Appendix 20

Whale Tail Thermal Monitoring Report 2024

AGNICO EAGLE

WHALE TAIL MINE

Thermal Monitoring Report 2024

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

Prepared by:
Agnico Eagle Mines Limited – Meadowbank Division

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1 INTRODUCTION

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

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

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

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

2 AVAILABLE DATA

There are currently 98 active thermistors at the Whale Tail Mine (Piquganiq) site.

The location, installation summary, and status of all the thermistors installed within the Whale Tail Mine (Piquganiq) 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 RESULTS

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 FACILITIES

3.1.1 Expected Thermal Effects on Permafrost

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

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

3.1.2 Thermal Monitoring Results

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

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

For the instruments located in the second instrumented cross section installed at 40 m above the ground elevation on top of the second bench, the available data indicates that for most instruments the active layer did not reach the PAG waste rock and year over year is experiencing a cooler trend.

In summer 2024, five new thermistors were installed in two new instrumented cross sections installed at 60 m above the ground elevation on top of the third bench of the Whale Tail WRSF. Data collection has only been ongoing since installation, so it is too early to assess the extent of the active layer. The 2026 Thermal Monitoring Report will re-assess this as two years of data will have been collected, allowing more time for the instruments to stabilize and show trends.

In late 2022 and early 2023, ten new thermistors were installed in the foundation of the IVR WRSF. Two years of data have now been collected. The available data indicates thermal behaviour along the expected trend (permafrost aggradation).

3.2 WATER MANAGEMENT FACILITIES

3.2.1 Expected Thermal Effects on Permafrost

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

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

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

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

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

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

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

3.2.2 Thermal Monitoring Results

Mammoth Dike

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

WRSF Dike

A degradation of the thermal conditions in the key trench of WRSF Dike was observed in the summer of 2019 leading to seepage. In 2024, the instrument data show that the foundation and key trench remained frozen all year long with signs of permafrost aggradation. This indicates that the mitigation measures implemented in 2020 continue to be successful. The active layer is contained within the rockfill and upstream thermal capping.

Whale Tail Dike

Similar to 2023, in 2024 the thermistors at Whale Tail Dike are showing cyclical trends associated with seasonal lake water temperature. The West abutment at 0+110 is frozen, and the East abutment is frozen at 0+790. The remaining thermistors remain primarily unfrozen below the active layer. On the East abutment the active layer warming trend persists and potentially connects to the seepage flow at depth (> 0°C). New thermistors at both the East and West abutment capping indicate that the overburden and bedrock have remained frozen.

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 2024 period.

3.3 OPEN PIT

3.3.1 Expected Effects on Permafrost

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

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

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

3.3.2 Thermal Monitoring Results

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

Three thermistors are currently active in the Whale Tail Pit. The thermistors are showing expected trends of seasonal variation close to surface and close to pit walls, with a thermal response in the south wall driven by the talik conditions. The previous thermistors installed in the IVR area are no longer functioning due to mining activity in the sector but were showing permafrost conditions until the instrument was decommissioned. A deep thermistor has been installed in 2020 in that area (IVR long TH) and shows permafrost conditions down to 500 m below ground surface, to El. 9600 m (mining datum).

4 REFERENCES

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

APPENDIX A – WHALE TAIL THERMAL MONITORING DATA

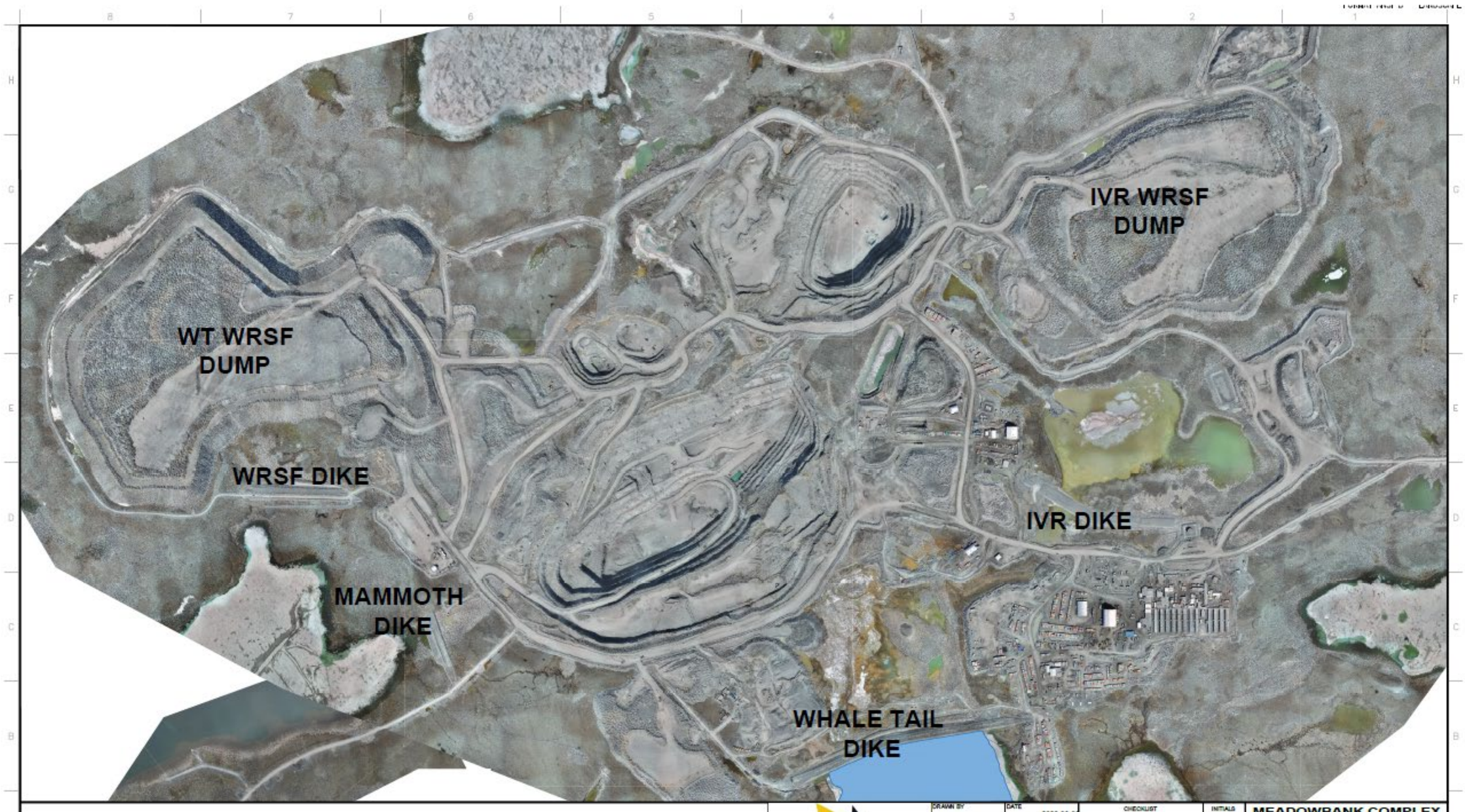

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TABLE 1: Instruments Coordinates

Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
1	WTD 0+110	WTD	607090.5	7254625	156.4	--	-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	607209.4	7254676.8	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	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	607408.6	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	159	--	-90	2020	Y
20	WTD 0+550	WTD	607505.2	7254768	157.9	--	-90	2020	Y
21	WTD 0+580	WTD	607533.163	7254773.95	158	--	-90	2020	Y
22	WTD 0+596	WTD	607549.6	7254775.2	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	607597.3	7254782.8	158.6	--	-90	2020	Y
27	WTD 0+665	WTD	607617	7254788	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	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	7254800	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	7254807.3	157.2	--	-90	2020	Y (14/16) beads
38	WTD US 0+130	WTD	607110.799	7254629.029	159.116	--	-90	2023	Y
39	WTD WAC 0+130	WTD	607118.539	7254611.482	159.25	--	-90	2023	Y
40	WTD EAC 0+781	WTD	607736.64	7254776.596	158.955	--	-90	2023	Y

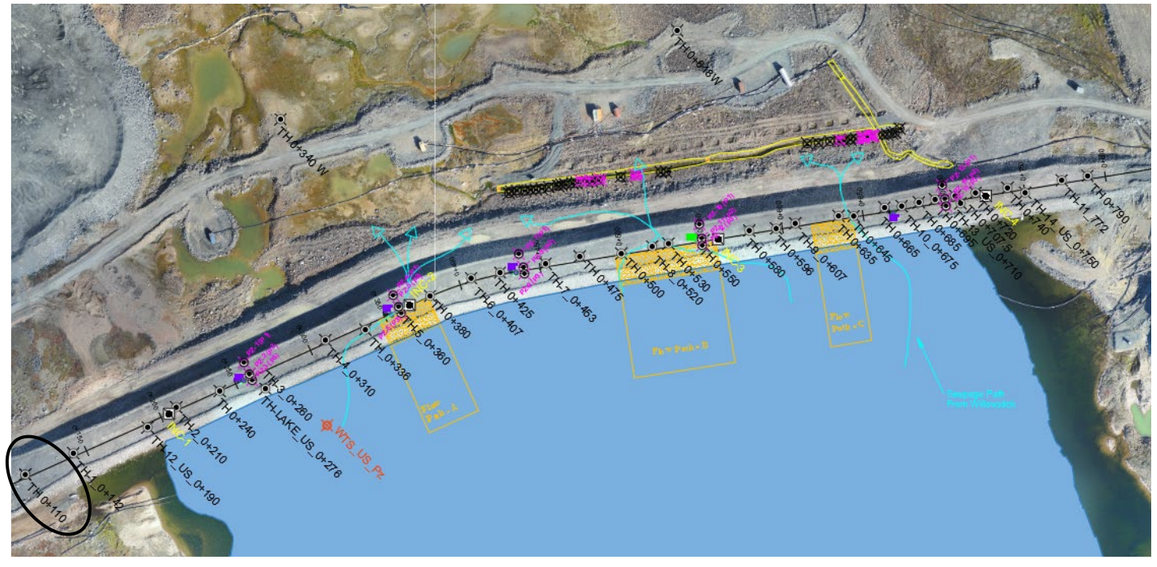
Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
41	WT WRSF TH01	WT-WRSF-1S	**615797.25**	**7238129.77**	**161.546**	--	-90	2019	Y
42	WT WRSF TH02	WT-WRSF-1S	**615861.49**	**7238133.24**	**162.053**	--	-90	2019	N (since 2020)
43	WT WRSF TH03	WT-WRSF-1S	**615814.31 to 615799.6**	**7238118.6 to 7238117**	**162.744 to 162.042**	9	0	2019	Y (9/16) beads)
44	WT WRSF TH04	WT-WRSF-1S	**615813.38 to 615797.7**	**7238134.1to 7238132.8**	**162.138 to 161.619**	9	0	2019	Y (8/16) beads)
45	WT WRSF TH05	WT-WRSF-1S	**615860.9 to 615800.3**	**71238133.3 to 7238126**	**162.202**	9	0	2019	Y (9/16) beads)
46	WT WRSF TH06	WT-WRSF-2S	-	-	-	-	-	2021	NOT INSTALLED
47	WT WRSF TH07	WT-WRSF-2S	**14041.823/822.075(AMQ)**	**14051.510/8232.486(AMQ)**	**199.6**	1	0	2021	Y
48	WT WRSF TH08	WT-WRSF-2S	**14029.392/14039.081(AMQ)**	**8227.543/8238.974(AMQ)**	**199.7**	1	0	2021	Y
49	WT WRSF TH09	WT-WRSF-2S	**14035.675/14189.86(AMQ)**	**8224.663/8407.910 (AMQ)**	**200.2**	1	0	2021	Y
50	WT WRSF TH10	WT-WRSF-2S	**14259.183 (AMQ)**	**8479.248 (AMQ)**	**199.484-195.386**	1	-37	2021	Y
51	WT WRSF TH11	WT-WRSF-1N	**14259.183**	**8479.249**	**198.637-168.637**	--	-90	2021	Y
52	WT WRSF TH12	WT-WRSF-1N	**14241.323/14231.698 (AMQ)**	**8481.427/8469.988 (AMQ)**	**200.2**	181	0	2021	Y
53	WT WRSF TH13	WT-WRSF-1N	**14521.240/14241.576 (AMQ)**	**8471.614/8460.159 (AMQ)**	**200.1**	181	0	2021	Y
54	WT WRSF TH14	WT-WRSF-1N	**14245.84/14101.278**	**8476.032/8304.453**	**200.2**	181	0	2021	Y
55	WT WRSF TH15	WT-WRSF-1N	**14254.017/14248.950**	**8481.414/8477.225**	**200.2**	181	-37	2021	Y
56	WT WRSF TH16	WT-WRSF-1N	**14259.183**	**8479.248**	**167.637-152.637**	--	-90	2021	Y
57	WT WRSF TH17	WT-WRSF-3S	**605484.55 / 605484.022**	**7255898.343 / 7255913.32**	**220**	358	0	2024	Y
58	WT WRSF TH18	WT-WRSF-3S	-	-	-		-	2024	NOT INSTALLED
59	WT WRSF TH19	WT-WRSF-2N	**605491.669 / 605491.175**	**7256118.973 / 7256103.959**	**220.4**	183	0	2024	Y
60	WT WRSF TH20	WT-WRSF-2N	**605492.629 / 605489.486**	**7256118.957 / 7256014.102**	**219.7**	183	0	2024	Y
61	WT WRSF TH21	WT-WRSF-2N	**605491.973 / 605490.441**	**7256134.912 / 7256128.586**	**219.56**	183	-37	2024	Y
62	IVR WRSF TH01	IVR-WRSF-1S	**608314.124**	**7256135.152**	**203.547**	--	-90	2023	Y
63	IVR WRSF TH02	IVR-WRSF-1S	**594598.883/594599.565**	**7257568.182/7257583.178**	**204.064**	9	0	2022	Y
64	IVR WRSF TH03	IVR-WRSF-1S	**594612.906/594613.468**	**7257567.520/7257582.555**	**204.061**	9	0	2022	Y
65	IVR WRSF TH04	IVR-WRSF-1S	**594605.898/594612.305**	**7257567.947/7257718.148**	**203.972**	9	0	2022	Y
66	IVR WRSF TH05	IVR-WRSF-1S	**608314.201**	**7256135.534**	**203.489**	--	-90	2023	y
67	IVR WRSF TH06	IVR-WRSF-1N	**608391.937**	**7256721.531**	**204.298**	--	-90	2023	Y
68	IVR WRSF TH07	IVR-WRSF-1N	**608395.025/608399.173**	**7256707.151/7256692.531**	**204.924**	164	0	2022	Y
69	IVR WRSF TH08	IVR-WRSF-1N	**608408.682/608412.721**	**7256710.367/7256695.844**	**204.936**	164	0	2022	Y

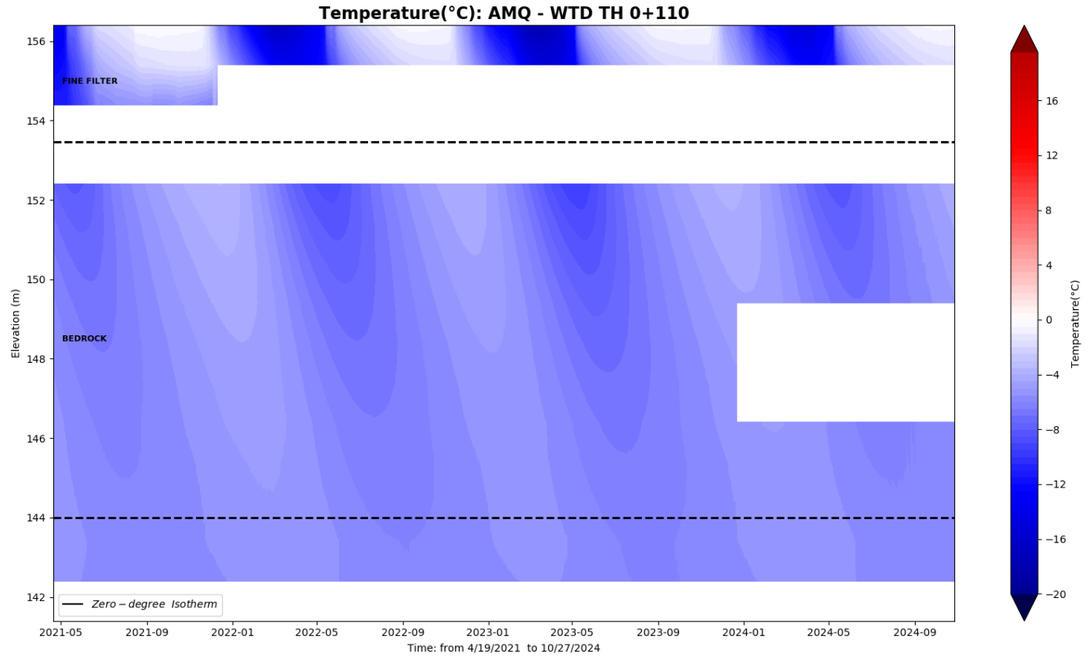
Line #	*Name*	*Area*	*Easting (X)*	*Northing (Y)*	*Elevation (Z)*	*Azimuth*	*Dip*	*Installed*	*Active (Y) or (N)*
70	*IVR WRSF TH09*	IVR-WRSF-1N	**608401.559/608440.755**	**7256708.91/7256564.158**	**204.761**	164	0	2022	Y
71	*IVR WRSF TH10*	IVR-WRSF-1N	**7256721.531**	**726721.531**	**204.298**	--	-90	2023	Y
72	*MD-TH01*	MD	**605924.66 / 605914.18**	**7255102.638 / 7255097.264**	**149.9 / 153.5**	243	**Slope**	2019	Y
73	*MD-TH02*	MD	**605926.19**	**7255102.52**	**154.9**	--	-90	2019	Y
74	*MD-TH03*	MD	**605926.74**	**7255102.6**	**154.9**	--	-90	2019	Y
75	*WRSFD TH01*	WRSF Dike	**605414.509 / 605415.086**	**7255528.273 / 7255545.692**	**157.9 / 151.6**	346	**Slope**	2019	Y
76	*WRSFD TH02*	WRSF Dike	**605416.44**	**7255526.7**	**159.07**	--	-90	2019	Y
77	*WRSFD TH03*	WRSF Dike	**605414.98**	**7255545.01**	**155.29**	--	-90	2019	Y
78	*WRSFD TH04*	WRSF Dike	**605387.14**	**7255524.47**	**158.15**	--	-90	2019	Y
79	*WRSFD TH05*	WRSF Dike	**605428.59**	**7255566.21**	**153.63**	--	-90	2019	Y
80	*WRSFD TH06*	WRSF Dike	**605435.56**	**7255544.29**	**155.35**	--	-90	2019	Y
81	*WRSFD TH07*	WRSF Dike	**605466.94**	**7255541.78**	**155.13**	--	-90	2019	Y
82	*WRSFD TH08*	WRSF Dike	**605384.991**	**7255544.818**	**159.886**	--	-90	2019	Y (11/16) beads
83	*WRSFD TH09*	WRSF Dike	**605425.1**	**7255546.038**	**160.037**	--	-90	2019	Y
84	*PSW DH2 TH*	Pit South Wall	**606998.837**	**7255127.783**	**149.02**	--	-90	2020	N
85	*PSW DH3 TH*	Pit South Wall	**607016.336**	**7255140.383**	**148.041**	--	-90	2020	N
86	*PSW DH6 TH*	Pit South Wall	**607058.391**	**7255184.293**	**148.181**	--	-90	2020	N
87	*PSW DH7 TH*	Pit South Wall	**607070.111**	**7255198.772**	**148.734**	--	-90	2020	N
88	*PSW DH10 TH*	Pit South Wall	**607142.218**	**7255272.101**	**150.109**	--	-90	2020	N
89	*PSW DH11 TH*	Pit South Wall	**607155.955**	**7255287.46**	**151.241**	250	-50	2020	N
90	*PSW DH12 TH*	Pit South Wall	**607168.065**	**7255293.87**	**151.934**	250	-50	2020	N
91	*PSW DH13 TH*	Pit South Wall	**606980.7**	**7255276.8**	**145.398**	--	-90	2020	N
92	*PSW DH14 Th*	Pit South Wall	**606937.5**	**7255411.5**	**130.761**	--	-90	2020	N
93	*AMQ15-324*	WT PIT	**606496.8**	**7254995.2**	**161.79**	323.41	-55.46	2015	N
94	*AMQ – WT2_NW_TH*	WT PIT	**14373.989**	**7324.655**	**109.248**	350	-10	2023	Y
95	*PSW_Ramp_TH*	WT PIT	**14837.534**	**6898.047**	**31.3**	--	-90	2024	Y
96	*AMQ – PSW3 – DDH1_TH*	WT PIT	**607078.57**	**7255209.62**	**149.8**	318.22	-47.7	2022	Y
97	*AMQ17-1233*	IVR	**606778**	**7256254**	**162**	252.71	-59.06	2017	N
98	*AMQ17-1337*	IVR	**607078**	**7256522**	**155**	260.37	-59.62	2017	N
99	*V651A*	IVR	**607624.208**	**7256122.348**	**10163.28**	333	-69	2019	Y
100	*BH-T2*	IVR D1	**607850.8**	**7255563.9**	**164.303**	--	-90	2019	N
101	*BH-4*	IVR D1	**608048**	**7255442**	**163.982**	--	-90	2019	N

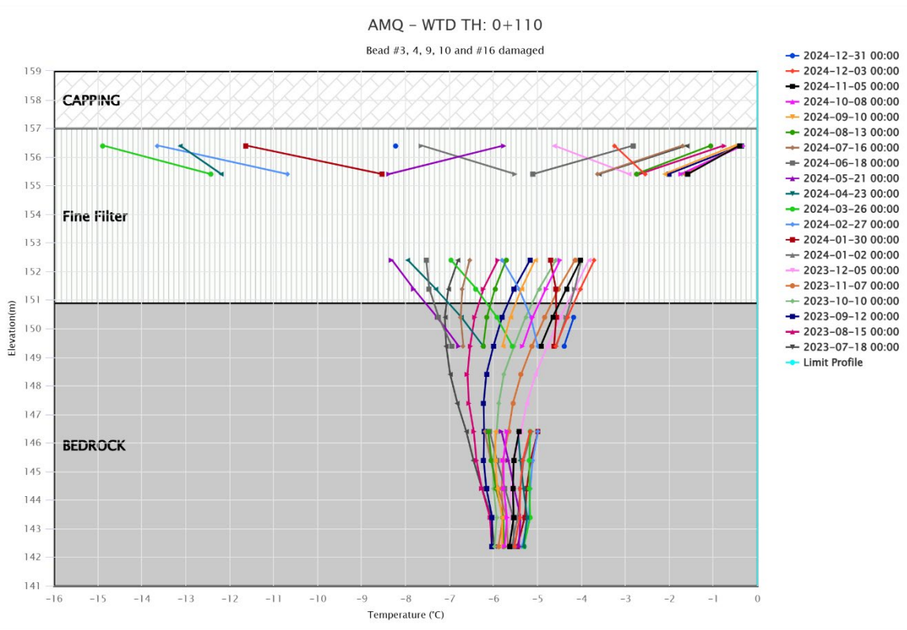
Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
102	IVR D1 TH1	IVR D1	607909.036	7255508.205	164.486	30 / 210	Liner	2021	Y
103	IVR D1 TH2	IVR D1	607908.144	7255506.309	164.895	--	-90	2021	Y
104	IVR D1 TH3	IVR D1	607912.603	7255515.354	165.1	--	-90	2021	Y
105	IVR D1 TH4	IVR D1	607906.637	7255503.624	165.76	--	-90	2021	Y
106	IVR D1 TH5	IVR D1	607899.06	7255512.94	159.666	120	Key Trench	2021	Y
107	IVR D1 TH6	IVR D1	607923.8	7255480.4	162.08	--	-90	2021	Y
108	IVR D1 TH7	IVR D1	607930.032	7255525.355	162.12	--	-90	2021	Y
109	AMQ21-2577A (M003)	Mammoth	605586.328	7254641.908	10156.648	336.1	-53.9	2021	Y
110	AMQ22-2762 (Long TH)	Mammoth	605363.6	7254674.8	5153.826	336	-65	2022	Y
111	AMQ22-2761 (Long TH)	Whale Tail	606073.6	7255502	5160.646	131.7	-61.8	2022	Y
112	AMQ22-2760 (Long TH)	IVR	607679.3	7256022.9	5164.106	193	-74	2022	Y
113	BH23-01 (MD-2_TH-01)	Mammoth	604737.917	7254814.747	153.835	--	-90	2023	Y
114	BH23-03 (MD-2_TH-02)	Mammoth	604788.98	7254682.294	152.661	--	-90	2023	Y
115	BH23-06 (MD-2_TH-03)	Mammoth	604867.121	7254511.269	153.441	--	-90	2023	Y
116	THERM01_243	Underground	607003.969	7255410.001	9926.9	339	-65	2020	N
117	THERM02_275	Underground	606861.274	7255309.315	9911.05	38	-50	2020	N
118	THERM03_380	Underground	607209.94	7255592.8	9968.536	352	-59	2020	N
119	THERM04_310	Underground	607009.0001	7255407.6	9926.9	35	-50	2020	N
120	AMQ15-294	WT Pit	607073.2	7255676.1	155.93	322.67	-45.18	2015	N
121	AMQ15-349 A	WT Pit	607064.9	7255627.5	155.3	204.41	-45.32	2015	N
122	AMQ15-421	WT Pit	607098.3	7255490.8	155.09	273.93	-51.31	2015	N
123	AMQ15-306	WT Pit	606714.8	7255363.8	154.92	96.3	-45.41	2015	N
124	AMQ15-452	WT Pit	606627.2	7255687.9	156.16	159.5	-49.98	2015	N
125	AMQ17-1159	WTD	607580.2	7254827.6	152.56	--	-90	2017	N
126	AMQ17-1188	WTD	607209.9	7254681.3	151.76	--	-90	2017	N
127	AMQ17-1265 A (2 TH,Lake)	WT Pit	606950	7255414	140	196.03	-79.99	2017	N
128	AMQ17-1277 A	WT Pit	606911	7255964	153	193.06	-60.17	2017	N
129	AMQ17-1164A	WTD	607415.60	7254779.33	151.57	--	-90	2017	N
130	MD-02-2015	MD	605906.1	7255094.5	152.269	--	-90	2015	N
131	WTD-2015-03	WTD	607311.61	7254712.18	151.81	--	-90	2015	N
132	Stkd100 (West Shore)	WTD	607138.63	7254644.04	156.52	--	-90	2017	N
133	Stkd101	WTD	607157.76	7254651.69	156.84	--	-90	2017	N
134	Stkd102	WTD	607173.06	7254659.34	154.12	--	-90	2017	N
135	Stkd311	WTD	607497.51	7254774.35	153.41	--	-90	2017	N
136	310	WTD	607520.46	7254789.65	154.51	--	-90	2017	N
137	309A	WTD	607547.20	7254811.60	154.72	--	-90	2017	N
138	TMRCK1	WTD	607576.28	7254869.75	153.87	--	-90	2017	N
139	TMRCK2	WTD	607606.88	7254888.11	153.92	--	-90	2017	N
140	TMRCK3 (East Shore)	WTD	607638.25	7254906.47	154.73	--	-90	2017	N
141	Stkd298	WTD	607705.24	7254760.58	154.42	--	-90	2017	N
142	Stkd299 (East Shore)	WTD	607689.94	7254751.01	153.74	--	-90	2017	N

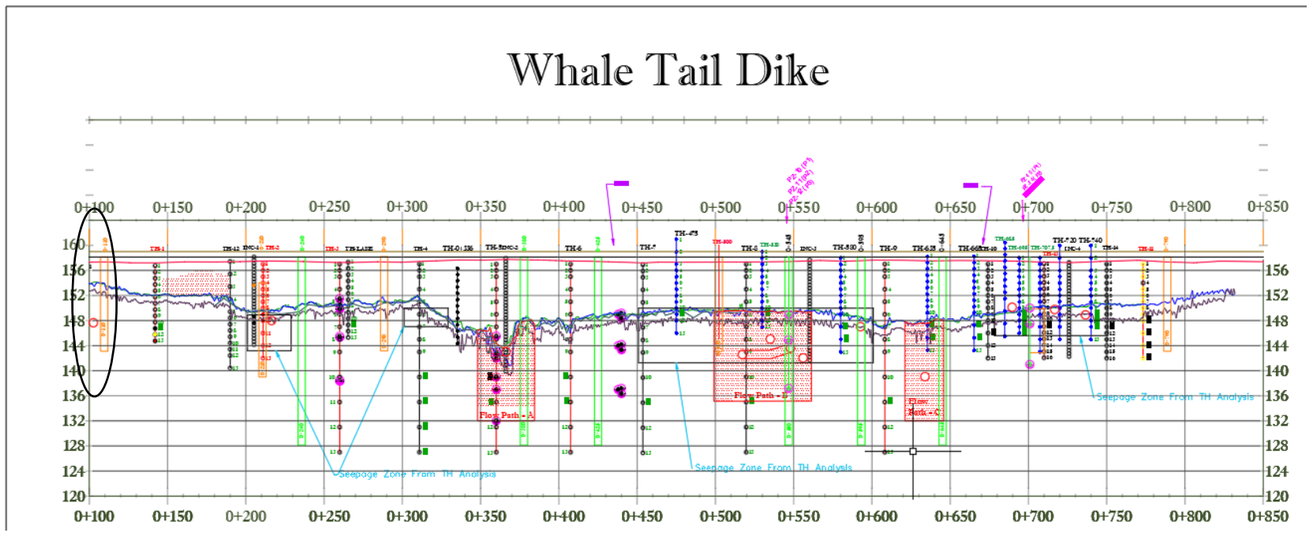
Line #	Name	Area	Easting (X)	Northing (Y)	Elevation (Z)	Azimuth	Dip	Installed	Active (Y) or (N)
143	Stkd301	WTD	**607683.05**	**7254741.83**	**153.39**	--	-90	2017	N

WTD-TH 0+110

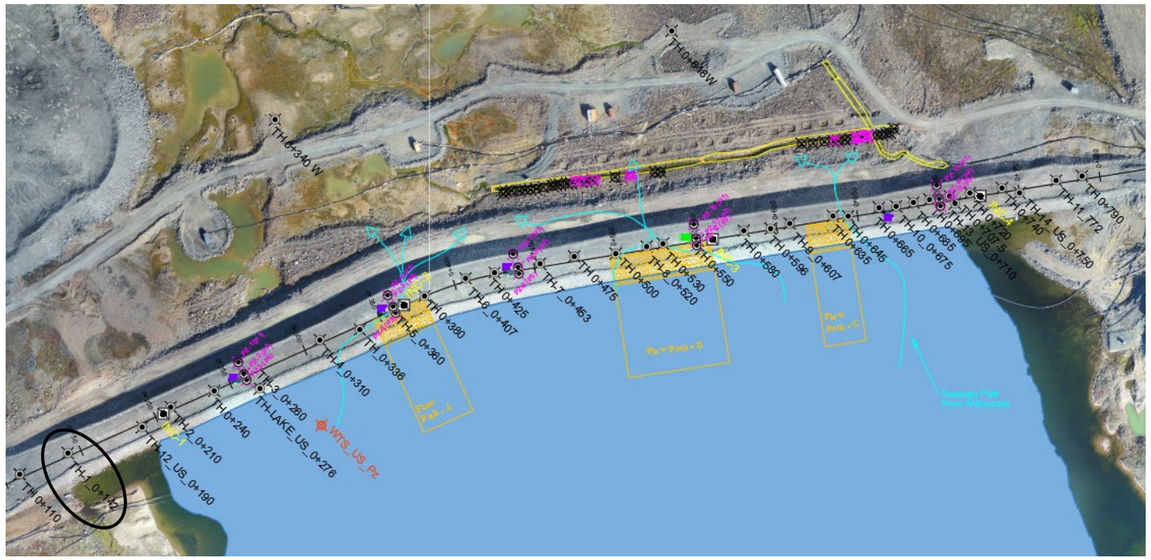

TH-0+340 W
TH-0+460 W
TH_0+110
TH-1_0+140
TH-2_US_0+190
TH-2_0+210
TH_0+240
TH-3_0+260
TH-LAKE_US_0+276
WTS_US_Pz
TH_0+310
TH_0+336
TH-4_0+360
TH-5_0+380
TH-6_0+407
TH-7_0+425
TH-8_0+453
TH-9_0+475
TH-10_0+500
TH-11_0+520
TH-12_0+550
TH-13_0+580
TH-14_0+598
TH-15_0+607
TH-16_0+635
TH-17_0+645
TH-18_0+665
TH-19_0+675
TH-20_0+695
TH-21_0+705
TH-22_US_0+710
TH-23_0+740
TH-24_US_0+750
TH-11_772
TH-0+790
Pz= Phiti - A
Pz= Phiti - B
Pz= Phiti - C
Seepage Path From Information

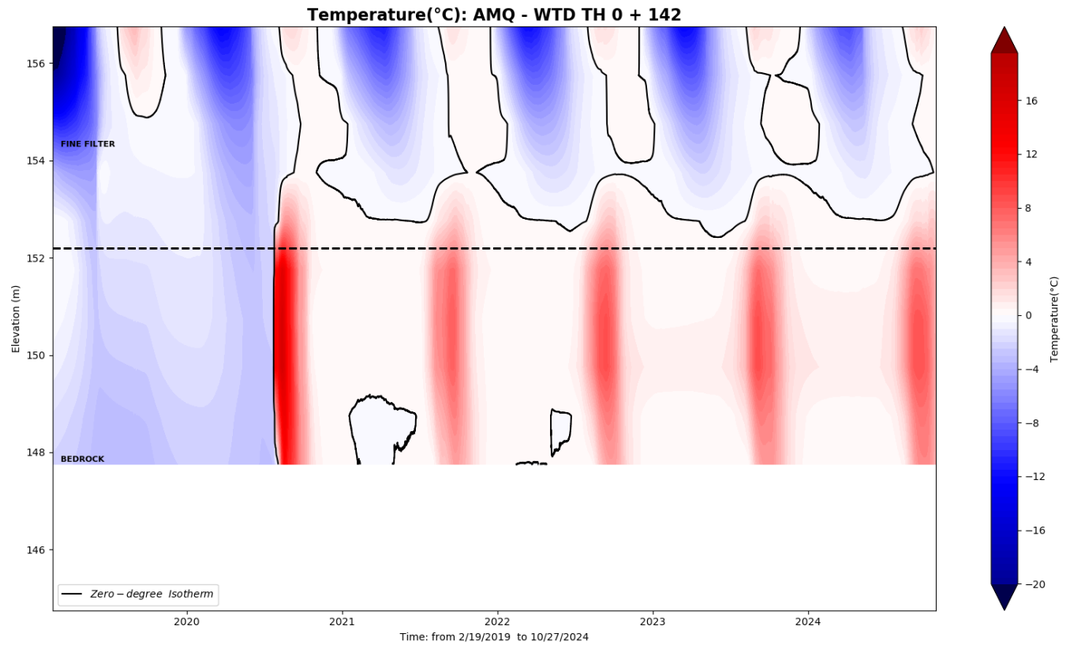

Temperature(°C): AMQ - WTD TH 0+110
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/19/2021 to 10/27/2024
Temperature(°C)

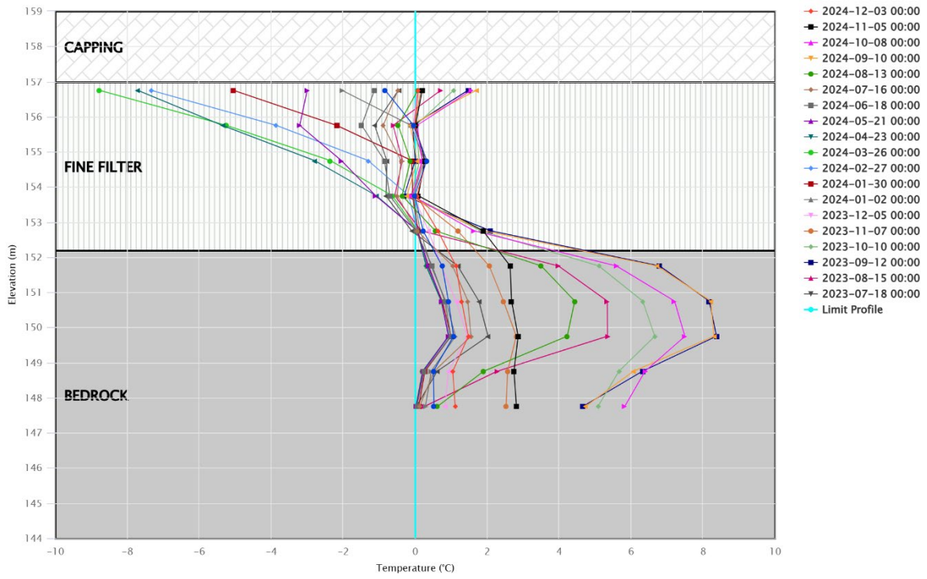

AMQ – WTD TH: 0+110
Bead #3, 4, 9, 10 and #16 damaged
CAPPING
Fine Filter
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

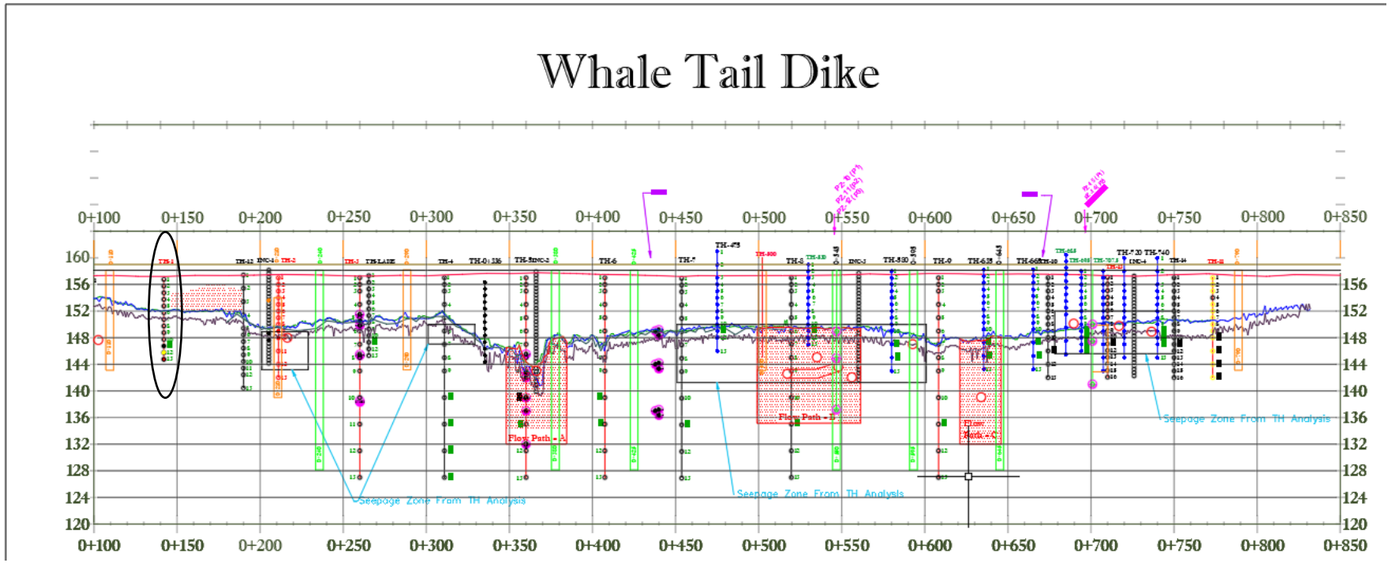

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+142

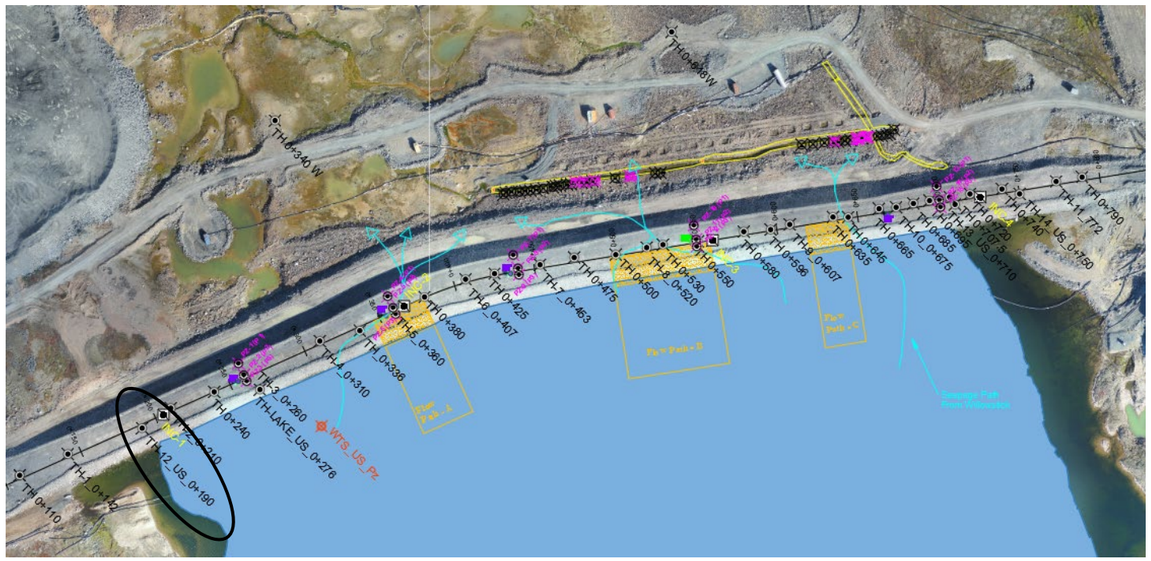

TH-0+340 W
TH-0+340 W
TH-0+790
TH-11_T72
TH-4_US_0+530
TH-10_0+740
TH-10_0+685
TH-10_0+675
TH-10_0+645
TH-10_0+635
TH-9_0+607
TH-9_0+596
TH-9_0+590
TH-9_0+550
TH-9_0+530
TH-9_0+520
TH-9_0+500
TH-9_0+475
TH-_0+453
TH-9_0+425
TH-9_0+407
TH-5_0+390
TH-5_0+360
TH-4_0+336
TH-4_0+310
TH-3_0+260
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path from Meadow

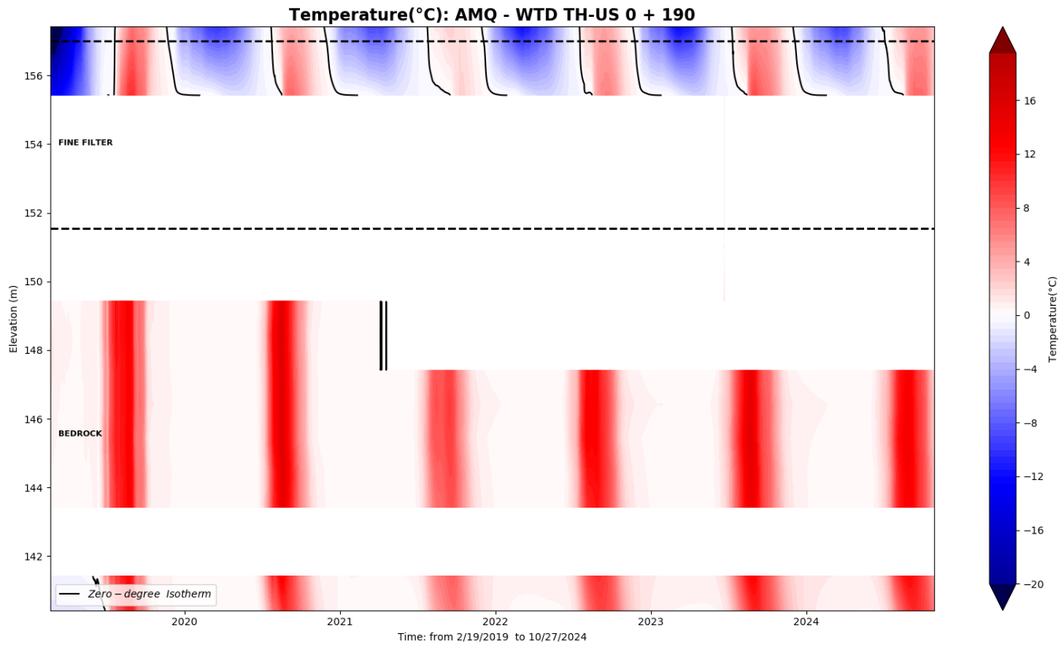

Temperature(°C): AMQ - WTD TH 0 + 142
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/27/2024
Temperature(°C)

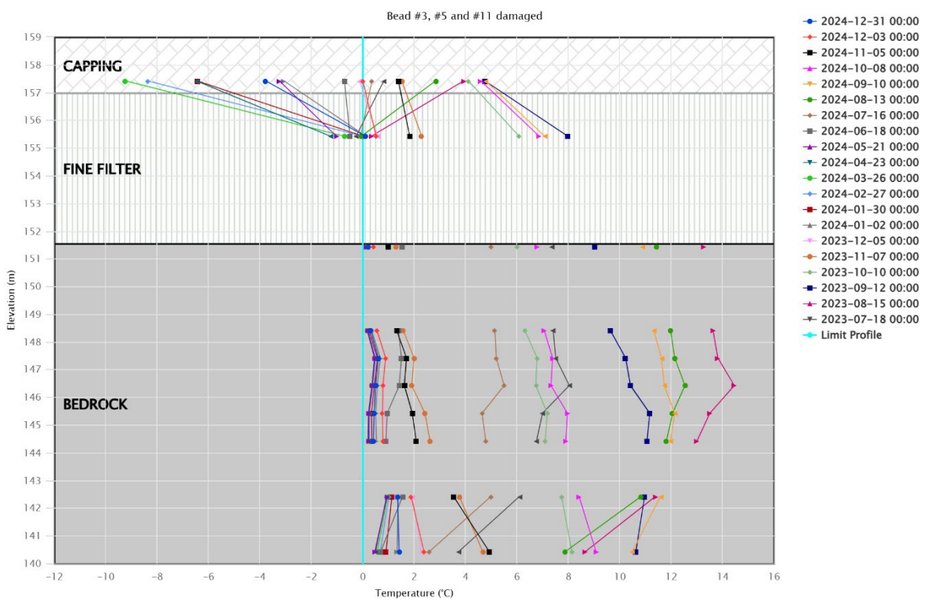

AMQ – WTD TH: 0+142
Bead #11 to #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

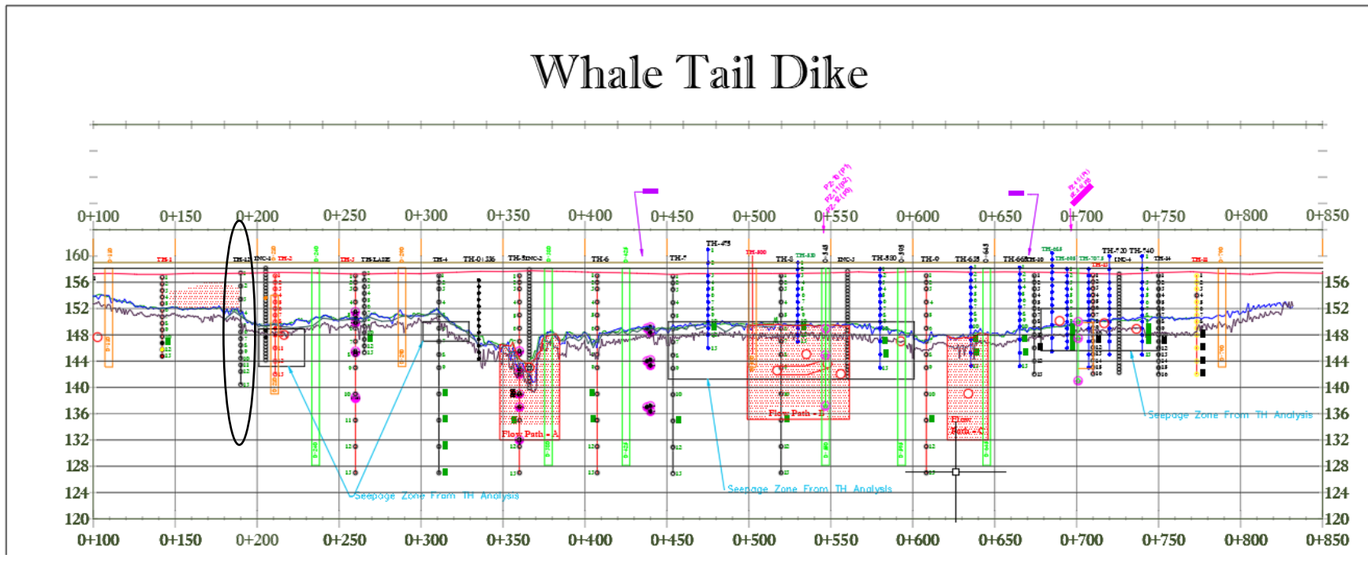

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+190 U/S

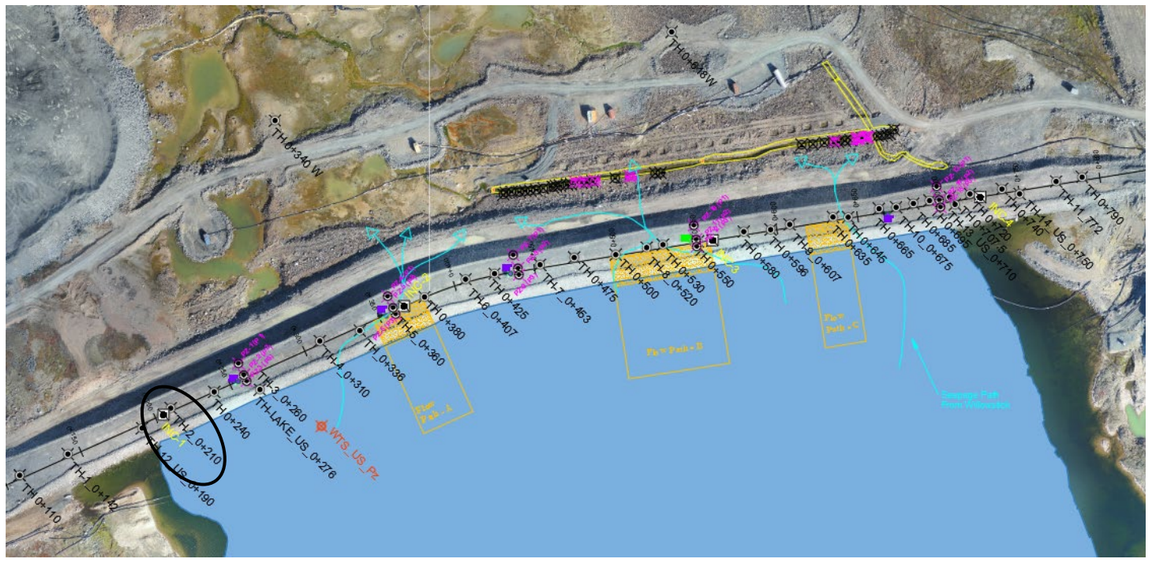




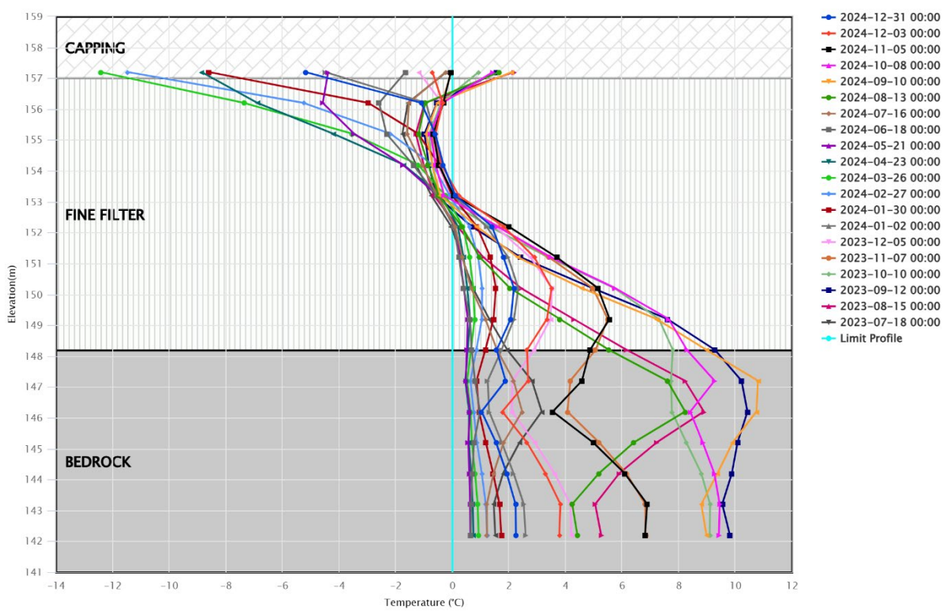


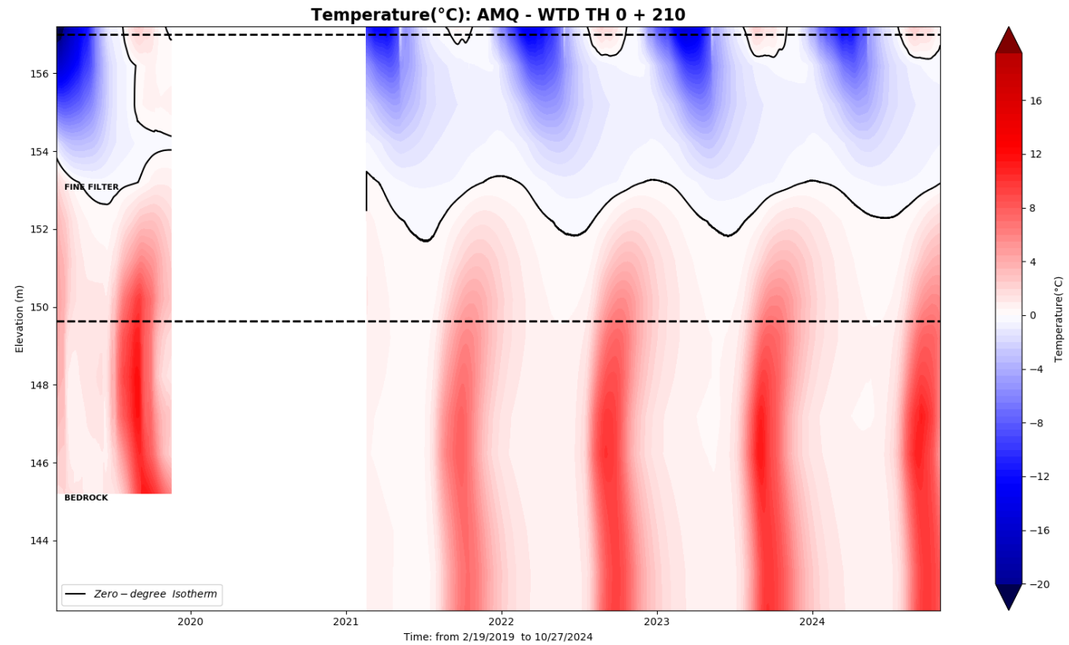


WTD-TH 0+210

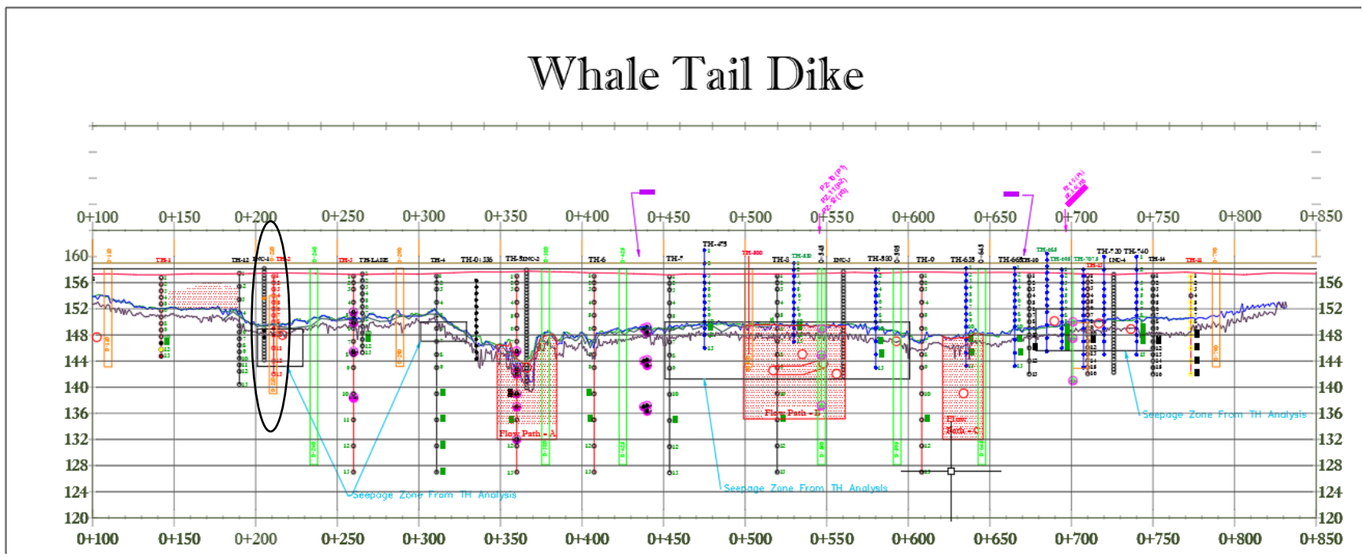


AMQ – WTD TH: 0+210_R

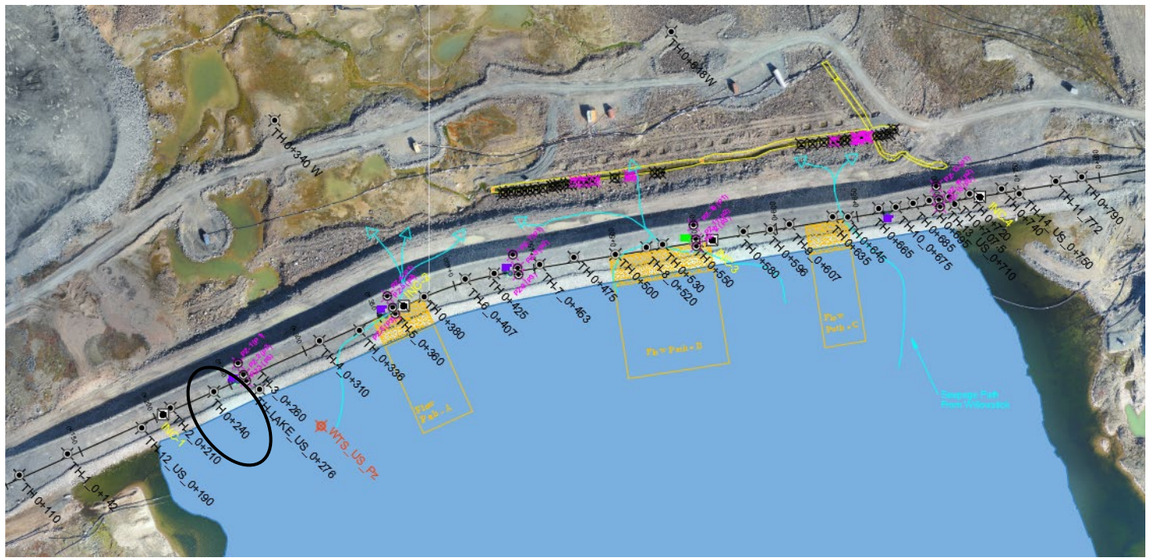




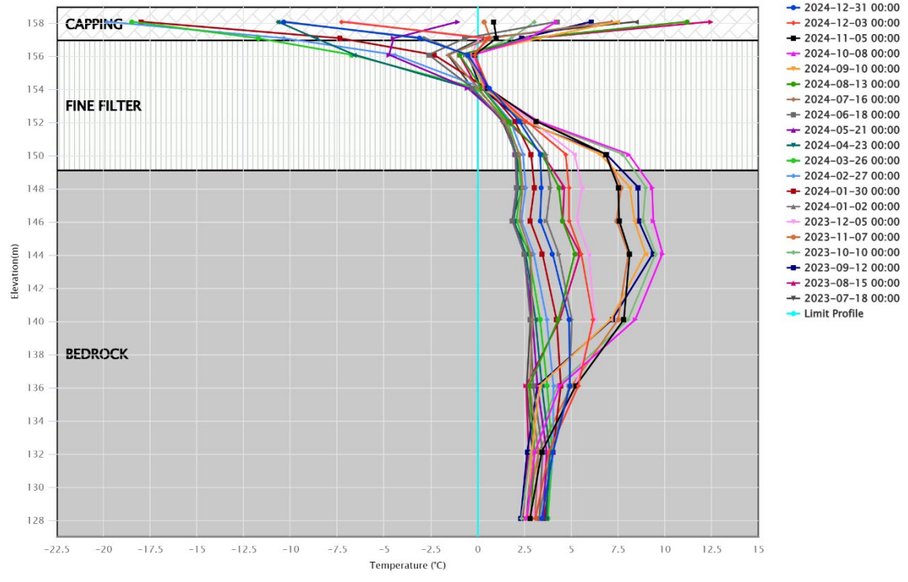
Thermistor string damaged by drilling. No dataset between Oct 2019 and February 2021. TH replaced

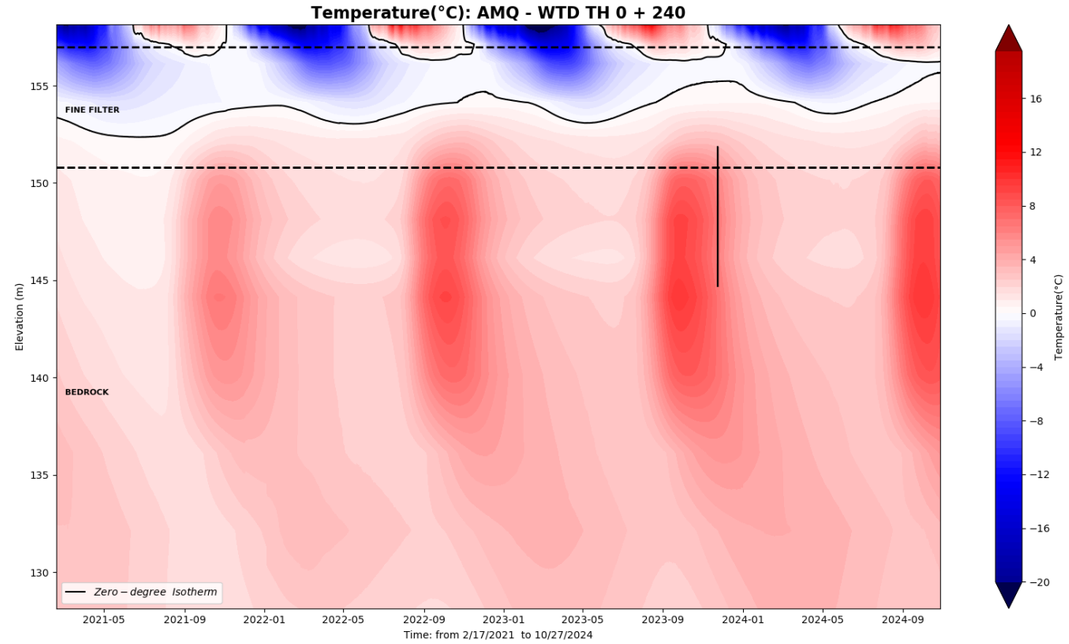


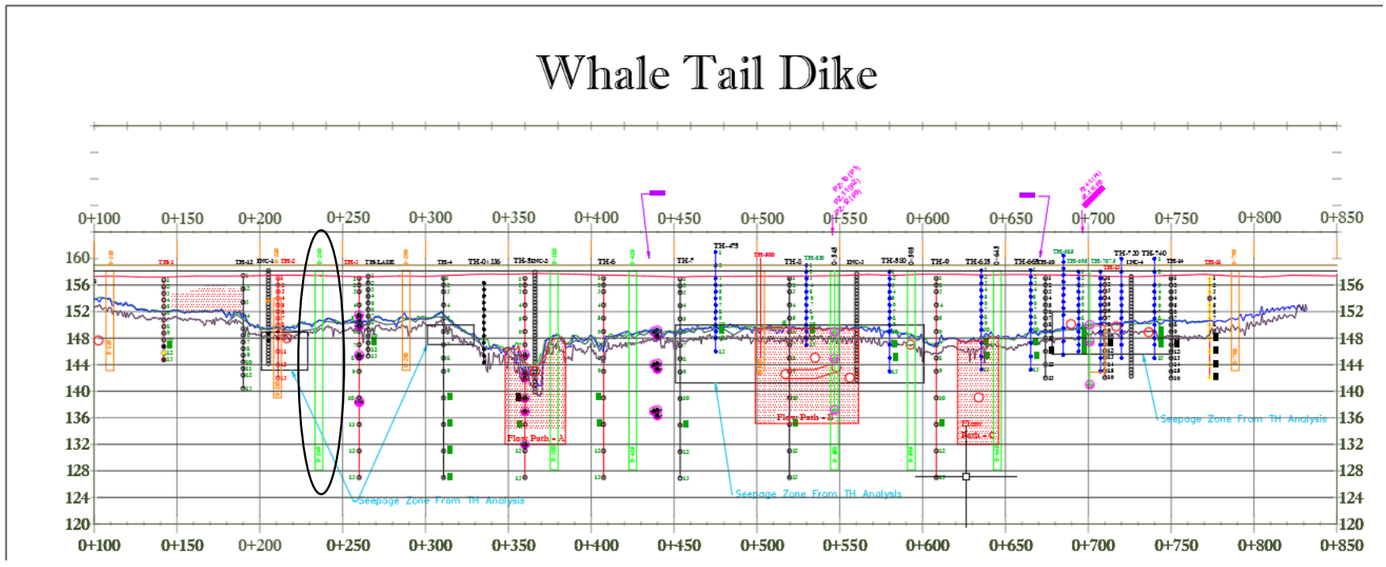
WTD-TH 0+240



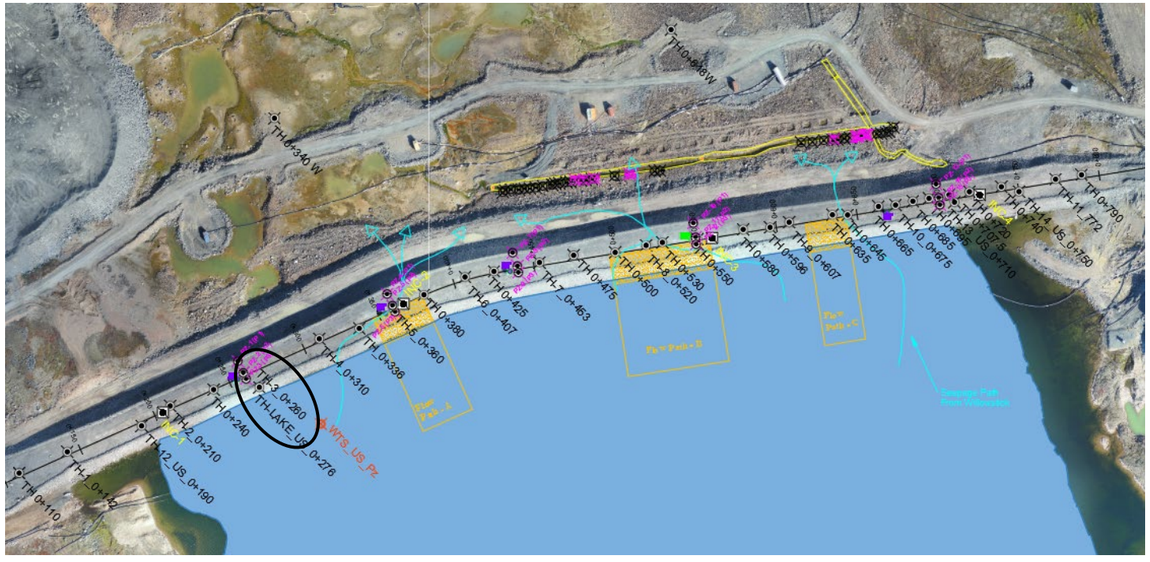
AMQ – WTD TH: 0+240

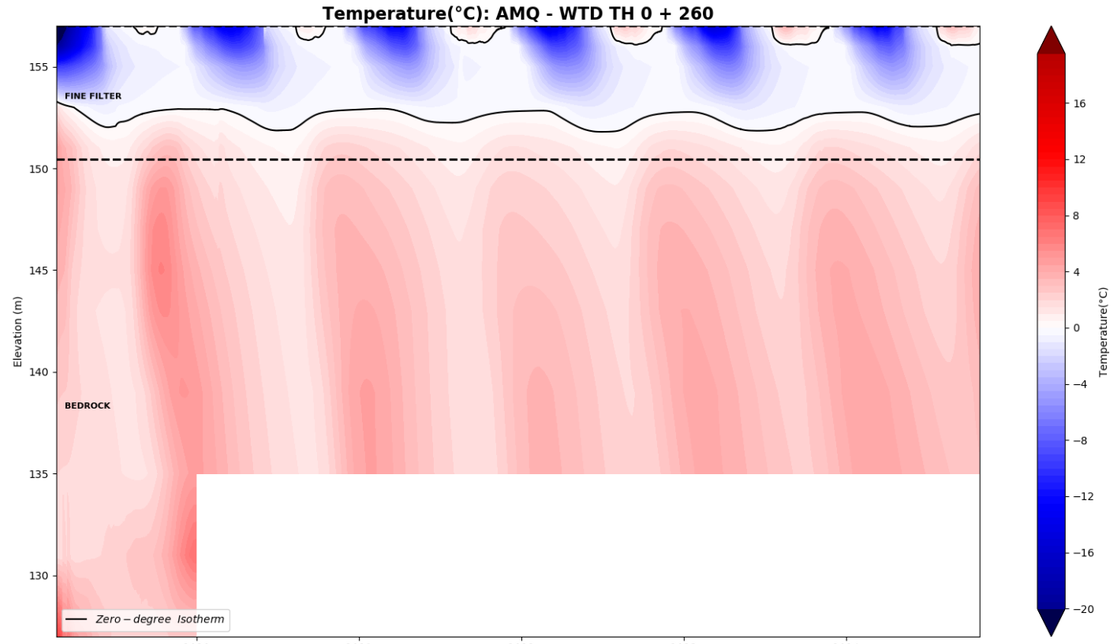


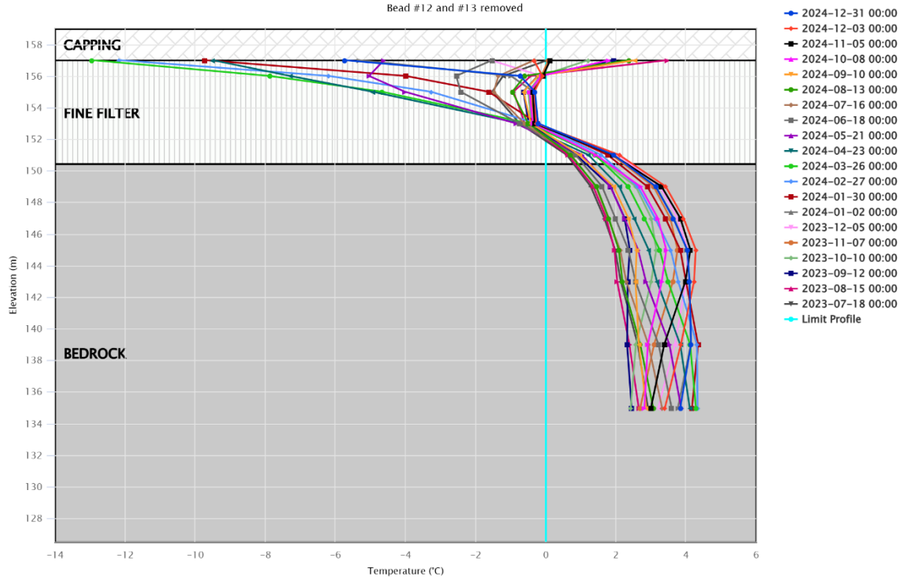


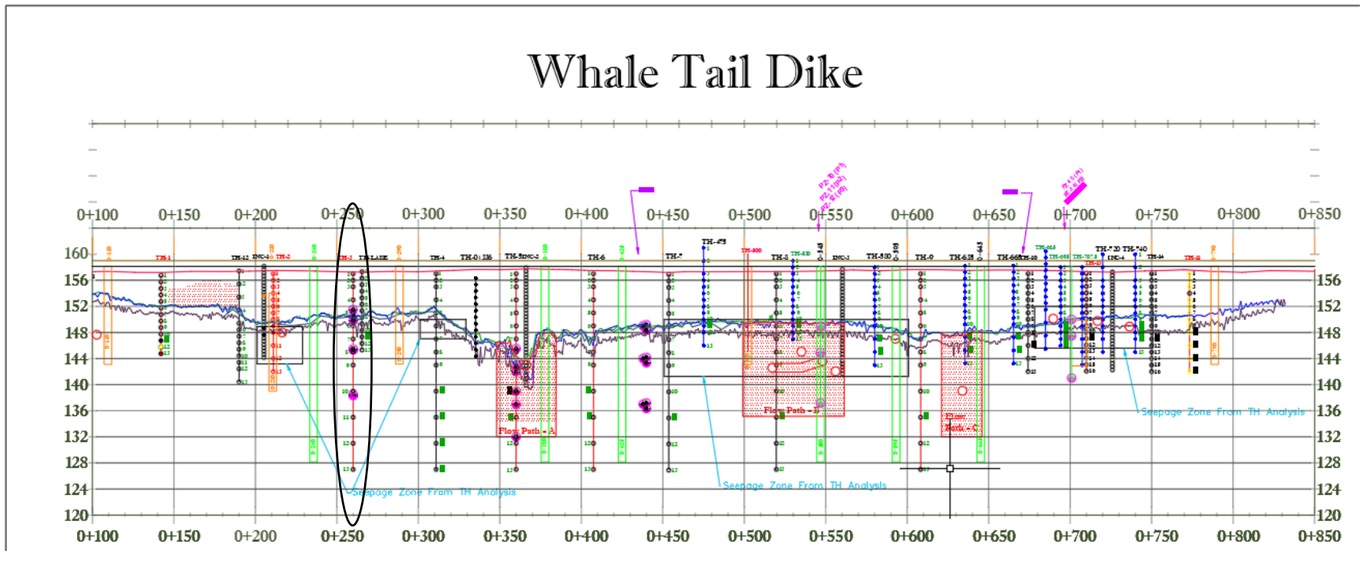


WTD-TH 0+260

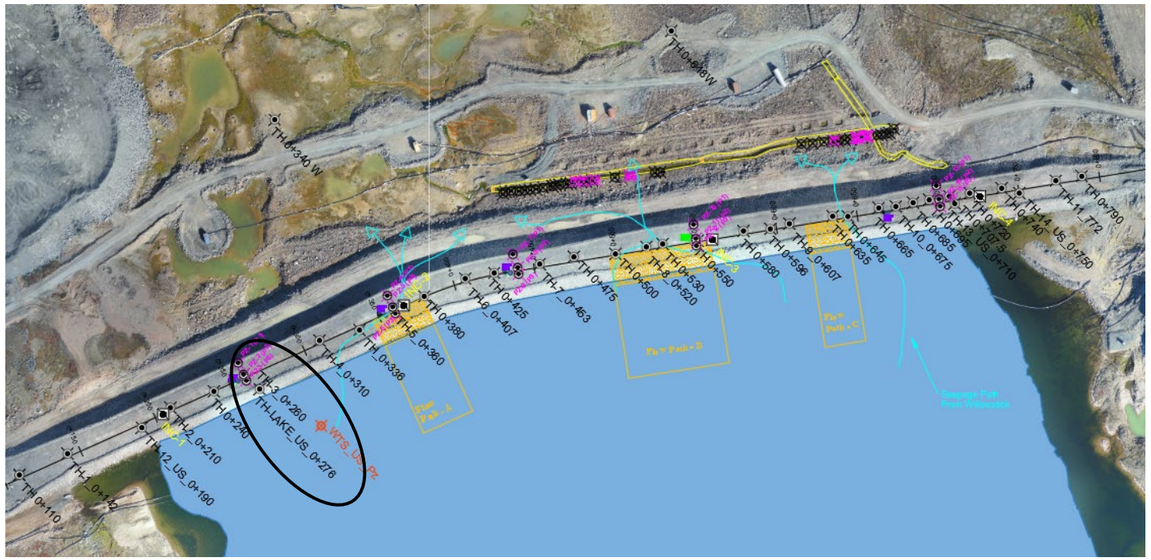

TH-0+340 W
TH-0+346W
TH_0+310
TH_0+336
TH_0+380
TH_0+425
TH_0+475
TH_0+500
TH_0+520
TH_0+530
TH_0+550
TH_0+580
TH_0+598
TH_0+607
TH_0+635
TH_0+646
TH_0+665
TH_0+675
TH_0+695
TH_0+707.5
TH_0+720
TH_0+740
TH_0+760
TH_0+780
TH_0+710
TH-LAKE_US_0+276
WTS_US_PZ
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Talbingo

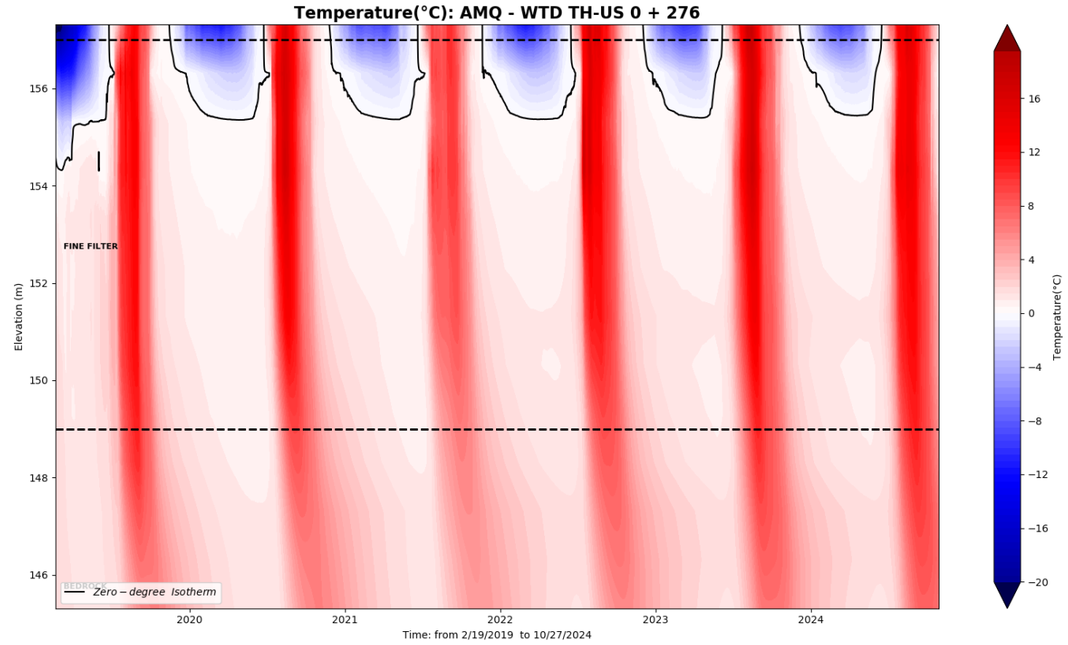

Temperature(°C): AMQ - WTD TH 0 + 260
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/27/2024
Temperature(°C)

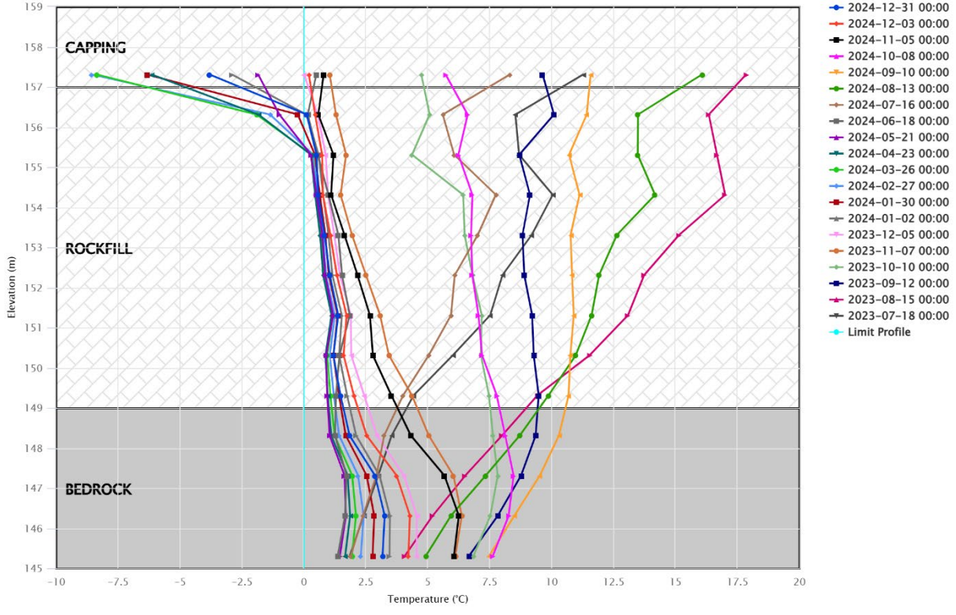

AMQ – WTD TH: 0+260
Bead #12 and #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

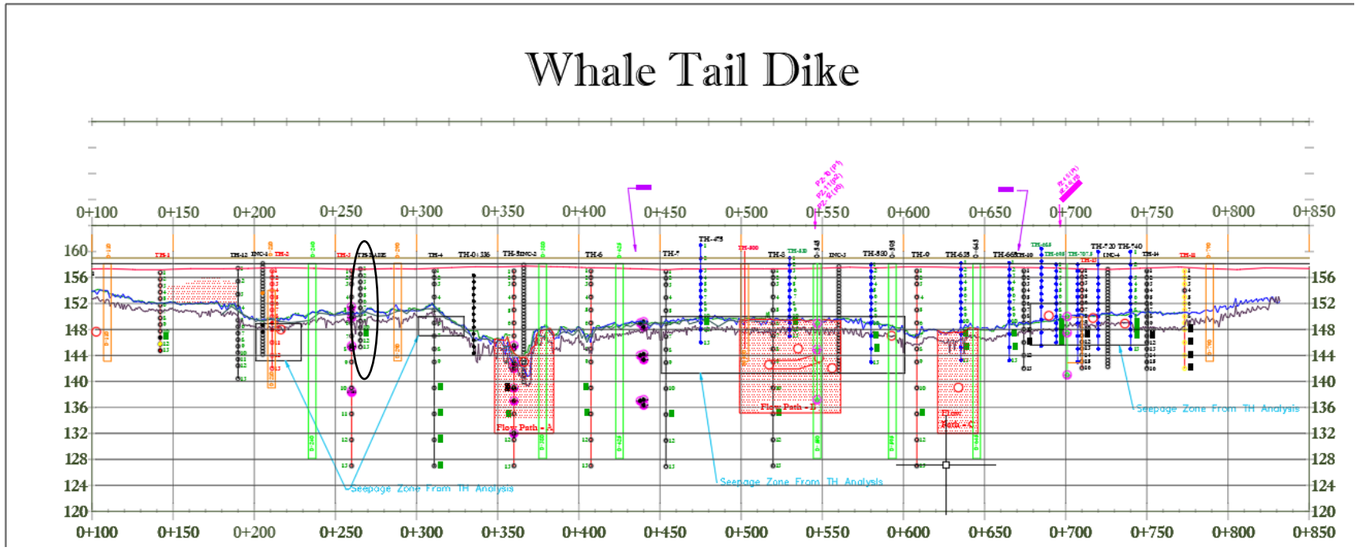

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+276 U/S

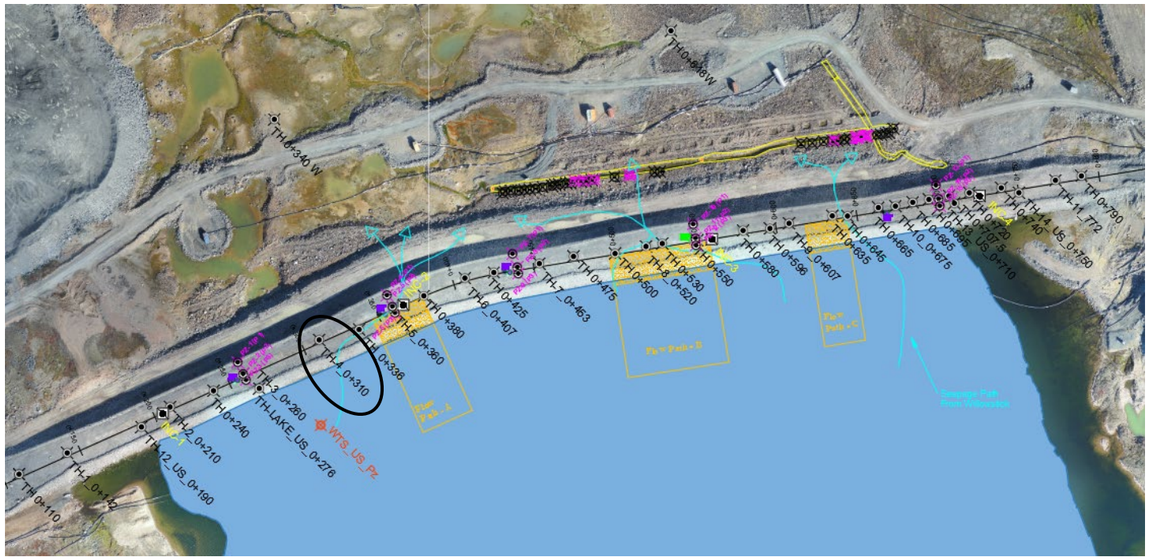


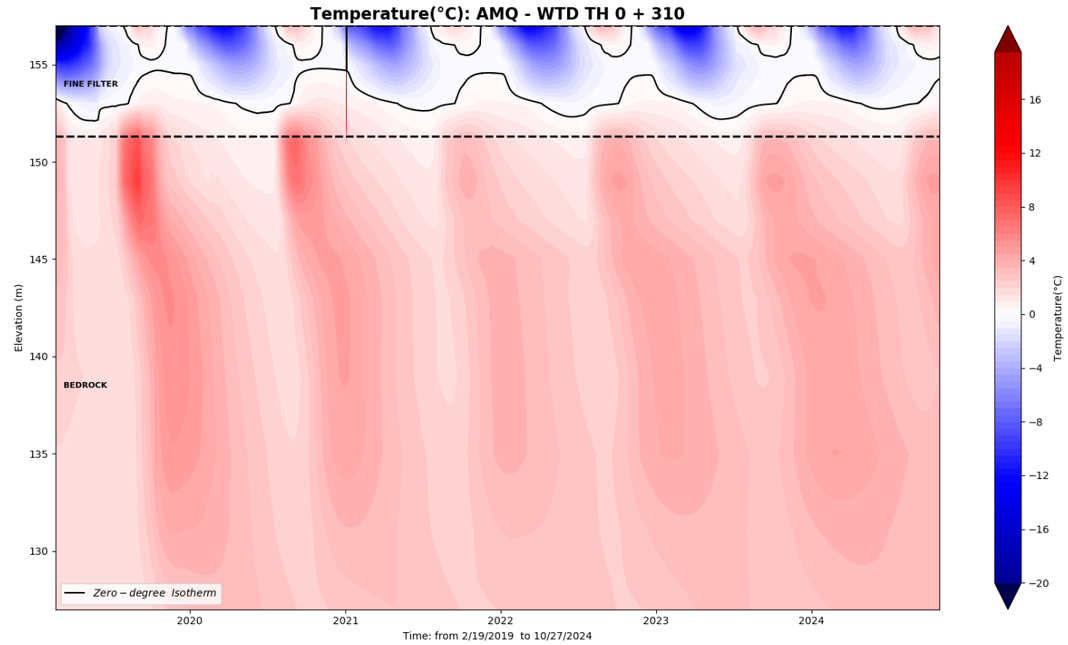


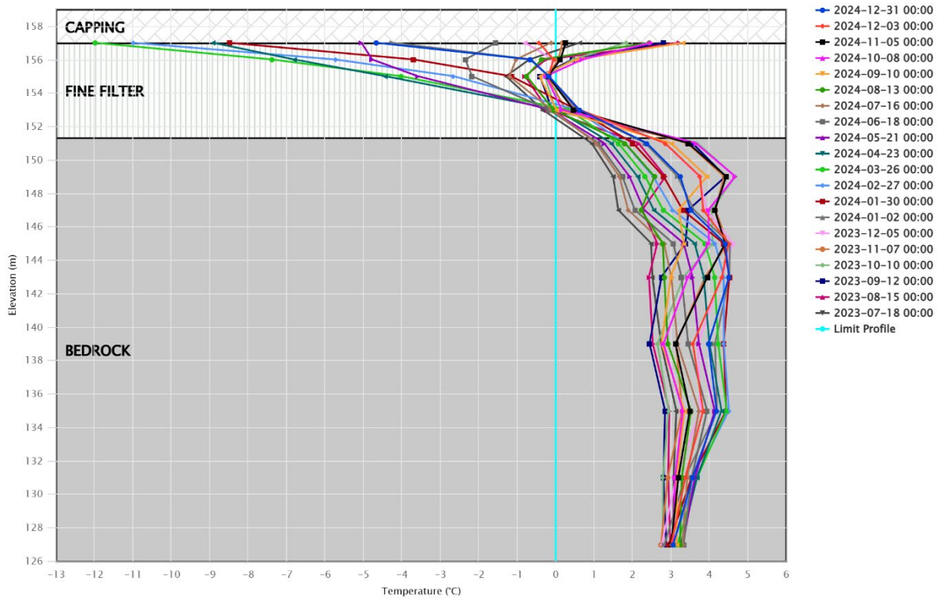


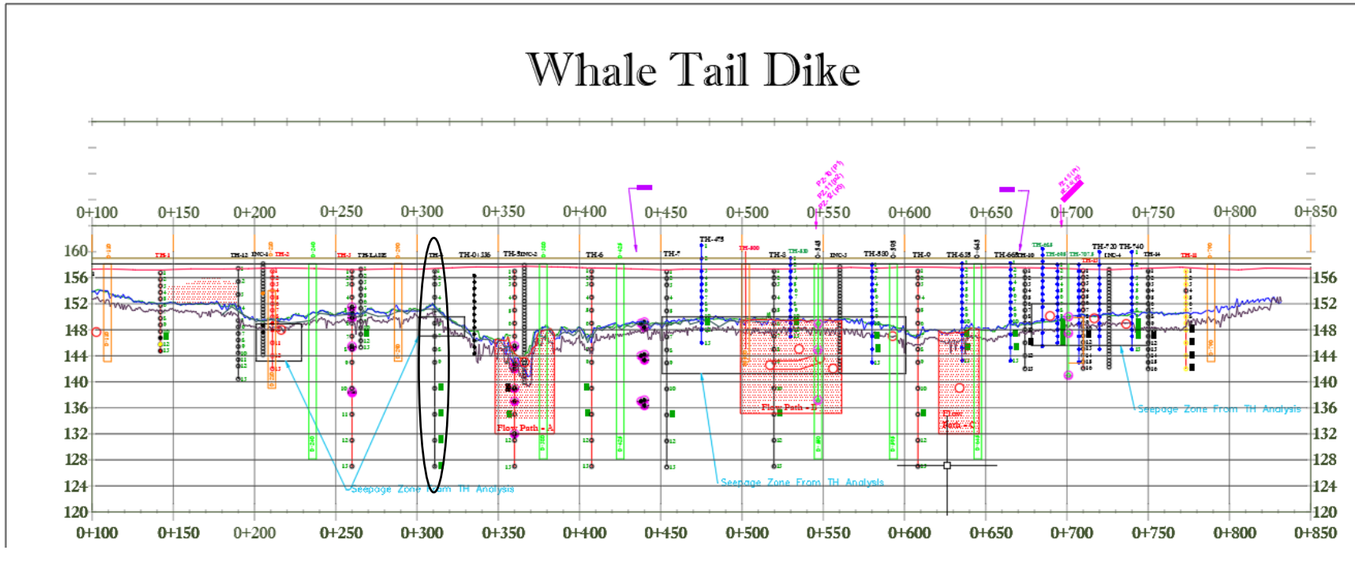


WTD-TH 0+310

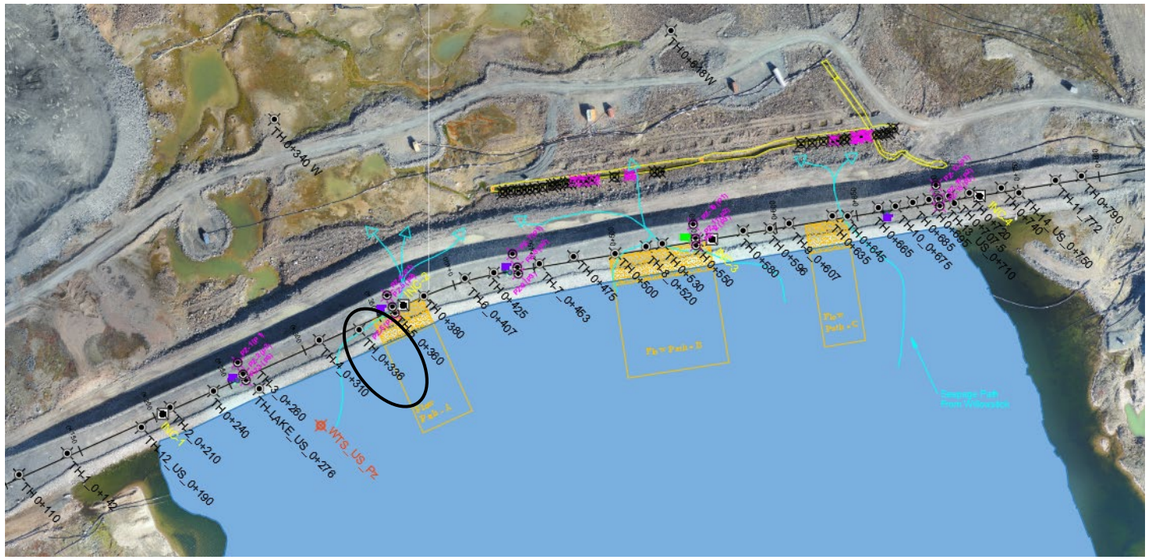

TH-0+340 W
TH-0+386W
TH-1_0+310
TH-2_0+260
TH-LAKE_US_0+276
TH-12_US_0+190
TH-1_0+112
TH-0+110
TH-0+240
TH-2_0+210
TH-0+390
TH-2_0+360
TH-0+336
TH-2_0+407
TH-0+405
TH-7_0+463
TH-0+475
TH-8_0+520
TH-0+500
TH-0+530
TH-0+550
TH-0+580
TH-0+596
TH-0+607
TH-0+635
TH-0+645
TH-0+665
TH-10_0+678
TH-0+685
TH-0+695
TH-0+729
TH-0+740
TH-14_US_0+750
TH-14_772
TH-0+790
TH-0+710
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Flux From Hydrocarbon

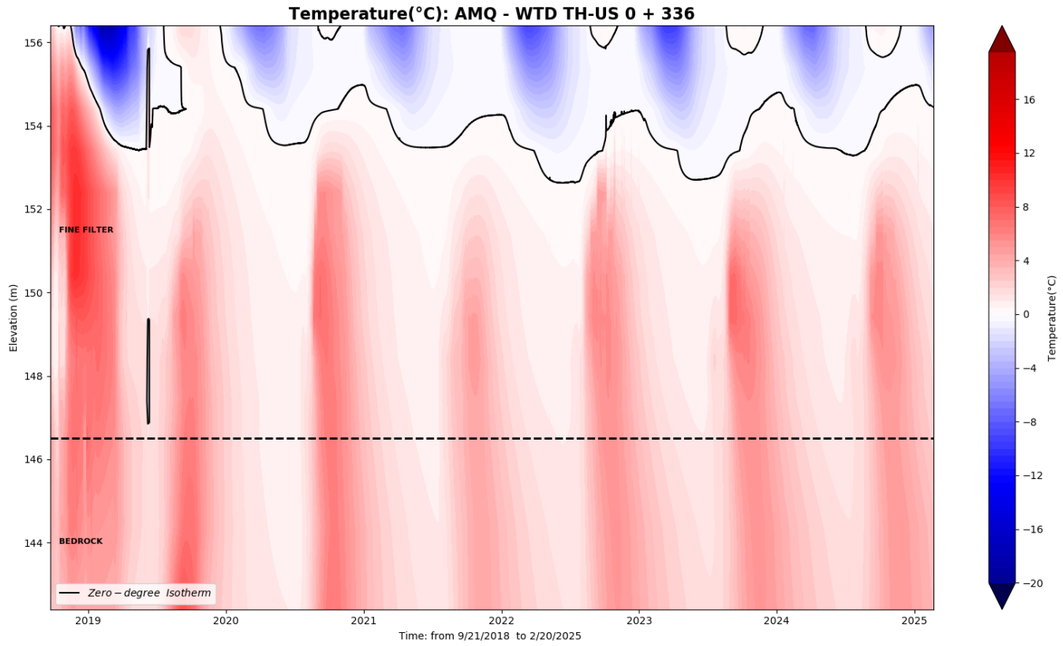

Temperature(°C): AMQ - WTD TH 0 + 310
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/27/2024
Temperature(°C)

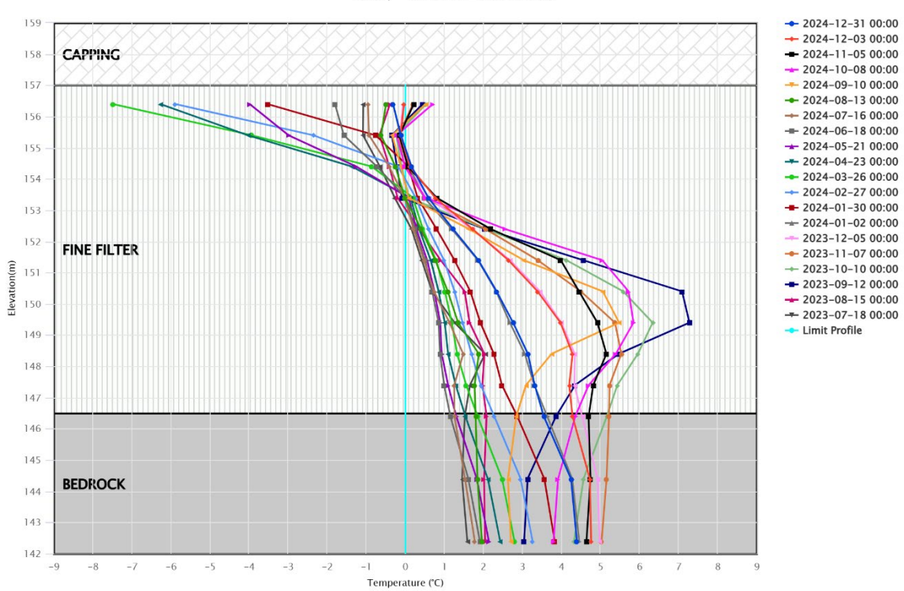

AMQ – WTD TH: 0+310
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

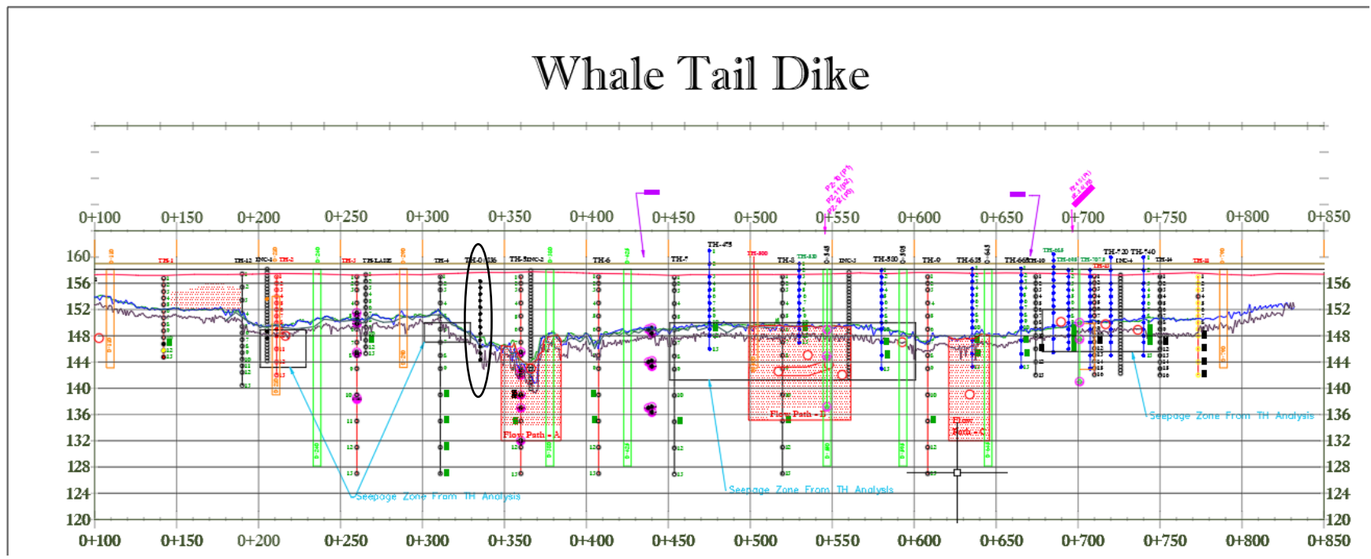

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+336 U/S

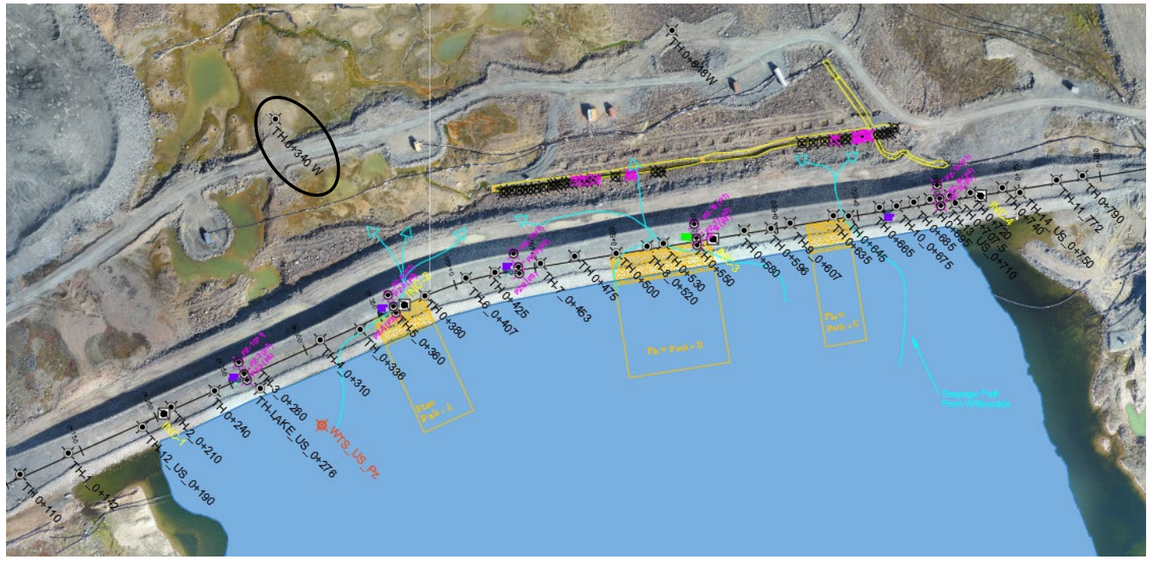




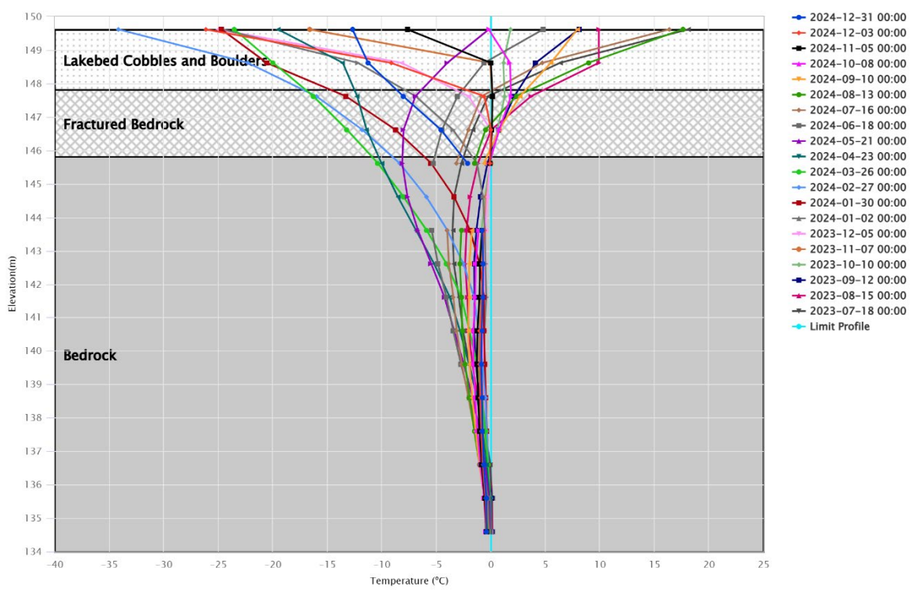


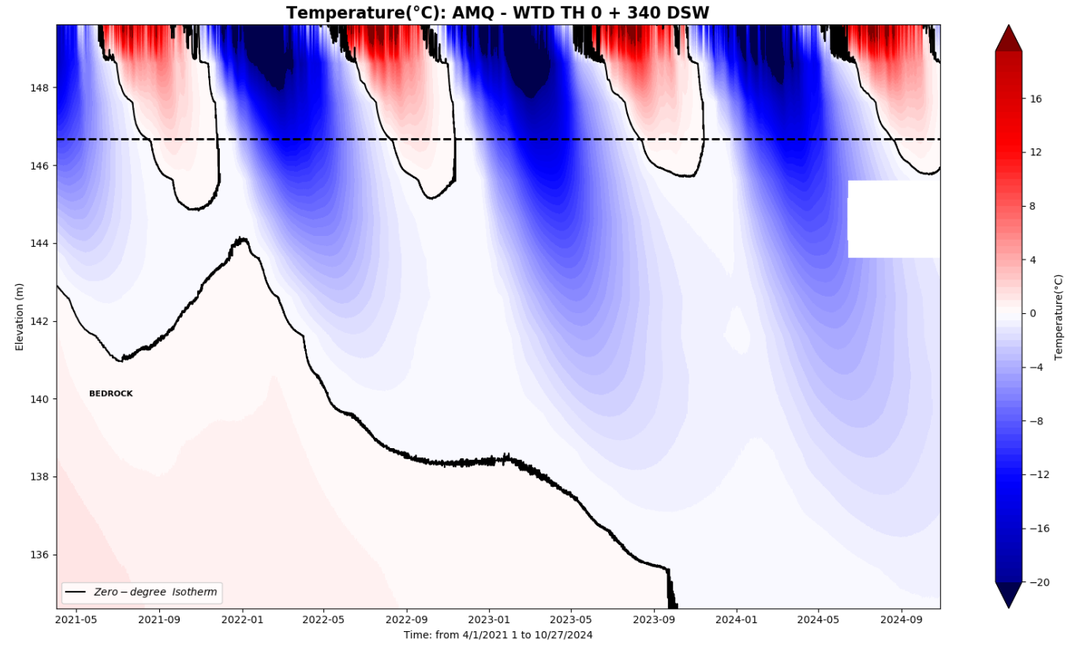


WTD-TH 0+340 DSW

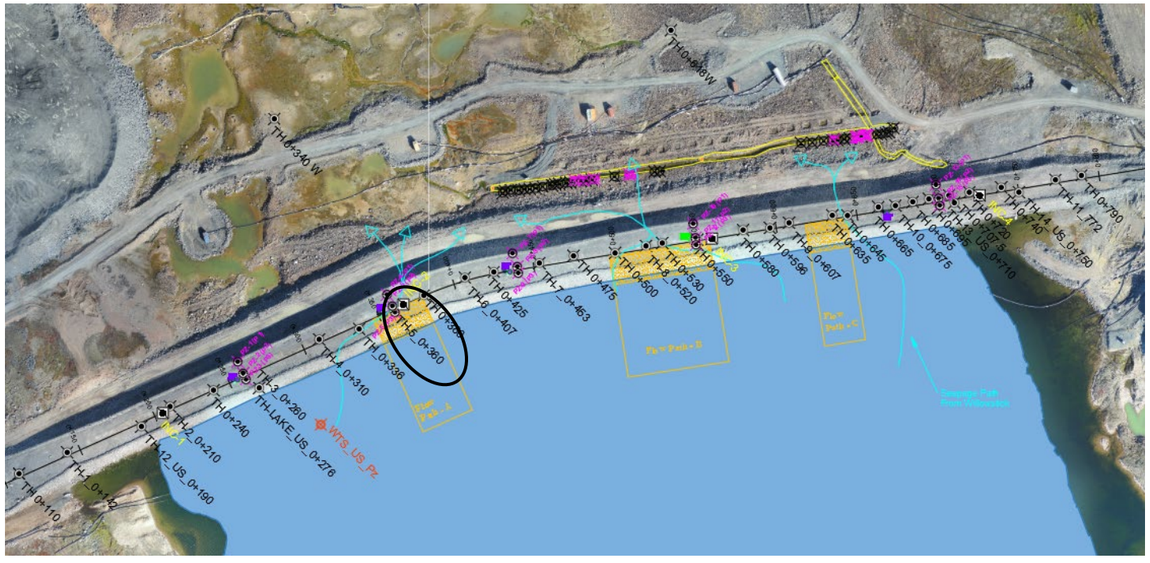


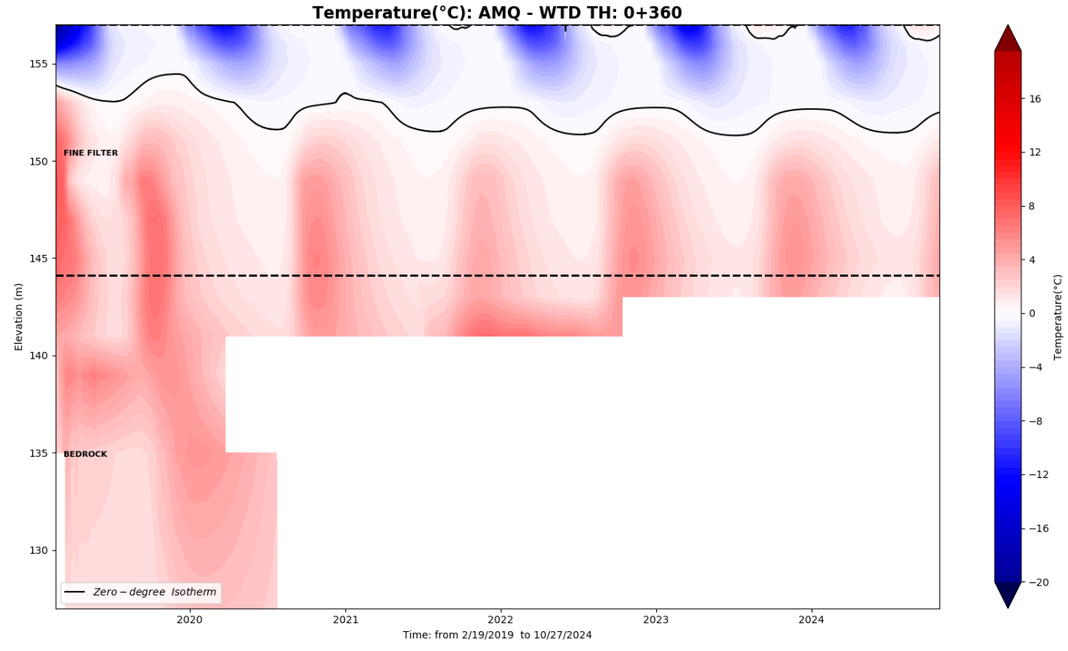
AMQ – WTD TH: D/S_West

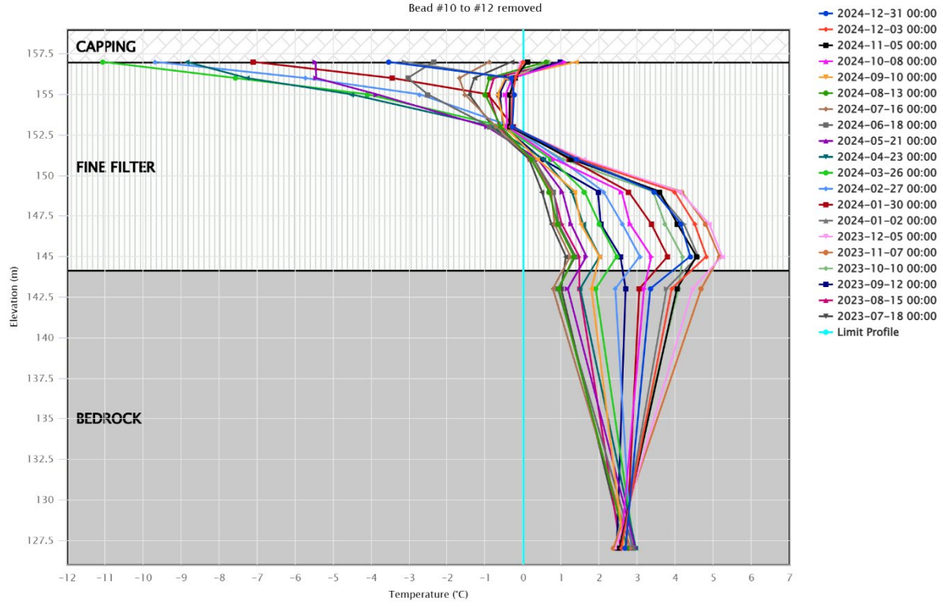


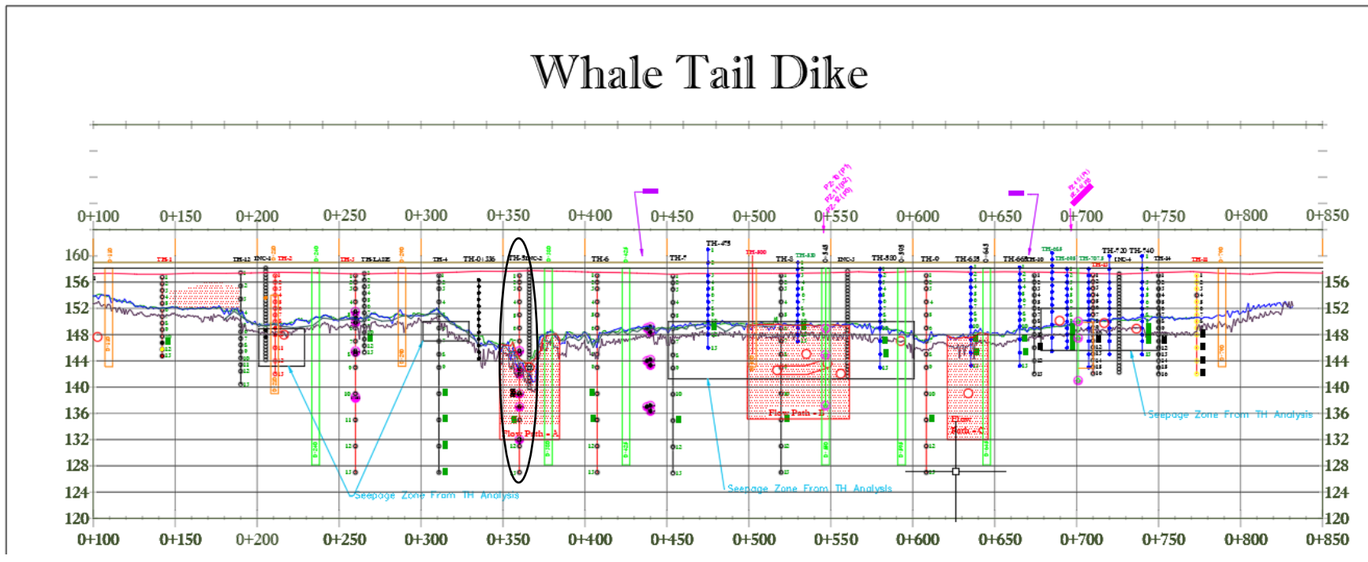


WTD-TH 0+360

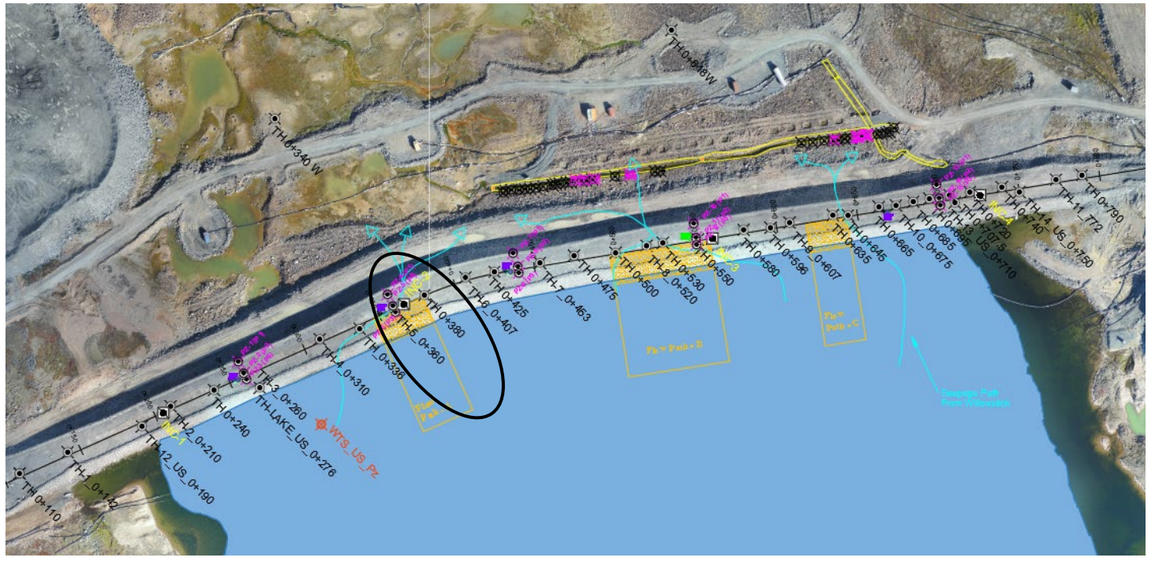

TH-0+340 W
TH-0+360 W
TH-0+790
TH-11_772
TH-14_US_0+750
TH-13_US_0+710
TH-0+740
TH-0+720
TH-0+685
TH-0+675
TH-0+665
TH-0+645
TH-0+635
TH-0+607
TH-0+598
TH-0+590
TH-0+550
TH-0+530
TH-8_0+520
TH-0+500
TH-7_0+463
TH-10_0+475
TH-9_0+407
TH-0+425
TH-0+398
TH-5_0+360
TH-0+350
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_PZ
Flux = Perb. A
Flux = Perb. B
Flux = Perb. C
Seepage Flux From Interaction

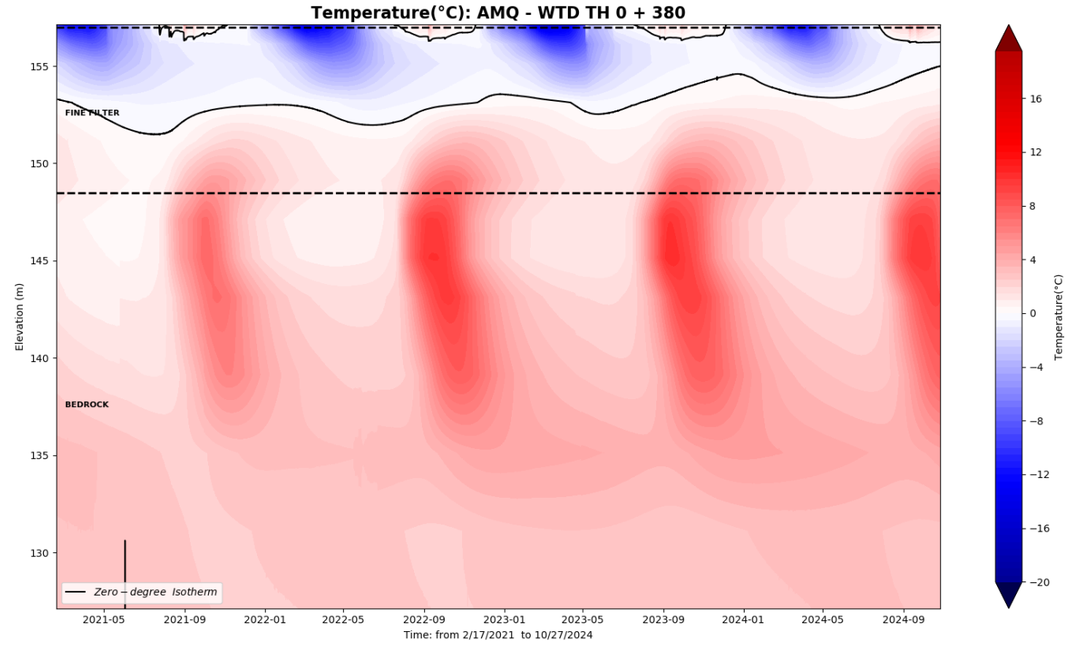

Temperature(°C): AMQ - WTD TH: 0+360
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/27/2024
Temperature(°C)

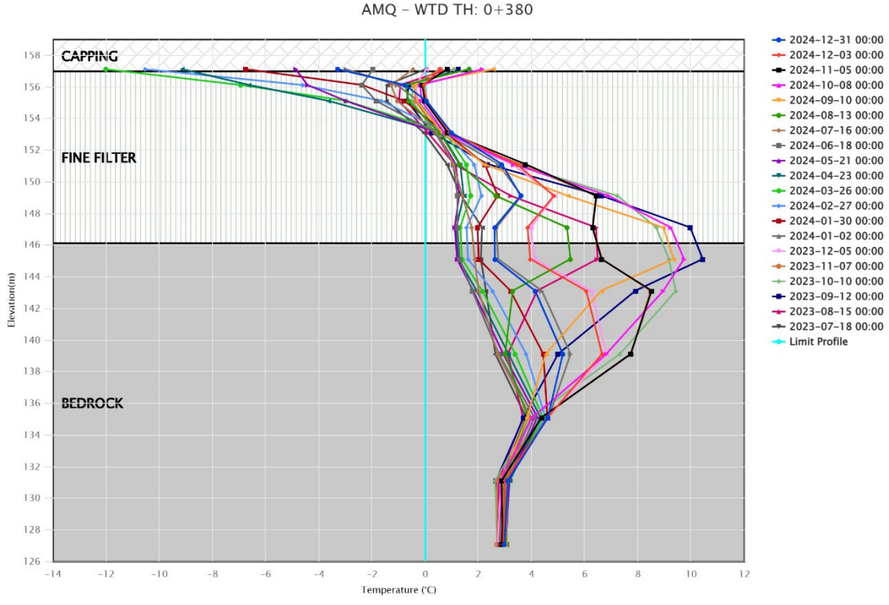

AMQ – WTD TH: 0+360
Bead #10 to #12 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

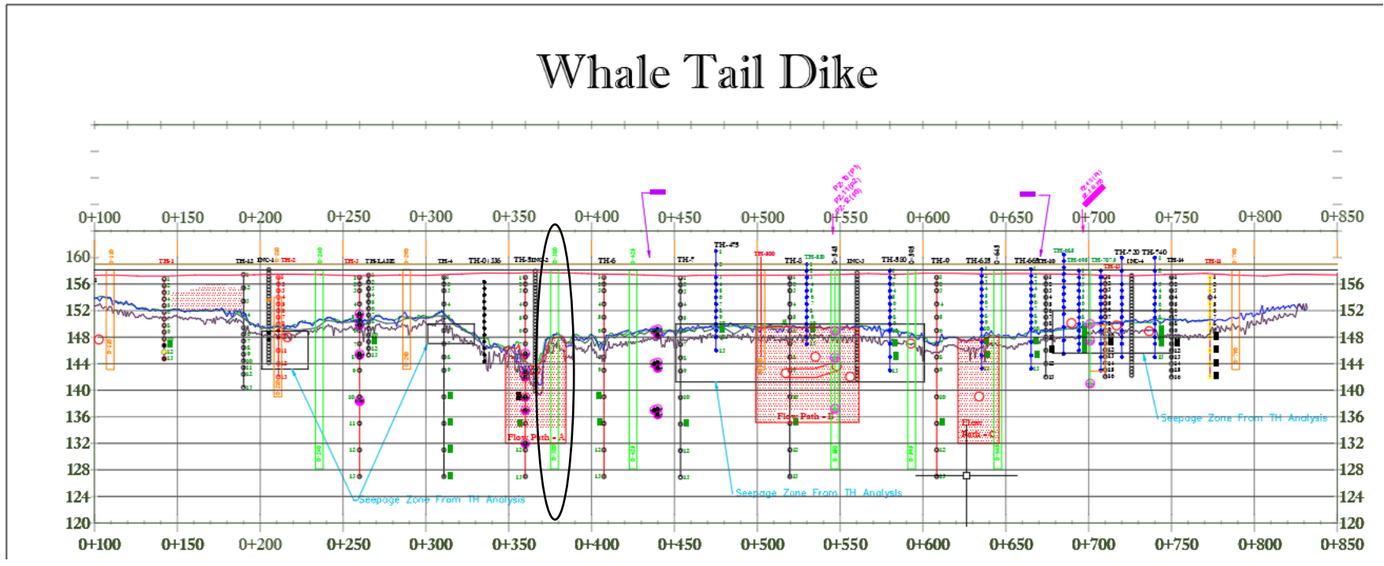

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+380

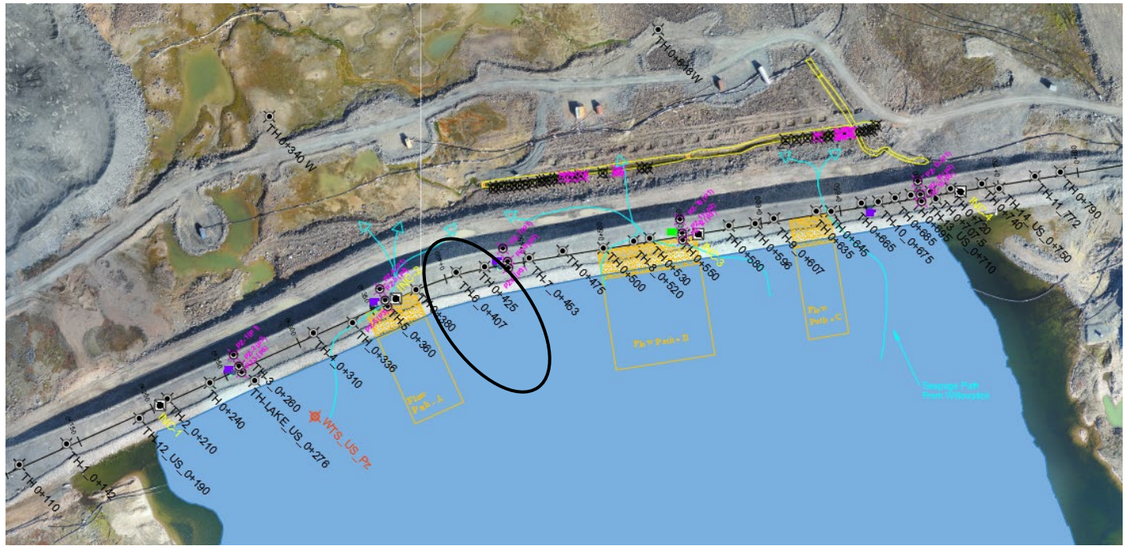

TH-0+340_W
TH-0+436W
TH-1_772
TH-0+790
TH-0+740
TH-14_US_0+750
TH-0+710
TH-0+720
TH-0+675
TH-0+635
TH-0+646
TH-0+665
TH-10_0+675
TH-9_0+607
TH-0+580
TH-0+590
TH-0+530
TH-8_0+520
TH-0+500
TH-0+475
TH-7_0+463
TH-6_0+425
TH-0+407
TH-5_0+380
TH-0+380
TH-0+336
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-0+240
TH-2_0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_PZ
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Tailings

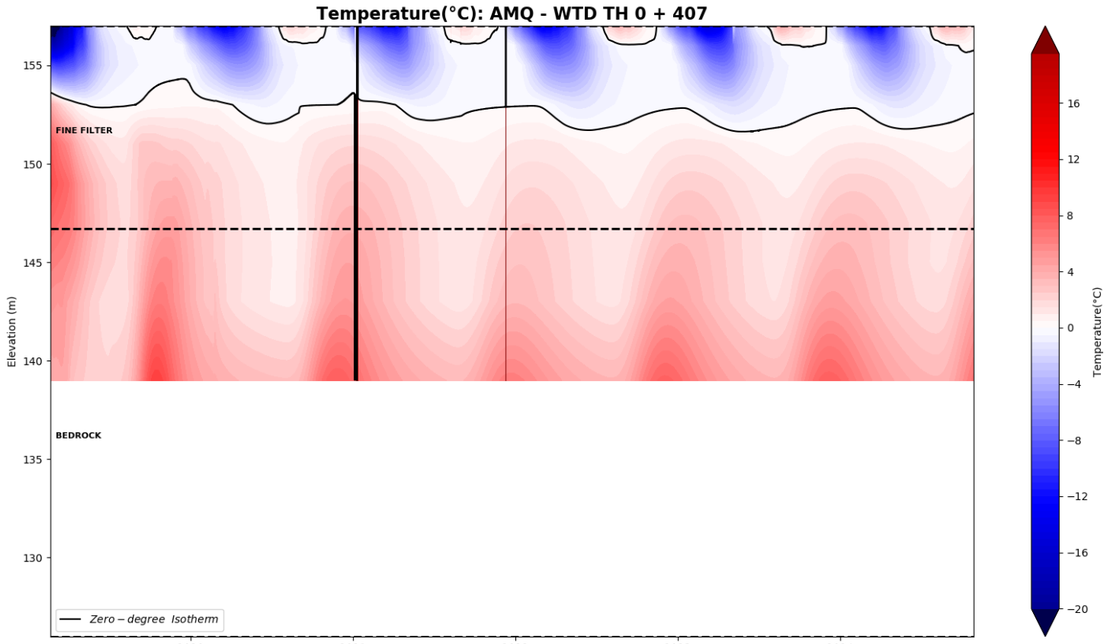

Temperature(°C): AMQ - WTD TH 0 + 380
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/17/2021 to 10/27/2024
Temperature(°C)

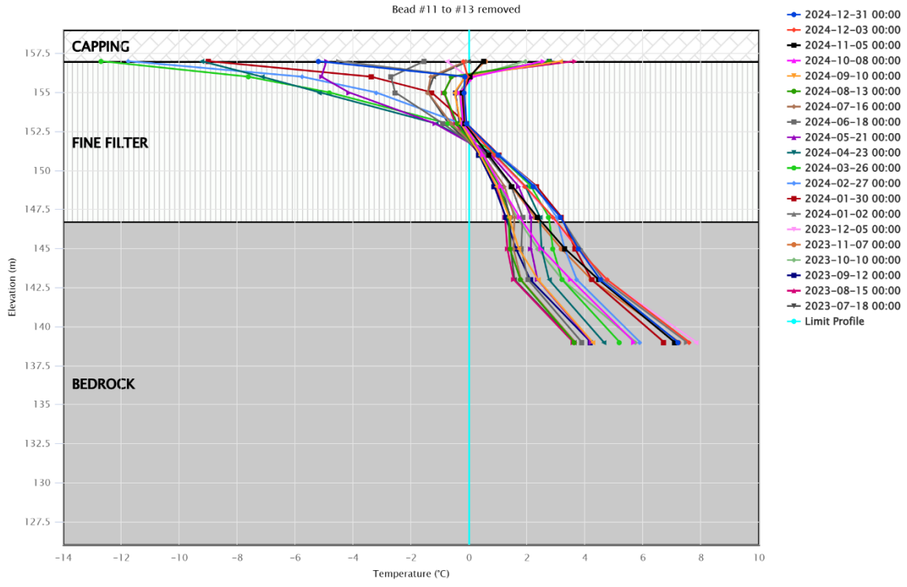

AMQ – WTD TH: 0+380
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile


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

WTD-TH 0+407


TH-0+340 W
TH-0+396W
TH-1_0+110
TH-1_0+142
TH-2_0+210
TH-2_0+240
TH-2_0+260
TH-LAKE_US_0+276
TH-3_0+310
TH-3_0+360
TH-3_0+398
TH-4_0+380
TH-4_0+407
TH-4_0+425
TH-5_0+453
TH-5_0+475
TH-6_0+500
TH-6_0+520
TH-6_0+530
TH-6_0+550
TH-7_0+590
TH-7_0+598
TH-8_0+607
TH-8_0+635
TH-8_0+645
TH-9_0+665
TH-9_0+675
TH-9_0+686
TH-10_0+696
TH-10_0+705
TH-10_0+710
TH-11_0+740
TH-11_772
TH-12_US_0+190
TH-0+790
WTS_US_PZ
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Whalebacks


Temperature(°C): AMQ - WTD TH 0 + 407
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 2/19/2019 to 10/27/2024
Temperature(°C)


AMQ – WTD TH: 0+407
Bead #11 to #13 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
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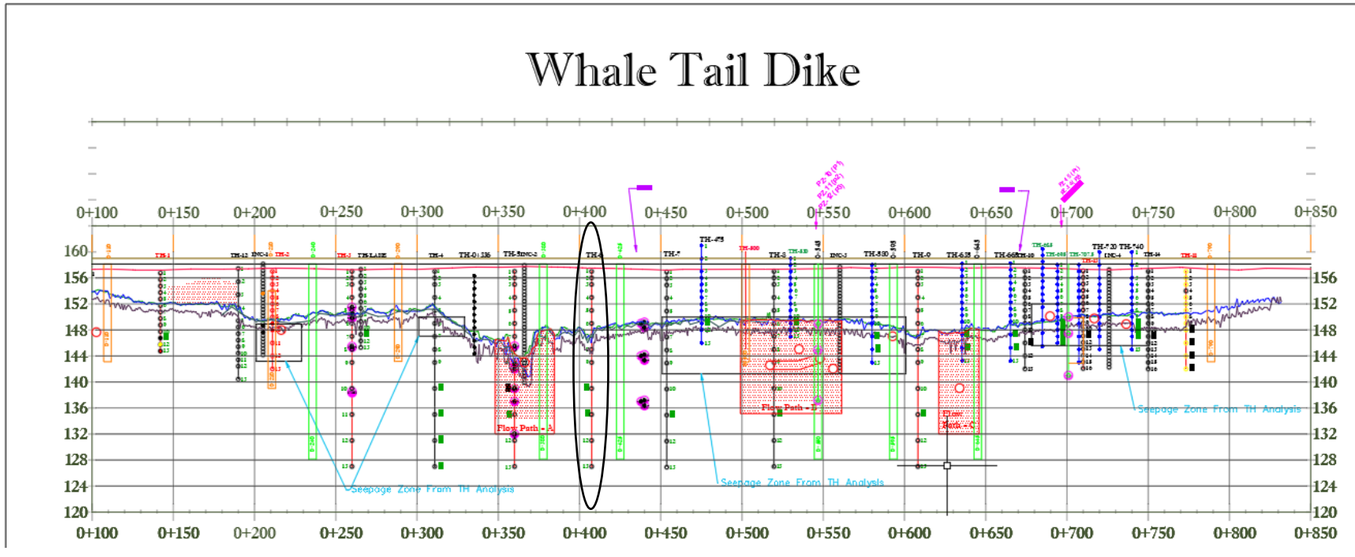
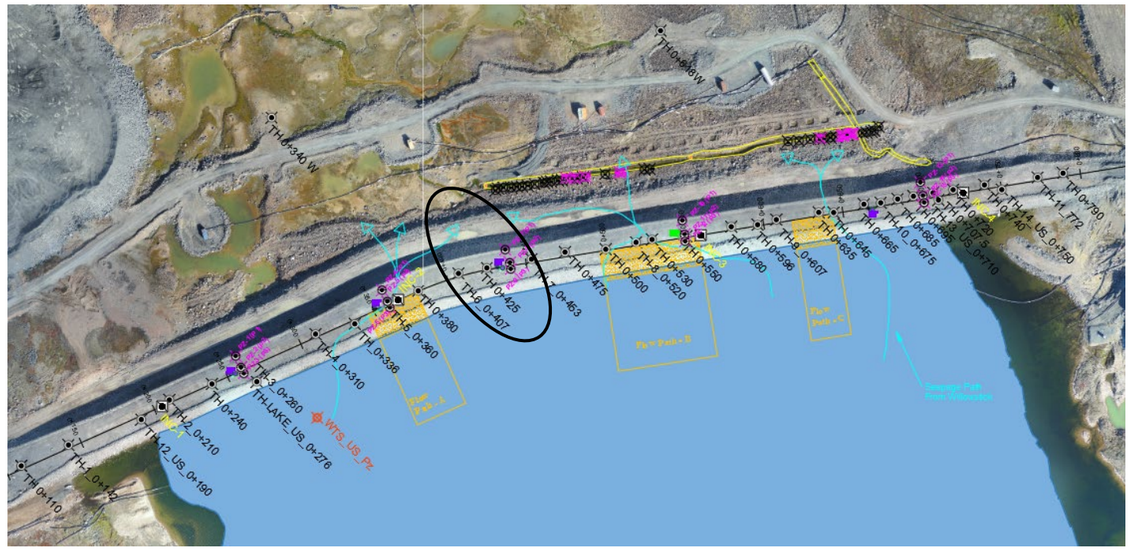
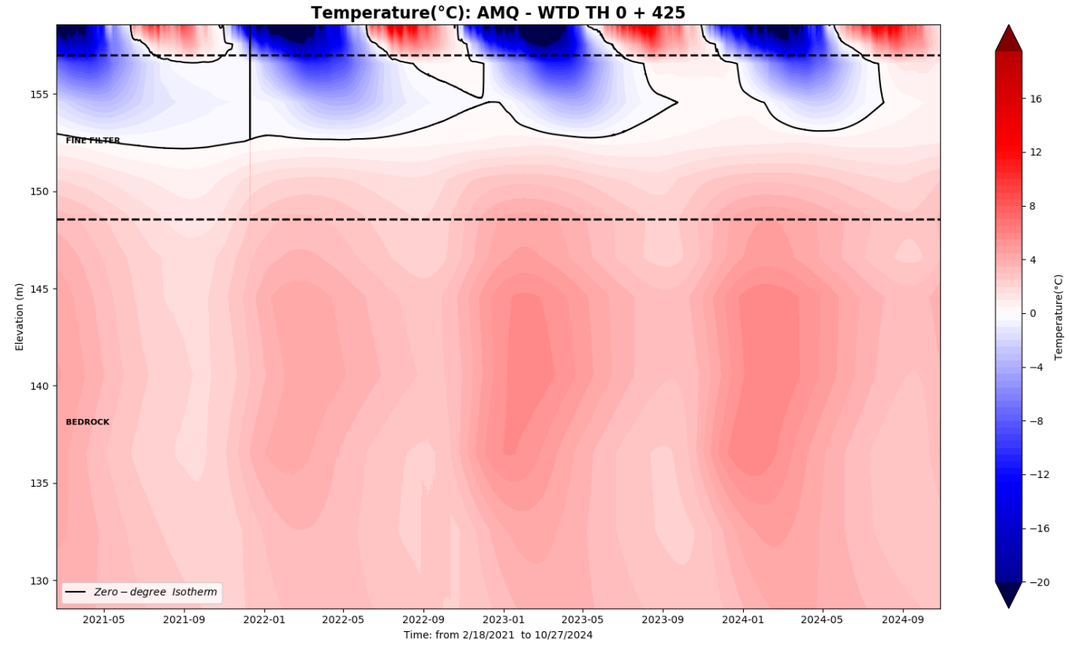
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

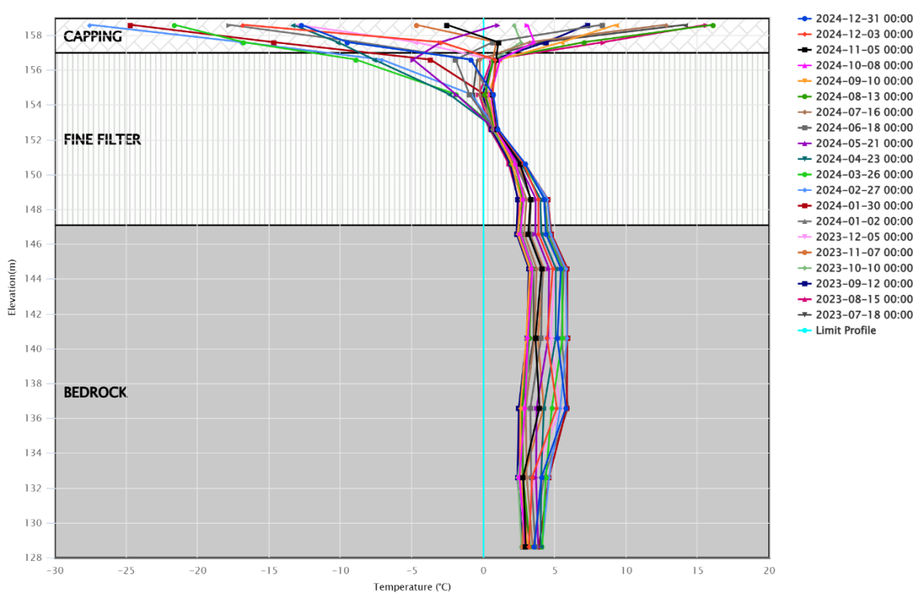

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

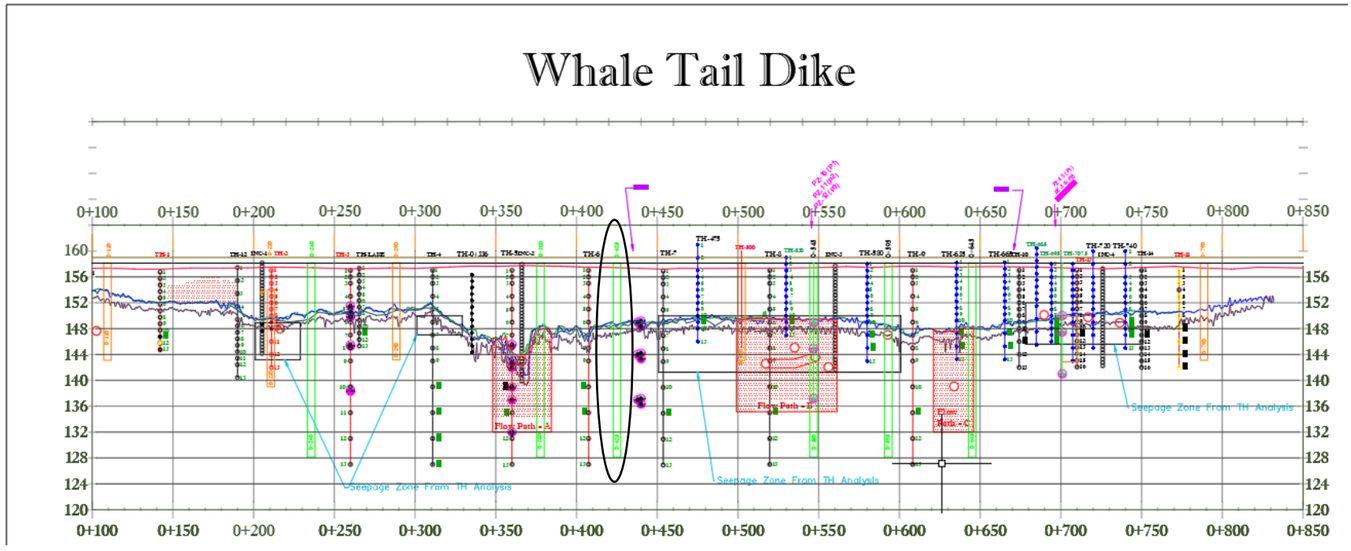
WTD-TH 0+425



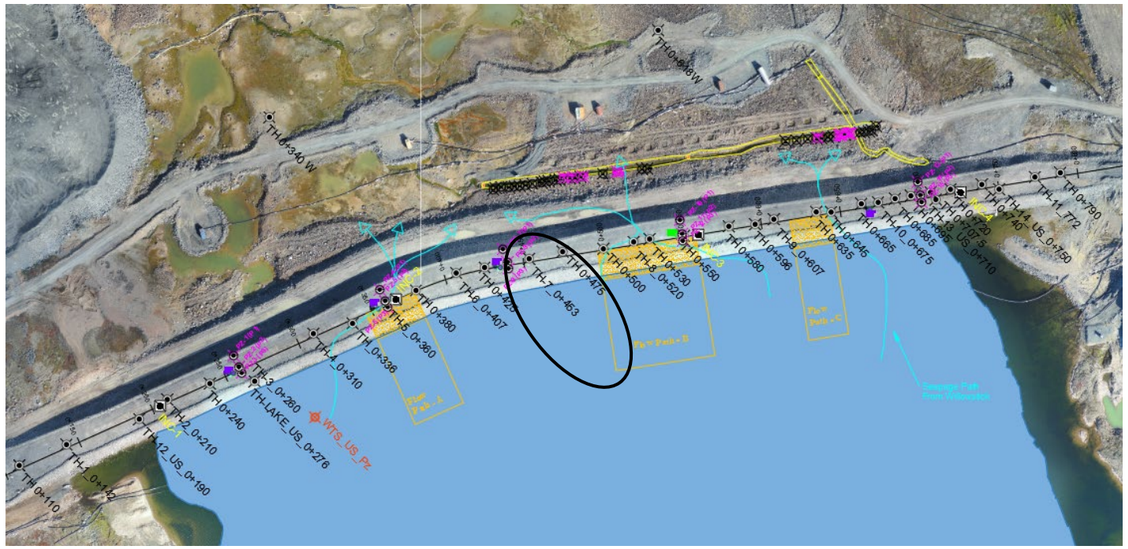


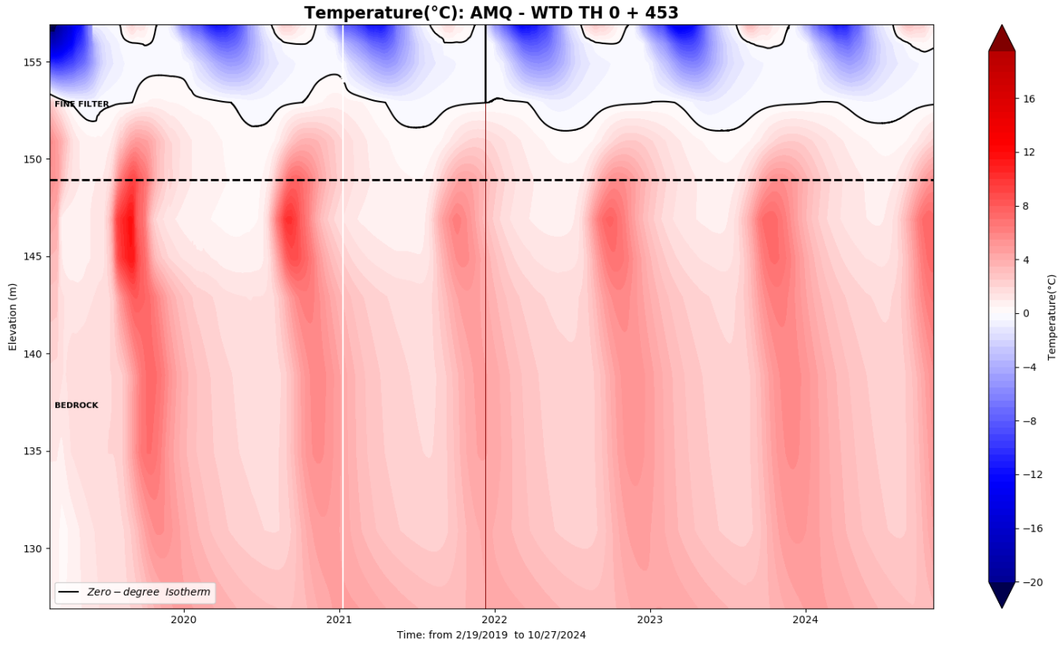
AMQ – WTD TH: 0+425

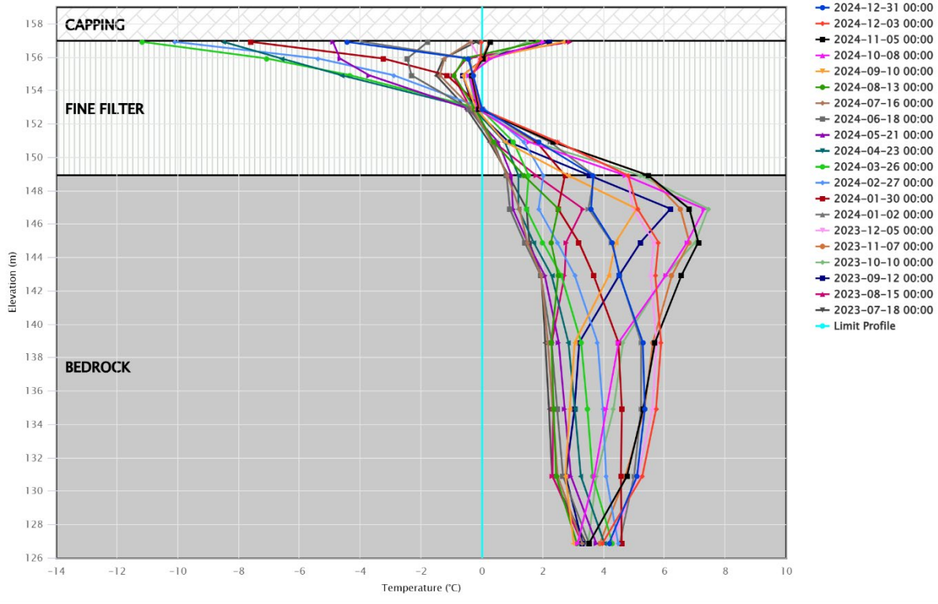




WTD-TH 0+453


TH-0+536 W
TH-0+540 W
TH-0+780
TH-11_7+72
TH-11_US_0+150
TH-0+740
TH-0+720
TH-0+710
TH-0+685
TH-0+675
TH-10_0+665
TH-0+645
TH-0+635
TH-9_0+607
TH-0+596
TH-0+580
TH-0+550
TH-8_0+520
TH-0+500
TH-7_0+453
TH-0+475
TH-6_0+407
TH-0+425
TH-0+380
TH-5_0+360
TH-0+336
TH-4_0+310
TH-3_0+280
TH-0+240
TH-LAKE_US_0+276
TH-2_0+210
TH-2_US_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Flux From Groundwater


Temperature(°C): AMQ - WTD TH 0 + 453
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/19/2019 to 10/27/2024
Temperature(°C)


AMQ – WTD TH: 0+453
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
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2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
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2023-12-05 00:00
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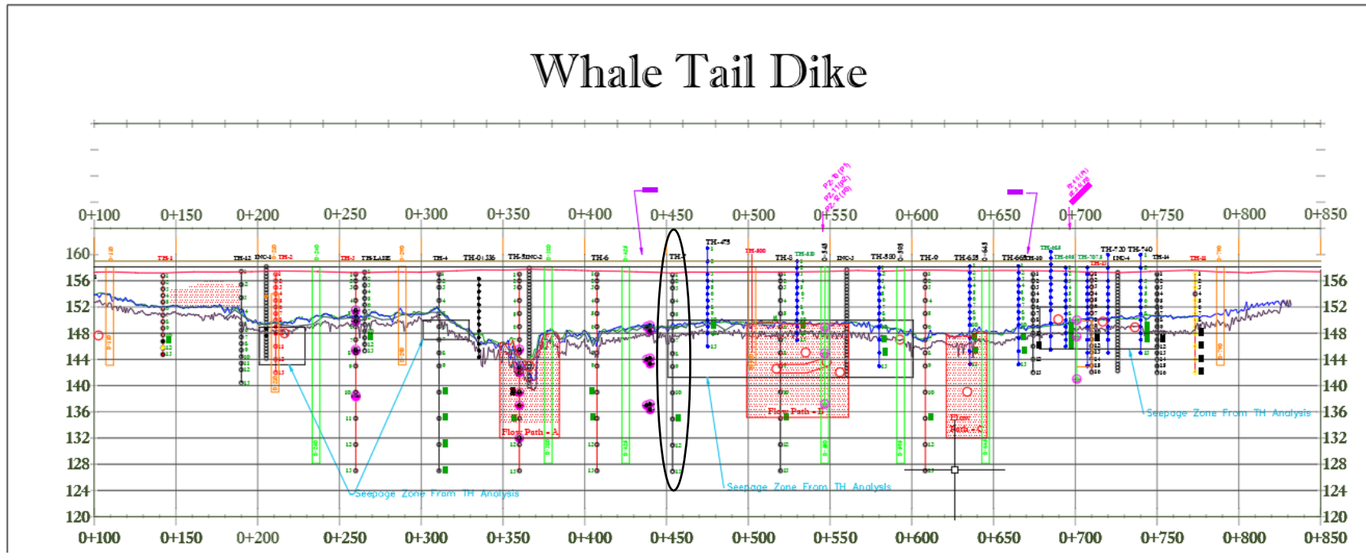
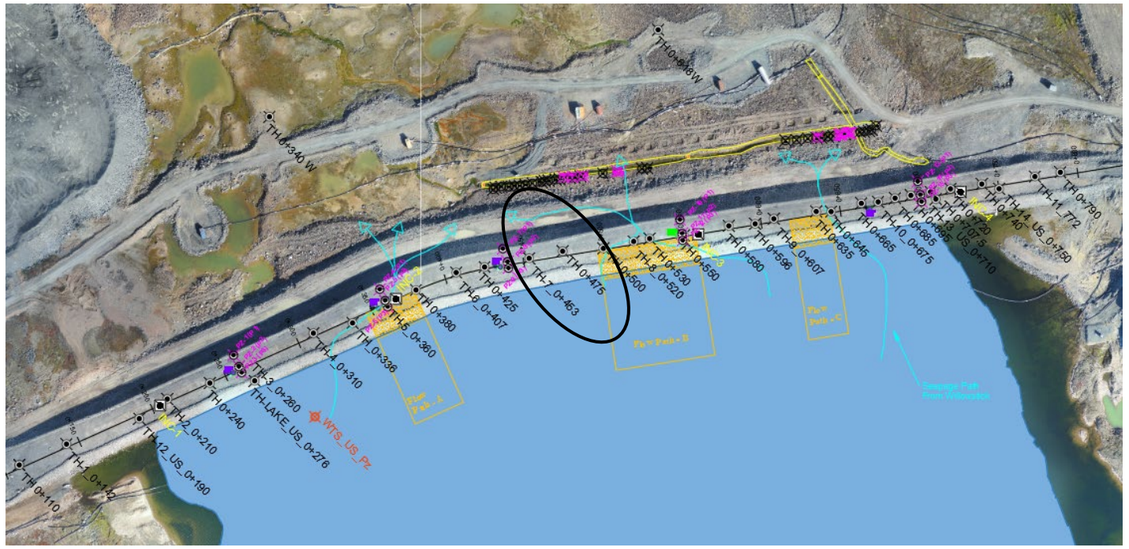
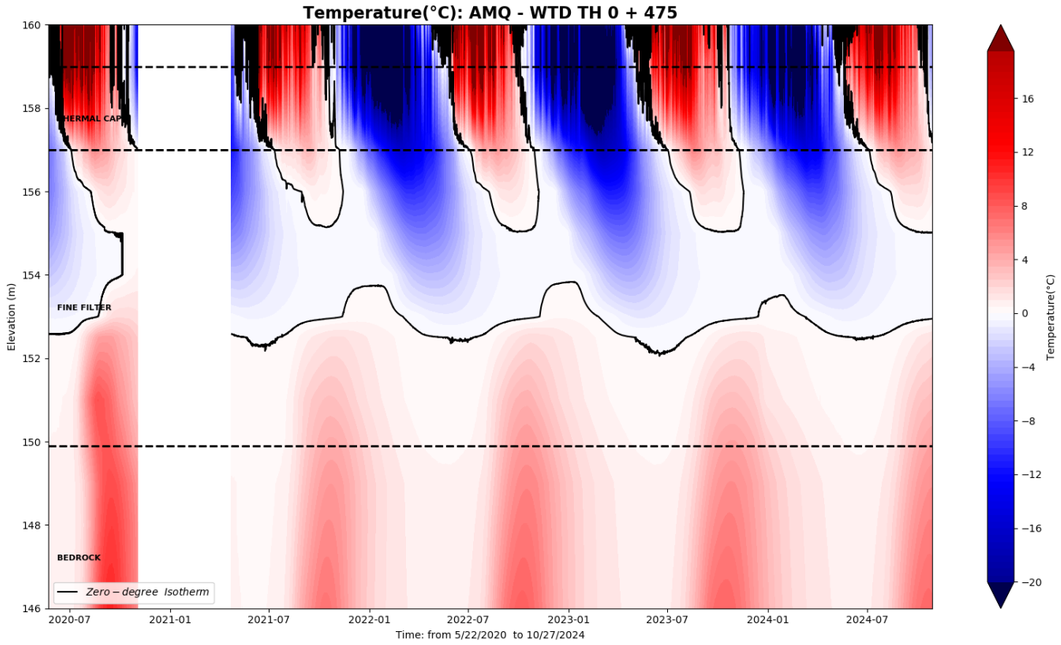
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

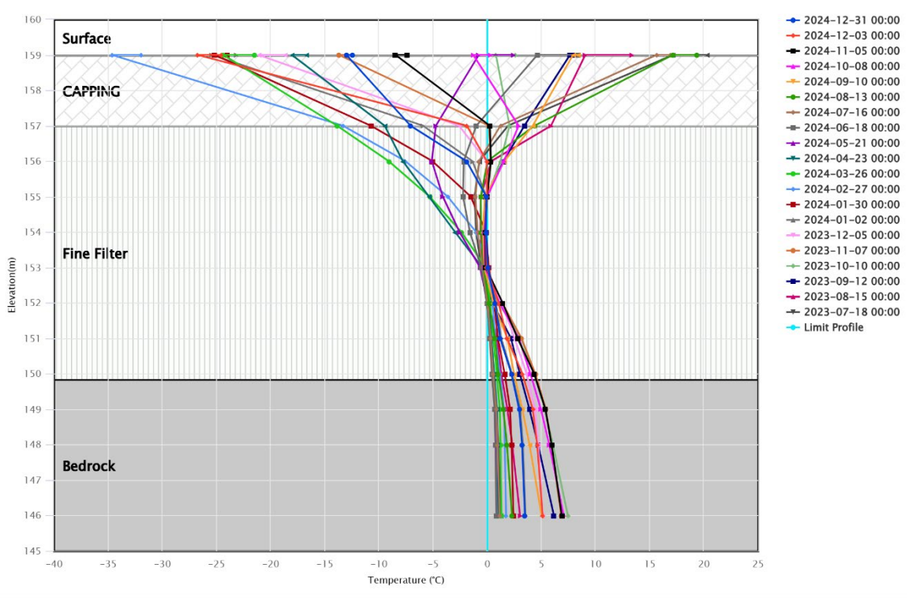

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

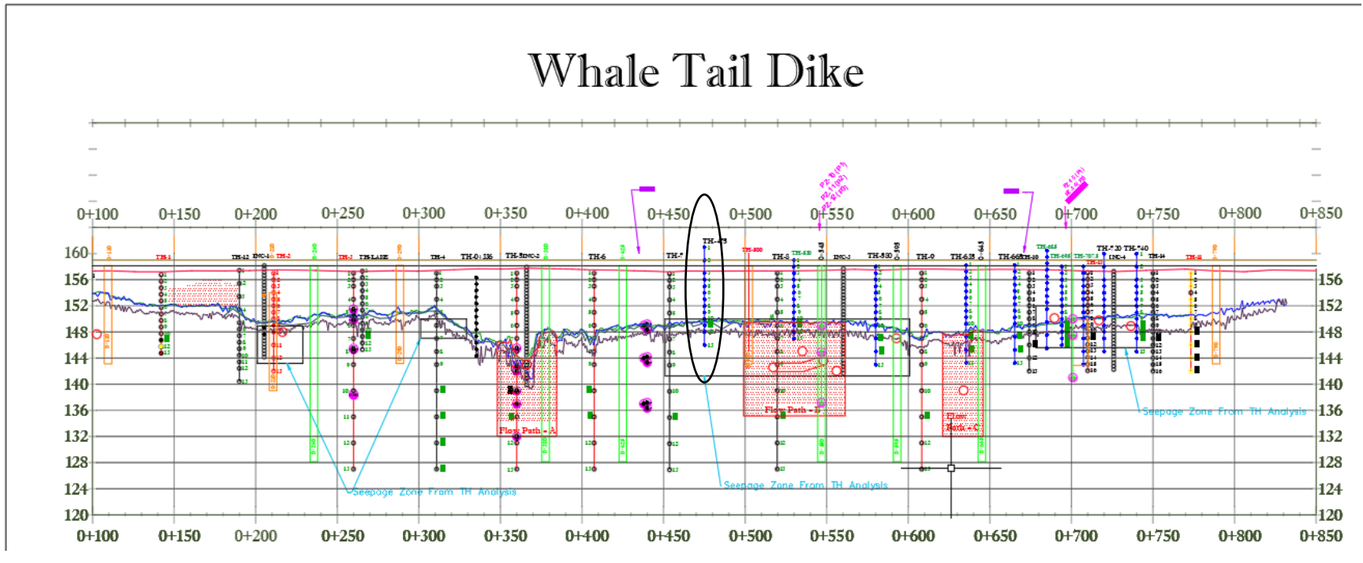
WTD-TH 0+475



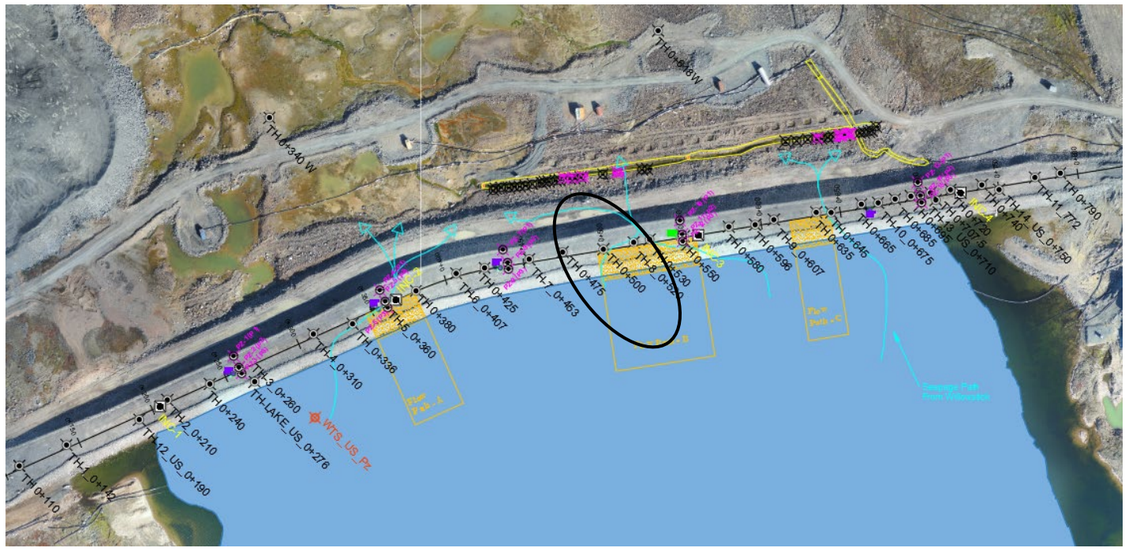


AMQ – WTD TH: 0+475_T

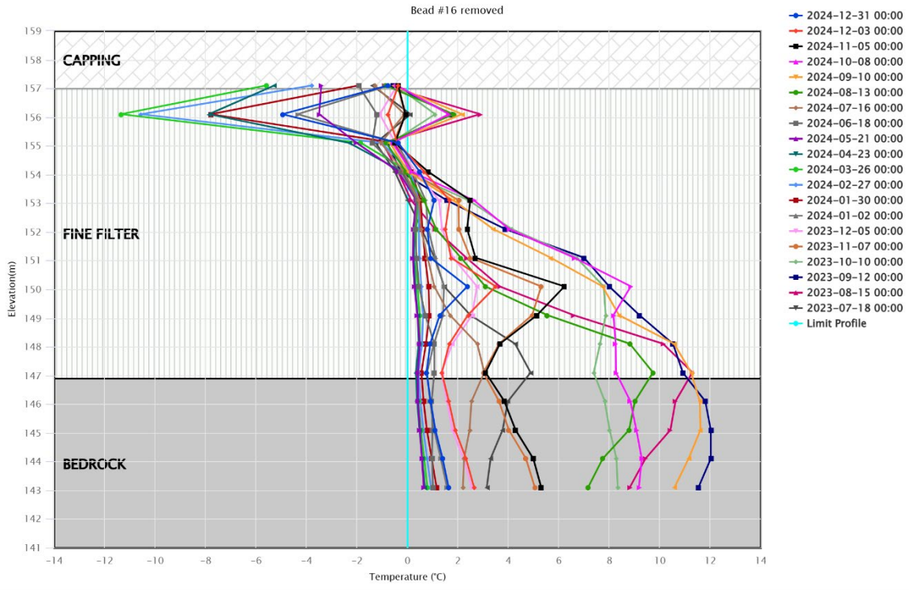


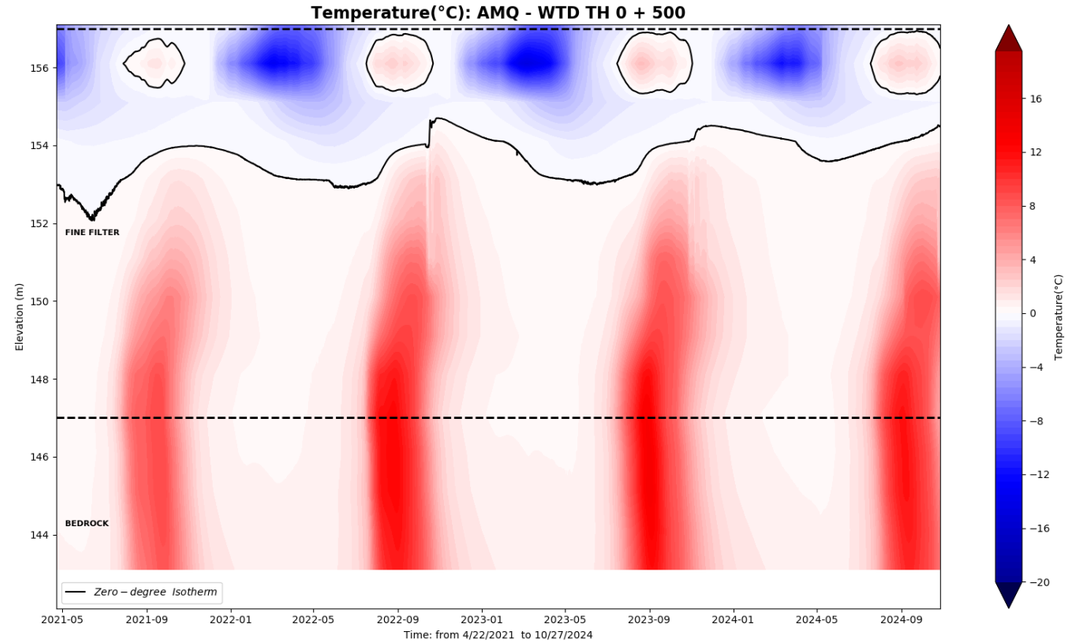


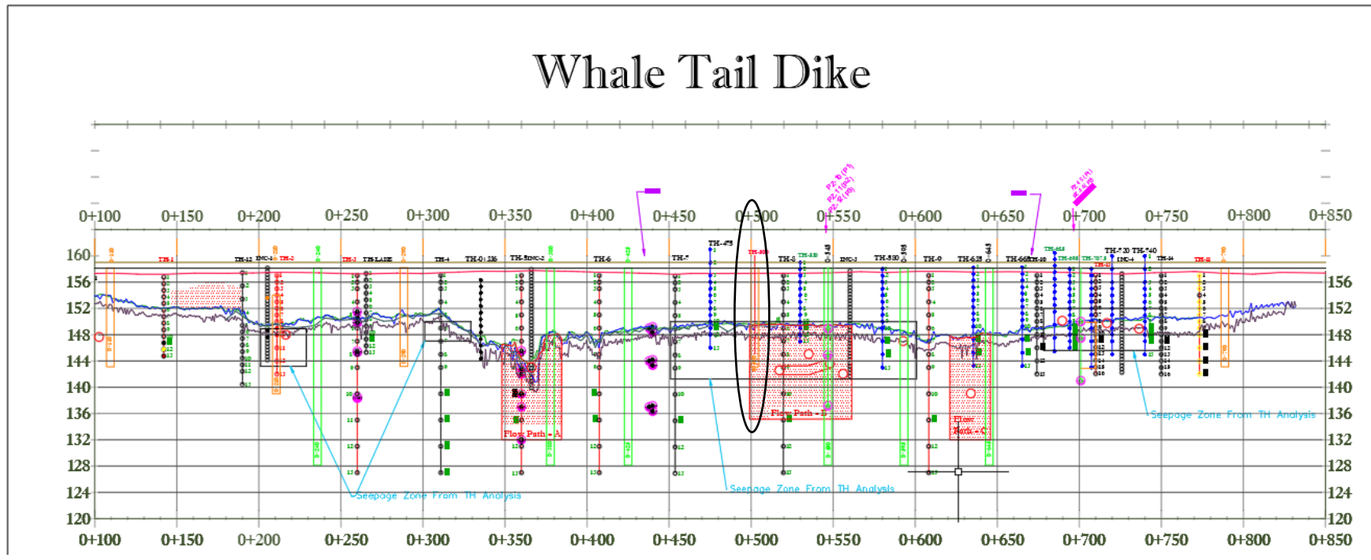
WTD-TH 0+500



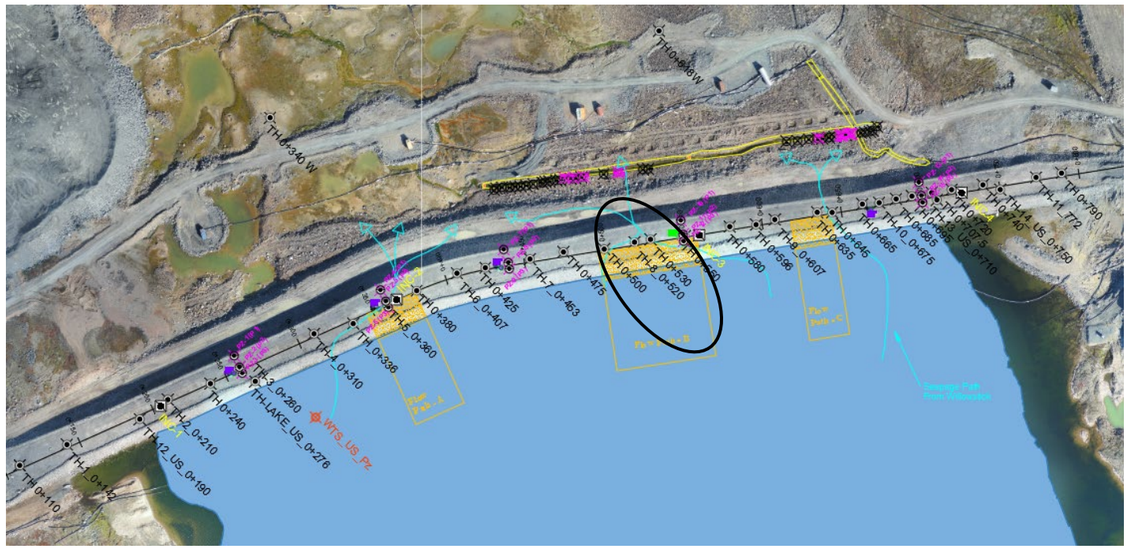
AMQ – WTD TH: 0+500

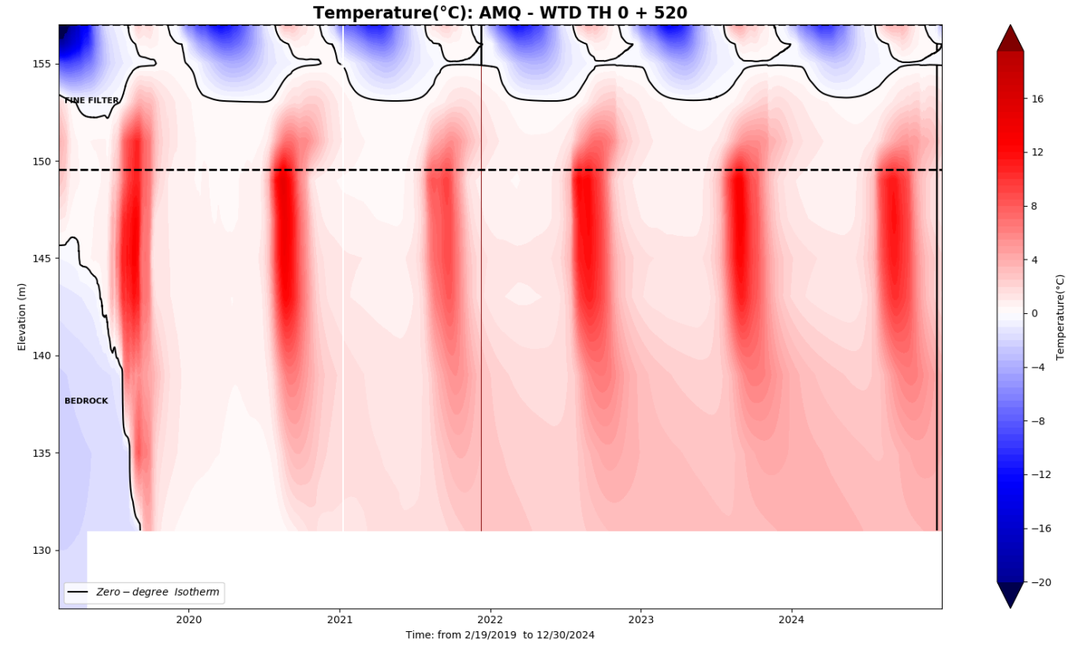


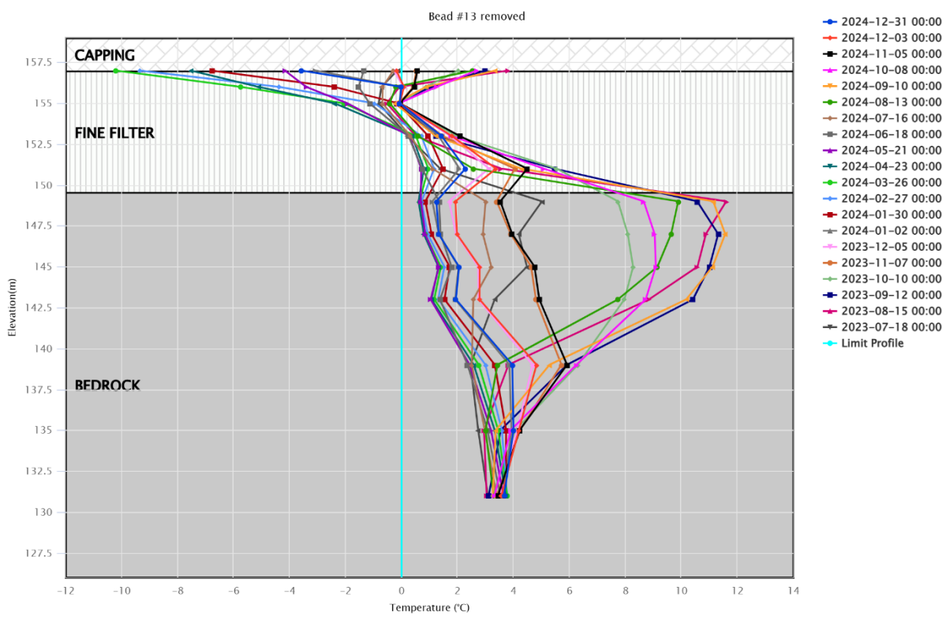




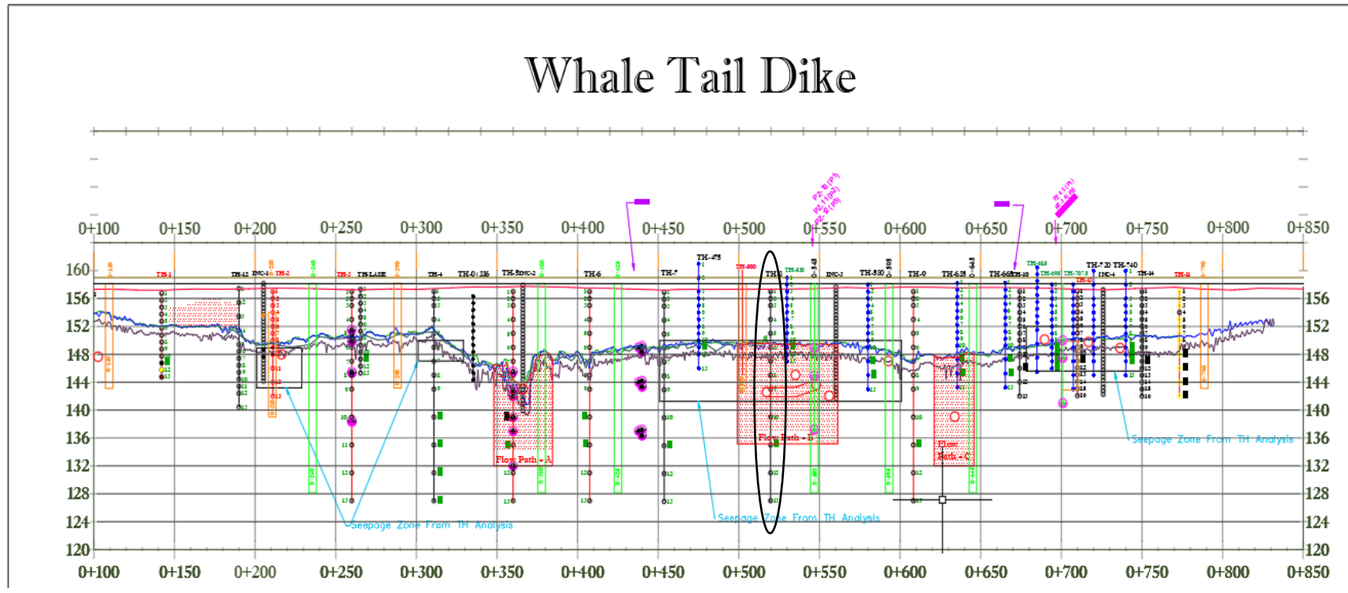
WTD-TH 0+520



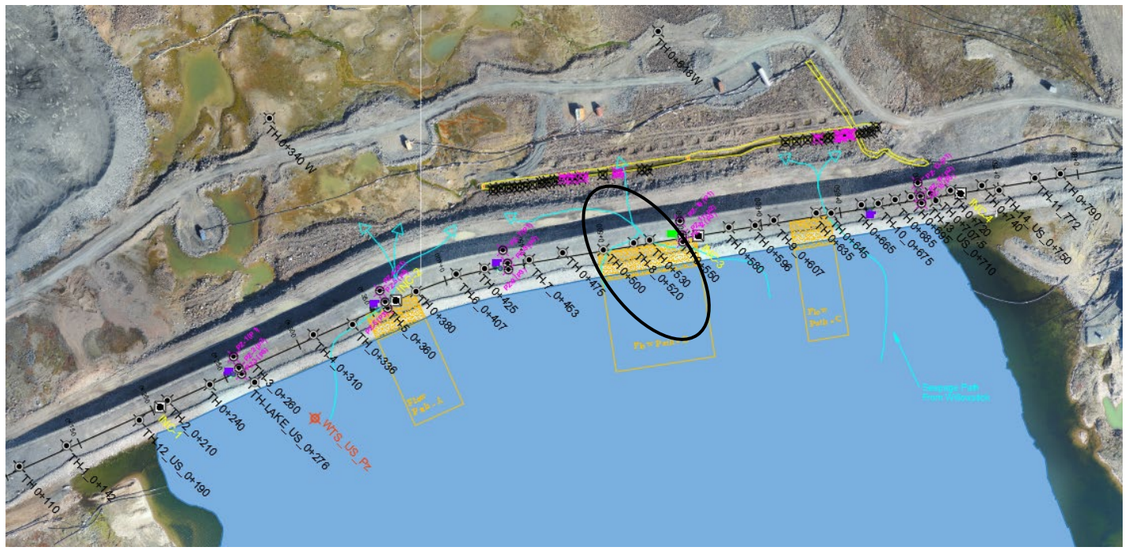


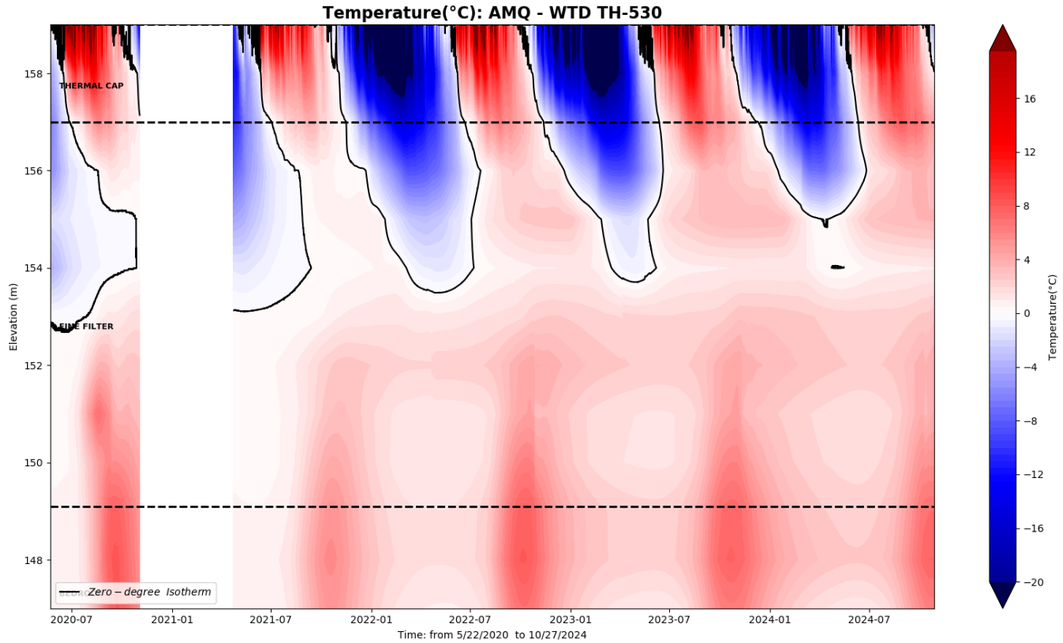


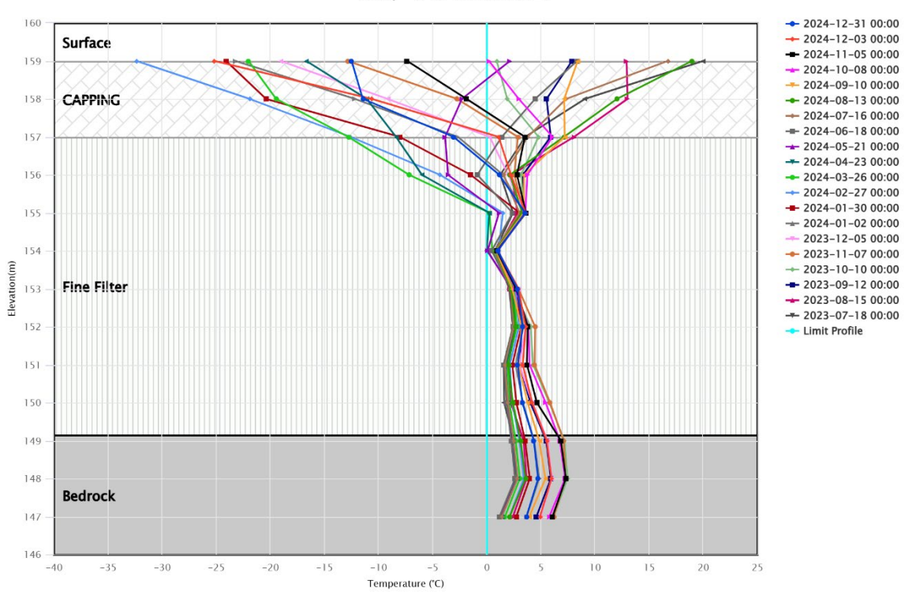
AMQ – WTD TH: 0+520

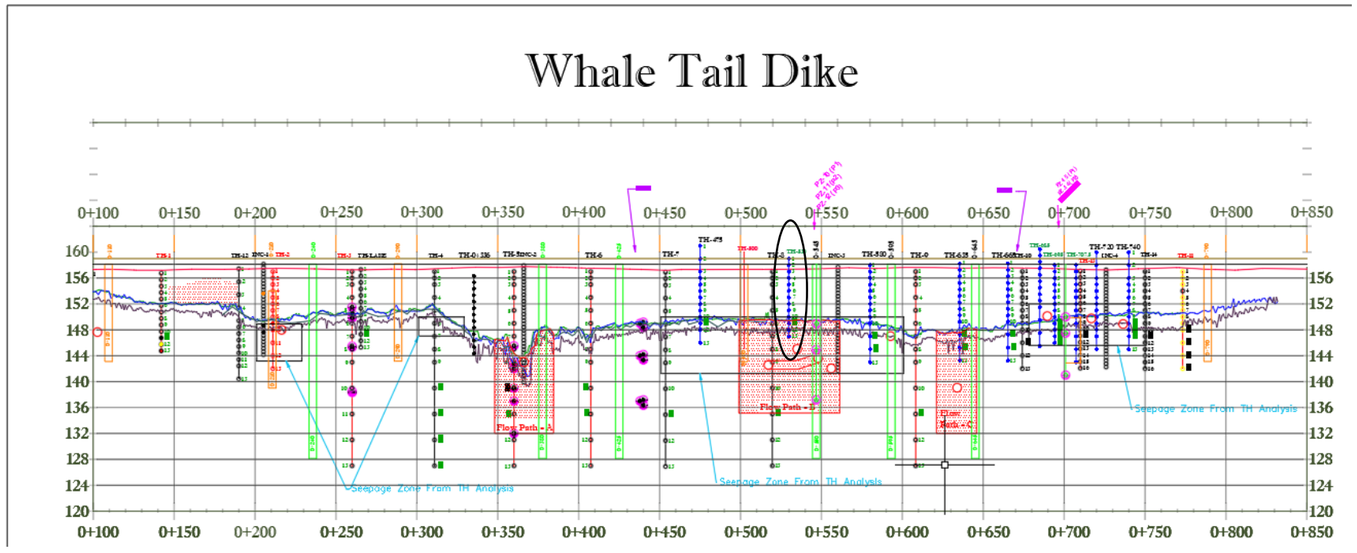


WTD-TH 0+530

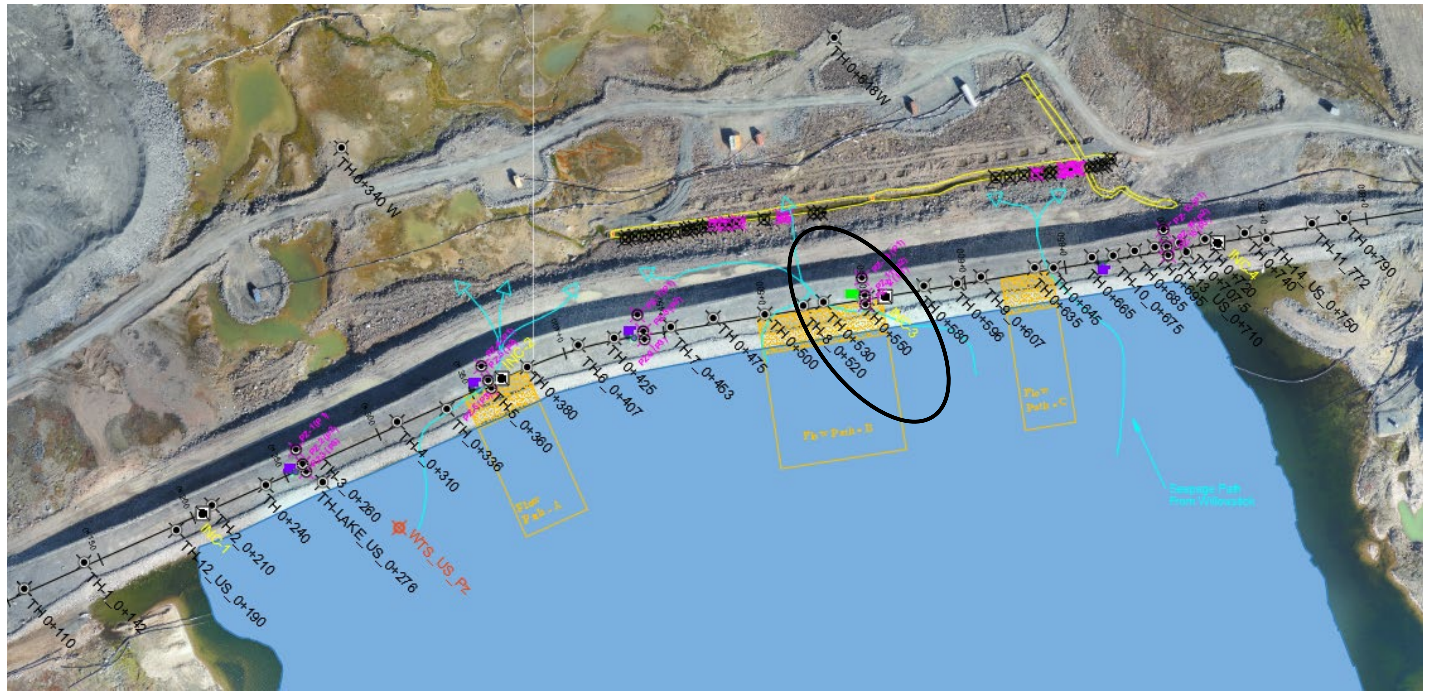

TH-0+516W
TH-0+340 W
TH-0+790
TH-11_772
TH-4_US_0+150
TH-0+740
TH-0+710
TH-0+645
TH-0+636
TH-0+607
TH-0+596
TH-0+590
TH-0+550
TH-0+530
TH-0+520
TH-0+500
TH-0+475
TH_7_0+453
TH-9_0+425
TH-9_0+407
TH-5_0+360
TH-0+380
TH_0+398
TH-1_0+310
TH-2_0+260
TH-LAKE_US_0+278
TH-0+240
TH-2_0+210
TH-12_US_0+190
TH-5_0+142
TH-0+110
WTS_US_PZ
Seepage Path from Whale Pit
Flow Path - A
Flow Path - B
Flow Path - C

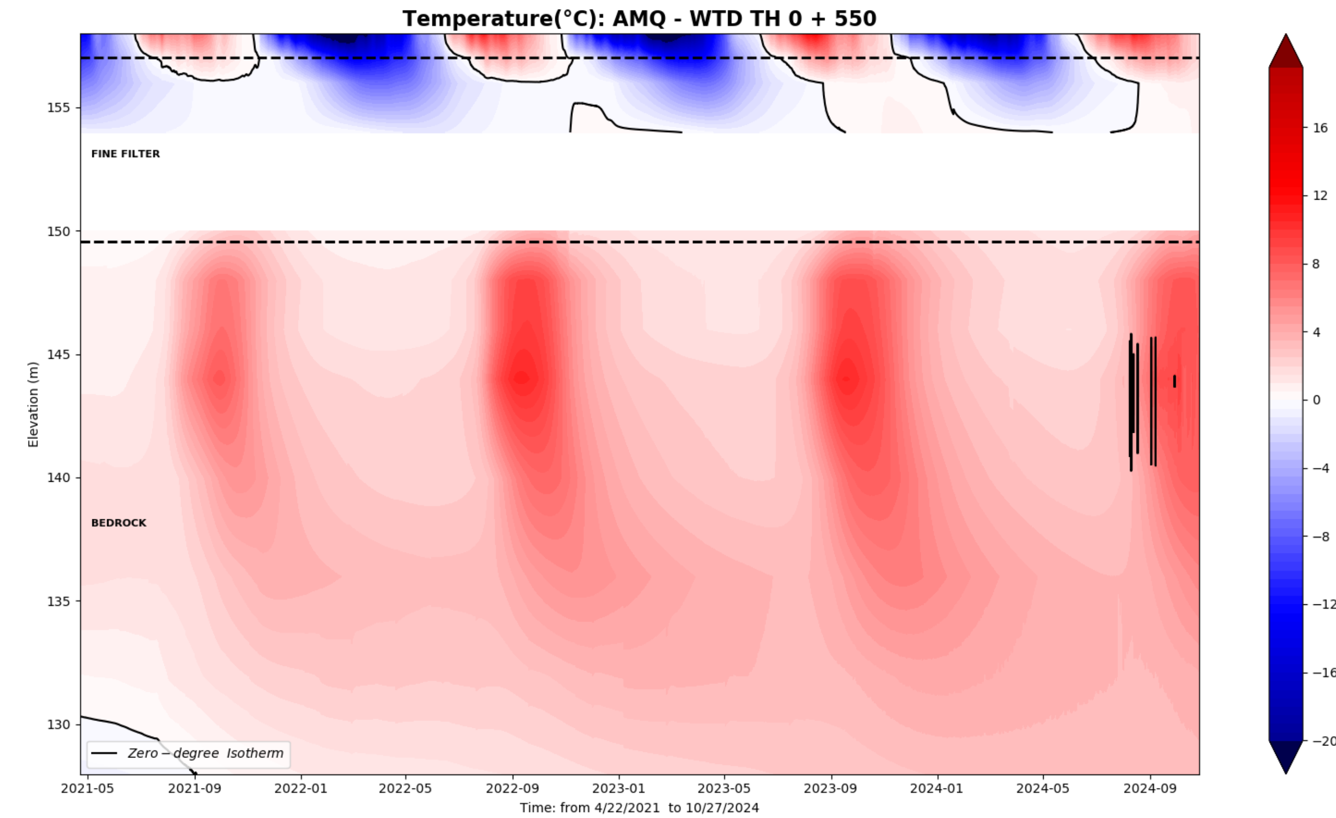

Temperature(°C): AMQ - WTD TH-530
THERMAL CAP
FINE FILTER
Zero – degree Isotherm
Elevation (m)
Time: from 5/22/2020 to 10/27/2024
Temperature(°C)

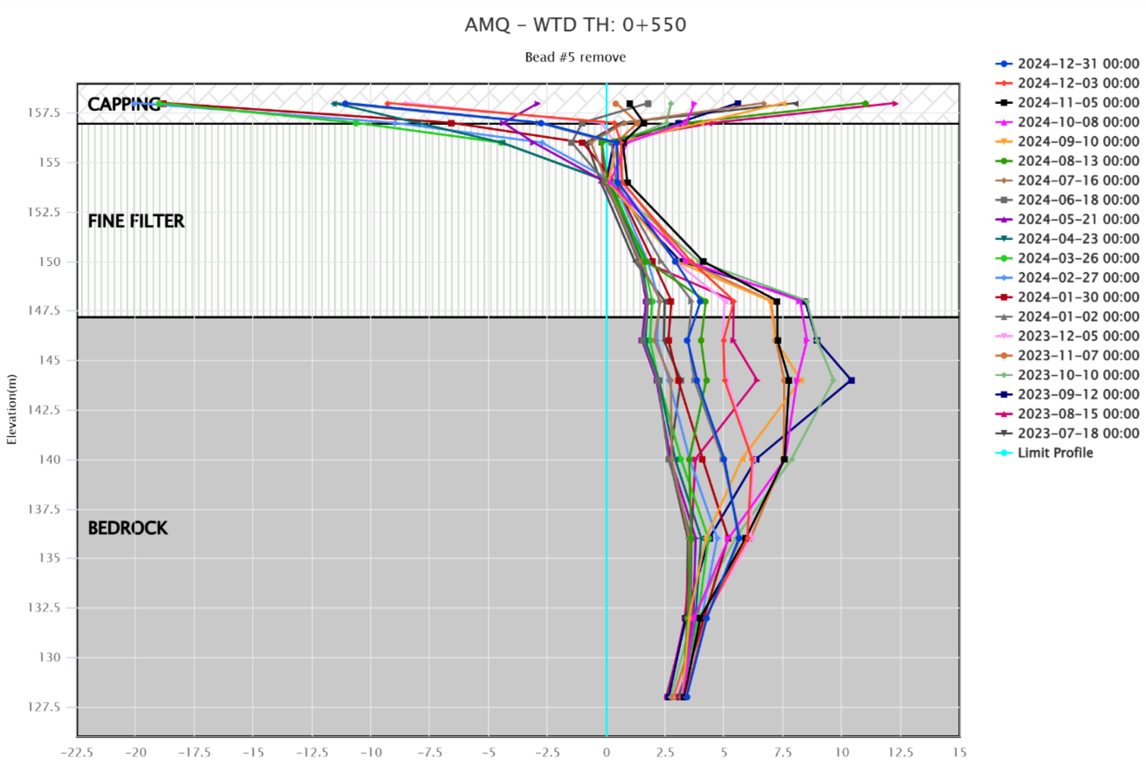

AMQ – WTD TH: 0+530_T
Surface
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

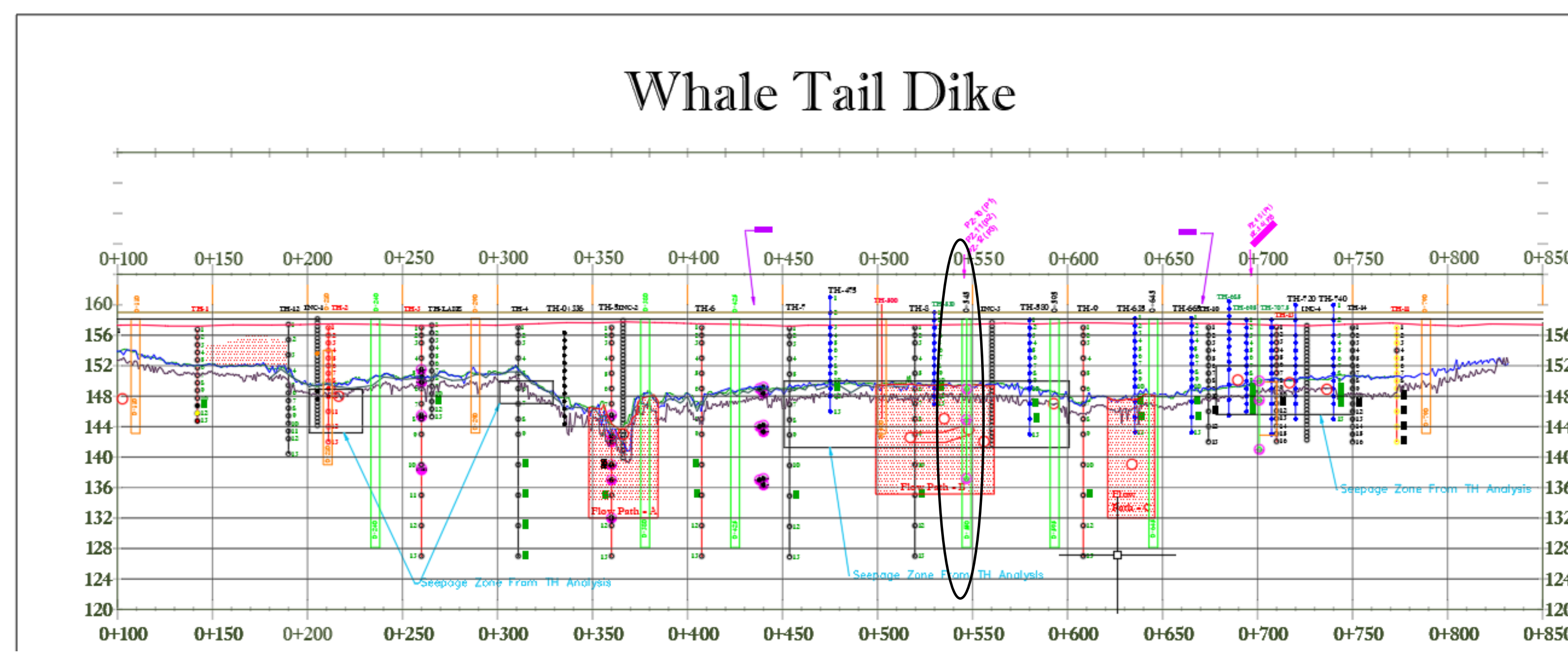

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+550

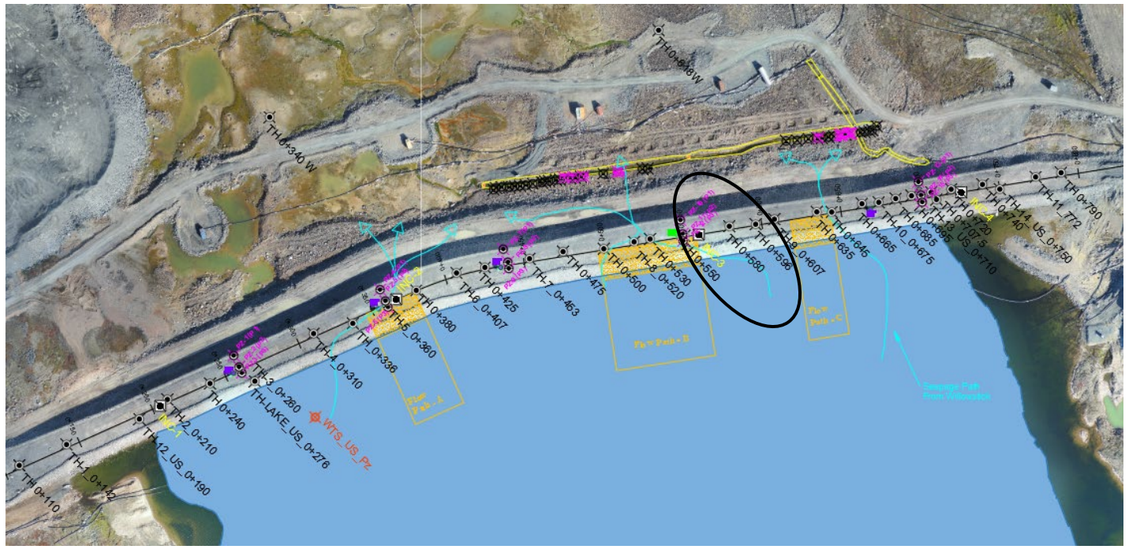


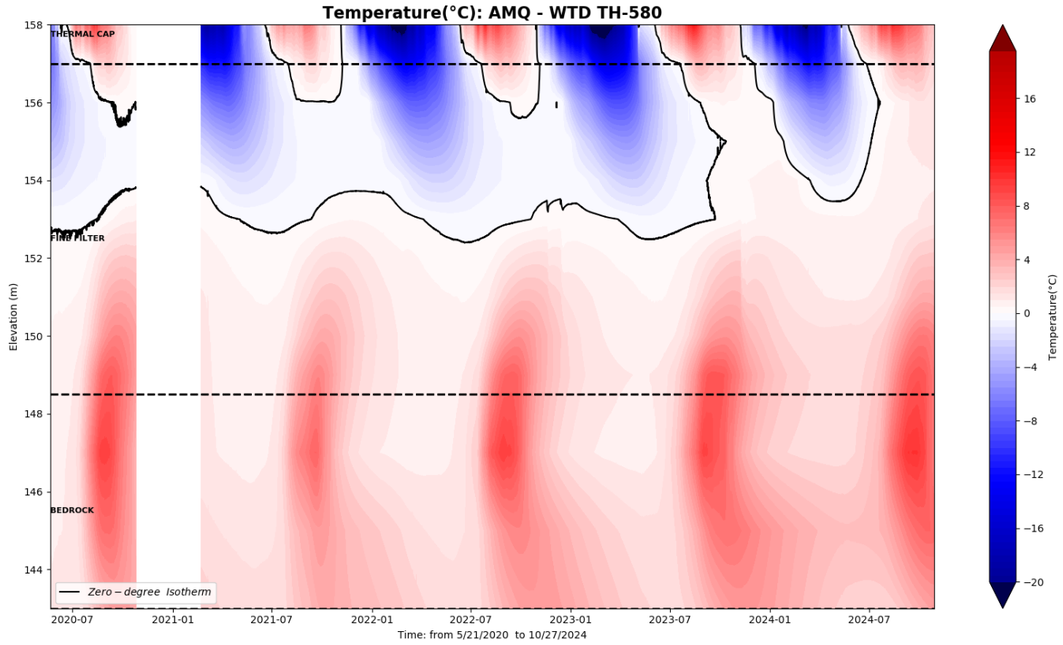

Temperature(°C): AMQ - WTD TH 0 + 550
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 4/22/2021 to 10/27/2024
Temperature(°C)

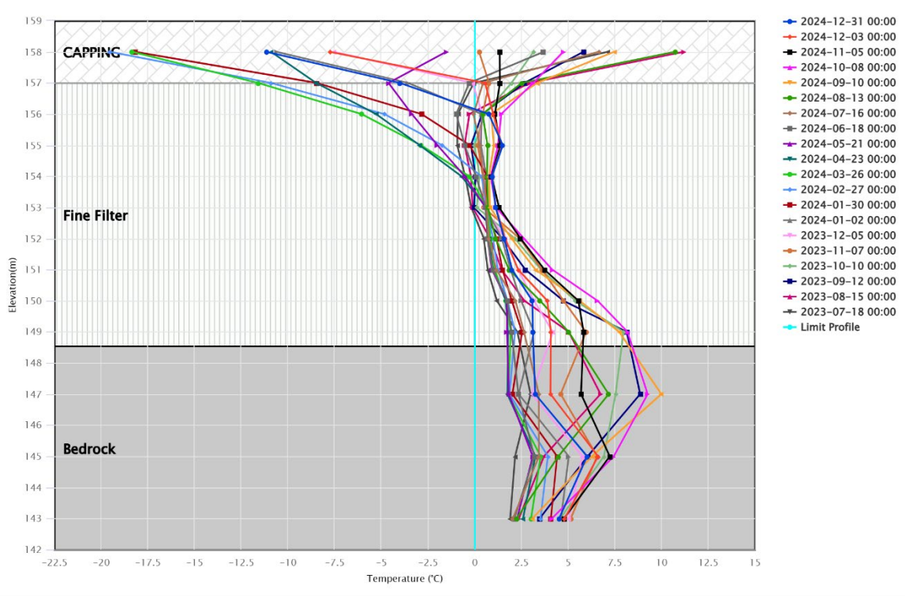

AMQ – WTD TH: 0+550
Bead #5 remove
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

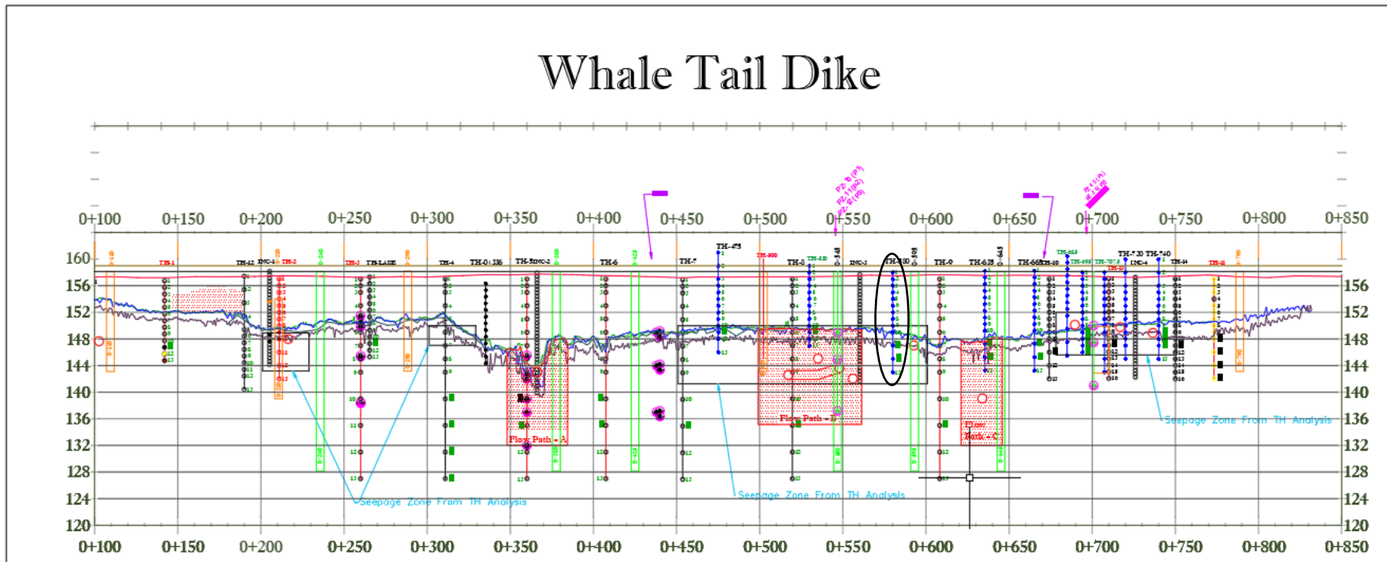

Whale Tail Dike
Seepage Zone From TH Analysis

WTD-TH 0+580

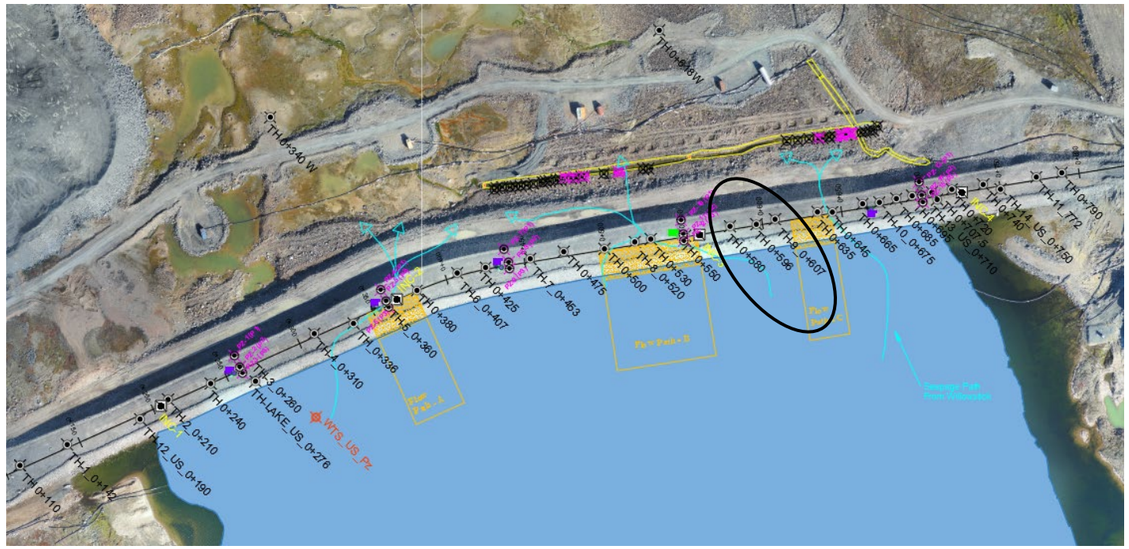

TH-0+340 W
TH-0+380 W
TH-1_T72
TH-1_0+790
TH-1_US_0+150
TH-10_0+635
TH-10_0+645
TH-10_0+665
TH-10_0+675
TH-10_0+685
TH-10_0+695
TH-10_0+725
TH-10_0+740
TH-10_US_0+710
TH-8_0+530
TH-8_0+550
TH-8_0+580
TH-8_0+590
TH-8_0+607
TH-9_0+407
TH-9_0+425
TH-7_0+463
TH-7_0+475
TH-7_0+500
TH-5_0+360
TH-5_0+380
TH-4_0+310
TH-4_0+336
TH-3_0+260
TH-LAKE_US_0+276
TH-2_0+210
TH-2_0+240
TH-2_US_0+190
TH-1_0+42
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Tailings Impoundment

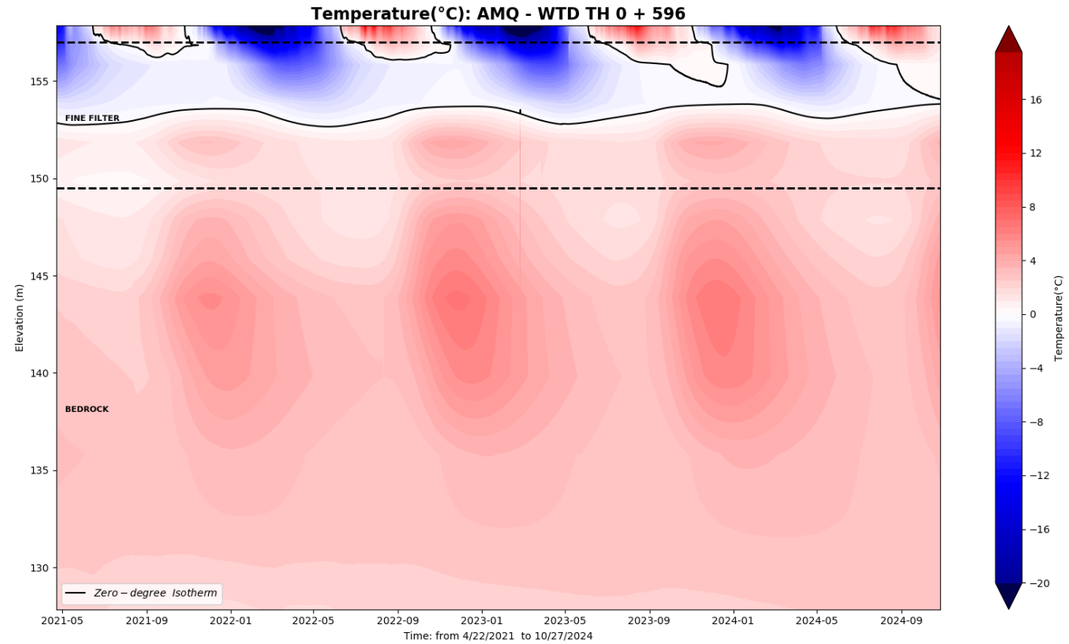

Temperature(°C): AMQ - WTD TH-580
THERMAL CAP
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)

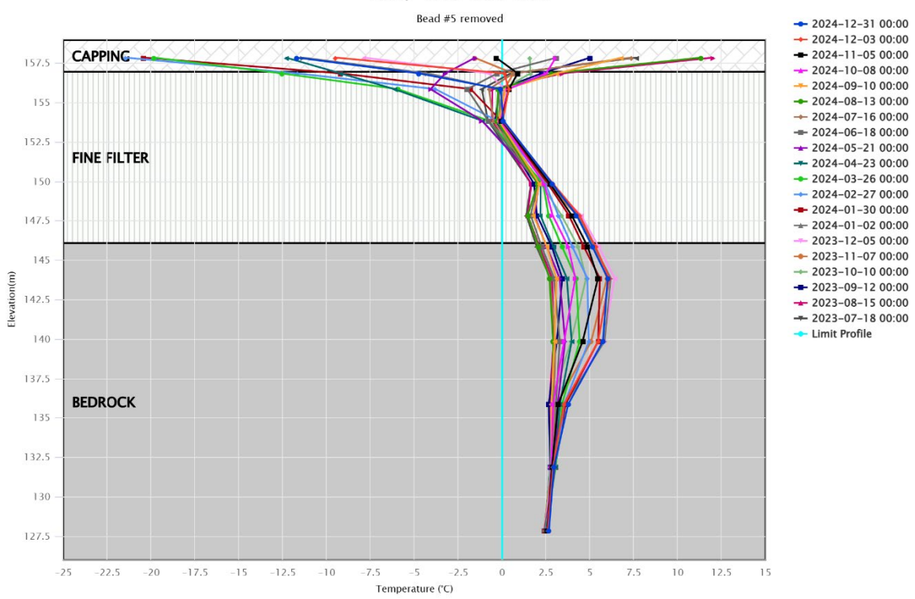

AMQ – WTD TH: 0+580_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

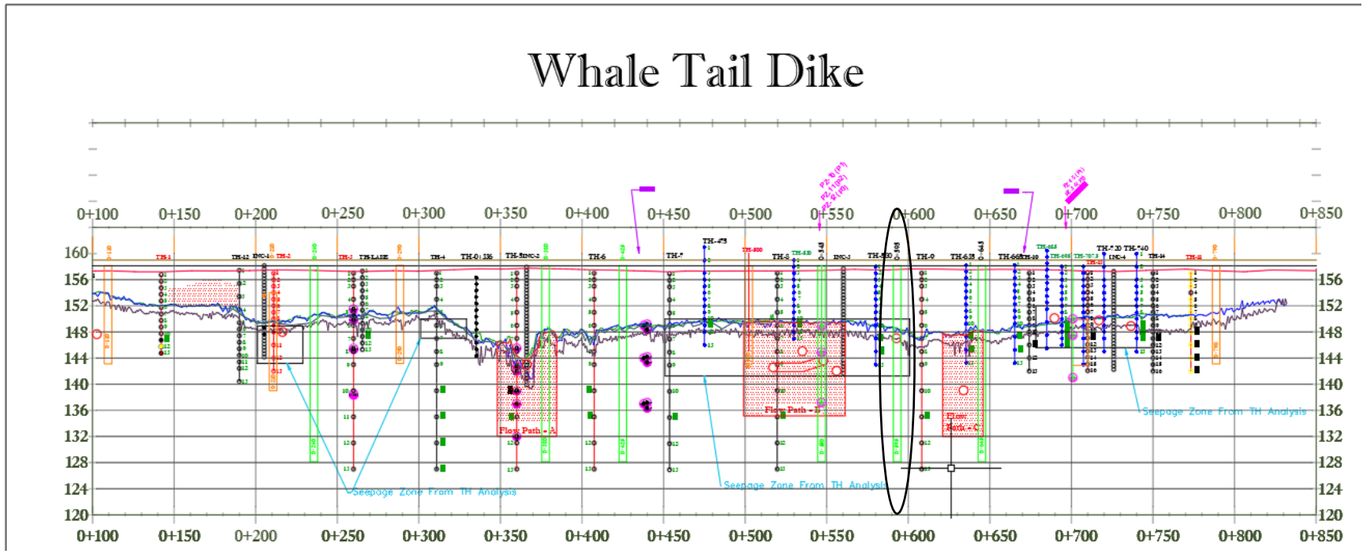

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+596

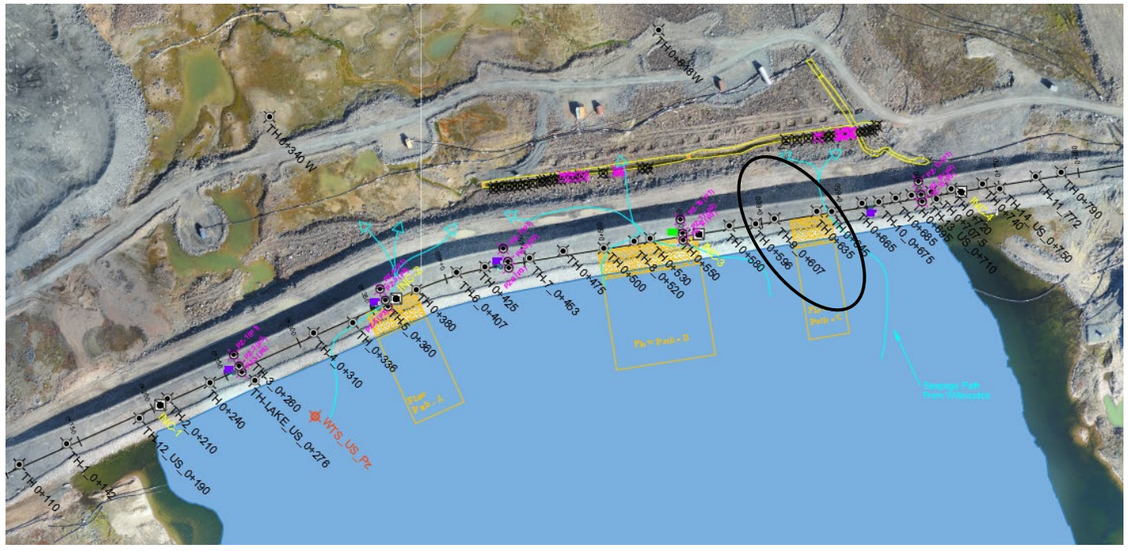

TH-0+596
TH-0+340_W
TH-0+686W
TH-0+790
TH-11_T72
TH-14_US_0+150
TH-0+740
TH-13_US_0+710
TH-0+720
TH-12_US_0+685
TH-0+695
TH-10_0+675
TH-10_0+665
TH-0+645
TH-0+635
TH-8_0+607
TH-0+598
TH-0+590
TH-0+560
TH-8_0+530
TH-8_0+520
TH-0+500
TH-0+475
TH-7_0+463
TH-6_0+425
TH-6_0+407
TH-5_0+380
TH-0+380
TH-0+336
TH-4_0+310
TH-3_0+280
TH-0+240
TH-2_0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
TH-LAKE_US_0+276
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path from Tailings


Temperature(°C): AMQ - WTD TH 0 + 596
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/22/2021 to 10/27/2024
Temperature(°C)

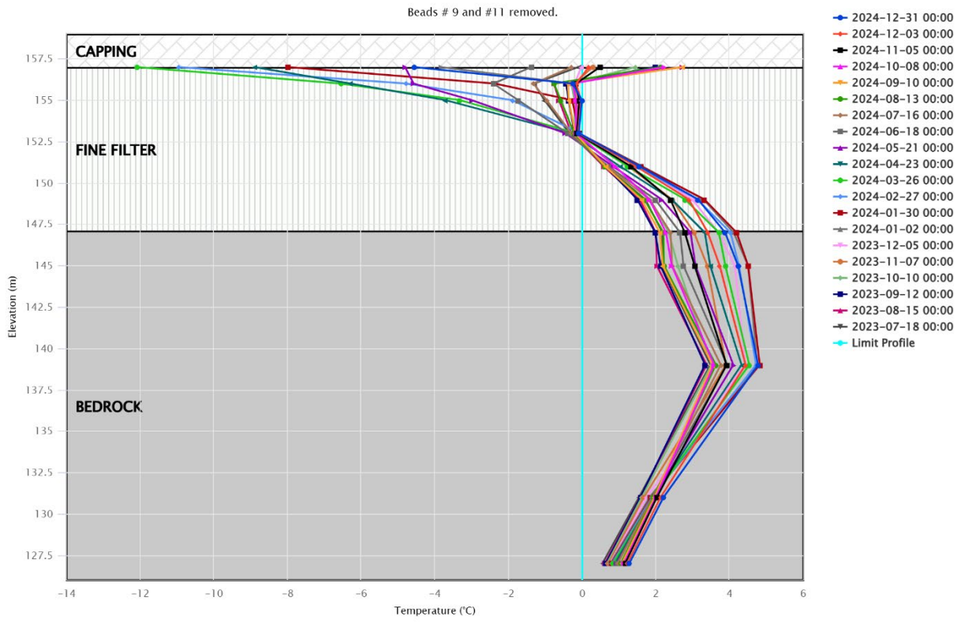

AMQ – WTD TH: 0+596
Bead #5 removed
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

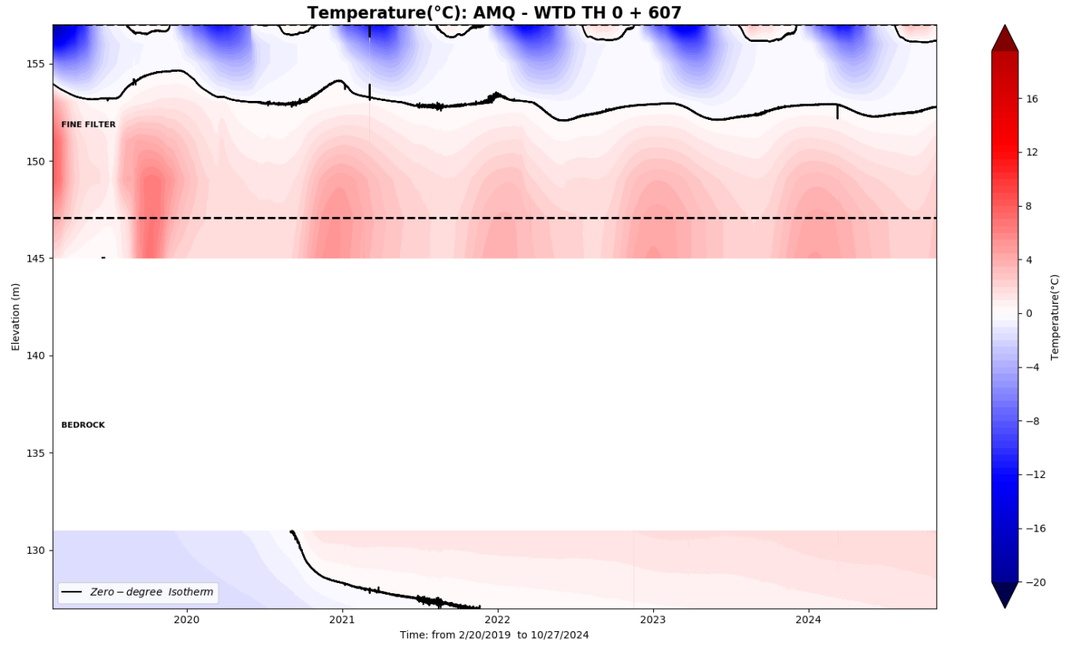

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

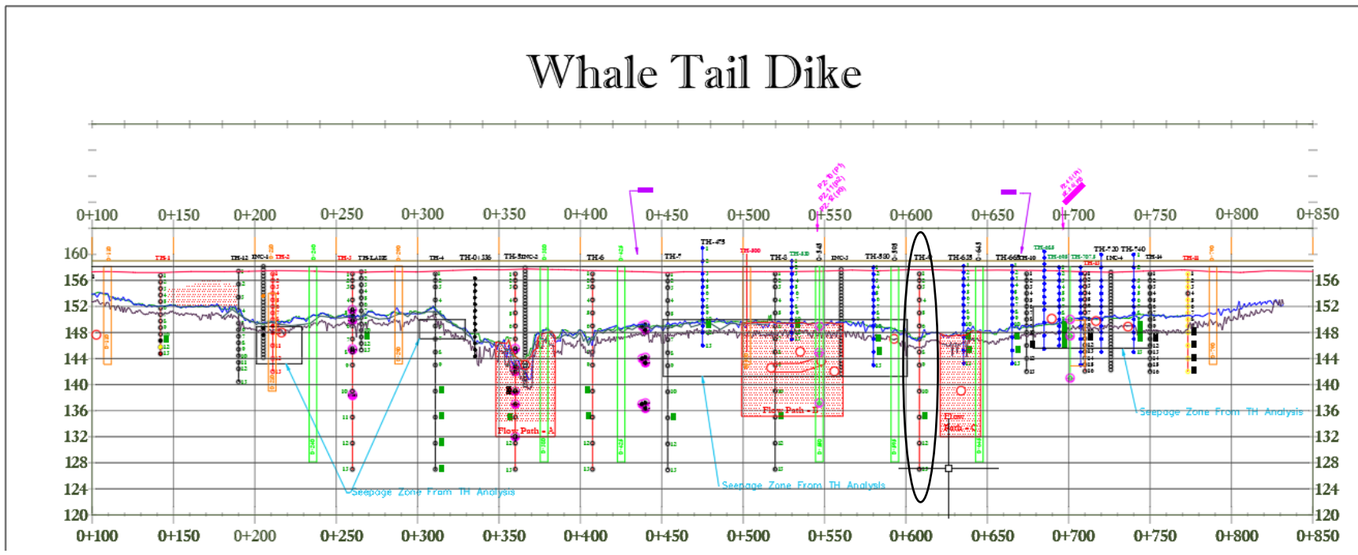
WTD-TH 0+607



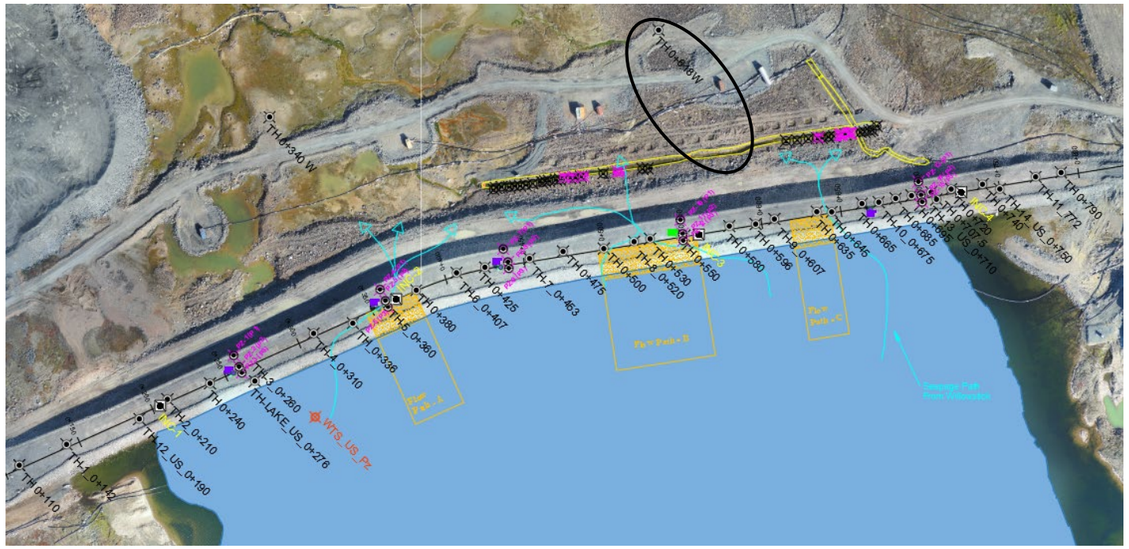
AMQ – WTD TH: 0+607

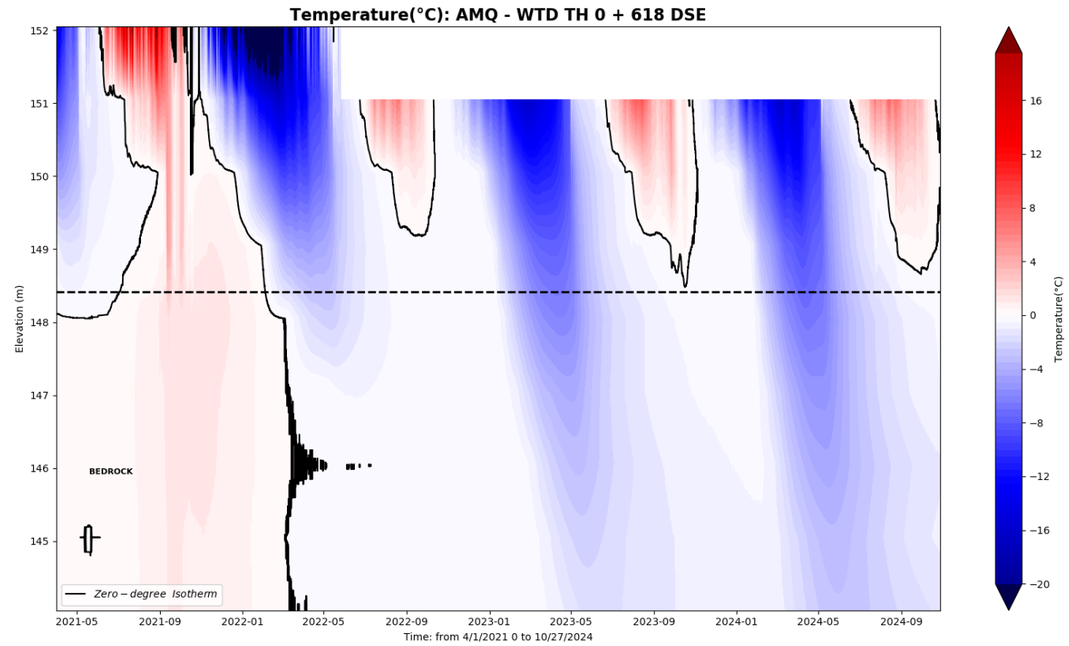


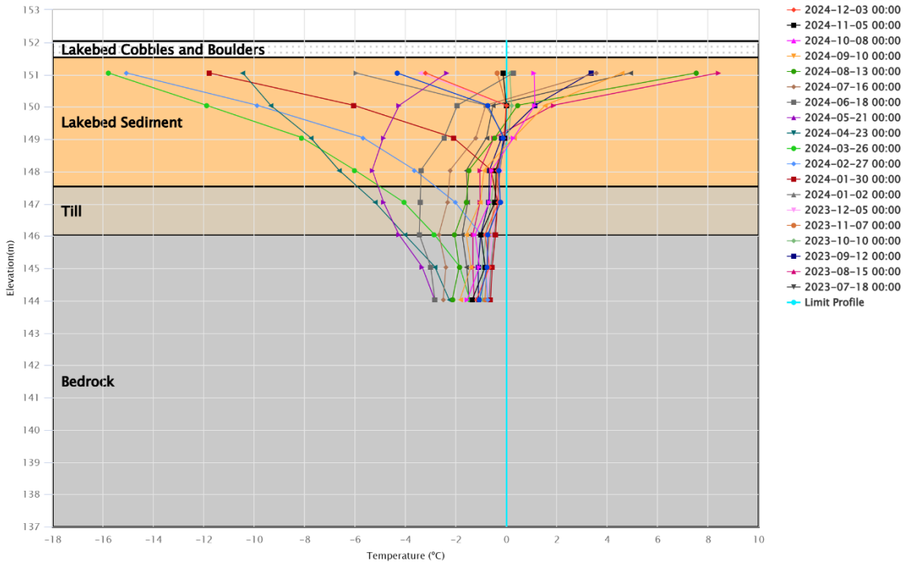




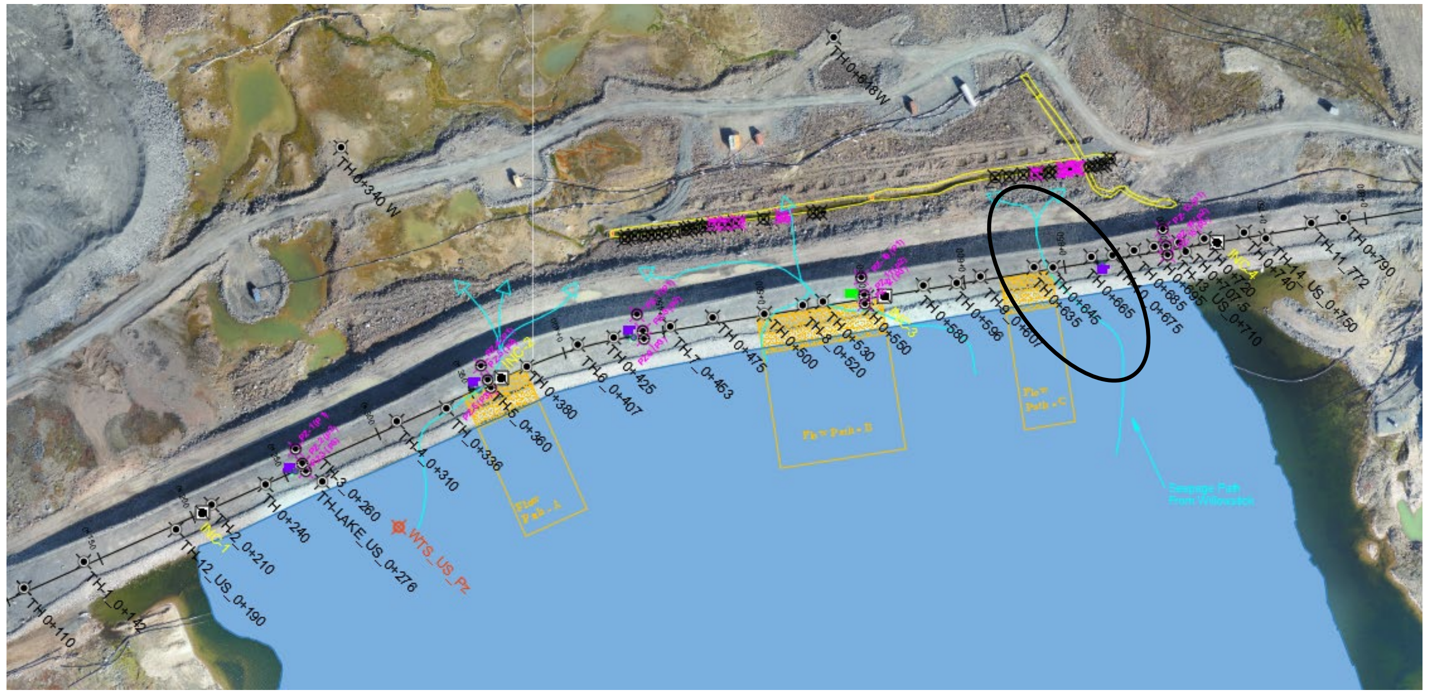
WTD-TH 0+618 DSE

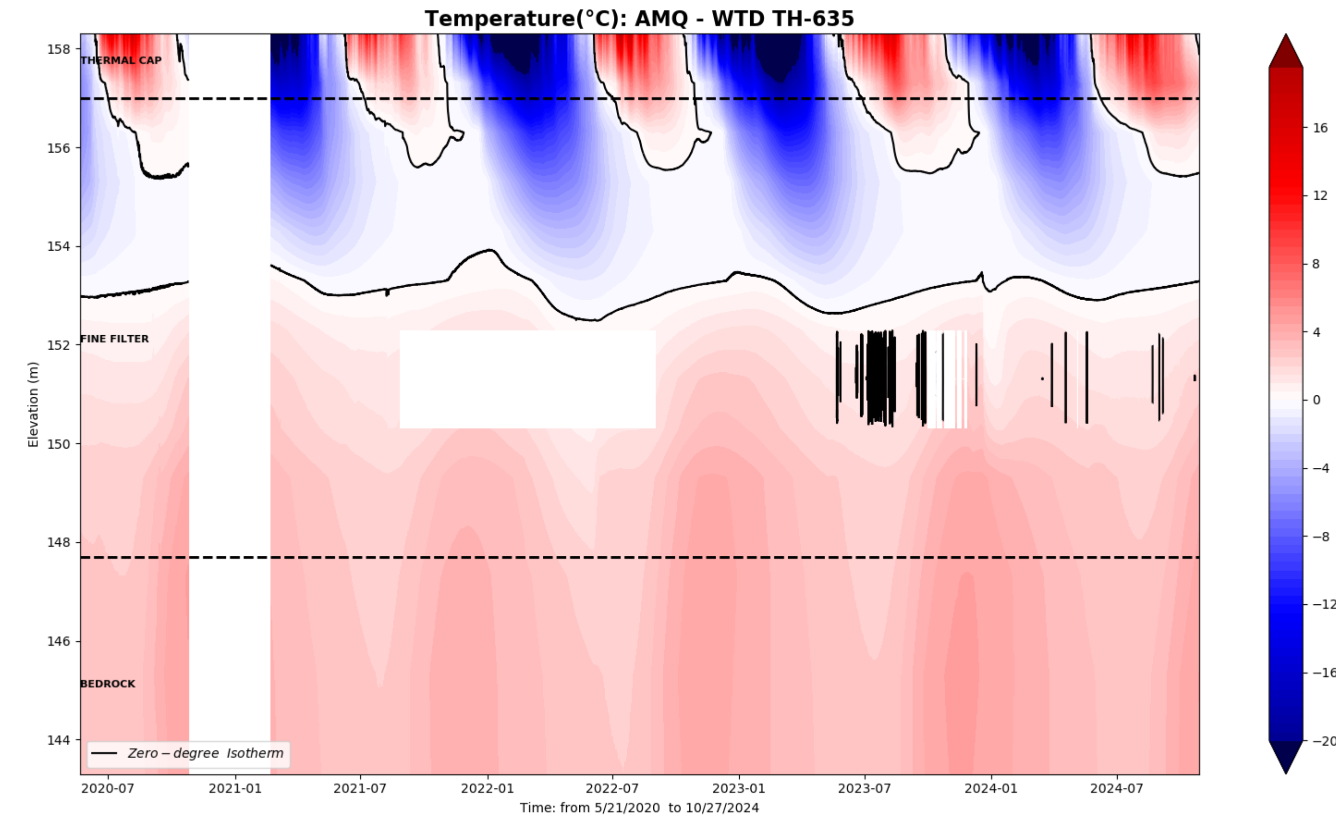


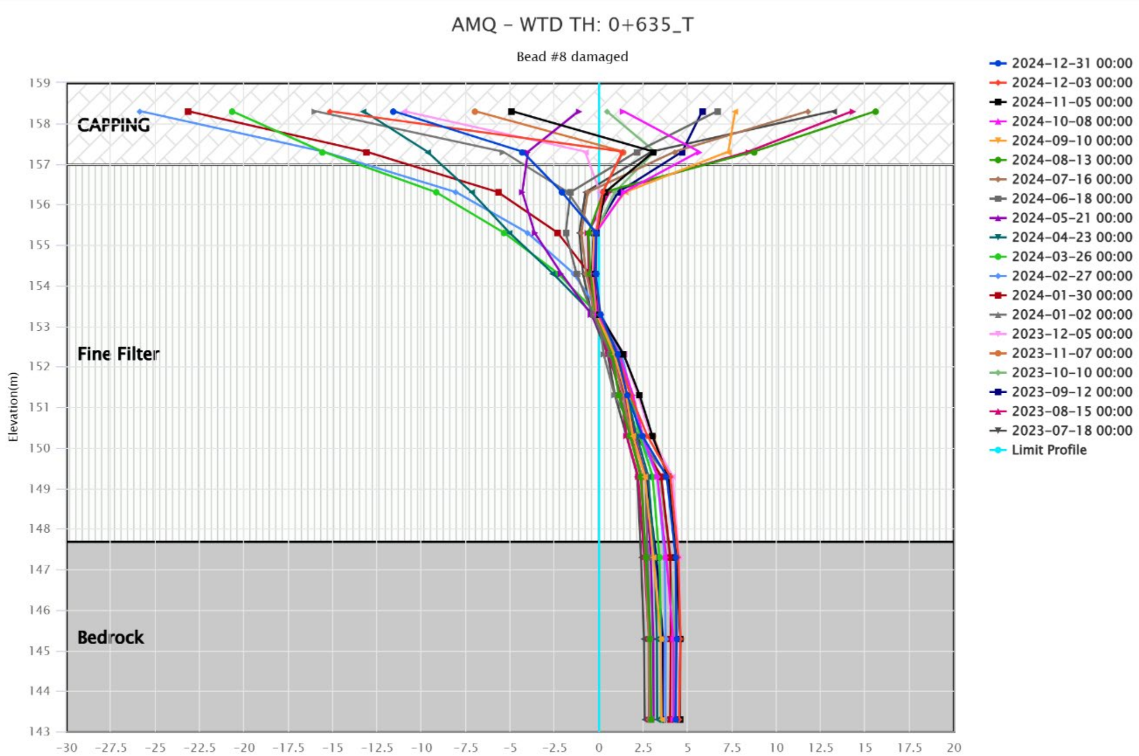


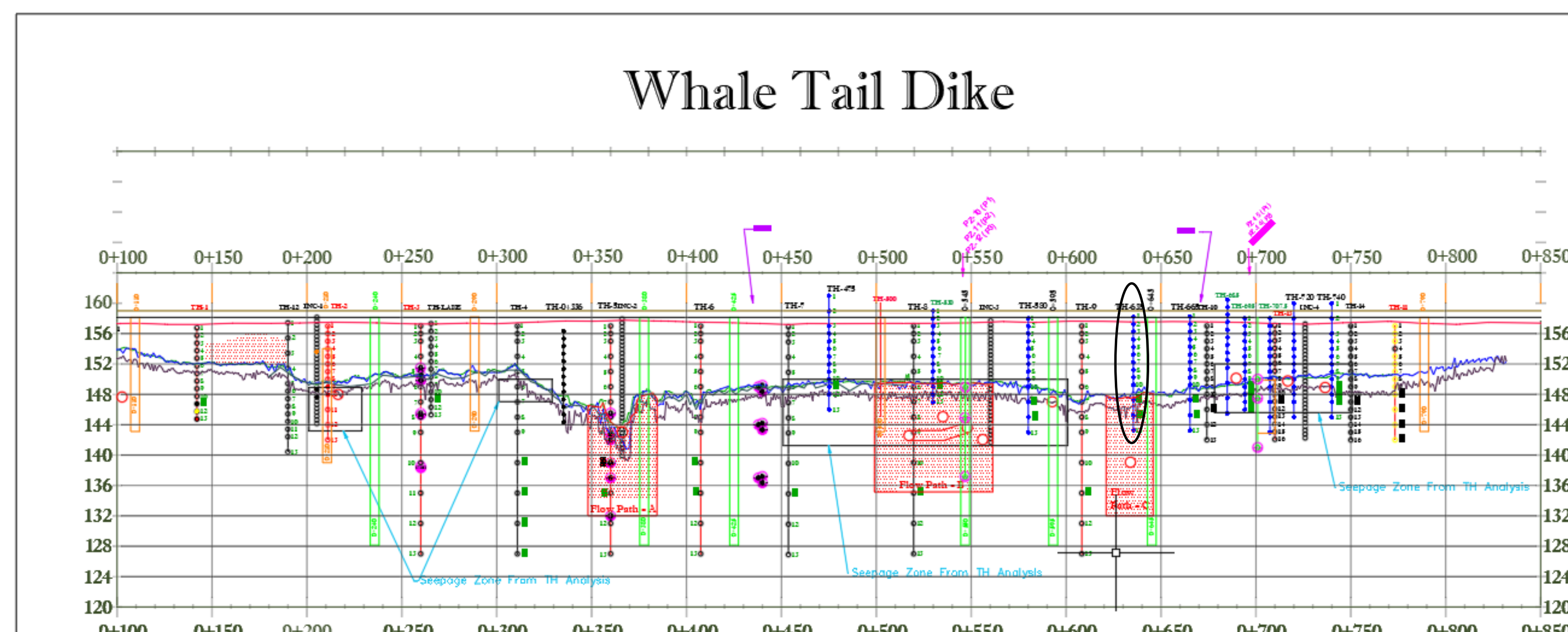


WTD-TH 0+635

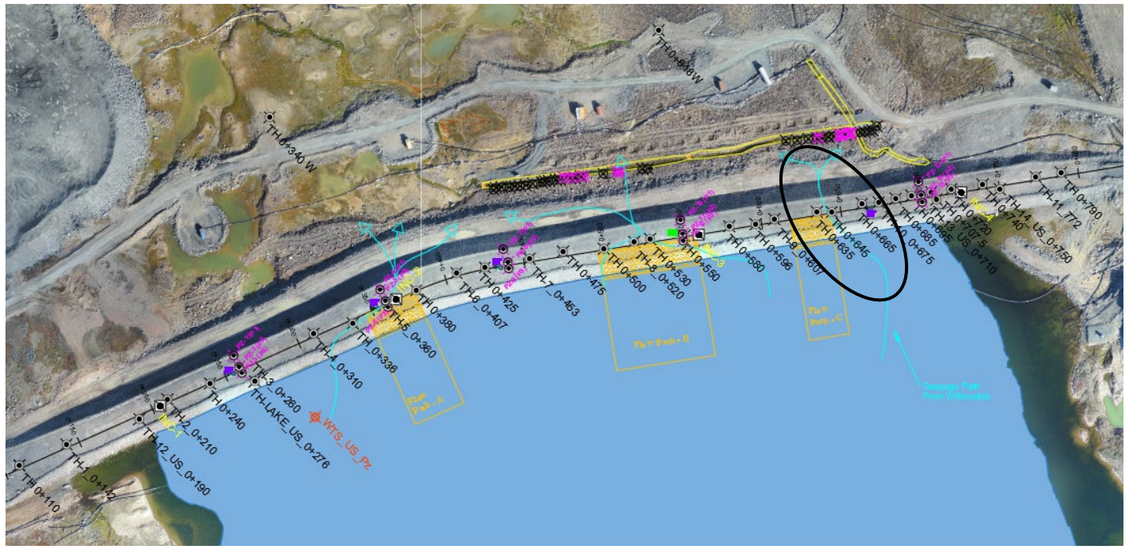


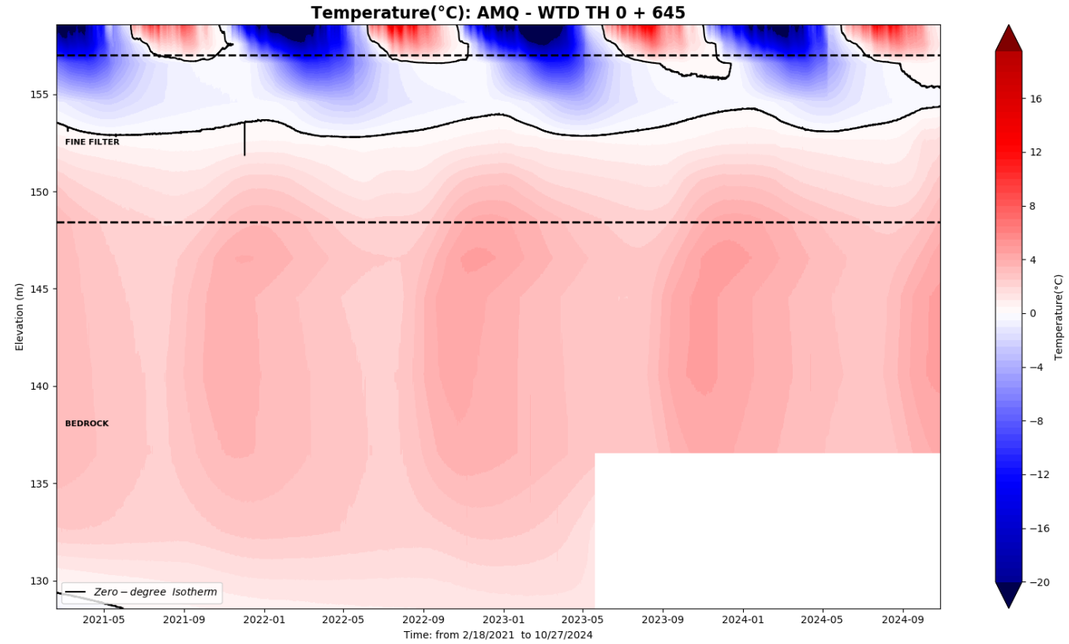

Temperature(°C): AMQ - WTD TH-635
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)
2020-07
2021-01
2021-07
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07

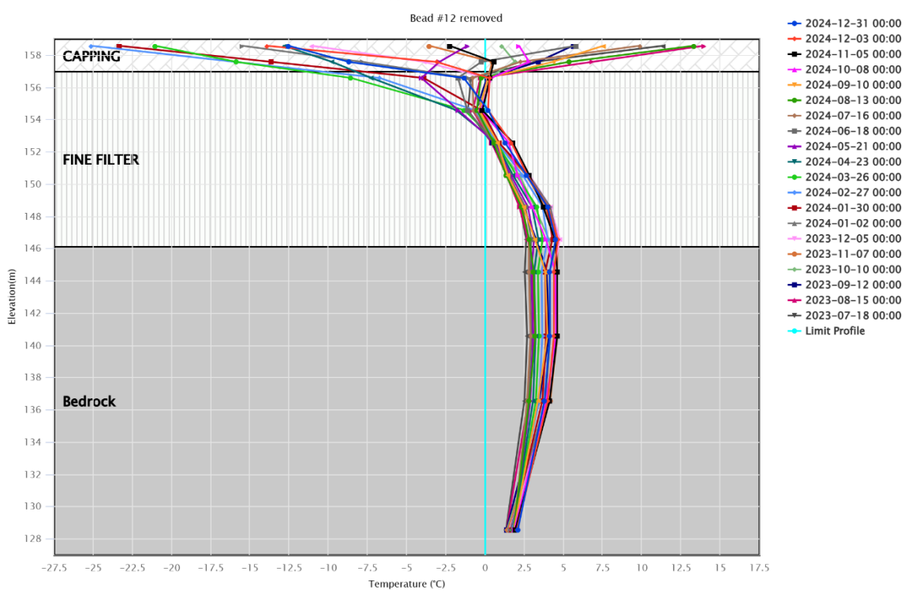

AMQ – WTD TH: 0+635_T
Bead #8 damaged
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

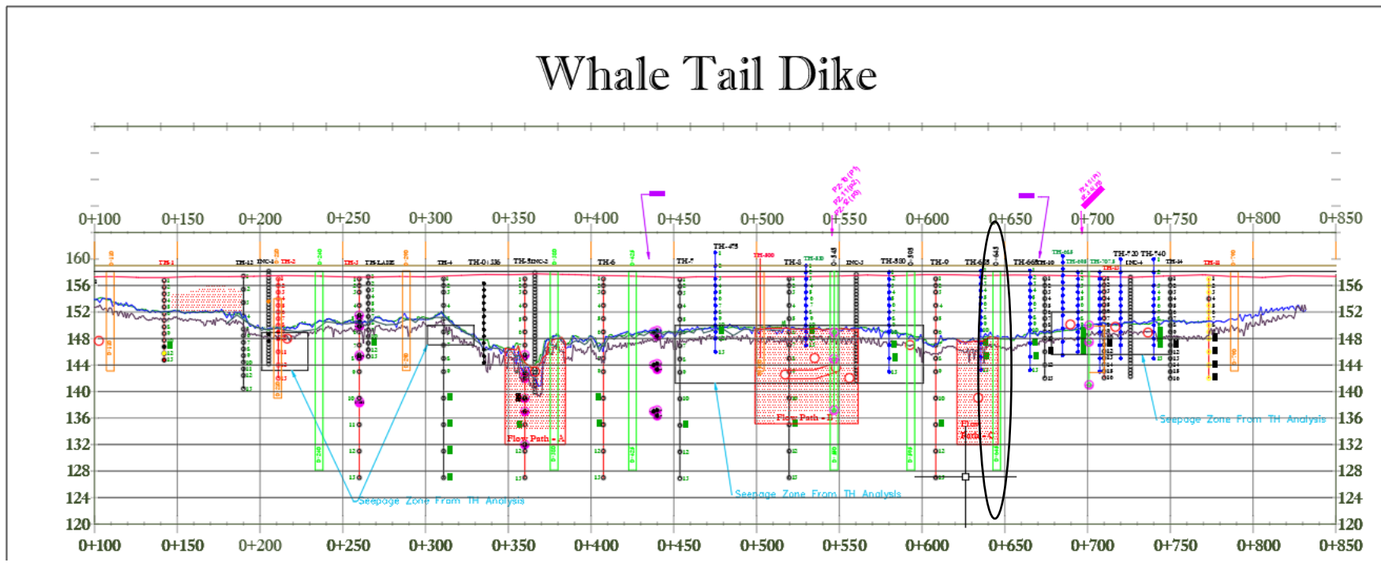

Whale Tail Dike
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B

WTD-TH 0+645

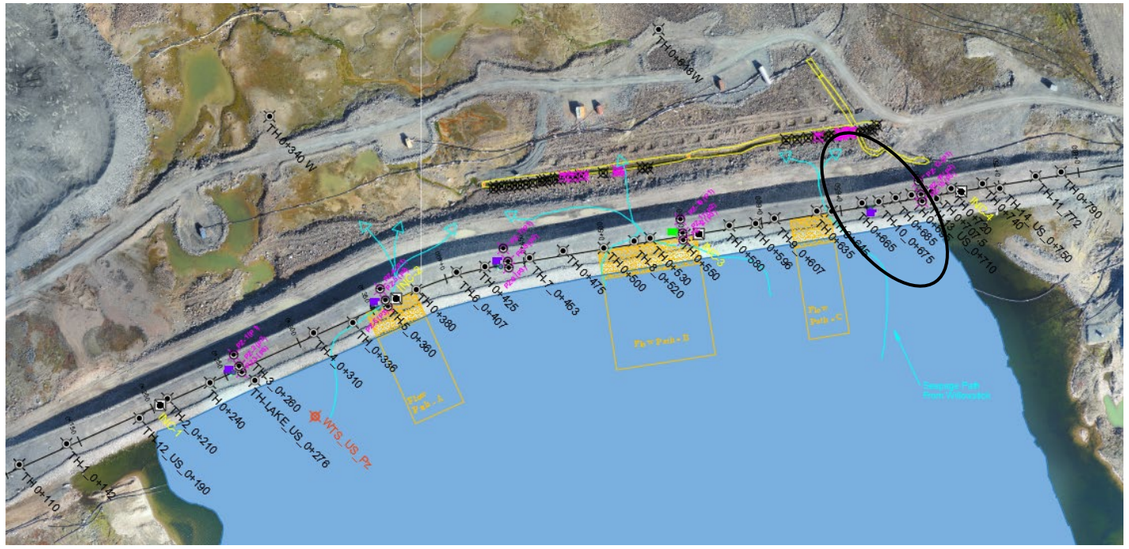

TH-0+340 W
TH-0+380 W
TH-1_T2
TH-1_0+790
TH-1_0+740
TH-1_US_0+710
TH-1_US_0+150
TH-0+675
TH-0+665
TH-0+645
TH-0+635
TH-0+607
TH-0+598
TH-0+580
TH-8_0+530
TH-8_0+520
TH-0+530
TH-0+500
TH-7_0+463
TH-0+475
TH-9_0+425
TH-9_0+407
TH-0+380
TH-5_0+360
TH-0+336
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-0+240
TH-2_0+210
TH-2_US_0+190
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis

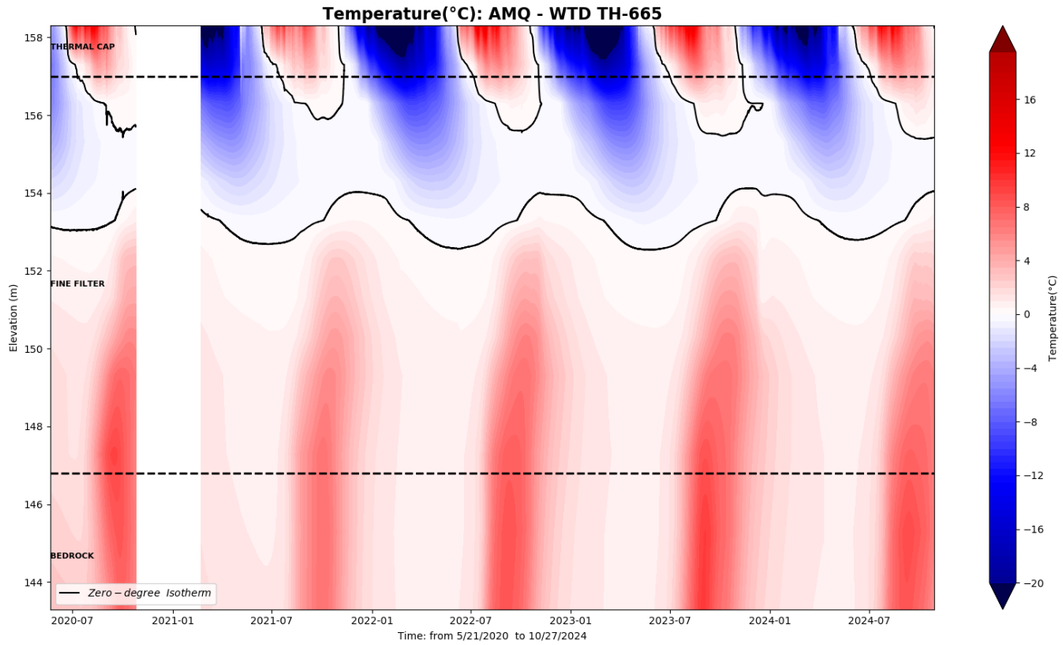

Temperature(°C): AMQ - WTD TH 0 + 645
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/18/2021 to 10/27/2024
Temperature(°C)

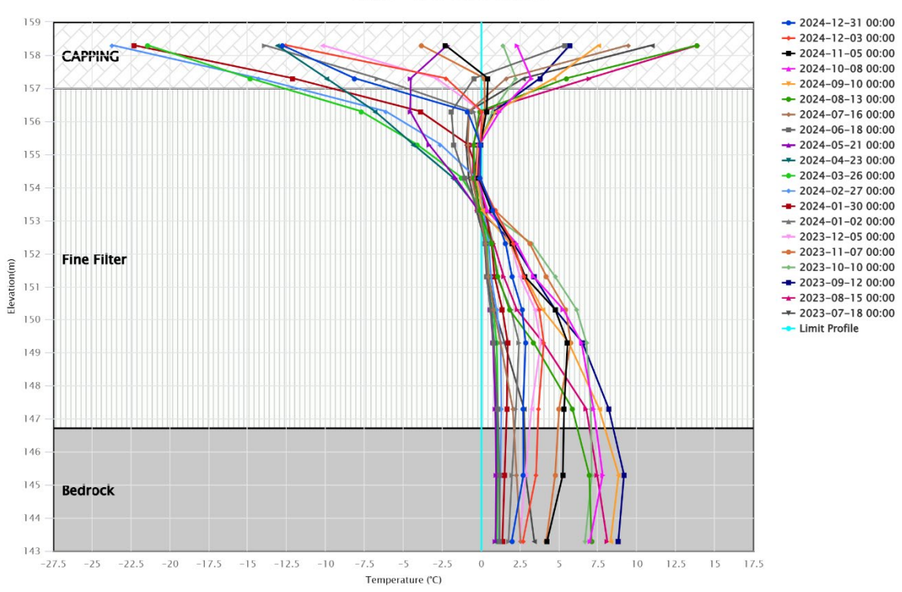

AMQ – WTD TH: 0+645
Bead #12 removed
CAPPING
FINE FILTER
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

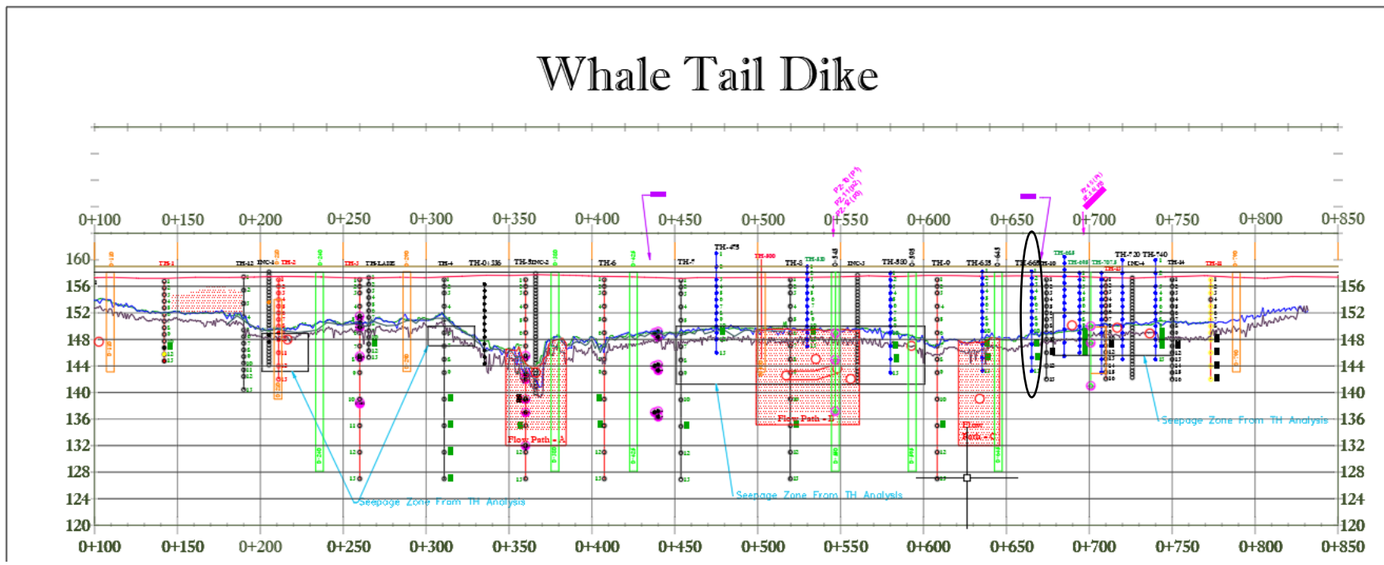

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+665

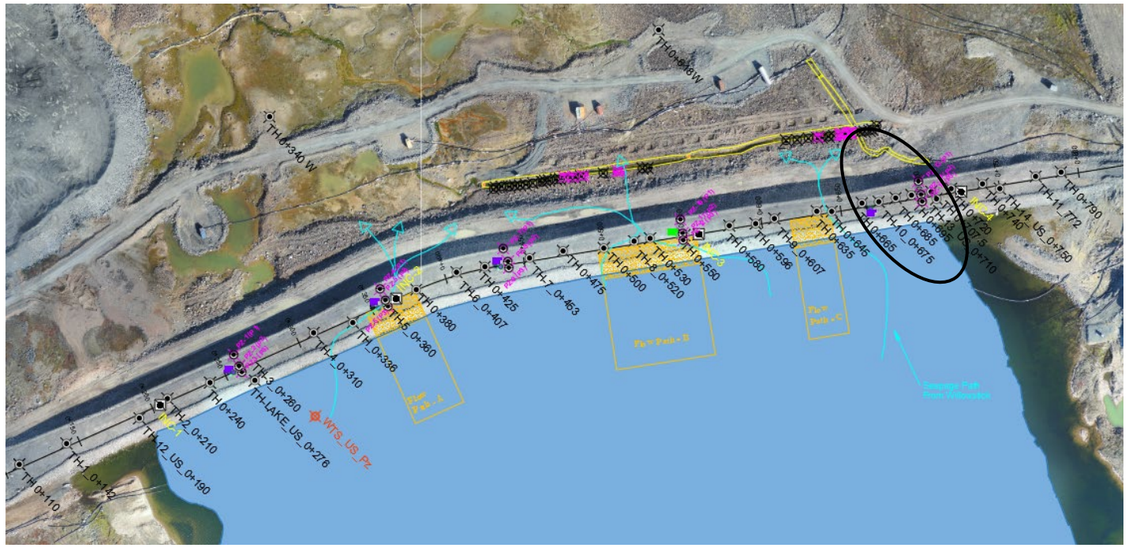

TH-0+340 W
TH-0+336W
TH-1_T72
TH-0+790
TH-1_0+740
TH-1_US_0+750
TH-0+720
TH-1_0+710
TH-0+685
TH-1_0+675
TH-0+665
TH-0+635
TH-8_0+607
TH-8_0+598
TH-1_0+580
TH-0+550
TH-0+530
TH-8_0+520
TH-0+500
TH-7_0+475
TH-7_0+463
TH-6_0+425
TH-6_0+407
TH-5_0+380
TH-5_0+360
TH-5_0+336
TH-4_0+310
TH-3_0+260
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-2_US_0+190
TH-1_0+162
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Interaction

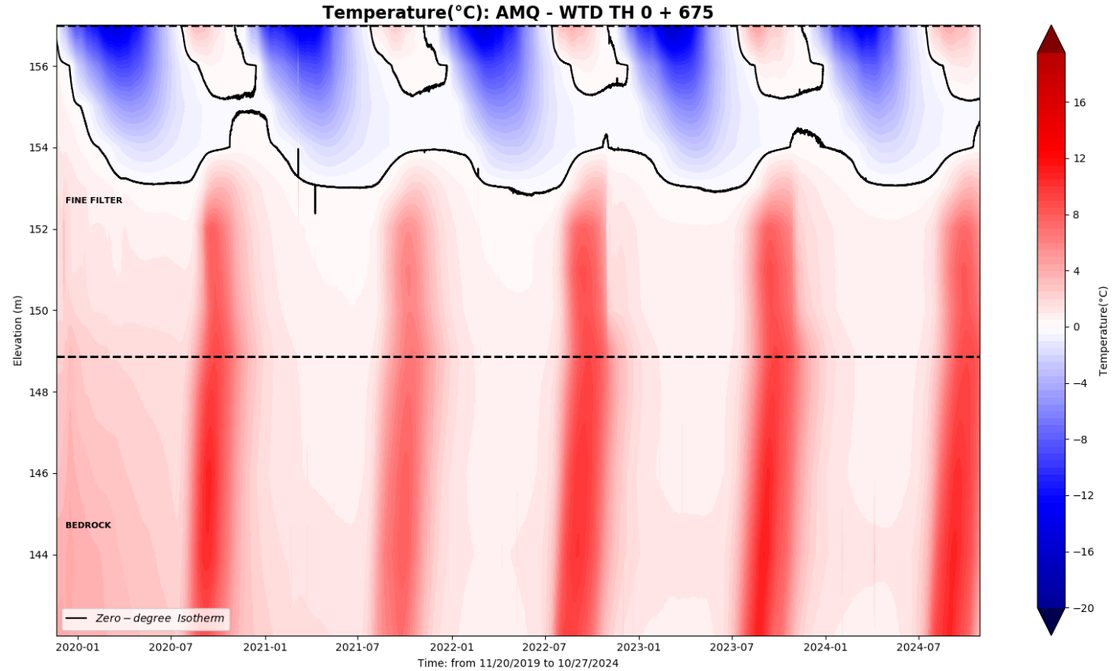

Temperature(°C): AMQ - WTD TH-665
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)

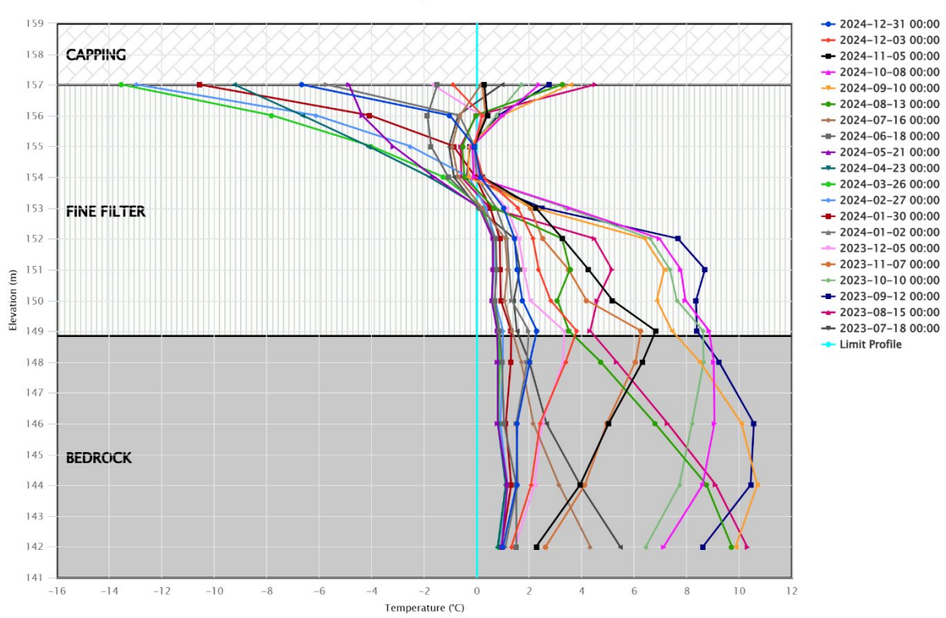

AMQ – WTD TH: 0+665_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

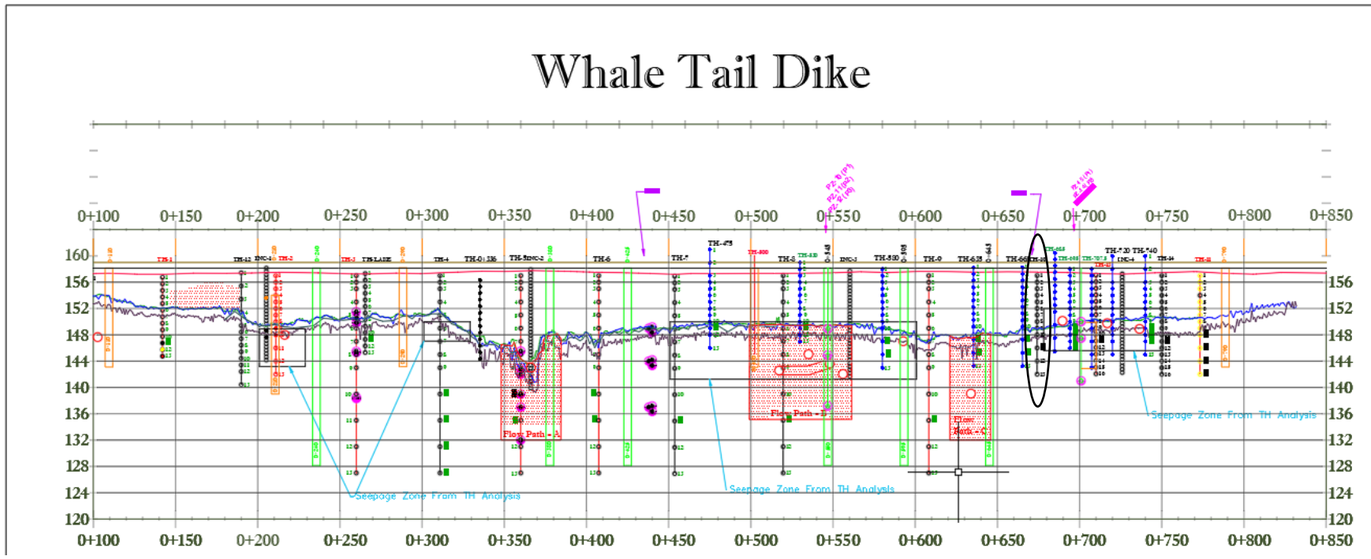

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+675

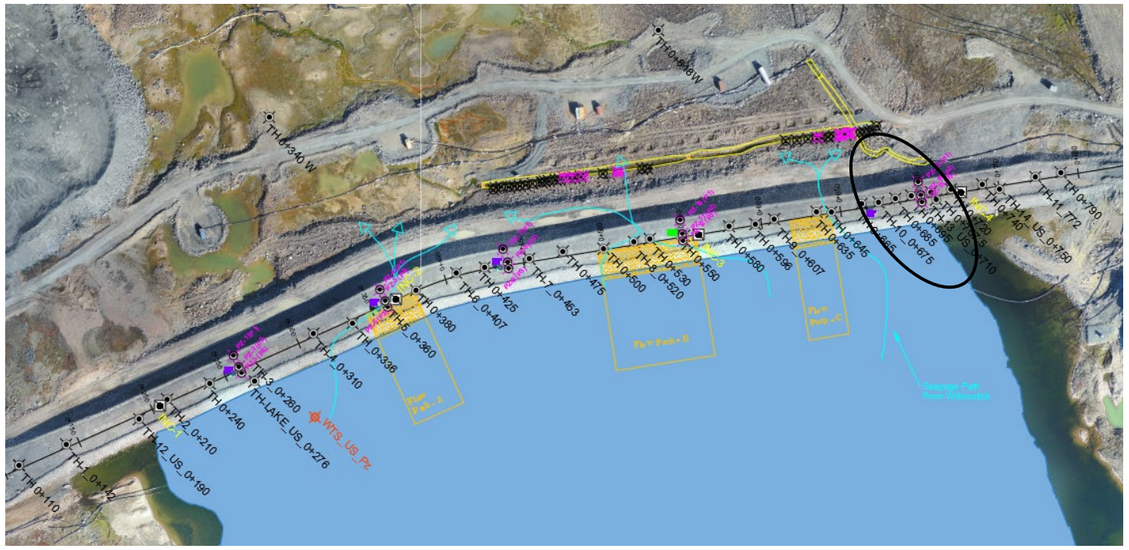

TH-0+340 W
TH-0+436W
TH-0+110
TH-1_0+142
TH-12_US_0+190
TH-2_0+210
TH-0+240
TH-3_0+260
TH-LAKE_US_0+276
WTS_US_Pz
TH-4_0+310
TH-0+336
TH-5_0+360
TH-0+380
TH-6_0+407
TH-7_0+425
TH-0+453
TH-0+475
TH-8_0+500
TH-0+520
TH-0+530
TH-0+550
TH-0+560
TH-9_0+596
TH-0+607
TH-0+635
TH-0+645
TH-10_0+675
TH-0+685
TH-0+695
TH-0+720
TH-0+740
TH-11_772
TH-0+780
TH-14_US_0+750
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path from Milestone

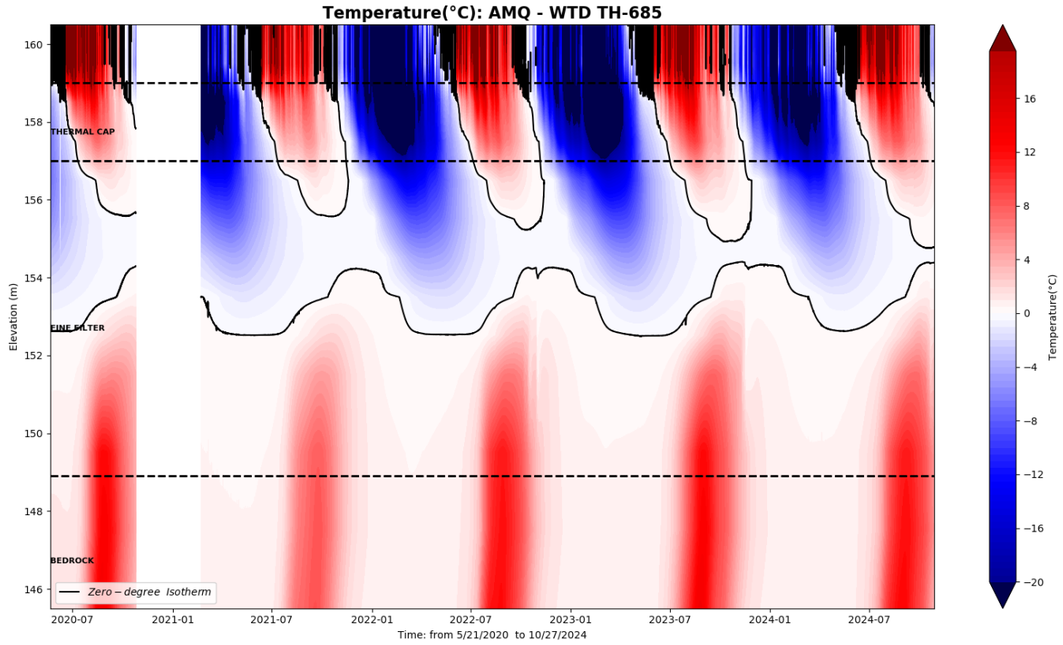

Temperature(°C): AMQ - WTD TH 0 + 675
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 11/20/2019 to 10/27/2024
Temperature(°C)

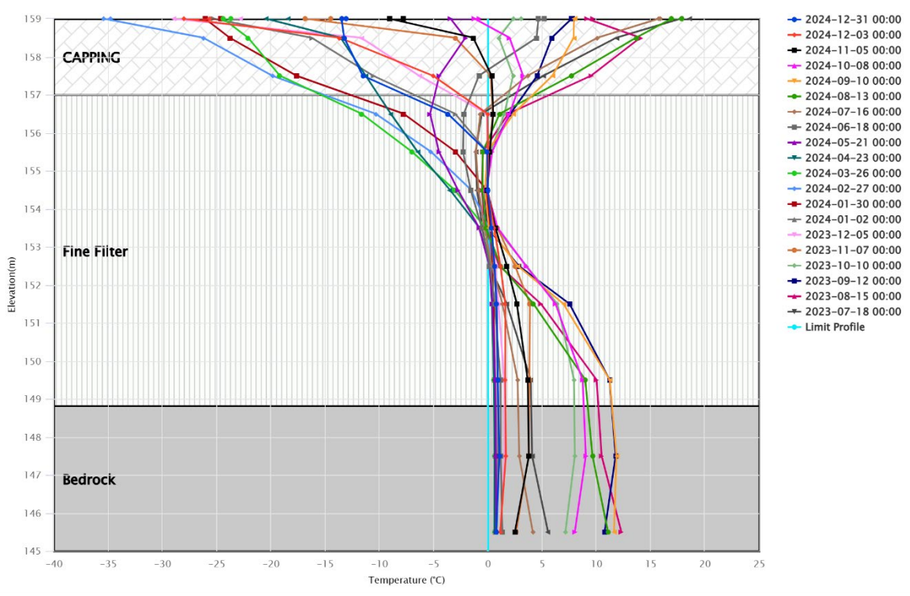

AMQ – WTD TH: 0+675
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

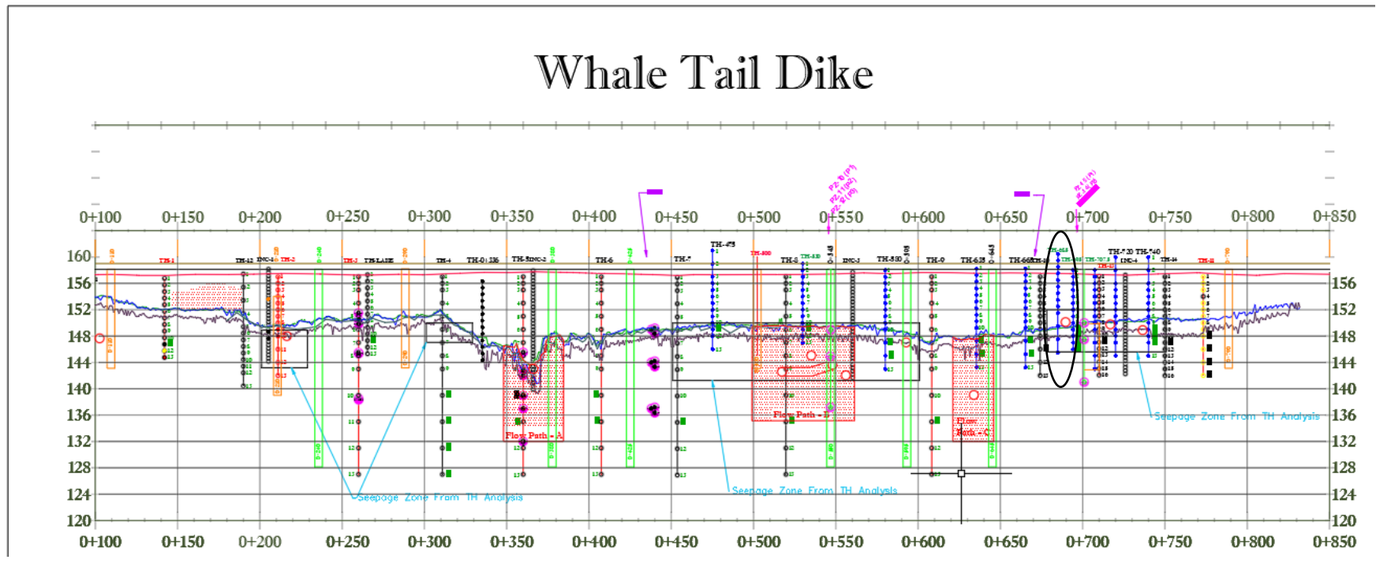

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+685

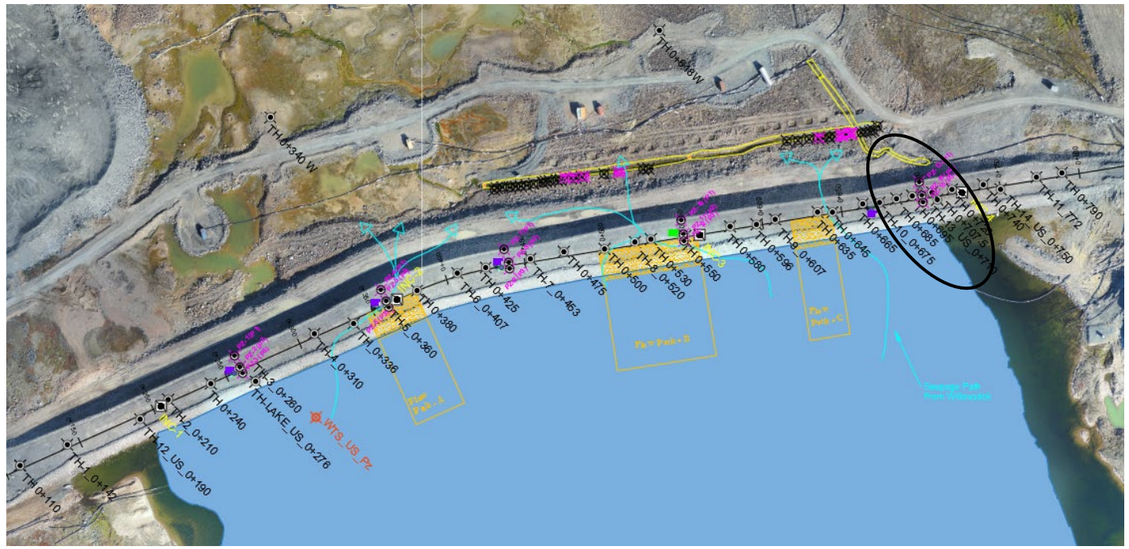

TH-0+340 W
TH-0+460 W
TH_0+110
TH_1_0+145
TH2_0+210
TH42_US_0+190
TH-0+240
TH_3_0+280
TH-LAKE_US_0+278
WTS_US_Pz
TH_4_0+310
TH_0+360
TH_0+380
TH_0+398
TH_0+405
TH_9_0+407
TH_7_0+463
TH_0+475
TH_0+500
TH_8_0+520
TH_0+530
TH_0+550
TH_0+580
TH_0+596
TH_0+635
TH_0+646
TH_10_0+675
TH_0+685
TH_0+710
TH_0+720
TH_0+740
TH_11_772
TH_0+750
TH_US_0+750
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis

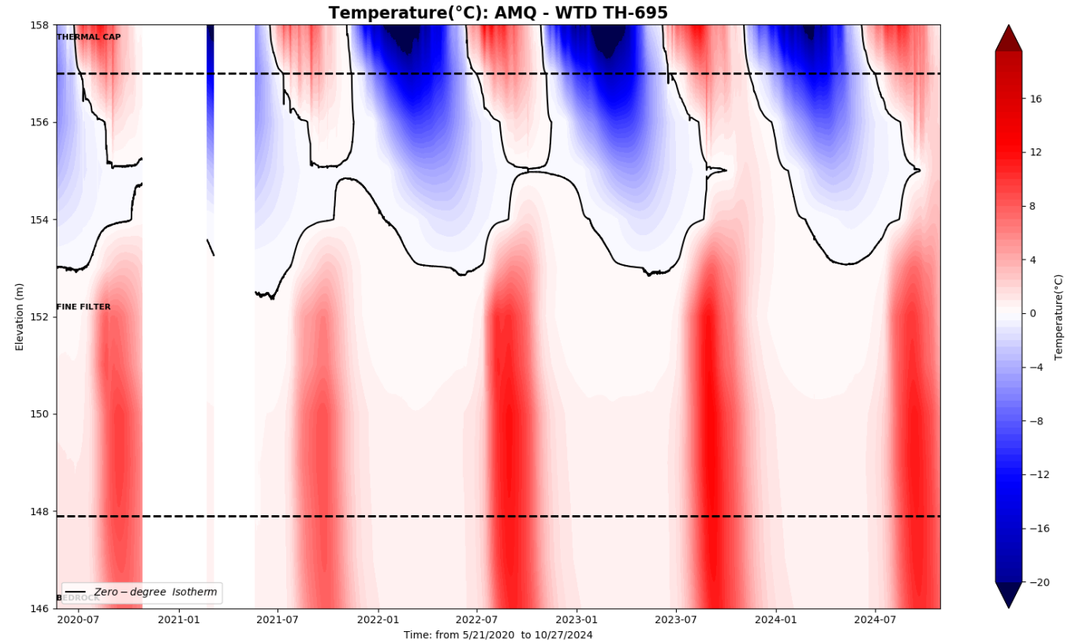

Temperature(°C): AMQ - WTD TH-685
Elevation (m)
THERMAL CAP
FINE FILTER
BEDROCK
Zero – degree Isotherm
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)

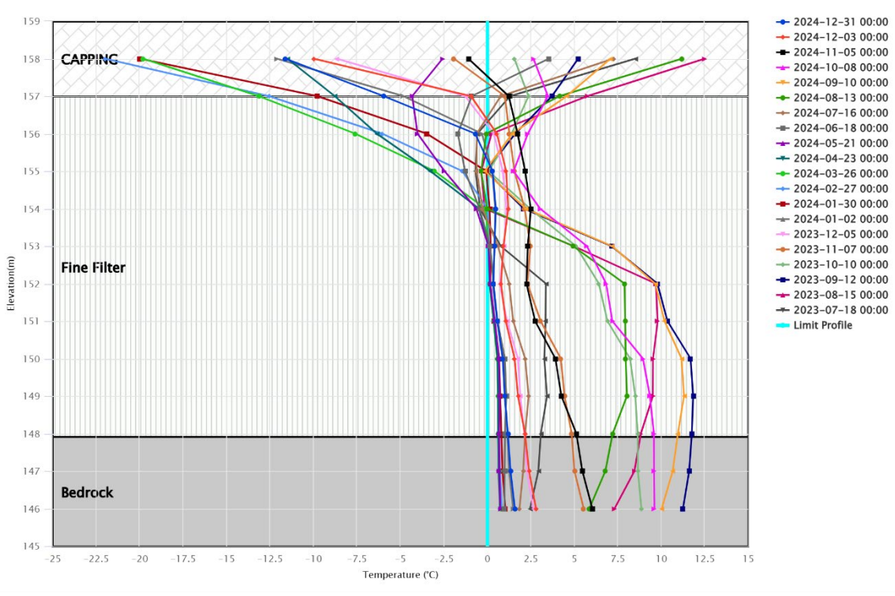

AMQ – WTD TH: 0+685_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

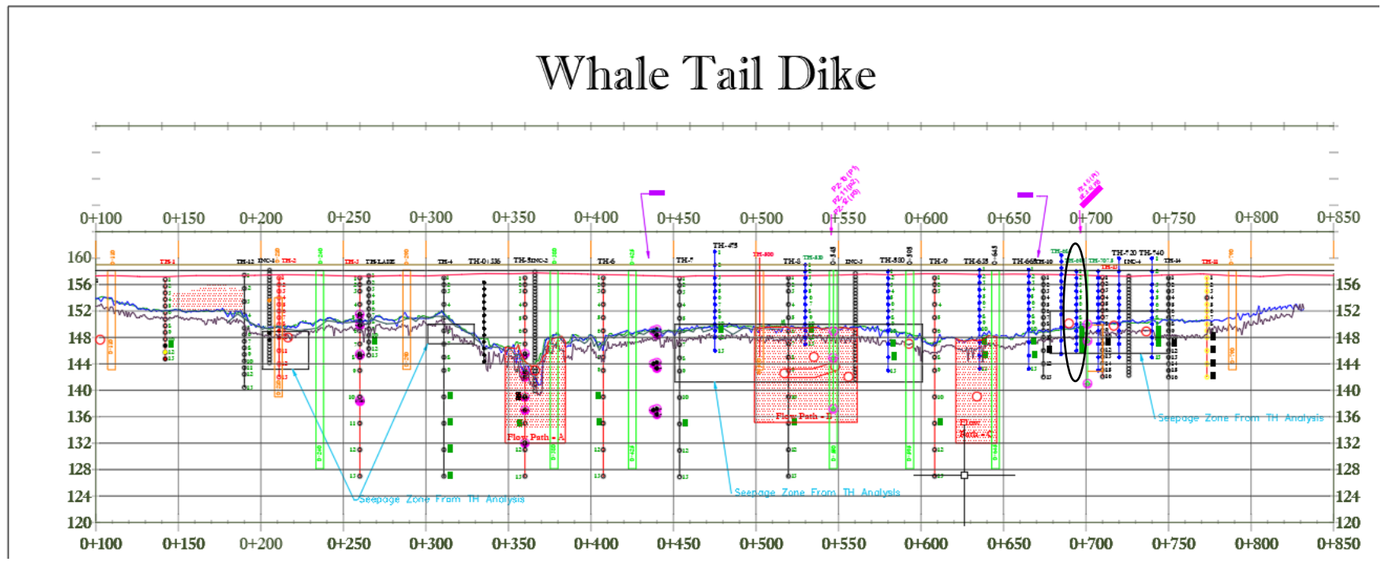

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+695

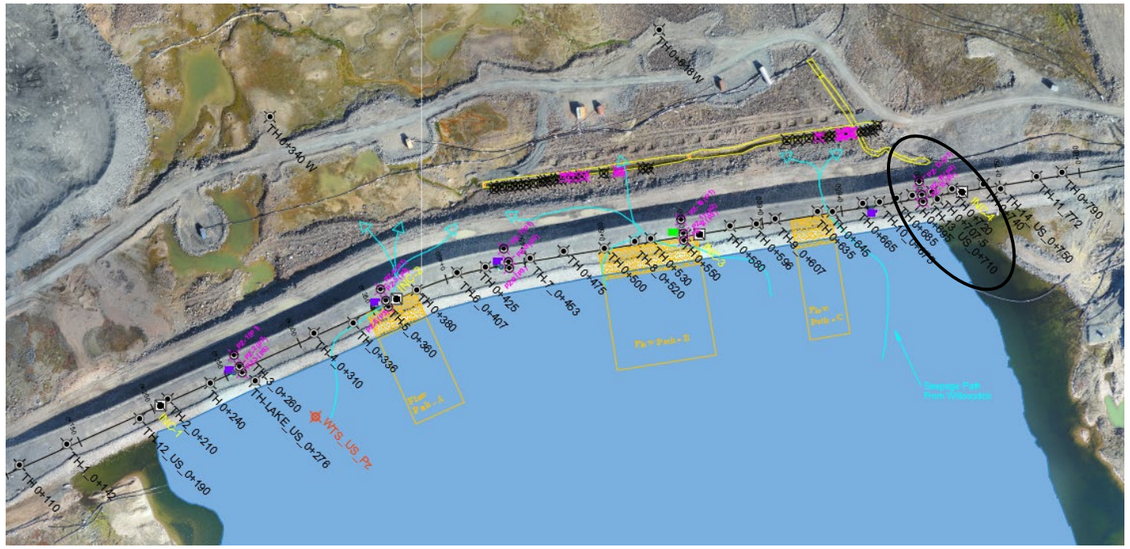

TH-0+340 W
TH-0+360W
TH-1_0+110
TH-1_0+142
TH-2_0+210
TH-2_0+260
TH-LAKE_US_0+276
TH-2_0+240
TH-12_US_0+190
WTS_US_Pz
TH-0_0+310
TH-0_0+336
TH-0_0+360
TH-0_0+380
TH-9_0+407
TH-9_0+425
TH-7_0+453
TH-0_0+475
TH-0_0+500
TH-8_0+520
TH-0_0+530
TH-0_0+550
TH-0_0+580
TH-0_0+598
TH-6_0+607
TH-0_0+635
TH-10_0+665
TH-0_0+675
TH-0_0+685
TH-0_0+695
TH-0_0+705
TH-0_0+740
TH-11_0+750
TH-11_772
TH-0+780
Pz = Path - A
Pz = Path - B
Pz = Path - C
Seepage Flux From Thermal Analysis

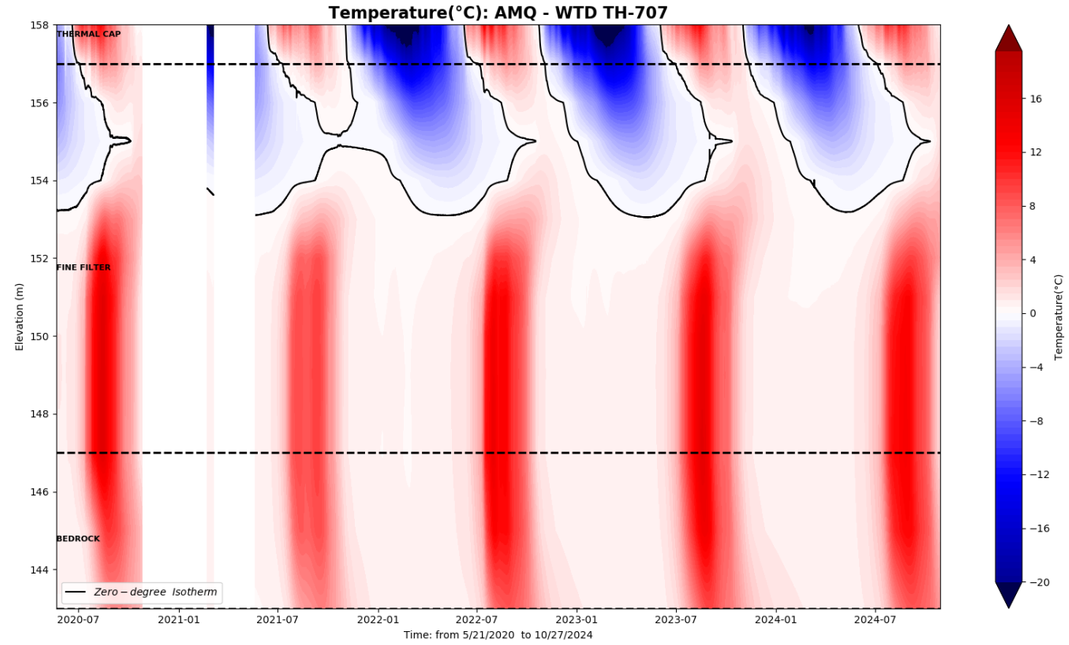

Temperature(°C): AMQ - WTD TH-695
THERMAL CAP
FINE FILTER
Zero – degree Isotherm
Elevation (m)
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)
158
156
154
152
150
148
146
2020-07
2021-01
2021-07
2022-01
2022-07
2023-01
2023-07
2024-01
2024-07
16
12
8
4
0
−4
−8
−12
−16
−20

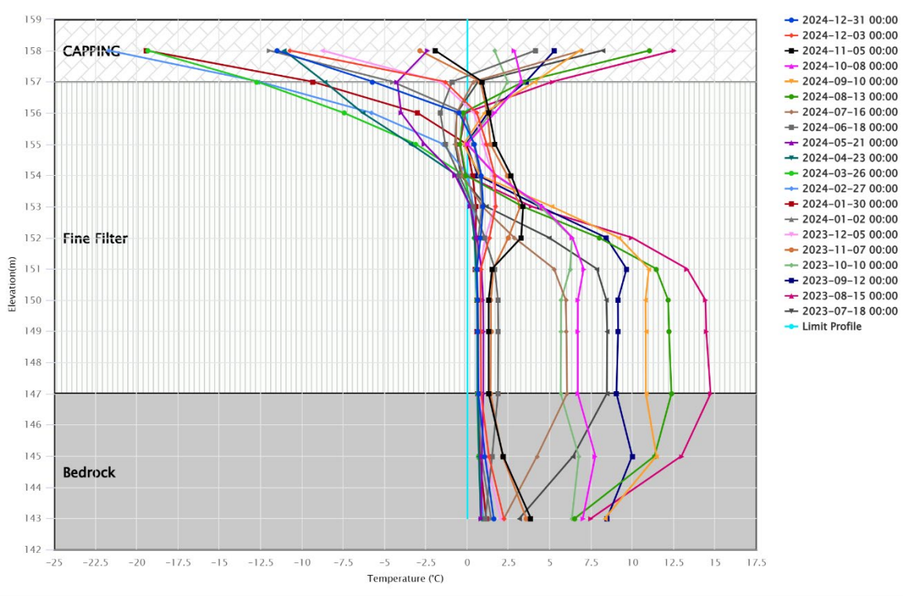

AMQ – WTD TH: 0+695_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

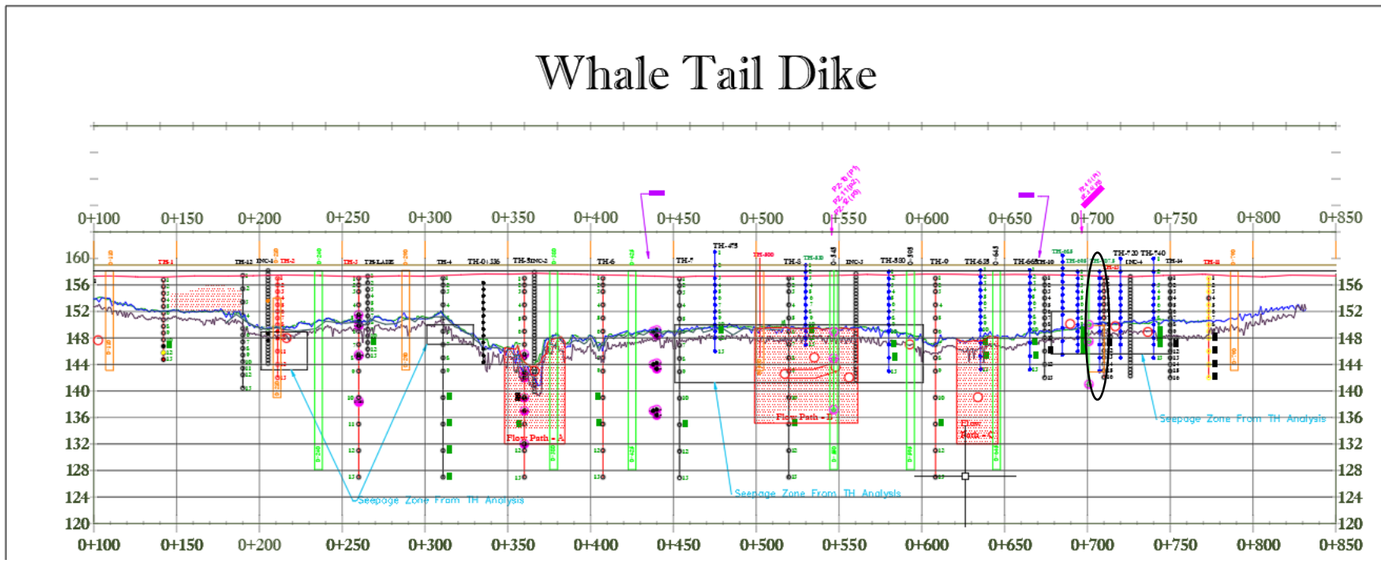

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+707

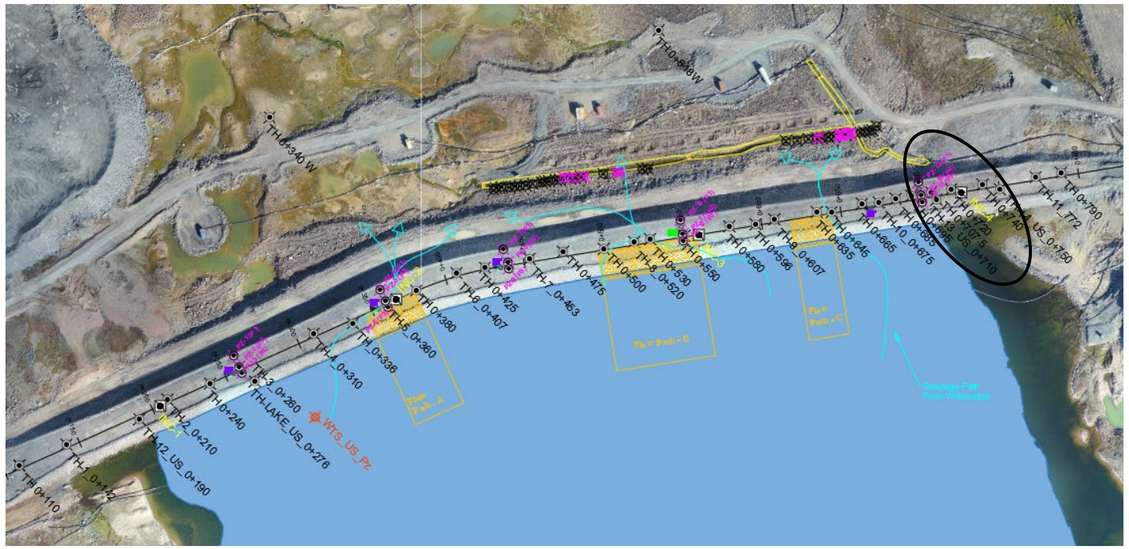

TH-0+340 W
TH-0+360 W
TH-0+790
TH-1_772
TH-1_0+750
TH-0+740
TH-0+730
TH-1_0+710
TH-0+695
TH-0+685
TH-0+665
TH-0+645
TH-0+607
TH-0+595
TH-0+580
TH-0+550
TH-0+530
TH-8_0+520
TH-0+500
TH-7_0+475
TH-7_0+463
TH-6_0+425
TH-6_0+407
TH-0+390
TH-5_0+360
TH-4_0+338
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Out From Talbot Lake

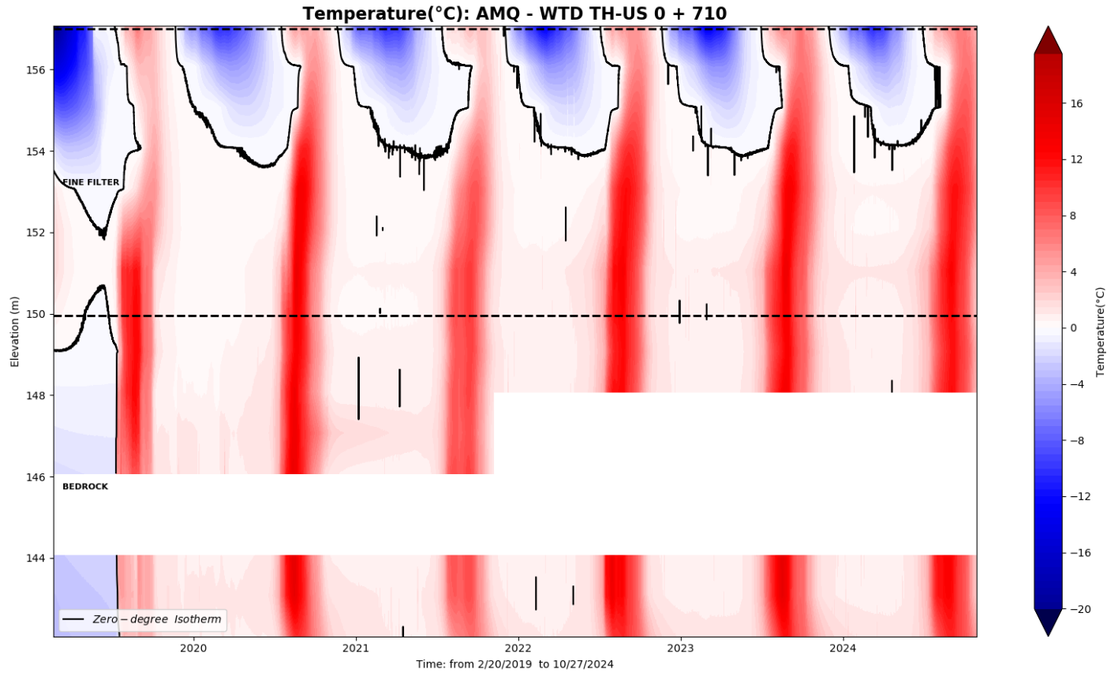

Temperature(°C): AMQ - WTD TH-707
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)

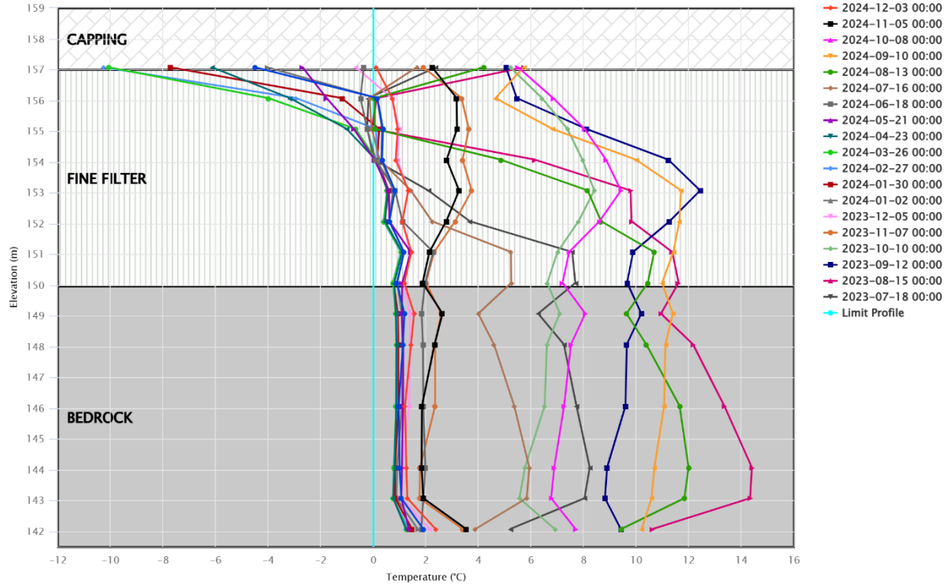

AMQ – WTD TH: 0+707_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

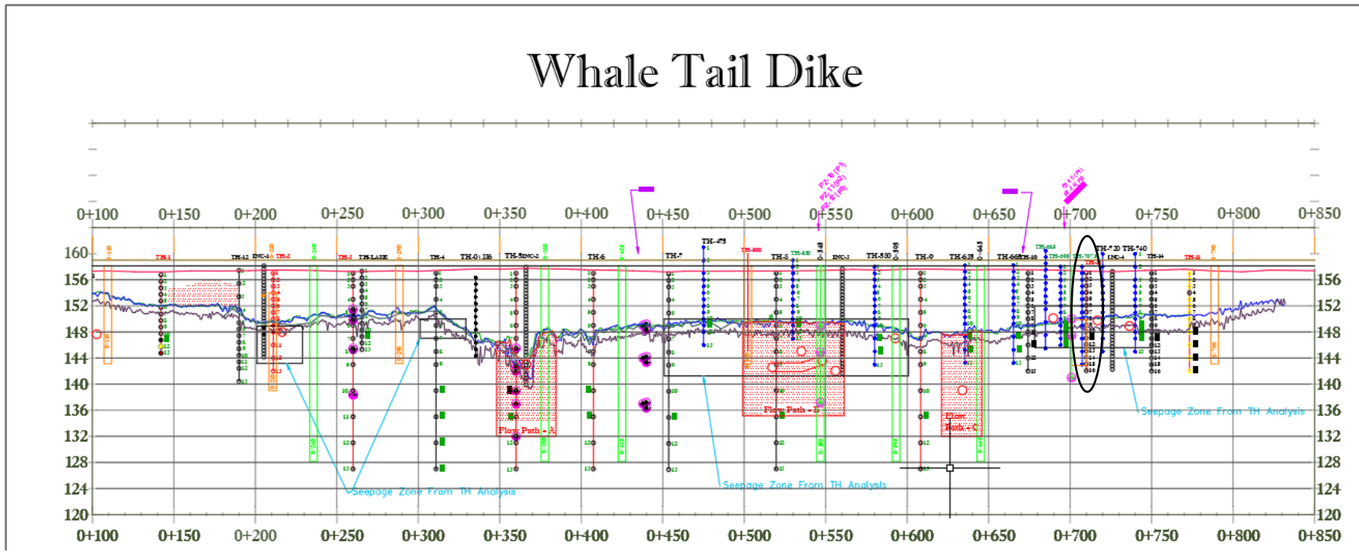

Whale Tail Dike
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis

WTD-TH 0+710 U/S

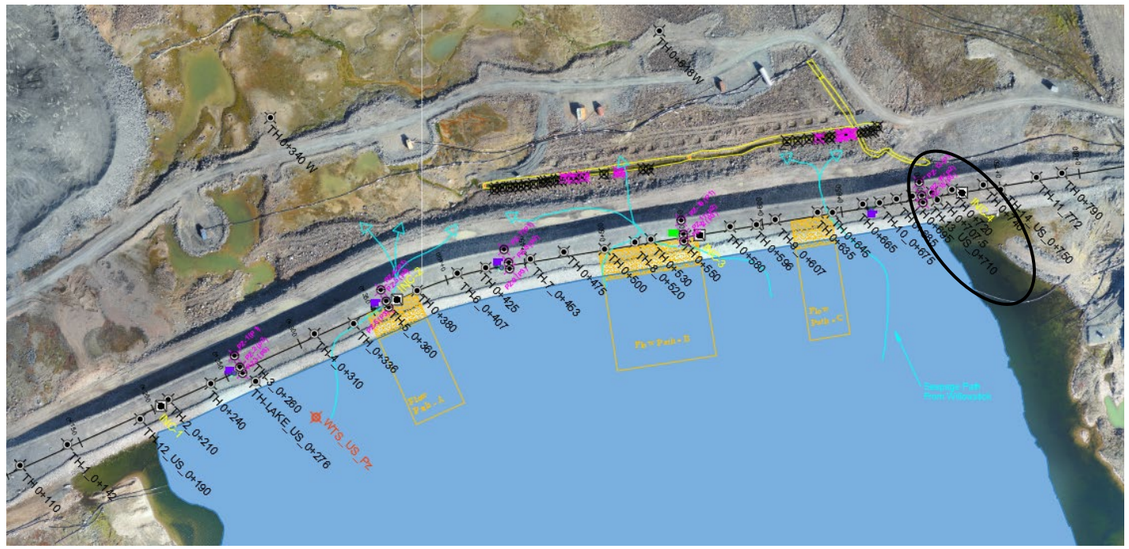


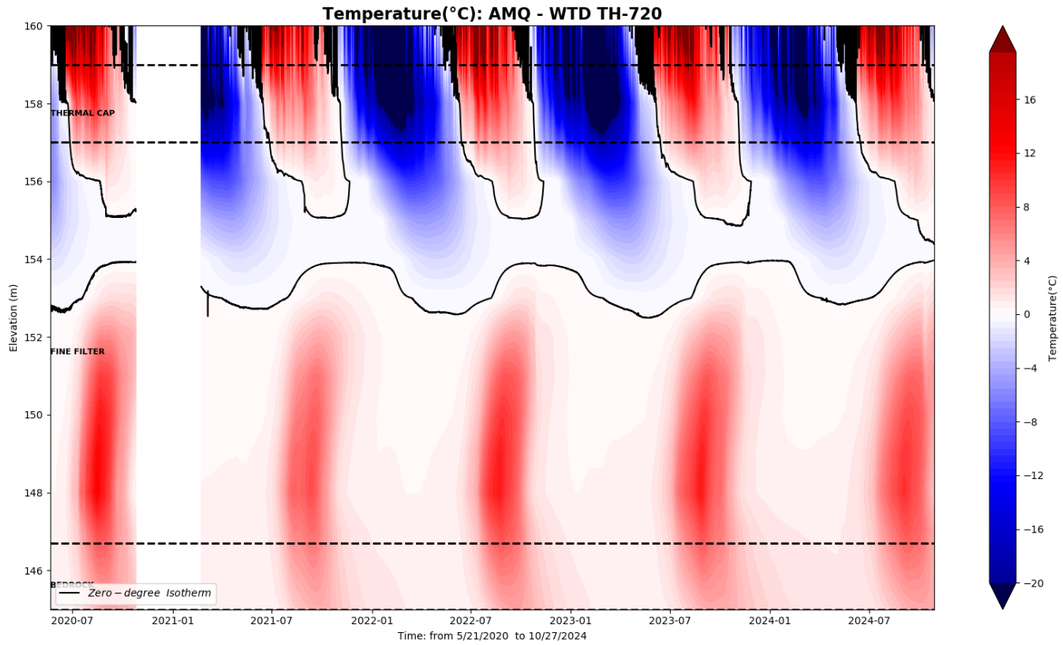


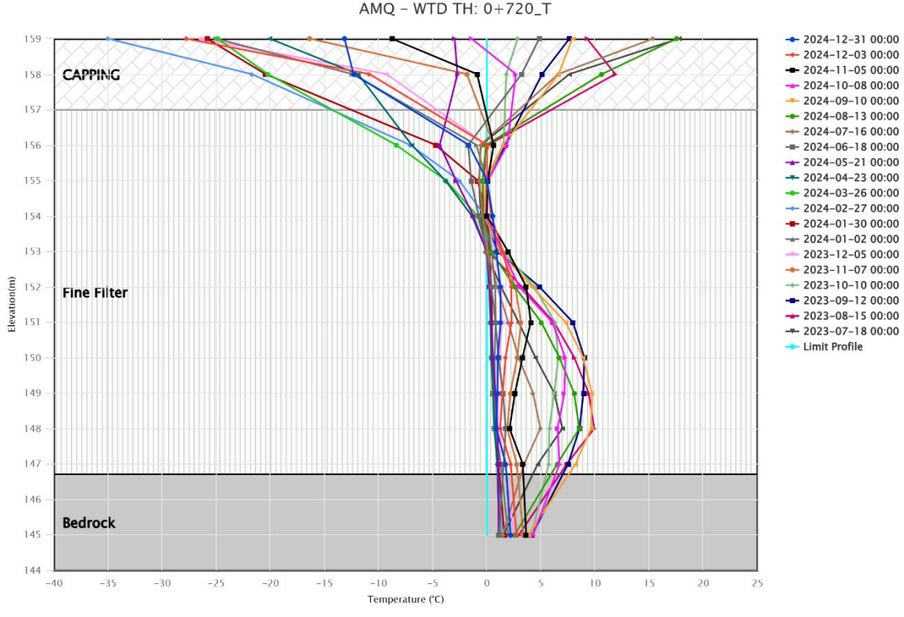


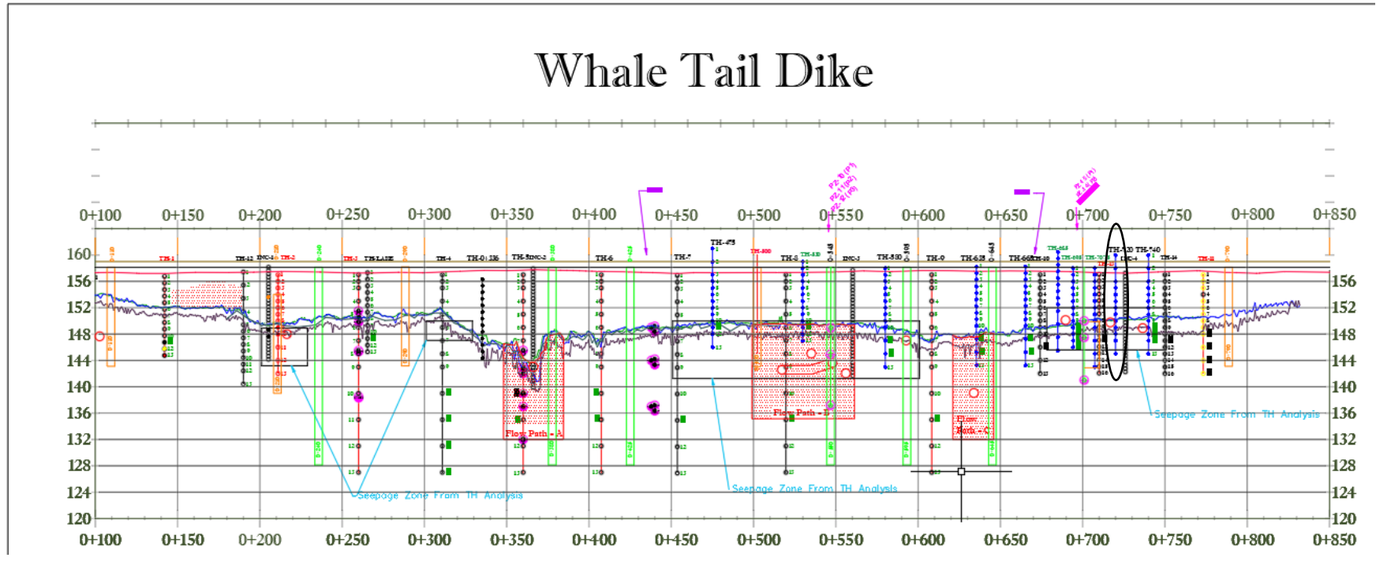


WTD-TH 0+720

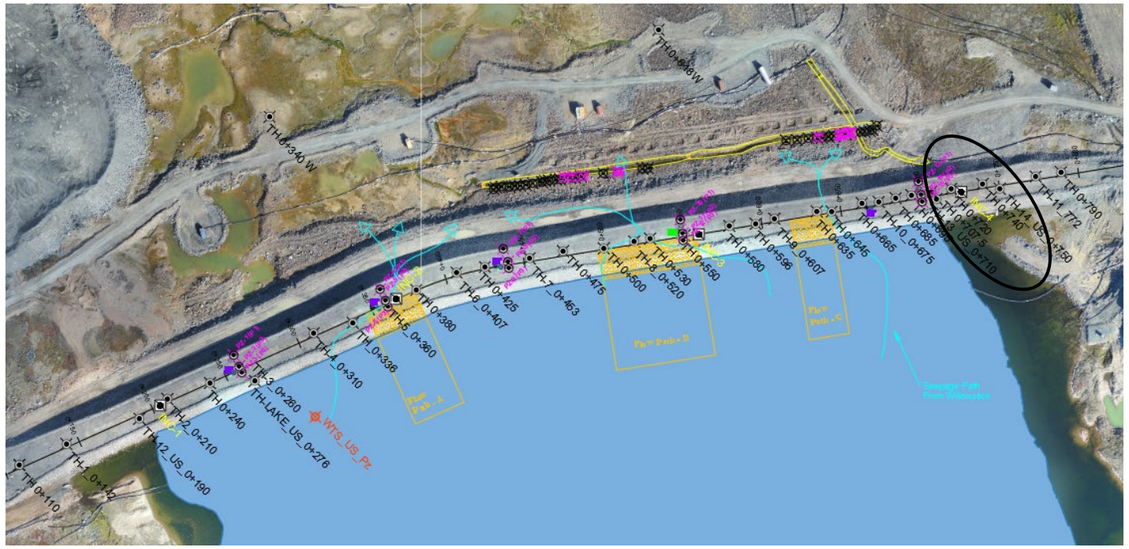

TH-0+340 W
TH-0+316 W
TH-0+110
TH-1_0+142
TH-12_US_0+190
TH-2_0+210
TH-0+240
TH-3_0+260
TH-LAKE_US_0+276
WTS_US_Pz
TH-4_0+310
TH-5_0+336
TH-5_0+360
TH-0+380
TH-6_0+407
TH-0+425
TH-7_0+453
TH-0+475
TH-0+500
TH-8_0+520
TH-0+530
TH-0+550
TH-0+580
TH-9_0+596
TH-9_0+607
TH-0+635
TH-0+645
TH-10_0+665
TH-0+675
TH-0+695
TH-0+720
TH-11_772
TH-0+750
TH-0+790
Py= Path - B
Flow Path - A
Flow Path - C
Seepage Path from Milkvetch

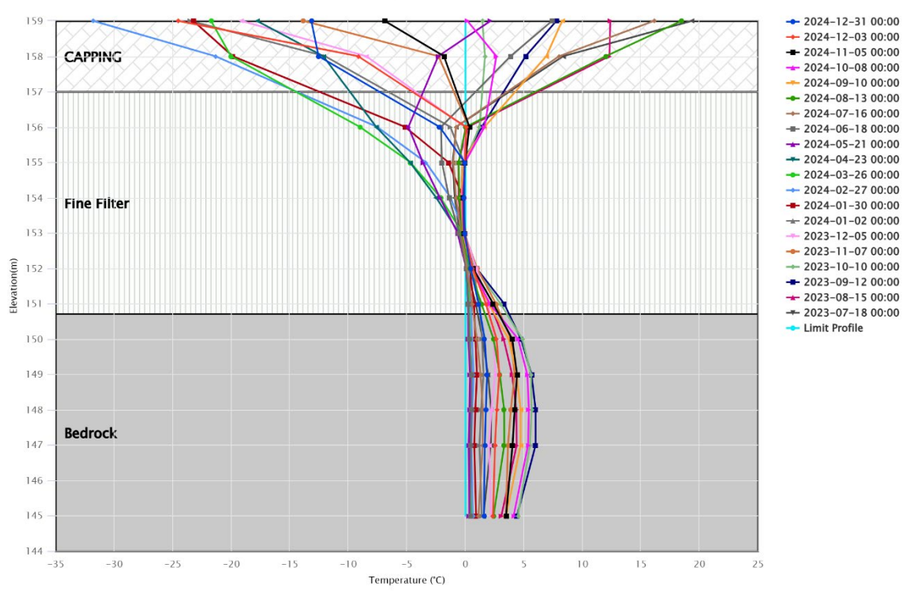

Temperature(°C): AMQ - WTD TH-720
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)

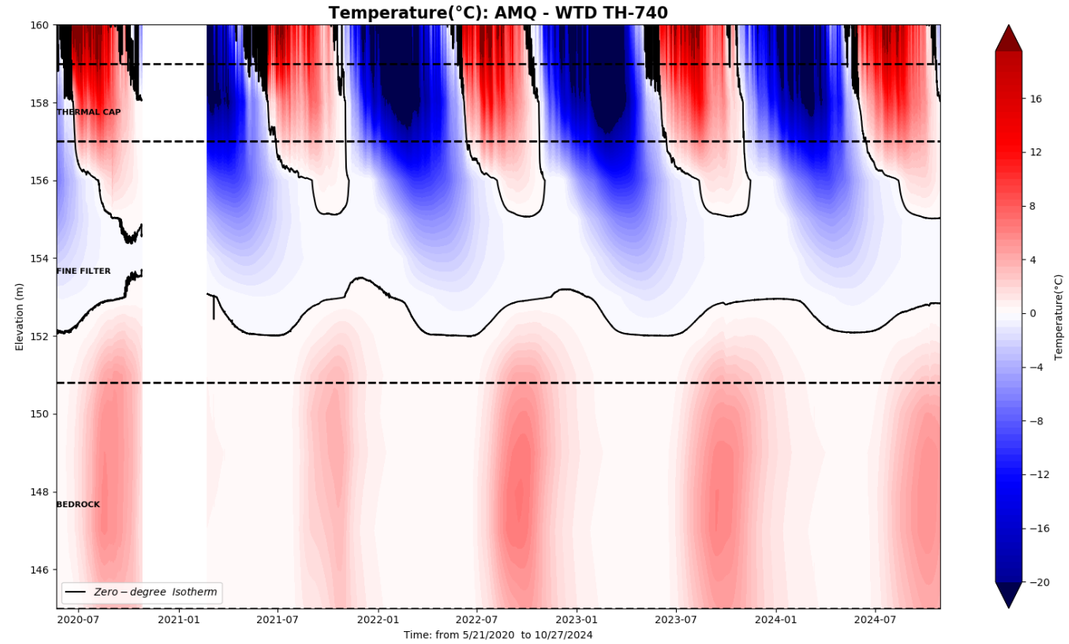

AMQ - WTD TH: 0+720_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

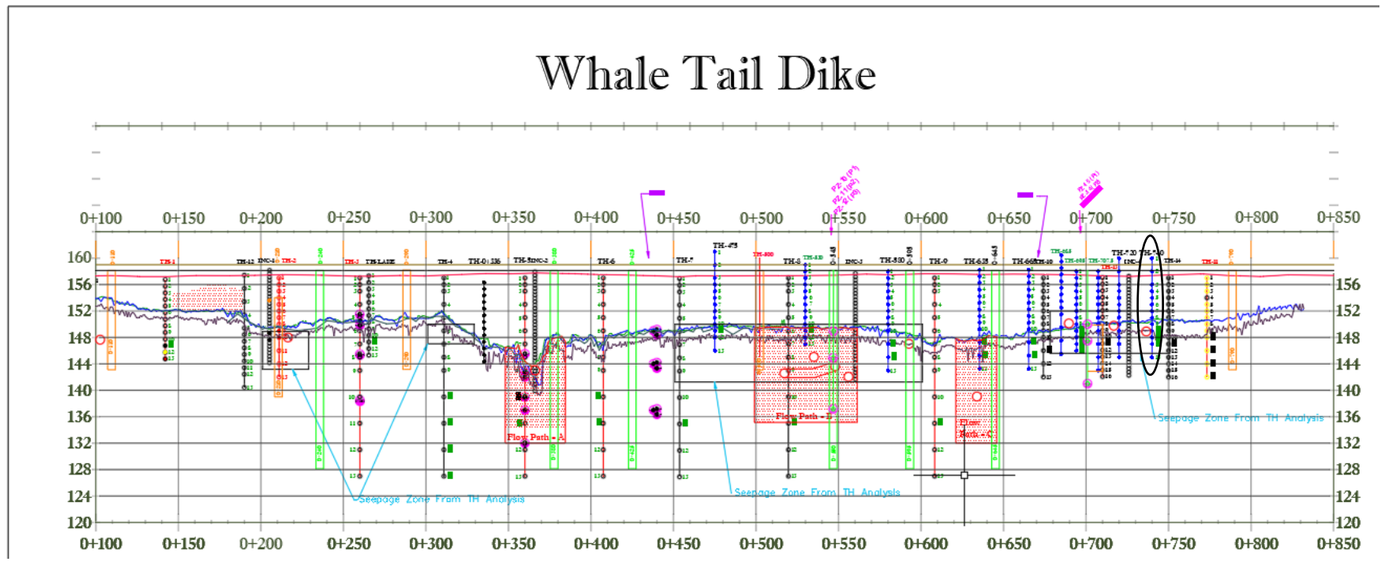

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+740

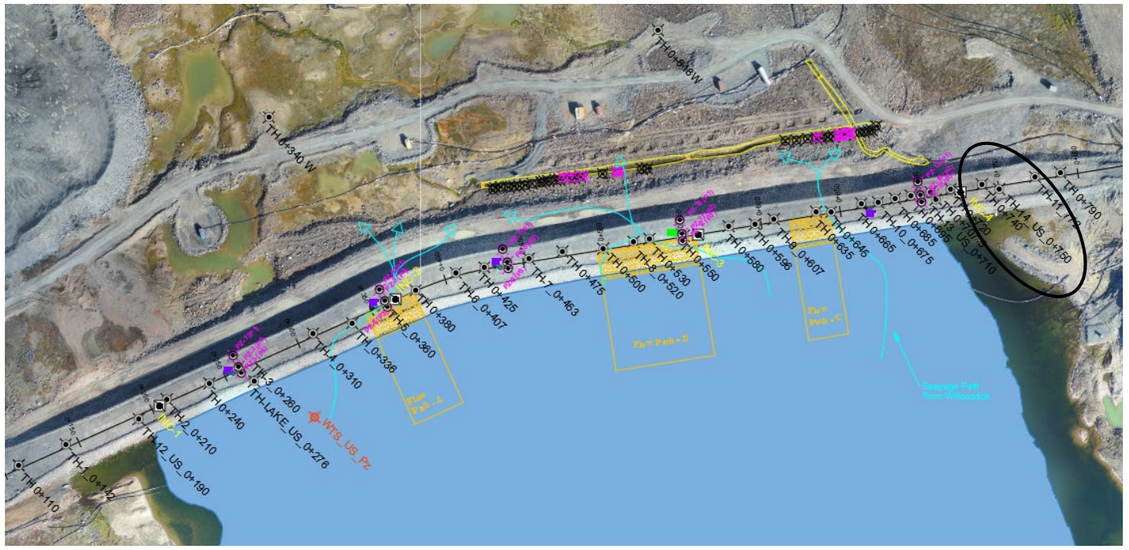

TH-0+340 W
TH-0+380 W
TH-11_T72
TH-0+790
TH-11_US_0+150
TH-0+740
TH-0+729
TH-0+716
TH-10_0+675
TH-10_0+665
TH-0+645
TH-0+635
TH-9_0+607
TH-0+598
TH-0+580
TH-8_0+550
TH-0+530
TH-8_0+520
TH-0+500
TH-7_0+475
TH-7_0+463
TH-6_0+425
TH-6_0+407
TH-5_0+380
TH-5_0+360
TH-4_0+336
TH-4_0+310
TH-3_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-1_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Flux Zone Thickness

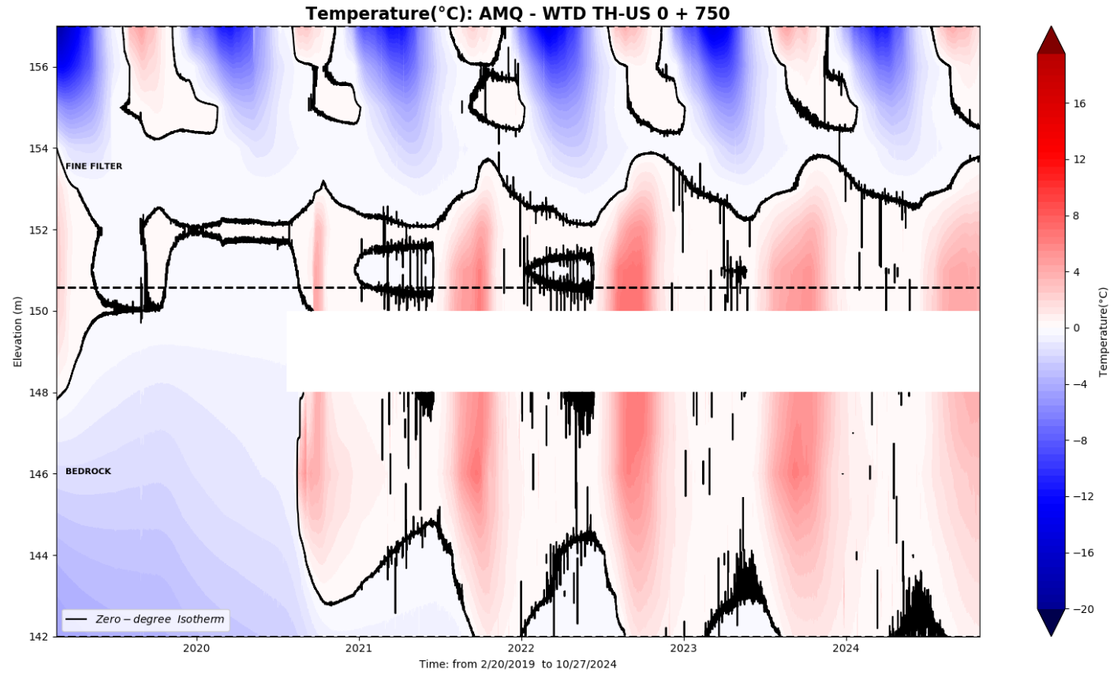

AMQ – WTD TH: 0+740_T
CAPPING
Fine Filter
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

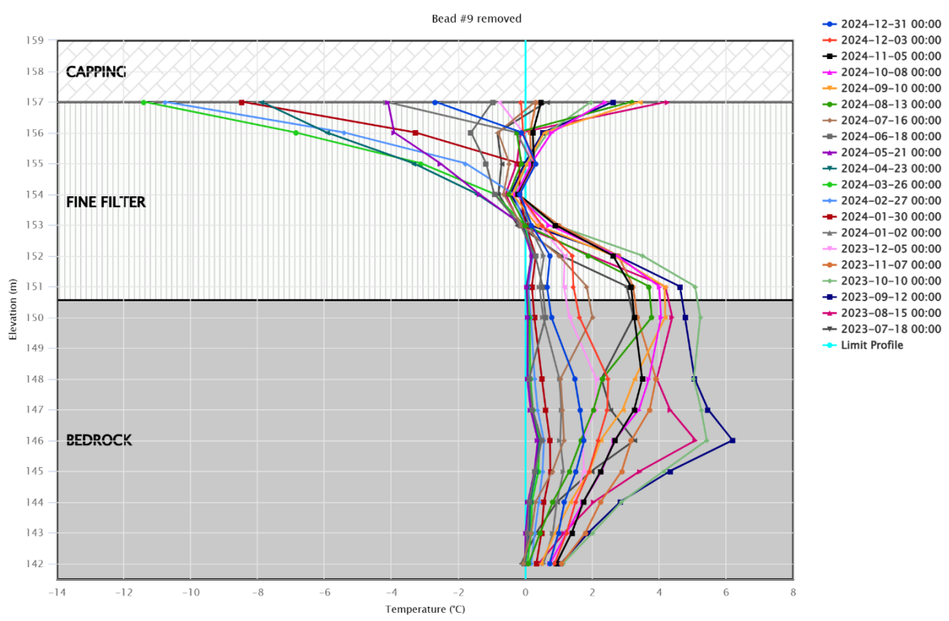

Temperature(°C): AMQ - WTD TH-740
THERMAL CAP
FINE FILTER
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 5/21/2020 to 10/27/2024
Temperature(°C)

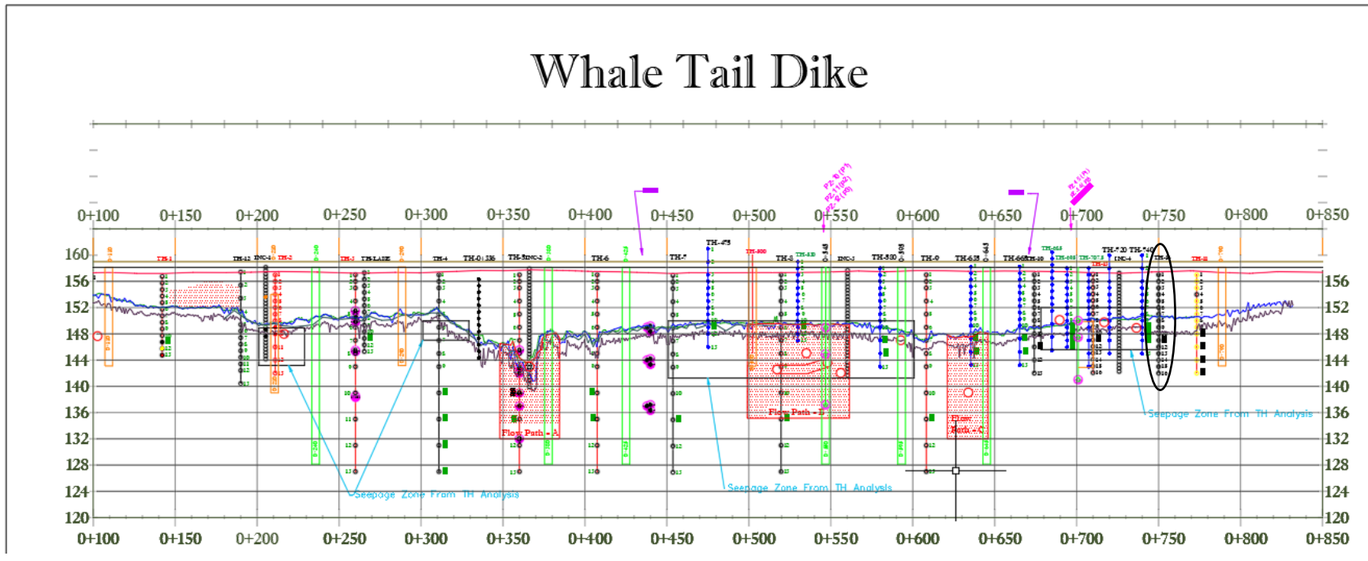

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+750

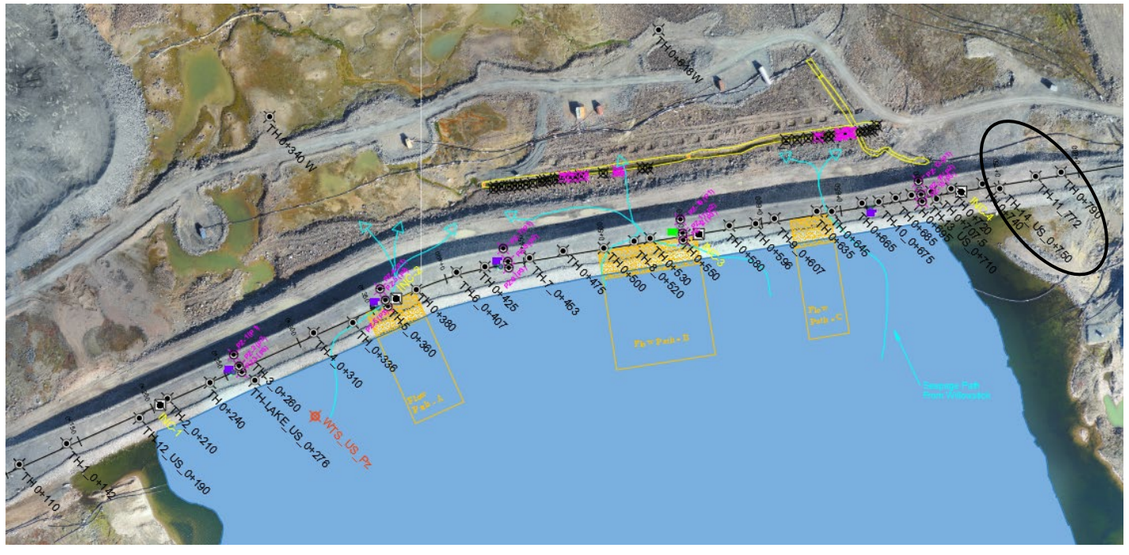

TH-0+340 W
TH-0+380 W
TH-0+750
TH-0+740
TH-0+710
TH-0+685
TH-0+675
TH-0+645
TH-0+635
TH-0+607
TH-0+590
TH-0+580
TH-0+550
TH-0+530
TH-0+520
TH-0+500
TH-0+475
TH-0+463
TH-0+425
TH-0+407
TH-0+380
TH-0+360
TH-0+336
TH-0+310
TH-0+280
TH-0+240
TH-0+210
TH-0+190
TH-0+110
TH-LAKE_US_0+278
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Flow From Whale Tail

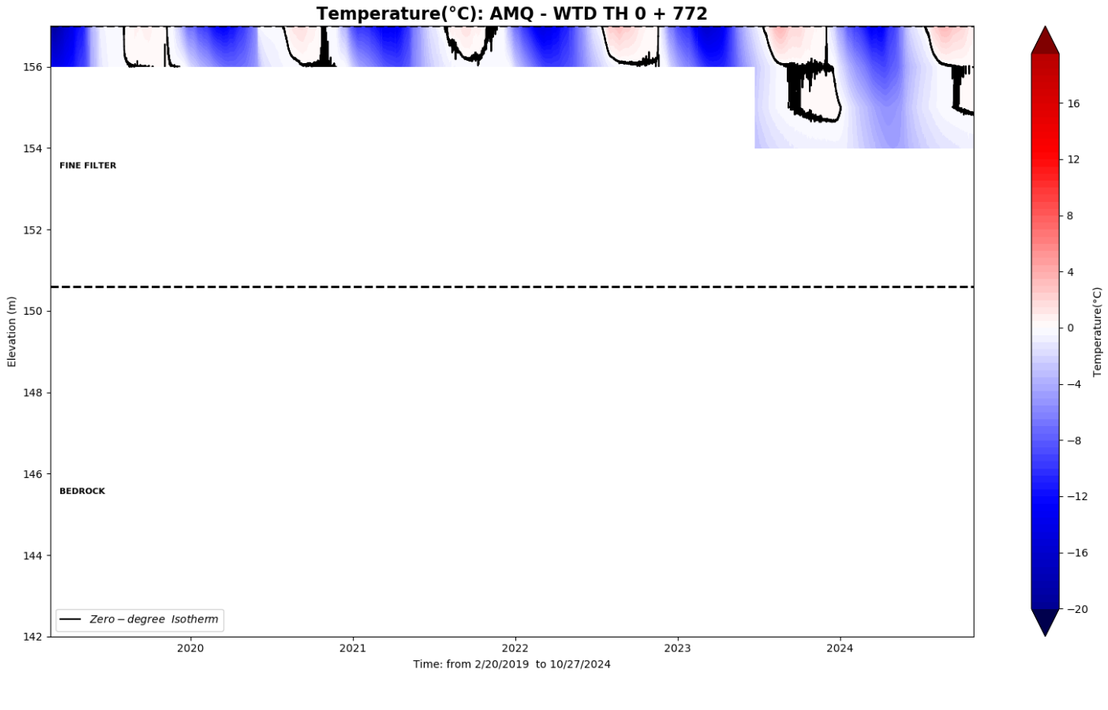

Temperature(°C): AMQ - WTD TH-US 0 + 750
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 2/20/2019 to 10/27/2024
Temperature(°C)

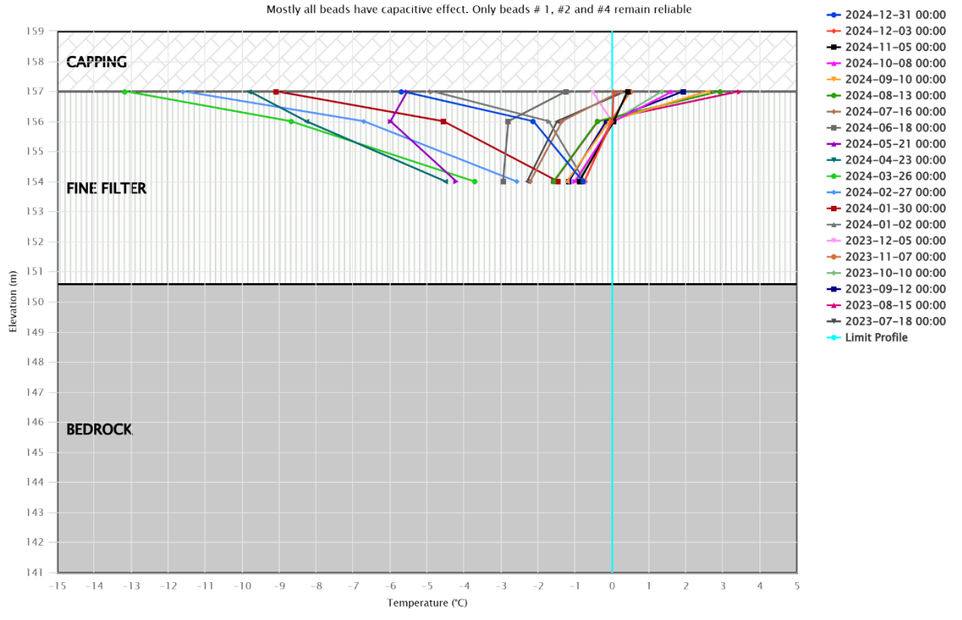

AMQ – WTD TH_US: 0+750
Bead #9 removed
CAPPING
FINE FILTER
BEDROCK
Elevation (m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

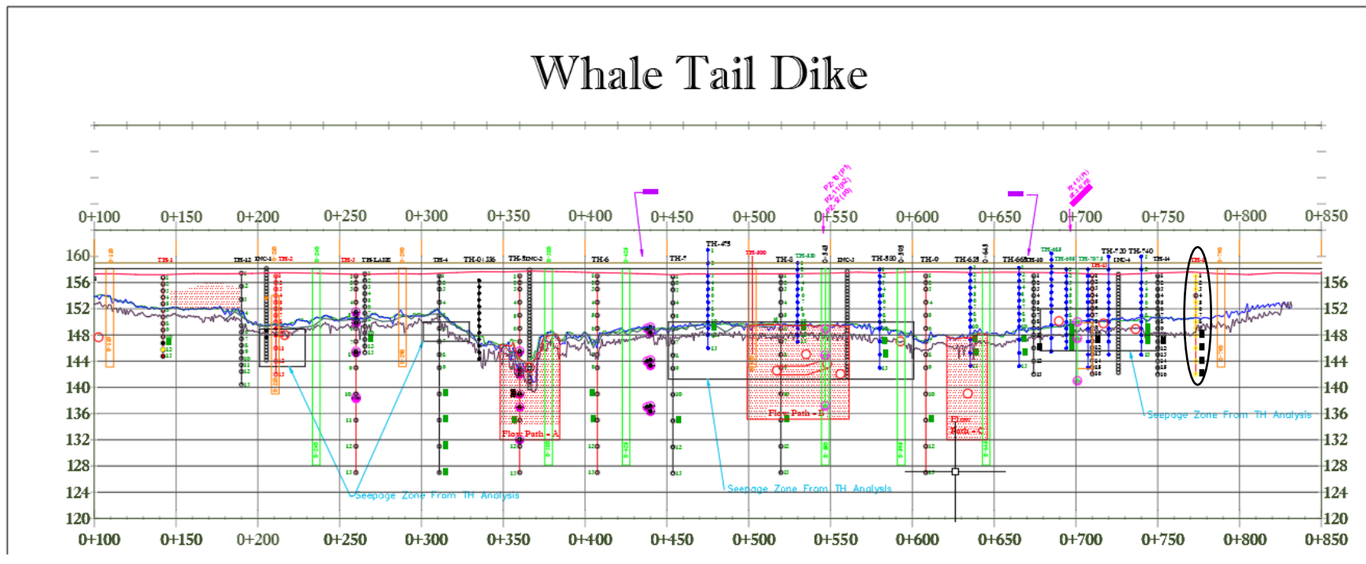

Whale Tail Dike
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Seepage Zone From TH Analysis
Flow Path - A
Flow Path - B
Flow Path - C

WTD-TH 0+772 U/S

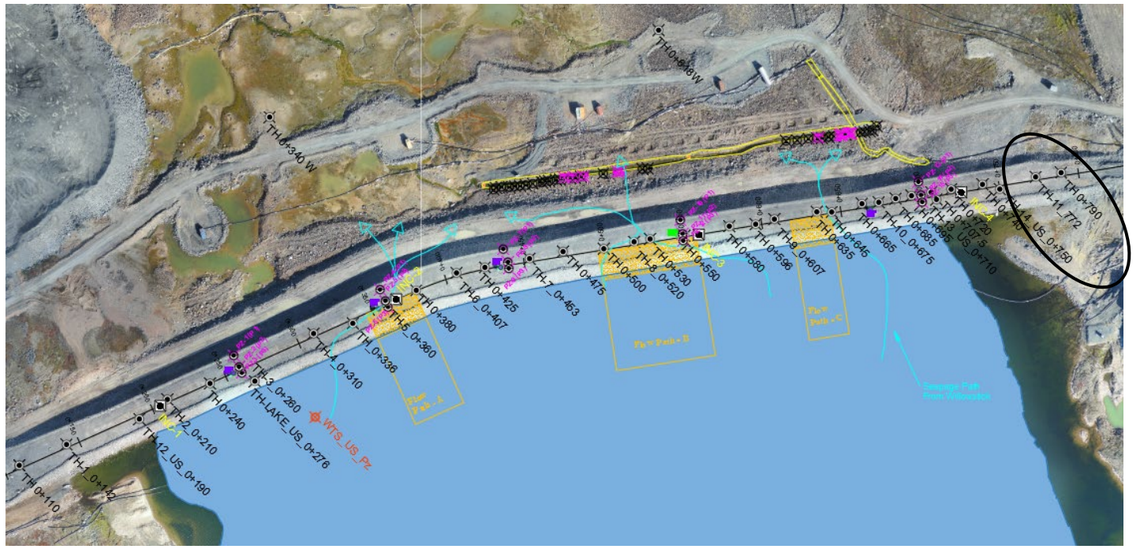


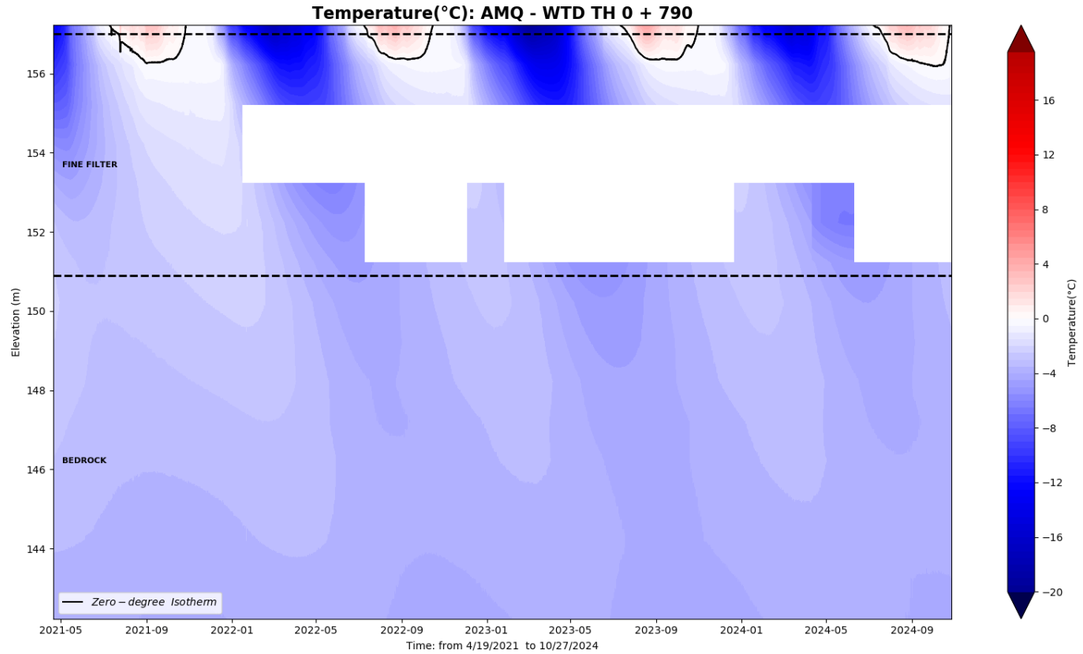


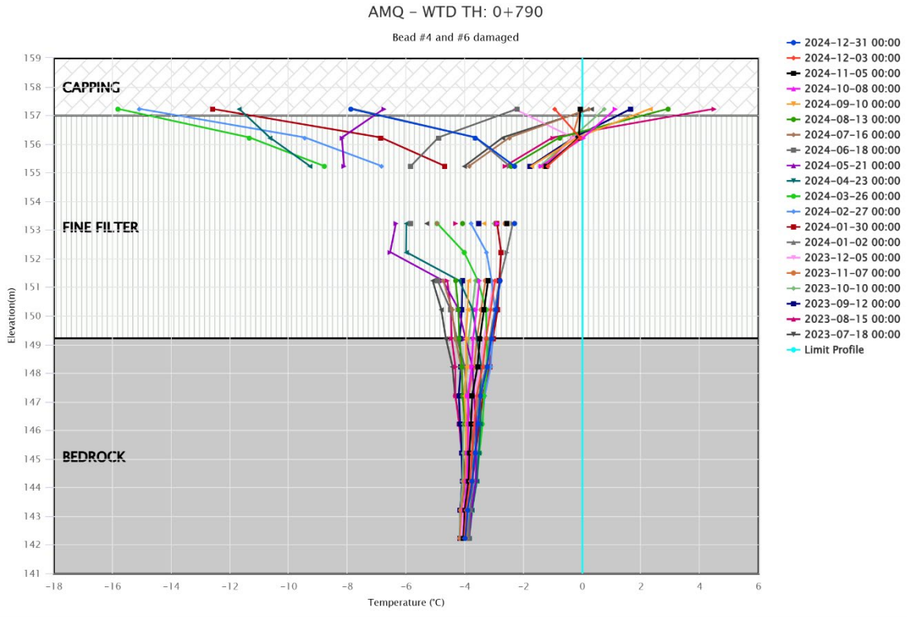


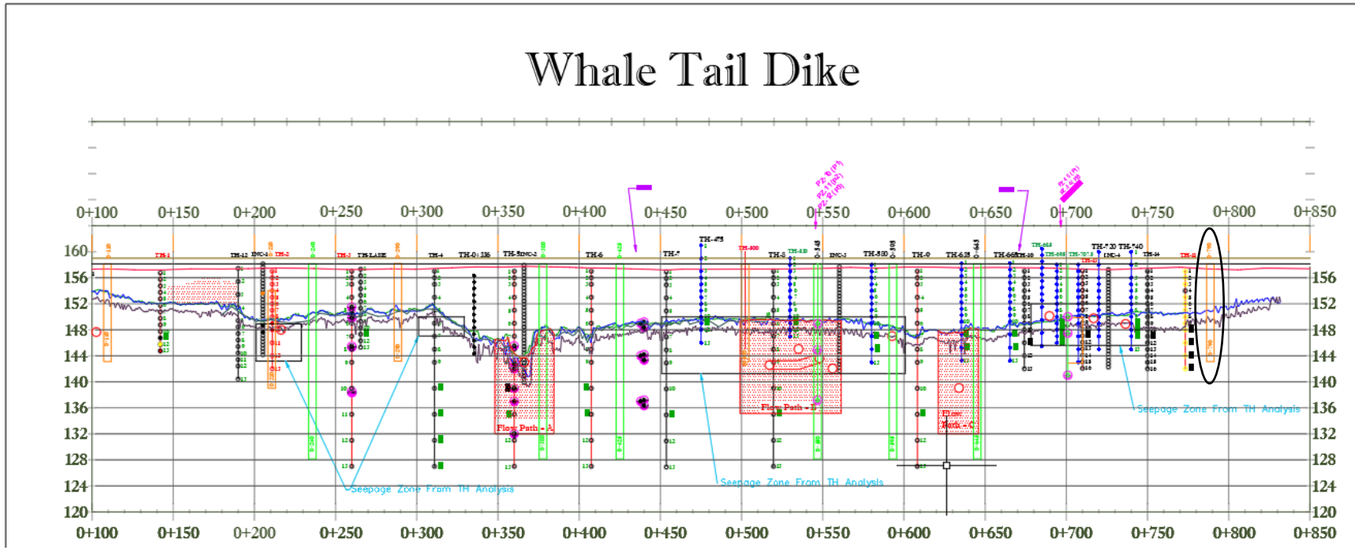


WTD-TH 0+790

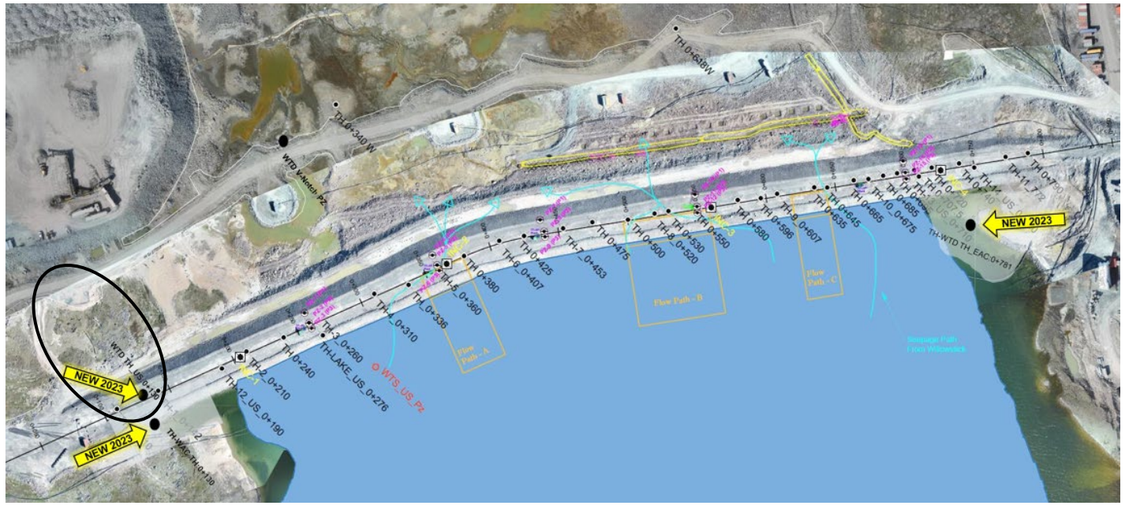

TH-0+340 W
TH-0+480W
TH-0+790
TH-11_T72
TH-11_US_0+150
TH-10_0+675
TH-10_0+665
TH-9_0+635
TH-9_0+607
TH-9_0+596
TH-9_0+580
TH-9_0+550
TH-9_0+530
TH-9_0+520
TH-9_0+500
TH-7_0+475
TH-7_0+453
TH-6_0+425
TH-6_0+407
TH-5_0+380
TH-5_0+360
TH-4_0+310
TH-4_0+296
TH-2_0+280
TH-LAKE_US_0+276
TH-2_0+240
TH-2_0+210
TH-12_US_0+190
TH-1_0+142
TH-0+110
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Dam Foundation

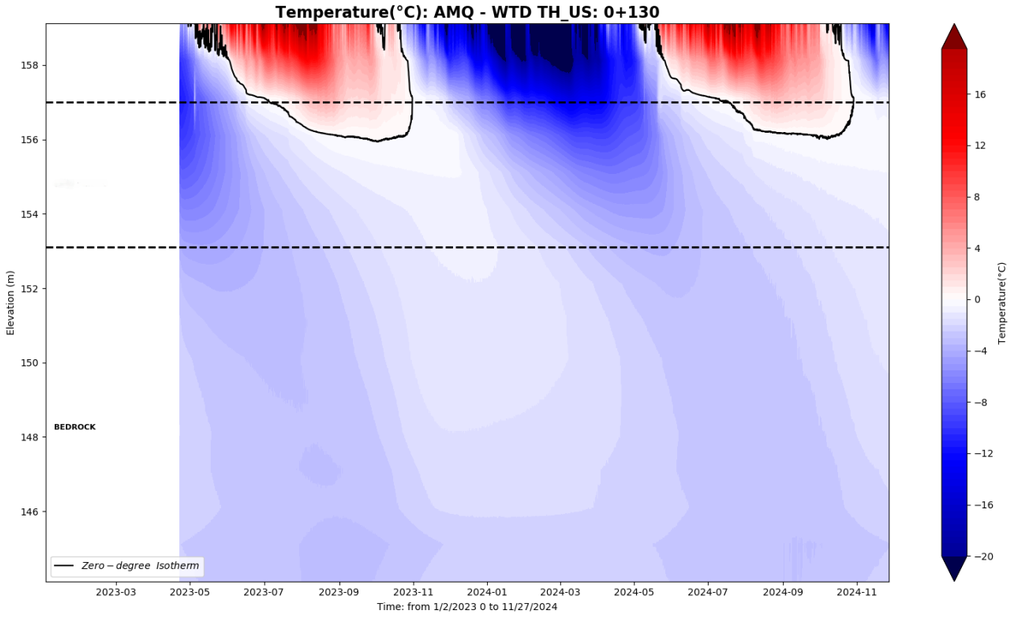

Temperature(°C): AMQ - WTD TH 0 + 790
FINE FILTER
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 4/19/2021 to 10/27/2024
Temperature(°C)

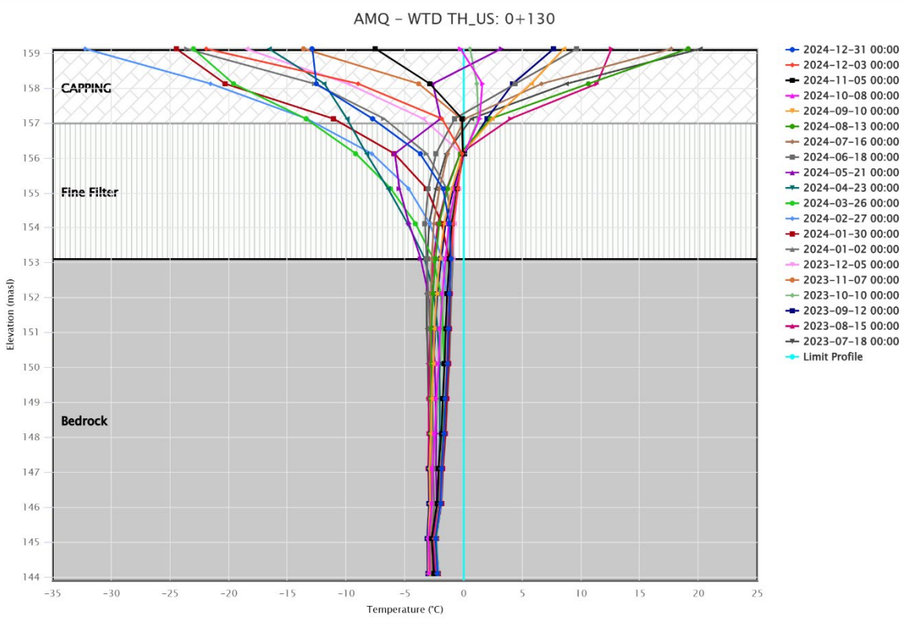

AMQ – WTD TH: 0+790
Bead #4 and #6 damaged
CAPPING
FINE FILTER
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile


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

WTD US 0+130

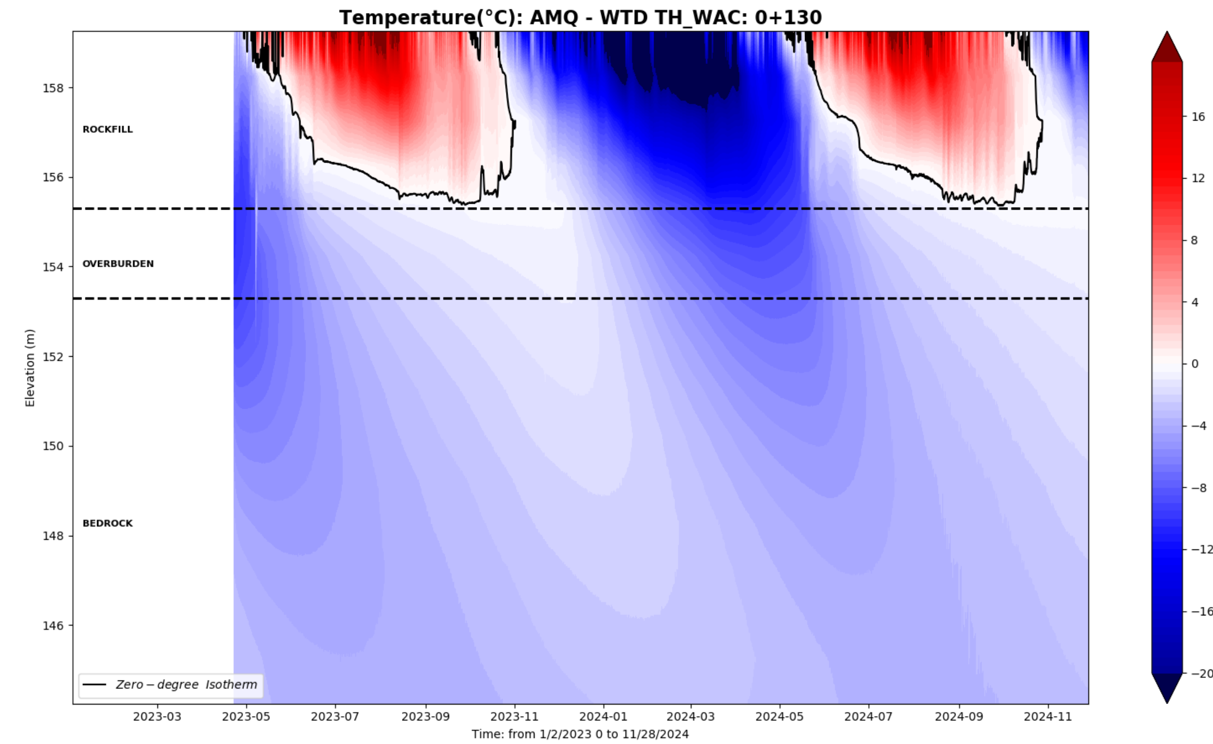

NEW 2023
NEW 2023
TH-WTD TH_EAC 0+781
WTD Water Pz
TH-LAKE_US_0+276
WTS_US_Pz
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path From Wikiwiki

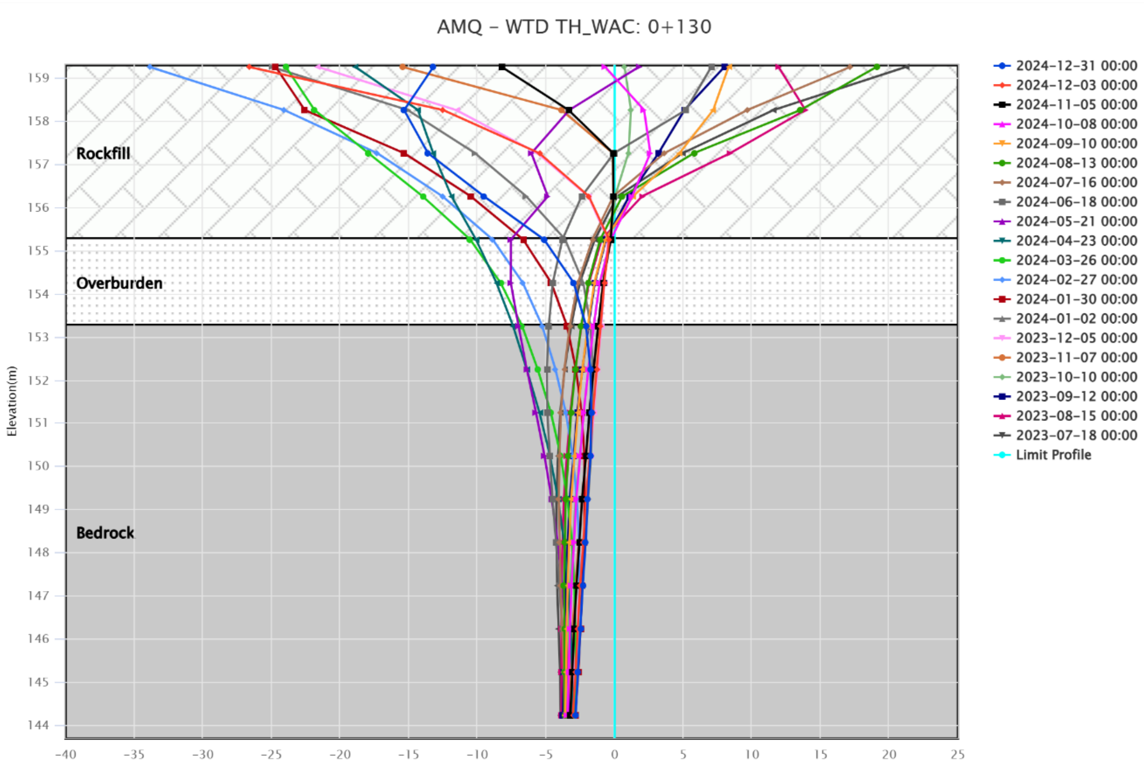

Temperature(°C): AMQ - WTD TH_US: 0+130
Elevation (m)
BEDROCK
Zero – degree Isotherm
Time: from 1/2/2023 0 to 11/27/2024
Temperature(°C)


AMQ – WTD TH_US: 0+130
CAPPING
Fine Filter
Bedrock
Elevation (masl)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

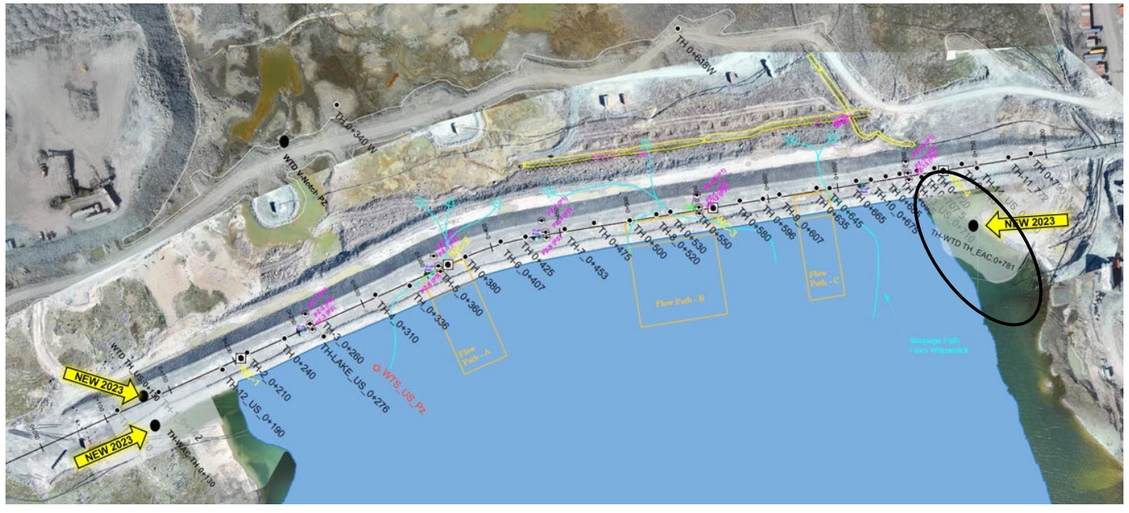
WTD WAC 0+130

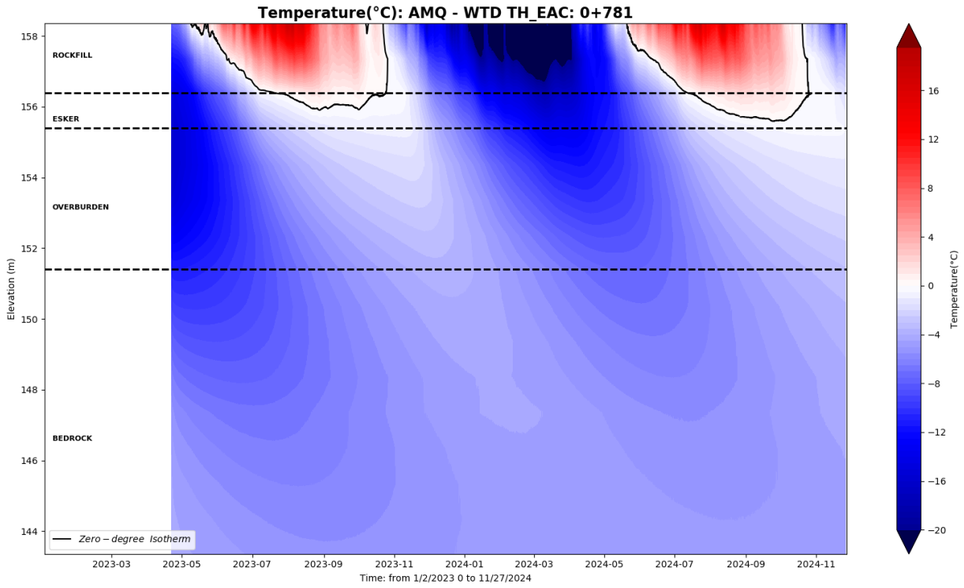

NEW 2023
NEW 2023
NEW 2023

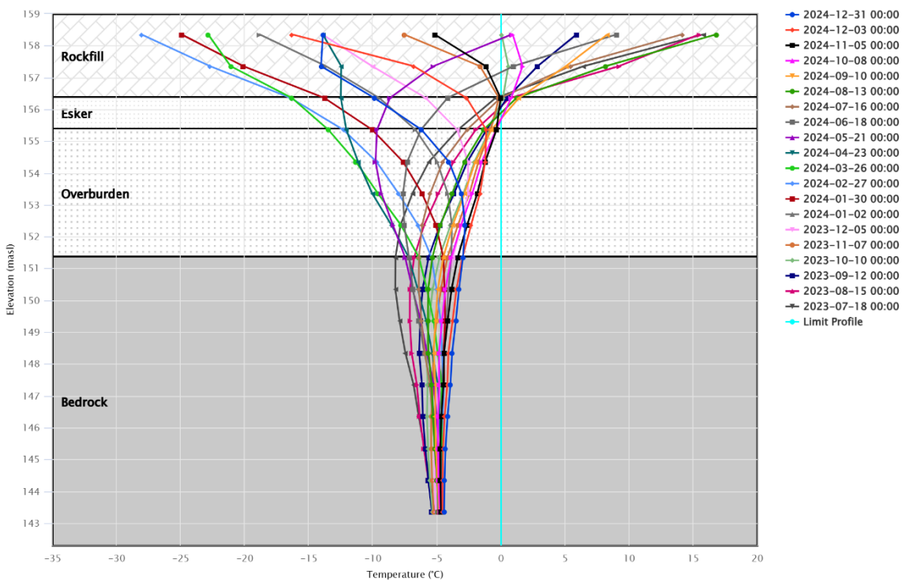

Temperature(°C): AMQ - WTD TH_WAC: 0+130
ROCKFILL
OVERBURDEN
BEDROCK
Elevation (m)
158
156
154
152
150
148
146
Zero – degree Isotherm
2023-03
2023-05
2023-07
2023-09
2023-11
2024-01
2024-03
2024-05
2024-07
2024-09
2024-11
Time: from 1/2/2023 0 to 11/28/2024
Temperature(°C)
16
12
8
4
0
−4
−8
−12
−16
−20


AMQ – WTD TH_WAC: 0+130
Rockfill
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

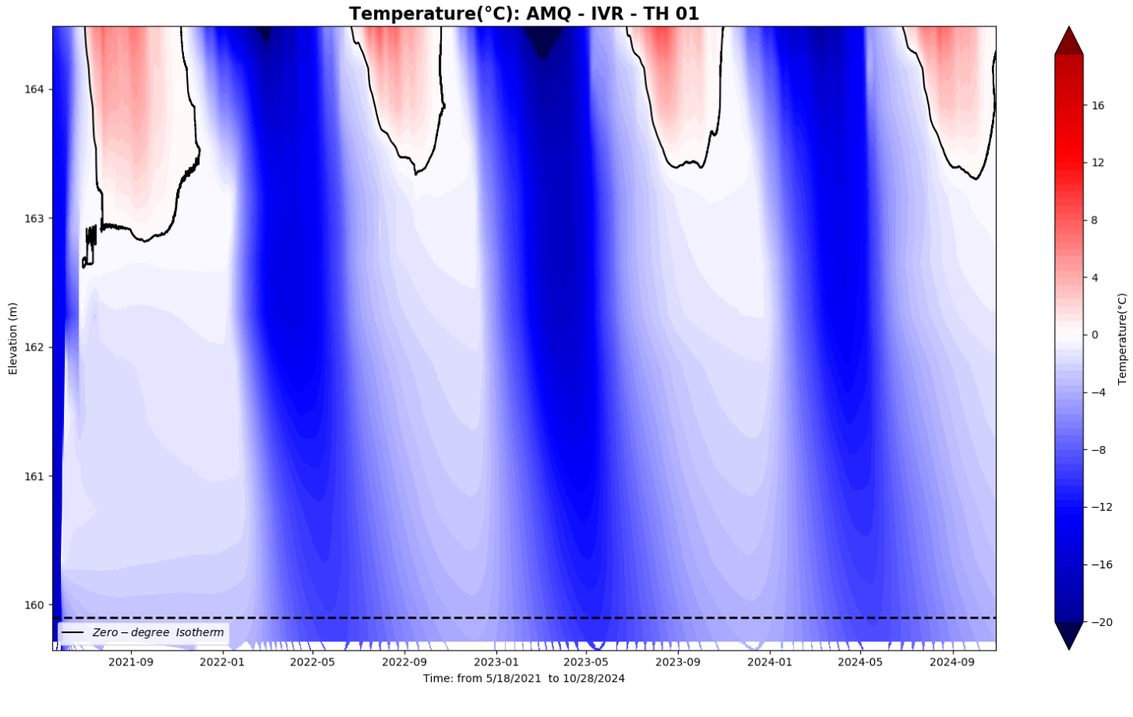
WTD EAC 0+781


NEW 2023
NEW 2023
NEW 2023
TH-WTD TH_EAC:0+781
Flow Path - A
Flow Path - B
Flow Path - C
Seepage Path - Frost Wedge/Ice
WTD Western Pit
WTS_US_Pit
TH-LAKE_US_0+276

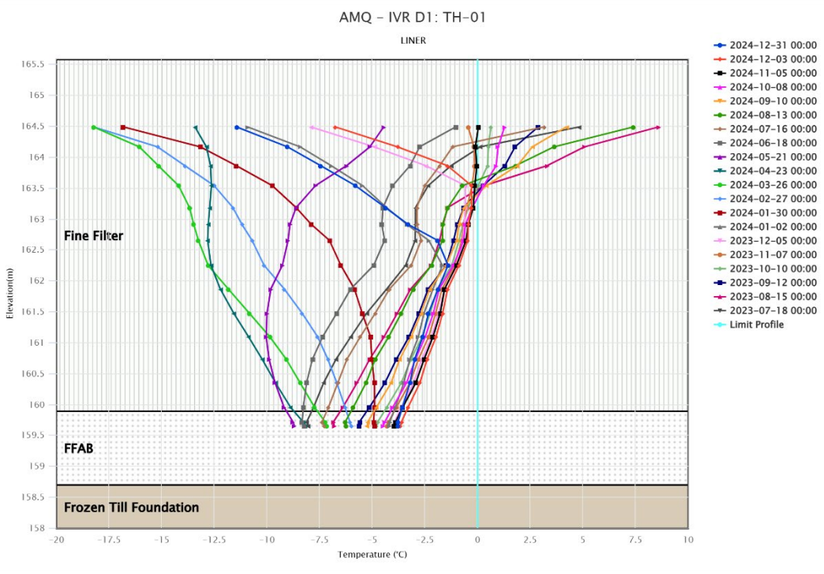

Temperature(°C): AMQ - WTD TH_EAC: 0+781
ROCKFILL
ESKER
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 1/2/2023 0 to 11/27/2024
Temperature(°C)

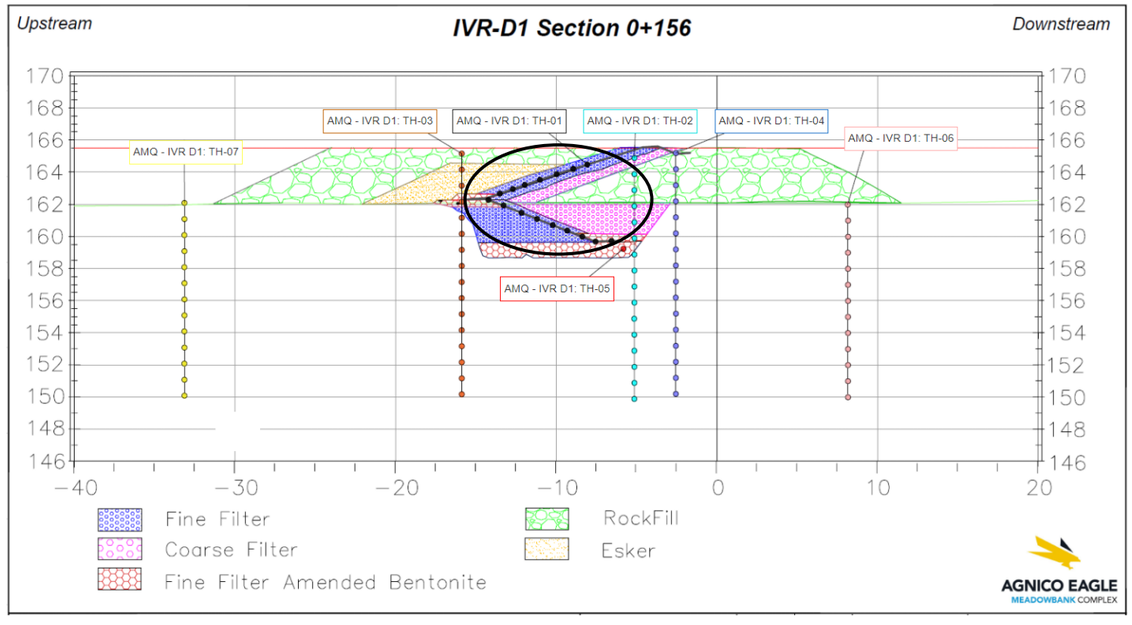

AMQ – WTD TH_EAC: 0+781
Rockfill
Esker
Overburden
Bedrock
Elevation (masl)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

IVR-D1-TH1



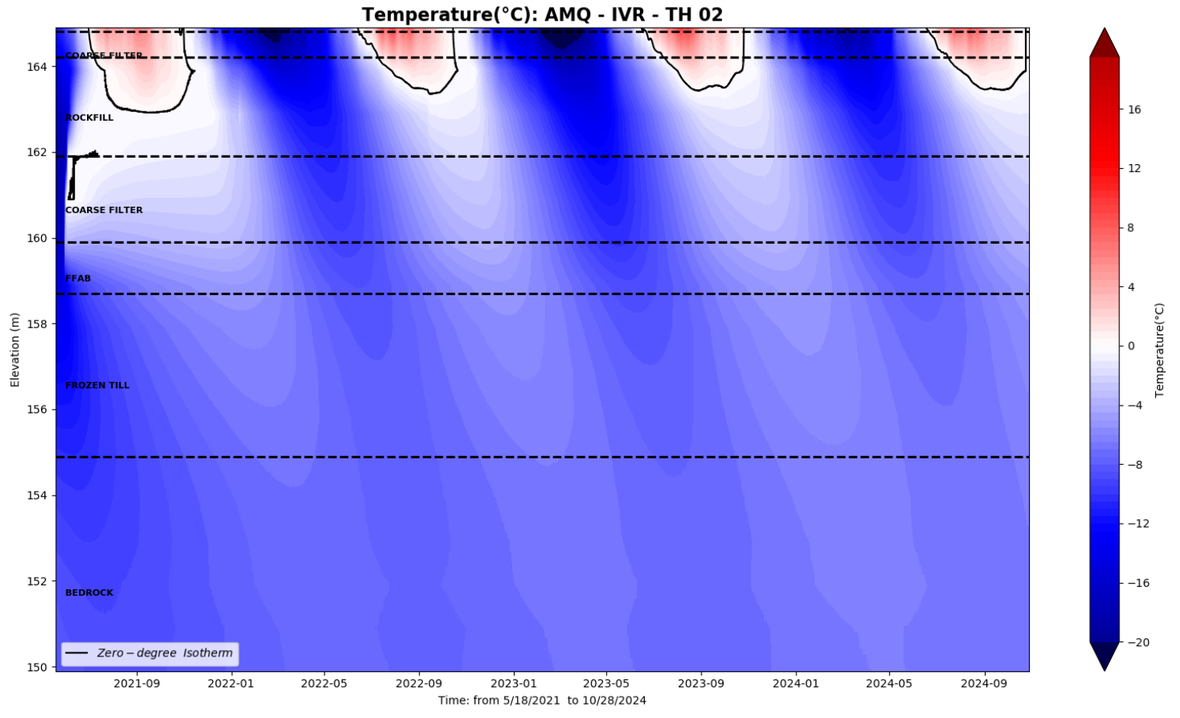
Time: from 5/18/2021 to 10/28/2024

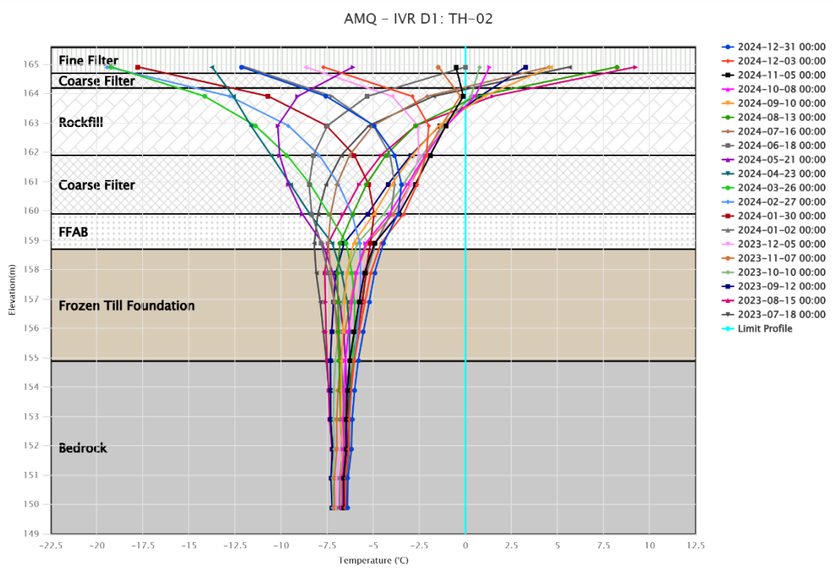


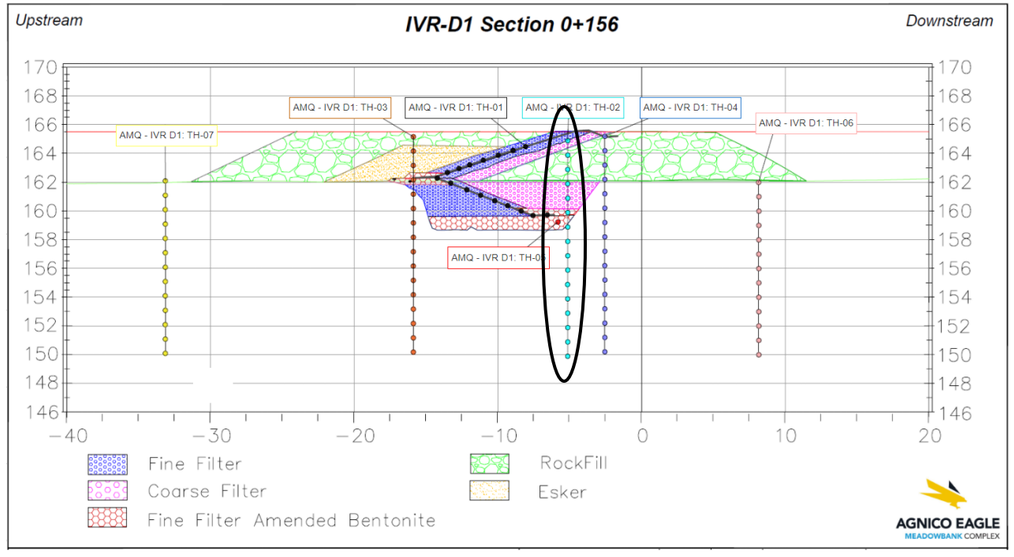


IVR-D1-TH2


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

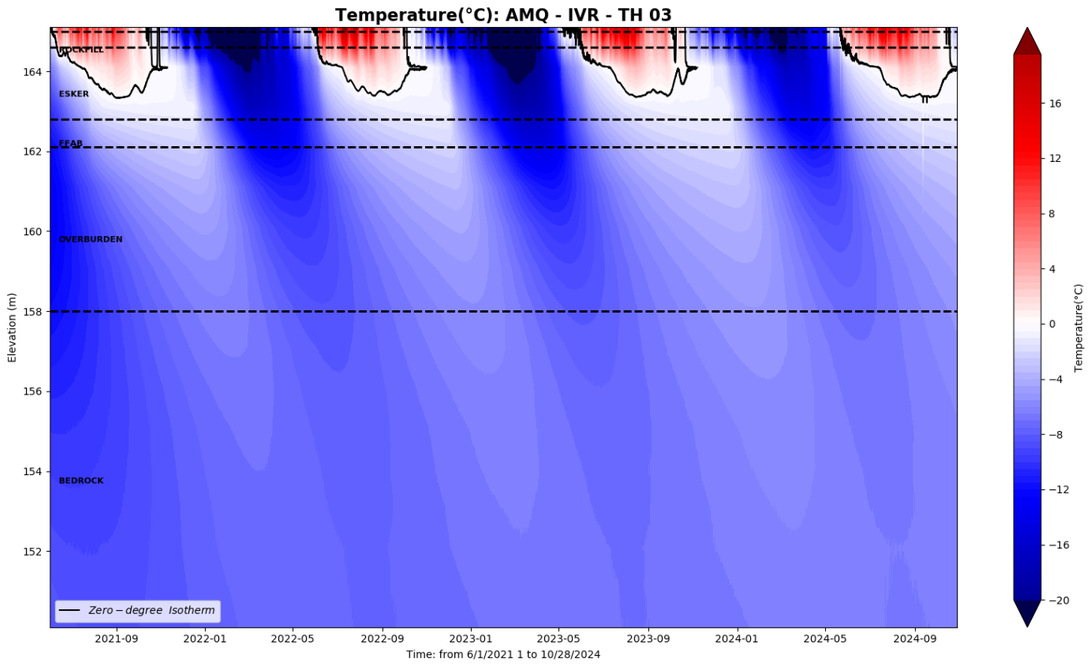

Temperature(°C): AMQ - IVR - TH 02
COARSE FILTER
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 5/18/2021 to 10/28/2024

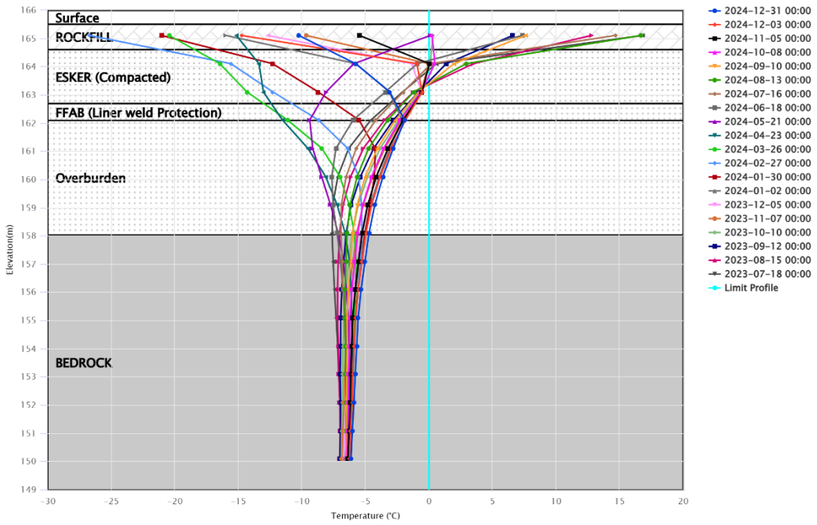

AMQ – IVR D1: TH–02
Fine Filter
Coarse Filter
Rockfill
Coarse Filter
FFAB
Frozen Till Foundation
Bedrock
Elevation(m)
Temperature (°C)
2024–12–31 00:00
2024–12–03 00:00
2024–11–05 00:00
2024–10–08 00:00
2024–09–10 00:00
2024–08–13 00:00
2024–07–16 00:00
2024–06–18 00:00
2024–05–21 00:00
2024–04–23 00:00
2024–03–26 00:00
2024–02–27 00:00
2024–01–30 00:00
2024–01–02 00:00
2023–12–05 00:00
2023–11–07 00:00
2023–10–10 00:00
2023–09–12 00:00
2023–08–15 00:00
2023–07–18 00:00
Limit Profile

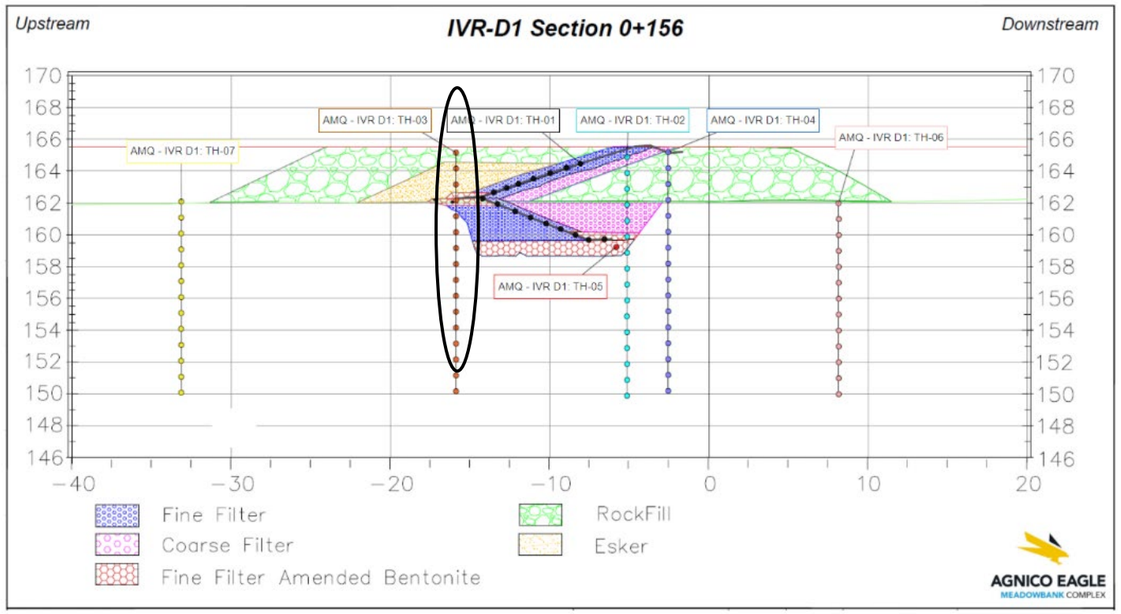

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH3


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

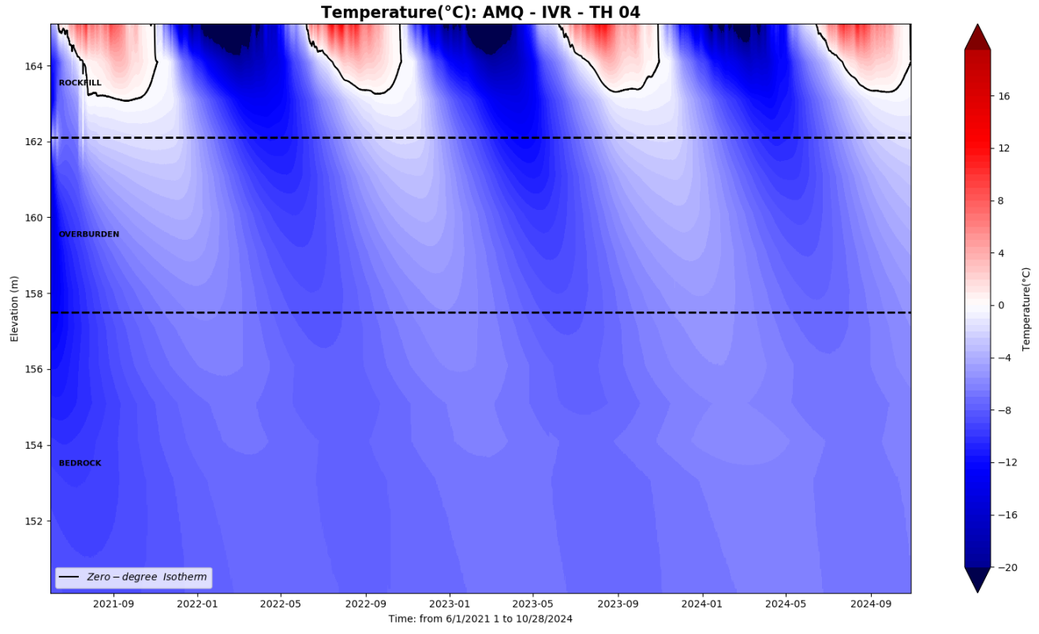

Temperature(°C): AMQ - IVR - TH 03
ROCKFILL
ESKER
CFAB
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
2021-09
2022-01
2022-05
2022-09
2023-01
2023-05
2023-09
2024-01
2024-05
2024-09
Time: from 6/1/2021 1 to 10/28/2024

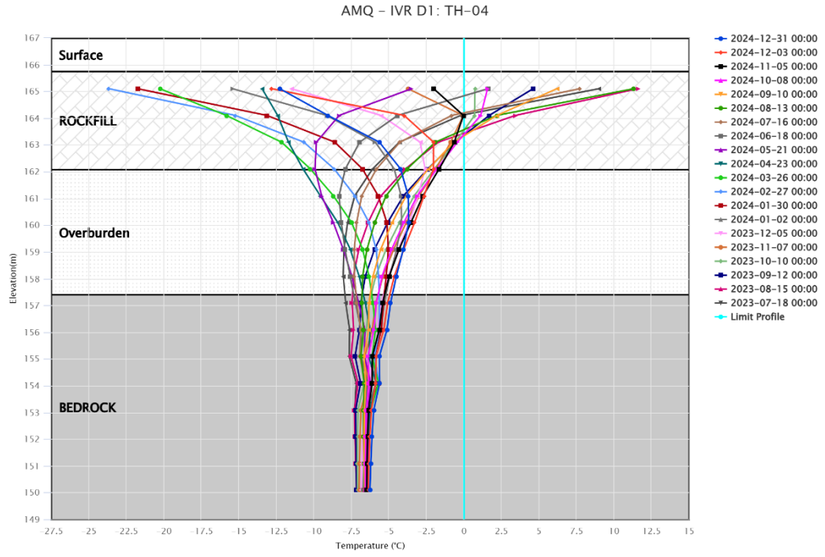

AMQ – IVR D1: TH-03
Surface
ROCKFILL
ESKER (Compacted)
FFAB (Liner weld Protection)
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

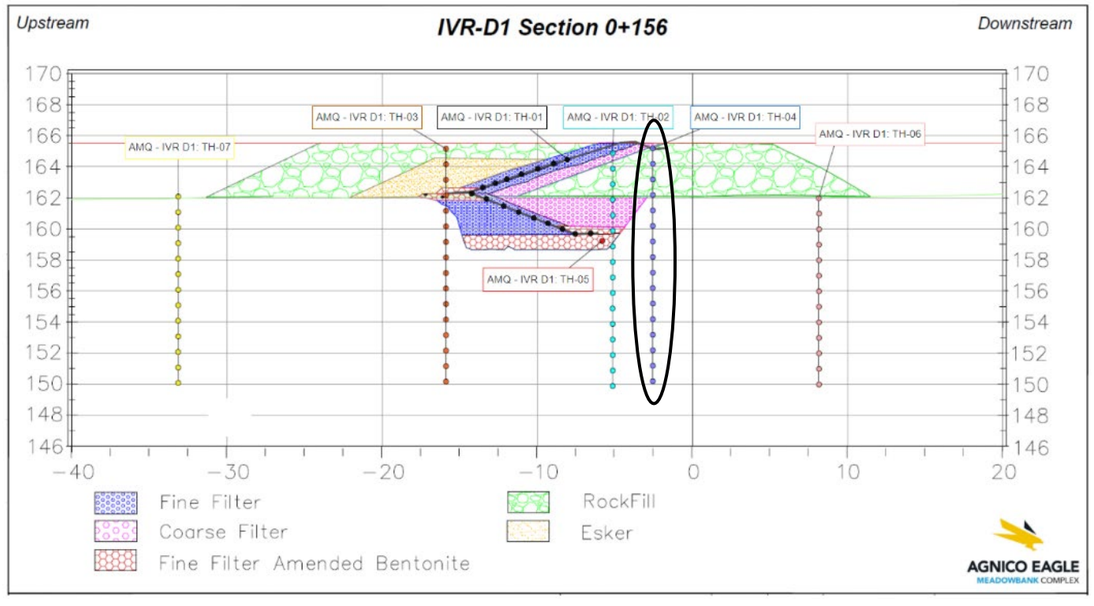

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH4

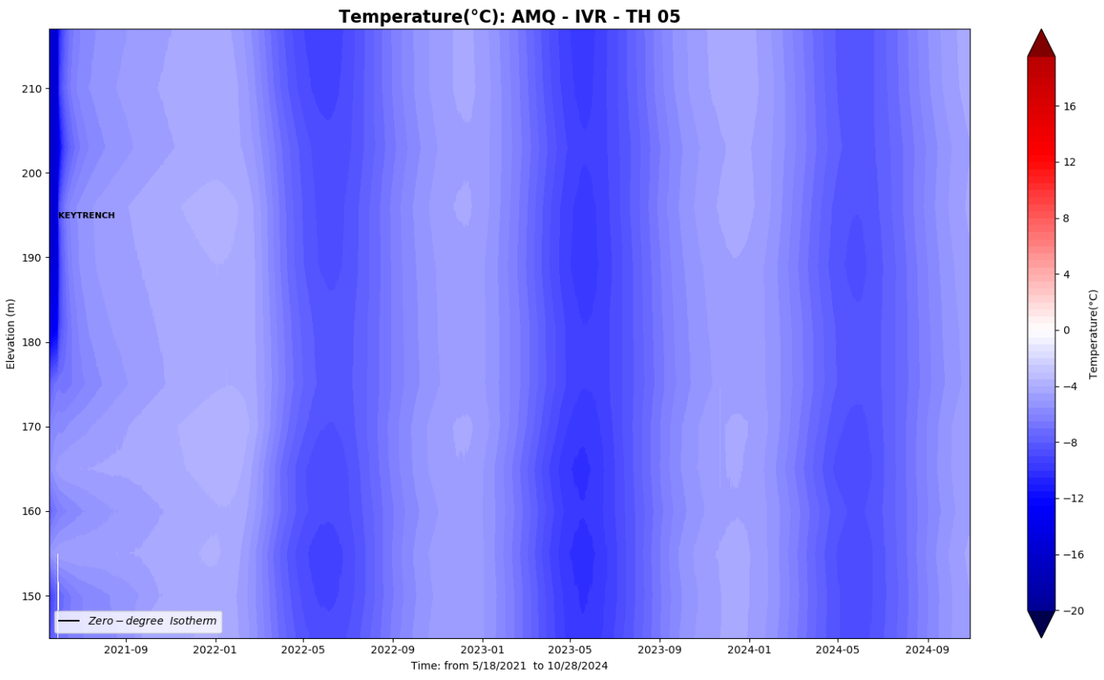

0+030
0+020
0+000
0+100
0+020
0+040
0+054
IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+200
0+300

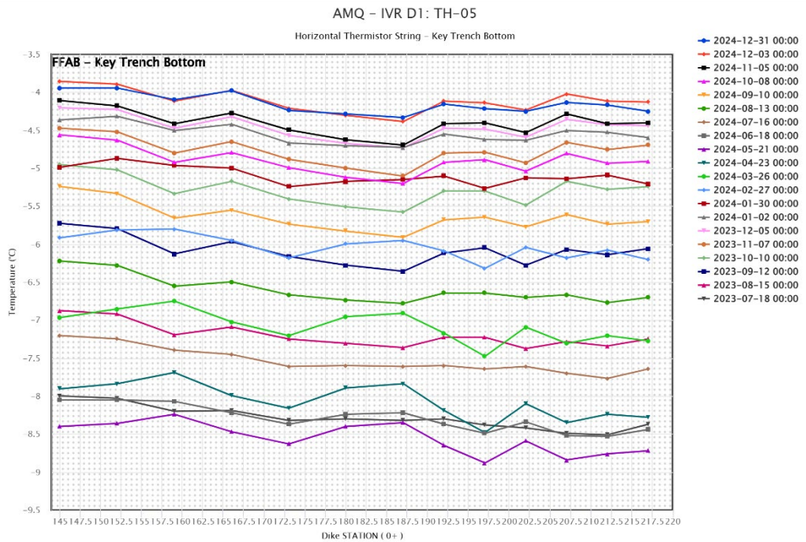

Temperature(°C): AMQ - IVR - TH 04
ROCKFILL
OVERBURDEN
BEDROCK
Elevation (m)
Zero – degree Isotherm
Time: from 6/1/2021 1 to 10/28/2024
Temperature(°C)


AMQ – IVR D1: TH-04
Surface
ROCKFILL
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

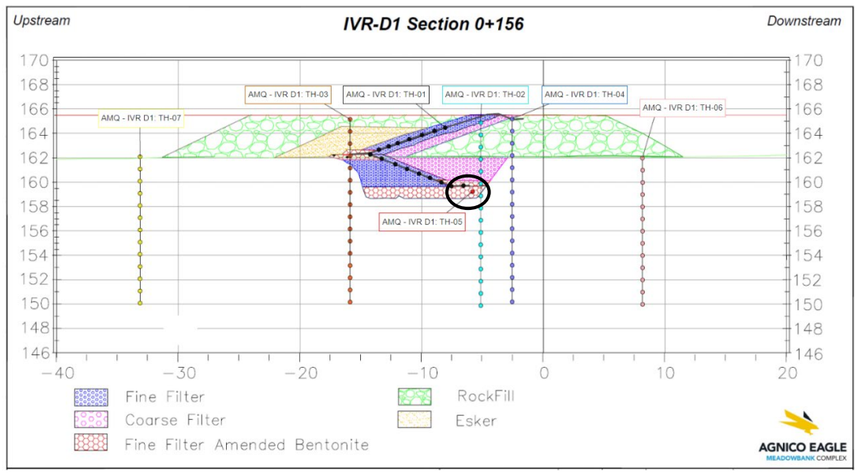

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH5



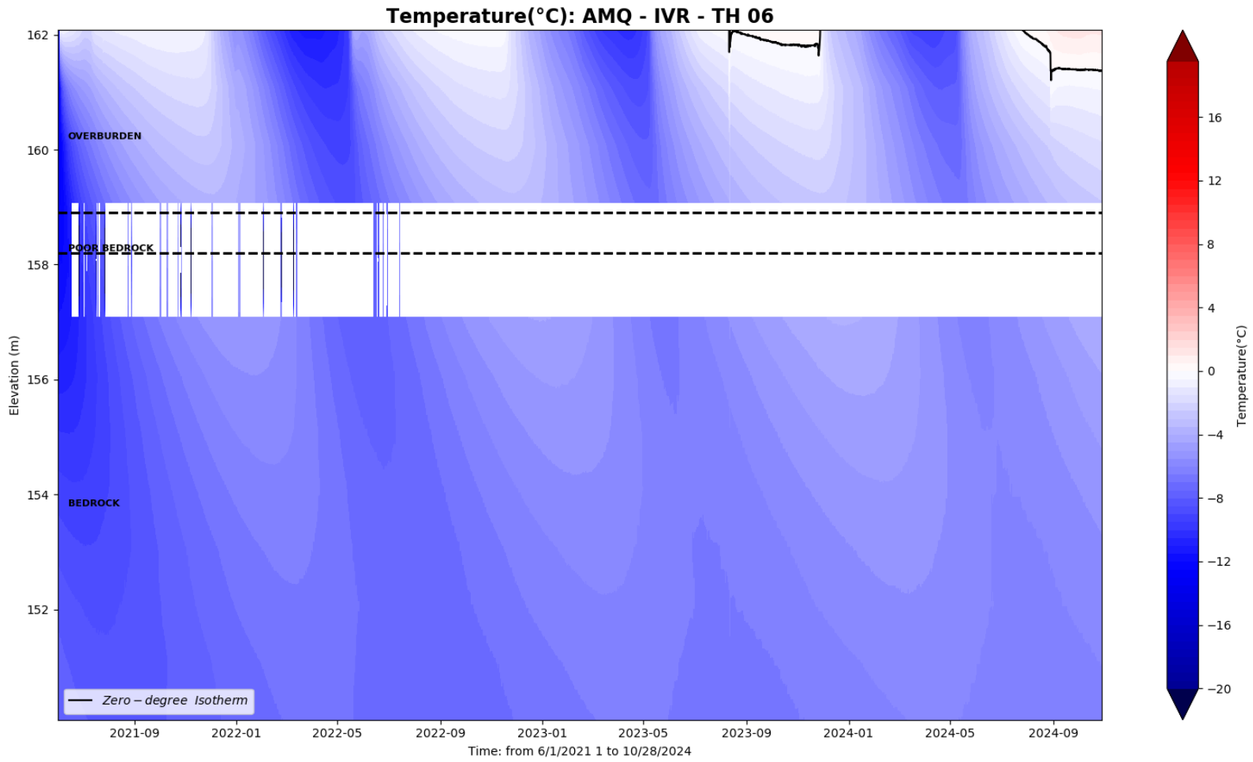


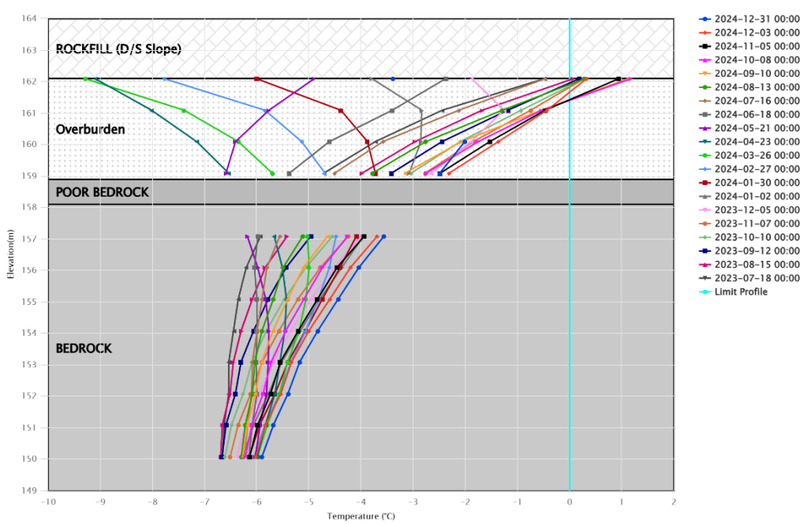
NOTE: This TH is horizontal and in Keytrench and must be reflected this way when reading the thermal graph

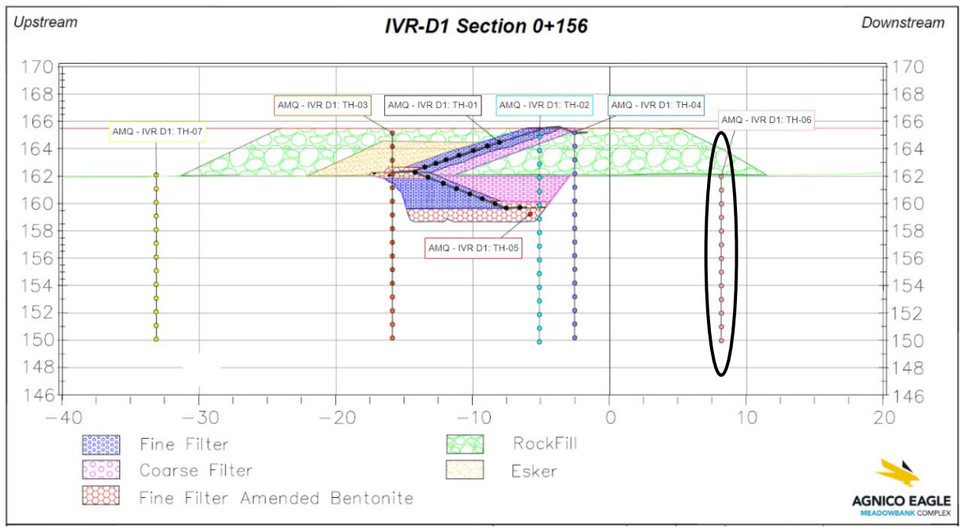


IVR-D1-TH6


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

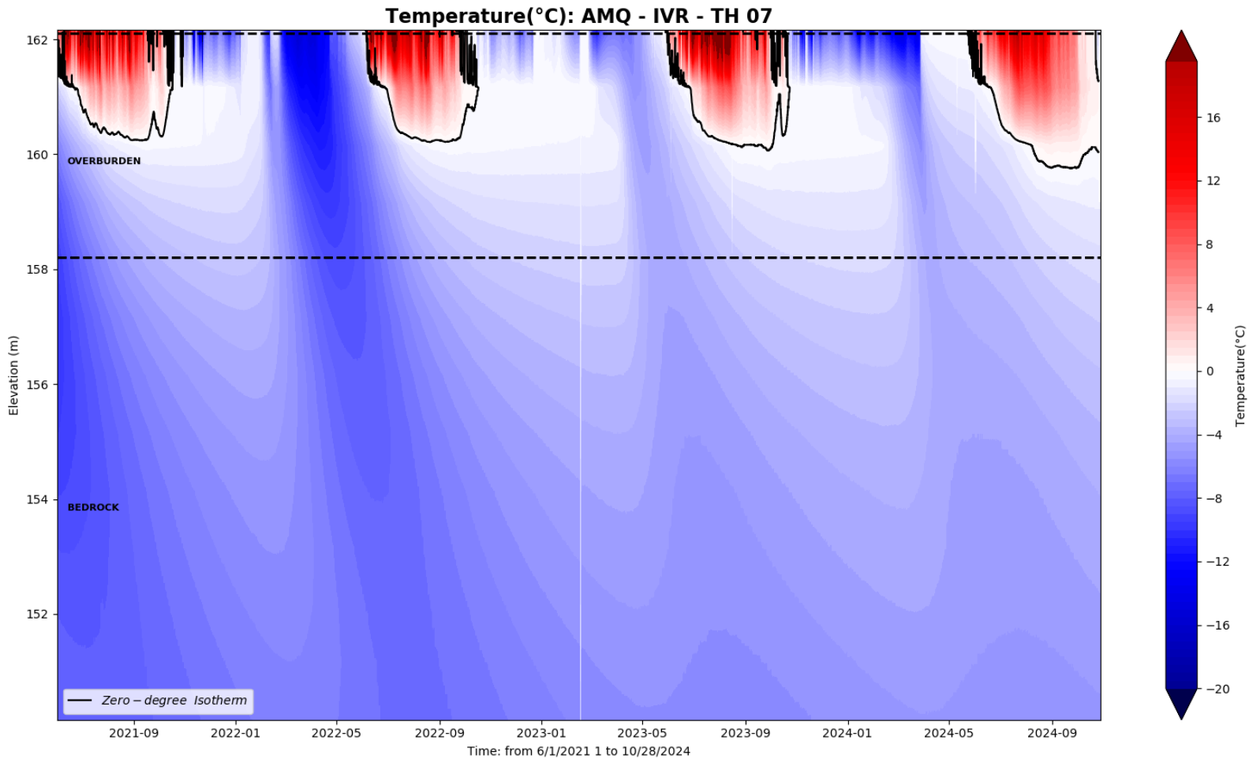

Temperature(°C): AMQ - IVR - TH 06
OVERBURDEN
POOR BEDROCK
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 6/1/2021 1 to 10/28/2024

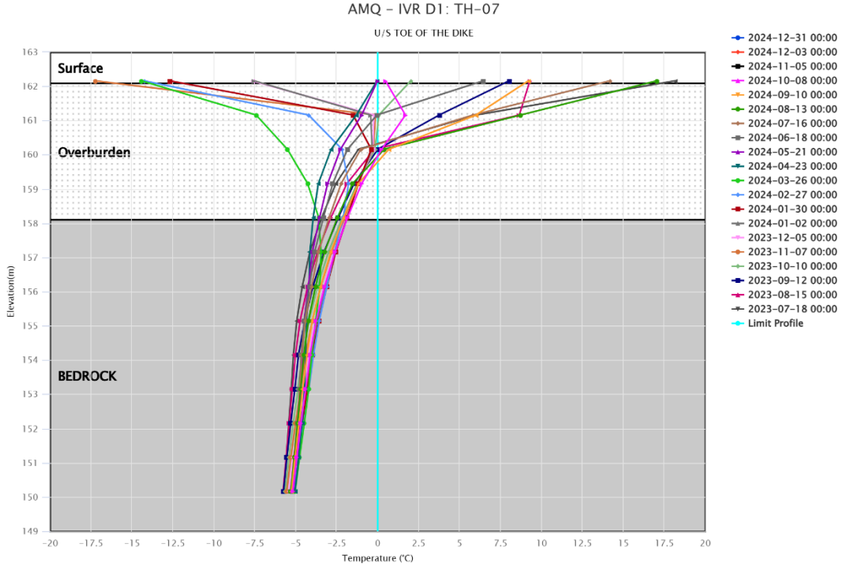

AMQ – IVR D1: TH–06
ROCKFILL (D/S Slope)
Overburden
POOR BEDROCK
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

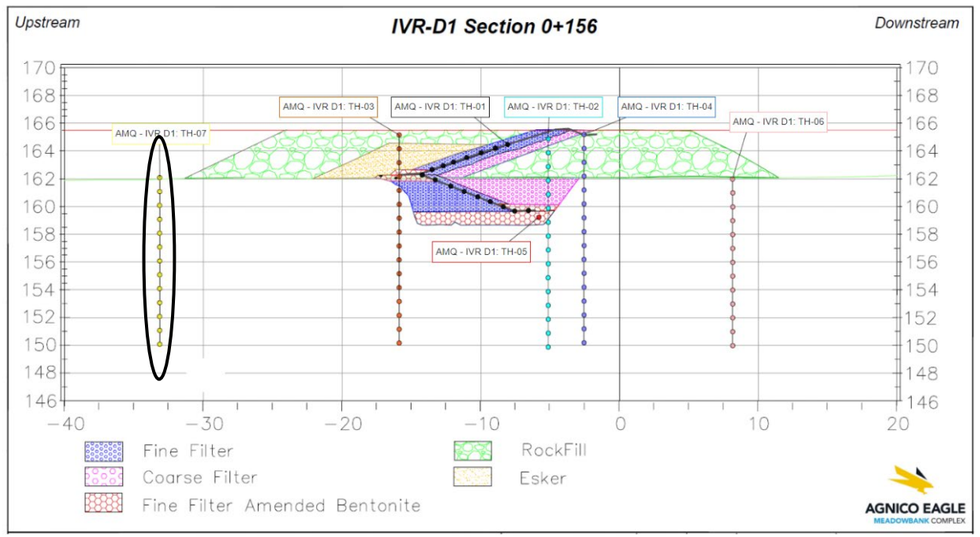

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

IVR-D1-TH7

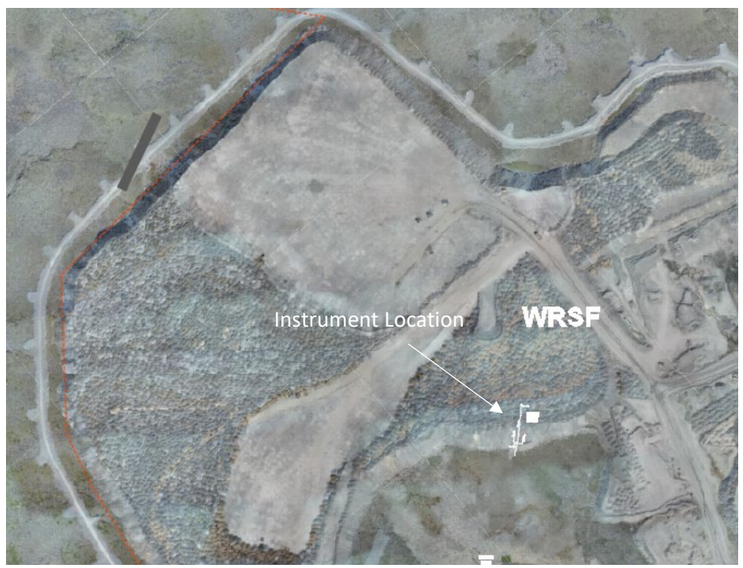

0+030
0+020
0+000
0+100
0+020
0+040
0+054
IVRD-TH-07
IVRD-TH-03
IVRD-TH-01 (liner)
IVRD-TH-02
IVRD-TH-04
IVRD-TH-05
(horizontal)
IVRD-TH-06
0+200
0+300


Temperature(°C): AMQ - IVR - TH 07
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature(°C)
Time: from 6/1/2021 1 to 10/28/2024

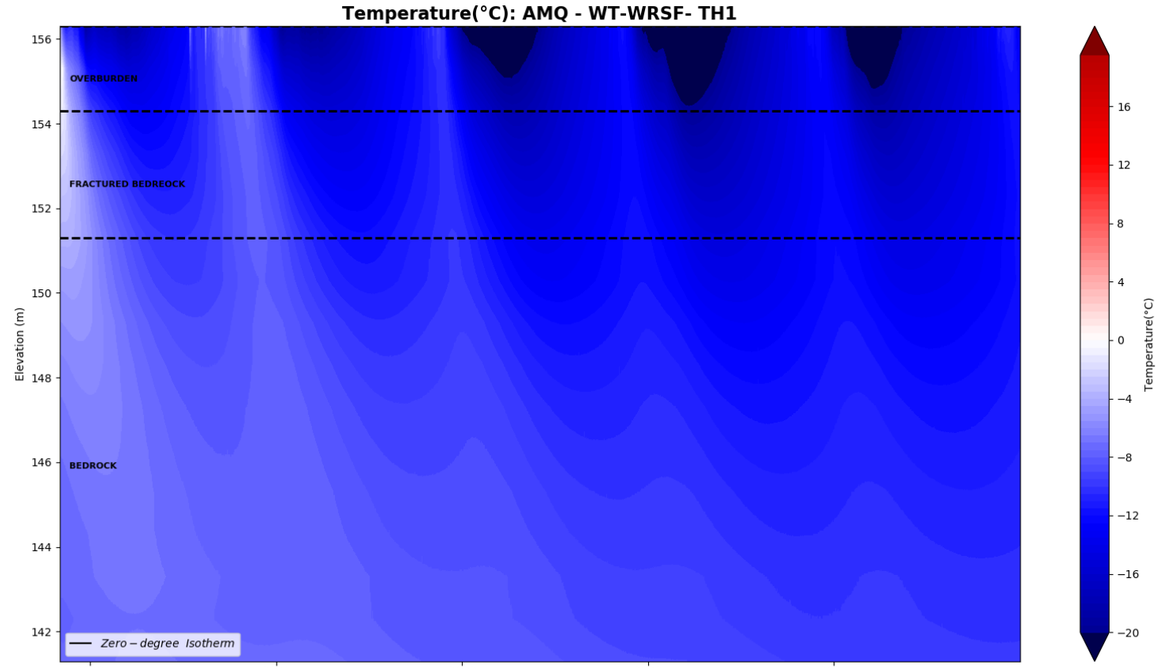

AMQ – IVR D1: TH-07
U/S TOE OF THE DIKE
Surface
Overburden
BEDROCK
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

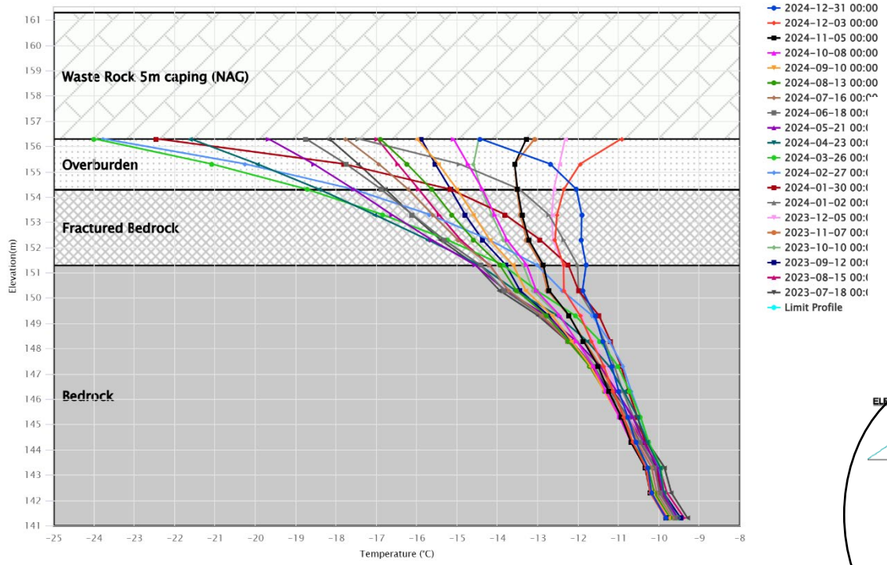

Upstream
IVR-D1 Section 0+156
Downstream
AMQ - IVR D1: TH-07
AMQ - IVR D1: TH-03
AMQ - IVR D1: TH-01
AMQ - IVR D1: TH-02
AMQ - IVR D1: TH-04
AMQ - IVR D1: TH-06
AMQ - IVR D1: TH-05
Fine Filter
Coarse Filter
Fine Filter Amended Bentonite
RockFill
Esker
AGNICO EAGLE
MEADOWBANK COMPLEX

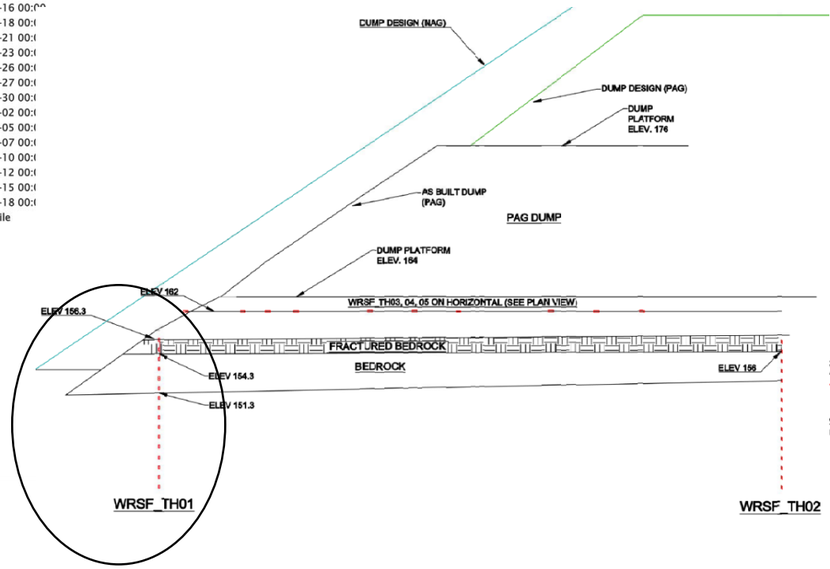
WT WRSF TH1

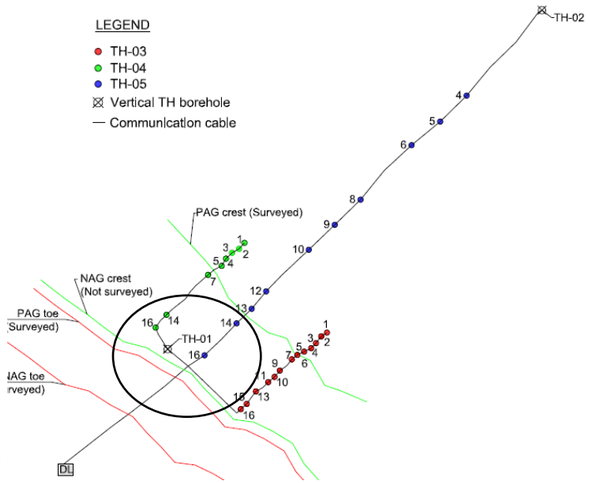


AMQ – WRSF – WT_TH_01

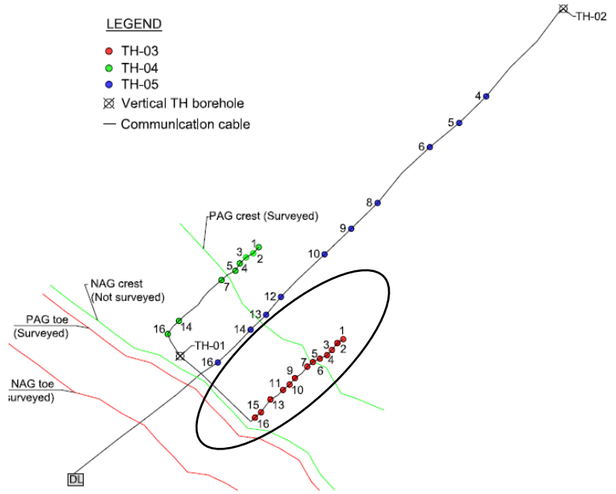


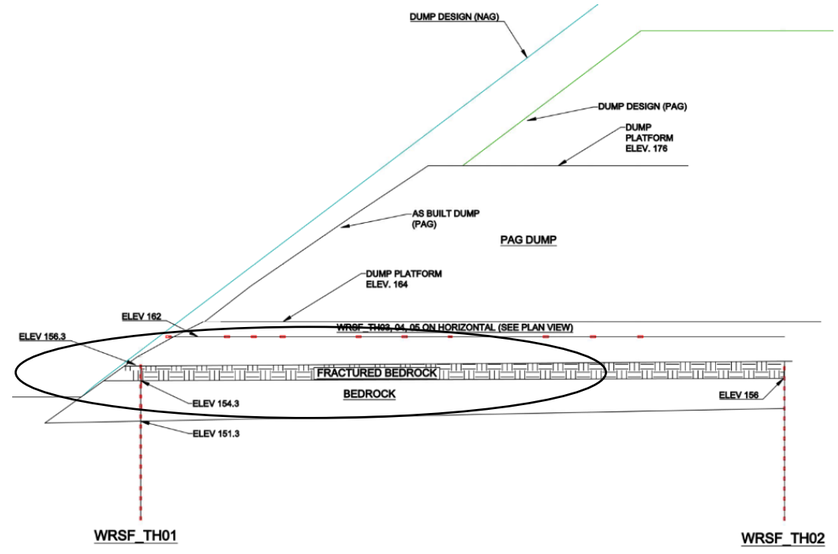






WT WRSF TH3

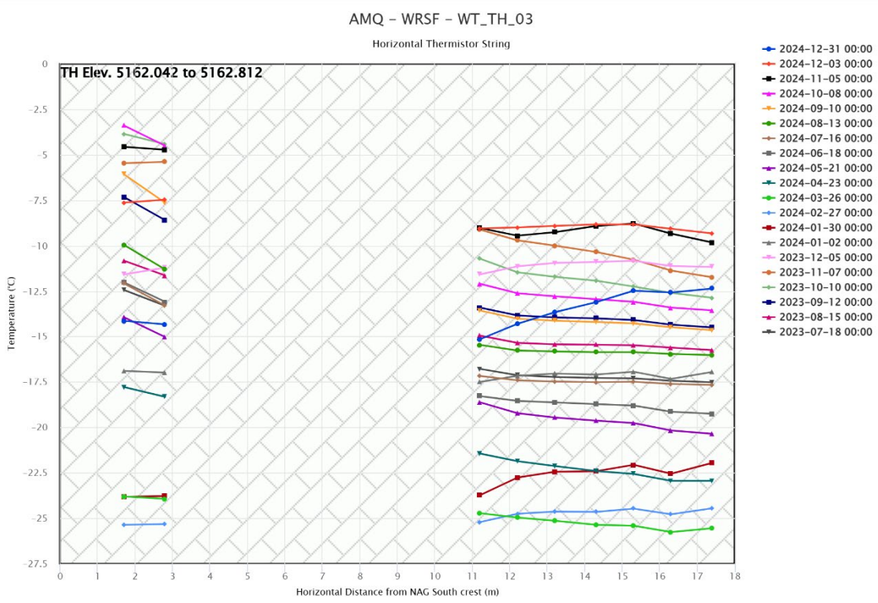




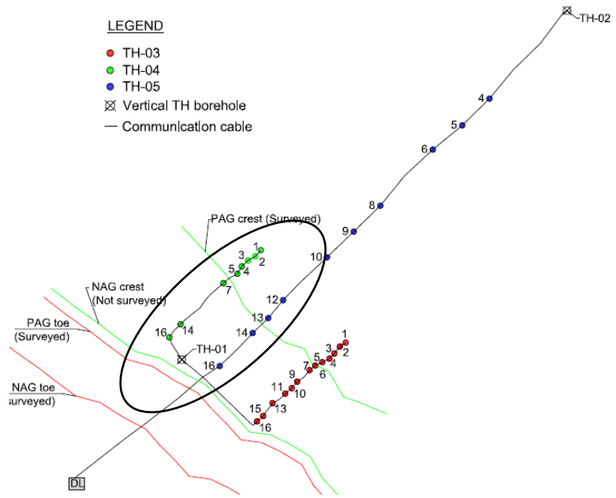
Thermistor in Waste Rock Elevation 162.042 to 162.812.

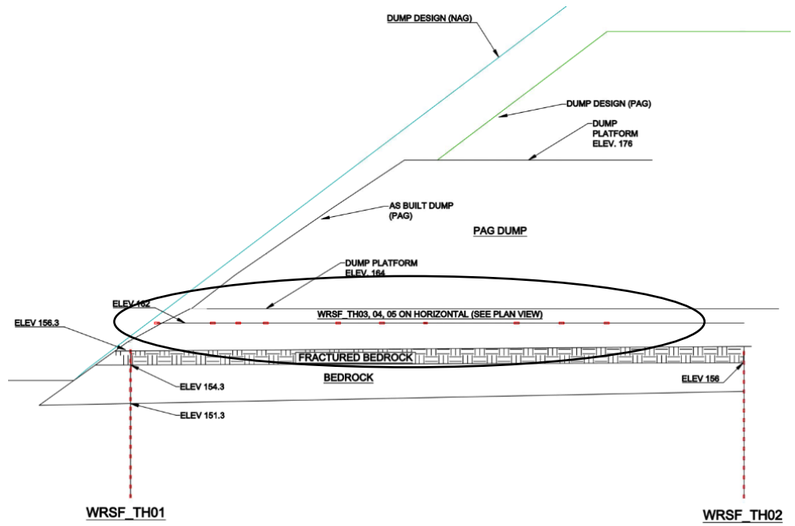
This instrument is installed horizontally and chart needs to be read accordingly

Beads 3 to 10 are not working



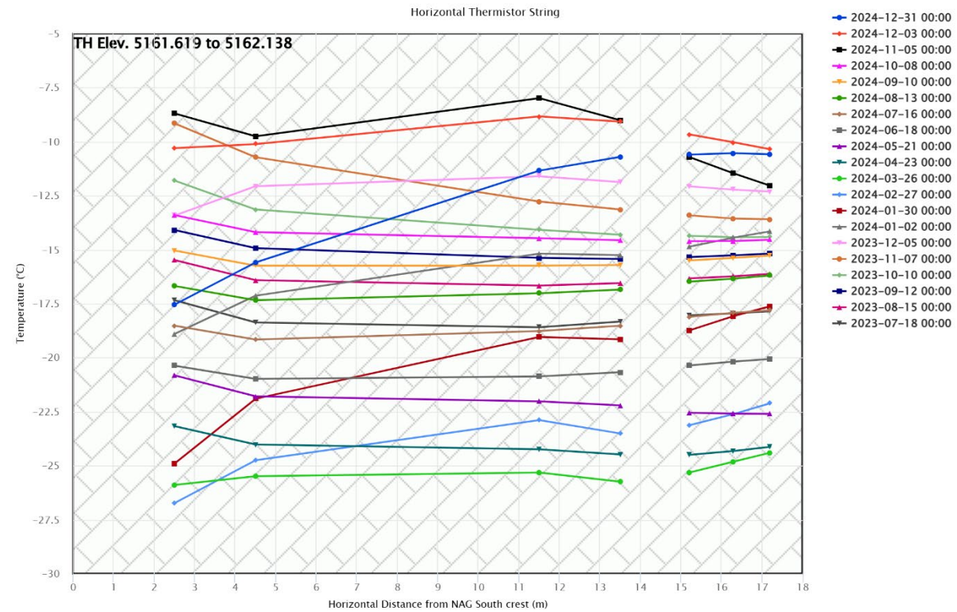
WT WRSF TH4



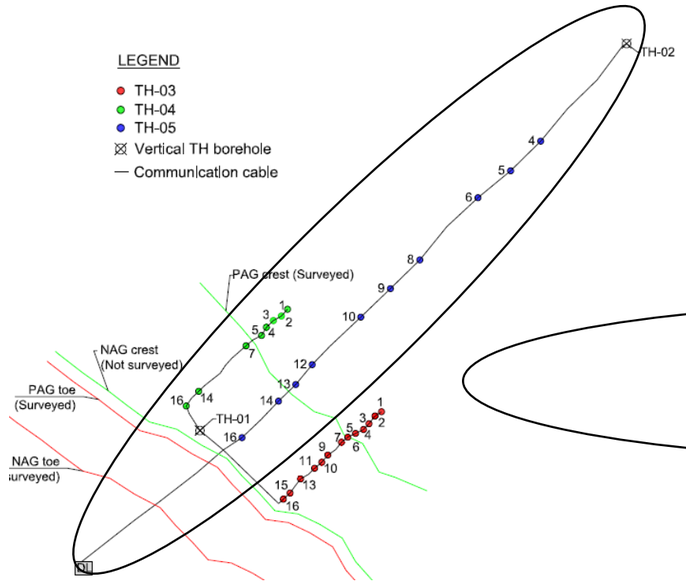


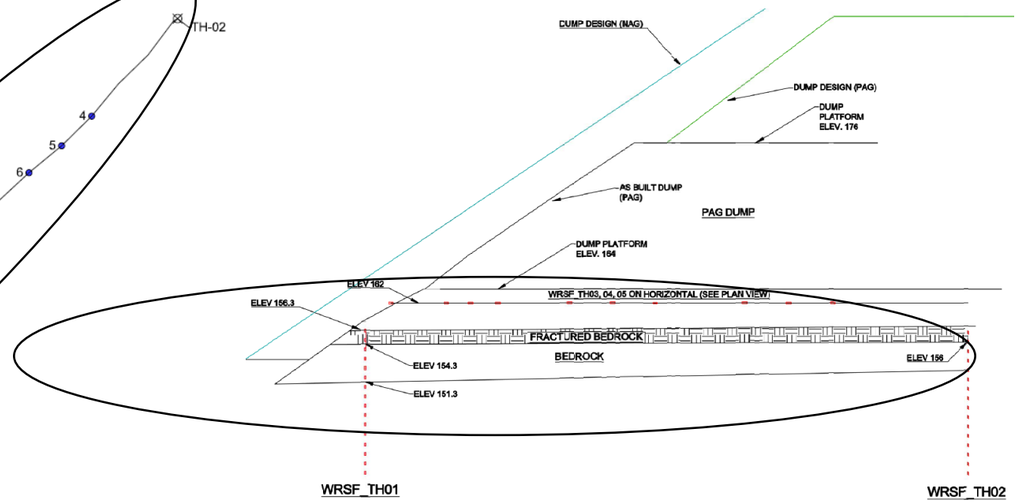
This instrument is installed horizontally and chart needs to be read accordingly

Beads 3 to 10 are not working

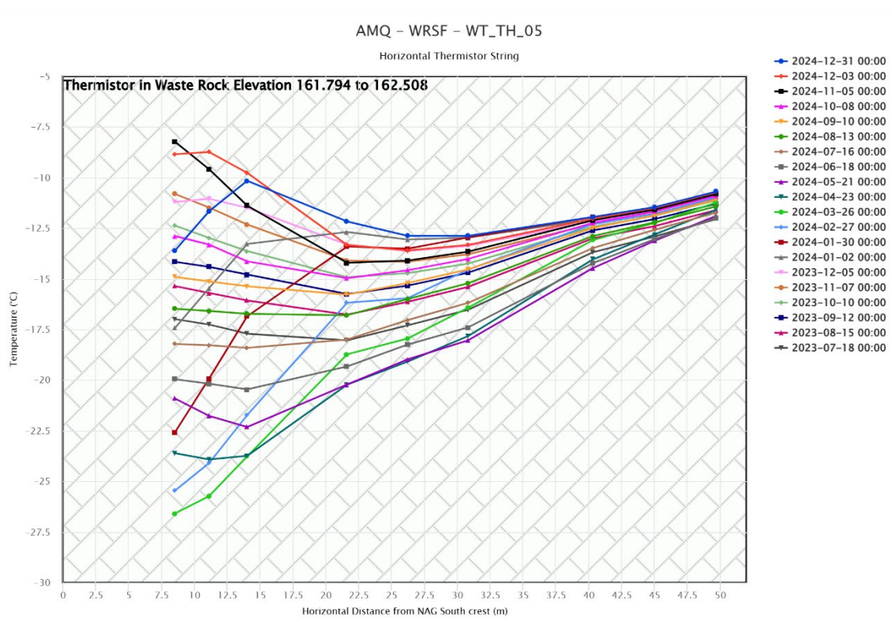


WT WRSF TH5

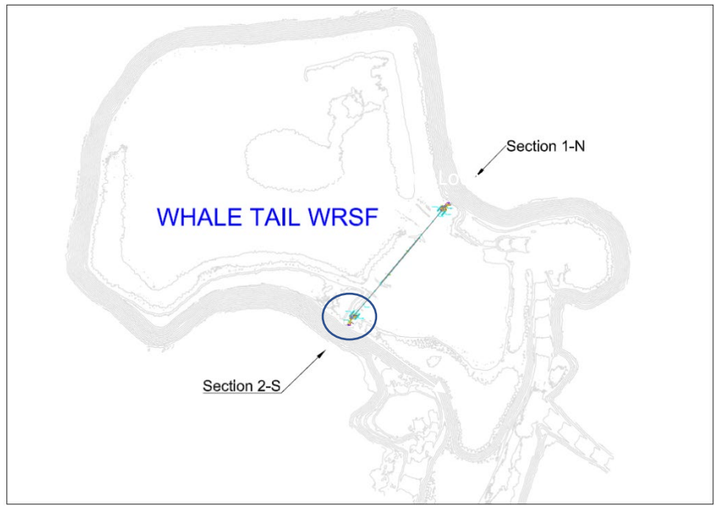


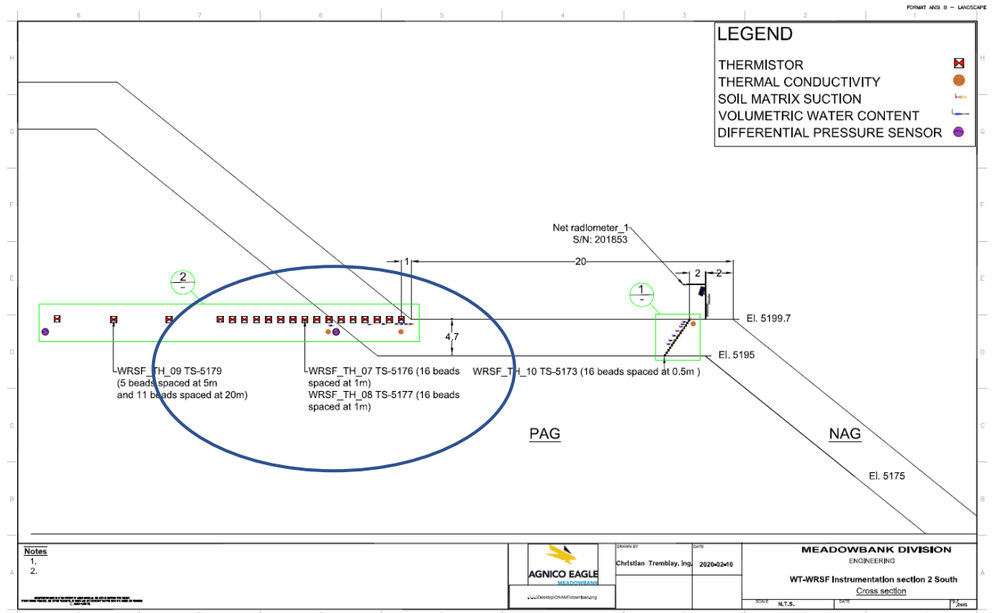


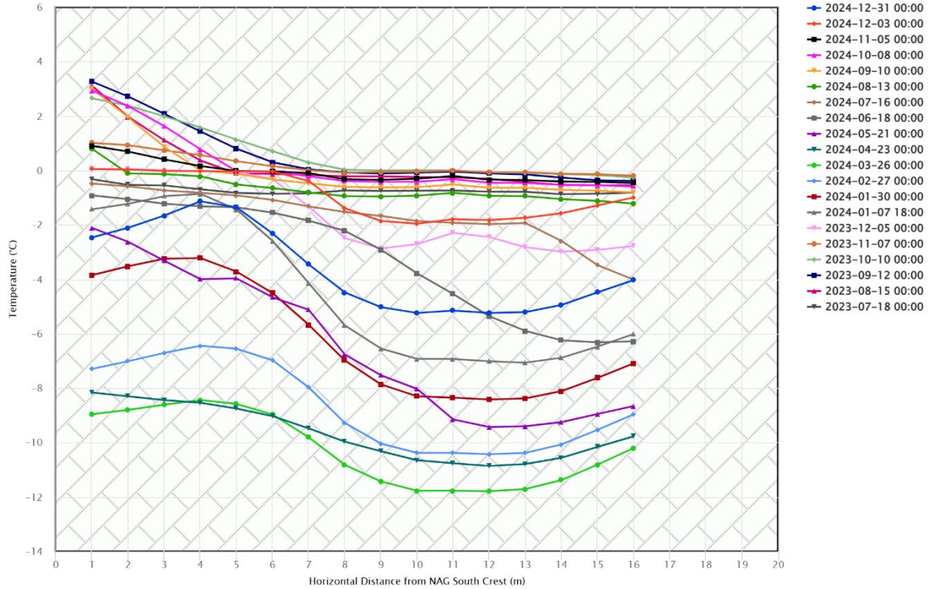
This instrument is installed horizontally and chart needs to be read accordingly



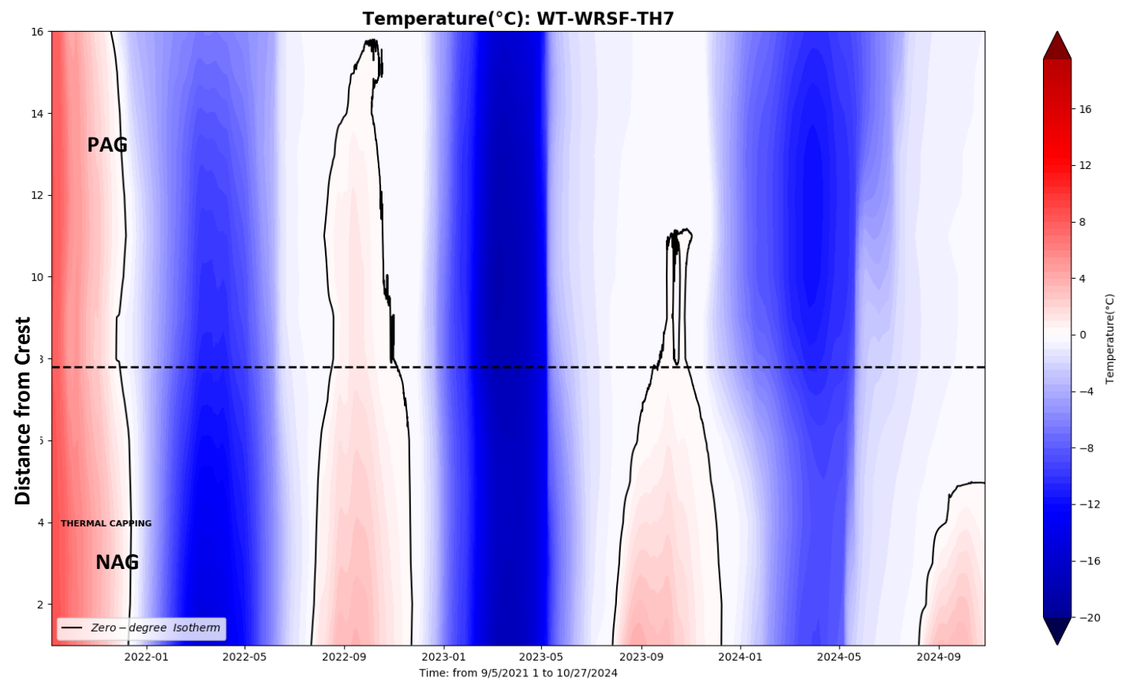
WT WRSF TH07





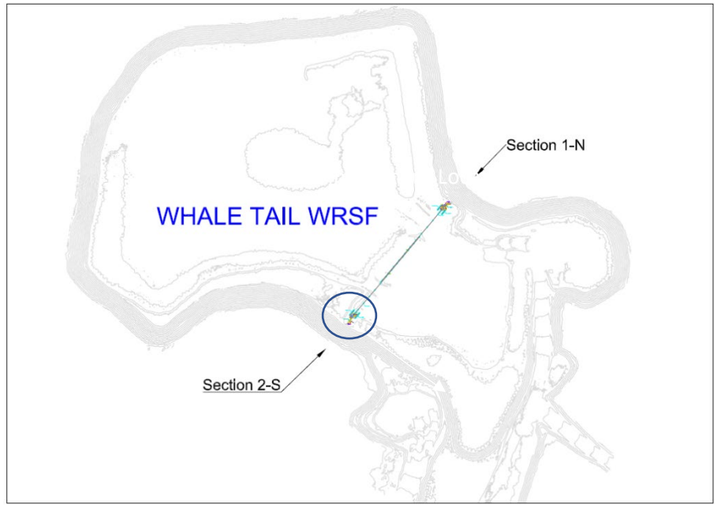


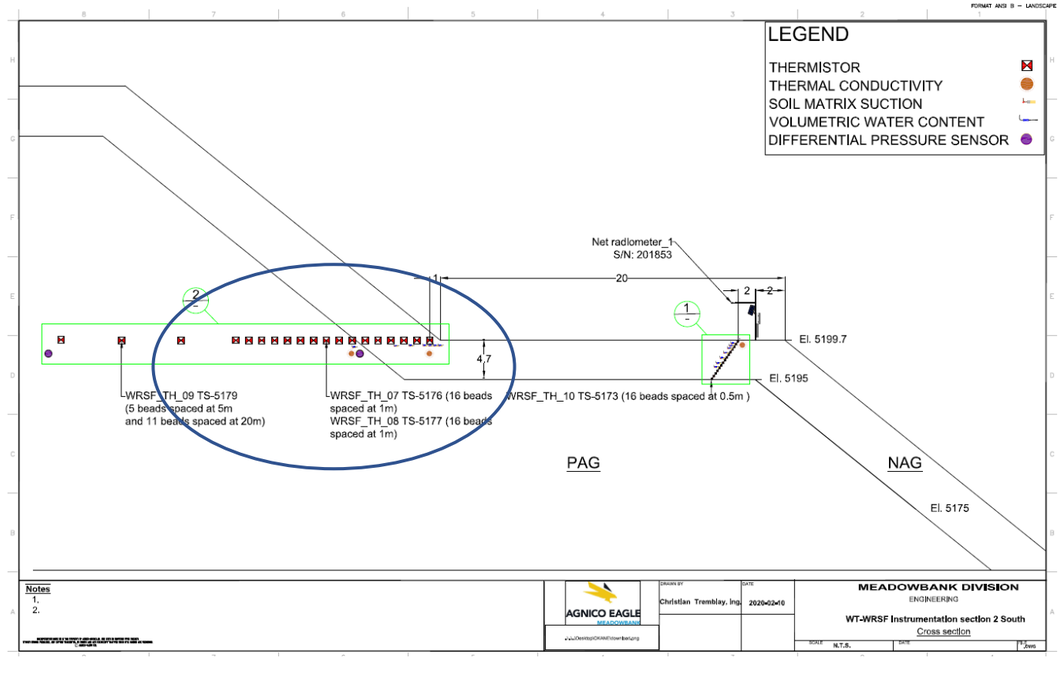
AMQ – WRSF – WT_TH_07

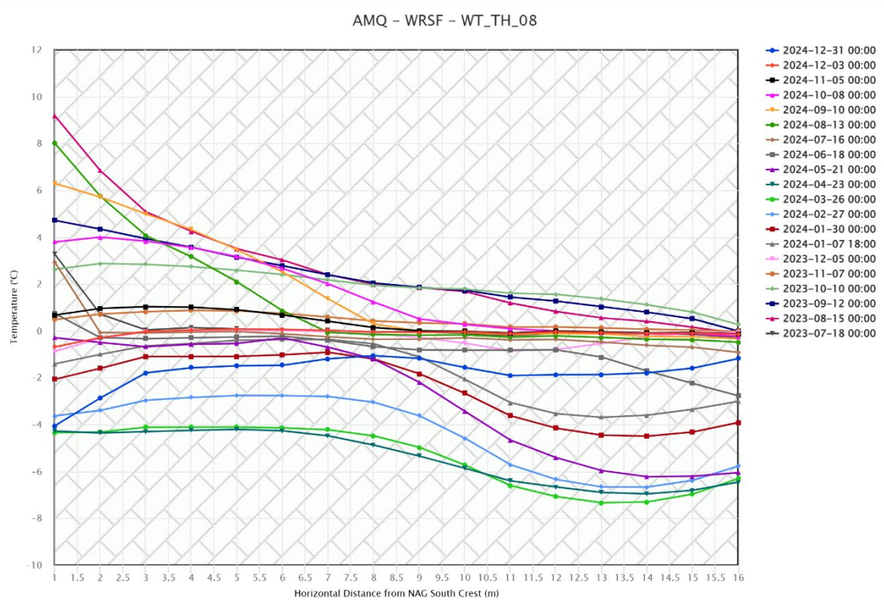


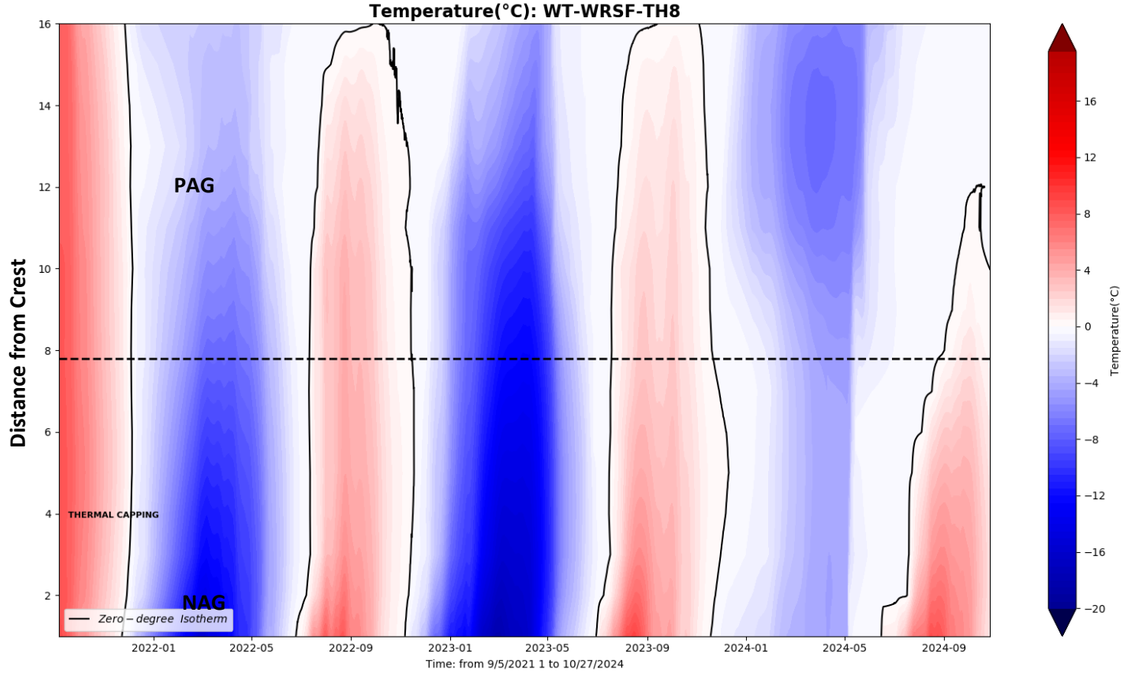
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH08



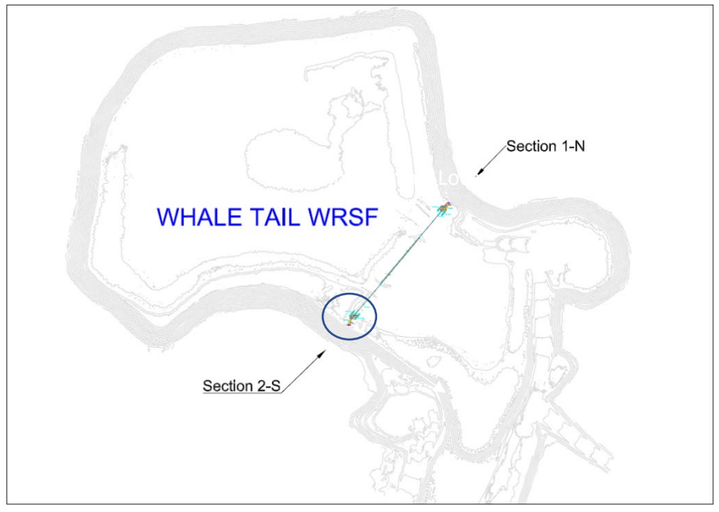


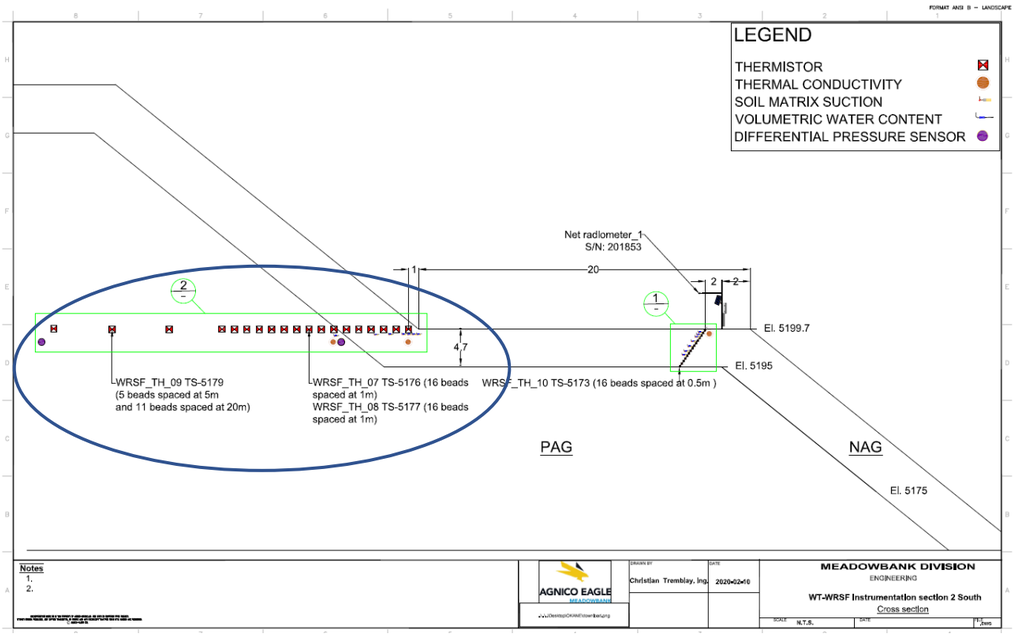


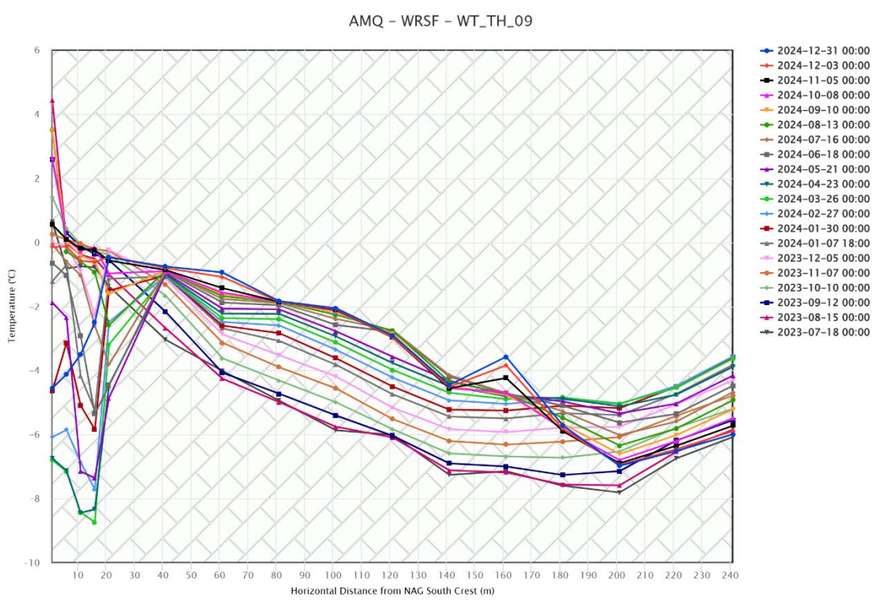


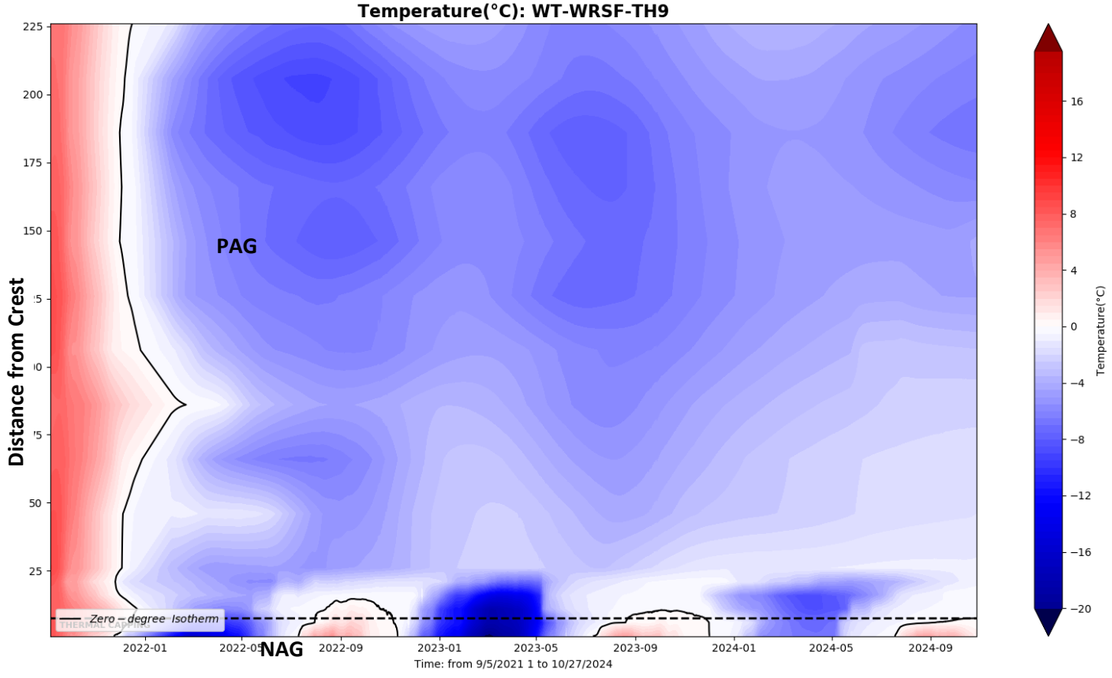
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH09



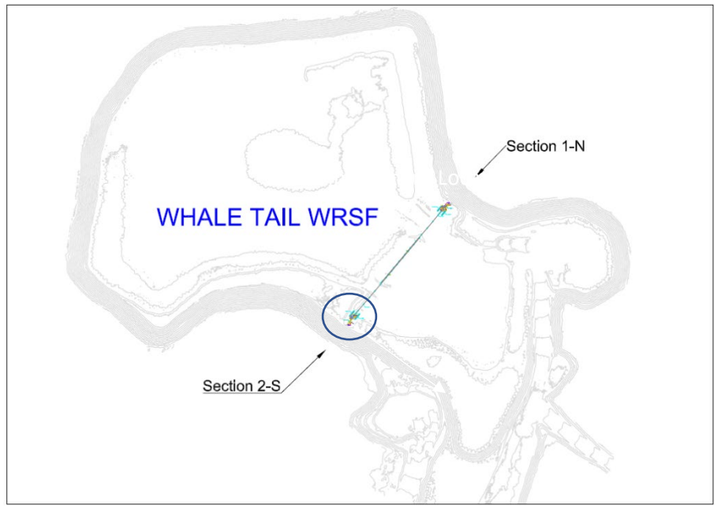


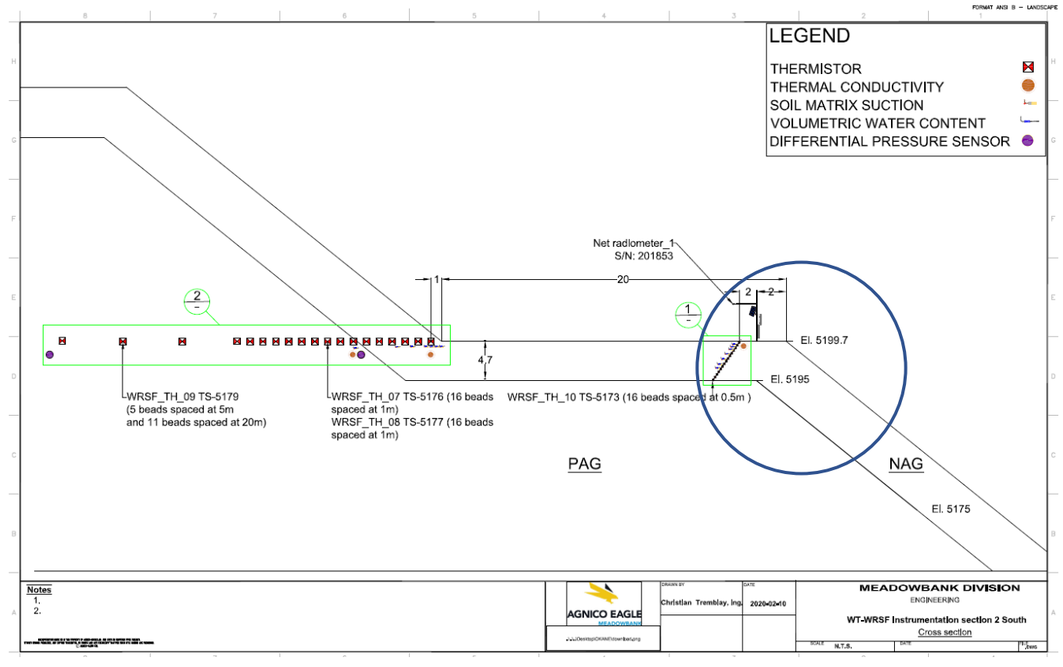


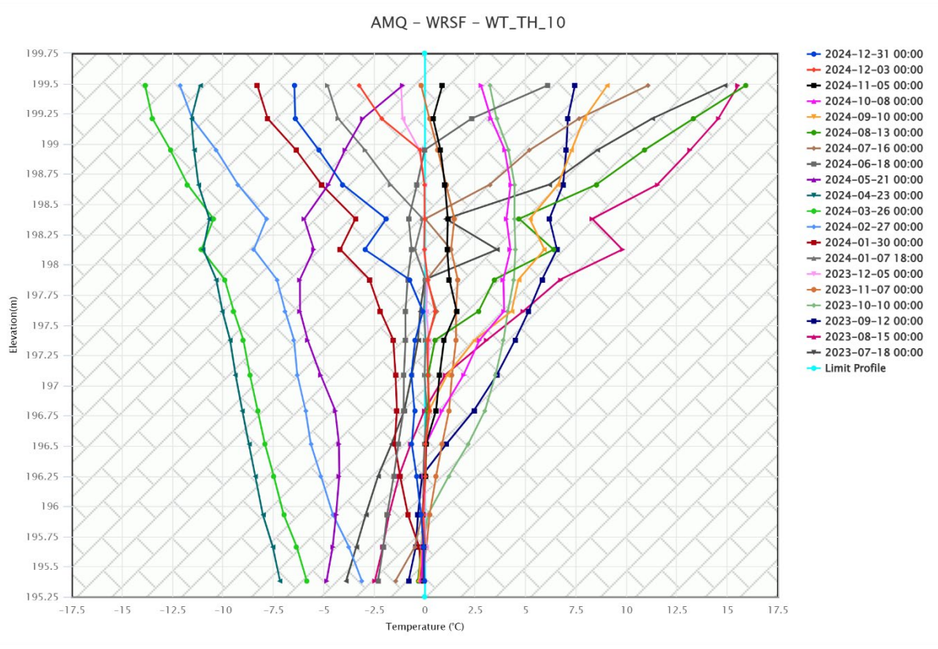


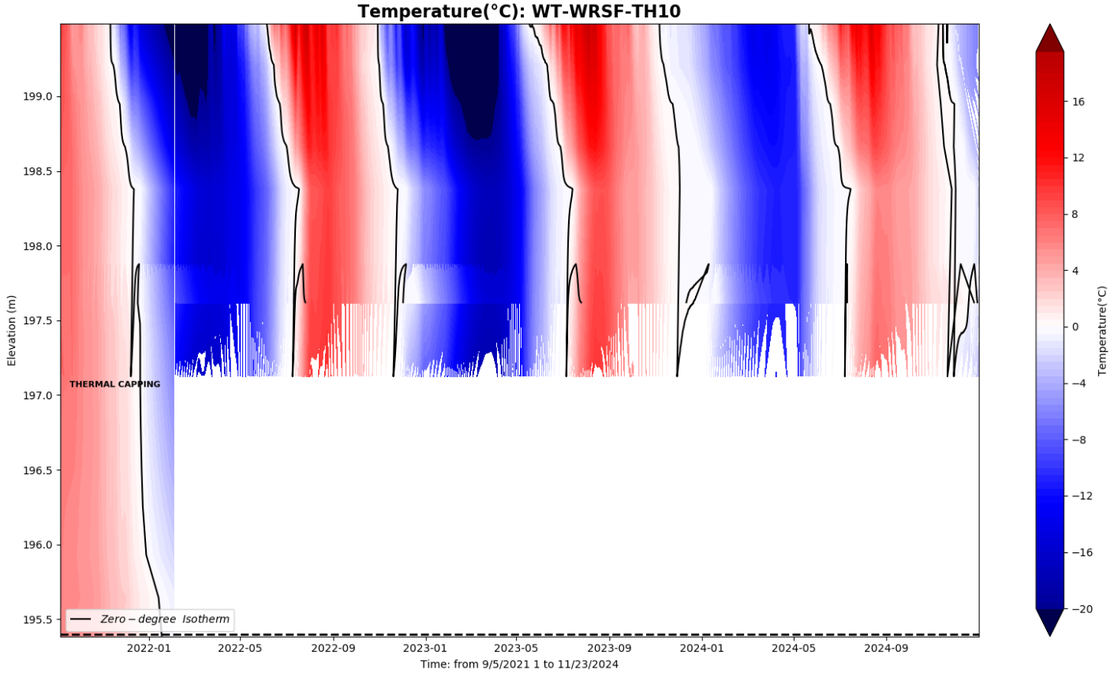
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH10

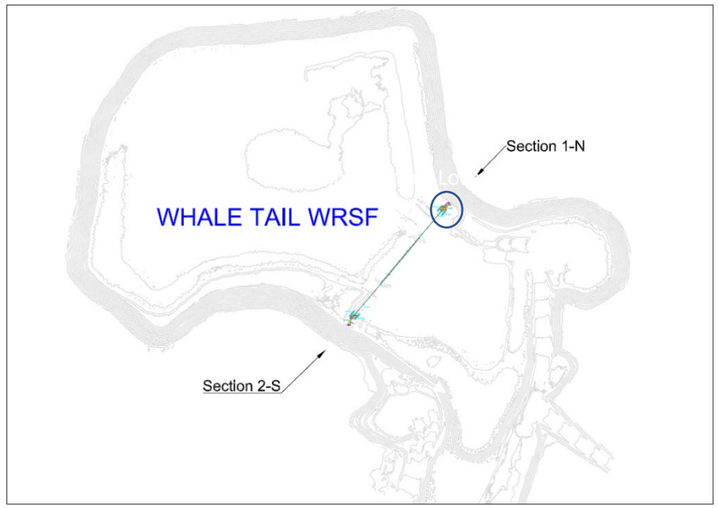

WHALE TAIL WRSF
Section 1-N
Section 2-S

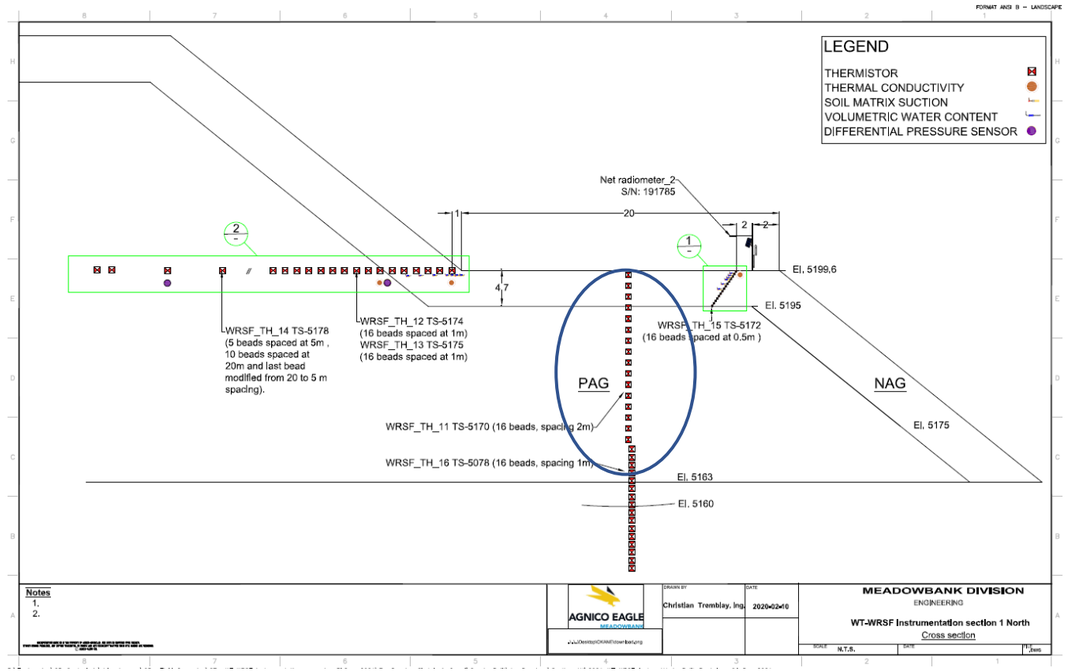

LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
Net radiometer_1
S/N: 201853
20
4.7
El. 5199.7
El. 5195
El. 5175
WRSF_TH_09 TS-5179
(5 beads spaced at 5m
and 11 beads spaced at 20m)
WRSF_TH_07 TS-5176 (16 beads
spaced at 1m)
WRSF_TH_08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


AMQ – WRSF – WT_TH_10
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-07 18:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile


Temperature(°C): WT-WRSF-TH10
Elevation (m)
THERMAL CAPPING
Zero – degree Isotherm
Temperature(°C)
Time: from 9/5/2021 1 to 11/23/2024

WT WRSF TH11





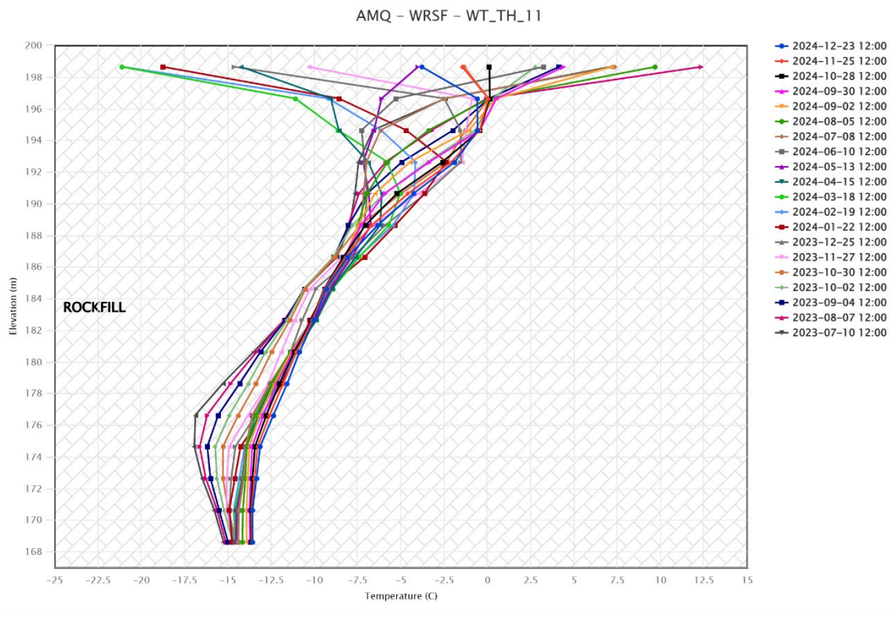
TH-11 & TH-16

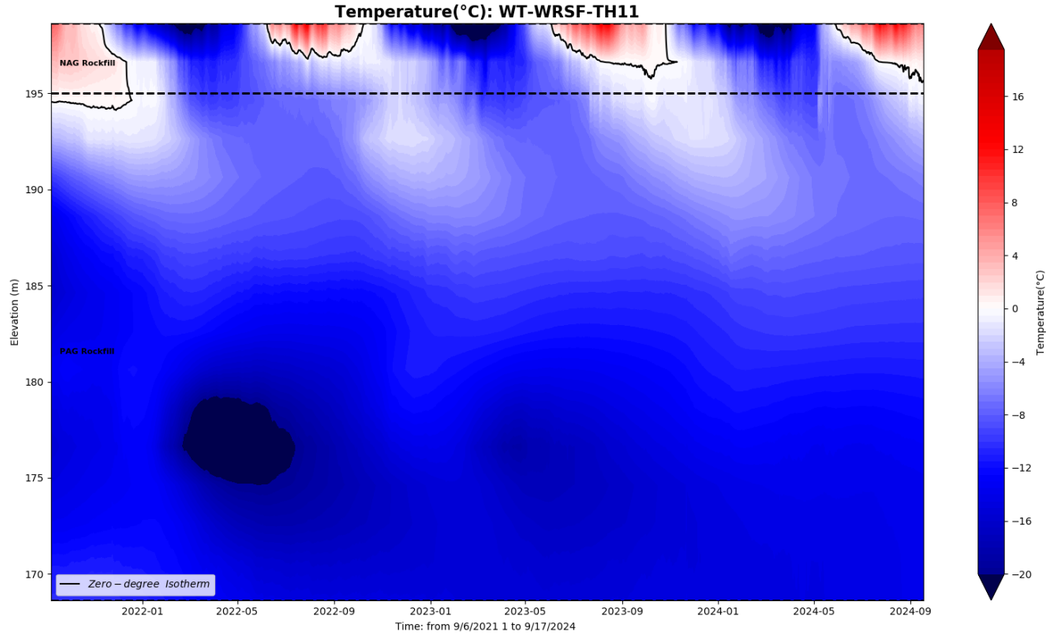
String # : RST 5170 & 5078

Drill Hole Coordinates

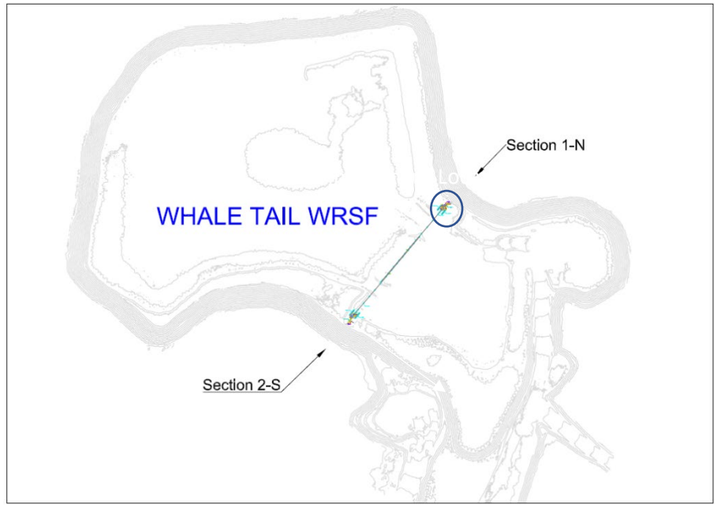
Northing	8479.2480
Easting	14259.1830
Elevation	5199.637

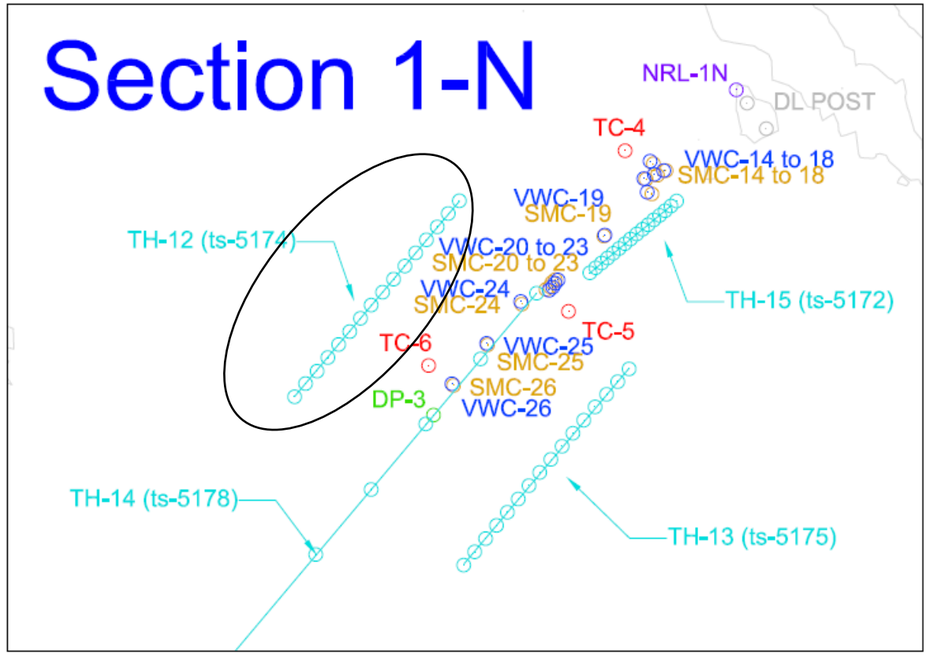
DEPTH M	ELEVATION MASL	
0	5199.637	Top of the platform
1	5198.637	
2		
3	5196.637	
4		
5	5194.637	
6		
7	5192.637	
8		
9	5190.637	
10		
11	5188.637	
12		
13	5186.637	
14		
15	5184.637	
16		
17	5182.637	
18		
19	5180.637	
20		
21	5178.637	
22		
23	5176.637	
24		
25	5174.637	
26		
27	5172.637	
28		
29	5170.637	
30		
31	5168.637	
32		
33	5167.037	
34	5166.037	
35	5165.037	
36	5164.037	
37	5163.037	Overburder
38	5162.037	
39	5161.037	
40	5160.037	Bedrock
41	5159.037	
42	5158.037	
43	5157.037	
44	5156.037	
45	5155.037	
46	5154.037	
47	5153.037	
48	5152.037	
49		
50		
51		
52	5147.637	Bottom of tl



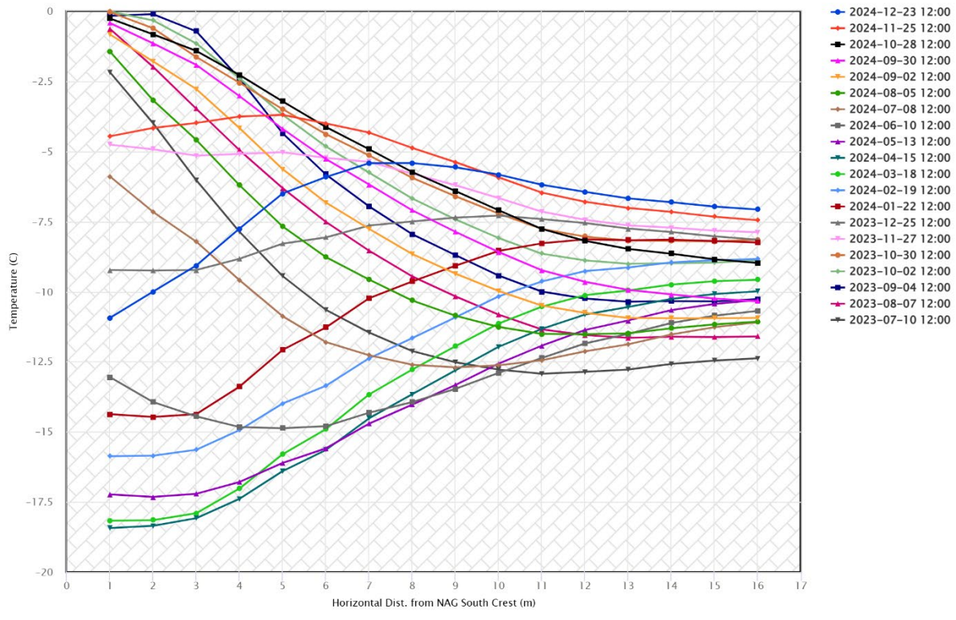


WT WRSF TH12



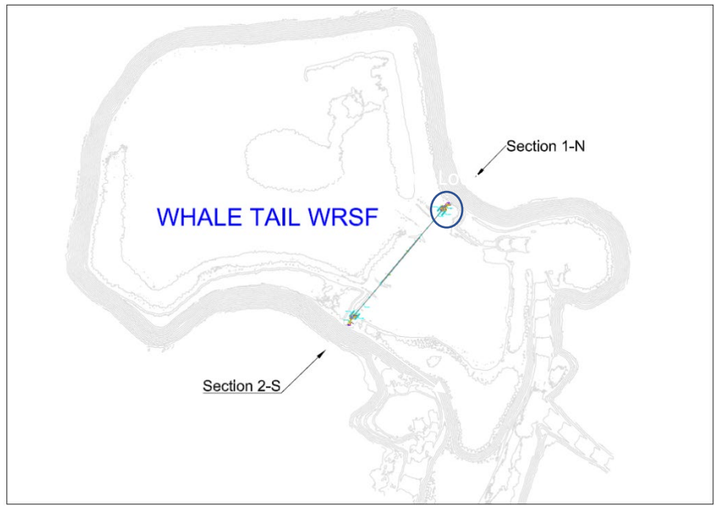


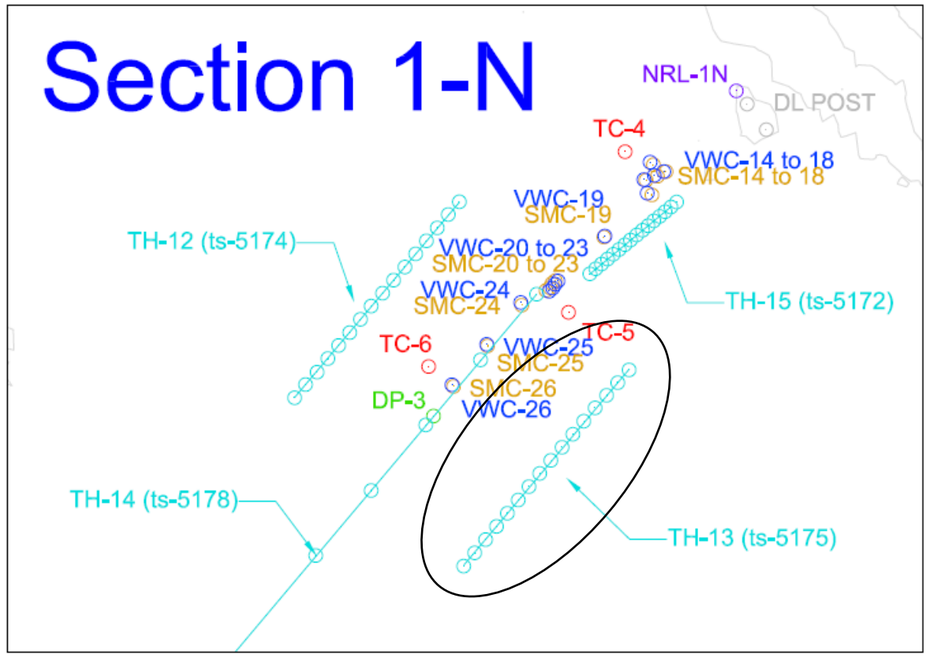
AMQ – WRSF – WT_TH_12

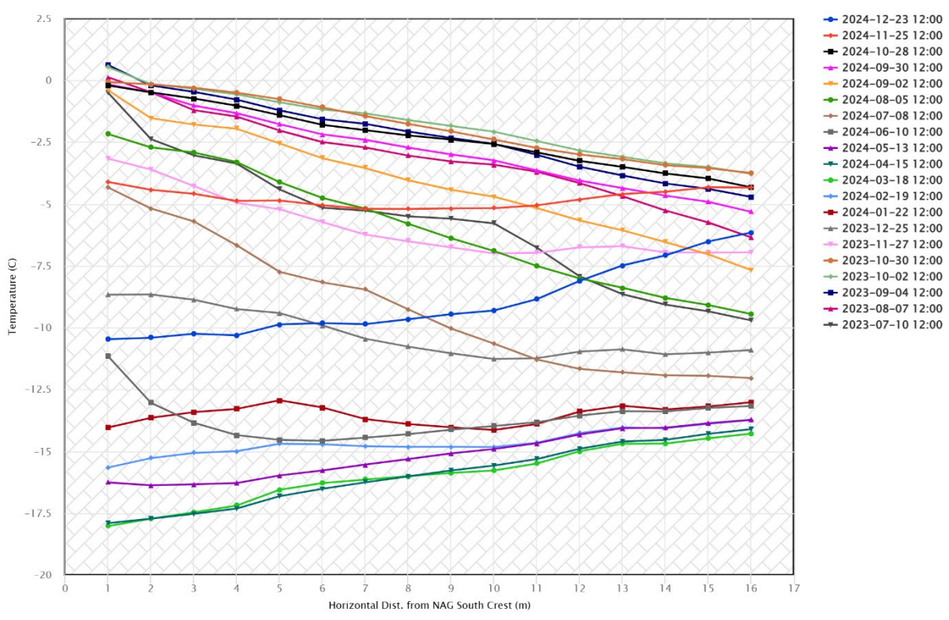


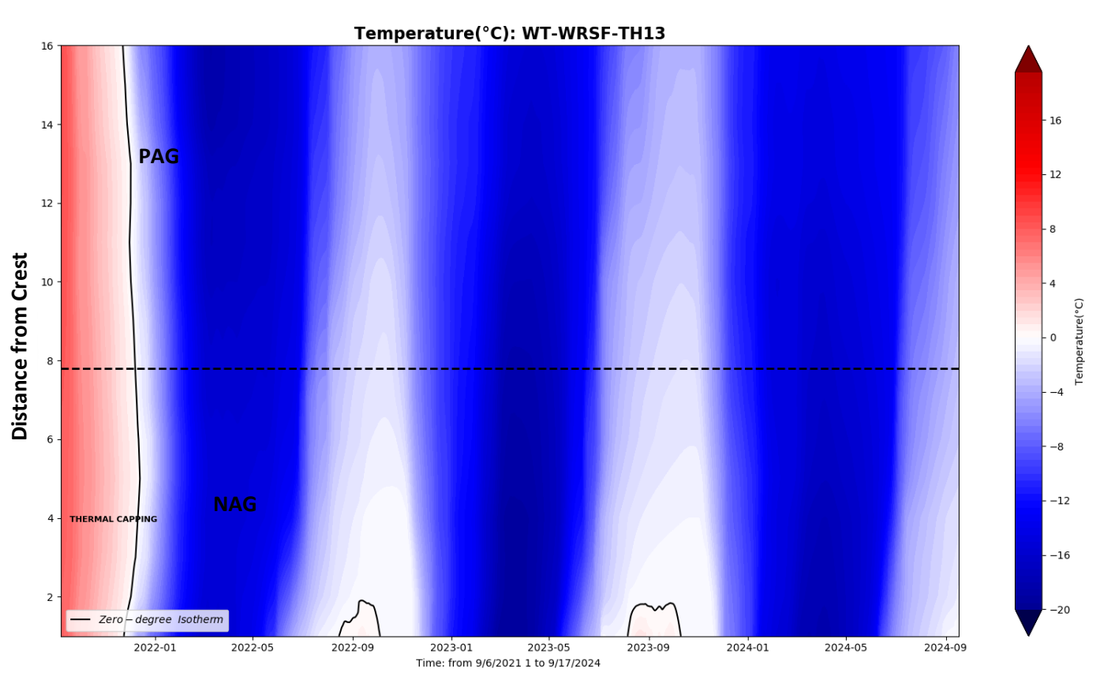
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH13



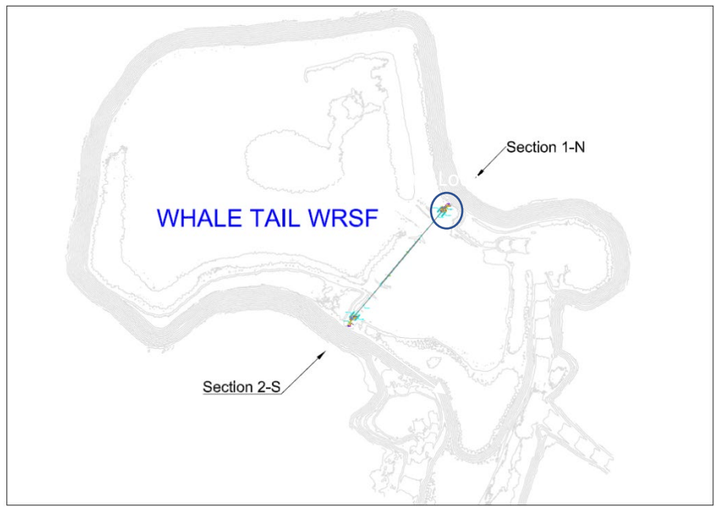


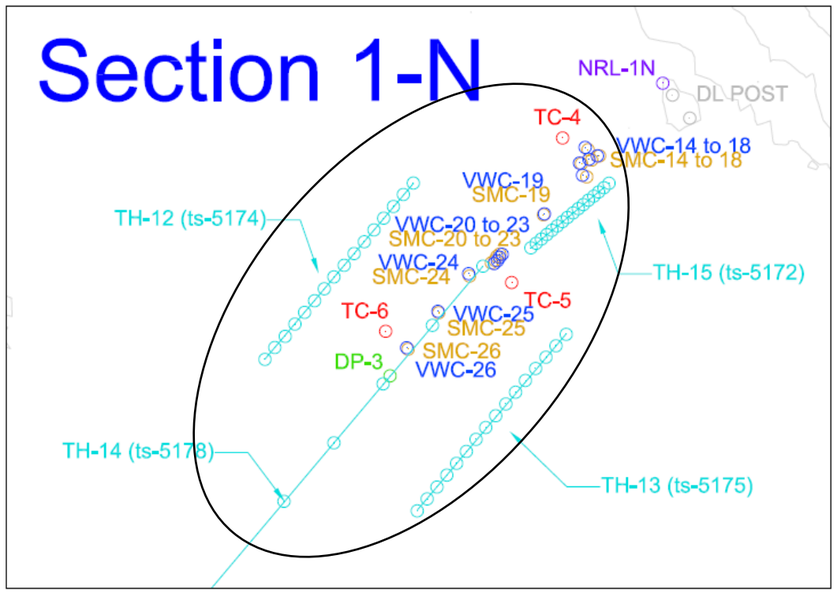




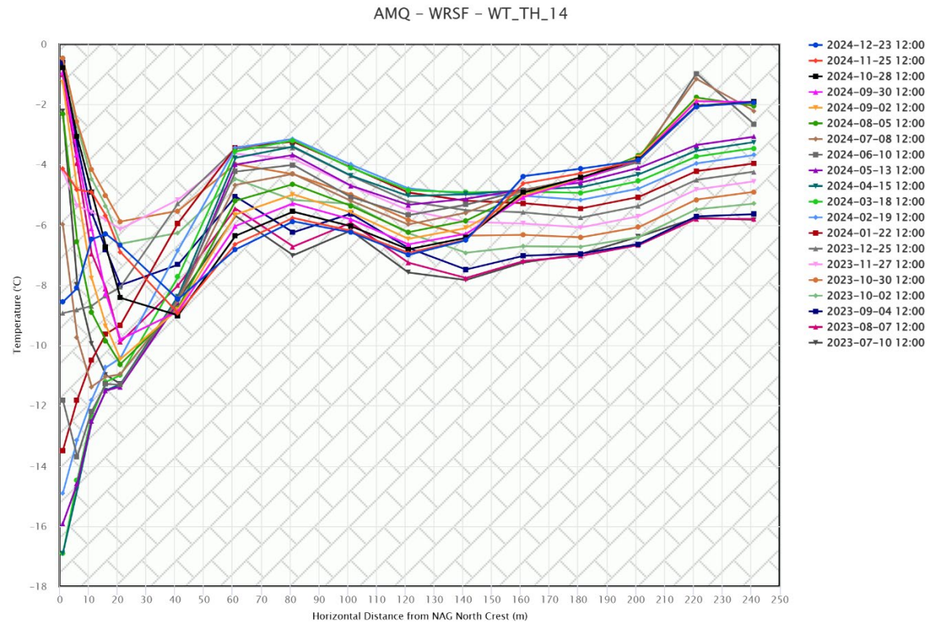
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH14

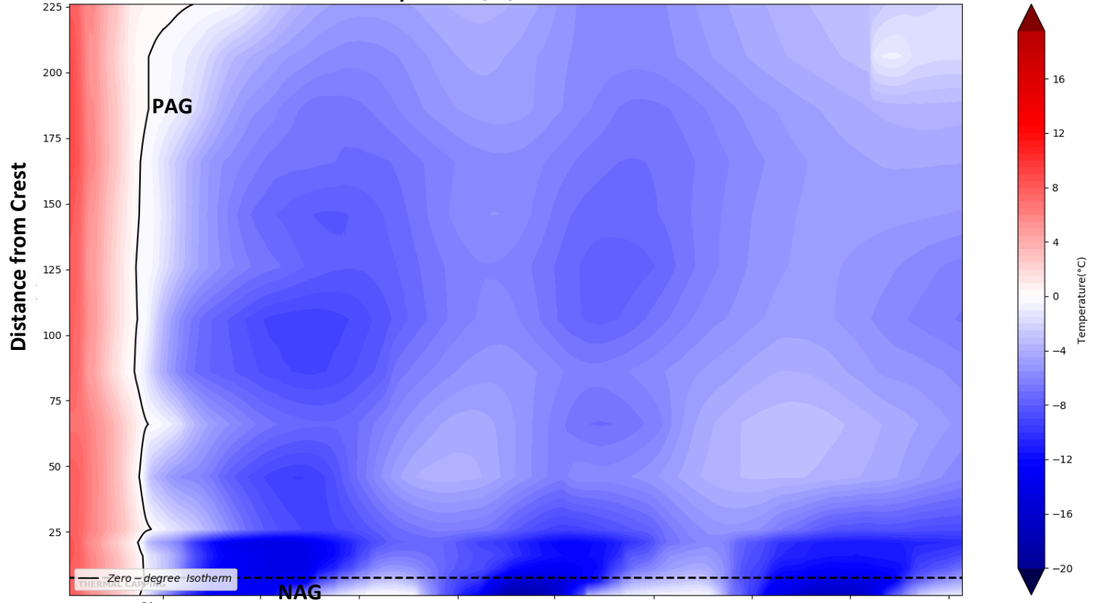




AMQ – WRSF – WT_TH_14

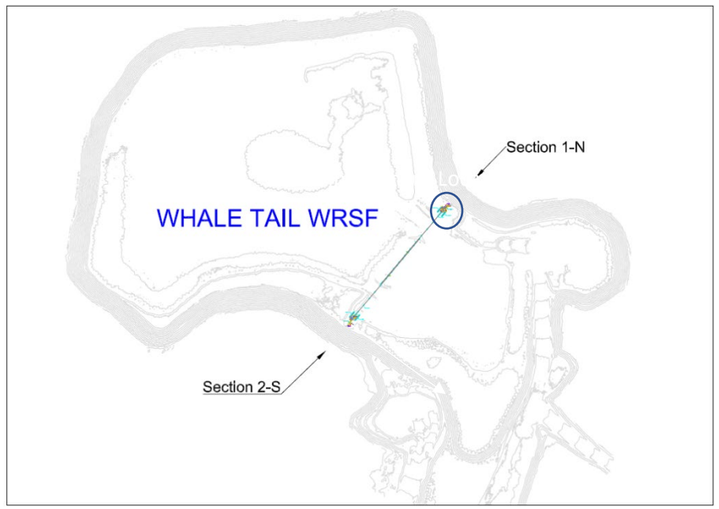


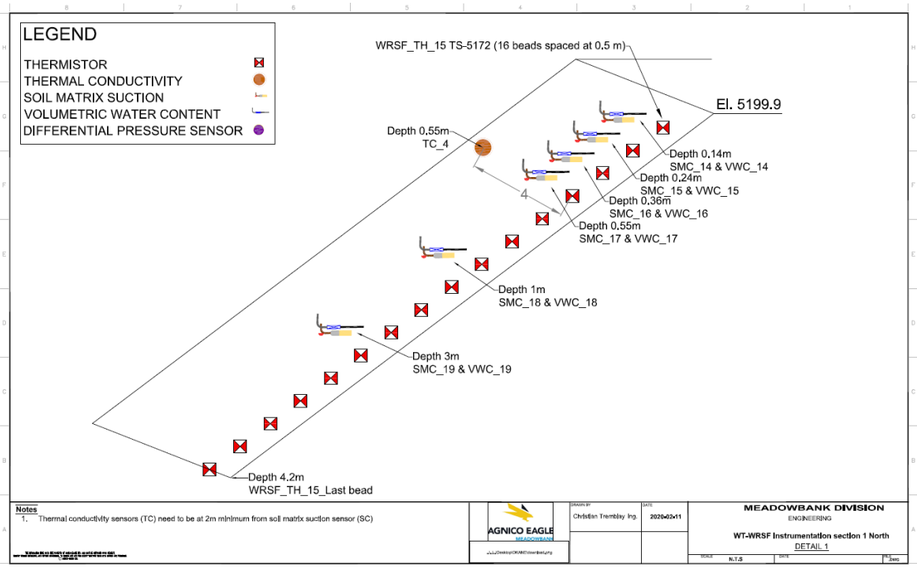
Temperature(°C): WT-WRSF-TH14

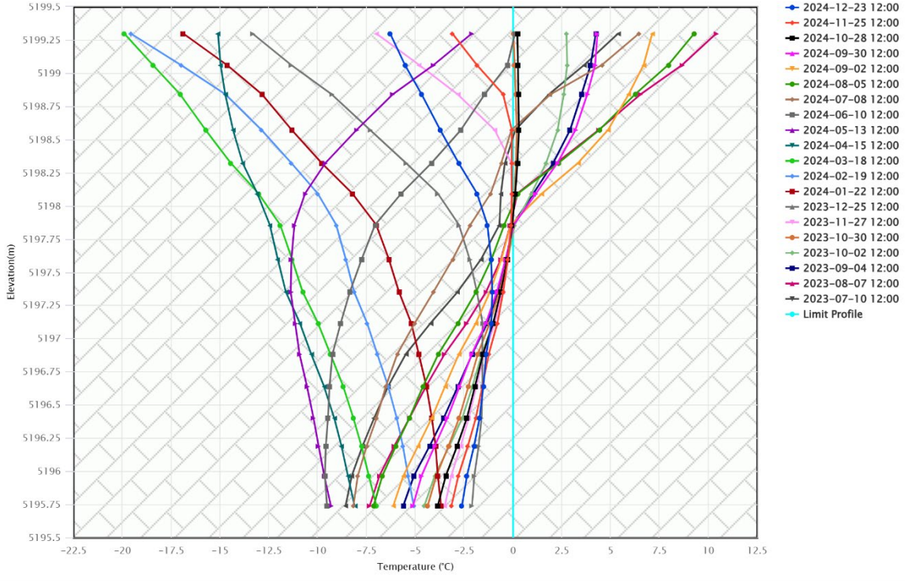


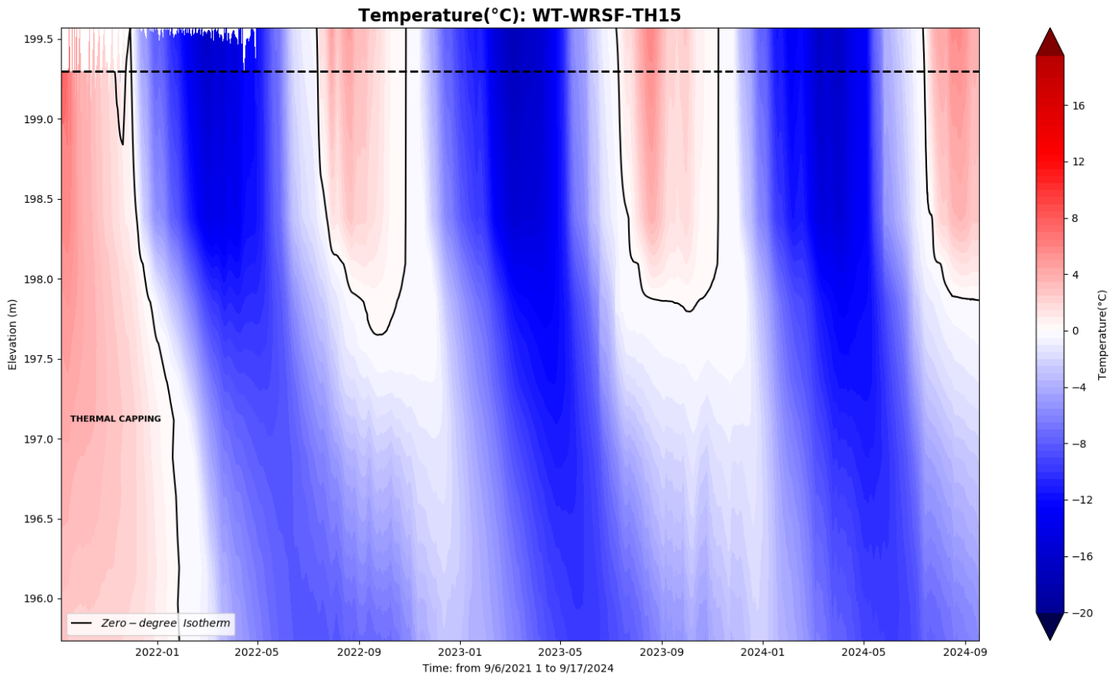
This instrument is installed horizontally and chart needs to be read accordingly

WT WRSF TH15

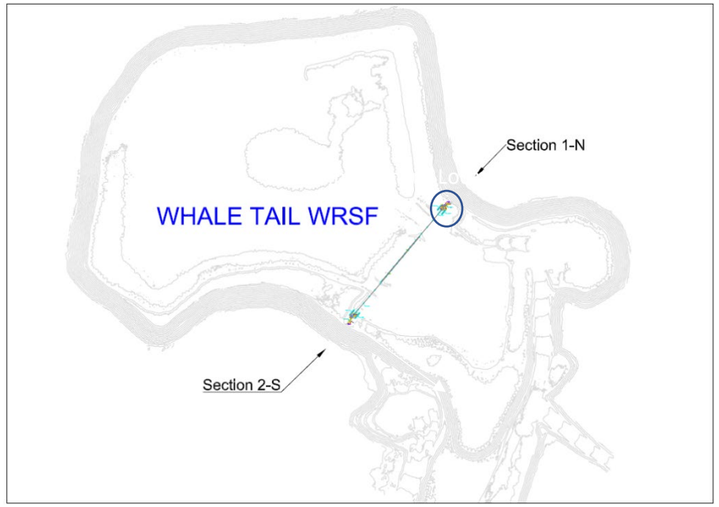

Section 1-N
WHALE TAIL WRSF
Section 2-S

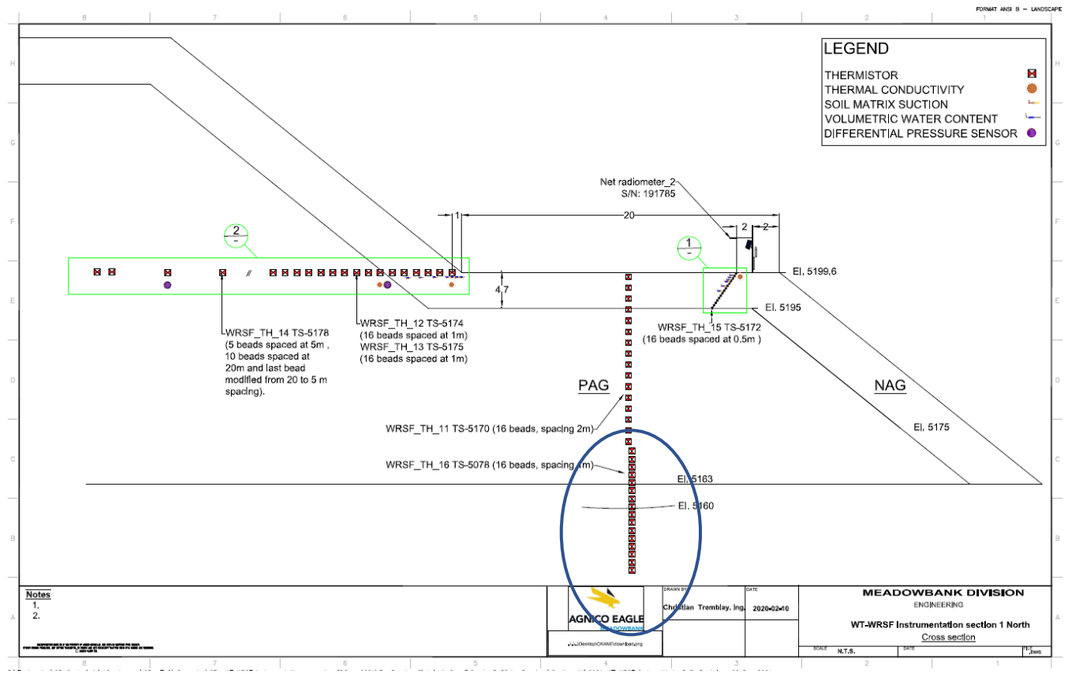

LEGEND
THERMISTOR
THERMAL CONDUCTIVITY
SOIL MATRIX SUCTION
VOLUMETRIC WATER CONTENT
DIFFERENTIAL PRESSURE SENSOR
WRSF_TH_15 TS-5172 (16 beads spaced at 0.5 m)
El. 5199.9
Depth 0.55m
TC_4
Depth 0.14m
SMC_14 & VWC_14
Depth 0.24m
SMC_15 & VWC_15
Depth 0.36m
SMC_16 & VWC_16
Depth 0.55m
SMC_17 & VWC_17
Depth 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
Christian Tremblay, Ing.
2020-02-11
MEADOWBANK DIVISION
ENGINEERING
WT-WRSF Instrumentation section 1 North
DETAIL 1


AMQ – WRSF – WT_TH_15
Elevation(m)
Temperature (°C)
2024-12-23 12:00
2024-11-25 12:00
2024-10-28 12:00
2024-09-30 12:00
2024-09-02 12:00
2024-08-05 12:00
2024-07-08 12:00
2024-06-10 12:00
2024-05-13 12:00
2024-04-15 12:00
2024-03-18 12:00
2024-02-19 12:00
2024-01-22 12:00
2023-12-25 12:00
2023-11-27 12:00
2023-10-30 12:00
2023-10-02 12:00
2023-09-04 12:00
2023-08-07 12:00
2023-07-10 12:00
Limit Profile


Temperature(°C): WT-WRSF-TH15
Elevation (m)
THERMAL CAPPING
Zero – degree Isotherm
Time: from 9/6/2021 1 to 9/17/2024
Temperature(°C)

WT WRSF TH16





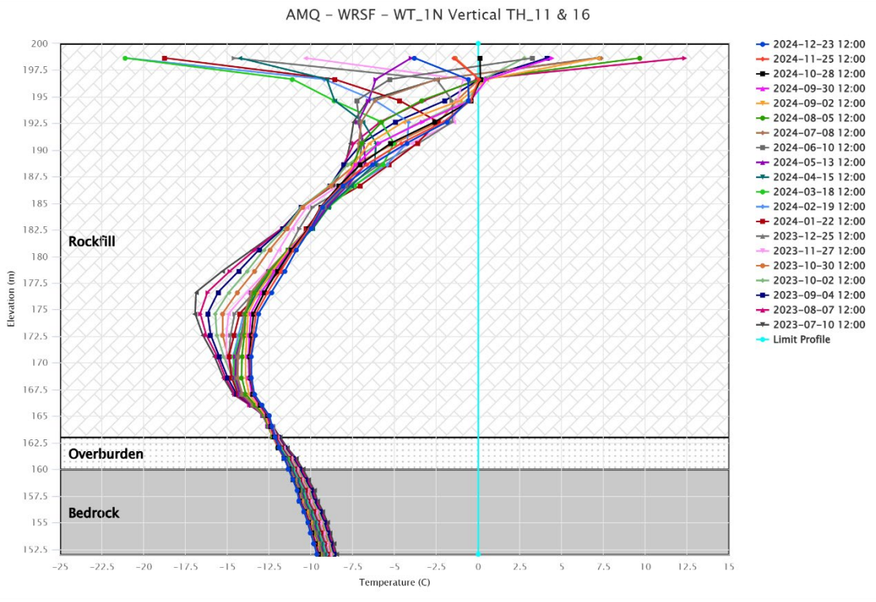
TH-11 & TH-16

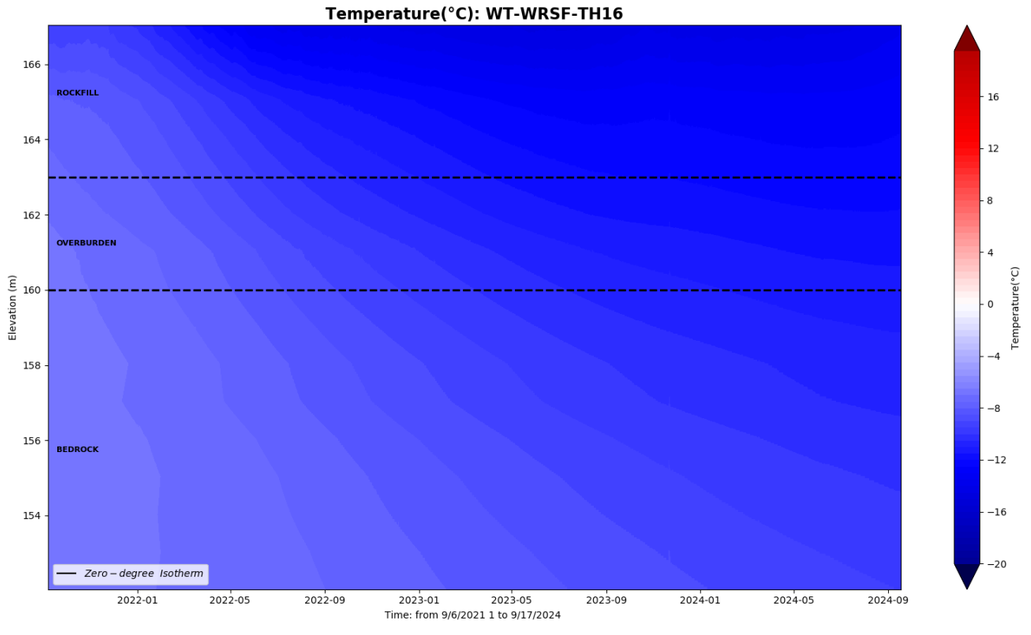
String # : RST 5170 & 5078

Drill Hole Coordinates

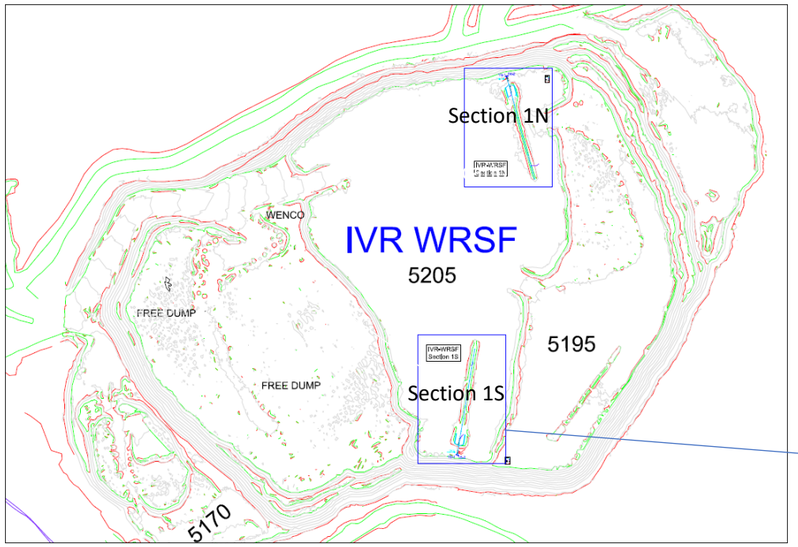
Northing	8479.2480
Easting	14259.1830
Elevation	5199.637

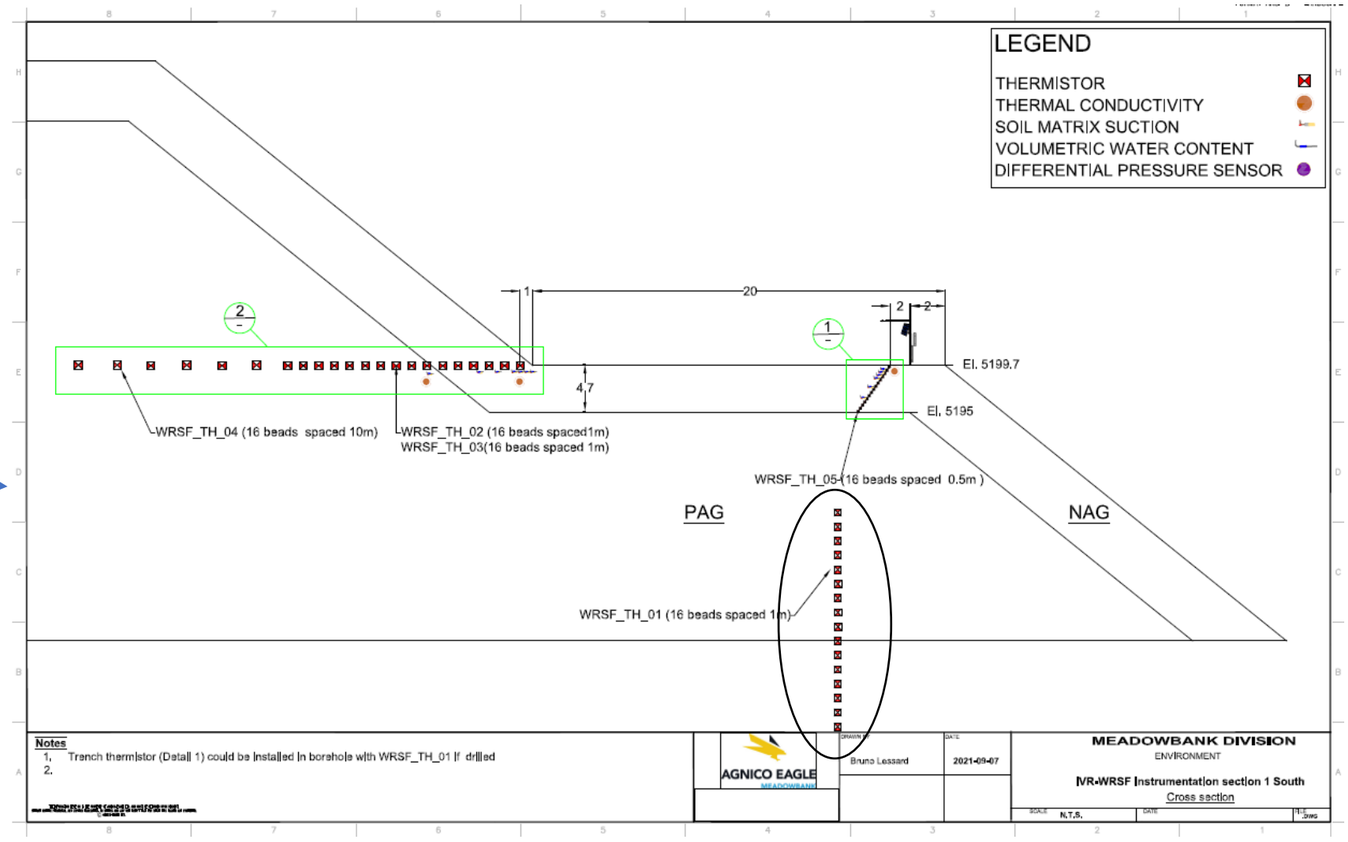
DEPTH M	ELEVATION MASL	
0	5199.637	Top of the platform
1	5198.637	
2		
3	5196.637	
4		
5	5194.637	
6		
7	5192.637	
8		
9	5190.637	
10		
11	5188.637	
12		
13	5186.637	
14		
15	5184.637	
16		
17	5182.637	
18		
19	5180.637	
20		
21	5178.637	
22		
23	5176.637	
24		
25	5174.637	
26		
27	5172.637	
28		
29	5170.637	
30		
31	5168.637	
32		
33	5167.037	
34	5166.037	
35	5165.037	
36	5164.037	
37	5163.037	Overburden
38	5162.037	
39	5161.037	
40	5160.037	Bedrock
41	5159.037	
42	5158.037	
43	5157.037	
44	5156.037	
45	5155.037	
46	5154.037	
47	5153.037	
48	5152.037	
49		
50		
51		
52	5147.637	Bottom of th

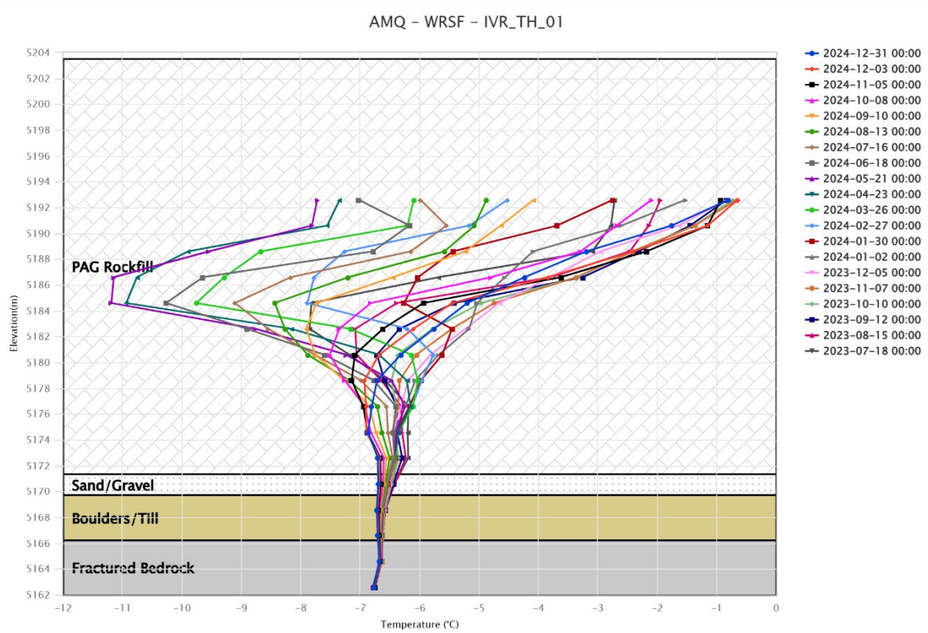




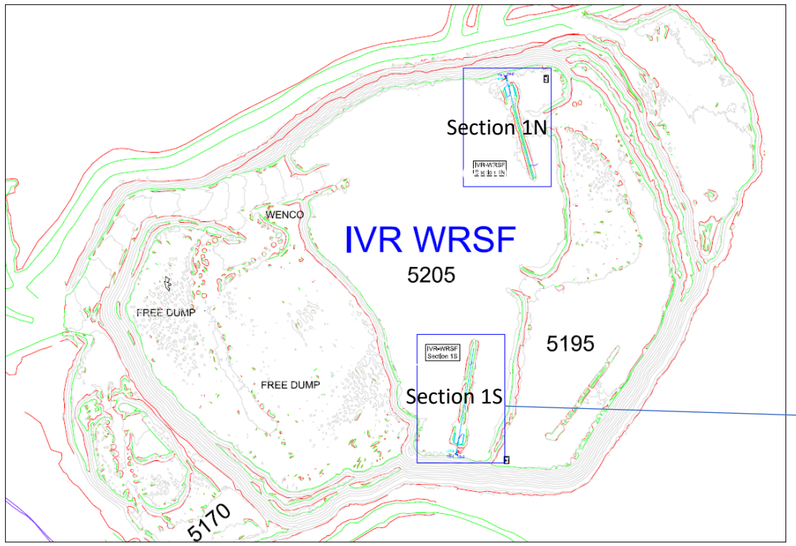
IVR WRSF TH01

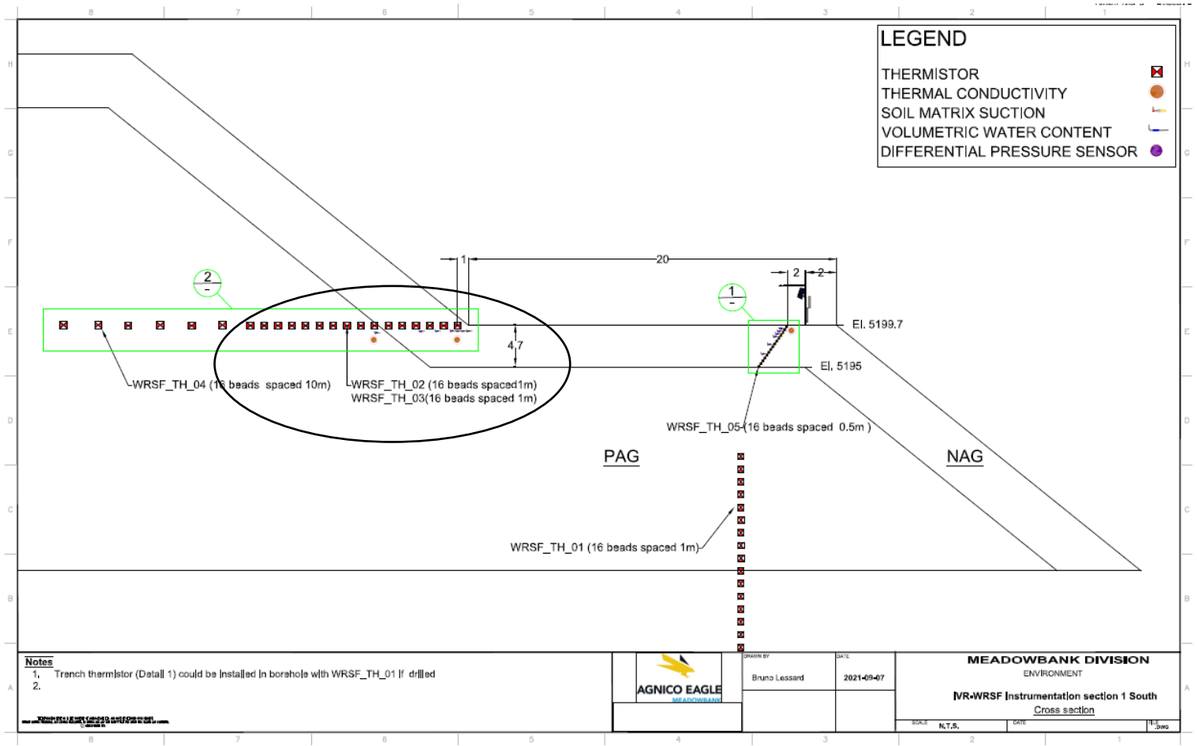


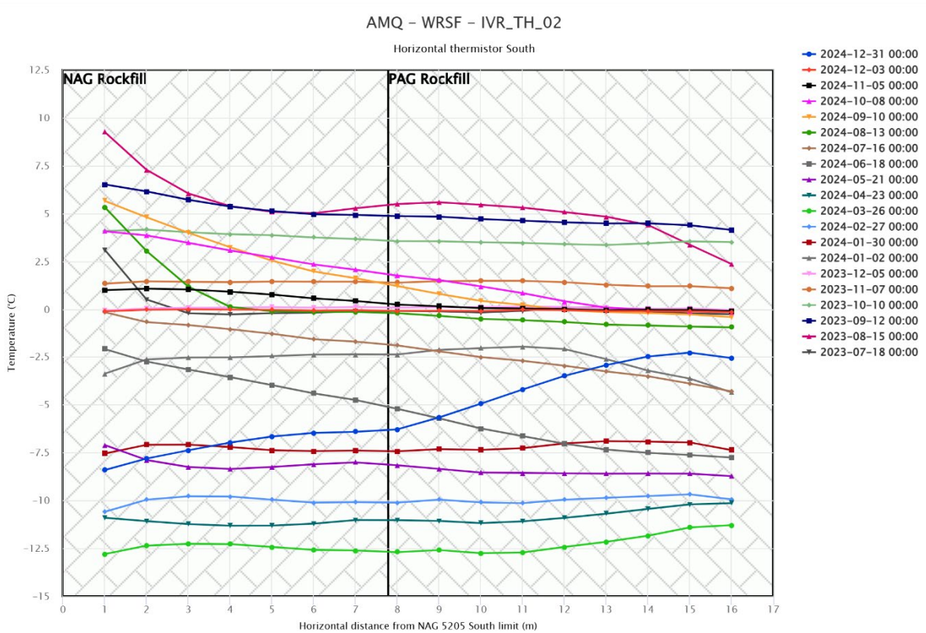




IVR WRSF TH02

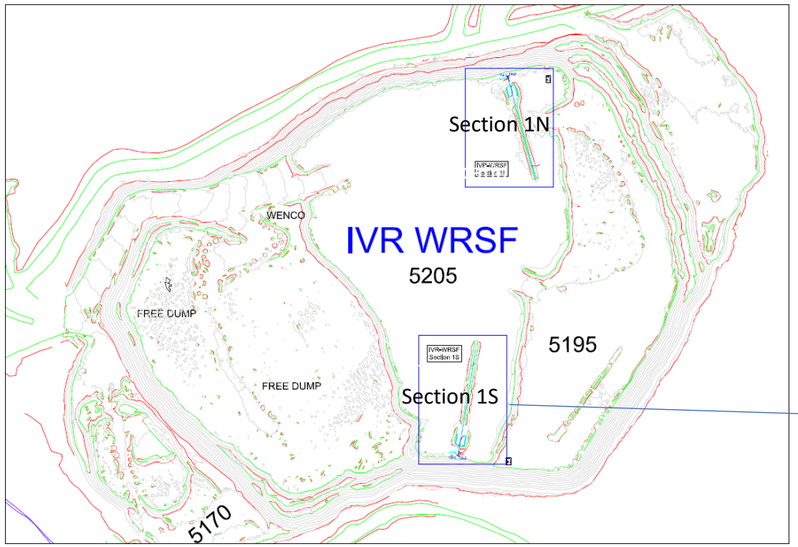


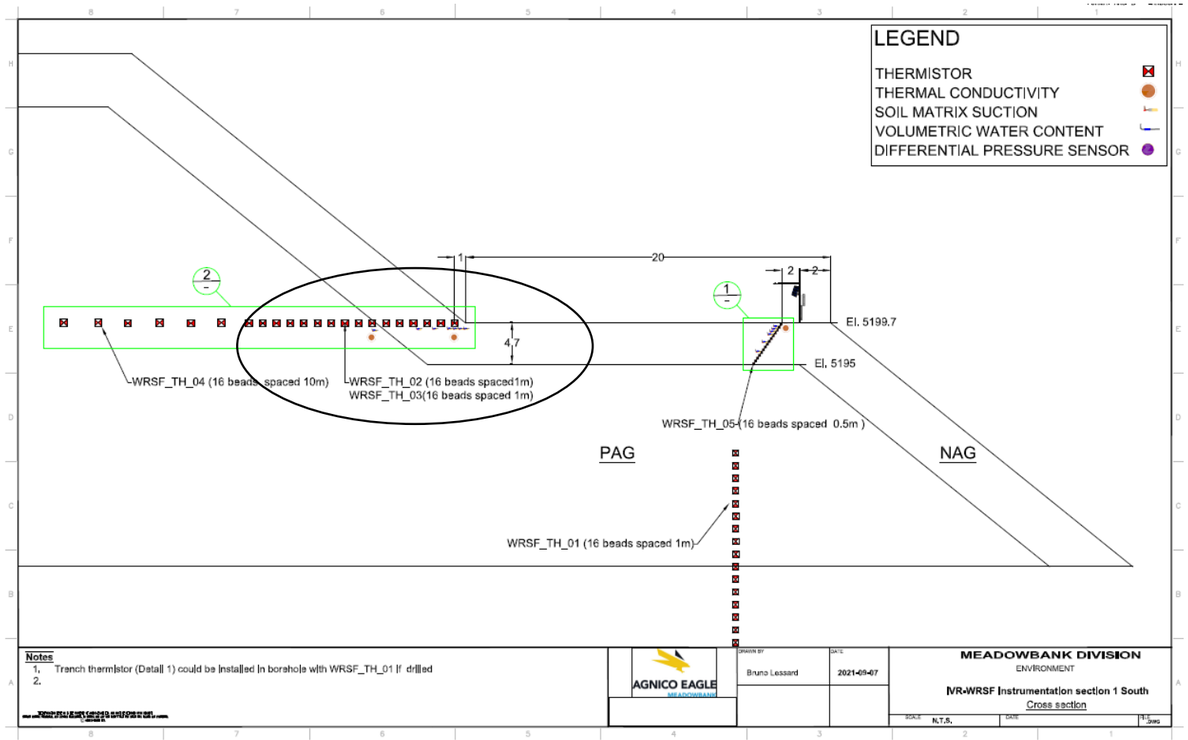


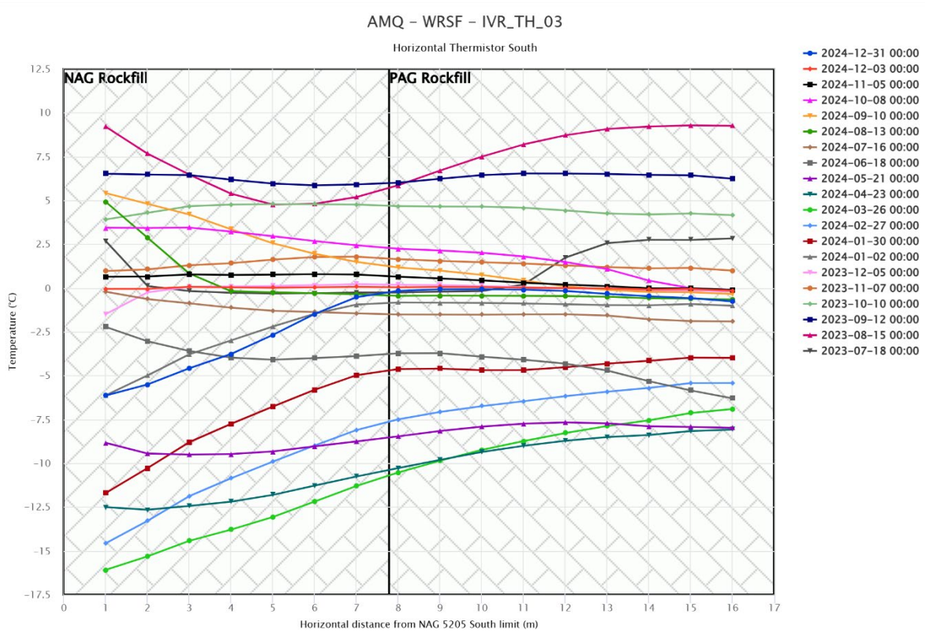


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH03

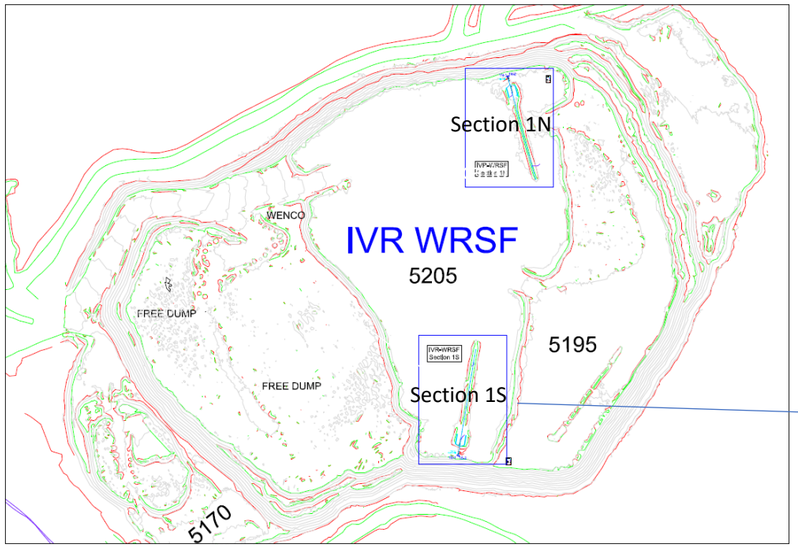


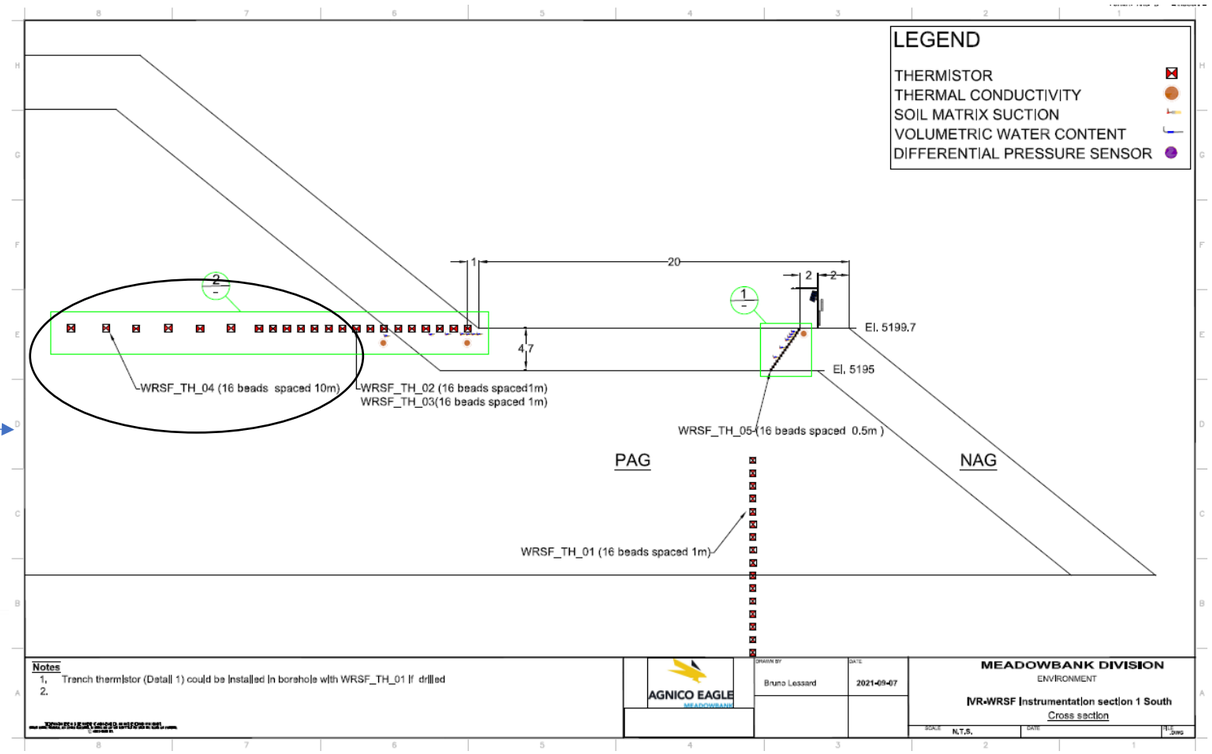


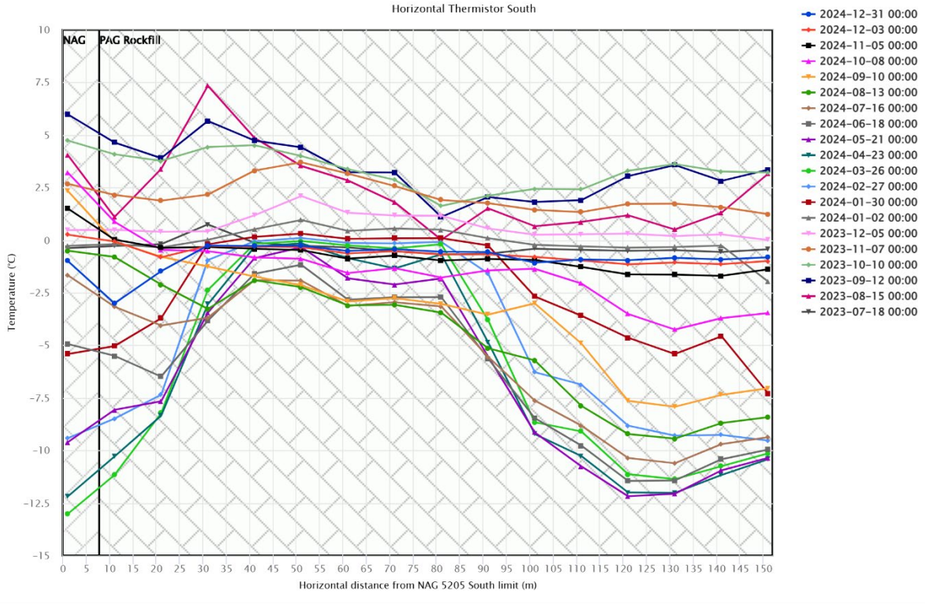


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH04

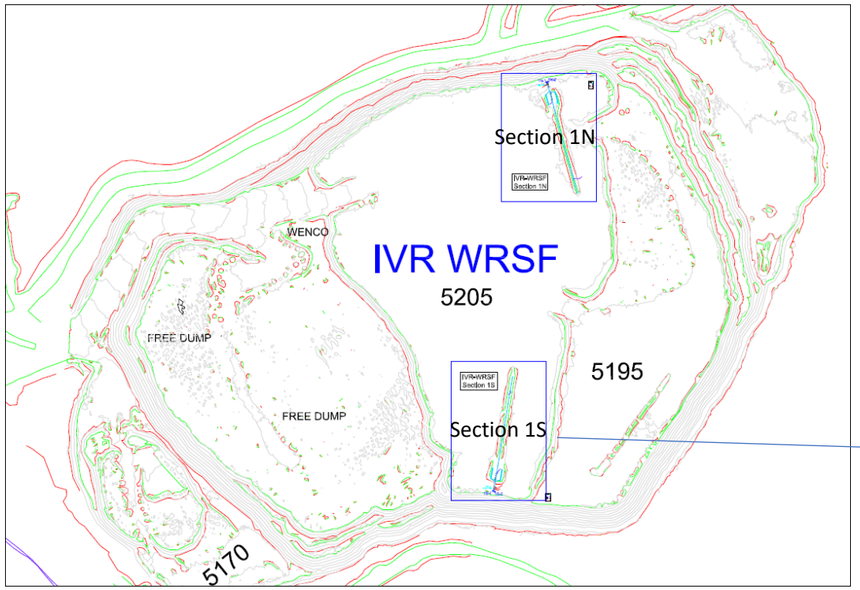


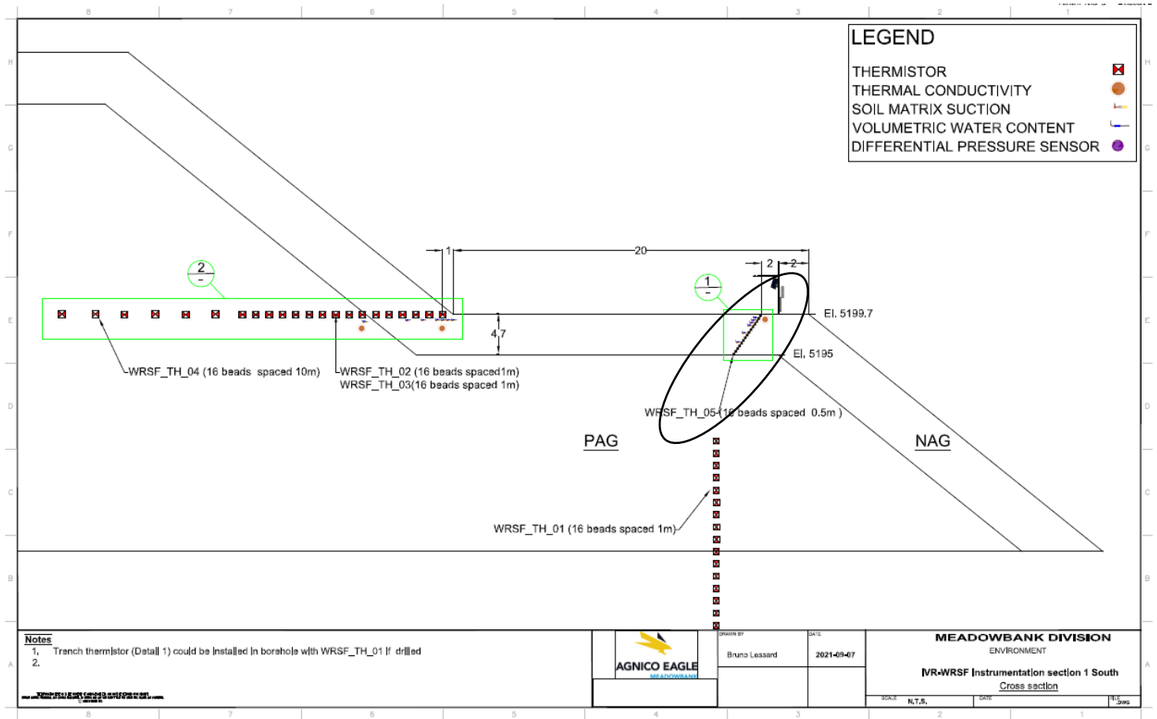


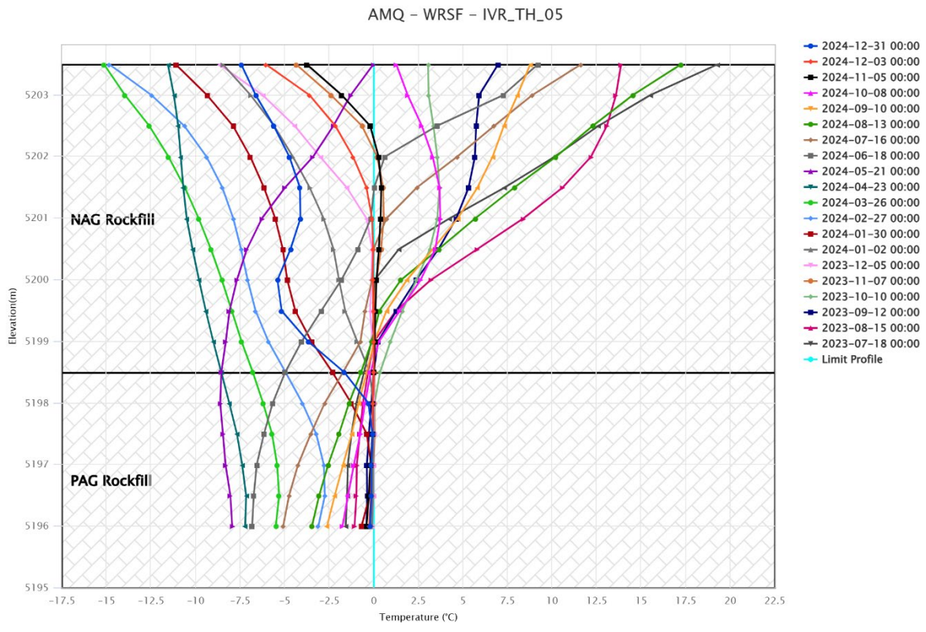


This instrument is installed horizontally and chart needs to be read accordingly

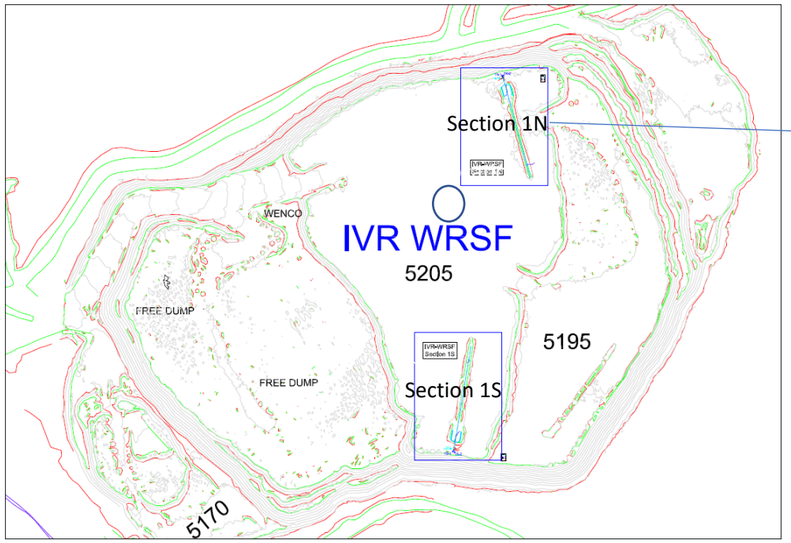
IVR WRSF TH05

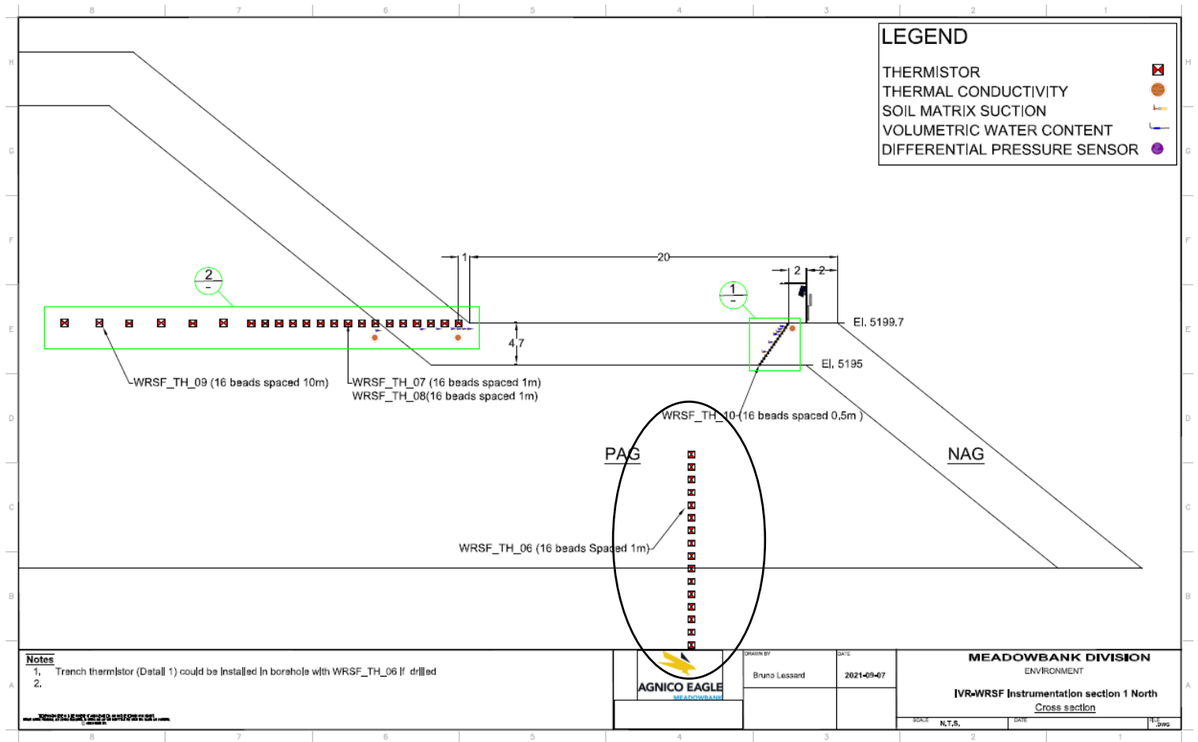


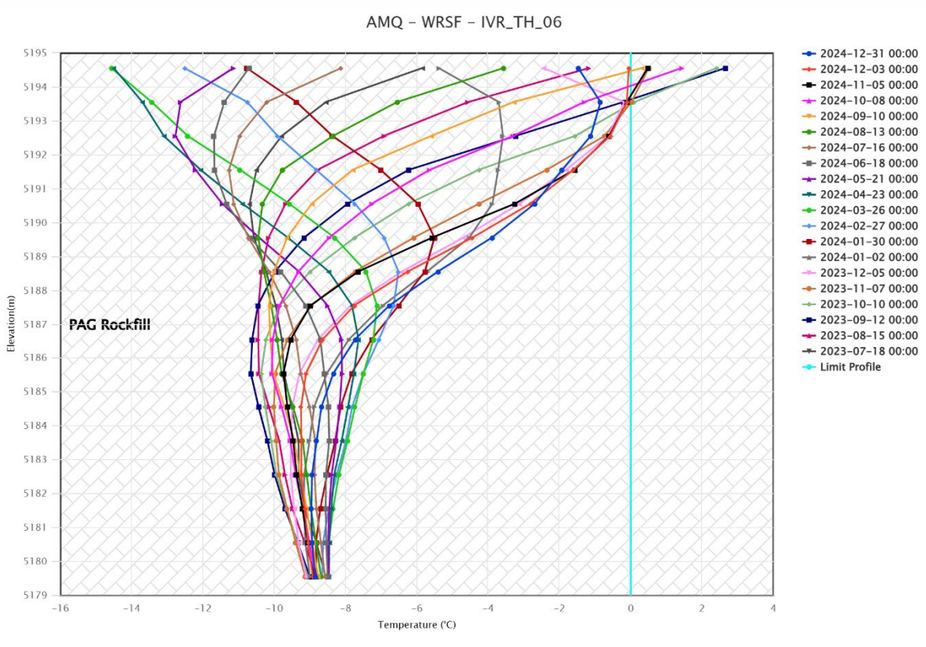




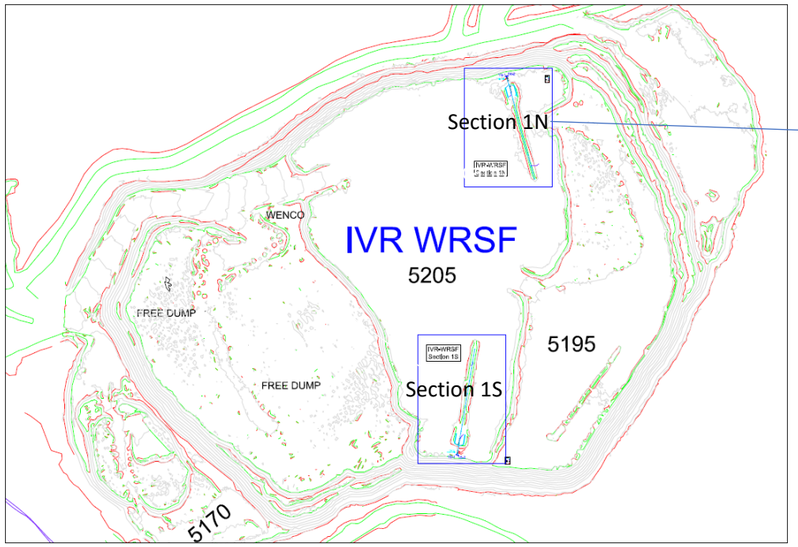
IVR WRSF TH06

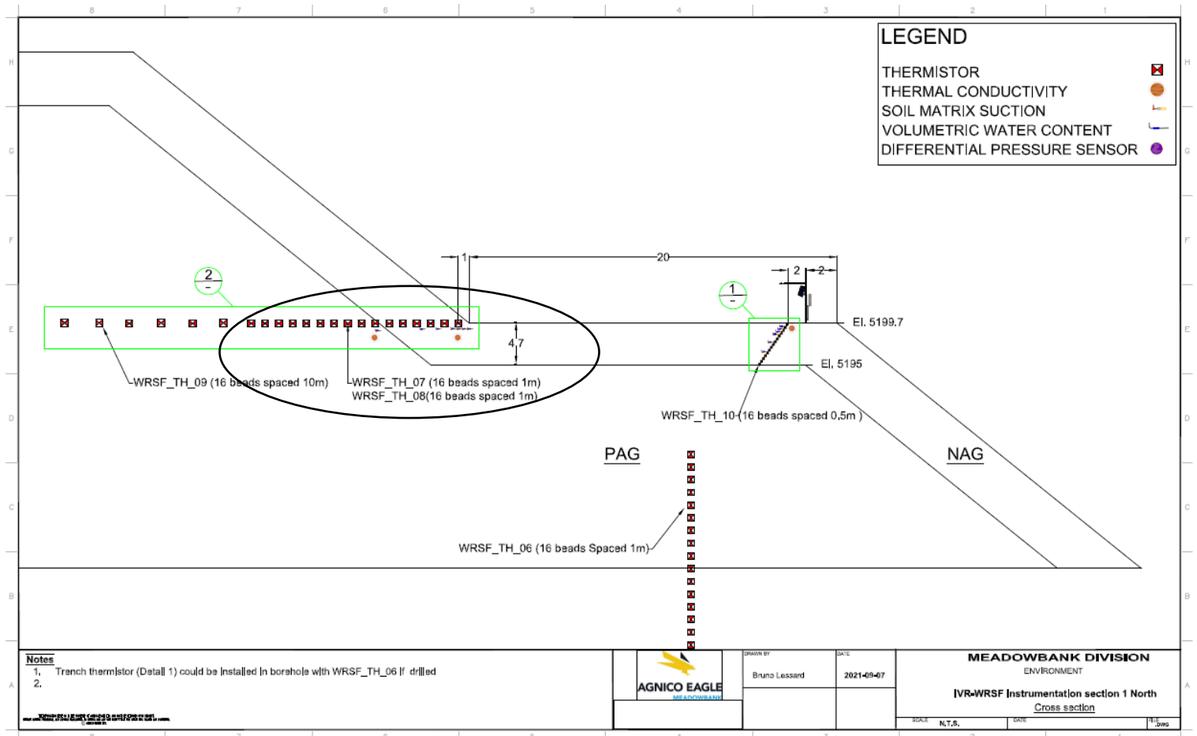


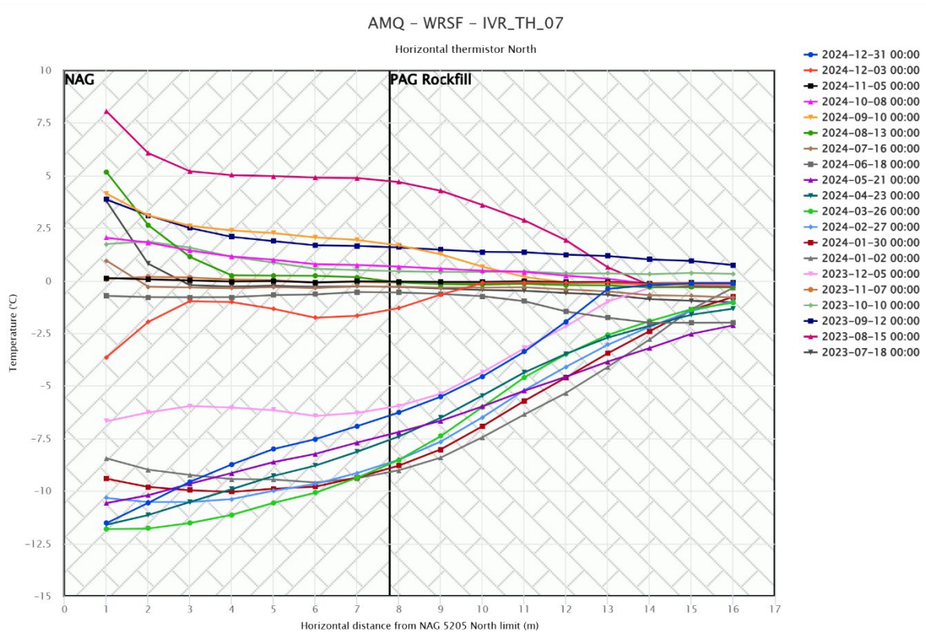




IVR WRSF TH07

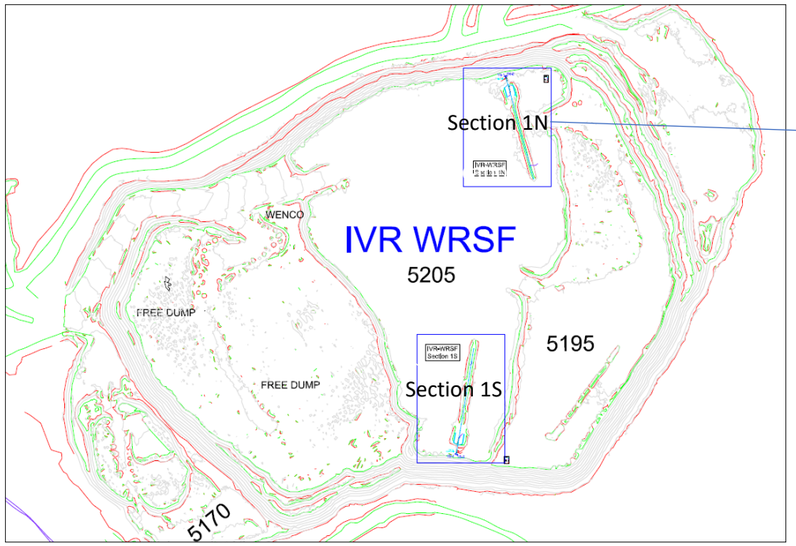


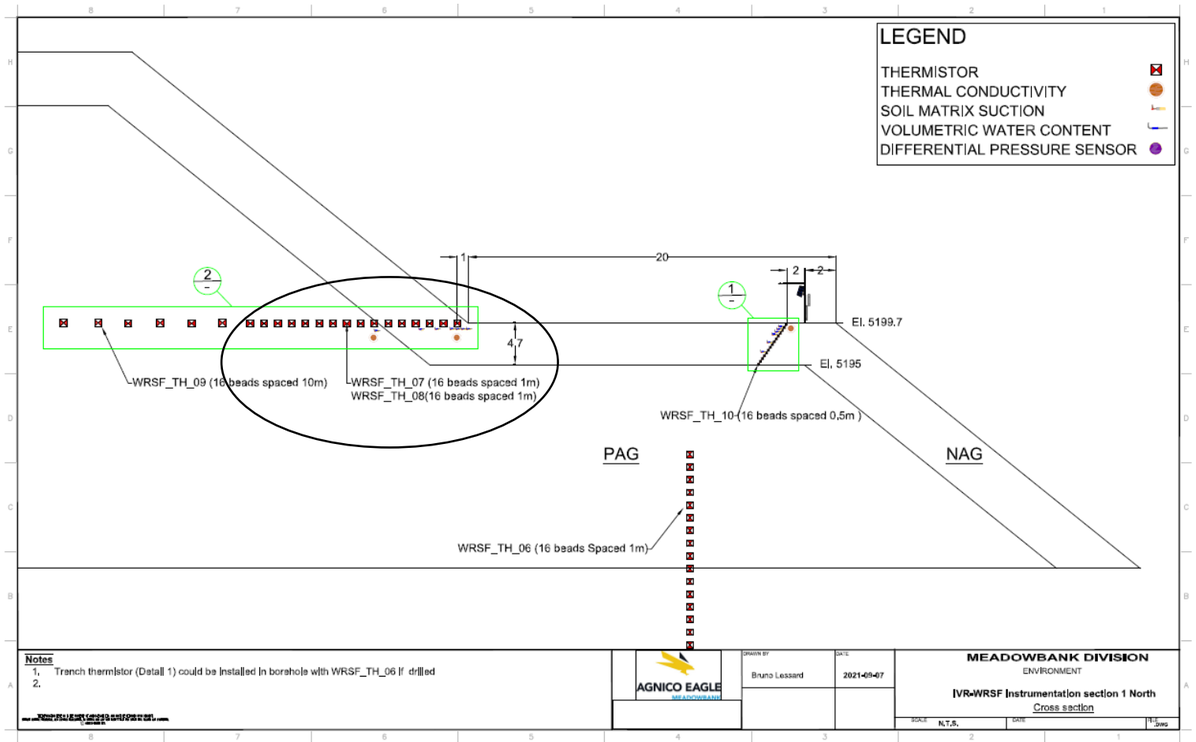


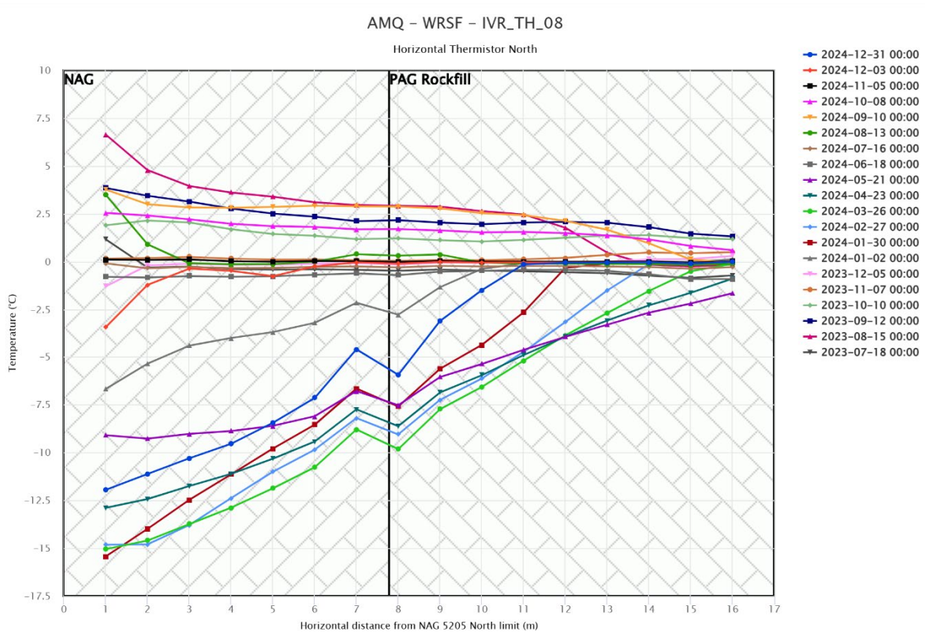


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH08

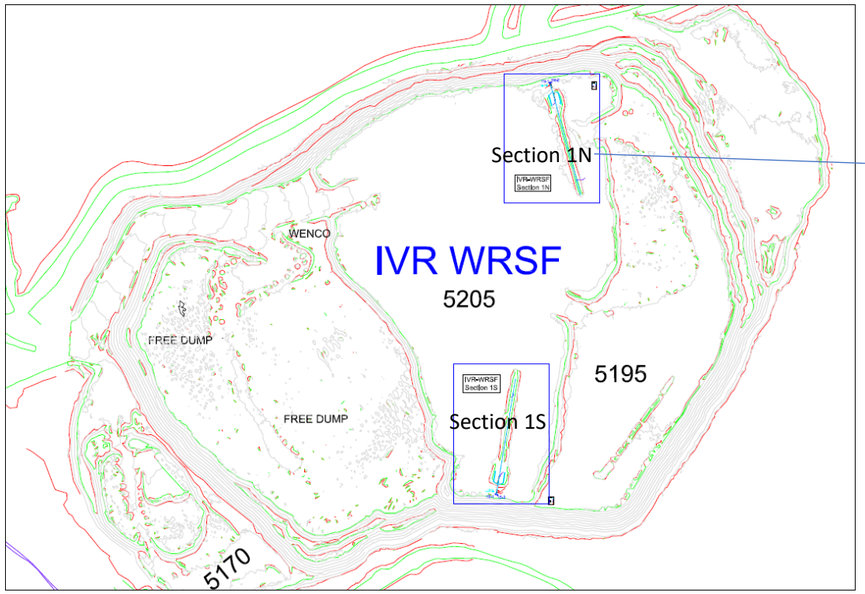


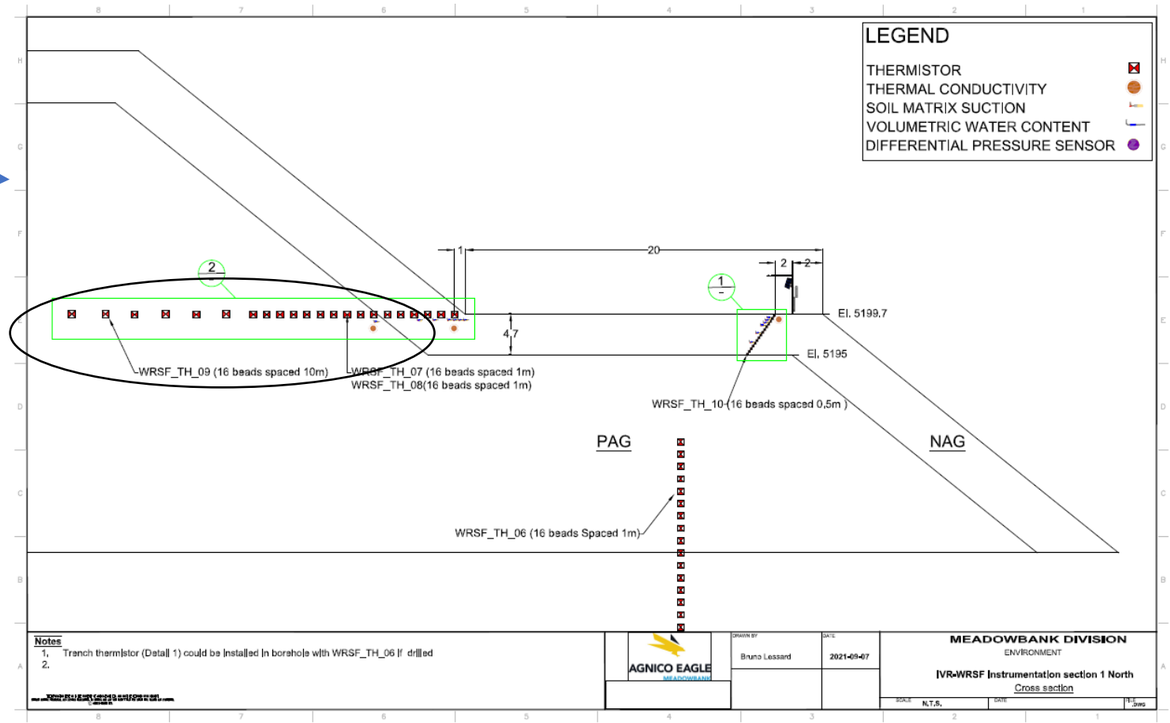


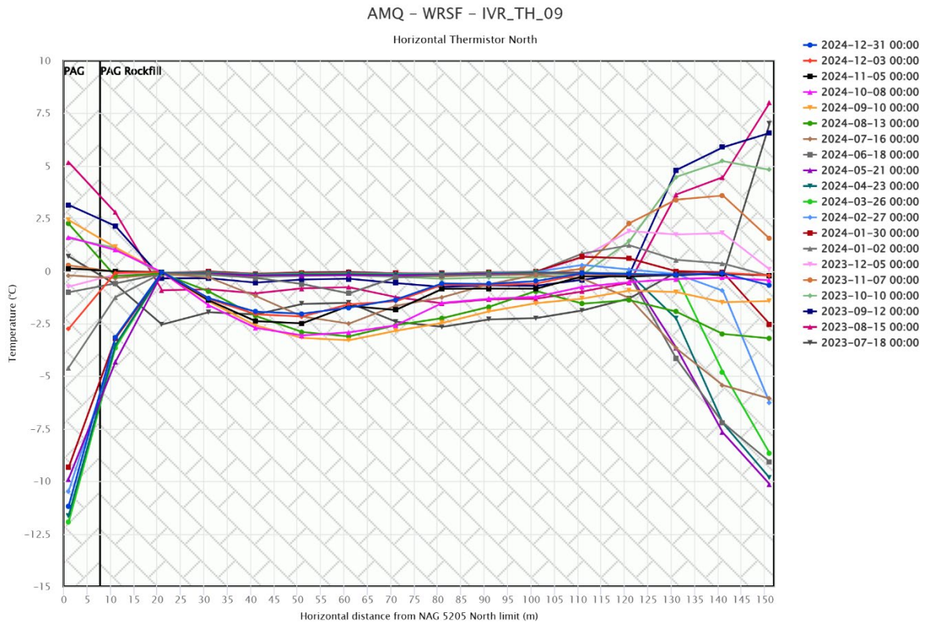


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH09

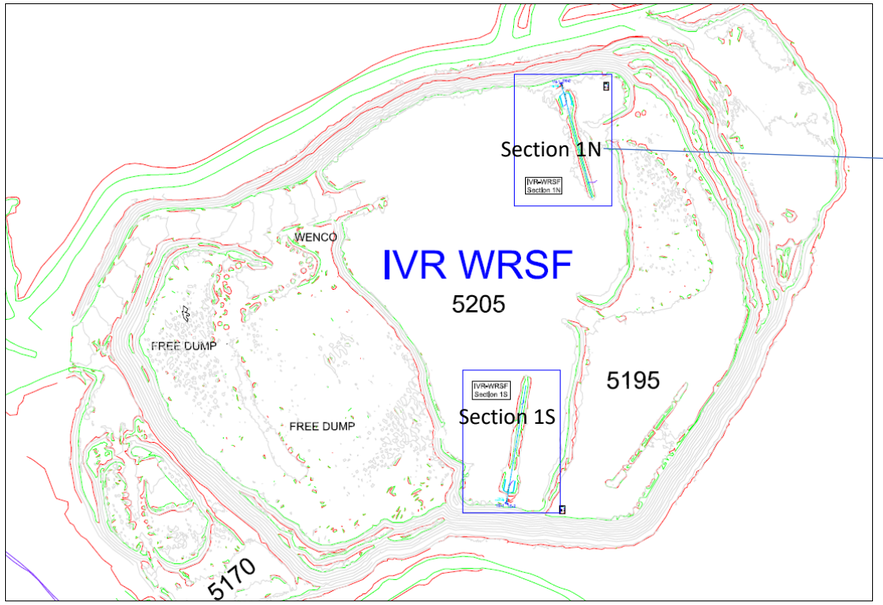


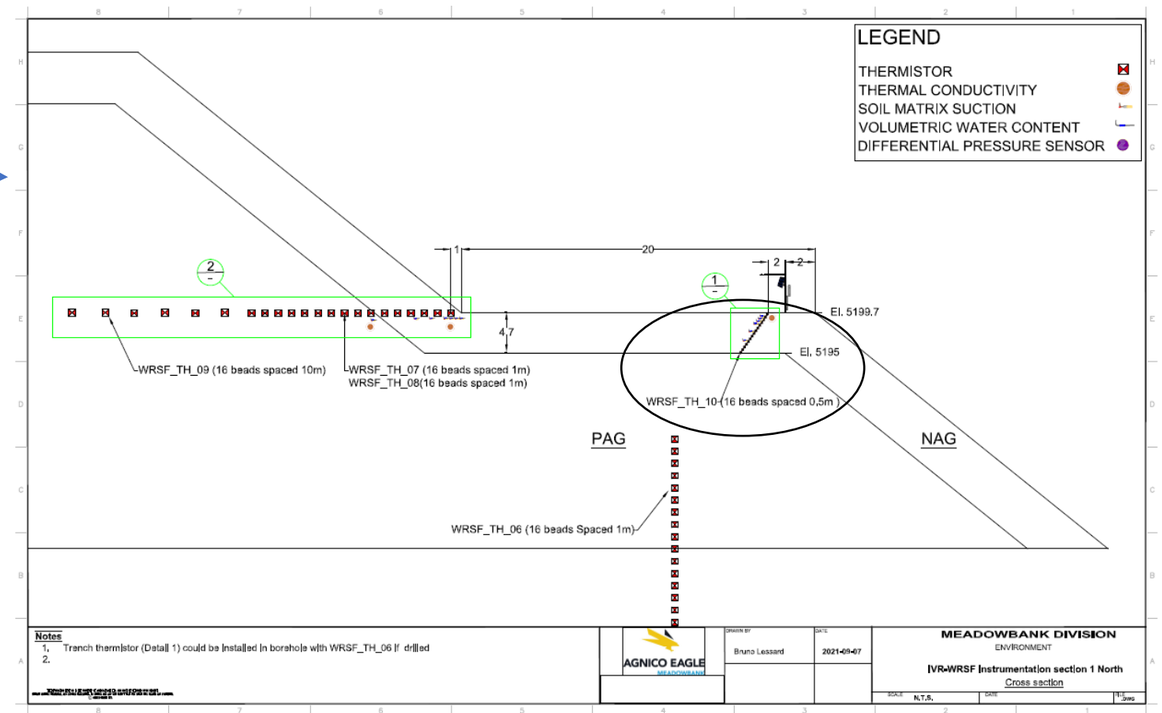


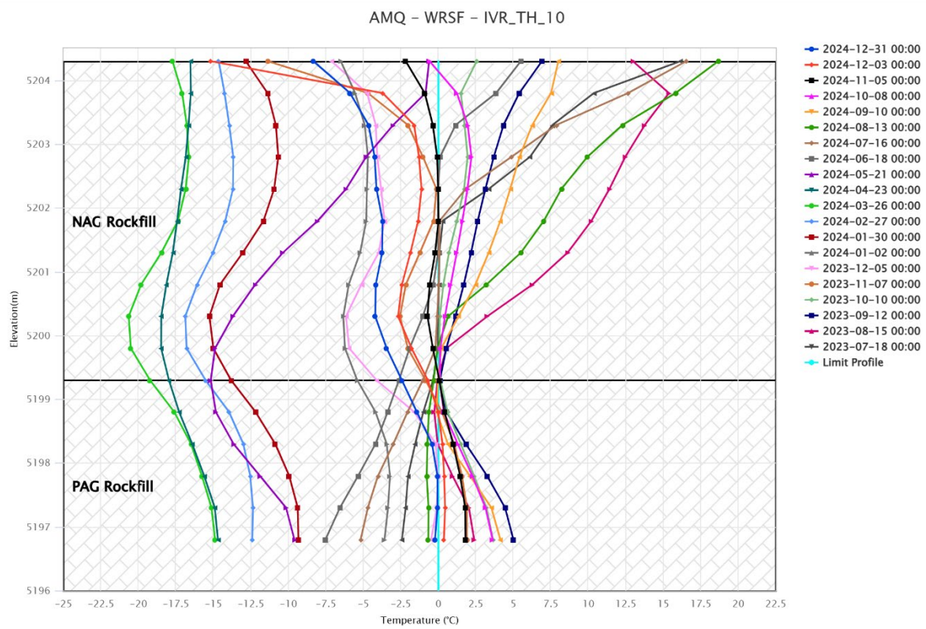


This instrument is installed horizontally and chart needs to be read accordingly

IVR WRSF TH10

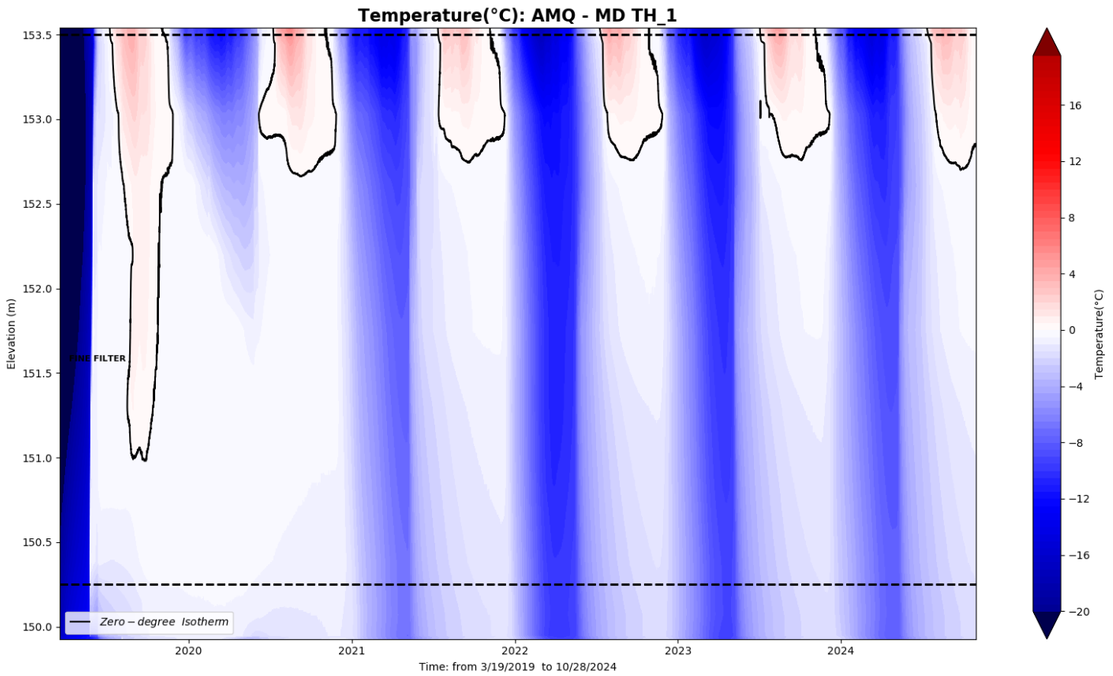


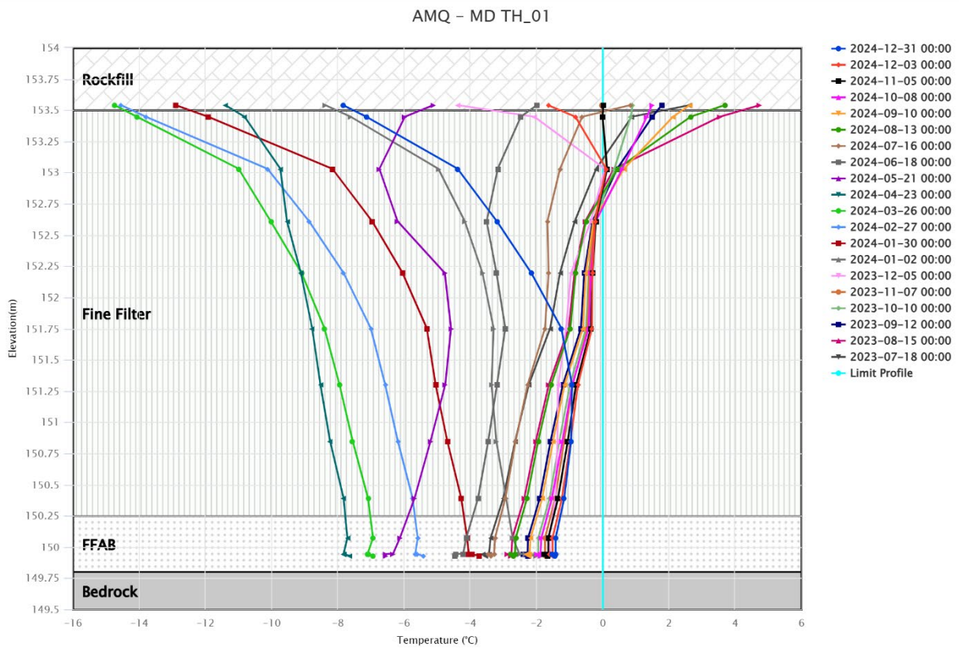


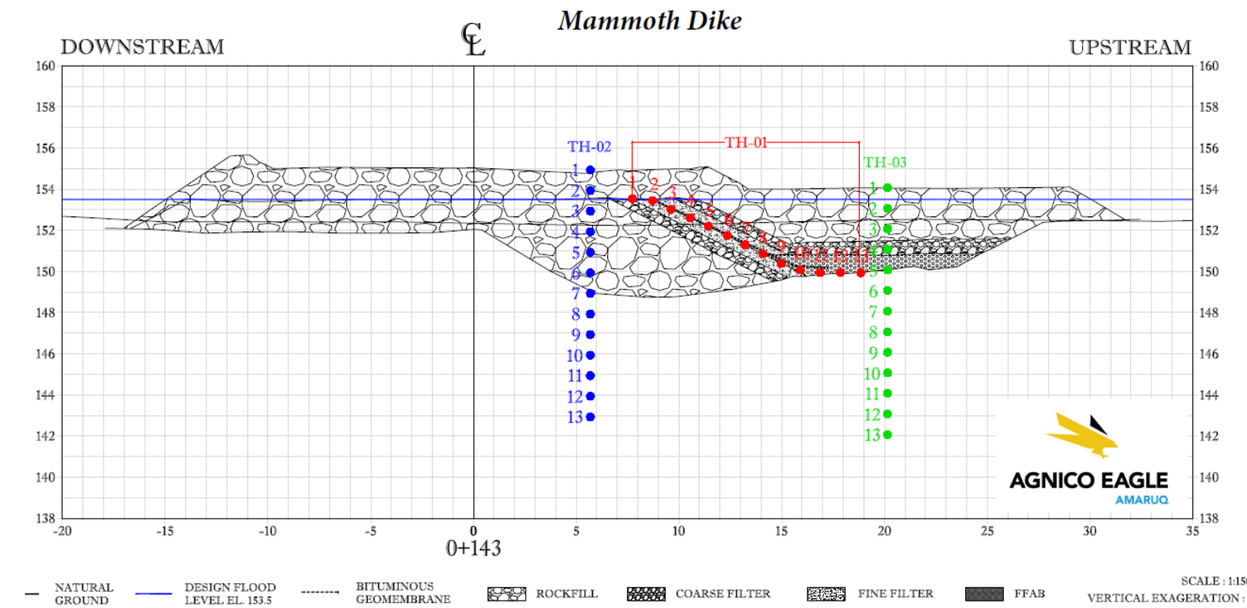


MD TH01


MD TH 01
MD TH 02
MD TH 03
MAMMOTH DIKE

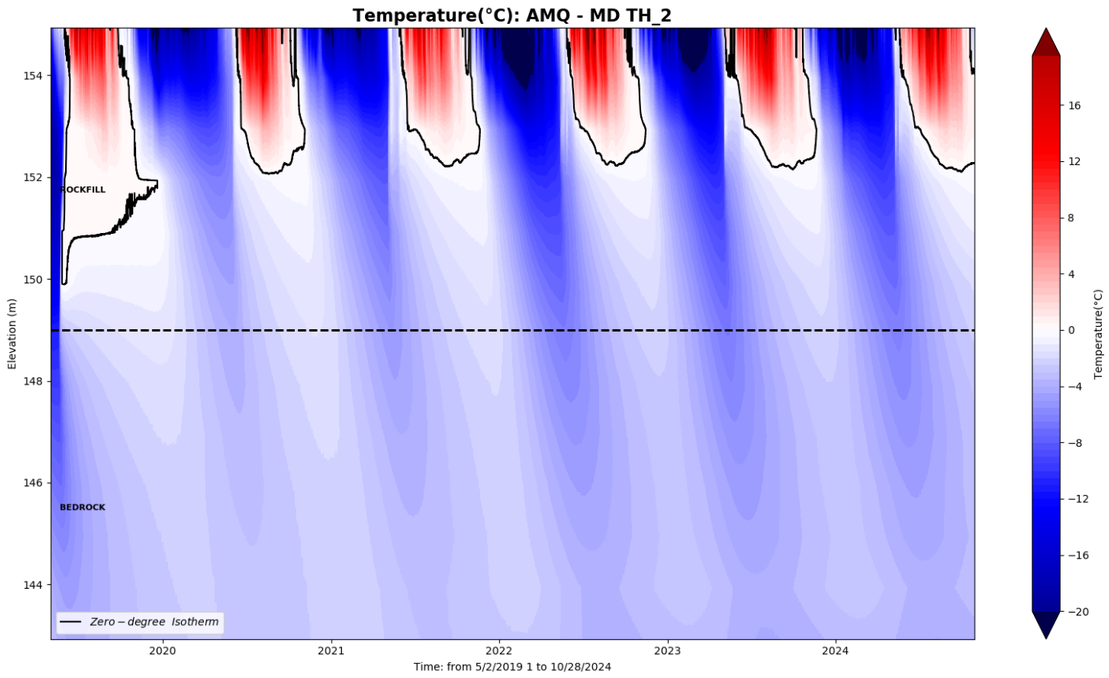

Temperature(°C): AMQ - MD TH_1
Elevation (m)
FINE FILTER
Zero – degree Isotherm
Time: from 3/19/2019 to 10/28/2024
Temperature(°C)

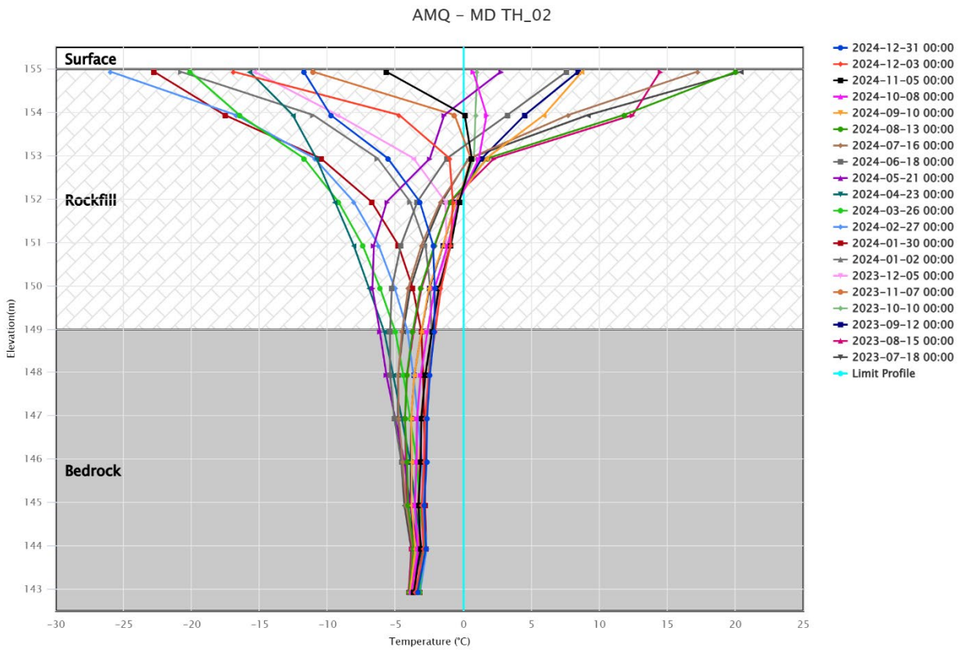

AMQ – MD TH_01
Rockfill
Fine Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
2024–12–31 00:00
2024–12–03 00:00
2024–11–05 00:00
2024–10–08 00:00
2024–09–10 00:00
2024–08–13 00:00
2024–07–16 00:00
2024–06–18 00:00
2024–05–21 00:00
2024–04–23 00:00
2024–03–26 00:00
2024–02–27 00:00
2024–01–30 00:00
2024–01–02 00:00
2023–12–05 00:00
2023–11–07 00:00
2023–10–10 00:00
2023–09–12 00:00
2023–08–15 00:00
2023–07–18 00:00
Limit Profile

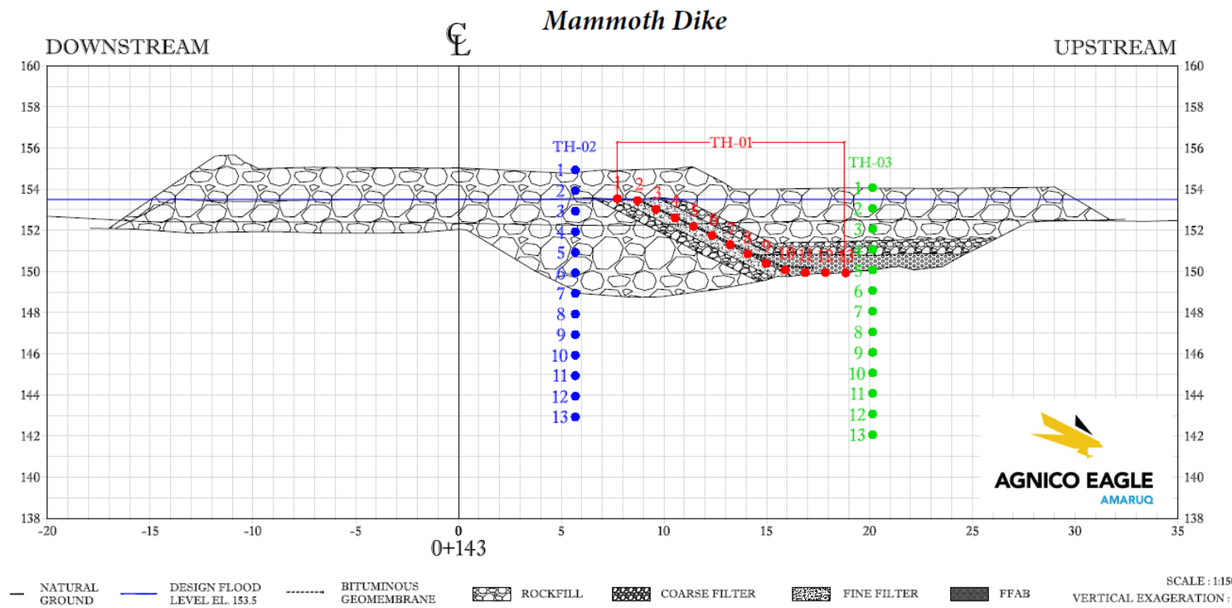

Mammoth Dike
DOWNSTREAM
UPSTREAM
TH-01
TH-02
TH-03
0+143
AGNICO EAGLE
AMARUQ
NATURAL GROUND
DESIGN FLOOD LEVEL EL. 153.5
BITUMINOUS GEOMEMBRANE
ROCKFILL
COARSE FILTER
FINE FILTER
FFAB

MD TH02


MD TH
01
MD TH
02
MD TH
03
MAMMOTH
DIKE

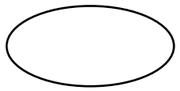

Temperature(°C): AMQ - MD TH_2
Elevation (m)
ROCKFILL
BEDROCK
Zero – degree Isotherm
2020
2021
2022
2023
2024
Time: from 5/2/2019 1 to 10/28/2024
Temperature(°C)

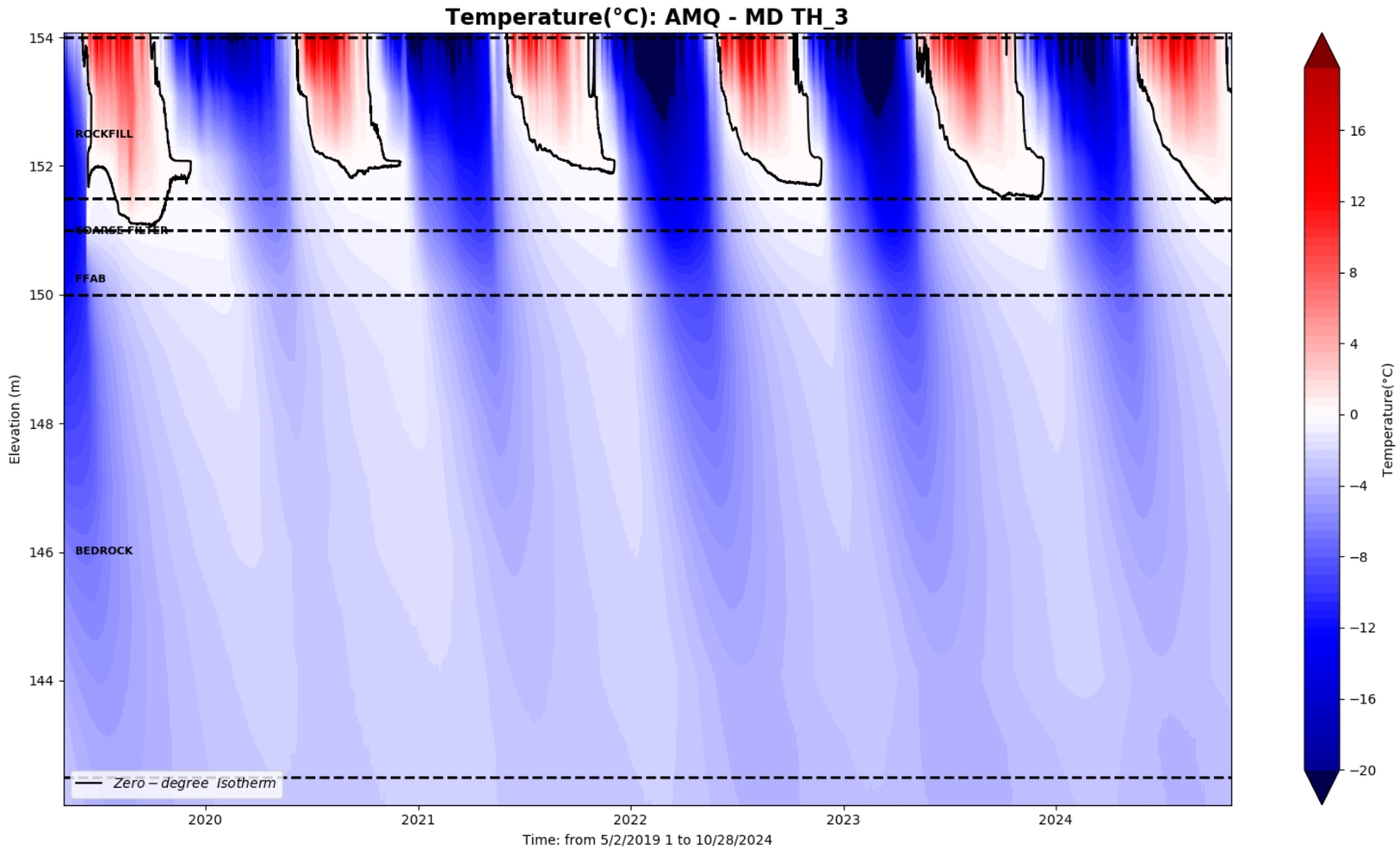

AMQ – MD TH_02
Surface
Rockfill
Bedrock
Elevation(m)
Temperature (°C)
2024–12–31 00:00
2024–12–03 00:00
2024–11–05 00:00
2024–10–08 00:00
2024–09–10 00:00
2024–08–13 00:00
2024–07–16 00:00
2024–06–18 00:00
2024–05–21 00:00
2024–04–23 00:00
2024–03–26 00:00
2024–02–27 00:00
2024–01–30 00:00
2024–01–02 00:00
2023–12–05 00:00
2023–11–07 00:00
2023–10–10 00:00
2023–09–12 00:00
2023–08–15 00:00
2023–07–18 00:00
Limit Profile

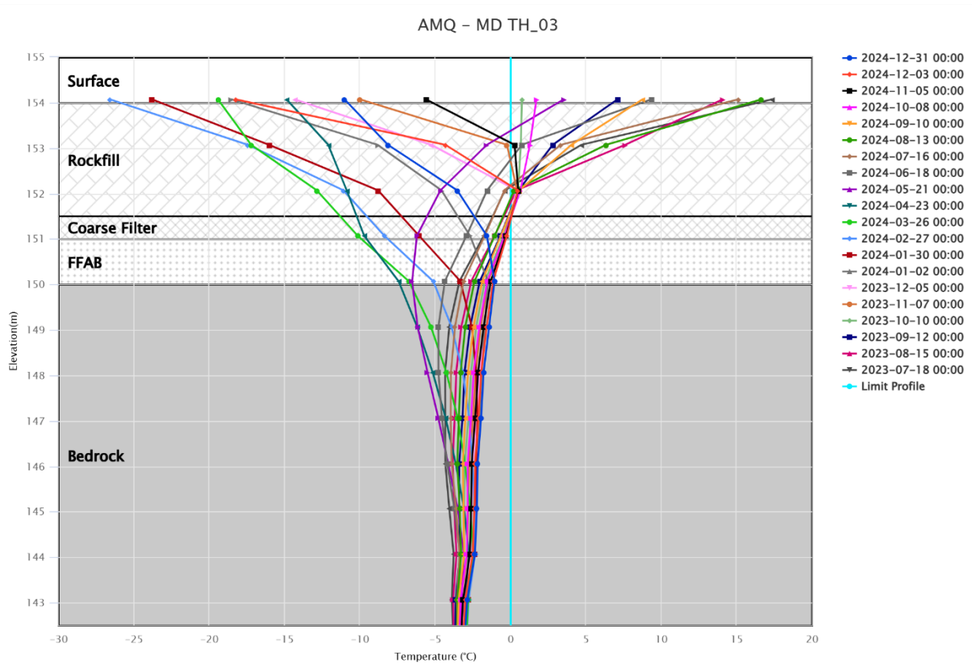

Mammoth Dike
DOWNSTREAM
UPSTREAM
TH-02
TH-01
TH-03
0+143
AGNICO EAGLE
AMARUQ
NATURAL GROUND
DESIGN FLOOD LEVEL EL. 153.5
BITUMINOUS GEOMEMBRANE
ROCKFILL
COARSE FILTER
FINE FILTER
FFAB
SCALE : 1:15
VERTICAL EXAGERATION :

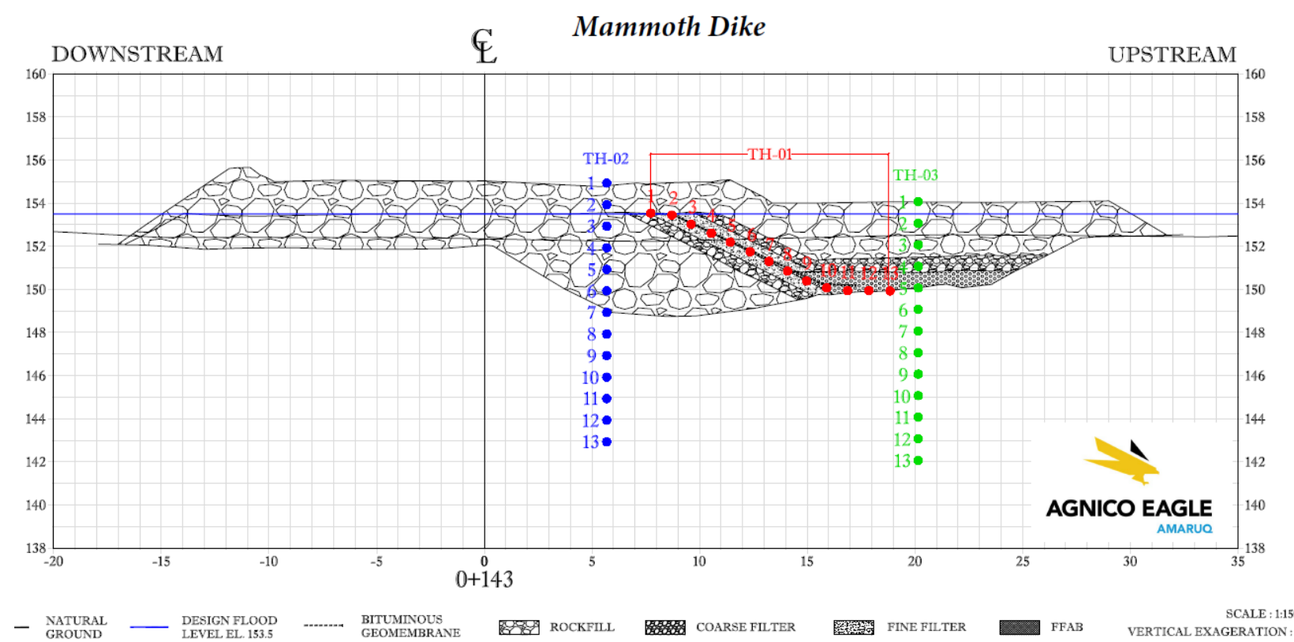
MD TH03


MD TH
01
MD TH
02
MD TH
03
MAMMOTH
DIKE

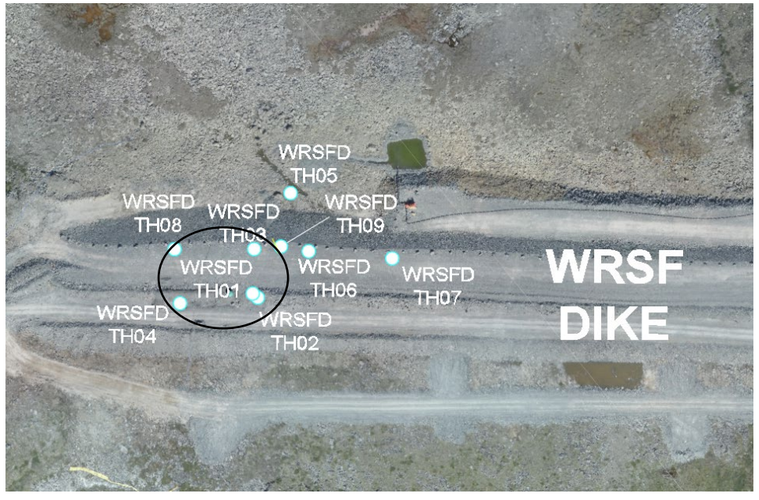


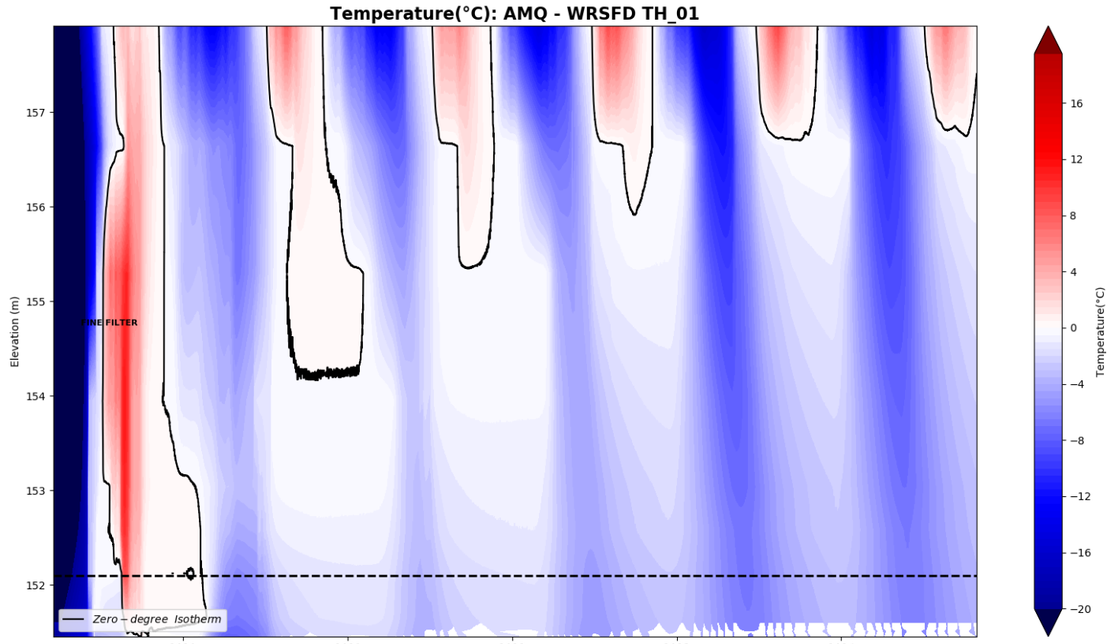

Temperature(°C): AMQ - MD TH_3
Elevation (m)
154
152
150
148
146
144
ROCKFILL
COARSE FILTER
FFAB
BEDROCK
Zero – degree Isotherm
2020
2021
2022
2023
2024
Time: from 5/2/2019 1 to 10/28/2024
16
12
8
4
0
−4
−8
−12
−16
−20
Temperature(°C)


AMQ – MD TH_03
Surface
Rockfill
Coarse Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

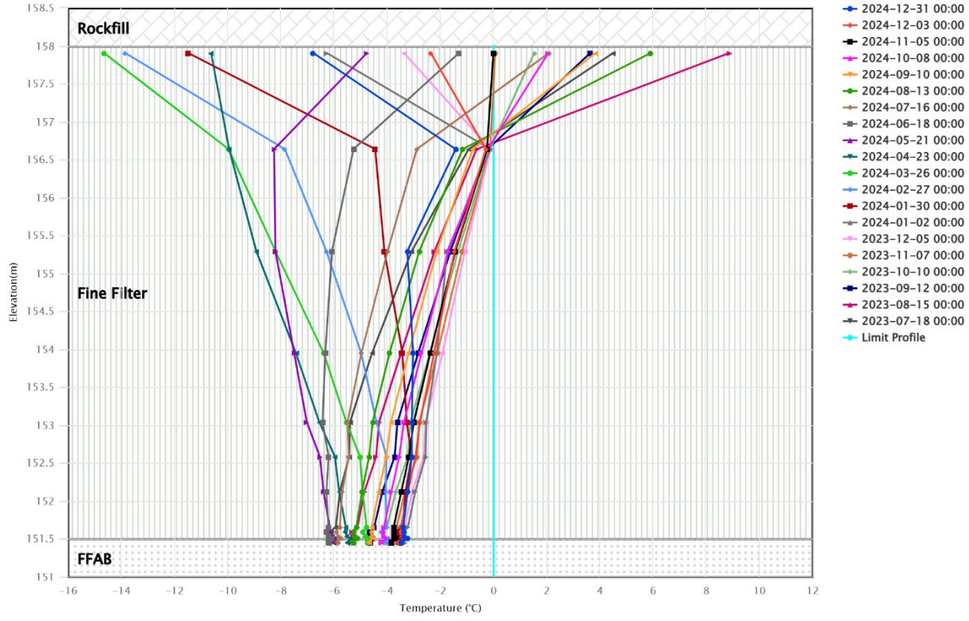

Mammoth Dike
DOWNSTREAM
UPSTREAM
TH-01
TH-02
TH-03
AGNICO EAGLE
AMARUQ
0+143
NATURAL GROUND
DESIGN FLOOD LEVEL EL. 153.5
BITUMINOUS GEOMEMBRANE
ROCKFILL
COARSE FILTER
FINE FILTER
FFAB
SCALE : 1:15
VERTICAL EXAGERATION :

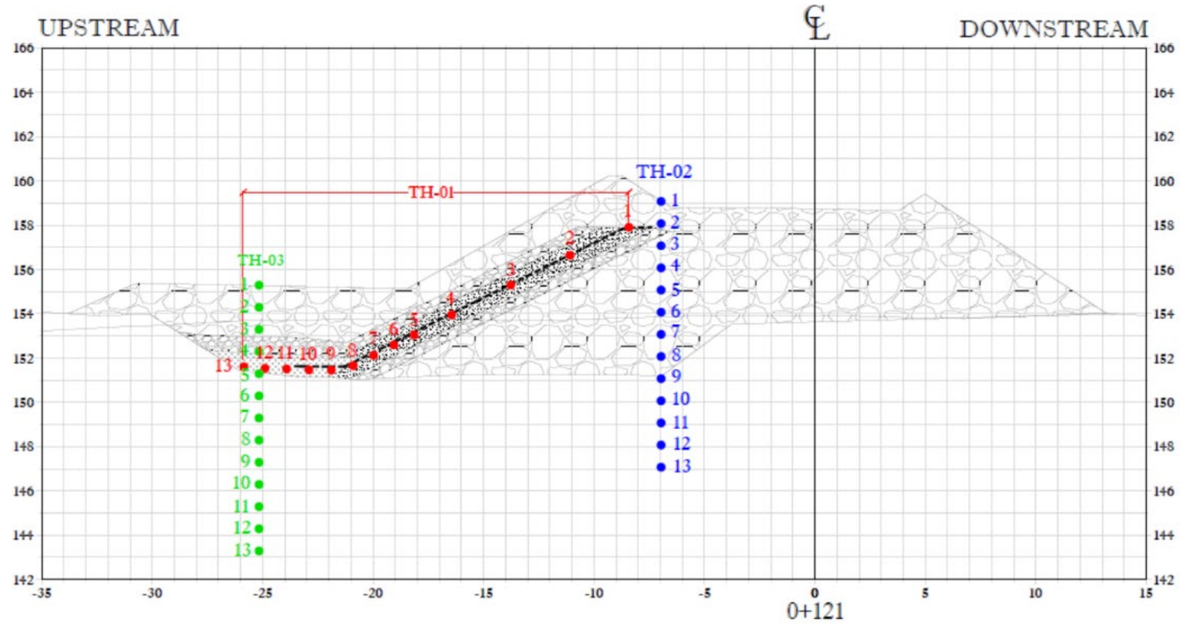
WRSFD TH01



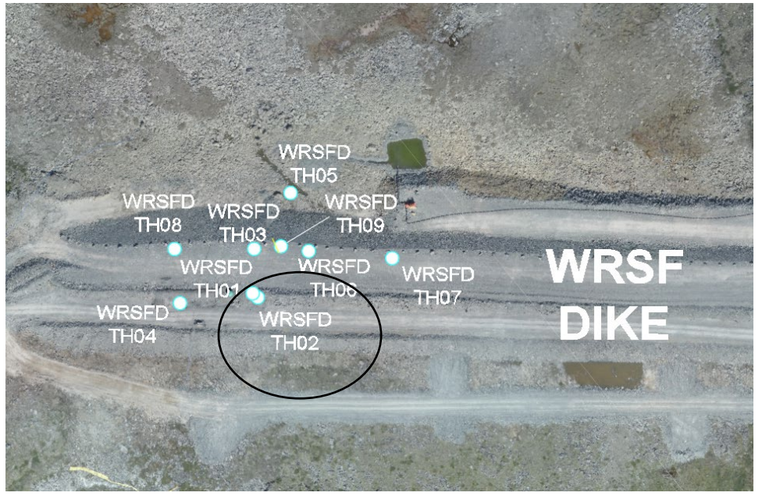


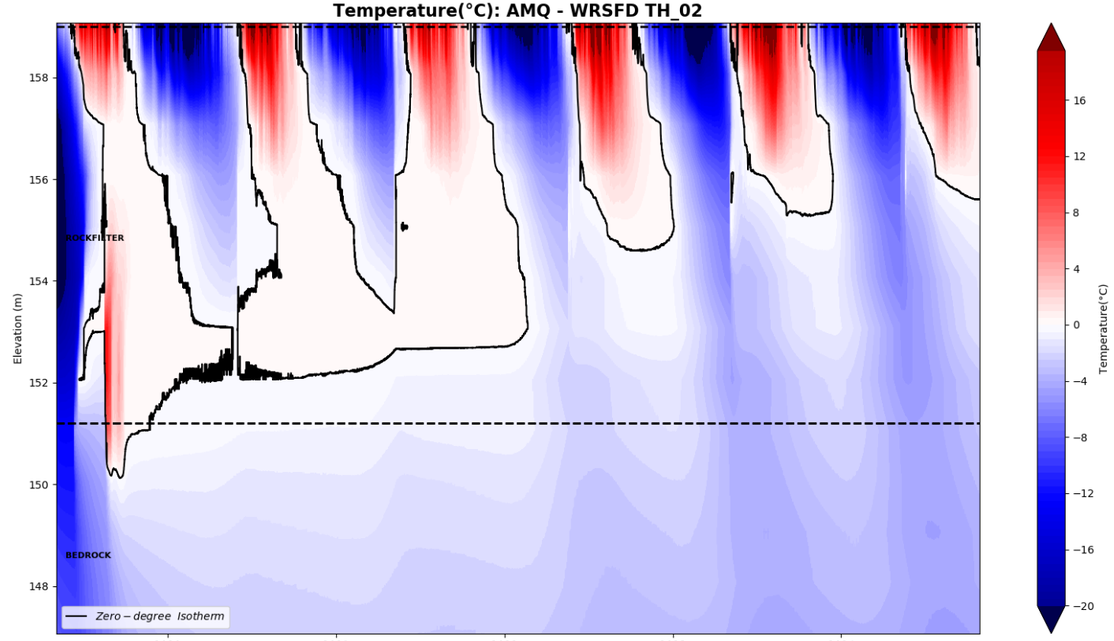
AMQ – WRSFD TH_01



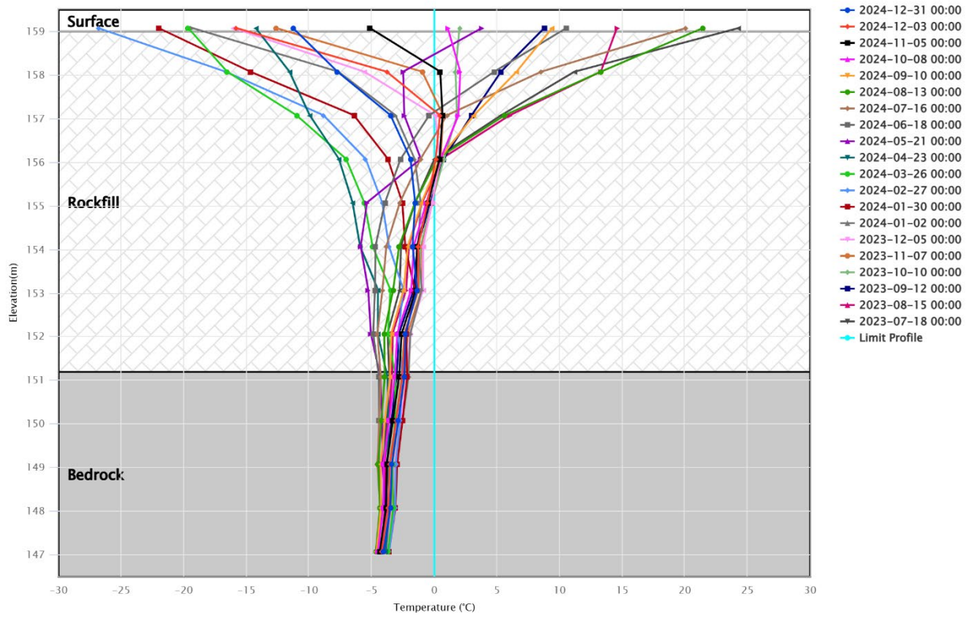


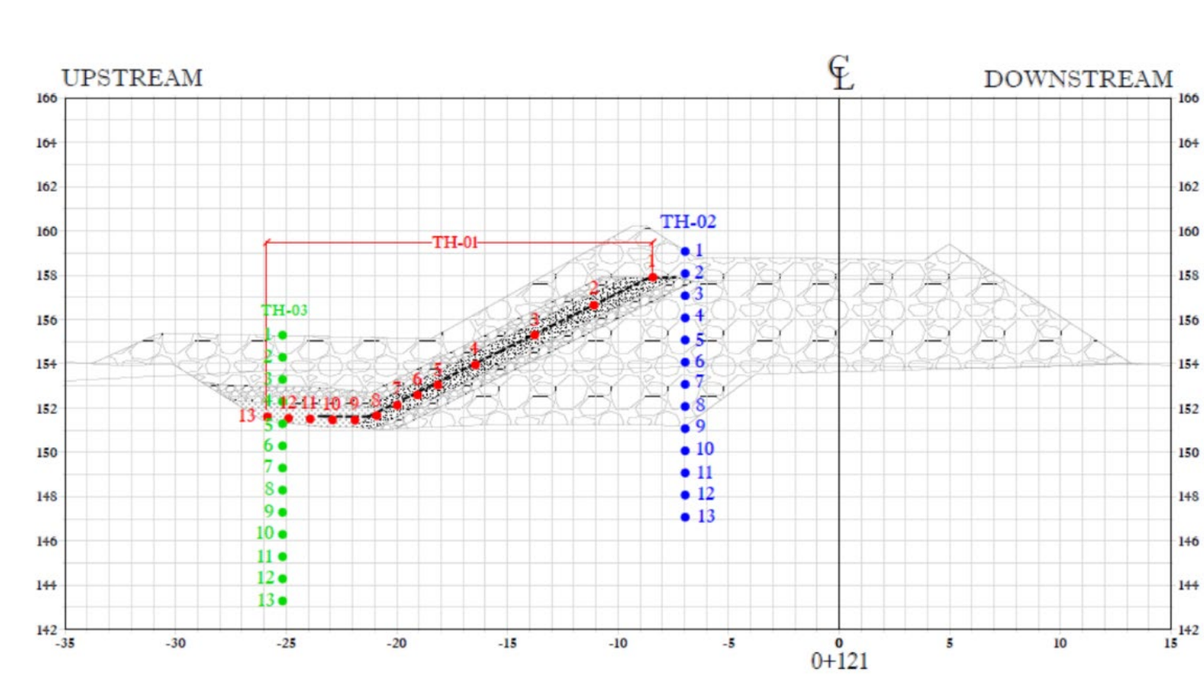
WRSFD TH02



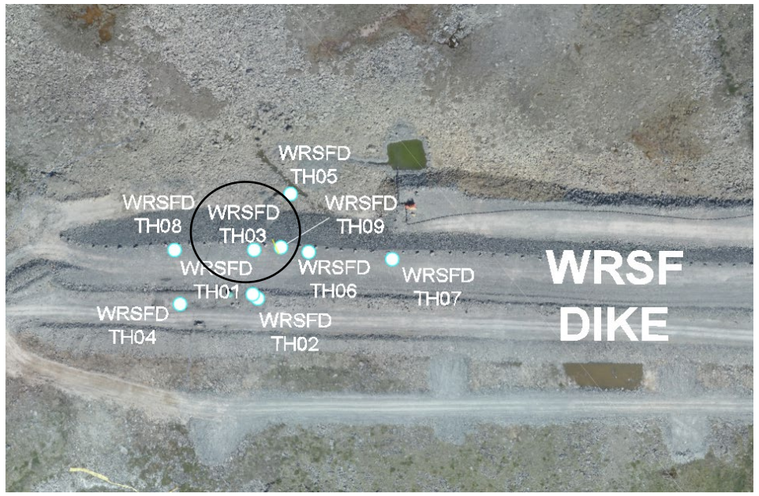


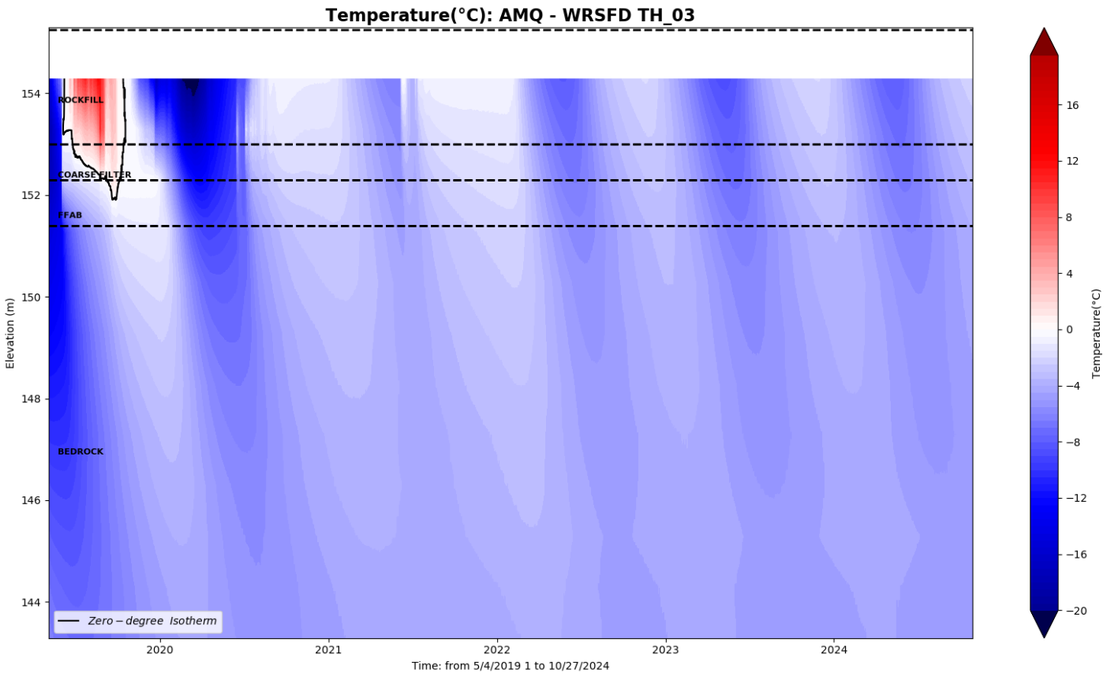
AMQ – WRSFD TH_02

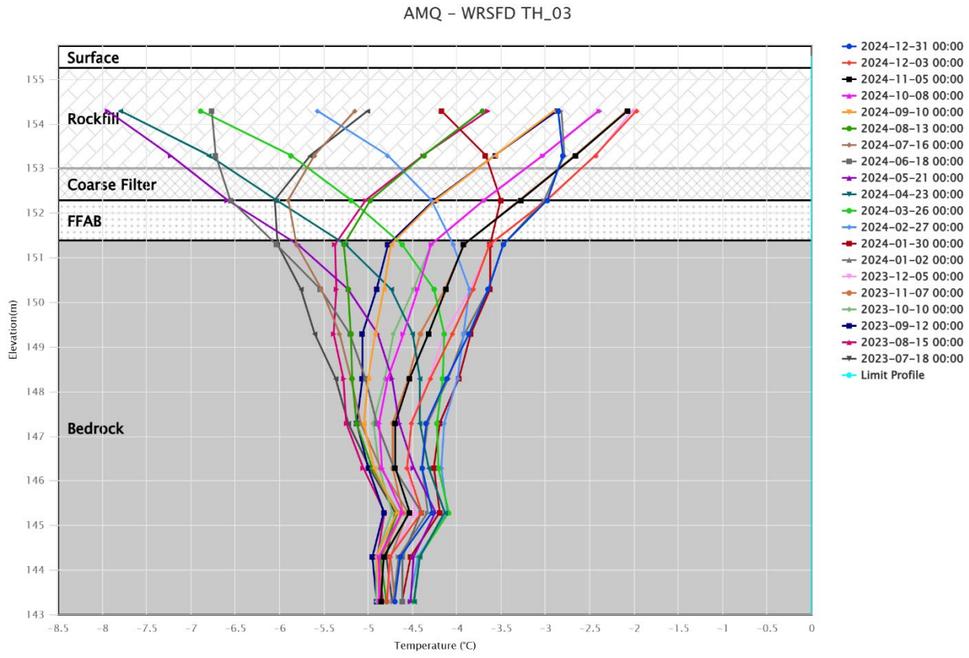


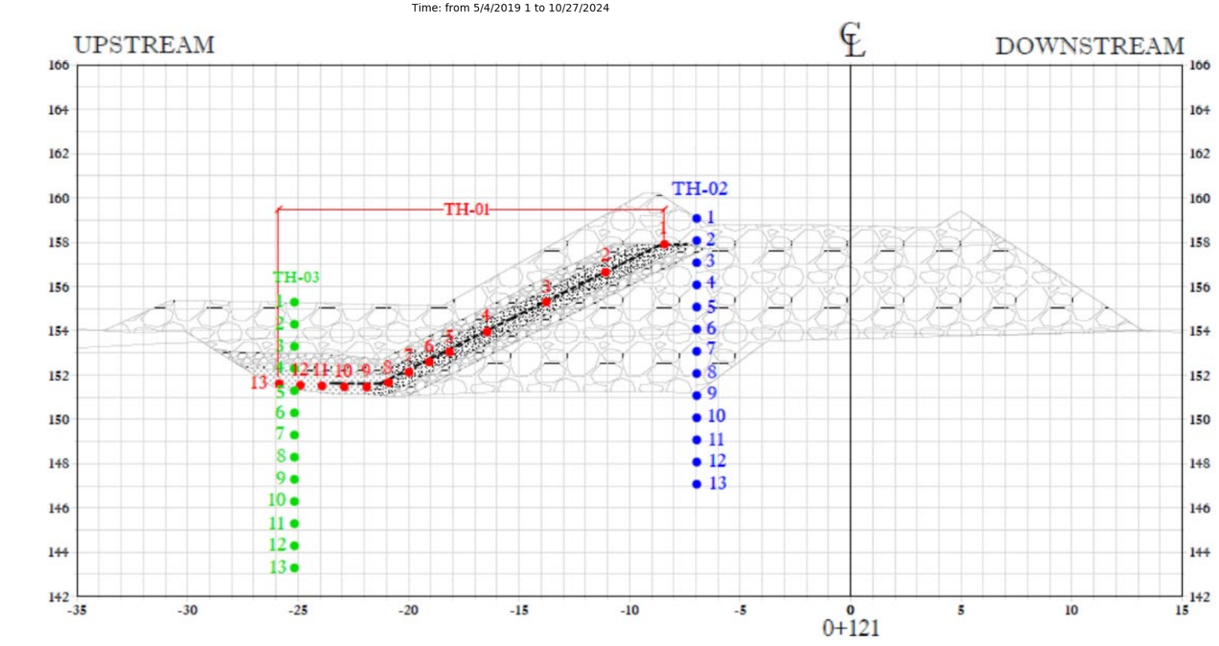


WRSFD TH03

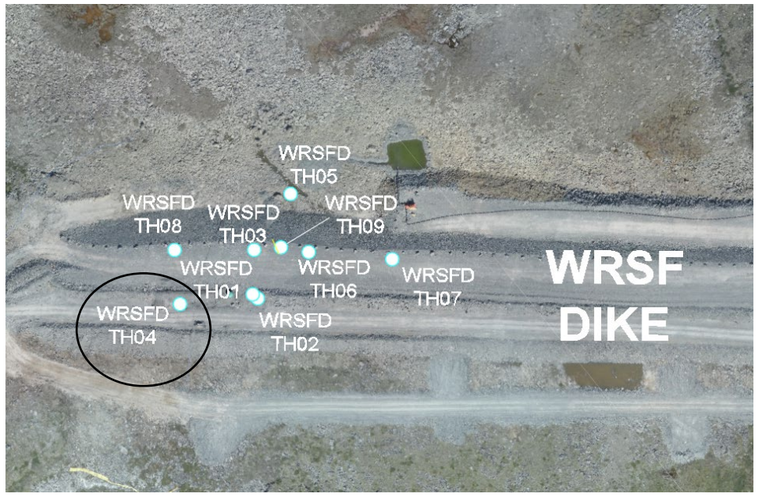

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

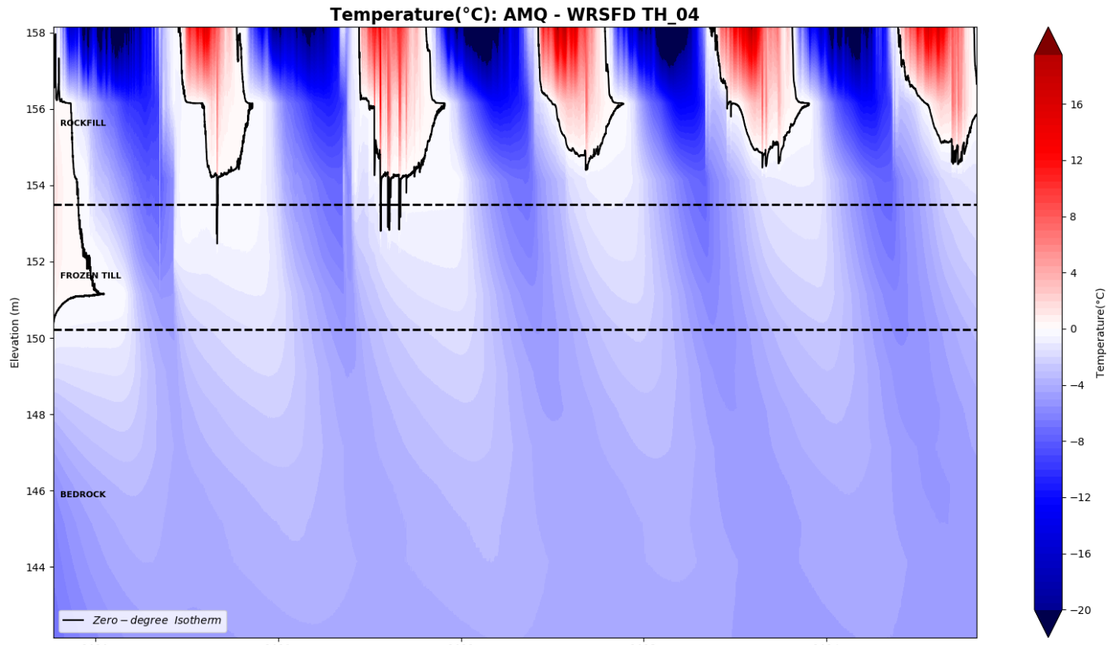

Temperature(°C): AMQ - WRSFD TH_03
ROCKFILL
COARSE FILTER
FFAB
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 5/4/2019 1 to 10/27/2024
Temperature(°C)


AMQ – WRSFD TH_03
Surface
Rockfill
Coarse Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

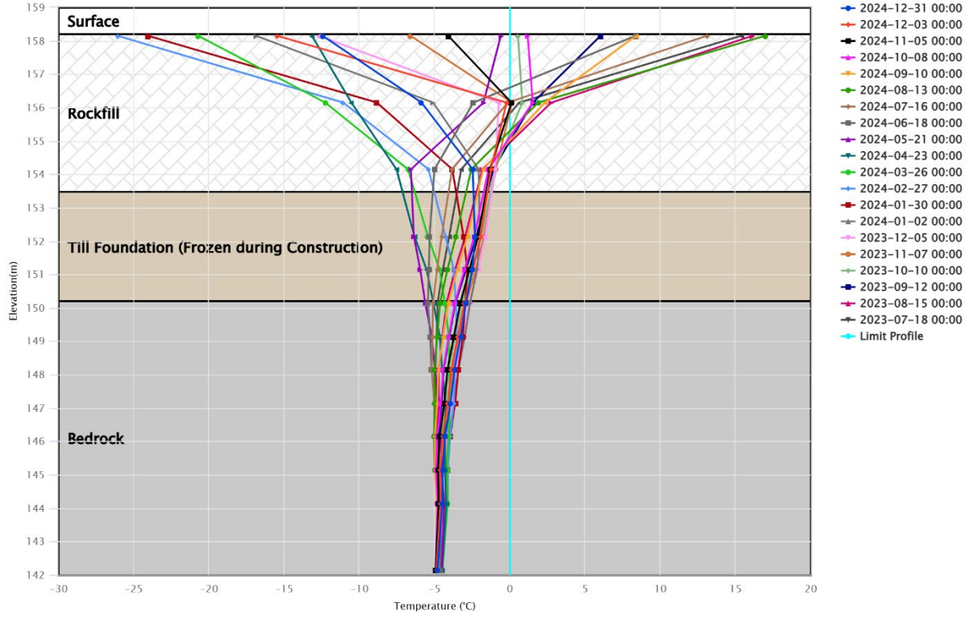

UPSTREAM
DOWNSTREAM
TH-01
TH-02
TH-03
0+121

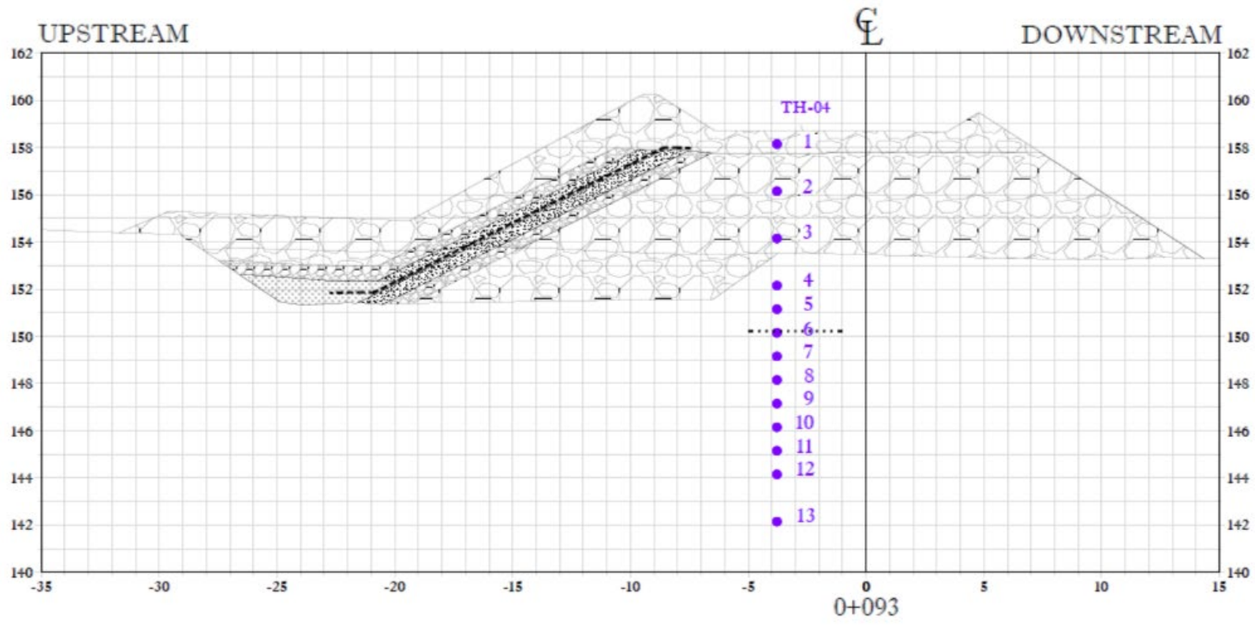
WRSFD TH04



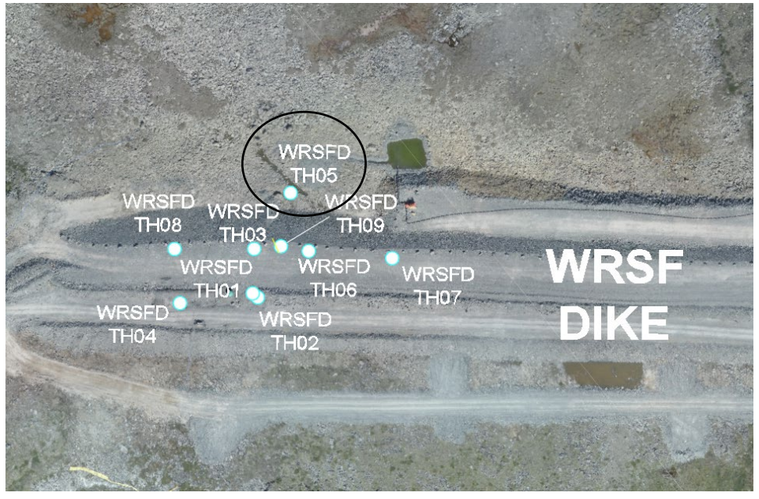


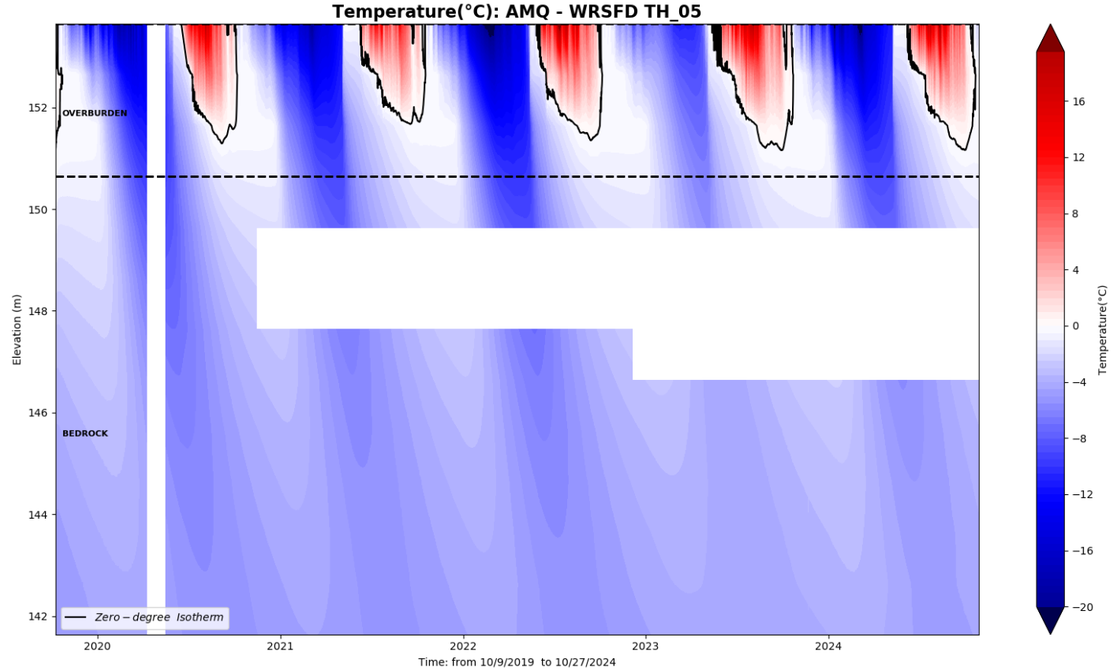
AMQ – WRSFD TH_04



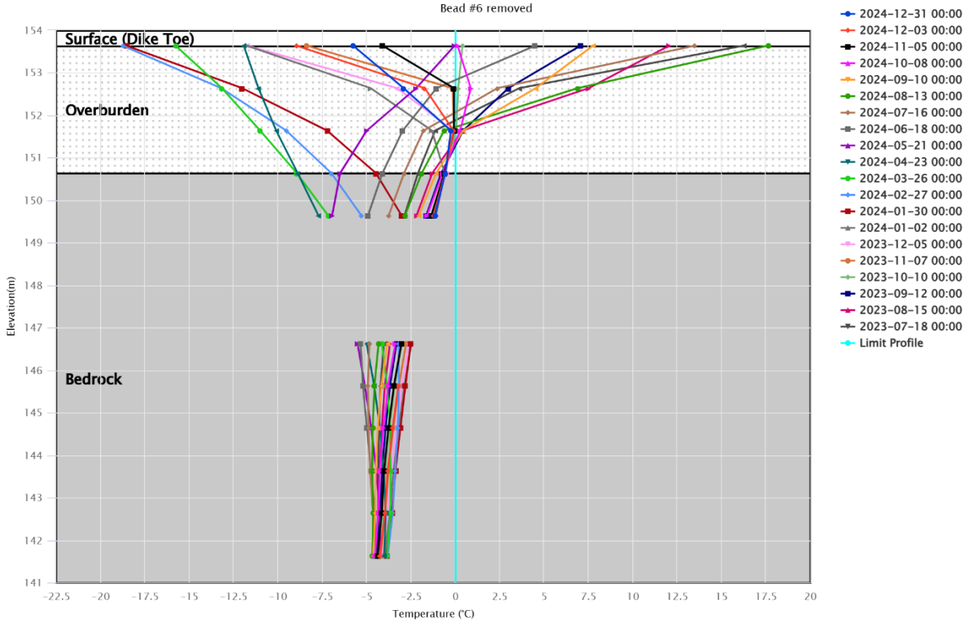


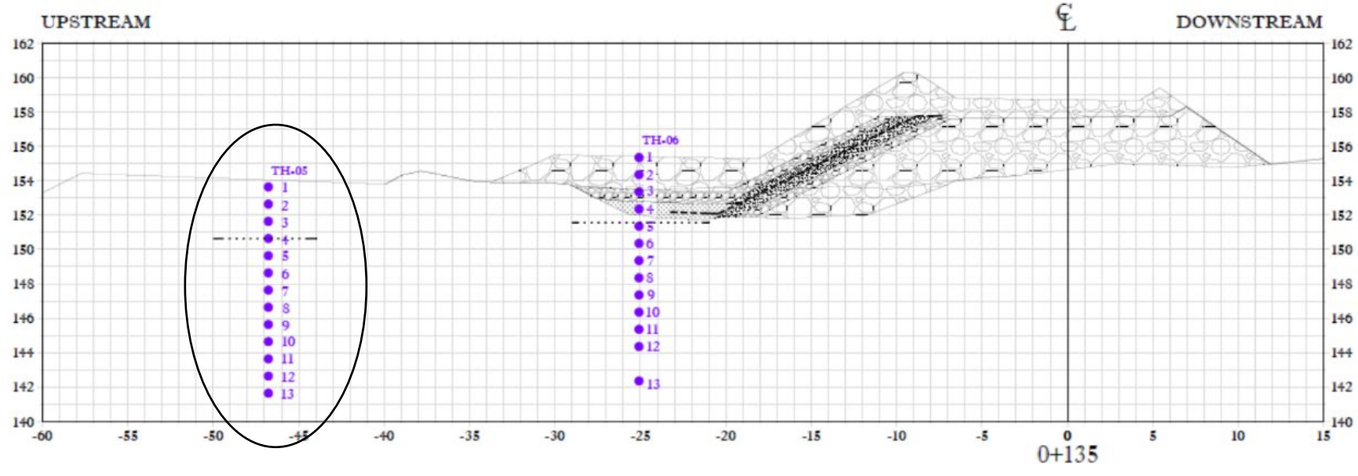
WRSFD TH05



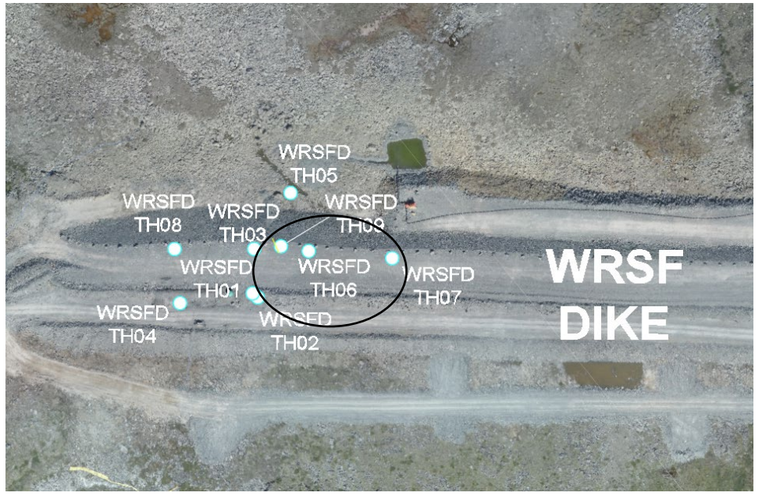


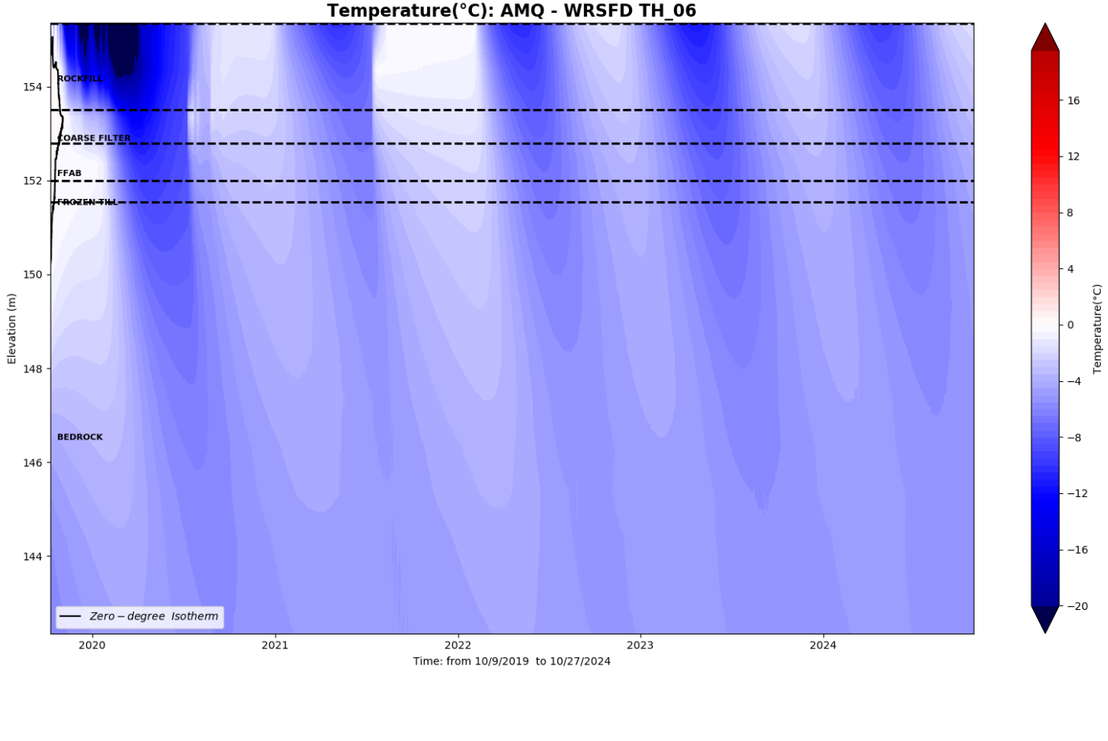
AMQ – WRSFD TH_05

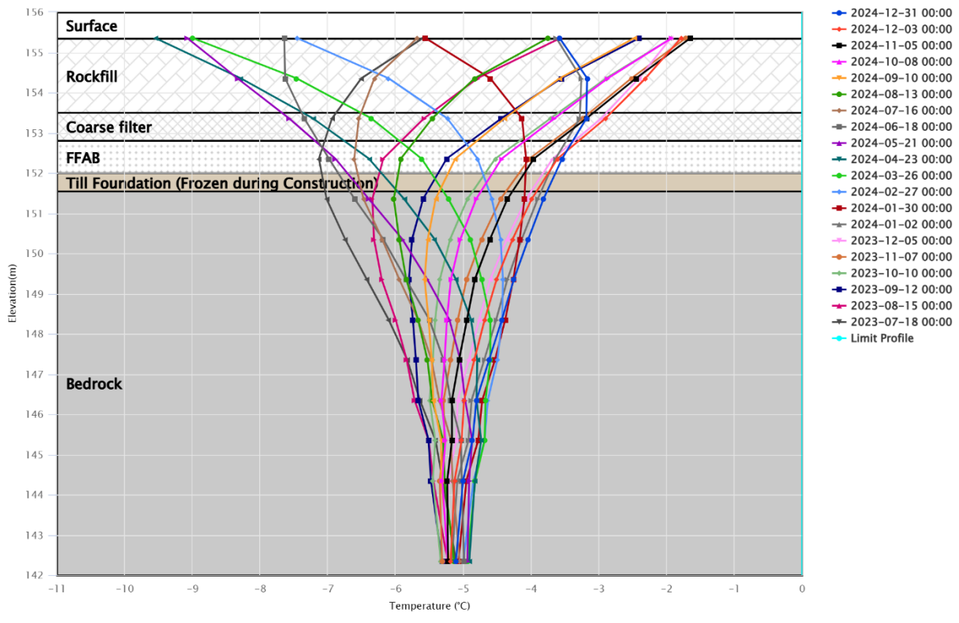


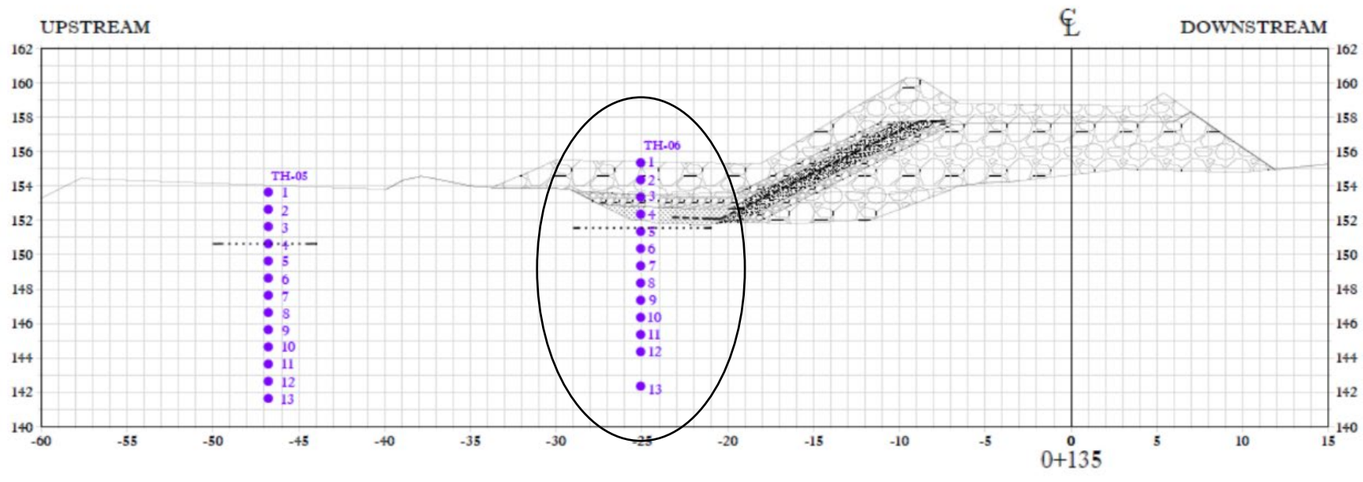


WRSFD TH06

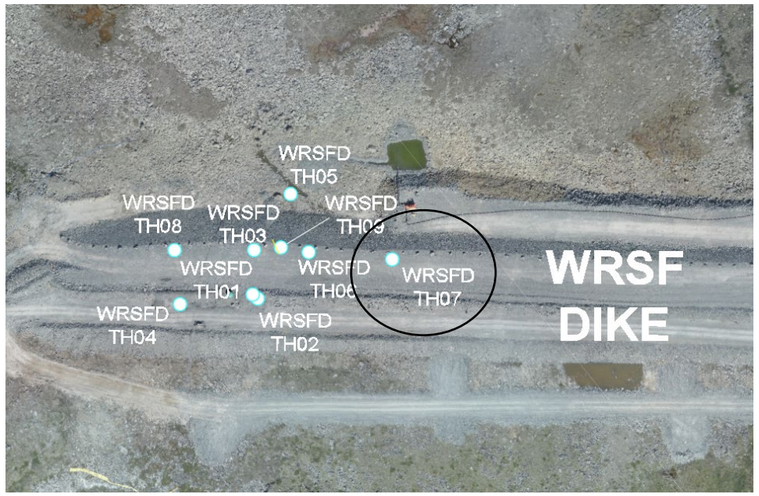

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

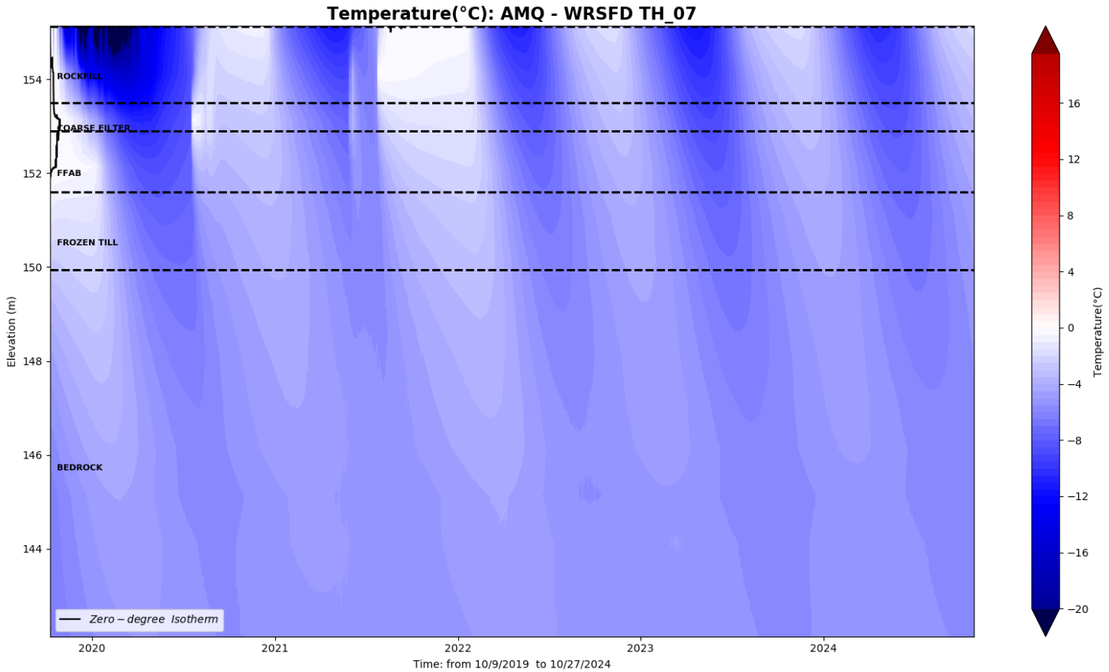

Temperature(°C): AMQ - WRSFD TH_06
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 10/9/2019 to 10/27/2024
Temperature(°C)

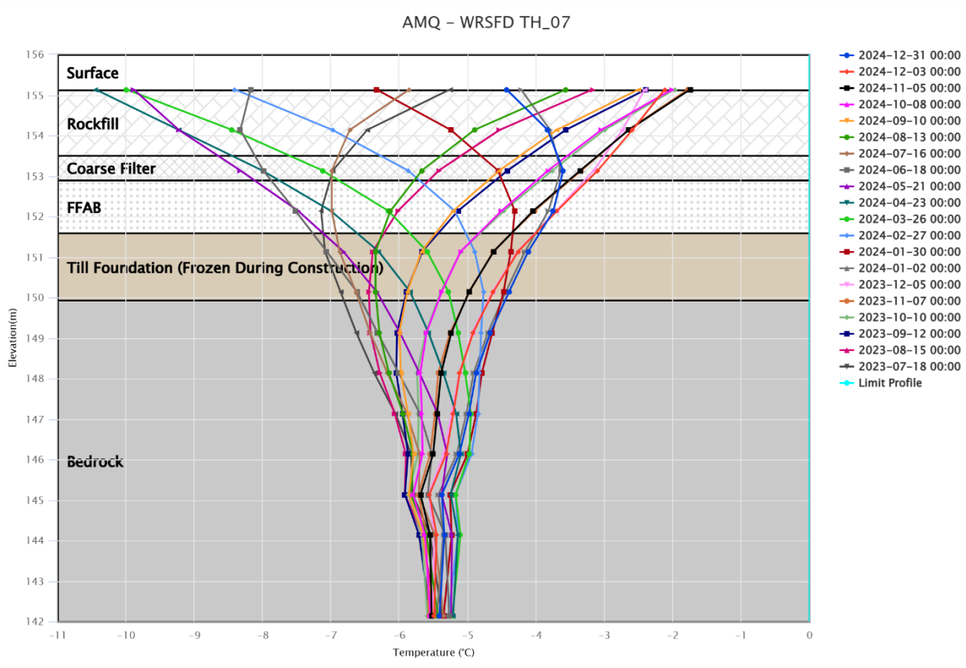

AMQ – WRSFD TH_06
Surface
Rockfill
Coarse filter
FFAB
Till Foundation (Frozen during Construction)
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

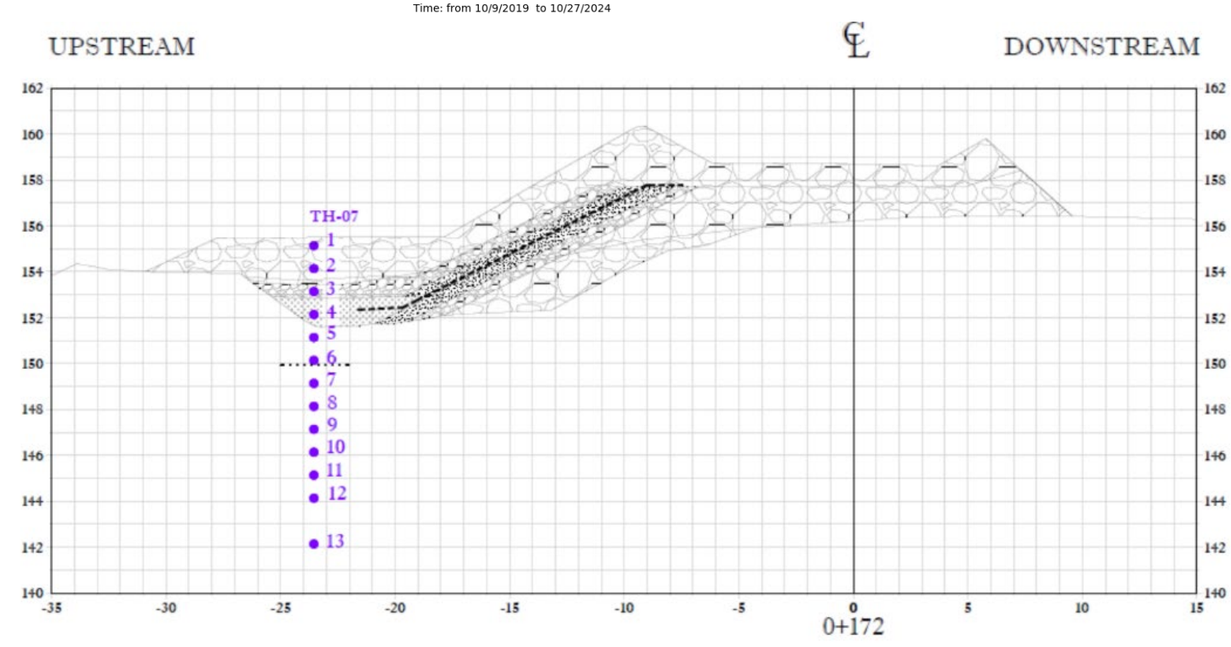

UPSTREAM
DOWNSTREAM
TH-05
TH-06
0+135

WRSFD TH07

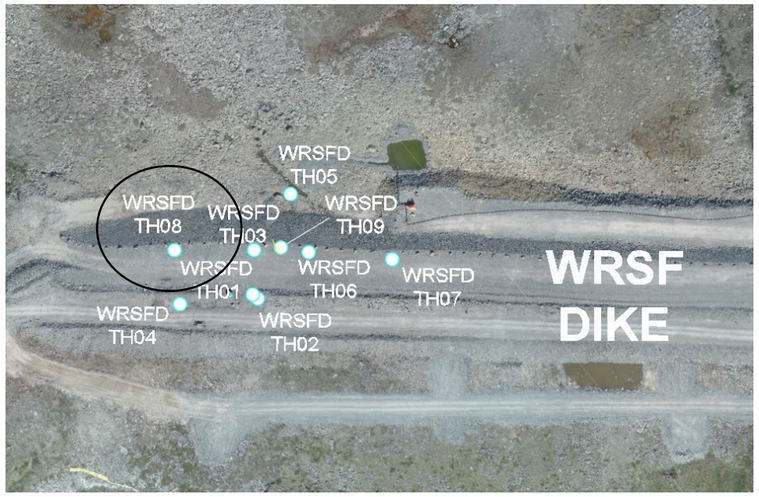

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

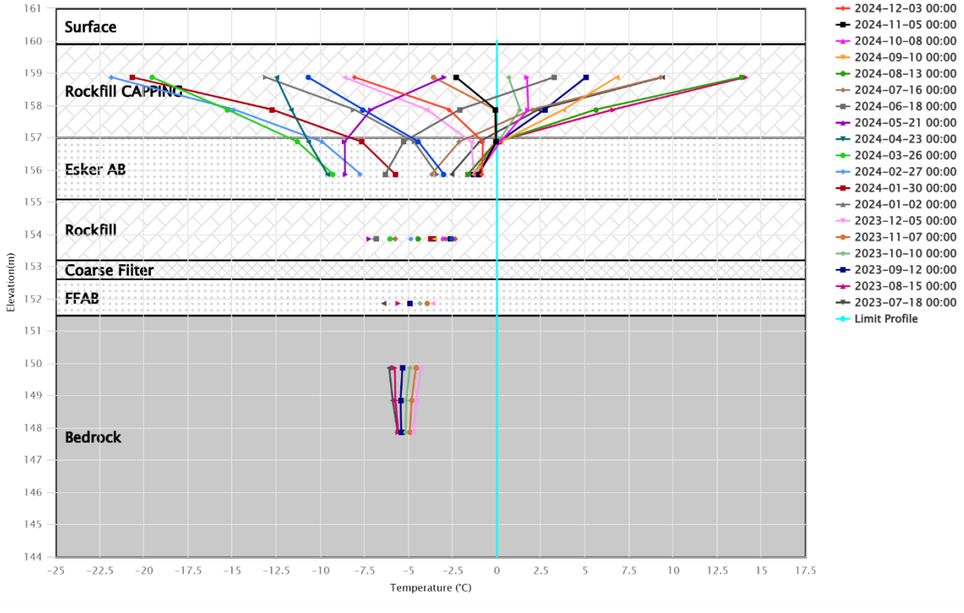

Temperature(°C): AMQ - WRSFD TH_07
ROCKFILL
COARSE FILTER
FFAB
FROZEN TILL
BEDROCK
Zero – degree Isotherm
Elevation (m)
Time: from 10/9/2019 to 10/27/2024
Temperature(°C)


AMQ – WRSFD TH_07
Surface
Rockfill
Coarse Filter
FFAB
Till Foundation (Frozen During Construction)
Bedrock
Elevation(m)
Temperature (°C)
2024-12-31 00:00
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

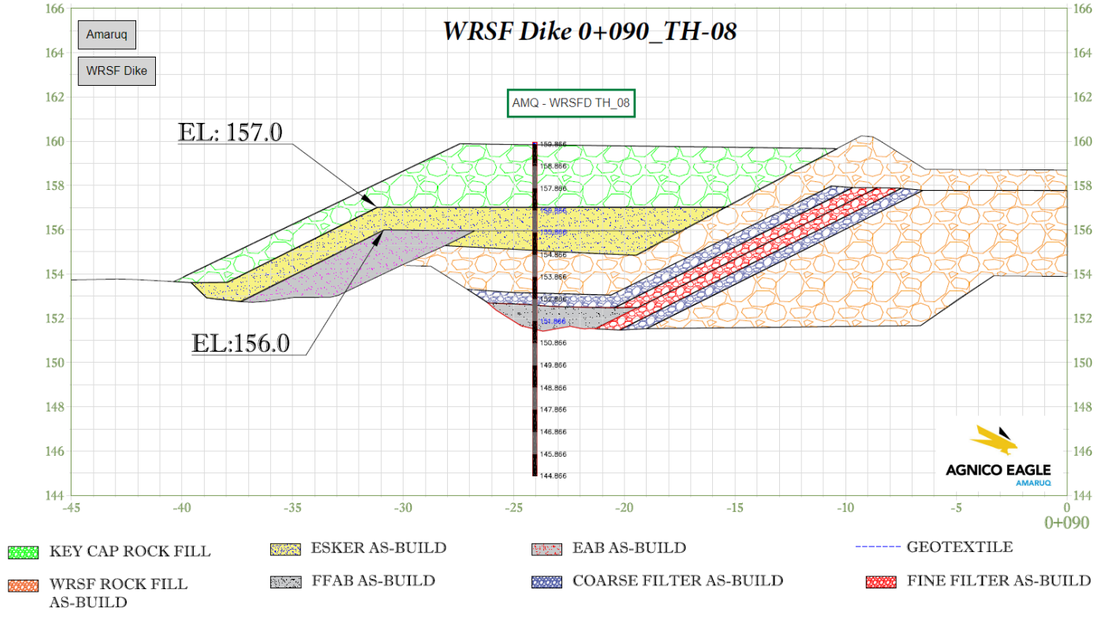

UPSTREAM
DOWNSTREAM
TH-07
1
2
3
4
5
6
7
8
9
10
11
12
13
0+172

WRSFD TH08

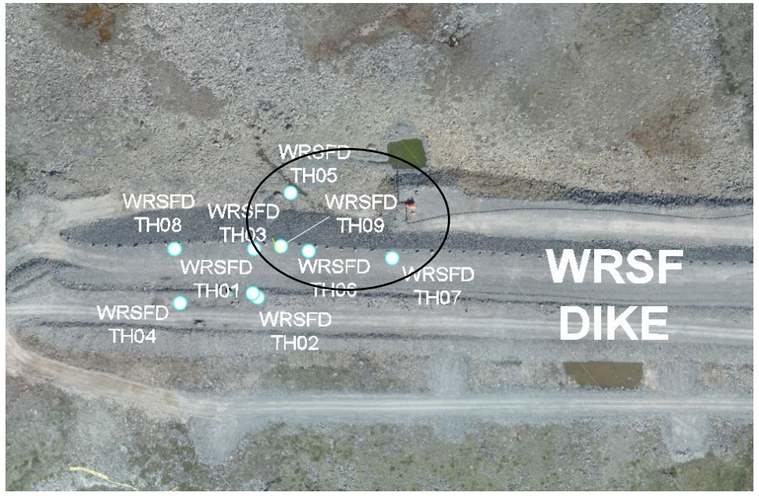

WRSFD TH05
WRSFD TH08
WRSFD TH03
WRSFD TH09
WRSFD TH01
WRSFD TH06
WRSFD TH07
WRSFD TH04
WRSFD TH02
WRSF DIKE

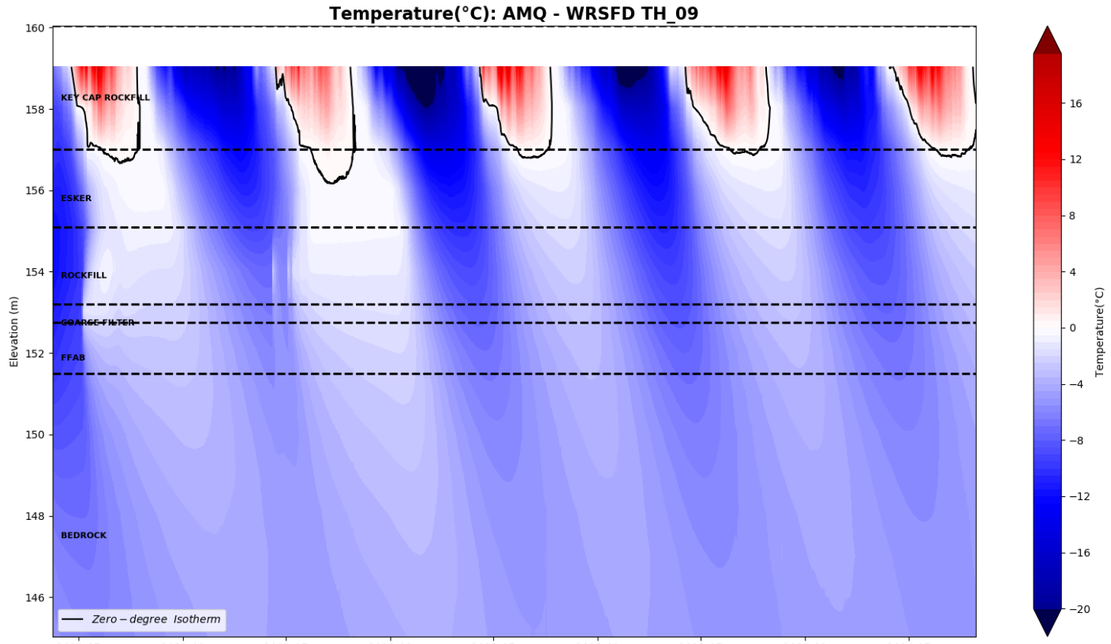

AMQ – WRSFD TH_08
Bead #1, #6, #8, #10 and #14 Damaged
Surface
Rockfill CAPPING
Esker AB
Rockfill
Coarse Filter
FFAB
Bedrock
Elevation(m)
Temperature (°C)
2024-12-03 00:00
2024-11-05 00:00
2024-10-08 00:00
2024-09-10 00:00
2024-08-13 00:00
2024-07-16 00:00
2024-06-18 00:00
2024-05-21 00:00
2024-04-23 00:00
2024-03-26 00:00
2024-02-27 00:00
2024-01-30 00:00
2024-01-02 00:00
2023-12-05 00:00
2023-11-07 00:00
2023-10-10 00:00
2023-09-12 00:00
2023-08-15 00:00
2023-07-18 00:00
Limit Profile

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 10/27/2024

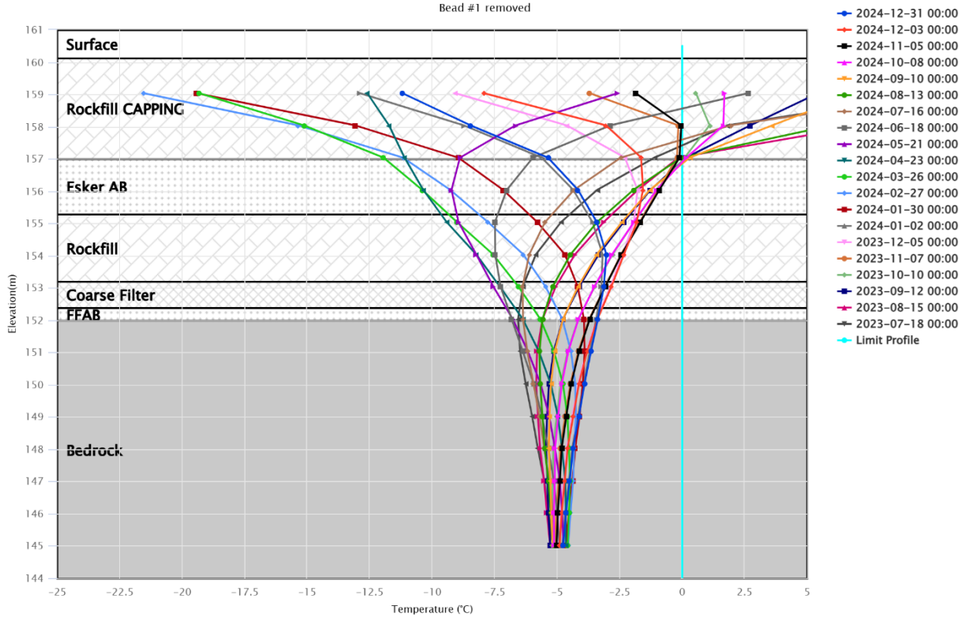

Amaruq
WRSF Dike
WRSF Dike 0+090_TH-08
AMQ - WRSFD TH_08
EL: 157.0
EL:156.0
AGNICO EAGLE
AMARUQ
0+090
KEY CAP ROCK FILL
WRSF ROCK FILL AS-BUILD
ESKER AS-BUILD
FFAB AS-BUILD
EAB AS-BUILD
COARSE FILTER AS-BUILD
GEOTEXTILE
FINE FILTER AS-BUILD

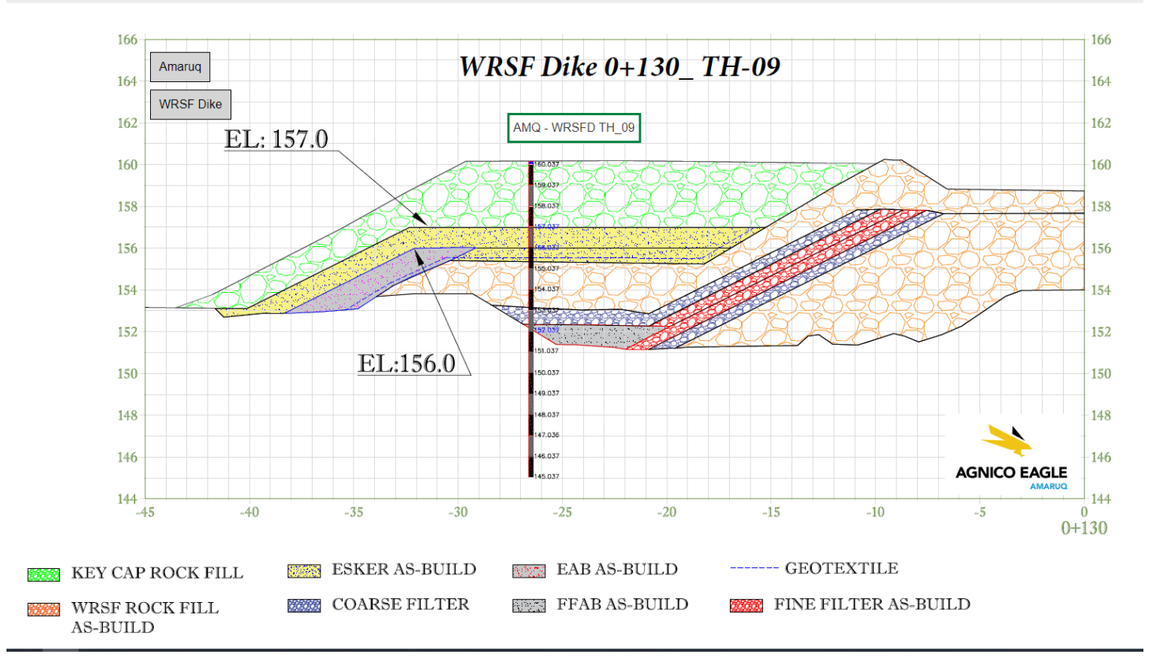
WRSFD TH09



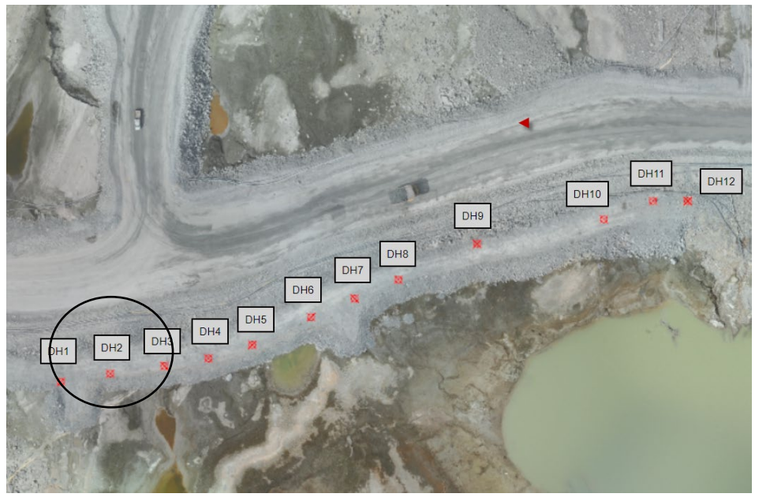


AMQ – WRSFD TH_09

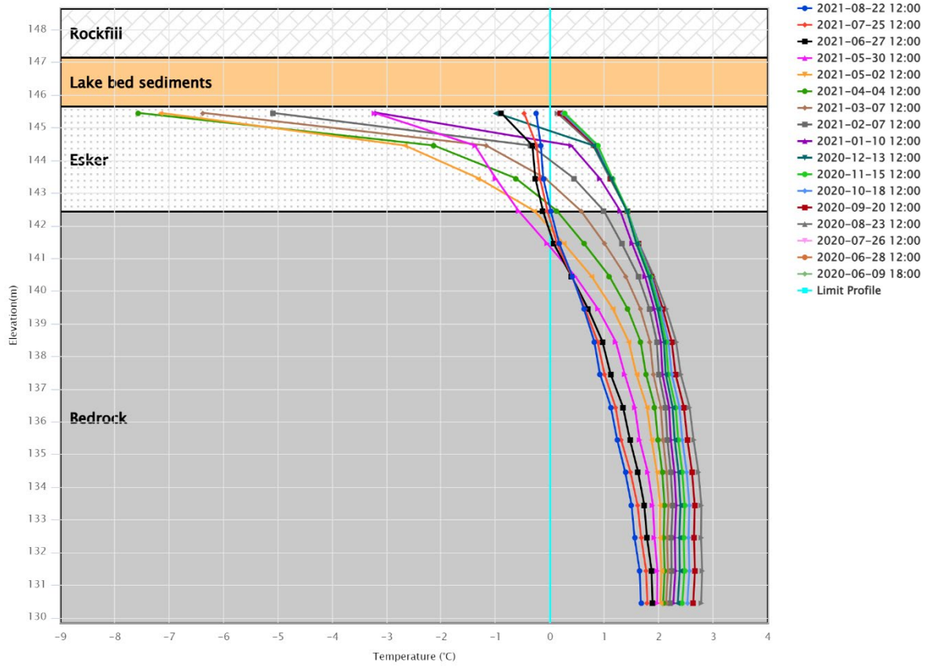


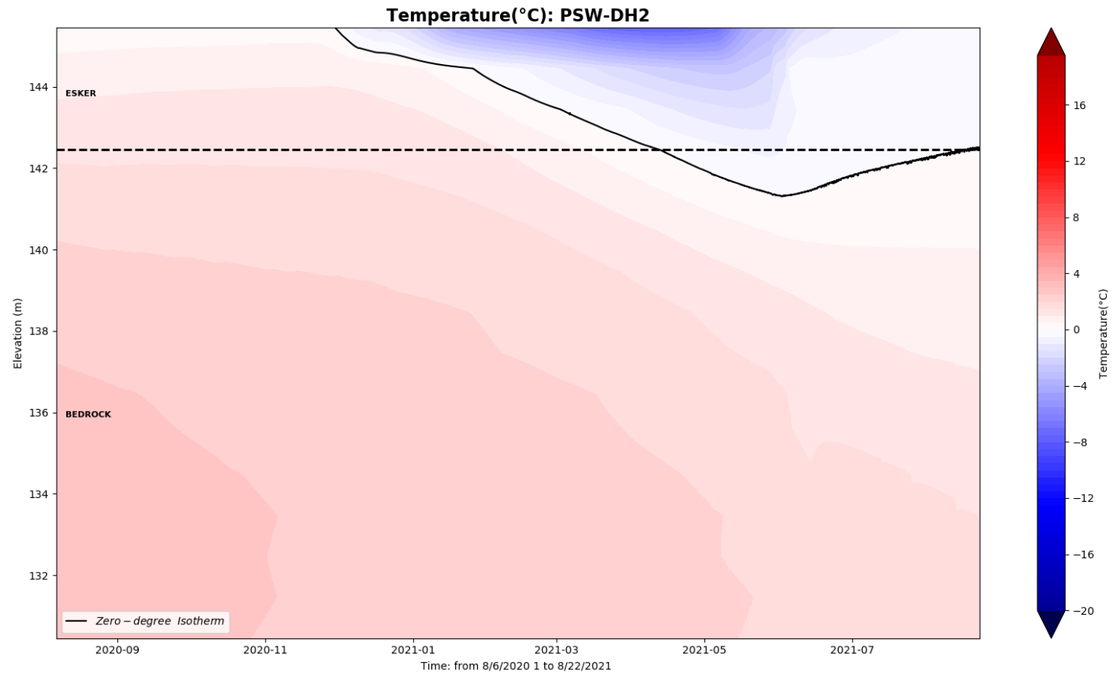


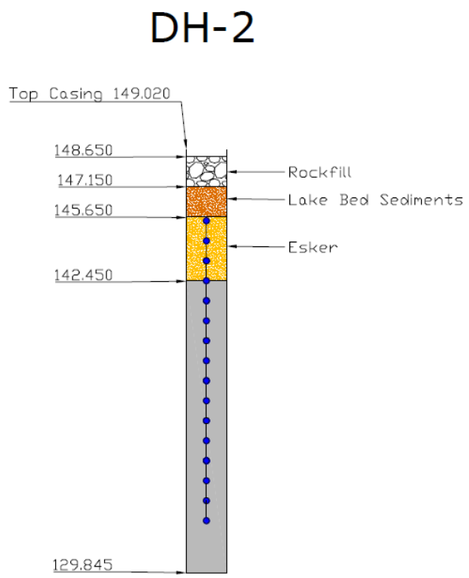
PSW – DH 2 TH



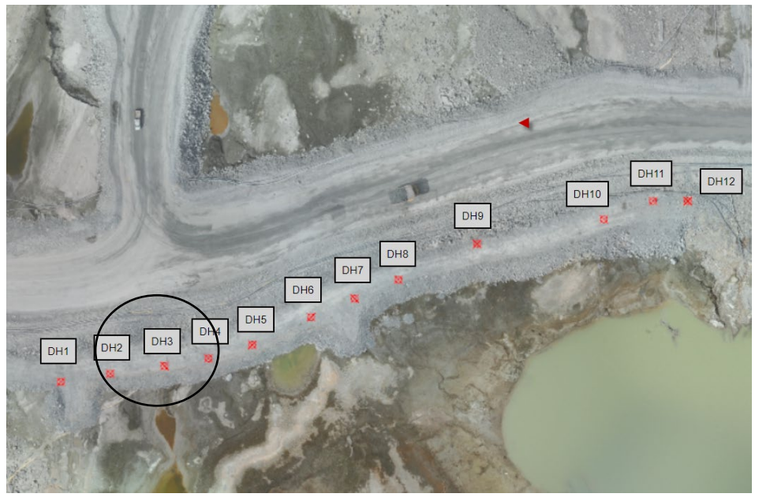
AMQ – PSW – DH02_TH



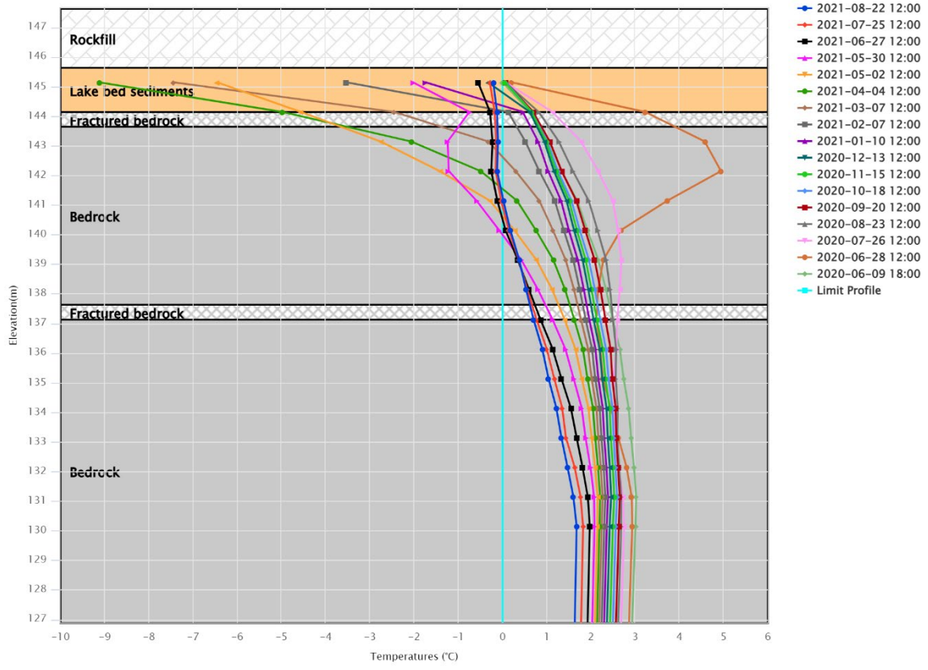


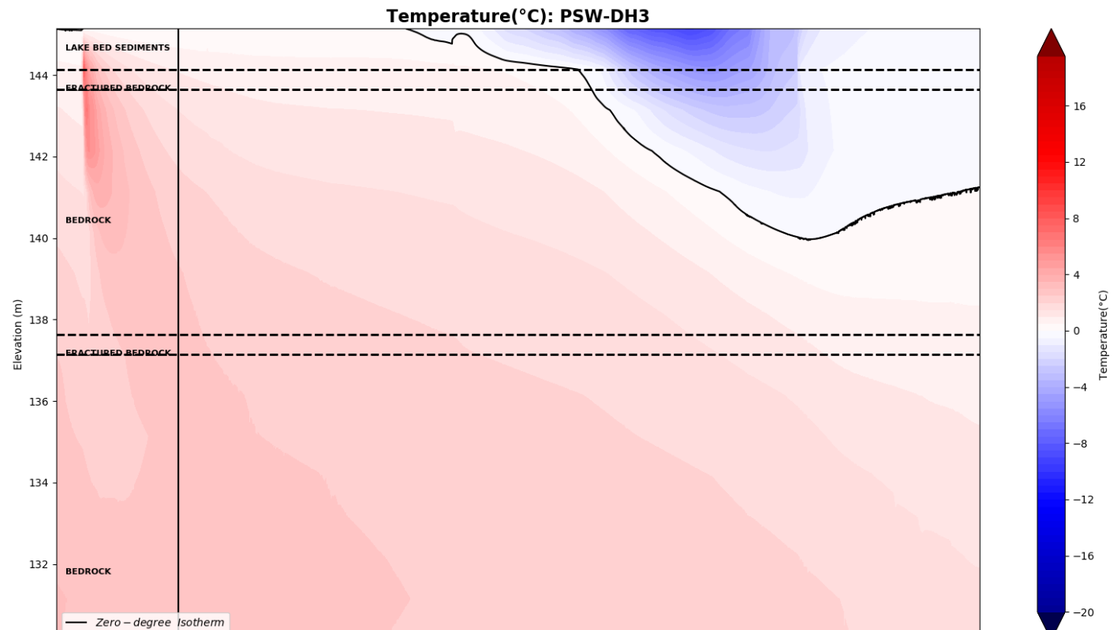


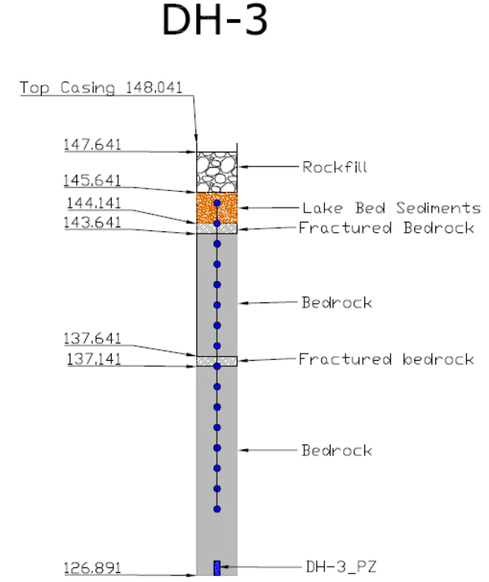
PSW – DH 3 TH



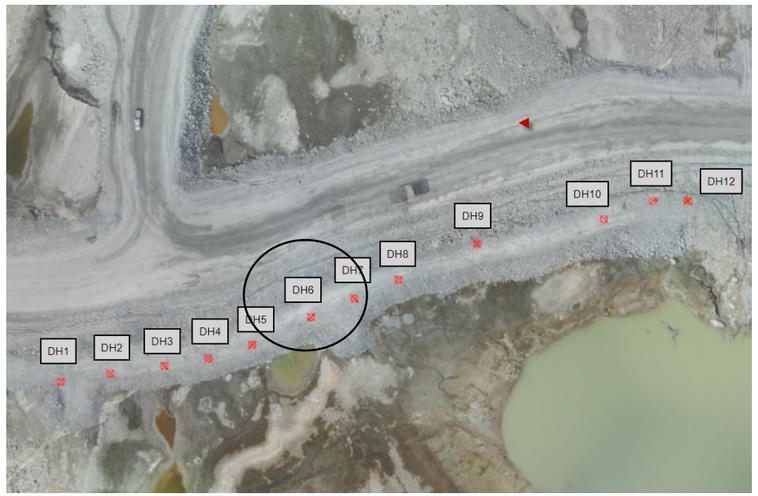
AMQ – PSW – DH03_TH



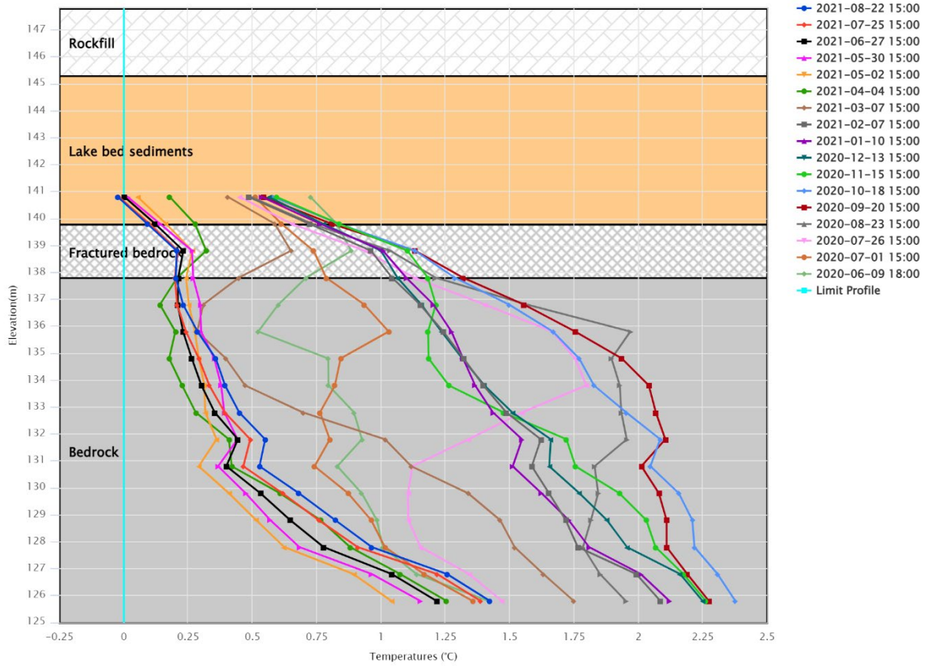


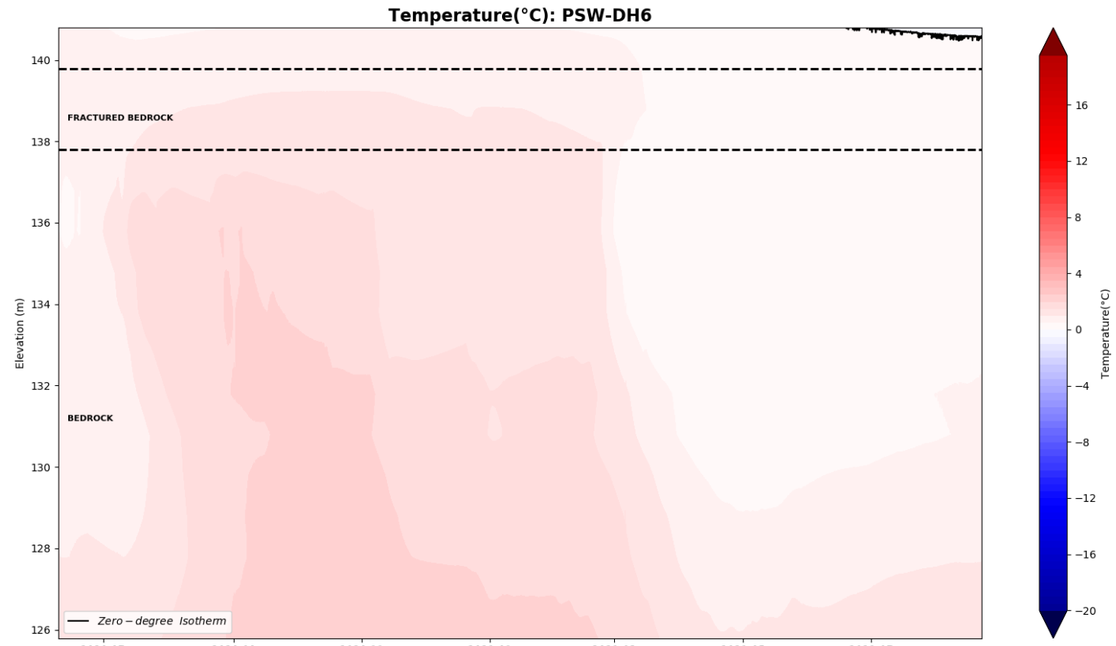


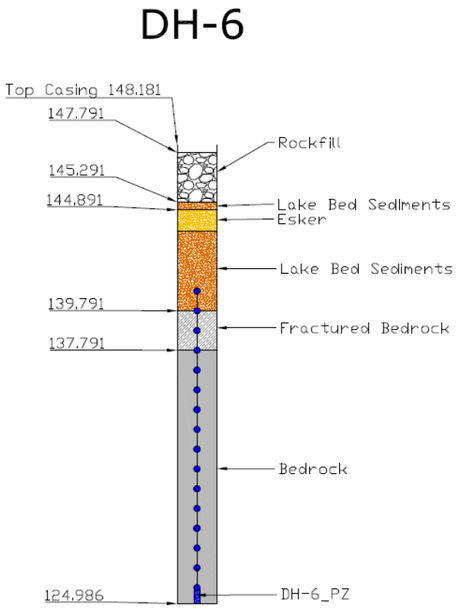
PSW – DH 6 TH



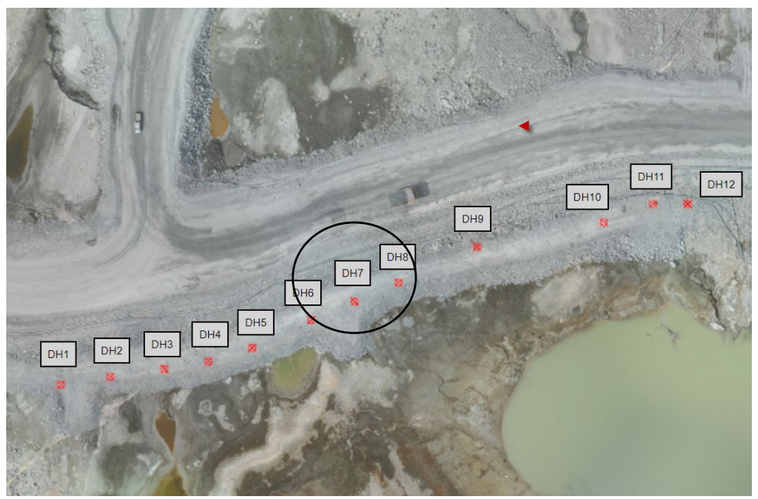
AMQ – PSW – DH06_TH



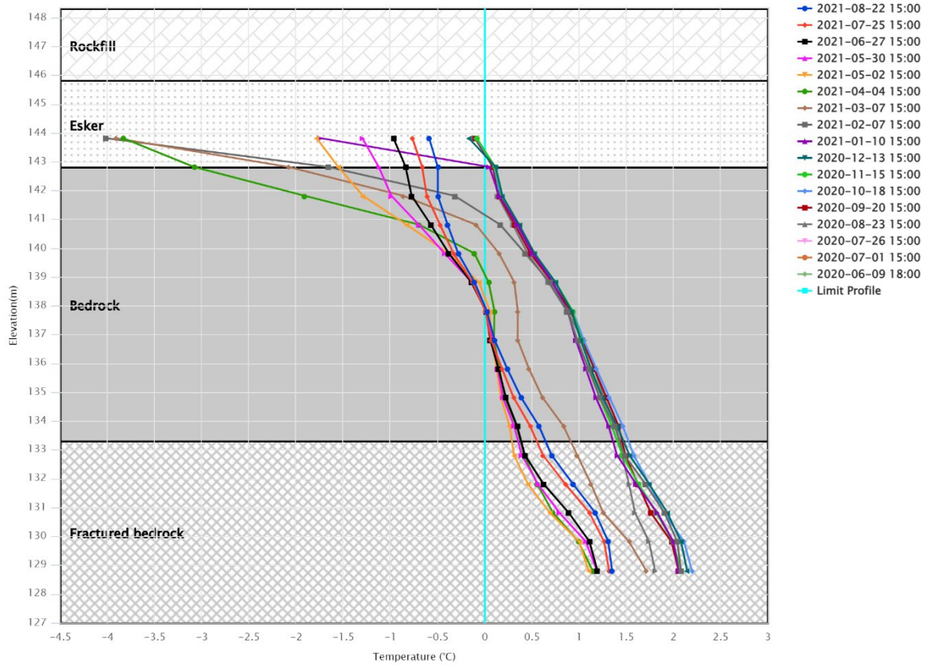


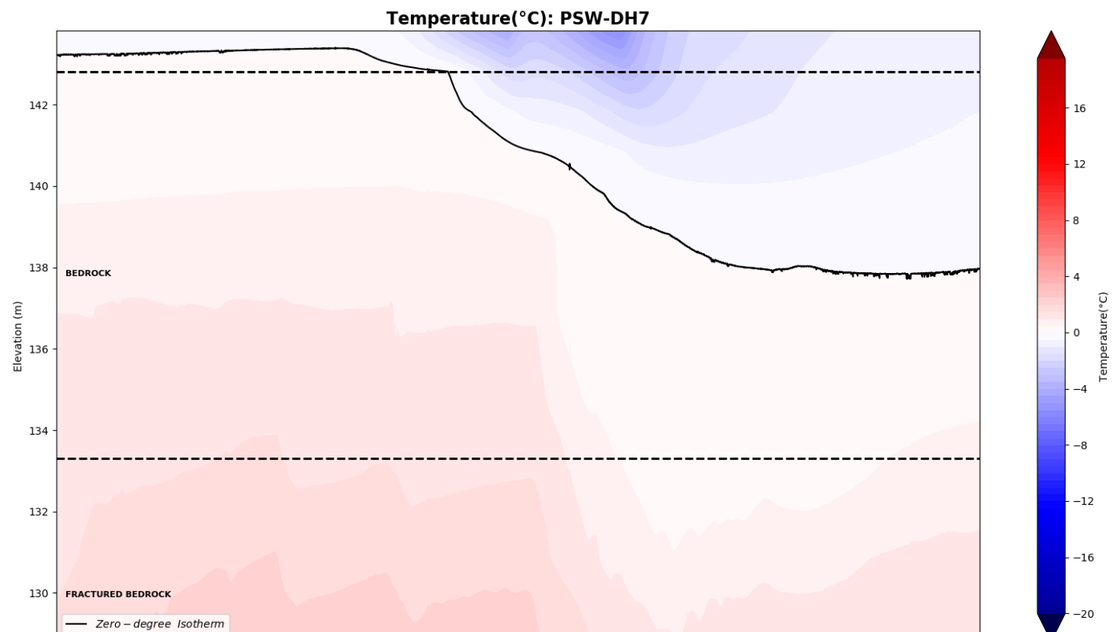


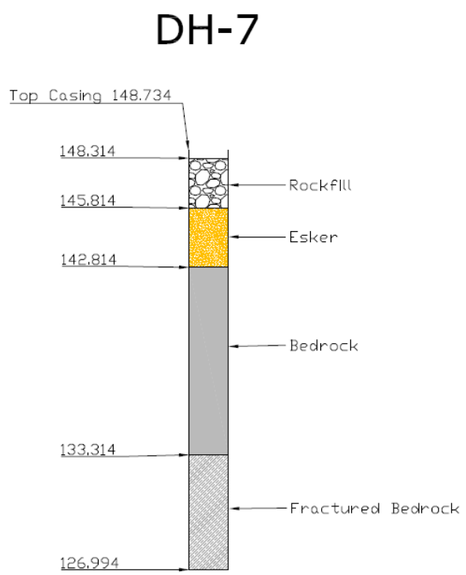
PSW – DH 7 TH



AMQ – PSW – DH07_TH

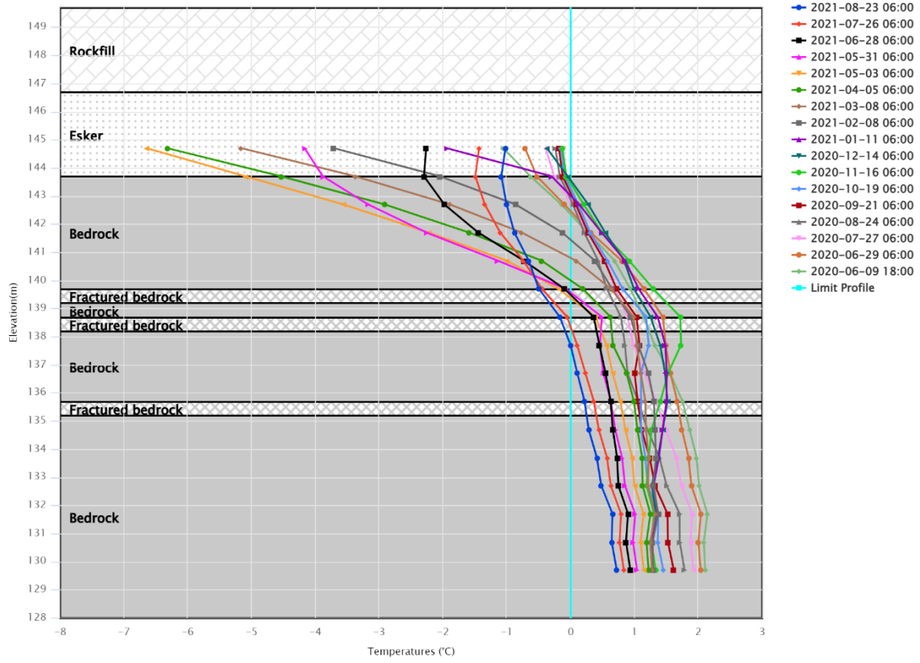


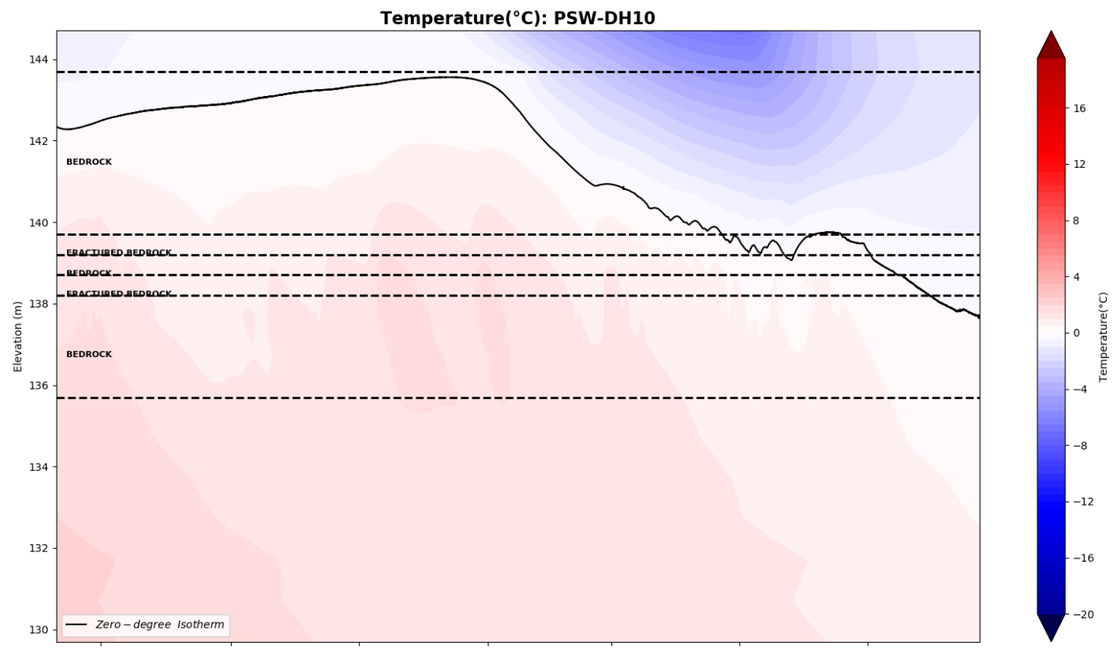


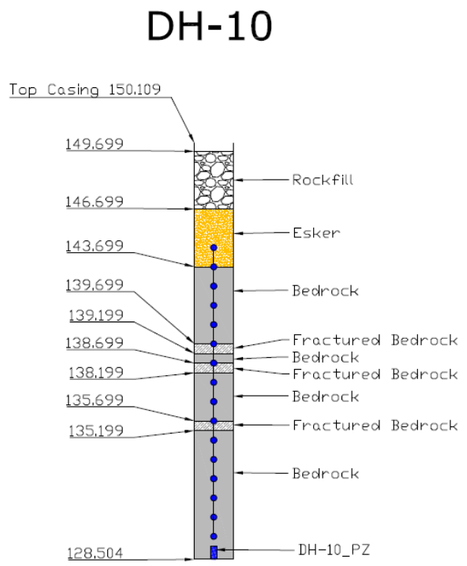


PSW – DH 10 TH

AMQ – PSW – DH10_TH

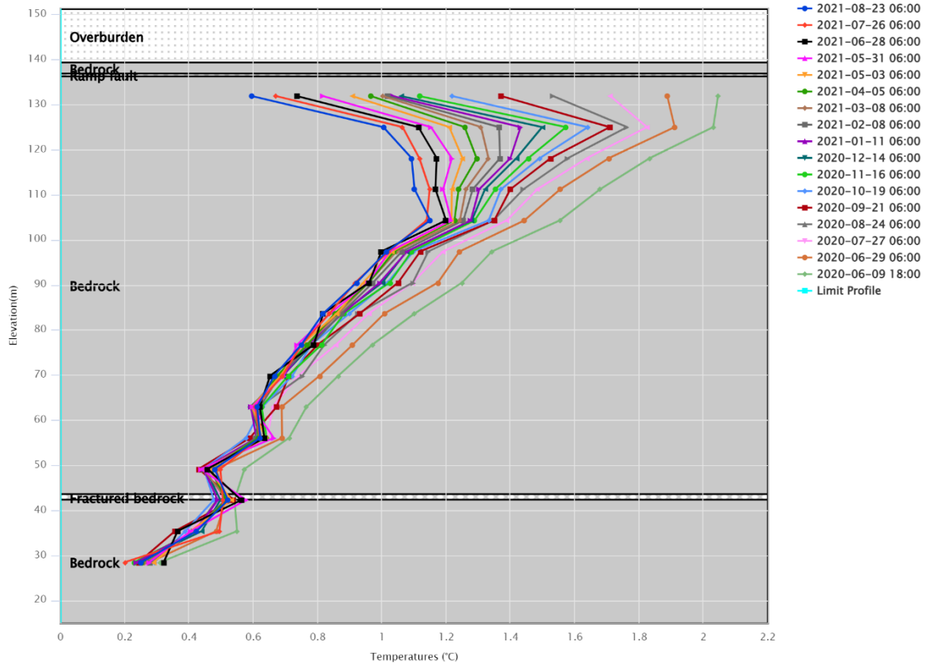


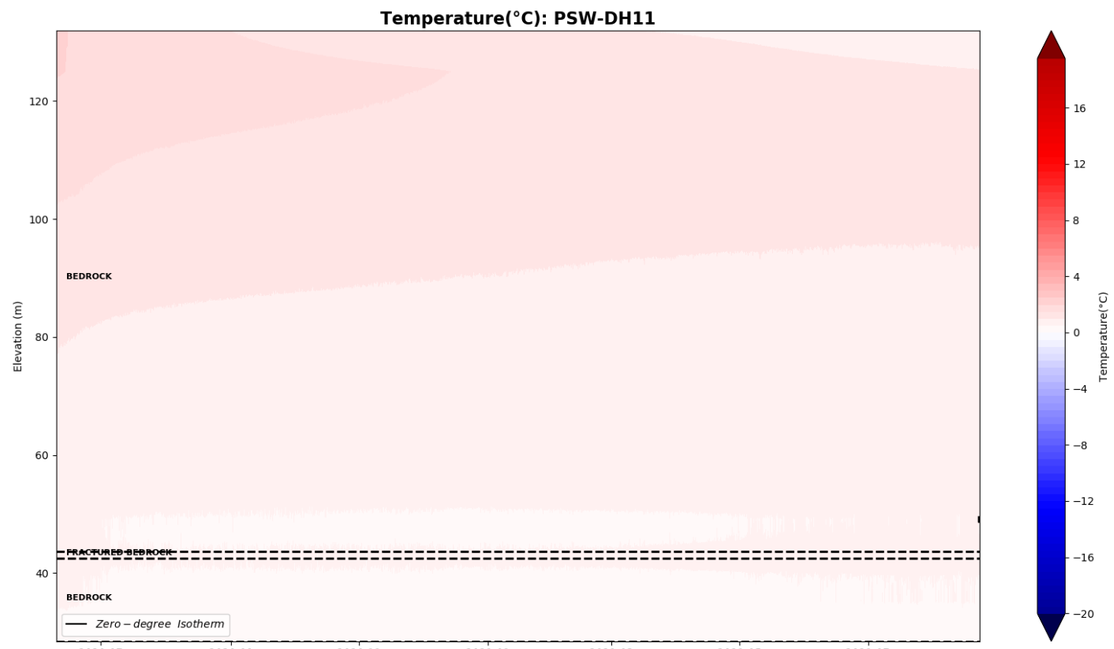


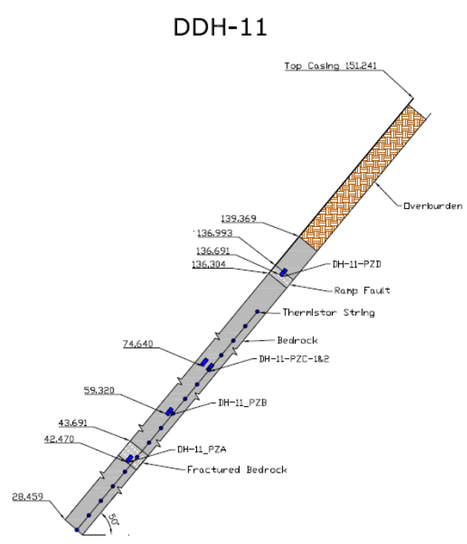


PSW – DH 11 TH

AMQ – PSW – DH11_TH

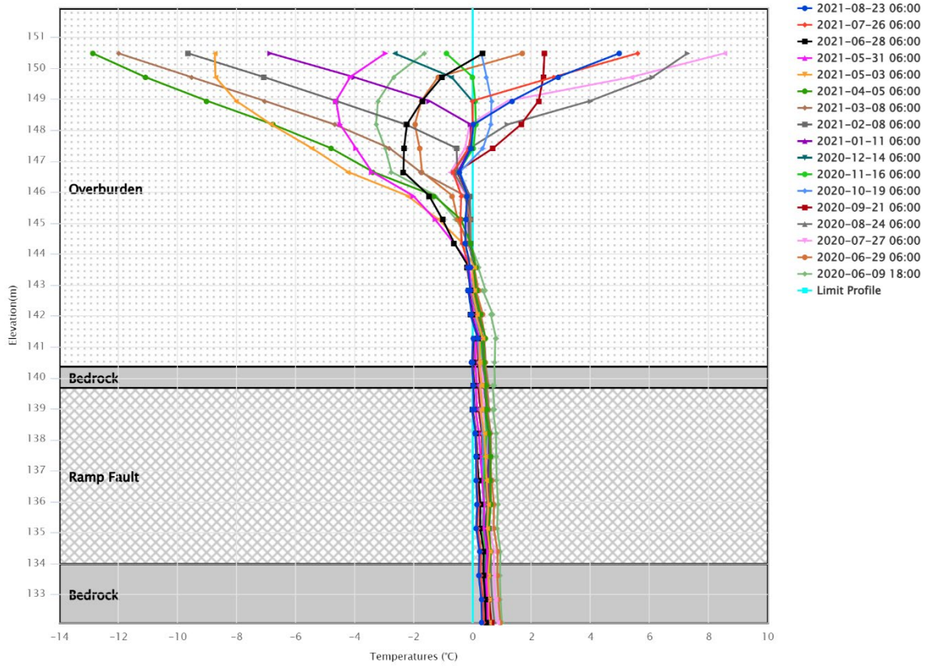


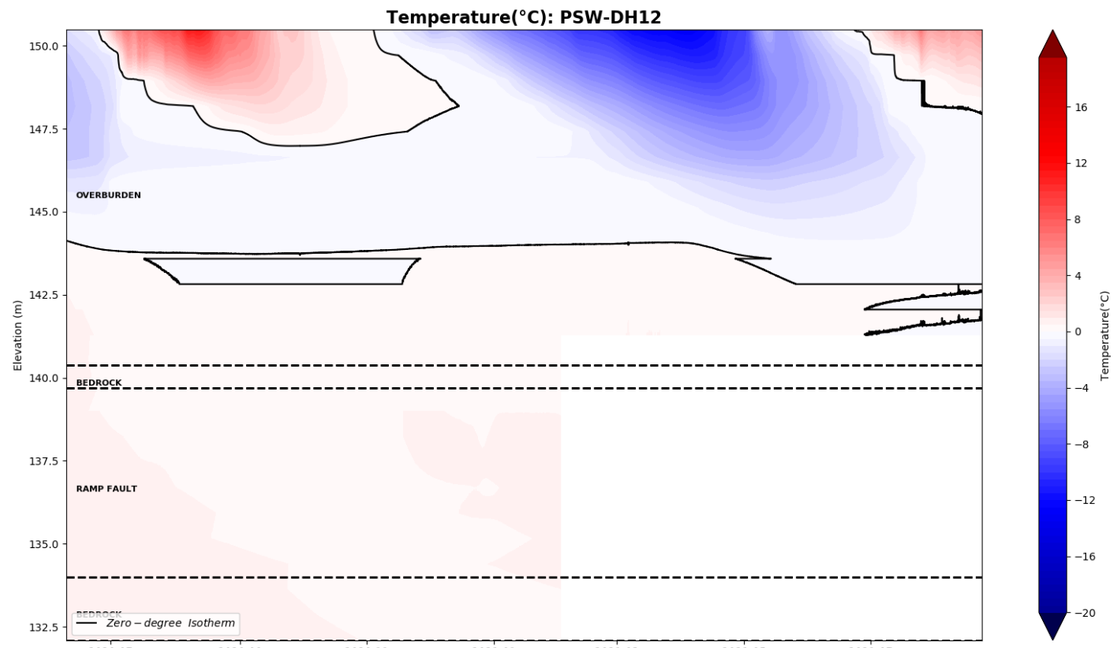


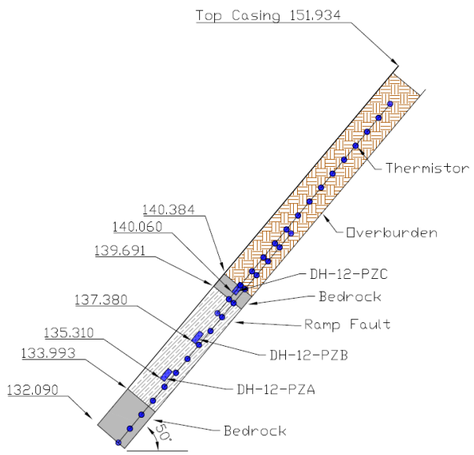


PSW – DH 12 TH

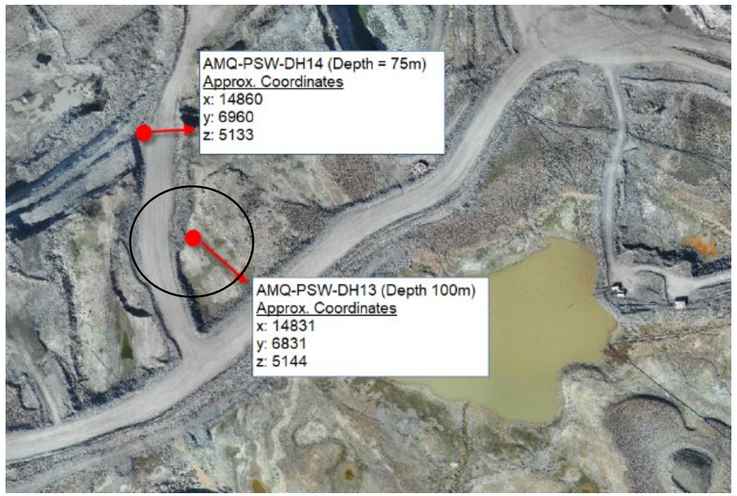
AMQ – PSW – DH12_TH



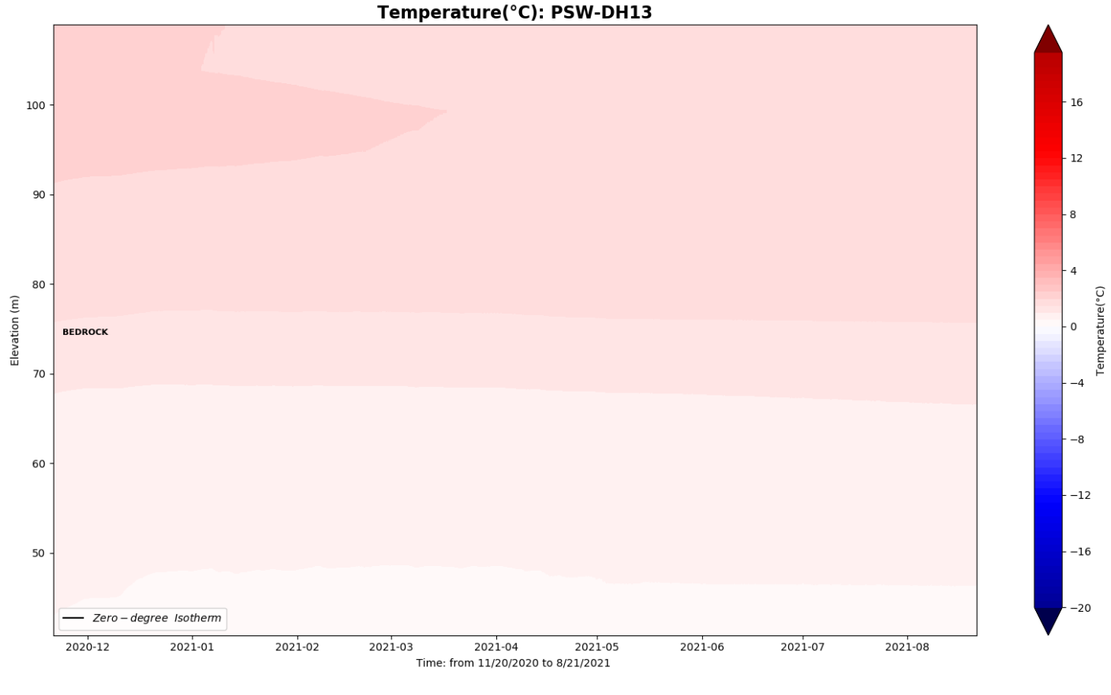


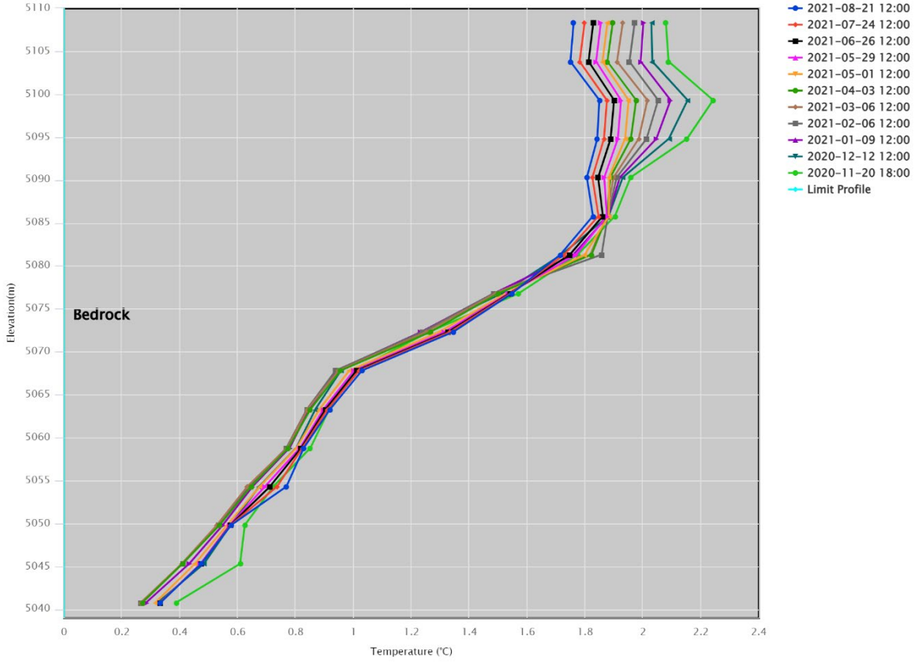


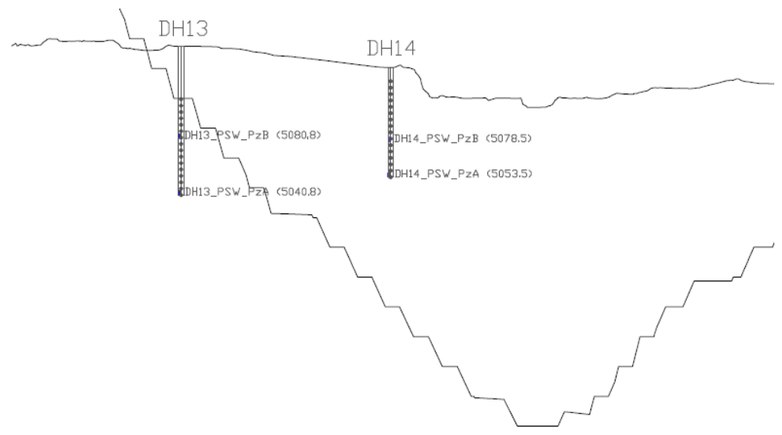
PSW – DH 13 TH



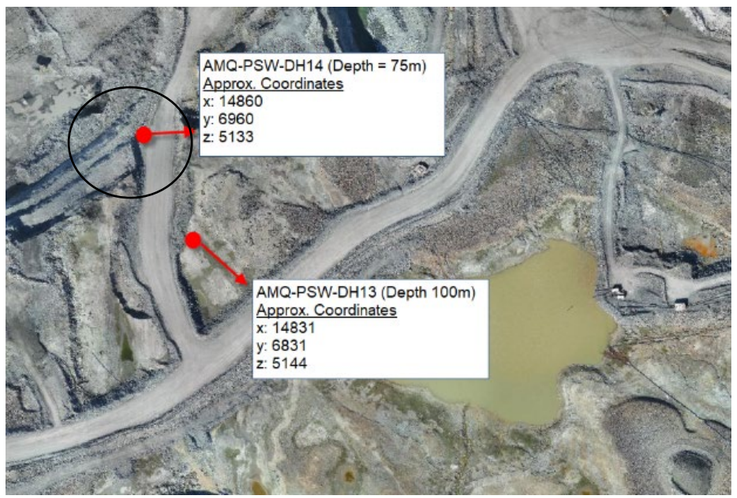
AMQ – PSW – DH13_TH



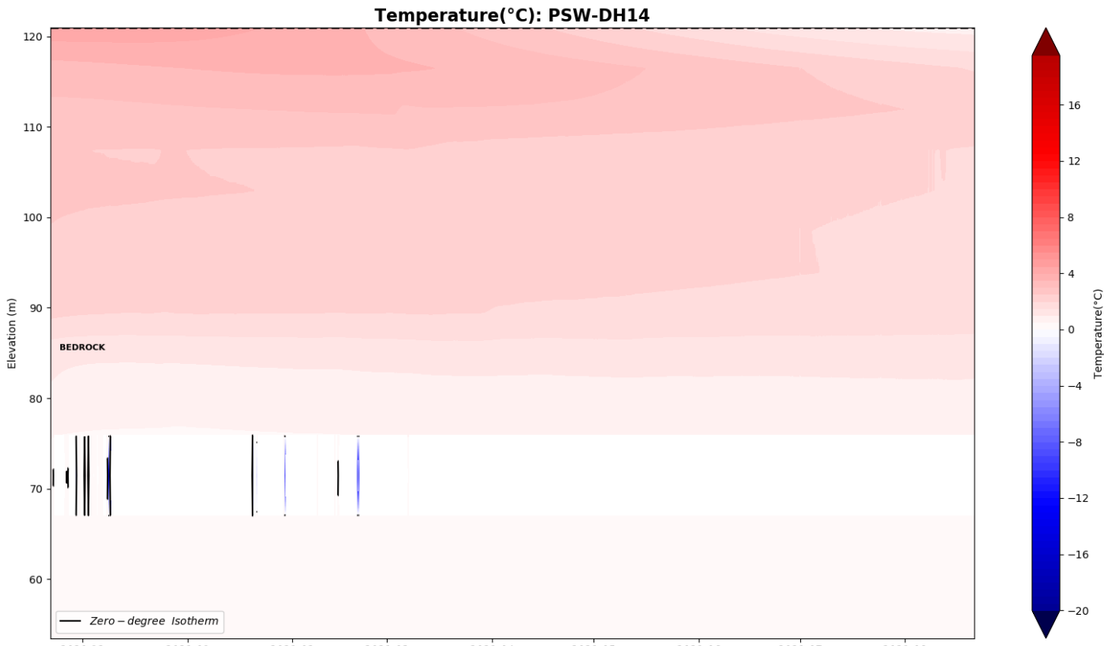


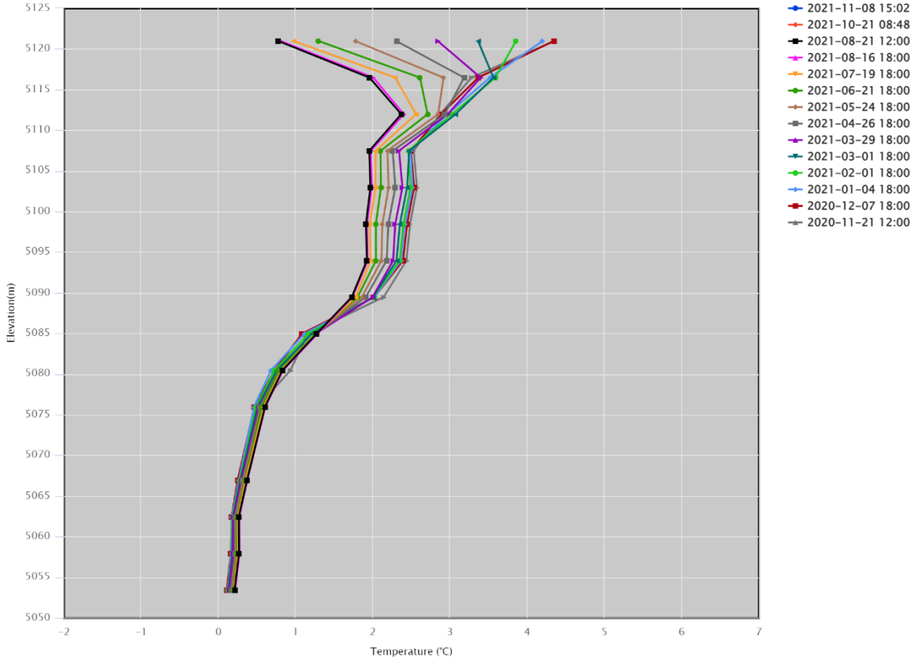


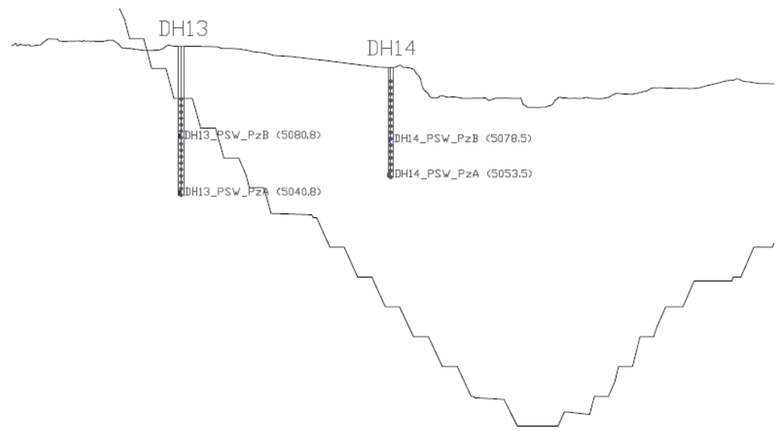
PSW – DH 14 TH



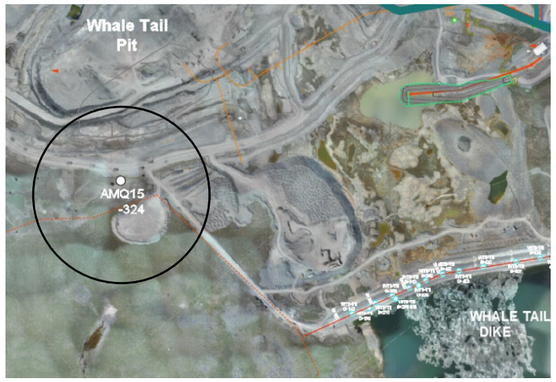
AMQ – PSW – DH14_TH

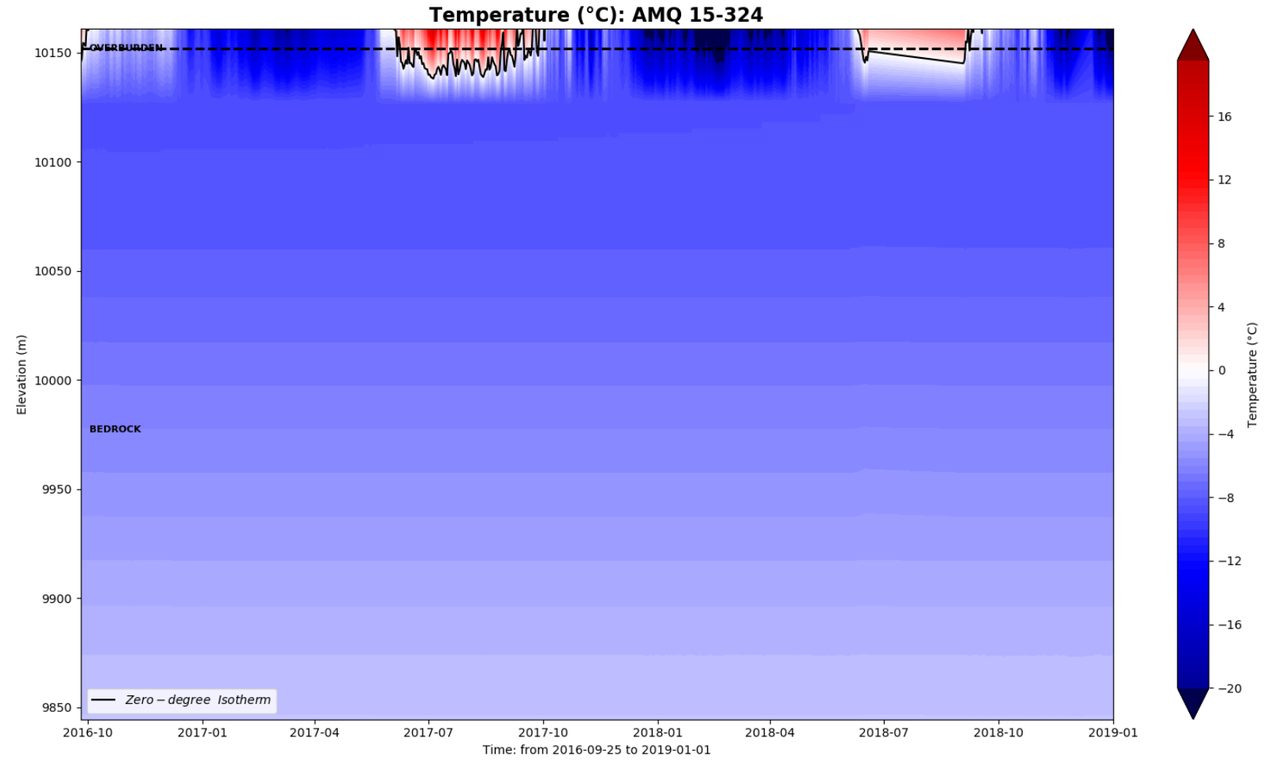


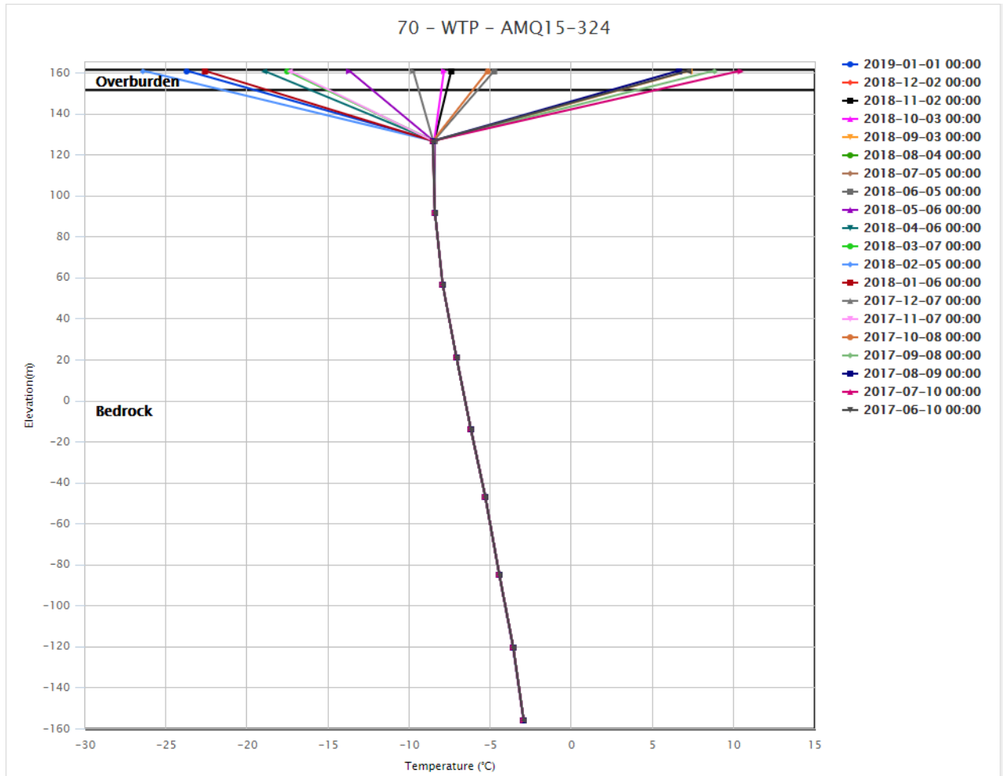




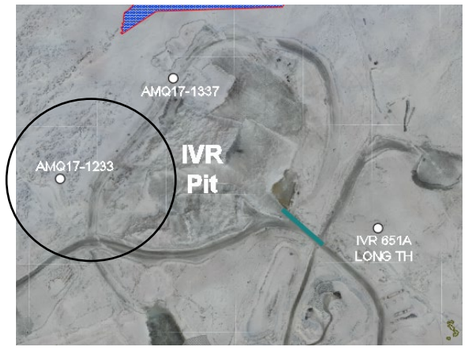
AMQ 15-324

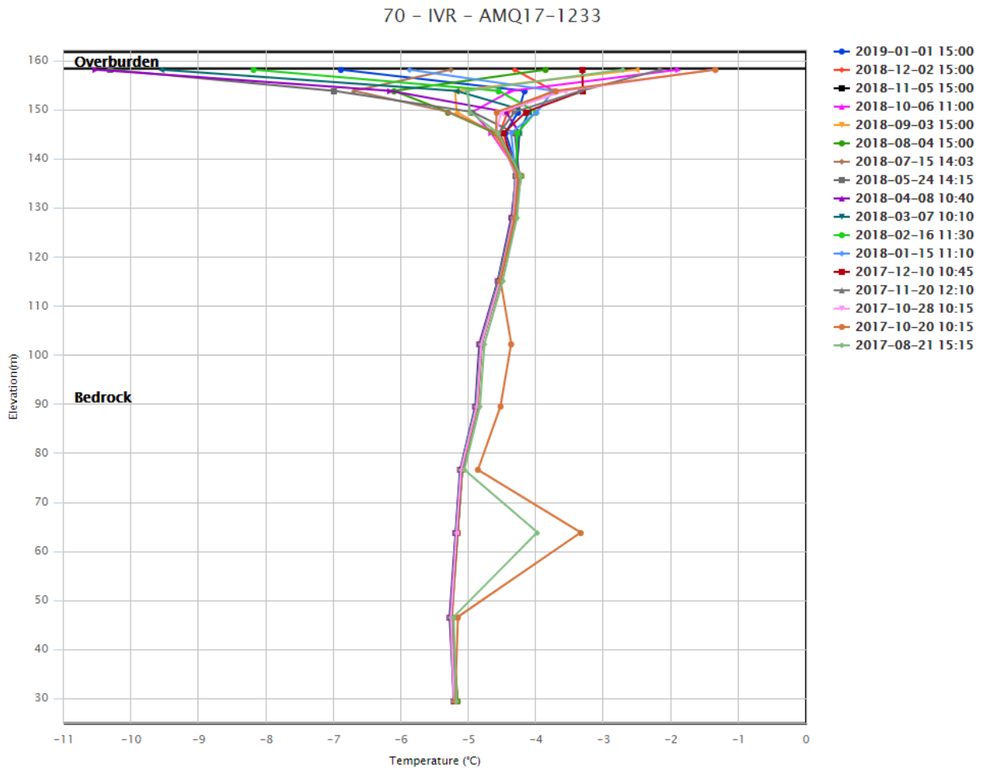

Whale Tail
Pit
AMQ15
-324
WHALE TAIL
DIKE

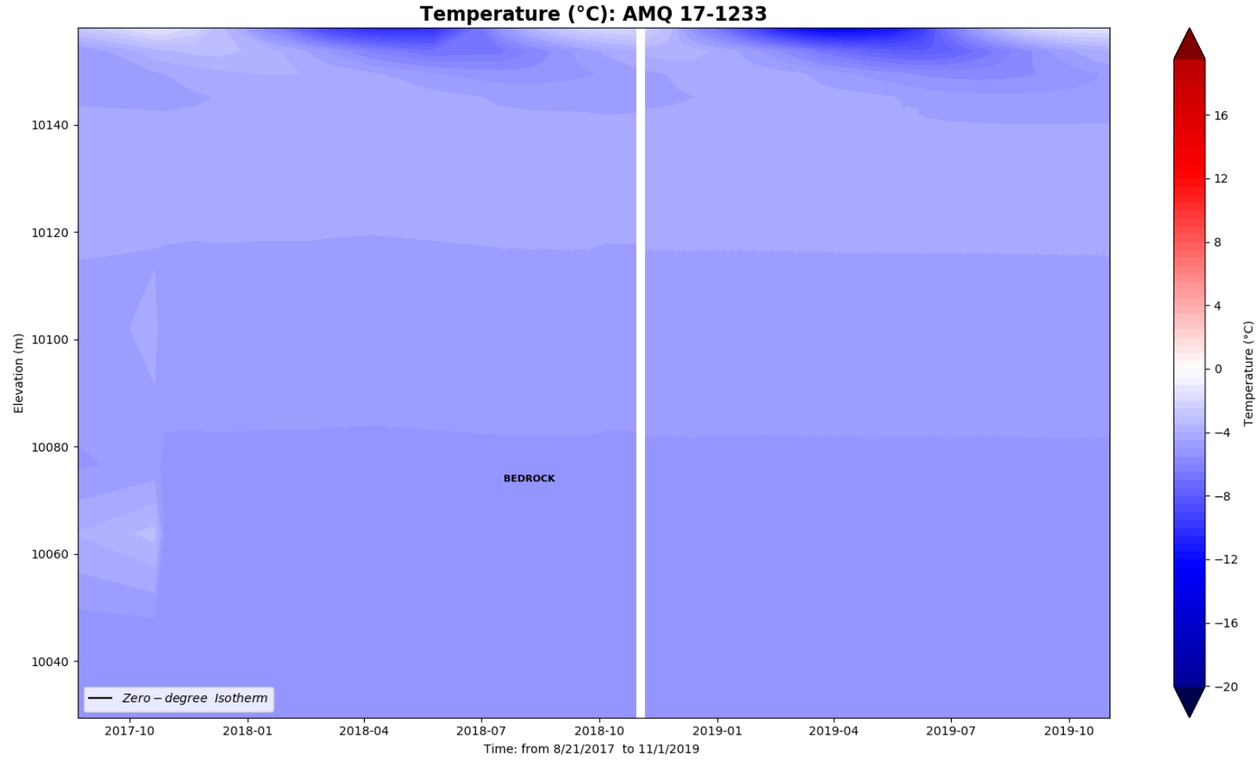

Temperature (°C): AMQ 15-324
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Elevation (m)
10150
10100
10050
10000
9950
9900
9850
2016-10
2017-01
2017-04
2017-07
2017-10
2018-01
2018-04
2018-07
2018-10
2019-01
Time: from 2016-09-25 to 2019-01-01
Temperature (°C)
16
12
8
4
0
−4
−8
−12
−16
−20


70 – WTP – AMQ15-324
Overburden
Bedrock
Elevation(m)
160
140
120
100
80
60
40
20
0
−20
−40
−60
−80
−100
−120
−140
−160
−30
−25
−20
−15
−10
−5
0
5
10
15
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

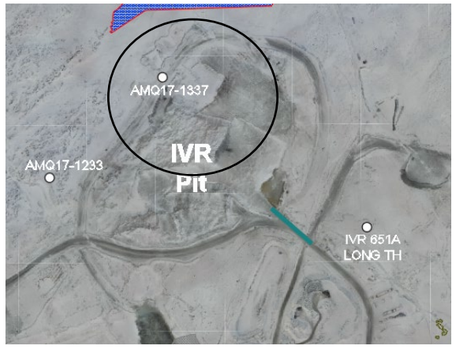
AMQ 17-1233

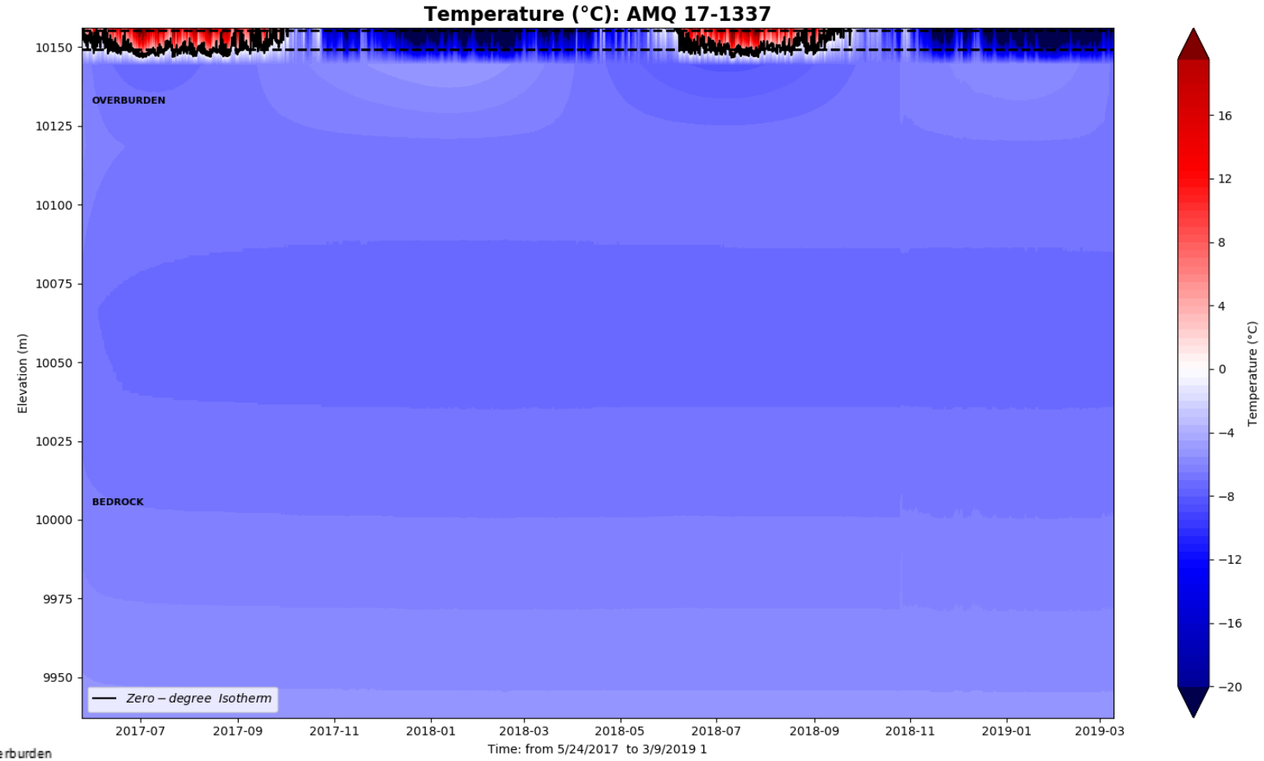

AMQ17-1337
AMQ17-1233
IVR
Pit
IVR 651A
LONG TH

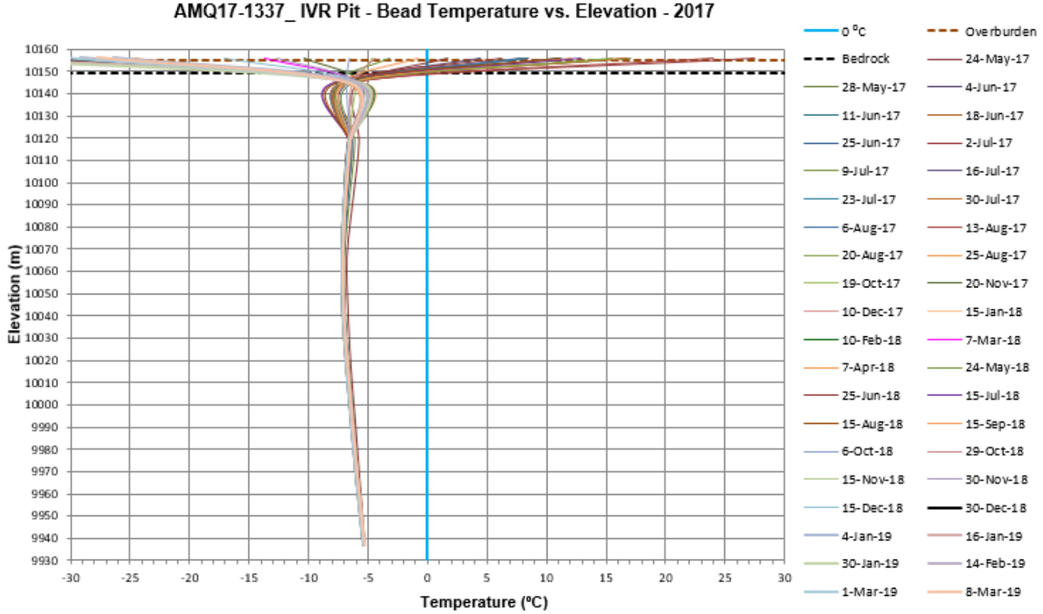

70 – IVR – AMQ17-1233
Overburden
Bedrock
Elevation(m)
Temperature (°C)
2019-01-01 15:00
2018-12-02 15:00
2018-11-05 15:00
2018-10-06 11:00
2018-09-03 15:00
2018-08-04 15:00
2018-07-15 14:03
2018-05-24 14:15
2018-04-08 10:40
2018-03-07 10:10
2018-02-16 11:30
2018-01-15 11:10
2017-12-10 10:45
2017-11-20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


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

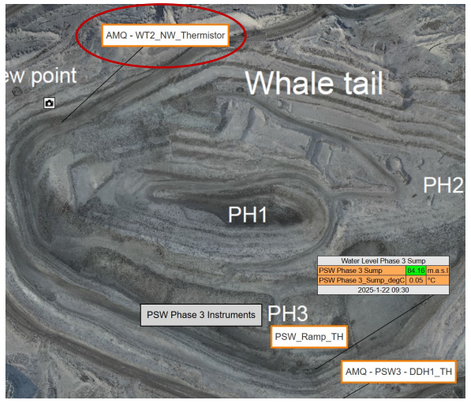
AMQ 17-1337


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

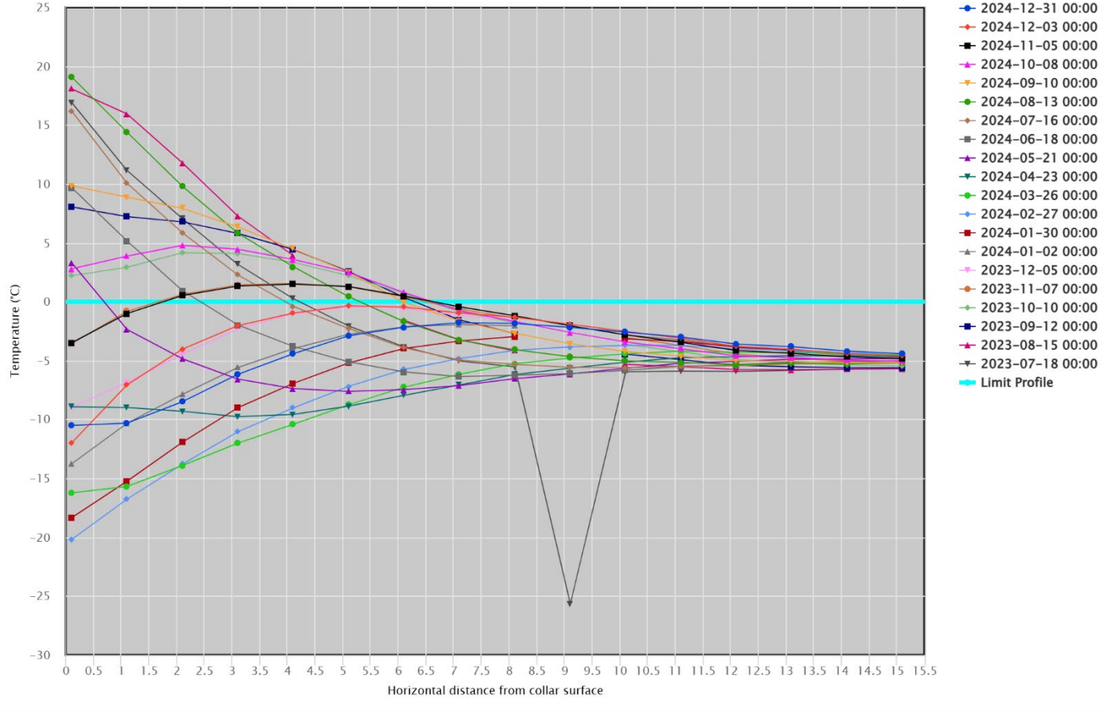

Temperature (°C): AMQ 17-1337
OVERBURDEN
BEDROCK
Zero – degree Isotherm
Elevation (m)
Temperature (°C)
Time: from 5/24/2017 to 3/9/2019 1


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

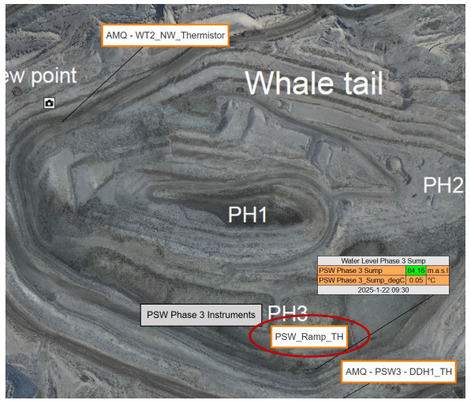
AMQ – WT2_NW_TH



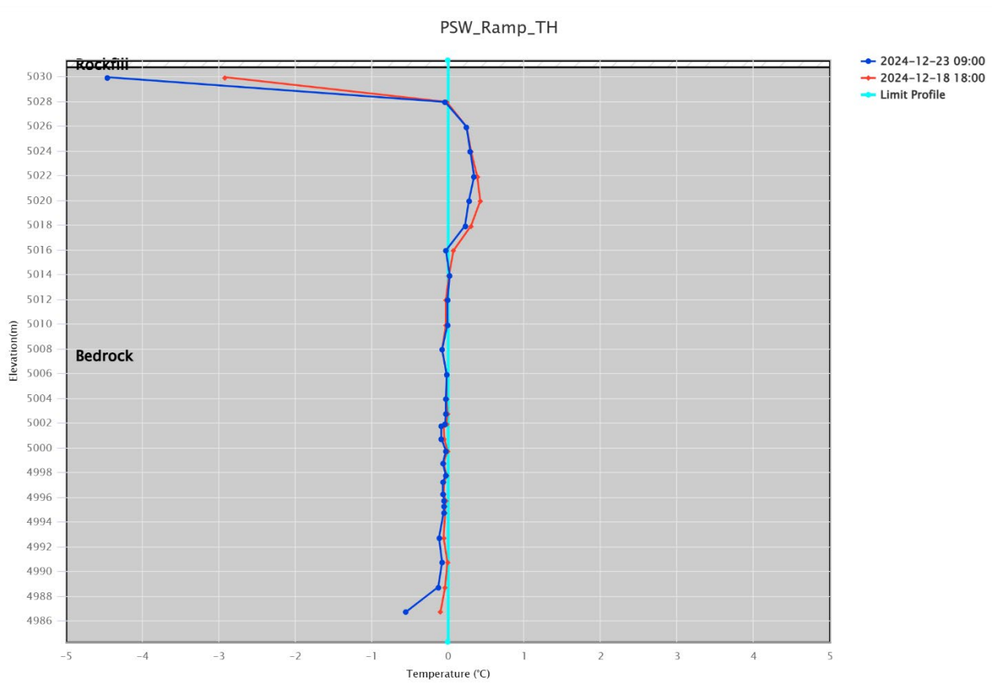
AMQ – WT2_NW_Thermistor



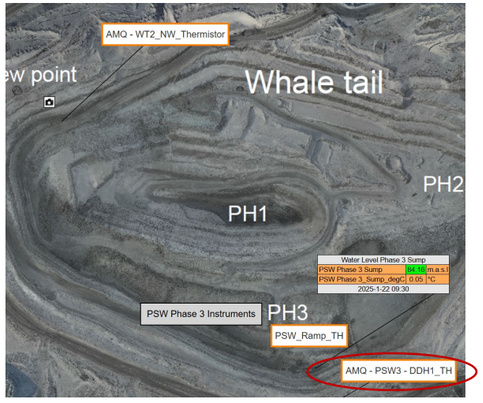
PSW_Ramp_TH



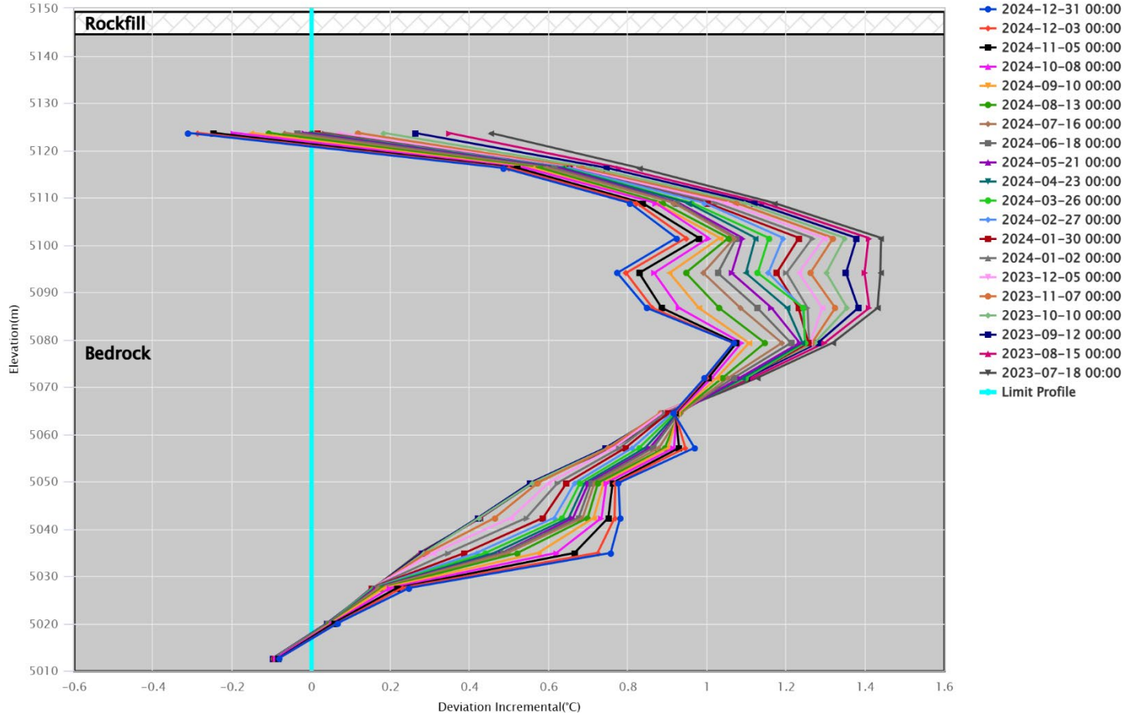
Not enough readings yet for interpretation



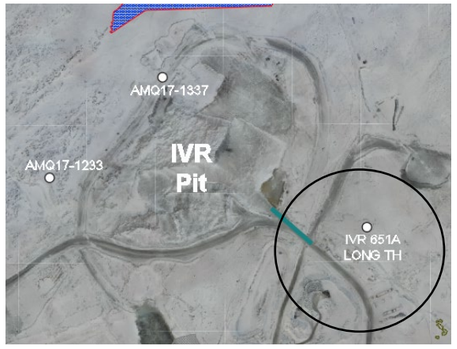
AMQ – PSW3 – DDH1_TH



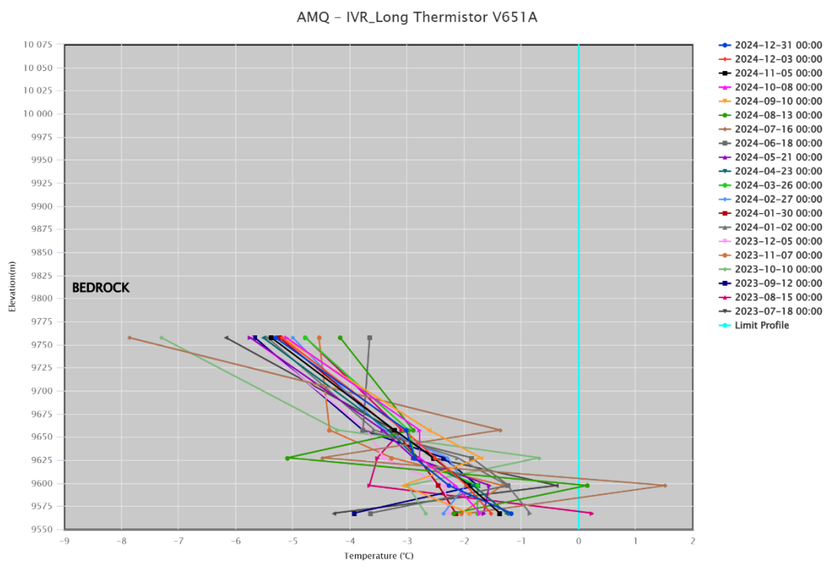
AMQ – PSW3 – DDH1_TH



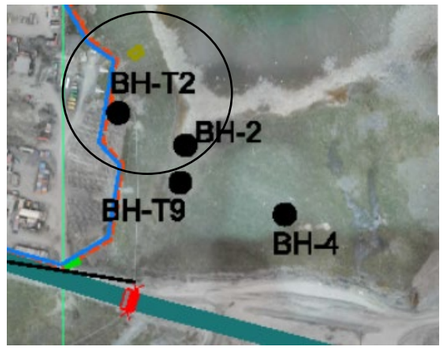
V651A Long TH

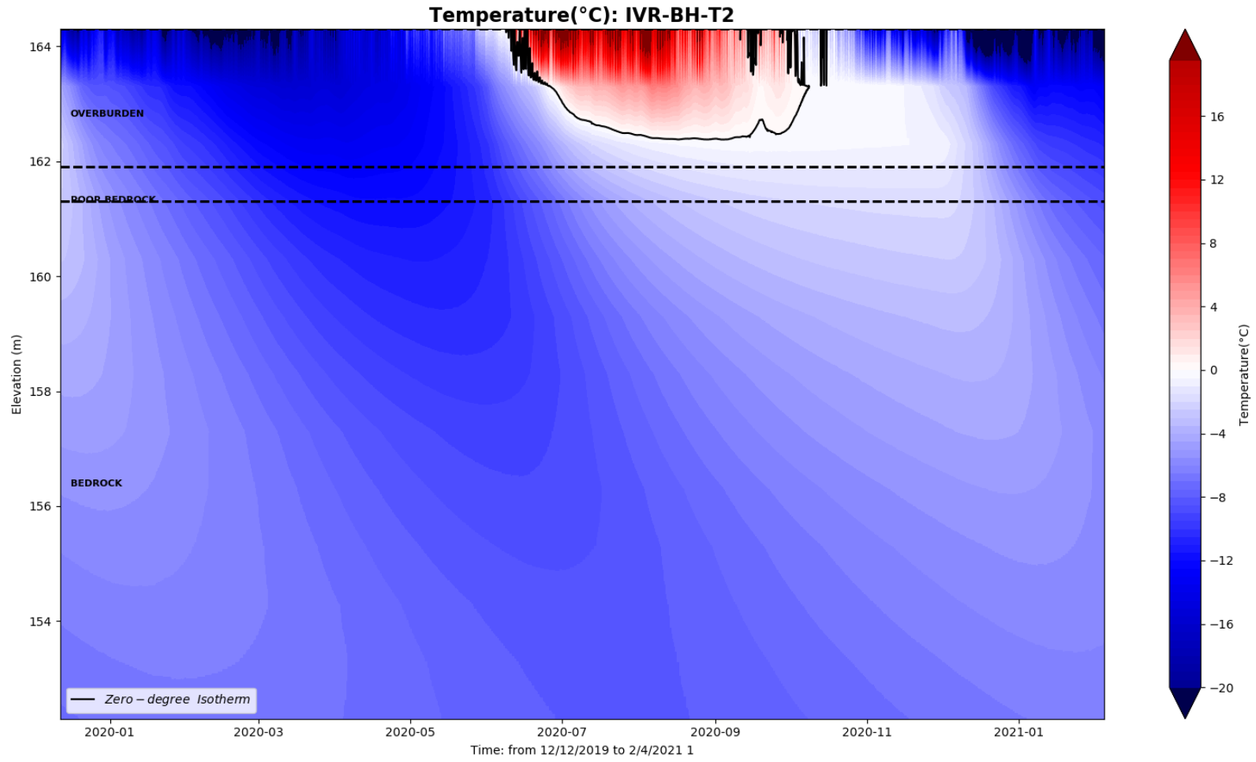


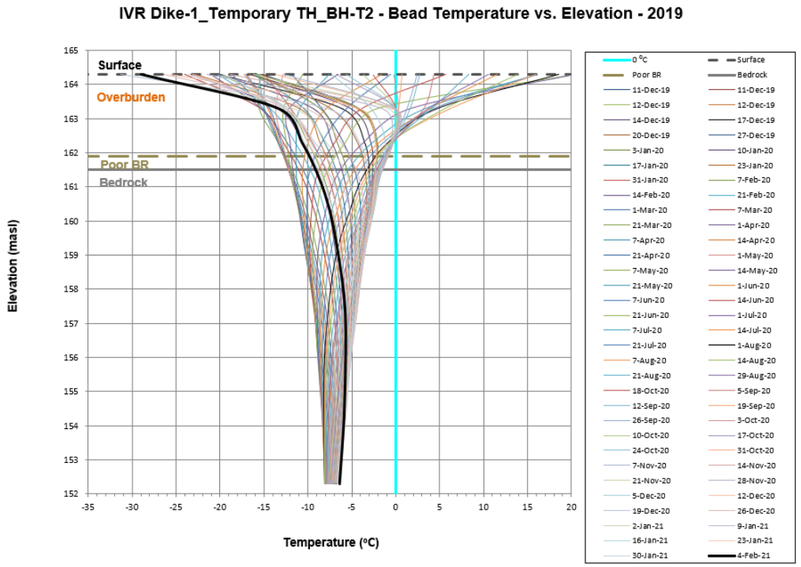
Note that readings are unstable and many beads are not functional



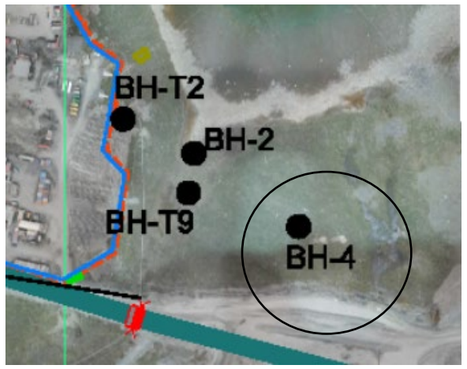
IVR-BH-T2

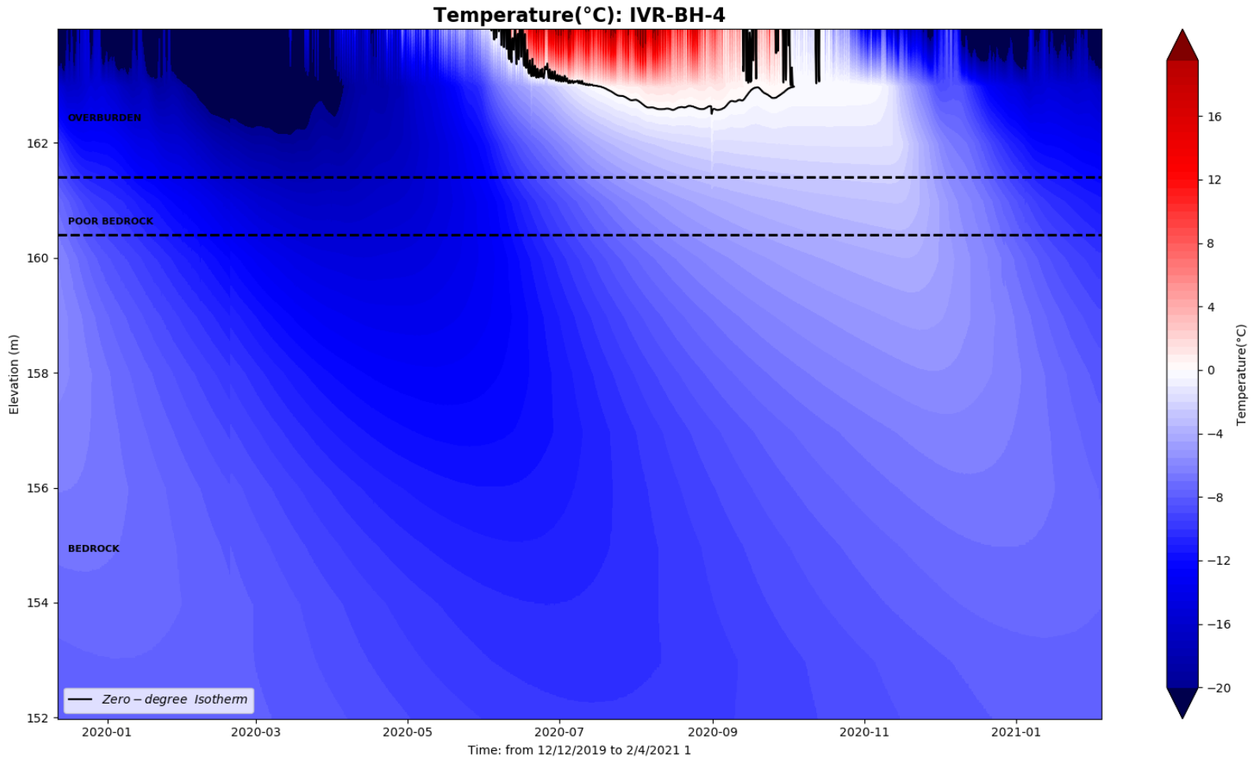

BH-T2
BH-2
BH-T9
BH-4

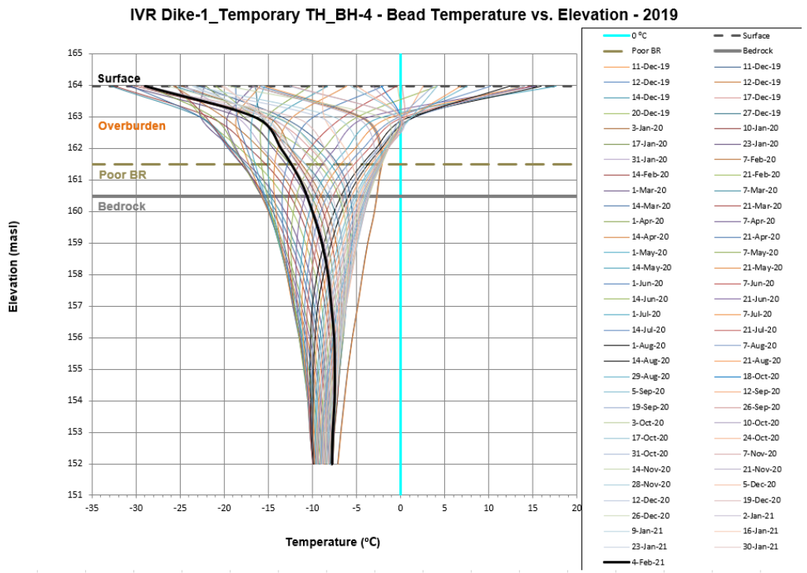

Temperature(°C): IVR-BH-T2
OVERBURDEN
POOR BEDROCK
BEDROCK
Elevation (m)
Zero – degree Isotherm
Temperature(°C)
Time: from 12/12/2019 to 2/4/2021 1


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

IVR-BH-4


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


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


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