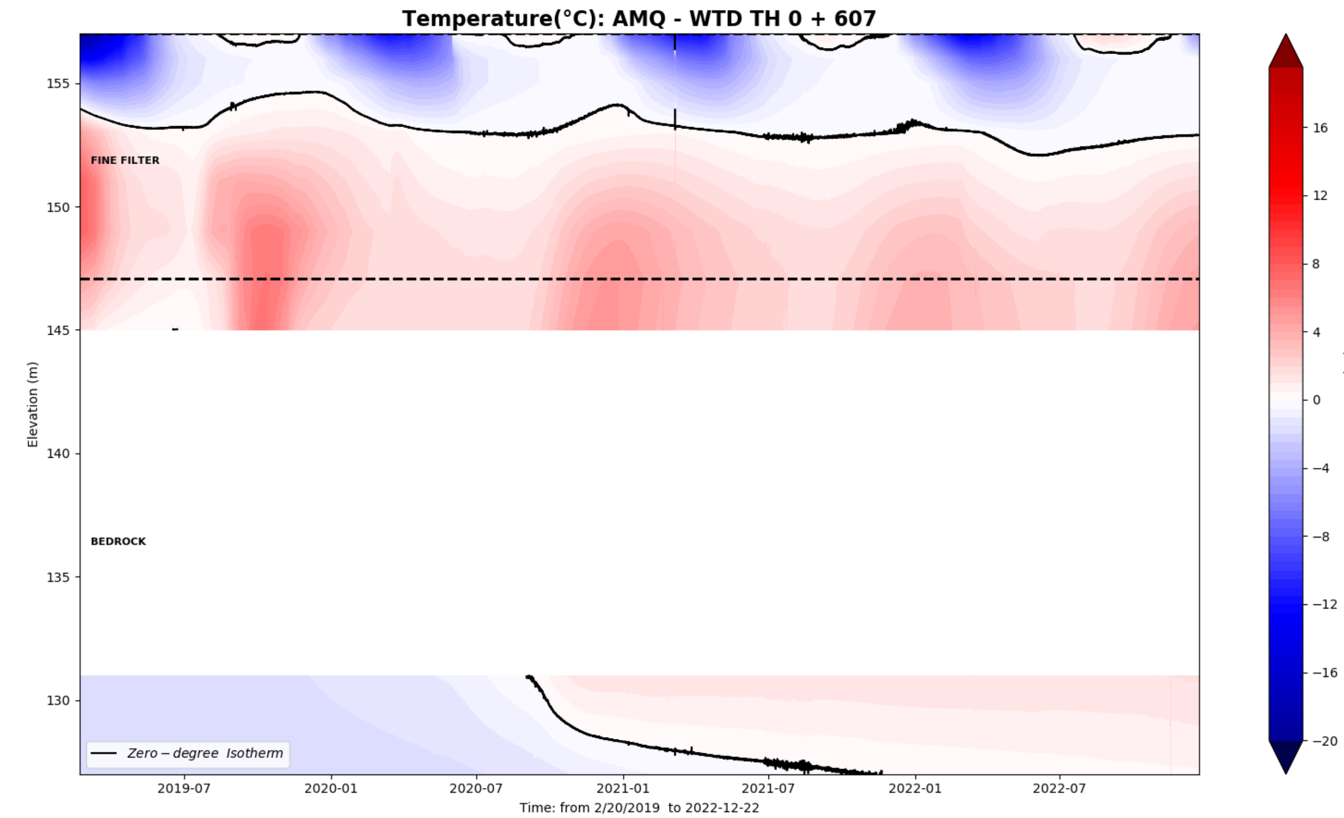
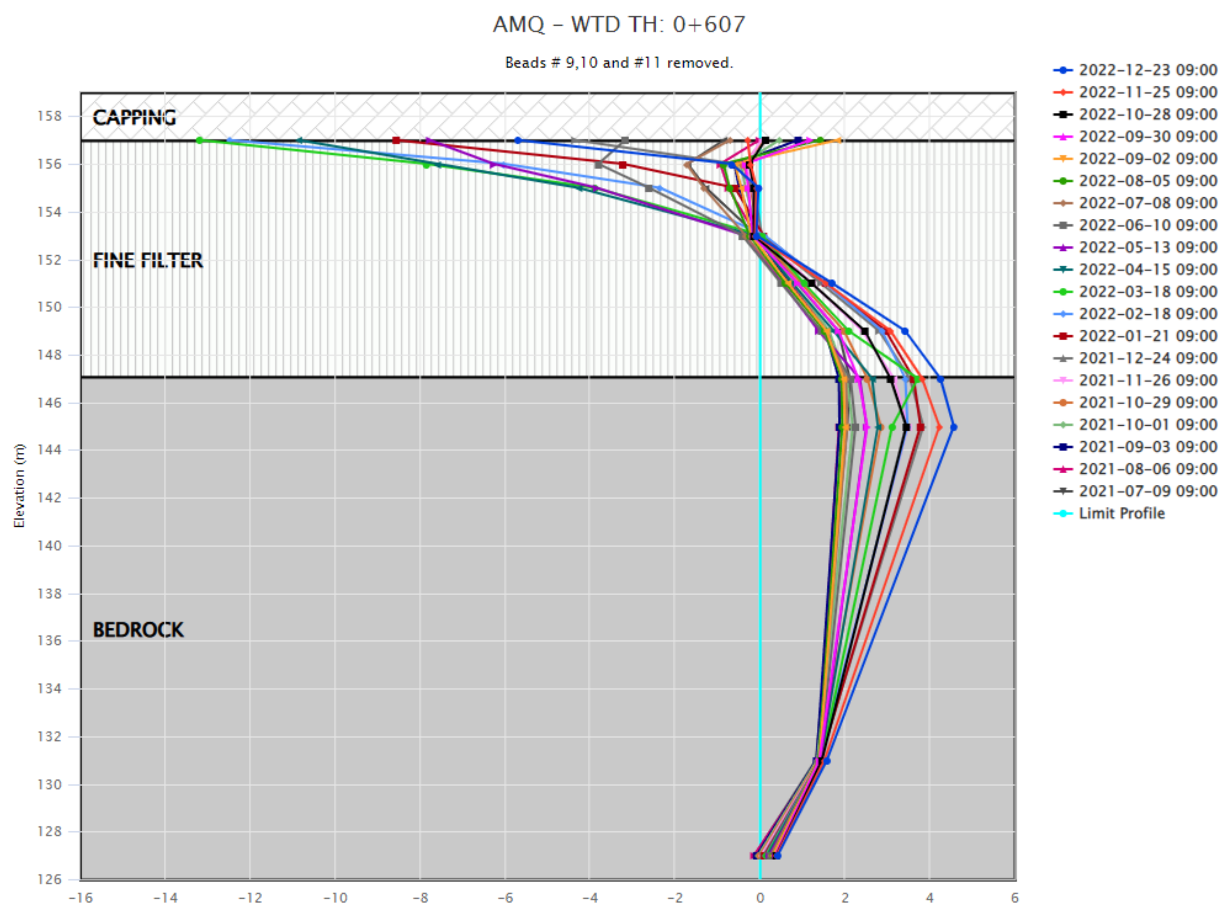
Limit Profile


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

WTD-TH 0+607




Temperature(°C): AMQ - WTD TH 0 + 607
FINE FILTER
BEDROCK
Elevation (m)
Temperature(°C)
Zero – degree Isotherm
Time: from 2/20/2019 to 2022-12-22


AMQ – WTD TH: 0+607
Beads # 9,10 and #11 removed.
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
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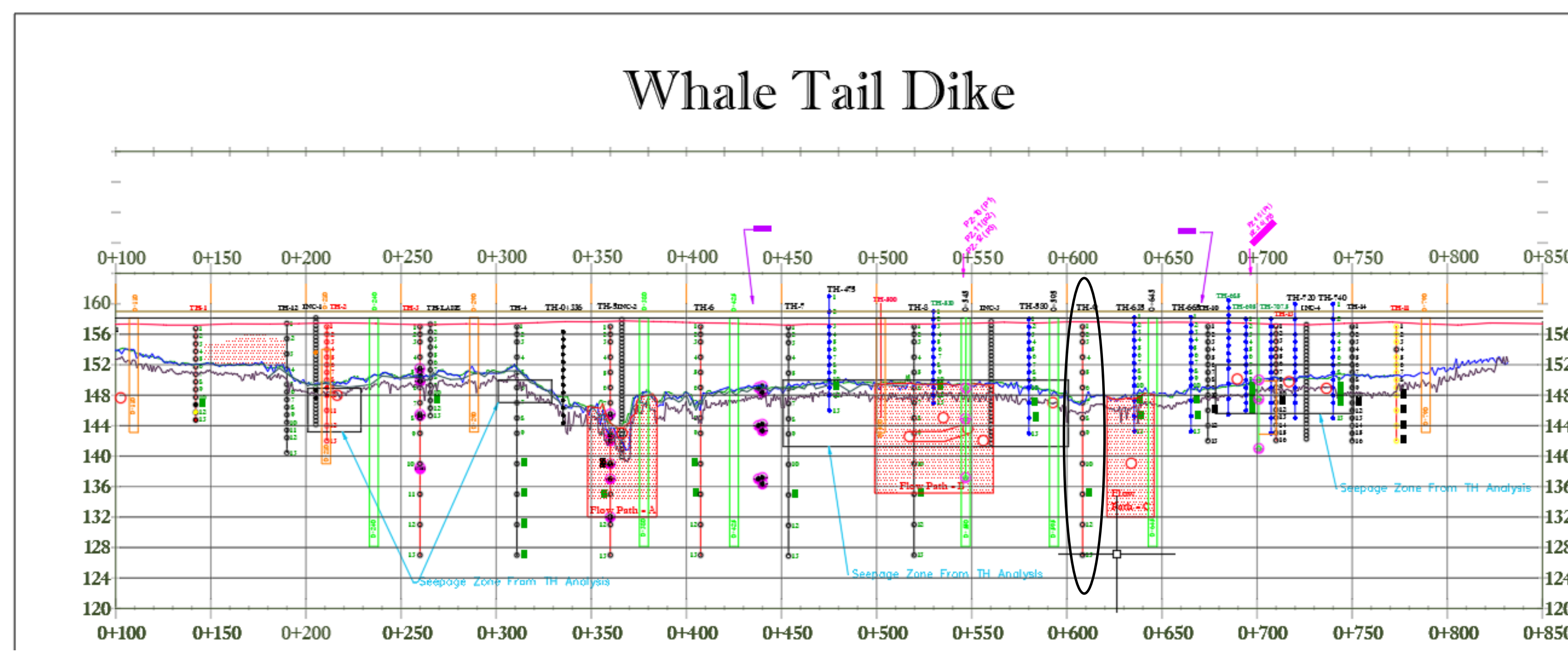
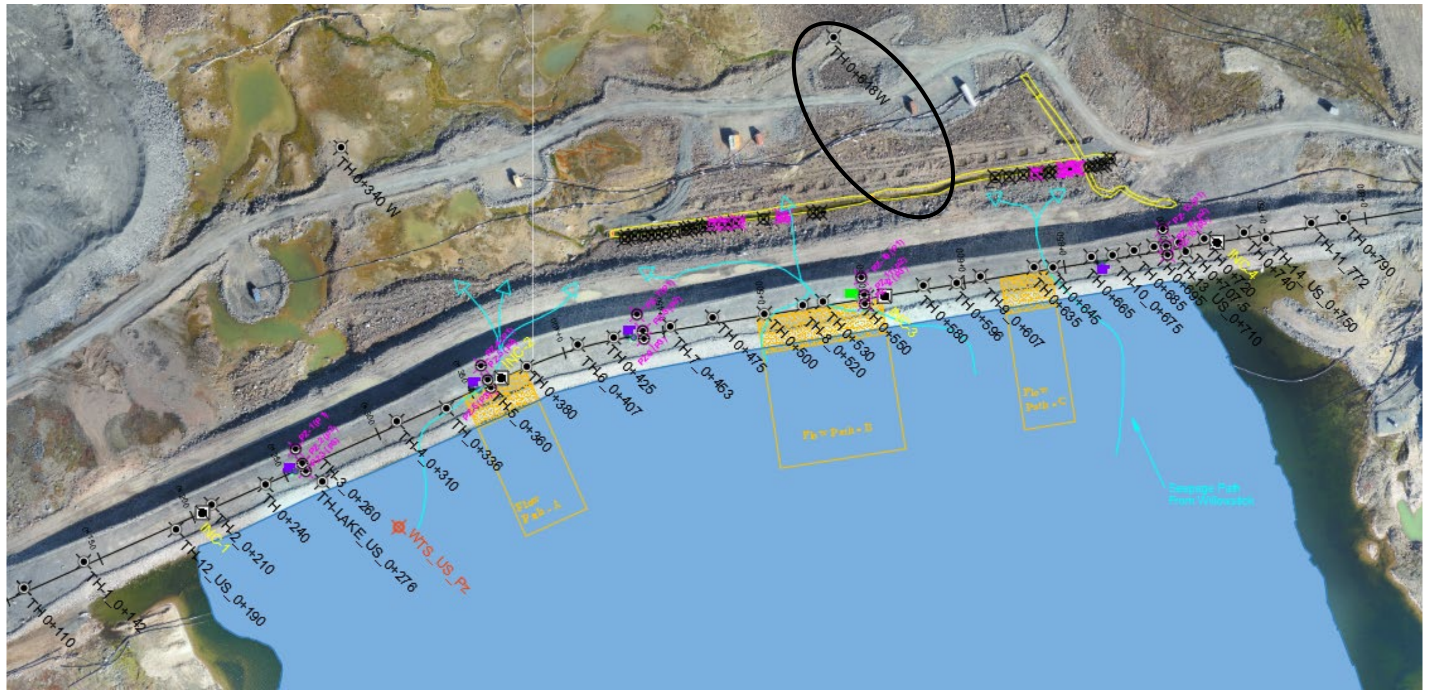
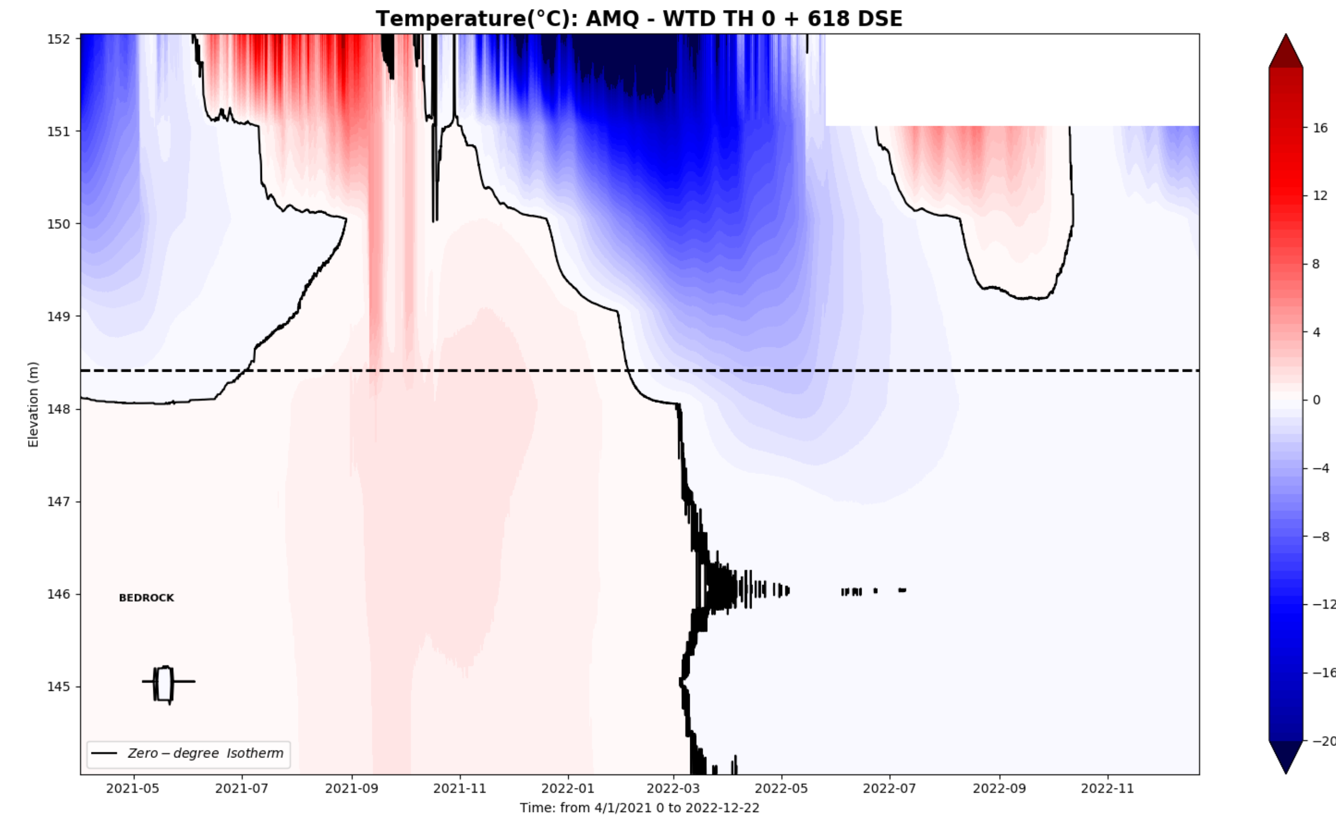
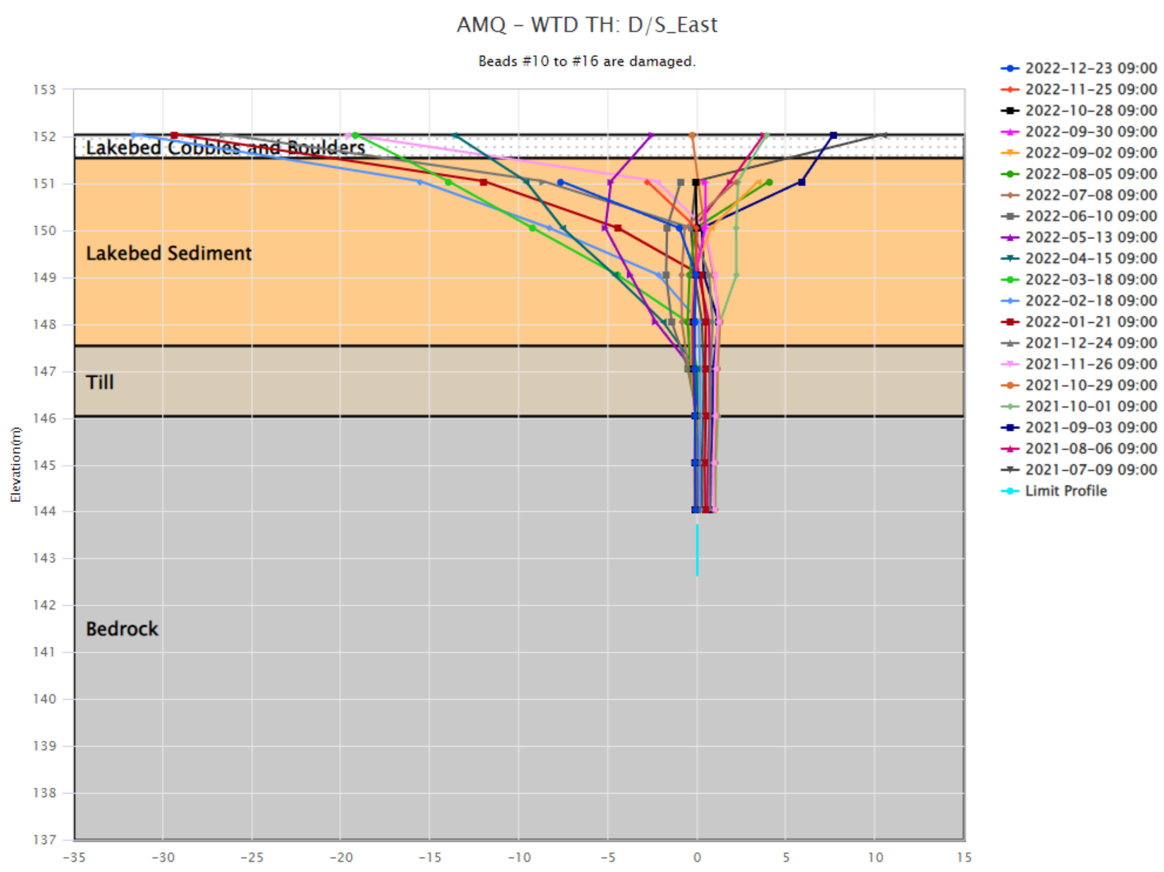
2021-07-09 09:00
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

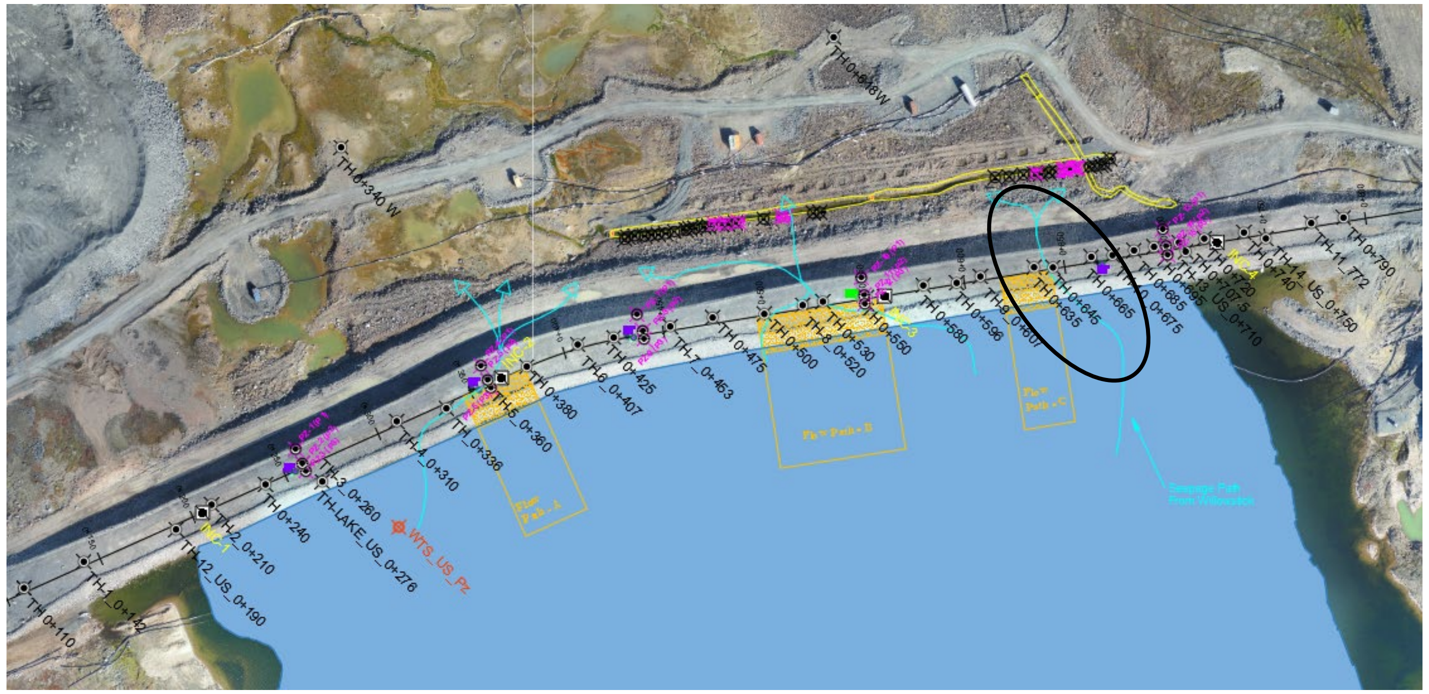
WTD-TH 0+618 DSE

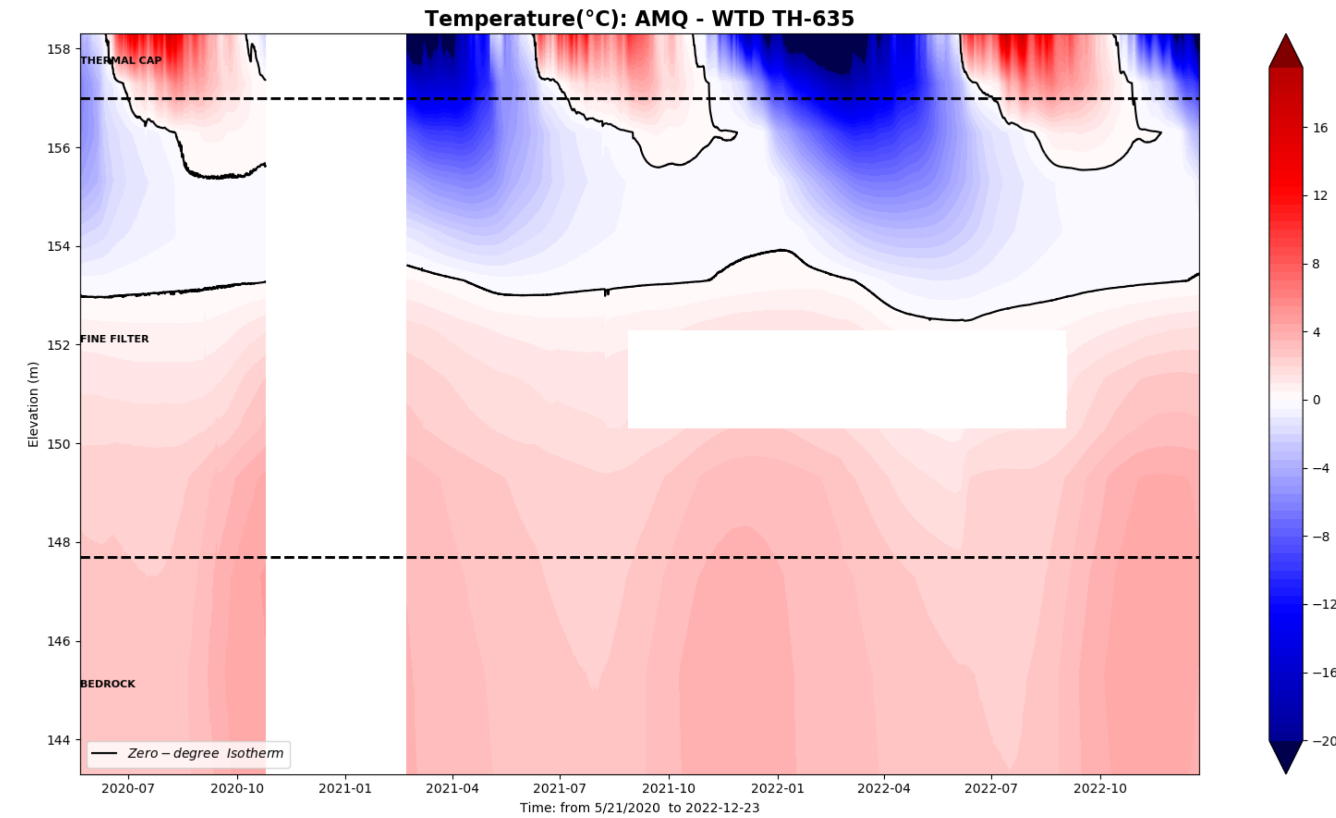


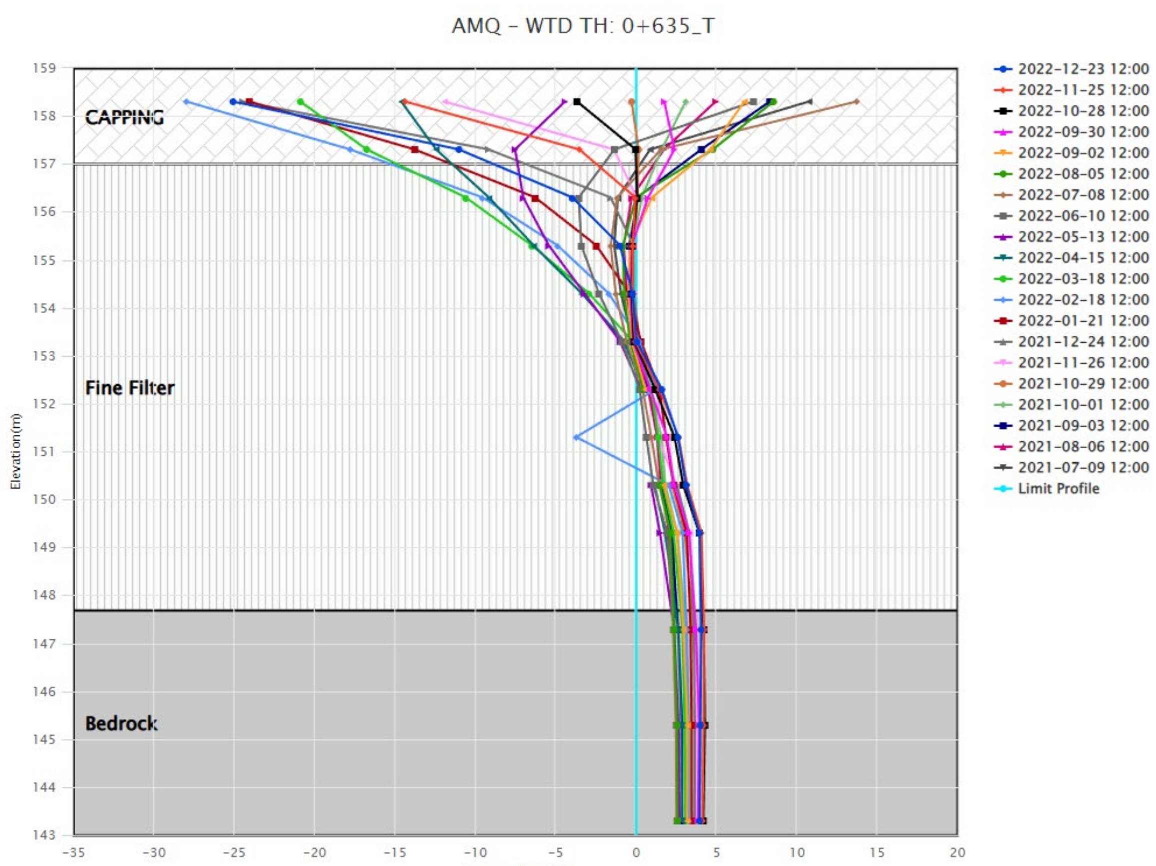




WTD-TH 0+635




Temperature(°C): AMQ - WTD TH-635
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
Time: from 5/21/2020 to 2022-12-23


AMQ – WTD TH: 0+635_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
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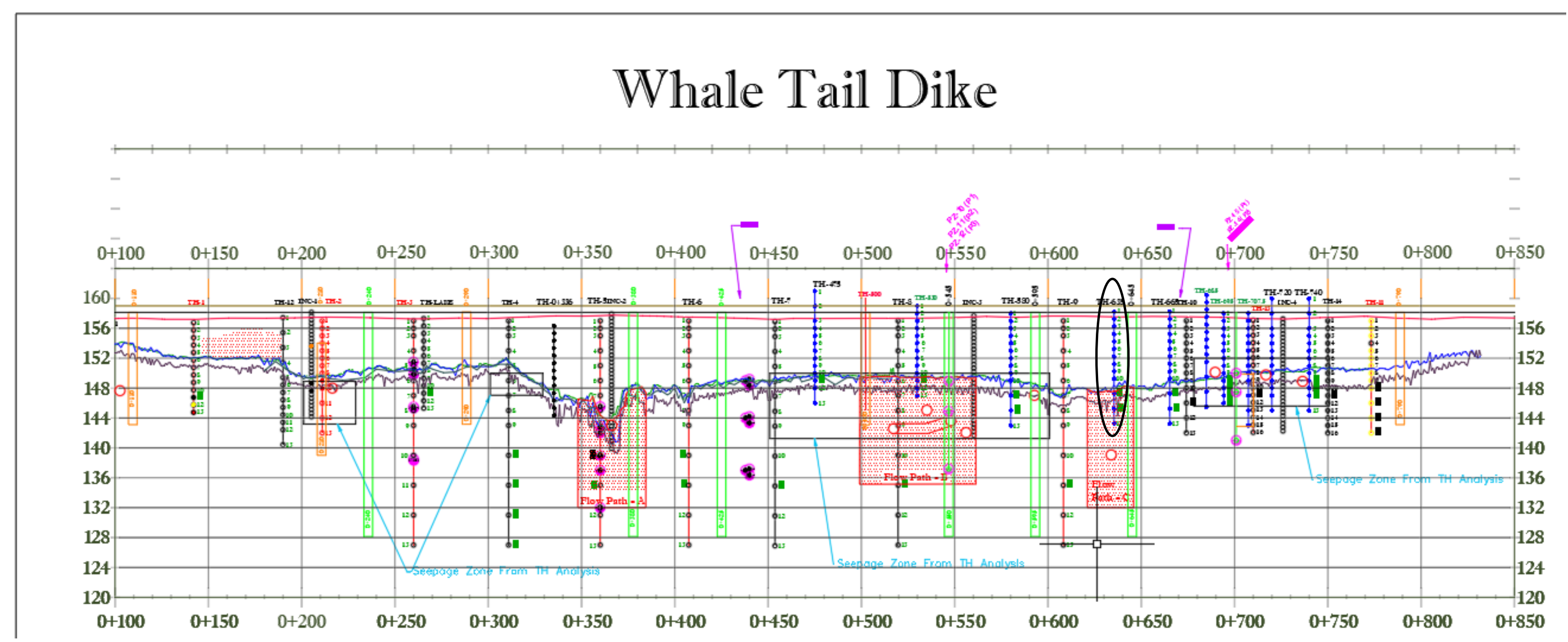
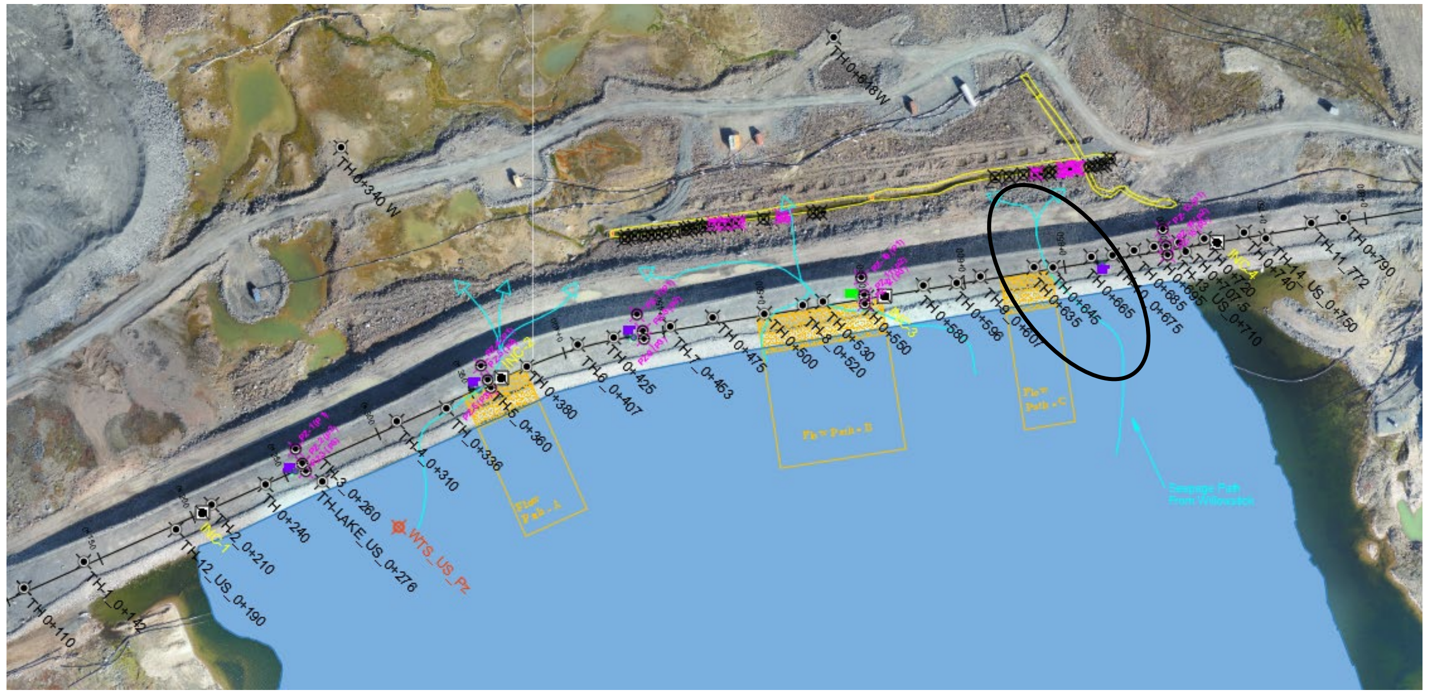
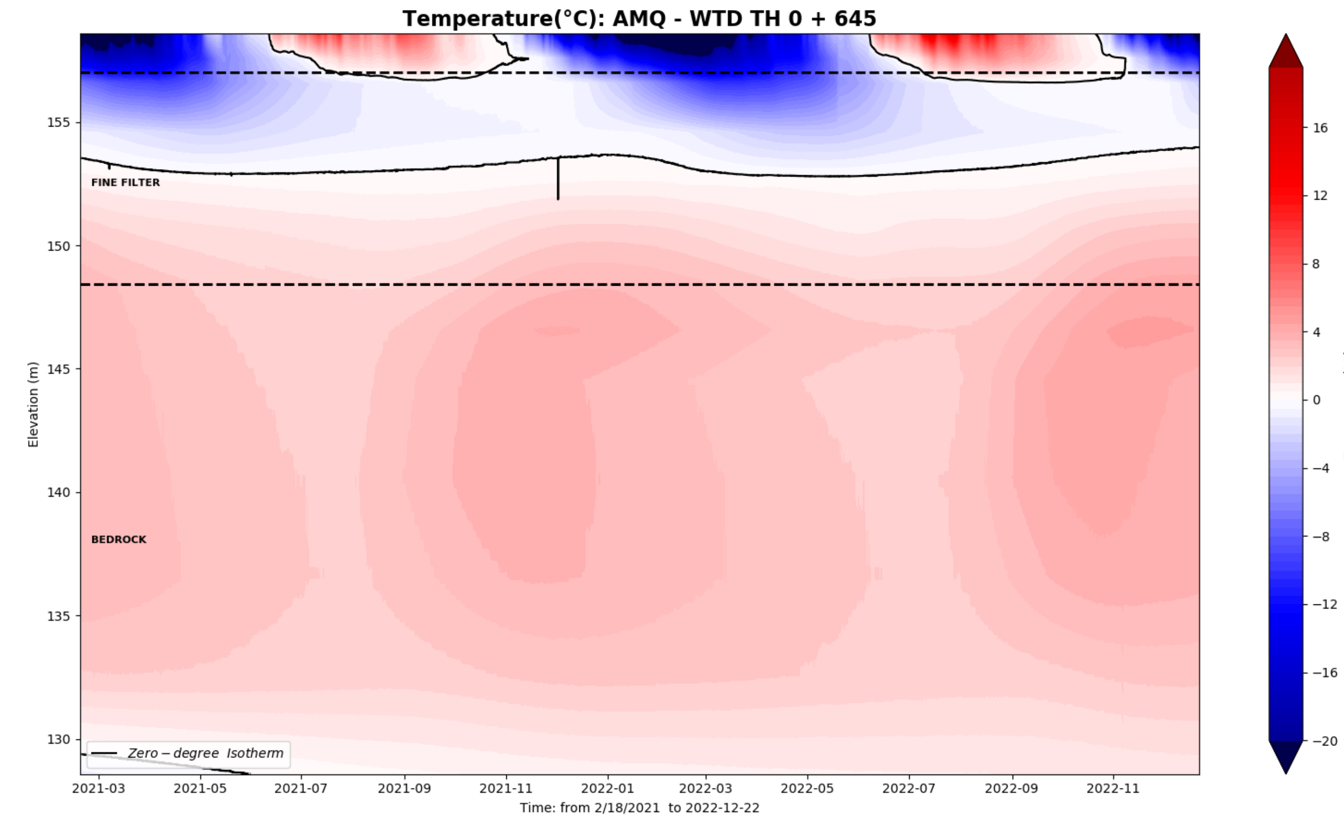
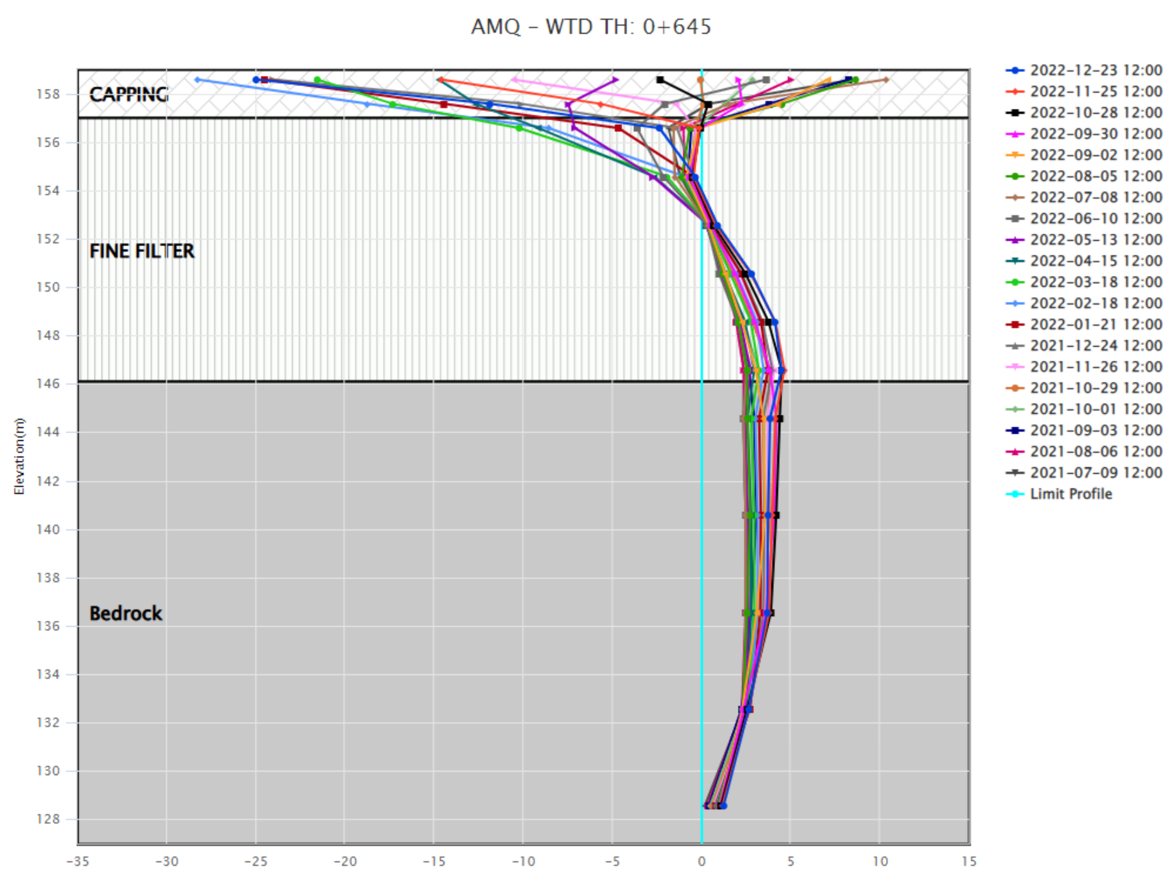
2021-07-09 12:00
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+645




Temperature(°C): AMQ - WTD TH 0 + 645
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/18/2021 to 2022-12-22


AMQ – WTD TH: 0+645
CAPPING
FINE FILTER
Bedrock
Elevation(m)
Temperature (C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
2022-05-13 12:00
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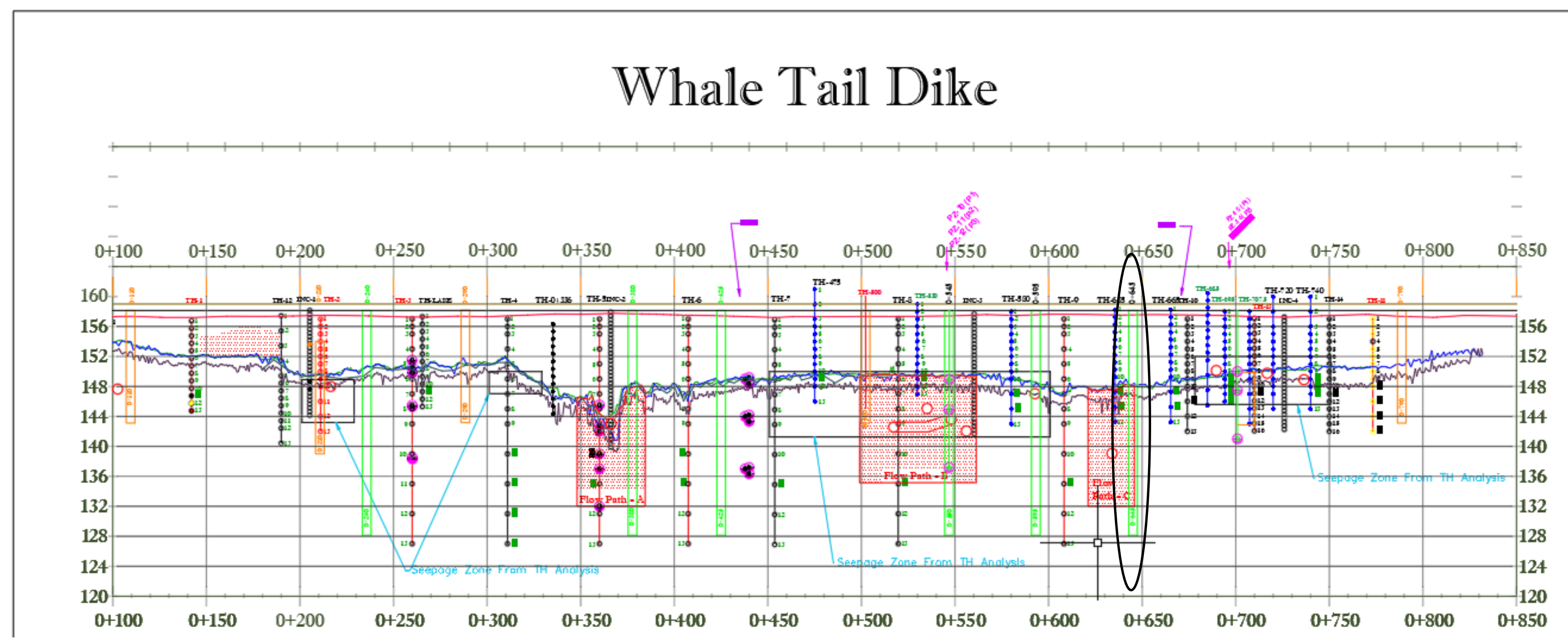
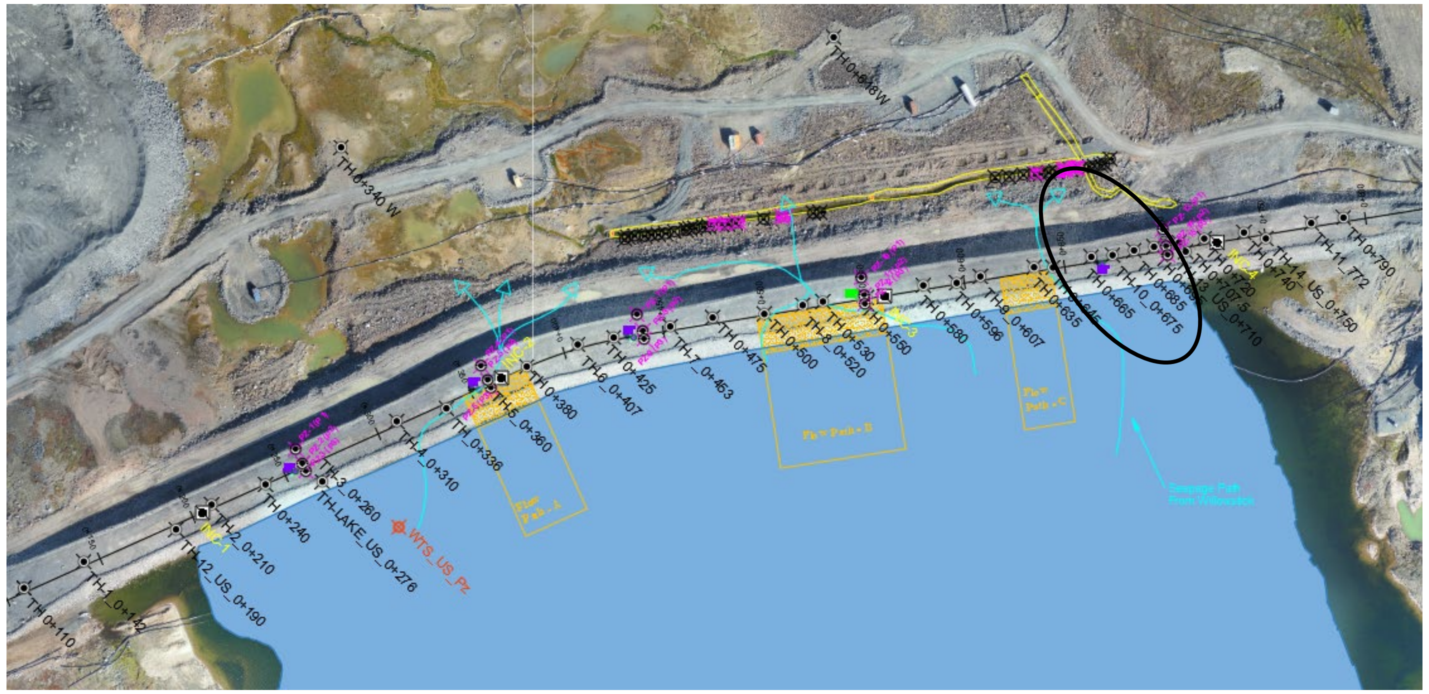
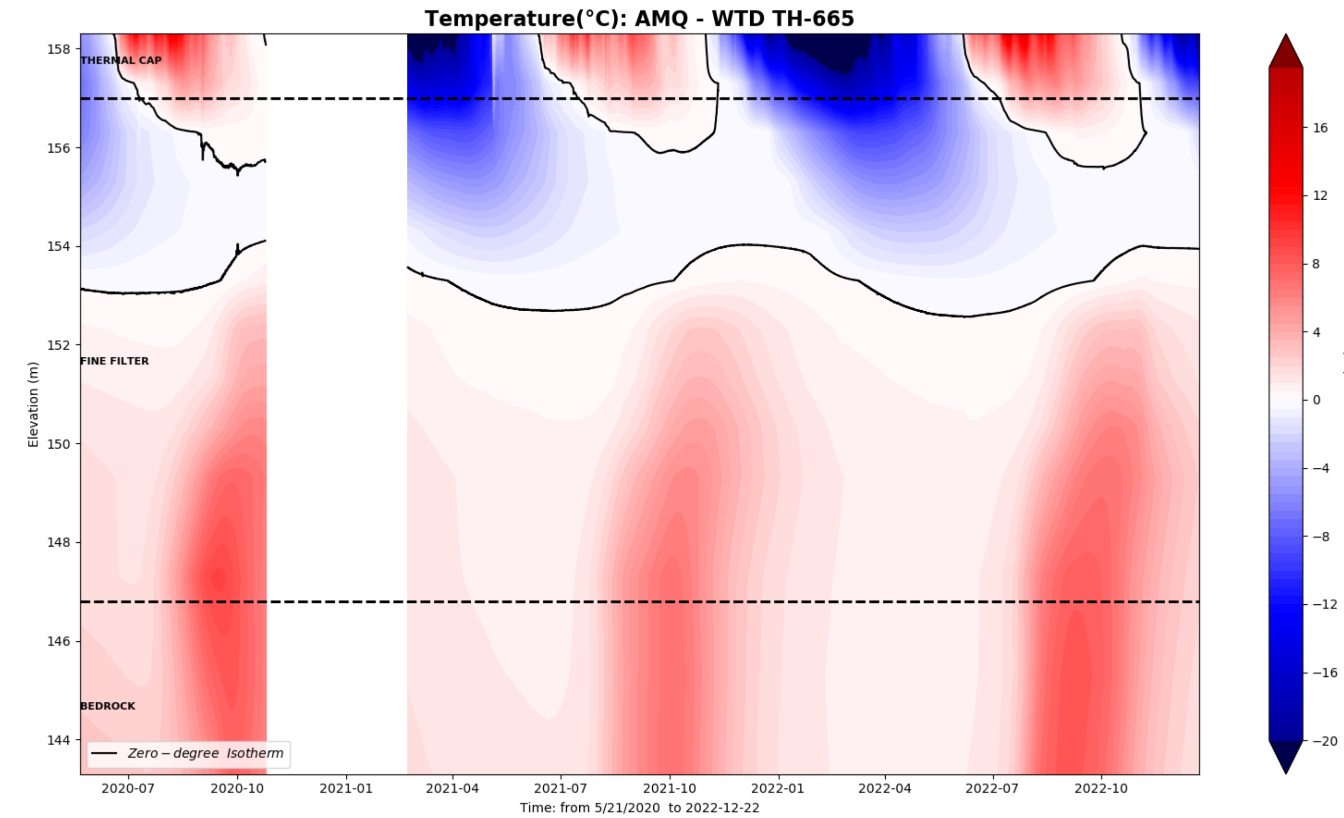
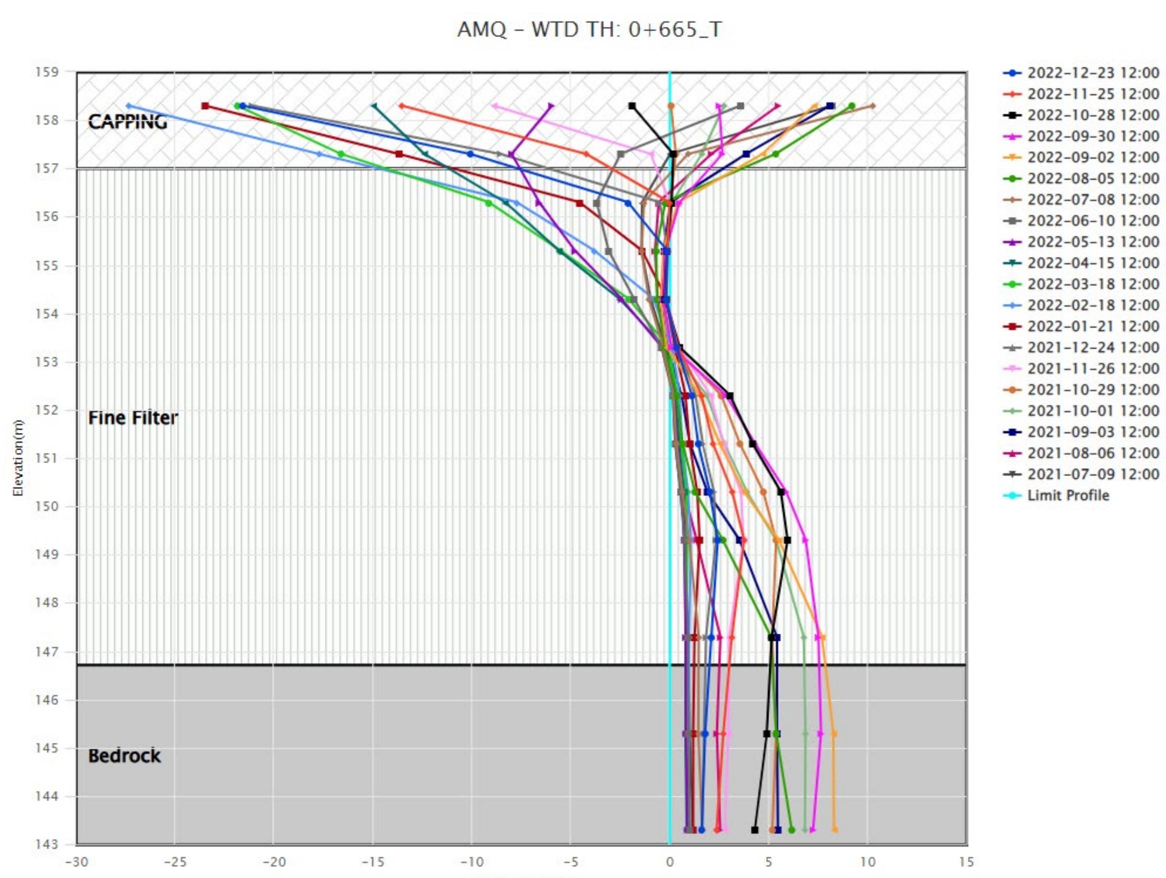
2021-07-09 12:00
Limit Profile


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

WTD-TH 0+665




Temperature(°C): AMQ - WTD TH-665
THERMAL CAP
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/21/2020 to 2022-12-22


AMQ – WTD TH: 0+665_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (C)
2022-12-23 12:00
2022-11-25 12:00
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2022-09-30 12:00
2022-09-02 12:00
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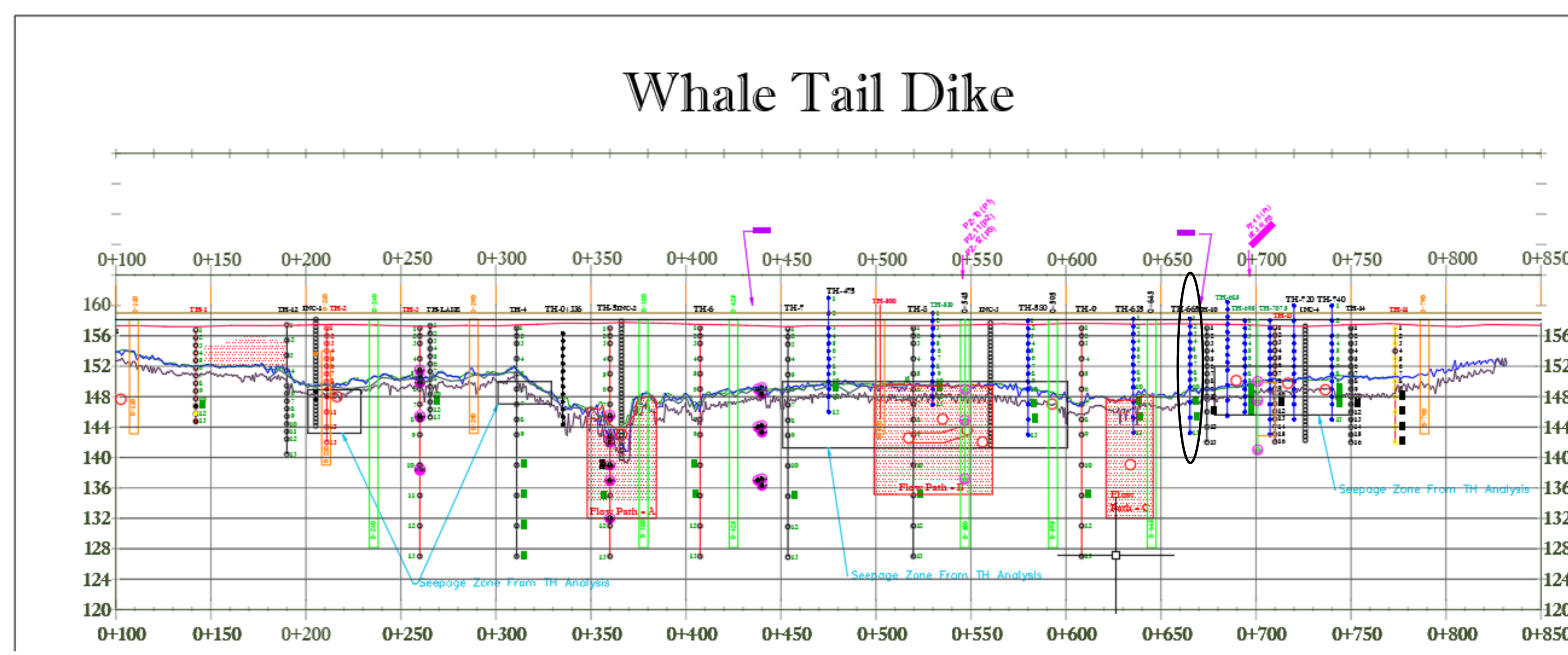
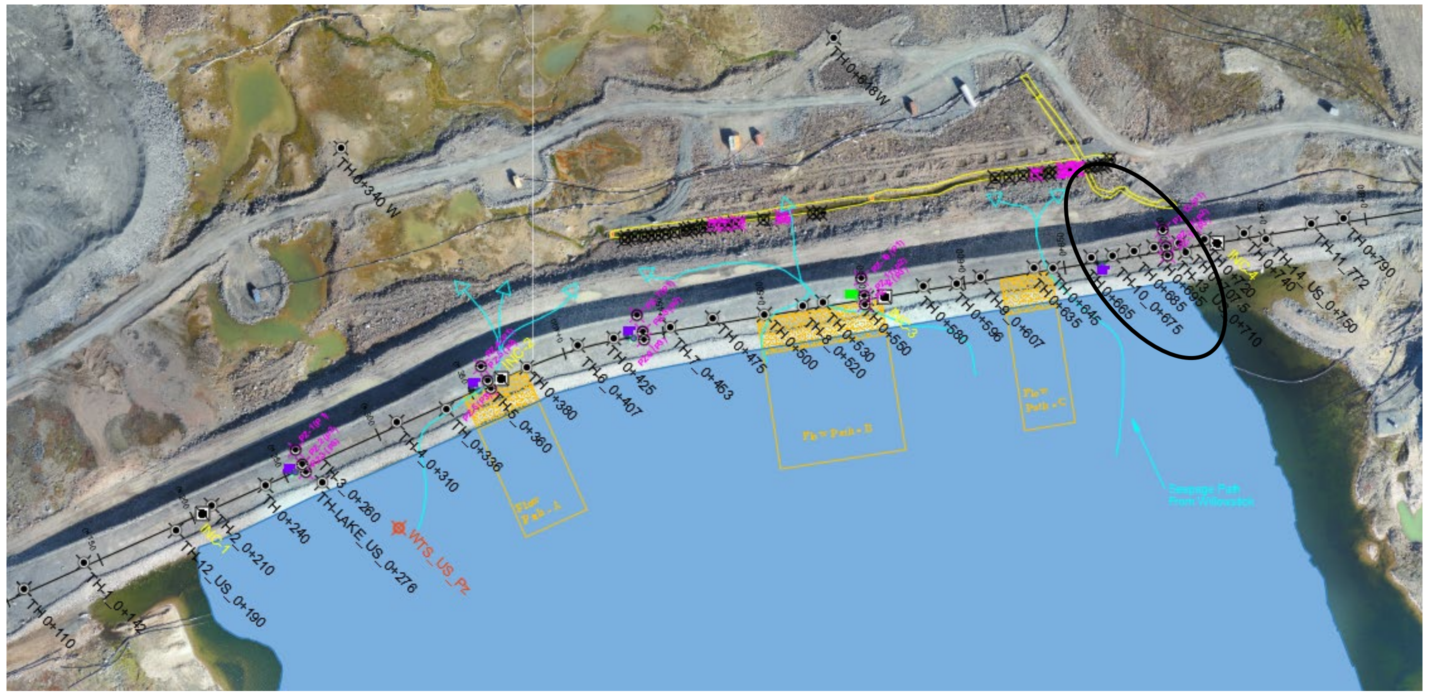
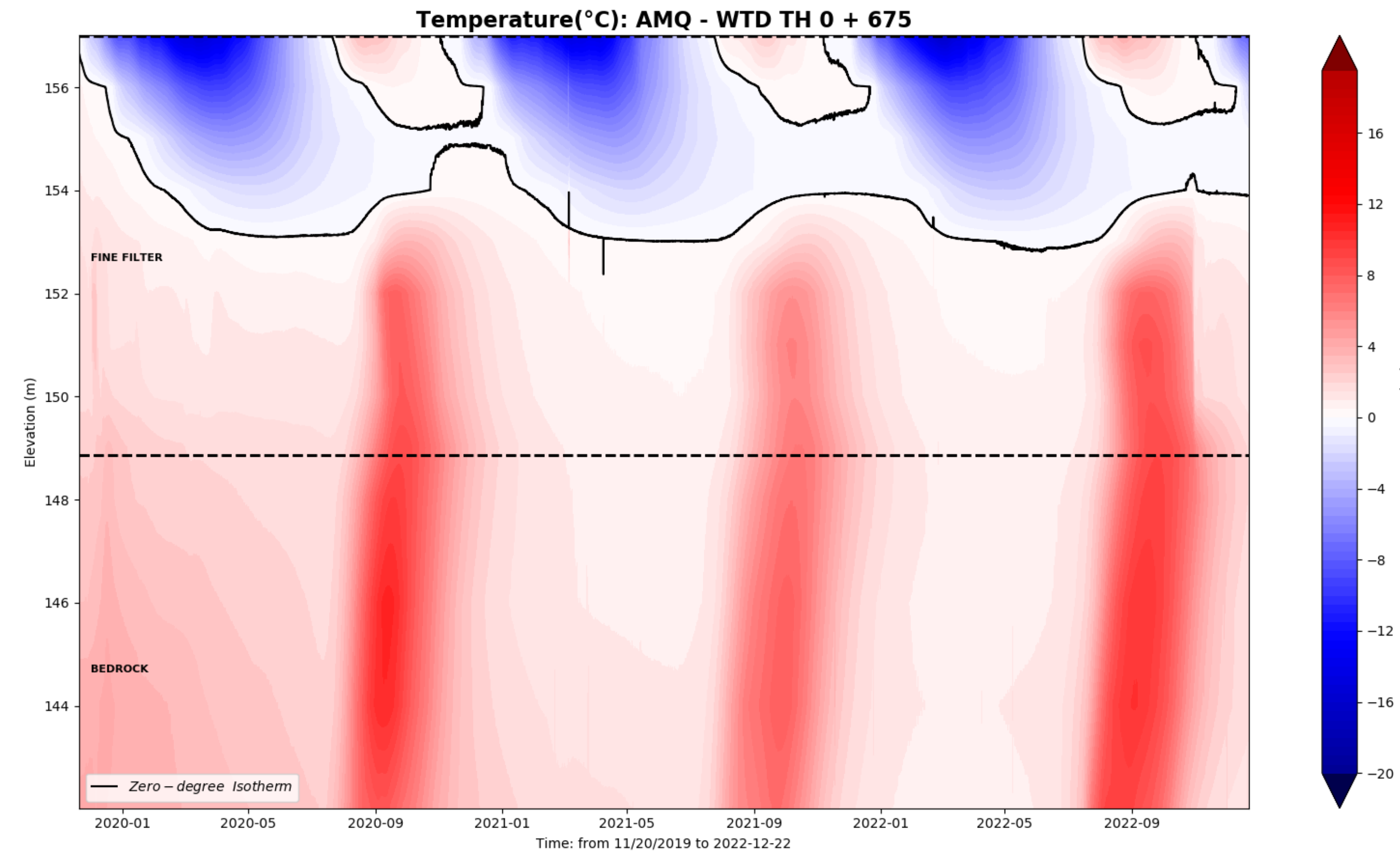
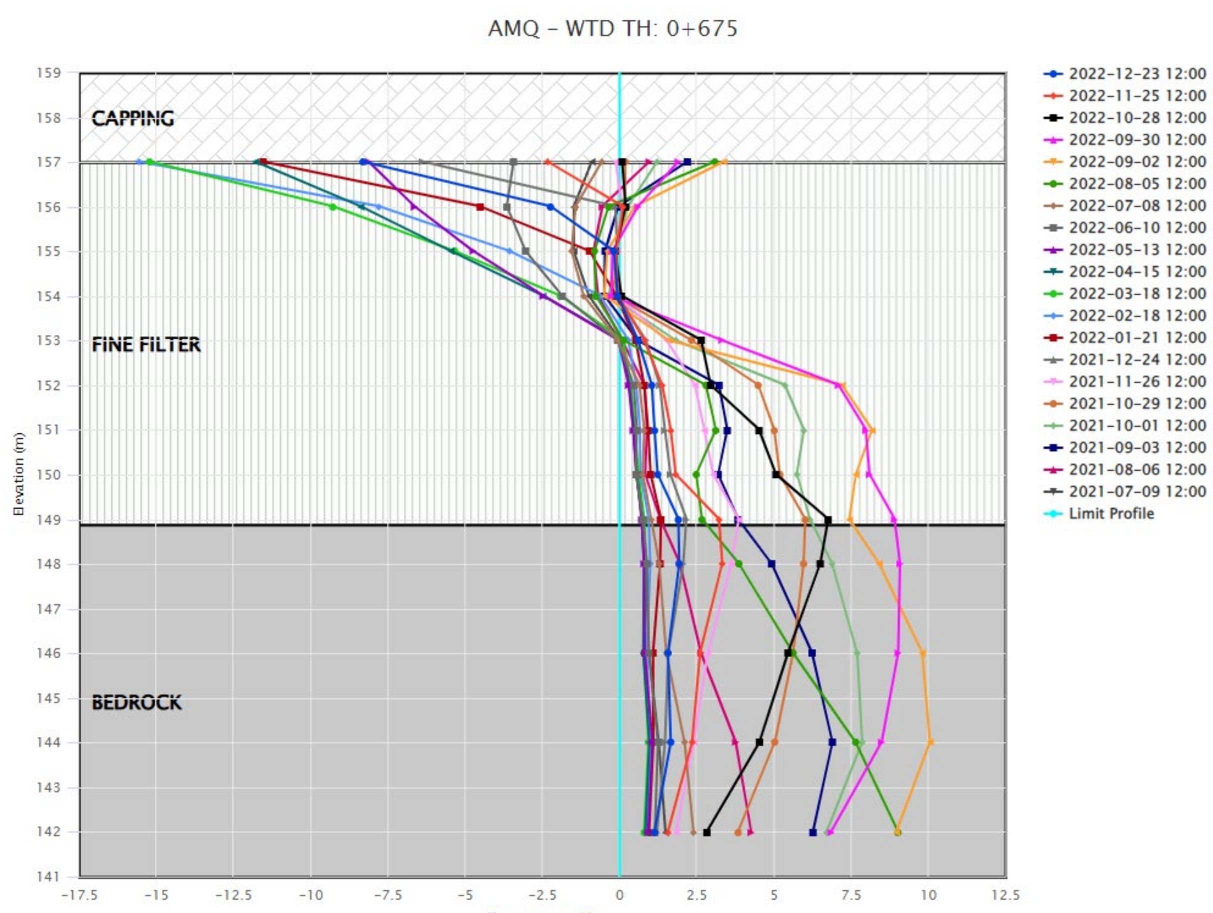
2021-07-09 12:00
Limit Profile


Whale Tail Dike

WTD-TH 0+675




Temperature(°C): AMQ - WTD TH 0 + 675
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 11/20/2019 to 2022-12-22


AMQ – WTD TH: 0+675
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
2022-05-13 12:00
2022-04-15 12:00
2022-03-18 12:00
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2021-12-24 12:00
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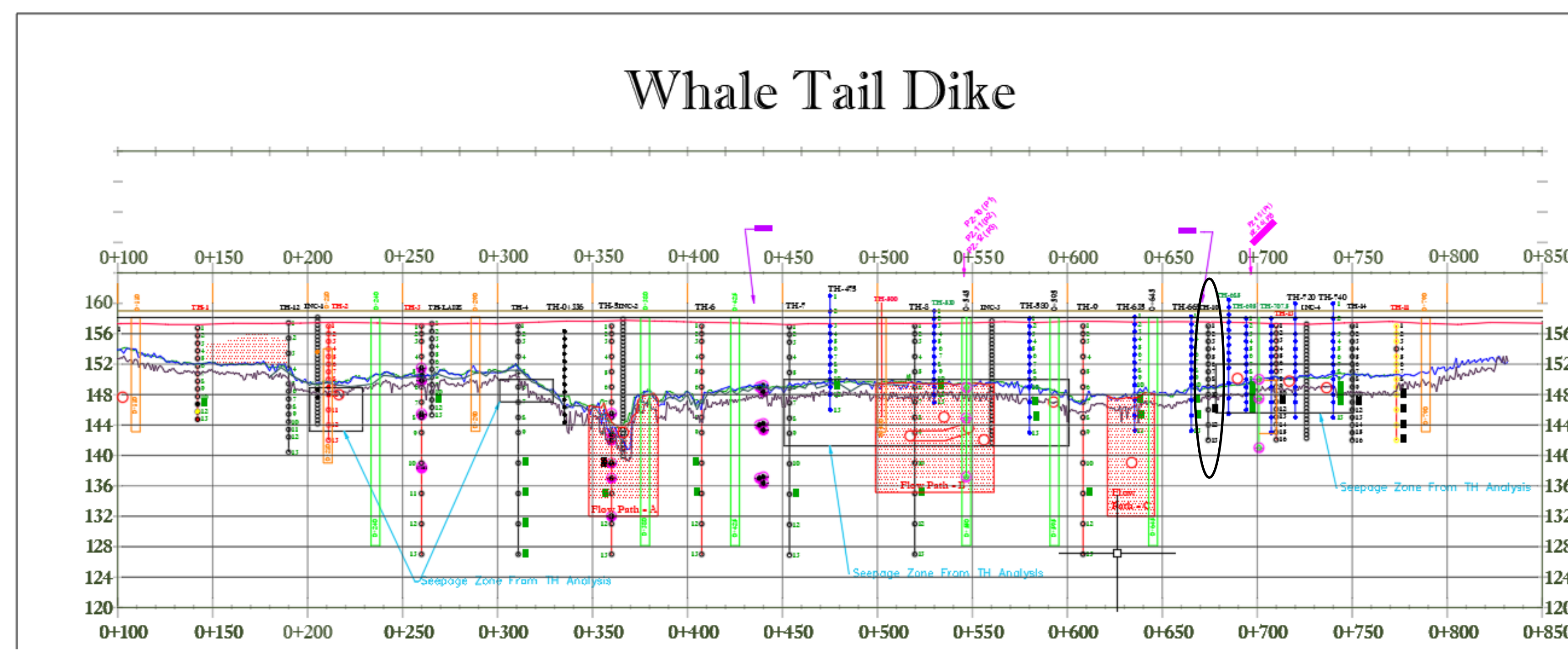
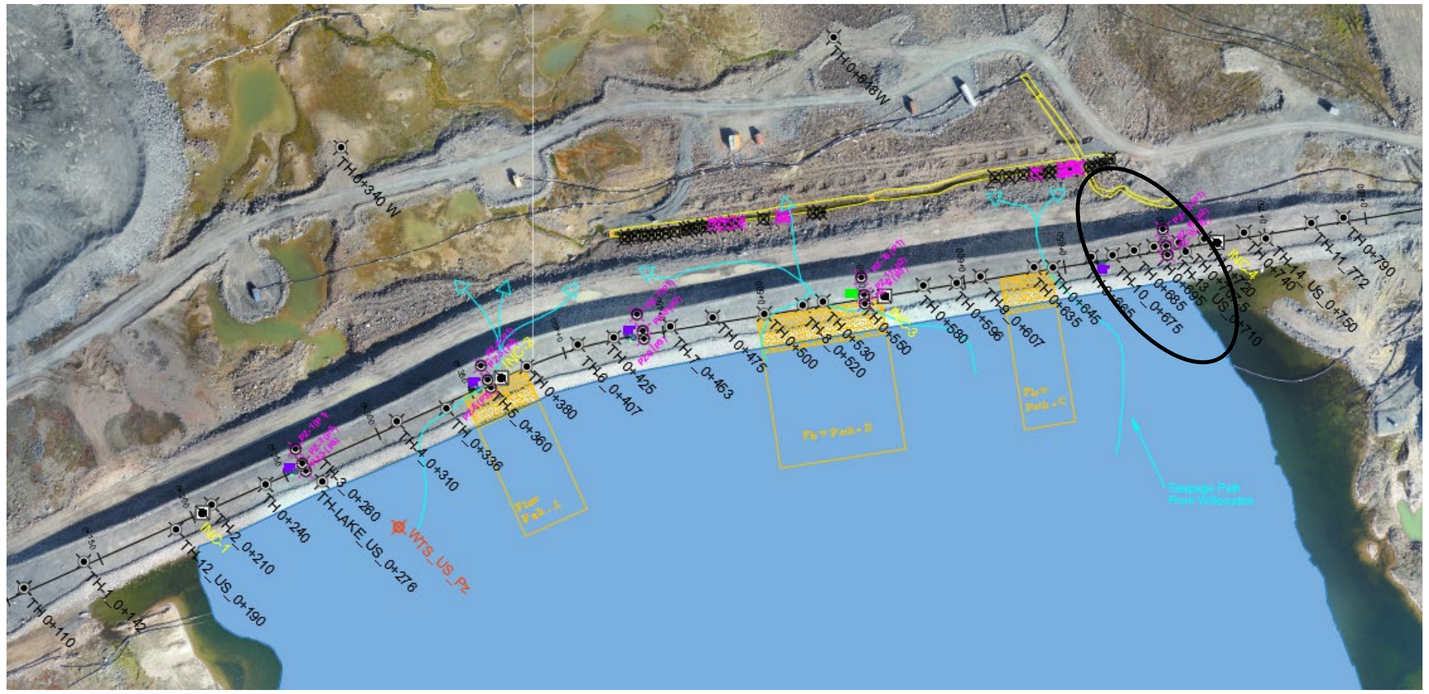
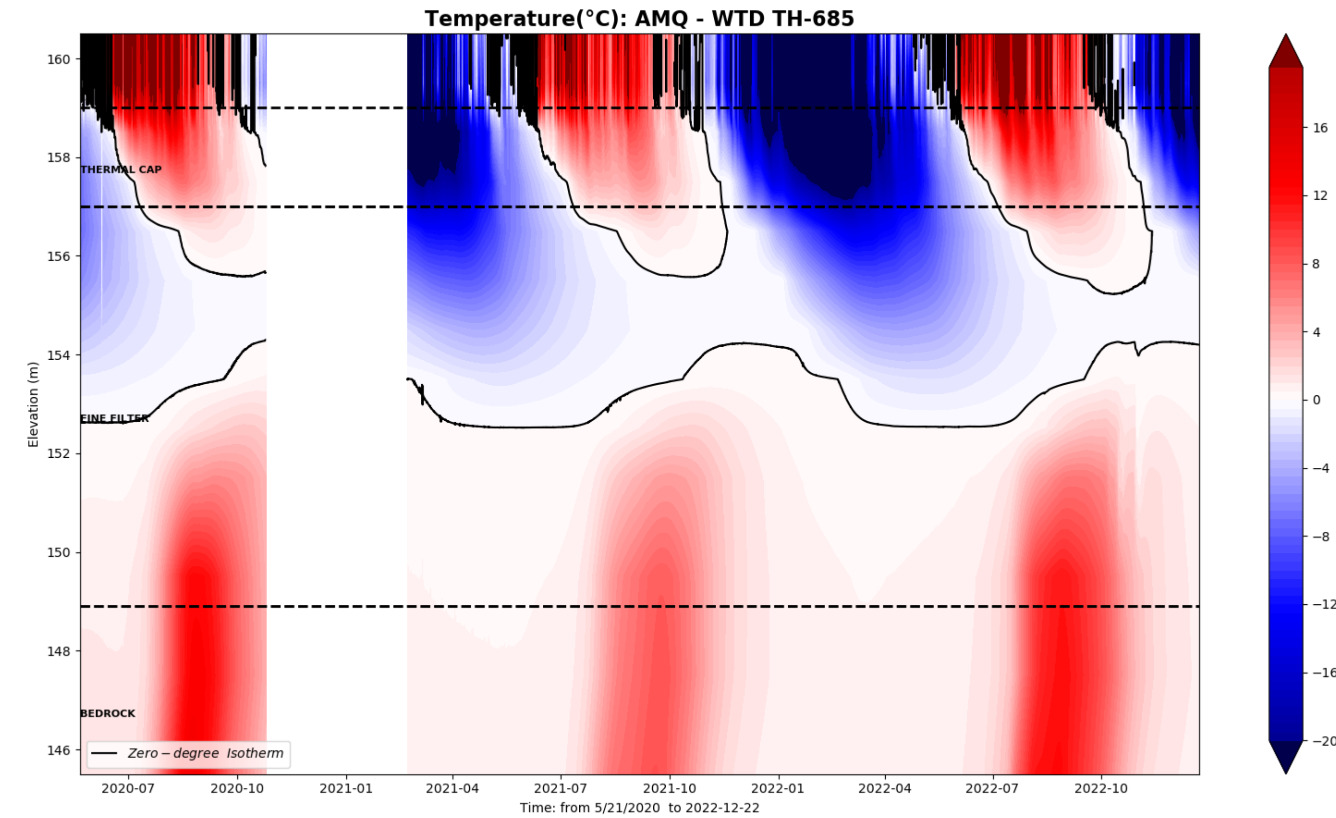
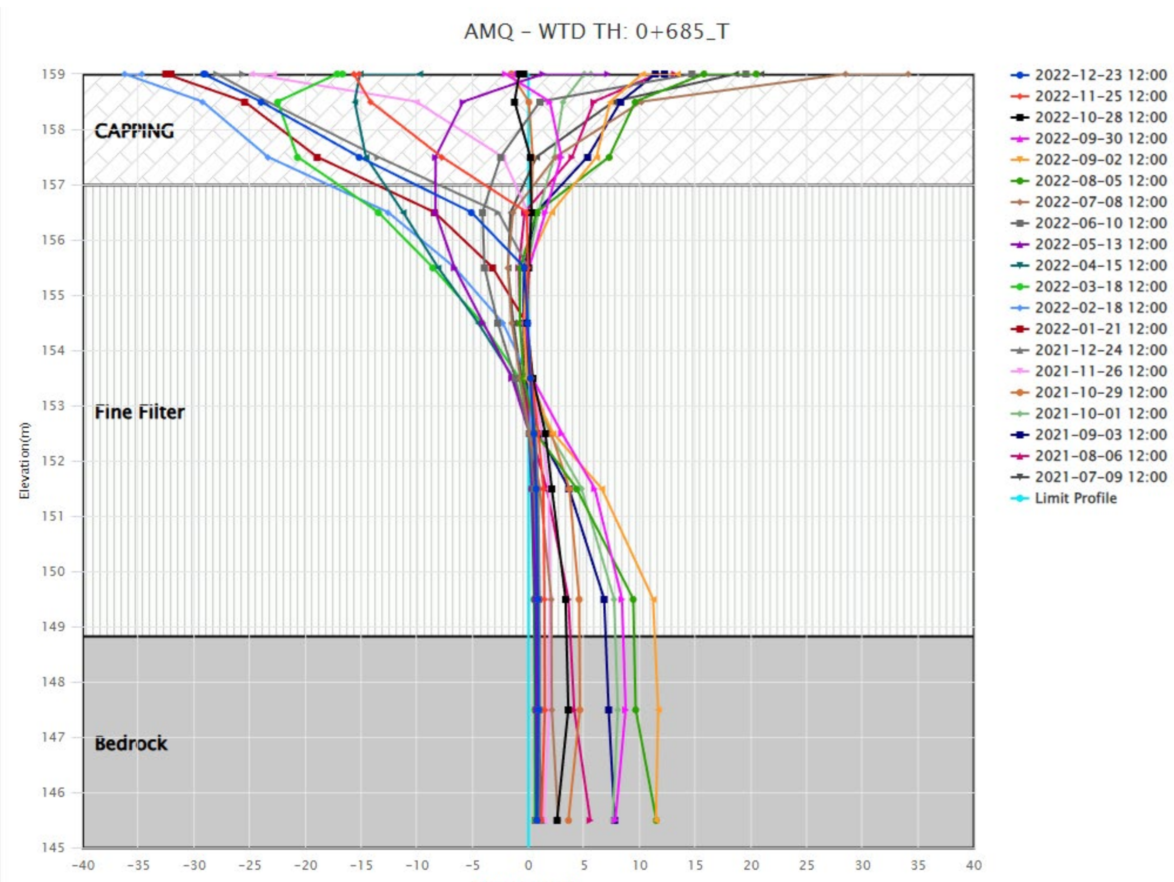
2021-07-09 12:00
Limit Profile


Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+685




Temperature(°C): AMQ - WTD TH-685
THERMAL CAP
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
2020-07
2020-10
2021-01
2021-04
2021-07
2021-10
2022-01
2022-04
2022-07
2022-10
Time: from 5/21/2020 to 2022-12-22


AMQ - WTD TH: 0+685_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
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2022-04-15 12:00
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2022-02-18 12:00
2022-01-21 12:00
2021-12-24 12:00
2021-11-26 12:00
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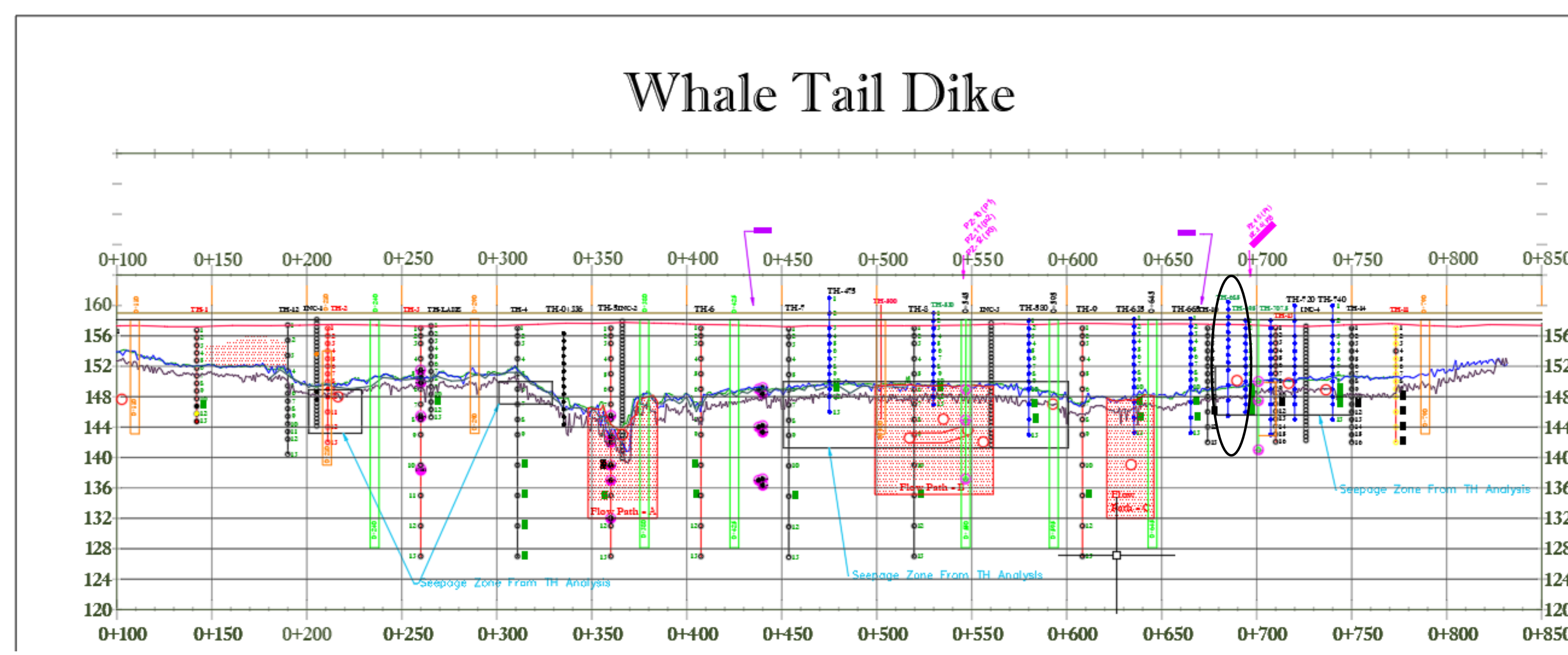
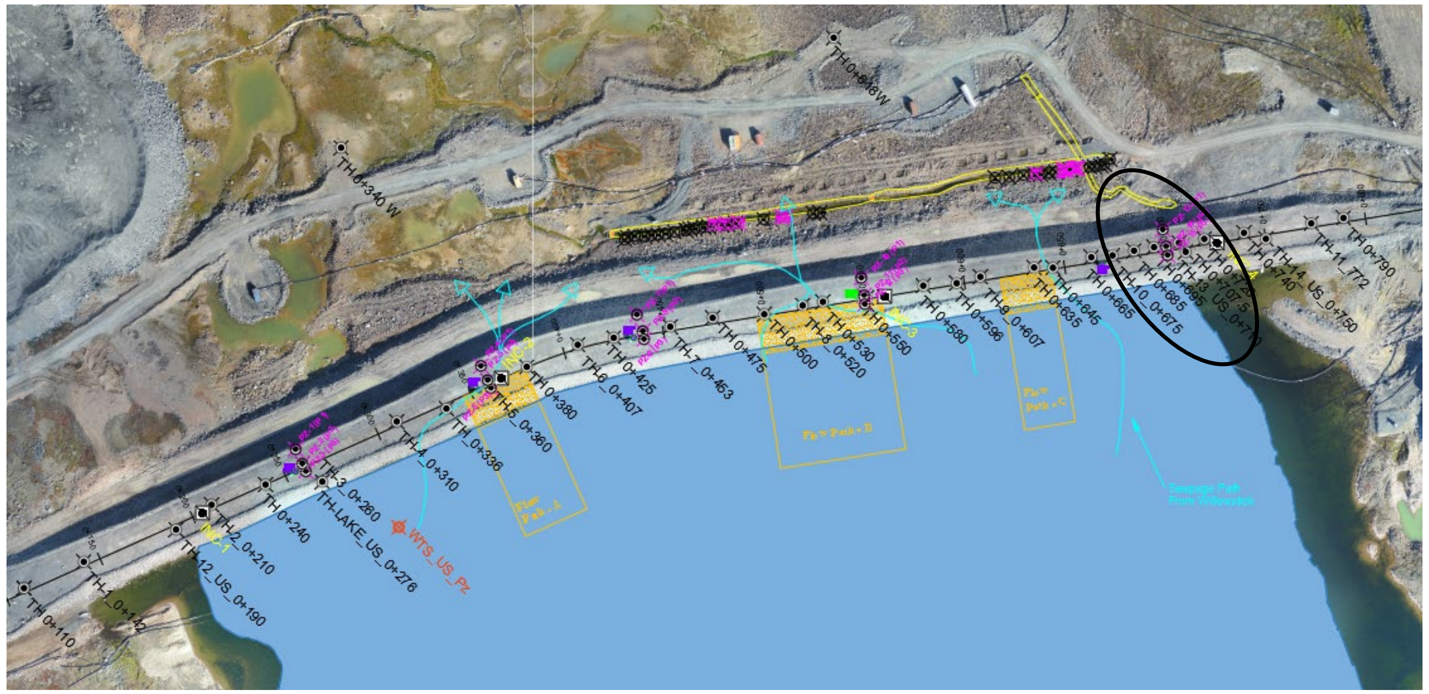
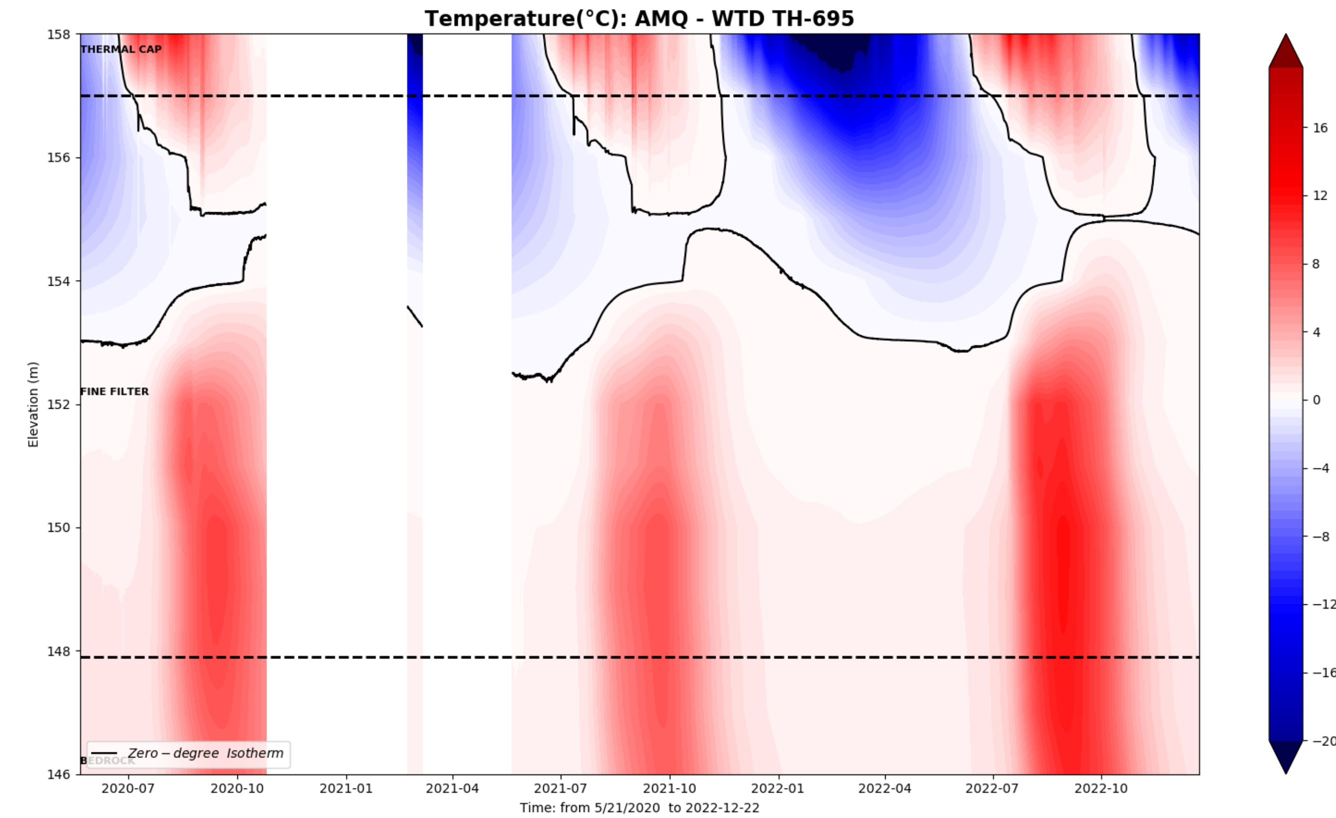
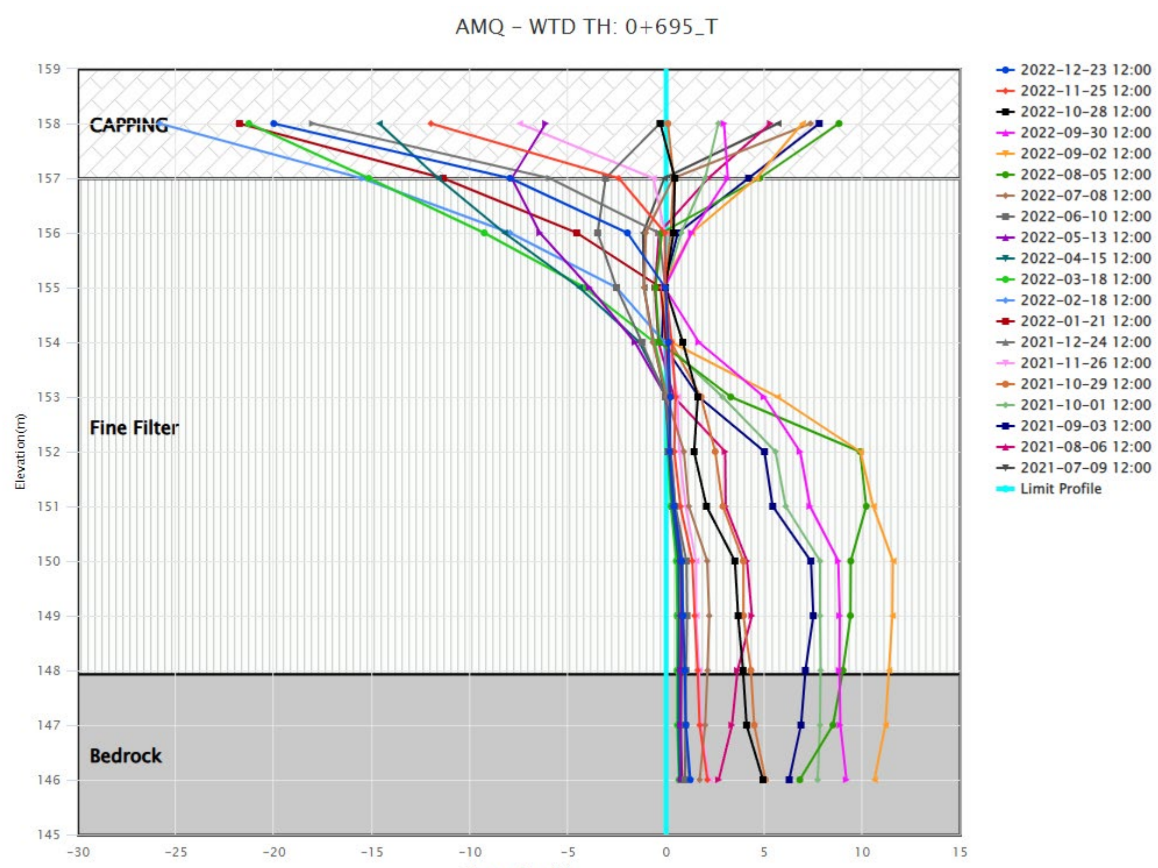
2021-07-09 12:00
Limit Profile


Whale Tail Dike
0+100
0+150
0+200
0+250
0+300
0+350
0+400
0+450
0+500
0+550
0+600
0+650
0+700
0+750
0+800
0+850
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis

WTD-TH 0+695




Temperature(°C): AMQ - WTD TH-695
THERMAL CAP
FINE FILTER
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/21/2020 to 2022-12-22


AMQ – WTD TH: 0+695_T
CAPPING
Fine Filter
Bedrock
Elevation (m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
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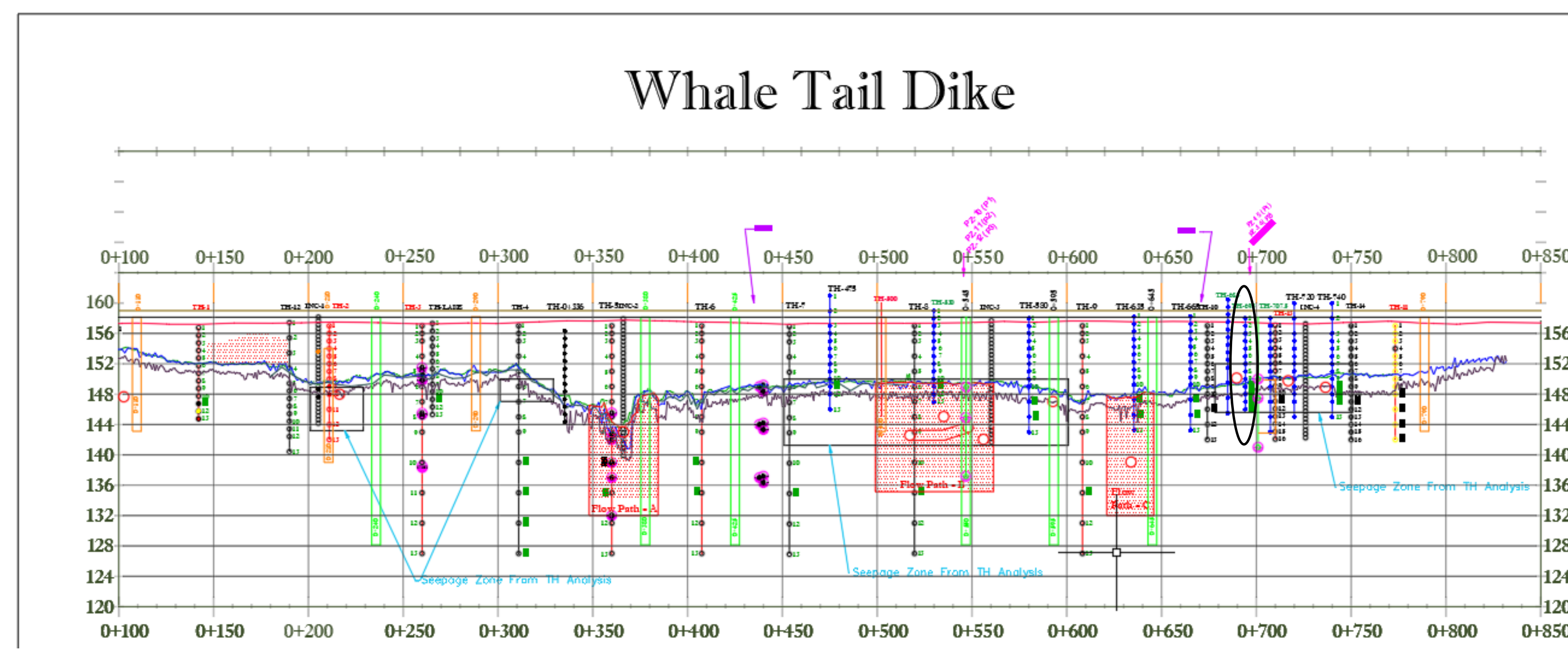
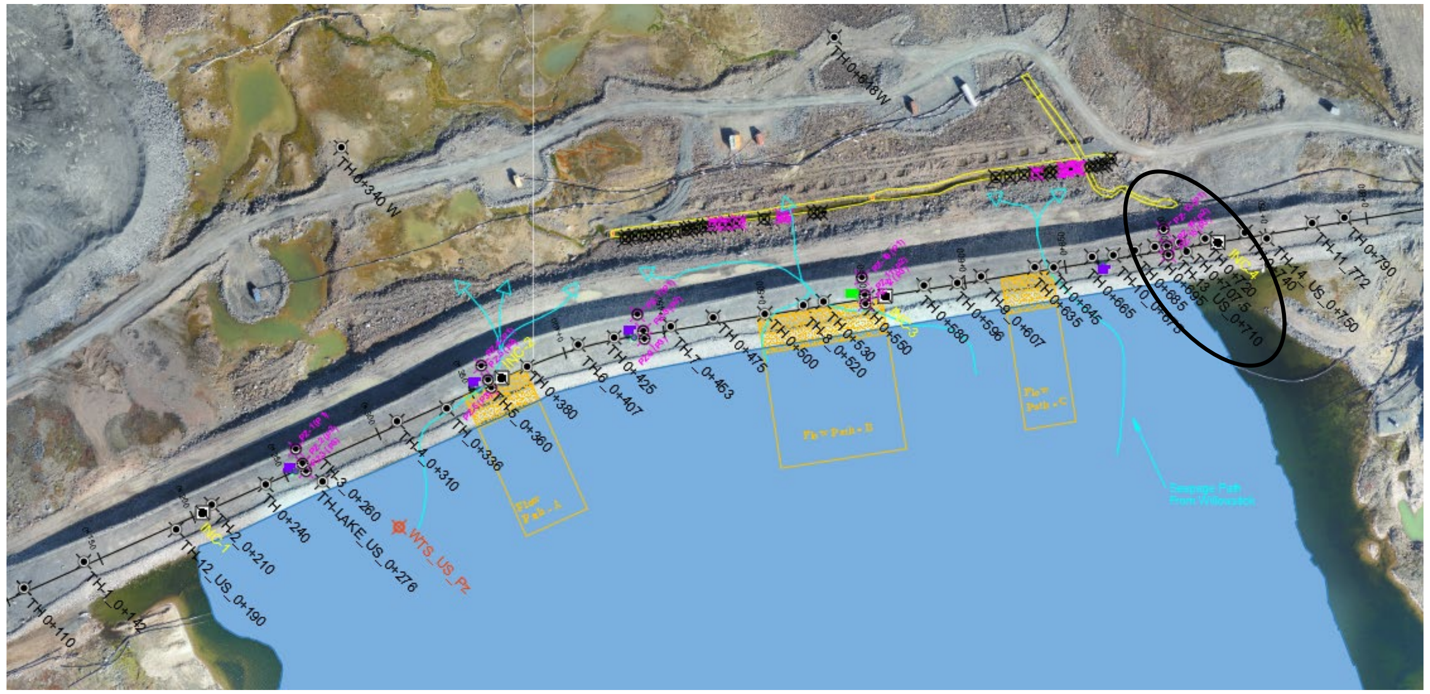
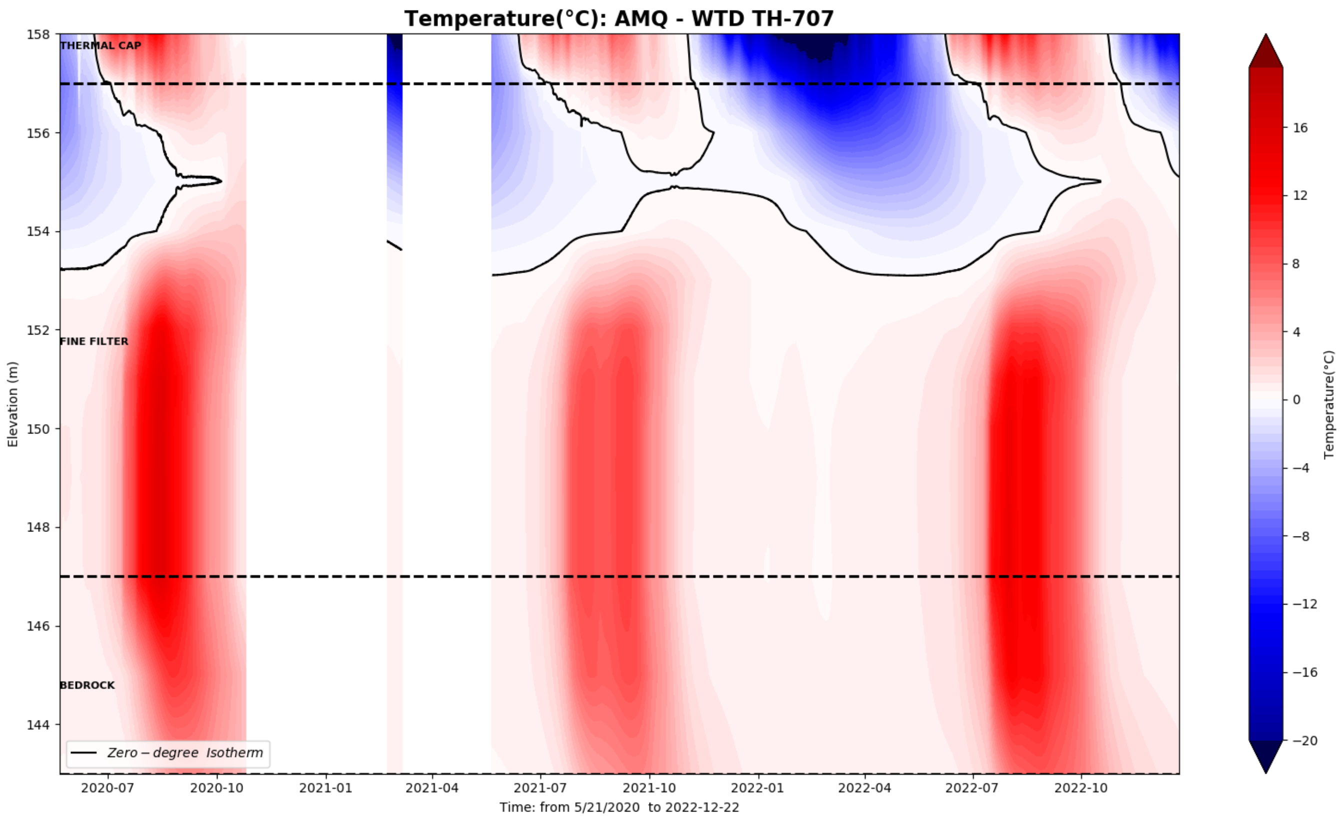
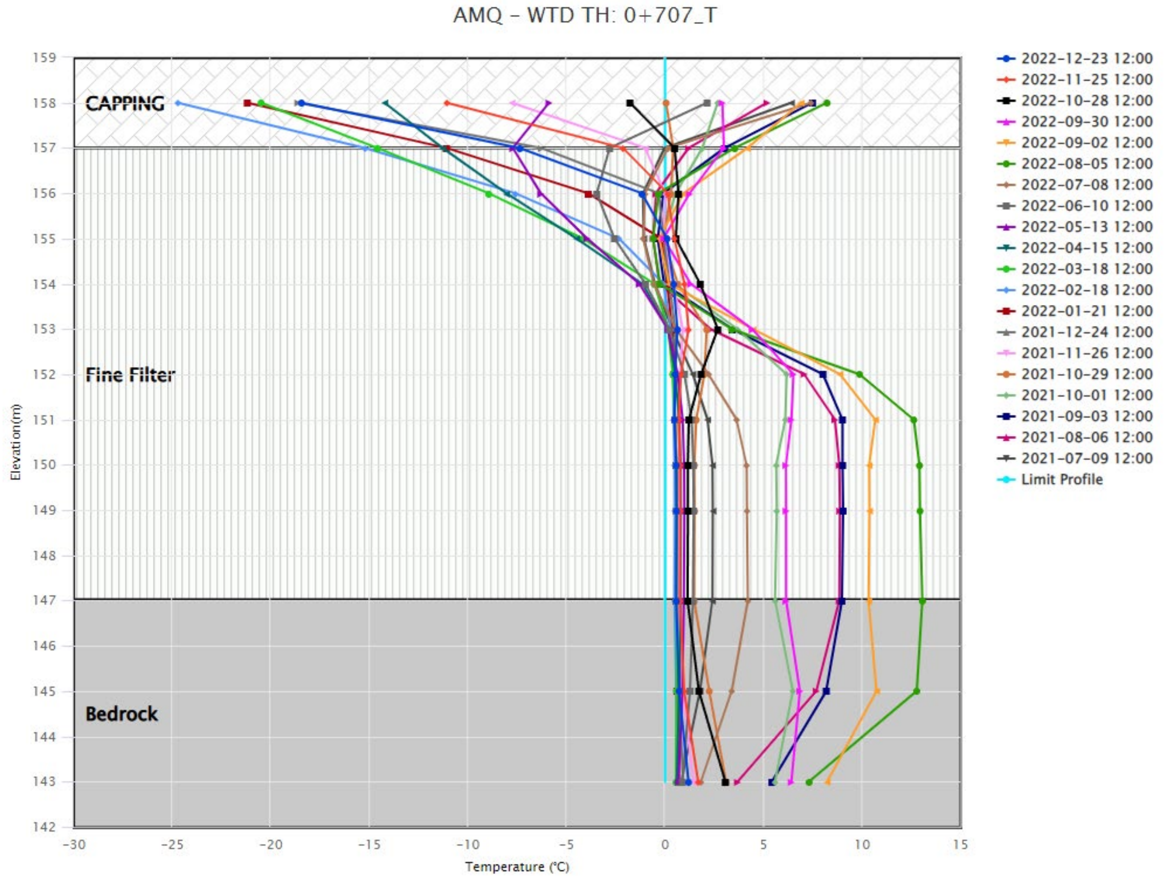
2021-07-09 12:00
Limit Profile


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

WTD-TH 0+707




Temperature(°C): AMQ - WTD TH-707
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 2022-12-22
Temperature(°C)


AMQ - WTD TH: 0+707_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
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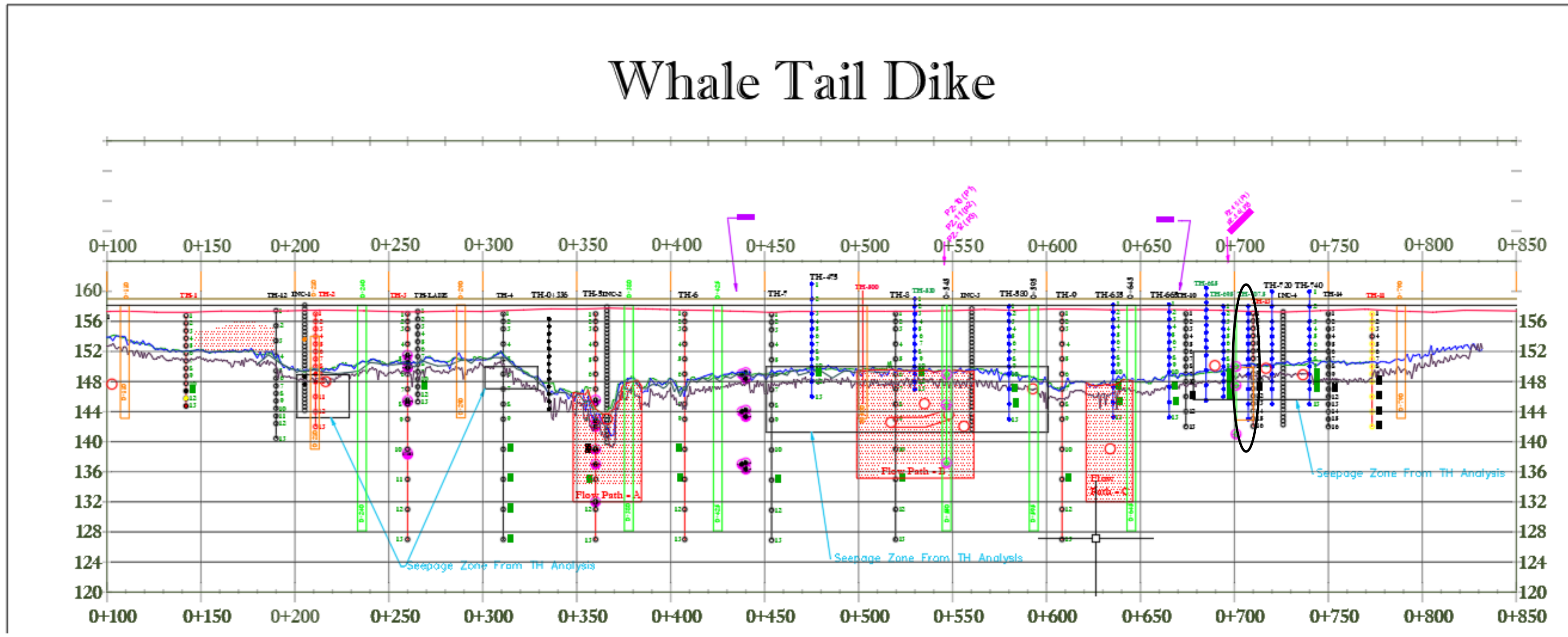
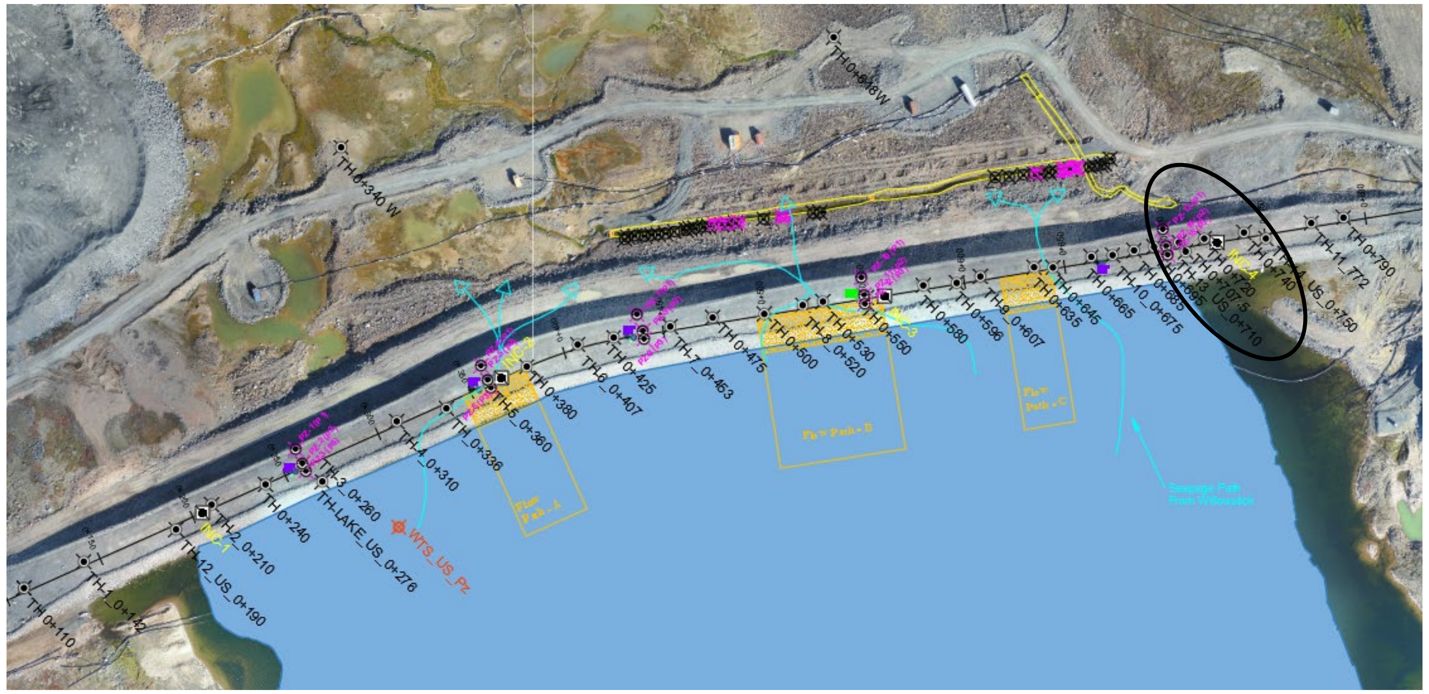
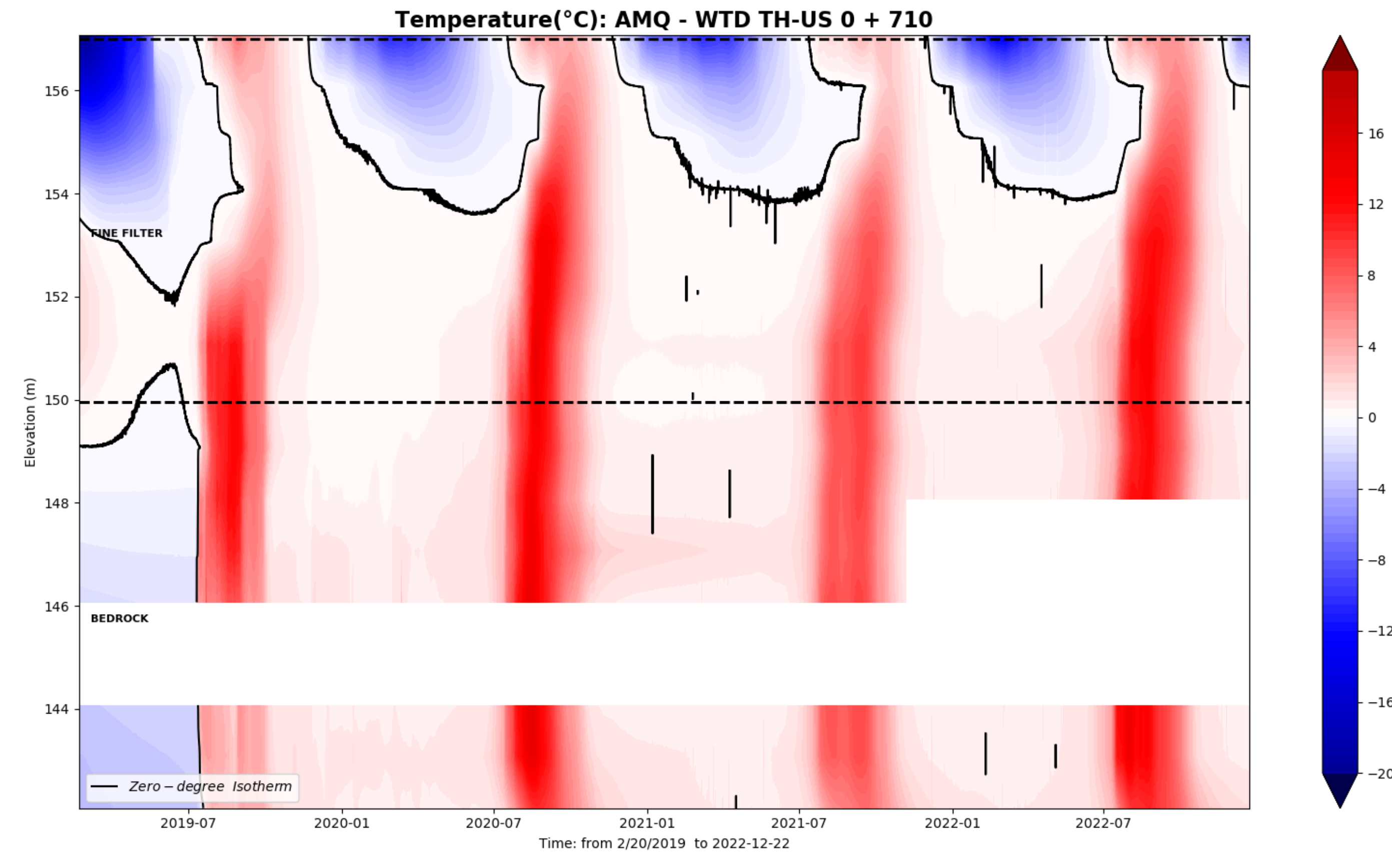
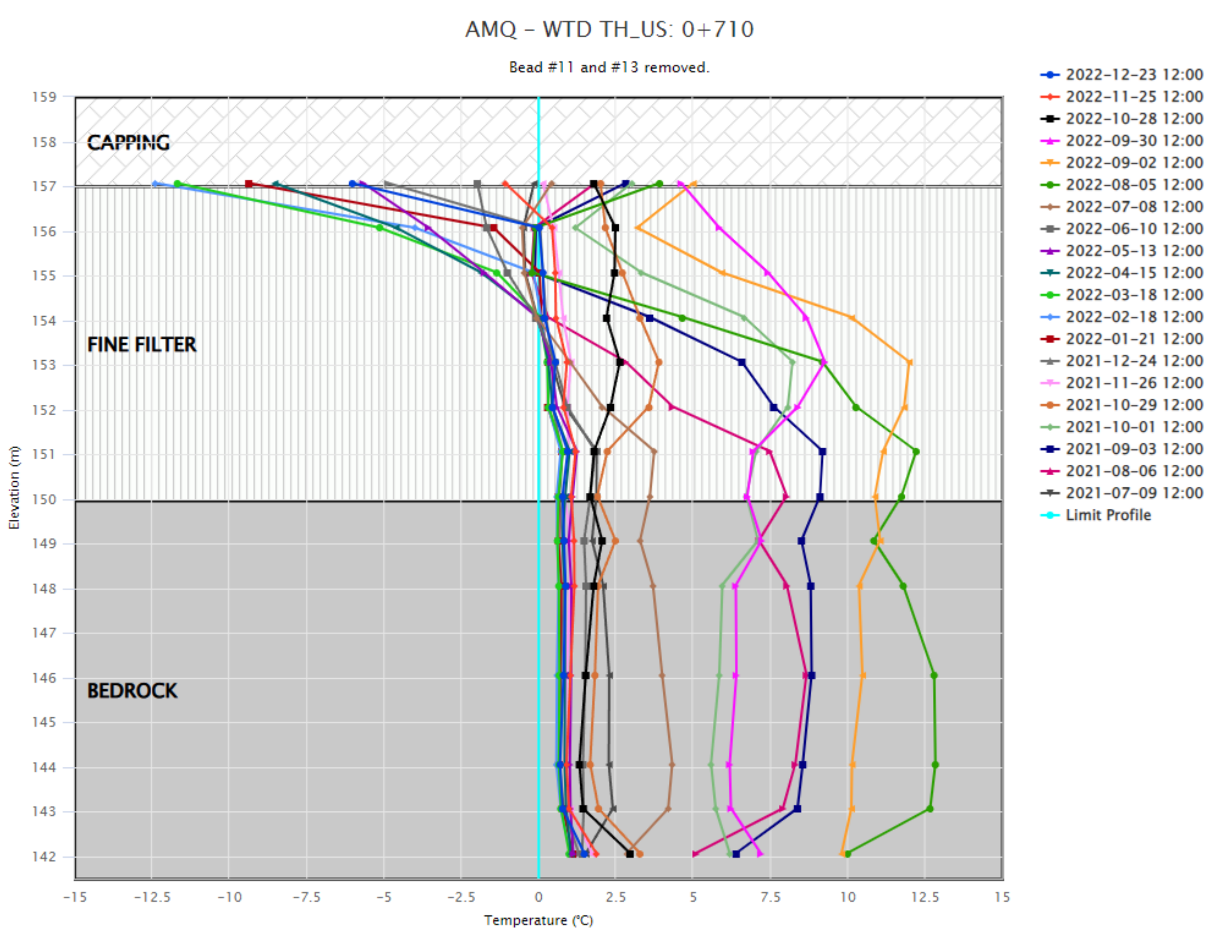
2021-07-09 12:00
Limit Profile

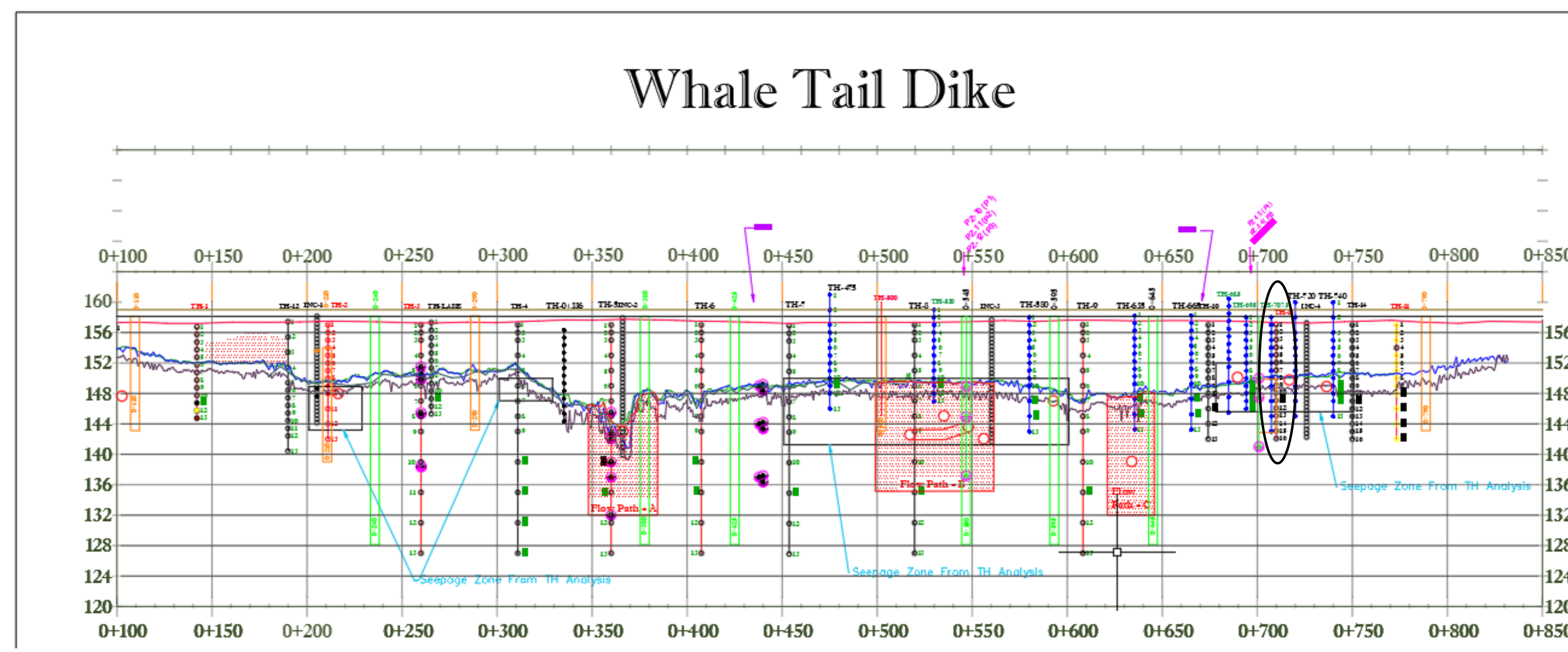

Whale Tail Dike
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B

WTD-TH 0+710 U/S

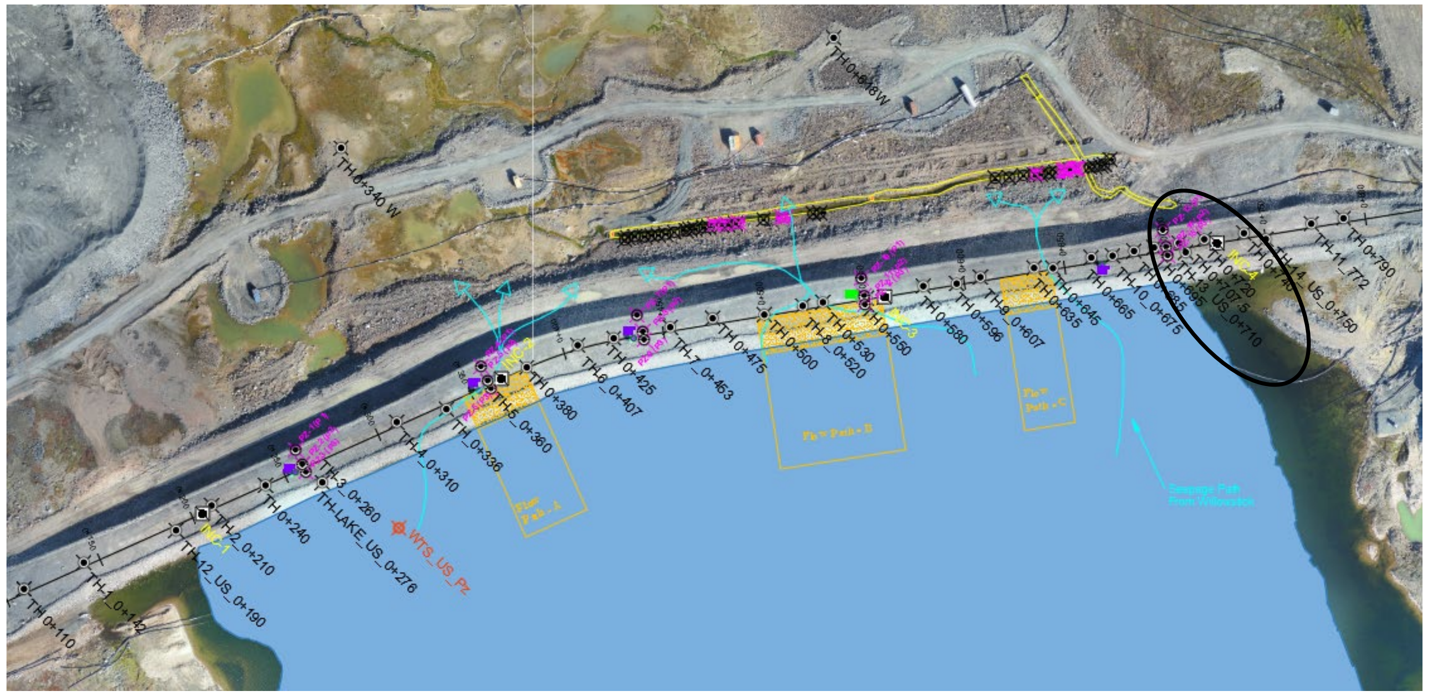


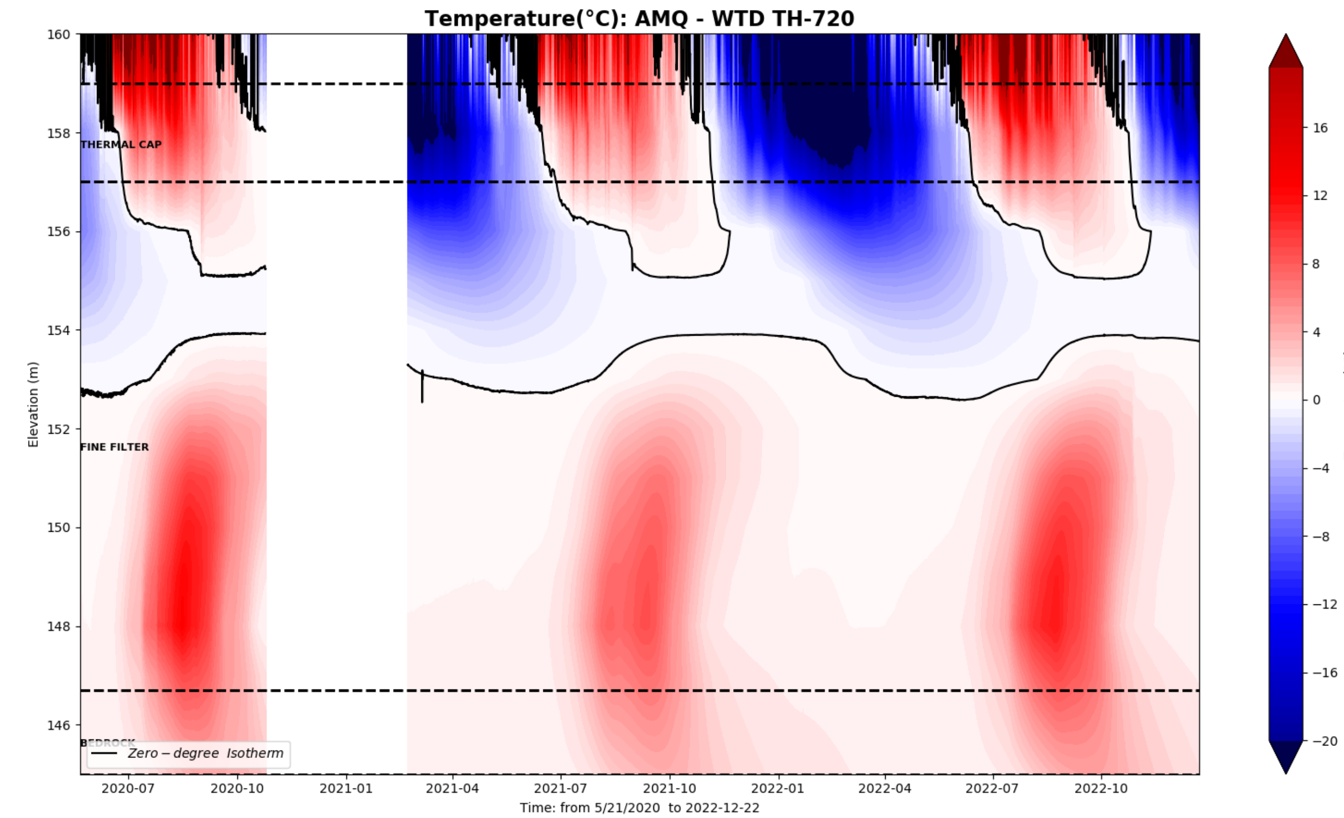




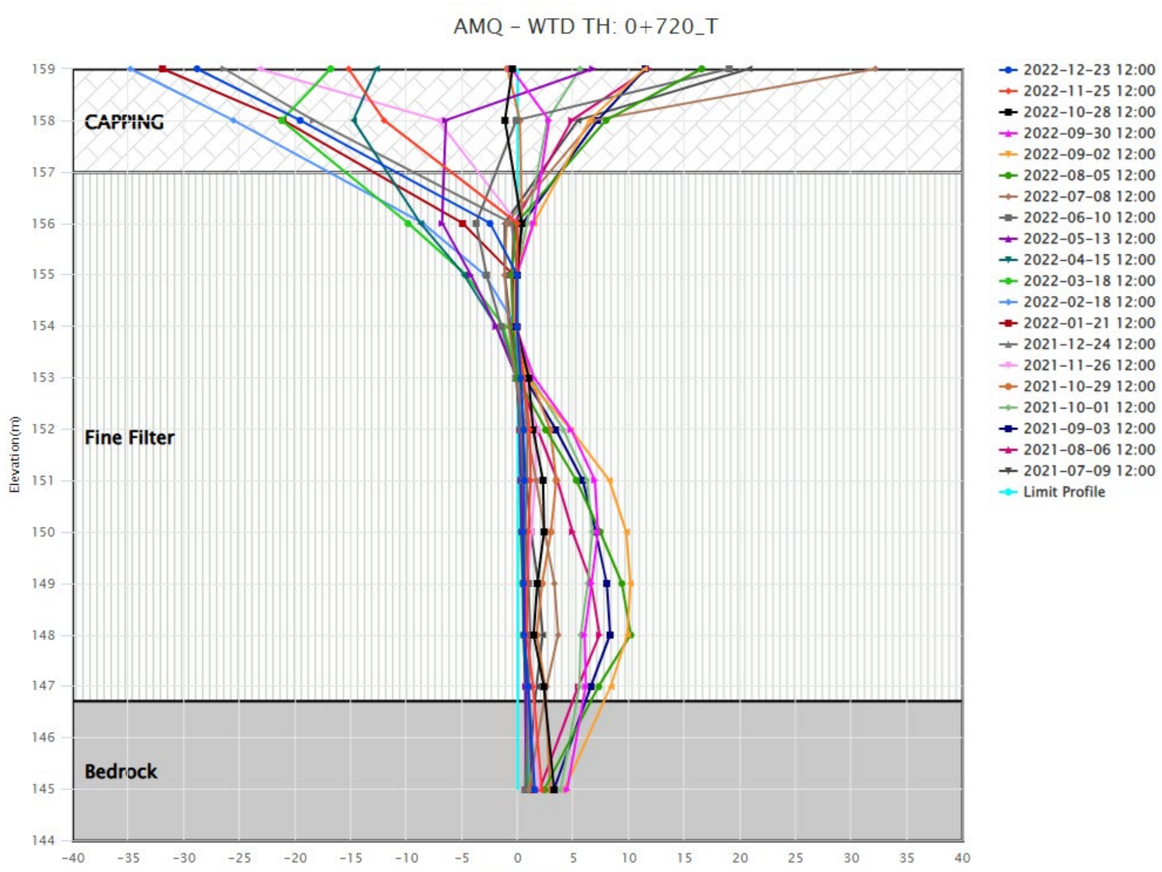


WTD-TH 0+720





Temperature(°C): AMQ - WTD TH-720
THERMAL CAP
FINE FILTER
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
2020-07 2020-10 2021-01 2021-04 2021-07 2021-10 2022-01 2022-04 2022-07 2022-10
Time: from 5/21/2020 to 2022-12-22



AMQ – WTD TH: 0+720_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
2022-05-13 12:00
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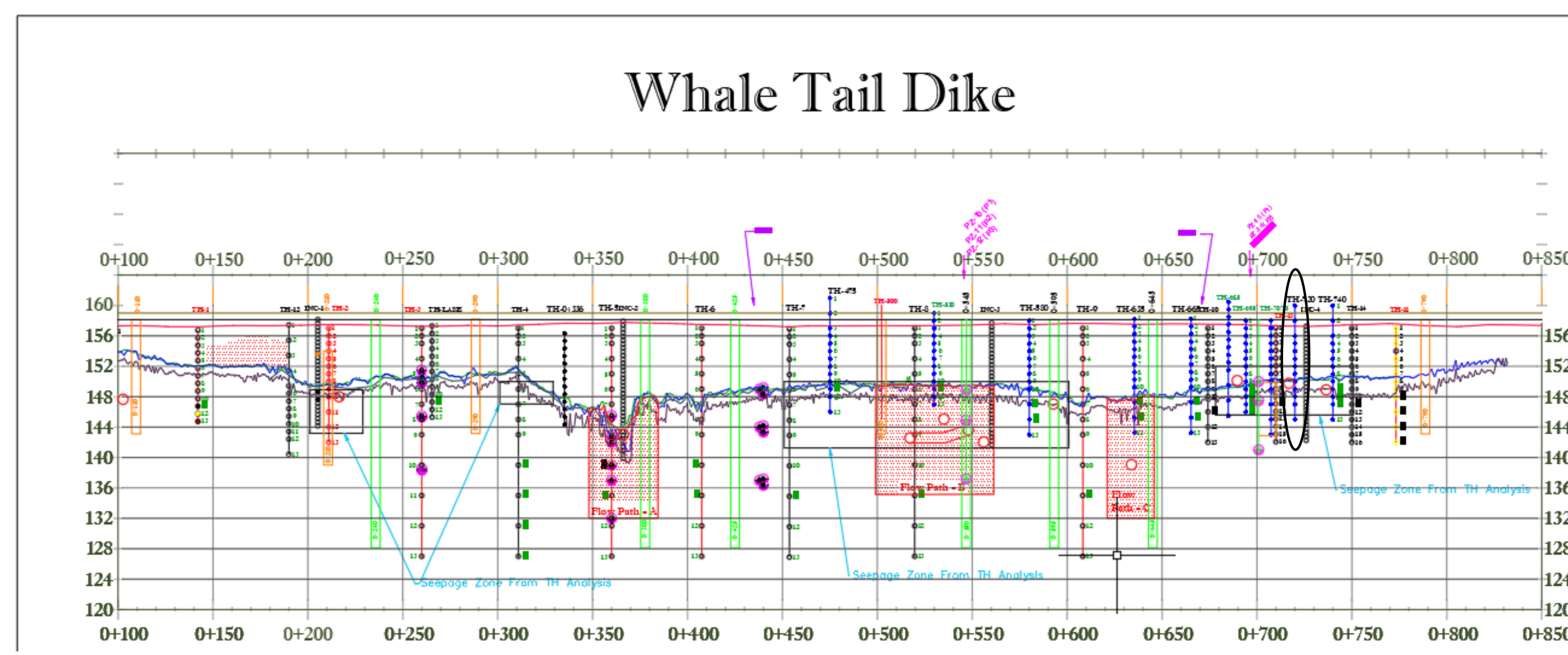
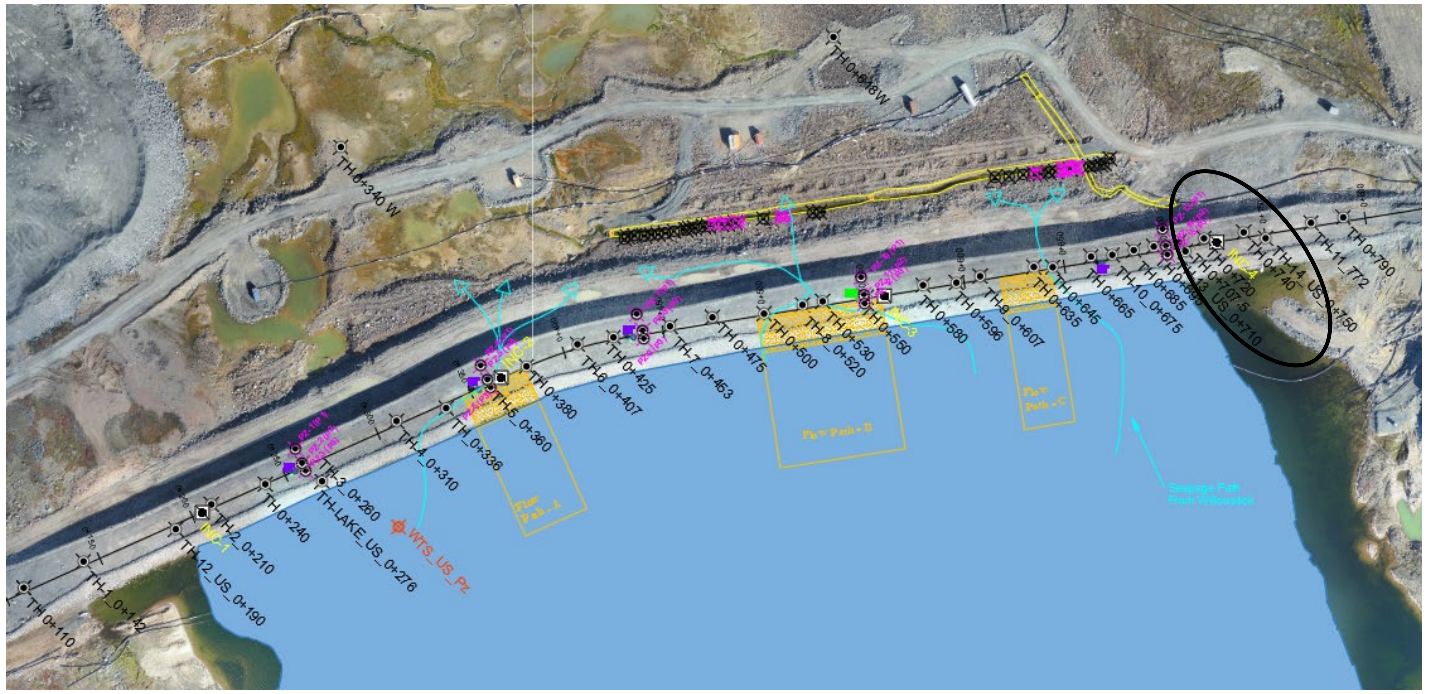
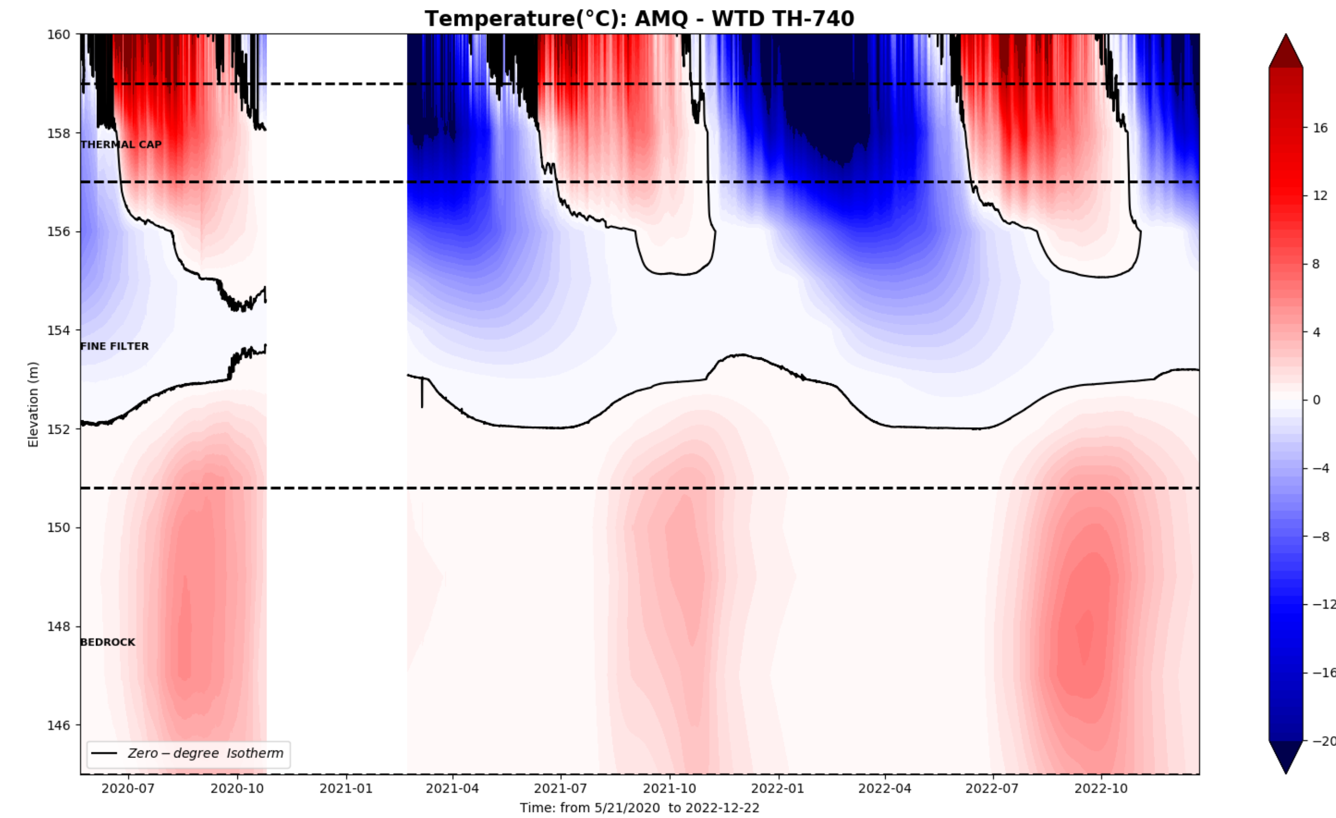
2021-07-09 12:00
Limit Profile

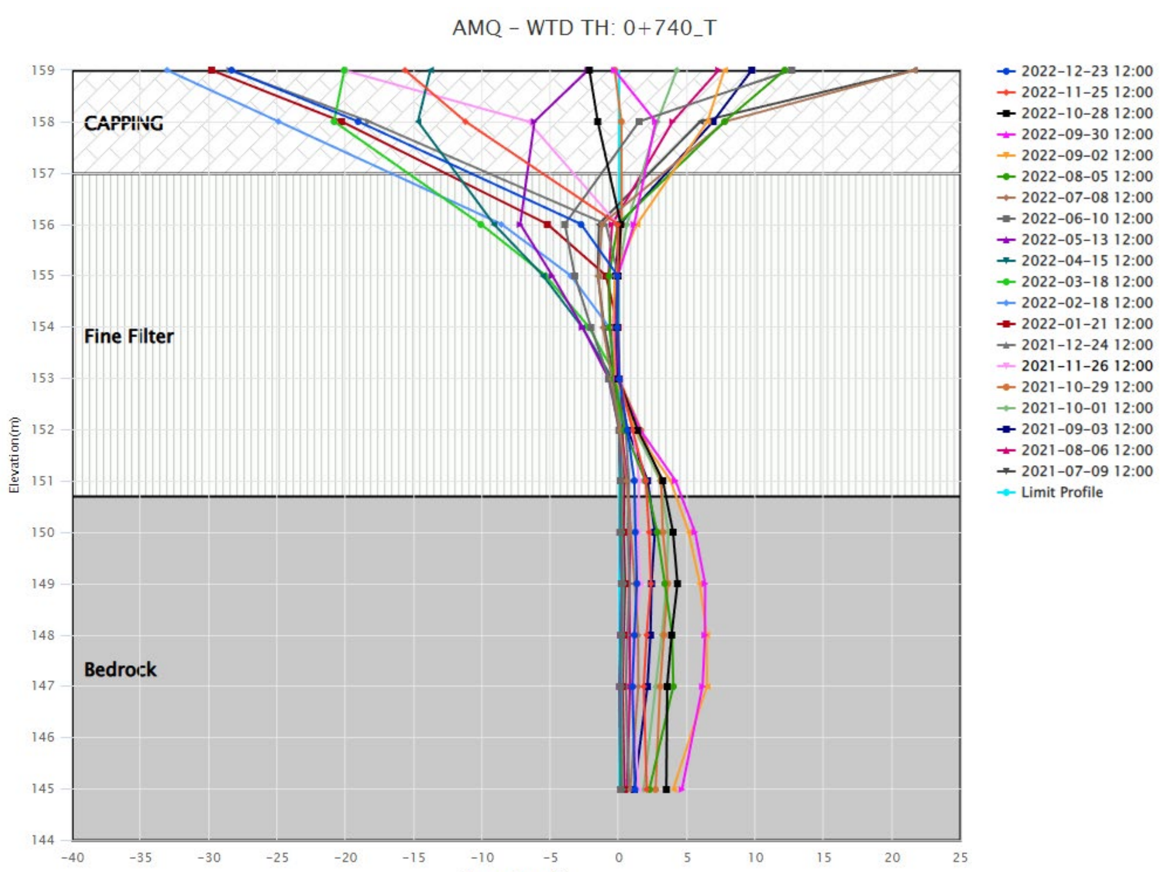


Whale Tail Dike
0+100 0+150 0+200 0+250 0+300 0+350 0+400 0+450 0+500 0+550 0+600 0+650 0+700 0+750 0+800 0+850
Seepage Zone From TH Analysis

WTD-TH 0+740




Temperature(°C): AMQ - WTD TH-740
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
Time: from 5/21/2020 to 2022-12-22
2020-07
2020-10
2021-01
2021-04
2021-07
2021-10
2022-01
2022-04
2022-07
2022-10


AMQ - WTD TH: 0+740_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
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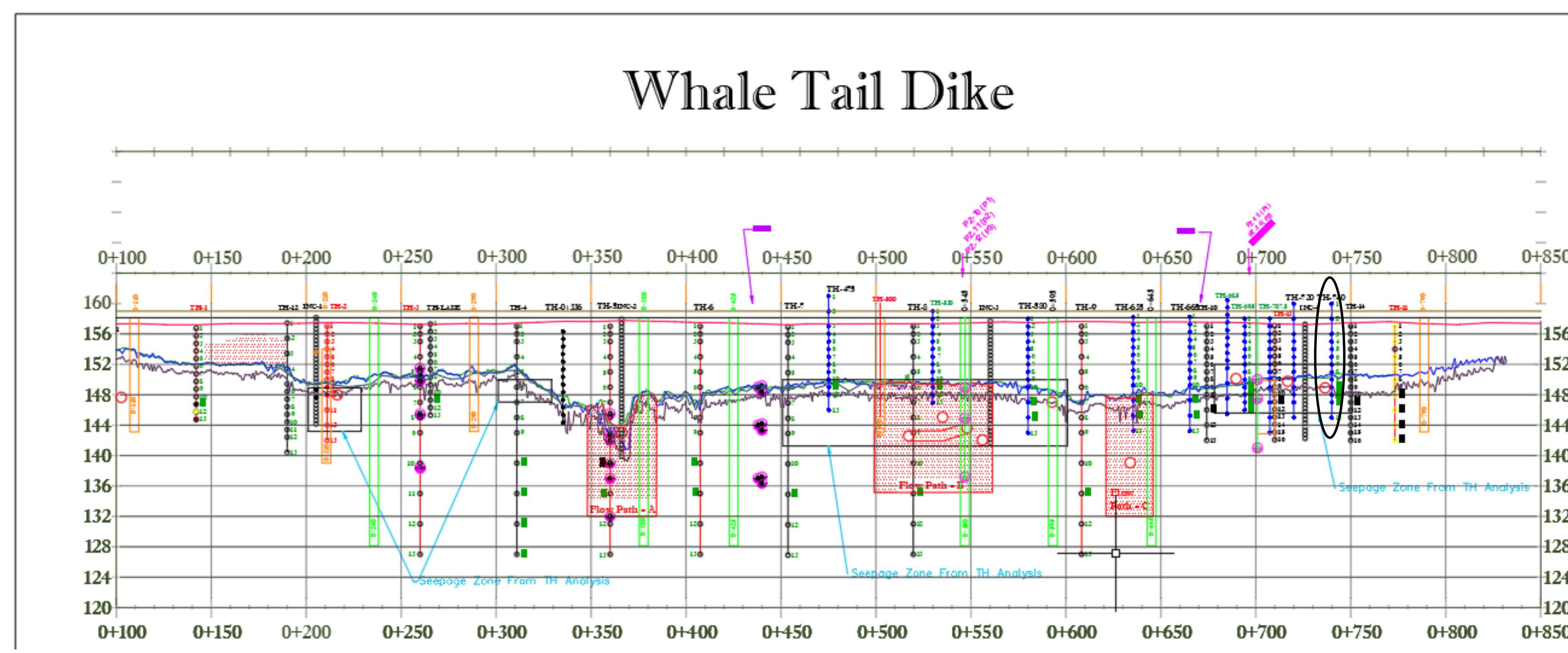
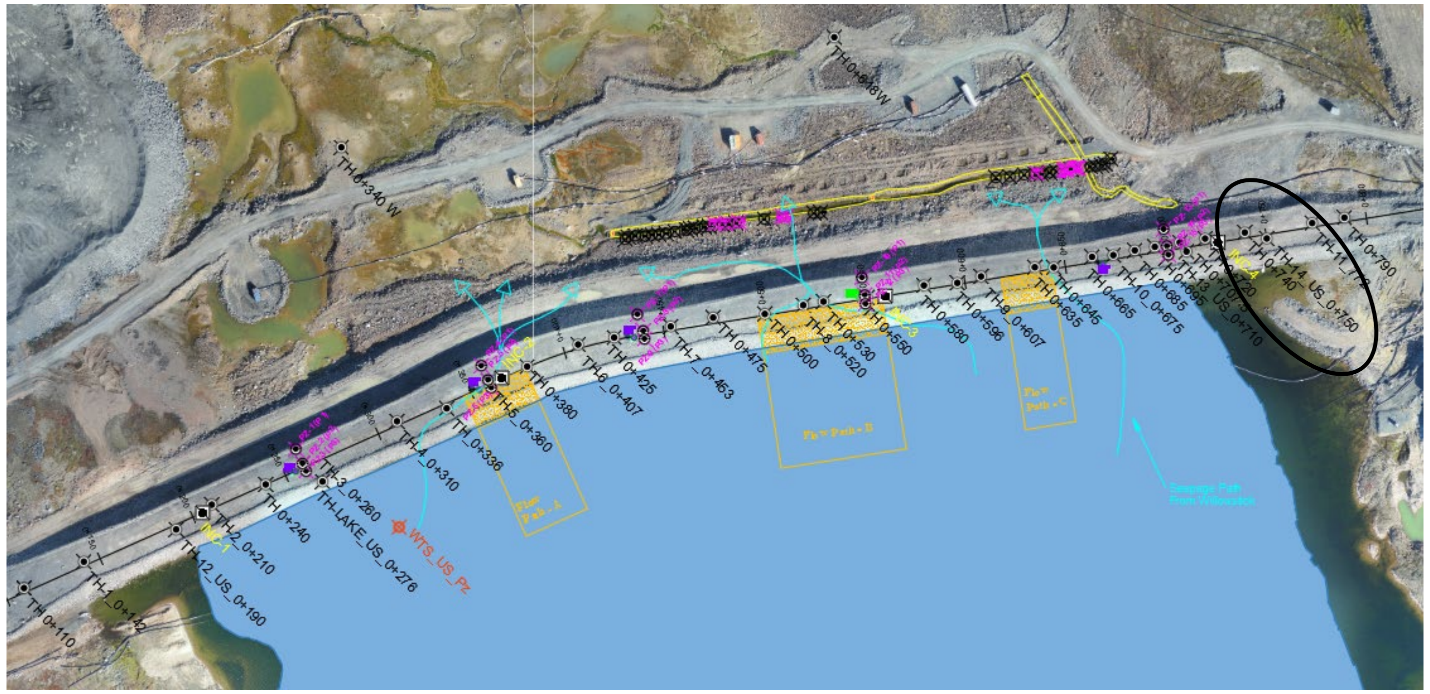
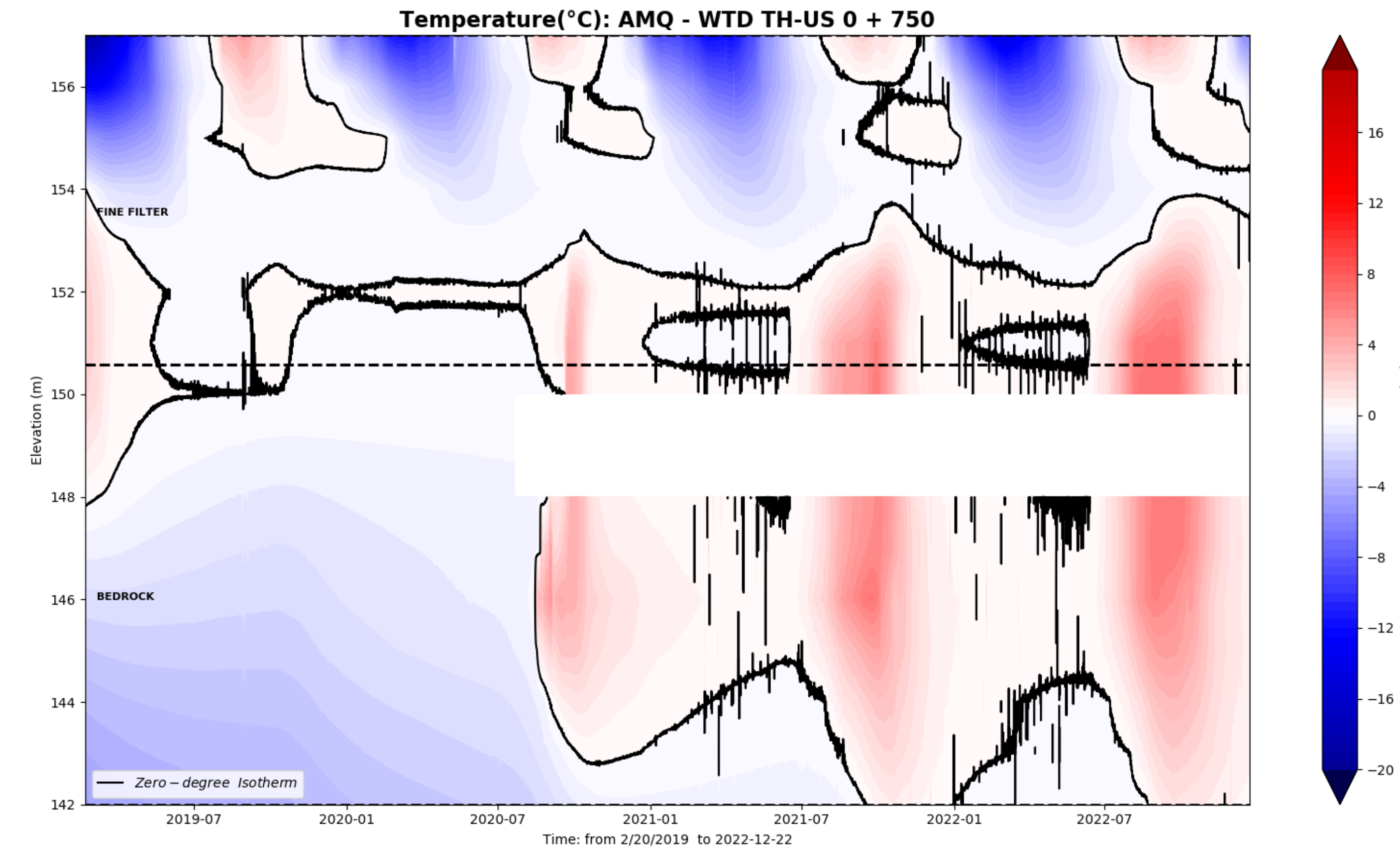
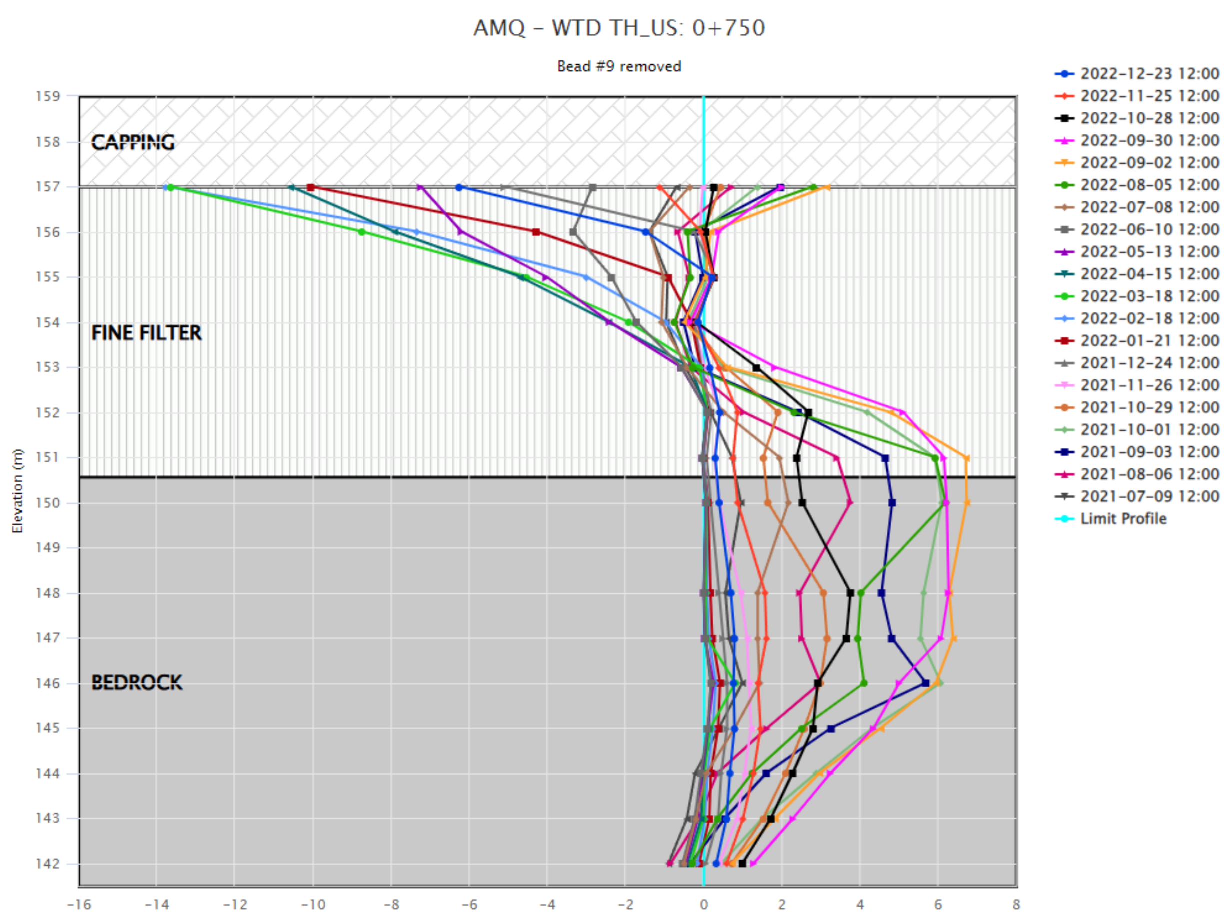
2021-07-09 12:00
Limit Profile


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

WTD-TH 0+750




Temperature(°C): AMQ - WTD TH-US 0 + 750
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 2/20/2019 to 2022-12-22


AMQ – WTD TH_US: 0+750
Bead #9 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
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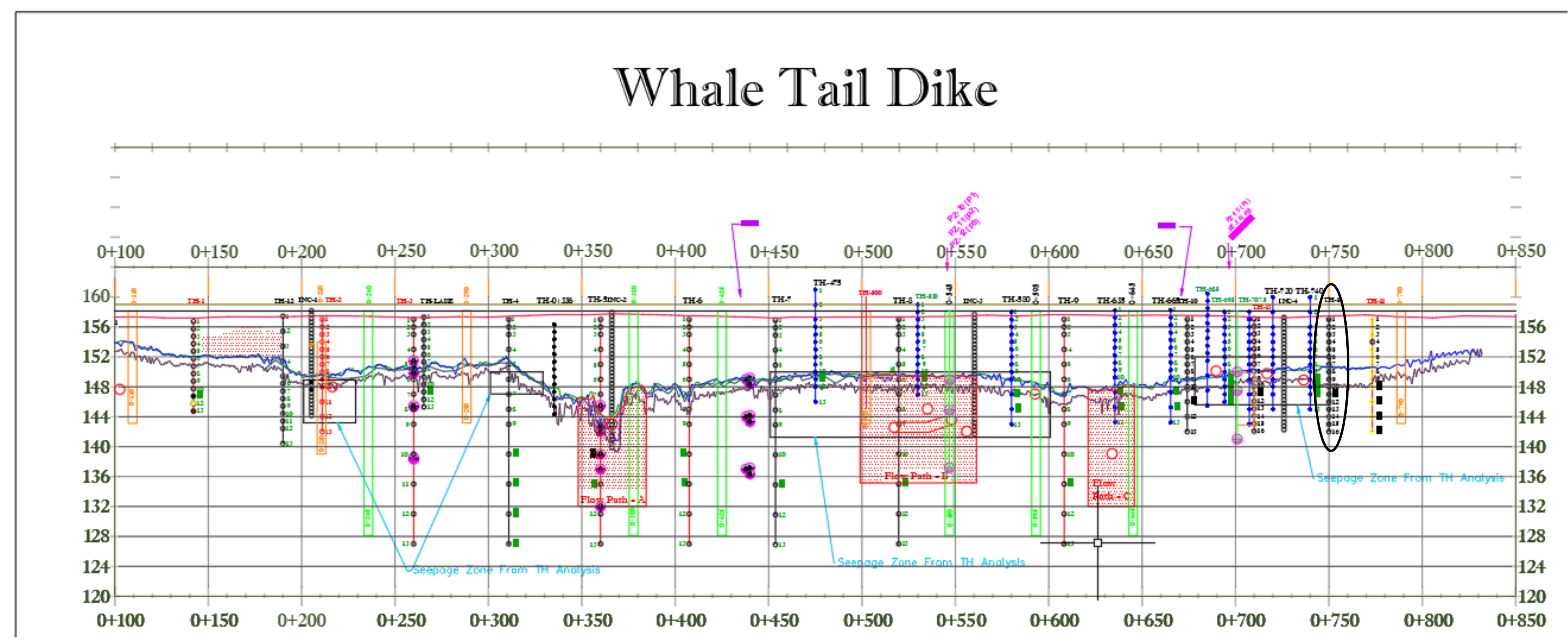
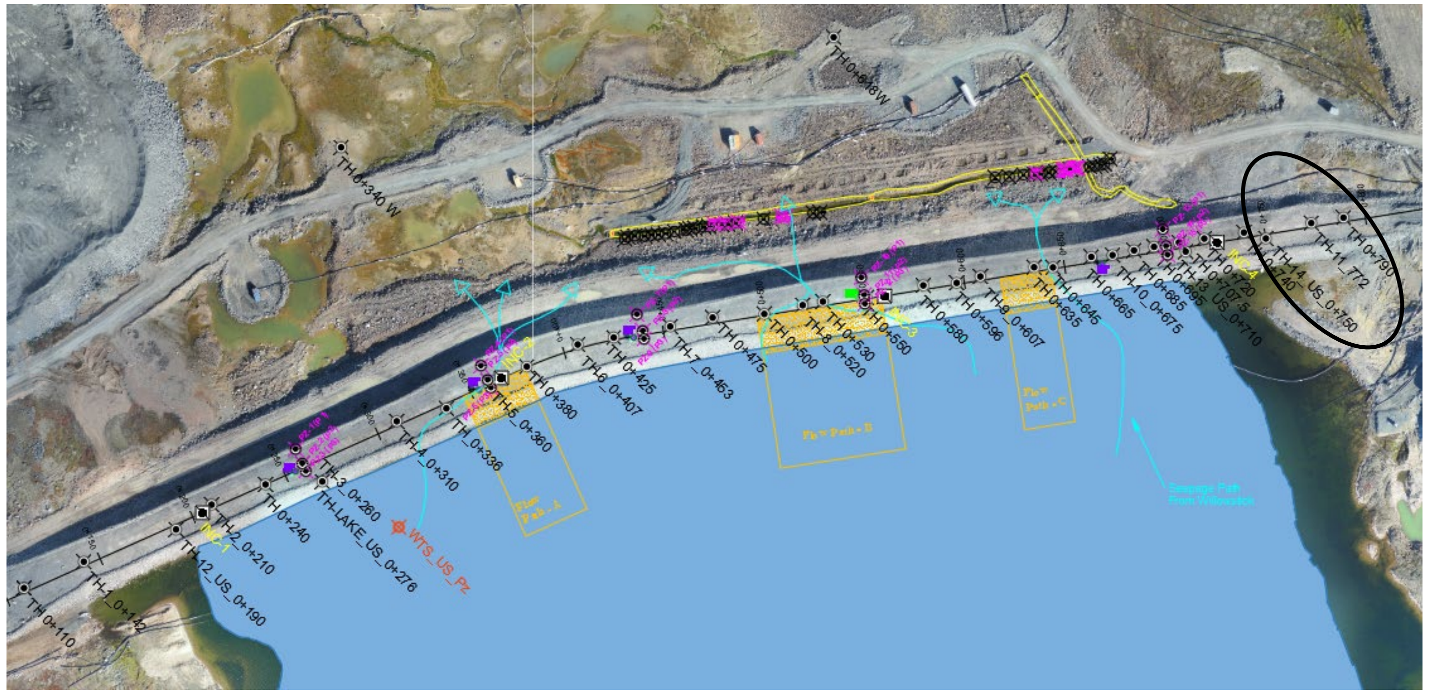
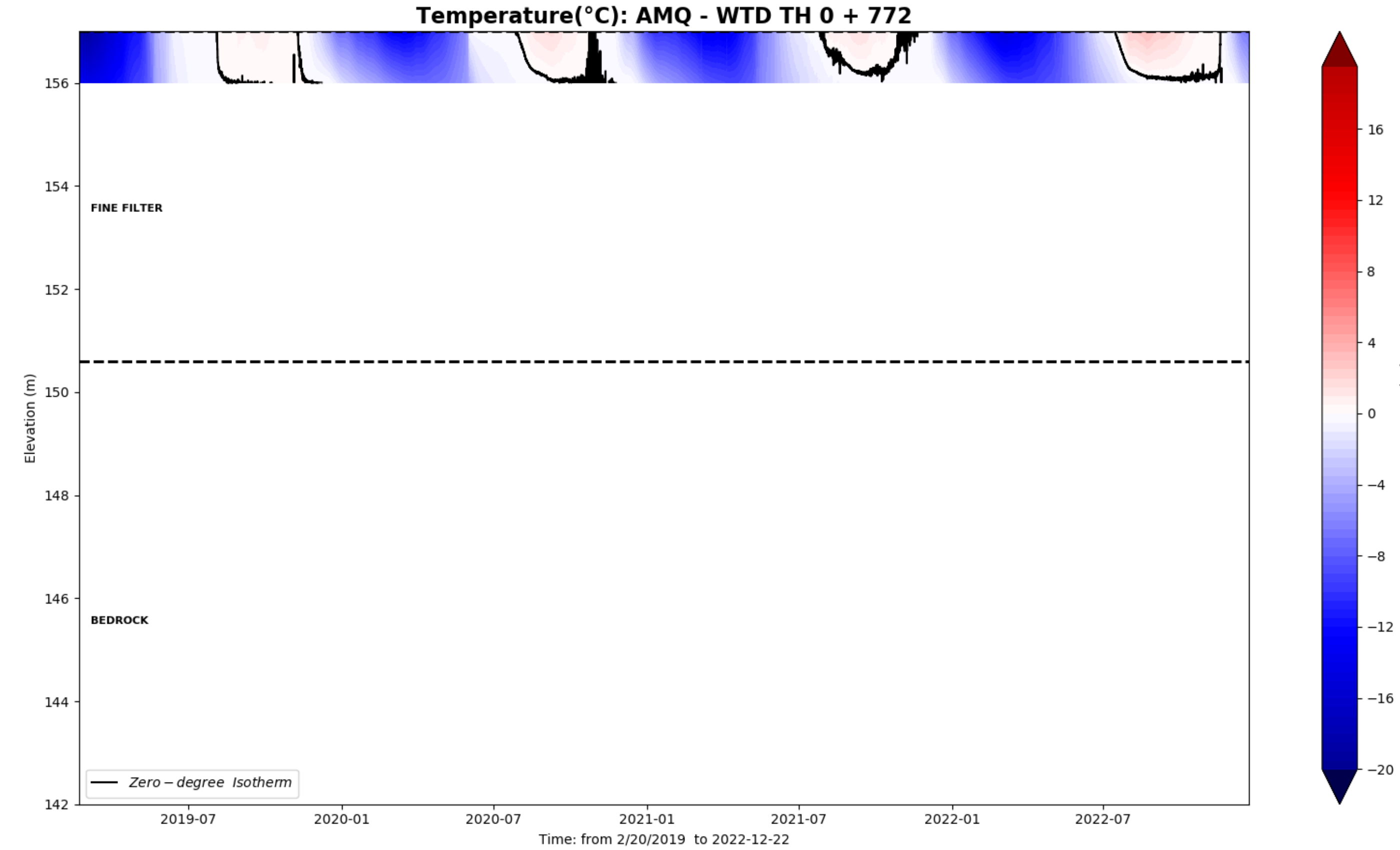
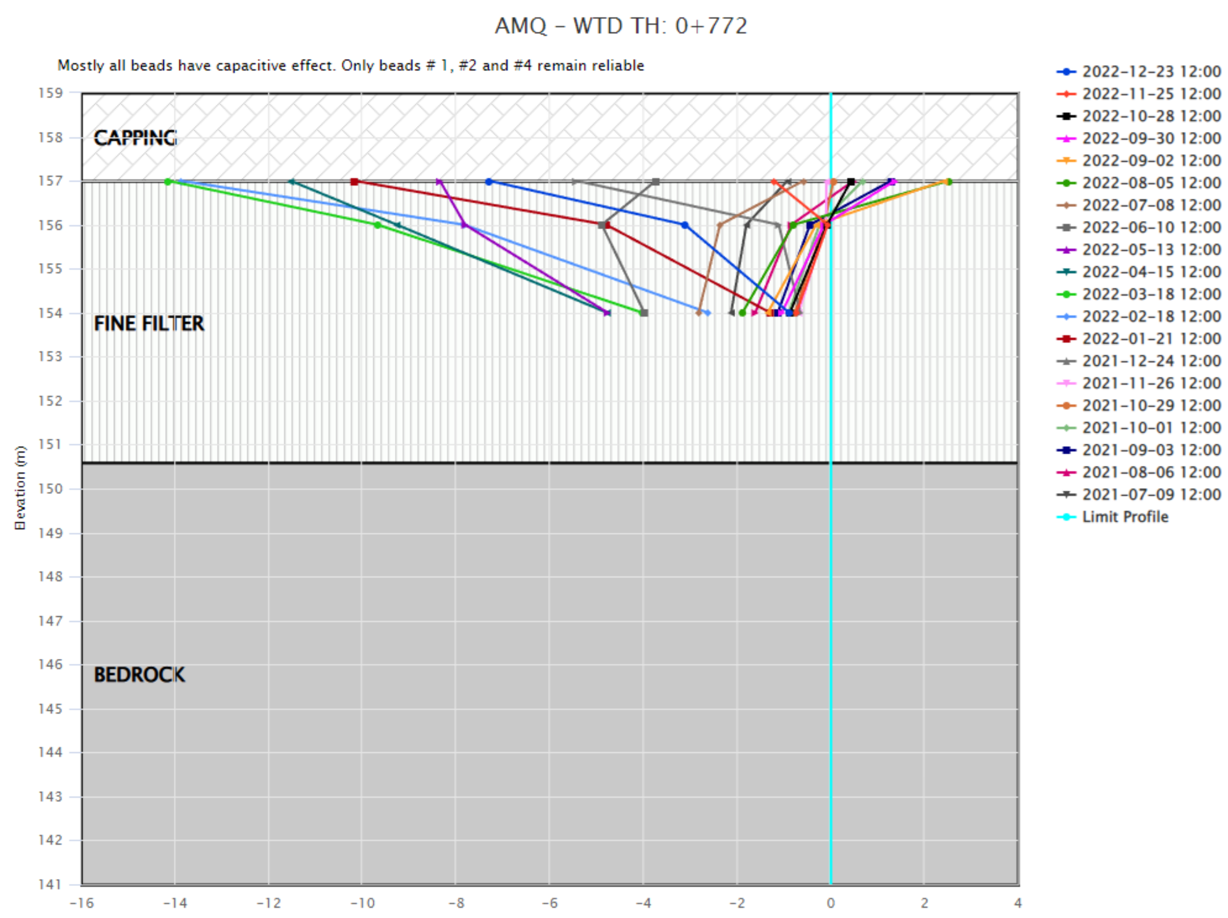
2021-07-09 12:00
Limit Profile

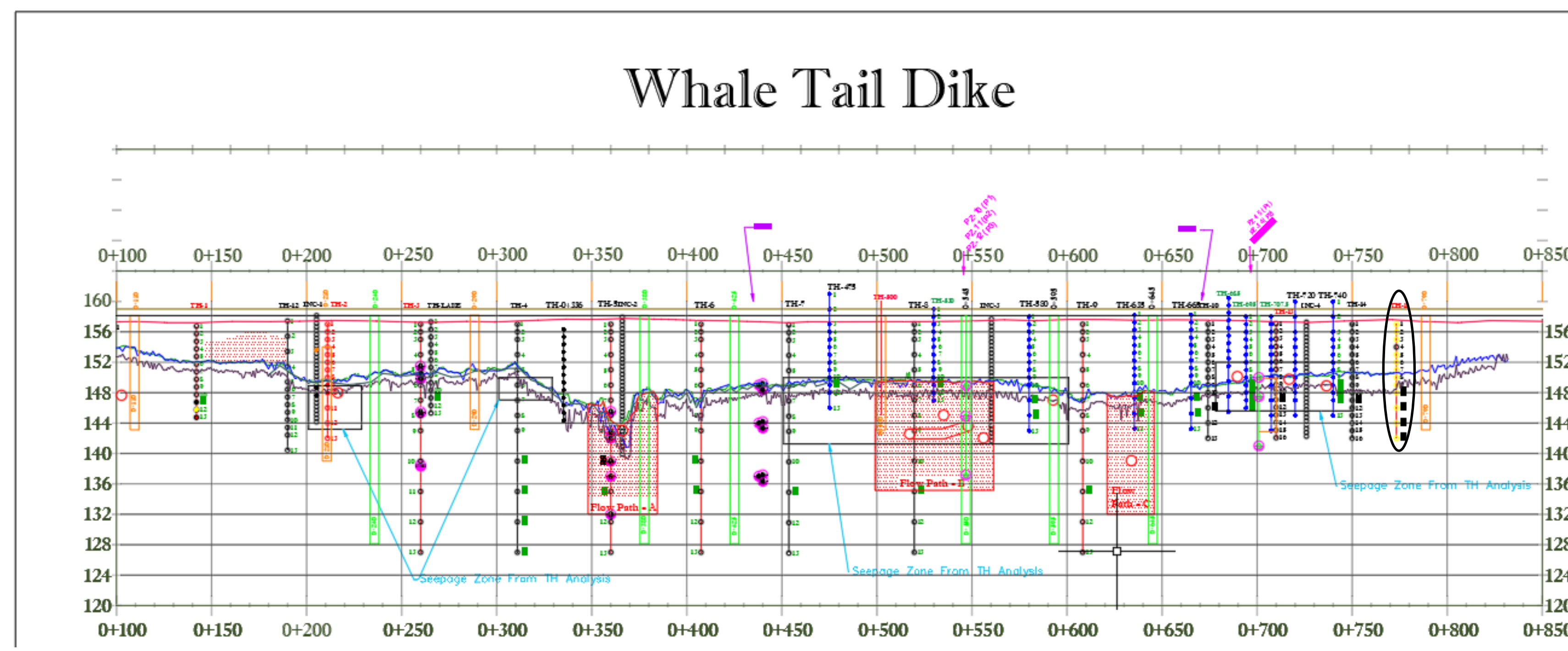

Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+772 U/S

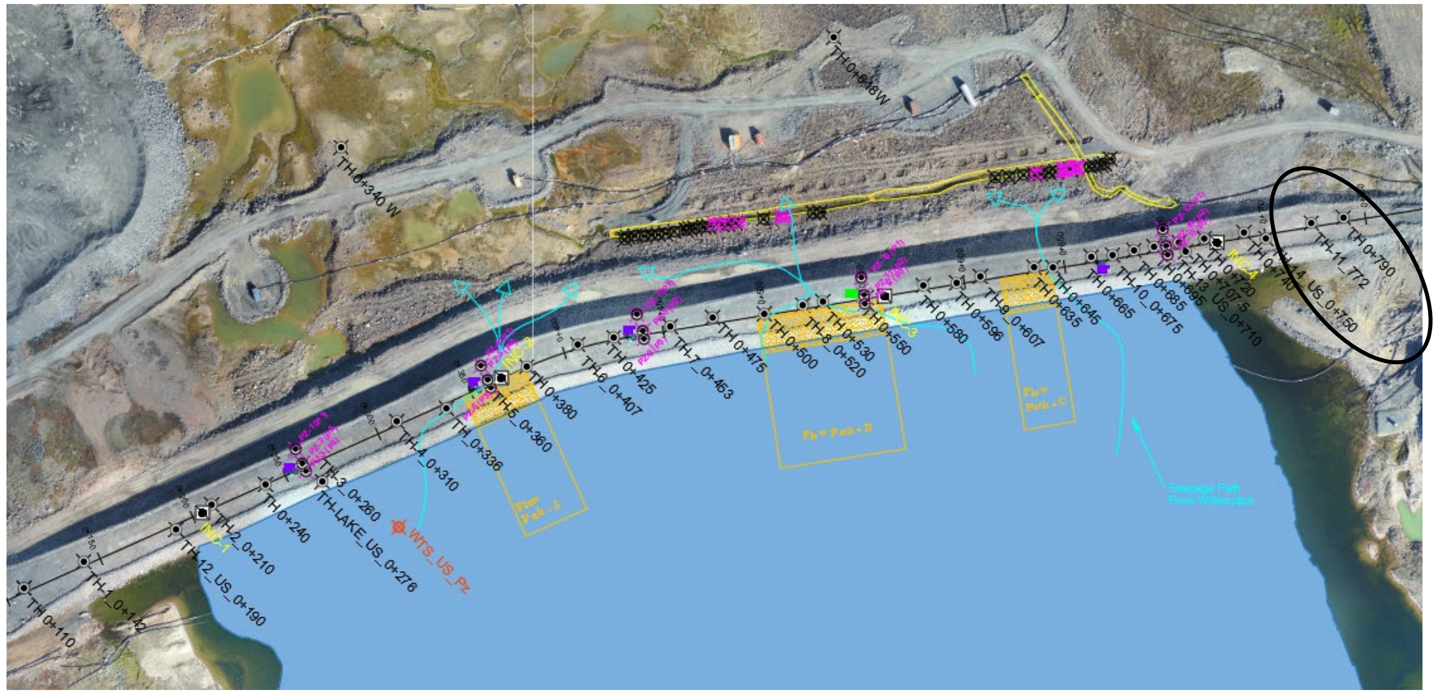


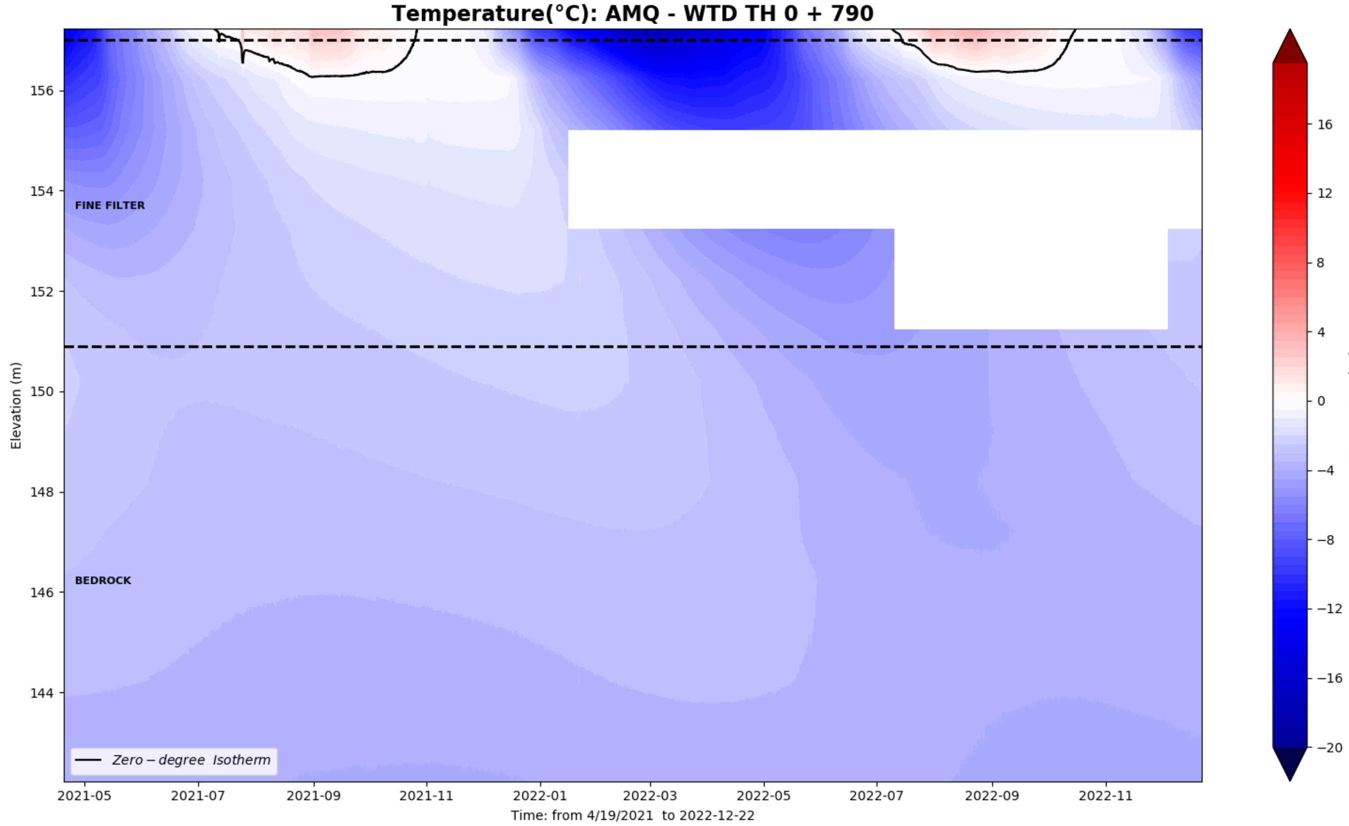


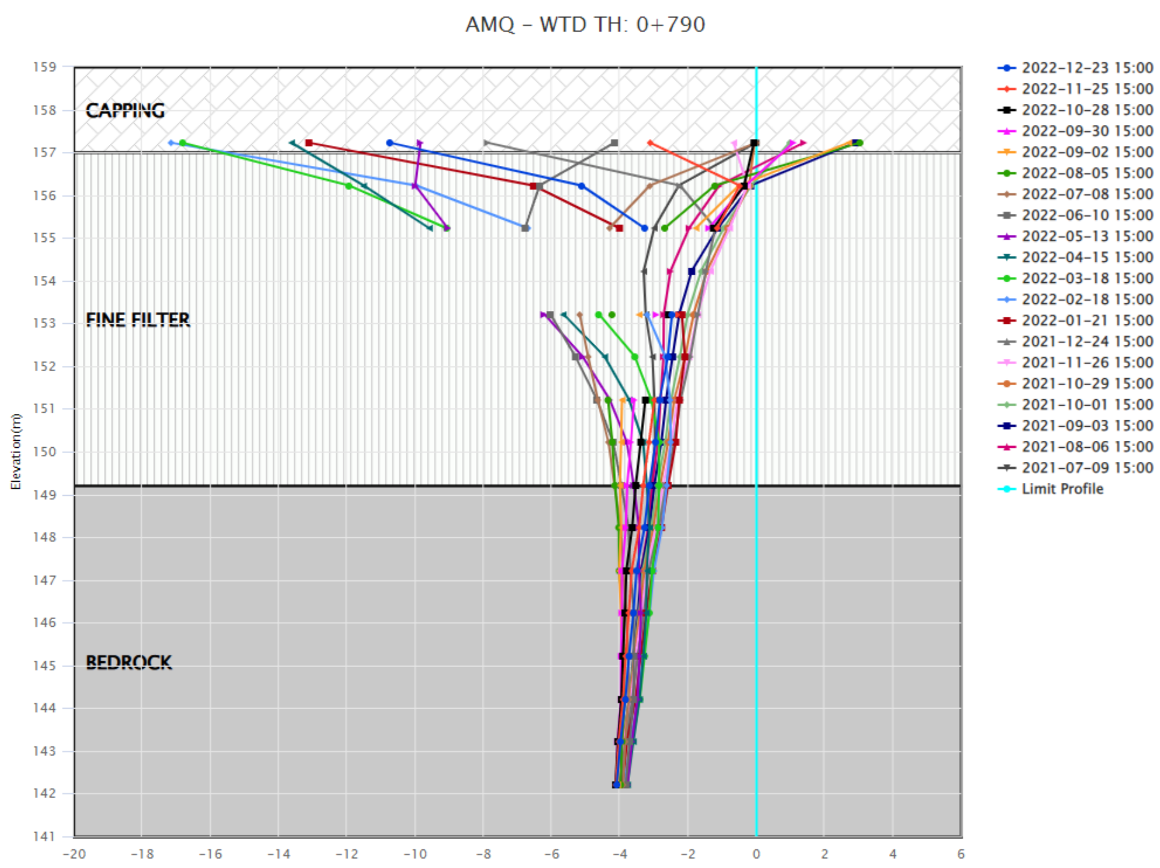


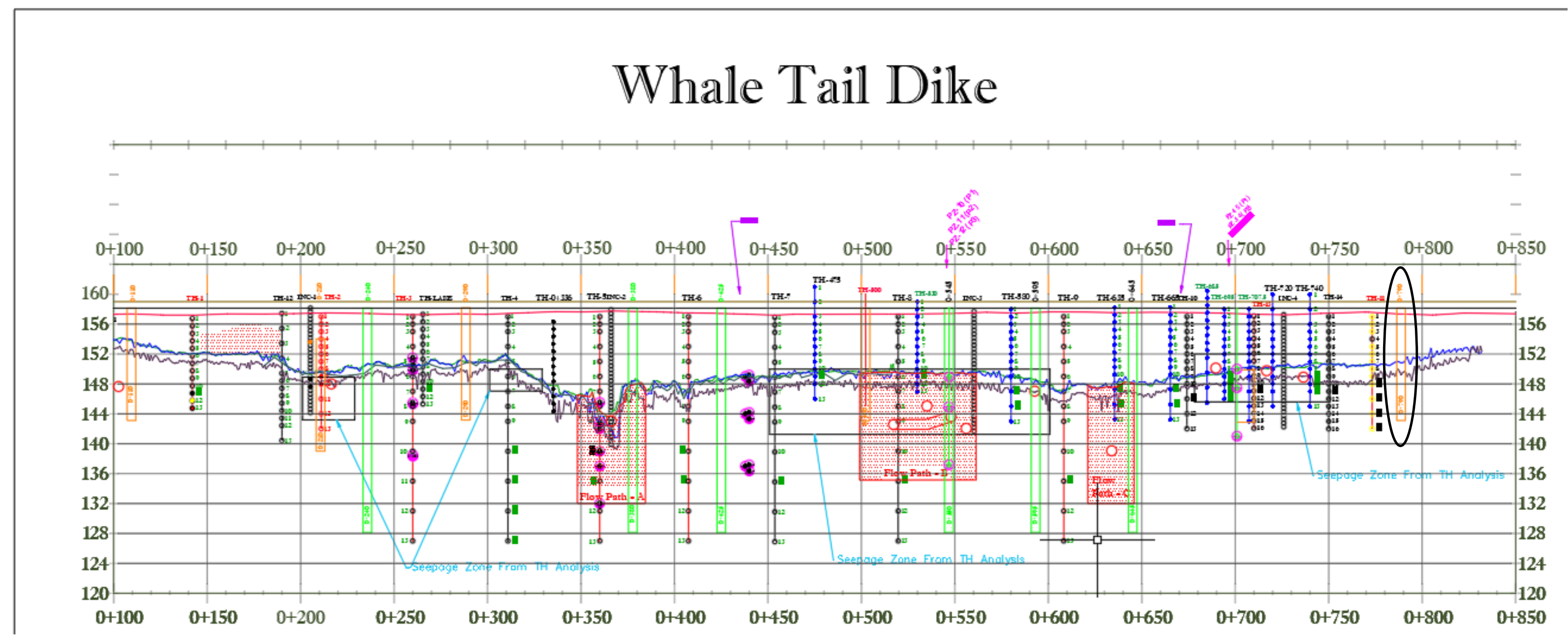


WTD-TH 0+790



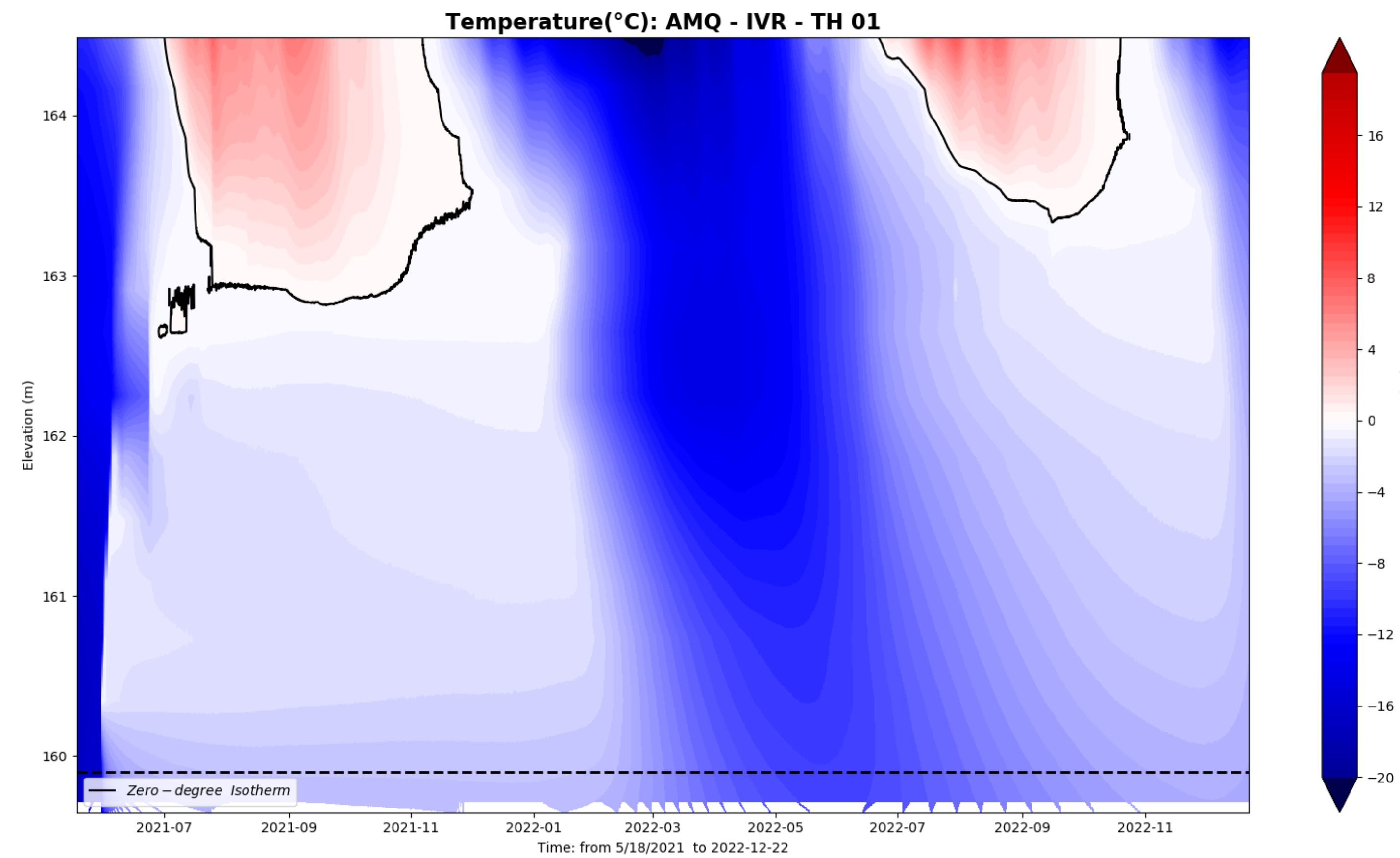

Temperature(°C): AMQ - WTD TH 0 + 790
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 4/19/2021 to 2022-12-22

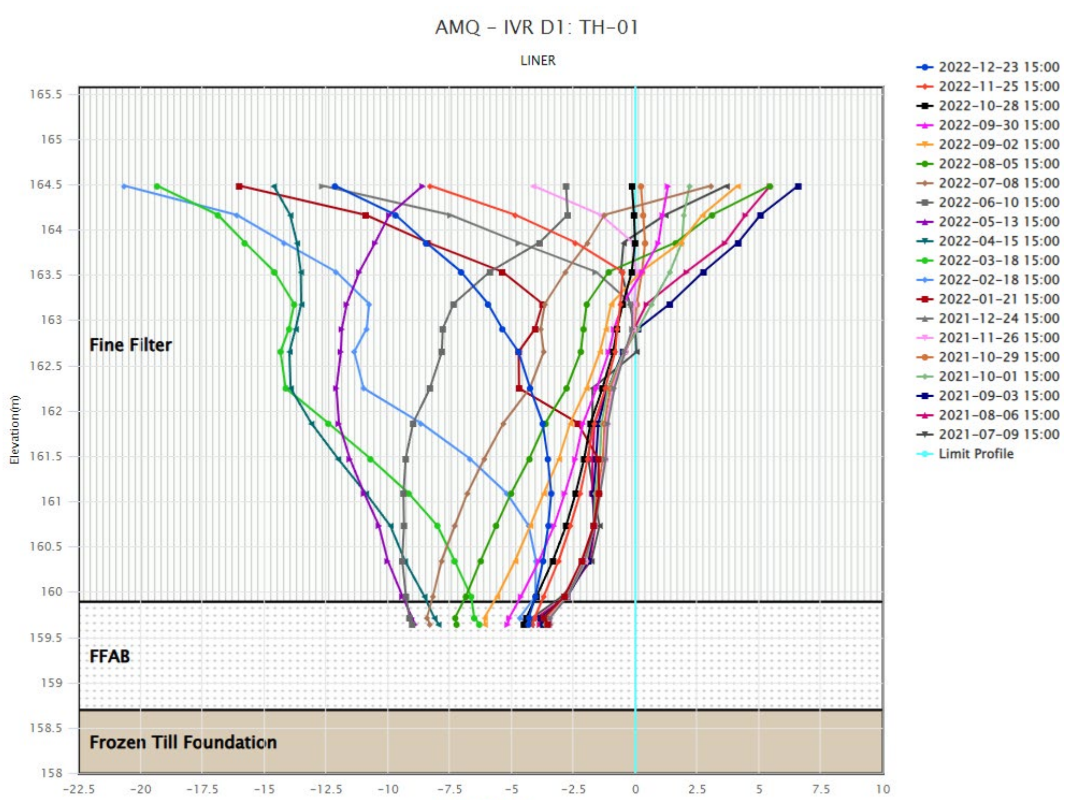

AMQ - WTD TH: 0+790
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

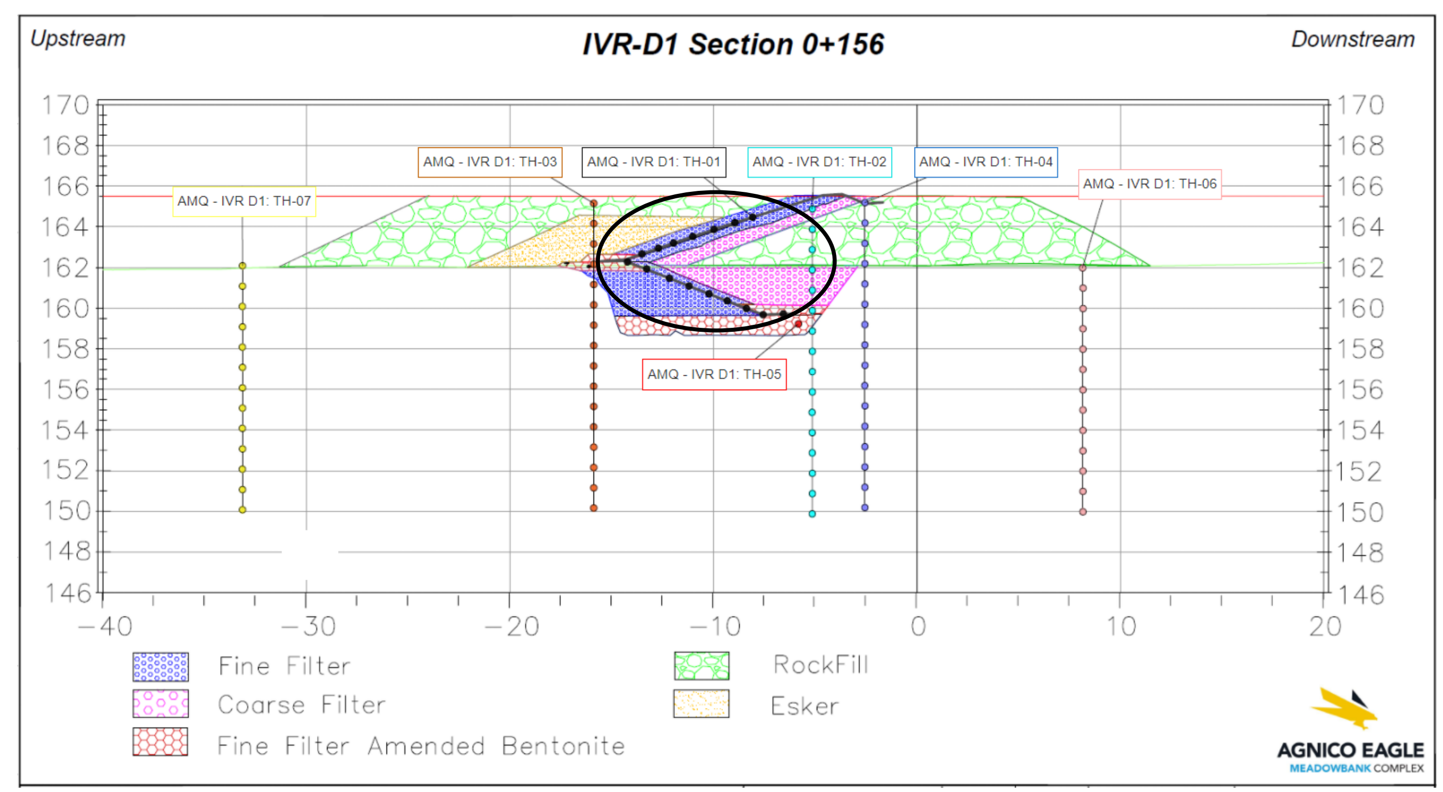

Whale Tail Dike
Seepage Zone From TH Analysis

IVR-D1-TH1


IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+100
0+200
0+300

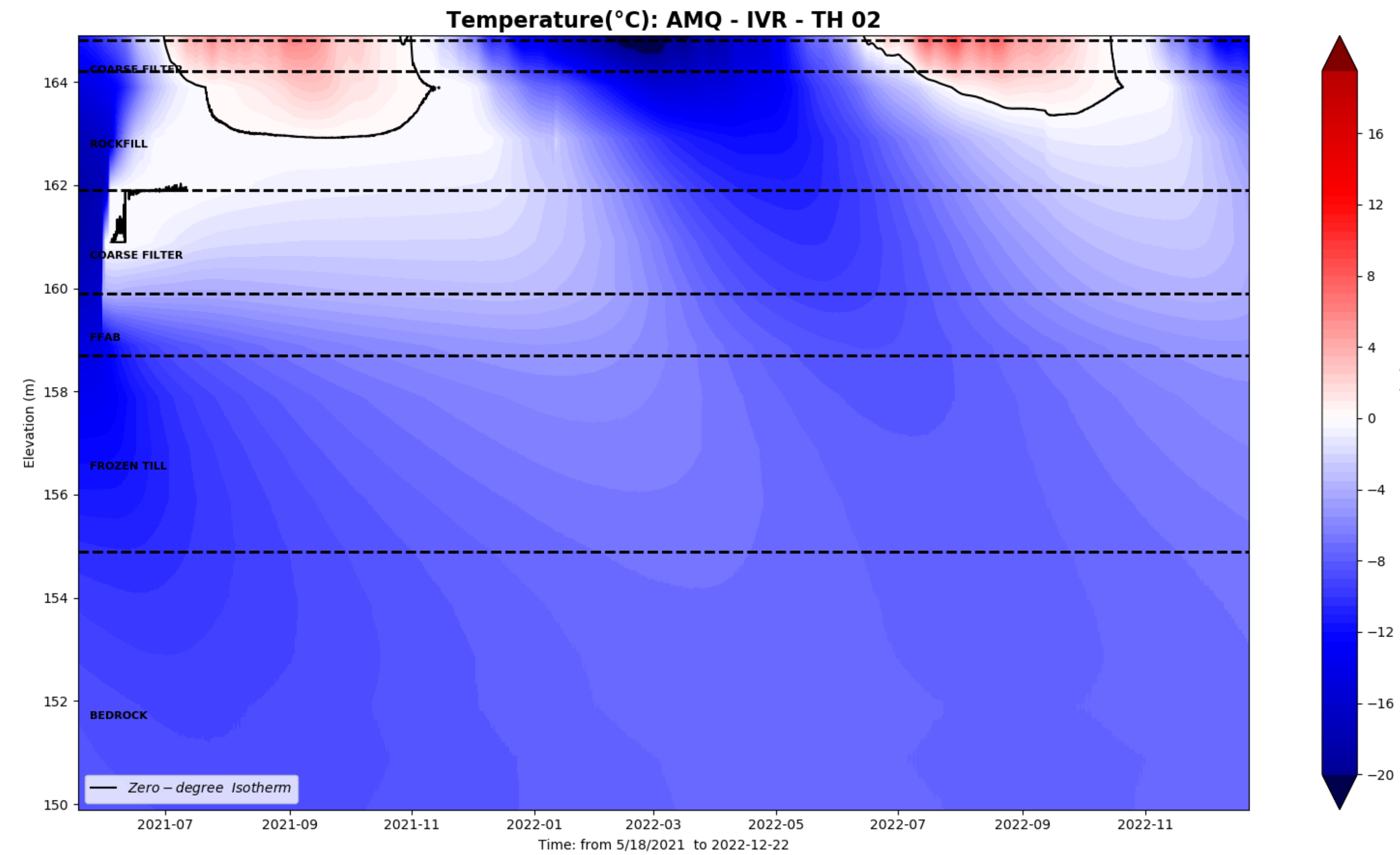

Temperature(°C): AMQ - IVR - TH 01
Elevation (m)
Zero – degree Isotherm
Time: from 5/18/2021 to 2022-12-22
Temperature(°C)

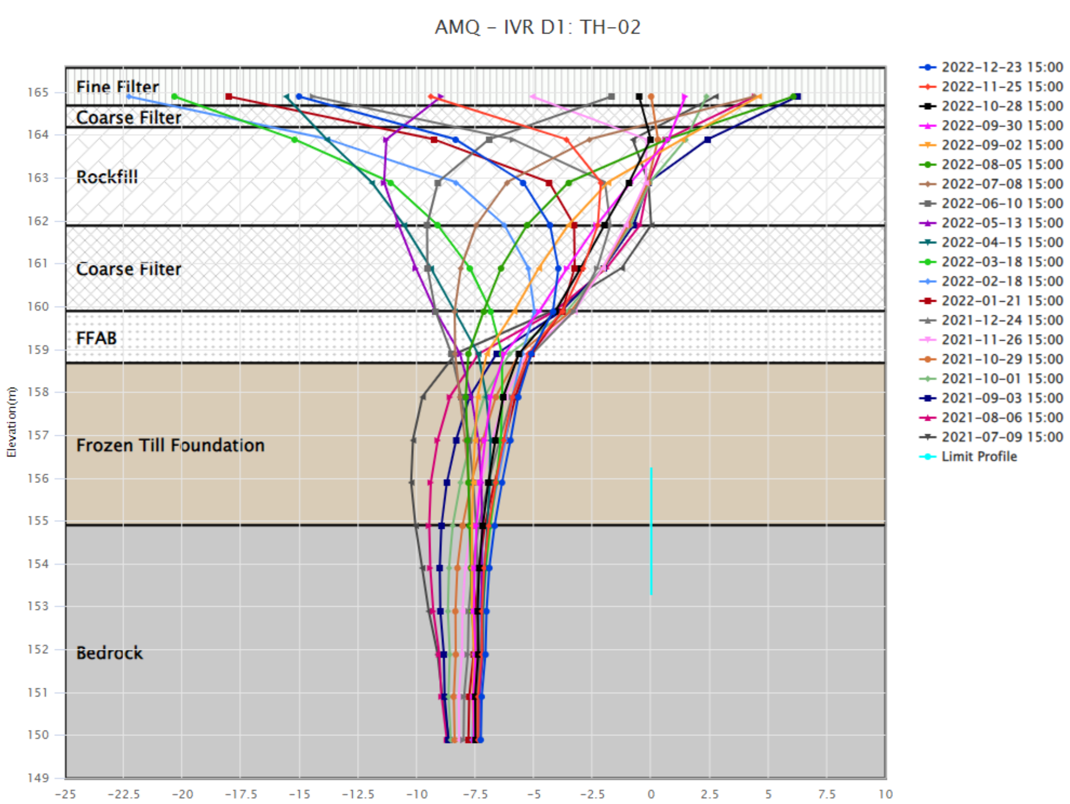

AMQ – IVR D1: TH-01
LINER
Fine Filter
FFAB
Frozen Till Foundation
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
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


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


Temperature(°C): AMQ - IVR - TH 02
COARSE FILTER
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
2021-07
2021-09
2021-11
2022-01
2022-03
2022-05
2022-07
2022-09
2022-11
Time: from 5/18/2021 to 2022-12-22


AMQ – IVR D1: TH-02
Fine Filter
Coarse Filter
Rockfill
Coarse Filter
FFAB
Frozen Till Foundation
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
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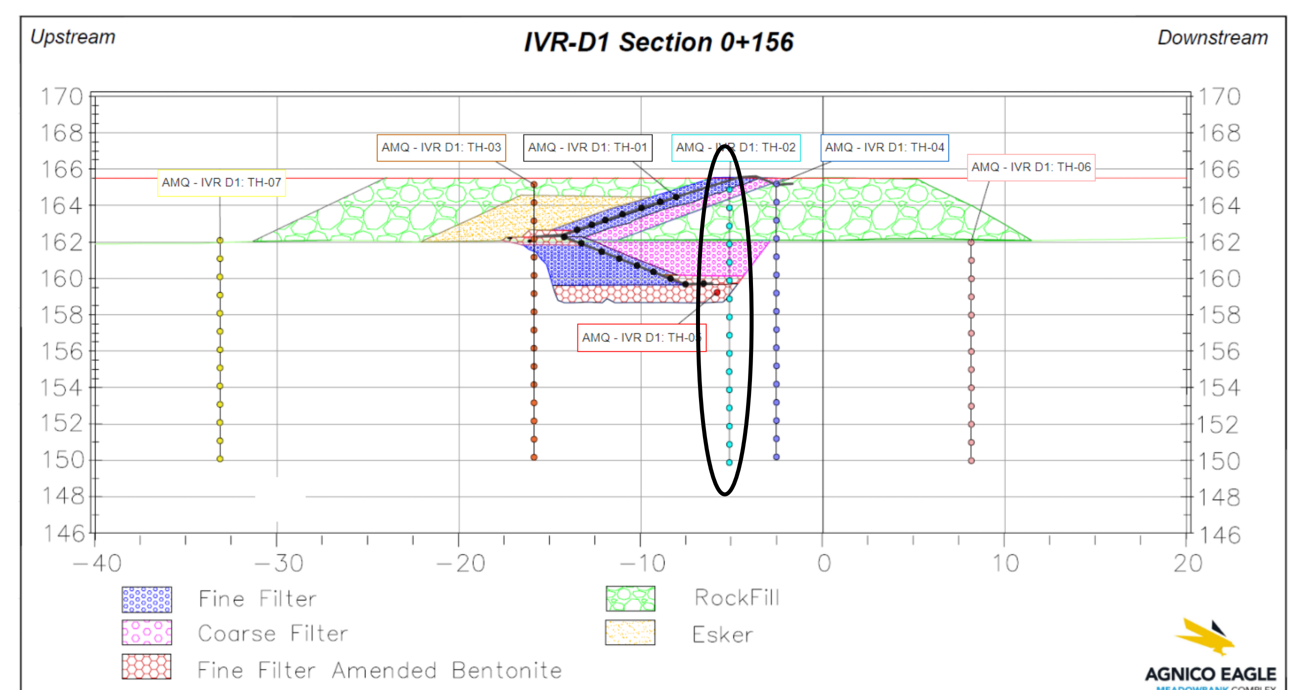
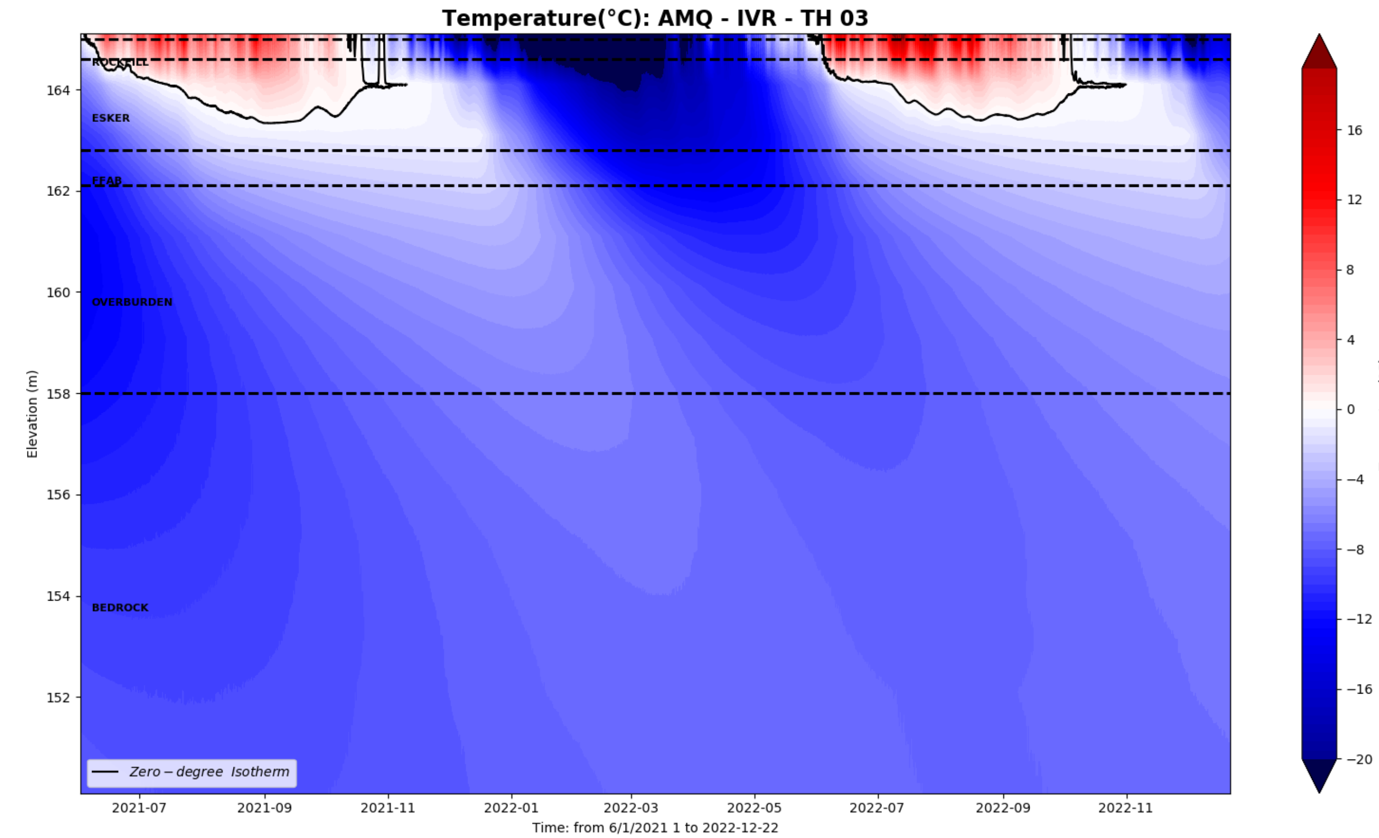
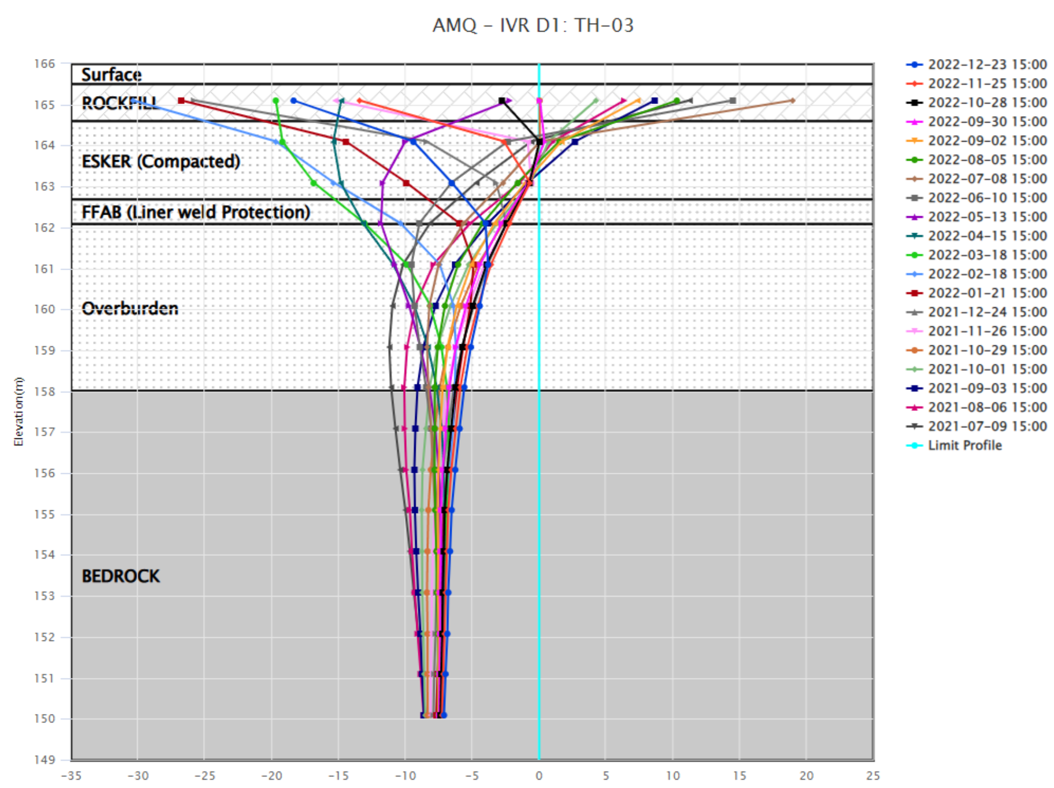
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

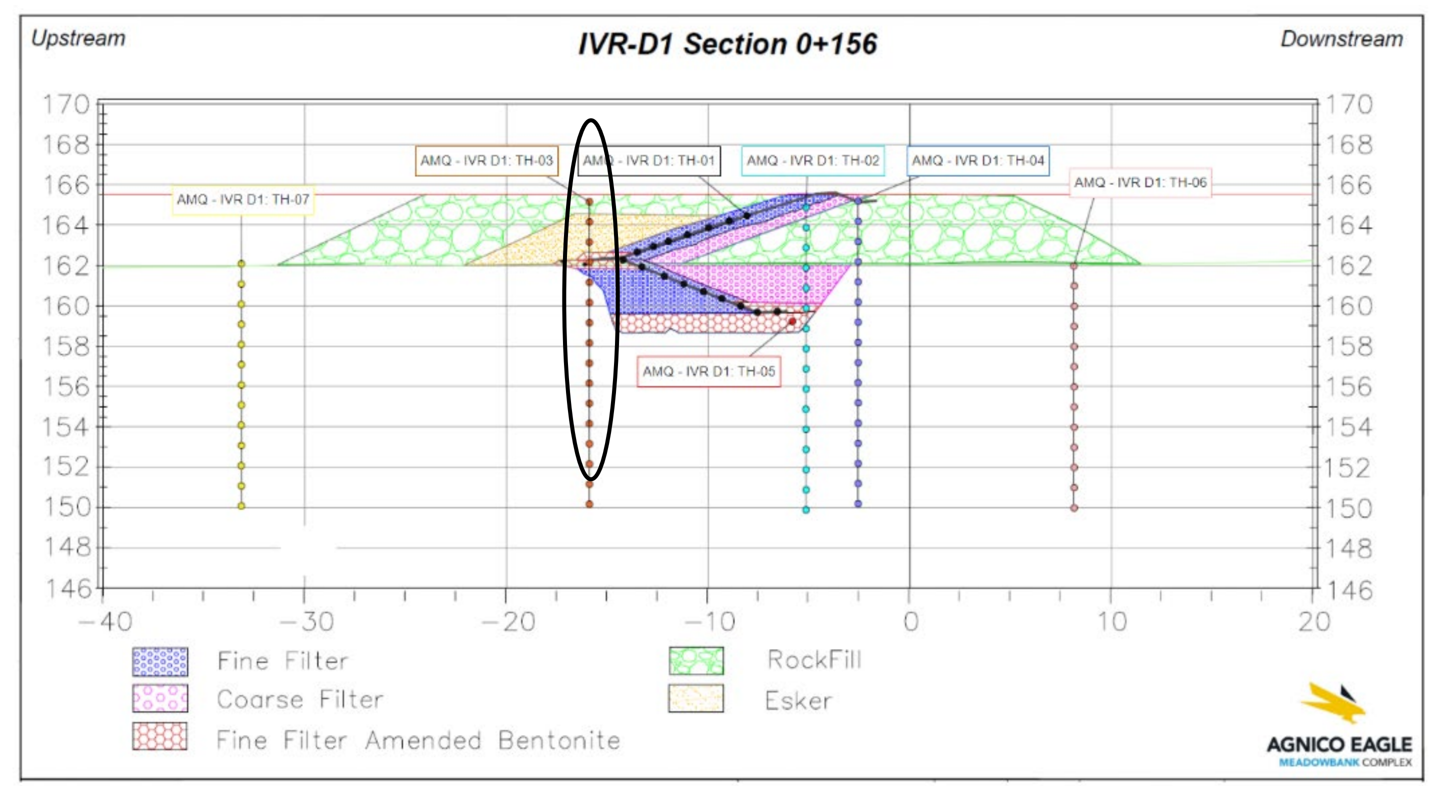

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH3


IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+100
0+200
0+300

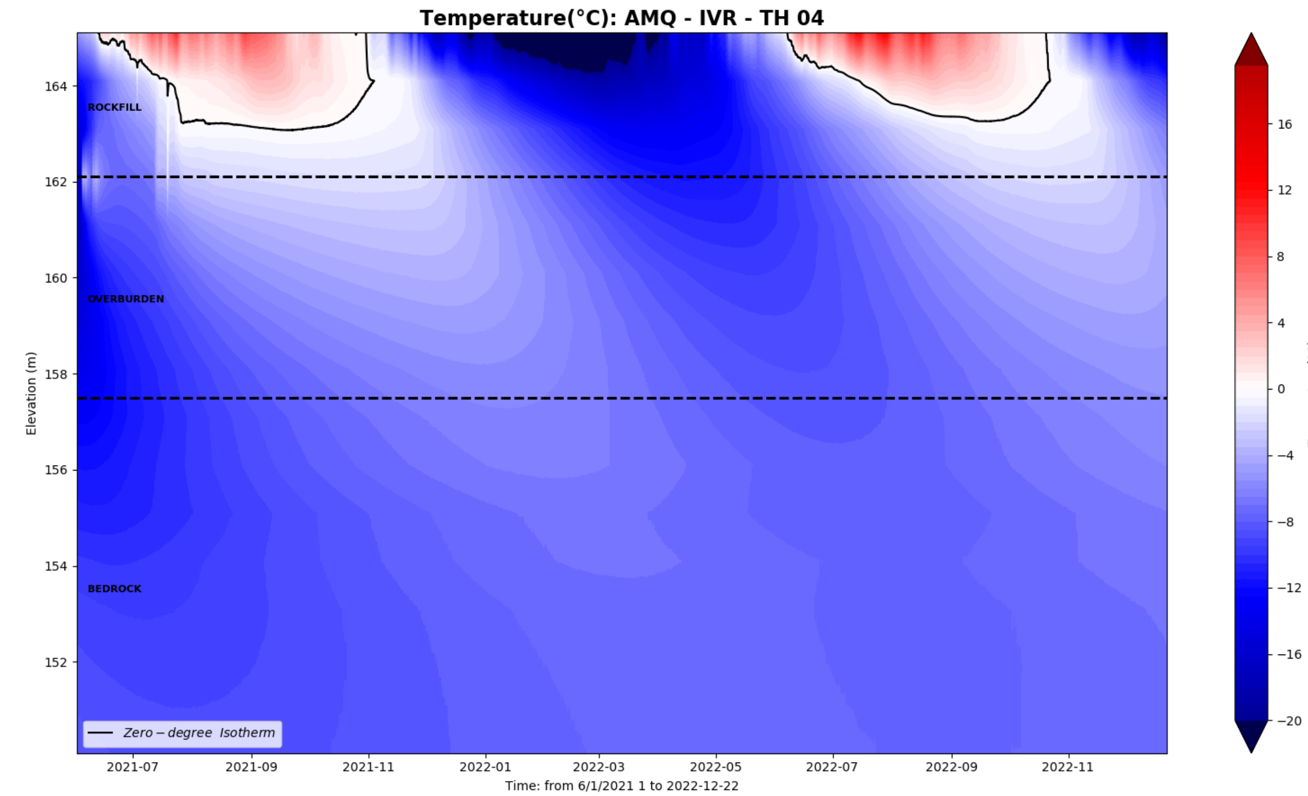

Temperature(°C): AMQ - IVR - TH 03
ROCKFILL
ESKER
FFAB
OVERBURDEN
BEDROCK
Elevation (m)
Temperature(°C)
Zero – degree Isotherm
Time: from 6/1/2021 1 to 2022-12-22

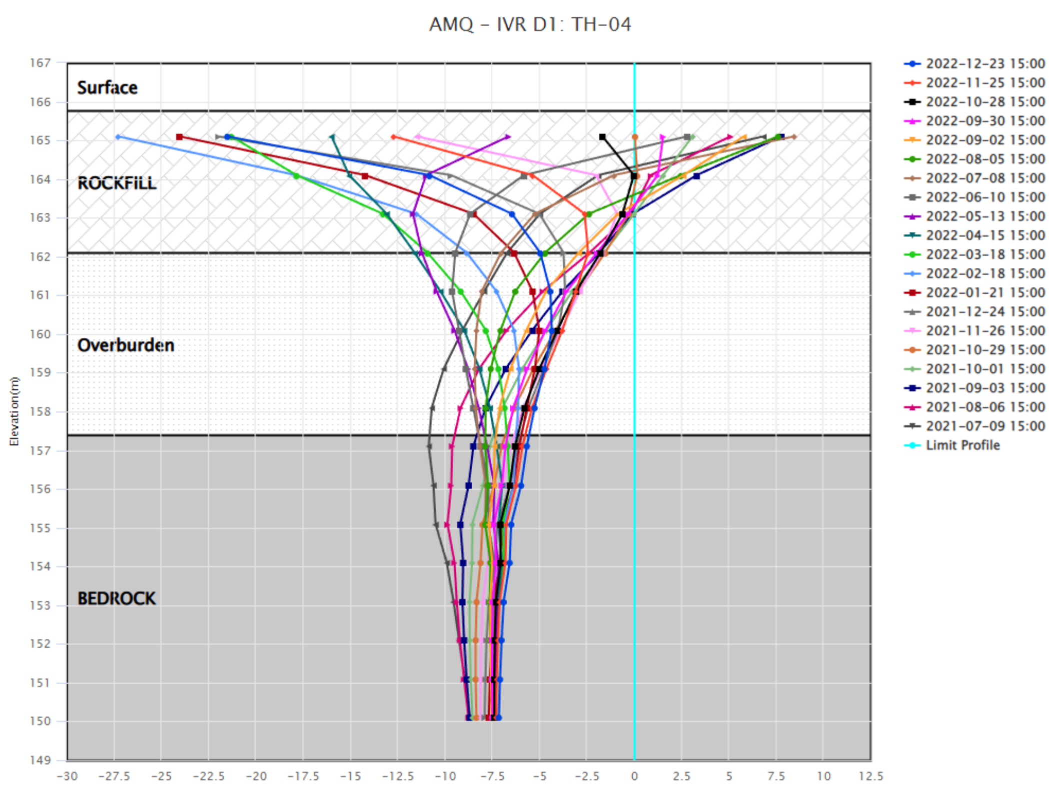

AMQ - IVR D1: TH-03
Surface
ROCKFILL
ESKER (Compacted)
FFAB (Liner weld Protection)
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

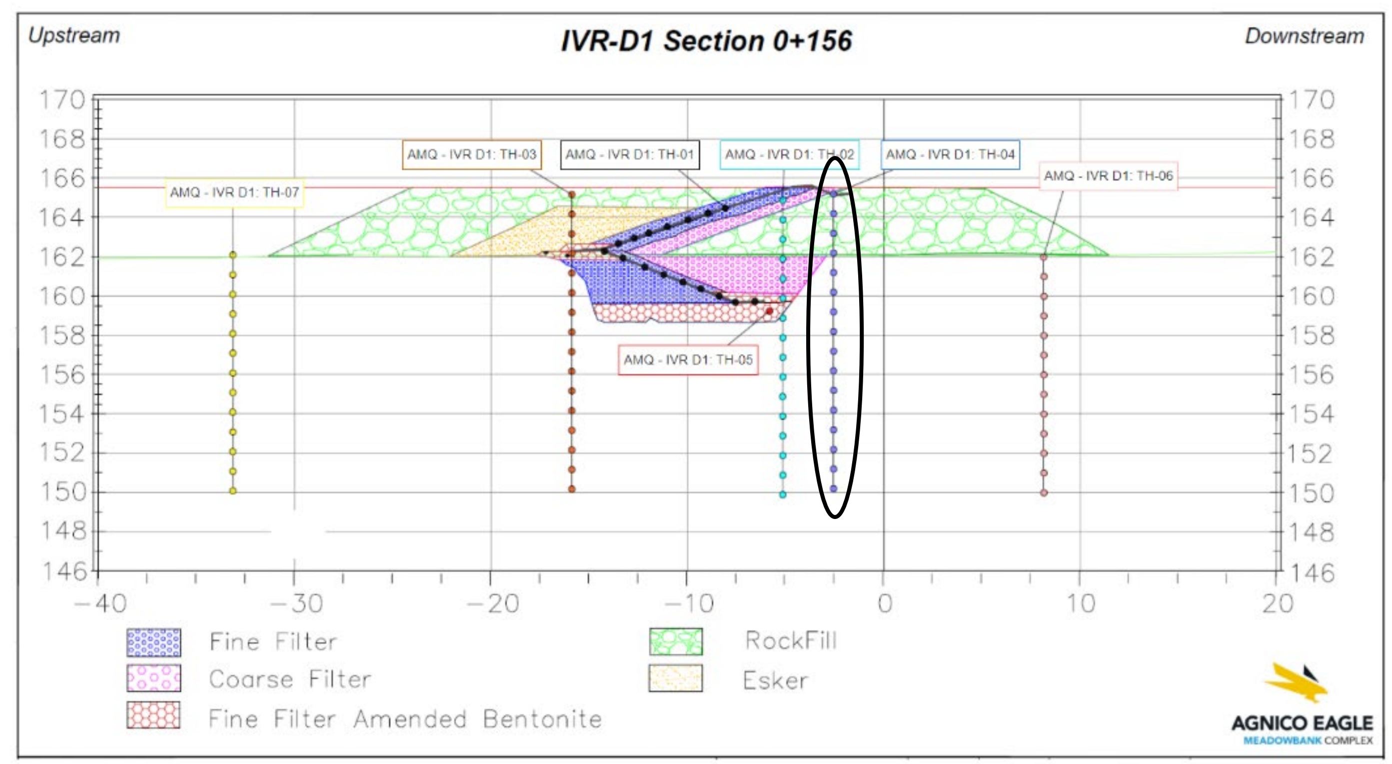

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH4

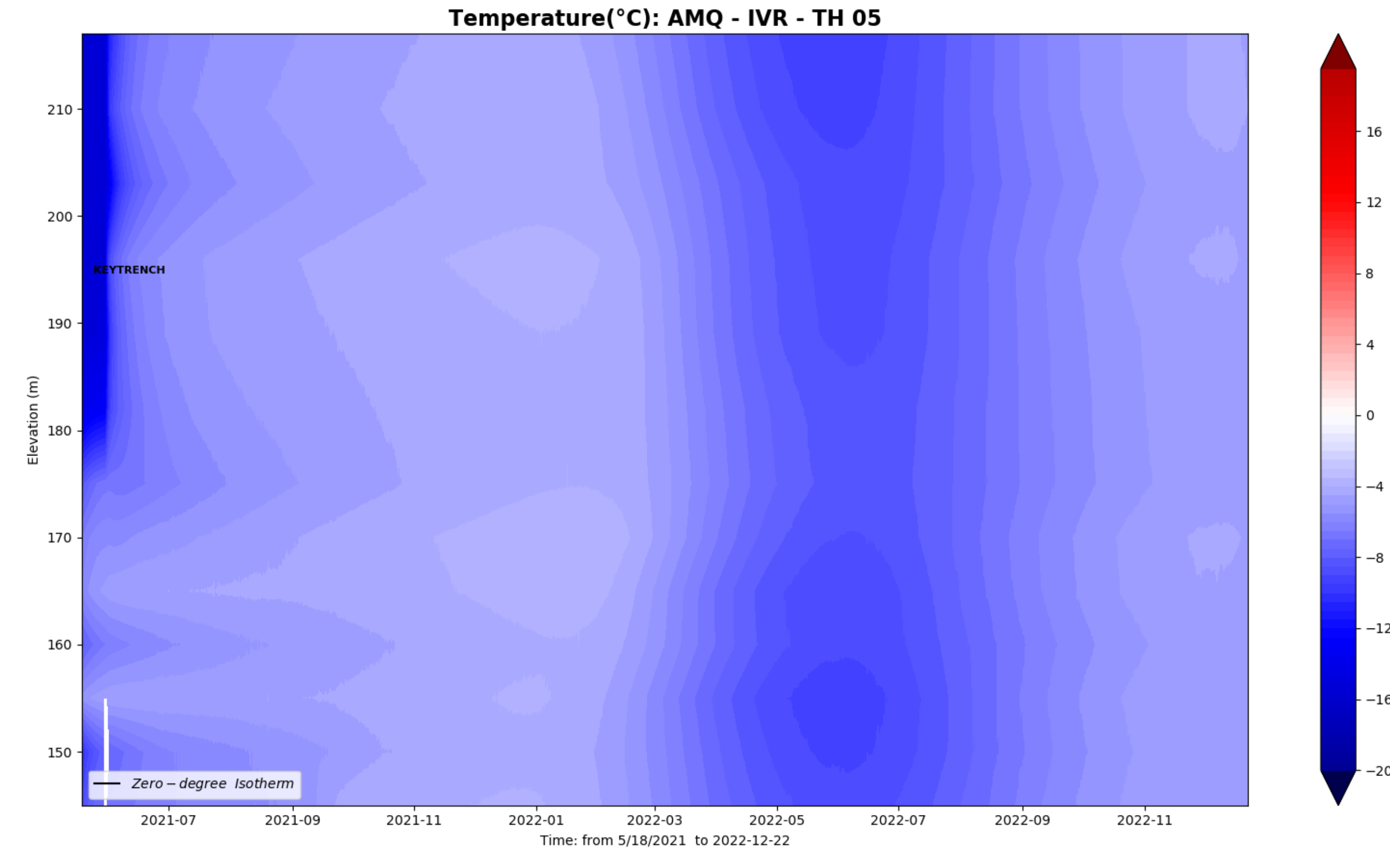

IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+100
0+200
0+300

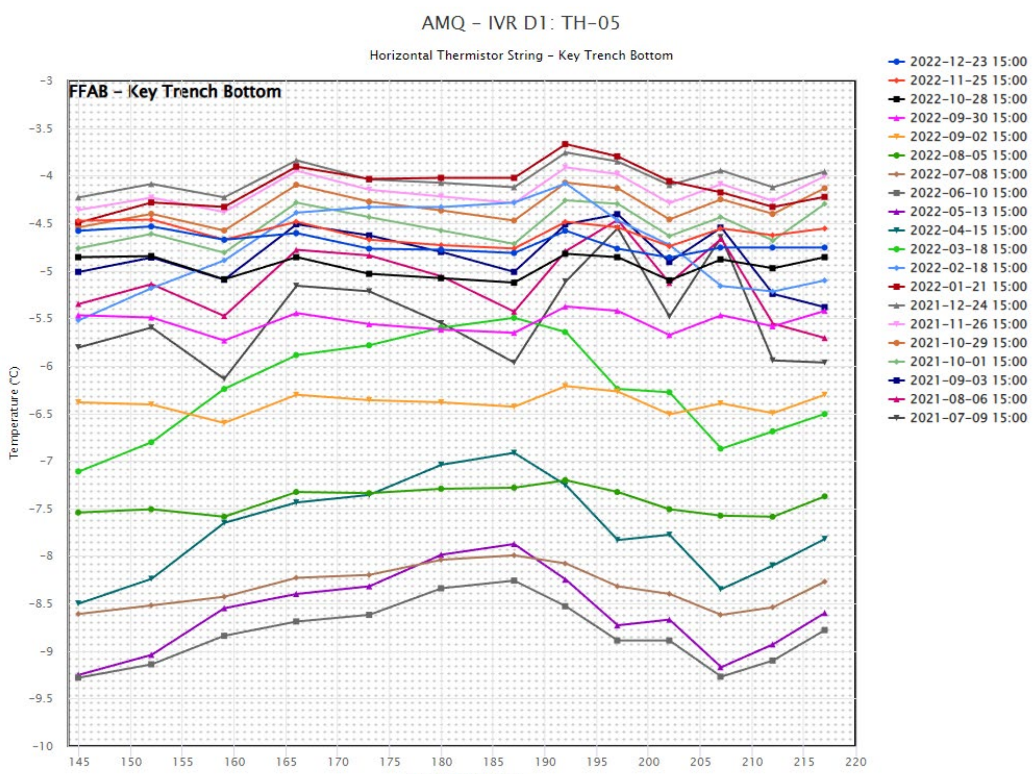

Temperature(°C): AMQ - IVR - TH 04
ROCKFILL
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 6/1/2021 1 to 2022-12-22
Temperature(°C)


AMQ – IVR D1: TH-04
Surface
ROCKFILL
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

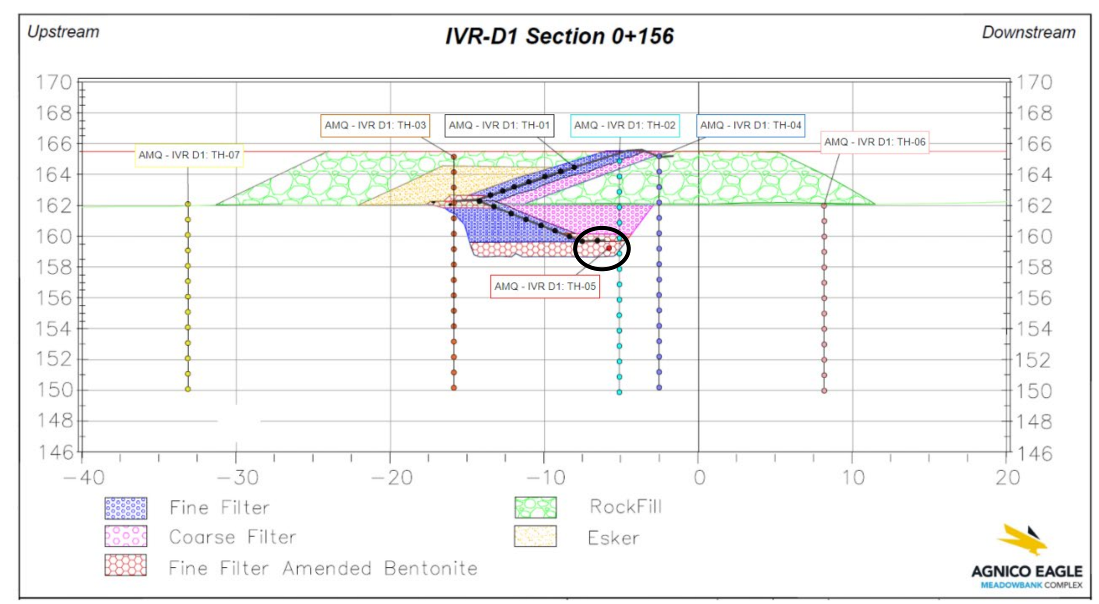

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH5



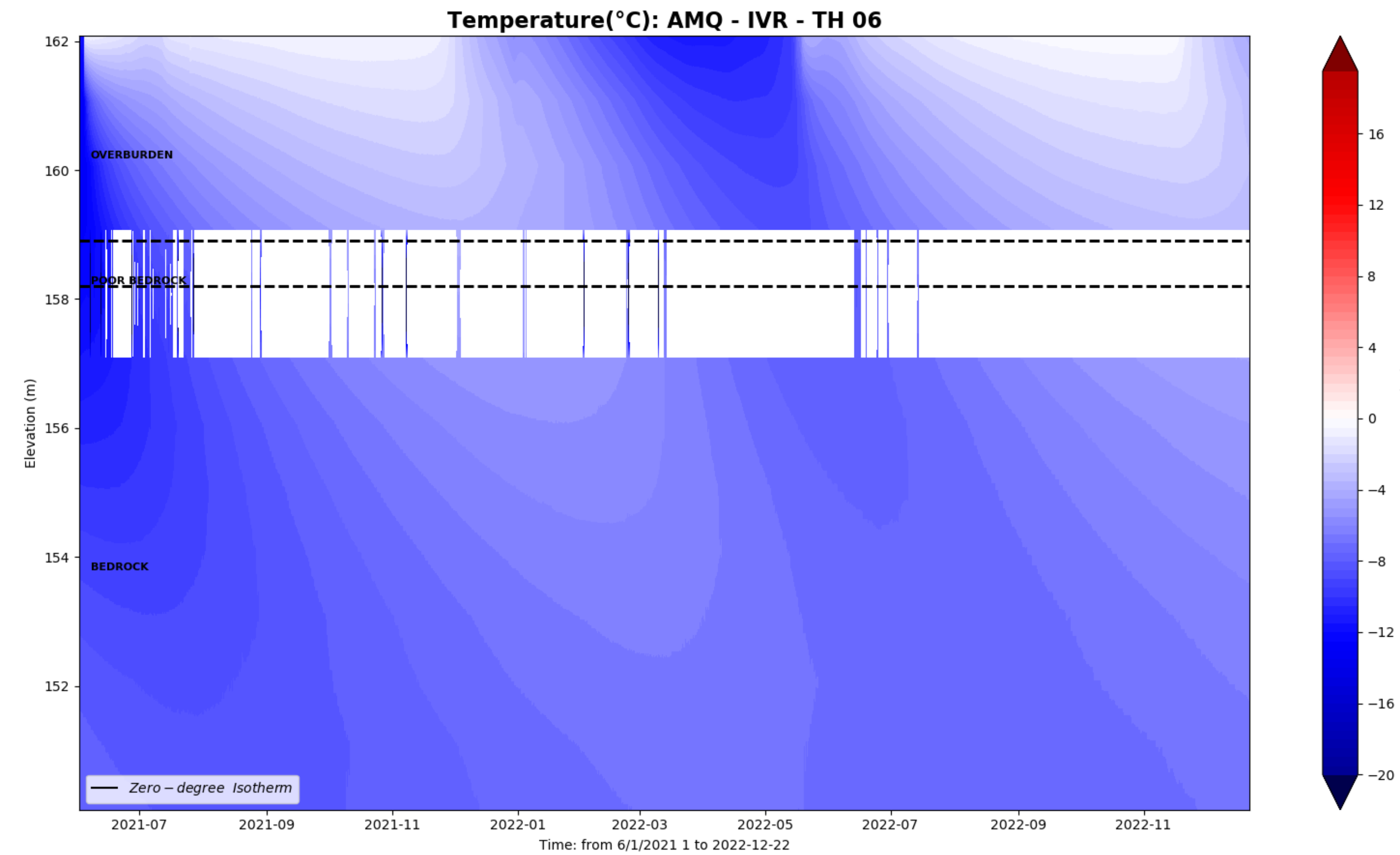


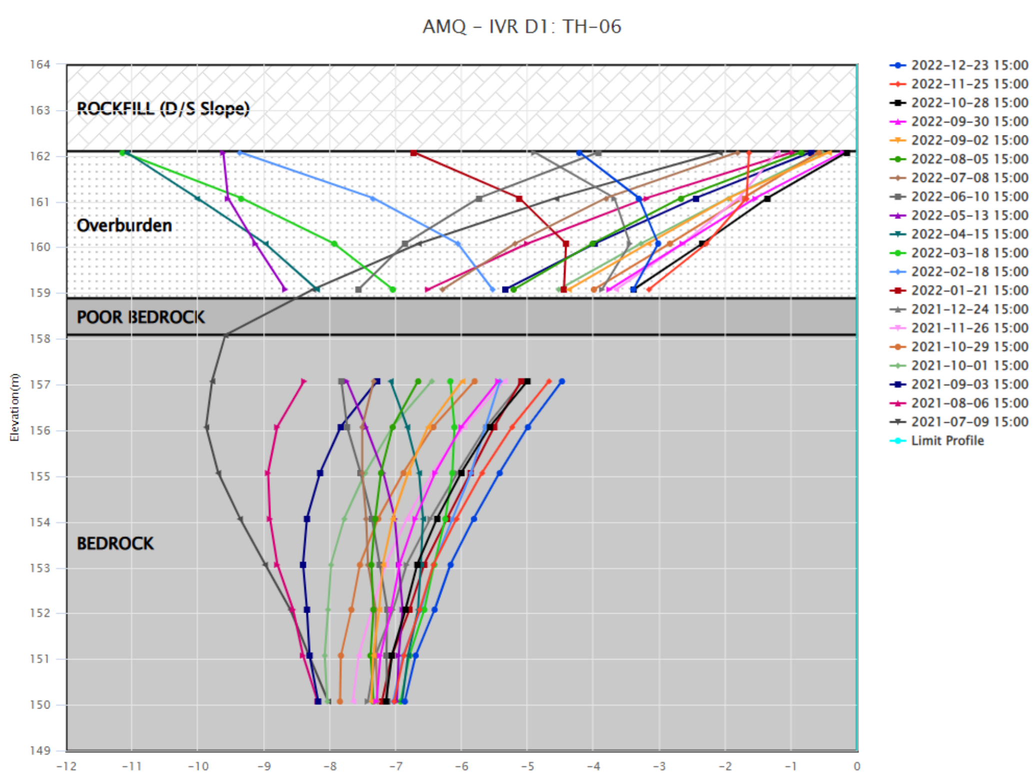
NOTE: This TH is horizontal and in Keytrench and must be reflected this way when reading the thermal graph

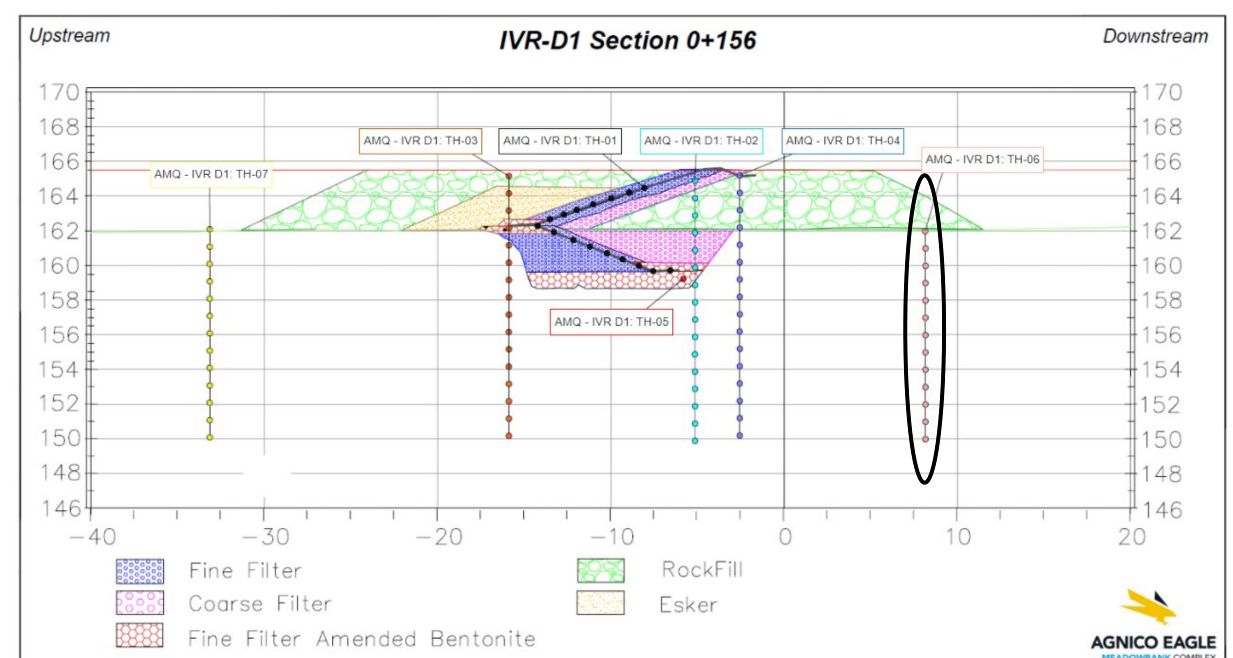


IVR-D1-TH6


IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+100
0+200
0+300

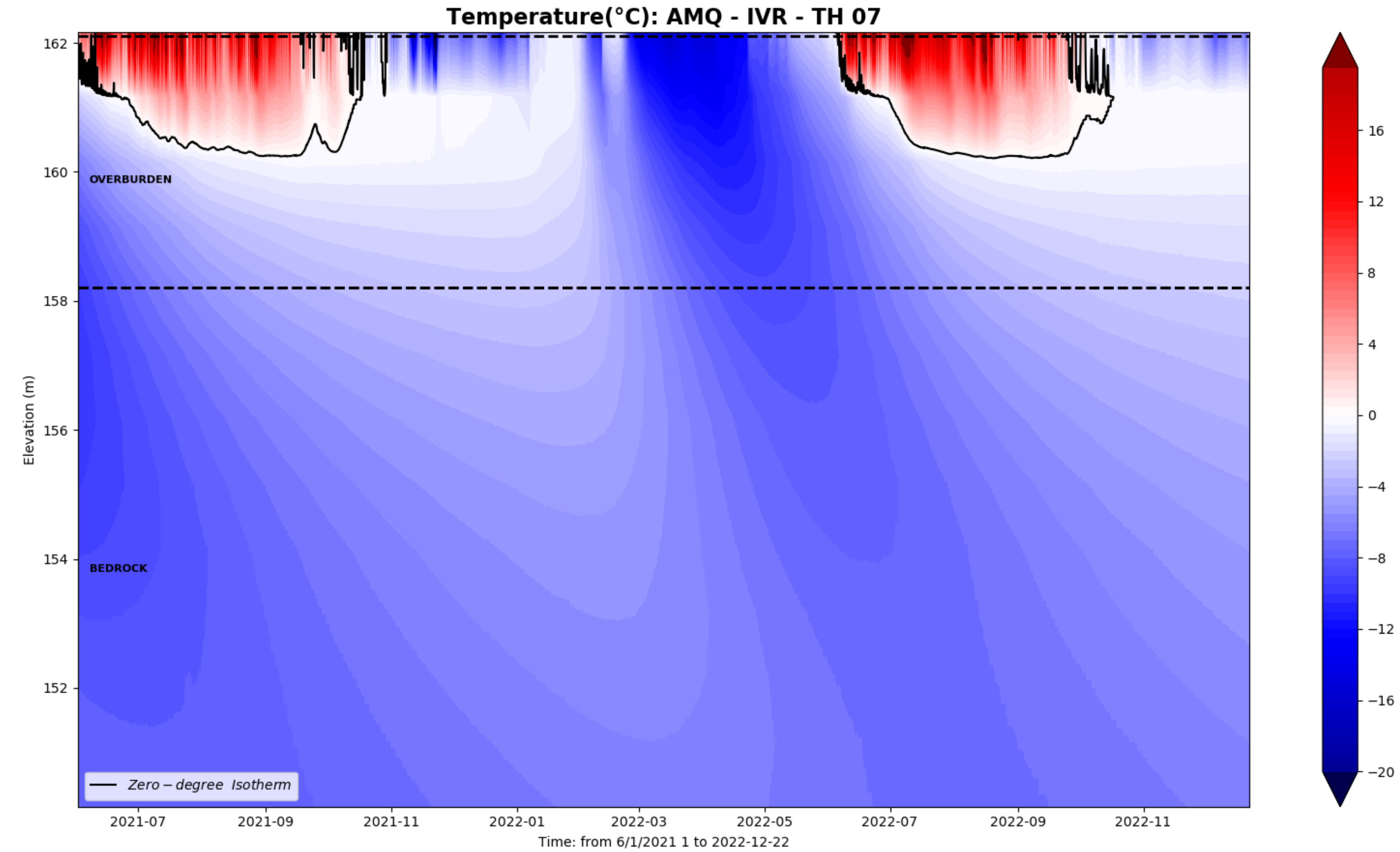

Temperature(°C): AMQ - IVR - TH 06
OVERBURDEN
POOR BEDROCK
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 6/1/2021 1 to 2022-12-22
Temperature(°C)

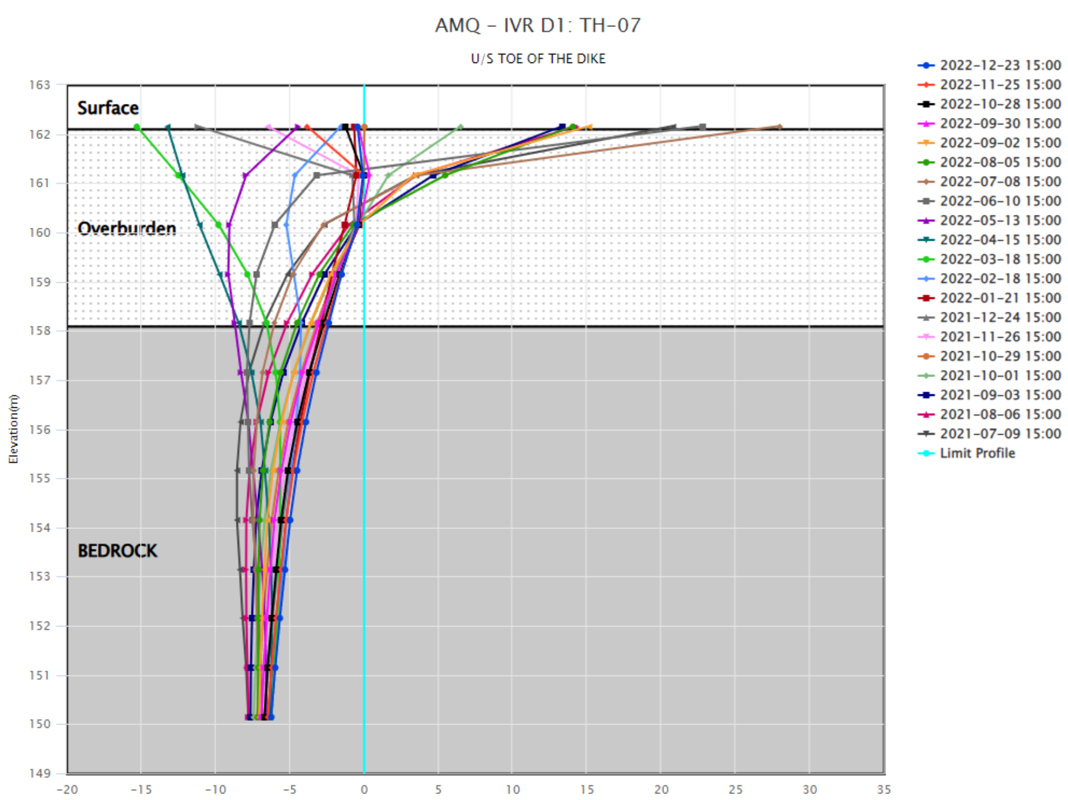

AMQ - IVR D1: TH-06
ROCKFILL (D/S Slope)
Overburden
POOR BEDROCK
BEDROCK
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

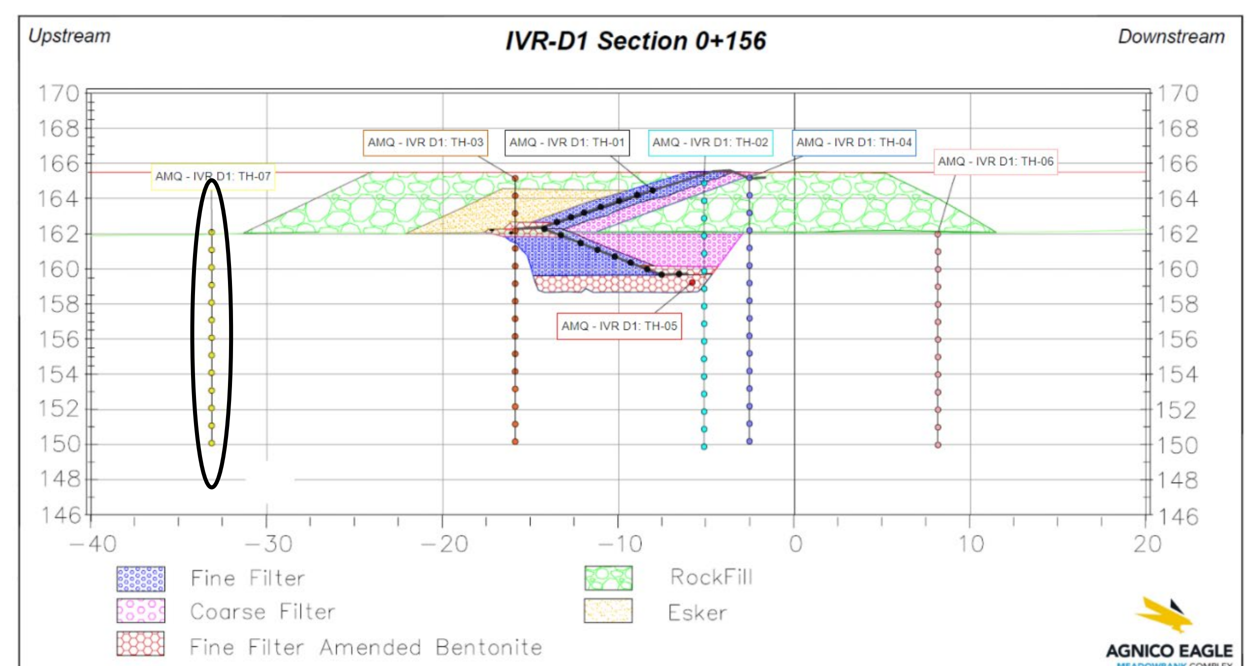

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH7

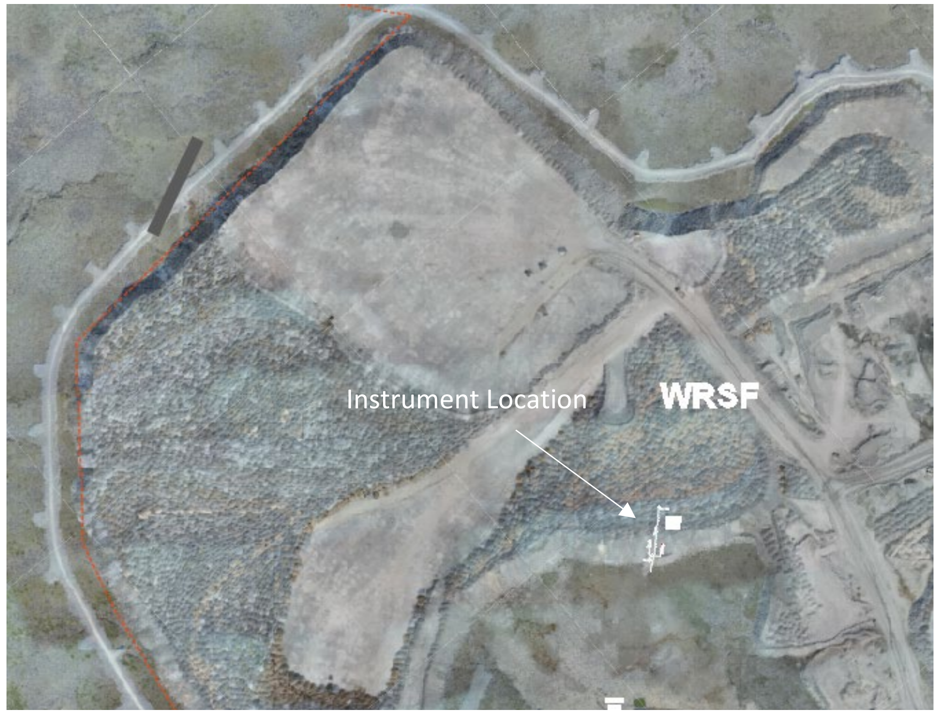

IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+100
0+200
0+300

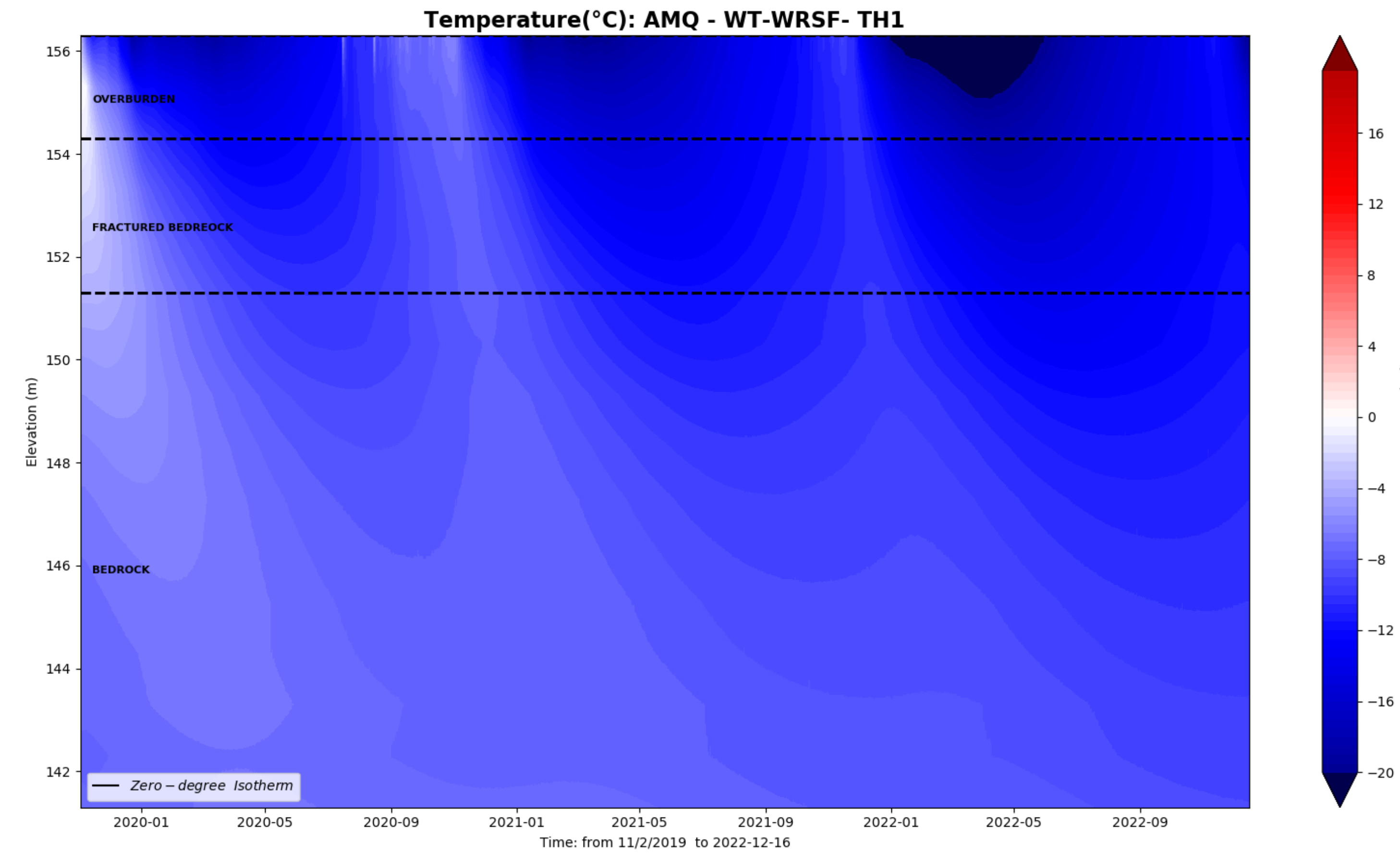

Temperature(°C): AMQ - IVR - TH 07
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
Time: from 6/1/2021 1 to 2022-12-22

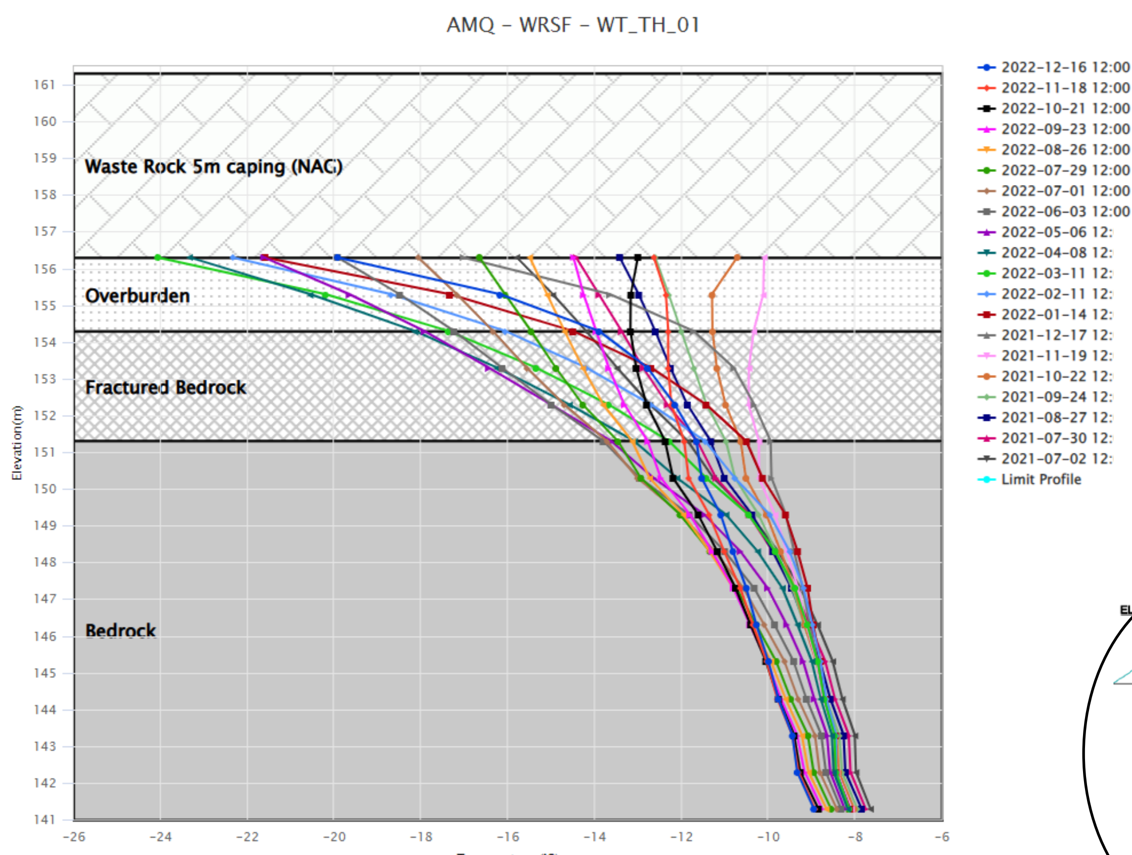

AMQ - IVR D1: TH-07
U/S TOE OF THE DIKE
Surface
Overburden
BEDROCK
Elevation (m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

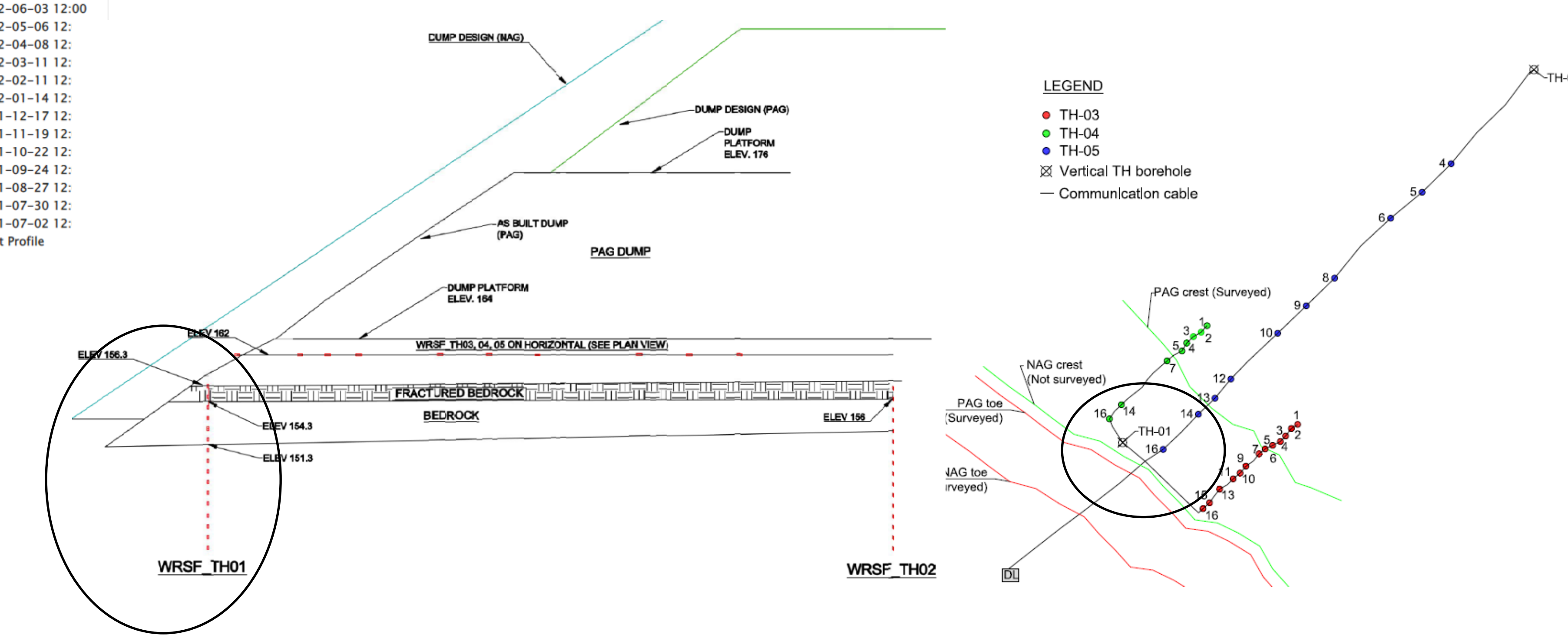

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

WT WRSF TH1


Instrument Location
WRSF

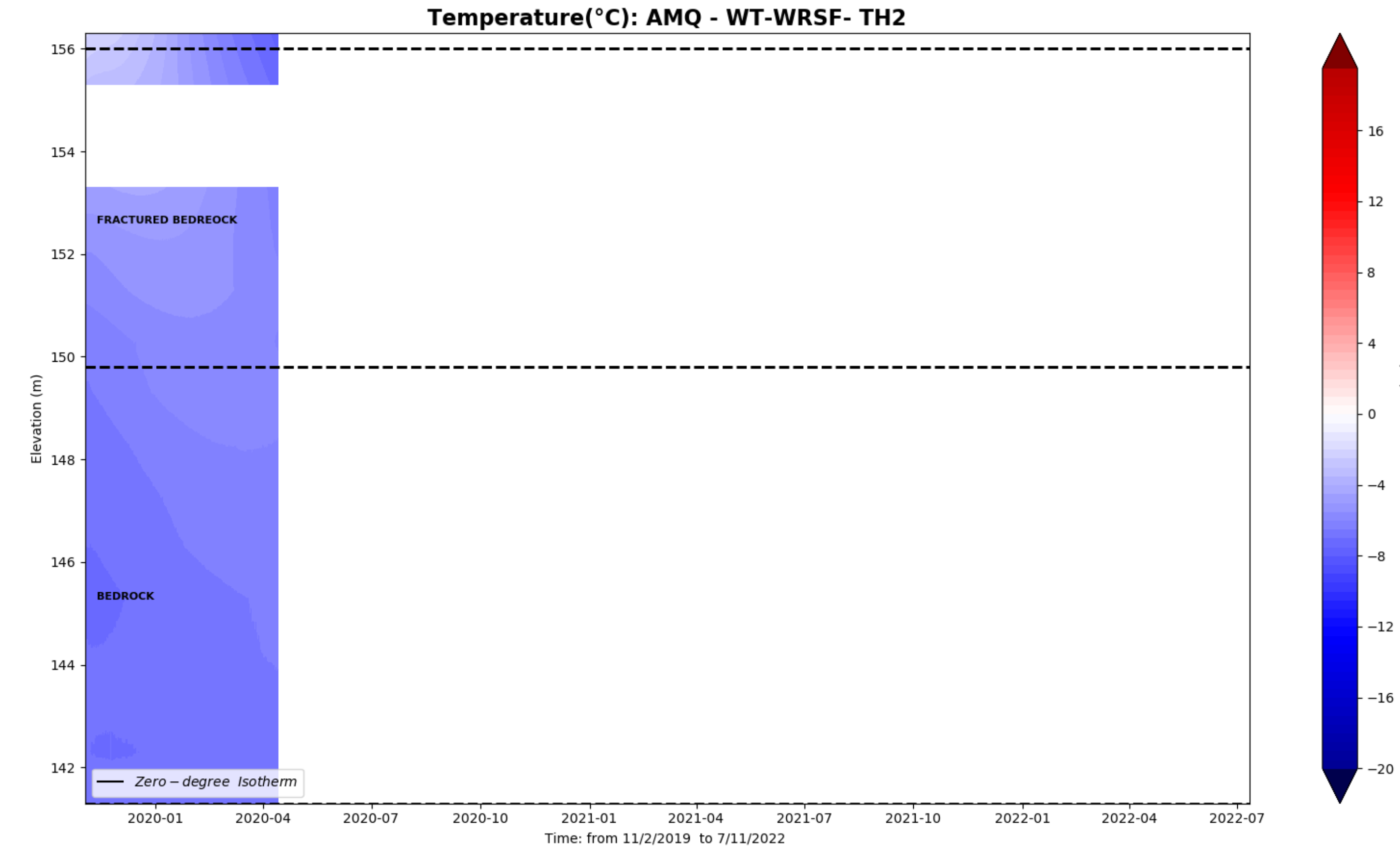

Temperature(°C): AMQ - WT-WRSF- TH1
OVERBURDEN
FRACTURED BEDROCK
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 11/2/2019 to 2022-12-16


AMQ – WRSF – WT_TH_01
Waste Rock 5m caping (NAG)
Overburden
Fractured Bedrock
Bedrock
Elevation(m)
Temperature (°C)
Limit Profile

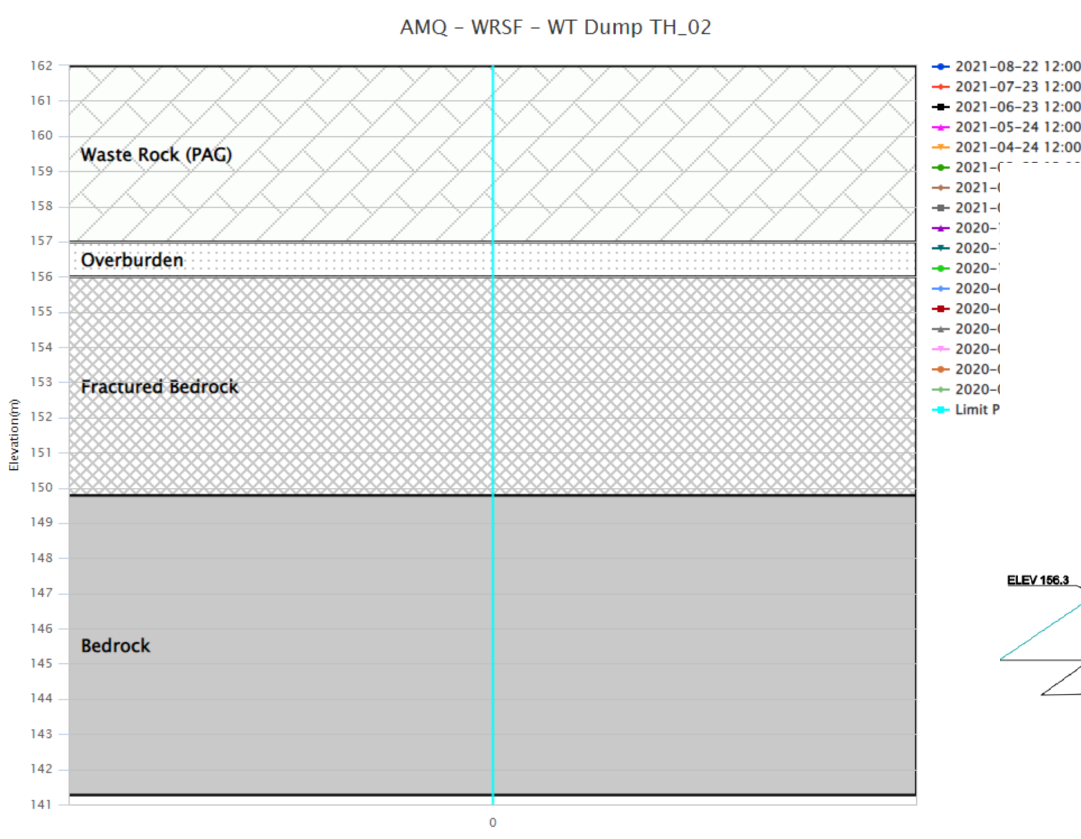

DUMP DESIGN (NAG)
DUMP DESIGN (PAG)
DUMP PLATFORM ELEV. 176
AS BUILT DUMP (PAG)
PAG DUMP
DUMP PLATFORM ELEV. 164
WRSF_TH03, 04, 05 ON HORIZONTAL (SEE PLAN VIEW)
FRACTURED BEDROCK
BEDROCK
ELEV 162
ELEV 156.3
ELEV 154.3
ELEV 151.3
ELEV 156
WRSF_TH01
WRSF_TH02
LEGEND
TH-03
TH-04
TH-05
Vertical TH borehole
Communication cable
PAG crest (Surveyed)
NAG crest (Not surveyed)
PAG toe (Surveyed)
TH-01
TH-02

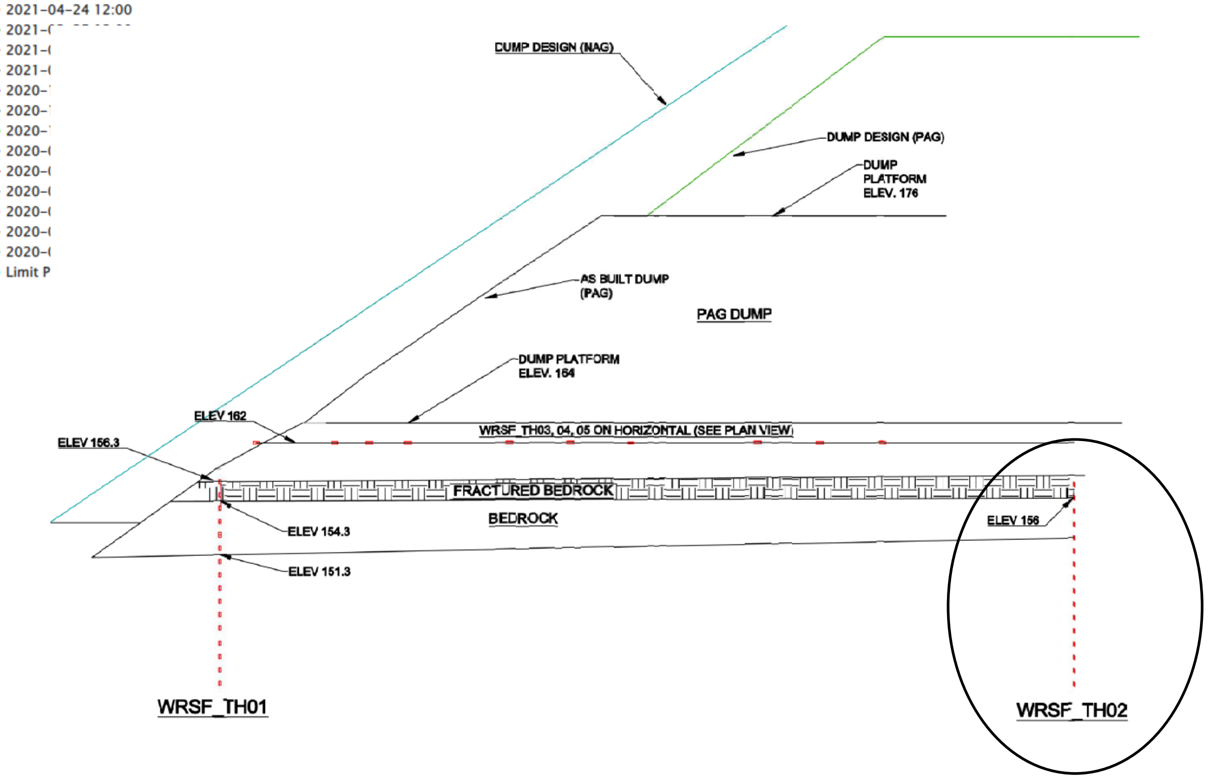
WT WRSF TH2

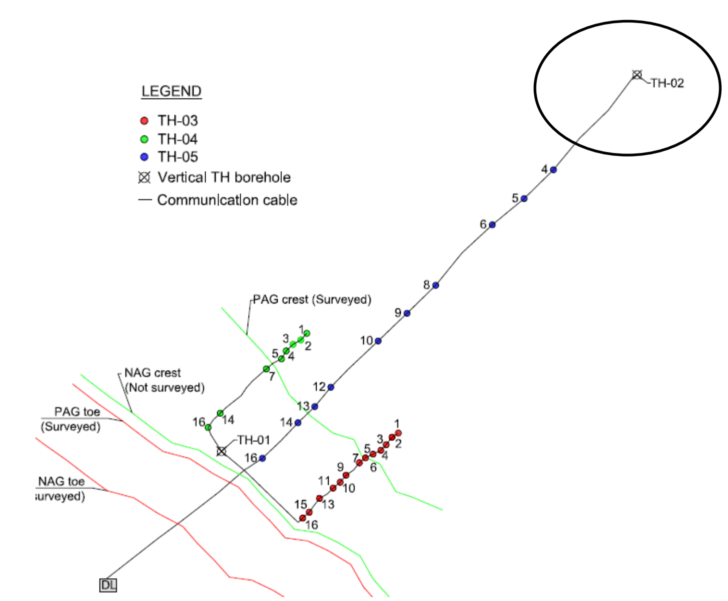
Last data May 2020



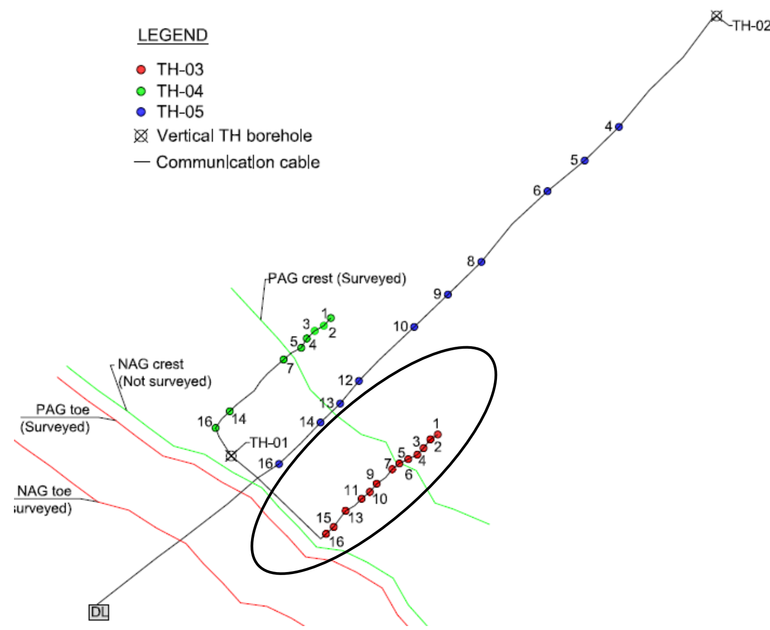
Last data May 2020

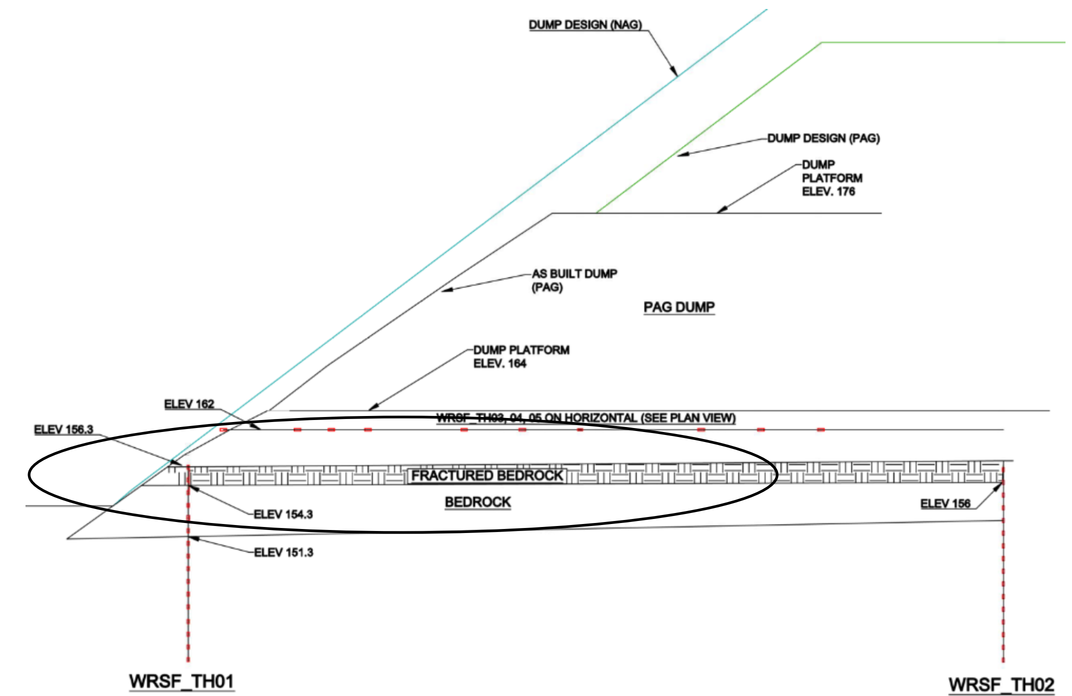




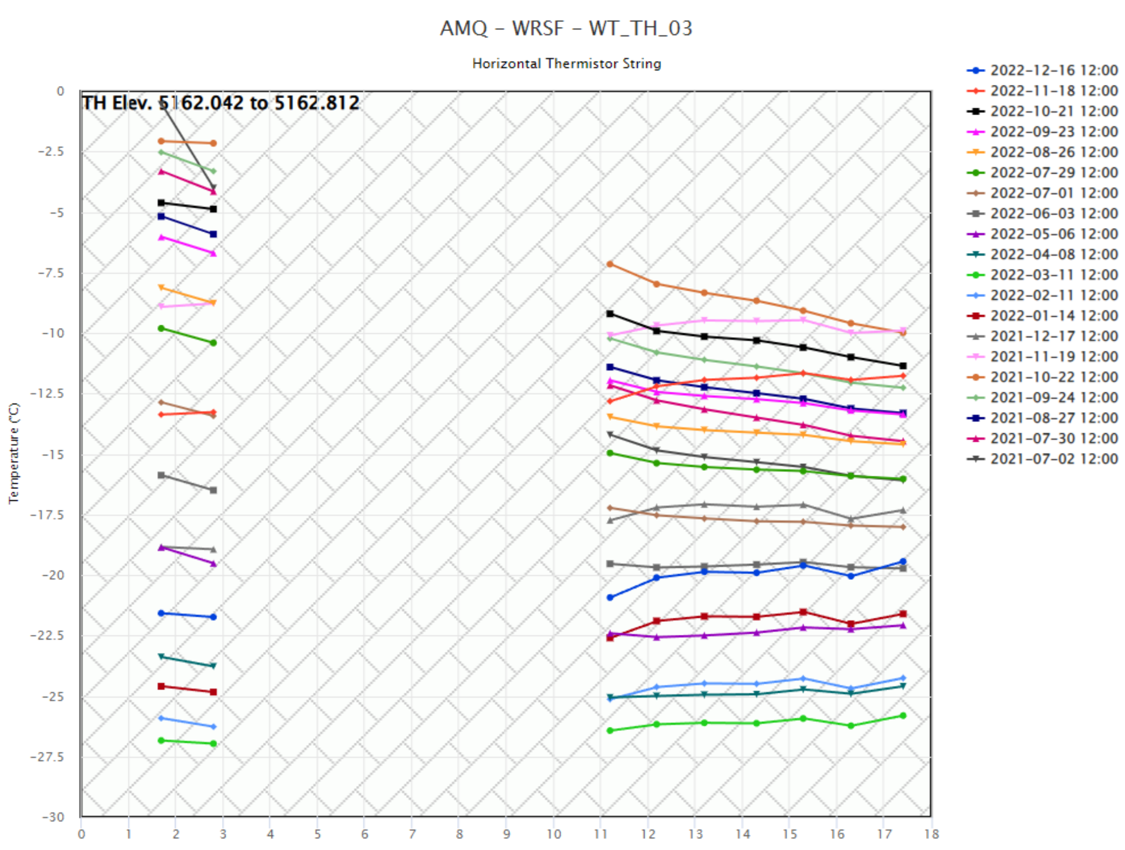


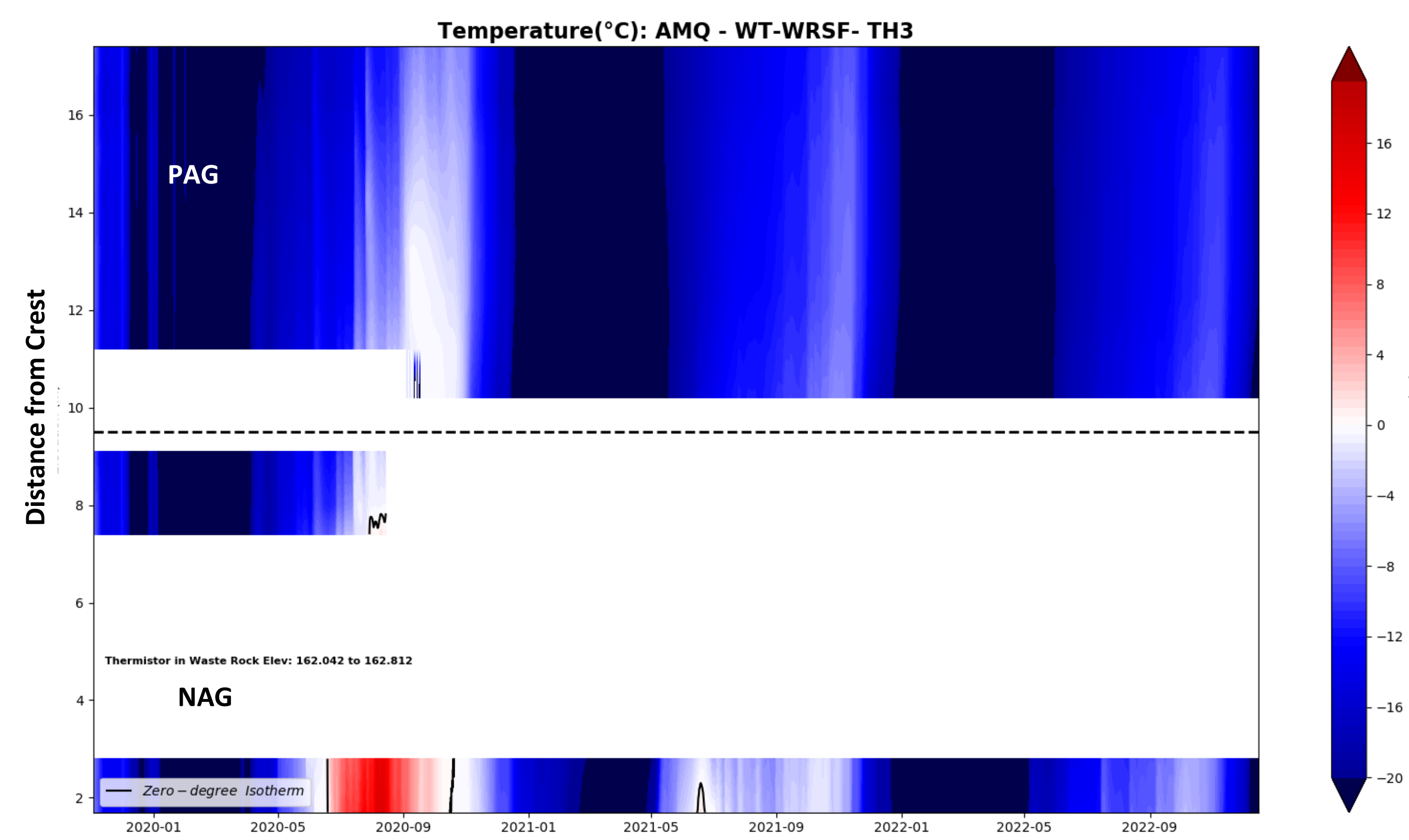
WT WRSF TH3





Thermistor in Waste Rock Elevation 162.042 to 162.812.

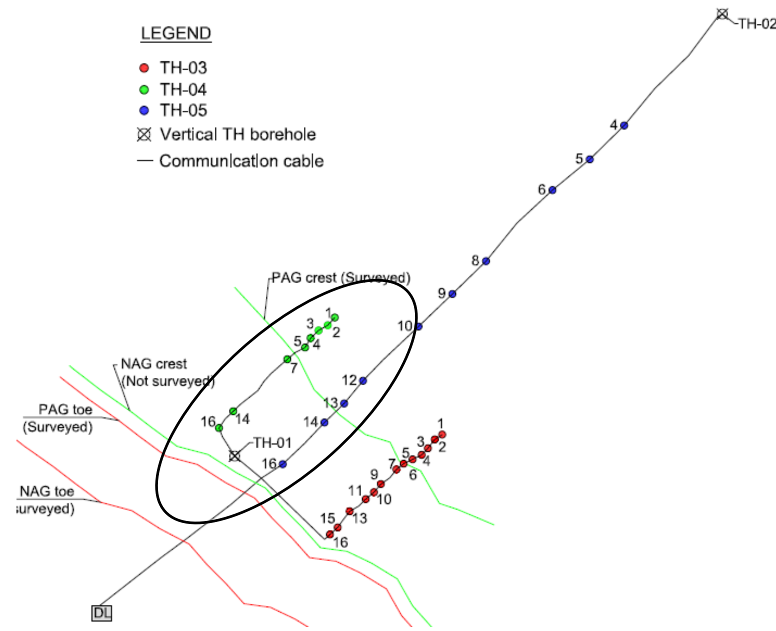


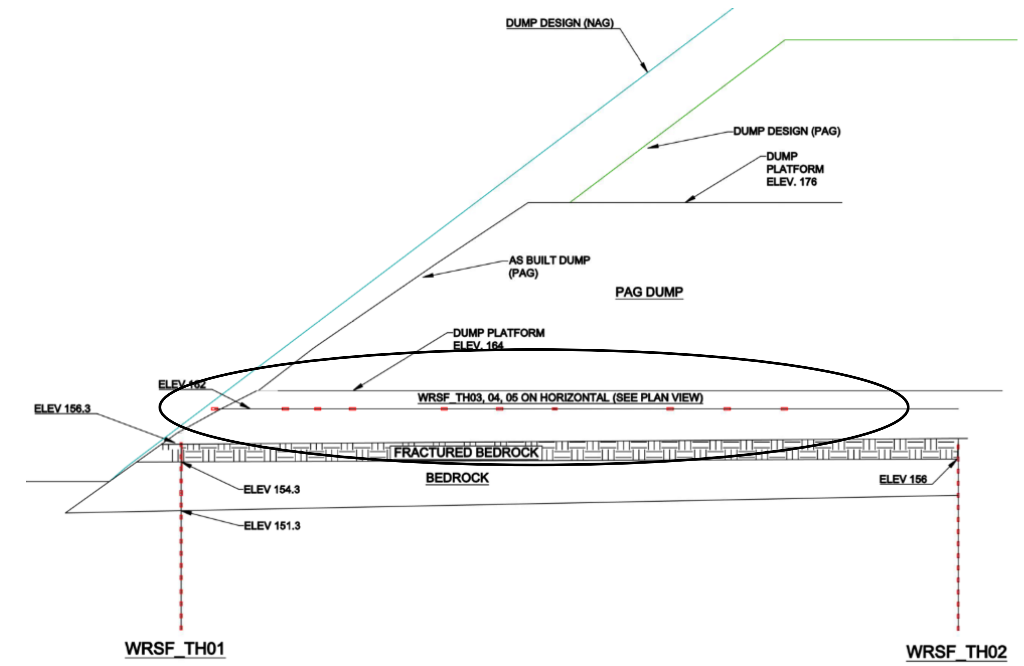


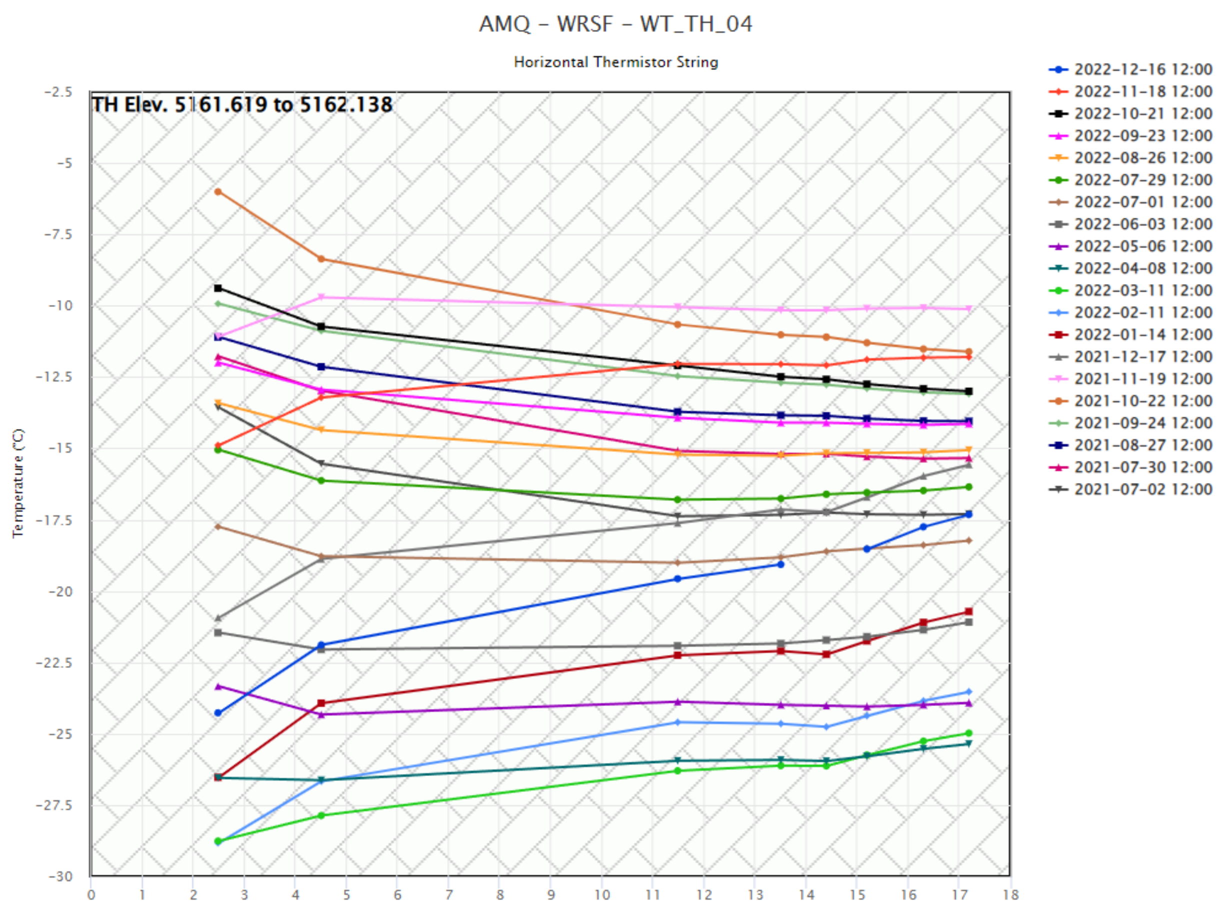
This instrument is installed horizontally and chart needs to be read accordingly

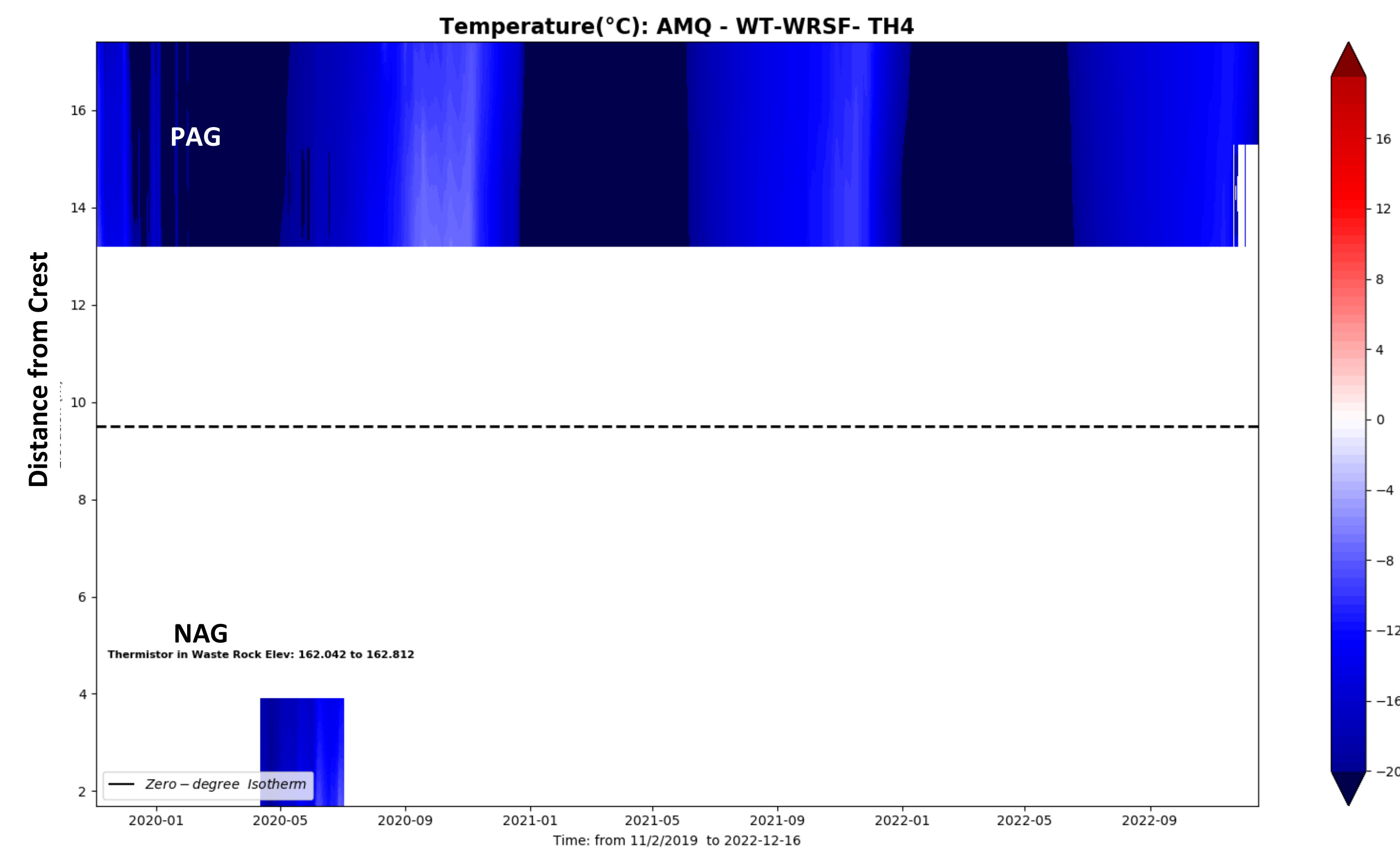
Beads 3 to 10 are not working

WT WRSF TH4





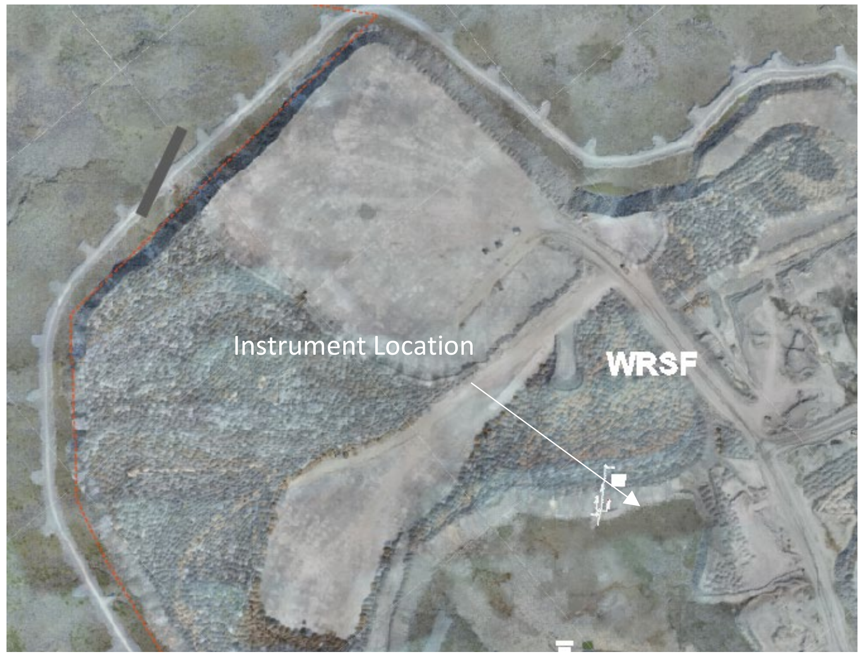


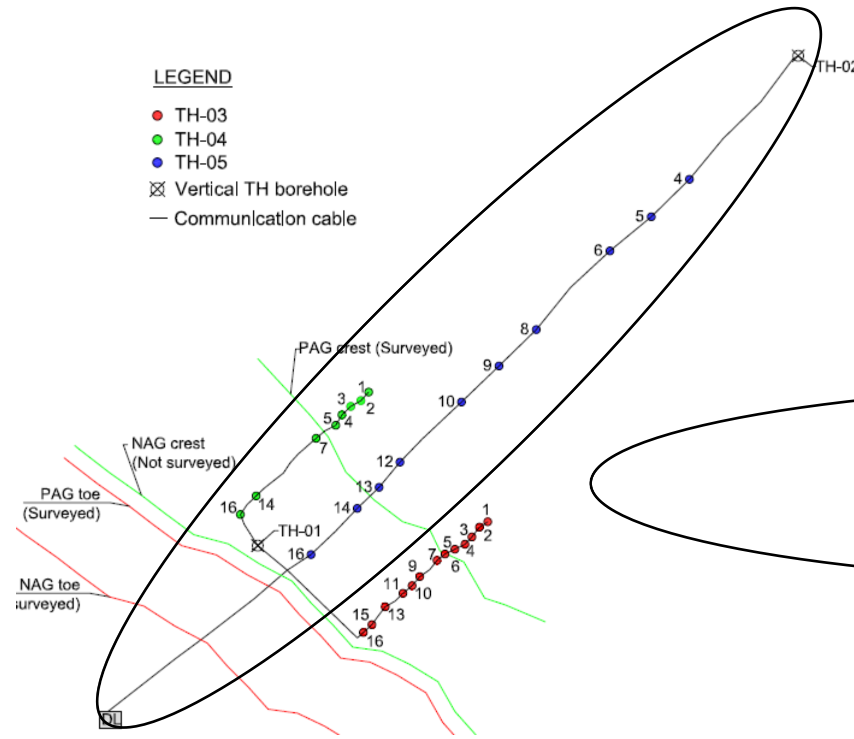


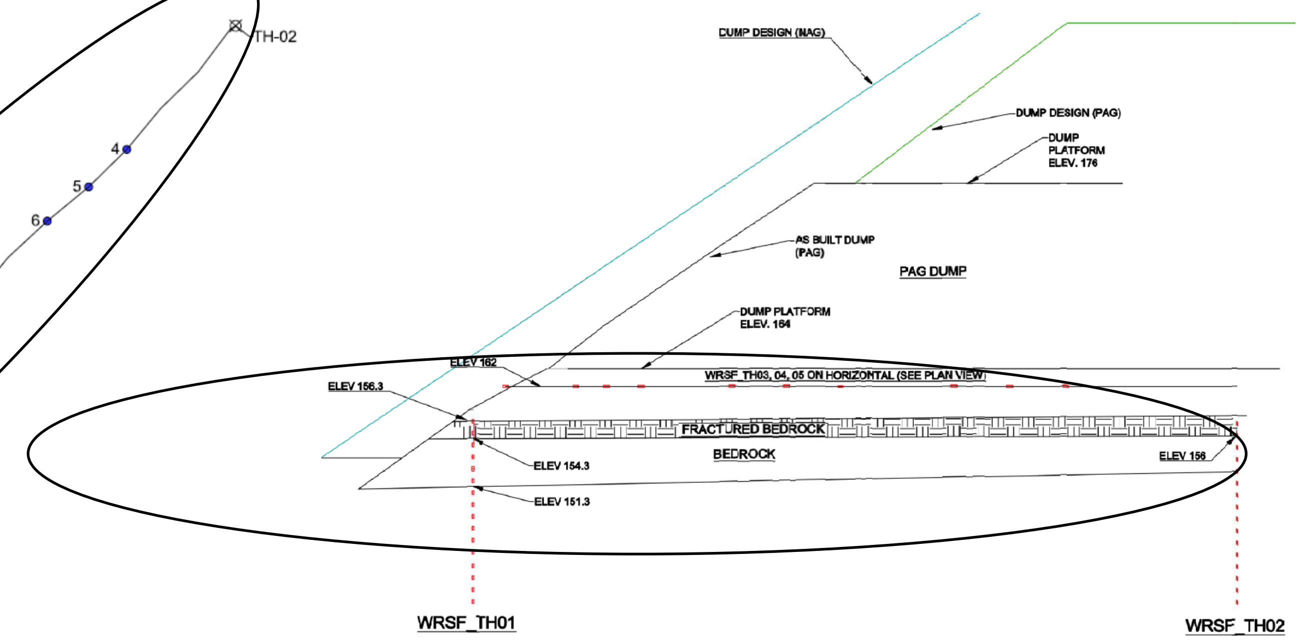
This instrument is installed horizontally and chart needs to be read accordingly

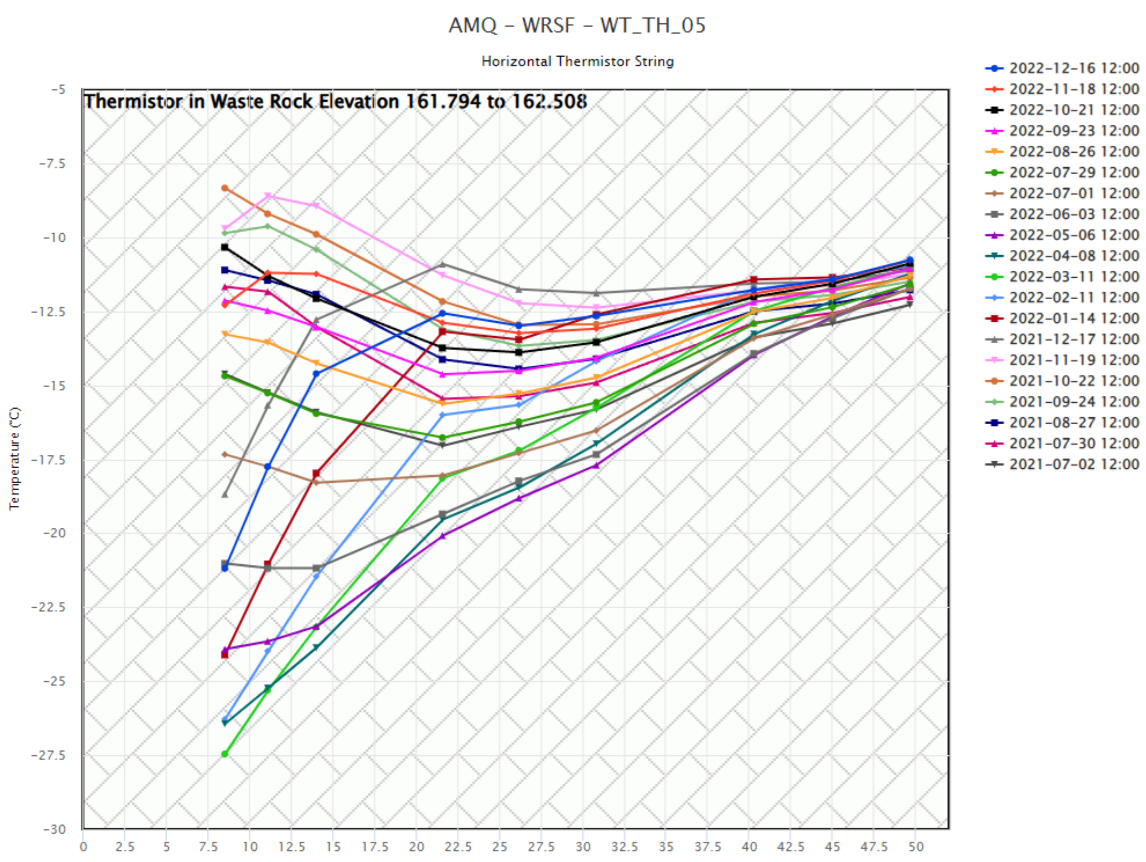
Beads 3 to 10 are not working

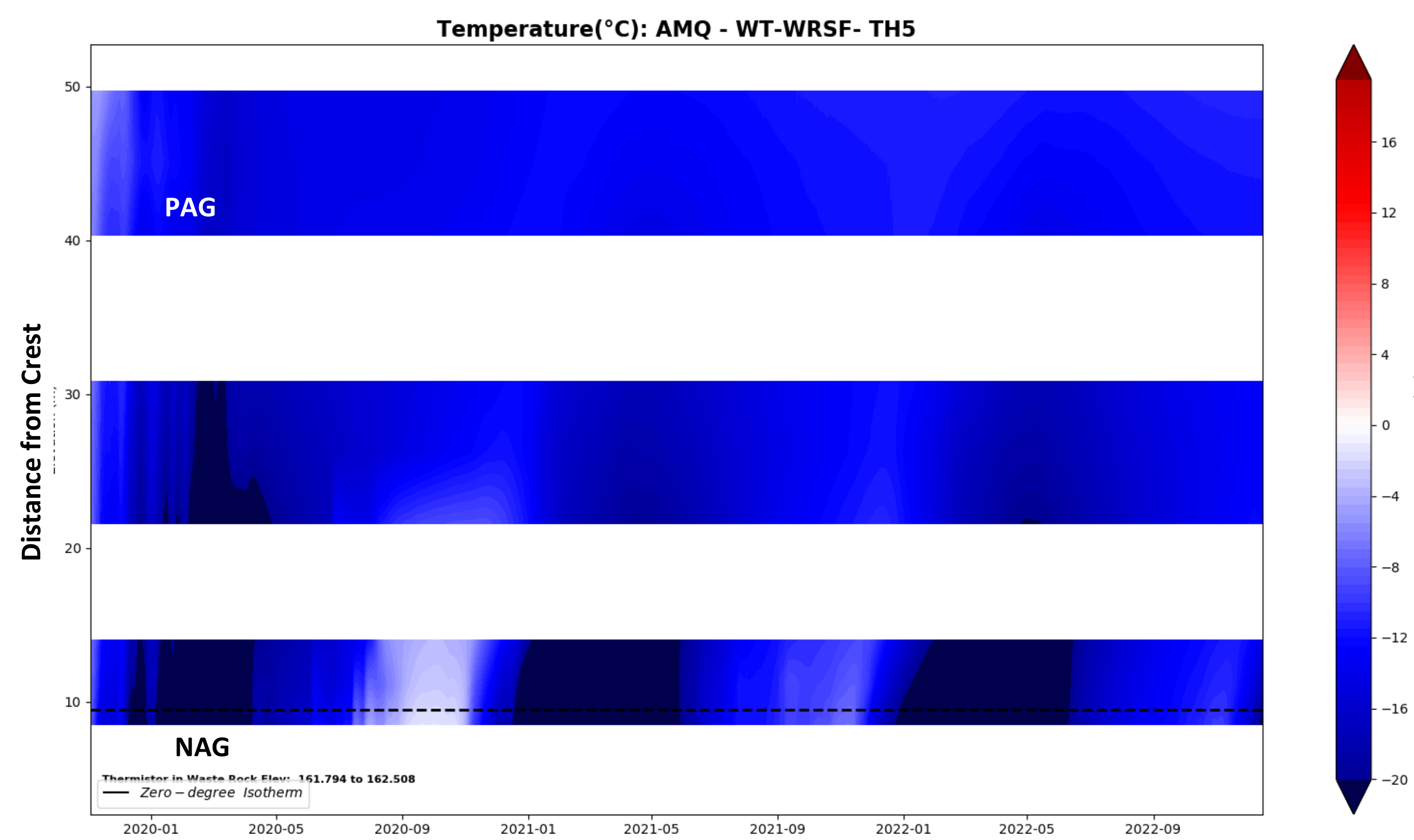
WT WRSF TH5





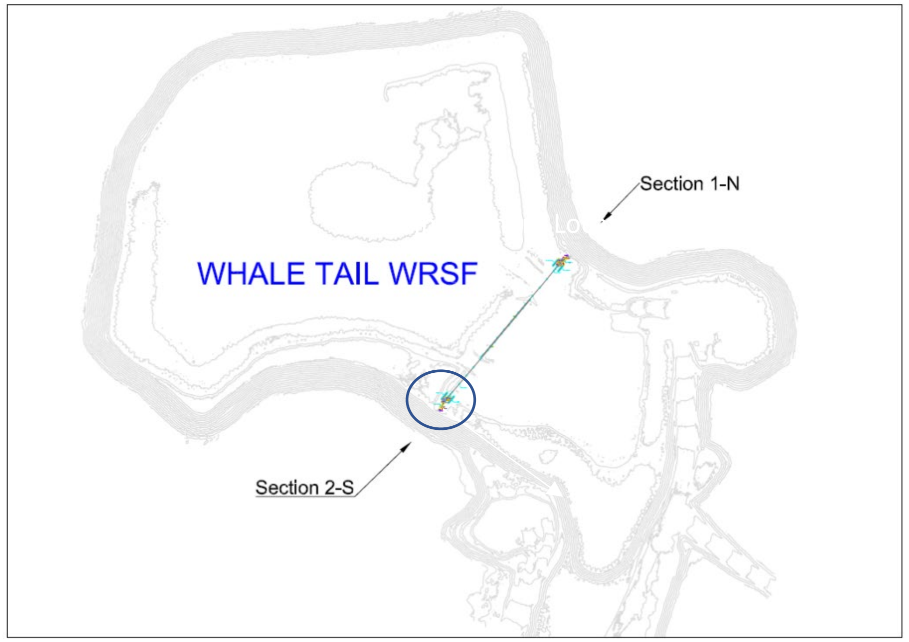




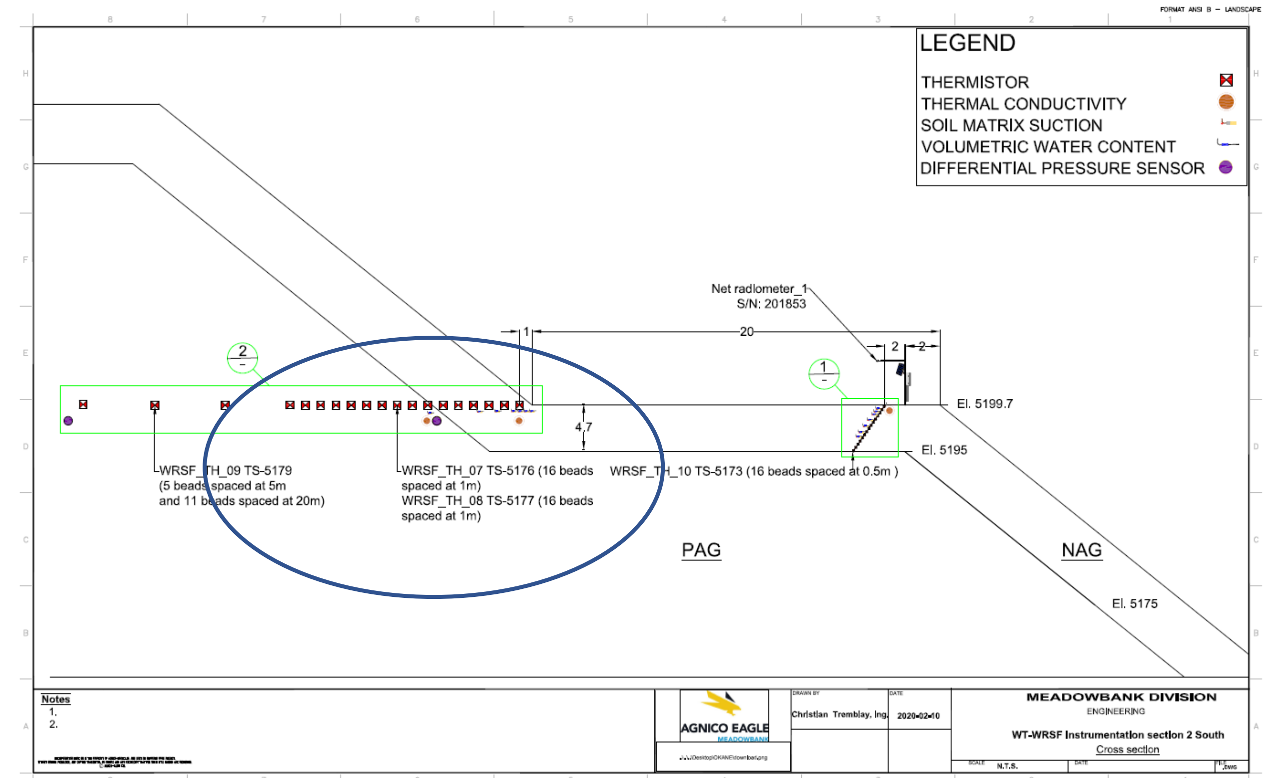


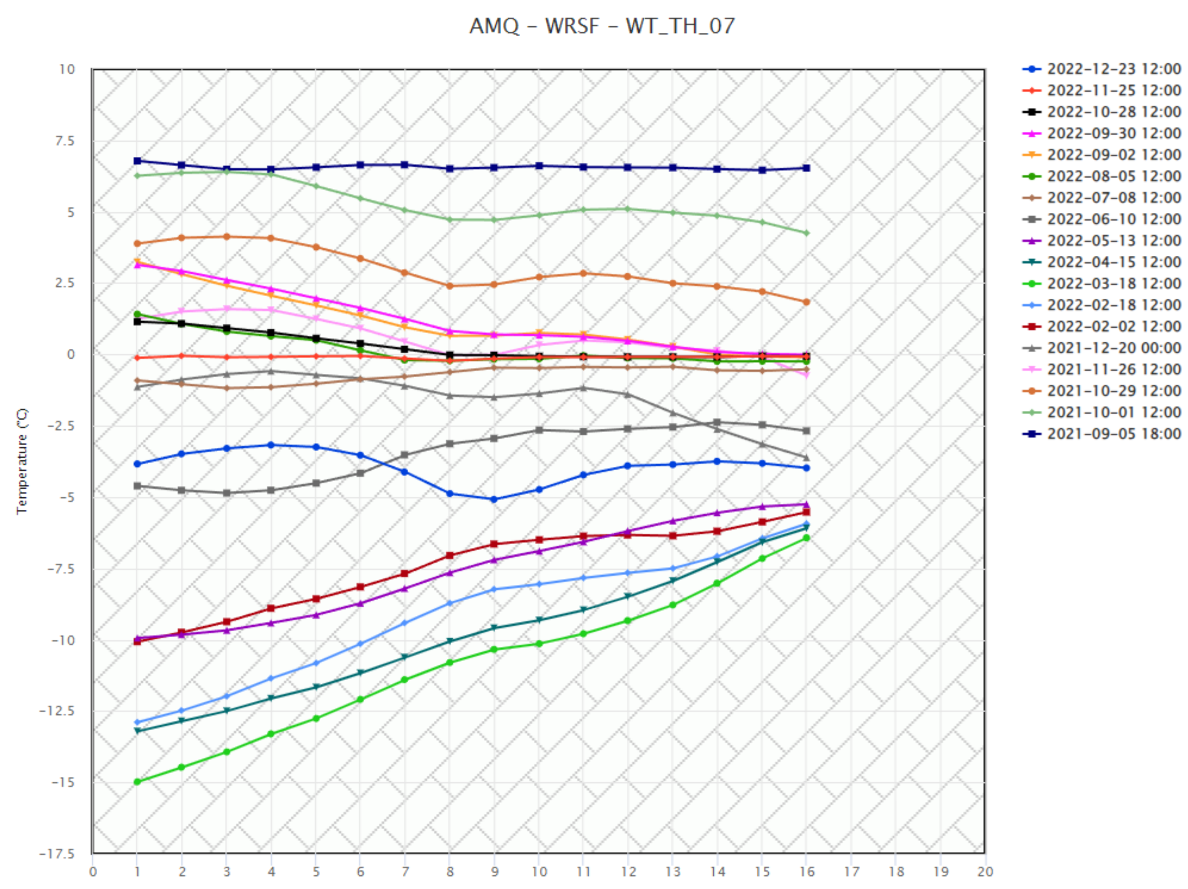
This instrument is installed horizontally and chart needs to be read accordingly

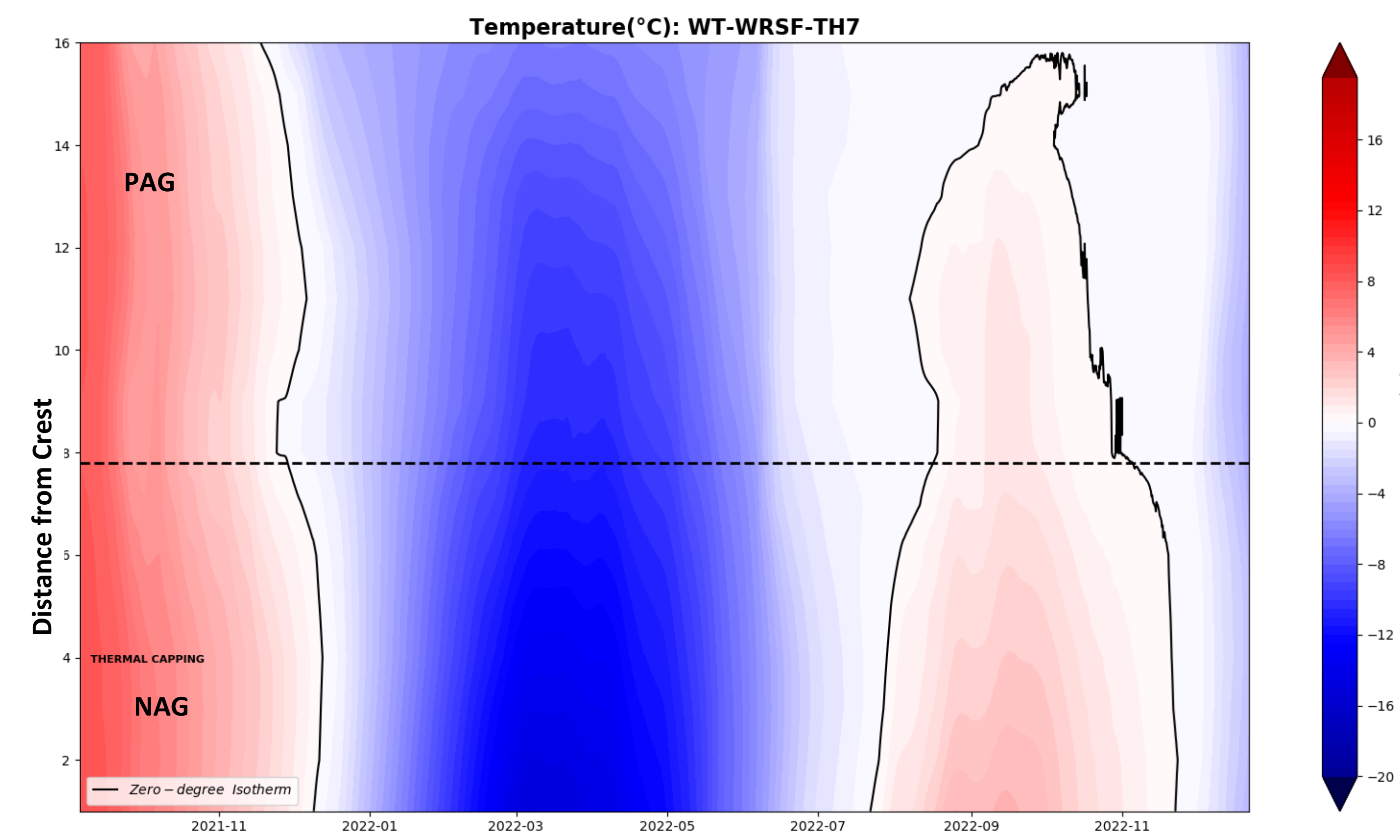
WT WRSF TH07



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

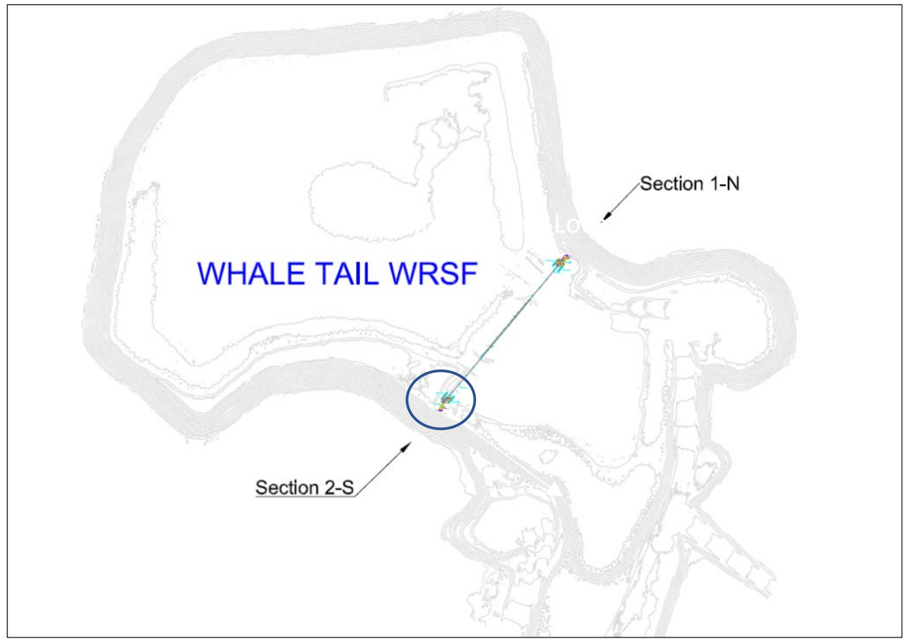


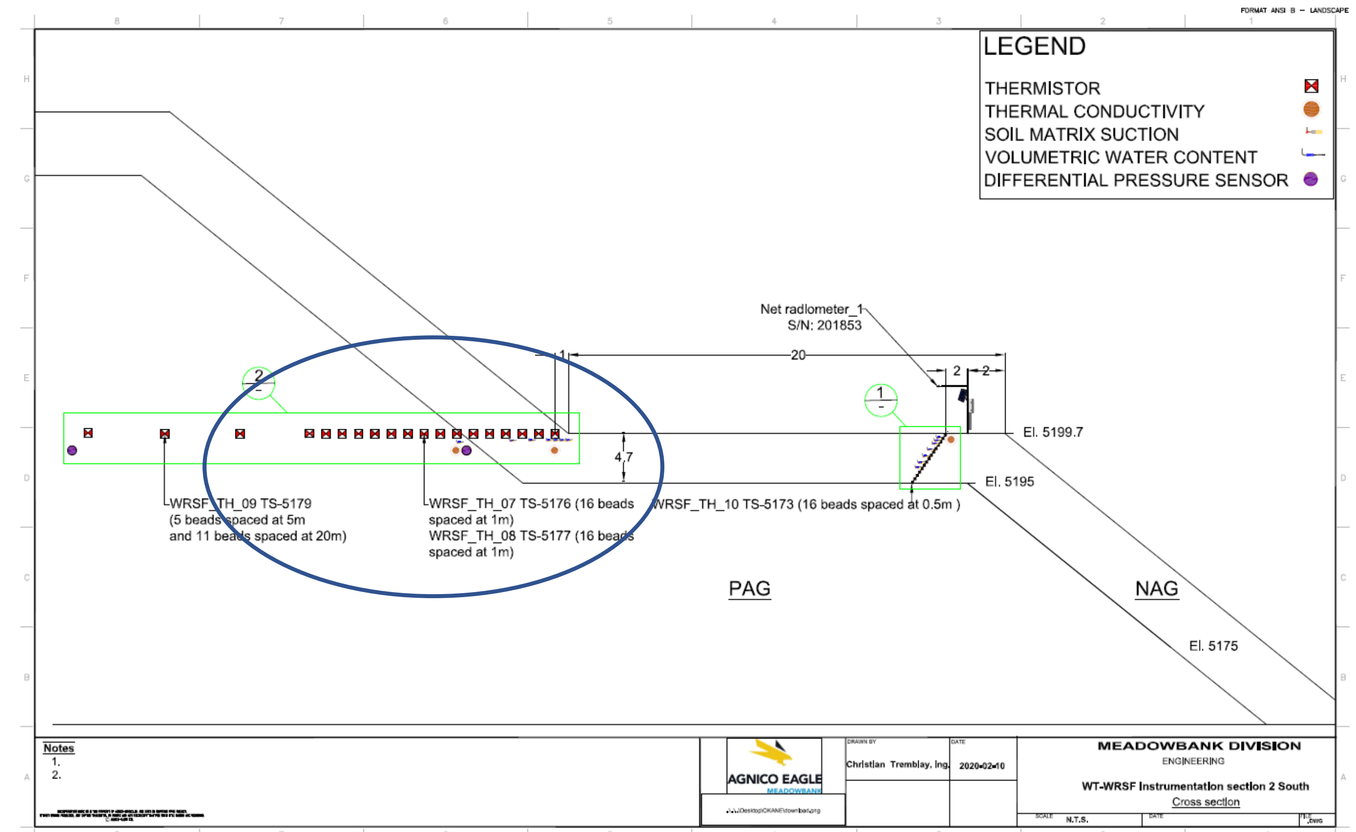


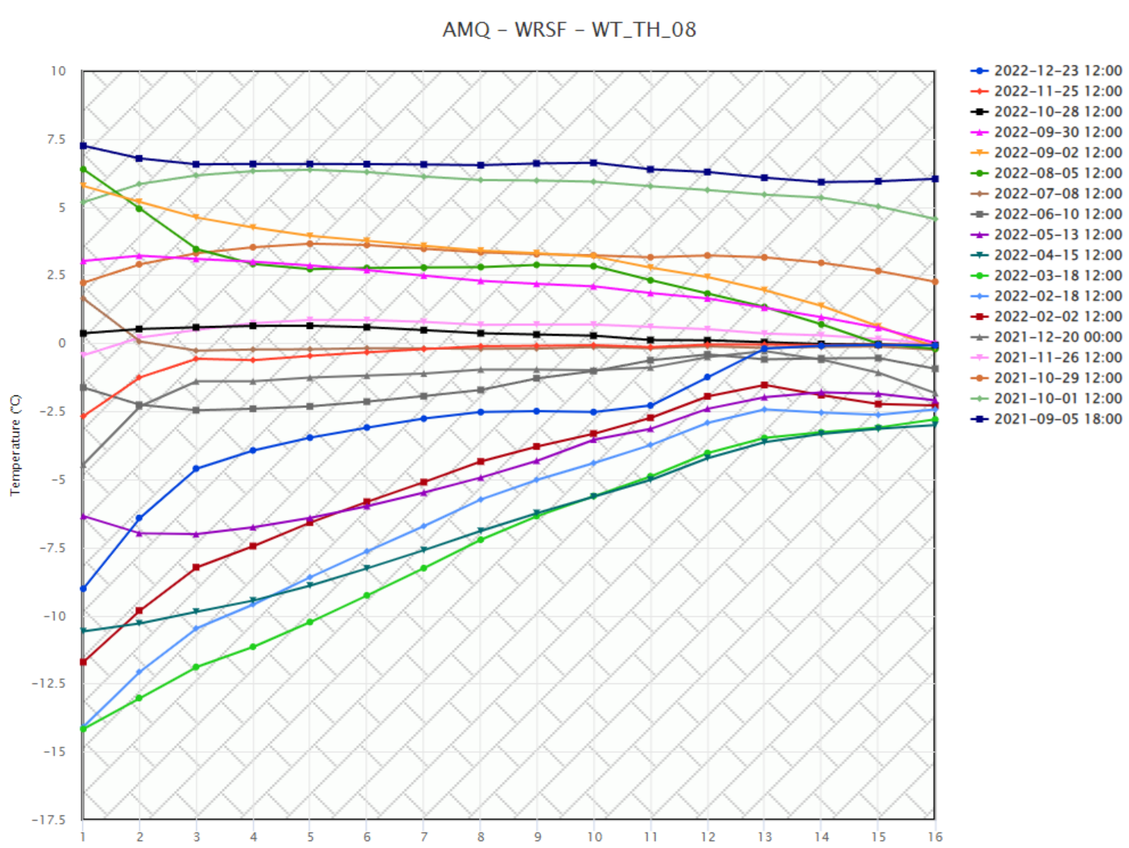


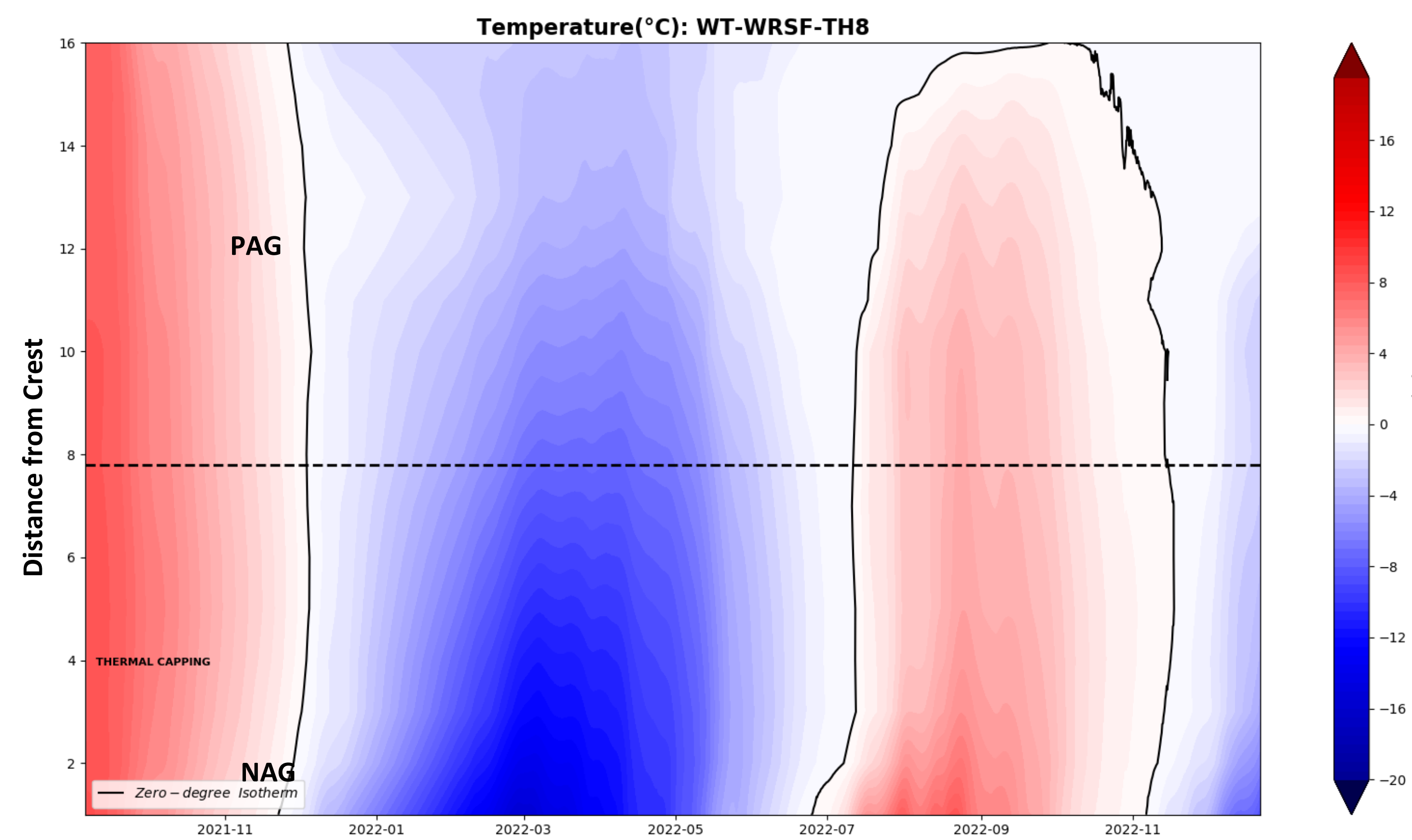
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH08



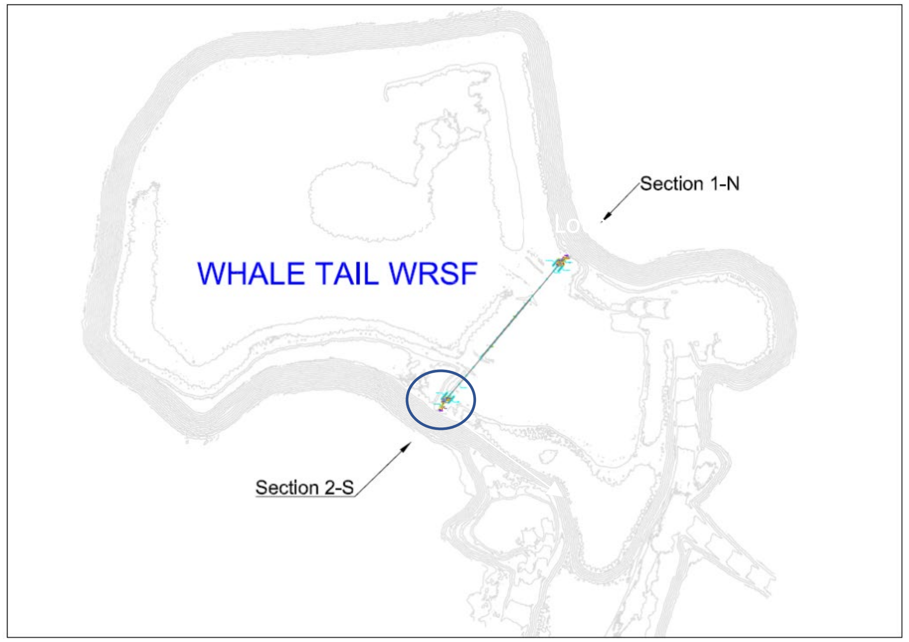


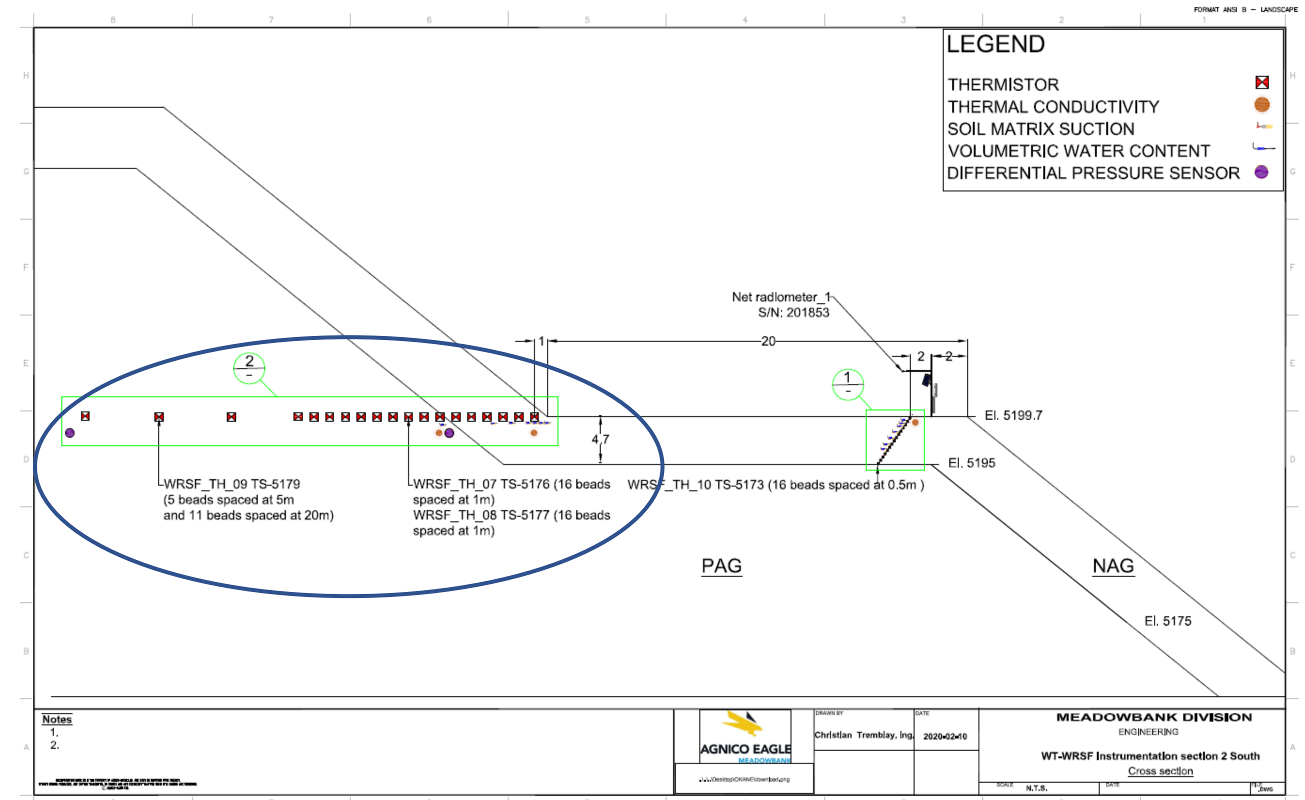


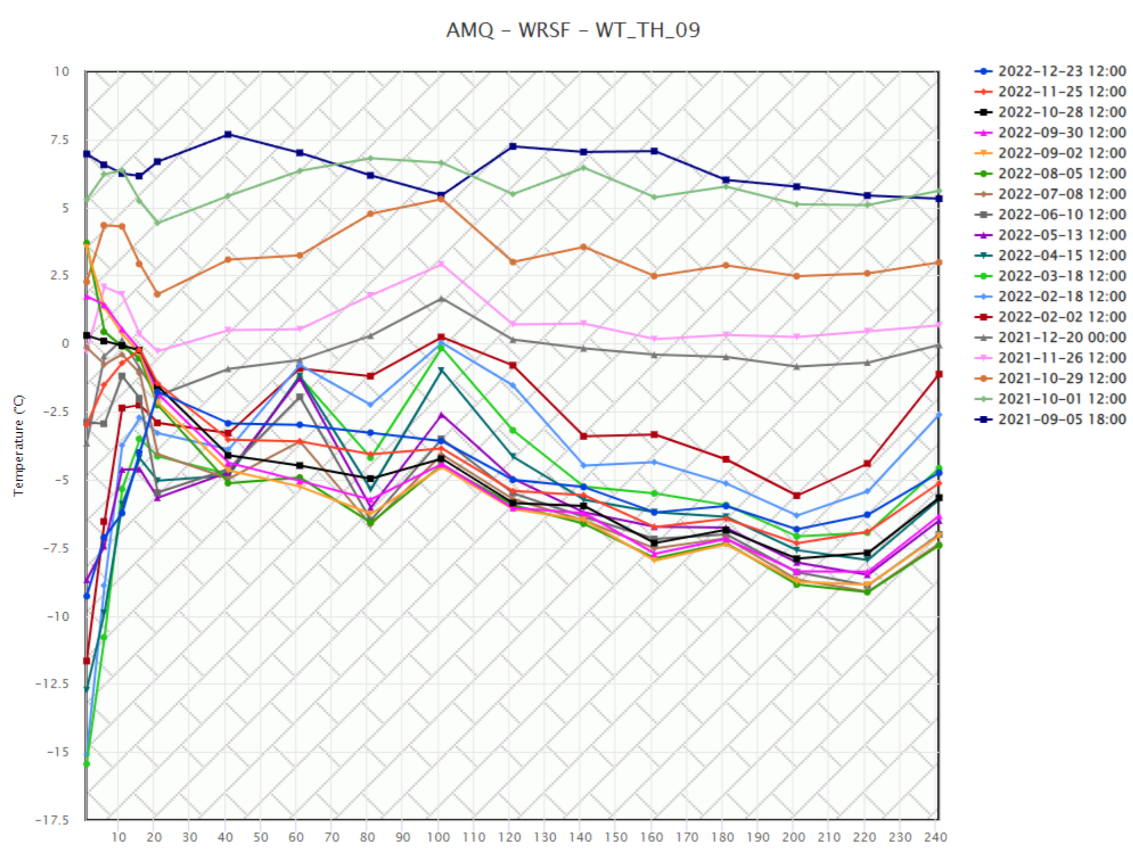


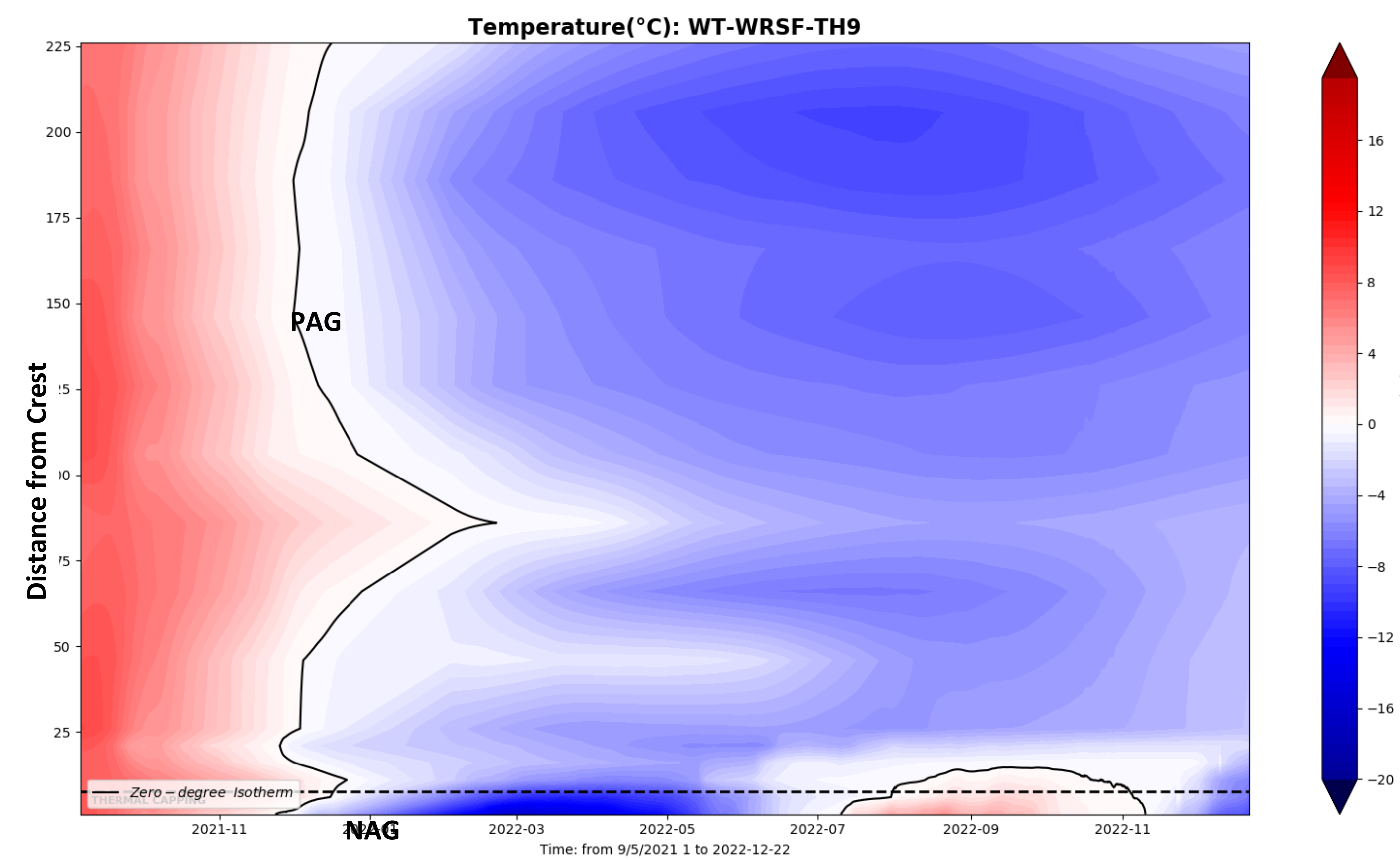
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH09



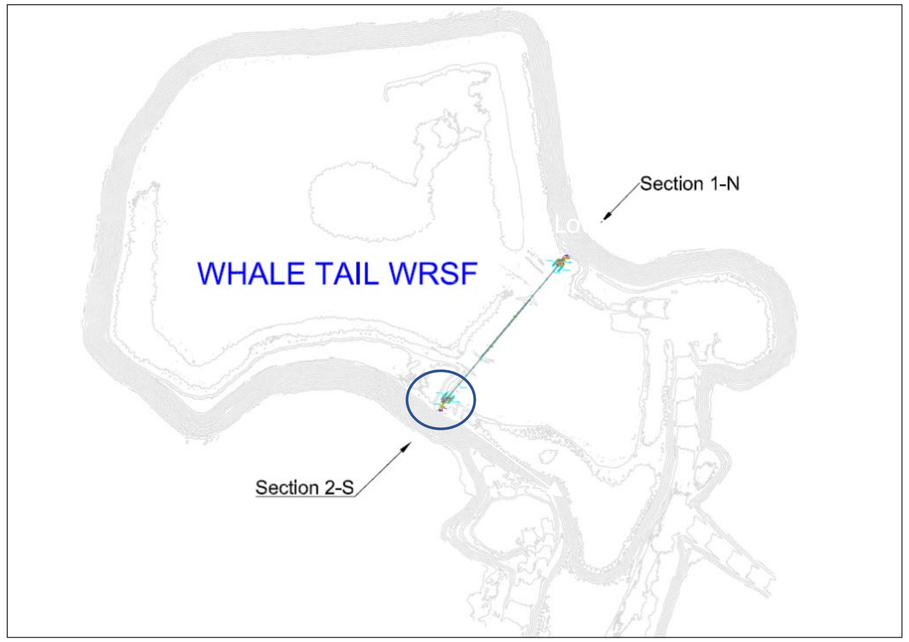


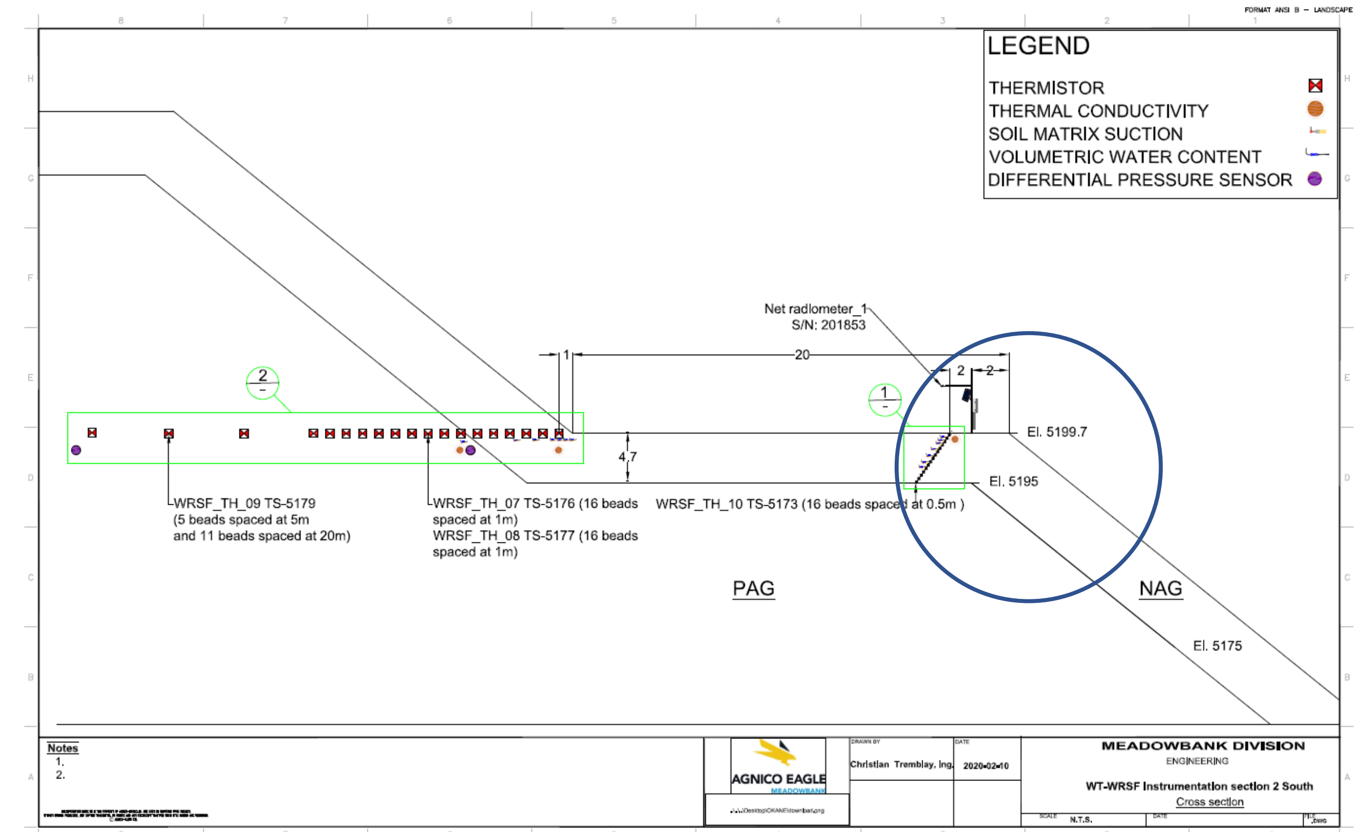


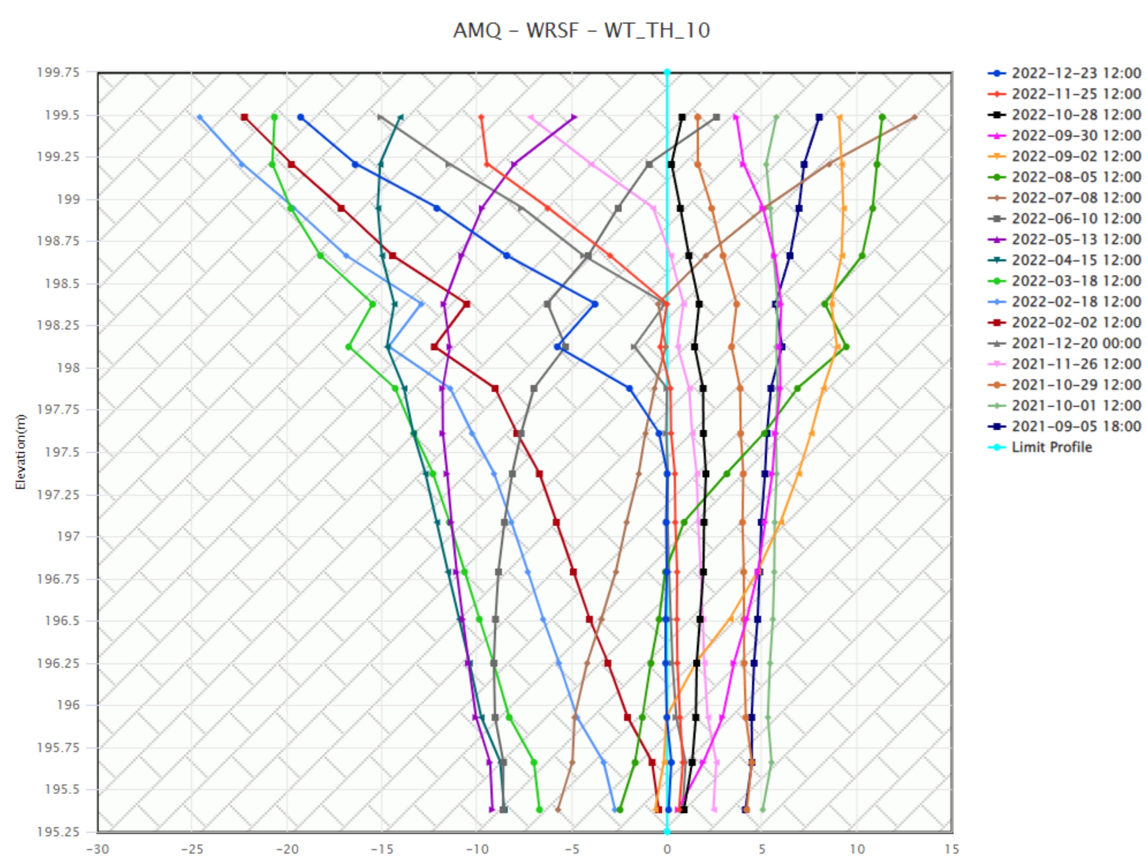


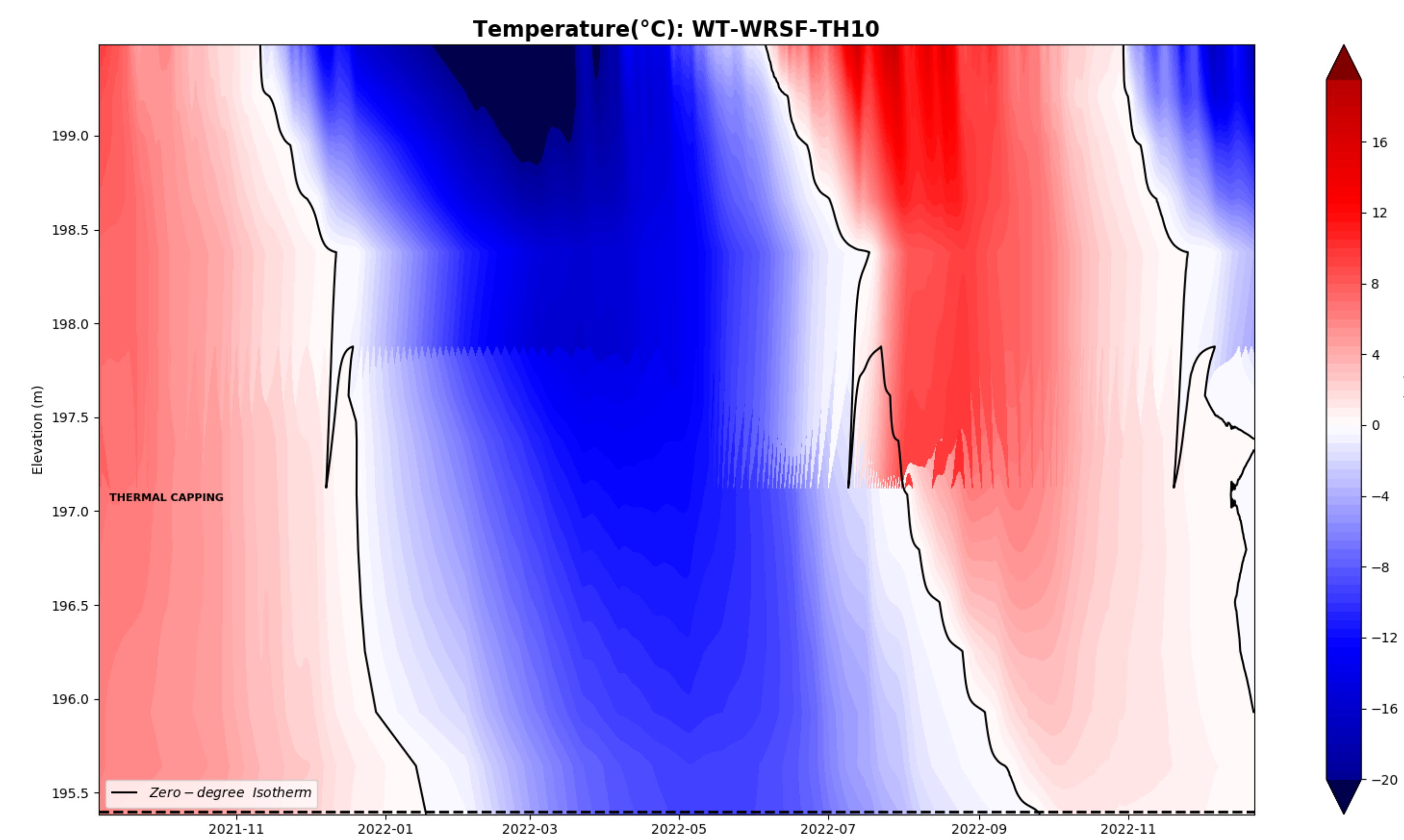
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH10

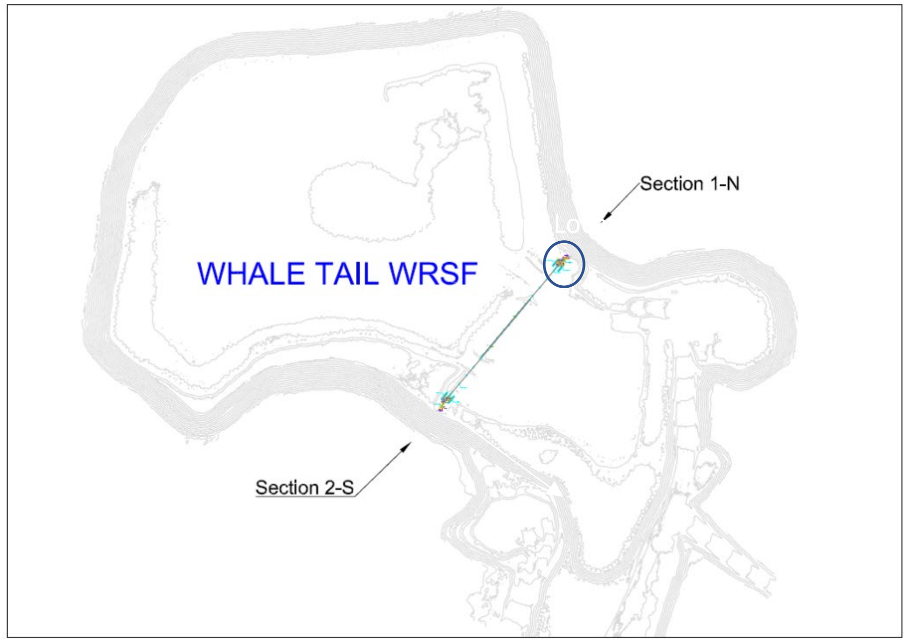

Section 1-N
WHALE TAIL WRSF
Section 2-S

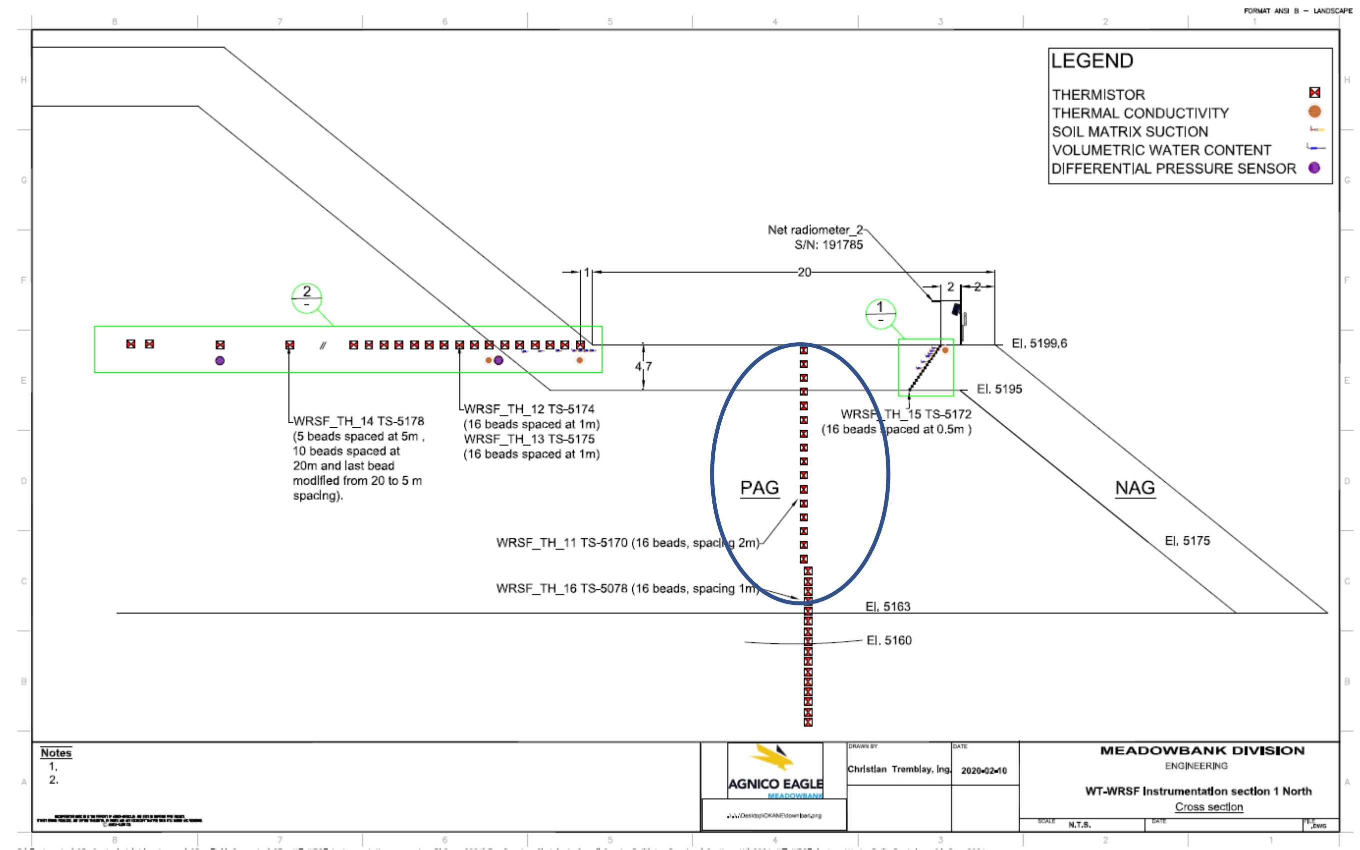

LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
Net radiometer_1
S/N: 201853
El. 5199.7
El. 5195
El. 5175
WRSF_TH_09 TS-5179 (5 beads spaced at 5m and 11 beads spaced at 20m)
WRSF_TH_07 TS-5176 (16 beads spaced at 1m)
WRSF_TH_08 TS-5177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

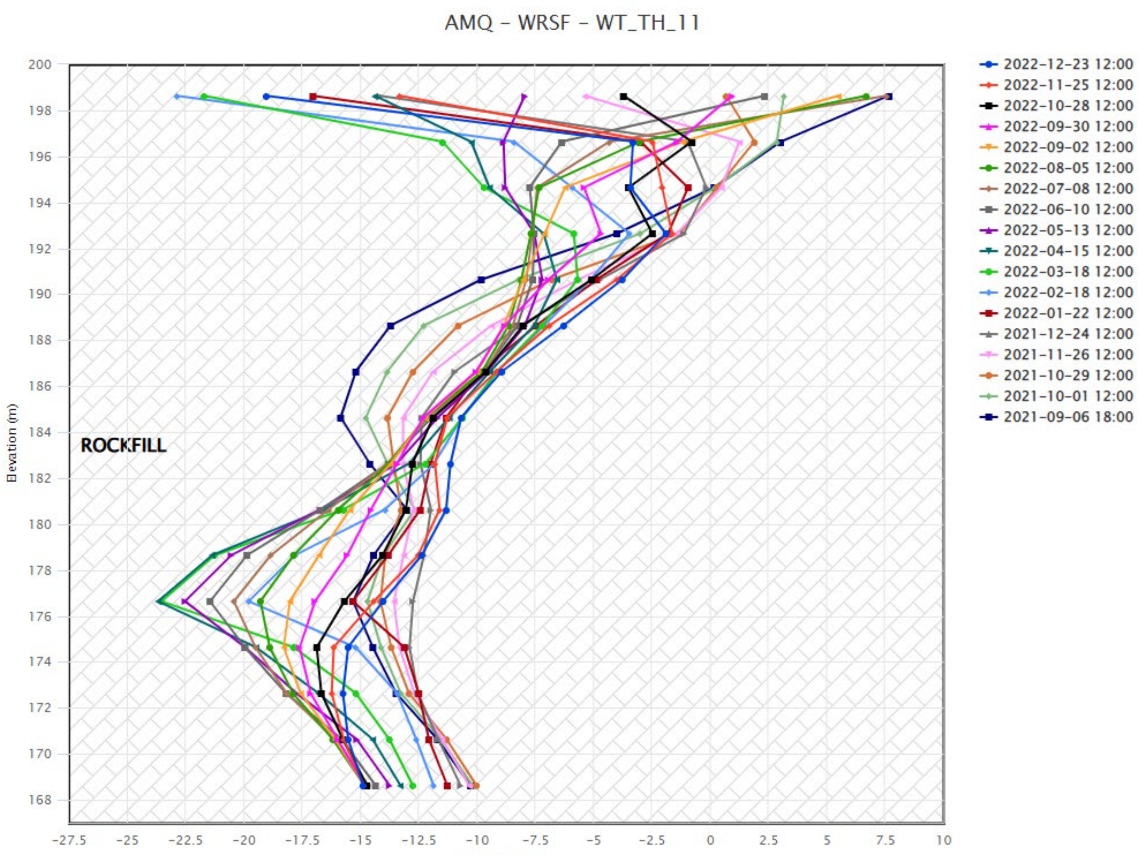

AMQ - WRSF - WT_TH_10
Elevation(m)
Temperature (°C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
2022-05-13 12:00
2022-04-15 12:00
2022-03-18 12:00
2022-02-18 12:00
2022-02-02 12:00
2021-12-20 00:00
2021-11-26 12:00
2021-10-29 12:00
2021-10-01 12:00
2021-09-05 18:00
Limit Profile

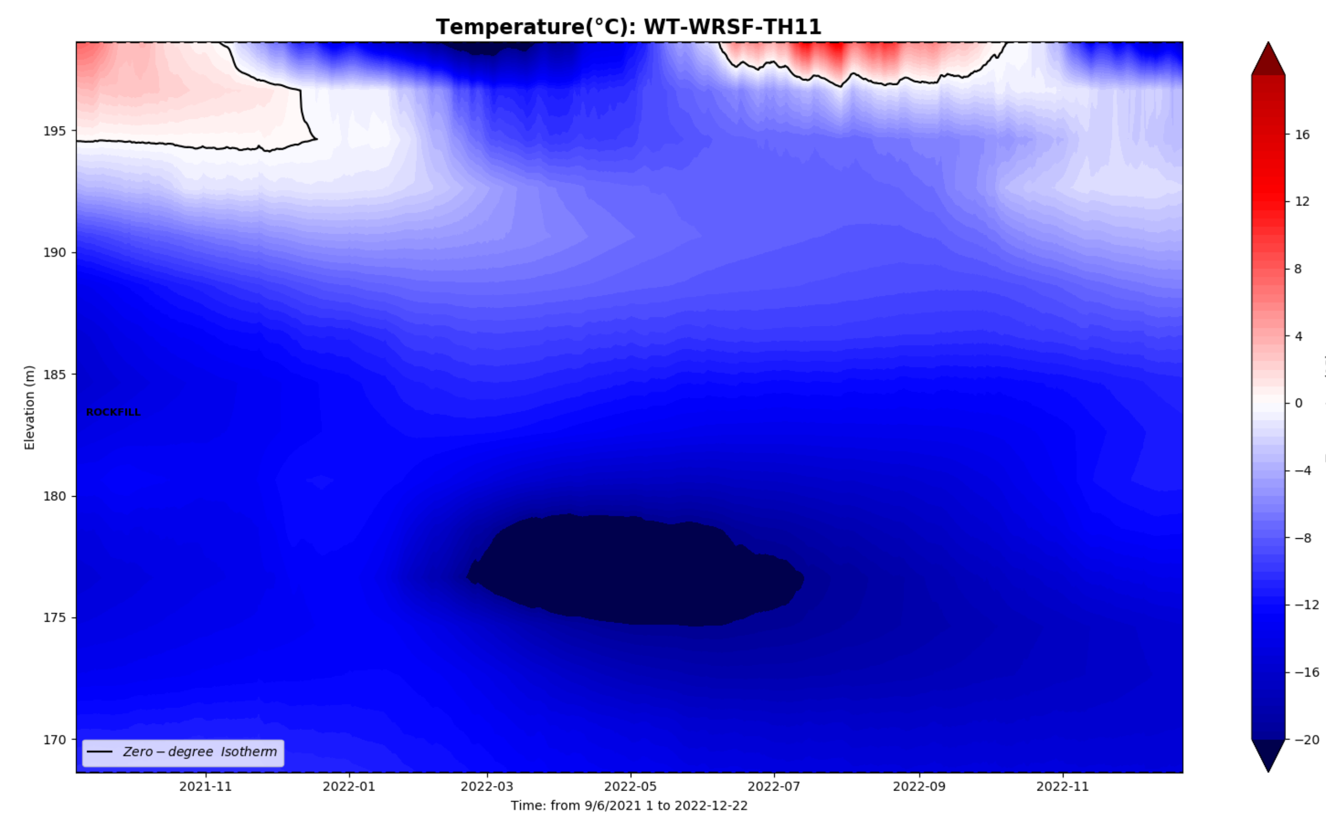

Temperature(°C): WT-WRSF-TH10
Elevation (m)
THERMAL CAPPING
Zero – degree Isotherm
Time: from 9/5/2021 1 to 2022-12-22
Temperature(°C)

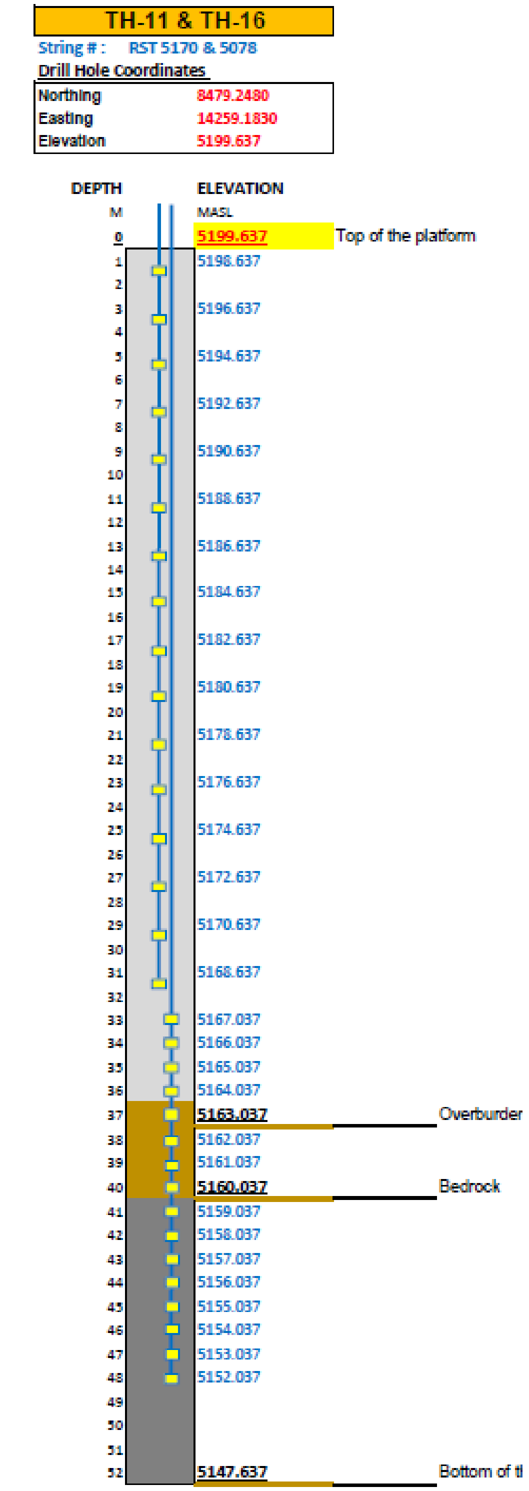
WT WRSF TH11


Section 1-N
WHALE TAIL WRSF
Section 2-S

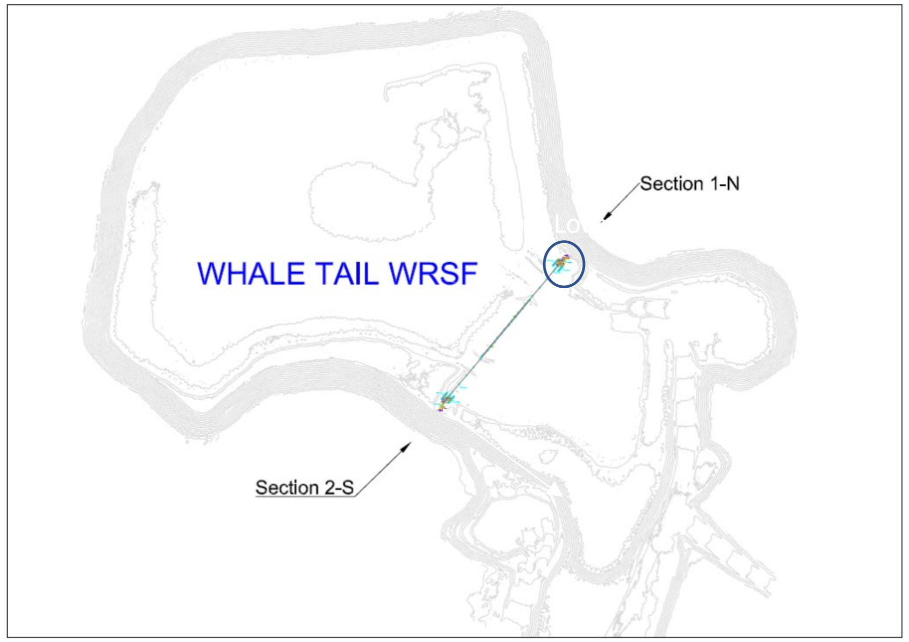

LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
Net radiometer_2
S/N: 191785
El. 5199.6
El. 5195
WRSF_TH_14 TS-5178
(5 beads spaced at 5m , 10 beads spaced at 20m and last bead modified from 20 to 5 m spacing).
WRSF_TH_12 TS-5174
(16 beads 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. 5175
El. 5163
El. 5160
AGNICO EAGLE
MEADOWBANK DIVISION
WT-WRSF Instrumentation section 1 North
Cross section

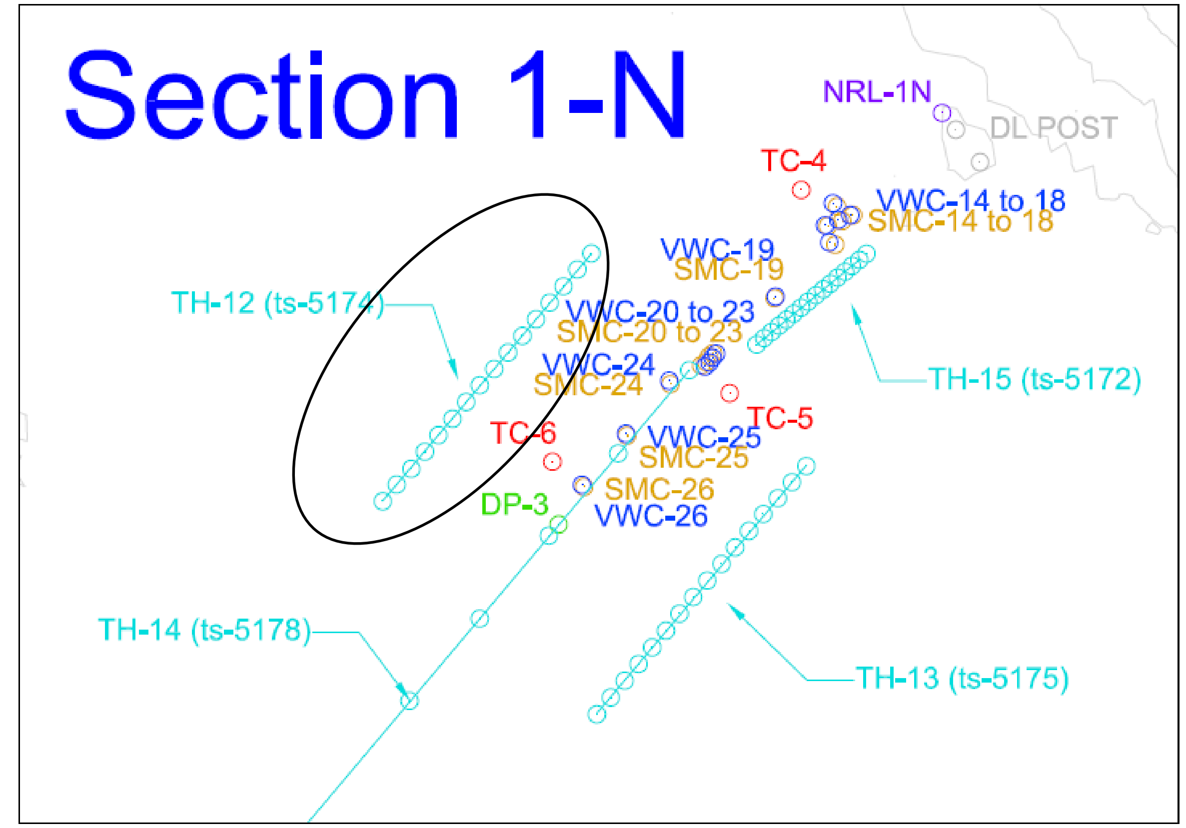

AMQ – WRSF – WT_TH_11
ROCKFILL
Elevation (m)
Temperature (C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
2022-05-13 12:00
2022-04-15 12:00
2022-03-18 12:00
2022-02-18 12:00
2022-01-22 12:00
2021-12-24 12:00
2021-11-26 12:00
2021-10-29 12:00
2021-10-01 12:00
2021-09-06 18:00

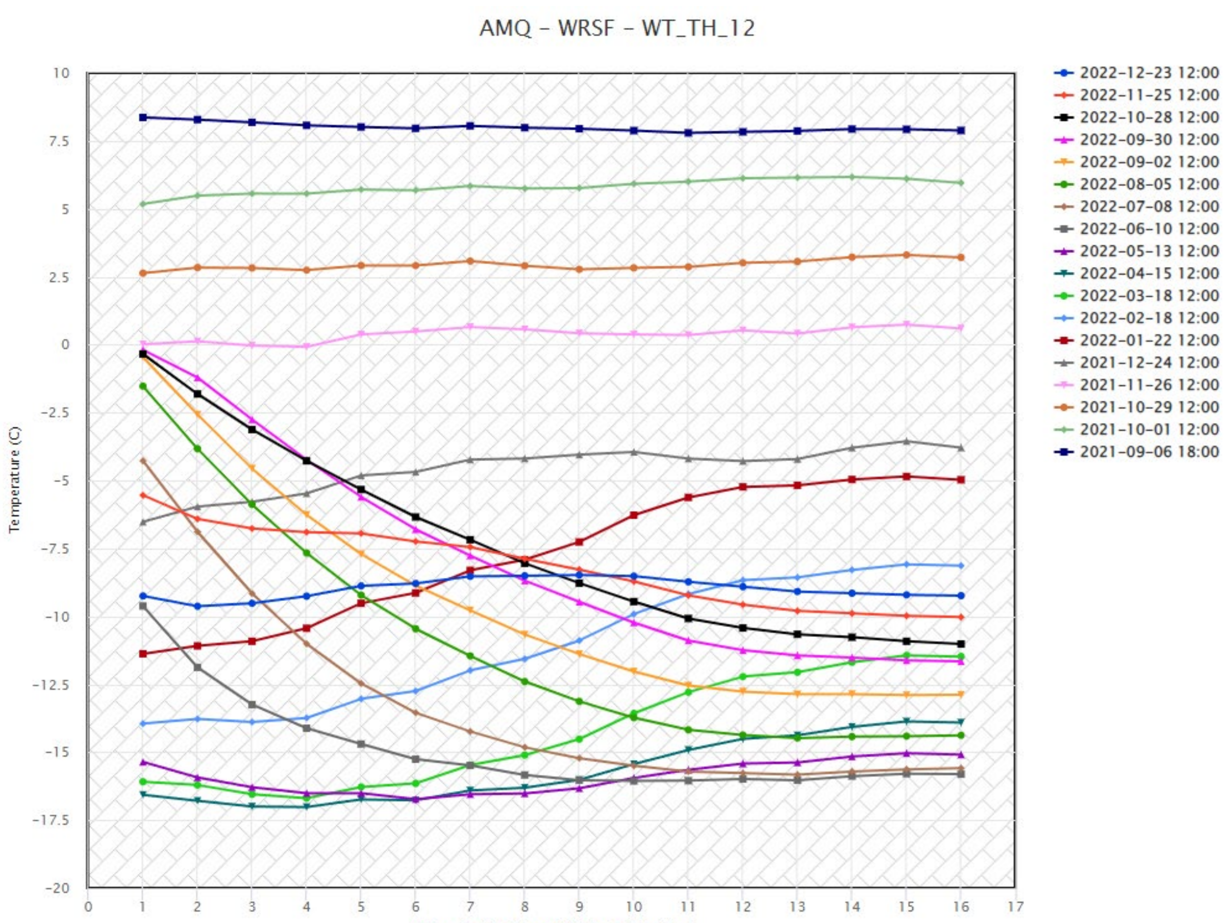

Temperature(°C): WT-WRSF-TH11
ROCKFILL
Elevation (m)
Zero – degree Isotherm
Time: from 9/6/2021 1 to 2022-12-22
Temperature(°C)

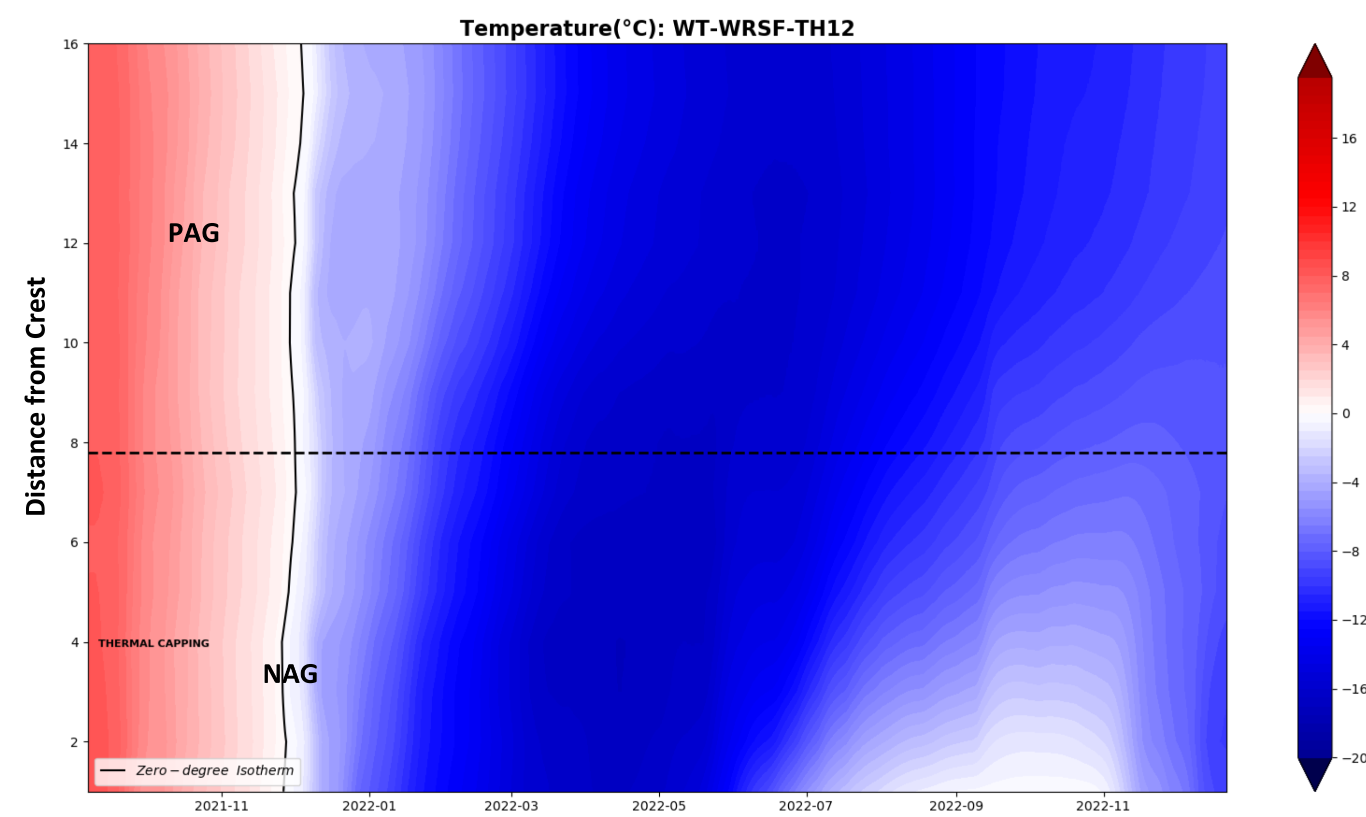

TH-11 & TH-16
String # : RST 5170 & 5078
Drill Hole Coordinates
Northing 8479.2480
Easting 14259.1830
Elevation 5199.637
DEPTH
ELEVATION
M
MASL
Top of the platform
Overburder
Bedrock
Bottom of tl

WT WRSF TH12



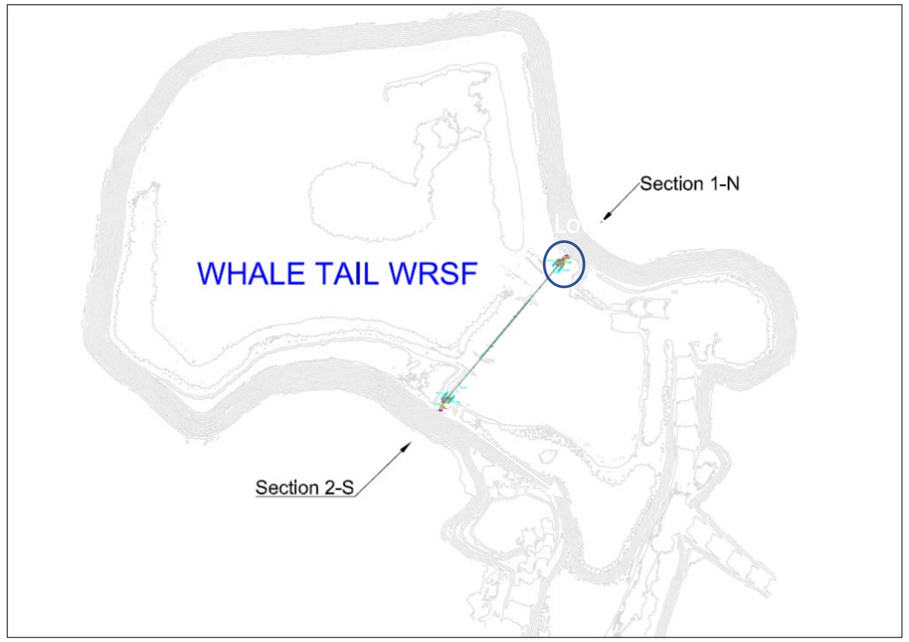


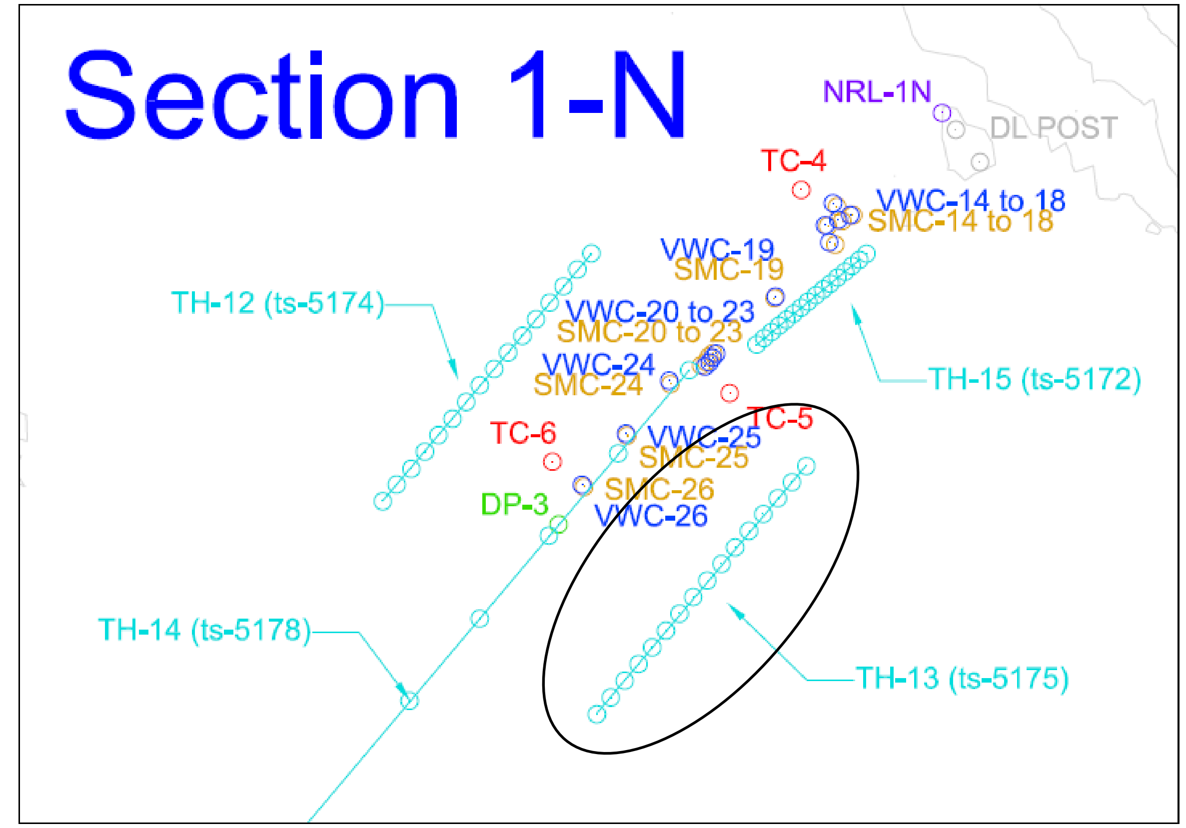


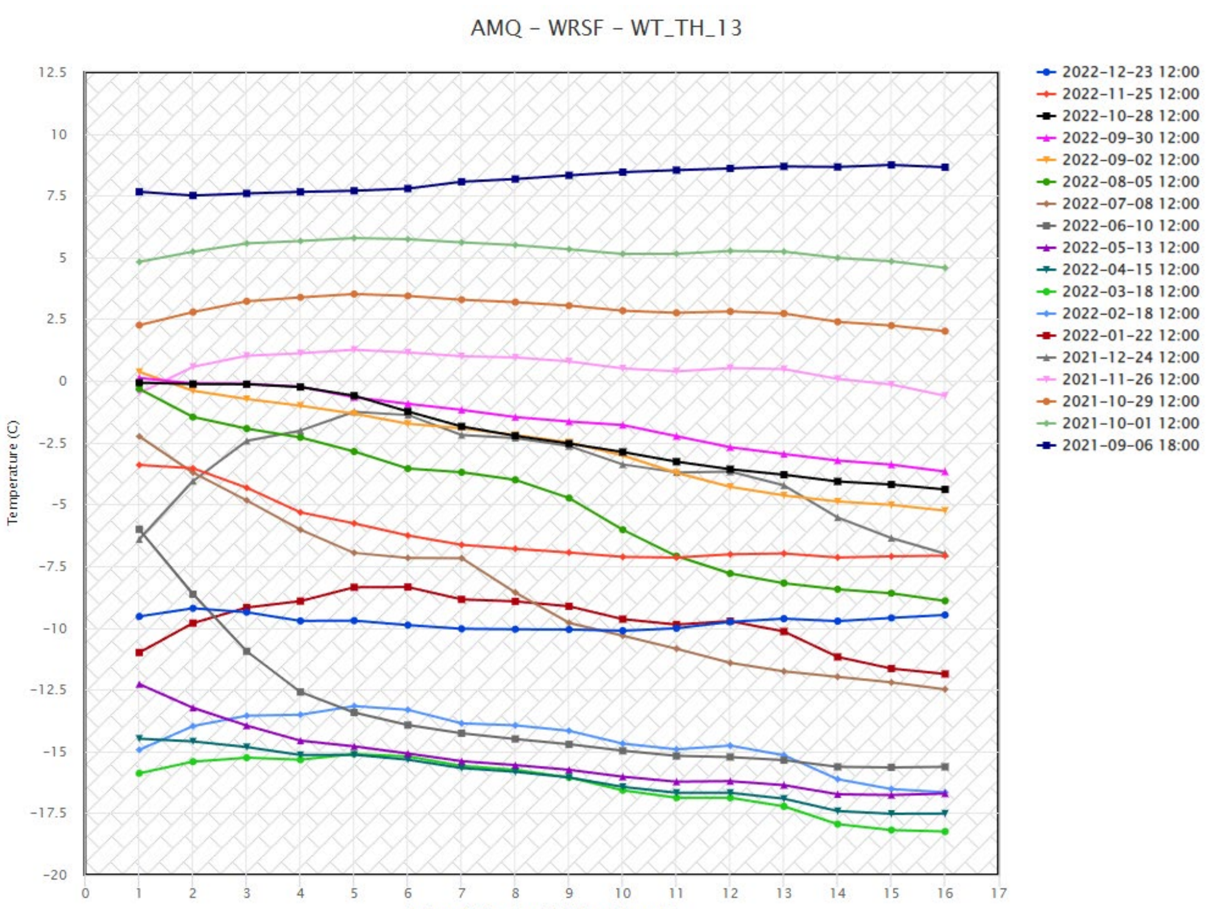


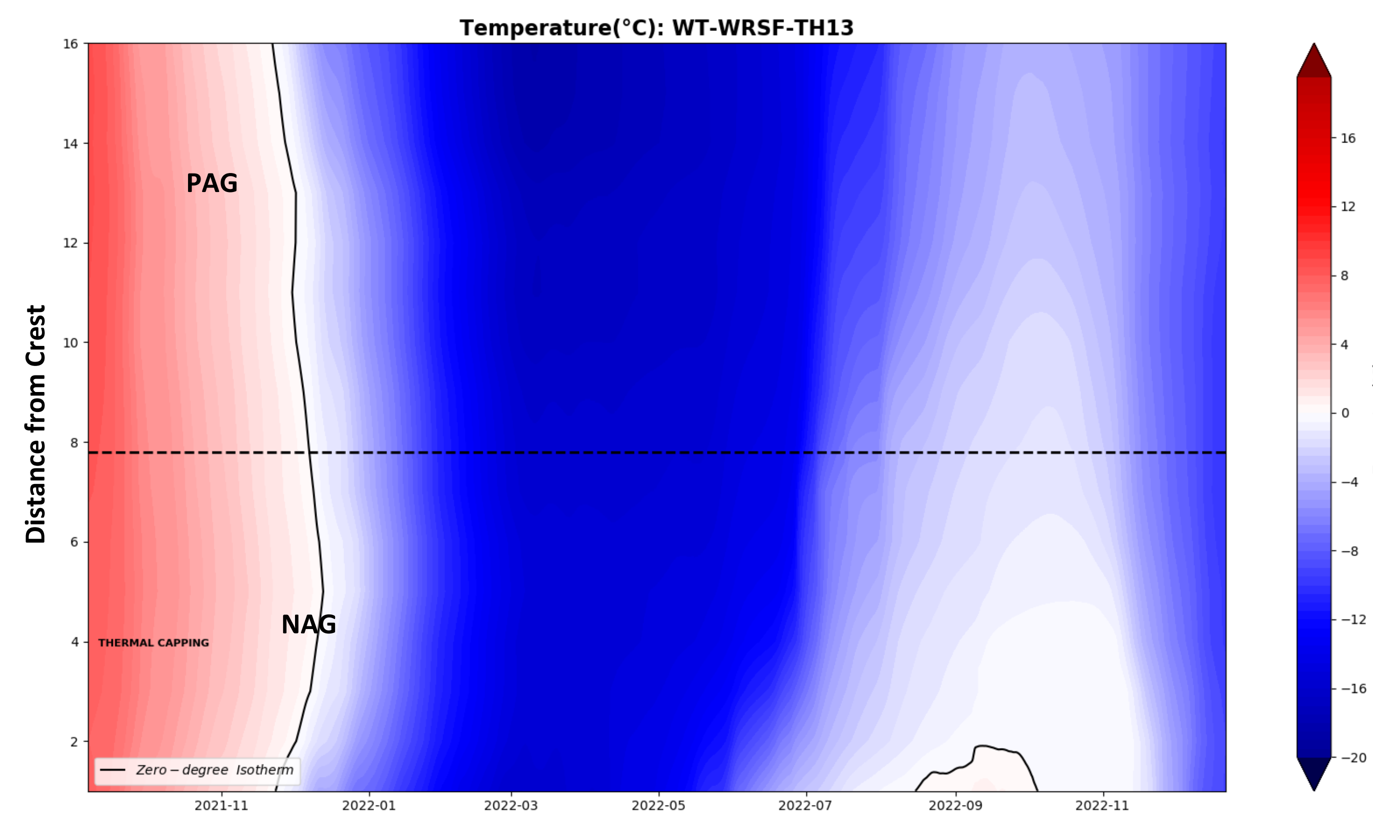
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH13



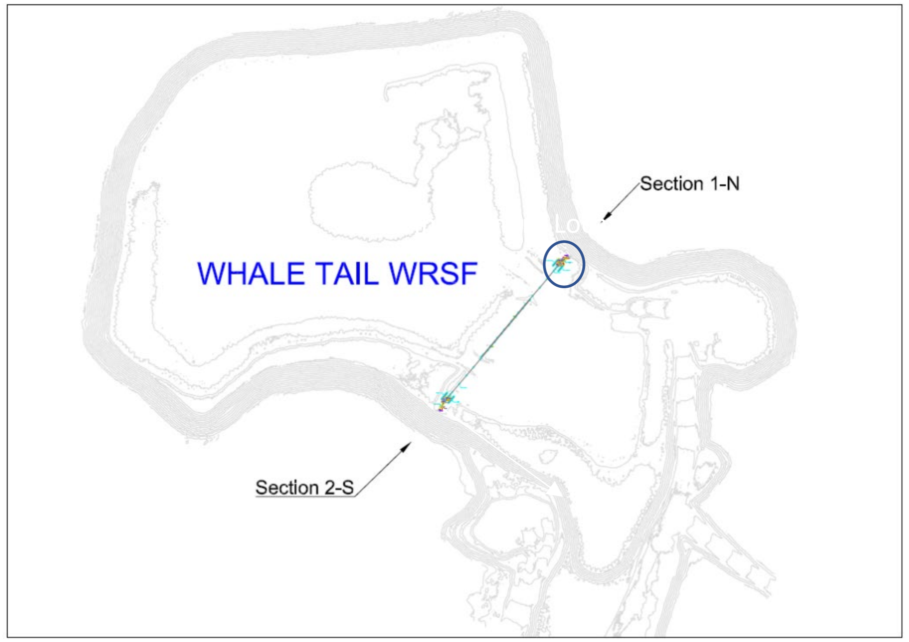


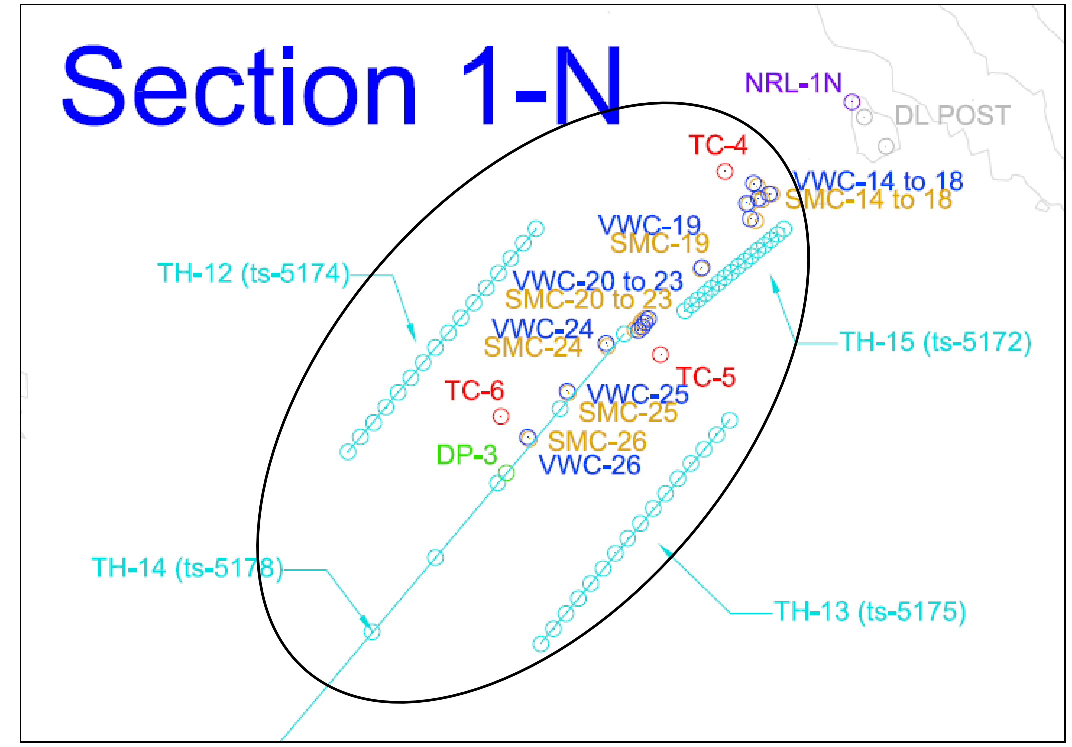


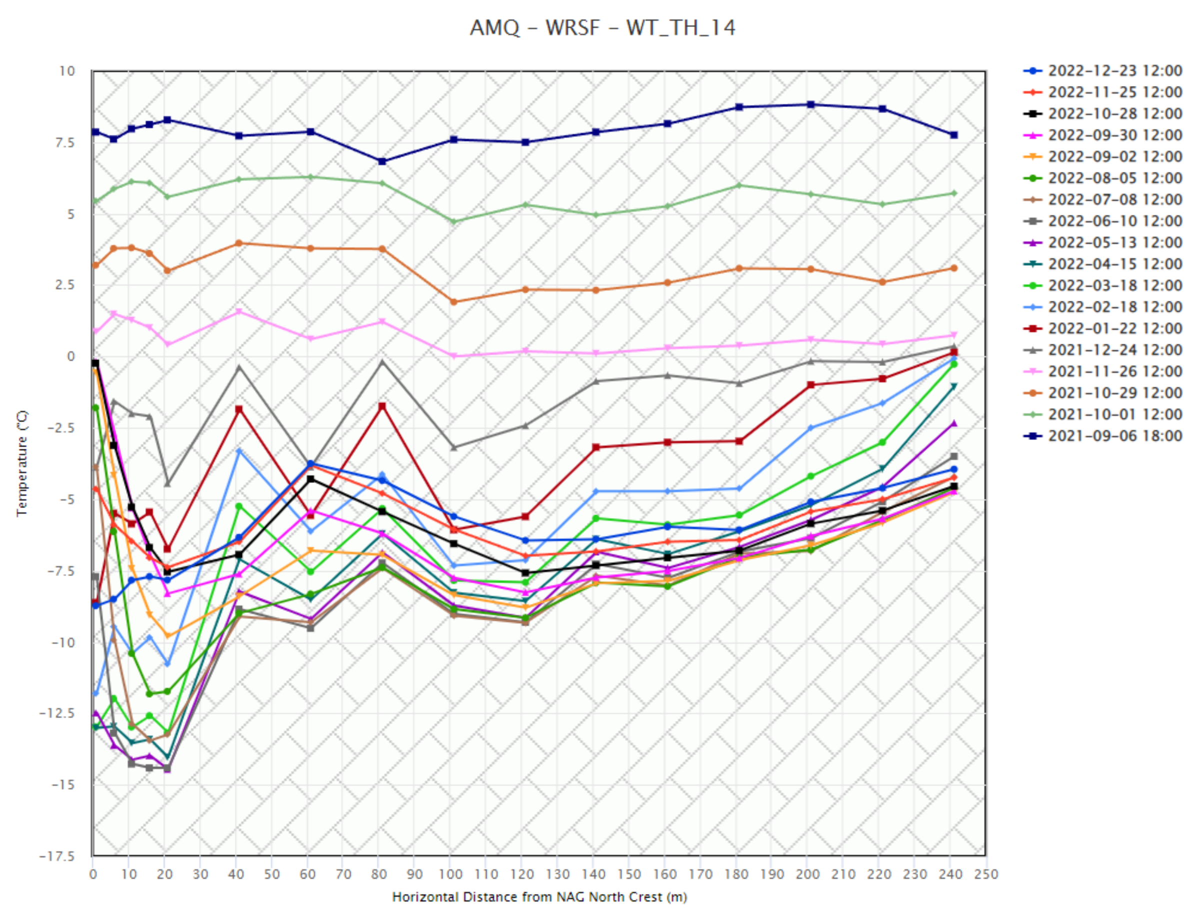


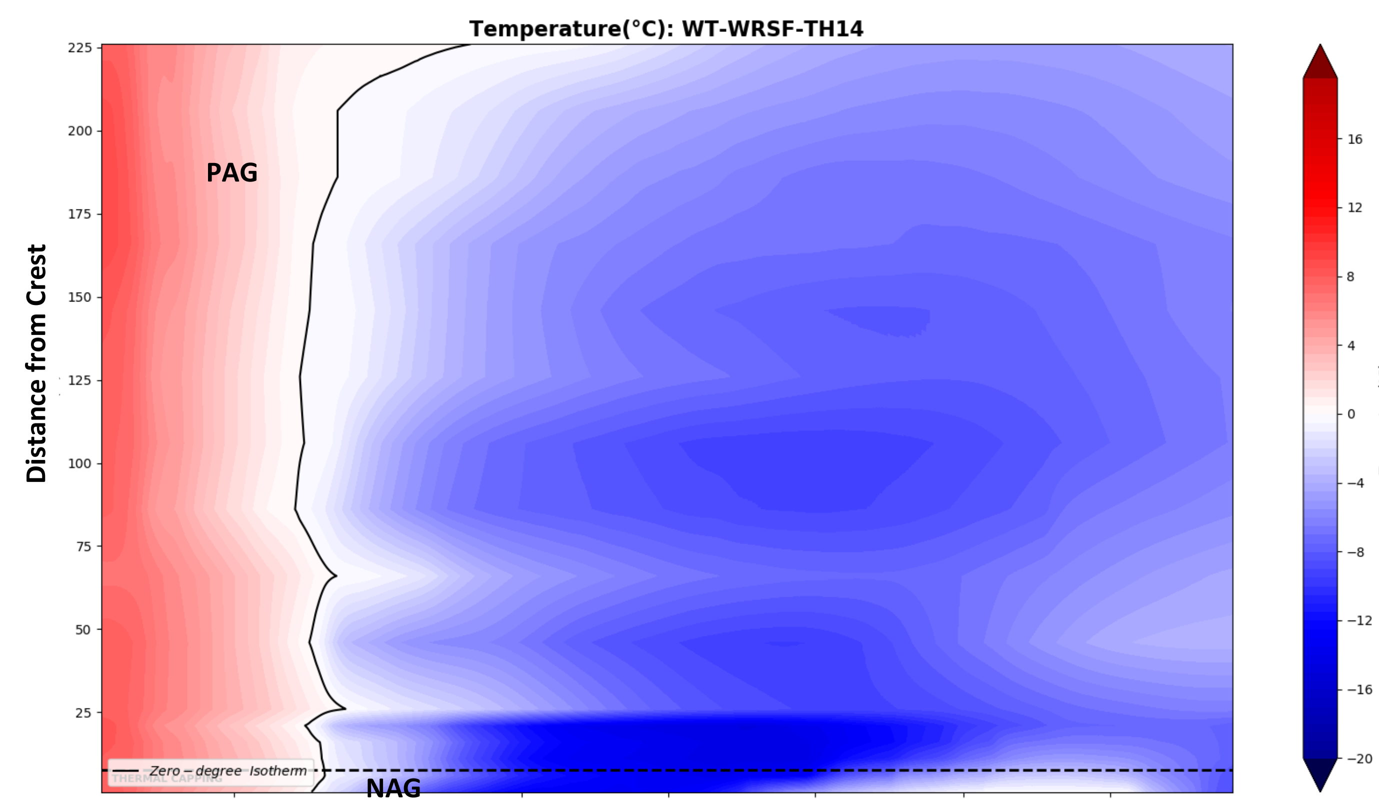
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH14



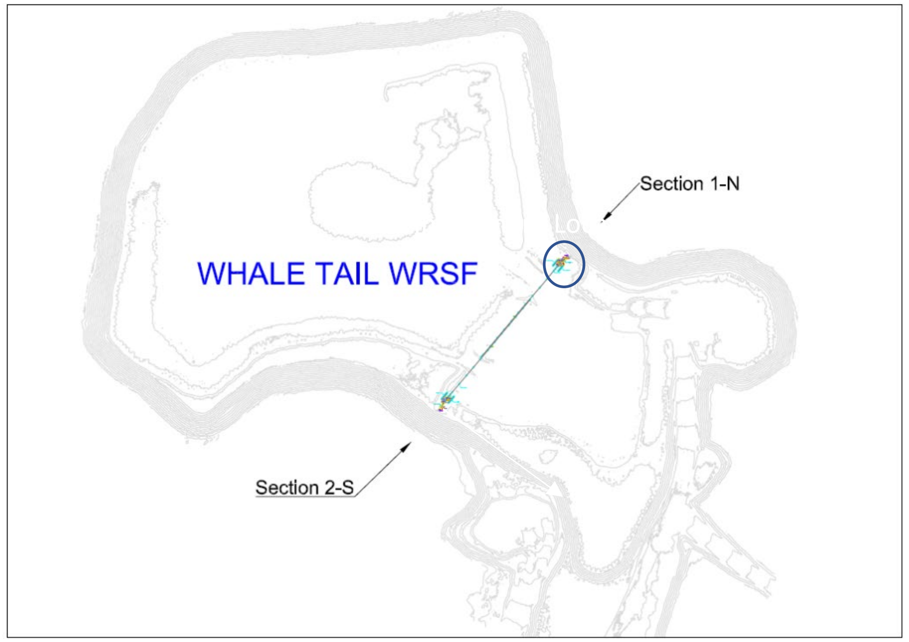




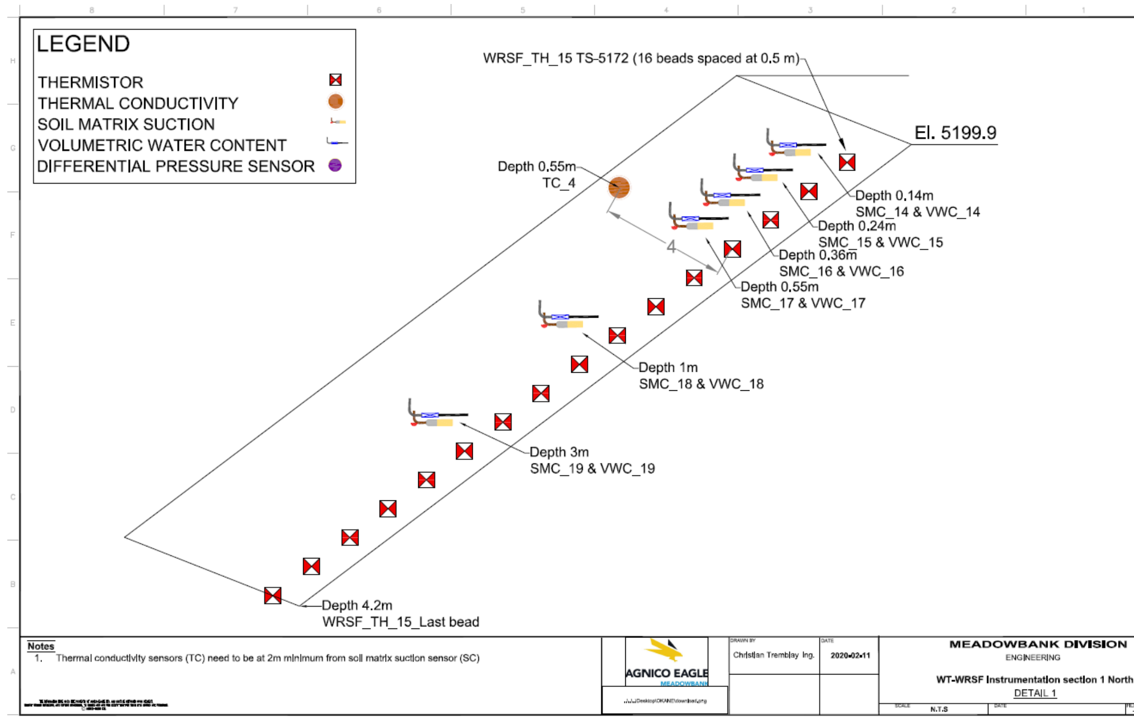


This instrument is installed horizontally and chart needs to be read accordingly

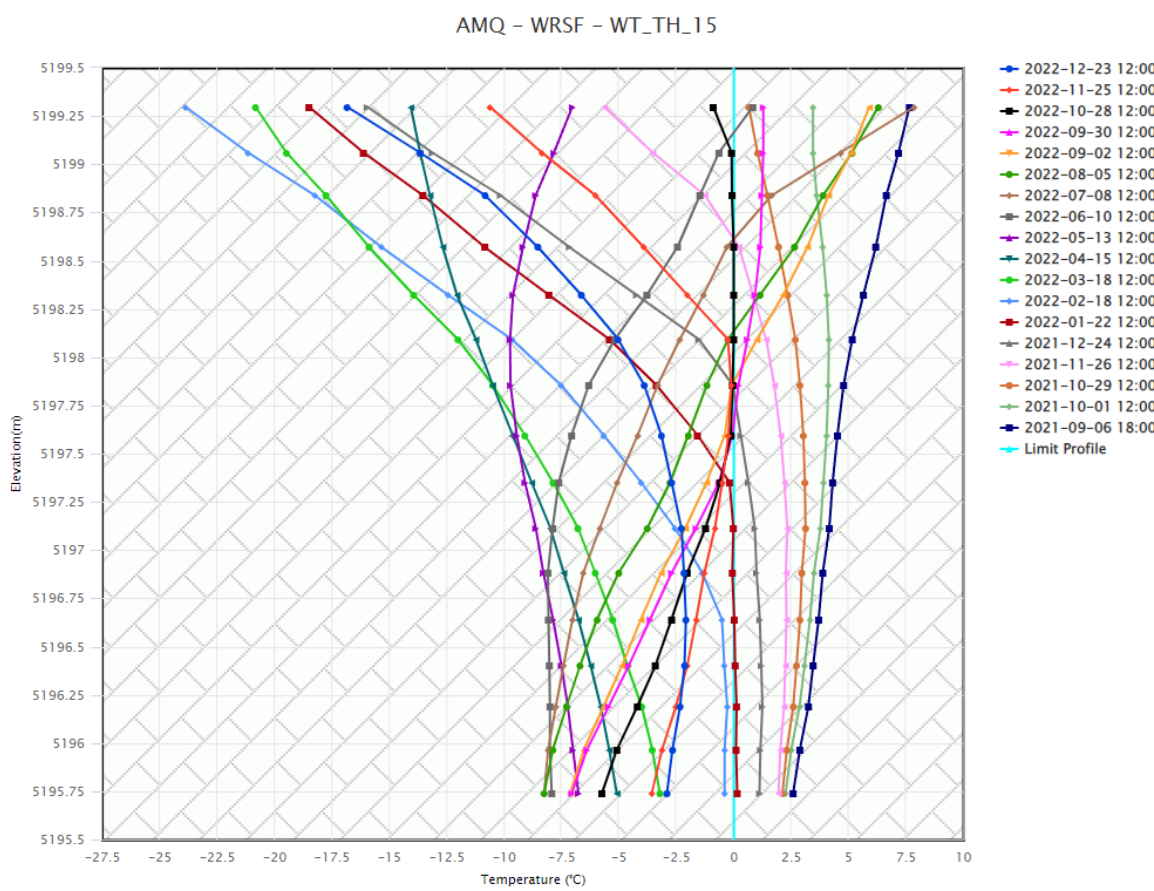
WT WRSF TH15



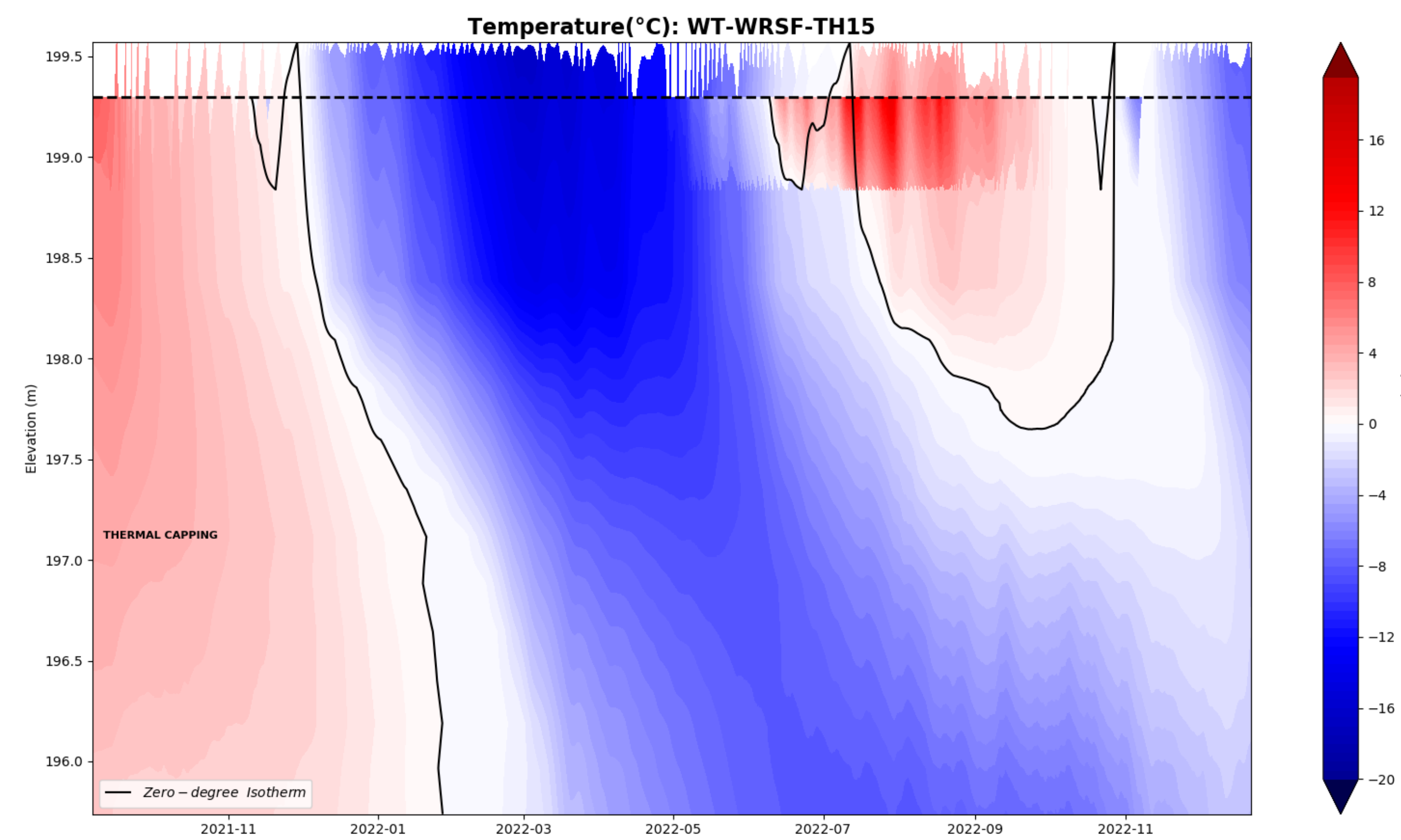
WHALE TAIL WRSF
Section 1-N
Section 2-S



LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
WRSF_TH_15 TS-5172 (16 beads spaced at 0.5 m)
El. 5199.9
Depth 0.55m
TC_4
Depth 0.14m
SMC_14 & VWC_14
Depth 0.24m
SMC_15 & VWC_15
Depth 0.36m
SMC_16 & VWC_16
Depth 0.55m
SMC_17 & VWC_17
Depth 1m
SMC_18 & VWC_18
Depth 3m
SMC_19 & VWC_19
Depth 4.2m
WRSF_TH_15_Last bead
Notes
1. Thermal conductivity sensors (TC) need to be at 2m minimum from soil matrix suction sensor (SC)
AGNICO EAGLE
MEADOWBANK DIVISION
WT-WRSF Instrumentation section 1 North
DETAIL 1

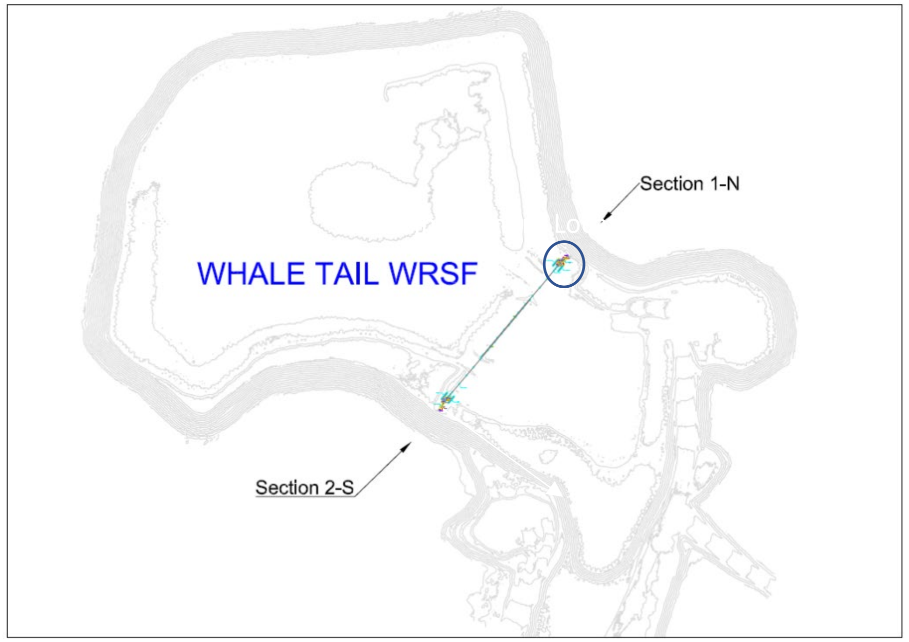


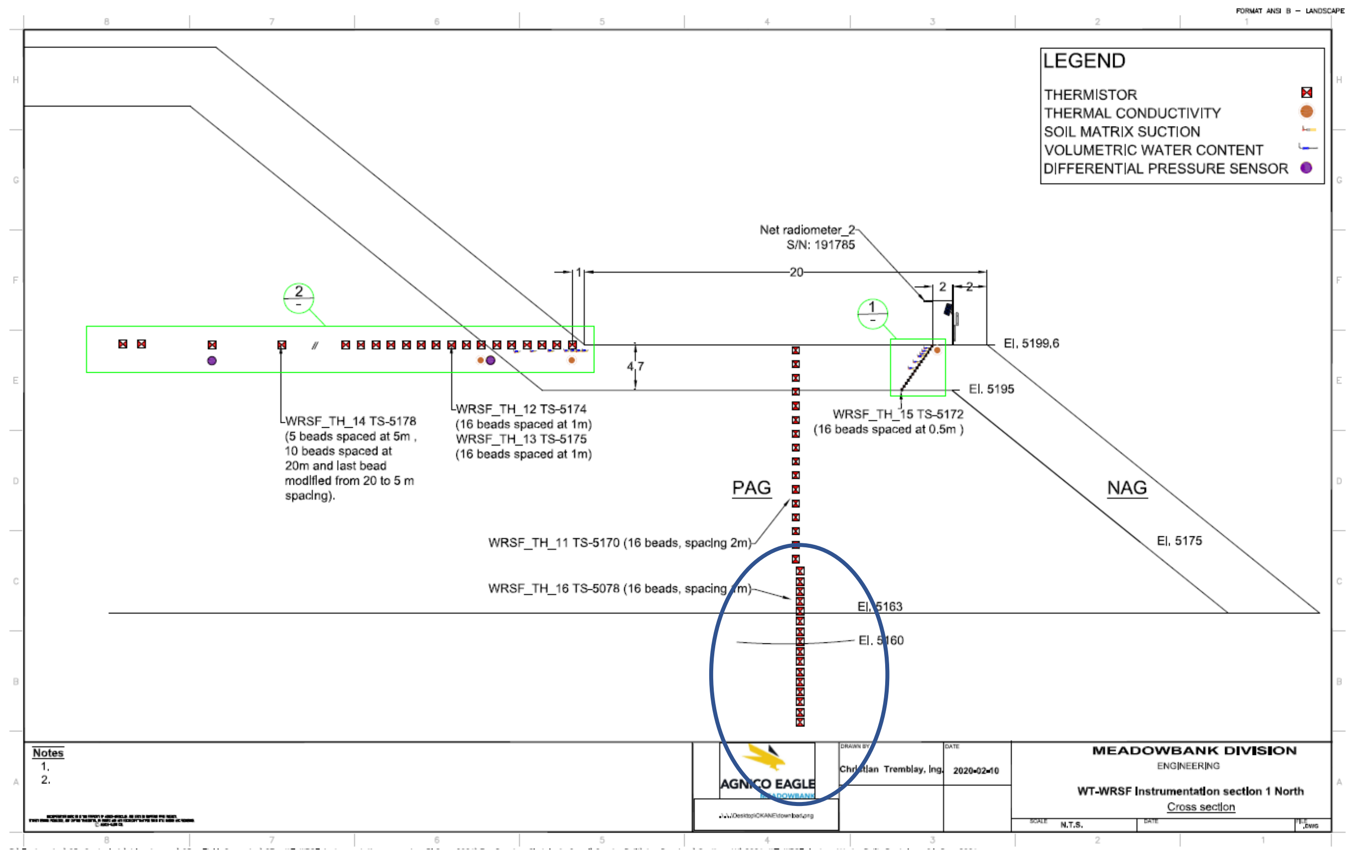
AMQ - WRSF - WT_TH_15
Elevation(m)
Temperature (C)
2022-12-23 12:00
2022-11-25 12:00
2022-10-28 12:00
2022-09-30 12:00
2022-09-02 12:00
2022-08-05 12:00
2022-07-08 12:00
2022-06-10 12:00
2022-05-13 12:00
2022-04-15 12:00
2022-03-18 12:00
2022-02-18 12:00
2022-01-22 12:00
2021-12-24 12:00
2021-11-26 12:00
2021-10-29 12:00
2021-10-01 12:00
2021-09-06 18:00
Limit Profile

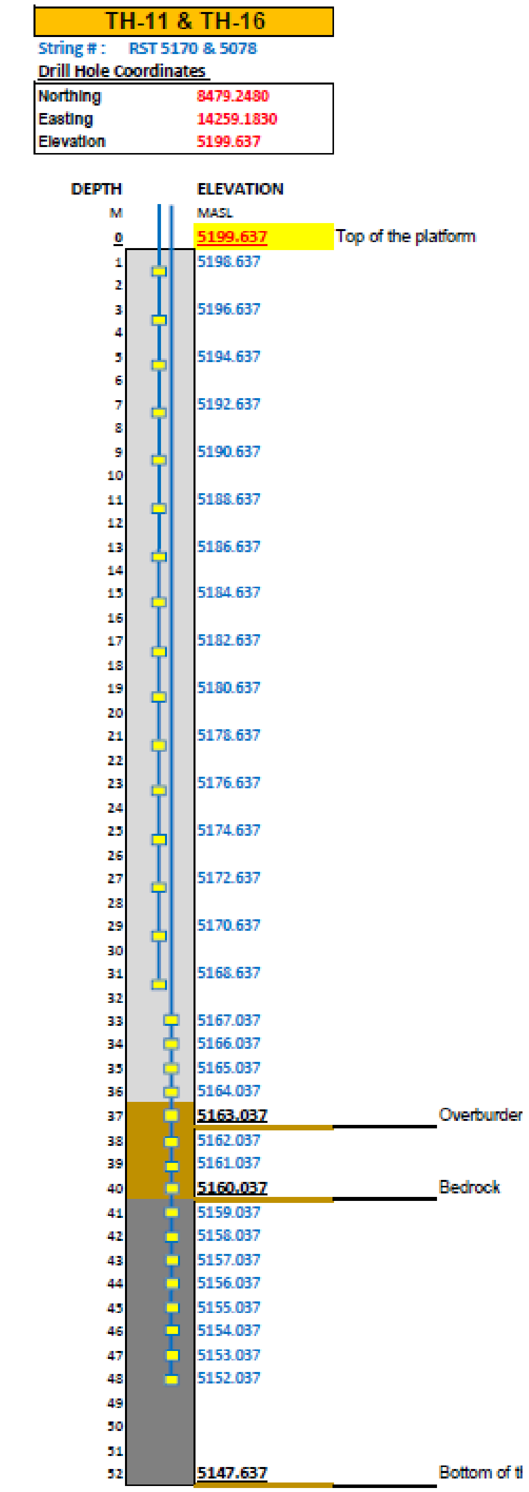


Temperature(°C): WT-WRSF-TH15
Elevation (m)
THERMAL CAPPING
Zero – degree Isotherm
Time: from 9/6/2021 1 to 2022-12-22
Temperature(°C)

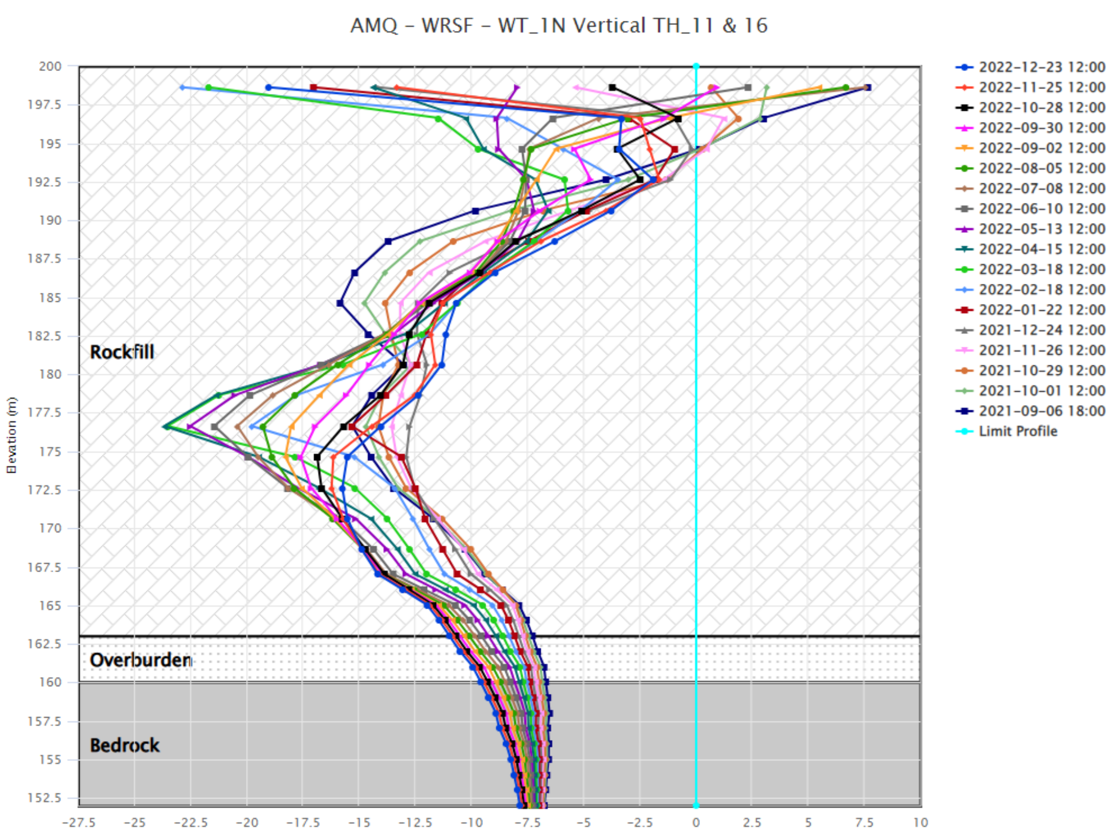
WT WRSF TH16

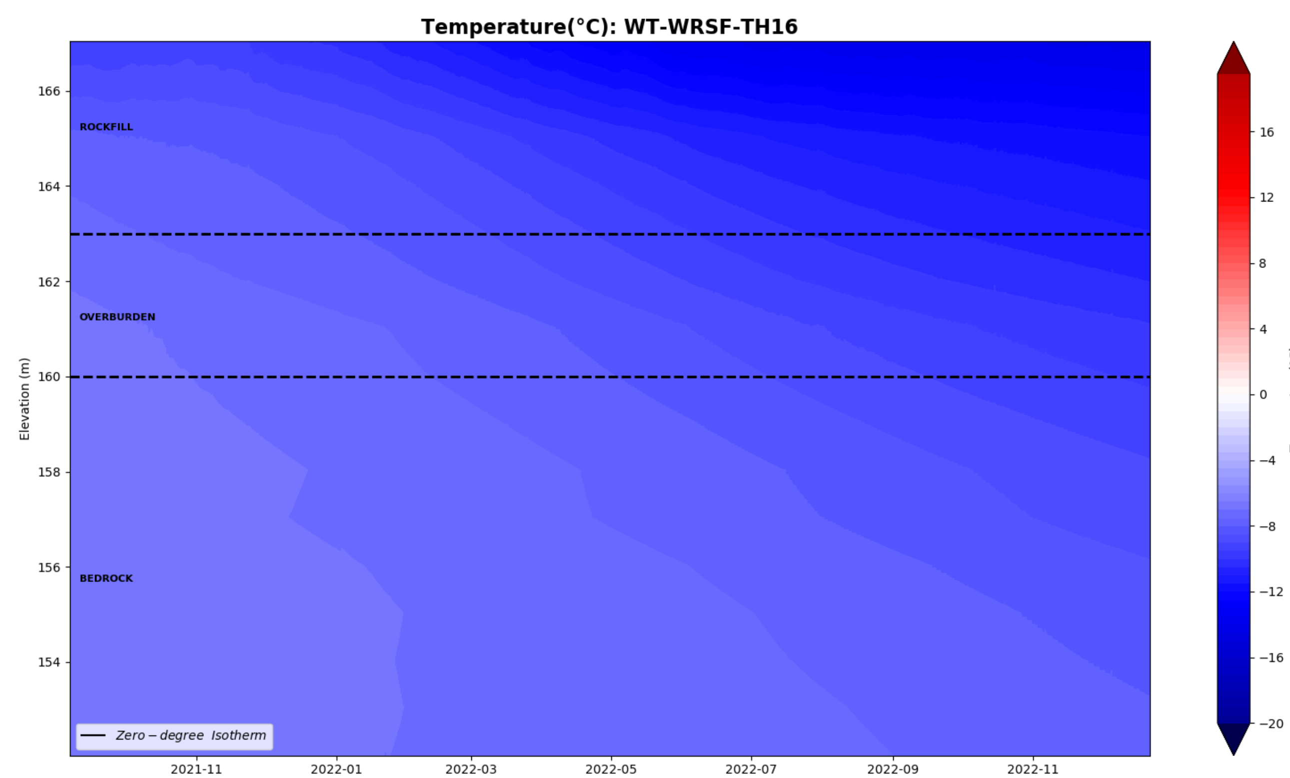






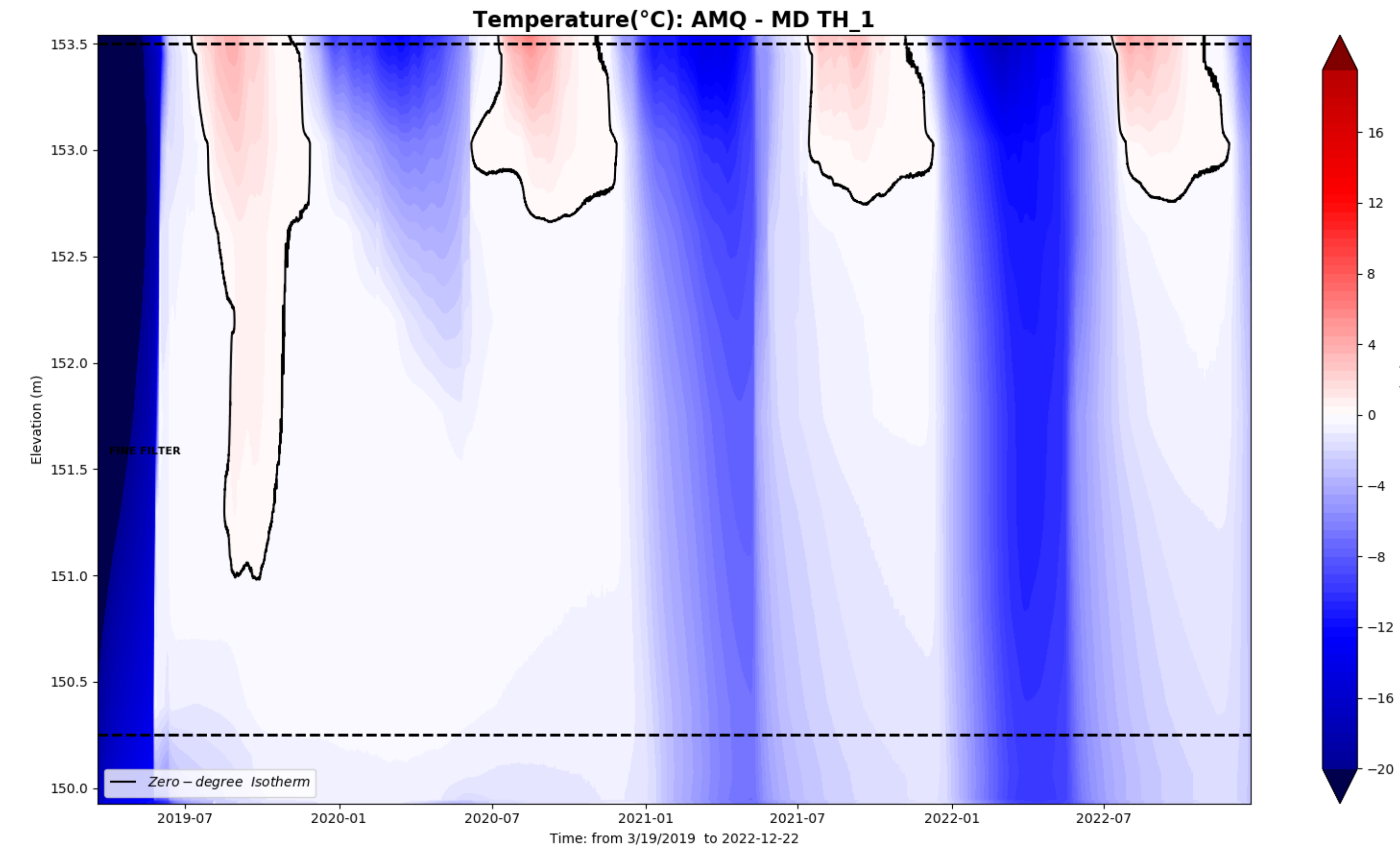
There was no data from Dec 20 to Feb 2 due to loss of battery power in the instrument.



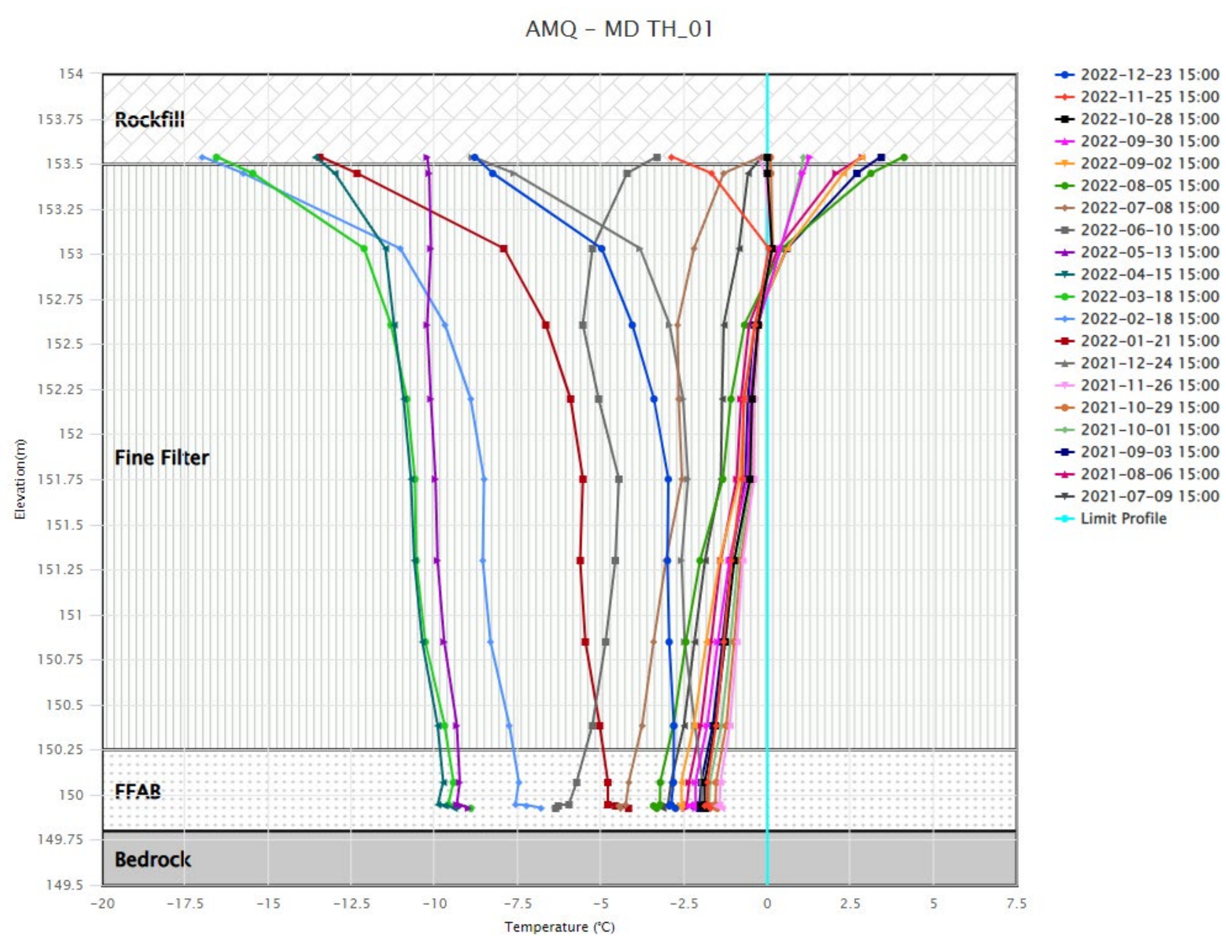


MD TH01

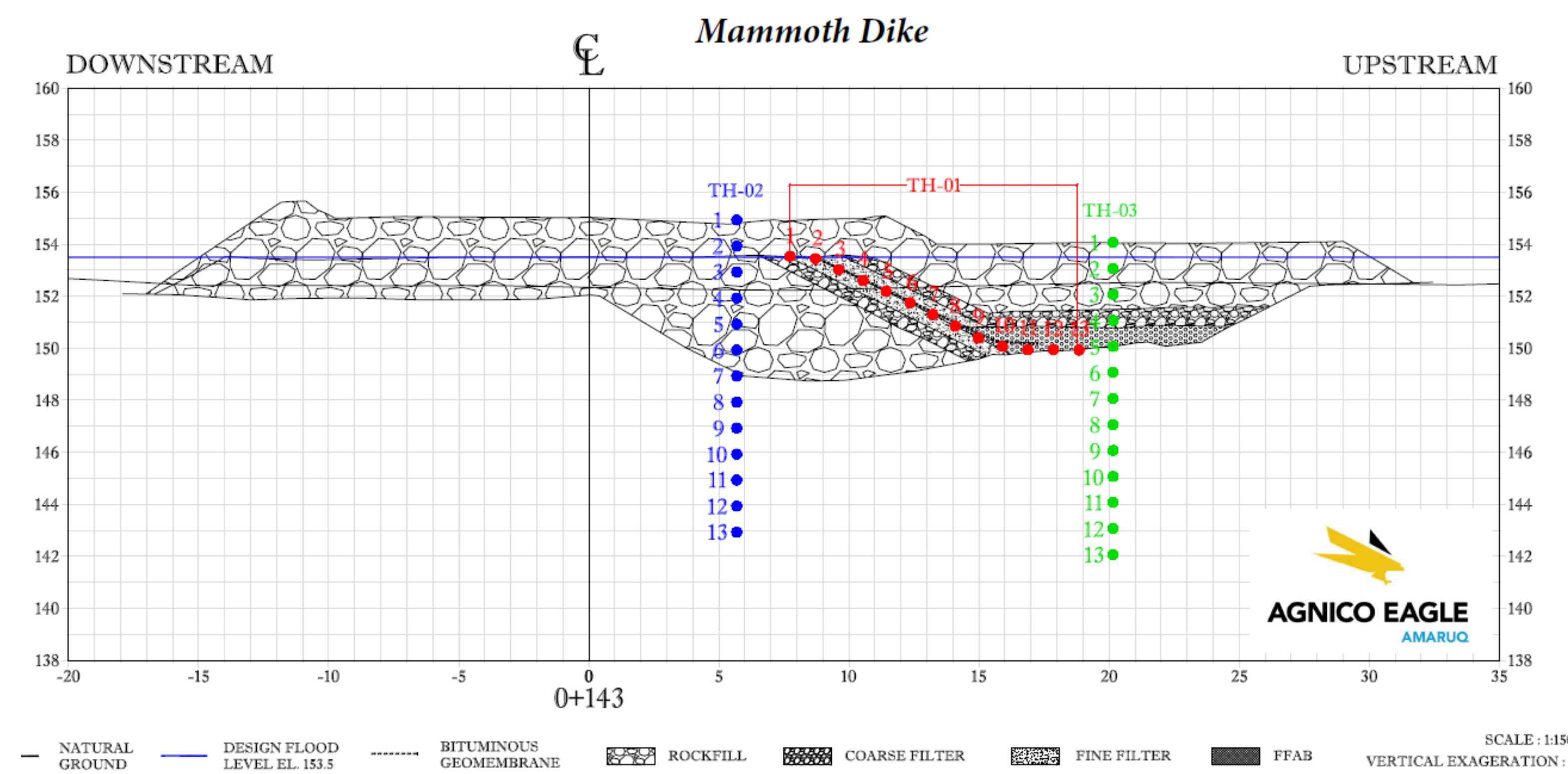
MD TH 01
MD TH 02
MD TH 03
MAMMOTH DIKE



Temperature(°C): AMQ - MD TH_1
Elevation (m)
153.5
153.0
152.5
152.0
151.5
151.0
150.5
150.0
Zero – degree Isotherm
2019-07
2020-01
2020-07
2021-01
2021-07
2022-01
2022-07
Time: from 3/19/2019 to 2022-12-22
Temperature(°C)
16
12
8
4
0
−4
−8
−12
−16
−20



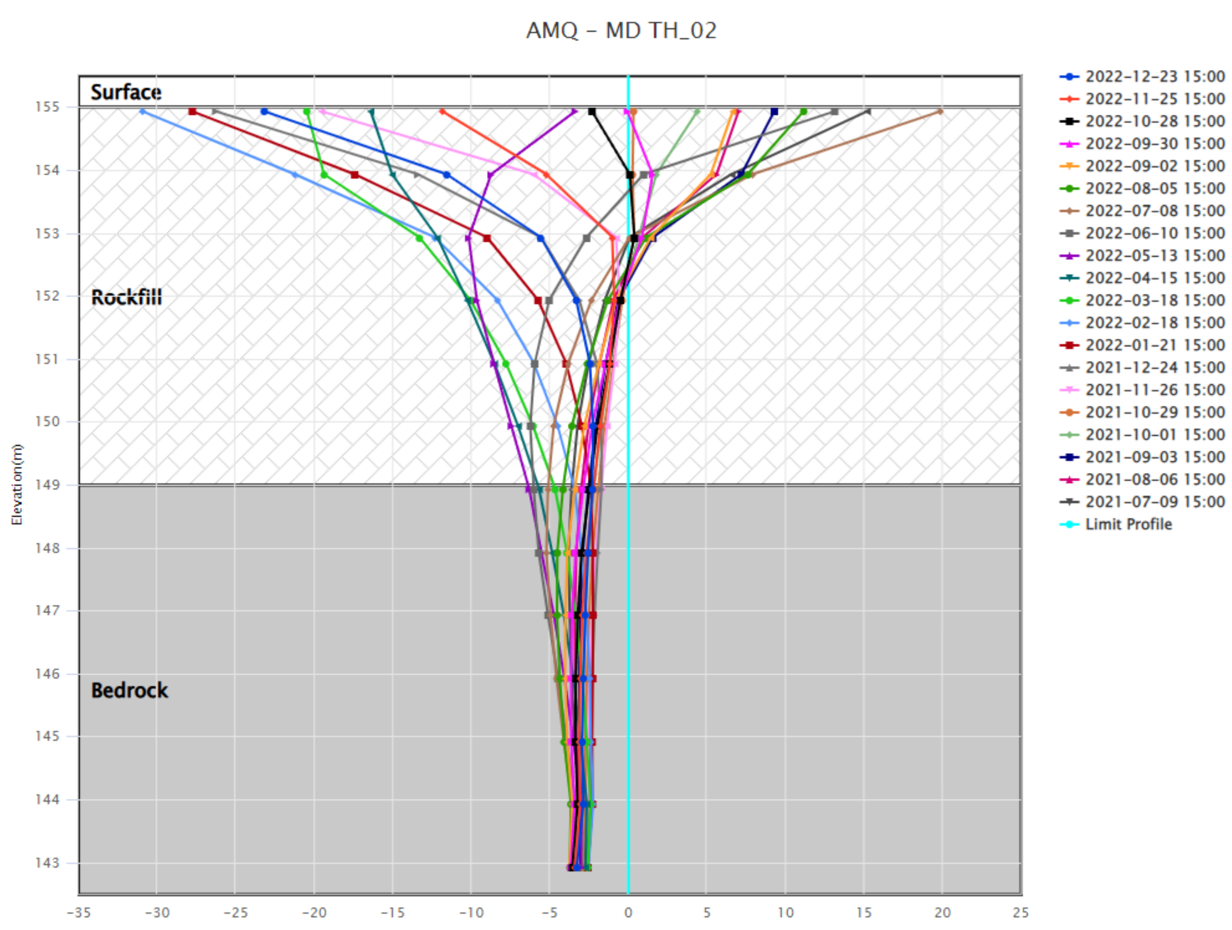
AMQ – MD TH_01
Rockfill
Fine Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
154
153.75
153.5
153.25
153
152.75
152.5
152.25
152
151.75
151.5
151.25
151
150.75
150.5
150.25
150
149.75
149.5
-20
-17.5
-15
-12.5
-10
-7.5
-5
-2.5
0
2.5
5
7.5
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

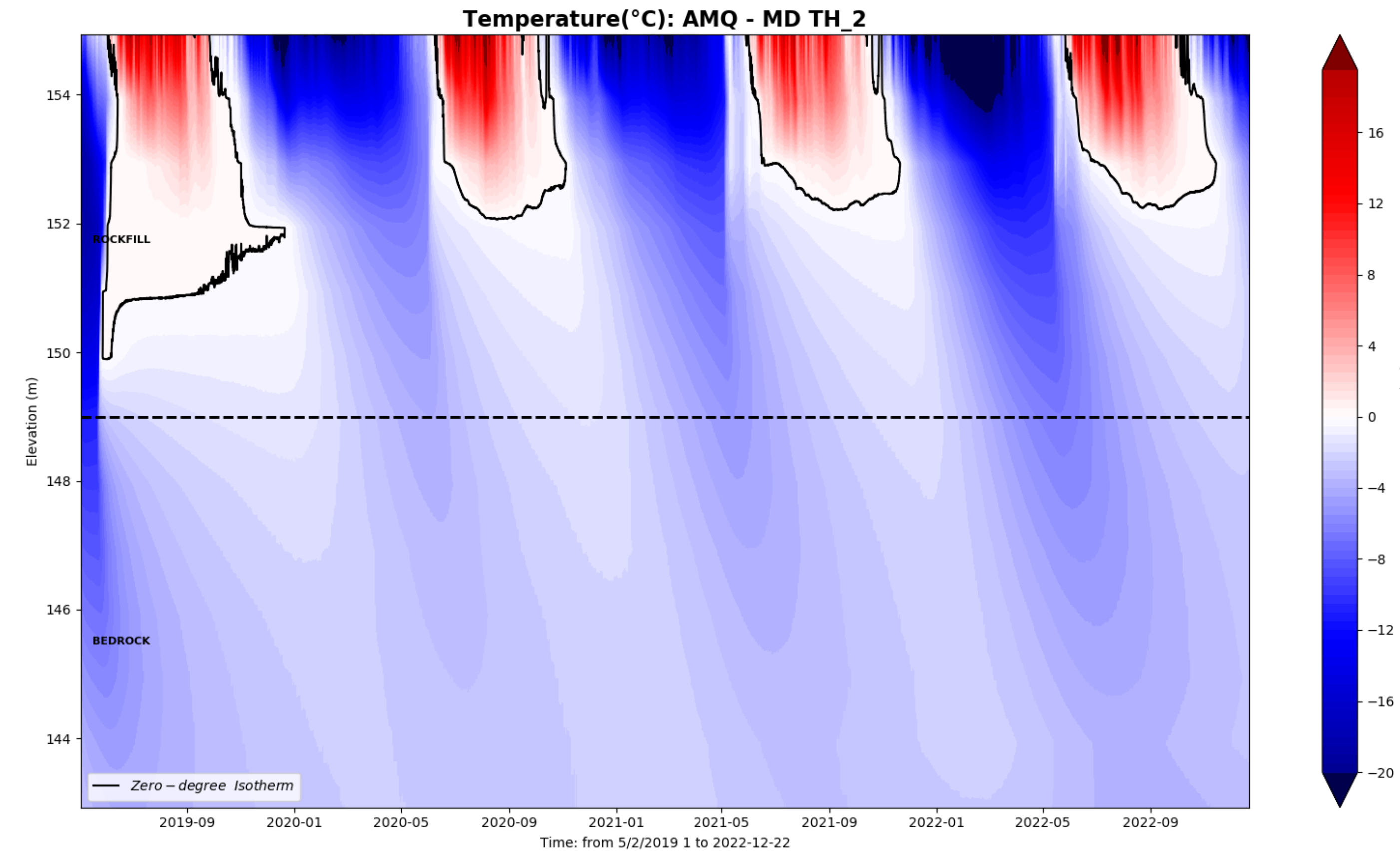


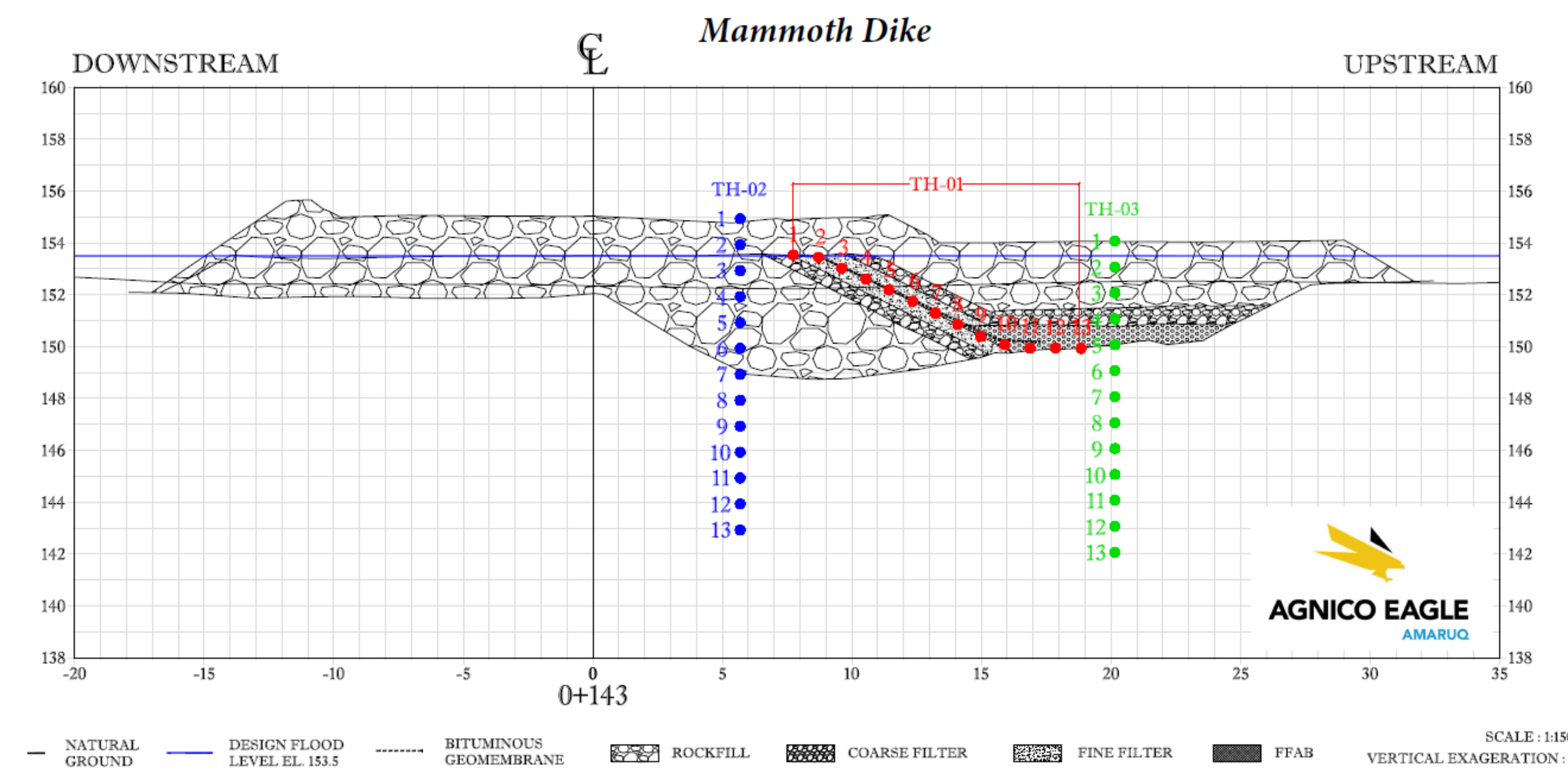
Mammoth Dike
DOWNSTREAM
UPSTREAM
TH-02
TH-01
TH-03
0+143
NATURAL GROUND
DESIGN FLOOD LEVEL EL. 153.5
BITUMINOUS GEOMEMBRANE
ROCKFILL
COARSE FILTER
FINE FILTER
FFAB
SCALE : 1:15
VERTICAL EXAGERATION :
AGNICO EAGLE
AMARUQ

MD TH02


MD TH 01
MD TH 02
MD TH 03
MAMMOTH DIKE

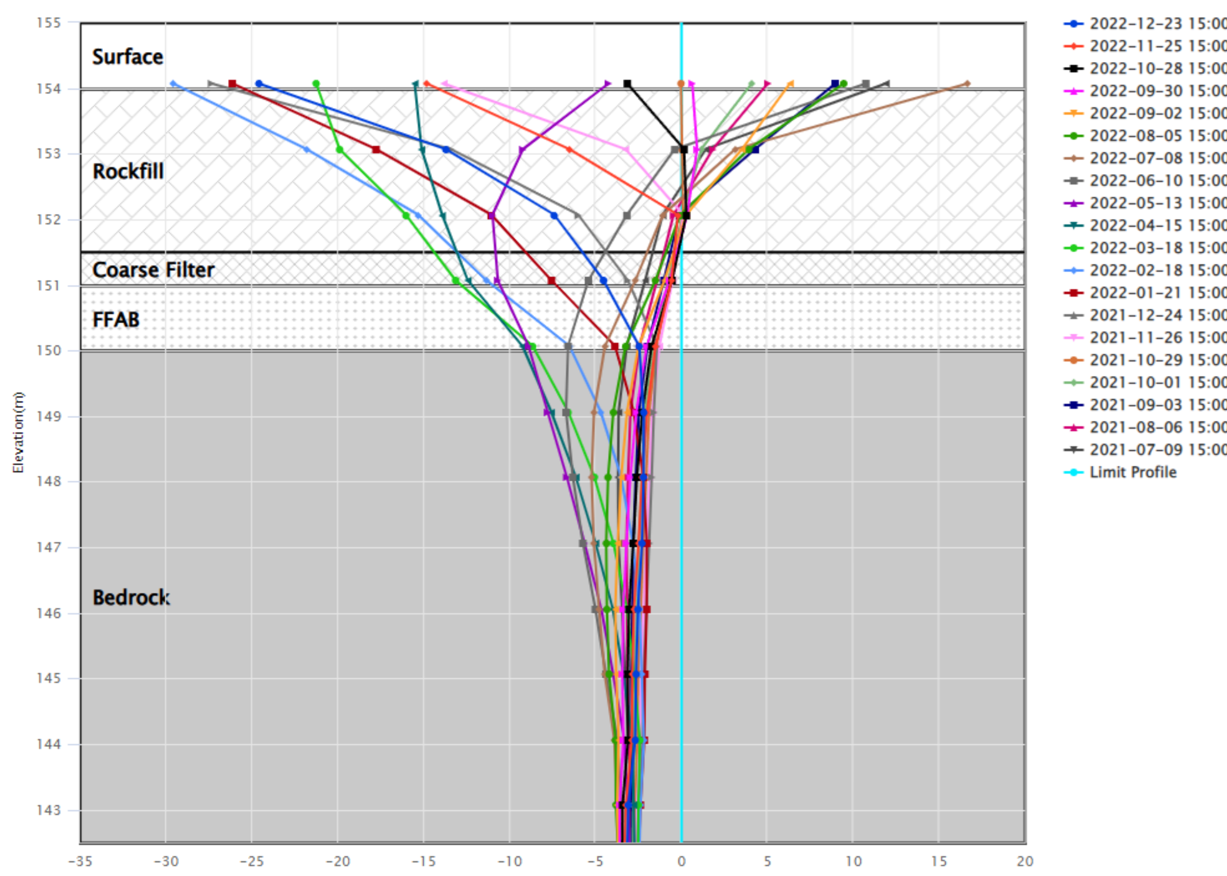

AMQ – MD TH_02
Surface
Rockfill
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

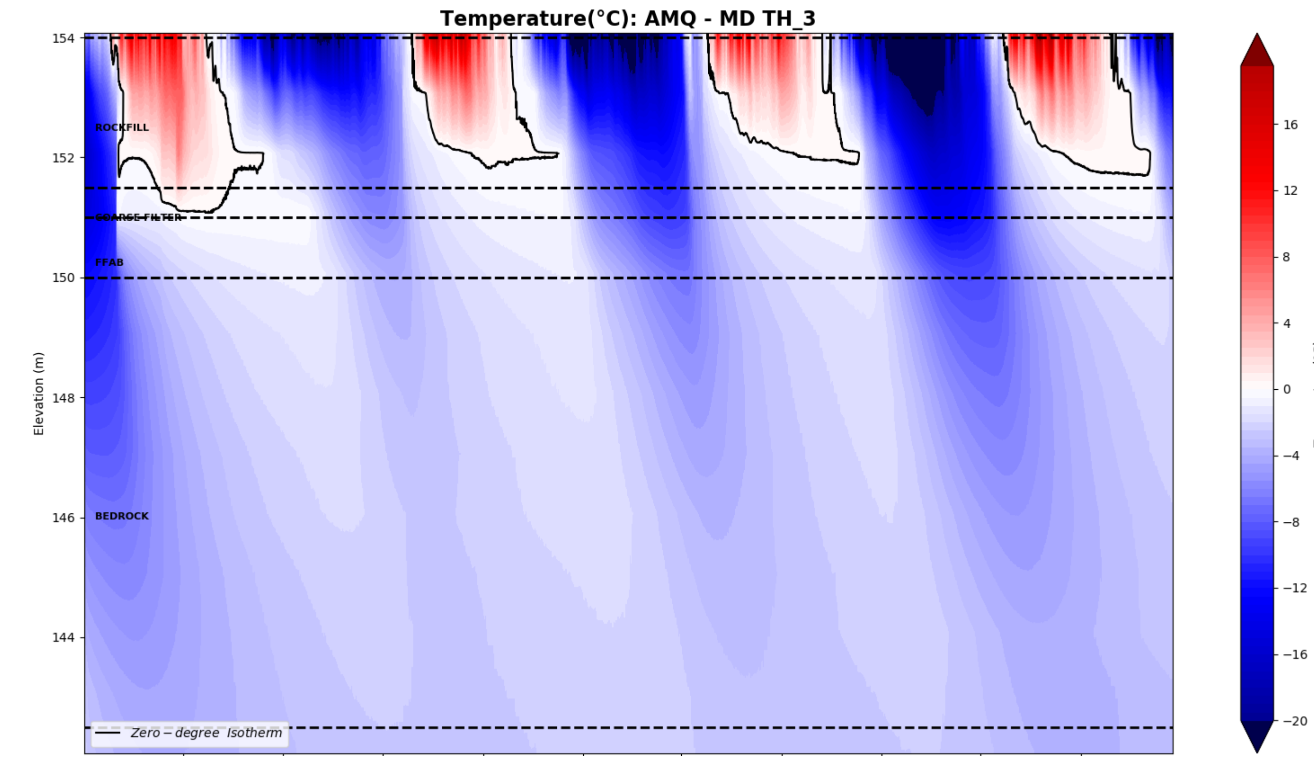

Temperature(°C): AMQ - MD TH_2
Elevation (m)
ROCKFILL
BEDROCK
Zero – degree Isotherm
Time: from 5/2/2019 1 to 2022-12-22
Temperature(°C)

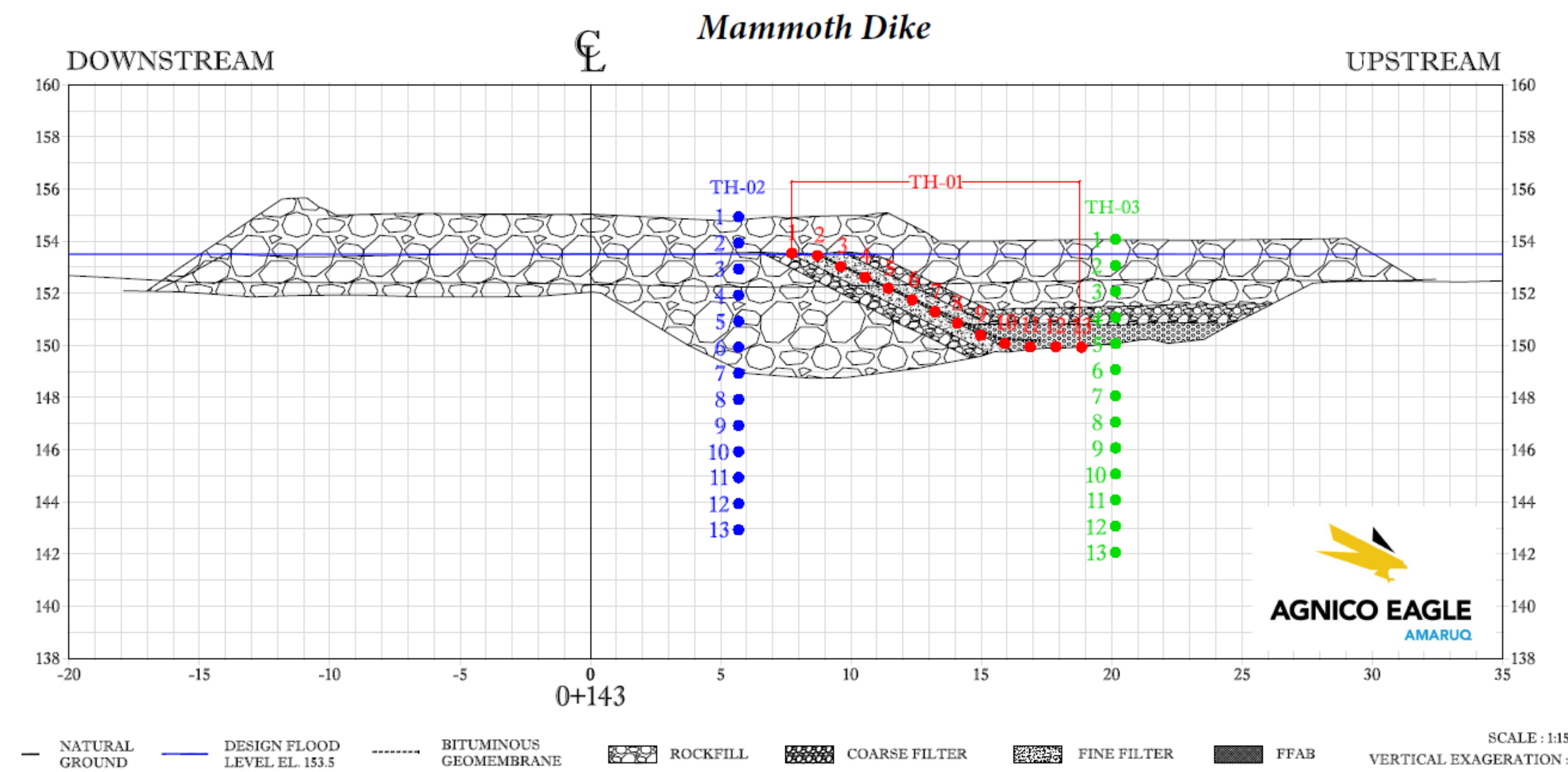

Mammoth Dike
DOWNSTREAM
UPSTREAM
TH-02
TH-01
TH-03
0+143
NATURAL GROUND
DESIGN FLOOD LEVEL EL. 153.5
BITUMINOUS GEOMEMBRANE
ROCKFILL
COARSE FILTER
FINE FILTER
FFAB
AGNICO EAGLE
AMARUQ

MD TH03

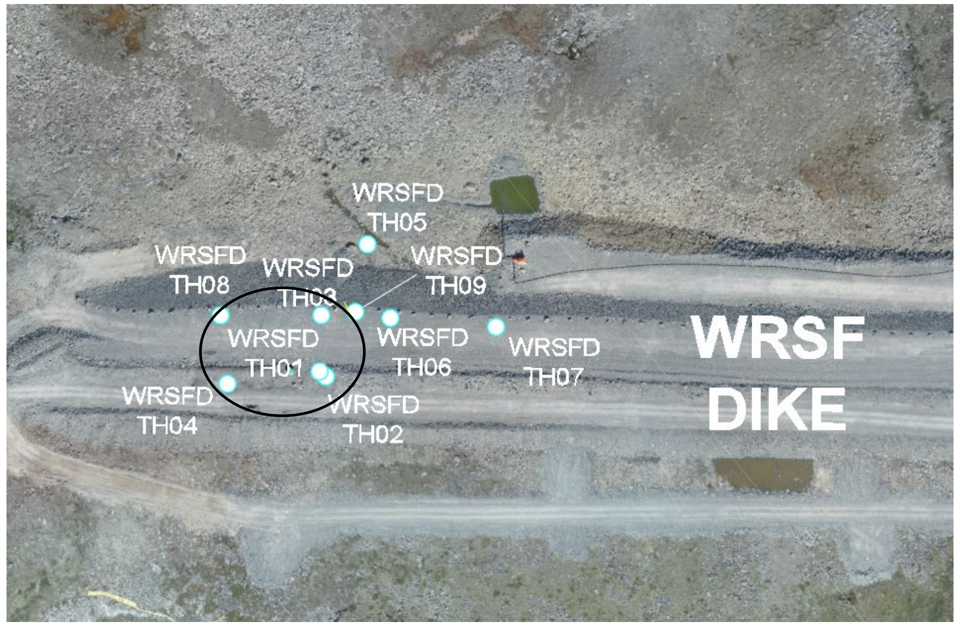
AMQ – MD TH_03

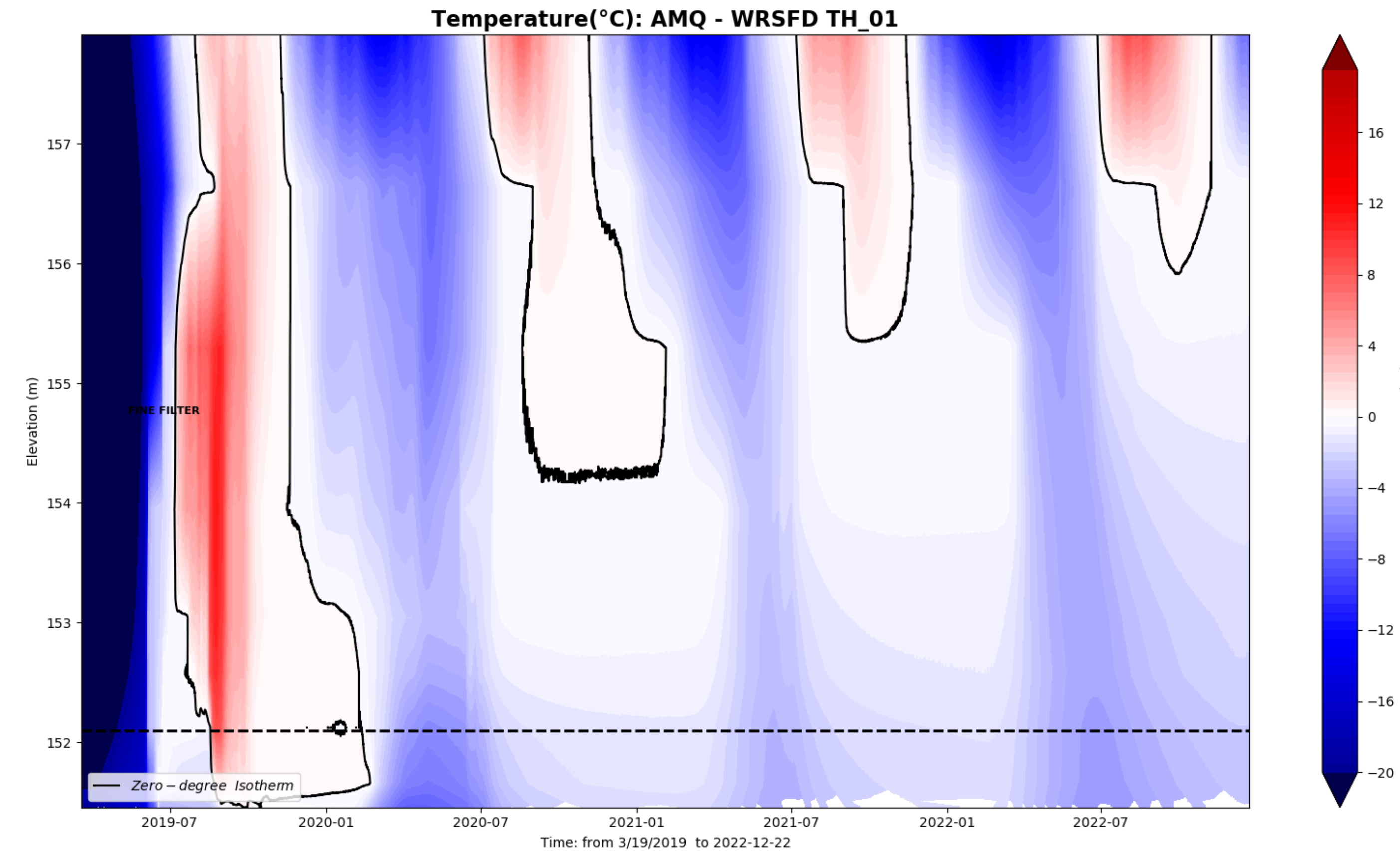


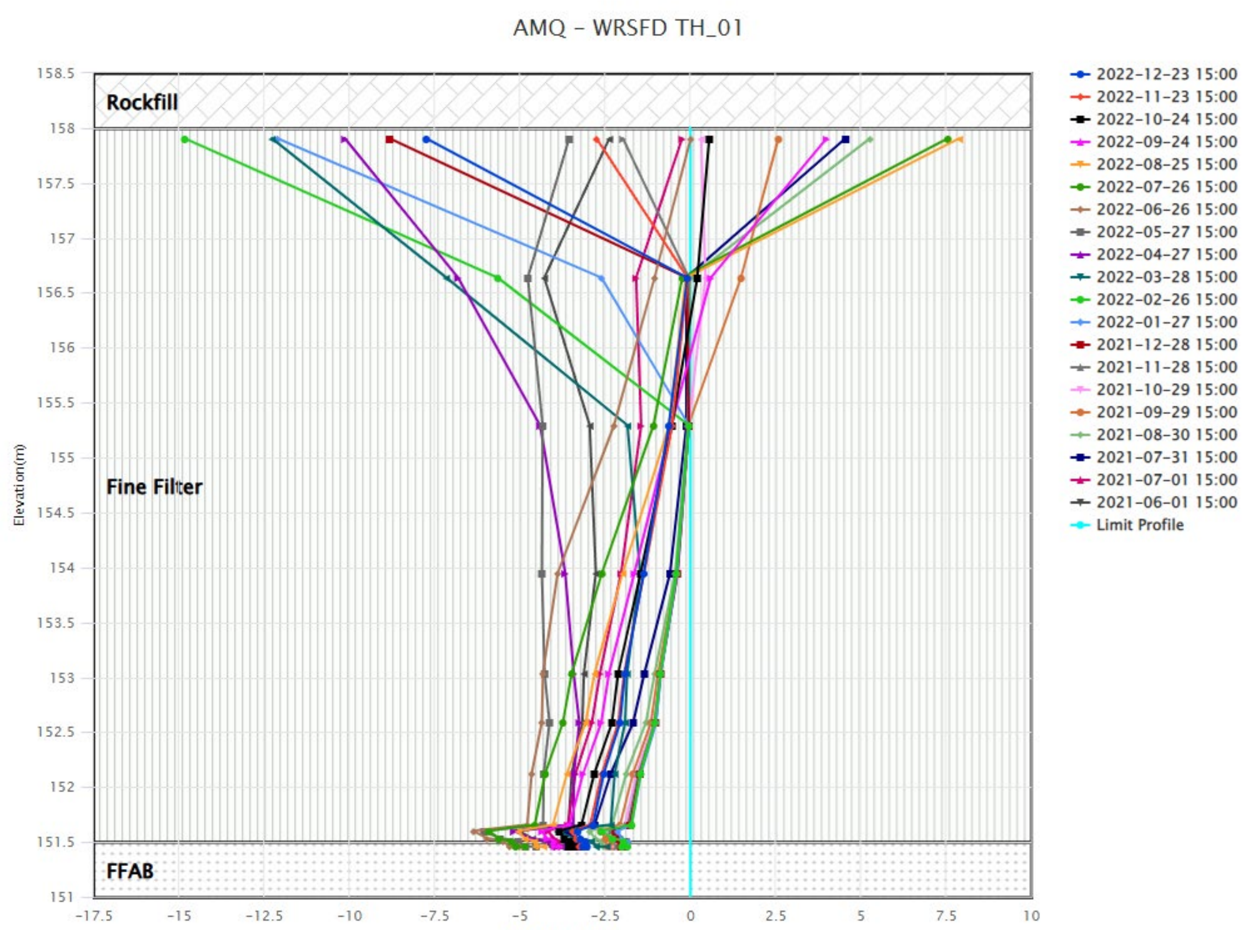


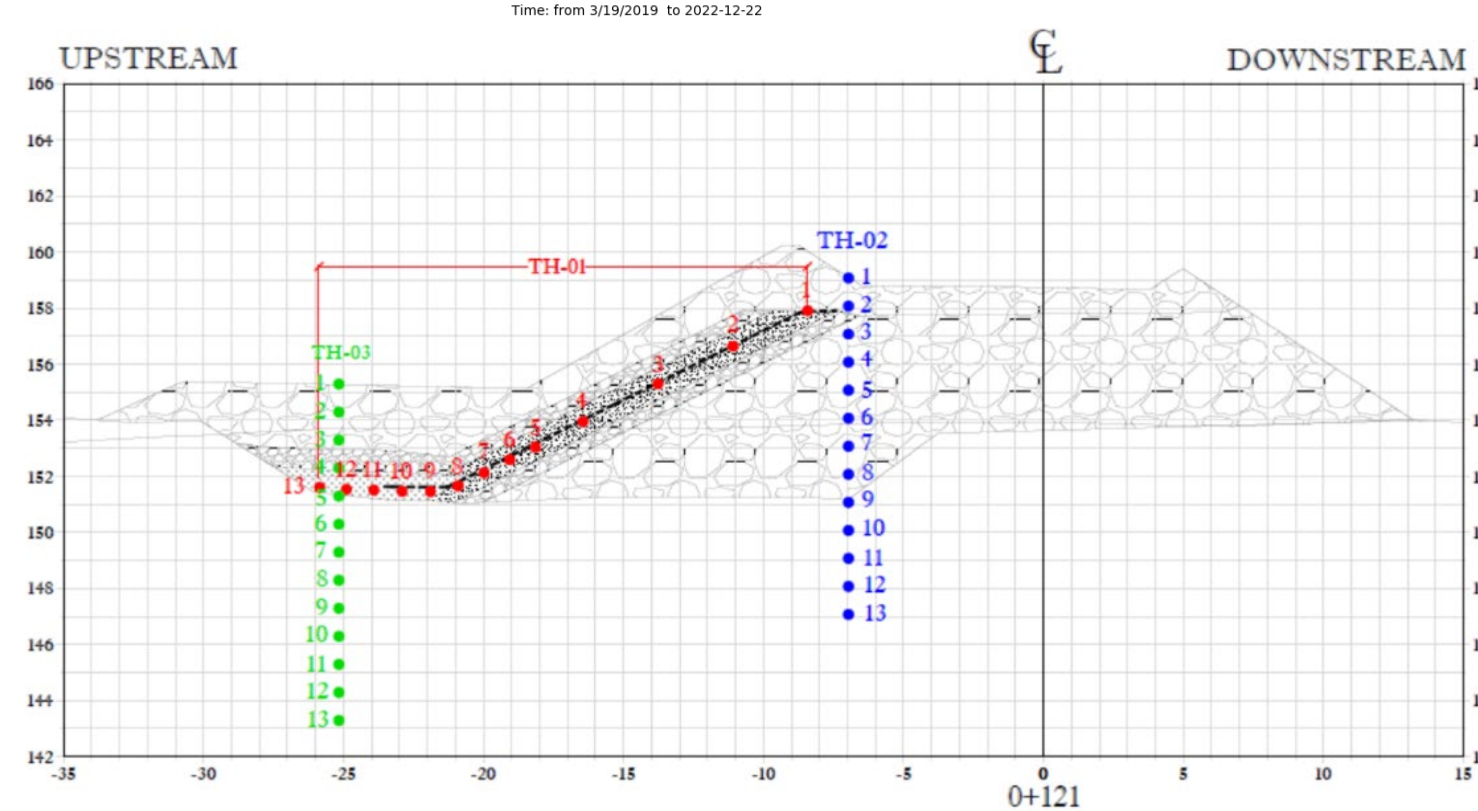


WRSFD TH01

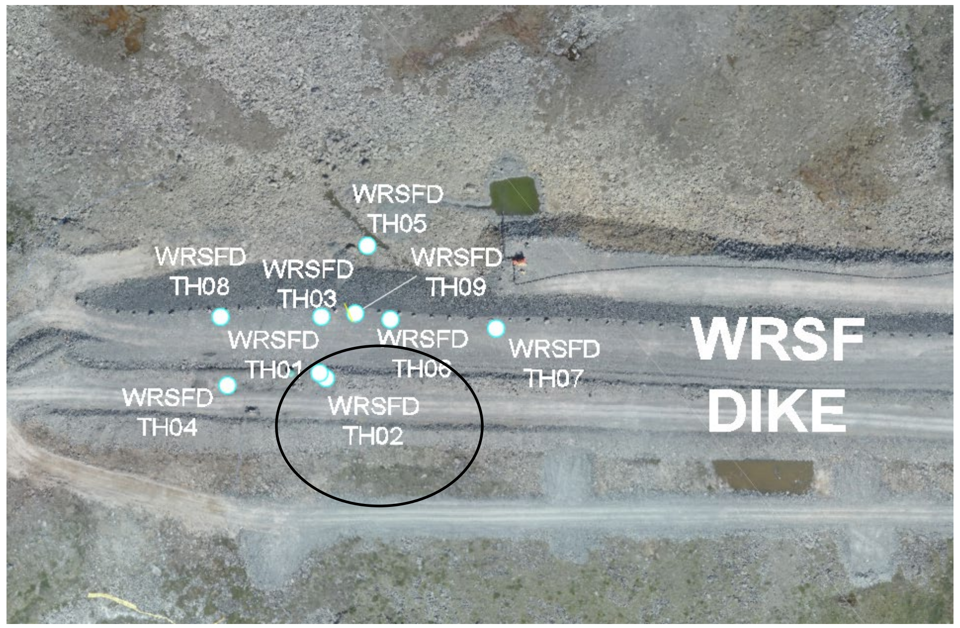

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

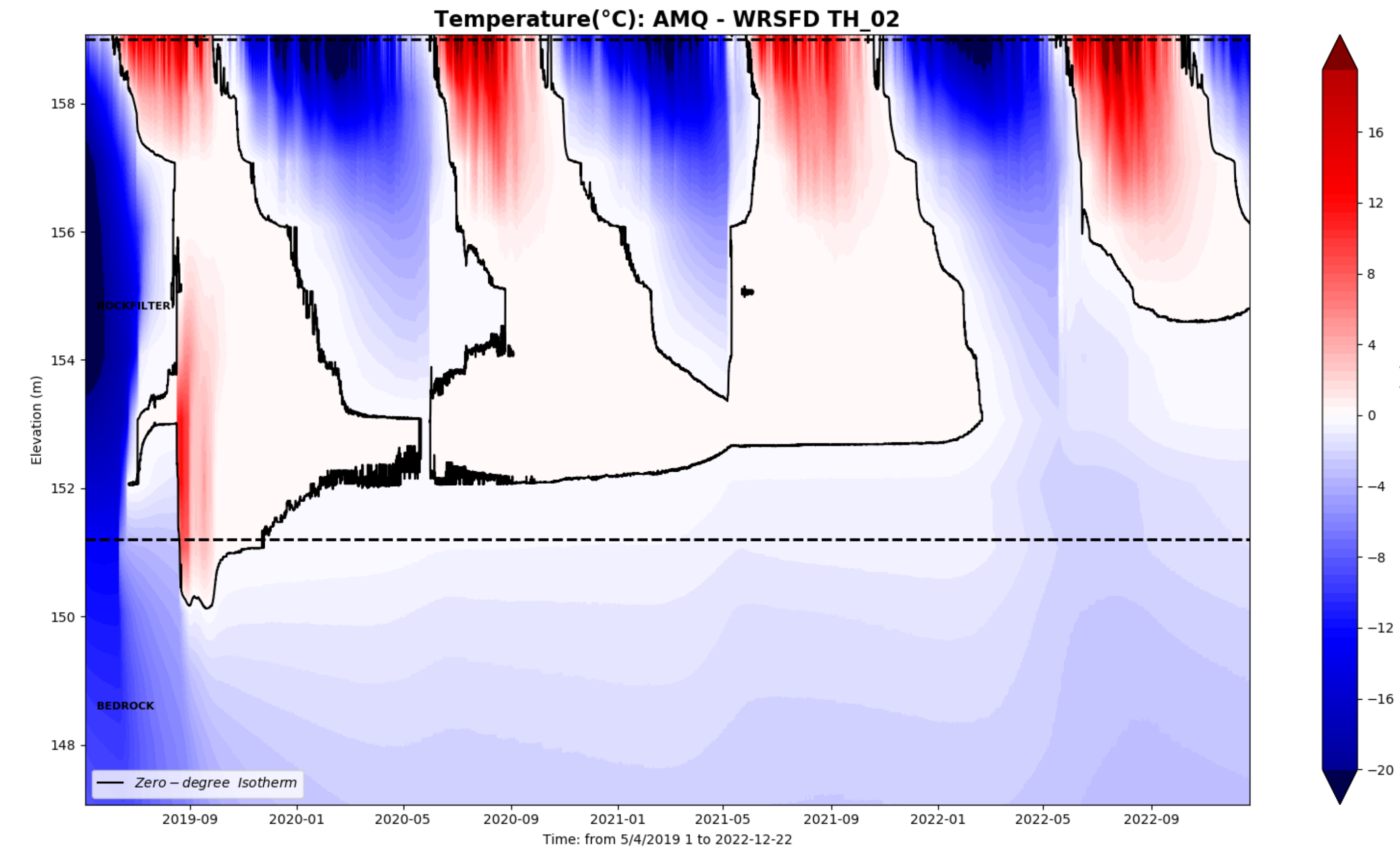

Temperature(°C): AMQ - WRSFD TH_01
Elevation (m)
Temperature(°C)
Zero – degree Isotherm
FINE FILTER
Time: from 3/19/2019 to 2022-12-22


AMQ – WRSFD TH_01
Rockfill
Fine Filter
FFAB
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-23 15:00
2022-10-24 15:00
2022-09-24 15:00
2022-08-25 15:00
2022-07-26 15:00
2022-06-26 15:00
2022-05-27 15:00
2022-04-27 15:00
2022-03-28 15:00
2022-02-26 15:00
2022-01-27 15:00
2021-12-28 15:00
2021-11-28 15:00
2021-10-29 15:00
2021-09-29 15:00
2021-08-30 15:00
2021-07-31 15:00
2021-07-01 15:00
2021-06-01 15:00
Limit Profile

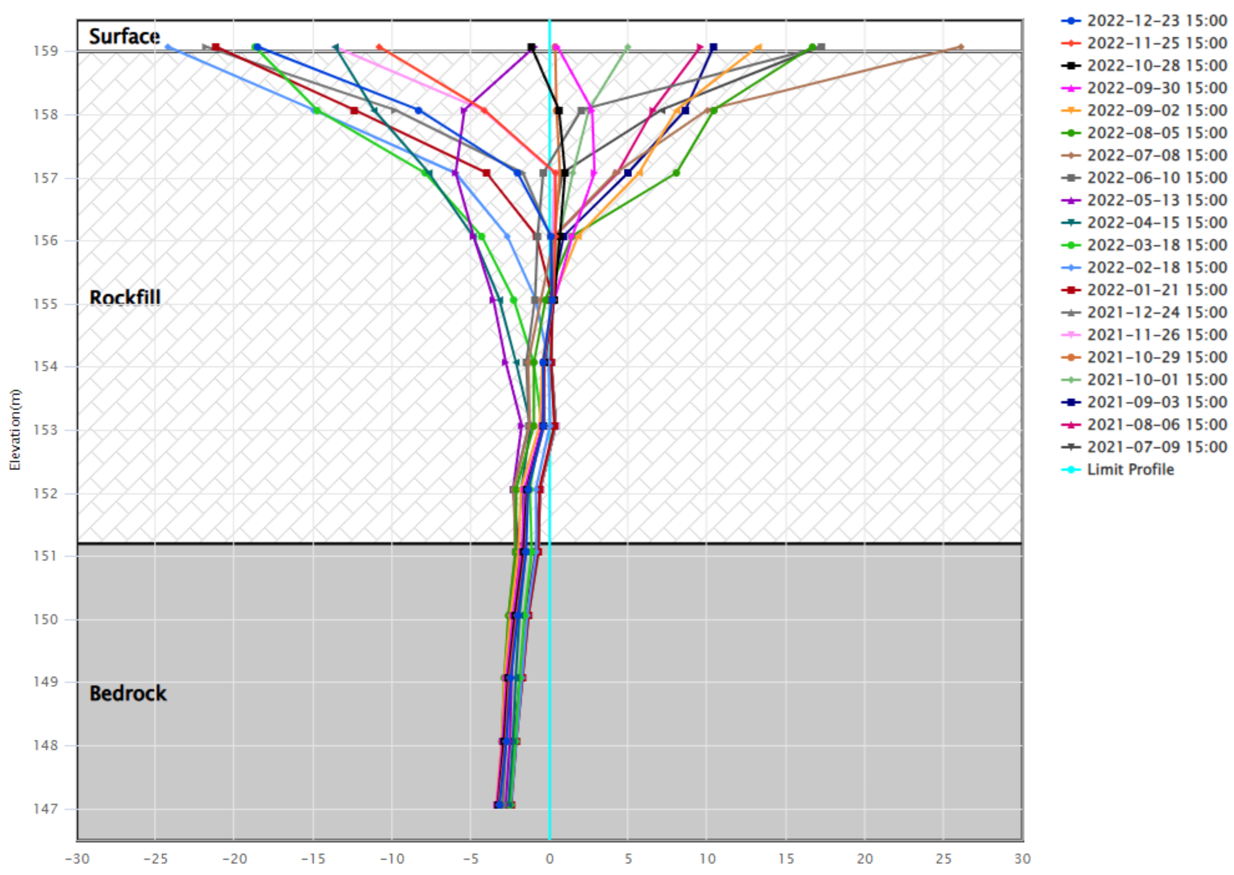

UPSTREAM
DOWNSTREAM
TH-01
TH-02
TH-03
0+121

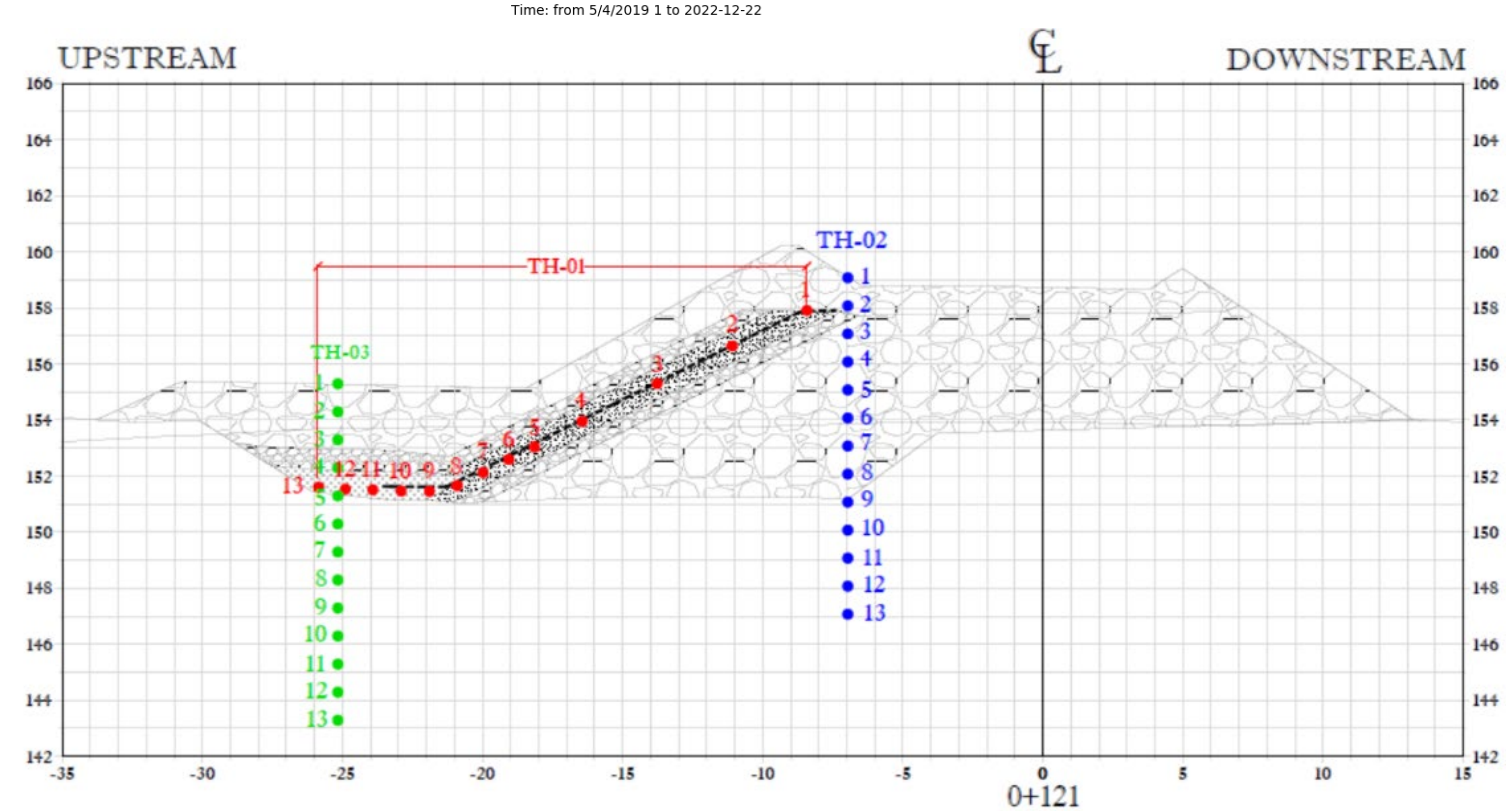
WRSFD TH02



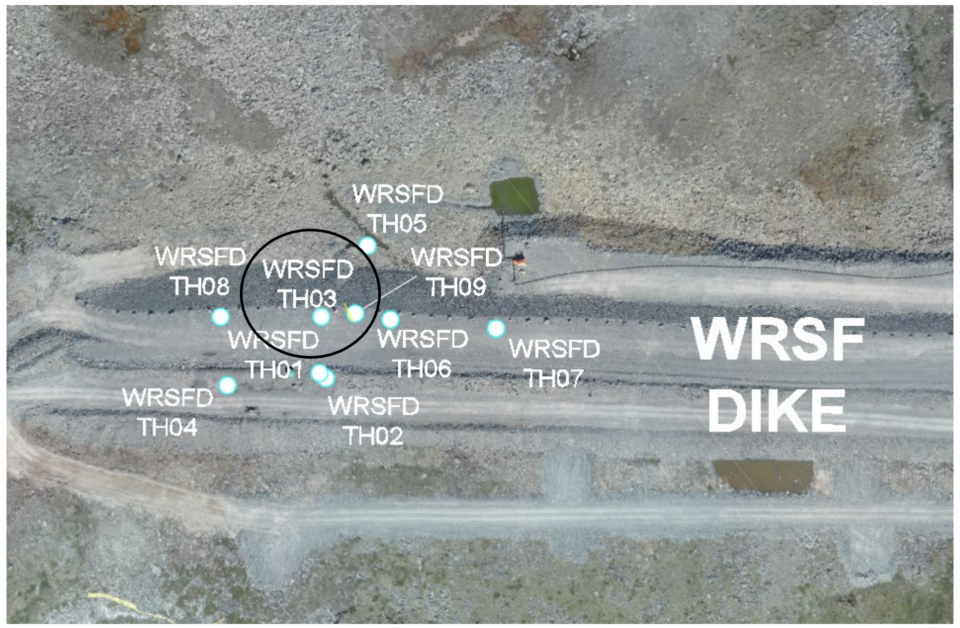


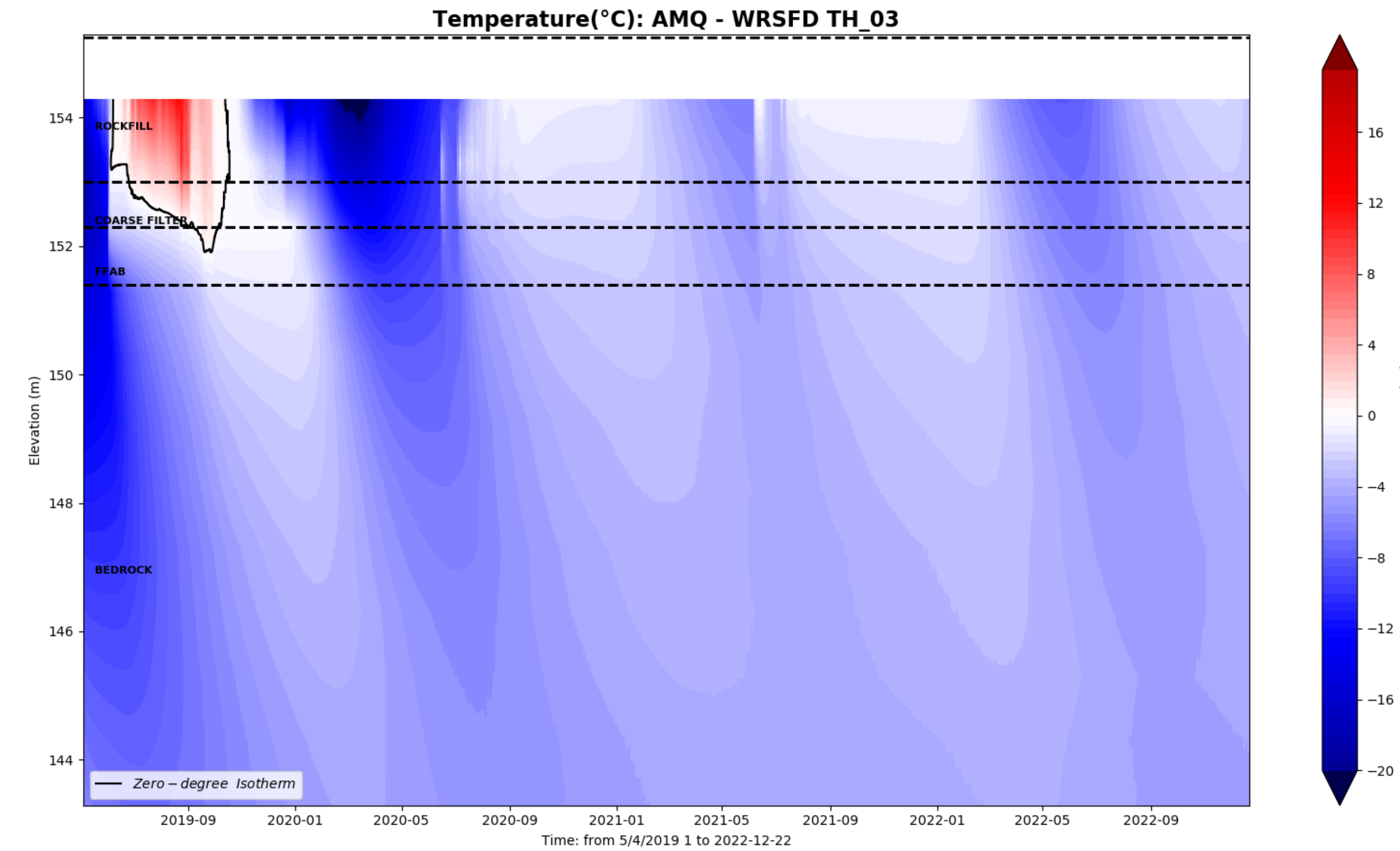
AMQ – WRSFD TH_02



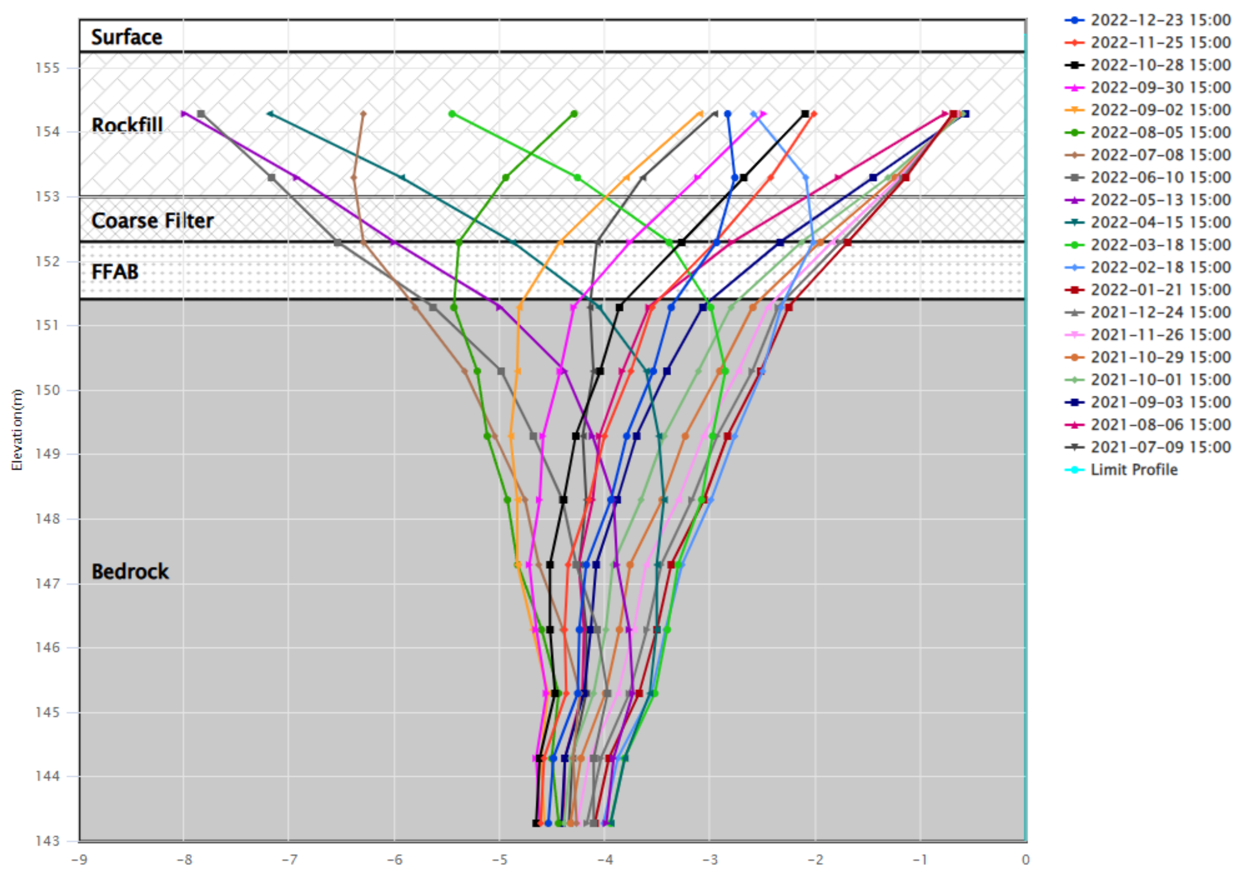


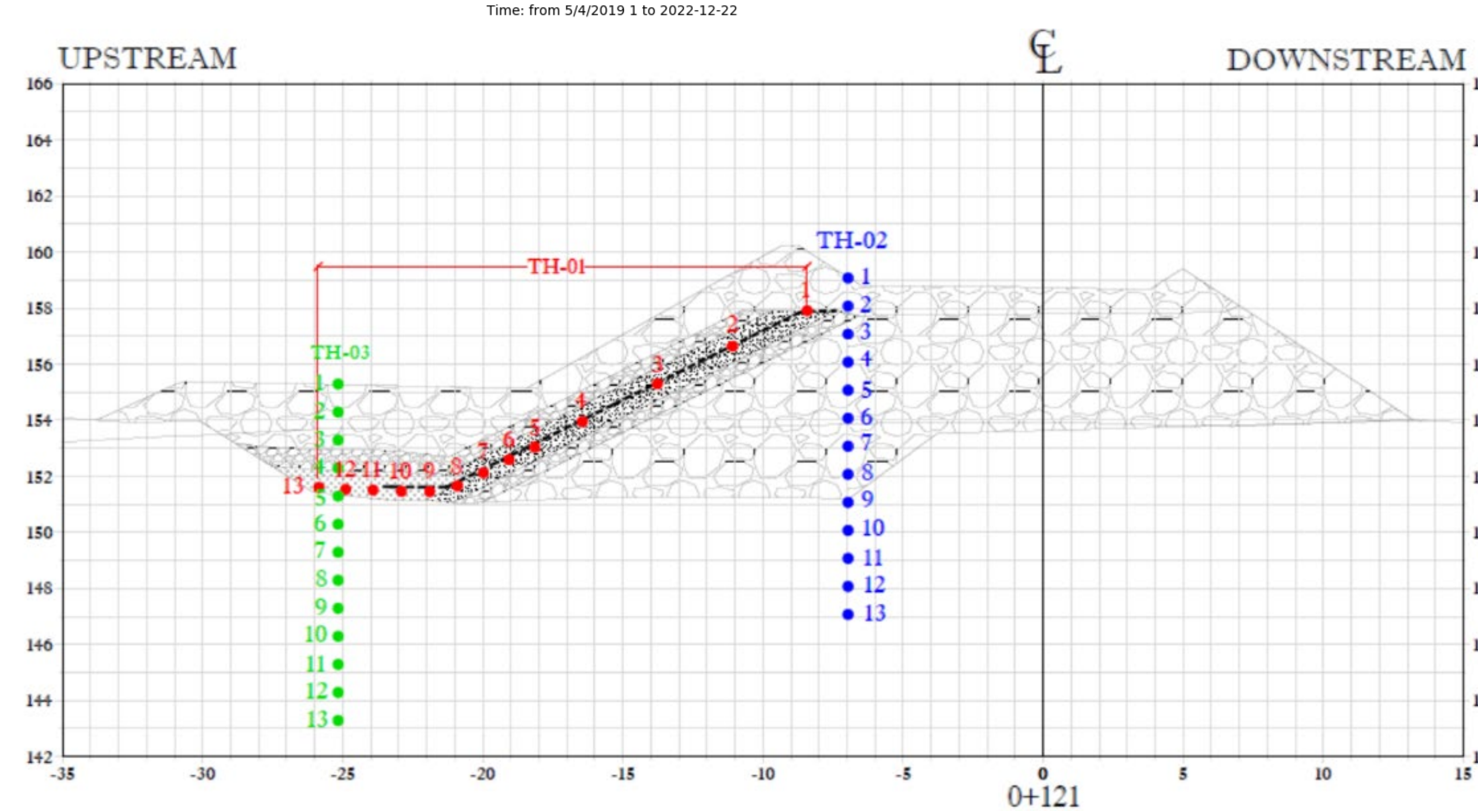
WRSFD TH03



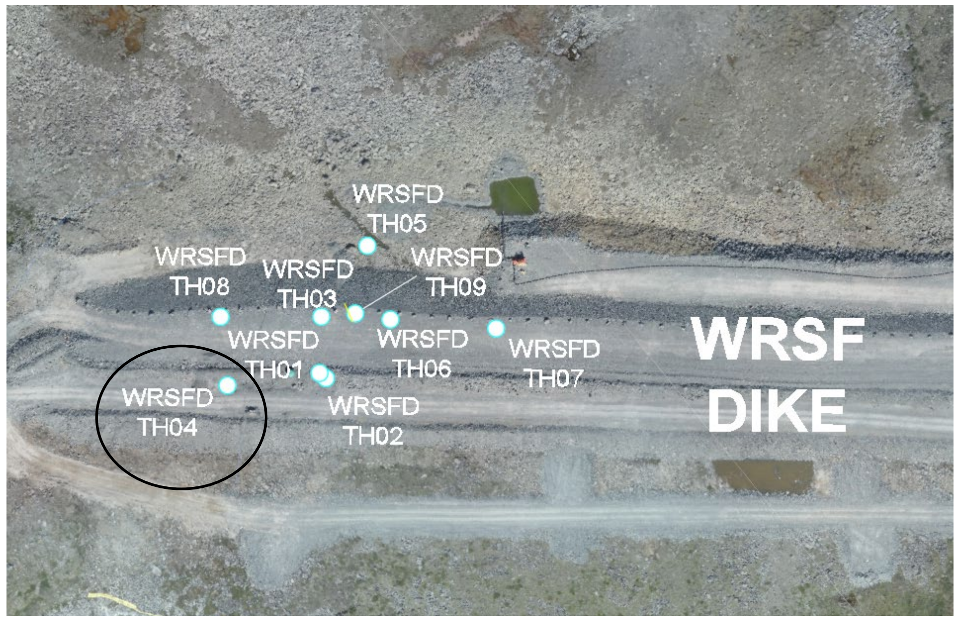


AMQ – WRSFD TH_03

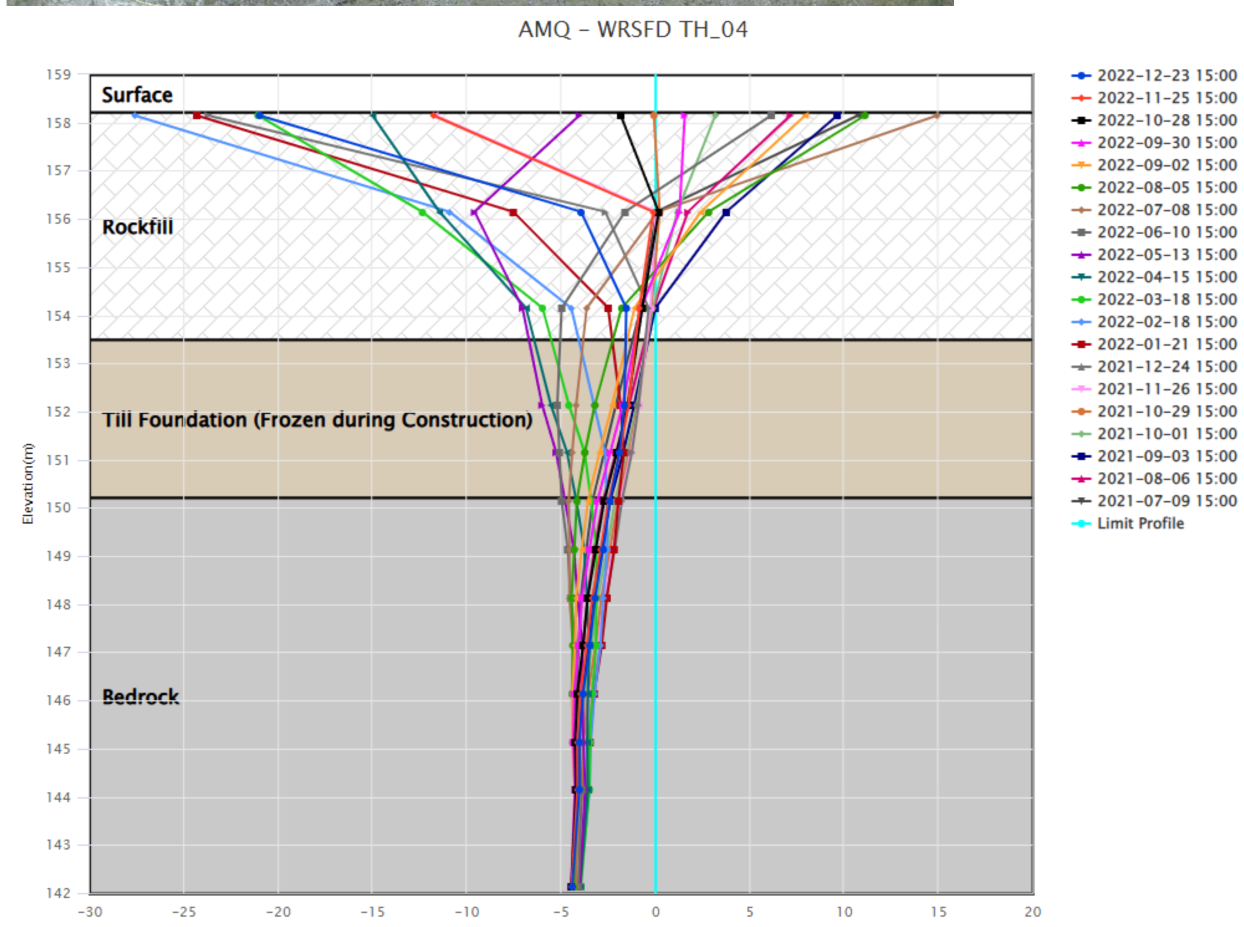




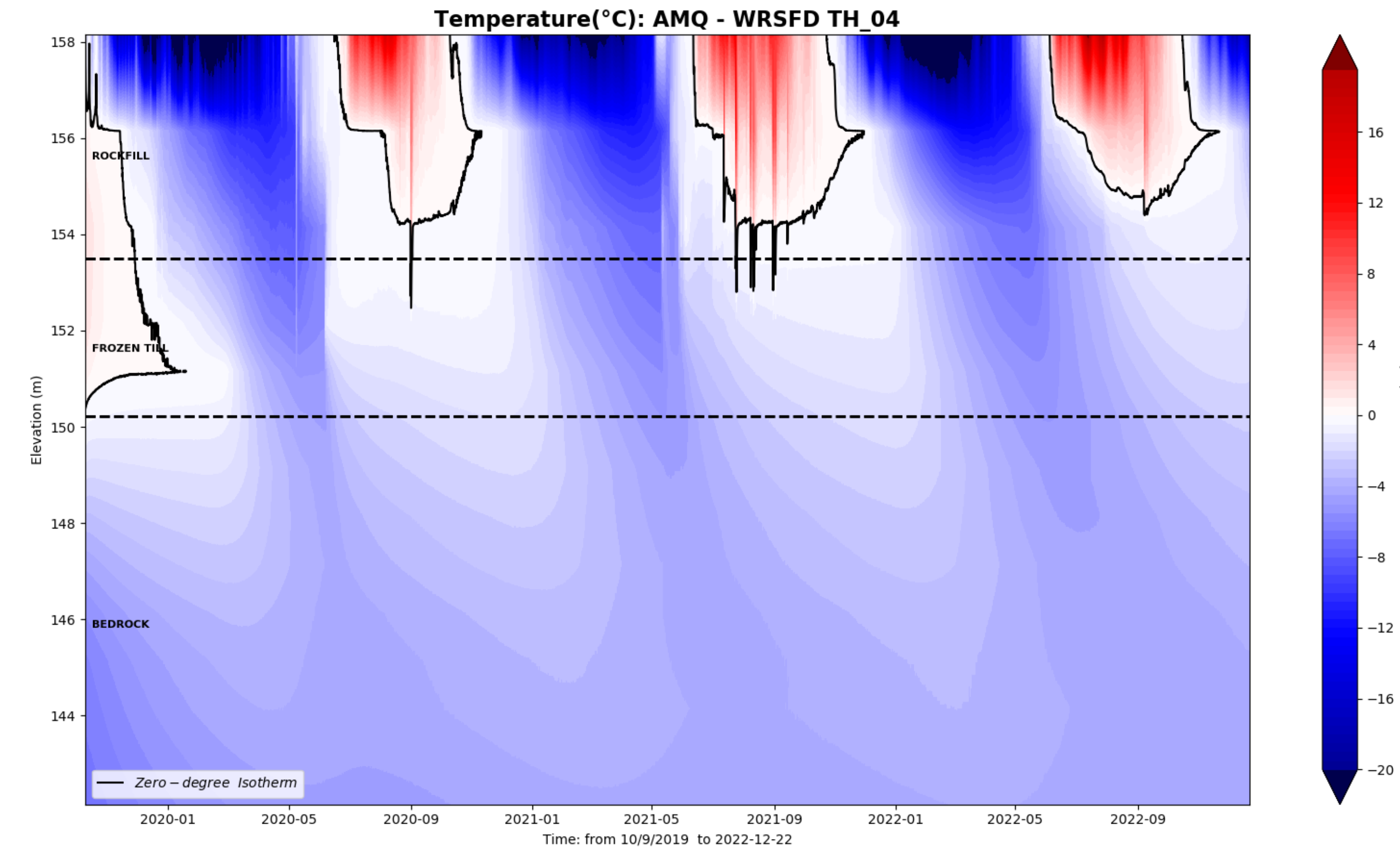
WRSFD TH04



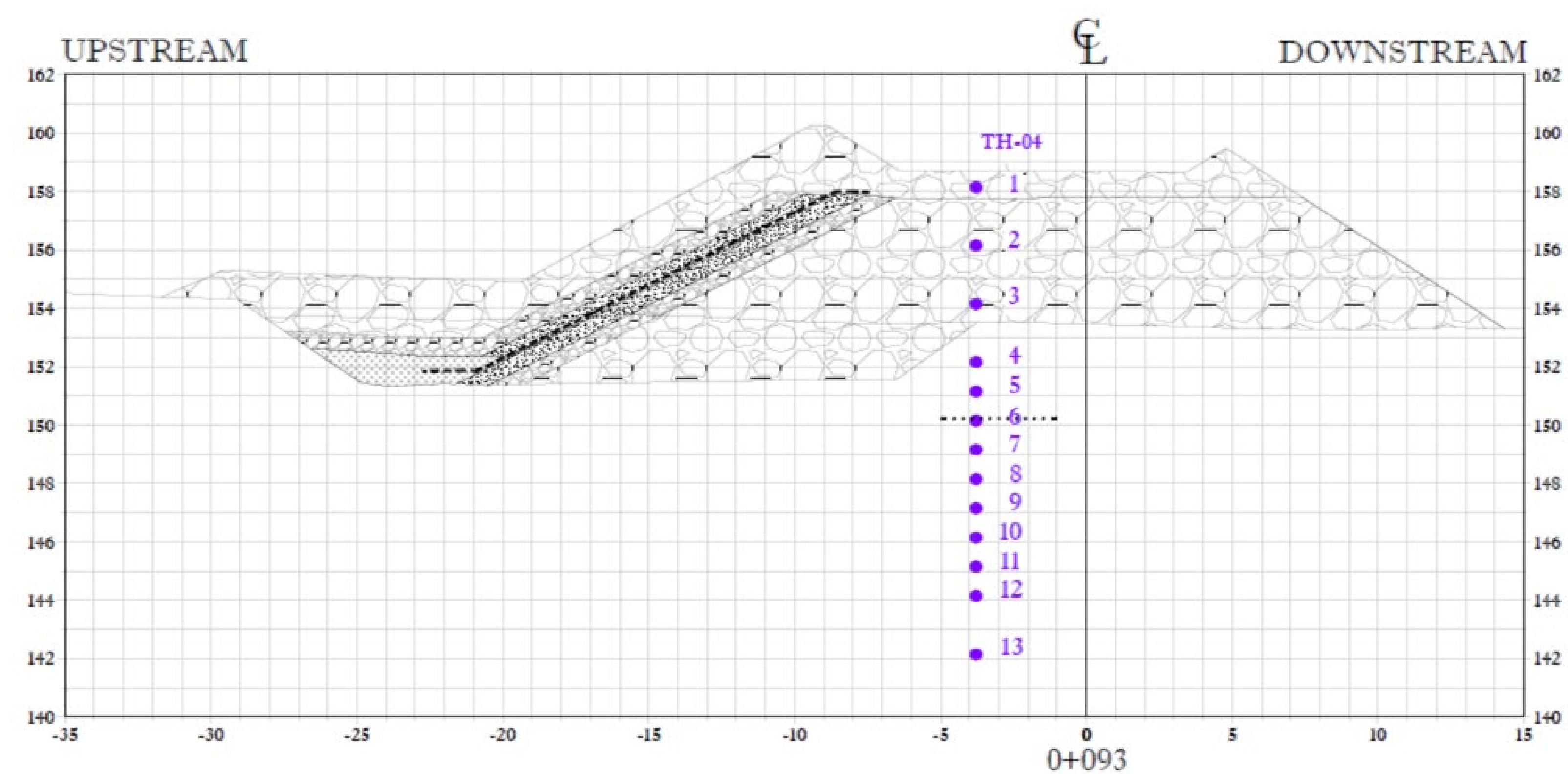
WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSF DIKE
WRSFD TH04
WRSFD TH02



AMQ – WRSFD TH_04
Surface
Rockfill
Till Foundation (Frozen during Construction)
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

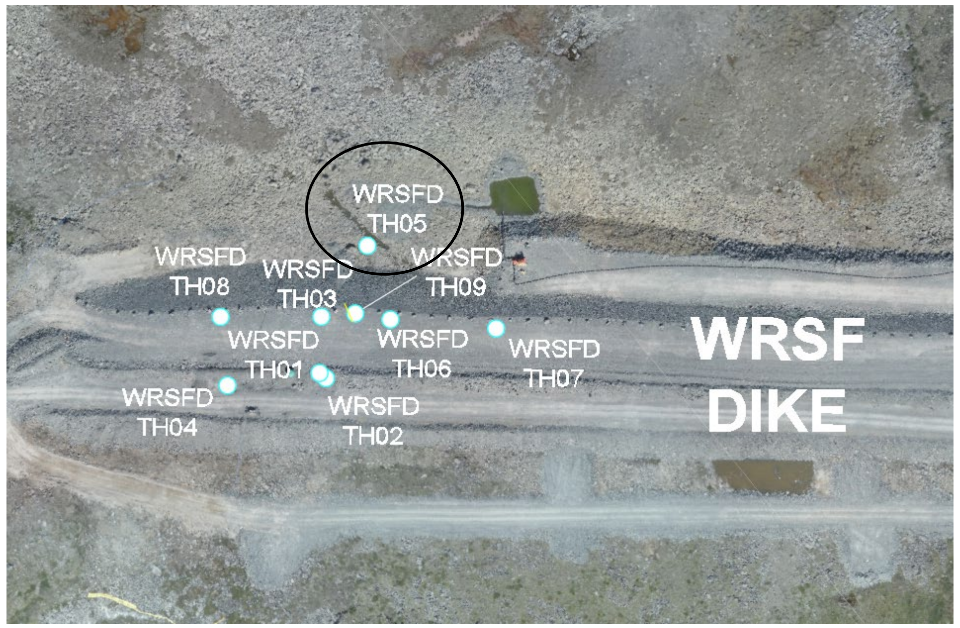


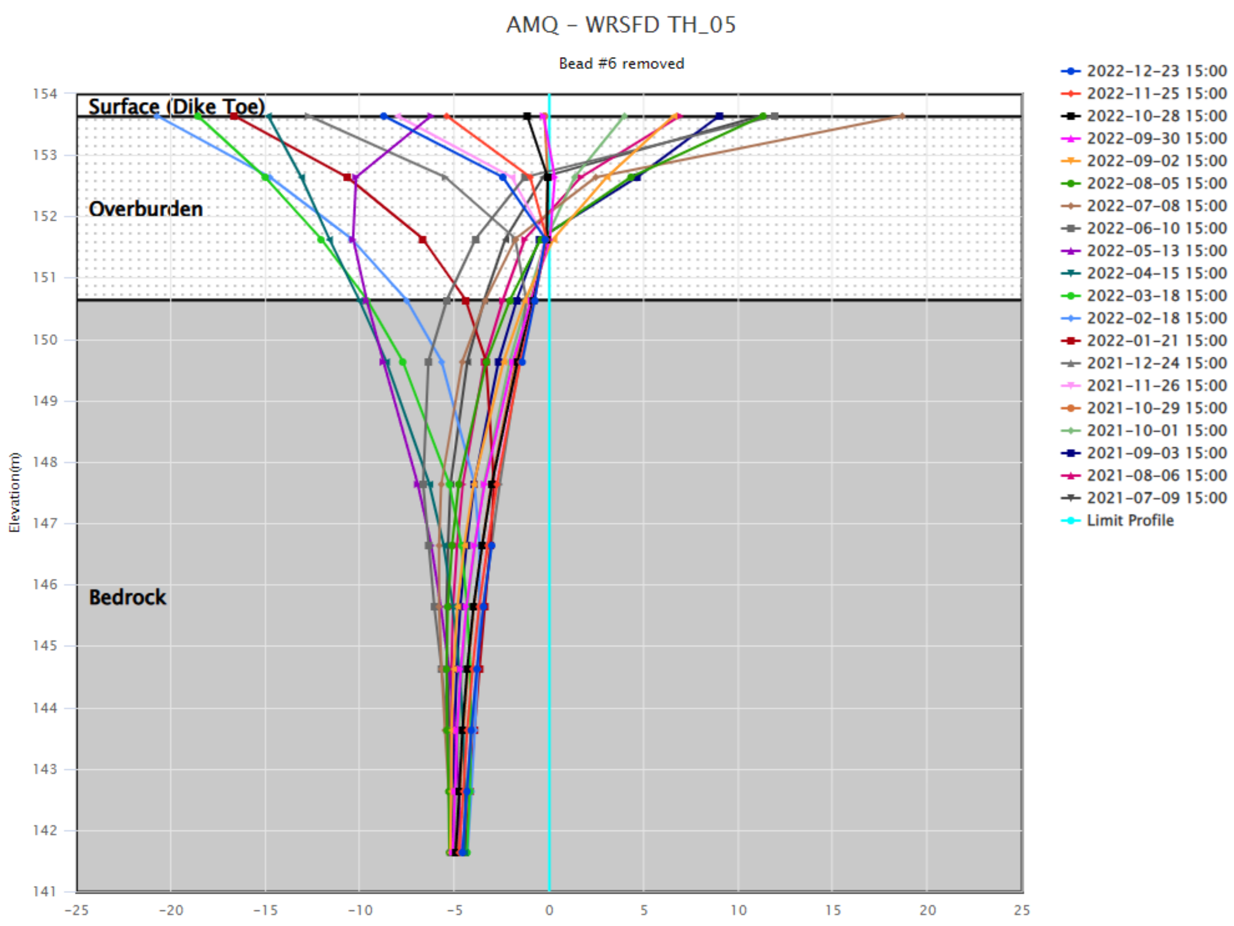
Temperature(°C): AMQ - WRSFD TH_04
ROCKFILL
FROZEN TILL
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 10/9/2019 to 2022-12-22
Temperature(°C)

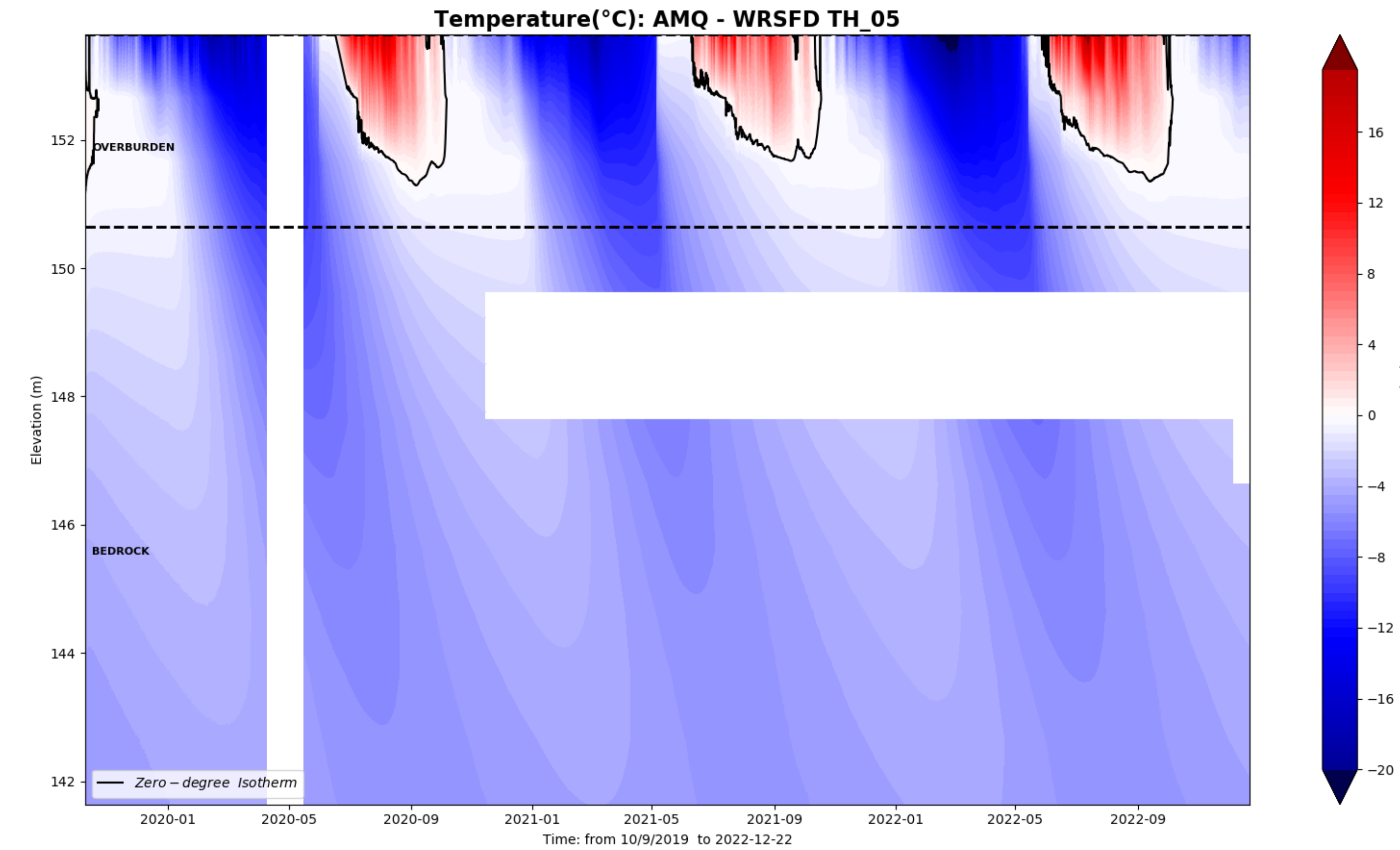


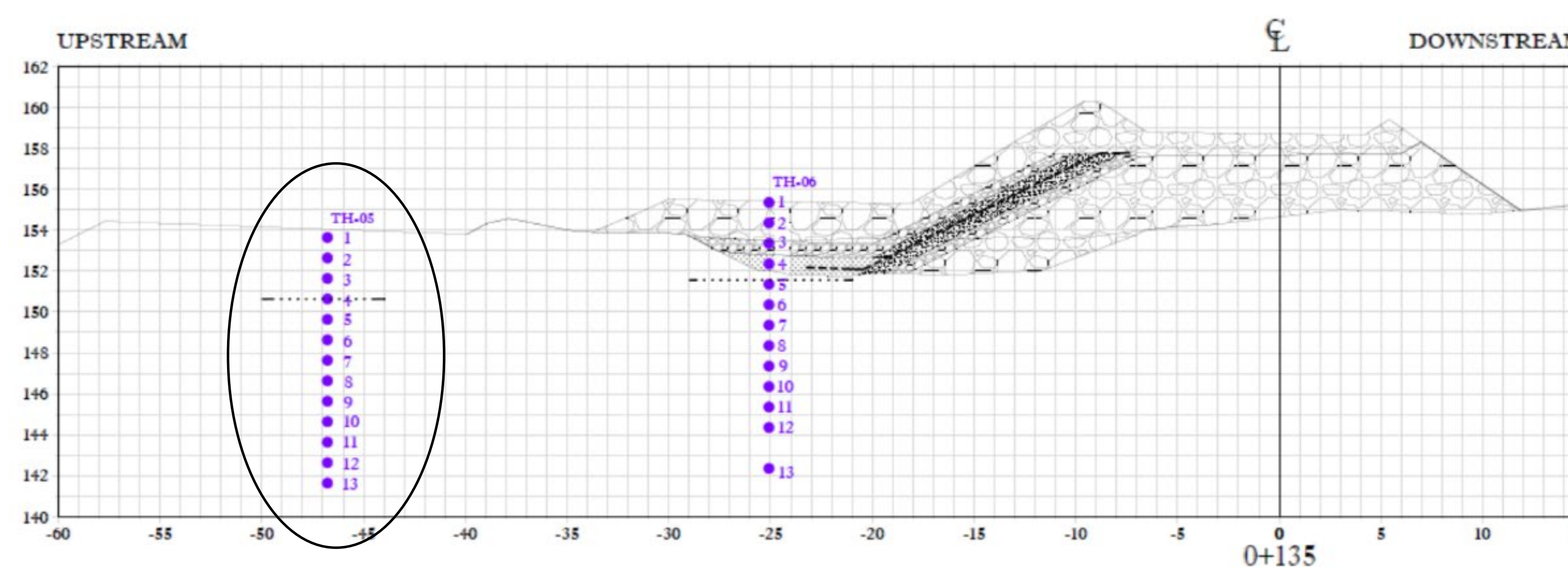
UPSTREAM
DOWNSTREAM
TH-04
0+093

WRSFD TH05

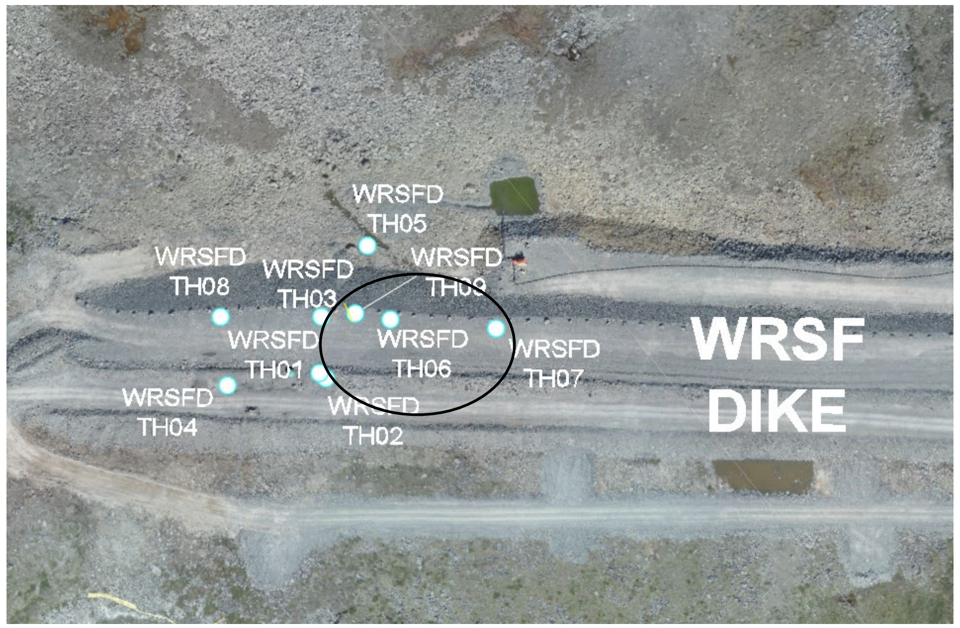

WRSFD
TH05
WRSFD
TH08
WRSFD
TH03
WRSFD
TH09
WRSFD
TH01
WRSFD
TH06
WRSFD
TH07
WRSFD
TH04
WRSFD
TH02
WRSF
DIKE

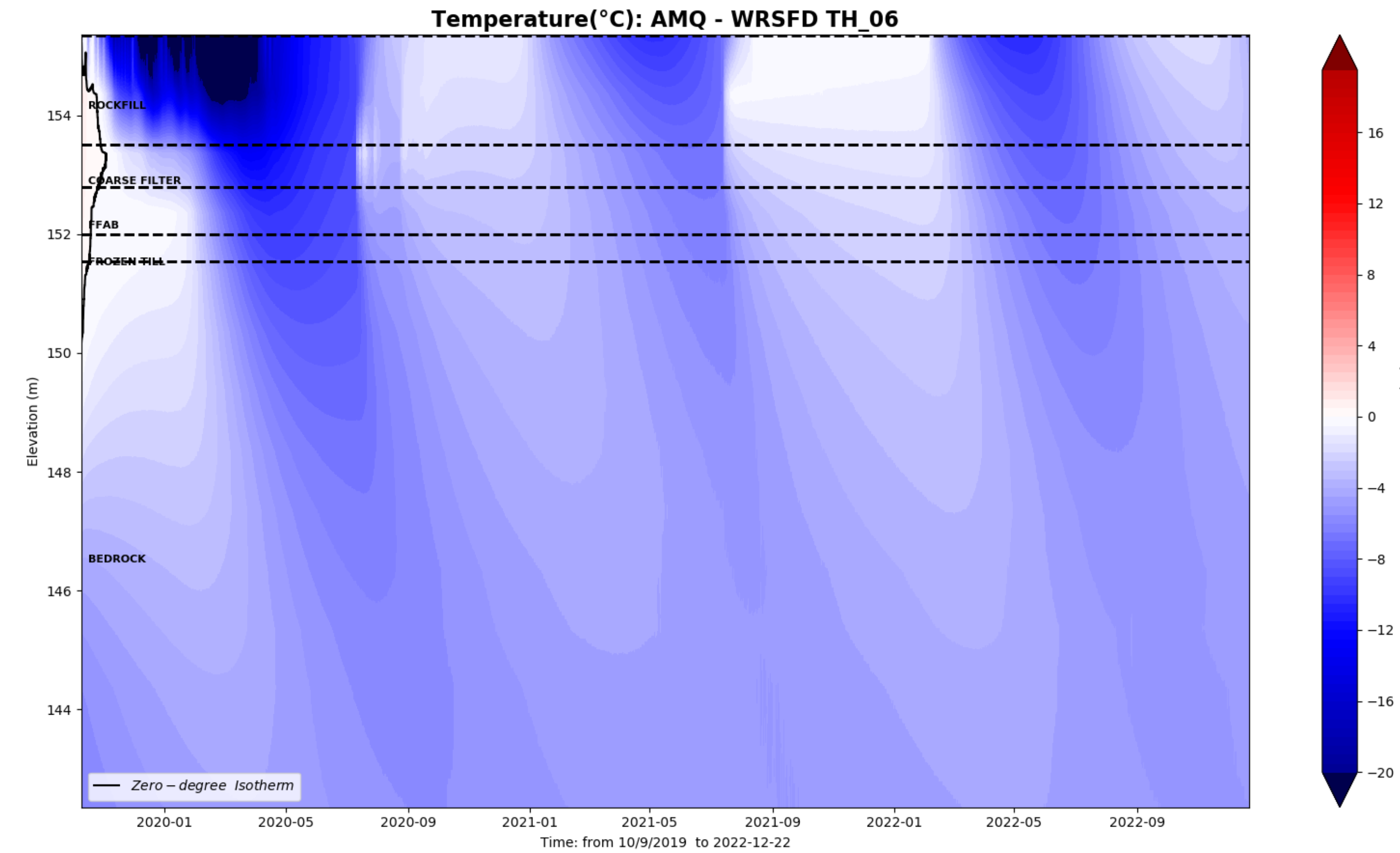

AMQ – WRSFD TH_05
Bead #6 removed
Surface (Dike Toe)
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

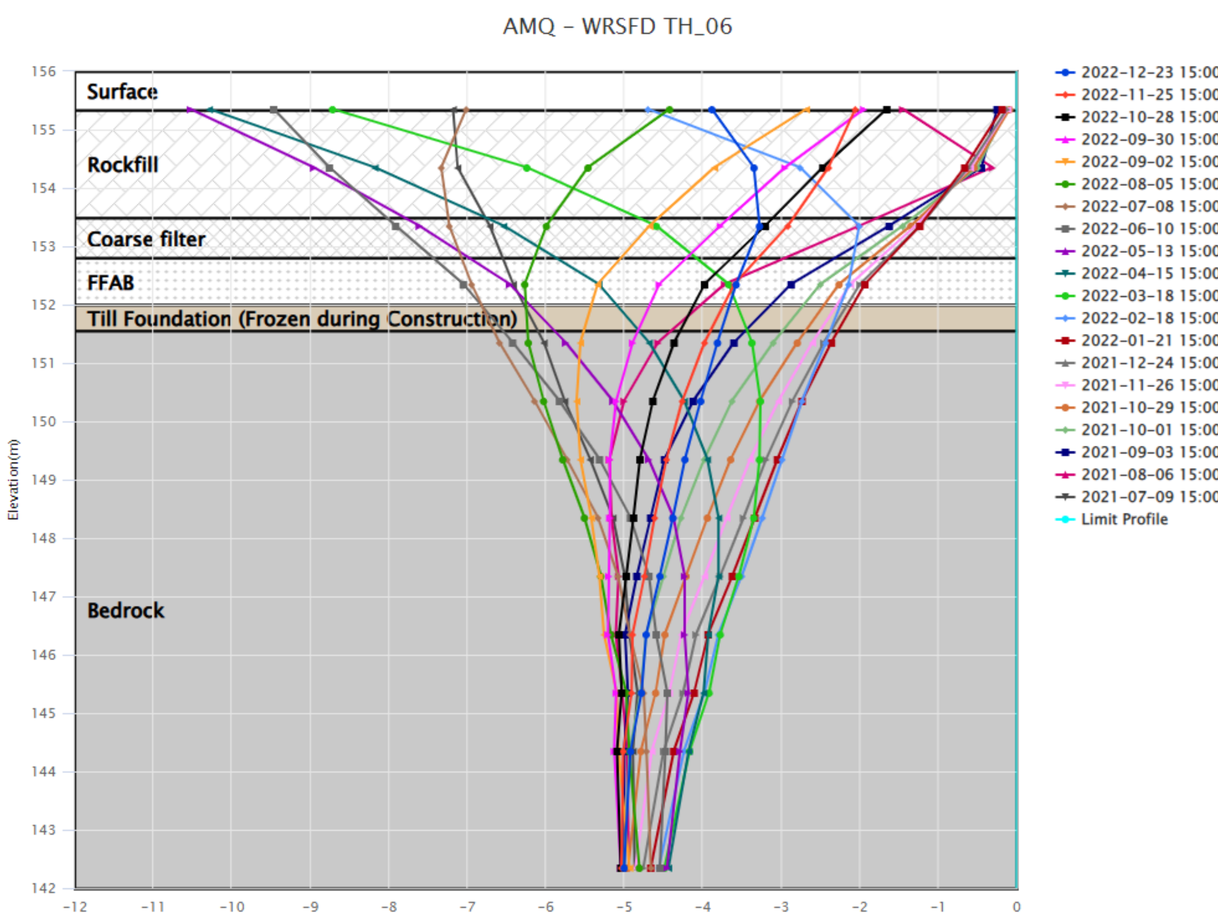

Temperature(°C): AMQ - WRSFD TH_05
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 10/9/2019 to 2022-12-22
Temperature(°C)

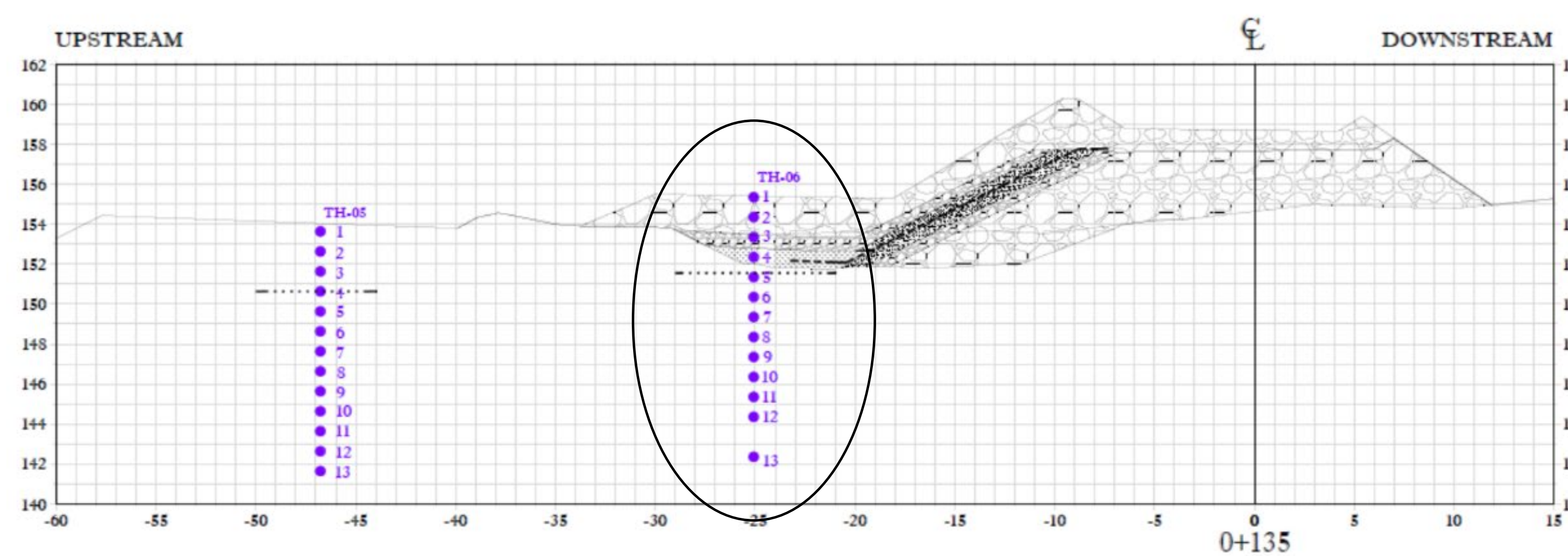

UPSTREAM
DOWNSTREAM
TH-05
TH-06
0+135

WRSFD TH06

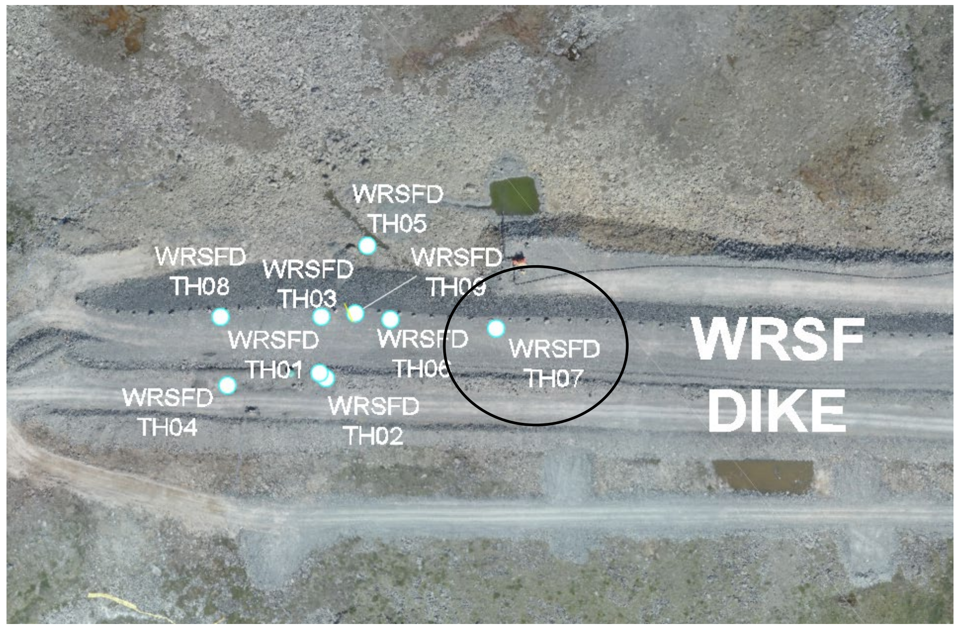

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

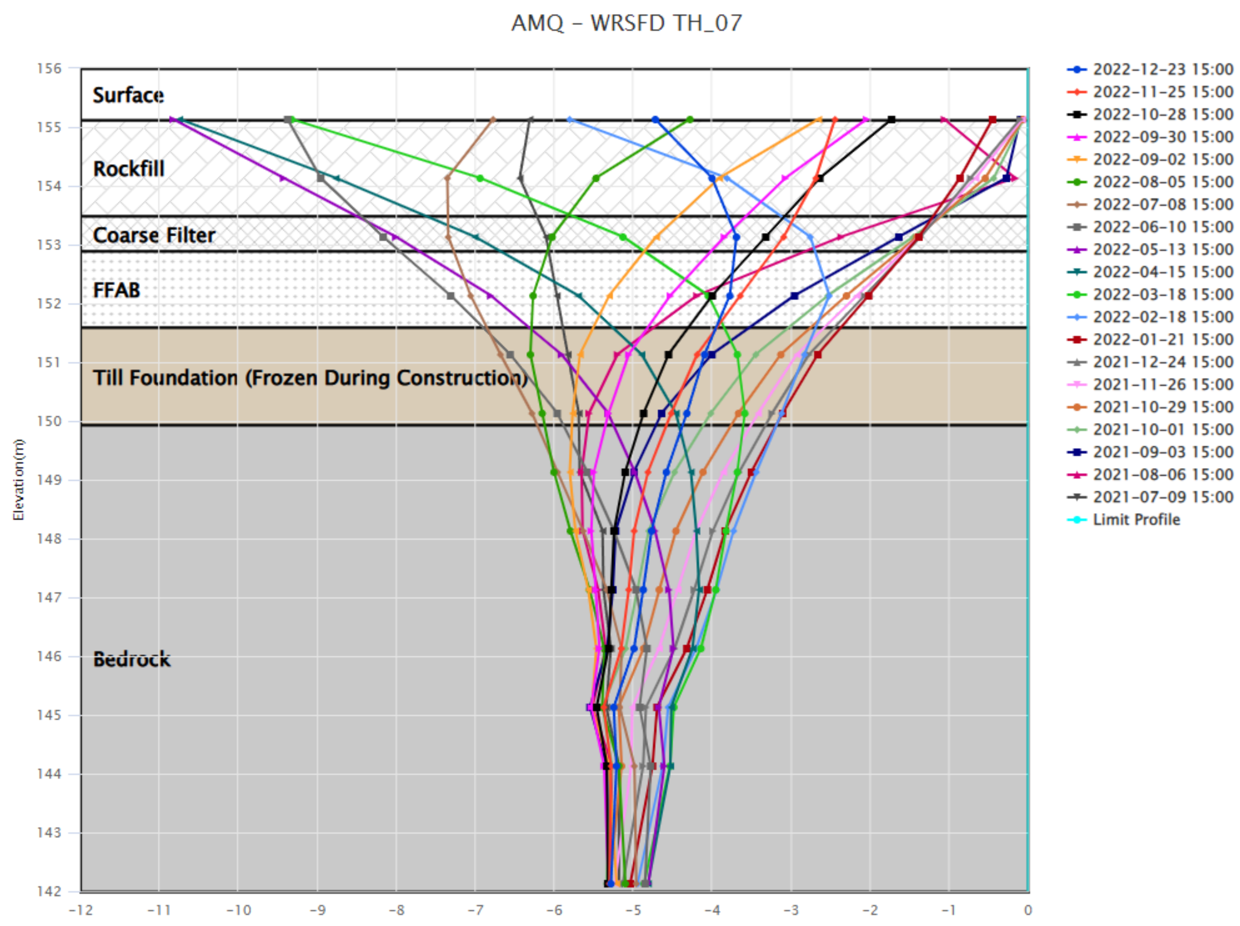

Temperature(°C): AMQ - WRSFD TH_06
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 10/9/2019 to 2022-12-22
Temperature(°C)

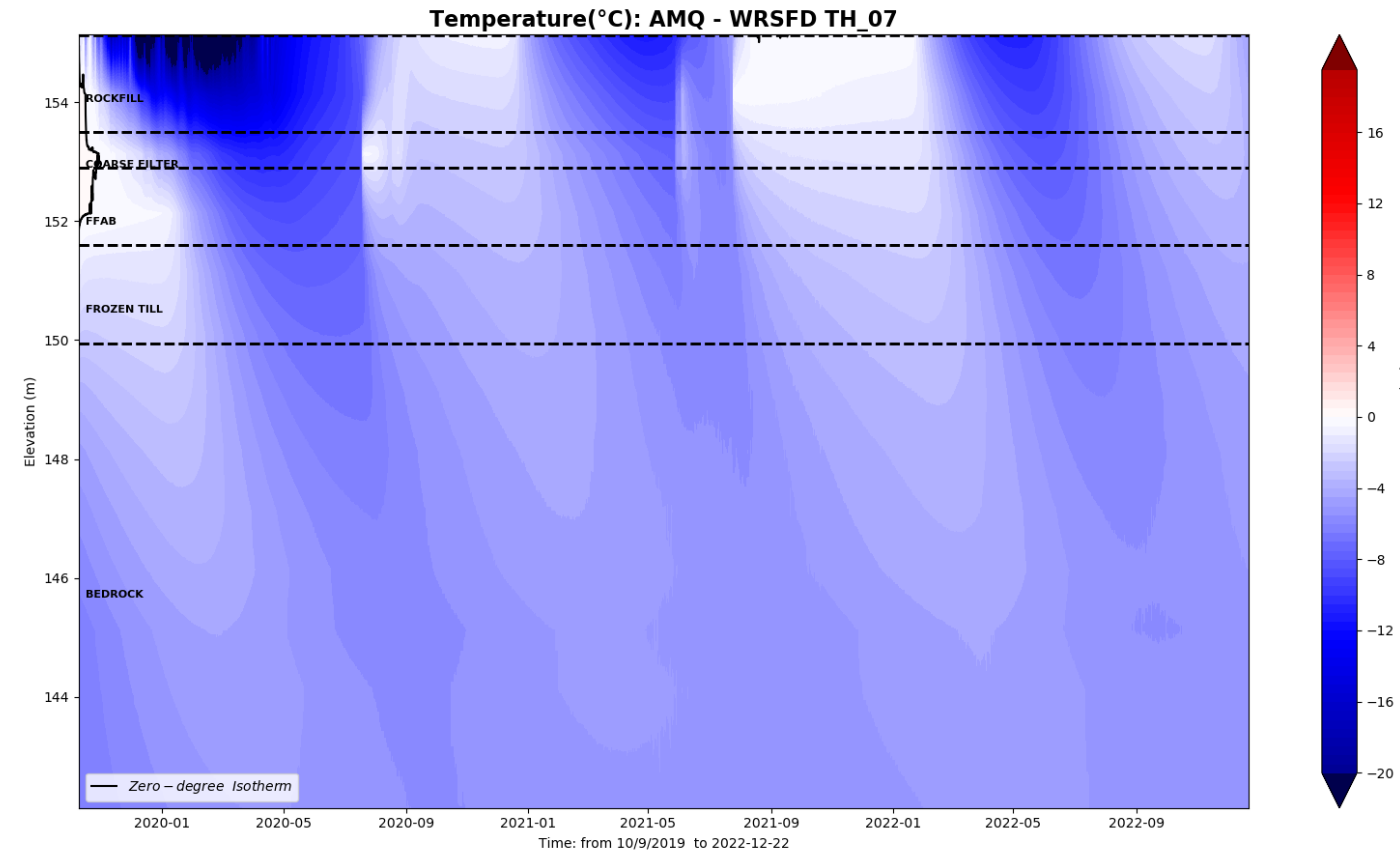

AMQ – WRSFD TH_06
Surface
Rockfill
Coarse filter
FFAB
Till Foundation (Frozen during Construction)
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

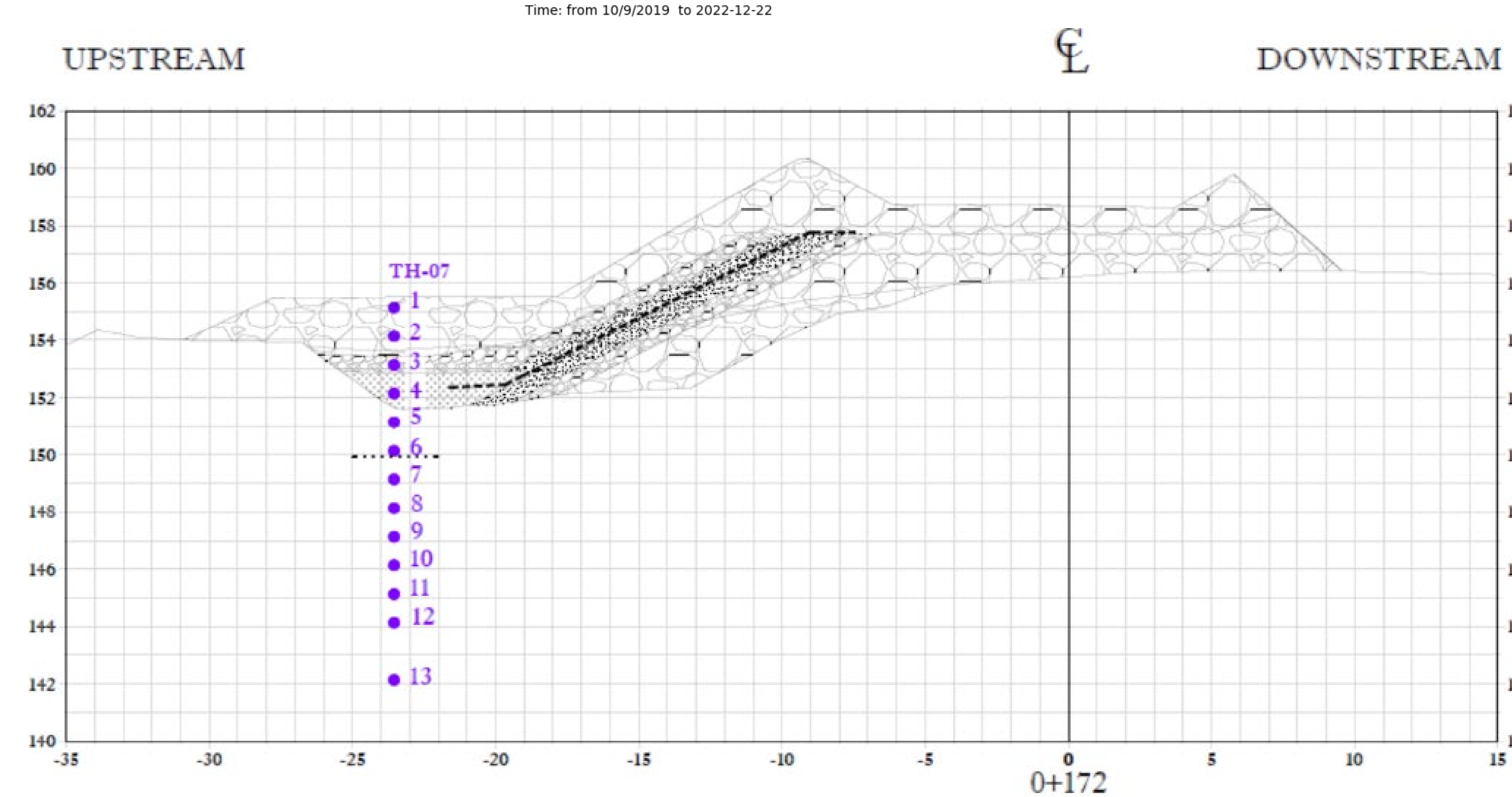

UPSTREAM
DOWNSTREAM
TH-05
TH-06
0+135

WRSFD TH07

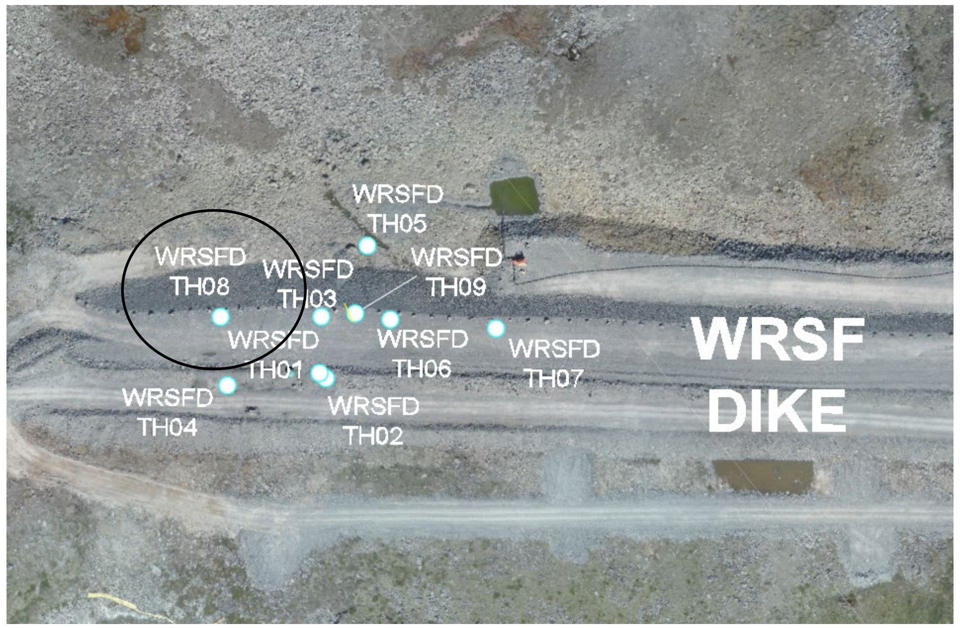

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE


AMQ – WRSFD TH_07
Surface
Rockfill
Coarse Filter
FFAB
Till Foundation (Frozen During Construction)
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

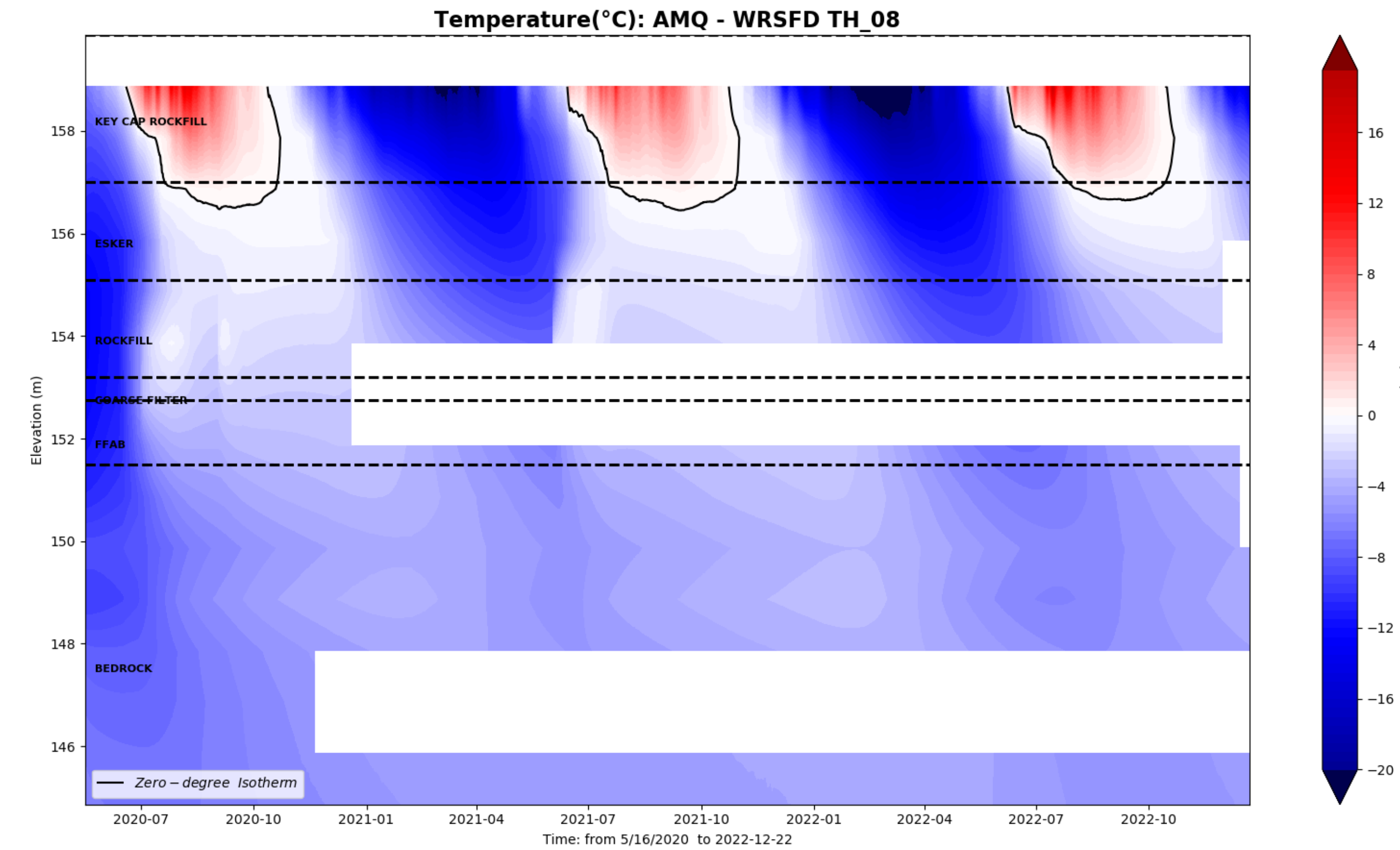

Temperature(°C): AMQ - WRSFD TH_07
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 10/9/2019 to 2022-12-22
Temperature(°C)


UPSTREAM
DOWNSTREAM
TH-07
0+172

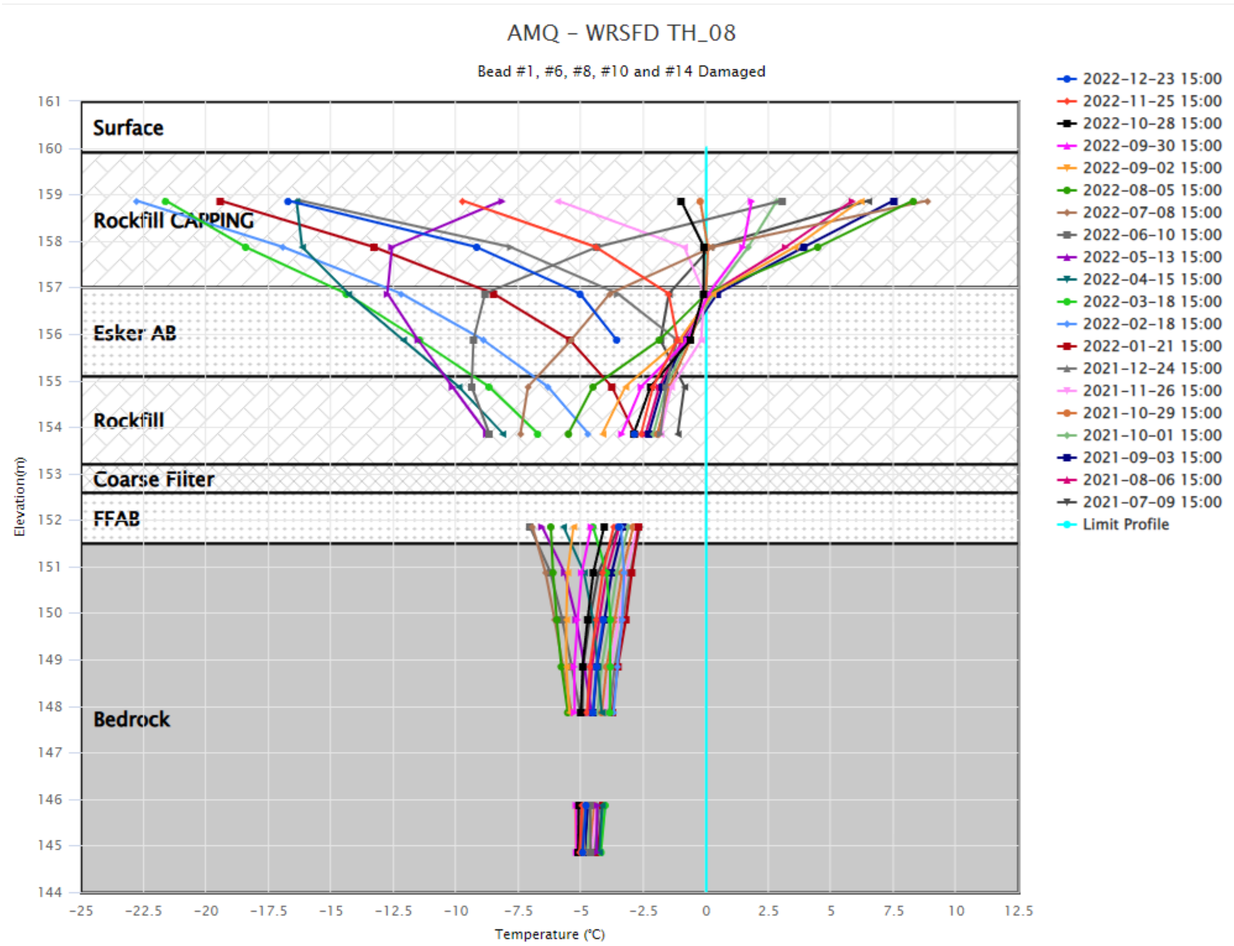
WRSFD TH08



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_08
KEY CAP ROCKFILL
ESKER
ROCKFILL
COARSE FILTER
FFAB
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/16/2020 to 2022-12-22



AMQ - WRSFD TH_08
Bead #1, #6, #8, #10 and #14 Damaged
Surface
Rockfill CAPPING
Esker AB
Rockfill
Coarse Filter
FFAB
Bedrock
Elevation(m)
Temperature (C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
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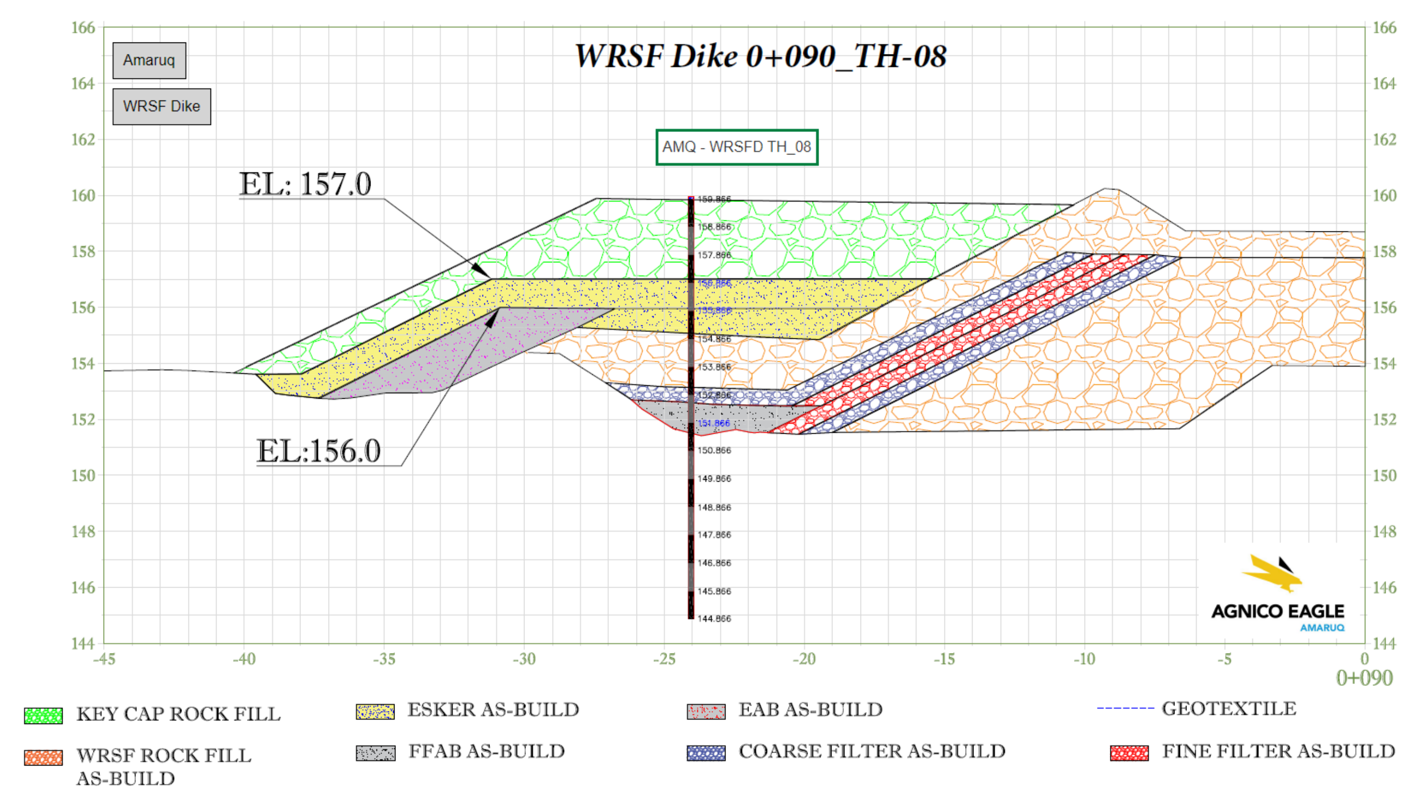
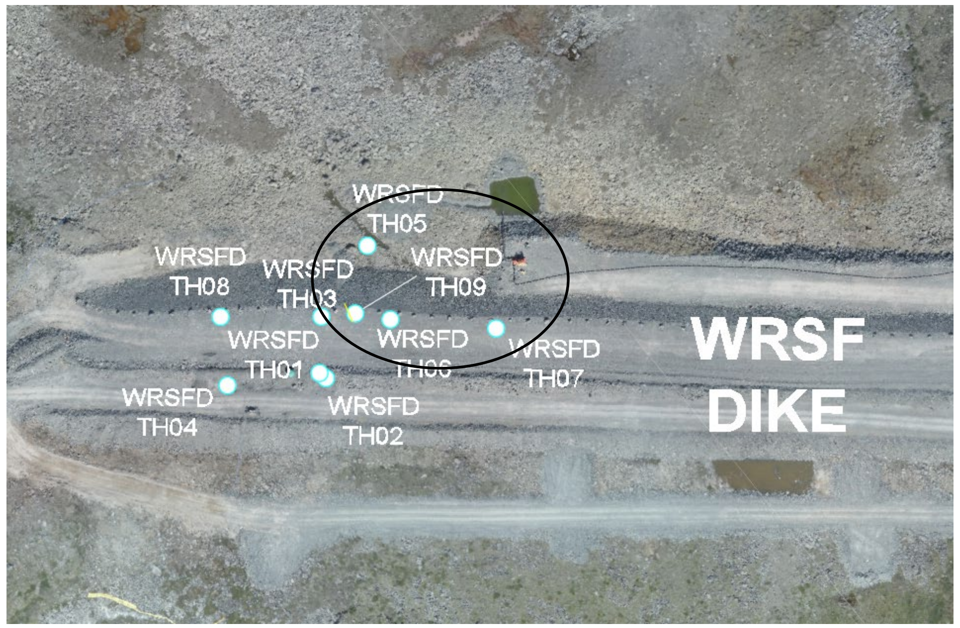
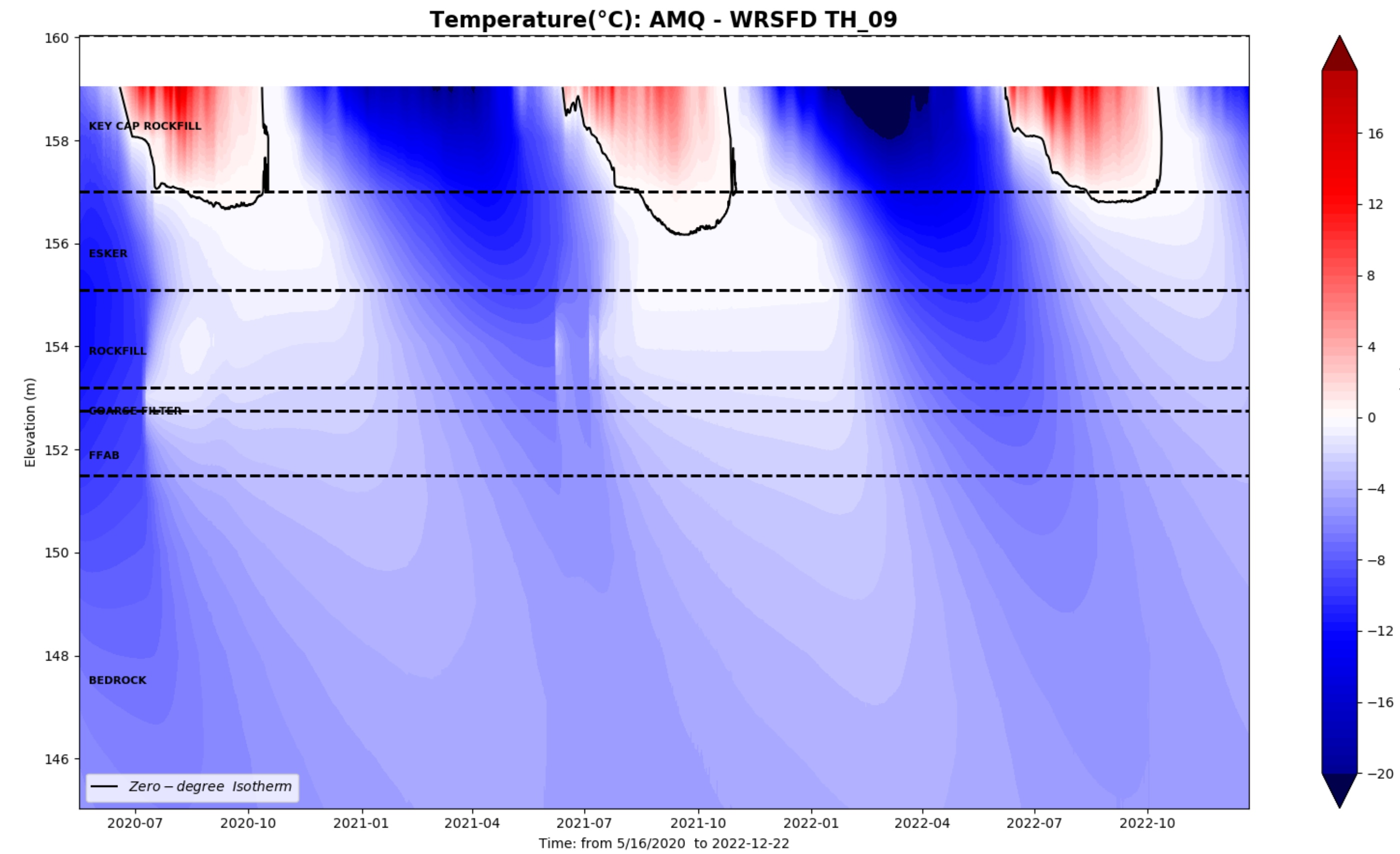
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

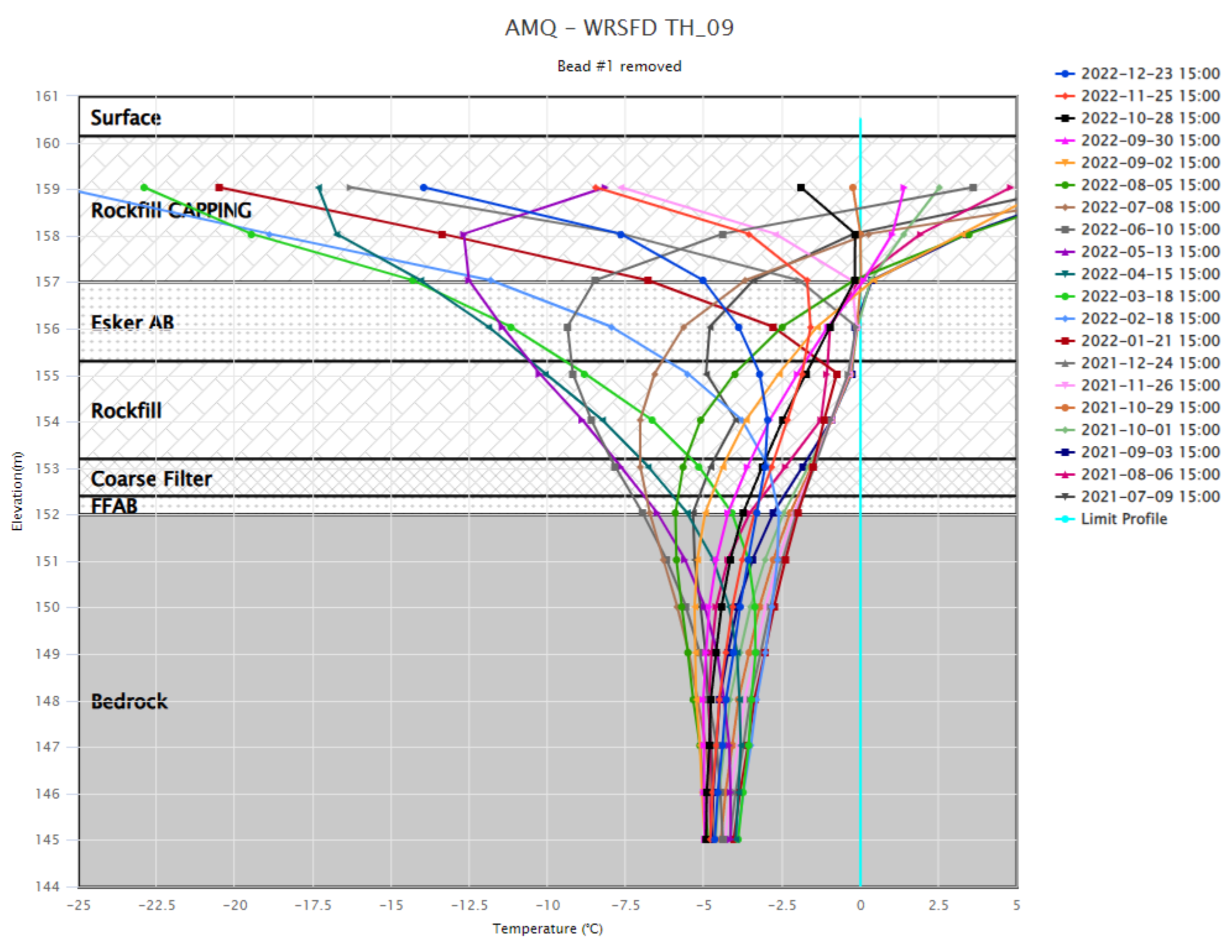


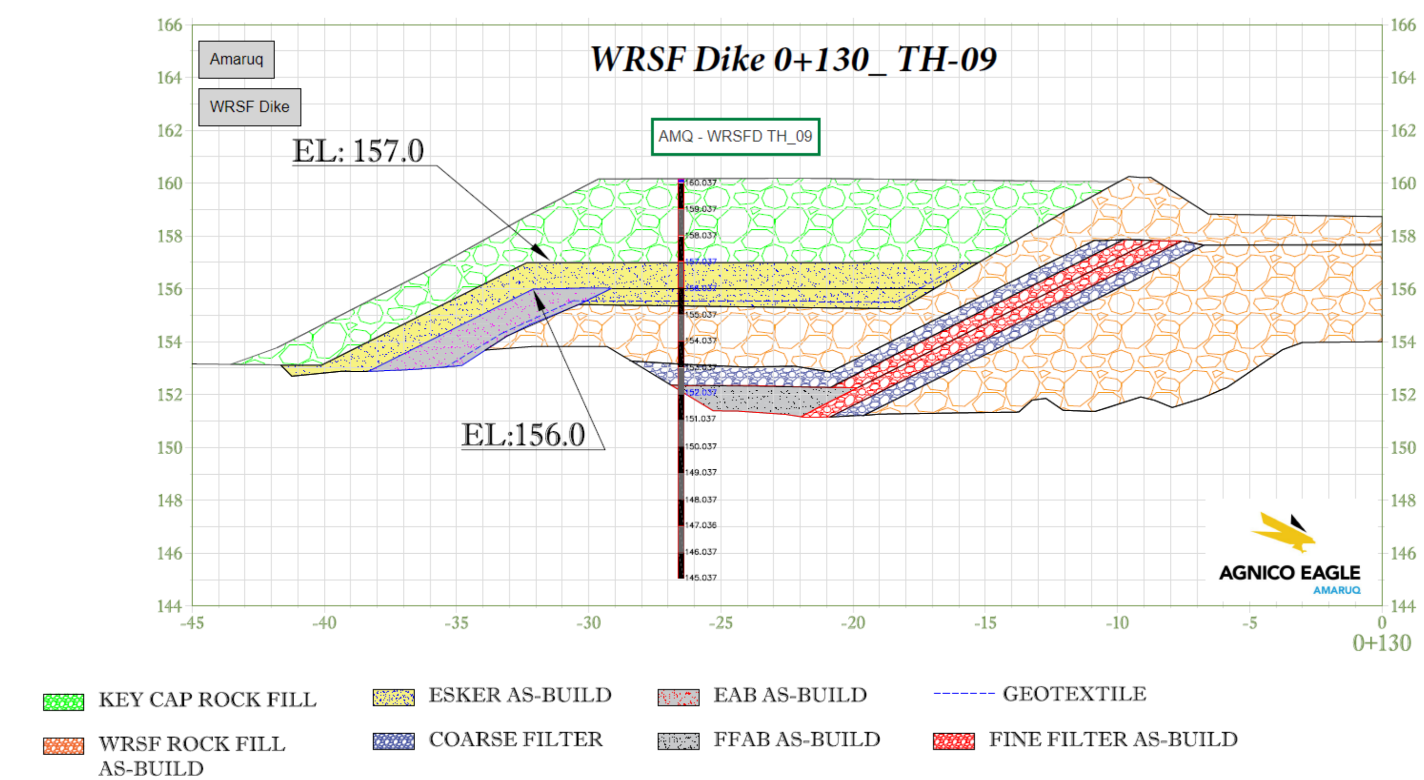
WRSF Dike 0+090_TH-08
Amaruq
WRSF Dike
AMQ - WRSFD TH_08
EL: 157.0
EL:156.0
0+090
AGNICO EAGLE
KEY CAP ROCK FILL
ESKER AS-BUILD
EAB AS-BUILD
GEOTEXTILE
WRSF ROCK FILL AS-BUILD
FFAB AS-BUILD
COARSE FILTER AS-BUILD
FINE FILTER AS-BUILD

WRSFD TH09

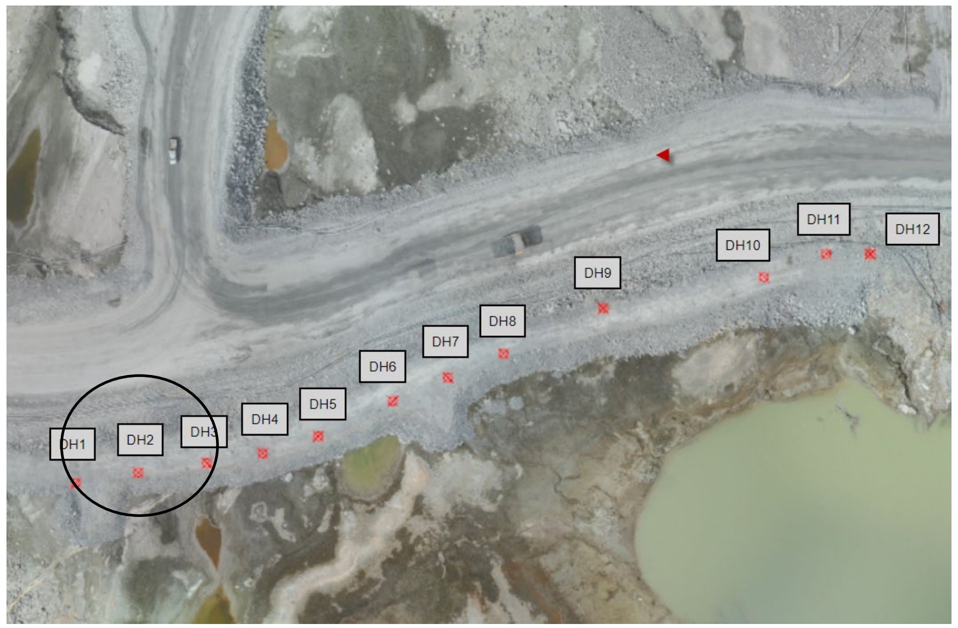

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

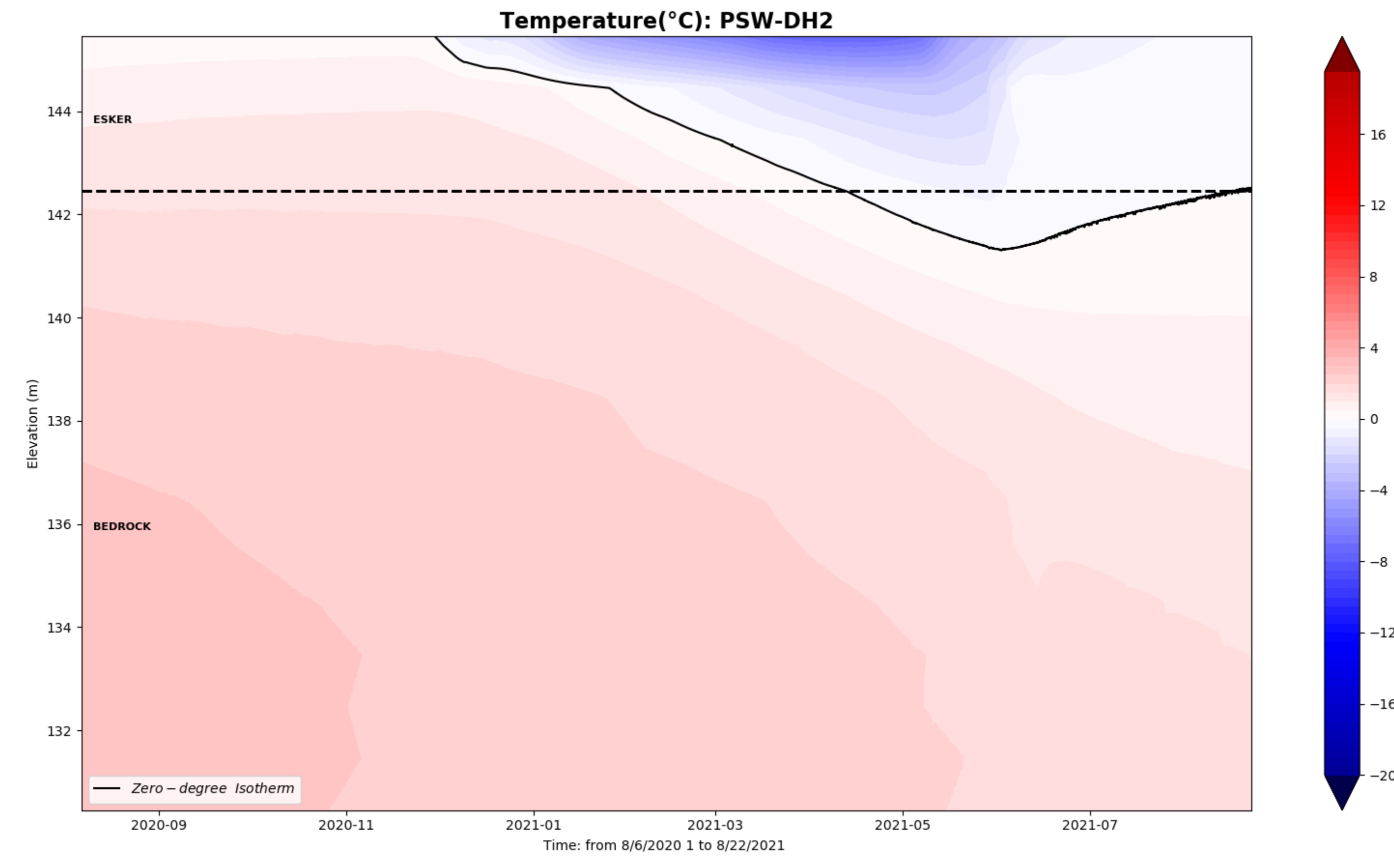

Temperature(°C): AMQ - WRSFD TH_09
KEY CAP ROCKFILL
ESKER
ROCKFILL
COARSE FILTER
FFAB
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
Time: from 5/16/2020 to 2022-12-22
2020-07
2020-10
2021-01
2021-04
2021-07
2021-10
2022-01
2022-04
2022-07
2022-10

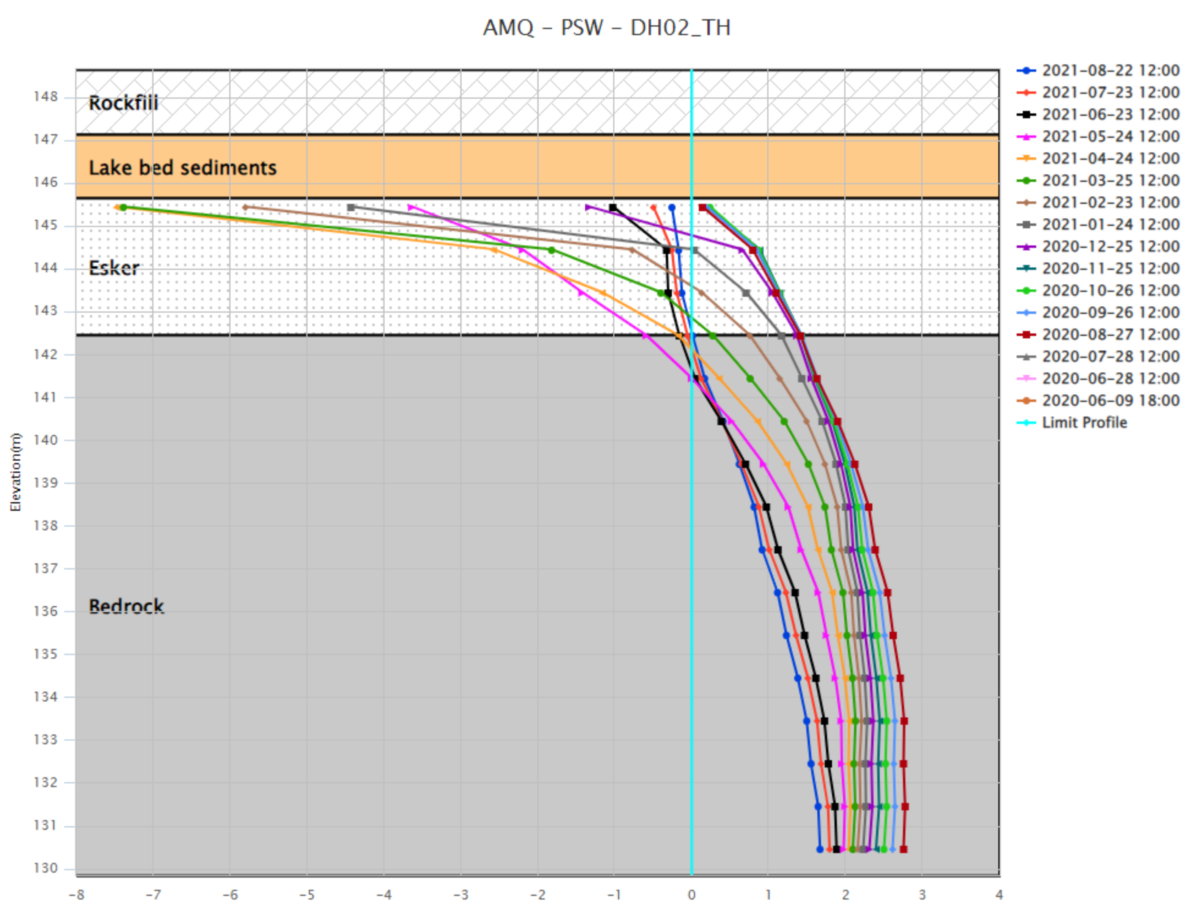

AMQ – WRSFD TH_09
Bead #1 removed
Surface
Rockfill CAPPING
Esker AB
Rockfill
Coarse Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
2022-12-23 15:00
2022-11-25 15:00
2022-10-28 15:00
2022-09-30 15:00
2022-09-02 15:00
2022-08-05 15:00
2022-07-08 15:00
2022-06-10 15:00
2022-05-13 15:00
2022-04-15 15:00
2022-03-18 15:00
2022-02-18 15:00
2022-01-21 15:00
2021-12-24 15:00
2021-11-26 15:00
2021-10-29 15:00
2021-10-01 15:00
2021-09-03 15:00
2021-08-06 15:00
2021-07-09 15:00
Limit Profile

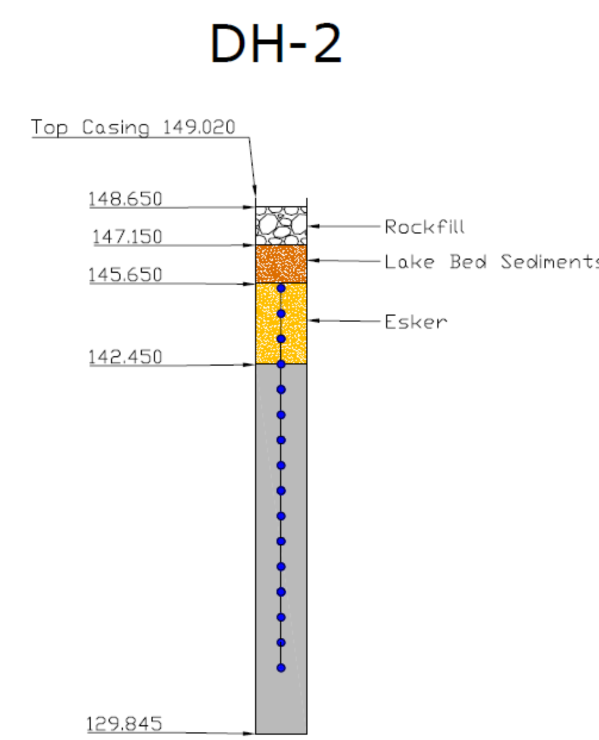

WRSF Dike 0+130_ TH-09
Amaruq
WRSF Dike
AMQ - WRSFD TH_09
EL: 157.0
EL:156.0
0+130
AGNICO EAGLE
AMARUQ
KEY CAP ROCK FILL
ESKER AS-BUILD
EAB AS-BUILD
GEOTEXTILE
WRSF ROCK FILL AS-BUILD
COARSE FILTER
FFAB AS-BUILD
FINE FILTER AS-BUILD

PSW – DH 2 TH

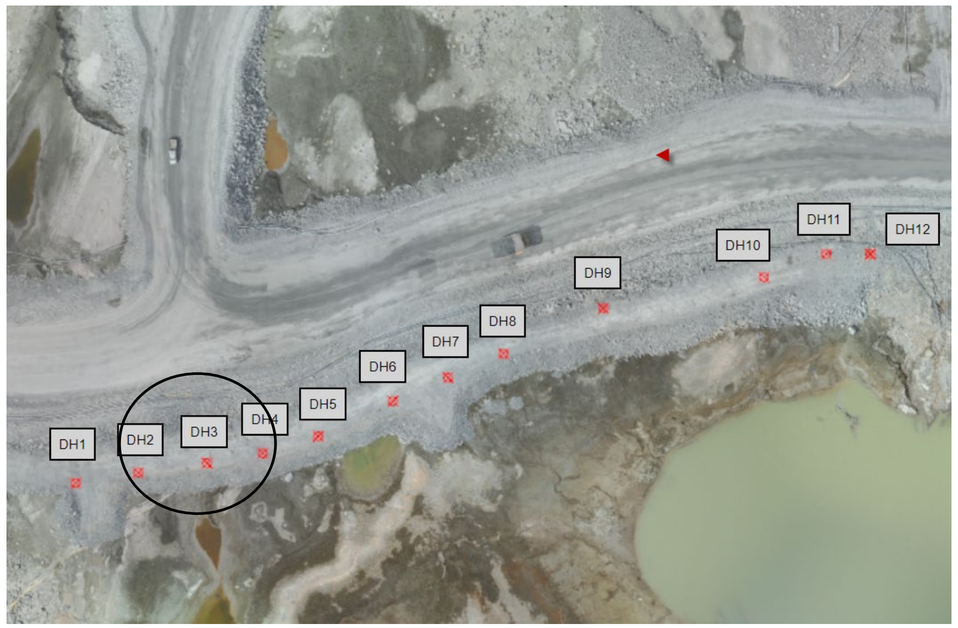

DH1
DH2
DH3
DH4
DH5
DH6
DH7
DH8
DH9
DH10
DH11
DH12

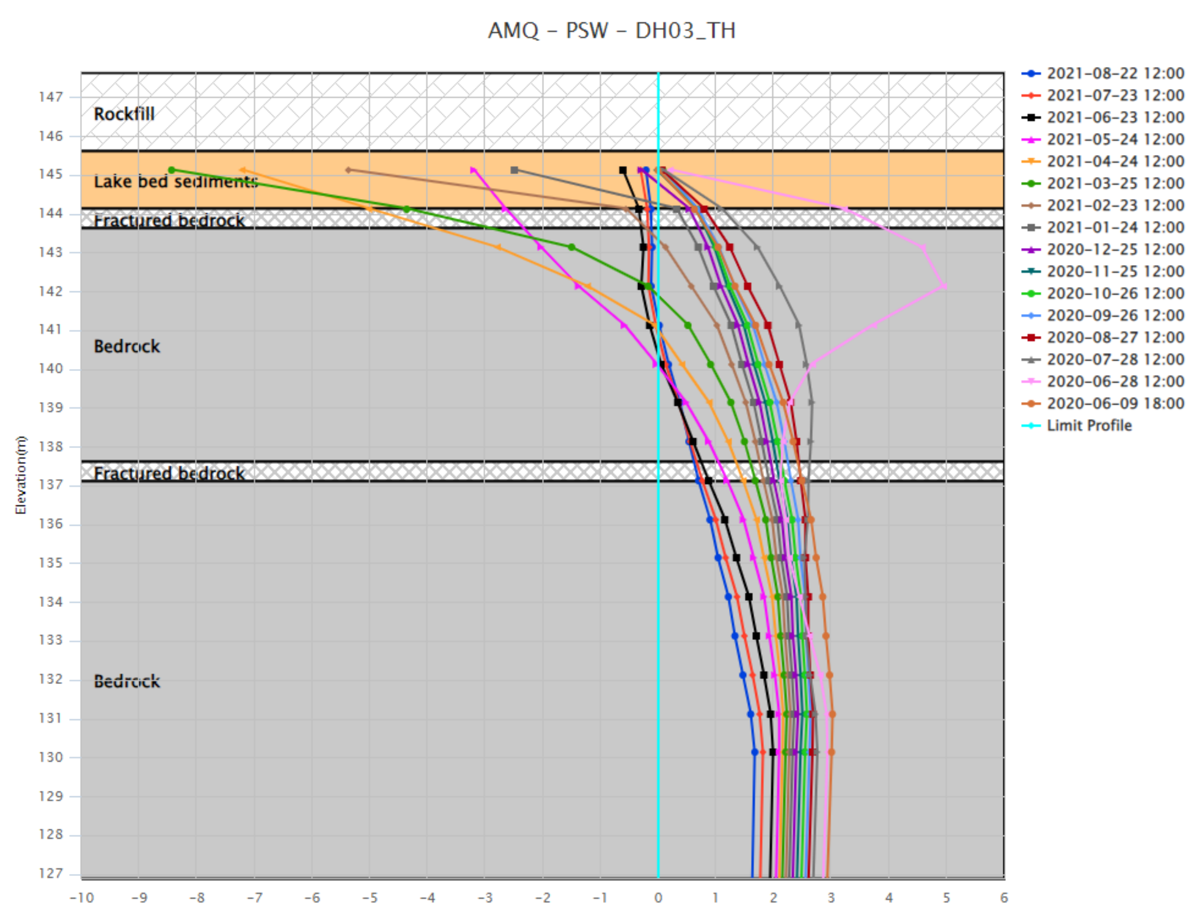

Temperature(°C): PSW-DH2
ESKER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 8/6/2020 1 to 8/22/2021
Temperature(°C)

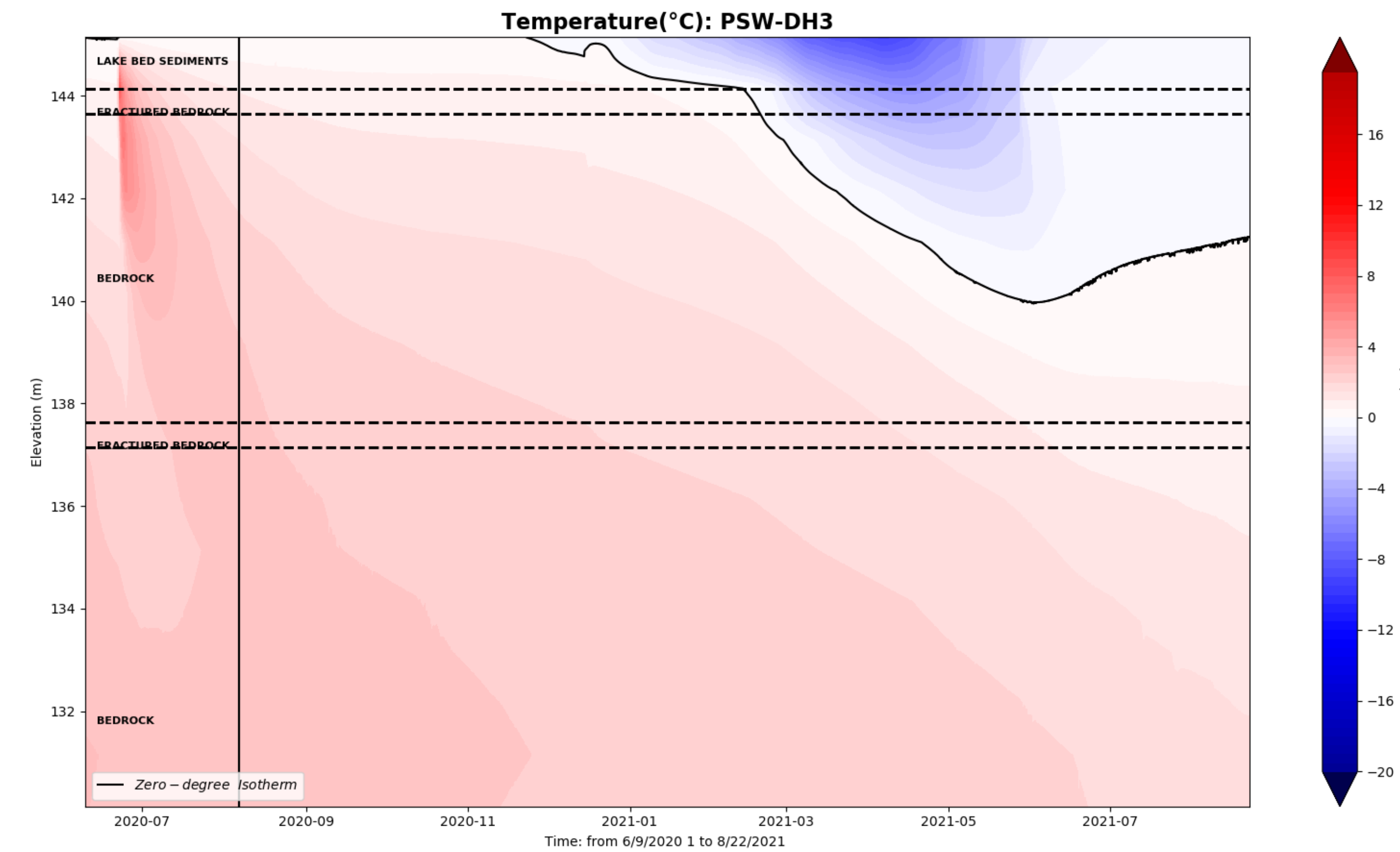

AMQ – PSW – DH02_TH
Rockfill
Lake bed sediments
Esker
Bedrock
Elevation(m)
Temperature (°C)
2021-08-22 12:00
2021-07-23 12:00
2021-06-23 12:00
2021-05-24 12:00
2021-04-24 12:00
2021-03-25 12:00
2021-02-23 12:00
2021-01-24 12:00
2020-12-25 12:00
2020-11-25 12:00
2020-10-26 12:00
2020-09-26 12:00
2020-08-27 12:00
2020-07-28 12:00
2020-06-28 12:00
2020-06-09 18:00
Limit Profile


DH-2
Top Casing 149.020
148.650
147.150
145.650
142.450
129.845
Rockfill
Lake Bed Sediments
Esker

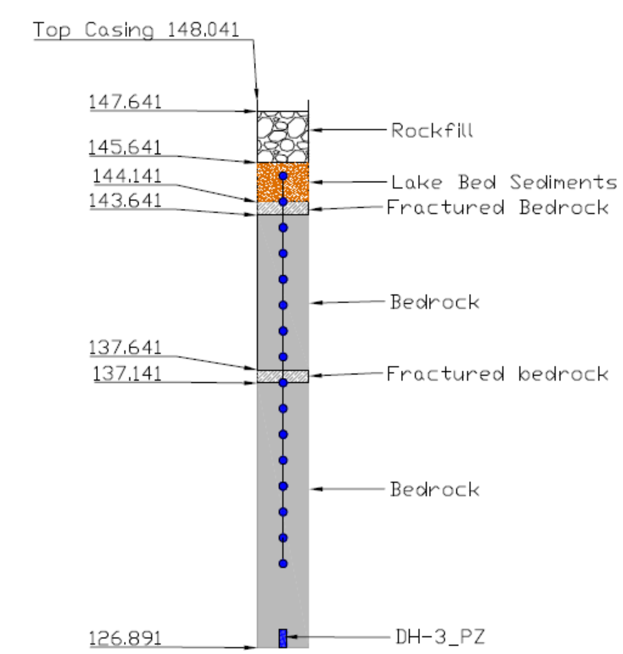
PSW – DH 3 TH



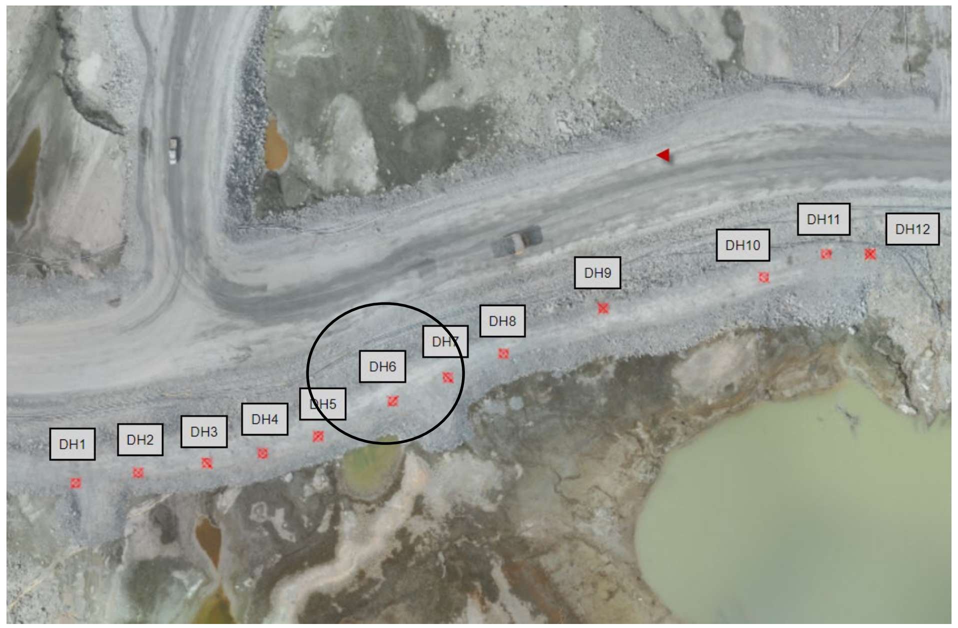


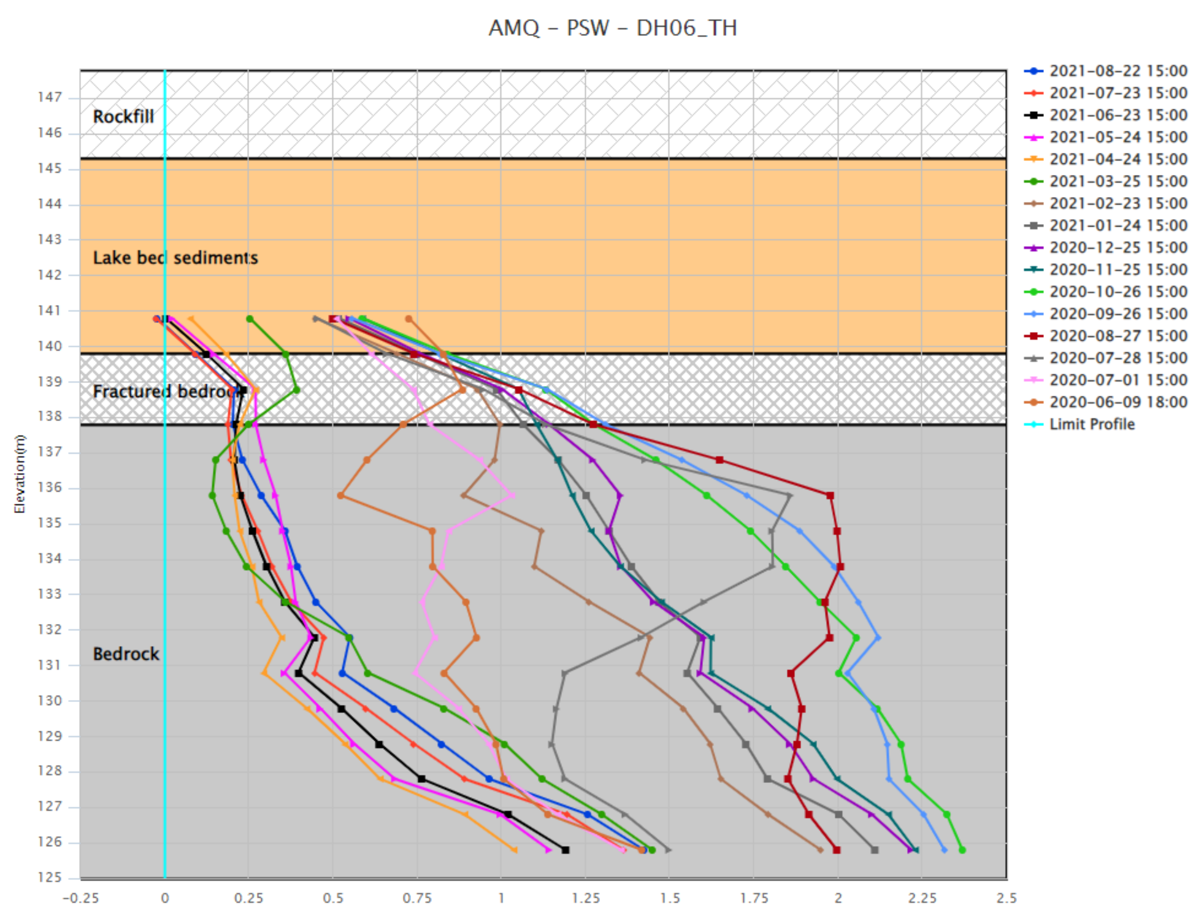


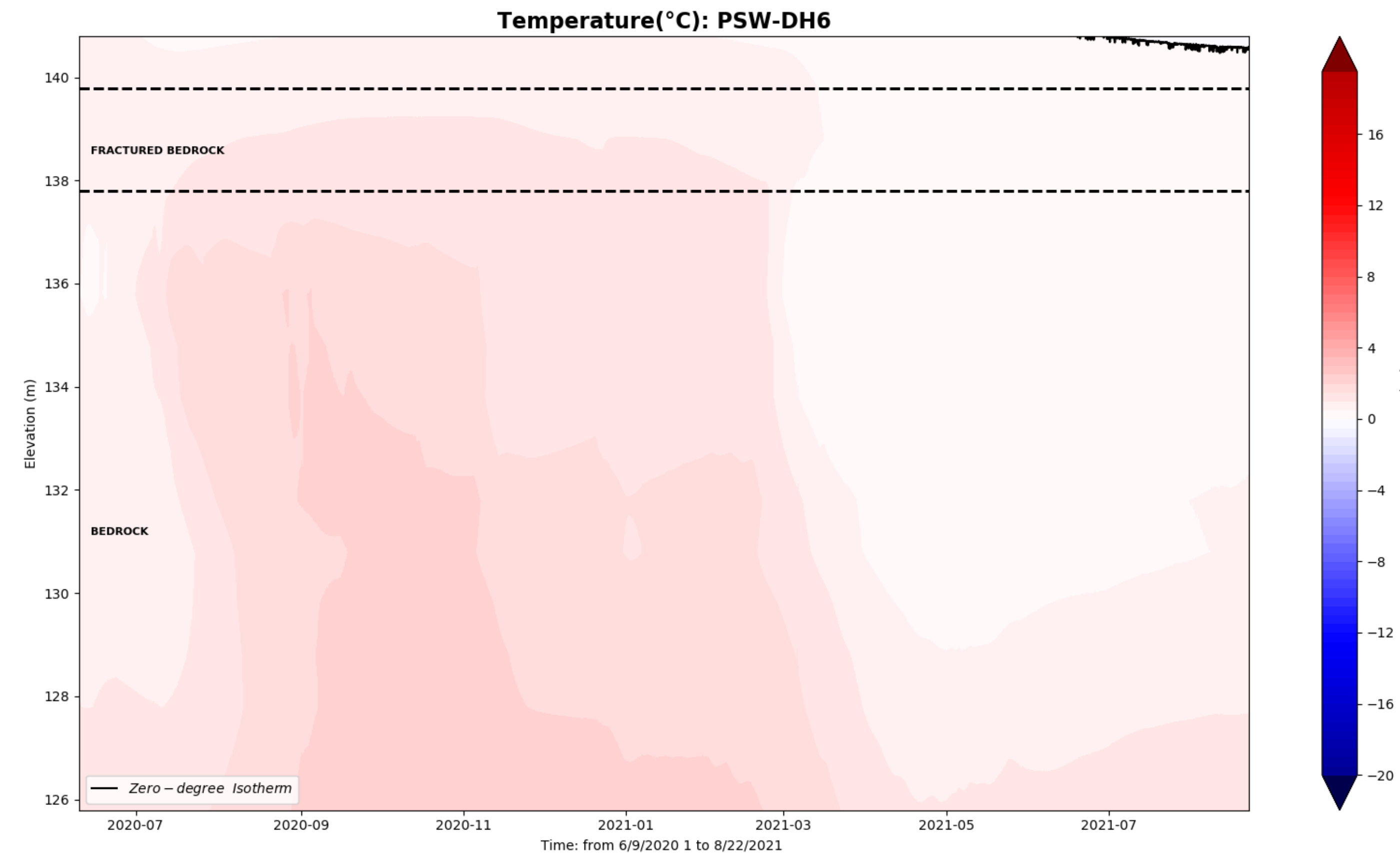
DH-3

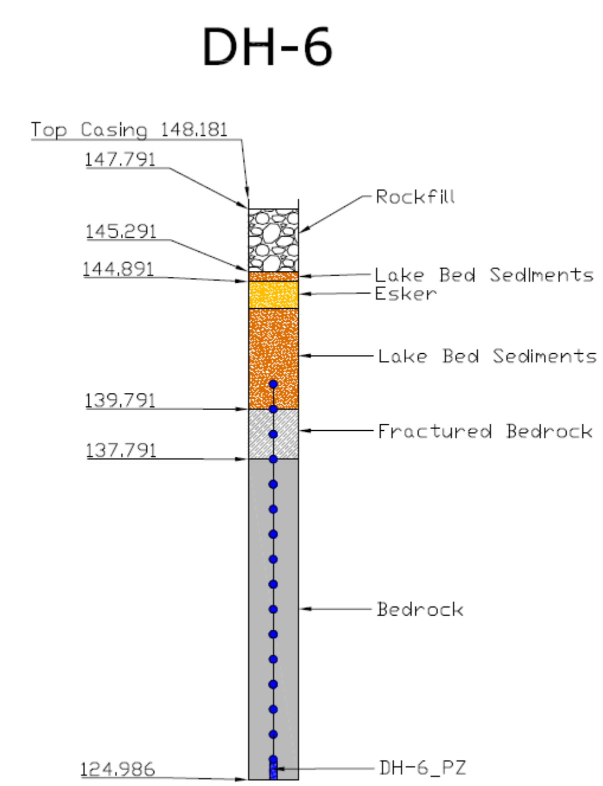


PSW – DH 6 TH

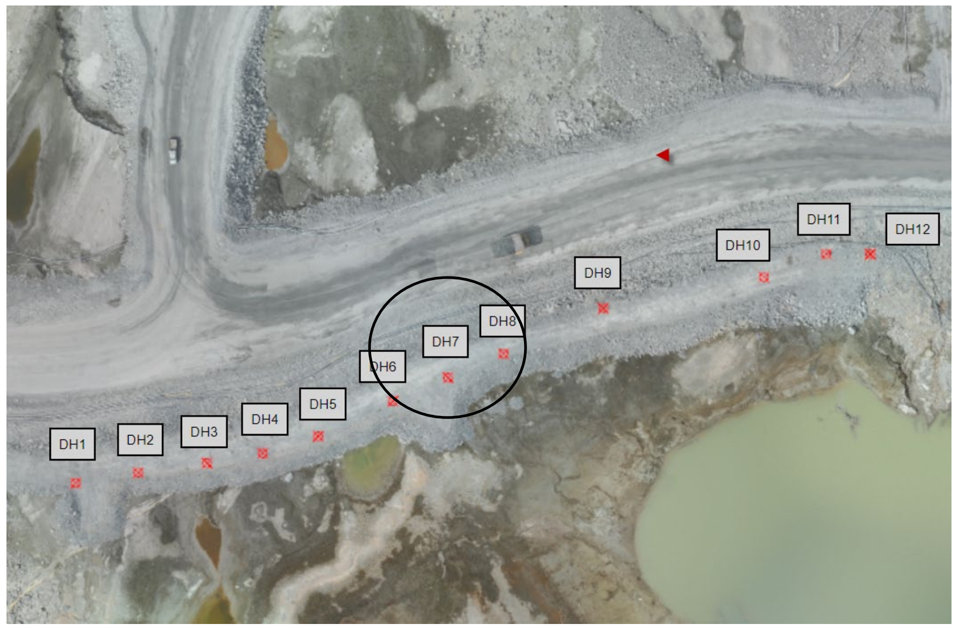

DH1
DH2
DH3
DH4
DH5
DH6
DH7
DH8
DH9
DH10
DH11
DH12

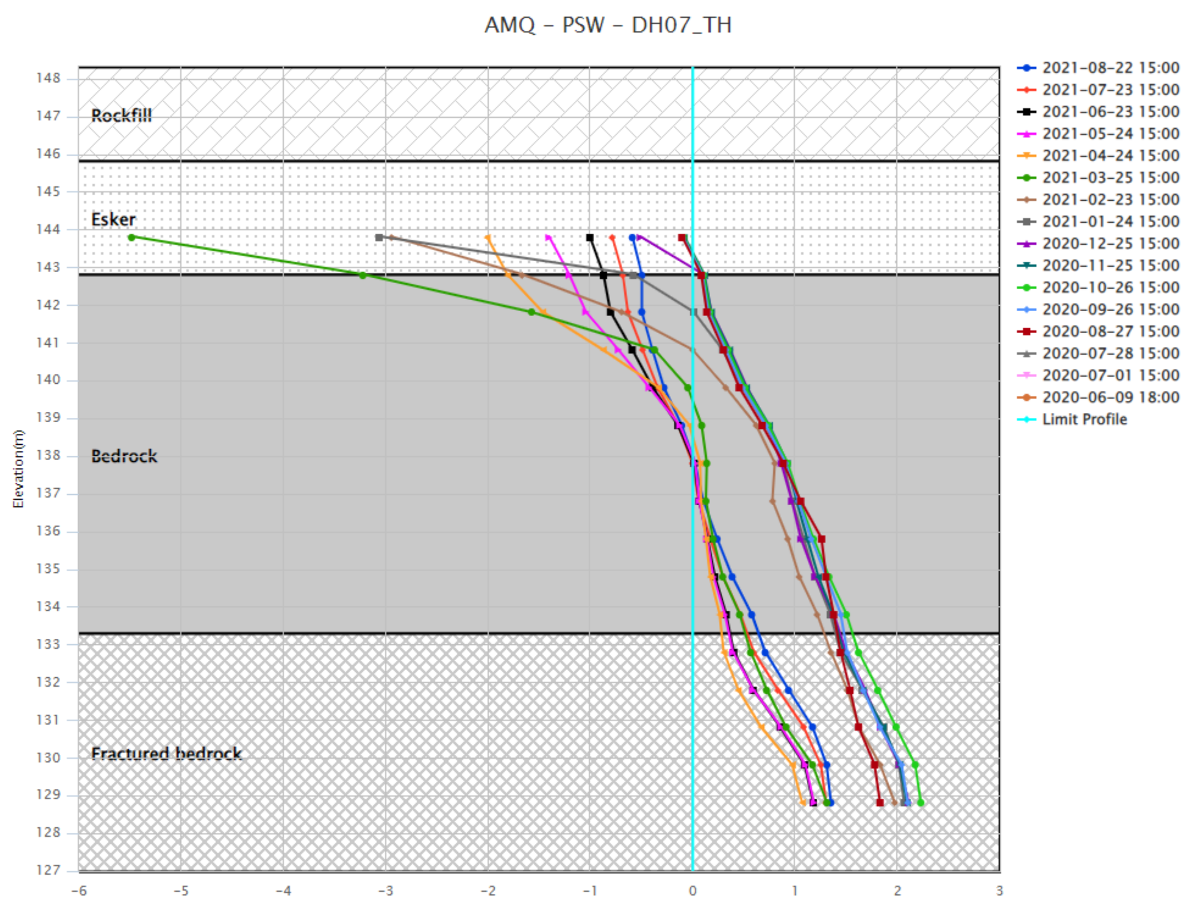

AMQ – PSW – DH06_TH
Rockfill
Lake bed sediments
Fractured bedrock
Bedrock
2021-08-22 15:00
2021-07-23 15:00
2021-06-23 15:00
2021-05-24 15:00
2021-04-24 15:00
2021-03-25 15:00
2021-02-23 15:00
2021-01-24 15:00
2020-12-25 15:00
2020-11-25 15:00
2020-10-26 15:00
2020-09-26 15:00
2020-08-27 15:00
2020-07-28 15:00
2020-07-01 15:00
2020-06-09 18:00
Limit Profile
Elevation(m)
Temperatures (°C)

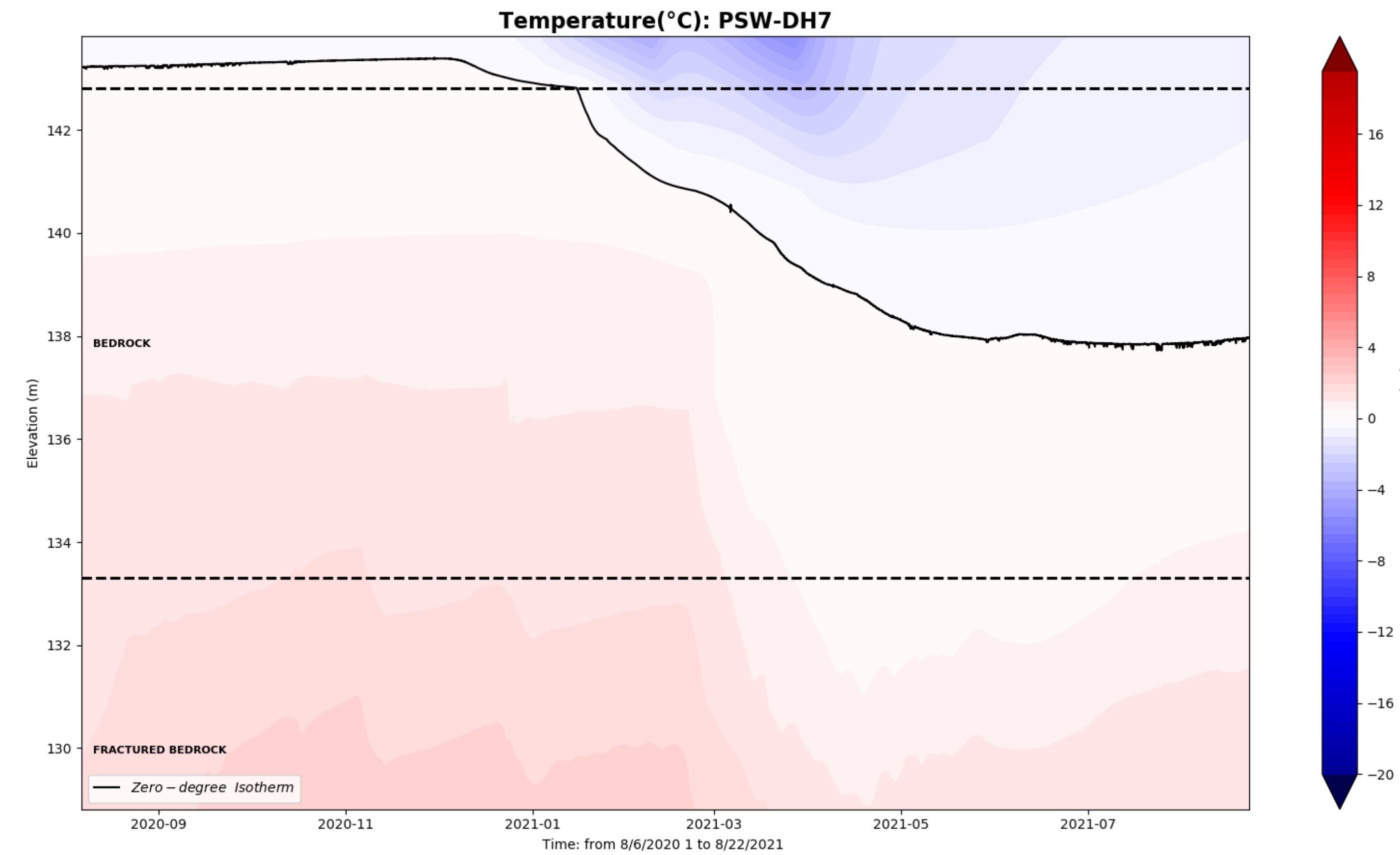

Temperature(°C): PSW-DH6
FRACTURED BEDROCK
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 6/9/2020 1 to 8/22/2021
Temperature(°C)

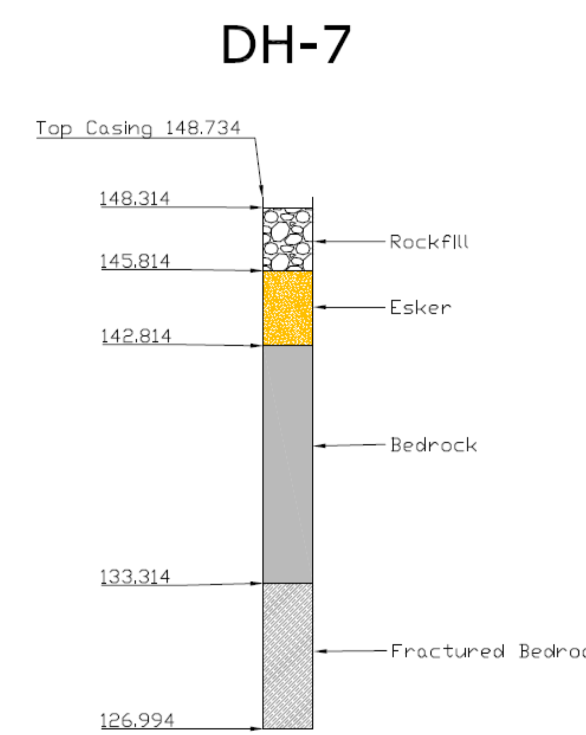

DH-6
Top Casing 148.181
147.791
145.291
144.891
139.791
137.791
124.986
Rockfill
Lake Bed Sediments
Esker
Lake Bed Sediments
Fractured Bedrock
Bedrock
DH-6_PZ

PSW – DH 7 TH


DH1
DH2
DH3
DH4
DH5
DH6
DH7
DH8
DH9
DH10
DH11
DH12

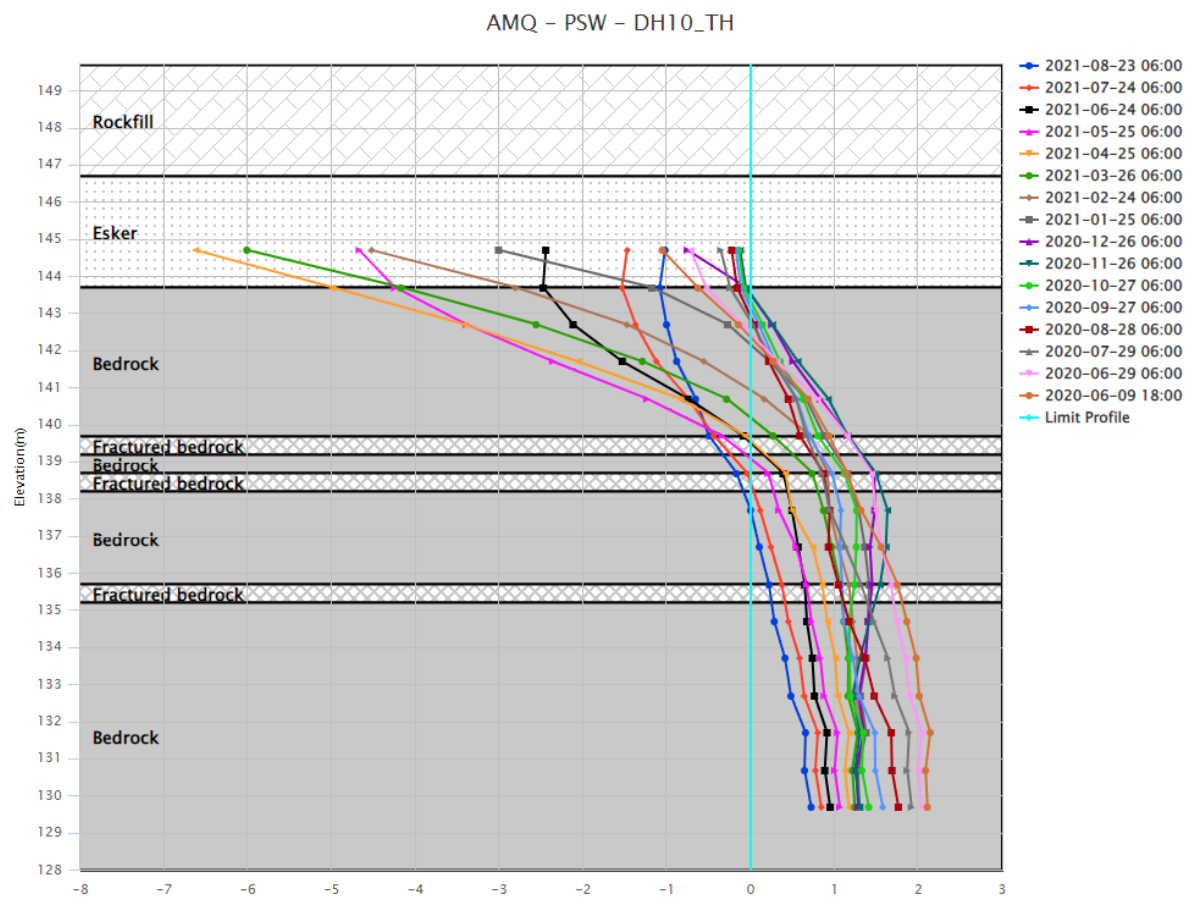

AMQ – PSW – DH07_TH
Rockfill
Esker
Bedrock
Fractured bedrock
Elevation(m)
Temperature (°C)
2021-08-22 15:00
2021-07-23 15:00
2021-06-23 15:00
2021-05-24 15:00
2021-04-24 15:00
2021-03-25 15:00
2021-02-23 15:00
2021-01-24 15:00
2020-12-25 15:00
2020-11-25 15:00
2020-10-26 15:00
2020-09-26 15:00
2020-08-27 15:00
2020-07-28 15:00
2020-07-01 15:00
2020-06-09 18:00
Limit Profile

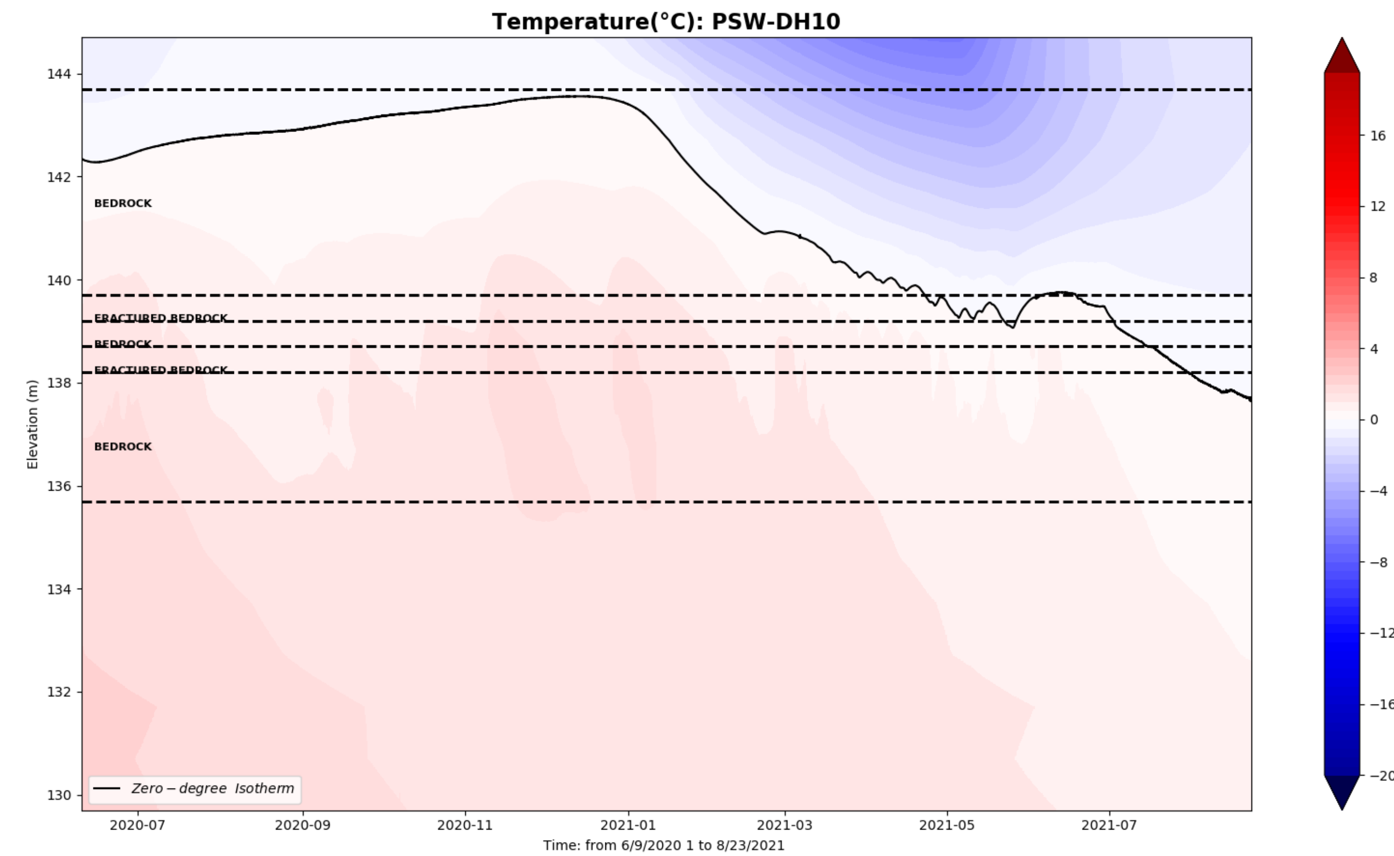

Temperature(°C): PSW-DH7
BEDROCK
FRACTURED BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 8/6/2020 1 to 8/22/2021

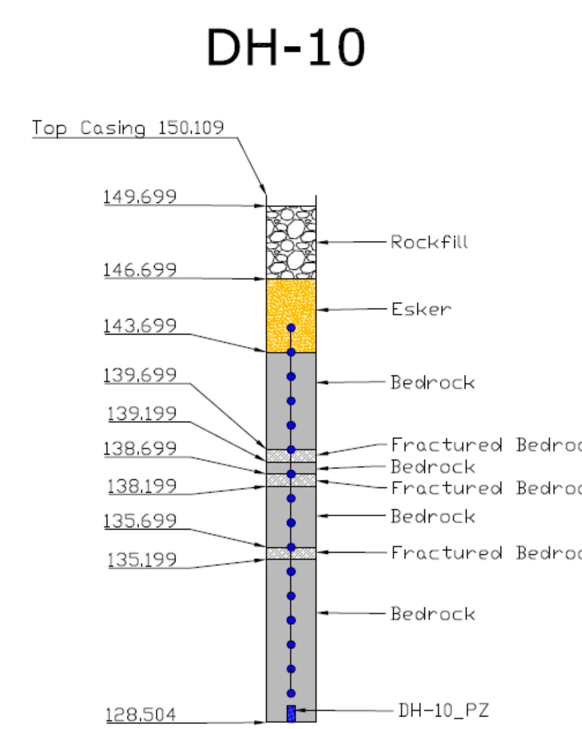

DH-7
Top Casing 148.734
148.314
145.814
142.814
133.314
126.994
Rockfill
Esker
Bedrock
Fractured Bedrock

PSW – DH 10 TH


DH1
DH2
DH3
DH4
DH5
DH6
DH7
DH8
DH9
DH10
DH11
DH12

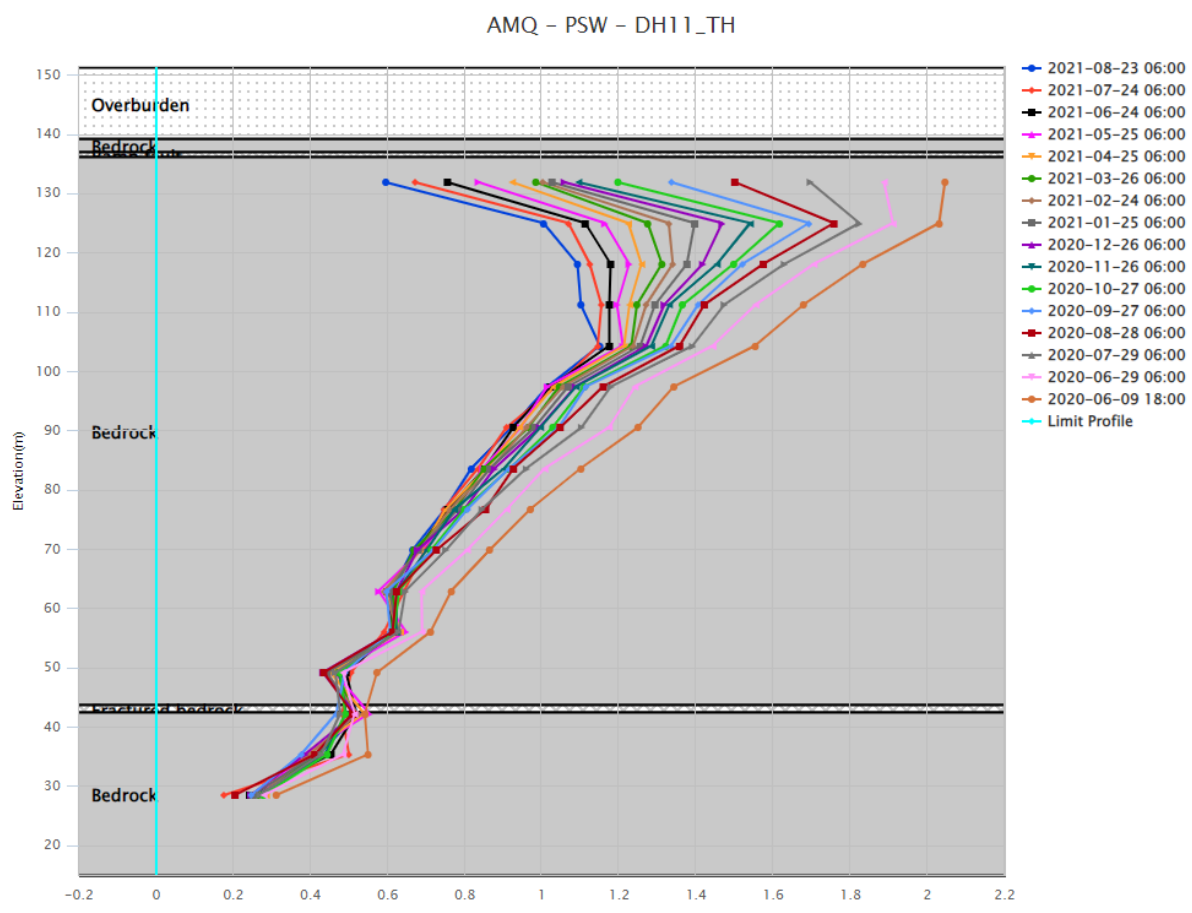

AMQ - PSW - DH10_TH
Rockfill
Esker
Bedrock
Fractured bedrock
Bedrock
Fractured bedrock
Bedrock
Fractured bedrock
Bedrock
Elevation(m)
Temperatures (°C)
2021-08-23 06:00
2021-07-24 06:00
2021-06-24 06:00
2021-05-25 06:00
2021-04-25 06:00
2021-03-26 06:00
2021-02-24 06:00
2021-01-25 06:00
2020-12-26 06:00
2020-11-26 06:00
2020-10-27 06:00
2020-09-27 06:00
2020-08-28 06:00
2020-07-29 06:00
2020-06-29 06:00
2020-06-09 18:00
Limit Profile

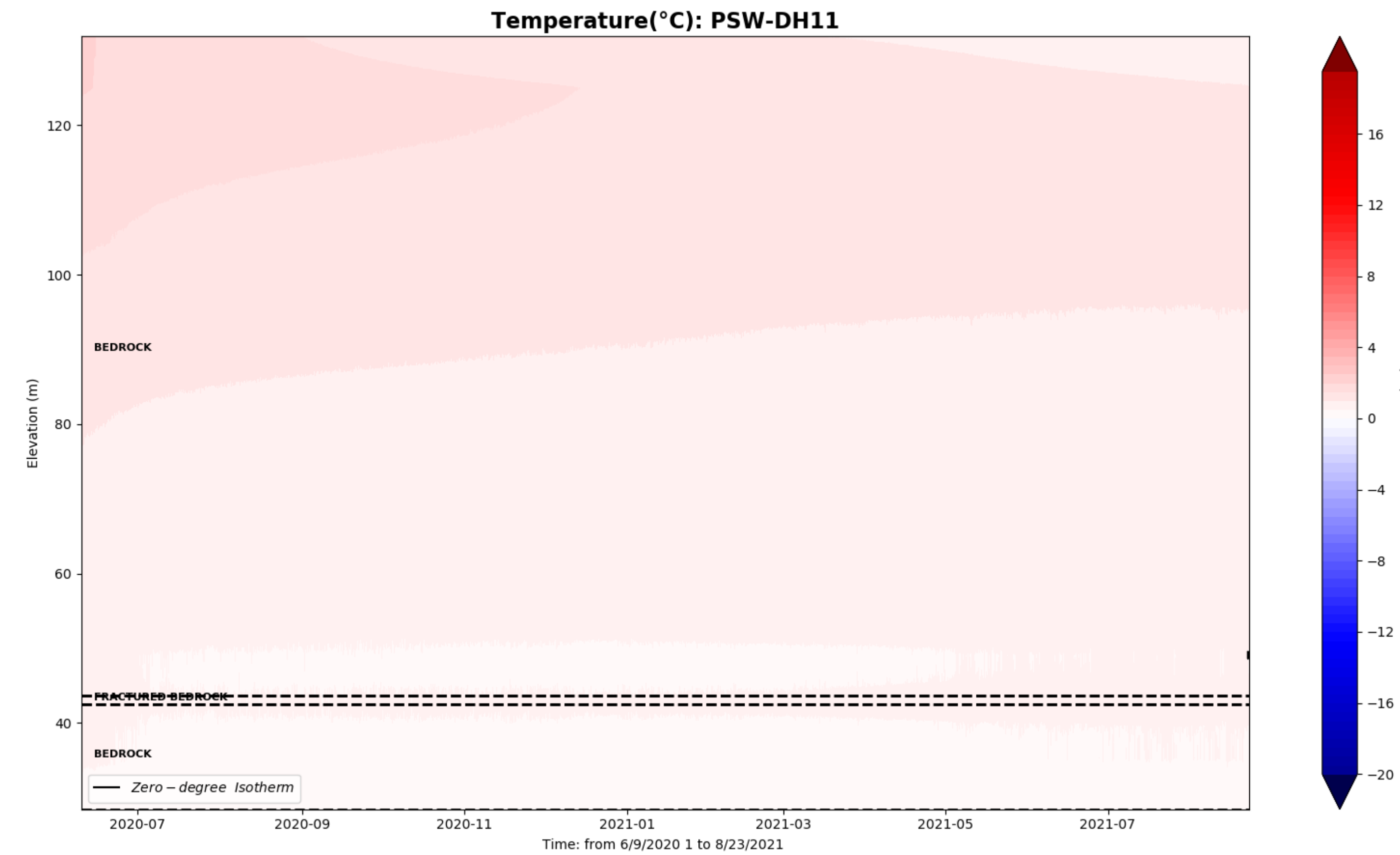

Temperature(°C): PSW-DH10
BEDROCK
FRACTURED BEDROCK
BEDROCK
FRACTURED BEDROCK
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 6/9/2020 1 to 8/23/2021
Temperature(°C)

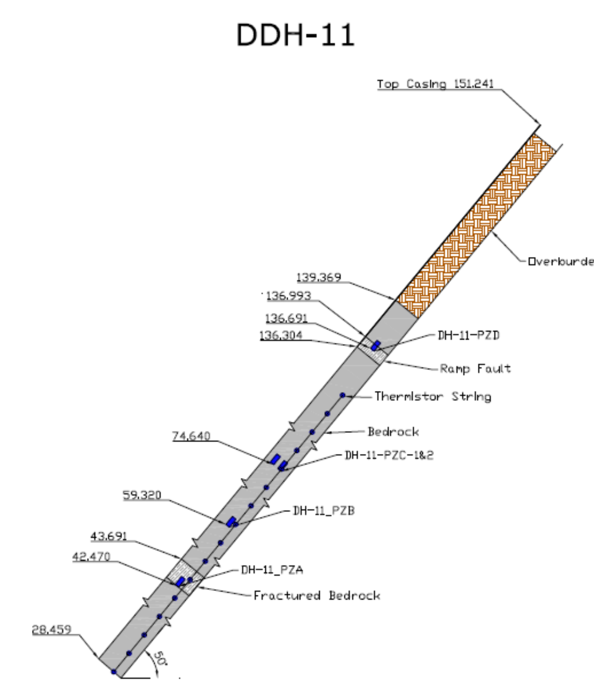

DH-10
Top Casing 150.109
149.699
146.699
143.699
139.699
139.199
138.699
138.199
135.699
135.199
128.504
Rockfill
Esker
Bedrock
Fractured Bedrock
Bedrock
Fractured Bedrock
Bedrock
Fractured Bedrock
Bedrock
DH-10_PZ

PSW – DH 11 TH


DH1
DH2
DH3
DH4
DH5
DH6
DH7
DH8
DH9
DH10
DH11
DH12

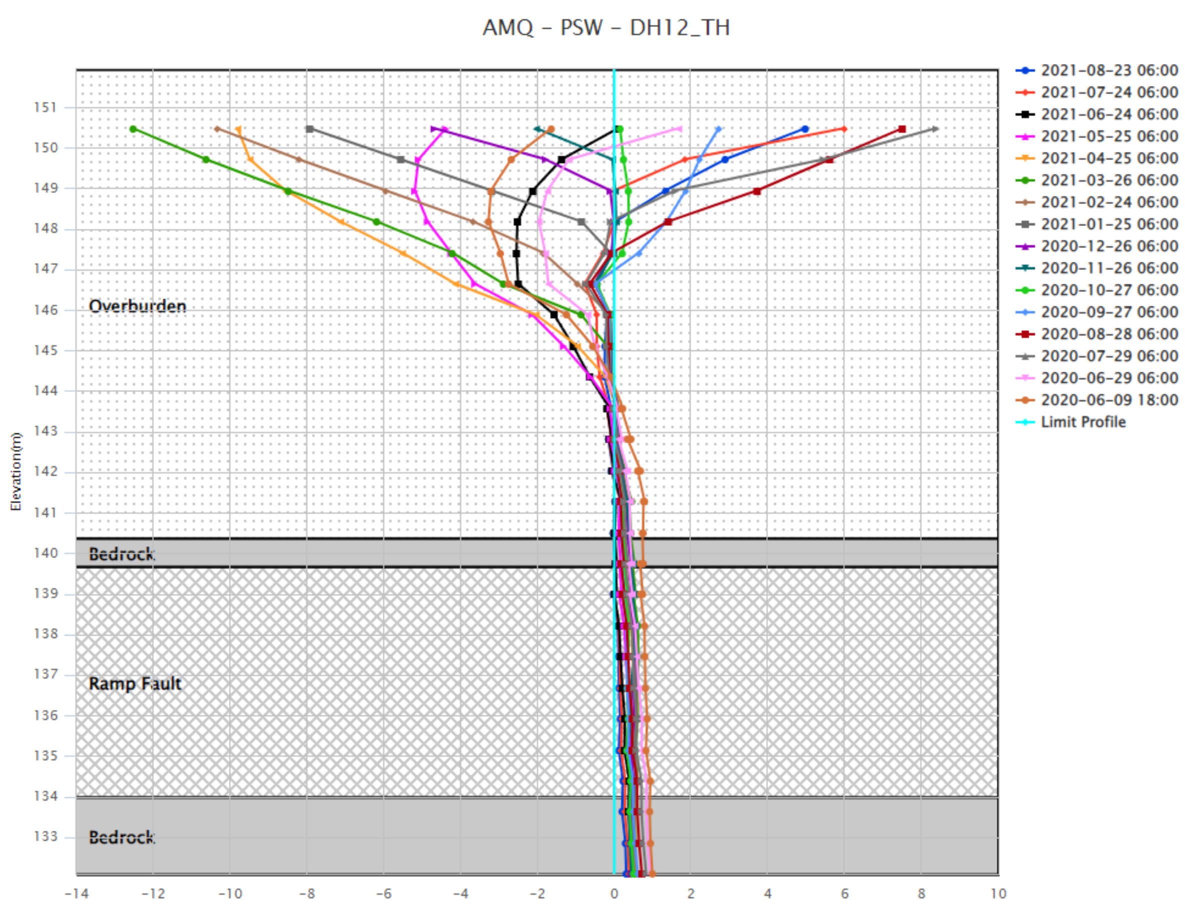

AMQ – PSW – DH11_TH
Overburden
Bedrock
Bedrock
Bedrock
Elevation(m)
Temperatures (°C)
2021-08-23 06:00
2021-07-24 06:00
2021-06-24 06:00
2021-05-25 06:00
2021-04-25 06:00
2021-03-26 06:00
2021-02-24 06:00
2021-01-25 06:00
2020-12-26 06:00
2020-11-26 06:00
2020-10-27 06:00
2020-09-27 06:00
2020-08-28 06:00
2020-07-29 06:00
2020-06-29 06:00
2020-06-09 18:00
Limit Profile


Temperature(°C): PSW-DH11
Elevation (m)
BEDROCK
FRACTURED BEDROCK
BEDROCK
Zero – degree Isotherm
2020-07
2020-09
2020-11
2021-01
2021-03
2021-05
2021-07
Time: from 6/9/2020 1 to 8/23/2021
Temperature(°C)


DDH-11
Top Casing 151.241
Overburden
139.369
136.993
136.691
136.304
DH-11-PZD
Ramp Fault
Thermistor String
Bedrock
74.640
DH-11-PZC-1&2
59.320
DH-11_PZB
43.691
42.470
DH-11_PZA
Fractured Bedrock
28.459

PSW – DH 12 TH


DH1
DH2
DH3
DH4
DH5
DH6
DH7
DH8
DH9
DH10
DH11
DH12


AMQ - PSW - DH12_TH
Overburden
Bedrock
Ramp Fault
Bedrock
Elevation(m)
Temperatures (°C)
2021-08-23 06:00
2021-07-24 06:00
2021-06-24 06:00
2021-05-25 06:00
2021-04-25 06:00
2021-03-26 06:00
2021-02-24 06:00
2021-01-25 06:00
2020-12-26 06:00
2020-11-26 06:00
2020-10-27 06:00
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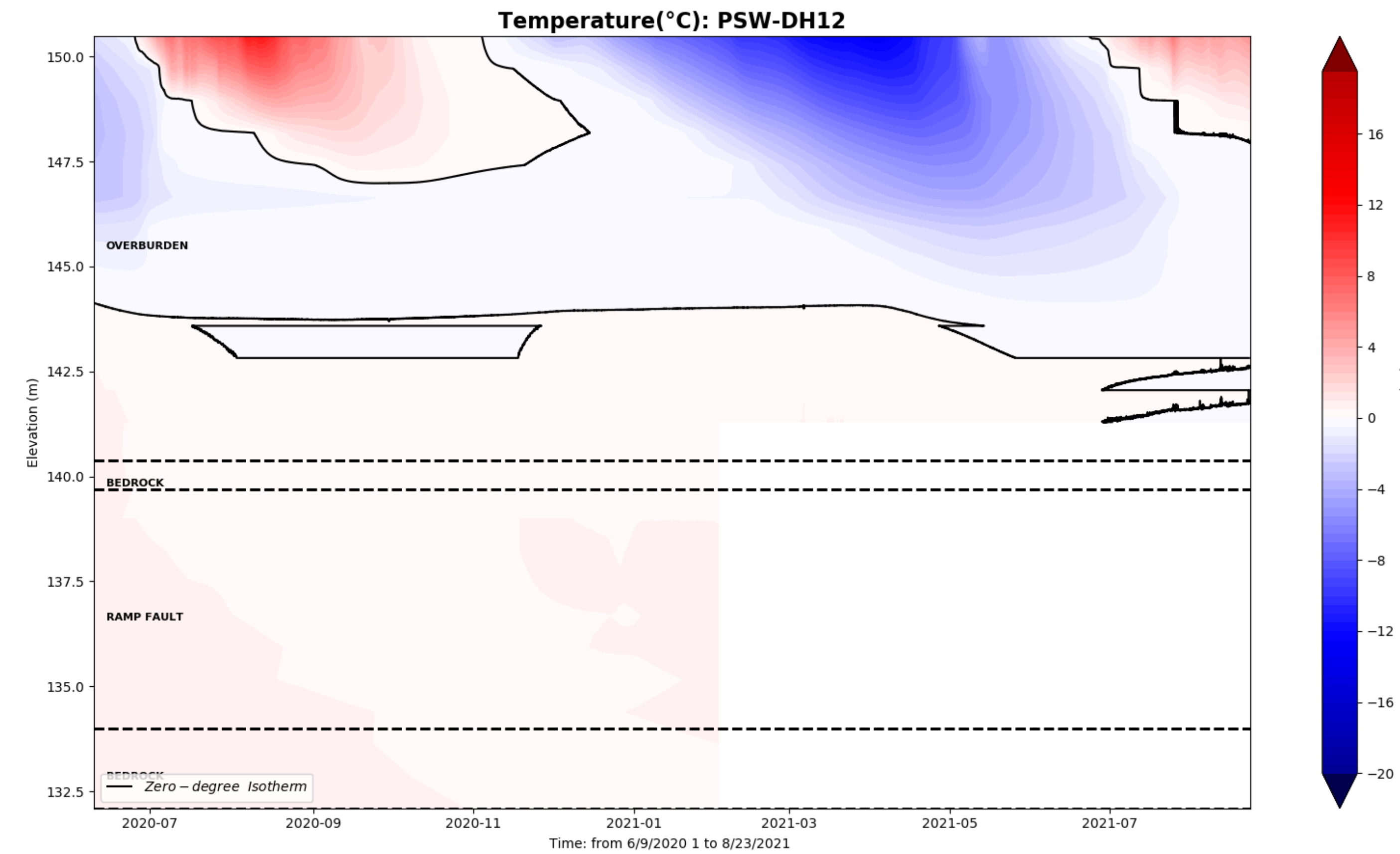
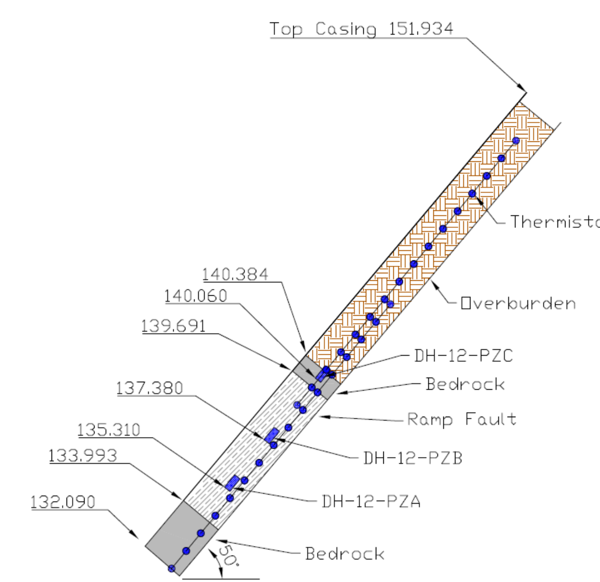
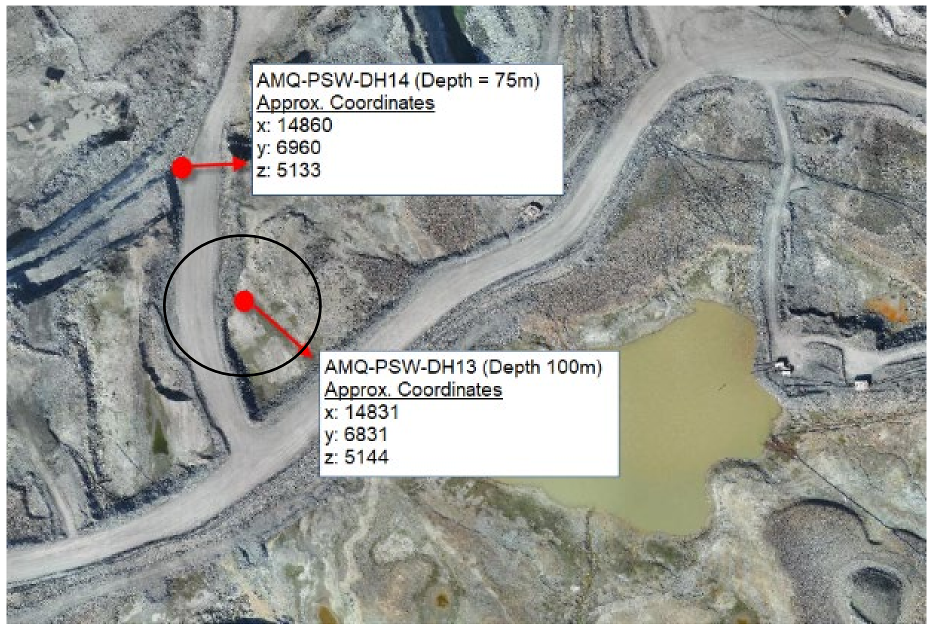
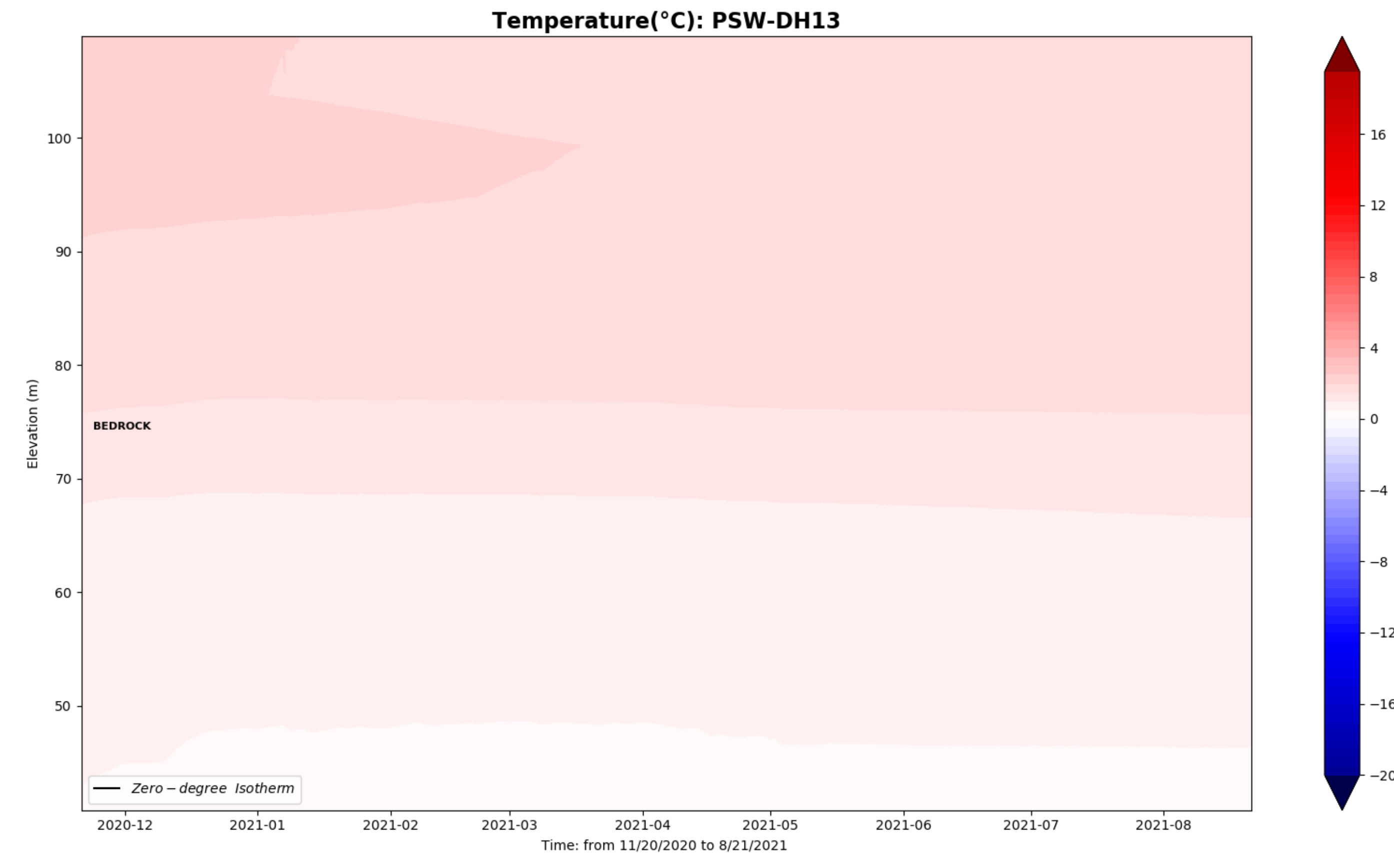
2020-08-28 06:00
2020-07-29 06:00
2020-06-29 06:00
2020-06-09 18:00
Limit Profile

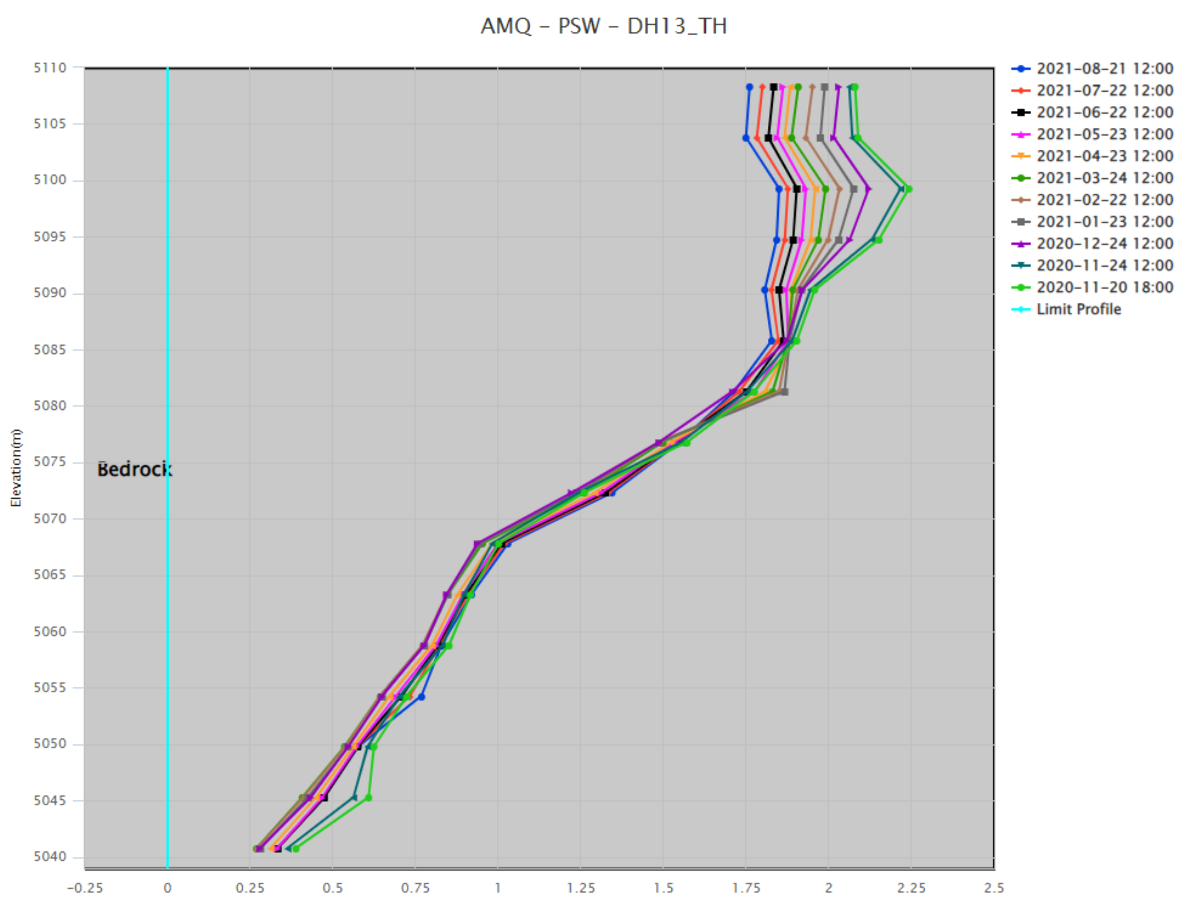

Temperature(°C): PSW-DH12
OVERBURDEN
BEDROCK
RAMP FAULT
Zero – degree Isotherm
Elevation (m)
Time: from 6/9/2020 1 to 8/23/2021
Temperature(°C)

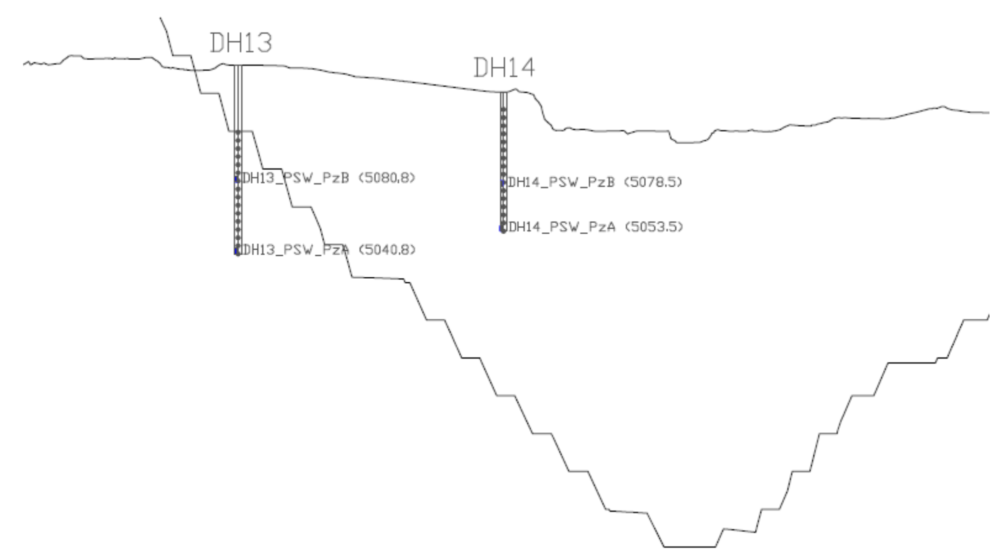

Top Casing 151.934
Thermistor
Overburden
140.384
140.060
139.691
DH-12-PZC
Bedrock
137.380
Ramp Fault
135.310
DH-12-PZB
133.993
DH-12-PZA
132.090
Bedrock
50°

PSW – DH 13 TH

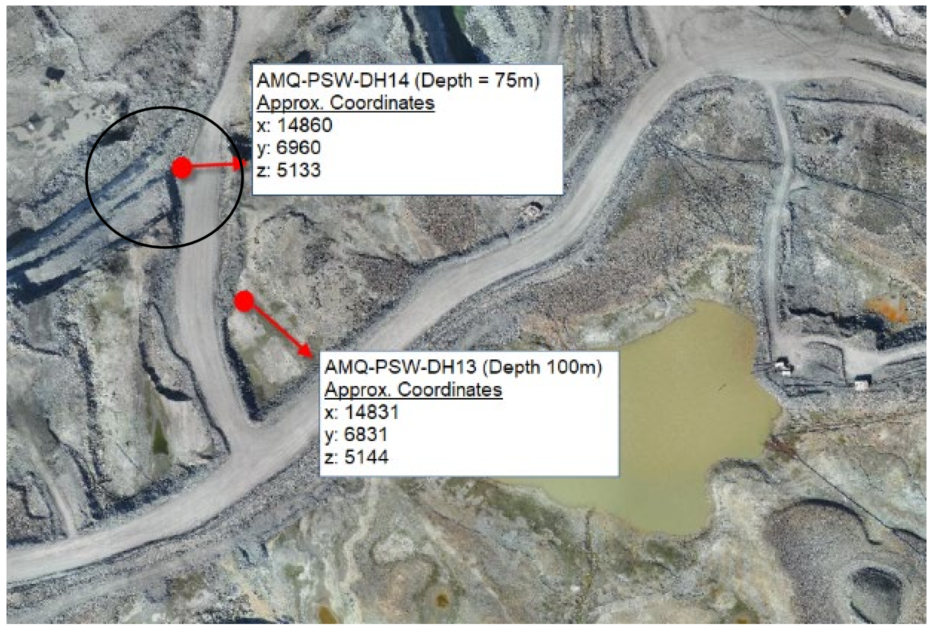

AMQ-PSW-DH14 (Depth = 75m)
Approx. Coordinates
x: 14860
y: 6960
z: 5133
AMQ-PSW-DH13 (Depth 100m)
Approx. Coordinates
x: 14831
y: 6831
z: 5144

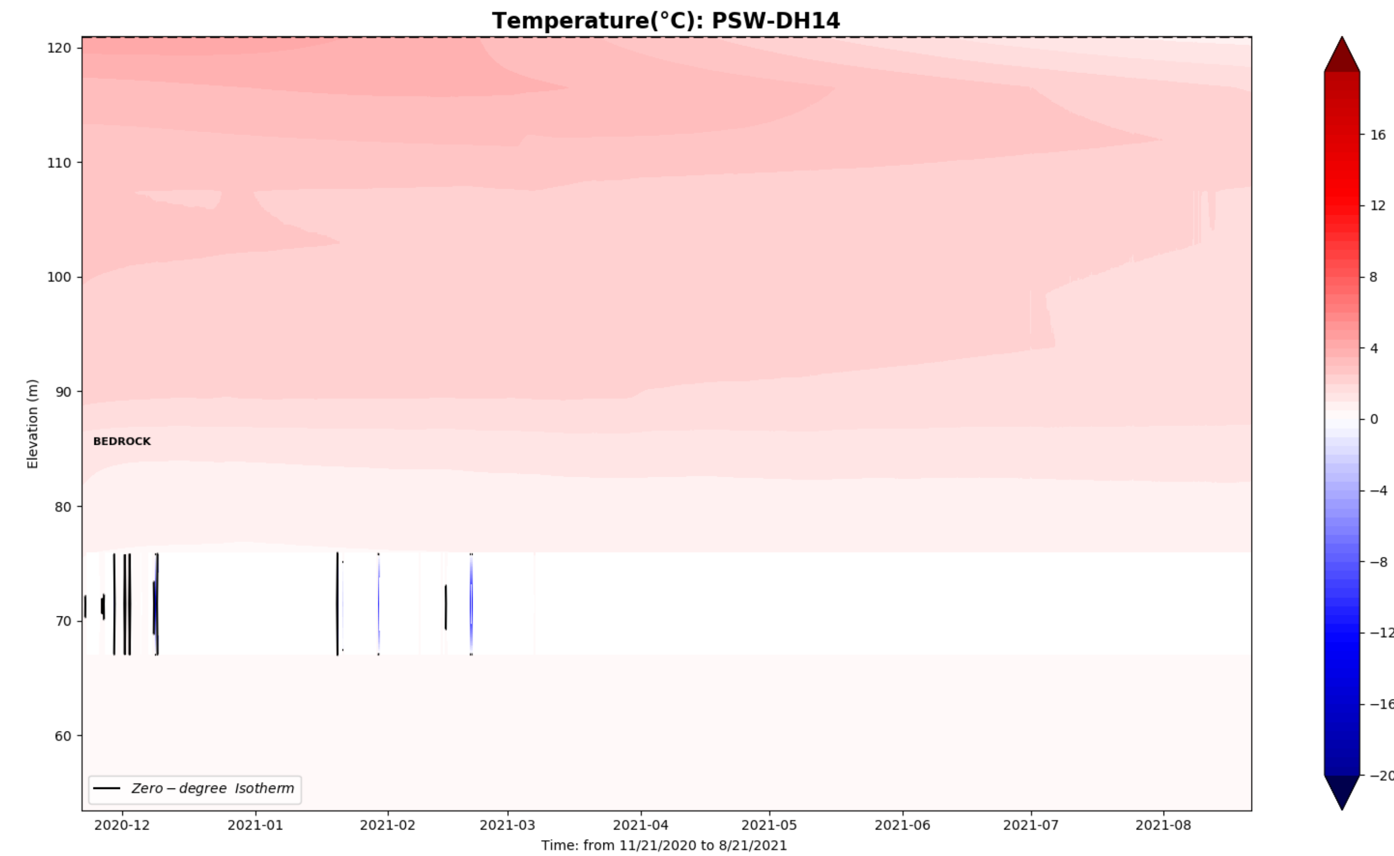

Temperature(°C): PSW-DH13
Elevation (m)
BEDROCK
Zero – degree Isotherm
Time: from 11/20/2020 to 8/21/2021
Temperature(°C)

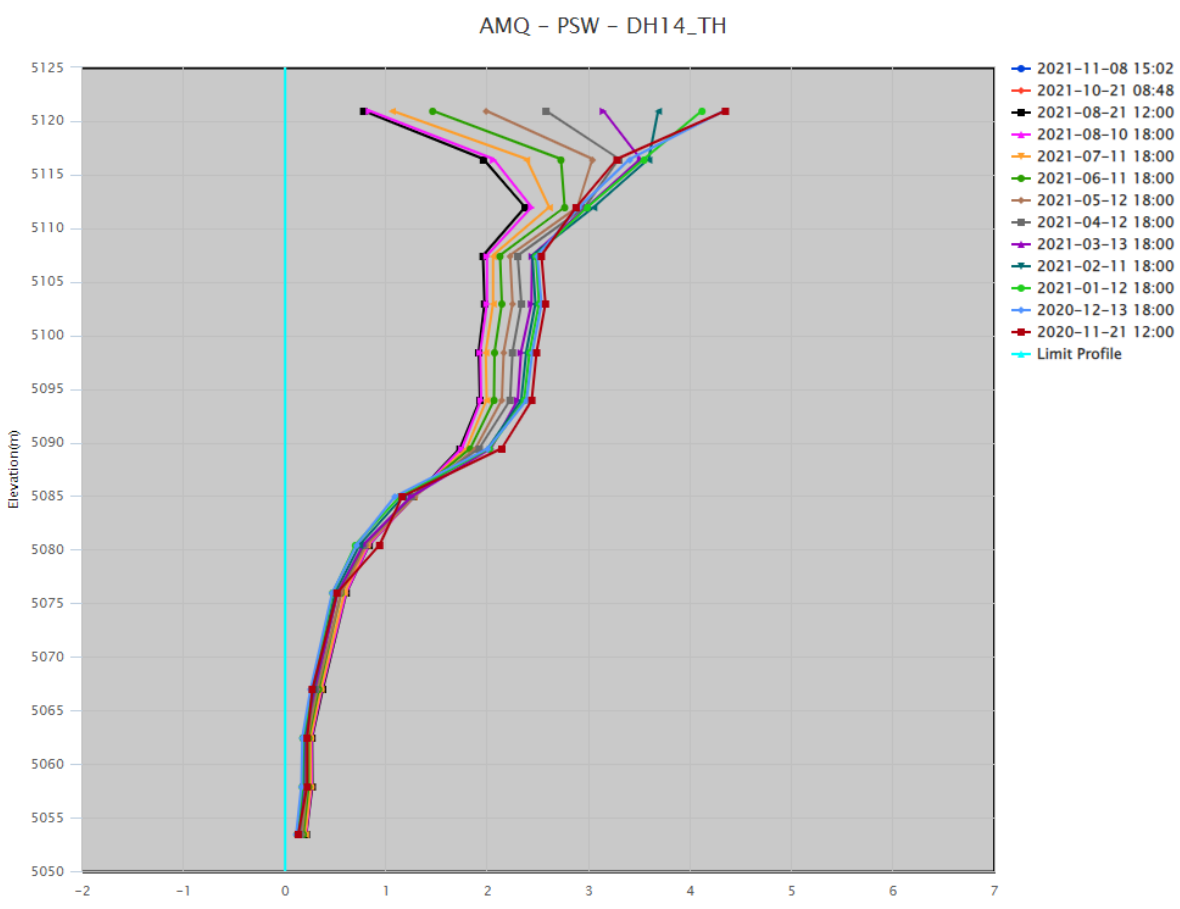

AMQ – PSW – DH13_TH
Elevation(m)
Temperature (°C)
Bedrock
2021-08-21 12:00
2021-07-22 12:00
2021-06-22 12:00
2021-05-23 12:00
2021-04-23 12:00
2021-03-24 12:00
2021-02-22 12:00
2021-01-23 12:00
2020-12-24 12:00
2020-11-24 12:00
2020-11-20 18:00
Limit Profile

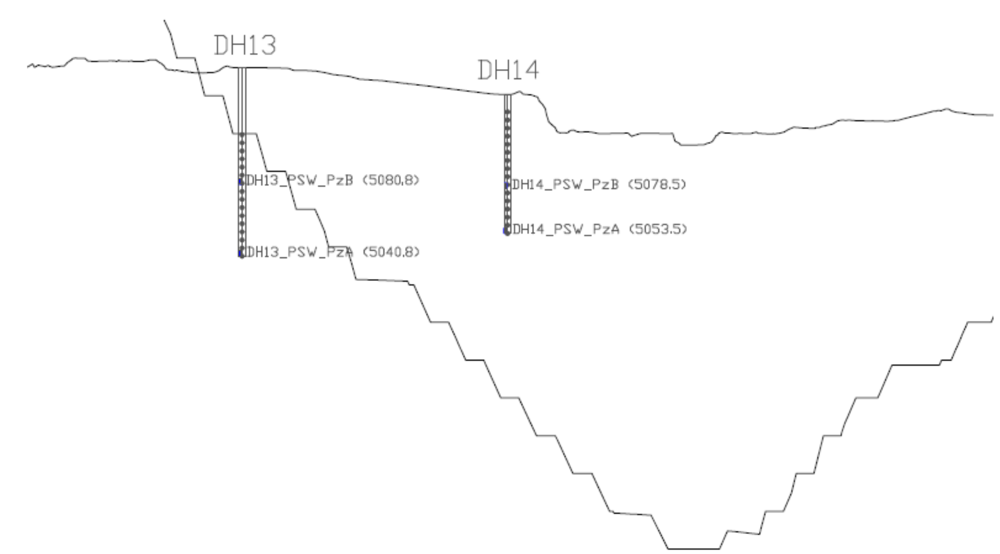

DH13
DH14
DH13_PSW_PzB (5080.8)
DH13_PSW_PzA (5040.8)
DH14_PSW_PzB (5078.5)
DH14_PSW_PzA (5053.5)

PSW – DH 14 TH


AMQ-PSW-DH14 (Depth = 75m)
Approx. Coordinates
x: 14860
y: 6960
z: 5133
AMQ-PSW-DH13 (Depth 100m)
Approx. Coordinates
x: 14831
y: 6831
z: 5144

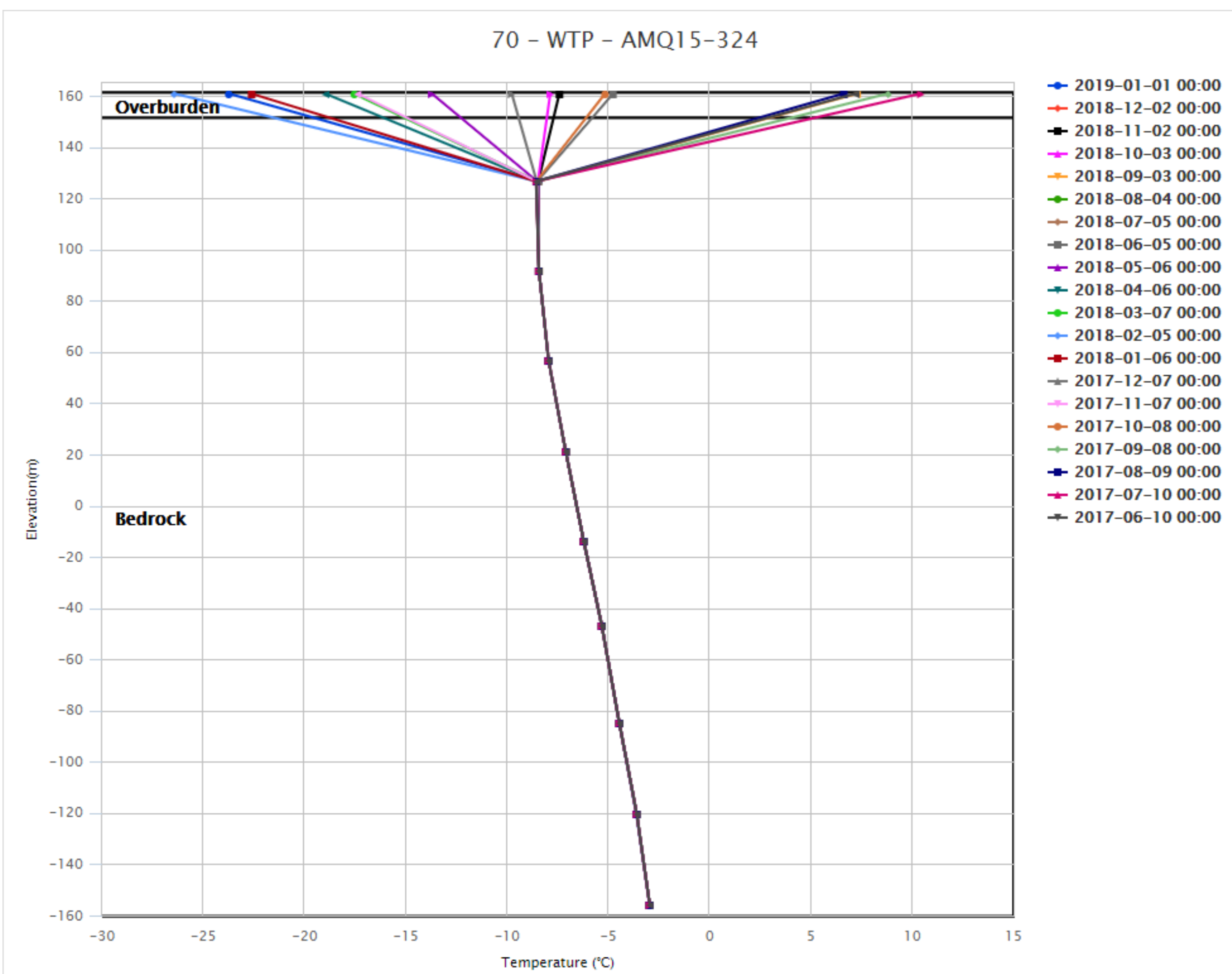

Temperature(°C): PSW-DH14
Elevation (m)
BEDROCK
Zero – degree Isotherm
Time: from 11/21/2020 to 8/21/2021
Temperature(°C)

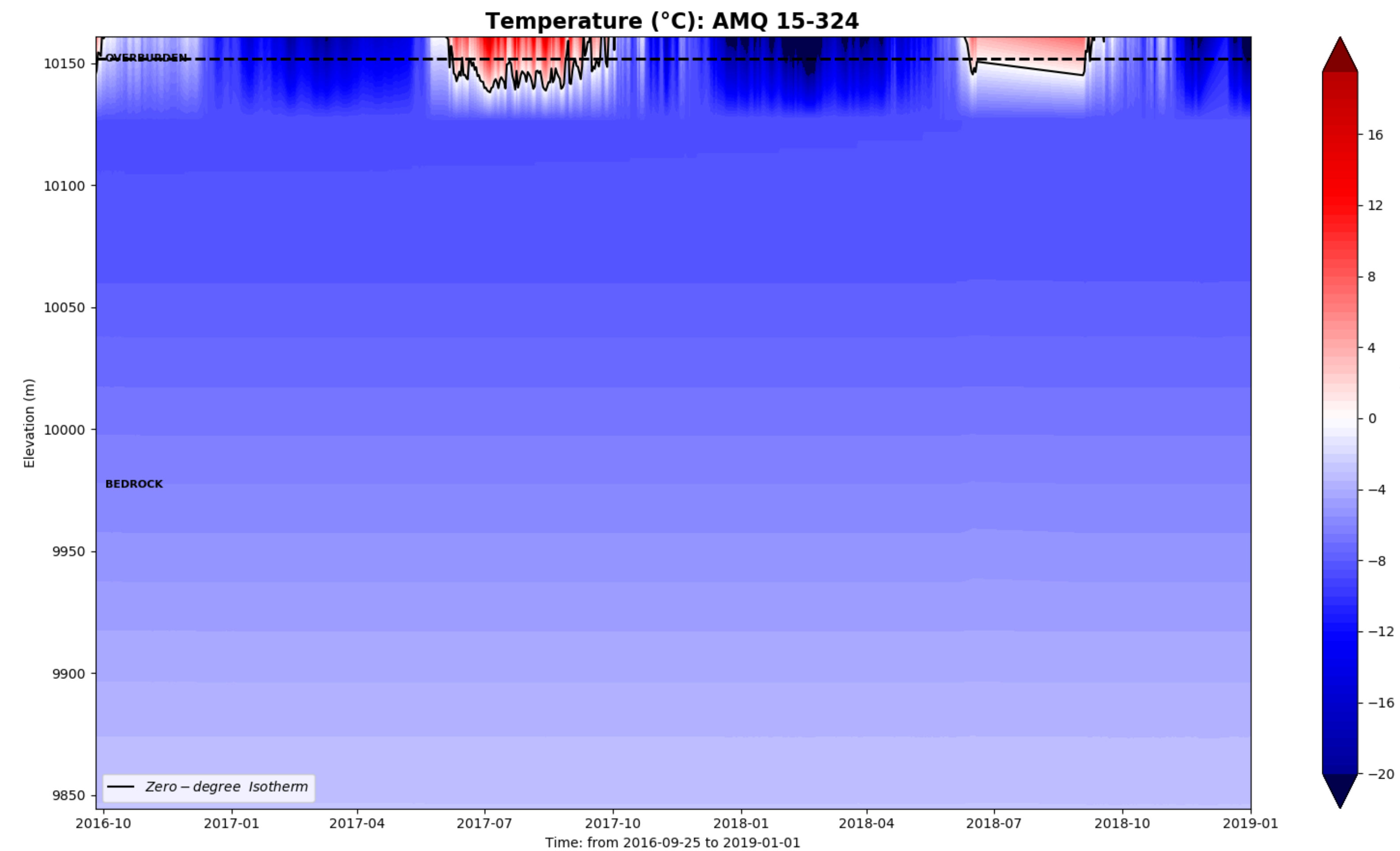

AMQ – PSW – DH14_TH
Elevation(m)
Temperature (°C)
2021-11-08 15:02
2021-10-21 08:48
2021-08-21 12:00
2021-08-10 18:00
2021-07-11 18:00
2021-06-11 18:00
2021-05-12 18:00
2021-04-12 18:00
2021-03-13 18:00
2021-02-11 18:00
2021-01-12 18:00
2020-12-13 18:00
2020-11-21 12:00
Limit Profile


DH13
DH14
DH13_PSW_PzB (5080.8)
DH13_PSW_PzA (5040.8)
DH14_PSW_PzB (5078.5)
DH14_PSW_PzA (5053.5)

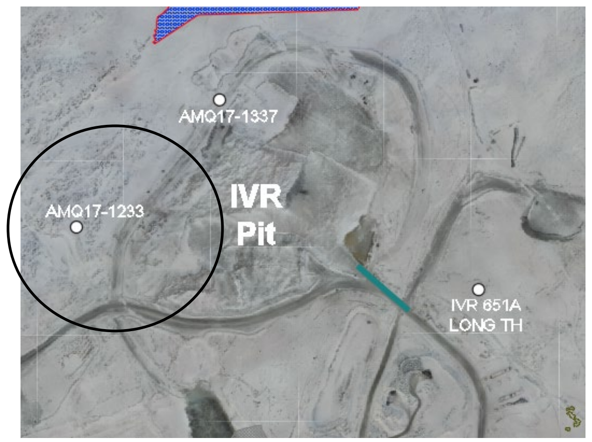
AMQ 15-324

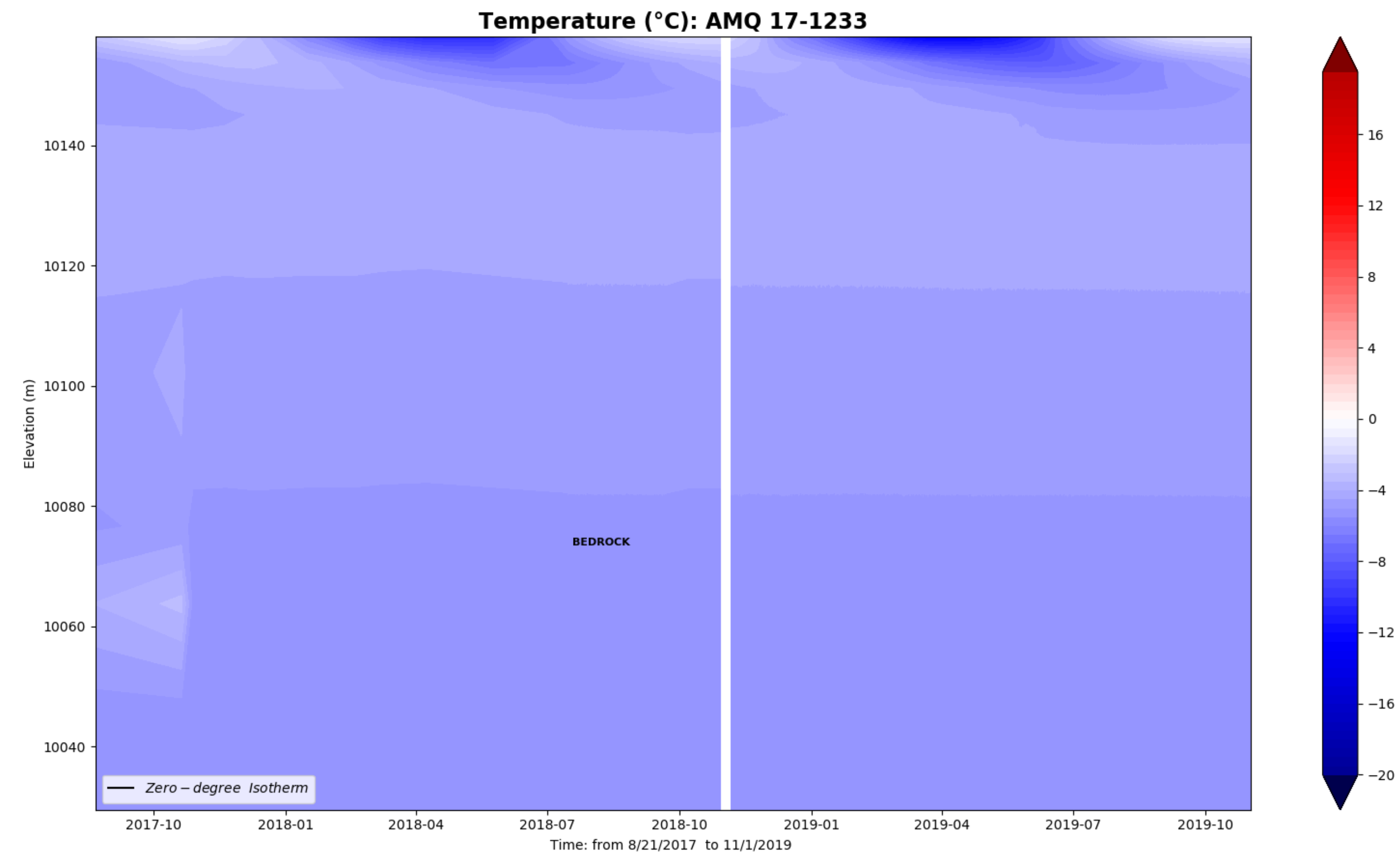

Whale Tail Pit
AMQ15 -324
WHALE TAIL DIKE

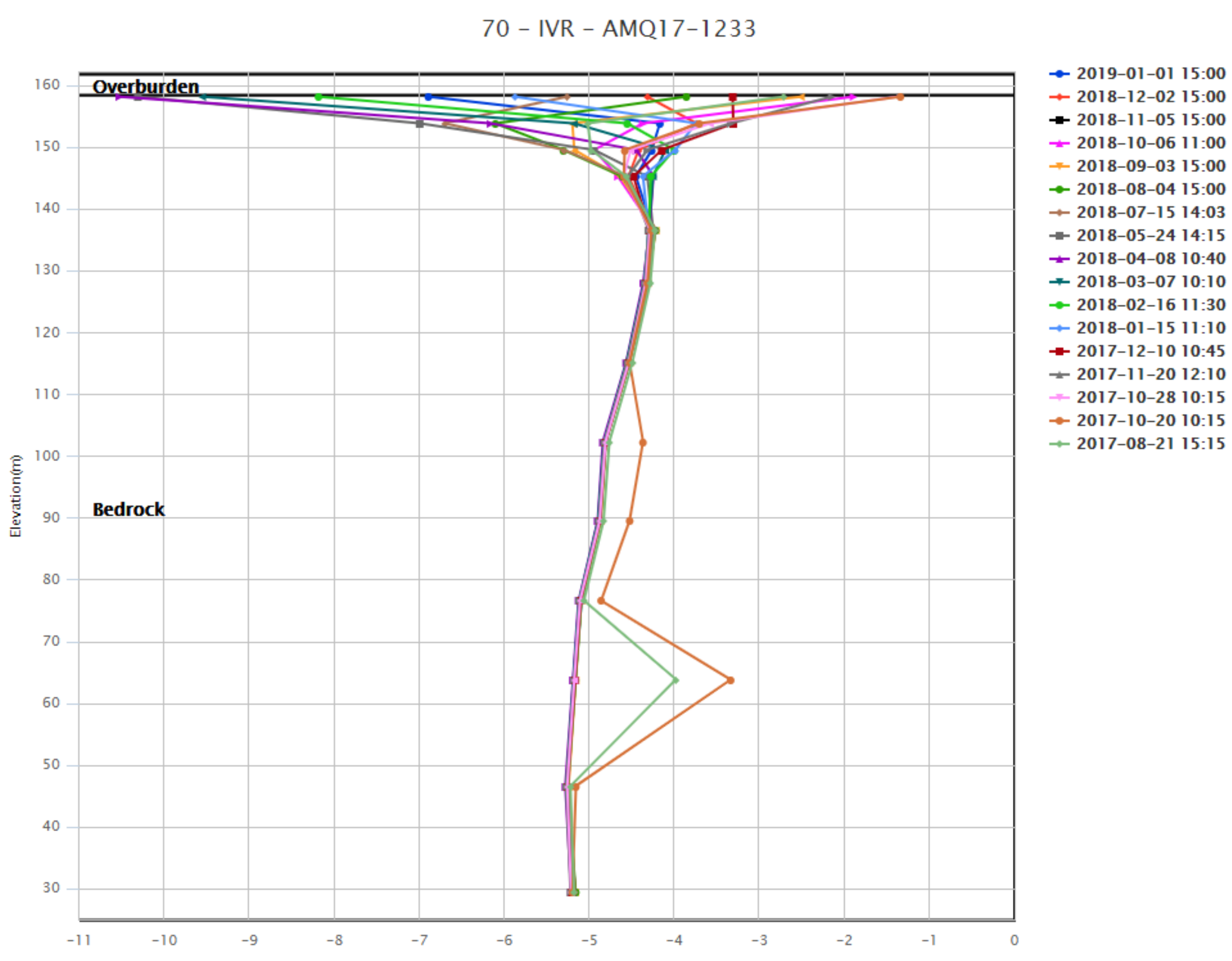

70 – WTP – AMQ15-324
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2019-01-01 00:00
2018-12-02 00:00
2018-11-02 00:00
2018-10-03 00:00
2018-09-03 00:00
2018-08-04 00:00
2018-07-05 00:00
2018-06-05 00:00
2018-05-06 00:00
2018-04-06 00:00
2018-03-07 00:00
2018-02-05 00:00
2018-01-06 00:00
2017-12-07 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
Elevation (m)
Zero – degree Isotherm
Time: from 2016-09-25 to 2019-01-01
Temperature (°C)

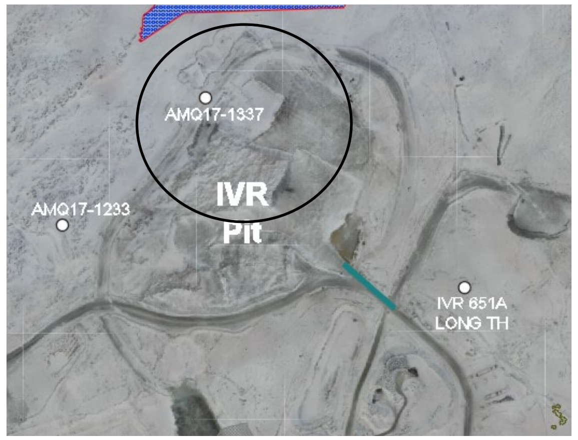
AMQ 17-1233

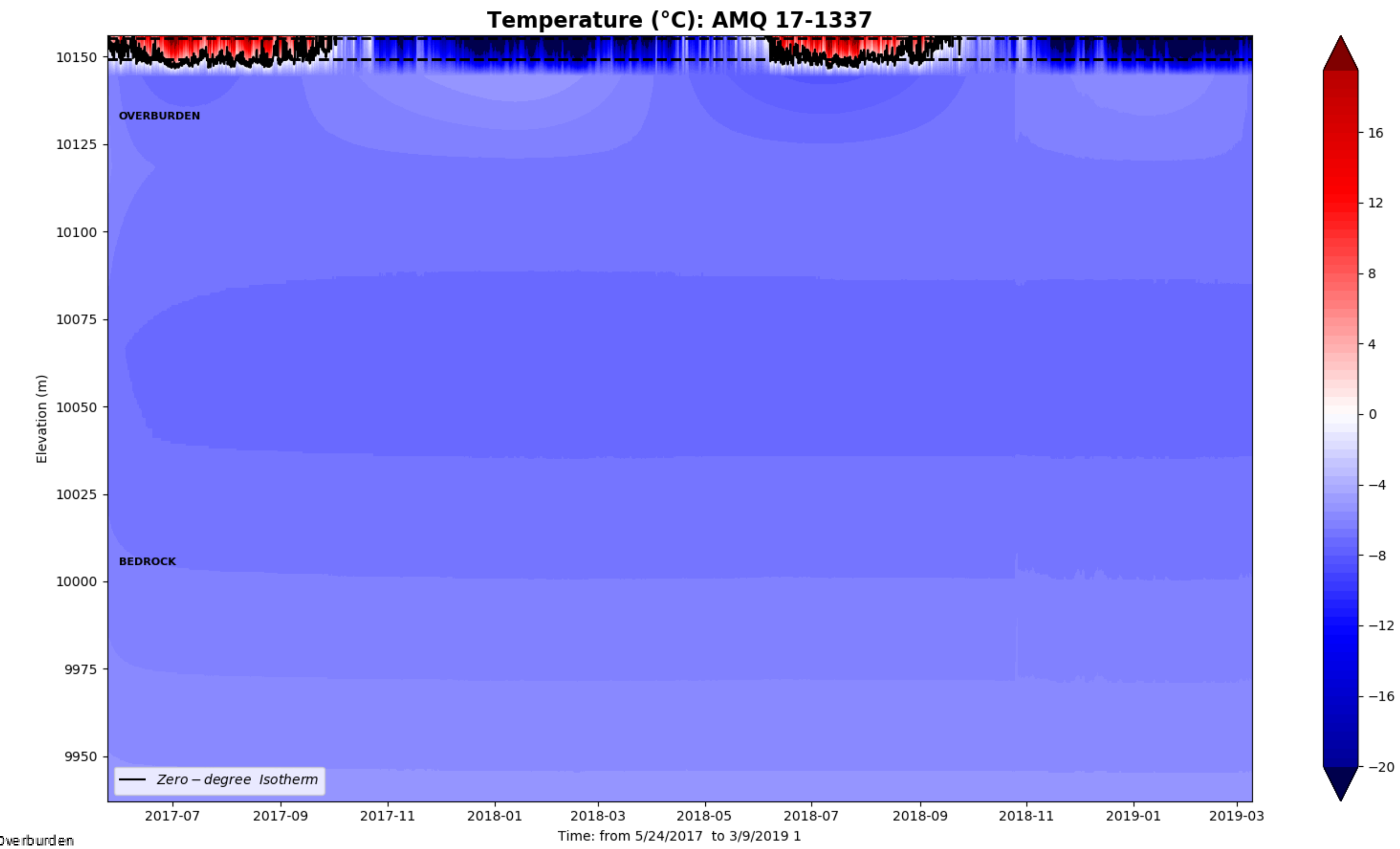

AMQ17-1337
AMQ17-1233
IVR
Pit
IVR 651A
LONG TH

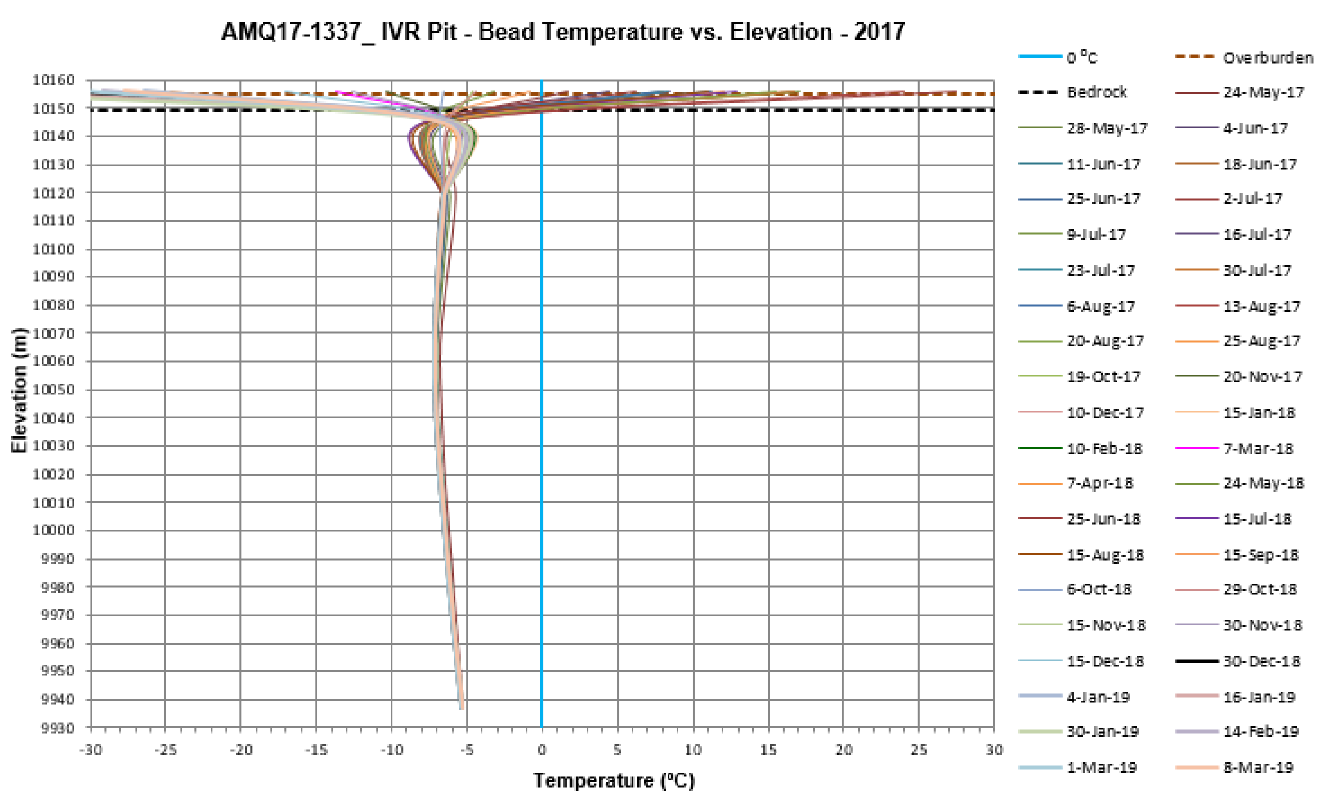

Temperature (°C): AMQ 17-1233
Elevation (m)
BEDROCK
Zero – degree Isotherm
Time: from 8/21/2017 to 11/1/2019
Temperature (°C)


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

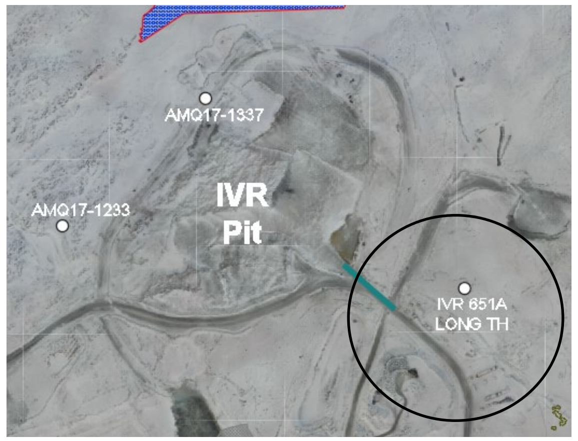
AMQ 17-1337

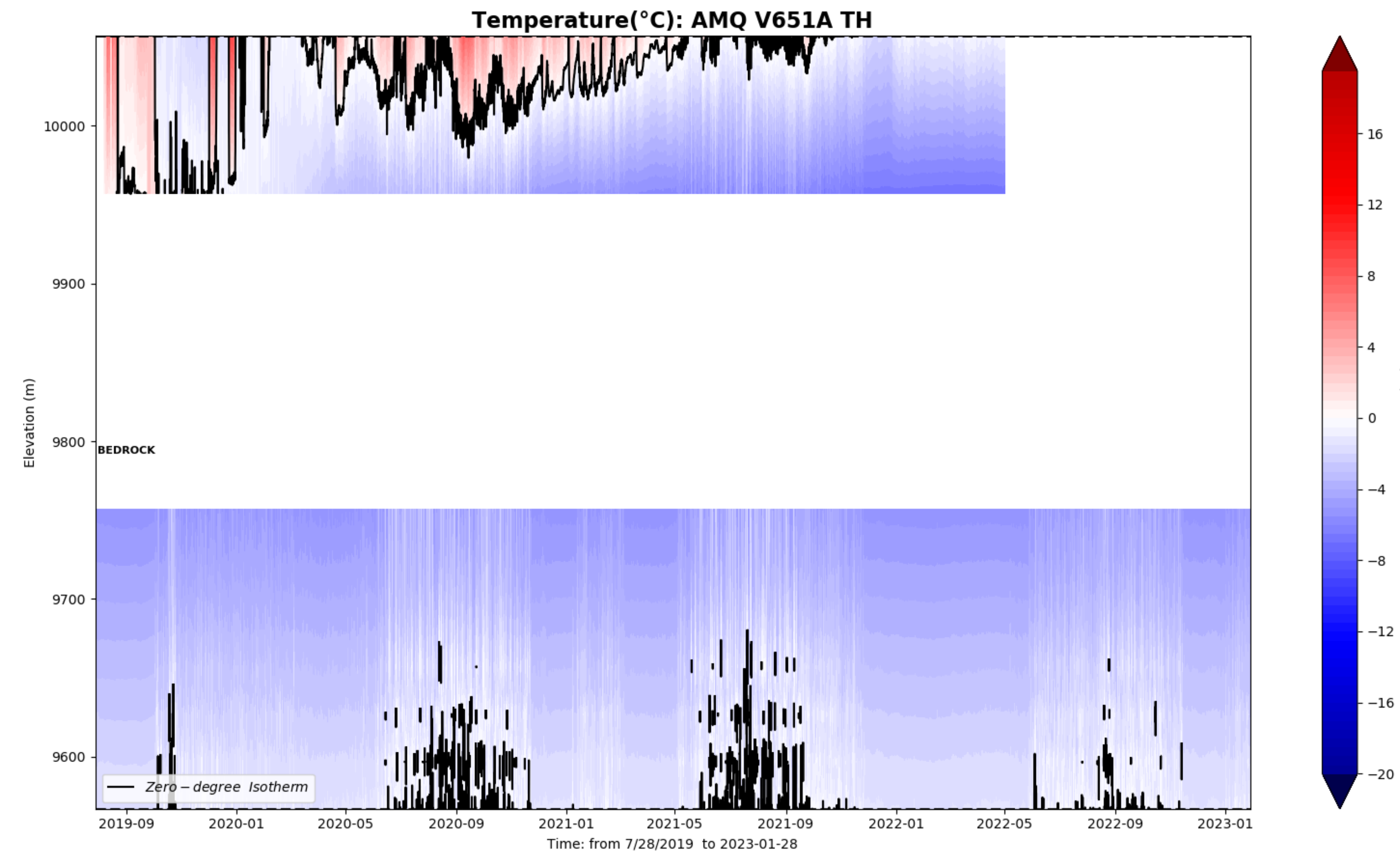

AMQ17-1337
IVR
Pit
AMQ17-1233
IVR 851A
LONG TH

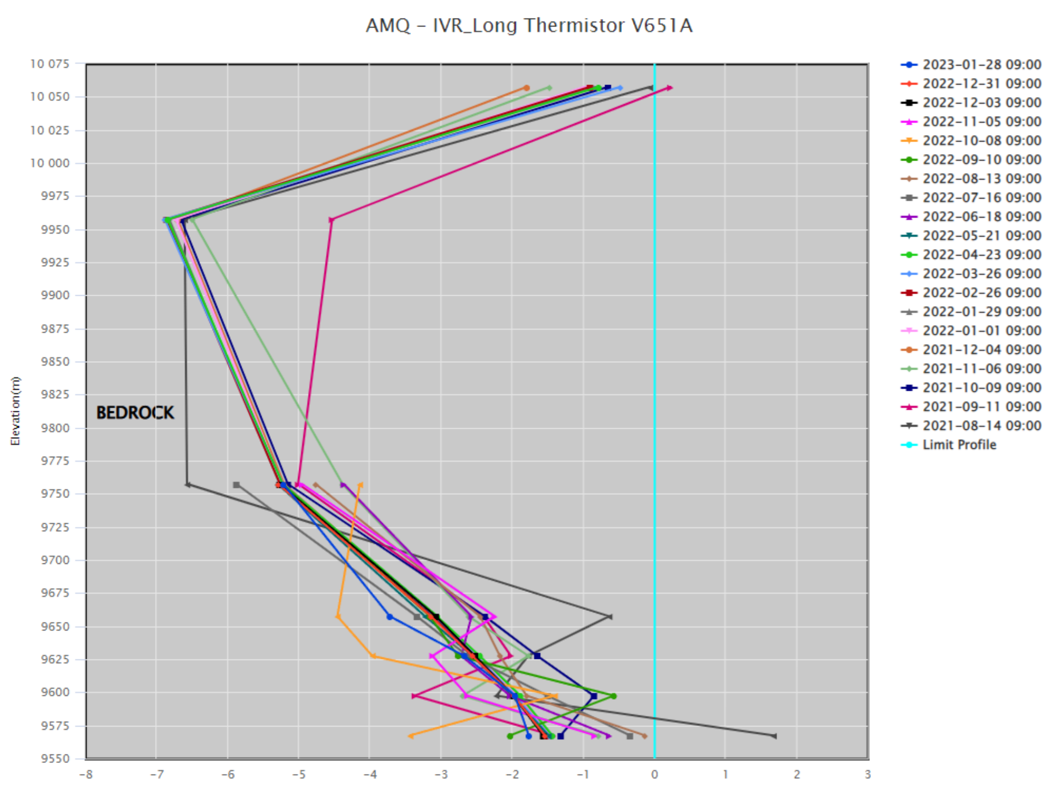

Temperature (°C): AMQ 17-1337
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/24/2017 to 3/9/2019 1
Temperature (°C)


AMQ17-1337_ IVR Pit - Bead Temperature vs. Elevation - 2017
Elevation (m)
Temperature (ºC)
0 °C
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

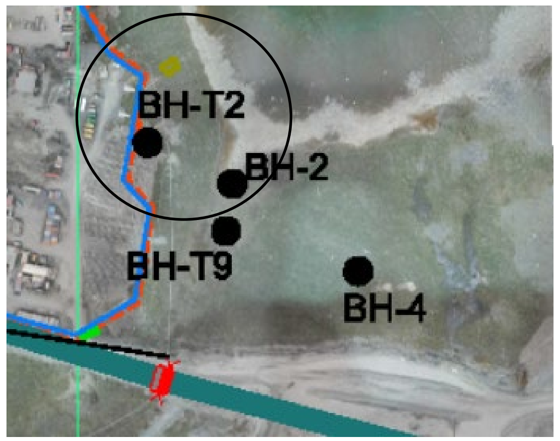
V651A Long TH

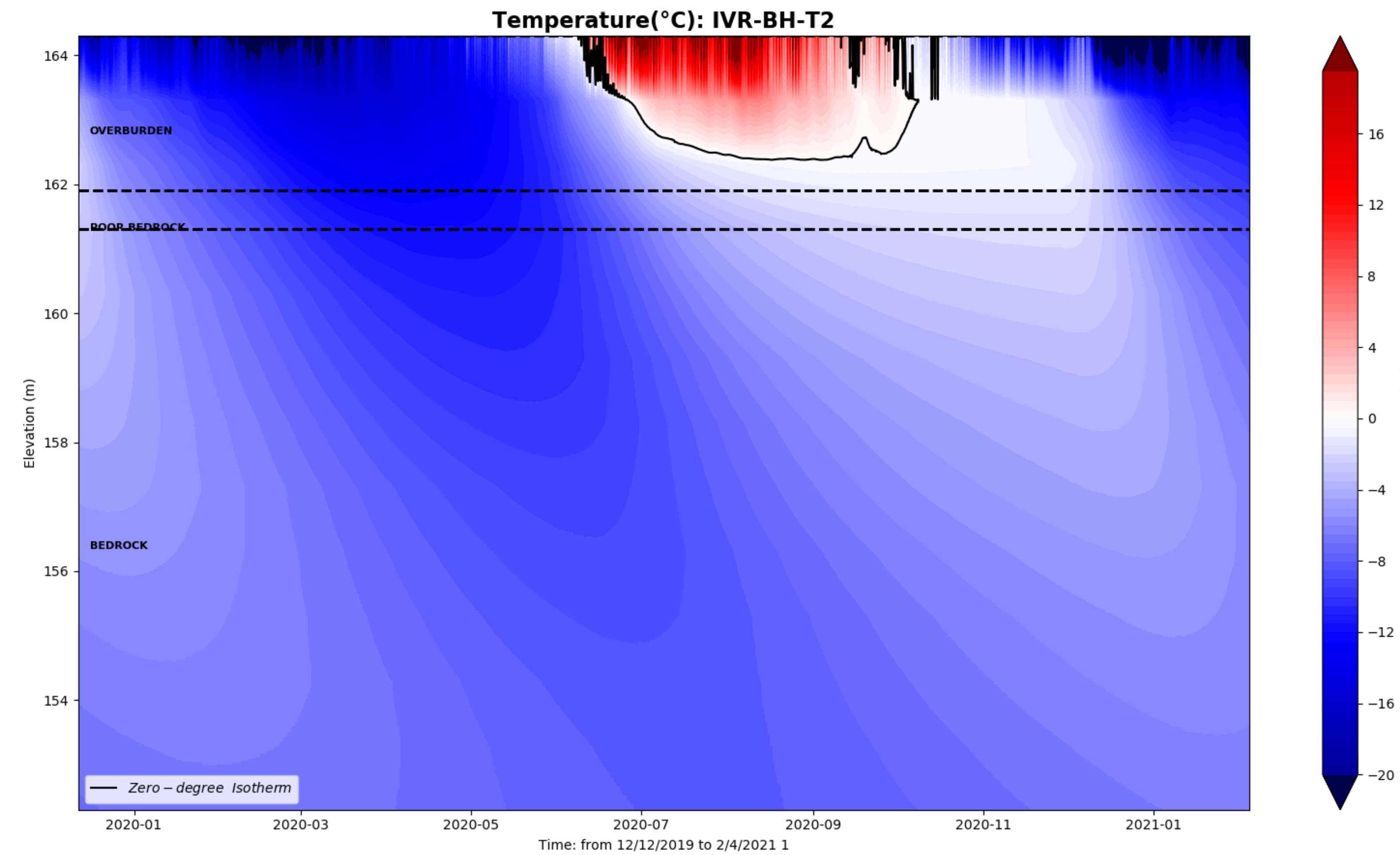


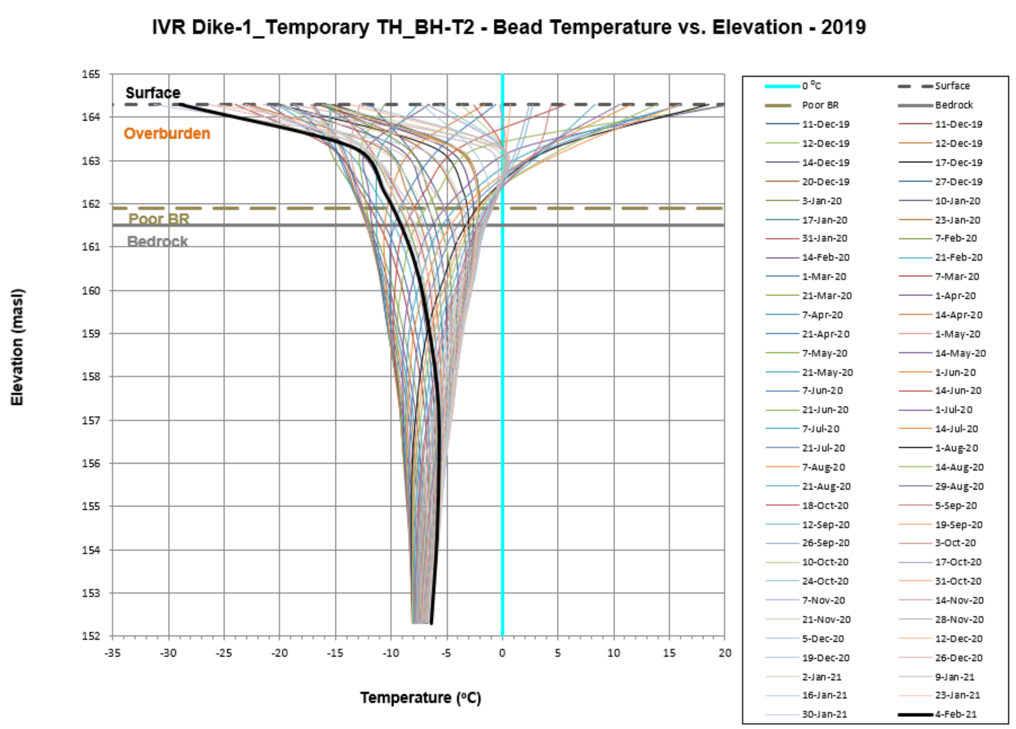




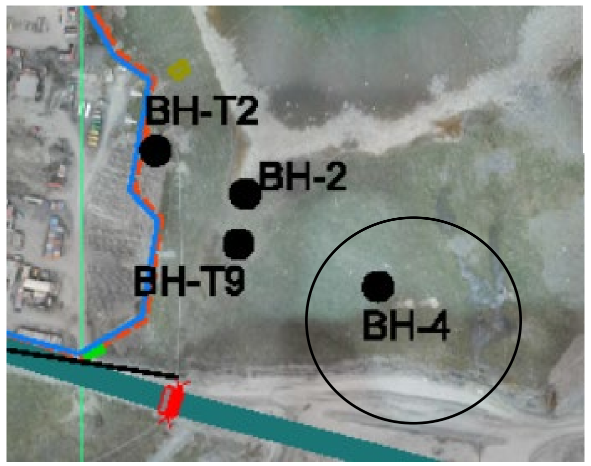
IVR-BH-T2


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

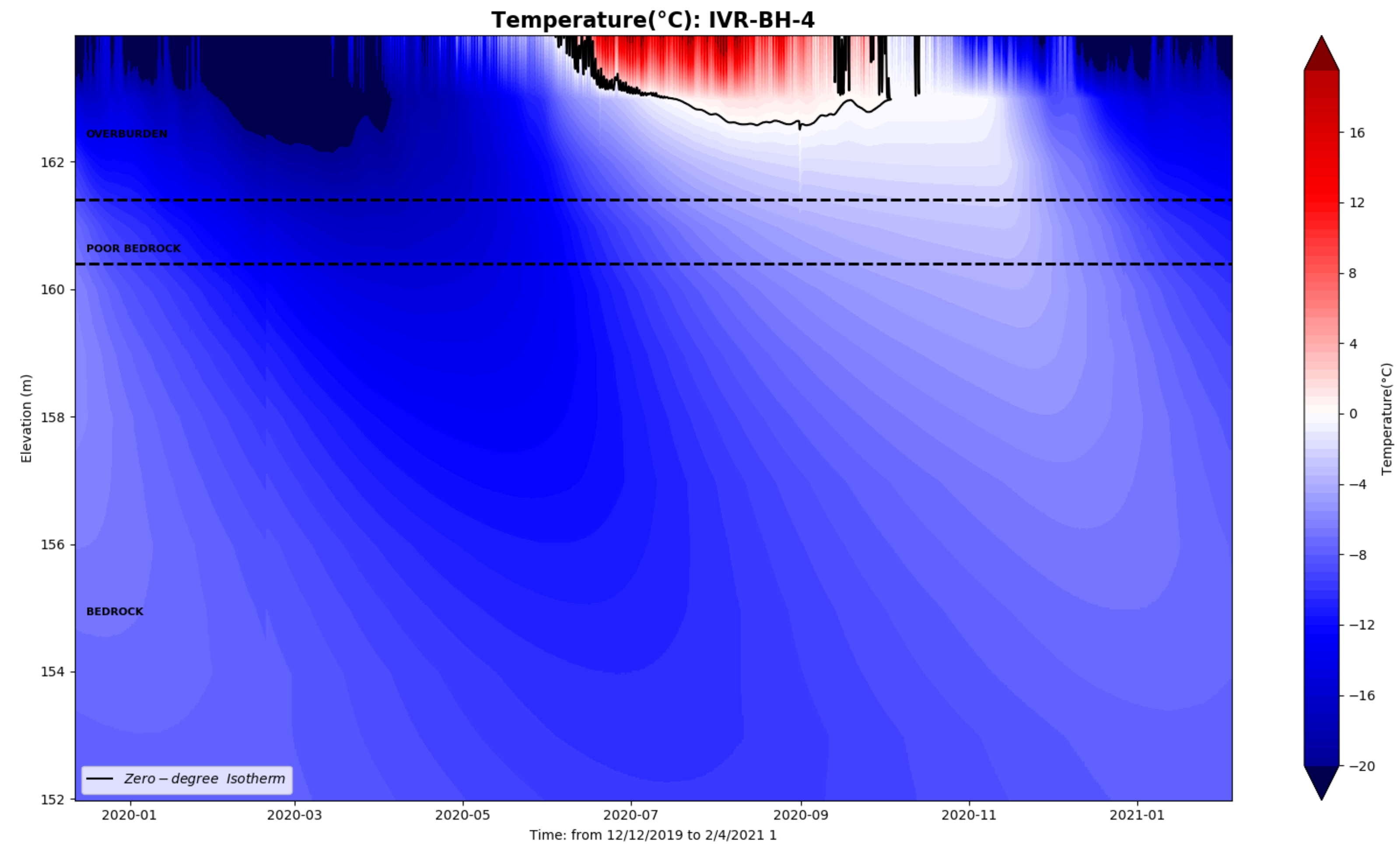

Temperature(°C): IVR-BH-T2
OVERBURDEN
POOR BEDROCK
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 12/12/2019 to 2/4/2021 1
Temperature(°C)


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

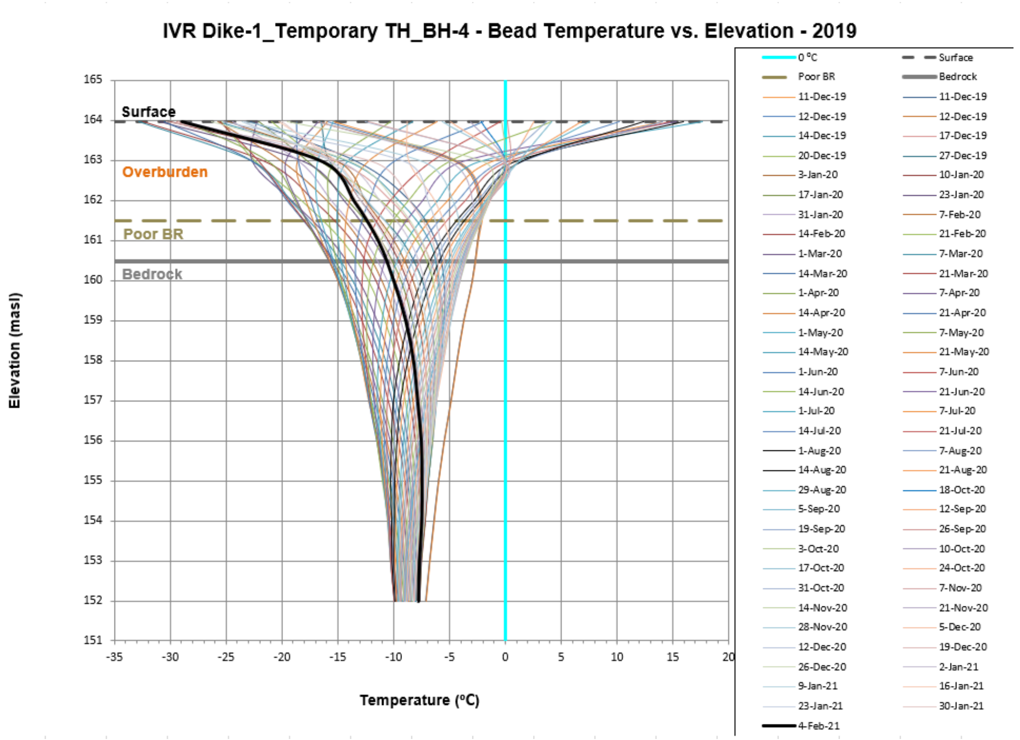
IVR-BH-4



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



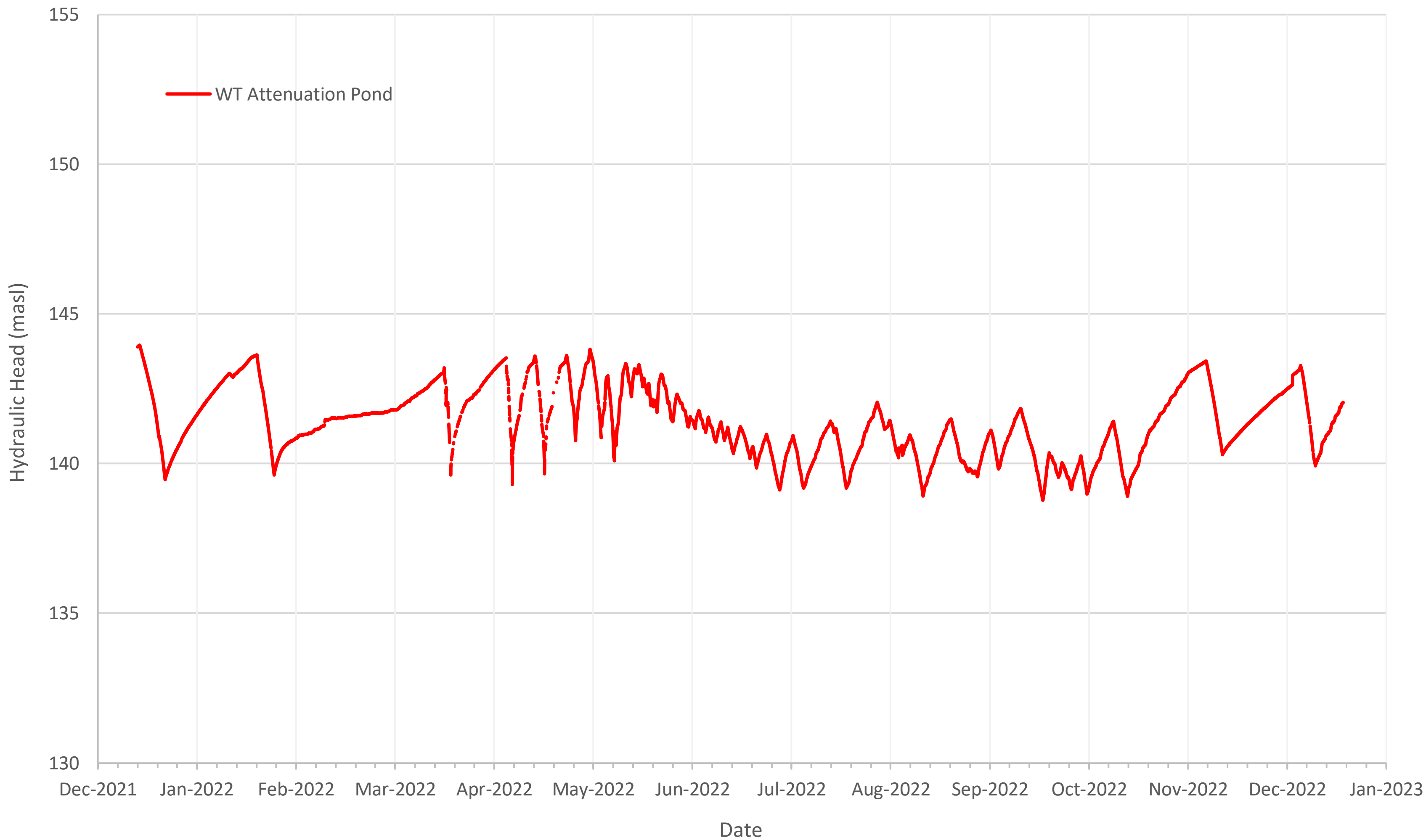
Temperature(°C): IVR-BH-4
OVERBURDEN
POOR BEDROCK
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 12/12/2019 to 2/4/2021 1
Temperature(°C)



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
4-Feb-21

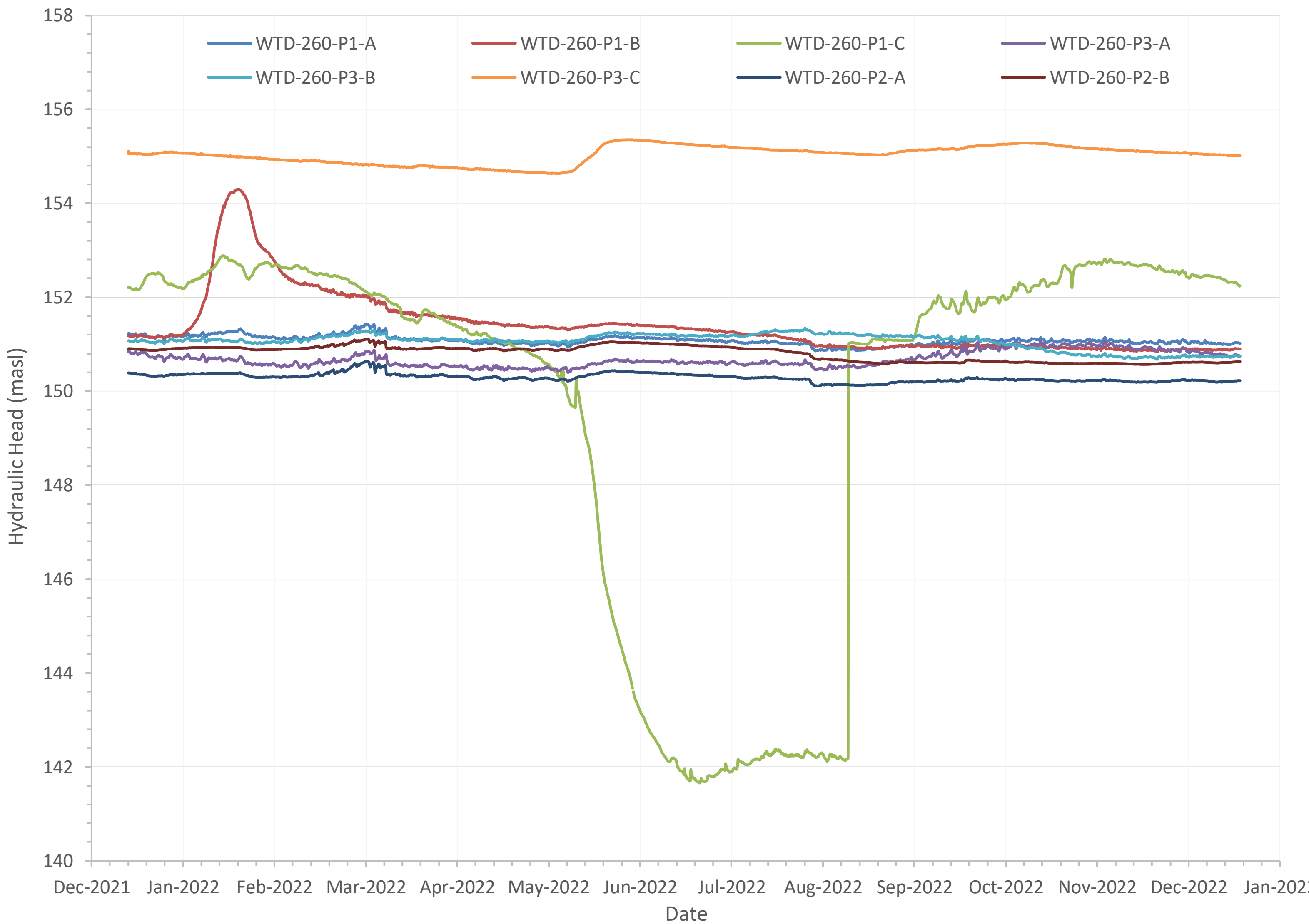
ATTACHMENT C

2022 Piezometric Data



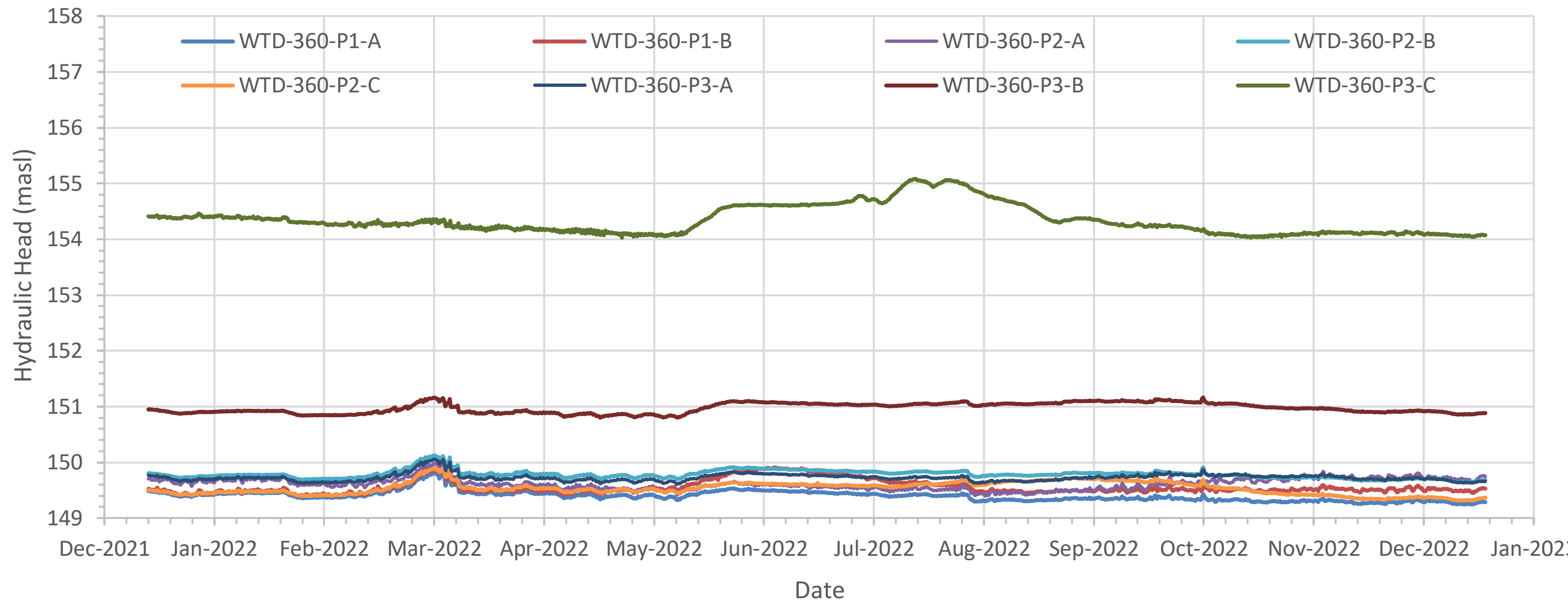
Notes:
All south wall piezometers (and thermistors) were decommissioned between August 21 and 23, 2021, due to mining activity in the sector.

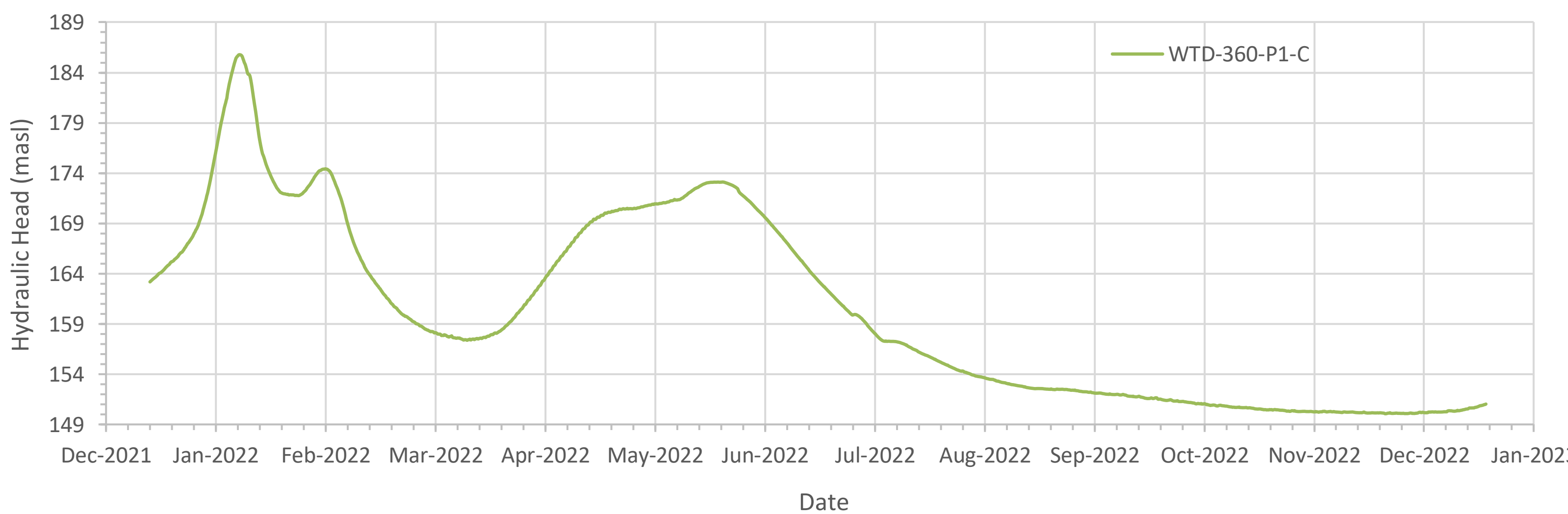
CLIENT	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION
PROJECT	2022 GROUNDWATER MONITORING PROGRAM WHALE TAIL MINE, NUNAVUT
CONSULTANT	WSP GOLDER
YYYY-MM-DD	2023-02-15
PREPARED	NU
DESIGN	--
REVIEW	JL
APPROVED	JL
TITLE	HYDRAULIC HEADS MEASURED AT WHALE TAIL ATTENUATION POND, JANUARY TO DECEMBER 2022
PROJECT No.	22525330
DOC.	547
Rev.	0
FIGURE	C-1



Notes:
WTD-260 series piezometers installed

CLIENT	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION	PROJECT	2022 GROUNDWATER MONITORING PROGRAM WHALE TAIL MINE, NUNAVUT
CONSULTANT	YYYY-MM-DD 2023-02-15	TITLE	**HYDRAULIC HEADS MEASURED AT WTD-260 SERIES PIEZOMETERS, JANUARY TO DECEMBER 2022**
WSP GOLDER	PREPARED NU		
	DESIGN --		
	REVIEW JL		
	APPROVED JL	PROJECT No. 22525330 DOC. 547 Rev. 0	FIGURE C-2





Notes:
WTD-360 series piezometers installed

CLIENT
AGNICO EAGLE
AGNICO EAGLE MINES LIMITED:
MEADOWBANK DIVISION

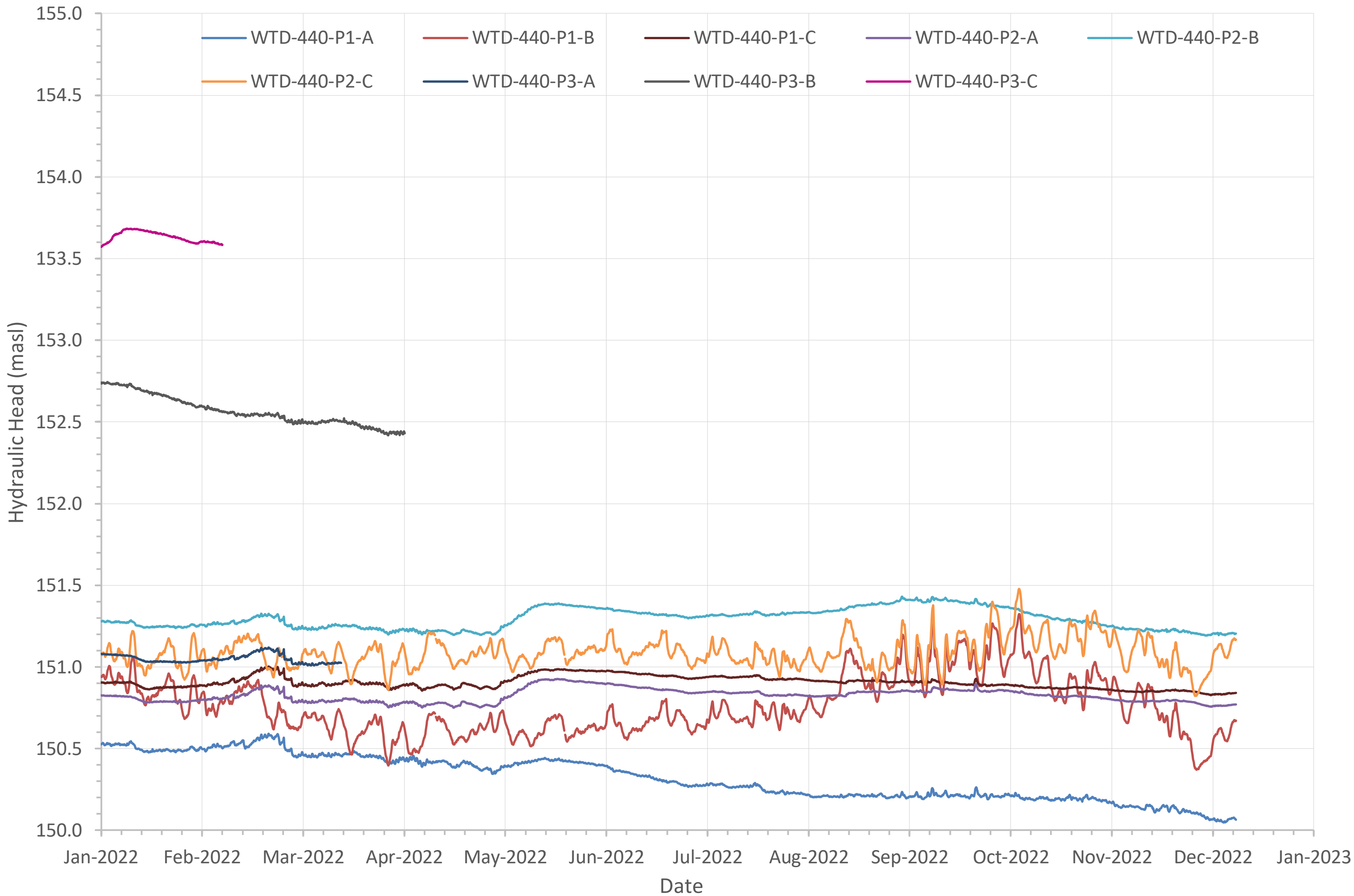
CONSULTANT
WSP GOLDER

YYYY-MM-DD	2023-02-15
PREPARED	NU
DESIGN	--
REVIEW	JL
APPROVED	JL

PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
HYDRAULIC HEADS MEASURED AT WTD-360 SERIES PIEZOMETERS, JANUARY TO DECEMBER 2022

PROJECT No.	DOC.	Rev.	FIGURE
22525330	547	0	C-3



Notes:
WTD-440 series piezometers installed
Hydraulic head data unavailable for WTD-440-P3-C from March 6 to December 31, 2022, for WTD-440-P3-B from April 29 to December 31, 2022, and for WTD-440-P3-A from April 10 to December 31, 2022, due to equipment malfunction.

CLIENT
AGNICO EAGLE
AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION

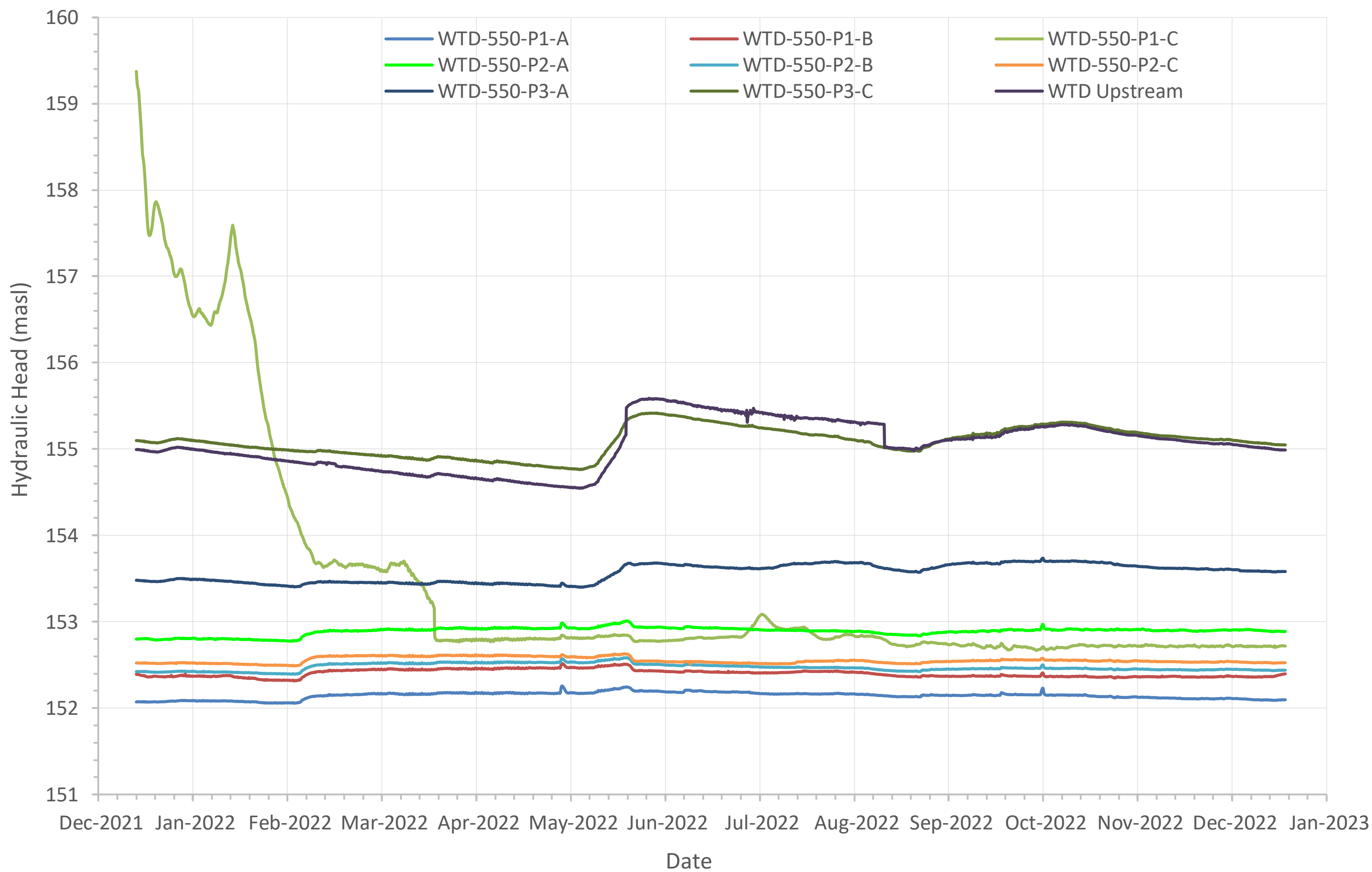
PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2023-02-15
PREPARED	NU
DESIGN	--
REVIEW	JL
APPROVED	JL

TITLE
HYDRAULIC HEADS MEASURED AT WTD-440 SERIES PIEZOMETERS, JANUARY TO DECEMBER 2022

PROJECT No.	DOC.	Rev.	FIGURE
22525330	547	0	C-4



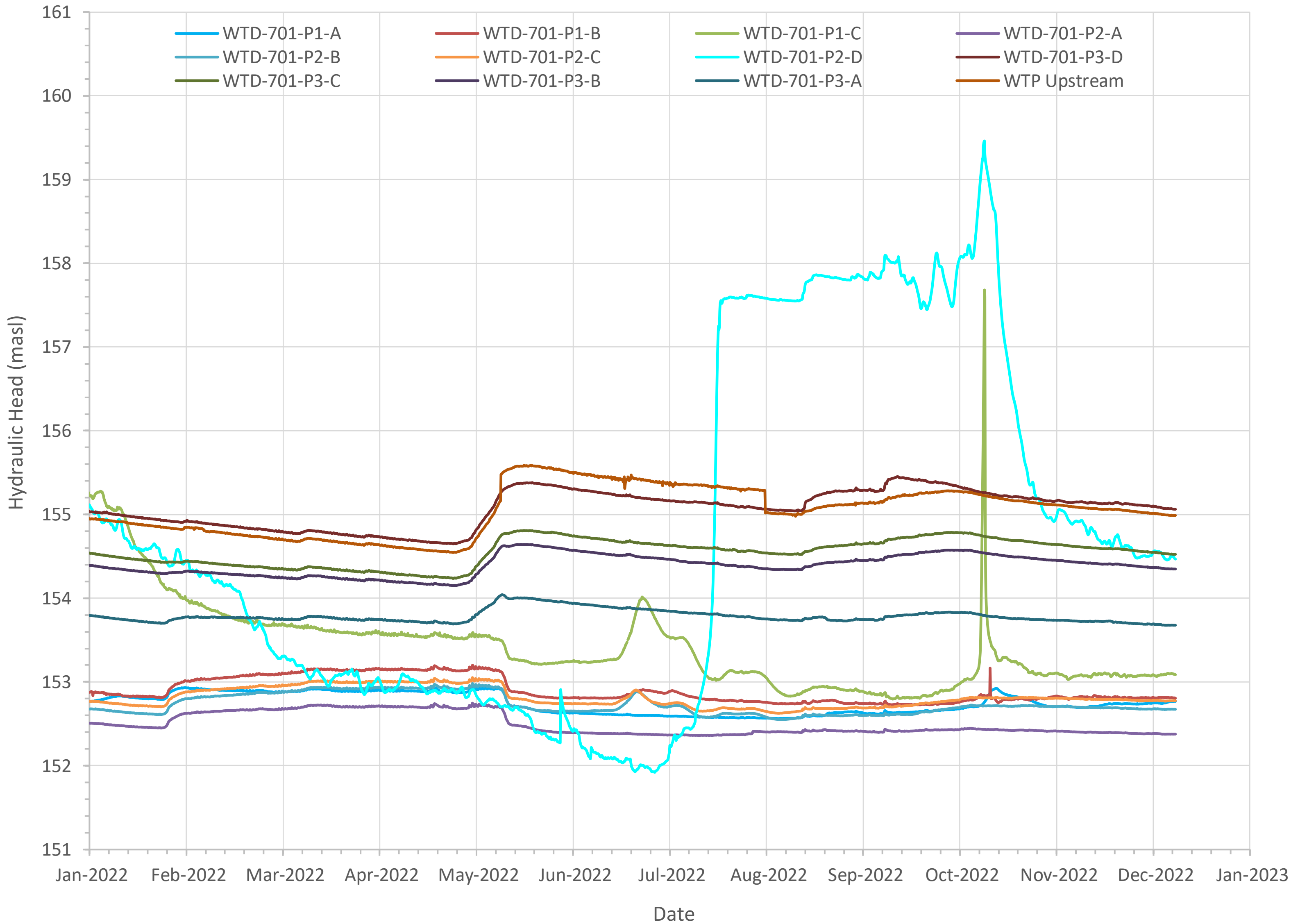
Notes:
WTD-550 series piezometers installed

CLIENT	AGNICO EAGLE	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION	
CONSULTANT	WSP GOLDER	YYYY-MM-DD	2023-02-15
		PREPARED	NU
		DESIGN	--
		REVIEW	JL
		APPROVED	JL

PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
HYDRAULIC HEADS MEASURED AT WTD UPSTREAM AND WTD-701 SERIES PIEZOMETERS, JANUARY TO DECEMBER 2022

PROJECT No.	DOC.	Rev.	FIGURE
22525330	547	0	C-5



Notes:
WTD-701 series piezometers installed

CLIENT	AGNICO EAGLE	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION	
CONSULTANT	WSP GOLDER	YYYY-MM-DD	2023-02-15
		PREPARED	NU
		DESIGN	--
		REVIEW	JL
		APPROVED	JL

PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
HYDRAULIC HEADS MEASURED AT WTD UPSTREAM AND WTD-701 SERIES PIEZOMETERS, JANUARY TO DECEMBER 2022

PROJECT No.	DOC.	Rev.	FIGURE
22525330	547	0	C-6

ATTACHMENT D

2022 Seepage Survey Photographs (provided by Agnico Eagle)

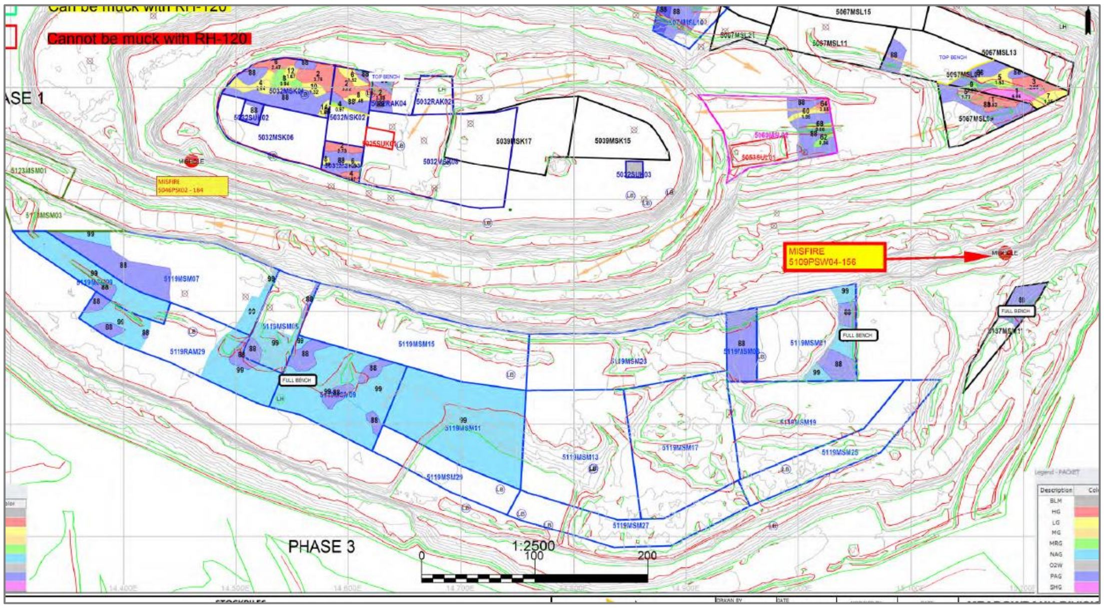


Photo 1: Pit seepage along Whale Tail Pit south wall, concentrated water source type, flowing joint (water source is related to ongoing water management operations), looking south (July 30, 2022).

Photo 2: Pit seepage along Whale Tail Pit south wall, concentrated water source type, flow observed from the top layer and joint set / fault brittle structure (water source is related to ongoing water management operations), looking south (July 30, 2022).

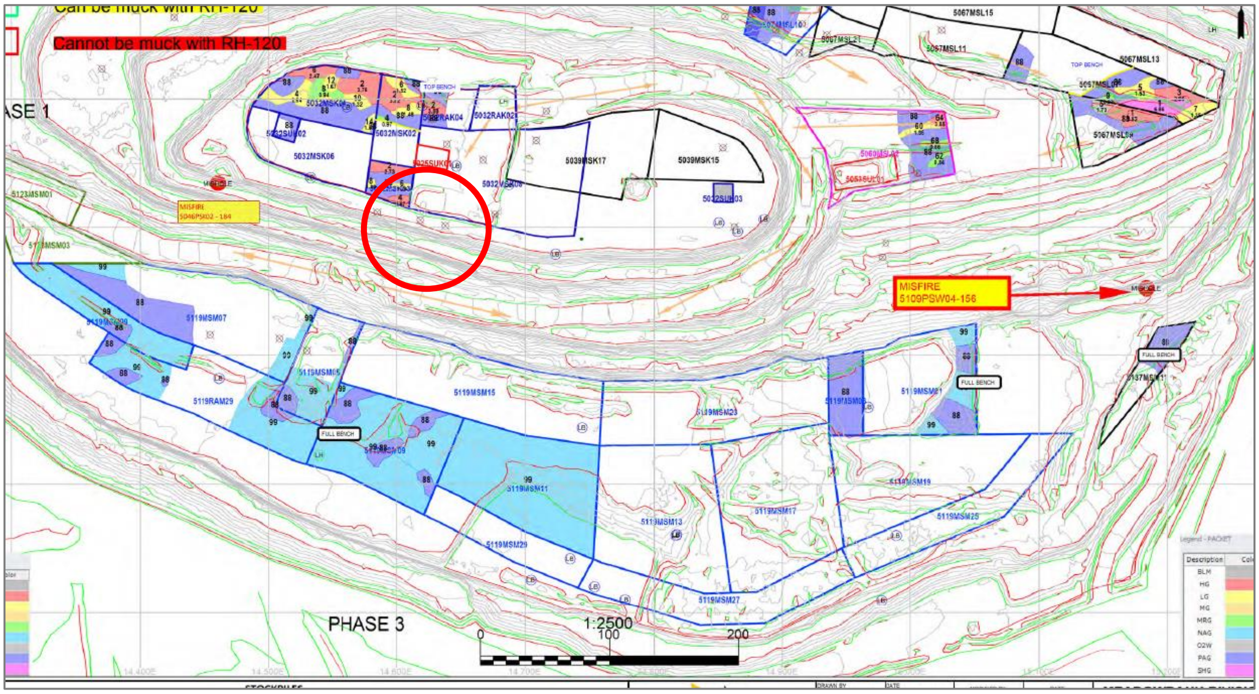

Cannot be muck with RH-120
MISFIRE
5109PSW04-156
PHASE 3
1:2500
0
100
200
5032MSK06
5039MSK17
5039MSK15
5067MSL15
5067MSL11
5067MSL13
5119MSM07
5119RAM29
5119MSM15
5119MSM11
5119MSM29
5119MSM13
5119MSM17
5119MSM27
5119MSM19
5119MSM25
FULL BENCH
TOP BENCH

Photo 3: Pit seepage along Whale Tail Pit south wall; flow coming from the ramp during a rainy day but precipitation does not justify the amount of concentrated water (August 1, 2022).

Photo 4: Whale Tail Pit, looking southwest, water accumulation on the catchment later in August 2022; this picture was taken without fresh rain (August 27, 2022).

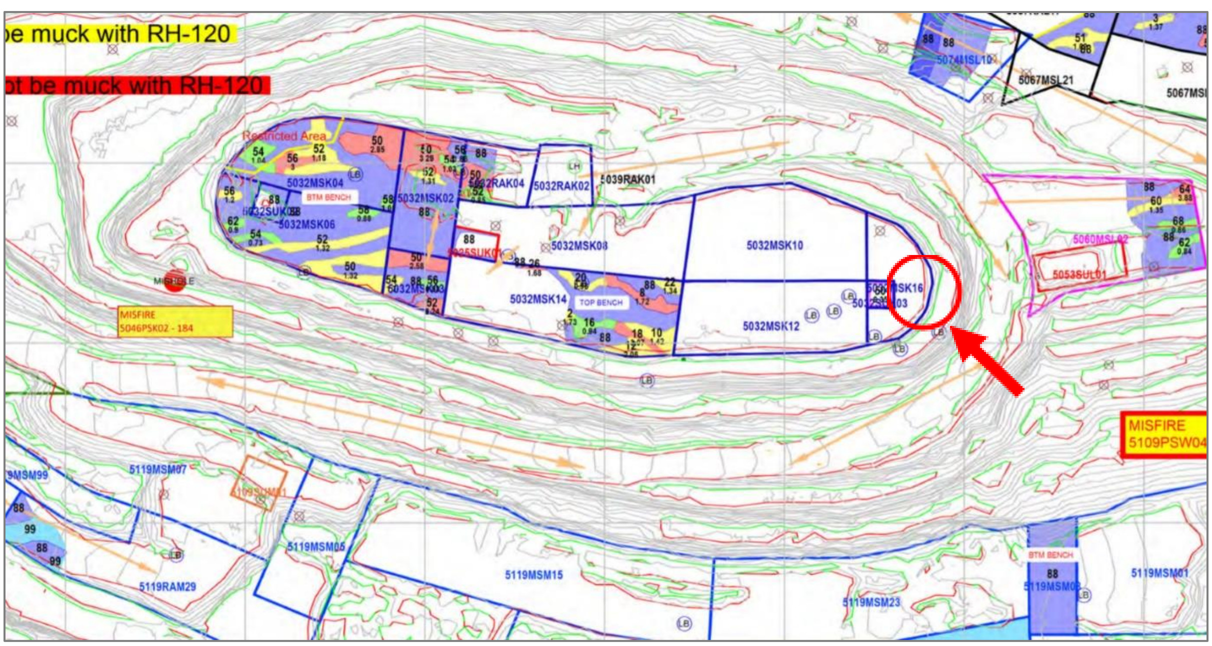
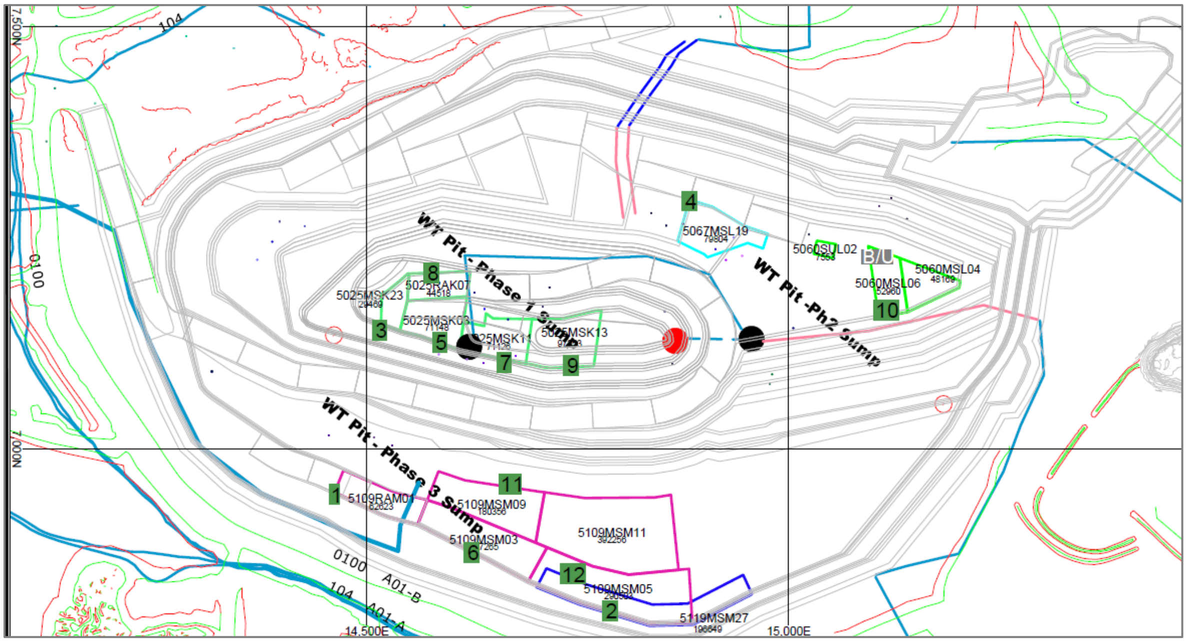


Photo 5: Whale Tail Pit P1, looking southeast; water was flowing steady from the eastern end of WHL P1, and this condition was ongoing for a couple weeks prior to August 21, 2022; water was observed flowing through a brittle structure (see red arrow), and the source is likely the same that forms the ice wall during sub-zero conditions, and flows underneath the ramp and exits through the wall (August 21, 2022).



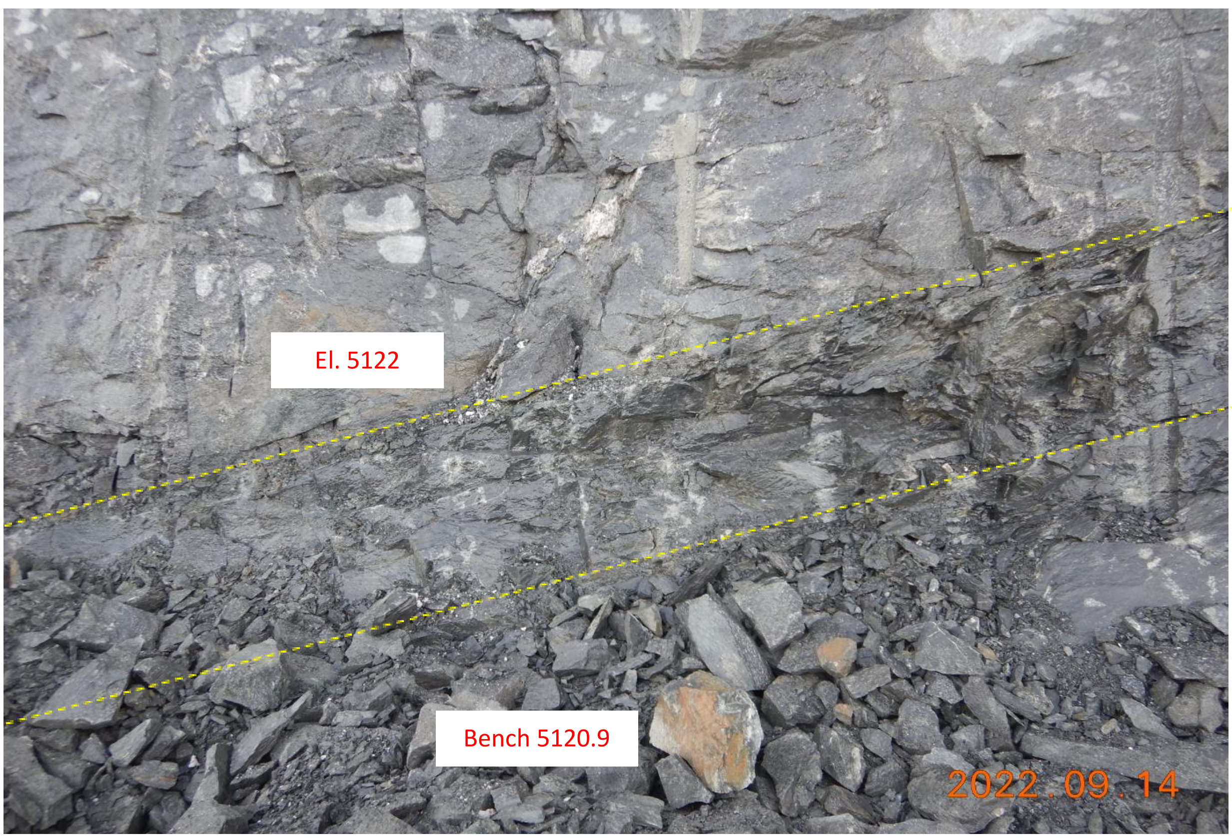


Photo 6: Whale Tail Pit P3, looking southwest; water flowing from a fault or brittle structure (September 14, 2022).

Photo 7: Whale Tail Pit P3, looking south-southwest; water flowing from a fault or brittle structure (November 13, 2022).

Photo 8: Whale Tail Pit P3, looking south-southwest; water flowing from a fault or brittle structure (November 13, 2022).

ATTACHMENT E

Supplemental 2022 Water Quality Data

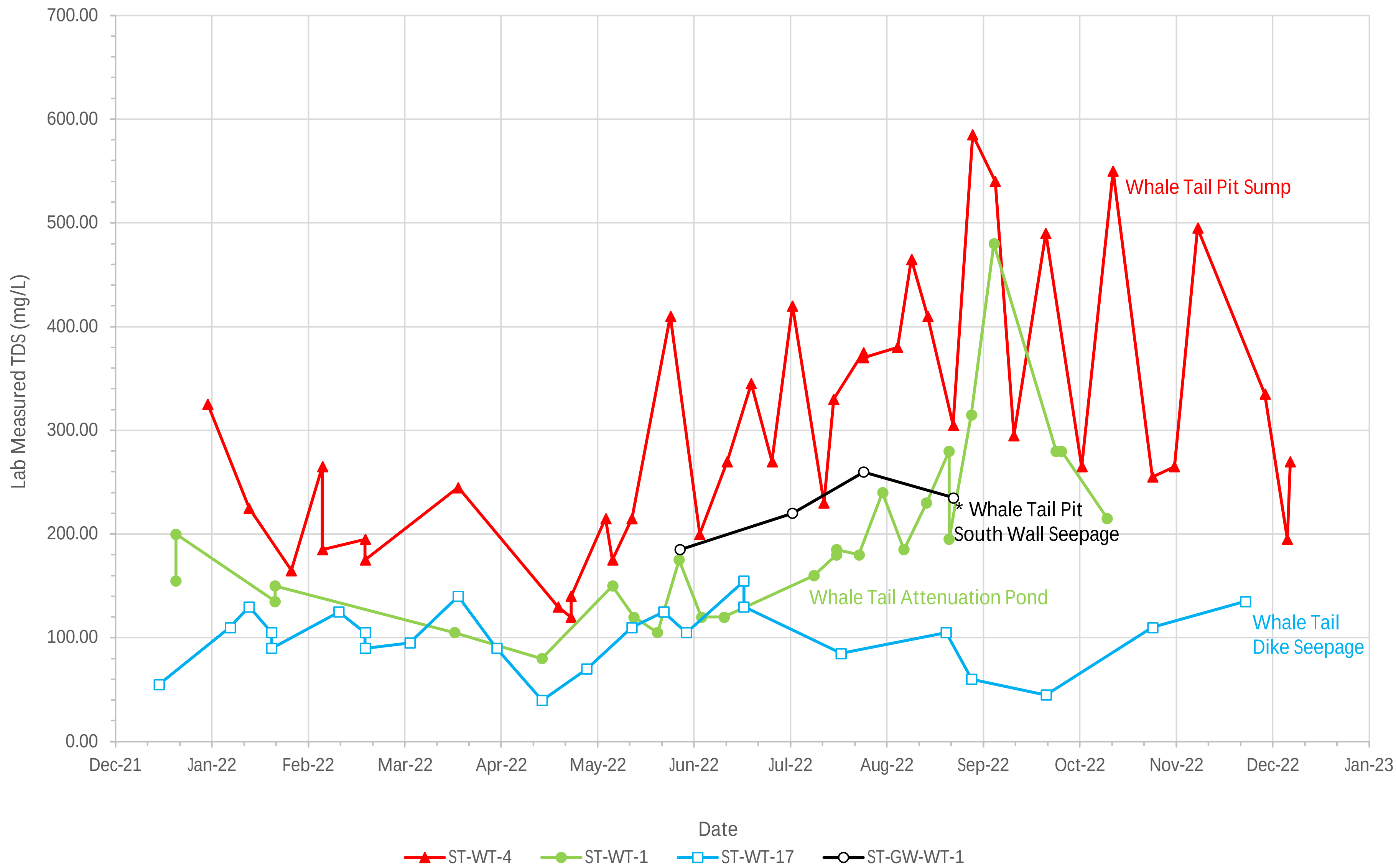
AGNICO EAGLE

Project : AMQ
Location : ST-GW-WT-1
Date range : 06-13-2022 - 09-06-2022

	Sample date	13-06-2022	18-07-2022	09-08-2022	06-09-2022
	Sample name	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1
	Sample type	N	N	N	N
	Depth range	-	-	-	-
Parameter	**Unit**				
WQ01- Field Measured					
Temperature	**°C**	3.6	2.4	9.9	4.7
pH	**pH units**	7.03	6.66	7.02	6.78
Conductivity	**uS/cm**	281	310	340	418
Dissolved oxygen	**mg/L**	11.22	10.55	10.84	10.29
Dissolved oxygen	**%**	104.9	98.9	111.2	104.5
Turbidity	**NTU**	3	0.92	10.7	1.87
Arsenic, field measure	**mg/L**	0.01	-	-	-
WQ02- Conventional Parameters					
pH	**pH units**	7.67	7.76	8.02	7.68
Turbidity	**NTU**	3.8	3.3	0.2	1.3
Specific conductivity	**ms/cm**	0.293	0.319	0.345	0.386
Hardness, as CaCO3	**mg/L**	107	123	133	131
Total alkalinity, as CaCO3	**mg/L**	49	51	55	56
Carbonate, as CaCO3	**mg/L**	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate, as CaCO3	**mg/L**	49	50	54	55
TDS	**mg/L**	185	220	260	235
TSS	**mg/L**	12	2	4	2
Total organic carbon	**mg/L**	1.9	2.5	1.6	1.6
Dissolved organic carbon	**mg/L**	1.6	2.1	1.3	1.4
Sodium Adsorption Ratio (salinity in water)	-	-	-	-	0.30
WQ03- Major Ions					
Bromide	**mg/L**	-	-	-	< 1.0
Chloride	**mg/L**	32	36	43	39
Cyanide	**mg/L**	0.00291	0.00197	0.00169	0.0109
Cyanide (free)	**mg/L**	0.0058	0.0045	< 0.0020	-
Fluoride	**mg/L**	-	-	-	0.20
Silica	**mg/L**	9.7	11	10	9.4
Sulfate	**mg/L**	37	43	39	67
WQ04- Nutrients and Chlorophyll a					
Ammonia (NH3)	**mg/L**	0.52	0.50	0.090	1.9
Ammonia Nitrogen (as N)	**mg/L**	0.42	0.41	0.074	1.6
Nitrate (as N)	**mg/L**	< 0.10	< 0.10	0.28	0.13
Nitrite (as N)	**mg/L**	0.030	< 0.010	0.027	0.018
Nitrate + nitrite (as N)	**mg/L**	< 0.10	< 0.10	0.30	0.15
Total Kjeldahl nitrogen	**mg/L**	0.54	0.37	0.11	1.7
Total phosphorus	**mg/L**	0.020	0.015	< 0.0010	0.0011
Orthophosphate (P)	**mg/L**	< 0.010	< 0.010	< 0.010	< 0.010
WQ06- Total Metals					
Aluminum	**mg/L**	0.281	0.0067	0.0702	0.0283
Antimony	**mg/L**	< 0.00050	< 0.00050	< 0.00050	0.00103
Arsenic	**mg/L**	0.0262	0.0390	0.0166	0.00700
Barium	**mg/L**	0.0772	0.0820	0.100	0.0814
Beryllium	**mg/L**	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Bismuth	**mg/L**	-	-	-	< 0.0010
Boron	**mg/L**	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	**mg/L**	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (total)	**mg/L**	32.3	36.9	40.4	38.5
Chromium	**mg/L**	0.0083	< 0.0010	0.0023	0.0012
Cobalt	**mg/L**	-	-	-	0.00522
Copper	**mg/L**	0.00052	< 0.00050	< 0.00050	< 0.00050
Iron	**mg/L**	1.08	0.998	0.279	0.415
Lead	**mg/L**	0.00027	< 0.00020	< 0.00020	< 0.00020
Lithium	**mg/L**	0.0052	0.0052	0.0056	0.0082
Magnesium (total)	**mg/L**	6.29	7.45	7.73	8.38
Manganese	**mg/L**	0.238	0.241	0.144	0.291
Mercury	**mg/L**	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	**mg/L**	0.0134	0.0123	0.0196	0.0199
Nickel	**mg/L**	0.0039	< 0.0010	0.0029	0.0063
Potassium (total)	**mg/L**	3.05	2.77	4.55	5.10
Selenium	**mg/L**	< 0.00010	< 0.00010	< 0.00010	0.00017
Silicon	**mg/L**	-	-	-	3.90
Silver	**mg/L**	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (total)	**mg/L**	6.13	7.75	8.62	7.72
Strontium	**mg/L**	0.155	0.184	0.184	0.188
Sulphur	**mg/L**	-	-	-	19.9
Tellurium	**mg/L**	-	-	-	< 0.0010
Thallium	**mg/L**	0.000017	< 0.000010	0.000017	0.000015
Tin	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	**mg/L**	0.0215	< 0.0050	< 0.0050	< 0.0050
Uranium	**mg/L**	0.00029	0.00014	0.00041	0.00071

Project : AMQ
Location : ST-GW-WT-1
Date range : 06-13-2022 - 09-06-2022

	Sample date	13-06-2022	18-07-2022	09-08-2022	06-09-2022
	Sample name	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1	ST-GW-WT-1
	Sample type	N	N	N	N
	Depth range	-	-	-	-
Parameter	**Unit**				
Vanadium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
WQ07- Dissolved Metals					
Aluminum	**mg/L**	< 0.0030	0.0044	0.0039	< 0.0030
Antimony	**mg/L**	< 0.00050	< 0.00050	< 0.00050	0.00104
Arsenic	**mg/L**	0.0125	0.0341	0.0143	0.00273
Barium	**mg/L**	0.0720	0.0815	0.107	0.0822
Beryllium	**mg/L**	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Bismuth	**mg/L**	-	-	-	< 0.0010
Boron	**mg/L**	< 0.050	< 0.050	< 0.050	< 0.050
Cadmium	**mg/L**	< 0.000010	< 0.000010	< 0.000010	< 0.000010
Calcium (Dissolved)	**mg/L**	-	-	-	38.3
Chromium	**mg/L**	< 0.0010	< 0.0010	0.0444	< 0.0010
Cobalt	**mg/L**	-	-	-	0.00536
Copper	**mg/L**	0.00359	< 0.00020	0.00176	0.00025
Iron	**mg/L**	0.0388	0.729	0.251	0.0826
Lead	**mg/L**	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Lithium	**mg/L**	0.0048	0.0050	0.0050	0.0078
Magnesium (Dissolved)	**mg/L**	-	-	-	8.39
Manganese	**mg/L**	0.242	0.247	0.146	0.296
Mercury	**mg/L**	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Molybdenum	**mg/L**	0.0135	0.0128	0.0212	0.0201
Nickel	**mg/L**	0.0041	< 0.0010	0.0233	0.0067
Potassium (Dissolved)	**mg/L**	-	-	-	5.15
Selenium	**mg/L**	0.00014	< 0.00010	< 0.00010	0.00020
Silicon	**mg/L**	-	-	-	3.79
Silver	**mg/L**	< 0.000020	< 0.000020	< 0.000020	< 0.000020
Sodium (Dissolved)	**mg/L**	-	-	-	7.73
Strontium	**mg/L**	0.152	0.193	0.221	0.190
Sulphur	**mg/L**	-	-	-	19.6
Tellurium	**mg/L**	-	-	-	< 0.0010
Thallium	**mg/L**	0.000021	< 0.000010	0.000014	0.000014
Tin	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Titanium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Uranium	**mg/L**	0.00030	0.00014	0.00039	0.00070
Vanadium	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Zinc	**mg/L**	< 0.0050	< 0.0050	< 0.0050	< 0.0050
WQ08- Radionuclides					
Radium-226	**Bq/l**	-	-	-	0.047



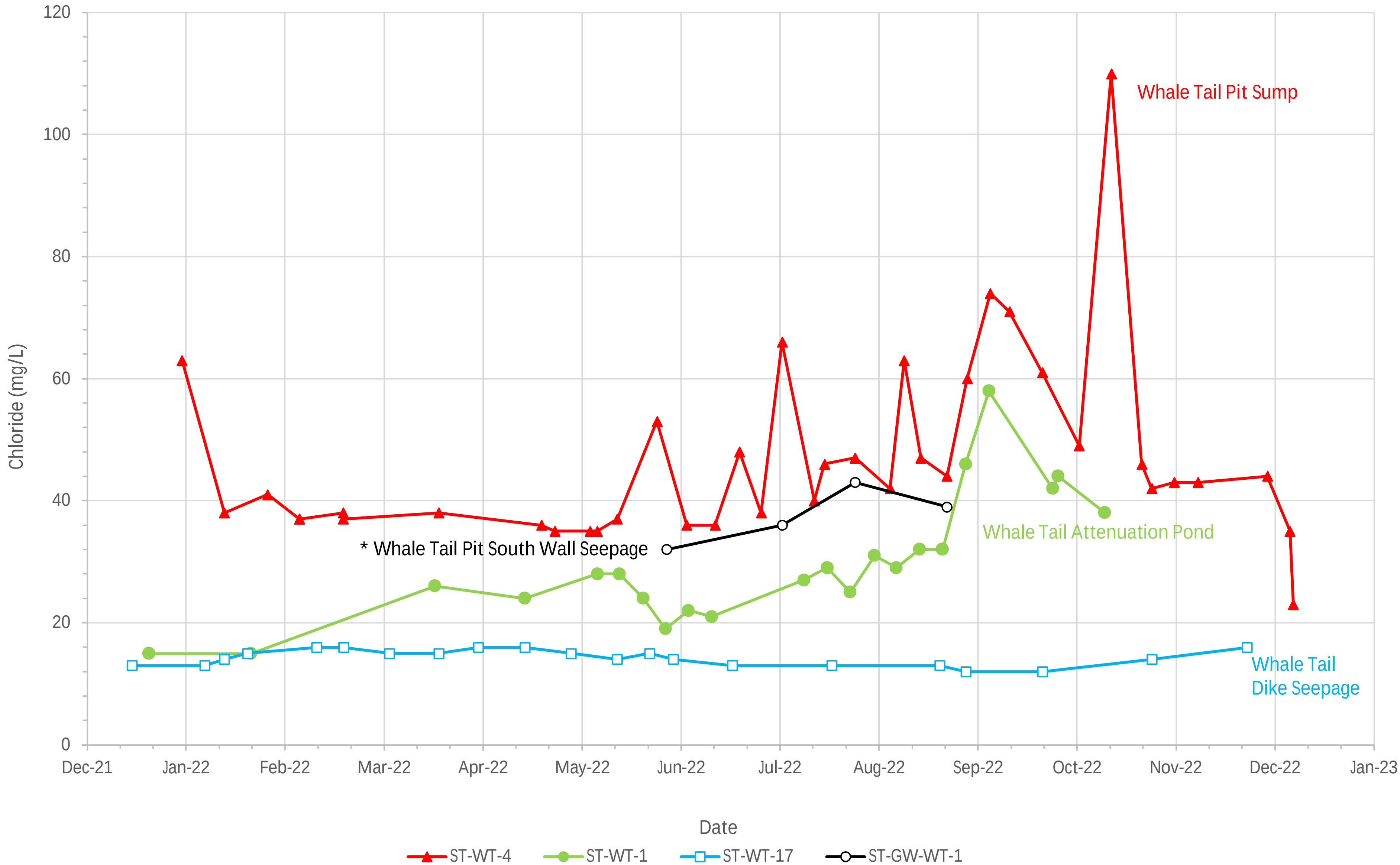
Notes:
* Pit wall seepage samples (ST-GW-WT-1) could not be collected in January, February, March, April, May, October, November and December 2022 due to accessibility issues related to operations and/or safety concerns.
Water quality samples collected by Agnico Eagle and analysed by analytical laboratory Bureau Veritas.
Duplicates water quality results also shown for ST-WT-1, SW-WT-4 and ST-WT-17.

CLIENT	AGNICO EAGLE	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION	
CONSULTANT	wsp	YYYY-MM-DD	2023-02-07
		PREPARED	NU
		DESIGN	--
		REVIEW	JL
		APPROVED	JL

PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
TOTAL DISSOLVED SOLIDS (TDS) CONCENTRATIONS, JANUARY TO DECEMBER 2022

PROJECT No.	DOC.	Rev.	FIGURE
22525330	548	0	E-1



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

CLIENT	AGNICO EAGLE	AGNICO EAGLE MINES LIMITED: MEADOWBANK DIVISION	
CONSULTANT	wsp	YYYY-MM-DD	2023-02-07
		PREPARED	NU
		DESIGN	--
		REVIEW	JL
		APPROVED	JL

PROJECT
2022 GROUNDWATER MONITORING PROGRAM
WHALE TAIL MINE, NUNAVUT

TITLE
CHLORIDE CONCENTRATIONS, JANUARY TO DECEMBER 2022

PROJECT No.	DOC.	Rev.	FIGURE
22525330	548	0	E-2

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.

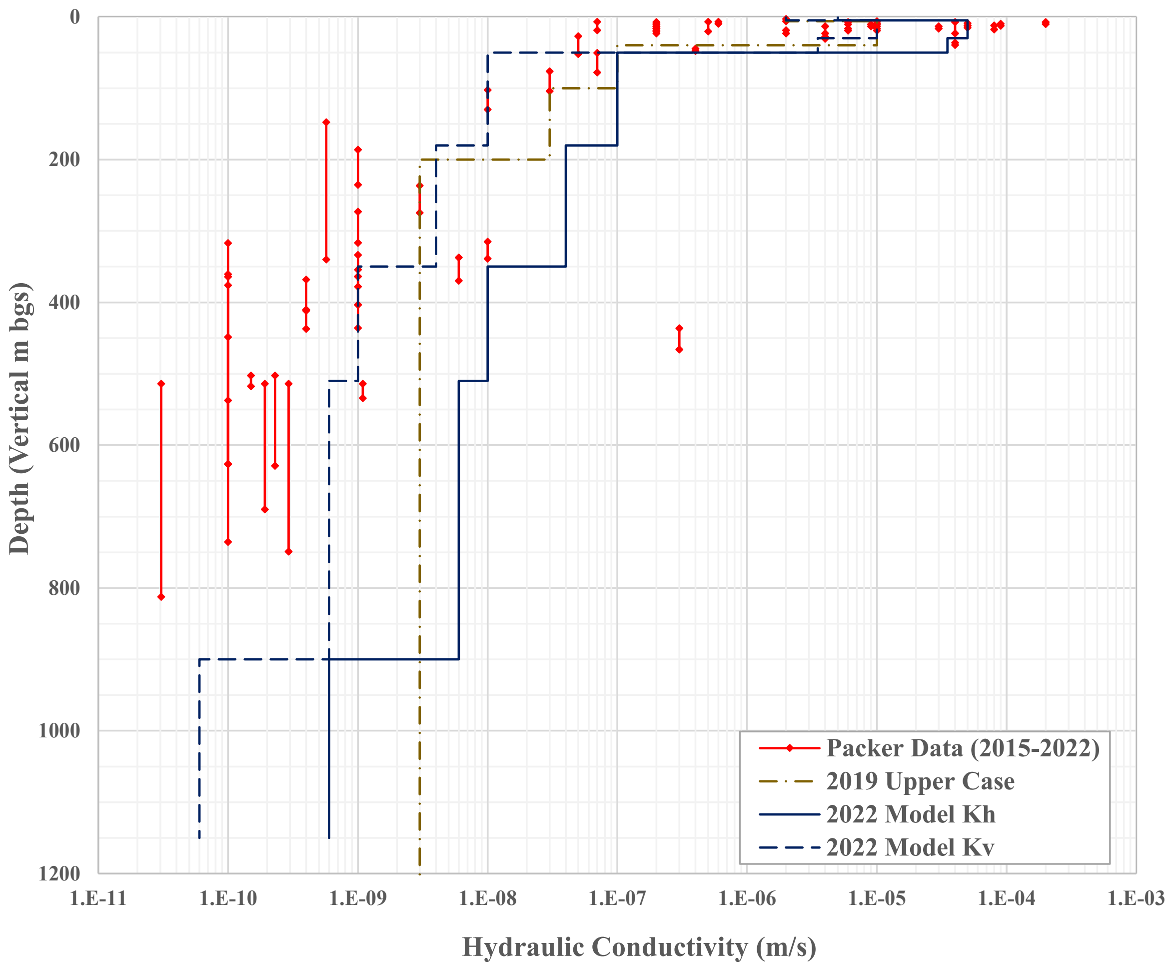


Figure 2: Simulated hydraulic conductivity distribution used in the 2019 and 2022 groundwater models.

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:

REGISTERED PROFESSIONAL GEOSCIENTIST
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Feb 22, 2023

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PERMIT TO PRACTICE
LORAX ENVIRONMENTAL SERVICES LTD.
Signature
Date Feb. 22, 2023
PERMIT NUMBER: P 1487
NT/NU Association of Professional Engineers and Geoscientists

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