

2024 Annual Geotechnical Inspection – Doris Tailings Impoundment Area

Hope Bay Mine, Nunavut, Canada
Agnico Eagle Mines Limited



SRK Consulting (Canada) Inc. ■ CAPR003066 ■ March 2025



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Hope Bay Mine, Nunavut, Canada

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South Dam helicopter overview from a helicopter during 2024 AGI

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Contents

| | | |
|-------|---|----|
| 1 | Introduction..... | 1 |
| 1.1 | General..... | 1 |
| 1.2 | Inspection Requirements..... | 2 |
| 2 | Site Conditions | 3 |
| 2.1 | Tailings Impoundment Area History | 3 |
| 2.2 | Tailings and Water Management Overview | 3 |
| 2.3 | Tailings Impoundment Area Infrastructure | 5 |
| 2.3.1 | North Dam..... | 5 |
| 2.3.2 | South Dam | 6 |
| 2.3.3 | West Dam | 6 |
| 2.3.4 | TIA Design Parameters and Design Criteria..... | 6 |
| 2.3.5 | Interim Dike | 9 |
| 2.3.6 | Tailings Deposition System..... | 9 |
| 2.3.7 | Emergency Dump Catch Basins | 10 |
| 2.3.8 | Reclaim and TIA Water Discharge System..... | 10 |
| 2.4 | Tailings Impoundment Area Instrumentation..... | 10 |
| 2.4.1 | North Dam..... | 10 |
| 2.4.2 | South Dam | 11 |
| 2.4.3 | West Dam | 11 |
| 2.4.4 | Interim Dike | 11 |
| 2.4.5 | Other TIA Instrumentation and Monitoring..... | 12 |
| 2.5 | Dam Hazard Classification | 12 |
| 3 | TIA Management System Review Findings | 15 |
| 3.1 | Tailings Operating, Maintenance and Surveillance Manual..... | 15 |
| 3.2 | Independent Dam Safety Review and Risk Assessment..... | 16 |
| 4 | TIA Inspection and Monitoring Instrumentation Findings..... | 17 |
| 4.1 | Compliance with Monitoring Frequency Requirements..... | 17 |
| 4.2 | North Dam Inspection and Monitoring..... | 21 |
| 4.2.1 | Overall (Visual) Inspection of the North Dam during the AGI | 21 |
| 4.2.2 | Ground Temperature Cables | 22 |
| 4.2.3 | Thermosyphons | 26 |
| 4.2.4 | GTC Datalogger Battery Voltage | 27 |
| 4.2.5 | Inclinometers..... | 28 |
| 4.2.6 | Survey Monitoring Points | 29 |
| 4.2.7 | Visual Inspection | 30 |
| 4.2.8 | Monitoring of Water at the Toe of the North Dam..... | 30 |
| 4.3 | South Dam Inspection and Monitoring | 30 |
| 4.3.1 | Overall (Visual) Inspection of the South Dam During the AGI | 30 |
| 4.3.2 | Ground Temperature Cables and Dataloggers..... | 32 |
| 4.3.3 | Survey Monitoring Points | 37 |
| 4.3.4 | Visual Inspection | 38 |
| 4.3.5 | Monitoring of Water at the Toe of the South Dam | 38 |
| 4.4 | Interim Dike & Spillway..... | 38 |

| | | |
|------|--|----|
| 4.5 | Tailings Deposit | 40 |
| 4.6 | Emergency Dump Catch Basins (EDCB) | 41 |
| 4.7 | TIA Shoreline | 41 |
| 4.8 | Doris Creek Bridge | 42 |
| 4.9 | Pipelines (Reclaim, Tailings Deposition and TIA Discharge) | 42 |
| 4.10 | TIA Reclaim System and Water Treatment Plant (710 Pumphouse) | 42 |
| 4.11 | TIA Operational Water Balance and Level Targets | 43 |
| 4.12 | Climate Data | 43 |
| 5 | Recommendations and Conclusions | 44 |
| | References | 55 |

Tables

| | | |
|------------|---|----|
| Table 2-1: | Summary of TIA Development History | 3 |
| Table 2-2: | TIA Design Volumes and Parameters | 5 |
| Table 2-3: | TIA Containment Dams Geometric Design Parameters | 7 |
| Table 2-4: | TIA Containment Dams Design Criteria | 8 |
| Table 2-5: | Interim Dike Geometric Design Parameters | 9 |
| Table 2-6: | EDCB Design and As-built Capacities | 10 |
| Table 2-7: | Dam Hazard Classification (CDA 2013, 2014, 2019) | 13 |
| Table 2-8: | Dam Hazard Classification of TIA Containment Structures | 14 |
| Table 3-1: | Roles and Responsibilities | 15 |
| Table 4-1: | North Dam Monitoring Frequency Requirements for the 2024 Monitoring Year ⁽¹⁾ | 17 |
| Table 4-2: | South Dam Monitoring Frequency Requirements for the 2024 Monitoring Year ⁽¹⁾ | 19 |
| Table 4-3: | Interim Dike Monitoring | 20 |
| Table 4-4: | North Dam Ground Temperature Cable Status | 23 |
| Table 4-5: | Summary of Core and Key Trench Ground Temperature Cable Observations | 25 |
| Table 4-6: | Summary of Inclinator Measurement Observations (Sep. 2012 through September 2024) | 28 |
| Table 4-7: | South Dam Ground Temperature Cable Status Summary | 32 |
| Table 4-8: | Summary of Key Trench foundation Ground Temperature Cable Observations | 36 |
| Table 5-1: | Table of Recommendations | 44 |

Appendices

Figures

Photo Logs

| | |
|------------|-------------------------------|
| Appendix A | Ground Temperature Cables |
| Appendix B | Thermosyphons |
| Appendix C | Datalogger Battery Levels |
| Appendix D | Inclinometers |
| Appendix E | Survey Monitoring |
| Appendix F | TIA Reclaim Pond Water Levels |
| Appendix G | Climate Data |

Executive Summary

Hope Bay is an advanced exploration site and former operating mine in care and maintenance owned by Agnico Eagle Mines Ltd. (Agnico Eagle). Hope Bay comprises three distinct areas of known mineralization, Doris, Madrid (North and South), and Boston. Before the site transitioned into care and maintenance in 2021, the Doris Mine (Phase 1) was in operation under Nunavut Water Board (NWB) Type A Water License 2AMDOH1335 - Amendment No.2. This license covers the current Phase 1 and well as the Phase 2 mining developments. Agnico Eagle contracted SRK Consulting (Canada) Inc. to conduct an annual geotechnical inspection (AGI) for the Tailings Impoundment Area (TIA) in accordance with all stipulated license conditions, NWB Water Licence 2AM-DOH1335 Part I, Item 9 and 10.

The TIA currently consists of a water retaining dam, the North Dam, and a tailings retaining dam, the South Dam and the Interim Dike. Subaerial tailings are currently retained by the South Dam, the Reclaim Pond is impounded by the North Dam and the Saline Pond is segregated from the Reclaim Pond by the Interim Dike. The North Dam was constructed during the winters of 2011 and 2012, Phase 1 of the South Dam was constructed in one season during the 2017/2018 winter season, and the Interim Dike was constructed in the winter of 2023.

Section 5 provides a summary of the 2024 AGI inspection components for the TIA, and the recommendations following the site inspection and subsequent review of monitoring data. Based on the results of the AGI in September 2024, the North Dam and South Dam are functioning as designed, and no significant concerns were identified regarding the ongoing performance of these structures. The Interim Dike is also performing adequately, with some recommended improvements. There are maintenance items that require attention, and suggestions for improvement of the performance monitoring system. The items in Section 5 are considered important to the ongoing performance and safety of the TIA and should be addressed.

1 Introduction

1.1 General

Hope Bay is both an advanced exploration project of Agnico Eagle Mines Ltd. (Agnico Eagle) and a previously operating mine site currently in care and maintenance. The site is located 705 km northeast of Yellowknife and 153 km southwest of Cambridge Bay in Nunavut Territory and is situated east of Bathurst Inlet (Figure 1). The site comprises three distinct areas of known mineralization, Doris, Madrid (North and South), and Boston.

Construction of the Tailings Impoundment Area (TIA) began in 2010 with the North Dam. Commercial production and tailings deposition within the TIA began in 2017. The South Dam, which provides the southern tailings containment, was constructed in 2018, prior to the development of the existing tailings beach. In order to segregate saline mine water and reclaim water, the Interim Dike was constructed in 2023 to replace the temporary Aquadam.

An annual geotechnical inspection (AGI) of the TIA containment dams and supplementary infrastructure including the Interim Dike, pipelines and emergency catch basins is required to fulfill NWB Water Licence 2AM-DOH1335 Part I, Item 9 and 10. Therefore, Agnico Eagle contracted SRK Consulting (Canada) Inc., the Design Engineer, to conduct the 2023 annual geotechnical inspection. SRK has conducted all formal AGI for the TIA since it was constructed, and SRK held the role of Engineer of Record for the TIA infrastructure from 2011 to the end of 2021.

Peter Luedke, PEng, Senior Consultant assisted by Anton Novikov, EIT, Staff Consultant with SRK conducted the on-site annual geotechnical inspection between September 11 and 18, 2024, accompanied by Agnico Eagle's Site Geotechnical Engineer (Brennan Jay, EIT). Weather conditions during the inspection were sunny to overcast. The detailed inspection of the dams and supporting infrastructure was carried out on foot, followed by a low-altitude helicopter flyover for an aerial reconnaissance of the TIA. A post-inspection meeting was held on-site with key personnel from relevant departments, where SRK presented the preliminary inspection findings.

Monitoring and surveillance activities occur on a regular basis throughout the year (Section 4.1), with Agnico Eagle and SRK working in close collaboration to review the data and make management decisions based on the data and overall performance of the TIA. The TIA monitoring data is summarized within this AGI report. To align the data included in the AGI report with the site inspection, the primary focus of monitoring data review is from October 1 to September 30, 2024 (the monitoring year), unless otherwise stated.

This report provides a summary of the conditions observed during the site inspection, a review of monitoring data, and recommendations to support the ongoing successful performance of the tailings management system. Photos detailing the inspection conditions are included as photologs, and a comprehensive review and analysis of the monitoring data are provided in the appendices.

1.2 Inspection Requirements

Under Type A Water License 2AM-DOH1335 – Amendment No. 2, dated December 7, 2018, the specific TIA inspection requirements are stated in Part I, items 9 and 10 of the license:

9. The Licensee shall undertake a geotechnical inspection of all surface infrastructure and earthworks, annually between July and September, by a Geotechnical Engineer. The inspection shall be conducted in accordance with applicable best practices including the Canadian Dam Association Guidelines for water and waste containment facilities.

10. The Licensee shall submit to the Board for review, within ninety (90) days of completion of the geotechnical inspection, a report in accordance with Part I Item 9 and/or the Annual Report. The report shall include a cover letter from the Licensee outlining an implementation plan addressing each of the Geotechnical Engineer's recommendations and shall include the following:

- a. All quantities in cubic meters of dike seepage from the North, West, and South Dams pumped back into the Tailings Impoundment Area;*
- b. As-built drawings and a summary of the mitigation works undertaken along the shoreline of the Tailings Impoundment Area in response to erosion; and*
- c. All data and information generated from the monitoring of all project geotechnical instrumentation.*

It should be noted that the report associated with the geotechnical inspection described above is routinely submitted to the Nunavut Water Board on an annual basis as part of the Hope Bay Annual Report.

2 Site Conditions

2.1 Tailings Impoundment Area History

A summary of the TIA permitting, construction, and operations history is provided in Table 2-1.

Table 2-1: Summary of TIA Development History

| Period | Comments |
|-----------------------------|---|
| Winter 2011 and Winter 2012 | North Dam constructed (SRK 2012b). |
| Fall 2012 | Project placed into Care and Maintenance before any tailings are produced. |
| 2012 – 2015 | Project in Care and Maintenance. |
| January 2017 | Start of tailings deposition in TIA. |
| January – June 2018 | Completion of South Dam Phase 1 construction. |
| August 2018 | Commissioning of additional instrumentation at the South Dam. |
| May 2019 | Instrumentation upgrades and additional datalogger installations at the South Dam. |
| February 2020 | Doris TIA discharge via the Roberts Bay Discharge System begins. System temporarily offline starting August 2020 to May 2021, December 2021 to July 2022, January to April 2023. |
| October 2021 | Doris Mill is shut down (put in Care and Maintenance), and tailings deposition ceases. |
| January 1, 2022 | Agnico Eagle and TMAC amalgamated and continued under the Agnico Eagle name |
| January 1, 2022 | Doris TIA EOR role transitioned from SRK to Agnico. SRK assumes the role of Design Engineer. |
| June 2022 | The reclaim pump pad and associated reclaim pumps were moved onto the shoreline to the north after decommissioning the previous Reclaim Jetty. |
| July 2022 | Aquadam constructed within the TIA as part of the site water management strategy. Saline water intercepted by the Doris underground is discharged to the south of the Aquadam. The purpose of the Aquadam is to segregate saline water in the south of the TIA from water to the north that is discharged to Roberts Bay. |
| March – June 2023 | Interim Dike was constructed to replace the Aquadam with a more robust structure. The purpose of the Interim Dike is similar to the Aquadam, to segregate saline water in the south of the TIA from the Reclaim Pond to the north. |
| April – June 2023 | The South Dam toe berm is constructed along the downstream side of the South Dam. |
| May 2023 | Emergency Water Treatment Plant (EWTP) constructed and commissioned. |
| November 2023 | Upstream ground temperature cables installed. |
| July 2024 | Passive thermosyphons converted to hybrid thermosyphons |

2.2 Tailings and Water Management Overview

The tailings impoundment area (TIA) is located southeast of the Doris mill and mine (Figure 1 and 2). Containment for the TIA is provided through a water-retaining frozen core dam (North Dam) which retains the Reclaim Pond, and a geosynthetic clay liner (GCL) lined frozen foundation tailings dam

(South Dam) which retains the tailings beach. The current tailings capacity of the TIA is approximately 2.5 Mt of subaerially deposited tailings.

The permitted Phase 2 TIA has not yet been constructed. The Phase 2 TIA increases the overall tailings solids containment capacity to approximately 18 Mt (SRK 2017e). The Phase 2 expansion will include a raise of the South Dam and a new West Dam (also a frozen foundation GCL lined dam) (Figure 3).

The TIA reclaim pond is used as the overall collector for all site surface contact water, which is either pumped or trucked to the TIA. Since July 2022, saline underground water has been segregated into the southern portion of the TIA in the Saline Water Storage (SWS), which is a separate cell retained by the Interim Dike. When possible, saline water is discharged to Roberts Bay. Water in the Reclaim Pond is typically made up of freshwater runoff and recycled for processing make-up during operations, however, under Care and Maintenance, water is discharged to Roberts Bay by the Roberts Bay Discharge System (RBDS) via the water treatment plant or directly discharged when water quality allows. Prior to discharge to Roberts Bay, all water must meet Metal and Diamond Mining Effluent Regulations (MDMER) limits. The water storage capacity of the Reclaim Pond varies over the mine life but is greater than 6.4 Mm³ in 2024.

As part of the TIA design (SRK 2017e) and as detailed in the OMS manual (AEM 2024) the water level is expected to be managed through regular discharges to Roberts Bay. Due to the substantive freeboard and design capacity to contain the Probable Maximum Flood (PMF), and as such no spillway was included in the design. A review of the operational beach slopes and tailings deposition plan (SRK 2021a) indicates current deposition plan will decrease the Reclaim Pond capacity over time. During the later stages of the currently permitted facility, the capacity of the Reclaim Pond will be reduced to between 133,000 m³ and 209,000 m³. Until the North Dam is breached at closure, the inflow design flood (IDF) storage volume is greater than 640,000 m³ and requires adequate control in accordance with CDA (2019). To mitigate against the risk of an overtopping failure at the North Dam and to remove the dependency on an active discharge a Emergency Overflow Channel (EOC) has been designed and is planned to be constructed when tailings deposition resumes. A discharge from the EOC would only occur during a very low probability emergency event and would not occur under normal operating conditions.

Assuming the Roberts Bay discharge system continues to be operational and adequate discharge occurs, it is not until the last two to four years of the tailings deposition (depending on operational pond volumes) that the available pond storage in the TIA is expected to fall below the IDF storage volume requirement. At that point in time, it is expected that lowering the elevation of the TIA's maximum normal operating water level (NOWL) will be required to contain the IDF storm event.

A detailed review of the water and load balance is provided annually under a separate cover (SRK, 2025).

The permitted tailings production rates and associated tailings storage requirements for the Doris TIA are summarized in Table 2-2.

Table 2-2: TIA Design Volumes and Parameters

| Description | Value |
|---|--|
| Nominal Tailings Production Rate (Design) | 4,000 tonnes per day (tpd) ¹ |
| Tailings Specific Gravity | 2.85 |
| Deposited Tailings Dry Density | 1.3 t/m ³ |
| Tailings Solids Content | 35% solids (by weight) initially, increasing to 65% (dependent on mine water management during operations) |
| Total Tailings Storage Requirement: | |
| By Mass | 18.0 Mt |
| By Volume | 13.9 Mm ³ |
| Remaining Tailings Storage Requirement: | |
| By Mass | 16.1 Mt |
| By Volume | 12.4 Mm ³ |
| Ice Entrainment Allowance: | |
| Percentage of Tailings Capacity | 20% |
| By Volume | 2.4 Mm ³ |
| Tailings Beach Slope: | Between 0.5% and 1.0% |

Notes:

¹ The operation is currently in Care and Maintenance.

2.3 Tailings Impoundment Area Infrastructure

2.3.1 North Dam

The North Dam forms the northern boundary of the Doris TIA within a narrow natural valley, blocking the original Tail Lake outlet to Doris Lake (Figure 3). The North Dam impounds the Reclaim Pond and was designed as a water retaining structure. The dam has a central frozen core with a secondary upstream Geosynthetic Clay Liner (GCL). The dam is constructed from local quarry rock and consists of processed fines for the core, 150 mm transition material, and a run of quarry (ROQ) outer shell. To ensure maintenance of the frozen foundation and frozen core conditions, the key trench of the dam is equipped with 12 horizontal thermosyphon evaporators to cool the foundation of the key trench (SRK 2007, 2012a, 2013a, 2015a). As of July 2024, the thermosyphons have been converted from passive thermosyphons to hybrid thermosyphons. The hybrid system utilizes passive cooling during the winter (when ambient air temperatures are below the ground temperature), and active cooling during warmer ambient air temperature. The passive thermosyphons function when the ambient air temperature is colder than the ground temperature where the thermosyphon is located. This happens because of the phase change of the carbon dioxide gas with which the thermosyphon is filled. Therefore, during the winter months, the cold ambient air temperature is used to draw heat from the foundation. When the ambient air temperature rises, the active thermosyphon cooling system is activated which utilizes mechanical cooling at the thermosyphon riser to continue the heat exchange cycle through the warmer seasons. Figure 4 through Figure 6 depict pertinent details of the North Dam and its instrumentation.

Construction of the North Dam started in February 2011 and was completed in April 2012, over two distinct winter seasons, as-built details are provided in SRK (2012b).

2.3.2 South Dam

The South Dam is located at the southern end of the former Tail Lake, on the watershed divide toward Ogama Lake (Figure 3). The South Dam is designed as a frozen foundation dam consisting of a compacted rock fill embankment (sourced from a local quarry) with a GCL keyed into the permafrost overburden and bedrock foundation for seepage control. Design parameters and design criteria are summarized in Table 2-3 and Table 2-4 respectively, with Figure 7 through Figure 9 presenting pertinent details of the South Dam design. The dam is designed to retain beached tailings as opposed to water. The dam construction occurs in two phases, the Phase 1 dam has been constructed and the Phase 2 dam is a future downstream raise.

South Dam construction began in January 2018 and Phase 1 construction was completed in June 2018. The South Dam instrumentation was commissioned in August 2018, with additional instrumentation installed in 2019.

In 2023, the South Dam toe berm was constructed. The toe berm is constructed of run-of-quarry rock fill and is typically 2.2 meters thick and 7 meters wide from the downstream slope of the dam to the crest of the toe berm. The intent of the toe berm is to mitigate the tension cracking previously observed on the downstream slope of the South Dam, specifically within the lateral extent of the existing tailings beach. The toe berm makes up a portion of the Phase 2 South Dam embankment, the remainder of which has not yet been constructed.

2.3.3 West Dam

The design for the West Dam is a frozen foundation dam with a key trench and a GCL liner keyed into permafrost, similar in design to the South Dam. It is intended to retain future beached tailings along low-lying ground on the western perimeter of the TIA (Figure 3).

If and when required to contain future tailings, this dam will be constructed in a single stage using local quarry rock.

2.3.4 TIA Design Parameters and Design Criteria

Geometric design parameters and design criteria for each dam are provided in the OMS Manual, and summarized in Table 2-3 and Table 2-4 for ease of reference.

Table 2-3: TIA Containment Dams Geometric Design Parameters

| Description | North Dam | South Dam | West Dam |
|--|--|--|--|
| Structure Type | Frozen core rock fill dam with geomembrane | Frozen foundation rock fill dam with geomembrane | Frozen foundation rock fill dam with geomembrane |
| Retains | Water | Tailings | Tailings |
| Secondary Seepage Barrier | GCL | GCL | GCL |
| GCL Deployment Slope | 2.5H:1V | Phase 1 – 3H:1V Phase 2 – 4H:1V | 3H:1V |
| Thermosyphons | 12 sloped | None | None |
| Crest Centerline Length | 220 m | 515 m | 470 m |
| Maximum Height | 11.0 m | Phase 1 – 6.0 m Phase 2 – 14.0 m | 5.0 m |
| Crest Elevation | 37.5 masl | Phase 1 – 38.0 masl Phase 2 – 46.0 masl | 46.0 masl |
| Core/GCL Elevation | 35.0 masl | Phase 1 – 37.0 masl Phase 2 – 45.0 masl | 45.0 masl |
| Full Supply Level (FSL) | 33.5 masl | Phase 1: Water – 33.5 masl Tailings – 36.5 masl Phase 2: Water – 33.5 masl Tailings – 44.5 masl | Water – 33.5 masl Tailings – 44.5 masl |
| Original Tail Lake Water Level | 28.3 masl | | |
| Total Actual Freeboard (Crest to FSL) | 4.0 m | Phase 1: Water – 4.5 m Tailings – 1.5 m Phase 2: Water – 12.5 m Tailings – 1.5 m | Water – 12.5 m Tailings – 1.5 m |
| Total Actual Minimum Freeboard (Core/GCL to FSL) | 1.5 m | Phase 1: Water – 3.5 m Tailings – 0.5 m Phase 2: Water – 11.5 m Tailings – 0.5 m | Water – 11.5 m Tailings – 0.5 m |
| Required Normal Freeboard (CDA 2013) | Wind setup (0.07 m) + Wave runup (1.06 m) = 1.13 m | | |
| Required Minimum Freeboard (CDA 2013) | Wind setup (0.06 m) + Wave runup (1.16 m) = 1.22 m Inflow Design Flood (IDF) Freeboard = 2.1 m (at end of mine life when Reclaim Pond is at its minimum size) | | |
| Thermal Protection above Frozen Core | 2.5 m | n/a | n/a |
| Crest Width | 13 m | 10 m | 10 m |
| Upstream Structure Slope | 6H:1V | 4H:1V | 4H:1V |

| Description | North Dam | South Dam | West Dam |
|-----------------------------|----------------------|----------------------|----------|
| Downstream Structure Slope | 4H:1V | 2H:1V | 2H:1V |
| Key Trench Depth | Varies (2.0 – 5.0 m) | Varies (2.0 – 4.0 m) | 4.0 m |
| Key Trench Upstream Slope | 0.5H:1V | 2H:1V | 2H:1V |
| Key Trench Downstream Slope | 0.5H:1V | 1H:1V | 1H:1V |

Table 2-4: TIA Containment Dams Design Criteria

| Description | North Dam | South Dam | West Dam |
|---|---|------------------------|------------------------|
| Settlement Allowance | | | |
| Foundation thaw of 1 m (partial thaw) | 1.00 m | 0.47 – 0.67 m | 0.40 – 0.60 m |
| Foundation thaw of 7 m (full thaw) | | 2.45 – 3.85 m | 2.03 – 3.43 m |
| Deformation Allowance (Total Strain due to Creep) | <2% | n/a | n/a |
| Design Life: | | | |
| Active use as water retaining structure | | | |
| Design basis as water retaining structure | 17 years | | |
| Design basis until breach | 22 years | | |
| Active use as solids retaining structure | 30 years | 17 years | 17 years |
| Design basis as solids retaining structure | | 25 years | 25 years |
| Annual Exceedance Probability (AEP) for Inflow Design Flood (IDF) | | | |
| Risk Based | 1/2,475 (0.0004) | | |
| Standards Based | 1/3 between 1/1,000 and the PMF ⁽¹⁾ | | |
| Static Stability Factor of Safety: Long-term (Drained Conditions) | 1.3 during construction 1.5 during operation and closure 1.2 to 1.3 partial or rapid drawdown | | |
| Pseudo-Static Stability Factors of Safety | 1.0 during earthquake 1.2 post earthquake | | |
| AEP for Earthquake Design Ground Motion | 1/2,475 (0.0004) | | |
| Peak Ground Acceleration (PGA) | 0.060g ⁽²⁾ | 0.036g | 0.043g |
| Mean Annual Air Temperature Climate Change | +6.8°C up to year 2100 | | |
| Thermal Design Criteria (Normal Conditions) ⁽³⁾ | | | |
| Foundation | -8°C | -2°C | -2°C |
| Frozen core (thermal block zone) | -2°C | n/a | n/a |
| Tailings Freezing Point Depression | n/a | 0 to -1°C | 0 to -1°C |
| Seepage Allowance | 78 m ³ /day | 50 m ³ /day | <1 m ³ /day |

Notes:

- ¹ Value based on experiential engineered judgement.
- ² A peak ground acceleration for a 1/2,475 return period was not available at the time of design of the North Dam, and therefore the PGA of 0.06 g was selected based on published data for Kugluktuk. This is further described in SRK (2007).
- ³ This value is the design criteria used during the design of the structure. Refer to the current TIA OMS manual for operating criteria and trigger levels (AEM 2024).

2.3.5 Interim Dike

The Interim Dike was constructed between March and June 2023. The structure is fully within the current TIA footprint and was constructed upstream (south) of the former Aquadam location. The Interim Dike is designed as an interim structure to segregate saline underground mine water from the overall Reclaim Pond, as part of the updated water management strategy during Care and Maintenance.

The structure consists of two parallel rock berms, with a compacted tailings core and a GCL liner on the interior face of the northern berm to provide additional hydraulic control. The upstream pond is actively controlled by pumping, and if required, passively controlled by a water elevation control channel (WECC).

A summary of the Interim Dike dimensions is provided in Table 2-5, additional information is provided in the construction summary report (AEM 2024):

Table 2-5: Interim Dike Geometric Design Parameters

| Description | Interim Dike |
|--|--------------------------|
| Structure Type | TIA Internal Dike |
| Secondary Seepage Barrier | GCL |
| GCL Deployment Slope | 2.5H:1V |
| Crest Centerline Length | 300 m |
| Maximum Height | 3.9 m (as-built) |
| Hydraulic Control Elevation (Crest along GCL) | 34.9 masl (as-built) |
| WECC Invert / Activation Elevation | 34.3 masl (as-built) |
| Normal Operating Water Level (South Pond) (NOWL) | 34.0 masl |
| Minimum Freeboard (WECC Invert to NOWL) | 0.3 m |
| Crest Width | 50 m (Varies) |
| Upstream Structure Slope | 2H:1V |
| Downstream Structure Slope | 2H:1V |
| Key Trench Depth | 1.0 m (Typical – Varies) |
| Key Trench Upstream Slope | 0.5H:1V |
| Key Trench Downstream Slope | 0.5H:1V |

2.3.6 Tailings Deposition System

The mine is currently in Care and Maintenance and therefore the tailings discharge system is inactive. Prior AGIs (SRK 2018a, 2019a, 2020a, 2021b) describe the design and history of beach development.

Prior to entering Care and Maintenance and the cessation of mill operation (October 2021), a cumulative 1,857,159 tonnes of tailings solids were deposited into the TIA.

2.3.7 Emergency Dump Catch Basins

Two Emergency Dump Catch Basins (EDCBs) have been constructed on either side of Doris Creek (Figure 2). The EDCBs are lined cells constructed at a topographic low-point along the tailings and reclaim pipeline routes that allow for the pipelines to be drained during prolonged mill shutdowns or power failures to prevent pipeline freeze-up. They were designed to accommodate at least two consecutive shutdowns plus direct precipitation over the basin areas. The EDCBs were constructed in 2017. Table 2-6 summarizes their design and as-built containment capacities.

Table 2-6. EDCB Design and As-built Capacities

| Component | Western EDCB | Eastern EDCB |
|---------------------------|--------------------|--------------------|
| Permitted Design Capacity | 120 m ³ | 120 m ³ |
| Required Design Capacity | 97 m ³ | 85 m ³ |
| As-Built Design Capacity | 124 m ³ | 85 m ³ |

2.3.8 Reclaim and TIA Water Discharge System

The TIA Reclaim and Roberts Bay Discharge System consist of high-density polyethylene (HDPE) pipelines, some of which are heat traced, and pumps sized to manage water in the TIA.

The Roberts Bay Discharge System was commissioned in February 2020 and historically was run intermittently as allowed by water quality to manage the water level in the Reclaim Pond. In 2023, a new effluent water treatment plant (EWTP) and reclaim pumphouse pad were constructed near the Reclaim Pond on a bedrock outcrop near the North Dam (Figure 2). The new EWTP provides additional water treatment capacity and allows for higher rates and extended discharge periods. Intake from the Reclaim Pond occurs via the intake line and reclaim pump house (710) which pumps water to the mill during operations via the new EWTP or bypassing the plant if used for reclaim water make-up and re-use in the mill. Since entering Care and Maintenance and the cessation of mill operation (October 2021), no reclaim water has been pumped to the mill.

The current reclaim pad is constructed at approximately 36.4 masl, above the maximum water level of the North Dam.

2.4 Tailings Impoundment Area Instrumentation

The Dam instrumentation is monitored and maintained in accordance with the North and South Dam Monitoring Standard Operating Procedure (SOP) (SRK 2022c and 2022d). The following sections detail the instrumentation by area.

2.4.1 North Dam

The active performance monitoring instrumentation for the North Dam consists of:

- Fifteen vertical ground temperature cables (GTCs);
- Thirteen horizontal GTCs;

- Eighteen surficial survey monitoring points located on the downstream face of the dam;
- Nine surficial survey monitoring points located on the upstream face;
- Fourteen crest survey monitoring points located along the upstream and downstream crest of the dam;
- Three deep settlement points;
- Six inclinometers located within the downstream face; and
- Twelve single bead thermistors, measuring thermosyphon contact temperatures.

The nine upstream surficial survey monitoring points were installed to monitor for expected deformation as the upstream foundation warms. Monitoring of these upstream points commenced in June 2023.

Figure 4 through Figure 6 show the location of North Dam instrumentation. All GTCs are connected to dataloggers allowing continuous data collection. Slope inclinometers are recorded manually using a slope inclinometer instrument owned by Agnico Eagle. Settlement monitoring is currently completed using RTK GPS, prior to the 2023 monitoring year, a total station was used.

2.4.2 South Dam

The active South Dam performance monitoring instrumentation consists of:

- Nine horizontal GTCs;
 - one transverse GTC along the GCL interface at the upstream top crest of the key trench (SD-HTS-B1-KT);
- Fifteen vertical GTCs;
- Nineteen surficial survey monitoring points (crest and downstream slope);
- Thirteen crest survey monitoring points; and
- Three deep settlement points.

The monitoring instrument locations are shown in Figure 7 and Figure 9. Eleven active GTCs are connected to dataloggers allowing continuous data collection and transmission. The data are accessed from an online portal.

2.4.3 West Dam

The West Dam is not yet constructed.

2.4.4 Interim Dike

The Interim Dike is monitored using three ground temperature cables (GTC). Two GTCs are installed on the north side of the Interim Dike and one on the upstream side (south). Periodic topographic surveys are also collected in addition to visual monitoring.

Weekly visual inspections and temperature readings from these GTCs are ongoing and a formal monitoring program is being developed by Agnico Eagle. An updated monitoring SOP is expected to be a part of the next OMS update.

2.4.5 Other TIA Instrumentation and Monitoring

The monitoring of the water level in the Reclaim Pond is summarized below:

- The water level in the TIA Reclaim Pond is monitored by an automated pressure transducer and data logger installed at monitoring point TIA-2. The data are transmitted by a solar-powered iridium satellite transceiver to an online portal where they can be accessed remotely by Agnico Eagle and SRK. There is also a backup datalogger installed to record pond levels should a problem occur with the primary data collection system.
- The primary datalogger is configured to collect a reading every 15 minutes in the summer and every 60 minutes during the winter. The data is transmitted to the online portal every 5 days, and daily during the freshet season.
- On an annual basis, another consultant conducts a water level reference survey and as required a bathymetry survey of the TIA basin. Based on communications from Agnico Eagle, the water level constant elevation was adjusted from 27.761 masl (ERM 2017) to 27.71 m on August 15, 2019, at 00:00, this constant remained unchanged for 2024.

Other instrumentation includes:

- Tailings deposition volumes are monitored with a flowmeter and an automated data collection system;
- Reclaim water is measured using a flowmeter with an automated data collection system;
- Mine water discharge rates are measured by a totalizer instrument, recorded manually twice daily; and
- Comprehensive climate data from the Doris meteorological station is maintained in a database for review in conjunction with any TIA monitoring.

2.5 Dam Hazard Classification

Dam hazard classifications for the North Dam, South Dam and West Dam were conducted as part of the design and included in the approved final environmental impact statement (SRK 2017e). The classifications were done in accordance with the Canadian Dam Safety Guidelines (CDA 2013) (Table 2-7) as well as the CDA Technical Bulletin on Application of Dam Safety Guidelines to Mining Dams (CDA 2014). The classification was reviewed as part of the 2019 AGI (SRK 2020a) in conjunction with the updated CDA bulletin (2019), at the time no changes in the TIA operations or context warranted modification to the hazard rating of HIGH for the constructed North and South Dams. The designated dam hazard classifications assigned to each structure are listed in Table 2-8 (SRK 2015, 2016b, 2017e).

In line with recommendations from the 2021 DSR, a review of the dam hazard classification should be undertaken prior to resuming operations and reference the 2023 CDA Technical Bulletin on Environmental Consequence Classification.

Table 2-7: Dam Hazard Classification (CDA 2013, 2014, 2019)

| Dam Class | Population at Risk ¹ | Incremental losses | | |
|-------------|---------------------------------|---------------------------|--|---|
| | | Loss of Life ² | Environmental and Cultural Values | Infrastructure and Economics |
| Low | None | 0 | Minimal short-term loss No long-term loss | Low economic losses; area contains limited infrastructure or services. |
| Significant | Temporary only | Unspecified | No significant loss or deterioration of fish or wildlife habitat Loss of marginal habitat only Restoration or compensation in kind highly possible | Losses to recreational facilities, seasonal workplaces, and infrequently used transportation routes. |
| High | Permanent | 10 or fewer | Significant loss or deterioration of <i>important</i> fish or wildlife habitat Restoration or compensation in kind highly possible | High economic losses affecting infrastructure, public transportation, and commercial facilities. |
| Very high | Permanent | 100 or fewer | Significant loss or deterioration of <i>critical</i> fish or wildlife habitat Restoration or compensation in kind possible but impractical | Very high economic losses affecting important infrastructure or services (e.g., highway, industrial facility, storage facilities for dangerous substances). |
| Extreme | Permanent | More than 100 | Major loss of <i>critical</i> fish or wildlife habitat Restoration or compensation in kind impossible | Extreme losses affecting critical infrastructure or services (e.g., hospital, major industrial complex, major storage facilities for dangerous substances). |

Notes:

¹ Definitions for population at risk:

None – There is no identifiable population at risk, so there is no possibility of loss of life other than through unforeseeable misadventure.

Temporary – People are only temporarily in the dam-breach inundation zone (e.g., seasonal cottage use, passing through on transportation routes, participating in recreational activities).

Permanent – The population at risk is ordinarily located in the dam-breach inundation zone (e.g., as permanent residents); three consequence classes (high, very high, extreme) are proposed to allow for more detailed estimates of potential loss of life (to assist in decision-making if the appropriate analysis is carried out).

² Implications for loss of life:

Unspecified – The appropriate level of safety required at a dam where people are temporarily at risk depends on the number of people, the exposure time, the nature of their activity, and other conditions. A higher class could be appropriate, depending on the requirements. However, the design flood requirement, for example, might not be higher if the temporary population is not likely to be present during the flood season.

Table 2-8: Dam Hazard Classification of TIA Containment Structures

| Structure | Population at Risk (PAR) | Loss of Life | Environmental and Cultural Values | Infrastructure and Economics | Overall Hazard Classification |
|-------------------------------|---------------------------------|---------------------|--|-------------------------------------|--------------------------------------|
| North Dam | SIGNIFICANT | SIGNIFICANT | HIGH | LOW | HIGH |
| South Dam | SIGNIFICANT | SIGNIFICANT | HIGH | LOW | HIGH |
| West Dam (Not constructed) | SIGNIFICANT | SIGNIFICANT | HIGH | LOW | HIGH |

3 TIA Management System Review Findings

3.1 Tailings Operating, Maintenance and Surveillance Manual

Agnico Eagle has completed a significant update to OMS manual and Emergency Response Plan to align with the Agnico Eagle standards and reflect the corporate governance structure. Agnico Eagle and SRK conducted a detailed review of the trigger, action, response plans for inclusion in the OMS manual. The OMS manual was updated in March 2024, and is reviewed and/or updated annually by Agnico Eagle. The OMS manual integrates the dam monitoring SOPs, TARPs, Emergency Response Plan as well as any changes to the tailings management system under Agnico Eagle’s corporate tailings management system. A detailed review of the OMS manual is not part of the Annual Geotechnical Inspection.

The roles and responsibilities for the TIA are listed in the OMS manual, however some key personnel have changed, an abbreviated list of key responsible parties as of September 2024 is provided below. Note, all parties are Agnico Eagle personnel unless otherwise stated.

Table 3-1: Roles and Responsibilities

| Role | Personnel Title |
|---|--|
| Accountable Executive Officer | Michel Julien Vice-president Environment and Critical Infrastructure |
| Engineer of Record ⁽¹⁾ | Thomas Lepine Advisor, Environmental Management |
| Mine General Manager | Marc-Olivier Vachon |
| Design Engineer | John Kurylo Principal Geotechnical Engineer – SRK Consulting |
| Site Geotechnical Engineer | Brennan Jay |
| Environment General Supervisor / Responsible Person | Guy Dufour (Transitioned to Cyril Jenkins, as of February 2025) |
| Independent Review Board | Bill Horne Independent Reviewer – Geocryology Inc. Henri Sangam Independent Review Board – Geomino Inc. |
| Health and Safety General Supervisor | Morgan Hjorth |

Sources: AEM, 2024

Notes:

1) The Engineer of Record role for the TIA transferred from John Kurylo (SRK) to Thomas Lepine on January 1, 2022.

SRK supports monitoring of the TIA, and all monitoring data for the TIA is submitted to SRK for review and data is hosted in a database and available for visualization and review online.

Recommendation:

- Update the monitoring SOPs for the North and South Dam to reflect all current monitoring instrumentation and procedures.

- Update the OMS manual to include any of the changes/revisions not captured in the current version of the OMS, including the South Dam toe berm, Emergency Overflow Channel implementation timing and any changes because of the dam hazard classification review.
- OMS Manual, TARPs and Emergency Response Plan should be reviewed with the Agnico Eagle site operations annually, or after revisions; to ensure staff are appropriately informed and trained on the contents of these documents.

3.2 Independent Dam Safety Review and Risk Assessment

In accordance with CDA Dam Safety Guidelines (CDA 2013, 2014, 2019), including the CDA Technical Bulletin on Dam Safety Reviews (CDA 2016), independent third-party dam safety reviews (DSRs) should be conducted in accordance with a frequency informed by the hazard classification of the structures. It is recommended that HIGH hazard classification dams, such as the North Dam and South Dam, undergo a dam safety review every seven years.

A DSR for the North and South dams was completed in 2021 by Tetra Tech Inc. (Tetra Tech 2022), and the next DSR should be planned for 2028. The findings from the 2021 DSR recommendations are being addressed.

Independent Review Board Meetings were held in July 2024.

Recommendations:

- Continue to address recommendations from the DSR.
- In line with recommendations from the DSR, the dam hazard classification should be reviewed and updated prior to resuming operations, and the review should consider the 2023 CDA Technical Bulletin on Environmental Consequence Classification.

4 TIA Inspection and Monitoring Instrumentation Findings

4.1 Compliance with Monitoring Frequency Requirements

The North Dam and South Dam monitoring frequency requirements are outlined in the OMS manual (AEM 2024).

The monitoring frequency requirements and actual monitoring frequency for the 2024 monitoring year (October 1, 2023 to September 30, 2024) are summarized for North and South Dams in Table 4-1 and Table 4-2, respectively. As a formal monitoring program is under development for the Interim Dike, a monitoring frequency summary is provided without a conformance column.

Table 4-1: North Dam Monitoring Frequency Requirements for the 2024 Monitoring Year⁽¹⁾

| Element | Item | Method | Responsibility | Required Frequency | Conformance with Frequency Requirements (AEM 2024) ⁽¹⁾⁽²⁾ | Comments |
|---------------|-----------------------------------|----------------------------------|----------------|--|--|--|
| Thermal | Ground Temperature Cables | Datalogger | Agnico Eagle | Daily (automated) | Yes | Recorded four times daily |
| | Thermosyphons | | | | Yes | Record four times daily |
| | Datalogger downloads | Manual | | Monthly | Yes | Data collected monthly |
| Deformation | Downstream Surface Settlement | Manual | Agnico Eagle | Monthly (May to Nov.) | No | Four of seven monthly surveys received (Missed surveys were due to issues with the survey equipment that have been addressed for 2025). |
| | Downstream Deep Settlement | | | | No | |
| | Crest Settlement | | | | No | |
| | Depressions | | | | Yes | |
| | Inclinometers | Manual | | Monthly | Yes | Data collected monthly, except when inclinometer was off site for servicing |
| Water Balance | Water Level | Datalogger / Pressure Transducer | Agnico Eagle | Daily (automated) | Yes | Readings every 15 min and uploaded daily during open water season, every 60 min and uploaded ever 5 days during winter. |
| | Water Level | Manual | | Monthly | Yes | Manual water level surveys only required if a datalogger is not in place, however monthly elevation checks are suggested in conjunction with the North Dam surveys. Water level constant for pressure transducer is checked annually during open water season. |
| | Seepage Monitoring ⁽⁵⁾ | | | Monthly when flowing water is observed | Yes | |

| Element | Item | Method | Responsibility | Required Frequency | Conformance with Frequency Requirements (AEM 2024) ⁽¹⁾⁽²⁾ | Comments |
|--|--|---------------------------------|--|---|--|--|
| Visual | Visual Walkover Inspection and Reporting | Visual Inspection | Agnico Eagle | Weekly (below FSL ⁽³⁾) Daily (at or above FSL) | Yes | Inspections conducted weekly, except when access was not available. ⁽⁴⁾ |
| | Annual Geotechnical Inspection | | Independent Qualified Licensed Geotechnical Engineer | Annually | Yes | September 2024 (This report) |
| Maintenance | | | | | | |
| North Dam Thermal Datalogger | Datalogger Primary Batteries | Manually recharge | Agnico Eagle | Annually (Or as needed) | No | Recharged December 2022 |
| | Datalogger Backup Batteries | Manually replace | | 5-year cycle | Yes | Replaced during datalogger recalibration |
| | Datalogger Recalibration | Manual | | | Yes | Completed Jan. 2018 |
| | Desiccant Packs | Manually replace | | As required | Not required | Replace moisture indicators in 2025. |
| Water Level Datalogger Station (TIA-2) | Datalogger Transmission Subscription | Online | | Annually | Yes | 15% of the data subscription remains (as of December 20, 2024) |
| | Physical Datalogger Station | Manually recalibrate or replace | | As required | Not required | No action required |

Note(s):

- ¹ The monitoring year (or data reporting period) included in this report was October 1, 2023 to September 30, 2024.
- ² This column lists if the monitoring frequency is compliant with the monitoring frequency requirements during this monitoring year.
- ³ NOWL: Normal Operating Water Level (Previously referred to as Full Supply Level)
- ⁴ Occasional inspections missed where dam access was not possible due to winter weather, road conditions or other operational constraints.
- ⁵ The Seepage Monitoring standard operating procedure monitors the flowing water at the toe of the North Dam for chemical signature of seepage originating in the TIA Reclaim Pond, no chemical signature has been observed to date. The Seepage Monitoring SOP also includes TL-5 geochemical sampling and Geochemical QA/QA monthly while water flow is observed at the North Dam toe.

Table 4-2: South Dam Monitoring Frequency Requirements for the 2024 Monitoring Year ⁽¹⁾

| Element | Item | Method | Resp. | Required Frequency | Conformance with Frequency Requirements (AEM 2024) ⁽¹⁾⁽²⁾ | Comments |
|------------------------------|--------------------------------------|----------------|--|---|--|--|
| Thermal | Ground Temperature Cables | Datalogger | Agnico Eagle | Daily (automated) | Yes | Data is transmitted every 12 hours. Some dataloggers have stopped transmitting data and AEM have attempted repair and replacement. Some transmission issues remain. |
| Deformation | Deep Settlement | Manual | Agnico Eagle | Monthly (May – Nov.) | No | Four of seven monthly surveys received (Missed surveys were due to issues with the survey equipment that have been addressed for 2025). |
| | Crest Settlement | | | | No | |
| | Surficial Settlement | | | | No | |
| | Depressions | | | | Yes | |
| Water Balance | Water Level | Datalogger | Agnico Eagle | Daily | Yes | Refer to Table 4-1 |
| | Seepage Monitoring | Manual | Agnico Eagle | Weekly when observed (flowing water) | Yes | No flowing water observed. |
| | Downstream Poned Water | Manual | Agnico Eagle | Monthly when observed | Yes | |
| Visual | Visual Walkover Inspection | Manual | Agnico Eagle | Weekly (below NOWL ⁽³⁾) Daily (above NOWL) | Yes | Inspections conducted weekly, except when access was not available. ⁽⁴⁾ |
| | Annual Geotechnical Inspection | | Independent Qualified Licensed Geotechnical Engineer | Annually | Yes | September 2024 (This report) |
| Maintenance | | | | | | |
| South Dam Thermal Datalogger | Datalogger Batteries | Solar recharge | Agnico Eagle | As needed | Yes | Service or replace dataloggers or batteries that do not appear to recharge in the summer via the photovoltaic cell. Some dataloggers have stopped transmitting and require maintenance |
| | Datalogger Recalibration | Manual | | | | |
| | Desiccant Packs | Manual | | | | |
| | Datalogger transmission subscription | Online | SRK/Agnico Eagle | Annually | Yes | None |

Note(s):

- ¹ The monitoring year (or data reporting period) included in this report was October 1, 2023 to September 30, 2024.
- ² This column lists if the monitoring frequency is compliant with the monitoring frequency requirements during this monitoring year.
- ³ NOWL: Normal Operating Water Level (Previously referred to as Full Supply Level)
- ⁴ Occasional inspections missed where dam access was not possible due to winter weather, road conditions or other operational constraints.

Table 4-3: Interim Dike Monitoring

| Element | Item | Method | Resp. | Required Frequency ⁽¹⁾ | Comments |
|---------------|--|------------|--|---|---|
| Thermal | Ground Temperature Cables | Datalogger | Agnico Eagle | Weekly (May to Nov) Monthly (December to April) Or Daily (if connected to datalogger) | Spot readings and periodic data logger readings. These GTCs should be connected to dataloggers. |
| Deformation | Topographic Survey | Survey | Agnico Eagle | Every two months – starting in May and continuing until snow covers the structure. | Topographic surveys of the Interim Dike should be completed once after snowmelt and once prior to freeze up (ideally every two months). Survey monitoring points should be established to allow monthly monitoring. |
| Water Balance | Upstream Water Level (Saline Water Pond) | Survey | Agnico Eagle | Monthly (ice free months) | Frequency may be increased at the discretion of the Site Geotechnical Engineer and/or EoR |
| Visual | Visual Walkover Inspection | Manual | Agnico Eagle | Weekly (May to Nov) Monthly (December to April) | Inspections conducted weekly, except when access was not available. ⁽²⁾ |
| | Annual Geotechnical Inspection | | Independent Qualified Licensed Geotechnical Engineer | Annually | September 2024 (This report) |

Note(s):

¹ As listed in the OMS Manual (AEM 2024)

² Occasional inspections missed where dike access was not possible due to winter weather, road conditions or other operational constraints.

Recommendations:

- Recommended monitoring frequencies have been met in most categories, however:
 - Three survey monitoring events we missed due to issues with the survey equipment (these have been addressed for 2025).
 - Some of the newly installed ground temperature cables on the North and South Dam are read infrequently and existing dataloggers have stopped transmitting. AEM have attempted repair and replacement. Some transmission issues remain.
 - AEM should aim to improve the frequency of the monitoring in 2025.
- Formalize and implement the monitoring program for the Interim Dike.
- Update the OMS manual and monitoring SOPs to include any new or updated instrumentation.

4.2 North Dam Inspection and Monitoring

4.2.1 Overall (Visual) Inspection of the North Dam during the AGI

As part of the 2024 AGI a visual inspection of the North Dam was completed. At the time of the inspection, the North Dam appeared to be in good condition, and no issues of concern were observed. Observations and recommendations related to instrumentation and monitoring points are provided in the following sections.

Cracking has been previously noted on the GTC datalogger housings. These cracks are located on the flange that connects the housing to the riser and the cracks do not appear to penetrate through the housing. The interior of the housings were dry and no evidence of moisture ingress was noted during the inspection. A thorough inspection should be conducted each spring for signs of moisture ingress, and repairs conducted where moisture ingress is observed. Consider replacement of all moisture indicators, and desiccant packets as needed.

Minor depressions in the rock fill have been observed periodically since construction on both the upstream and downstream sides. On the upstream side of the dam, particularly below the high-water line, ice and wave action is suspected to have caused movement of some of the ROQ rock and it is possible that localized thaw settlement has caused some increased undulation in the ROQ surface. These areas will be monitored for further changes, however at the time of inspection there was no cause for concern.

Tundra die-back was observed along the eastern upstream toe of the dam, below the high water mark. This area should be monitored closely over the next year for signs of thermal erosion and increased thaw settlement.

The attached Photolog (Photolog 1 to 3) provides a general overview of conditions on the North Dam.

Recommendations:

- Disturbance (track marking) on the tundra above the west abutment, due to drilling access during the EOC drilling investigation was previously noted (SRK, 2023b). This area was inspected in 2024 and no signs of erosion or permafrost degradation were observed in 2024, however the areas should continue to be monitored periodically and mitigation measures implemented if changes are observed.
- Tundra dieback observed along the upstream toe (below 33.05 masl, the maximum Reclaim Pond level) should include monitoring for erosion or increased permafrost thaw settlement in the future.
- Cover the dam face GTCs with non-woven geotextile and a thin layer of rock for protection and to improve the quality of the temperature readings.

4.2.2 Ground Temperature Cables

To monitor long-term temperature of the frozen core and the dam foundation, a total of twenty-four GTCs were installed during the North Dam construction (SRK 2012b). Of the twenty-four installed GTCs, twenty-two are still functional. Since September 2012, GTC data for the North Dam is recorded by two Campbell Scientific CR1000 dataloggers, and the data is downloaded directly from the dataloggers by Agnico Eagle personnel.

The data is recorded every six hours, unless otherwise noted, details on the status of the North Dam GTCs is summarized in Table 4-4, and a summary of the GTC measurements is provided in Table 4-5. The GTC data collection had no concerns in 2024.

Four additional vertical GTCs were installed in the upstream face of dam in February 2024, to monitor the thermal performance of the rockfill shell. Data is collected by manual spot readings or by automated data loggers.

Table 4-4: North Dam Ground Temperature Cable Status

| GTC ID | Status | Comments |
|-----------------|----------|--|
| ND-VTS-040-KT | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-040-31.5 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-040-33.5 | Active | Cable disconnected from datalogger October 10, 2013 to May 12, 2014 |
| | | Connection to datalogger more permanently repaired July 2014 |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-VTS-060-US | Inactive | Irreparably damaged between April 27 and August 8, 2012 |
| ND-VTS-060-USS1 | Active | Installed February 2024. Spot readings collected periodically through 2024. |
| ND-VTS-060-DS | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-VTS-060-KT | Active | Spliced during construction. Fully operational, except for recalibration January 1 to March 3, 2018 |
| ND-HTS-060-28.8 | Active | Bead 7 – Works intermittently, and since fall 2016 has occasional erratic readings that are attributed to instrumentation errors. |
| | | Bead 9 – Works intermittently |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-060-31.0 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-060-33.5 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-VTS-085-US | Active | Erratic data at most beads (excluding Beads 3, 6 and 9) between June 2016 and May 2017 with lower amplitude spikes between December 2016 and May 2017. |
| | | Erratic data subsided since May 2017 |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-VTS-085-USS1 | Active | Installed February 2024, spot readings began in March 2024 and continuous datalogger readings began in August 2024. |
| ND-VTS-085-USS2 | Active | Installed February 2024, spot readings began in March 2024 and continuous datalogger readings began in August 2024. |
| ND-HTS-085-US | Active | Installed on the upstream face of the dam. Readings collected July to October 2024. |
| ND-VTS-085-DS | Active | Erratic data at most beads (excluding Beads 3, 6 and 9) between June 2016 and May 2017 with lower amplitude spikes between December 2016 and May 2017. Erratic readings have not been recorded since May 2017. |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-VTS-085-KT | Active | Erratic data at most beads (excluding Beads 3, 6 and 9) between June 2016 and May 2017 with lower amplitude spikes between December 2016 and May 2017. Erratic readings have not been recorded since May 2017. |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-085-25.3 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-085-29.4 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-085-33.5 | Inactive | Irreparably damaged during construction |

| GTC ID | Status | Comments |
|-----------------|--------|---|
| ND-VTS-130-US | Active | Bead 9 – Periods of erratic readings since June 2016 (temperature dropping randomly to less than -15°C) |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |
| | | Bead 1- Offline since August 13, 2020 and August 18, 2023 |
| | | Bead 8 - Offline from February 25 to September 21, 2021 and November 4, 2021 to August 11, 2022 |
| | | Bead 10 – Erratic readings for periods since May 2022 |
| ND-VTS-130-USS1 | Active | Installed February 2024. Spot readings collected periodically through 2024. |
| ND-VTS-130-DS | Active | Small magnitude temperature spikes during summer months between 2013 and 2017 (Bead 3, 7, 8, 9, 11), no spikes observed in 2018 through 2021, spikes were observed in 2022 and 2023. |
| | | Beads 3 – 8 were offline after the connector at the datalogger housing was damaged on September 24, 2017. Repaired and reconnected on March 11, 2018 following datalogger recalibration |
| ND-VTS-130-KT | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| | | All beads were offline after the connector at the datalogger housing was damaged on September 24, 2017. Repaired and reconnected on March 4, 2018 following datalogger recalibration |
| ND-HTS-130-28.8 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| | | Bead 2 – Erratic readings and intermittent logging in Summer 2018, 2019 and 2020 |
| ND-HTS-130-31.0 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| ND-HTS-130-33.5 | Active | Fully operational, except for cable repair and recalibration between September 24, 2017 and March 3, 2018 |
| ND-VTS-175-KT | Active | Spliced during construction |
| | | Incorrectly connected to datalogger as ND-HTS-175-33.5 from August 9, 2012 to June 16, 2014, therefore Beads 9, 10 and 11 had no readings during this time. |
| ND-HTS-175-32.5 | Active | Disconnected for recalibration between January 1 to March 3, 2018 |
| | | Spliced during construction |
| ND-HTS-175-33.5 | Active | Incorrectly connected to datalogger as ND-HTS-175-KT, from August 9, 2012 to June 16, 2014 |
| | | Disconnected for recalibration between January 1 to March 3, 2018 |

Table 4-5: Summary of Core and Key Trench Ground Temperature Cable Observations

| Zone | Horizontal GTCs (Core) | Vertical GTCs (KT) | Observation |
|--------------------|--|--------------------|---|
| Design Temperature | -2°C | -8°C | The minimum criteria required to ensure Dam is performing in accordance with design specifications (normal operating conditions) |
| Station 0+040 | Meets | Meets | Temperatures are below the design specification with substantive safety buffer. Slight warming trend observed but appears to be counteracted by the active cooling of the thermosyphons. An active thermosyphon cooling system was implemented in July 2024 (Section 4.2.3), resulting in improved thermal performance in this zone of the dam. All temperatures are below the maximum temperature criteria. |
| Station 0+060 | Meets | Meets | Temperatures are below the design specification with substantive safety buffer within the central core (Critical Zone). Upstream most beads indicate a recent warming trend, observed beginning in 2023, related to rising water levels in the reclaim pond combined with a warmer winter 2024. All temperatures in the core remain below -2°C. An active thermosyphon cooling system was implemented in July 2024 (Section 4.2.3), resulting in improved thermal performance in this zone of the dam. These GTCs are being closely monitored by AEM and SRK. |
| Station 0+085 | Meets (Upstream-most bead exceeded -2°C) | Meets | Temperatures are below the design specification with substantive safety buffer within the central core (Critical Zone). Upstream most beads within the core indicate rising temperatures beginning in 2019 and becoming more notable in 2022 to 2024. The upstream most beads within the core (ND-HTS-085-25.3 and ND-HTS-085-29.4) exceeded -2°C between August 2023 and May 2024, and peaked at -1.71 °C (December 2023) and has since cooled to below -2 °C. The warming trend is related to rising water levels in the reclaim pond combined with a warmer Q3 2023 and Q1 2024. All other temperatures in the core remain below -2°C. An active thermosyphon cooling system was implemented in July 2024 (Section 4.2.3), resulting in improved thermal performance in this zone of the dam . These GTCs are being closely monitored by AEM and SRK. |
| Station 0+130 | Meets | Meets | Temperatures are below the design specification with substantive safety buffer within the central core (Critical Zone). Upstream most beads indicate a recent warming trend, observed beginning in 2023, related to rising water levels in the reclaim pond combined with a warmer winter 2024. All temperatures in the core remain below -2°C. An active thermosyphon cooling system was implemented in July 2024 (Section 4.2.3), resulting in improved thermal performance in this zone of the dam. These GTCs are being closely monitored by AEM and SRK. |

| Zone | Horizontal GTCs (Core) | Vertical GTCs (KT) | Observation |
|---------------|------------------------|--------------------|---|
| Station 0+175 | Meets | Meets | Generally performing as expected with substantive safety buffer and stable trend in the core, and slight cooling trend in the foundation An active thermosyphon cooling system was implemented in July 2024 (Section 4.2.3), resulting in improved thermal performance in this zone of the dam |

Since the accelerated warming trend was observed in September 2023 (Table 4-5), AEM has changed the TARP level to Yellow (level 1) and subsequently to Orange (level 2) in April 2024. The TARP level change has resulted in increased frequency of GTC monitoring to every two weeks, data review, meetings with the internal review board members and thermal modelling have been ongoing since the observations. Following the TARP change to Orange, additional mitigation measures including reducing the water level on the upstream side (to reduce thermal loading) and implementation of an active cooling system on the passive thermosyphons (July 2024). Additional engineering mitigations are being considered to maintain performance of the North Dam.

The data collected to the end of December 2024 (not shown in Appendices) indicate core temperatures have continued to decrease as the thermosyphons become operational and the surface boundary cools with the air temperature. The GTCs will continue to be closely monitored in support of the additional review meetings and thermal modelling which are ongoing.

Recommendations:

- Continue to closely monitor warming conditions along upstream side of the North Dam and continue to monitor the results, adhere to the TARPs, plan/implement additional review meetings, analysis and implement responses/mitigations accordingly.
- Continue downloading data every two weeks until observed warming conditions subside.
- Consider implementing dataloggers for all new GTCs, and continue manual spot readings until dataloggers are installed.
- Cover the dam face GTCs with non-woven geotextile and a thin layer of rock for protection and to improve the quality of the temperature readings.

4.2.3 Thermosyphons

Thermosyphon temperature monitoring for the North Dam has been automated. Single bead thermistors connected to the datalogger system are attached to each thermosyphon evaporator pipe below the ground surface, and insulation has been placed around the thermistor beads to ensure the evaporator pipe temperature, and not the ambient air temperature, is measured (SRK 2012b). Additionally, air temperatures are recorded at the dataloggers every six hours. This data are downloaded as part of the monthly ground temperature cable datalogger downloads.

To monitor the performance of the thermosyphons, thermosyphon evaporator pipe contact temperatures and air temperatures are plotted against time.

During the winter months, when the thermosyphons are operating passively, the thermosyphon pipe temperatures are typically 5°C warmer than the air temperature. If the thermosyphon pipe temperature during the winter months is approximately the same as the air temperature, it indicates that the thermosyphon is not working correctly. Thermistor data indicates all the south and north thermosyphons are functioning except for North 2 (Appendix B).

As documented in past AGI's (SRK 2023) Since 2012, the measured pipe temperature of North 2 was only slightly higher than the measured air temperature, which indicates a malfunction. Ground temperature readings near the North 2 thermosyphon pipe support the conclusion that the North 2 thermosyphon is not working correctly. Efforts to investigate and remediate the non-functional thermosyphon through practical measures have been exhausted, including a detailed inspection during installation of the active cooling system. Thermal modelling of the frozen core has considered loss of the North 2 thermosyphon. Any additional measures will be taken as necessary based on the observed performance of the overall dam.

The hybrid thermosyphon active refrigeration has effectively reduced the peak temperatures in 2024 and are expected to continue to remove heat from the foundation in subsequent years. The south bank of thermosyphons are operational since July 11, 2024. The north bank active cooling system was operational from July 11 to September 20, 2024 however stopped operating due to issues with the refrigeration unit. Passive cooling resumed in November 2024.

Arctic Foundations is planned to be on site in 2025 to troubleshoot the south refrigeration unit in 2025, in order to resume active cooling once the passive cooling stops at the end of winter 2025.

Recommendations:

- Troubleshoot and repair the active refrigeration system prior to the end of the passive thermosyphon cooling period (Typically ending in April).
- Update the OMS to include considerations for the operations, maintenance and monitoring of the hybrid thermosyphon cooling system.
- After at least one full season of operation, review the performance of the active cooling system and assess the effectiveness of the system.

4.2.4 GTC Datalogger Battery Voltage

Each CR1000 datalogger is powered by an external lead acid battery. Battery voltage is an important indicator of datalogger performance. If the battery voltage drops below 12 V, it is operating outside of the optimal range. At or below 9.6 V, voltage is outside of the operating range and the recorded readings could be incorrect, or the datalogger will shut down and readings would not be recorded.

The dataloggers record the minimum battery voltage four times daily. A graph of battery voltage versus time is provided in Appendix C.

Recommendations:

- Recharge the CR-1000 Batteries as the voltage of CR-1000#2 Battery is below 12.0V

4.2.5 Inclinometers

Six inclinometers were installed within the downstream face of the North Dam at the time of construction (2012). These inclinometers are used along with the survey monitoring points to monitor deformation within the dam and dam foundation. Inclinometer readings are taken by Agnico Eagle site personnel.

Inclinometer measurements are provided in Appendix D, and the data quality for the surveys has been good.

The inclinometer profiles show only negligible displacements in the dam foundation, and small displacements over the portion of the inclinometer above the natural ground surface as summarized in Table 4-6. Inclinometer ND-IN-120-3 is the only inclinometer that suggests a trend of downslope movement, with a maximum total magnitude is 5.3 cm since installation in 2012. All other inclinometers are showing minimal movement, or the movement is oscillating seasonally which likely indicates there is some movement of the inclinometer casing itself, as opposed to actual deformation of the dam or foundation.

Table 4-6: Summary of Inclinometer Measurement Observations (Sep. 2012 through September 2024)

| Inclinometer | Maximum Overall Deformation | | Maximum Foundation Deformation (m) | | | Observations |
|--------------|-----------------------------|---------------------------|------------------------------------|-------------------------|---------------------------|---|
| | Magnitude (m) | Depth Below Dam Shell (m) | Magnitude (m) | Depth To Foundation (m) | Depth Below Dam Shell (m) | |
| ND-IN-070-1 | 0.028 | 1.0 | Less than 0.005 | 9.5 | 9.5 – 15.0 | Minor deformation trend since 2015 |
| ND-IN-070-2 | 0.036 | 1.5 | 0.016 | 9.0 | 9.0 | Seasonal oscillation. |
| ND-IN-070-3 | 0.017 | 1.5 | Less than 0.005 | 7.5 | 7.5 – 13.0 | Minor deformation trend since 2015 |
| ND-IN-120-1 | 0.012 | 0 | Less than 0.005 | 7.0 | 7.0 – 12.0 | Minor deformation trend upstream, constant since May 2016 |
| ND-IN-120-2 | 0.022 | 0 | Less than 0.005 | 6.0 | 6.0 – 11.0 | Displacement trend constant since November 2017. |
| ND-IN-120-3 | 0.053 | 0 | Less than 0.005 | 3.7 | 3.7 – 4.5 | General trend of movement in dam shell, towards the northwest. The rate has increased slightly since 2021 (7mm/yr). |

The inclinometer was sent to Durham-Geo Slope Indicator (DGSI) for service and recalibration in 2023. The next service and recalibration should be planned for 2026.

During the inspection in 2023, it was noted that the inclinometer grooves were not exactly oriented in perpendicular-to-crest and parallel-to-crest orientations. During the 2024 inspection, the inclinometer casing orientations were measured relative to the dam crest, going forward inclinometer casing orientations should be recorded once per year to determine if the casings are rotating.

Recommendations:

- Record the inclinometer casing groove directions annually for at least three years to verify if there is any ongoing rotation. Take groove direction readings relative to the line of inclinometer casings (perpendicular to crest).
- Consider installation of automated inclinometer readings, via in place inclinometer (IPI) or shape accel array (SAA) to improve precision, continuity and reduce gaps associated with long inclinometer probe repair periods.

4.2.6 Survey Monitoring Points

The OMS (AEM 2024) outlines that survey data should be collected monthly between May and November. Survey monitoring of the North Dam occurred four times during the monitoring year, two less than recommended, due to issues with the GPS survey equipment.

Since construction, deep settlement and crest displacement have been small and of similar magnitude. Displacement, of these monitoring points, has essentially been unchanged since September 2013, confirming that much of the measured displacement to date is all directly related to the period immediately following construction. Complete survey data is presented in Appendix E.

Since 2013, the magnitude of displacement in the downstream dam shell has been minimal overall. There has been a persistent trend of horizontal displacement at ND-SSP-155-2 and ND-SSP-110-3, both situated near the downstream toe, starting from June 2016 and continuing into 2024. The vertical displacement at these points has been limited. This increased horizontal movement is likely due to the gradual thawing of the active layer beneath the shallow rockfill at the toe of the dam and the lateral displacement or rotation of the monitoring point boulder where the survey pin is installed. ND-DSP-070 has indicated a vertical displacement in the last survey of 2024 and will continue to be monitored for a credible displacement trend. The survey data do not indicate any immediate concerns and visual inspection of the dam shell do not identify any notable signs of displacement.

Monitoring of the upstream survey monuments began on June 11, 2023. The data indicate an increasing trend in displacement for ND-SSP-125-US-2, reaching a maximum total displacement of approximately 0.3 meters in August 2024. This is likely influenced by deformations associated with historically high-water level.

No data has been received since October 14, 2023 for SSP-065-US-2, SSP-085-US-1, SSP-100-US-1 and SSP-160-US-1. These points were damaged due to snow clearing during installation of the upstream GTCs and should be re-established.

Recommendations:

- Integrate new upstream surficial survey points into the North Dam monitoring SOP and OMS.
- Re-establish the surficial survey points that were damaged due to snow removal and install flags to prevent future damage when heavy equipment is working nearby.

4.2.7 Visual Inspection

Visual inspections of the North Dam are required weekly when the TIA water level is below the full supply level. All weekly visual inspection reports, including photos, are maintained by AEM on an internal system and are not provided in the AGI. The visual inspections report and track changes to the dam surface, visible damage to instrumentation, signs of erosion or seepage, or any other surface anomalies.

Recommendations:

- No recommendations

4.2.8 Monitoring of Water at the Toe of the North Dam

The monitoring of the flowing water at the North Dam toe is described in the Monitoring SOP and OMS Manual (AEM 2024). The intent of this monitoring is to verify that there is no chemical signature of the Reclaim Pond in the water emanating from the toe of the dam (hypothesized to be percolation of precipitation and snowmelt from the ROQ dam shell voids). The program includes routine water quality sampling. SRK's review of the 2024 water quality is ongoing and reported separately.

Recommendations:

- No change to recommendations
- The v-notch weir at the toe of the dam does not provide accurate flow measurements. Consider decommissioning if disturbance to the toe of the dam can be minimized, or it may be left in place provided no signs of thermal degradation at the toe are observed.
- If a change in typical water flow rates is observed (subjective) this should be noted on the visual inspection form.

4.3 South Dam Inspection and Monitoring

4.3.1 Overall (Visual) Inspection of the South Dam During the AGI

As part of the AGI, a visual inspection of the South Dam was completed. Overall, the dam is performing as expected and there were no significant issues noted. Observations and recommendations related to monitoring instrumentation are provided in the following sections.

The construction of the South Dam toe berm has addressed the cracking due to relaxation of the downstream slope of the dam, within the section of the dam retaining the Phase 1 tailings beach. Tension cracks of different length and aperture are visible at the toe berm, with limited change from 2023. No new tension cracks were observed on the downstream slope of the dam, indicating the downstream berm is functioning as intended. Tension cracking is still visible along the abutments constructed to support the Phase 2 dam raise. Cracking in the Phase 2 abutment areas does not impact the performance of the Phase 1 tailings retaining portion of the dam; however, it does pose a potential maintenance issue and could require future mitigation if the cracking were to propagate more than currently observed. The most prominent tension crack is located on the southeastern side of the downstream rock shell (abutment) along the steeper slope and is attributed to active layer thaw settlement.

Ponded water has been observed at the downstream toe of the dam since construction and was observed to contain frost wedge polygons and standing water prior to construction. In past years the pond size was observed to be larger, however in 2024 the pond appears to have decreased in size and is not a cause for concern.

Both the downstream ponding and cracking are within the ultimate Phase 2 footprint and will be covered by the South Dam raise, so any additional proactive mitigation should be considered with this in mind.

Additionally, some minor ponded areas are noted on the tailings beach near the upstream shell, which appears to be precipitation runoff ponded in minor localized depressions.

There has been a notable increase in tailings dust on the dam shell since 2023. Site observations suggest that conditions have improved compared to earlier in the year, with the most dust being visible following freshet. Along the downstream toe, small amounts of tailings were visible on vegetation (i.e. a dust coating). Past visual inspections (Section 4.3.4) have noted small amounts of tailings on the melting snow drifts early in the summer. It is hypothesized that this has been transported during periods of strong winds from the north. Visual, dust, water quality monitoring is ongoing. Flooding of the Saline Pond (retained by the Interim Dike) may have a positive impact on reducing dust generation however this should be considered with the integrity of the structure in mind. Dust mitigation on the southern extents of the beach should be considered if the remaining upland beach is expected to remain dry for multiple years. At the time of inspection, the wind transported tailings visible on the ground was only observed on or immediately downstream South Dam toe (within five meters). AEM should continue their tailing dust related monitoring program and consider adding dust fall monitoring or similar.

On the tailings beach, tailings borrow areas were created during the construction of the Interim Dike. This borrow area is now partially flooded by the Saline Pond, and the Saline Pond is closer to the South Dam than previously observed due to this excavation. However, the Saline Pond, is still outside the recommended 100-meter buffer from the South Dam. Additional tailings excavation or farming should be avoided within 100-meters of the South Dam to maintain the required beach lengths.

Photolog 4 to 6 provide a general overview of the South Dam conditions at the time of the AGI.

Recommendations:

- The Phase 2 abutment tension cracks (outside of the lateral Phase 1 tailings extent) should continue to be monitored and plans to mitigate this if the cracking progresses to the point where progressive thaw slumps could be expected.
- Continue the tailing dust related monitoring program and consider adding dust fall monitoring as appropriate.
- Dust mitigation on the southern extents of the beach should be considered until deposition is planned to be resumed.
- Avoid tailings excavation or farming within 100 m of South Dam to maintain beach lengths.

4.3.2 Ground Temperature Cables and Dataloggers

To monitor long-term thermal performance of the frozen foundation dam, a total of twenty-seven GTCs were installed during South Dam construction (SRK 2018c) and four new cables were installed in November 2023. Three of the new cable were installed to replace cables damaged during construction, and one was installed in the tailings beach upstream of the dam. The original GTCs are connected to Beaded Stream Dataloggers (D505) to allow continuous data capture, and spot readings have been collected to-date for the new GTC. Table 4-7 provides a summary of the GTC status during the monitoring year.

Table 4-7: South Dam Ground Temperature Cable Status Summary

| GTC ID | Station ID | Status | # of Sensors (Functional / As-built) | Cable Serial Number | Comment |
|---------------|------------|-----------------|--------------------------------------|---------------------|--|
| SD-VTS-065-KT | 0+65 | Active | 11 / 11 | 3259 | ■ Offline for short periods in previous years (Appendix A) |
| SD-HTS-065-US | 0+65 | Inactive (2024) | 5 / 5 | 3263 | ■ Offline for short periods in previous years (Appendix A) ■ Currently offline – last data available on July 19, 2024 |
| SD-HTS-155-US | 1+55 | Inactive (2024) | 5 / 5 | 3266 | ■ Currently offline – Last data available on July 19, 2024 |
| SD-HTS-155-KT | 1+55 | Inactive | 0 / 11 | - | ■ Damaged during construction (irreparable) |
| SD-VTS-155-KT | 1+55 | Active | 11 / 11 | 3251 | ■ Offline for short periods in previous years (Appendix A) |
| SD-VTS-155-US | 1+55 | Inactive | 0 / 11 | 3272 | ■ Single sensor functioning until November 9, 2019 |

| GTC ID | Station ID | Status | # of Sensors (Functional / As-built) | Cable Serial Number | Comment |
|----------------|------------|---------------------|--------------------------------------|---------------------|--|
| | | | | | <ul style="list-style-type: none"> No data since November 2019 (irreparable damage) |
| SD-VTS-155-DS | 1+55 | Inactive (2024) | 11 / 11 | 3264 | <ul style="list-style-type: none"> Currently offline – Last data available on July 19, 2024 |
| SD-HTS-240-KT | 2+40 | Active | 11 / 11 | 3254 | <ul style="list-style-type: none"> Offline for short periods in previous years (Appendix A) Data gaps between January 23, 2024 and March 18, 2024 due to datalogger troubleshooting. |
| SD-HTS-240-US | 2+40 | Inactive (2024) | 7 / 7 | 3269 | <ul style="list-style-type: none"> Offline for short periods in previous years (Appendix A) Currently offline – Last data available on Aug 3, 2024. Suspected datalogger issue (unresolved). |
| SD-VTS-240-KT | 2+40 | Inactive (2024) | 11 / 11 | 3255 | <ul style="list-style-type: none"> Offline for short periods in previous years (Appendix A) Currently offline – Last data available November 12, 2023, Suspected cable may have been disconnected or damaged during installation of new upstream cables. |
| SD-VTS-240-US | 2+40 | Inactive (Replaced) | 0 / 11 | 3268 | <ul style="list-style-type: none"> Measurements ended on October 10, 2019 Replacement cable (SD-VTS-240-US1) installed November 2023 |
| SD-VTS-240-US1 | 2+40 | Active | 11/11 | 4454 | <ul style="list-style-type: none"> Installed November 2023, periodic spot readings through 2024 (See Appendix A) |
| SD-VTS-240-DS | 2+40 | Inactive (Replaced) | 0 / 11 | 3265 | <ul style="list-style-type: none"> Measurements ended on October 22, 2019 (irreparable damage) Replacement cable (SD-VTS-240-DS1) installed November 2023 |
| SD-VTS-240-DS1 | 2+40 | Active | 11/11 | 4453 | <ul style="list-style-type: none"> Installed November 2023, periodic spot readings through 2024 (See Appendix A) |
| SD-HTS-365-KT | 3+65 | Active | 11 / 11 | 3257 | <ul style="list-style-type: none"> Offline for short periods in previous years (Appendix A) No data between December 2, 2023 and March 18, 2024 due to datalogger troubleshooting |

| GTC ID | Station ID | Status | # of Sensors (Functional / As-built) | Cable Serial Number | Comment |
|---------------|------------|---------------------|--------------------------------------|---------------------|--|
| SD-HTS-365-US | 3+65 | Active | 11 / 11 | 3271 | ■ Continuously operational since construction |
| SD-VTS-365-KT | 3+65 | Inactive | 0 / 11 | - | ■ Damaged following construction (irreparable) |
| SD-VTS-365-US | 3+65 | Active | 10 / 11 | 3270 | <ul style="list-style-type: none"> ■ Bead 2 inactive ■ Offline for short periods in previous years (Appendix A) ■ No data collected from December 2, 2023 and March 18, 2024 due to datalogger troubleshooting |
| SD-VTS-365-DS | 3+65 | Inactive (Replaced) | 0 / 11 | 3275 | <ul style="list-style-type: none"> ■ Measurements ended on August 3, 2020 (Irreparable damage) ■ Replacement cable (SD-VTS-360-DS) installed November 2023 |
| SD-VTS-360-DS | 3+65 | Active | 11/11 | 4456 | ■ Installed November 2023, periodic spot readings through 2024 (See Appendix A) |
| SD-VTS-US1 | 3+65 | Active | 2 / 13 | 3197 | <ul style="list-style-type: none"> ■ Installed in suspected ground ice wedge near upstream toe ■ Only bead 1 and 2 active ■ Offline for short periods in previous years (Appendix A) ■ No data between December 2, 2023 and March 18, 2024 due to datalogger troubleshooting |
| SD-VTS-US2 | 3+65 | Active | 1 / 15 | 3189 | <ul style="list-style-type: none"> ■ Installed in suspected ground ice wedge near upstream toe ■ Only bead 1 active ■ Offline for short periods in previous years (Appendix A) ■ No data between December 2, 2023 and March 18, 2024 due to datalogger troubleshooting |
| SD-VTS-US3 | 3+65 | Inactive | 0/12 | 3194 | <ul style="list-style-type: none"> ■ Cable installed November 2023 ■ Readings manually collected between November 14, 2023 and January 8, 2024. Cable unable to be read after January 8, 2024. |

| GTC ID | Station ID | Status | # of Sensors (Functional / As-built) | Cable Serial Number | Comment |
|---------------|------------|-----------------|--------------------------------------|---------------------|--|
| SD-HTS-460-KT | 4+60 | Inactive (2024) | 11 / 11 | 3256 | <ul style="list-style-type: none"> ■ Offline for short periods in previous years (Appendix A) ■ Currently offline – Last data available on July 19, 2024 |
| SD-HTS-460-US | 4+60 | Inactive | 0 / 5 | - | <ul style="list-style-type: none"> ■ Damaged following construction (irreparable) |
| SD-VTS-460-KT | 4+60 | Active | 11 / 11 | 3252 | <ul style="list-style-type: none"> ■ Currently offline – Last data available on July 19, 2024 (no prior issues). Suspected datalogger transmission issue. |
| SD-VTS-460-US | 4+60 | Active | 11 / 11 | 3273 | <ul style="list-style-type: none"> ■ Damaged following construction (repaired) ■ Currently offline – Last data available on July 19, 2024. Suspected datalogger transmission issue. |
| SD-VTS-460-DS | 4+60 | Inactive (2024) | 11 / 11 | 3276 | <ul style="list-style-type: none"> ■ Currently offline – Last data available on July 19, 2024 (no prior issues). Suspected datalogger transmission issue. |
| SD-VTS-510-KT | 5+10 | Inactive (2024) | 11 / 11 | 3260 | <ul style="list-style-type: none"> ■ Offline for short periods in previous years (Appendix A) ■ Currently offline – Last data available on July 19, 2024. Suspected datalogger issue. |
| SD-HTS-510-US | 5+10 | Inactive (2024) | 5 / 5 | 3274 | <ul style="list-style-type: none"> ■ Damaged following construction (repaired) ■ Offline for short periods in previous years (Appendix A) ■ Currently offline – Last data available on July 19, 2024. Suspected datalogger issue. |
| SD-HTS-B1-KT | NA | Inactive (2024) | 20 / 20 | 3261 | <ul style="list-style-type: none"> ■ Currently offline – Last data available on July 19, 2024. Suspected datalogger issue. |

Notes:

¹ The cables identified as Inactive (2024) have been reviewed and appear to not be recording the ground temperature. Through ongoing troubleshooting it is suspected that there is an issues with communications between the datalogger and GTCs and in some cases may be related to the discharging datalogger batteries.

The thermal design freezing point depression criteria requires a ground temperature of less than -2°C at the upstream base of the key trench (Figure 9). The ground temperatures meet the thermal design criteria with few exceptions, and the dam is performing as expected, as outlined in Table 4-8. Based on the operational GTCs, the thermal design criteria along the base of and in the foundation of the key trench is being met in all locations where data is available.

Thermal monitoring data for the GTCs are shown in Appendix A.

Table 4-8: Summary of Key Trench foundation Ground Temperature Cable Observations

| Zone | Horizontal GTC | Vertical GTC | Observation |
|----------------------------------|----------------|--------------|---|
| Design Freezing Point Depression | -2°C | -2°C | The minimum criteria required to ensure Dam is performing in accordance with design specifications |
| Station 0+65 | No GTC | Meets | Performing as expected with substantive safety buffer in the base of the key trench. |
| Station 1+55 | Offline | Meets | Performing as expected with substantive safety buffer in the base of the key trench. |
| Station 2+40 | Meets | Offline | Performing as expected with a small buffer on the horizontal for beads 1 and 2 and substantive safety buffer in the base of the key trench. No data collected after November 12, 2023 for the vertical cable at the base of a key trench. |
| Station 3+65 | Meets | Offline | Performing as expected with small safety buffer on the horizontal key trench cable. SD-VTS-365-KT is irreparable. |
| Station 4+60 | Offline | Offline | SD-HTS-460-KT and SD-VTS-460-KT offline as of July 19, 2024 (See Appendix A). Prior to the cables going offline, performance was as expected. |
| Station 5+10 | No GTC | Offline | Performing as expected prior to cable SD-VTS-510-KT going offline July 19, 2024. |
| SD-HTS-B1-KT | Meets | N/A | Bead 2 (near station 2+40) exceed (are warmer than) the foundation freezing point depression seasonally, however no adverse performance is observed at Station 2+40 in the other GTCs |

Each datalogger contains a photovoltaic cell which is intended to recharge the battery automatically however battery monitoring data (Appendix C) indicates that DL01A and DL03A show initial signs of discharging battery issues and is approaching 6V, which may result in dataloggers no longer recording ground temperatures or transmitting data.

Recommendations:

- New GTCs installed in November 2023 which are currently collected as spot readings, should be connected to dataloggers. Data collected/transmitted should be integrated into the overall monitoring system.
- Continue to investigate and troubleshoot the cables which stopped transmitting November 2023 and July 2024, to ensure that cables continue to function and data is collected. A minimum of monthly spot readings should be collected until the dataloggers are re-established. If connection with the dataloggers cannot be re-established consider replacing the dataloggers.
- Recharge, replace or repair the dataloggers or battery where the battery is draining. A drained battery may lead to stopped data transmission or datalogger malfunction.

- Protect any exposed cables or cables with limited gravel cover that may be prone to damage from snow clearing and other activities. Placement of boulders or other barricades as needed.
- Inspect the South Dam after spring melt, especially looking for any exposed or damaged ground temperature cables. This will allow for preventative maintenance and placement of protective material to be done if exposed cables are observed, which will help to limit the potential for damage from wildlife.

4.3.3 Survey Monitoring Points

Survey monitoring at the South Dam includes 12 crest survey monitoring points (SMPs), 3 deep settlement points (DSPs), and 19 surficial survey monitoring points (SSPs). For the 2024 monitoring period, four surveys were conducted for the surficial survey monitoring points in May, June, August, and September. Only one survey was conducted for the deep settlement points in June, and three surveys were conducted for the crest survey monitoring points in May, June, and August. Complete survey data is presented in Appendix E.

The overall vertical and horizontal displacement since August 2019 is limited in all survey locations. Measured displacements have substantial variability, for example in June 2023, however this is attributed primarily to survey error and inconsistent survey data collection. The magnitude of the overall displacement trends remains small and are not of concern.

For 2024, the following observations have been made:

- **SSP:** There is variability in all displacement measurements (survey variability), but no overall trends are observed. SD-SSP-08 and SD-SSP-06 are showing a trend of vertical displacement approaching -0.1 m, however limited readings were collected in 2024.
- **DSP:** There is limited variability in the displacement readings and no credible trend observed, particularly as only one survey of the DSP locations was collected.
- **SMP:** Only three surveys were collected and no elevation data was provided in August. For SD-SMP-09, horizontal displacement has exceeded 0.1 m in the latest data and will continue to be monitored, however no signs of displacement were observed near this point and the displacement is not corroborated by other nearby survey points.

A detailed aerial image and LiDAR survey was collected in September 2024 and will be reviewed in early 2025.

Recommendation:

- Survey frequencies, completeness and accuracy of surveys require improvement.
- Review and document existing tension crack length using recent aerial LiDAR and imagery, and GPS ground survey for future tracking of progression.

4.3.4 Visual Inspection

Visual inspections of the South Dam are required weekly when the TIA water level is below the full supply level. All weekly visual inspection reports, including photos, are maintained by AEM on an internal system and are not provided in the AGI. The visual inspection report and track changes to the dam surface, visible damage to instrumentation, signs of erosion or seepage, or any other surface anomalies.

Recommendation:

- No recommendations.

4.3.5 Monitoring of Water at the Toe of the South Dam

The South Dam seepage and ponded water monitoring program is described in the OMS (AEM, 2024). The program includes routine water quality sampling and flow measurements if flowing water is observed. Since dam construction in 2019, there has been no flowing water observed at the downstream toe of the South Dam. The purpose of the ponded water monitoring program is to establish a geochemical baseline and monitor for potential seepage or changes in thermal regime of the ice-rich tundra in the area. SRK's annual review of the 2024 geochemical monitoring data is ongoing and will be reported separately.

Recommendations:

- No recommendations.

4.4 Interim Dike & Spillway

The Interim Dike was constructed in 2023 as a replacement to the Aquadam, as described in Section 2.3.5. The Interim Dike was inspected during the AGI for the second time by SRK since construction and the primary observations are as follows:

- The maximum operating water level for the Saline Pond must account for the lower crest elevation of the Interim Dike.
- Aquadam trench has been re-sloped to mitigate immediate hazards (unstable ground). However consider filling the trench to limit potential thawing impacts.
- Tension cracks were observed on the upstream (south) crest of the Interim Dike in 2023. These cracks are expected as the 2H:1V rockfill dike slope is constructed on thawing, unconsolidated and ice-rich tailings. During the 2024 inspection the tension cracks appear similar to 2023.
- Based on the September 2024 LiDAR survey, the crest elevation appears lower than in 2023. The key elevations above the GCL crest should be checked using GPS RTK survey and the critical elevations of the structure updated in the OMS manual.

Monitoring of the Interim Dike is currently limited to visual inspections, opportunistic topographic surveys and GTC spot readings. It is important that a comprehensive and consistent monitoring

program be implemented and documented in the OMS manual. The monitoring program should include ground temperature monitoring, visual inspections, survey displacement monitoring, and water level monitoring in the Saline Pond, while considering the overall water management strategy.

Overall, the Interim Dike performance is satisfactory and in line with expectations. Diligent monitoring and maintenance will be important to maintain and extend the structure's lifespan.

The Interim Dike WECC was constructed in 2023 and was inspected during 2024 AGI walkover. The following observations were made:

- The WECC is currently blocked by a rock fill access road. This access road is intended to have culverts installed however this was not completed during construction of the road and therefore requires active management of the Saline Pond water levels by pumping and may require breaching of the road fill in order to avoid overtopping of the Interim Dike during a flood event.
- The WECC has been constructed with zones of rock armor which are thinner than designed, including areas where the non-woven geotextile is protruding along the WECC alignment.
- The WECC side slopes exhibit signs of hydraulic erosion and differential settlement likely linked to ice wedges and lateral water flow into the WECC.
- Construction overburden piles near the WECC inlet have been cleaned up and have reduced the ponding in this area.
- The saline water pond is being maintained at a low level (32.65 cm at the time of the inspection), and the spillway is inactive.
- Overburden piles have been regraded this year, and major ponding has been drained.

Photolog 7 and 9 provide a general overview of the Interim Dike, Spillway, and WECC conditions at the time of the AGI.

Recommendations:

- A thorough inspection and detailed topographic survey of the Interim Dike should be carried out following freshet 2025.
- Implement the monitoring program for the Interim Dike (Table 4-3) including monitoring of displacement, foundation thermal conditions, water level in the Saline Pond (south side of the dike) and maintaining of the required beach at the South Dam.
 - The GTC data is currently collected as spot readings. Once dataloggers are in place, they should be downloaded monthly or transmitted automatically while the structure is operational, or until the thermal regime is well understood. Ideally, the dataloggers should be connected to the overall telemetry system and integrated into the monitoring platform.
 - An annual survey would ideally be captured as LiDAR or photogrammetry with orthomosaic imagery to provide a detailed and accurate topographic and visual record. Alternatively, a high-density ground survey using RTK GPS could be collected.

- The operating water level of the Saline Pond should be adjusted to 34.3 masl, to reflect the invert of the WECC and settlement of the southern side of the dike. Consider the impacts of reduced Saline Pond capacity in the water balance.
- Following annual (minimum) topographic survey of the dike, the operating water level should be reviewed and adjusted if settlement is observed.
- The Interim Dike and WECC was constructed on frozen unconsolidated tailings and are sensitive to foundation thaw. In order to maximize the lifespan, the trench left by the thawed Aquadam bladder should be backfilled in 2025 . This will thermally protect the north rock berm which supports the GCL containment layer.
- Settlement is expected if the foundation thaws. Due to the level of expected maintenance which may be required (typically following freshet), consider planning for these maintenance activities.
- Tension cracks observed should be visually monitored for indications of additional or progressive slumping and repaired if observed. Vehicle or equipment traffic should be directed to remain at least 3 meters back from the crest of the dike to avoid additional loading.
- If tailings are farmed from the tailings beach during the winter or spring, a grading or farming plan should be in place to avoid unintended impacts to the Interim Dike.

4.5 Tailings Deposit

The mine is currently in Care and Maintenance, as such no new tailings have been deposited within the TIA.

Tailings were borrowed from the tailings beach, to obtain the tailings required for the core of the Interim Dike. The borrowed tailings areas were at least 100 m from the toe of the South Dam. Maintaining a 100 m beach from the South Dam, such that the saline or reclaim pond is more than 100 m from the dam is an important operational consideration (AEM 2024).

Water quality monitoring at TL-13 (the Saline Water Storage sampling location) indicate a maximum chloride concentration of 12,300 mg/L Cl and salinity of 20 psu in April 2024 (potentially impacted by cryoconcentration) and 5,520 mg/L Cl and salinity of 9.3 psu in August 2024¹. Following freshet, the minimum chloride concentration was 757 mg/L Cl and salinity of 1.4 psu in May 2024. The elevated chloride concentrations are expected to have limited impact on the long-term tailings beach freezeback as the concentrations fluctuate annually and the ingress of saline water into the partially frozen tailings beach is expected to be limited. The Saline Water Storage is maintained at least 100 meters from the South Dam, which further mitigated the potential impact to the tailings beach. Impounded saline water at the Interim Dike may increase thaw settlement and performance over time.

¹ For reference, during operations the threshold for tailings porewater of 4,500 mg/L Cl equivalent to limit beach freezing point depression to 0.5°C.

Recommendations:

- No recommendations.

4.6 Emergency Dump Catch Basins (EDCB)

The Eastern Dump Catch Basin is in good condition as shown in Photolog 12 and 13. The Western Dump Catch Basin, however, has a wrinkled liner that does not appear to be adequately anchored, and therefore, may not perform as intended. Since the site is in Care and Maintenance this is not currently a concern. In general, East EDCB in good condition, only minor tension cracking noted on the crest of berm. West EDCB appears to be in similar condition as past years with settlement and tension cracking very visible along crest.

Recommendations:

- No changes to the past recommendations.
 - The Western Emergency Dump Catch Basin still requires repairs. These repairs should be completed prior to restarting operations and tailings deposition. Additional liner slippage since 2020 was noted at the top of the liner crest. Further liner slippage may result in a reduction of the capacity of this emergency catch basin.
 - A ground survey of the EDCB (including the top elevations of the exposed liner) should be completed prior to resuming operations to verify LiDAR survey elevations and check of the available containment capacity of this catch basin.
 - Consider mechanical alternatives [to catch basins], such as pigging the line, to push tailings to the TIA in the event of a breakdown.

4.7 TIA Shoreline

Degradation of the natural ground has been observed below the high-water level, approximately 33 masl. This is mainly occurring on the sandy banks along the eastern edge of the reclaim pond and generally more pronounced on the northern aspects, influenced by the longer fetch distance along the pond (north-south). There are no indications of retrogressive thaw at this time; only erosion from wave action has been noted, primarily along sandy shoreline deposits. This erosion has revealed a potential sand source within the TIA, with a significant spatial extent. Photolog 10 and 11 present a general overview of the TIA Shoreline inspection.

Recommendations:

- Visually inspect the shoreline from a helicopter and/or drone aerial photo to confirm no retrogressive thaw slumps have occurred.

4.8 Doris Creek Bridge

The Doris Creek Bridge provides the only access route to the TIA and is an important component of site infrastructure. Overall, no significant changes have been observed in the area. The bridge footings and abutments are in good condition and no signs of differential settlement or erosion are observed. However, the ground temperature cable connections are damaged and have not been read since November 2023. The cable connections must be repaired to maintain monitoring of the permafrost conditions underlying the bridge abutments. An overview of the Doris Bridge inspection can be found in Photolog 14 and 15.

Recommendations:

- Repair or replace the ground temperature cable connections to ensure continuity of monitoring of the abutments, as required by the Water License.

4.9 Pipelines (Reclaim, Tailings Deposition and TIA Discharge)

Pipelines are placed directly on the ground, which could be either rockfill pads, road shoulders or directly on the tundra. There are signs of vegetation dieback because of pipelines placed directly on the tundra near the TIA. This is becoming a preferred flow path for surface runoff which could ultimately lead to surface erosion and subsequent thermal erosion of permafrost. At the time of inspection, no thermal or hydraulic erosion was observed.

Recommendations:

- No changes to the past recommendations.
 - Agnico Eagle should carefully inspect all pipelines placed directly on the tundra for signs of vegetation dieback and associated flow path channeling. Where this is occurring, the pipeline must be relocated to follow existing all-weather road shoulders, and appropriate remediation needs to be put in place where damage has occurred.
 - The smaller diameter TIA pipelines going from the North Dam to Doris Creek, that were used during the care and maintenance period and before tailings were placed in the TIA around 2017, are no longer connected or functional. Agnico Eagle should consider removing these nonfunctional pipelines from the tundra.
 - Going forward, Agnico Eagle should consider abandoning the practice of placing pipelines directly onto the tundra. Additional pipelines (specifically any pipelines that are no longer in use) should be removed from the tundra where practical. Any pipeline removal should consider approaches to ensure that additional permafrost damage does not result from the removal activities.

4.10 TIA Reclaim System and Water Treatment Plant (710 Pumphouse)

There are no current geotechnical concerns with the new location of the reclaim pumphouse or the Water Treatment Plant pad (Figure 2).

In the reclaim jetty area, the pipelines are largely removed and most of the waste cleaned up. However, disturbances in the tundra, such as dozer tracks and overstripping below the Water Treatment Plant (WTP), pose a risk as they could become preferential flow paths or areas of ponding, potentially leading to further degradation.

To mitigate these issues, it is recommended to backfill the overstripped toe below the WTP slope with Run-of-Quarry (ROQ) material. Additionally, monitoring the dozer tracks for signs of increased thermal erosion should be completed, and ideally rock fill should be placed within the track marks to limit ponding.

Recommendations:

- Backfill the overstripped toe below the WTP slope with Run-of-Quarry (ROQ) material.
- Monitor the dozer tracks for signs of increased thermal erosion, and rock fill should be placed within the track marks to limit ponding.

4.11 TIA Operational Water Balance and Level Targets

The TIA operational water and load balance tool is used to predict water levels in the TIA and communicate water balance updates and projections monthly. The normal operation water level target for 2024 was less than 34.0 masl, however the maximum water level in 2024 was 32.12 masl in January, decreasing to 30.70 by the end of 2024.

The strong focus by AEM on water management in 2024 is acknowledged, it will be important to integrate the current water management strategy with the findings from the ongoing review of the North Dam thermal performance and any additional modelling which may inform changes to the water level TARP or OMS.

Recommendations:

- No changes to past recommendations:
 - Review the TIA operating water levels and the associated water level TARPS annually, in conjunction with the result of the ongoing North Dam thermal performance monitoring and analysis.

4.12 Climate Data

For reference, the updated climate data received from the Doris meteorological station is provided in Appendix G. The data presented summarizes the historical climate record and the 2024 climate record. The climate data is reviewed by Stantec and then distributed to Agnico, and SRK. SRK maintains a climate record in the Environmental Data Management System database.

5 Recommendations and Conclusions

Based on the results of the 2024 AGI, the Doris TIA and associated structures (primarily the North Dam and South Dam) are functioning as designed. The Interim Dike is performing well; however some additional maintenance monitoring is recommended. Table 5-1 presents a summary of the recommendations listed throughout this report.

Table 5-1: Table of Recommendations

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|-------------|---|---|---|-------------------|
| General TIA | Tailings Operating, Maintenance and Surveillance (OMS) Manual and Emergency Response Plan (ERP) | <ul style="list-style-type: none"> ■ Interim Dike and South Dam toe Berm constructed in 2023 and new instrumentation was installed. ■ Modifications to the monitoring systems are not fully captured with the 2024 OMS and SOP update | <ul style="list-style-type: none"> ■ COMPLETED: Update the OMS manual to include the Interim Dike as-built details and Interim Dike monitoring SOP, Saline Pond management and any changes to the water management strategy or operating criteria related to the Interim Dike. ■ Update the monitoring SOPs for the North and South Dam to reflect all current monitoring instrumentation and procedures. ■ Update the OMS manual to include any of the changes/revisions not captured in the current version of the OMS, including the South Dam toe berm, Emergency Overflow Channel implementation timing and any changes because of the dam hazard classification review. ■ OMS Manual, TARPs and Emergency Response Plan should be reviewed with the Agnico Eagle site staff annually, or after revisions; to ensure staff are appropriately informed and trained on the contents of these documents. | 2023-AGI-01 |
| | Independent Dam Safety Review and Risk Assessment | <ul style="list-style-type: none"> ■ DSR recommendations are being addressed where appropriate. ■ Independent review board meetings were held in July 2024. | <ul style="list-style-type: none"> ■ Continue to address recommendations from the DSR, where appropriate. ■ In line with recommendations from the DSR, the dam hazard classification should be reviewed and updated prior to resuming operations, and the review should consider the 2023 CDA | 2023-AGI-02 |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|-----------|---|---|---|-----------------------|
| | Compliance with Monitoring Frequency Requirements | <ul style="list-style-type: none"> ■ Some visual inspection, survey monitoring missed, however overall compliance is acceptable. | <p>Technical Bulletin on Environmental Consequence Classification.</p> <ul style="list-style-type: none"> ■ Recommended monitoring frequencies have been met in most categories, however: <ul style="list-style-type: none"> – Three survey monitoring events we missed due to issues with the survey equipment (these have been addressed for 2025). – Some of the newly installed ground temperature cables on the North and South Dam are read infrequently and existing dataloggers have stopped transmitting. AEM have attempted repair and replacement. Some transmission issues remain. – AEM should aim to improve the frequency of monitoring in 2025. ■ Formalize and implement the monitoring program for the Interim Dike. ■ Update the OMS manual and monitoring SOPs to include any new or updated instrumentation | 2023-AGI-03 (updated) |
| North Dam | Overall (Visual) Inspection of the North Dam during AGI | <ul style="list-style-type: none"> ■ Disturbance above the west abutment toward the Emergency Overflow Channel (EOC) alignment due to drill tracks was observed in 2022 (Drilling for EOC). ■ Tundra die-back was observed along the eastern upstream toe of the dam, below the high-water mark. This area should be monitored closely over the next year for signs of thermal erosion and increased thaw settlement. | <ul style="list-style-type: none"> ■ Previous recommendations unchanged. <p>Additional recommendations include:</p> <ul style="list-style-type: none"> ■ Disturbance (track marking) on the tundra above the west abutment, due to drilling access during the EOC drilling investigation was previously noted (SRK, 2023b). This area was inspected and no signs of erosion or permafrost degradation were observed in 2024, however the areas should continue to be monitored periodically and mitigation measures implemented if changes are observed. ■ Tundra dieback observed along the upstream toe (below 33.05 masl, the maximum water Reclaim Pond level) should include monitoring | 2022-AGI-08 |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|------|----------------------------------|--|--|-------------------|
| | | | for erosion or increased permafrost thaw settlement in the future. | |
| | Ground Temperature Cables (GTCs) | <ul style="list-style-type: none"> An accelerated and credible warming trend in GTC beads on the upstream side of the core was observed in late 2023. This trend is Expected to be related to historically high-water levels. | <ul style="list-style-type: none"> Continue to closely monitor warming conditions along upstream side of the North Dam and continue to monitor the results, adhere to the TARPs, plan/implement additional review meetings, analysis and implement responses/mitigations accordingly. Continue downloading data every two weeks until observed warming conditions subside. | 2023-AGI-04 |
| | | <ul style="list-style-type: none"> New GTCs installed on the upstream face which are not connected to dataloggers should be monitored regularly (minimum of monthly) Thermal readings from a ground temperature cable within an uncovered PVC pipe will not be representative of the boundary condition of the upstream dam face, above the water level. | <ul style="list-style-type: none"> Consider implementing dataloggers for all new GTCs, and continue manual spot readings until dataloggers are installed. Cover the dam face GTCs with non-woven geotextile and a thin layer of rock for protection and to improve the quality of the temperature readings. | 2024-AGI-23 |
| | GTC Datalogger Battery | <ul style="list-style-type: none"> GTC datalogger batteries have not been charged since 2022, and CR-1000#2 is below the recommended voltage of 12.0V | <ul style="list-style-type: none"> Recharge the CR-1000 Batteries as the voltage of CR-1000#2 Battery is below 12.0V | 2024-AGI-24 |
| | Thermosyphons | <ul style="list-style-type: none"> The passive thermosyphon system was converted to a hybrid thermosyphon system in 2024 The active cooling unit on the south thermosyphons was not operational in the fall of 2024 and should be repaired prior to spring 2025. AEM is planning to have AFC come to site to troubleshoot. | <ul style="list-style-type: none"> Troubleshoot and repair the active refrigeration system prior to the end of the passive thermosyphon cooling period (Typically ending in April) Update the OMS to include considerations for the operations, maintenance and monitoring of the hybrid thermosyphon cooling system. After at least one full season of operation, review the performance of the active cooling | 2024-AGI-25 |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|-----------|--|--|--|-------------------|
| | | | system and assess the effectiveness of the system. | |
| | Inclinometers | <ul style="list-style-type: none"> Inclinometer grooves appear to be rotated slightly from the expected position of parallel and perpendicular to the crest. Baseline orientation measurements were collected during the 2024 AGI. | <ul style="list-style-type: none"> Updated recommendation: Record the inclinometer casing groove directions annually for at least three years to verify if there is any ongoing rotation. Take groove direction readings relative to the line of inclinometer casings (perpendicular to crest). | 2023-AGI-05 |
| | | <ul style="list-style-type: none"> Inclinometer probe yielding erroneous results and requiring lengthy repair/calibration period. | <ul style="list-style-type: none"> Consider installation of automated inclinometer readings, via in place inclinometer (IPI) or shape accel array (SAA) to improve precision, continuity and reduce gaps associated with long inclinometer probe repair periods. | Comment |
| | Survey Monitoring Points | <ul style="list-style-type: none"> New upstream monitoring points were installed in 2023 and are being monitored | <ul style="list-style-type: none"> Integrate new upstream surficial survey points into the North Dam monitoring SOP and OMS. | 2023-AGI-06 |
| | | <ul style="list-style-type: none"> Some survey points were damaged during snow clearing | <ul style="list-style-type: none"> Re-establish the surficial survey points that were damaged due to snow removal and install flags to prevent future damage when heavy equipment is working nearby. | 2024-AGI-26 |
| | Monitoring of Water at the Toe of the North Dam | <ul style="list-style-type: none"> V-notch weir remains in place but does not provide an accurate measurements due to flow depth and bypassing flow. | <ul style="list-style-type: none"> The v-notch weir at the toe of the dam does not provide accurate flow measurements. Consider decommissioning if disturbance to the toe of the dam can be minimized, or it may be left in place provided no signs of thermal degradation at the toe are observed. If a change in typical water flow rates is observed (subjective) this should be noted on the visual inspection form. | 2023-AGI-07 |
| South Dam | Annual (Visual) Inspection of the South Dam during AGI | <ul style="list-style-type: none"> The South Dam toe berm was constructed in May 2023. It covered the extents of the | <ul style="list-style-type: none"> The Phase 2 abutment tension cracks (outside of the lateral Phase 1 tailings extent) should continue to be monitored and plans to mitigate | 2023-AGI-08 |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|------|--|--|--|-----------------------|
| | | relaxation and tension cracks along the South Dam, across the Phase 1 tailings extent. Tension cracking on the downstream face of the Phase 2 abutments remain. | this if the cracking progresses to the point where progressive thaw slumps could be expected. | |
| | | <ul style="list-style-type: none"> ■ Past tailings borrow source for Interim Dike has lead to ponding on beach closer than previously observed, it is currently more than 100 m from the dam. | <ul style="list-style-type: none"> ■ Avoid tailings excavation or farming within 100 m of South Dam to maintain beach lengths | 2023-AGI-09 |
| | | <ul style="list-style-type: none"> ■ Tailings dust has been observed downstream of the tailings dam, outside of the South Dam catchment. | <ul style="list-style-type: none"> ■ Continue the tailing dust related monitoring program and consider adding dust fall monitoring as appropriate. ■ Dust mitigation on the southern extents of the beach should be considered until deposition is planned to be resumed. | 2024-AGI-## |
| | Ground Temperature Cables (GTCs) and Dataloggers | <ul style="list-style-type: none"> ■ Replacement of damaged vertical GTCs occurred in November 2023. Additionally, a GTC was installed upstream of the dam, in the tailings beach. | <ul style="list-style-type: none"> ■ New GTCs installed in November 2023 should be protected and connected to dataloggers. Data collected/transmitted should be integrated into the overall monitoring system. ■ Ensure the new and existing datalogger transmission subscriptions are maintained. | 2023-AGI-10 |
| | | <ul style="list-style-type: none"> ■ A number of cables stopped transmitting simultaneously on July 19, 2024. No obvious signs of damage were observed during the inspection and the problem is expected to be on the datalogger transmission side. AEM and Beadedstream should continue to troubleshoot the issue. | <ul style="list-style-type: none"> ■ Continue to investigate and troubleshoot the cables which stopped transmitting during since November 2023 and July 2024 to ensure that cables are maintained, and data is collected. A minimum of monthly spot readings should be collected if the dataloggers are not re-established. | 2024-AGI-27 |
| | | <ul style="list-style-type: none"> ■ Battery monitoring data (Appendix C) indicates that DL01A and DL03A show initial signs of | <ul style="list-style-type: none"> ■ Recharge, replace or repair the dataloggers or battery where the battery voltage is draining. A drained battery may lead to stopped data transmission or datalogger malfunction. | 2023-AGI-11 (updated) |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|--------------|-------------------|--|--|-----------------------|
| | | discharging battery issues and is approaching 6V. | | |
| | | <ul style="list-style-type: none"> GTC cable alignments currently protected by thin layer of crushed rock with limited protection from snow clearing equipment. | <ul style="list-style-type: none"> Protect any exposed cables or cables with limited gravel cover that may be prone to damage from snow clearing and other activities, by placement of boulders or other barricade. Inspect the South Dam after spring melt, especially looking for any exposed or damaged ground temperature cables. This will allow for preventative maintenance and placement of protective material to be done if exposed cables are observed, which will help to limit the potential for damage from wildlife. | 2023-AGI-12 |
| | Survey Monitoring | <ul style="list-style-type: none"> LiDAR and aerial imagery were collected in September 2024 which provide adequate documentation of the existing tension cracks. | <ul style="list-style-type: none"> Review and document existing tension crack lengths using recent aerial LiDAR and imagery, and GPS ground survey for future tracking of progression. | 2023-AGI-13 (updated) |
| | | <ul style="list-style-type: none"> Some monthly surveys were not completed and there were some data quality issues in the provided survey data. | <ul style="list-style-type: none"> Survey frequencies and completeness and quality of surveys require improvement. | 2024-AGI-28 |
| Interim Dike | Interim Dike | <ul style="list-style-type: none"> Tension cracks and slumping has been repaired along the Aquadam trench, however the trench has not been backfilled. Tension cracks were observed along the south crest of the Interim Dike. | <ul style="list-style-type: none"> The Interim Dike and WECC was constructed on frozen unconsolidated tailings and are sensitive to foundation thaw. In order to maximize the lifespan, the trench left by the thawed Aquadam bladder should be backfilled. This will thermally protect the north rock berm which supports the GCL containment layer. Settlement is expected if the foundation thaws. Due to the level of expected maintenance which may be required (typically following freshet), consider planning for these maintenance activities. Tension cracks observed should be visually monitored for indications of additional or | 2023-AGI-15 (updated) |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|------|-----------------|---|--|-----------------------|
| | | | <p>progressive slumping and repaired if observed. Vehicle or equipment traffic should be directed to remain at least 3 meters back from the crest of the dike to avoid additional loading.</p> | |
| | | <ul style="list-style-type: none"> ■ The Interim Dike construction was completed in 2023. ■ Additional GTC monitoring instrumentation was installed in November 2023. ■ A monitoring program has been established in the OMS manual (AEM 2024) | <ul style="list-style-type: none"> ■ A thorough inspection and detailed topographic survey of the Interim Dike should be carried out following freshet to observe how the structure performed, following a full year of operations. ■ Implement the monitoring program for the Interim Dike (Table 4 3) including monitoring of displacement, foundation thermal conditions, water level in the Saline Pond (south side of the dike) and maintaining of the required beach at the South Dam. <ul style="list-style-type: none"> – The GTC data is currently collected as spot readings. Once dataloggers are in place, they should be downloaded monthly or transmitted automatically while the structure is operational, or until the thermal regime is well understood. Ideally, the dataloggers should be connected to the overall telemetry system and integrated into the monitoring platform. – An annual survey would ideally be captured as LiDAR or photogrammetry with orthomosaic imagery to provide a detailed and accurate topographic and visual record. Alternatively, a high-density ground survey using RTK GPS could be collected. – The operating water level of the Saline Pond should be adjusted to 34.3 masl, to reflect the invert of the WECC and settlement of the southern side of the dike. Consider the impacts of reduced Saline Pond capacity in the water balance. – Following annual (minimum) topographic survey of the dike, the operating water level | 2023-AGI-16 (updated) |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|-----------------|---|--|---|-----------------------|
| | Interim Dike Water Elevation Control Channel (WECC) | <ul style="list-style-type: none"> ■ Previous excavated material piles have been regraded. ■ The Interim Dike crest height varies and is below the original design elevation. ■ The WECC is blocked by a newly installed access road. Culverts were designed but not installed. | <p style="text-align: center;">should be reviewed and adjusted if settlement is observed.</p> <ul style="list-style-type: none"> ■ The Interim Dike and WECC was constructed on frozen unconsolidated tailings and are sensitive to foundation thaw. In order to maximize the lifespan, the trench left by the thawed Aquadam bladder should be backfilled in 2025. This will thermally protect the north rock berm which supports the GCL containment layer. ■ Settlement is expected if the foundation thaws. Due to the level of expected maintenance which may be required (typically following freshet), consider planning for these maintenance activities. ■ Tension cracks observed should be visually monitored for indications of additional or progressive slumping and repaired if observed. Vehicle or equipment traffic should be directed to remain at least 3 meters back from the crest of the dike to avoid additional loading. ■ The spillway is obstructed by a road without culverts, necessitating the pond to be kept low enough to accommodate the freshet. It's important to check the elevation of the dike and assess storage capacity. ■ If tailings are farmed from the tailings areabeach of overburden piles during the winter or spring, a grading or farming plan should be in place to avoid unintended impacts to the Interim Dike. | 2023-AGI-17 (updated) |
| Other TIA Areas | Emergency Dump Catch Basins | <ul style="list-style-type: none"> ■ No modifications to the EDCB have been made. | <ul style="list-style-type: none"> ■ No changes to the past recommendations. | 2022-AGI-13 |
| | TIA Shoreline | <ul style="list-style-type: none"> ■ Degradation of the natural ground has been observed below the | <ul style="list-style-type: none"> ■ Visually inspect the shoreline from a helicopter and/or drone aerial photo to confirm no retrogressive thaw slumps have occurred. | 2024-AGI-29 |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|------|--|---|---|-----------------------|
| | | <p>high-water level, approximately 33 meters above sea level (masl).</p> | | |
| | Doris Creek Bridge | <ul style="list-style-type: none"> ■ The bridge abutment condition appears unchanged. ■ GTC SRK10-DCB1 and SRK 10-DCB2 read out connections were damaged after the November 2023 and July 2023 readings, respectively. ■ The gabion baskets which form part of the bridge abutment structure are deformed (and have been since construction), and therefore it is not possible to tell if additional deformations of the gabion wall have occurred. However this gabion wall only retains road fill. ■ Some tension cracks were noted along the edge of the turnout near the bridge. ■ No signs of deformation or settlement below the abutment are observed. ■ Ground temperature cable connections are still damaged. | <ul style="list-style-type: none"> ■ Repair or replace the ground temperature cable connections, or check the cable and connect it to a datalogger to ensure continuity of monitoring of the abutments, as required by the Water License | 2024-AGI-30 |
| | Pipelines (Reclaim, Tailings Deposition and TIA Discharge) | <ul style="list-style-type: none"> ■ Unused pipelines on tundra ■ Vegetation dieback under pipelines | <ul style="list-style-type: none"> ■ No changes to the past recommendations. | 2023-AGI-19 |
| | TIA Reclaim System and WTP (710 Pumphouse) | <ul style="list-style-type: none"> ■ The water treatment plant (WTP) has been constructed and commissioned and the 710 Pumphouse has been relocated to the new Reclaim Pond pumping location near the WTP. | <ul style="list-style-type: none"> ■ Backfill the over stripped toe below the WTP slope with Run-of-Quarry (ROQ) material. | 2023-AGI-20 (updated) |

| Area | Inspection Item | Observation | Recommendation | Recommendation ID |
|------|---|--|--|-------------------|
| | | <ul style="list-style-type: none"> ■ Substantial ruts in tundra (heavy equipment tracks) and areas of over-stripping with ponded and slowly flowing water was observed near the new WTP. | <ul style="list-style-type: none"> ■ Monitor the dozer tracks for signs of increased thermal erosion, and rock fill should be placed within the track marks to limit ponding. . | |
| | TIA Operational Water Balance and Level Targets | <ul style="list-style-type: none"> ■ The TIA operational water levels and TARPs have been revised. ■ Operation of the Water Treatment Plant was able to lower the water level to 30.7 by the end of 2024 ■ High water levels are thought to be a cause of the upstream core warming at the North Dam. | <ul style="list-style-type: none"> ■ No changes to the past recommendations | 2023-AGI-21 |

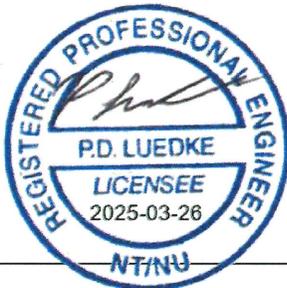
Closure

This report, 2024 Annual Geotechnical Inspection – Doris Tailings Impoundment Area, was prepared by

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Anton Novikov, EIT
Staff Consultant

and

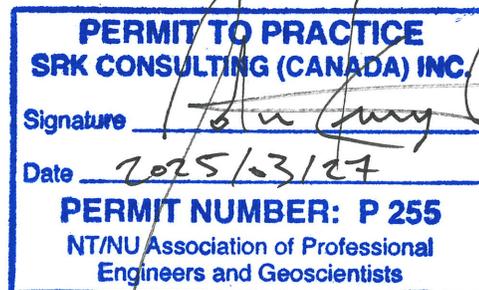


Peter Luedke, PEng
Senior Consultant

and reviewed by

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Megan Miller MEng, PEng
Principal Consultant



All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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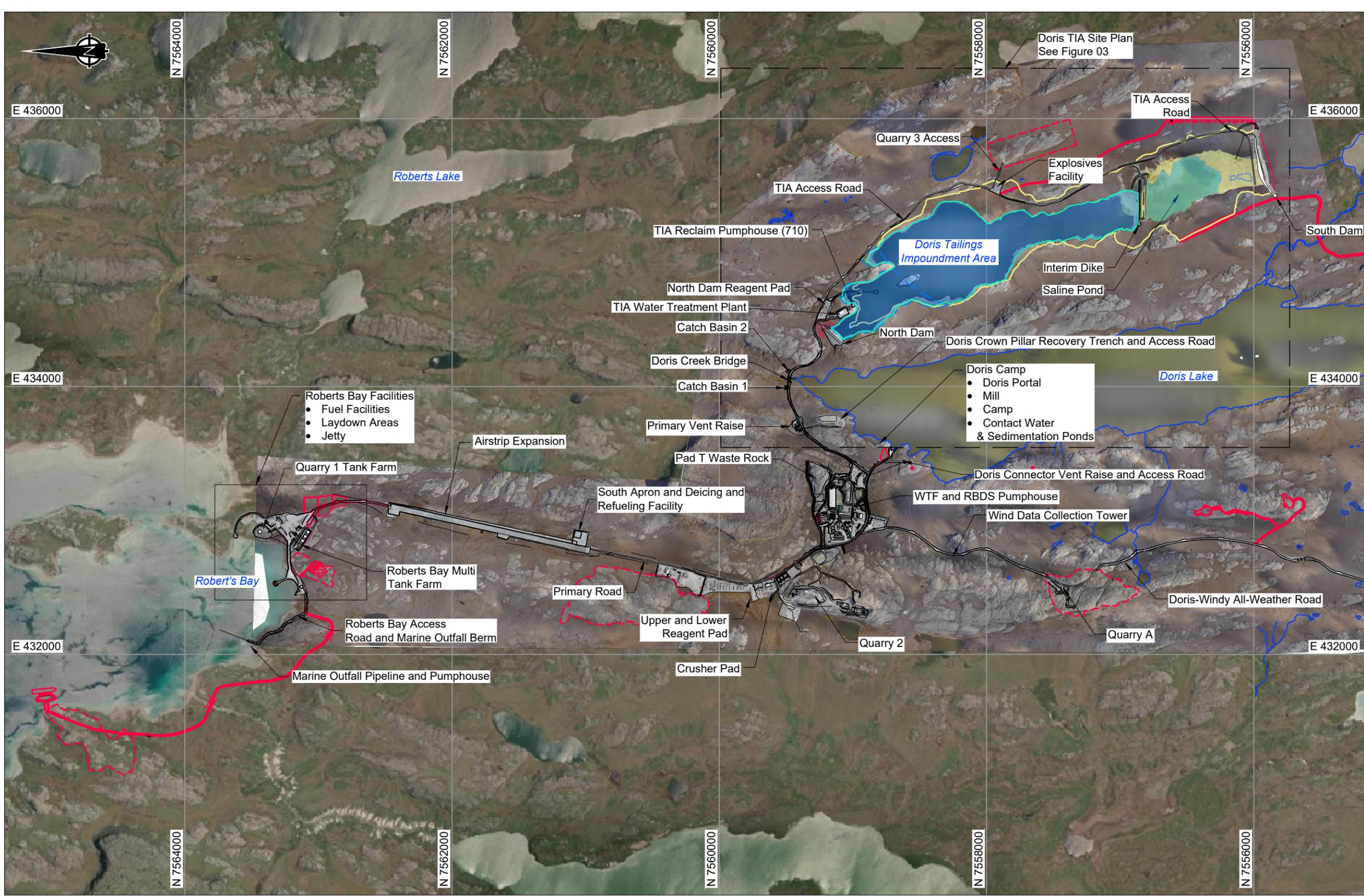
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Figures



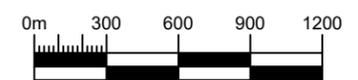
- LEGEND**
- As-Constructed Infrastructure
 - Proposed Infrastructure
 - ▭ Quarries
 - ▭ Reclaim Pond Extent
 - ▭ Saline Pond
 - ▭ Subaerial Tailings Beach (2021)
 - ▭ Ultimate Reclaim Pond Extent
 - ▭ Ultimate Tailings Extent

NOTES

- All units are in meters unless otherwise specified.

REFERENCES

NAD83 CSRS UTM Zone 13.
 ESRI World Imagery, retrieved December 20, 2024.
 Hope Bay 2024 Mosaic, provided by client.



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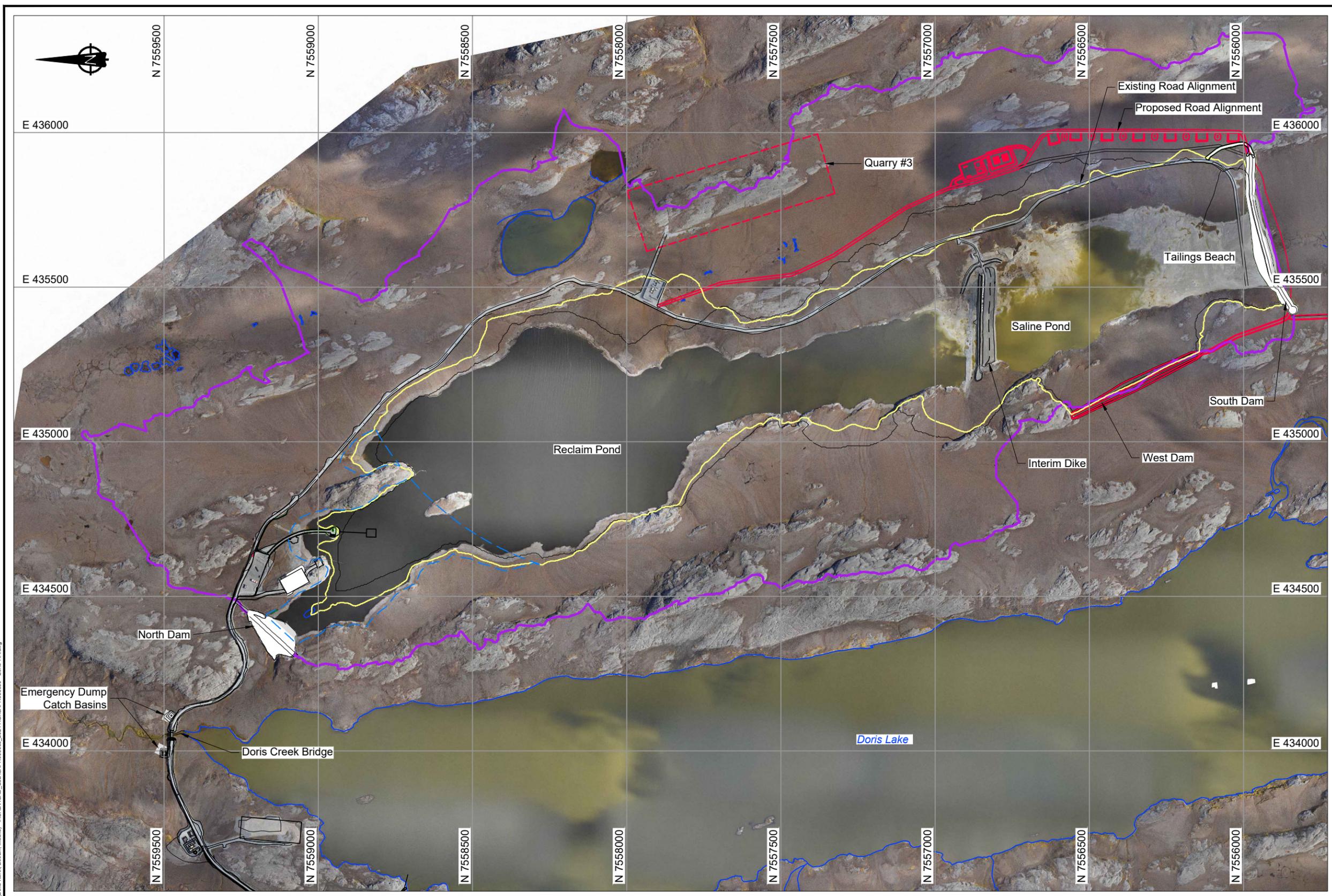
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AGNICO EAGLE

Hope Bay

| | | |
|-------------------------------------|------------------|--------------|
| 2024 Annual Geotechnical Inspection | | |
| Doris General Arrangement | | |
| DATE: February 2025 | APPROVED: PDL | FIGURE: 2 |



LEGEND

- Existing Infrastructure
- Permitted Infrastructure (Not Constructed)
- Quarry
- Ultimate Reclaim Pond Extent
- Ultimate Tailings Extent
- Watershed Boundary

NOTES

1. All units are in meters unless otherwise specified.

REFERENCES

NAD83 UTM Zone 13.
 NAD83 CSRS UTM Zone 13.
 Hope Bay 2024 Mosaic, provided by client.
 Tailings Beach survey collected by drone LiDAR in August 2021, data provided by client.



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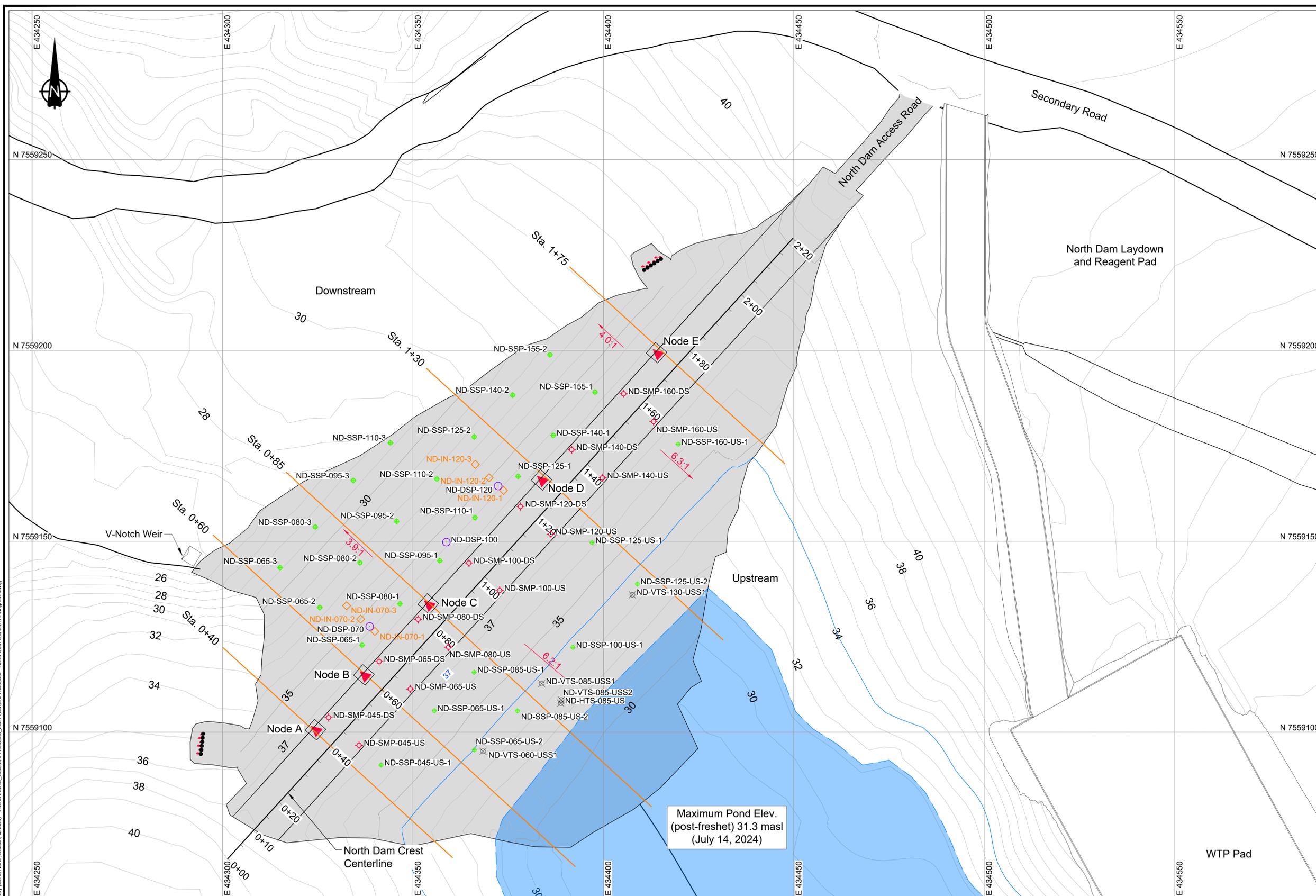
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Hope Bay

| | | |
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| 2024 Annual Geotechnical Inspection | | |
| Doris TIA Site Plan | | |
| DATE: February 2025 | APPROVED: PDL | FIGURE: 3 |



- LEGEND**
- ◇ Survey Monitoring Point (Crest)
 - Deep Settlement Point
 - ⊕ Surficial Survey Point
 - ◇ Incliner Location
 - ▲ Datalogger Node
 - Thermosyphon Radiator
 - ⊗ New Ground Temperature Cable (GTC)
 - Full Supply Level (Elev. 33.5 masl)
 - Normal Operating Water Level (Upper Bound 34.0 masl)

- NOTES**
1. Topographic contour data was provided by the Client. As-Built contour data for the terrain model was provided by the Contractor.
 2. Contours shown at 1.0 m intervals.

REFERENCES
NAD83 UTM Zone 13.



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AGNICO EAGLE

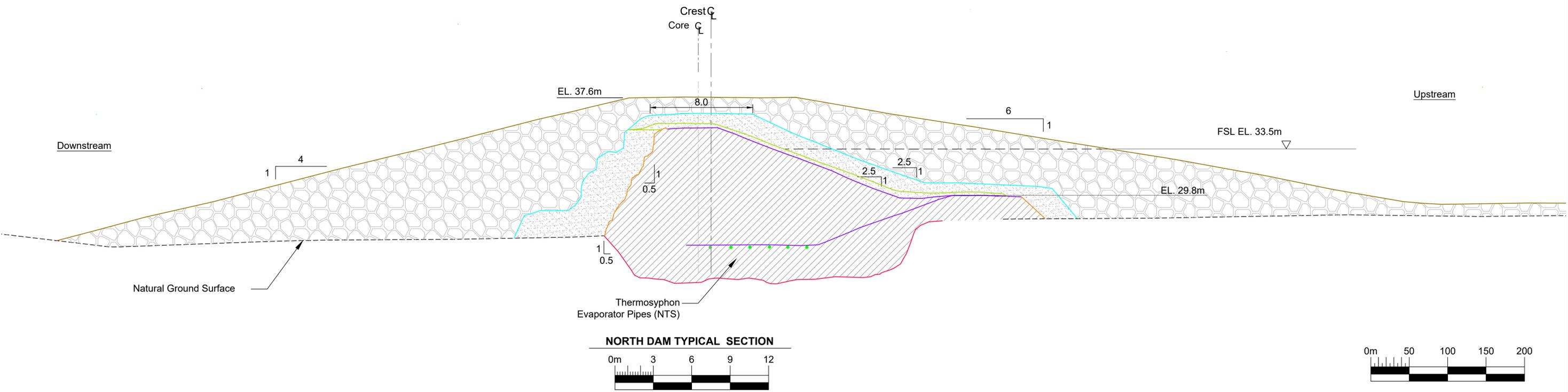
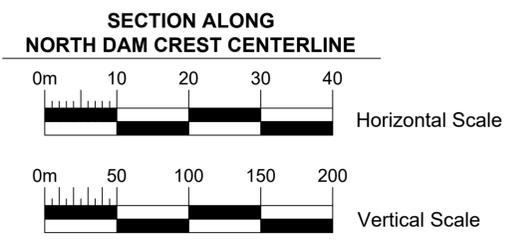
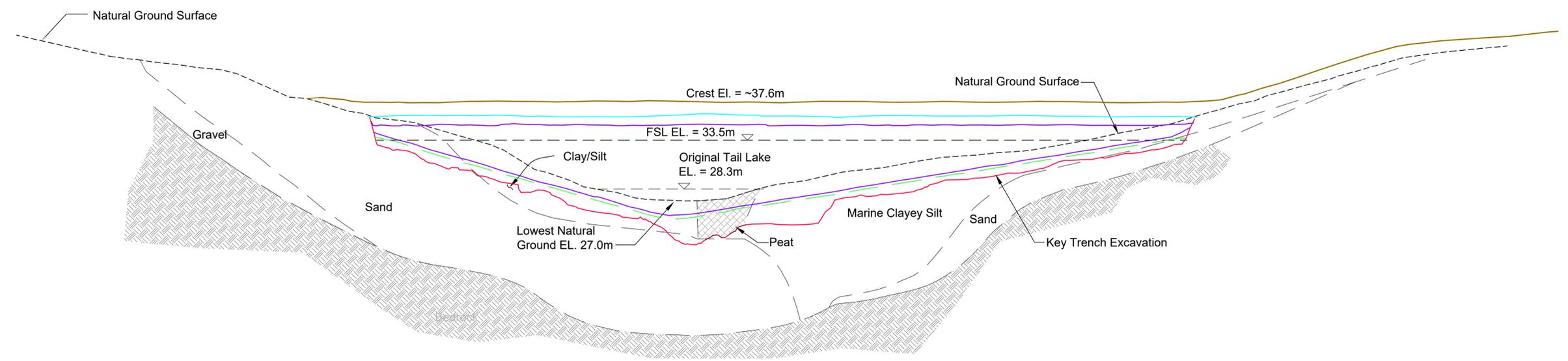
Hope Bay

2024 Annual Geotechnical Inspection

North Dam and Instrumentation Site Plan

| | | |
|------------------------|------------------|--------------|
| DATE: February 2025 | APPROVED: PDL | FIGURE: 4 |
|------------------------|------------------|--------------|

0+00 0+20 0+40 0+60 0+80 1+00 1+20 1+40 1+60 1+80 2+00 2+20



- LEGEND**
- Thermosyphon Evaporator Pipe (NTS)
 - - - Natural Ground
 - Stratigraphic Boundary
 - Geosynthetic Clay Liner (GCL)
 - Core Material
 - Key Trench
 - GCL Cover Material
 - Transition Material
 - ROQ Material
 - Thermosyphon Evaporator Pipes
 - Thermosyphon Evaporator Pipes
 - ▨ Core Material
 - ▨ Transition Material
 - ▨ Run of Quarry (ROQ)
 - ▨ Surfacing Material
 - ▨ Bedrock
 - ▨ Peat

NOTES

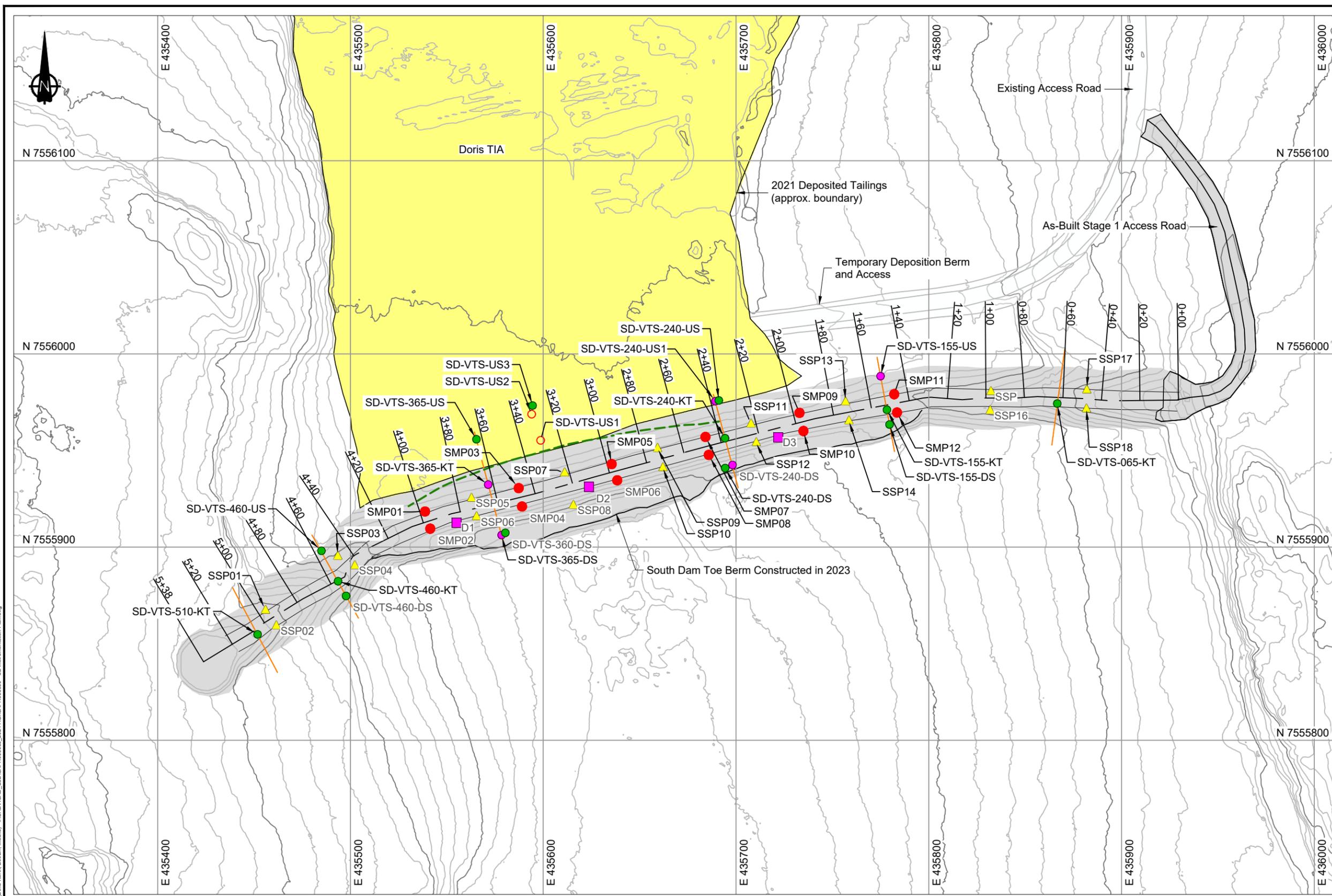
- The subsurface geology has been extrapolated from a series of geotechnical investigations consisting of drill holes, auger holes and shallow test pits. Bedrock contact and geological unit contacts are therefore likely to vary somewhat.

REFERENCES

NAD83 UTM Zone 13.

C:\Users\shaw\SRK Consulting\F5208 Hope Bay (Doris North, Boston, Madrid) - \ACAD\ACAD_C3D\CAPR003066 - North Dam Typical Sections.dwg

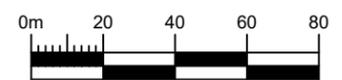
| | | | | |
|--------------|---|--|-----------|---------|
| | | 2024 Annual Geotechnical Inspection | | |
| | | North Dam Foundation Conditions and Typical As-Constructed Section | | |
| SRK JOB NO.: | Hope Bay | DATE: | APPROVED: | FIGURE: |
| FILE NAME: | CAPR003066 - North Dam Typical Sections.dwg | February 2025 | PDL | 5 |



- LEGEND**
- Survey Monitoring Point (Crest)
 - ▲ Surficial Survey Point
 - Deep Settlement Point
 - Datalogger Location
 - Vertical GTC Active
 - Vertical GTC Intactive
 - Vertical GTC Partial Function
 - Horizontal Key Trench Cable (SD-HTS-B1-KT)
 - 2021 South Dam and Beach

- NOTES**
1. Contours shown at 1.0 m interval.
 2. All units shown are in meters unless otherwise stated.
 3. Inactive vertical cables replaced November 2023, including: SD-VTS-365-DS, SD-VTS-240-DS, SD-VTS-240-US, SD-VTS-155-US

REFERENCES
 NAD83 UTM Zone 13.
 Contours developed from LiDAR survey provided by client, captured September 2024.



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Hope Bay

2024 Annual Geotechnical Inspection

South Dam and Instrumentation Site Plan

DATE: February 2025 APPROVED: PDL FIGURE: 7

LEGEND

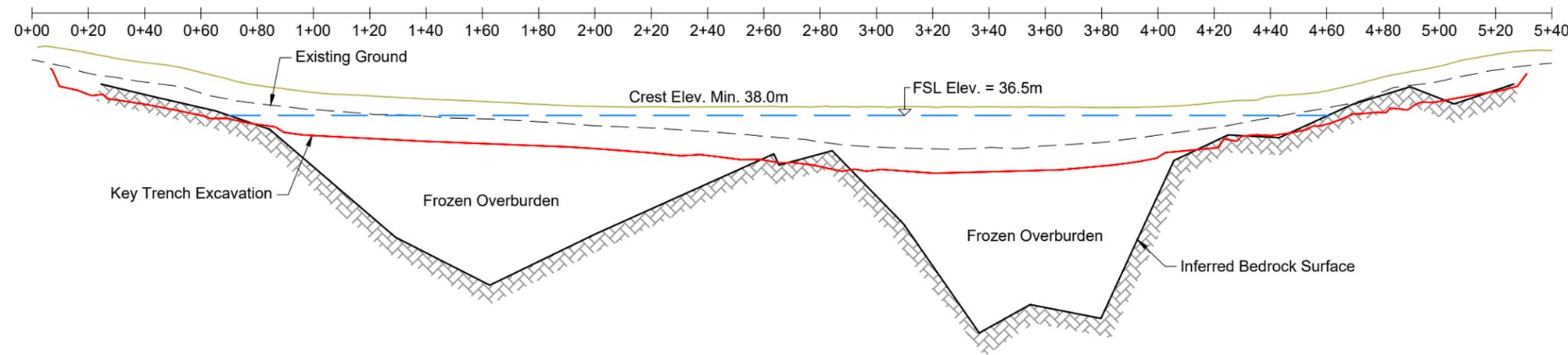
- ✱ Thermistor Bead Location
- Lower GCL Liner
- Upper GCL Liner
- ▒ Bedding Material
- ▨ Transition Material
- ▩ Run of Quarry Backfill

NOTES

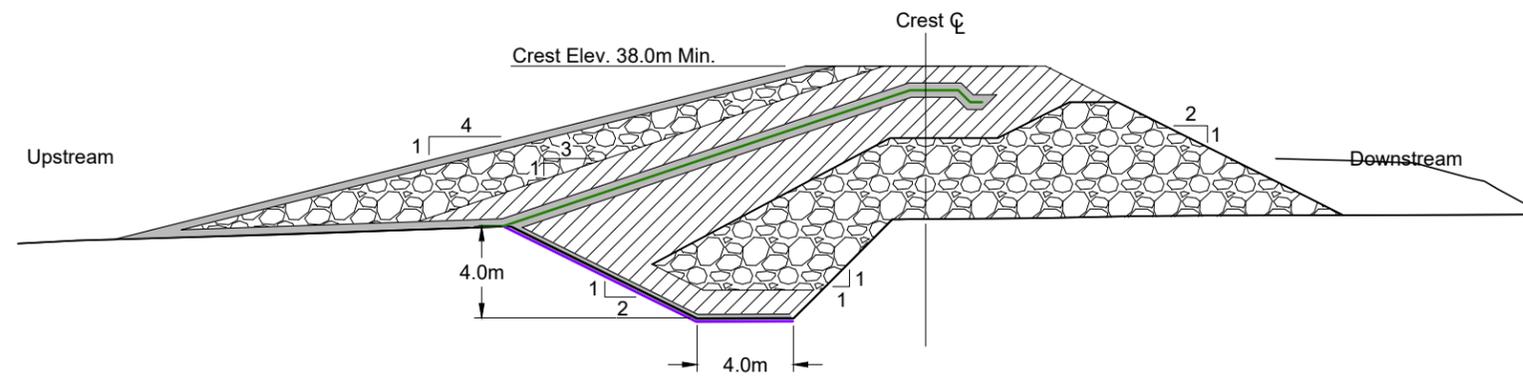
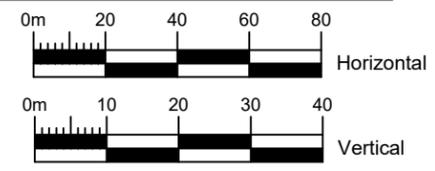
1. Topographic and as-constructed contour data from the terrain model was provided by the Client.
2. All units shown are in meters unless otherwise stated.

REFERENCES

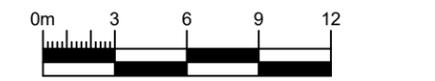
NAD83 UTM Zone 13.



SECTION ALONG SOUTH DAM CREST CENTERLINE



SOUTH DAM TYPICAL SECTION



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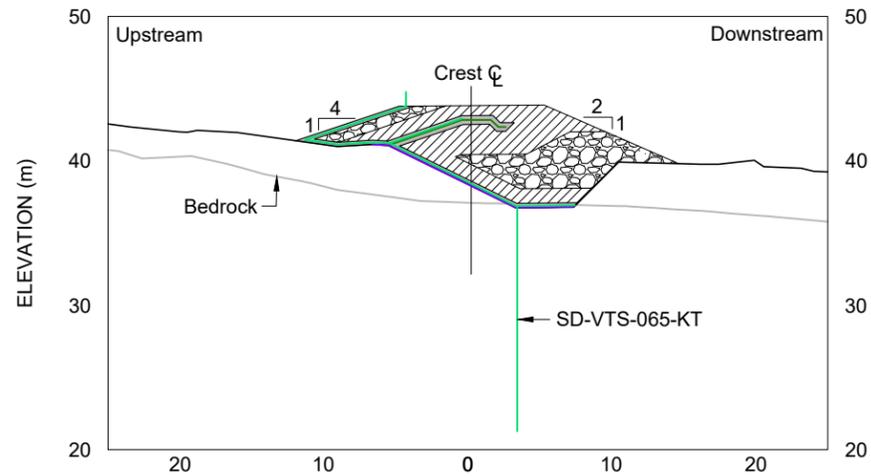
Hope Bay

2024 Annual Geotechnical Inspection

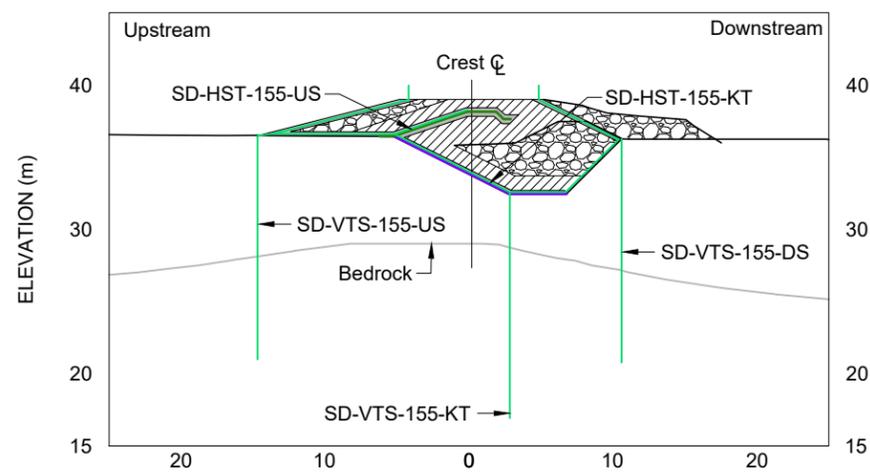
South Dam Foundation Conditions and Typical As-Constructed Section

DATE: February 2025 APPROVED: PDL FIGURE: 8

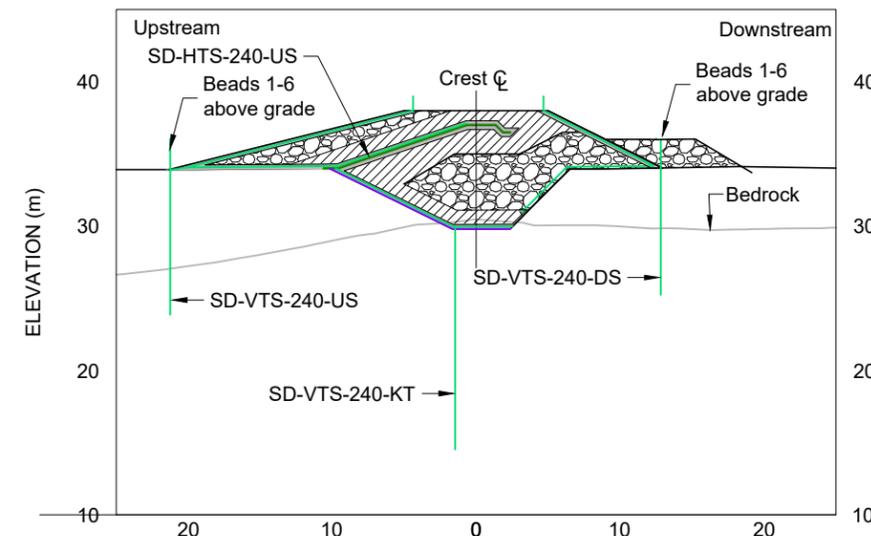
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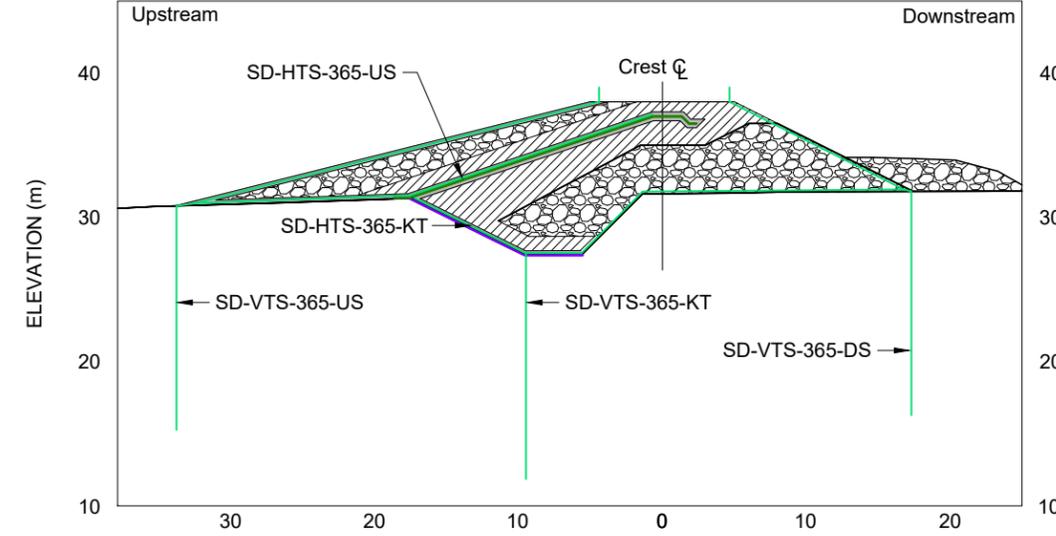
Sta. 0+65



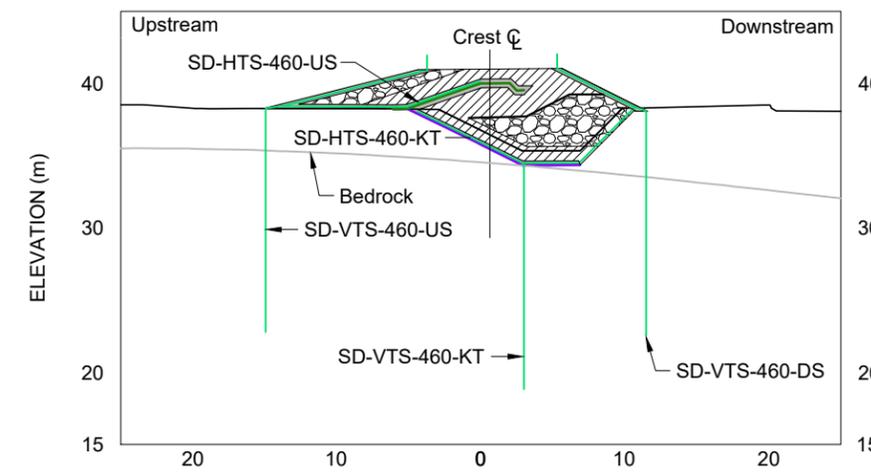
Sta. 1+55



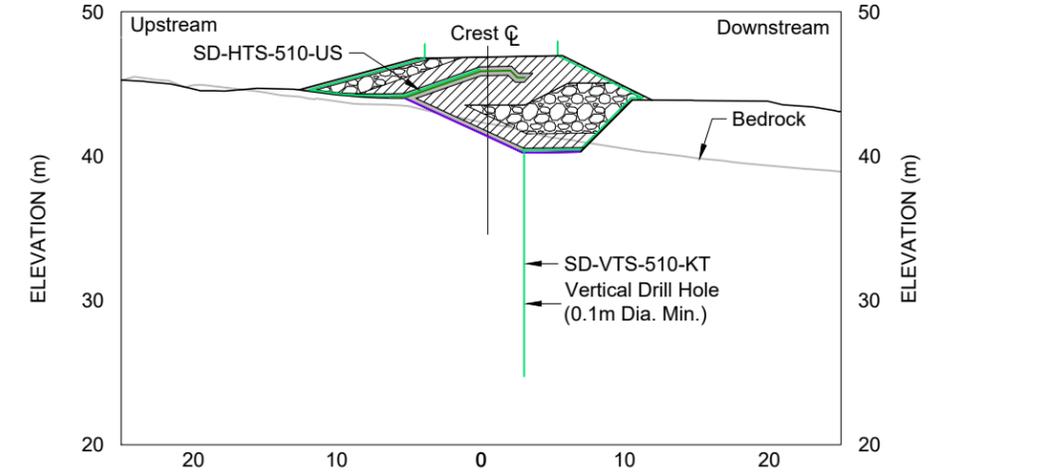
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Sta. 3+65



Sta. 4+60

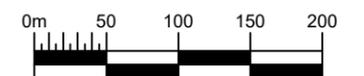


Sta. 5+10

- LEGEND**
- Ground Temperature Cable
 - Lower GCL Liner
 - Upper GCL Liner
 - Bedding Material
 - Transition Material
 - Run of Quarry Backfill

- NOTES**
1. Topographic and as-constructed contour data from the terrain model was provided by the Client.
 2. All units shown are in meters unless otherwise stated.

REFERENCES
NAD83 UTM Zone 13.



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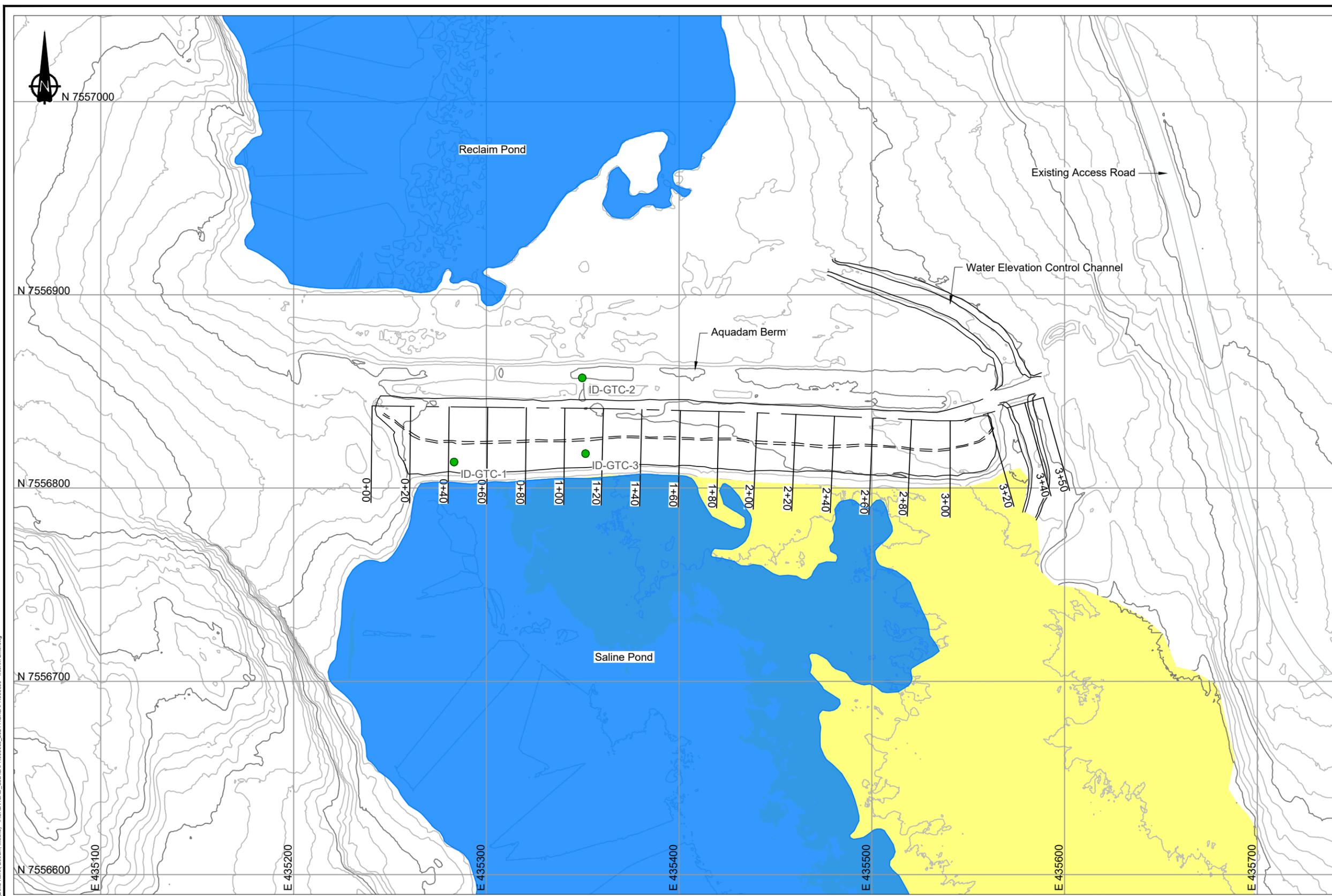
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Hope Bay

2024 Annual Geotechnical Inspection

South Dam Instrumentation Cross Sections

DATE: February 2025 APPROVED: PDL FIGURE: 9



LEGEND

- Vertical GTC Active
- 2021 Subaerial Tailings
- 2024 Pond Surface

NOTES

1. Topographic and As-built data was provided by the Client
2. Contours shown at 1.0 m interval.
3. All units shown are in meters unless otherwise stated.
4. 2021 Tailings Beach survey collected by drone LiDAR in August 2021, data provided by client.

REFERENCES

NAD83 UTM Zone 13.



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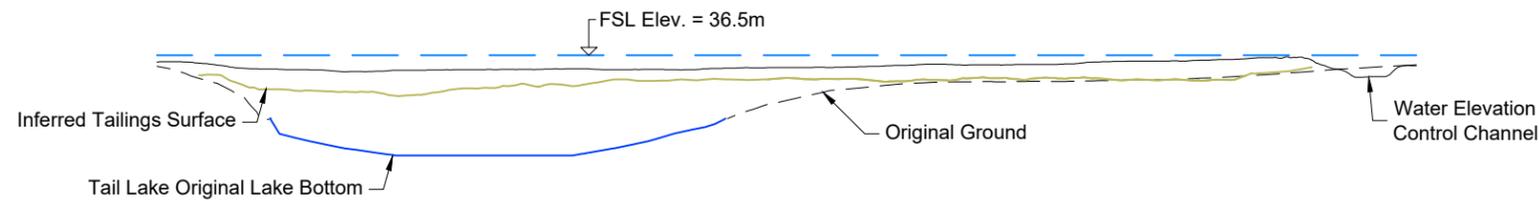
Hope Bay

2024 Annual Geotechnical Inspection

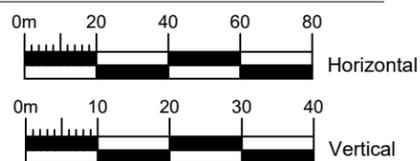
Interim Dike Instrumentation Site Plan

| | | |
|------------------------|------------------|---------------|
| DATE: February 2025 | APPROVED: PDL | FIGURE: 10 |
|------------------------|------------------|---------------|

0+00 0+20 0+40 0+60 0+80 1+00 1+20 1+40 1+60 1+80 2+00 2+20 2+40 2+60 2+80 3+00 3+20 3+40 3+50



SECTION ALONG SOUTH DAM CREST CENTERLINE



LEGEND

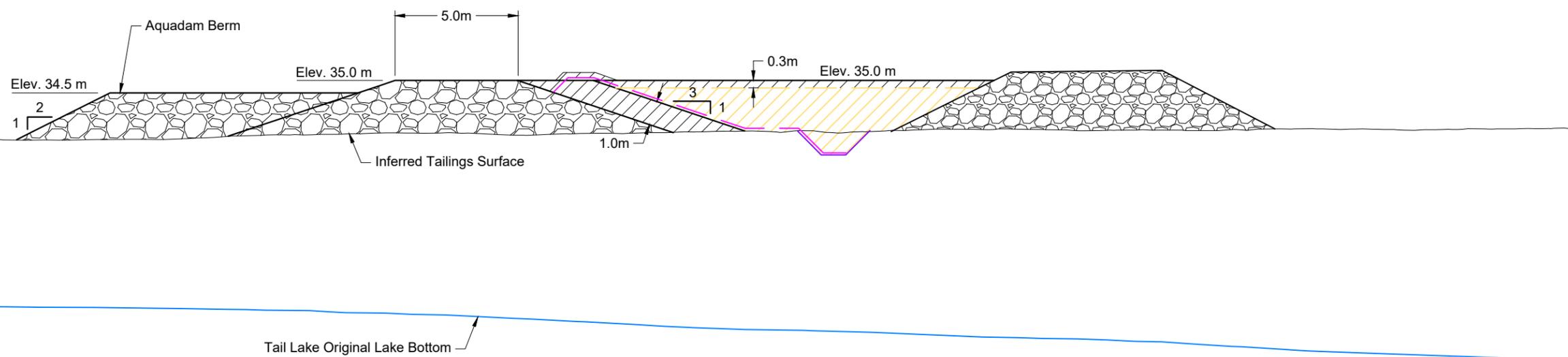
- GCL Liner
- ROQ Material
- Filter / Bedding Material
- Key Trench Excavation
- Compacted Tailings
- Abutment Cover

NOTES

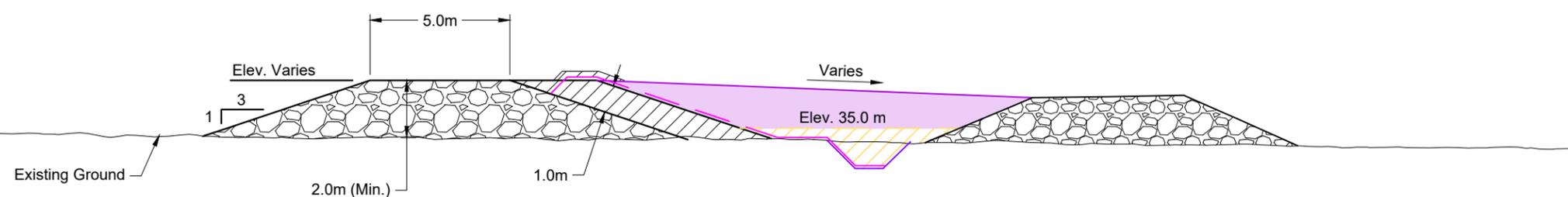
1. Topographic and as-constructed contour data from the terrain model was provided by the Client.
2. All units shown are in meters unless otherwise stated.

REFERENCES

NAD83 UTM Zone 13.



INTERIM DIKE TYPICAL SECTION ON TAILINGS (DESIGN)



INTERIM DIKE TYPICAL SECTION ON TUNDRA



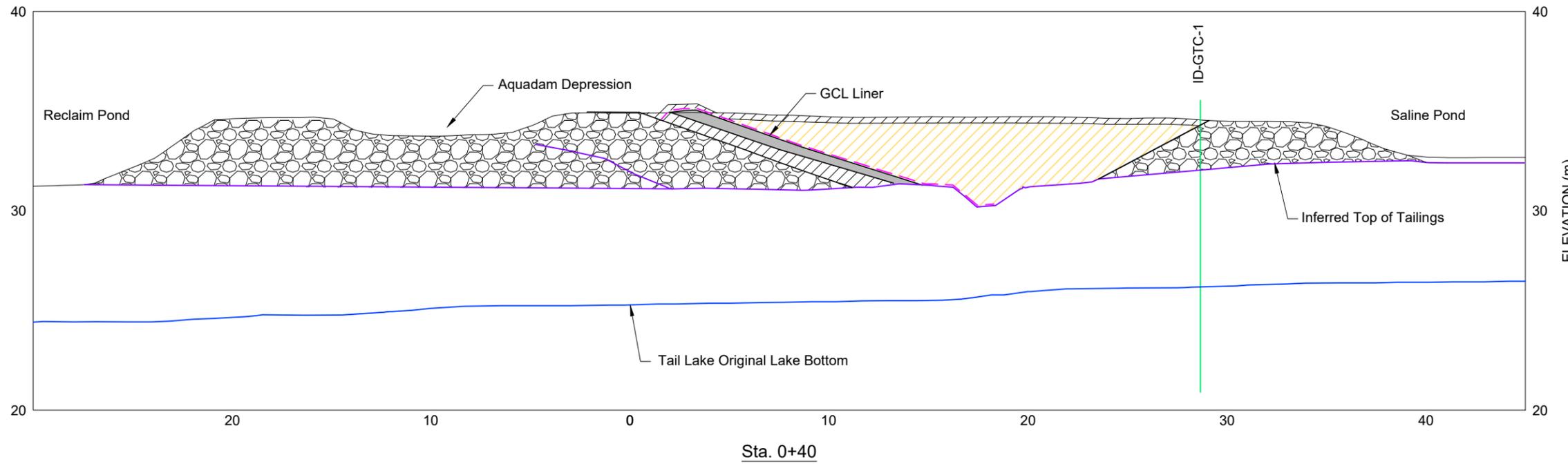
srk consulting

SRK JOB NO.: CAPR003066
 FILE NAME: CAPR003066 - Interim Dike.dwg

AGNICO EAGLE

Hope Bay

| | | |
|---|------------------|---------------|
| 2024 Annual Geotechnical Inspection | | |
| Interim Dike Foundation Conditions and Typical Sections | | |
| DATE: February 2025 | APPROVED: PDL | FIGURE: 11 |



LEGEND

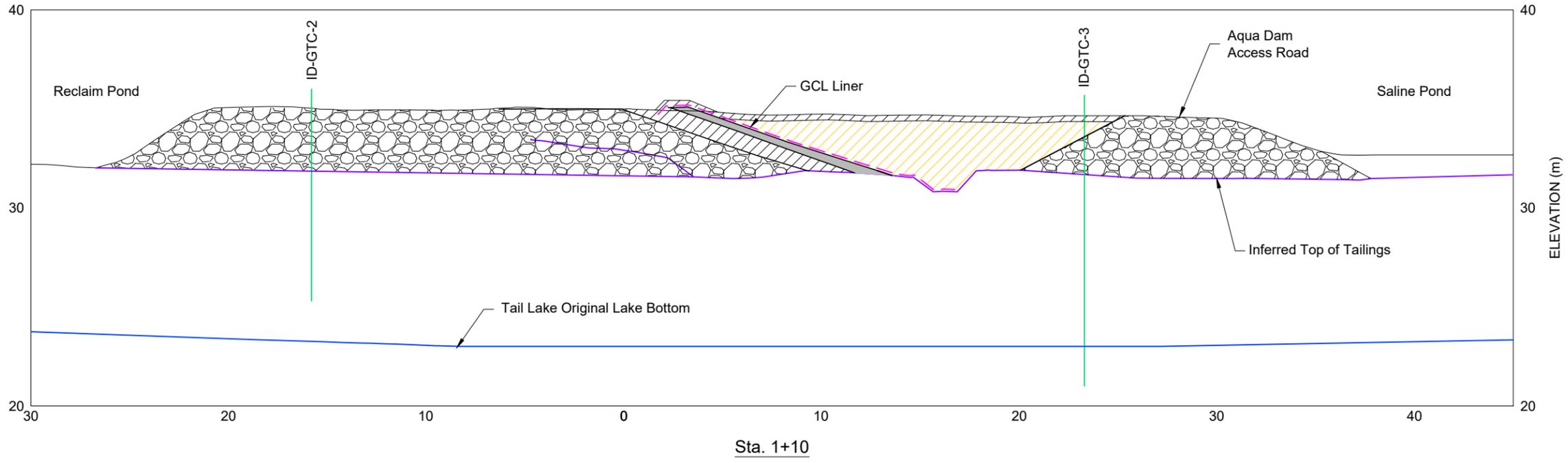
- Ground Temperature Cable
- Bedding Material
- Transition Material
- Run of Quarry Backfill
- Compacted Tailings

NOTES

1. Topographic and as-constructed contour data from the terrain model was provided by the Client.
2. All units shown are in meters unless otherwise stated.

REFERENCES

NAD83 UTM Zone 13.



C:\Users\shayla\SRK Consulting\F5228 Hope Bay (Doris North, Madras) - IACAD\CAD_C3DC\CAPR003066 - 2024 AGI\CAPR003066 - Interim Dike.dwg

| | | | | |
|--|----------|---|-----------|---------|
| | | 2024 Annual Geotechnical Inspection | | |
| | | Interim Dike Instrumentation Cross Sections | | |
| SRK JOB NO.: CAPR003066 | Hope Bay | DATE: | APPROVED: | FIGURE: |
| FILE NAME: CAPR003066 - Interim Dike.dwg | | February 2025 | PDL | 12 |

Photo Logs

PROJECT PATH: C:\Users\SMITH\SRK Consulting\F5208 Hope Bay (Doris North, Boston, Madrid) - \ACAD\GIS\PROJECTS\CAPR003066_HB_Annual_Geotech_Inspection\CAPR003066_HB_2024_TIAAGI.aprx - L:Annual Geotech Inspection



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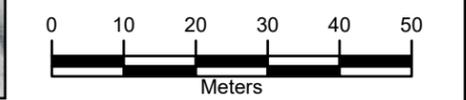
- Inspection Photo
- Existing Infrastructure

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

1. Aerial image collected September 2024.



srk consulting

SRK JOB NO: CAPR003066
LAYOUT: CAPR003066_HB_2024_TIAAGI

AGNICO EAGLE

HOPE BAY

2024 TIA AGI

North Dam Inspection

| | | |
|----------------|-------------------|-----------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 1 |
|----------------|-------------------|-----------|



Photo 1: North Dam Overview from the Helicopter (Looking Southeast).



Photo 2: North Dam Upstream Face (Looking Southwest).



Photo 3: North Dam Downstream Face (Looking Southwest).



Photo 4: North Dam Upstream Toe Tundra Die-Back (Looking Southeast).

| | | | | |
|---|---|-----------------------------|--------------------|-----------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | North Dam Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 2 |



Photo 5: North Dam Northeastern Thermosyphon (Looking Northwest).



Photo 6: North Dam Southwestern Thermosyphon (Looking Southwest).



Photo 7: North Dam Instrumentation Inspection (Looking Northwest).



Photo 8: North Dam Instrumentation Inspection (Looking Northwest).

| | | | | |
|---|--|-----------------------------|--------------------|-----------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | North Dam Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 3 |

PROJECT PATH: C:\Users\SMITH\SRK Consulting\F5208 Hope Bay (Doris North, Boston, Madrid) - \ACAD\GIS\PROJECTS\CAPR003066_HB_Annual_Geotech_Inspection\CAPR003066_HB_2024_TIAAGI.aprx - L:Annual Geotech Inspection



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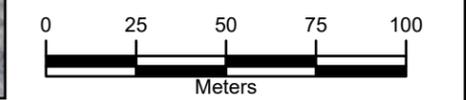
- Inspection Photo
- Existing Infrastructure

NOTES

- Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

- Aerial image collected September 2024.



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SRK JOB NO: CAPR003066
LAYOUT: CAPR003066_HB_2024_TIAAGI

AGNICO EAGLE

HOPE BAY

2024 TIA AGI

South Dam Inspection

| | | |
|----------------|-------------------|-----------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 4 |
|----------------|-------------------|-----------|



Photo 9: South Dam Overview from the helicopter (Looking Northwest).



Photo 10: South Dam Crest (Looking West).



Photo 11: North Dam Downstream Face (Looking Northwest).



Photo 12: South Dam Downstream Toe Berm (Looking Southeast).

| | | | | |
|---|--|-----------------------------|--------------------|-----------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | South Dam Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 5 |



Photo 13: South Dam Cracking Downstream Face (Looking Southeast).



Photo 14: South Dam Upstream Face (Looking East).



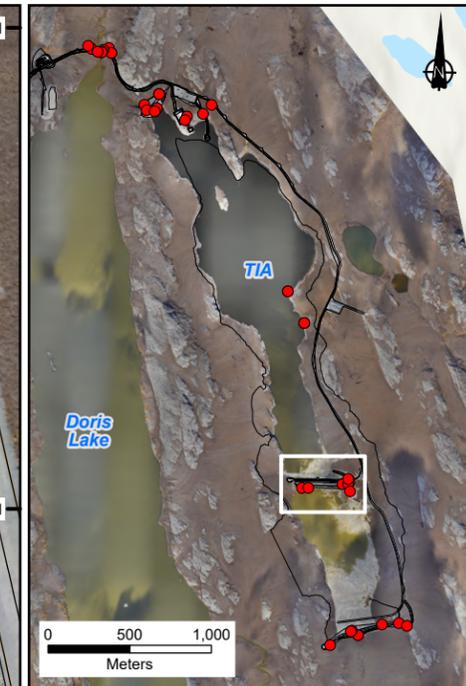
Photo 15: South Dam Upstream Face (Looking Southwest).



Photo 16: South Dam Instrumentation Inspection (Looking Southeast).

| | | | | |
|---|--|-----------------------------|--------------------|-----------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | South Dam Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 6 |

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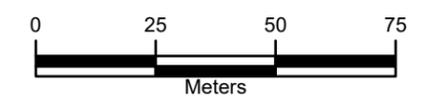
- Inspection Photo
- Existing Infrastructure

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

1. Aerial image collected September 2024.



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SRK JOB NO: CAPR003066
LAYOUT: CAPR003066_HB_2024_TIAAGI

AGNICO EAGLE

HOPE BAY

2024 TIAAGI

Interim Dike Inspection

| | | |
|----------------|-------------------|-----------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 7 |
|----------------|-------------------|-----------|



Photo 17: Interim Dike Overview from the helicopter (Looking Southeast).



Photo 18: Interim Dike Overview and Former Aquadam Location (Looking West).



Photo 19: Interim Dike Crest (Cracking) (Looking West).



Photo 20: Interim Dike Upstream Face (Cracking) (Looking West).

| | | | | |
|---|---|--------------------------------|--------------------|-----------------------|
|  |  | 2024 TIA AGI | | |
| | | Interim Dike Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 8 |



Photo 21: Interim Dike Spillway (Looking South).



Photo 22: Interim Dike Spillway (Looking South).



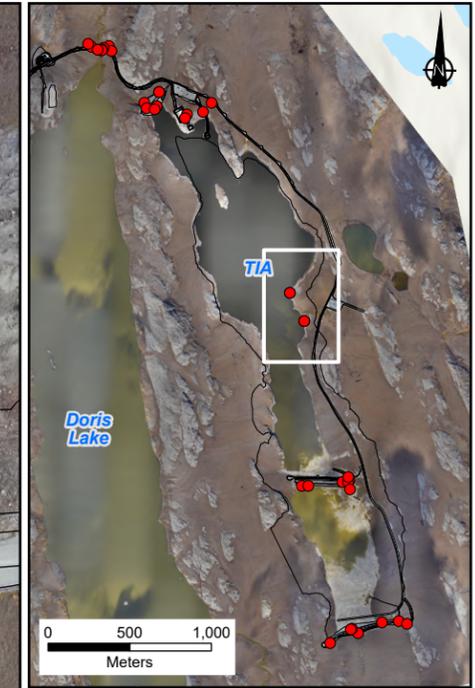
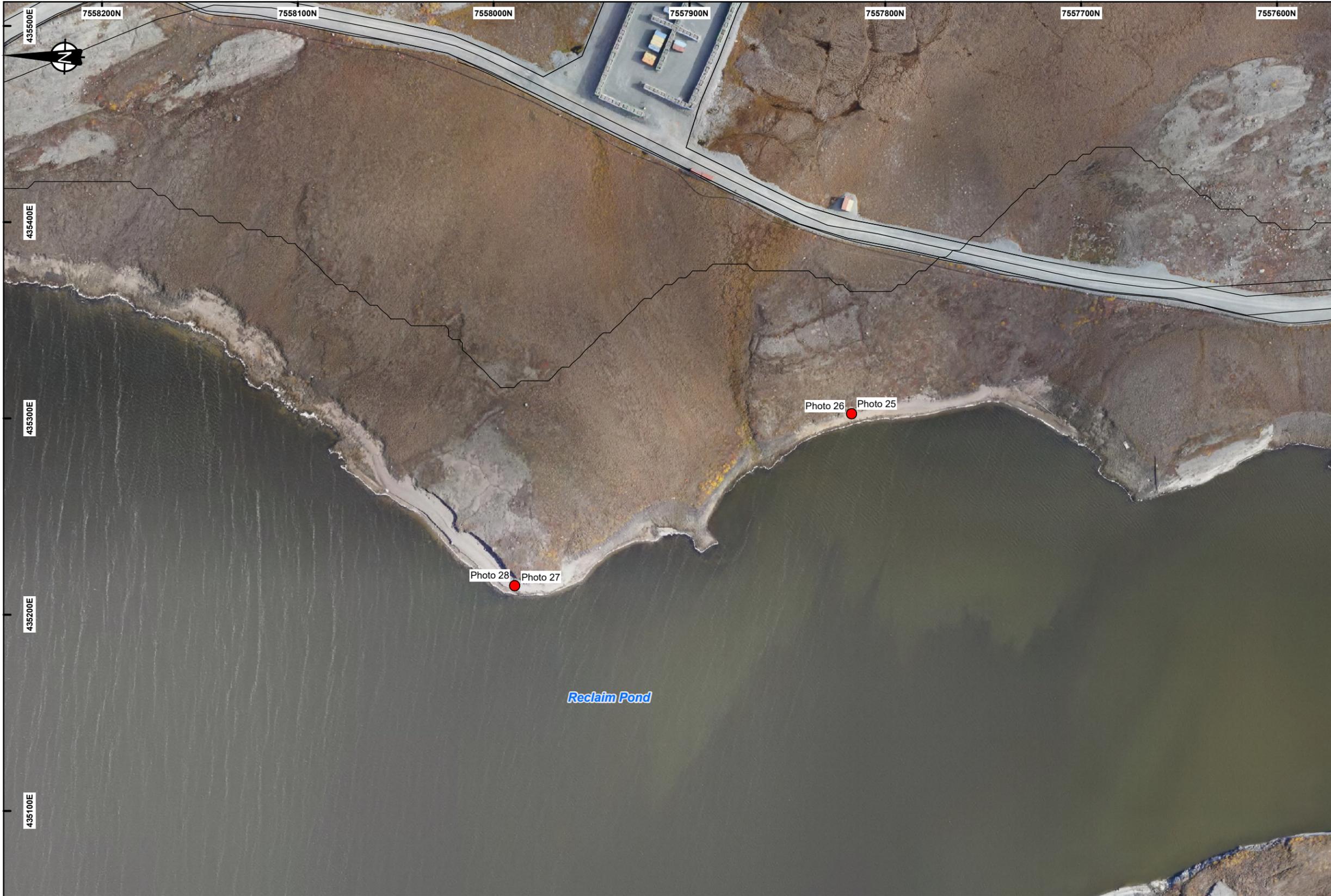
Photo 23: Interim Dike Spillway (Looking Southeast).



Photo 24: Interim Dike Spillway (Looking Northwest).

| | | | | |
|---|---|--------------------------------|--------------------|-----------------------|
|  |  | 2024 TIA AGI | | |
| | | Interim Dike Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 9 |

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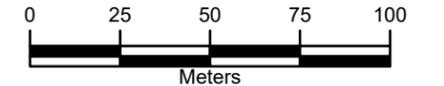
- Inspection Photo
- Existing Infrastructure

NOTES

- Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

- Aerial image collected September 2024.



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SRK JOB NO: CAPR003066
LAYOUT: CAPR003066_HB_2024_TIAAGI

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HOPE BAY

2024 TIAAGI

TIA Shoreline Inspection

| | | |
|----------------|-------------------|------------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 10 |
|----------------|-------------------|------------|



Photo 25: TIA Shoreline Overview (Looking South).



Photo 26: TIA Shoreline Erosion (Looking Southeast).



Photo 27: TIA Shoreline Overview (Looking Northeast).



Photo 28: TIA Shoreline Overview (Looking Southwest).

| | | | | |
|---|--|---------------------------------|--------------------|------------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | TIA Shoreline Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 11 |

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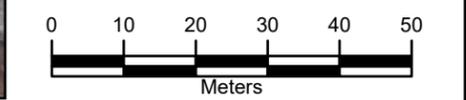
- Inspection Photo
- Existing Infrastructure

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

1. Aerial image collected September 2024.



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SRK JOB NO: CAPR003066
LAYOUT: CAPR003066_HB_2024_TIAAGI

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HOPE BAY

2024 TIAAGI

Emergency Dump Catch Basins Inspection

| | | |
|----------------|-------------------|------------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 12 |
|----------------|-------------------|------------|



Photo 29: Eastern Emergency Dump Catch Basin (Looking Southeast).



Photo 30: Eastern Emergency Dump Catch Basin (Looking Northeast).



Photo 31: Western Emergency Dump Catch Basin (Looking Northwest).



Photo 32: Western Emergency Dump Catch Basin Western Slope (Looking Southwest).

| | | | | |
|---|--|---|--------------------|------------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | Emergency Dump Catch Basins Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 13 |

PROJECT PATH: C:\Users\SMITH\SRK Consulting\F5208 Hope Bay (Doris North, Boston, Madrid) - \ACAD\GIS\PROJECTS\CAPR003066_HB_Annual_Geotech_Inspection\CAPR003066_HB_2024_TIAAGI.aprx - L:Annual Geotech Inspection



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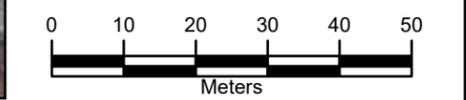
- Inspection Photo
- Existing Infrastructure

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

1. Aerial image collected September 2024.



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SRK JOB NO: CAPR003066
LAYOUT: CAPR003066_HB_2024_TIAAGI

AGNICO EAGLE

HOPE BAY

2024 TIAAGI

Doris Creek Bridge Inspection

| | | |
|----------------|-------------------|------------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 14 |
|----------------|-------------------|------------|



Photo 33: Eastern Side of Doris Bridge, Northern Gabion (Looking South).



Photo 34: Doris Bridge Overview Below the Deck (Looking West).



Photo 35: Eastern Side of Doris Bridge, Southern Gabion (Looking East).



Photo 36: Western Side of Doris Bridge, Abutment Overview (Looking West).

| | | | | |
|---|--|---------------------------|--------------------|------------------------|
|  |  AGNICO EAGLE | 2024 TIA AGI | | |
| | | Doris Creek Bridge | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 15 |

PROJECT PATH: C:\Users\SMITH\SRK Consulting\F5208 Hope Bay (Doris North, Boston, Madrid) - \ACAD\GIS\PROJECTS\CAPR003066_HB_Annual_Geotech_Inspection\CAPR003066_HB_2024_TIAAGI.aprx - L:Annual Geotech Inspection



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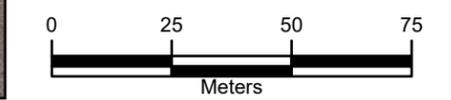
- Inspection Photo
- Existing Infrastructure

NOTES

- Coordinate System: NAD 1983 CSRS UTM Zone 13N

REFERENCES

- Aerial image collected September 2024.



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LAYOUT: CAPR003066_HB_2024_TIAAGI

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2024 TIAAGI

Water Treatment Plan
and Reclaim Pad Inspection

| | | |
|-------------------|----------------------|----------------------|
| Date: Jan 2025 | Approved: PL / AN | Figure: 16 |
|-------------------|----------------------|----------------------|



Photo 37: ROQ below the WTP slope (Looking Southeast).



Photo 38: Partially Dismantled Pipelines (Looking Southeast).



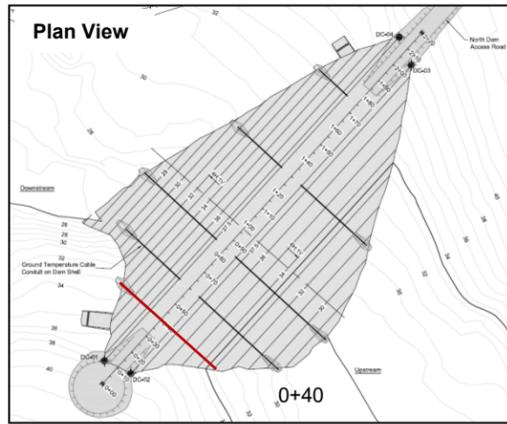
Photo 39: Disturbance in Tundra (Dozer Tracks) (Looking Northwest).



Photo 40: Presence of Waste Material (Looking South).

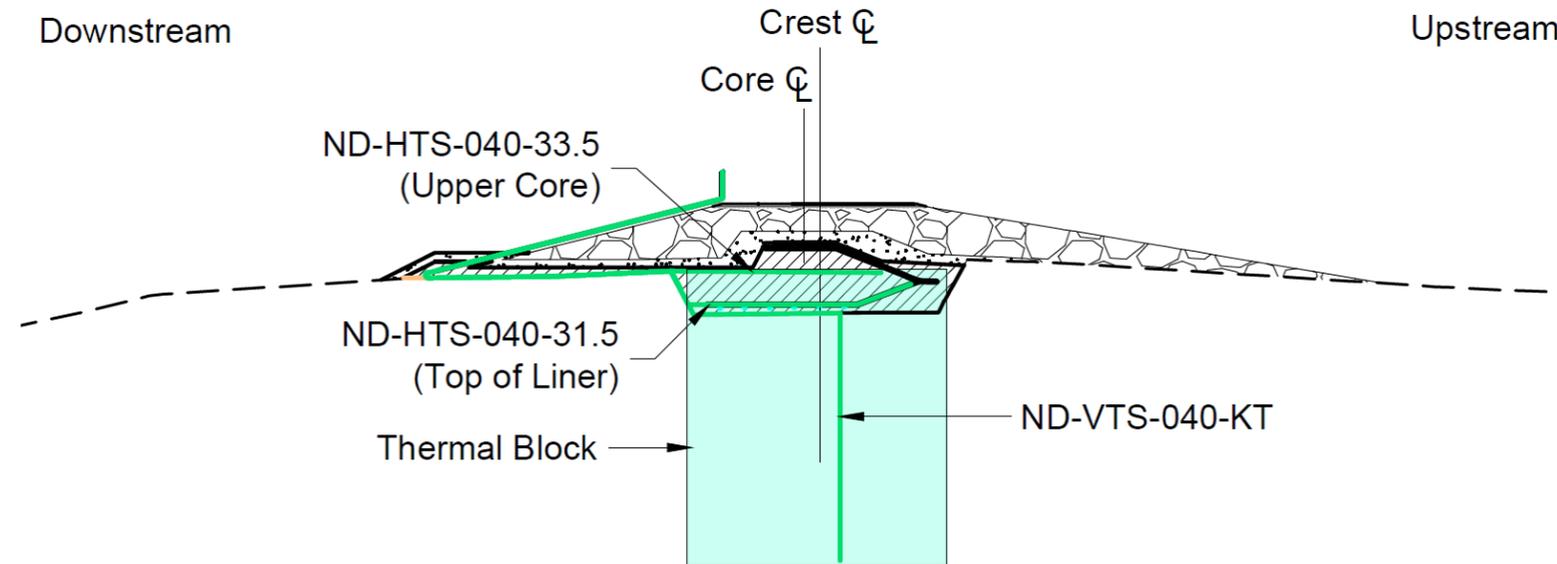
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|  |  | 2024 TIA AGI | | |
| | | Water Treatment Plan and Reclaim Pad Inspection | | |
| Job No: CAPR003066 Filename: 2024_TIA_AGI_Photolog.pptx | Hope Bay | Date: December 2024 | Approved: PL/AN | Photolog: 17 |

Appendix A Ground Temperature Cables



Downstream

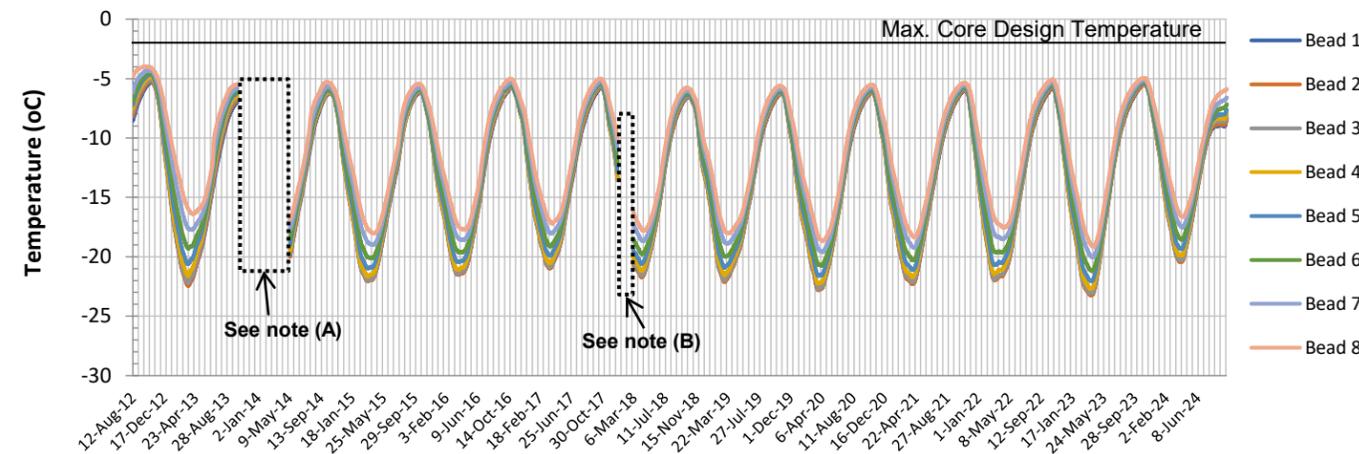
Upstream



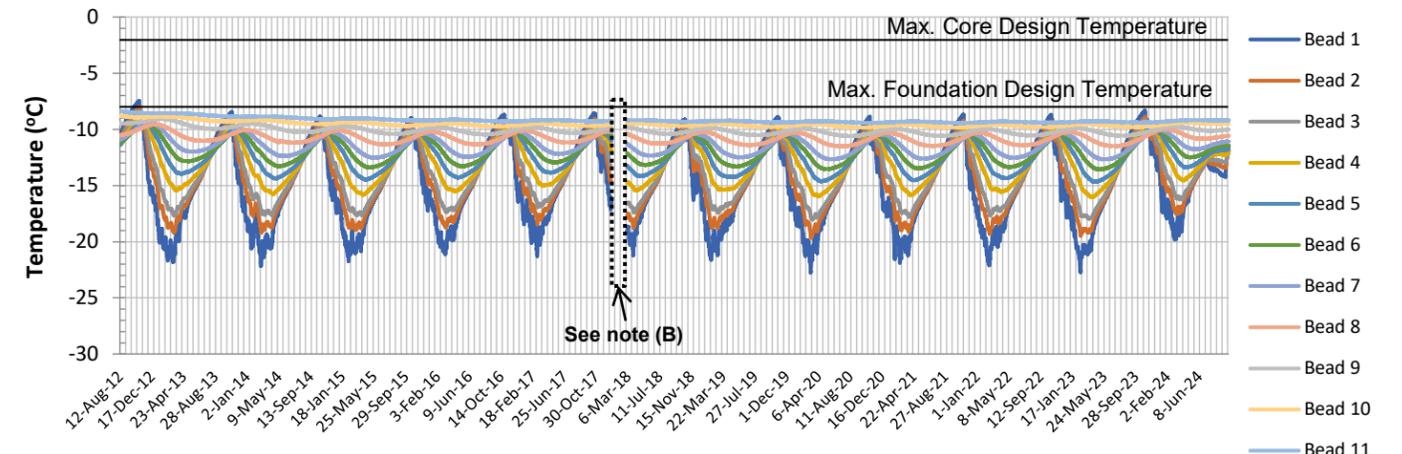
Legend:

- GTC Status: Cable irreparably damaged
- GTC Status: Bead damaged or data missing
- Design Thermal Block

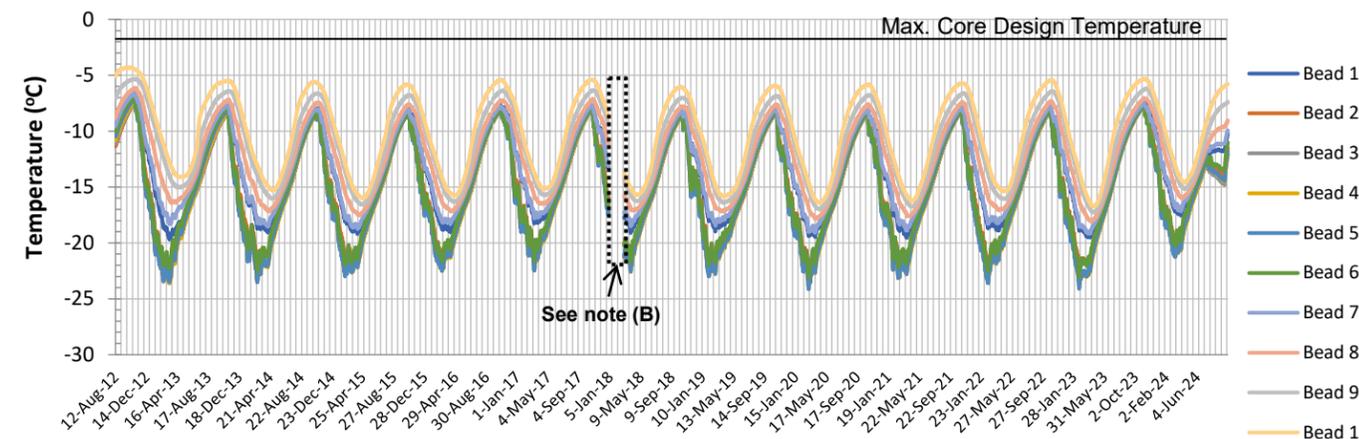
ND-HTS-040-33.5



ND-VTS-040-KT



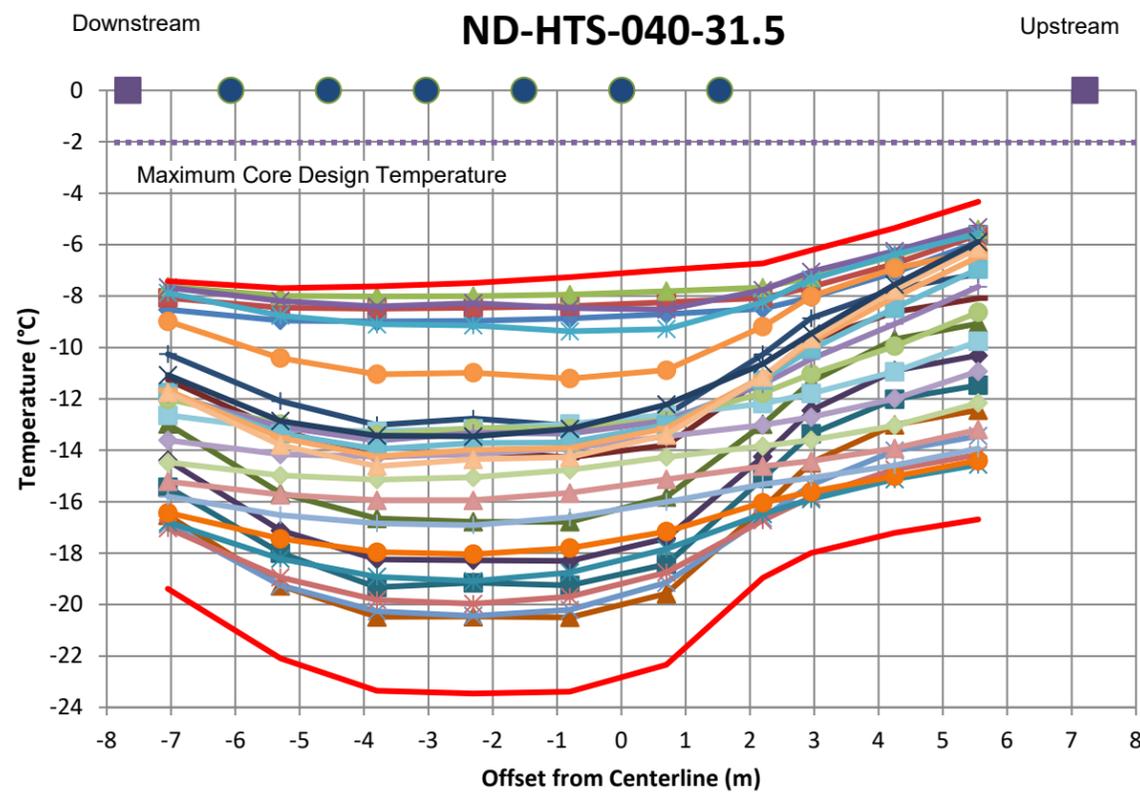
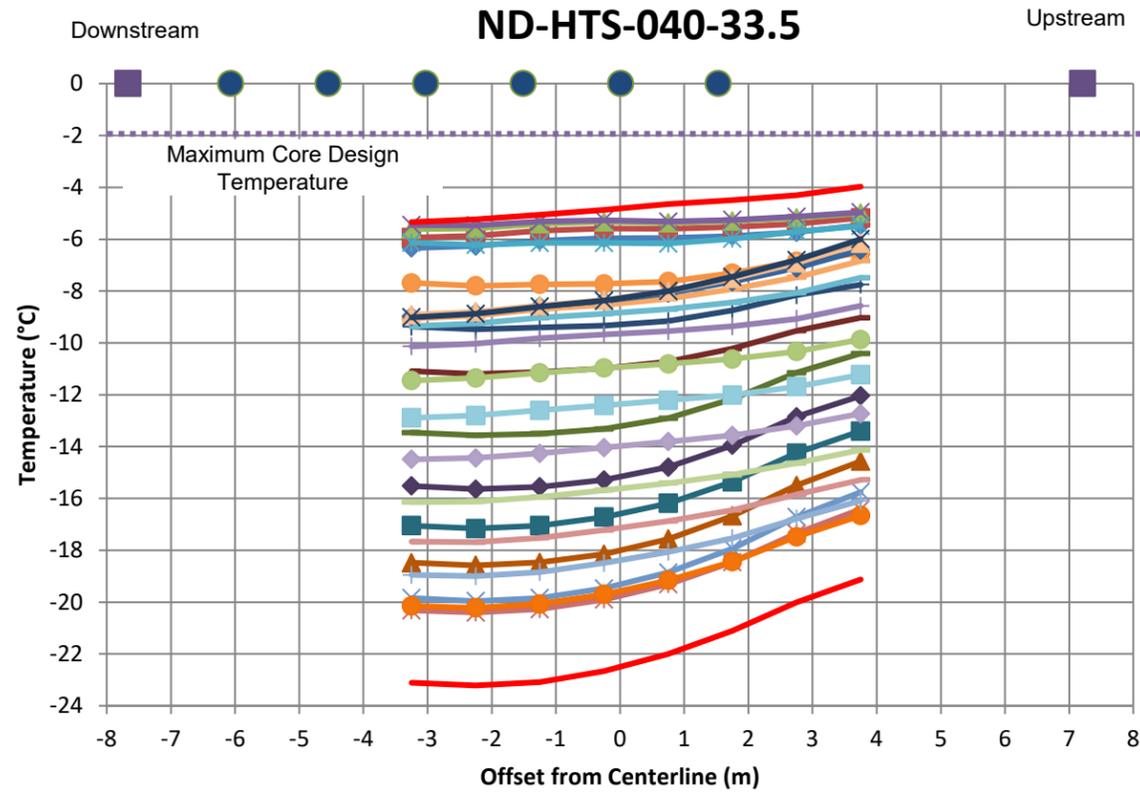
ND-HTS-040-31.5



Notes:

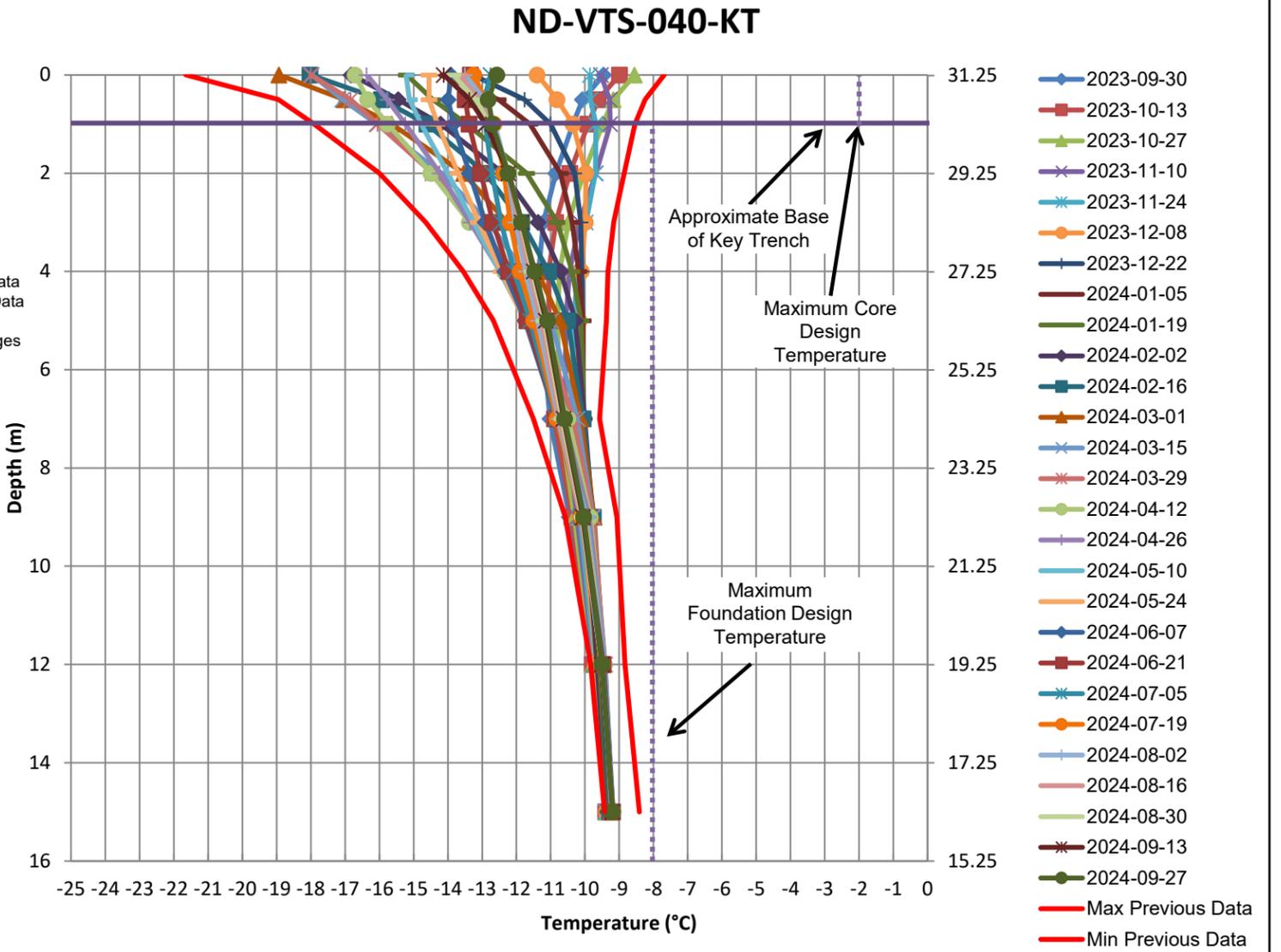
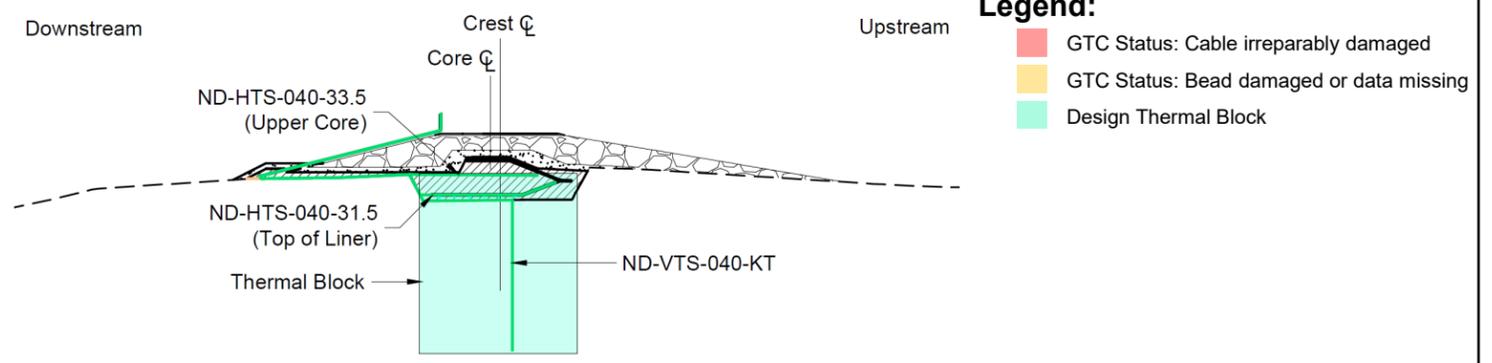
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- (A) ND-HTS-040-33.5 data logger was disconnected from October 10, 2013 to May 12, 2014.
- (B) Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.

| | | | | |
|---|-----------------|---|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+40 Ground Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.1 |



- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Min Previous Data
- Max Previous Data
- Thermosyphon
- Key Trench Edges

- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
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- 2024-08-02
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- Min Previous Data
- Thermosyphon
- Key Trench Edges

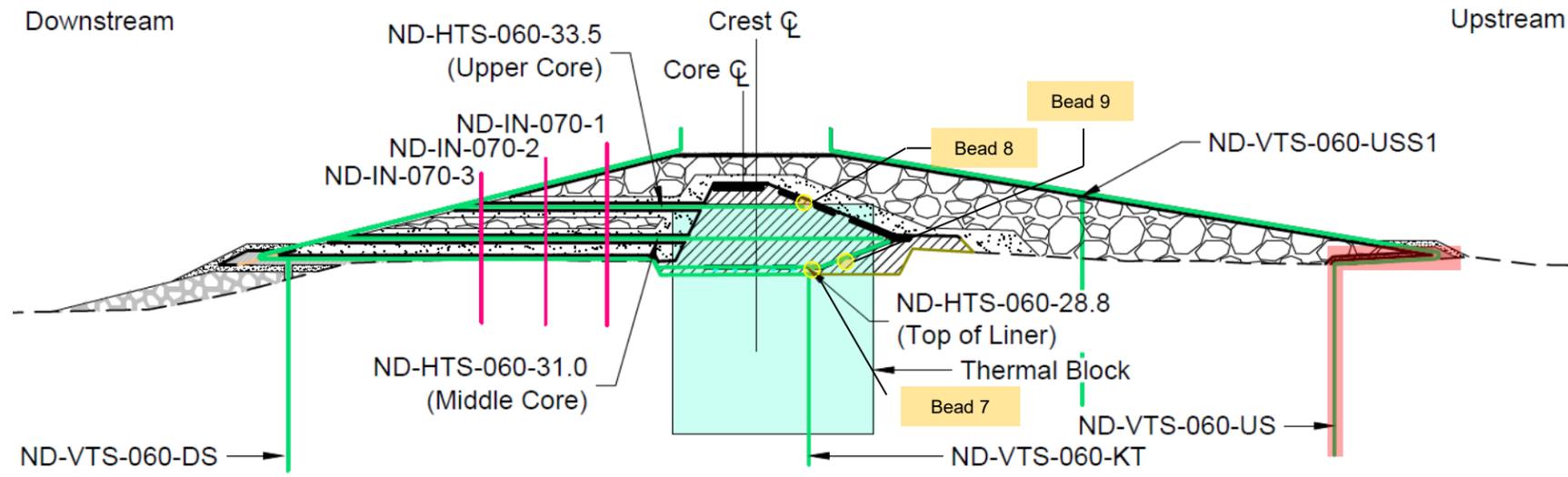
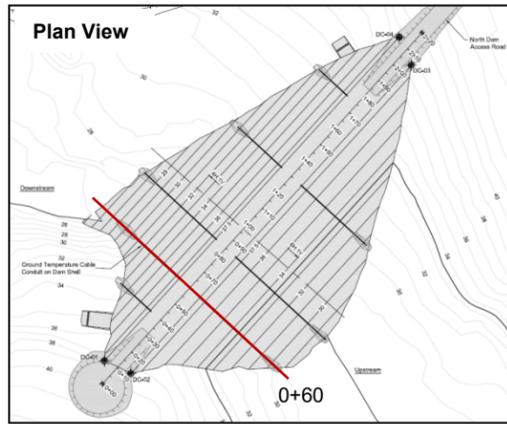


- Legend:**
- GTC Status: Cable irreparably damaged
 - GTC Status: Bead damaged or data missing
 - Design Thermal Block

Notes:

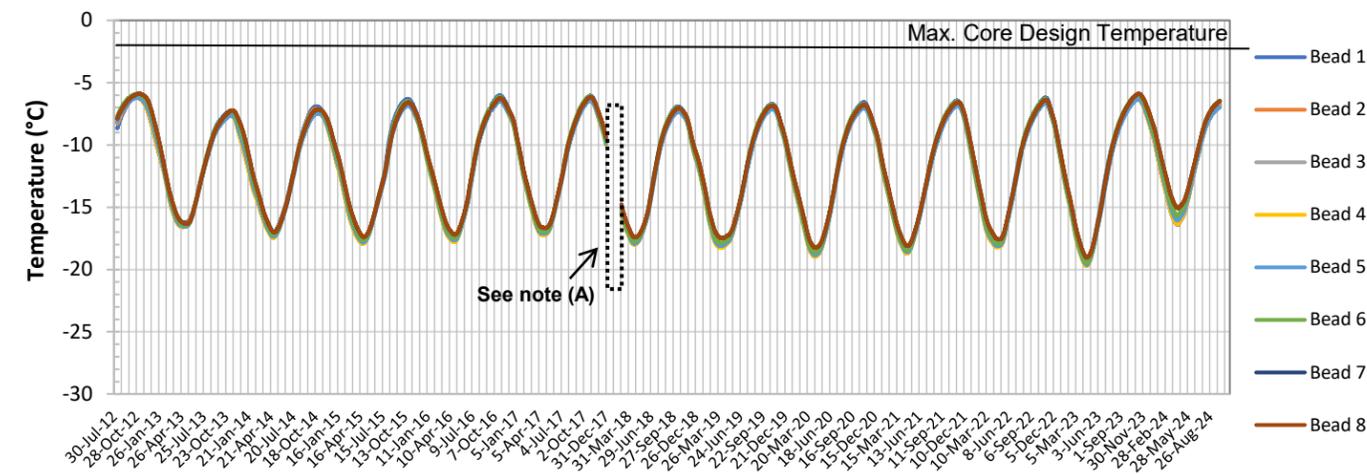
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).

| | | | | |
|---|-----------------|---|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+40 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.2 |

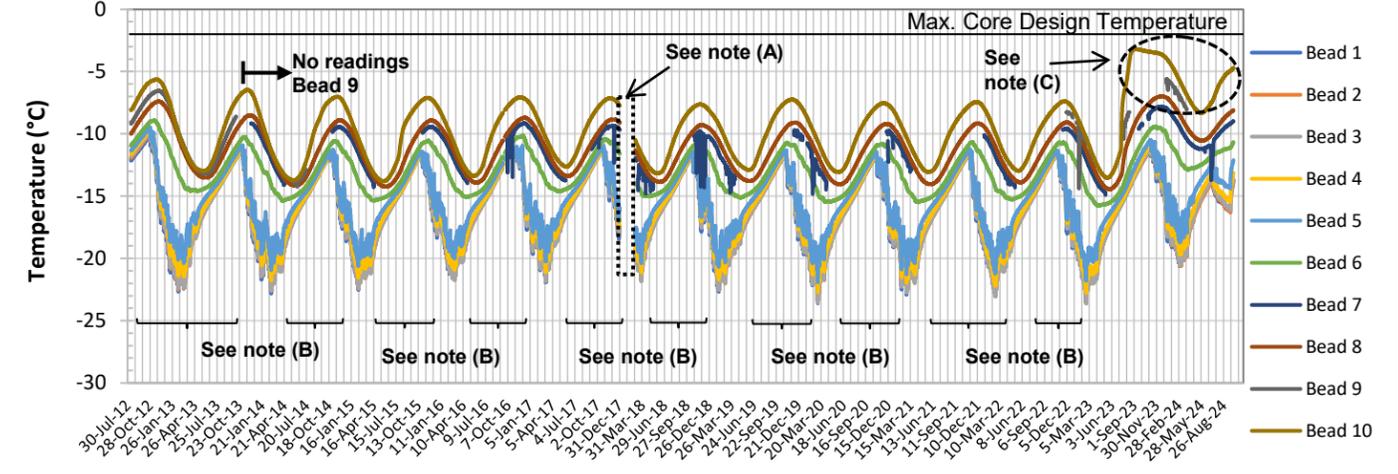


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block

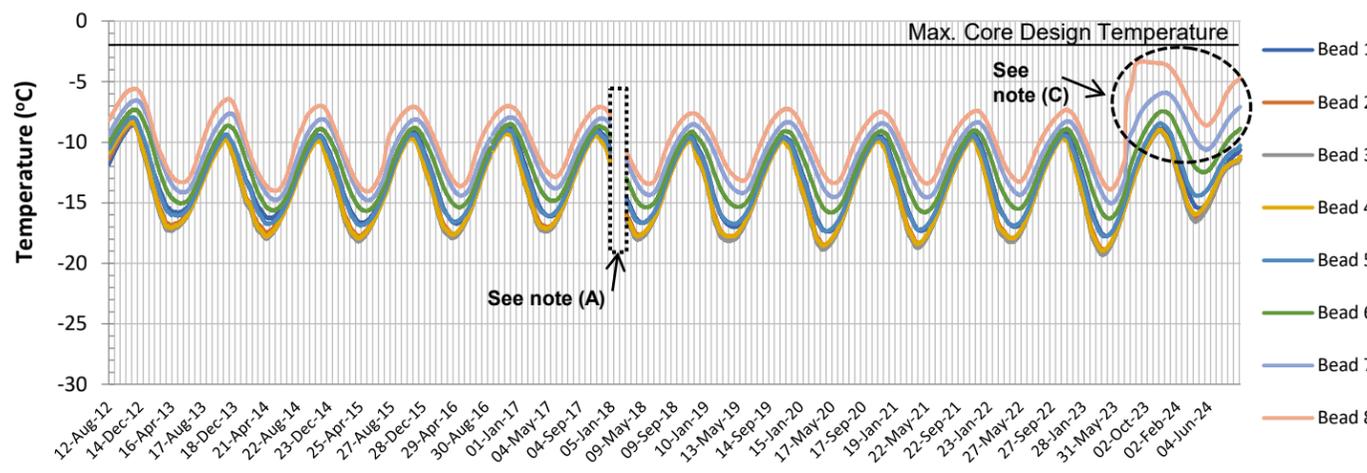
ND-HTS-060-33.5



ND-HTS-060-28.8

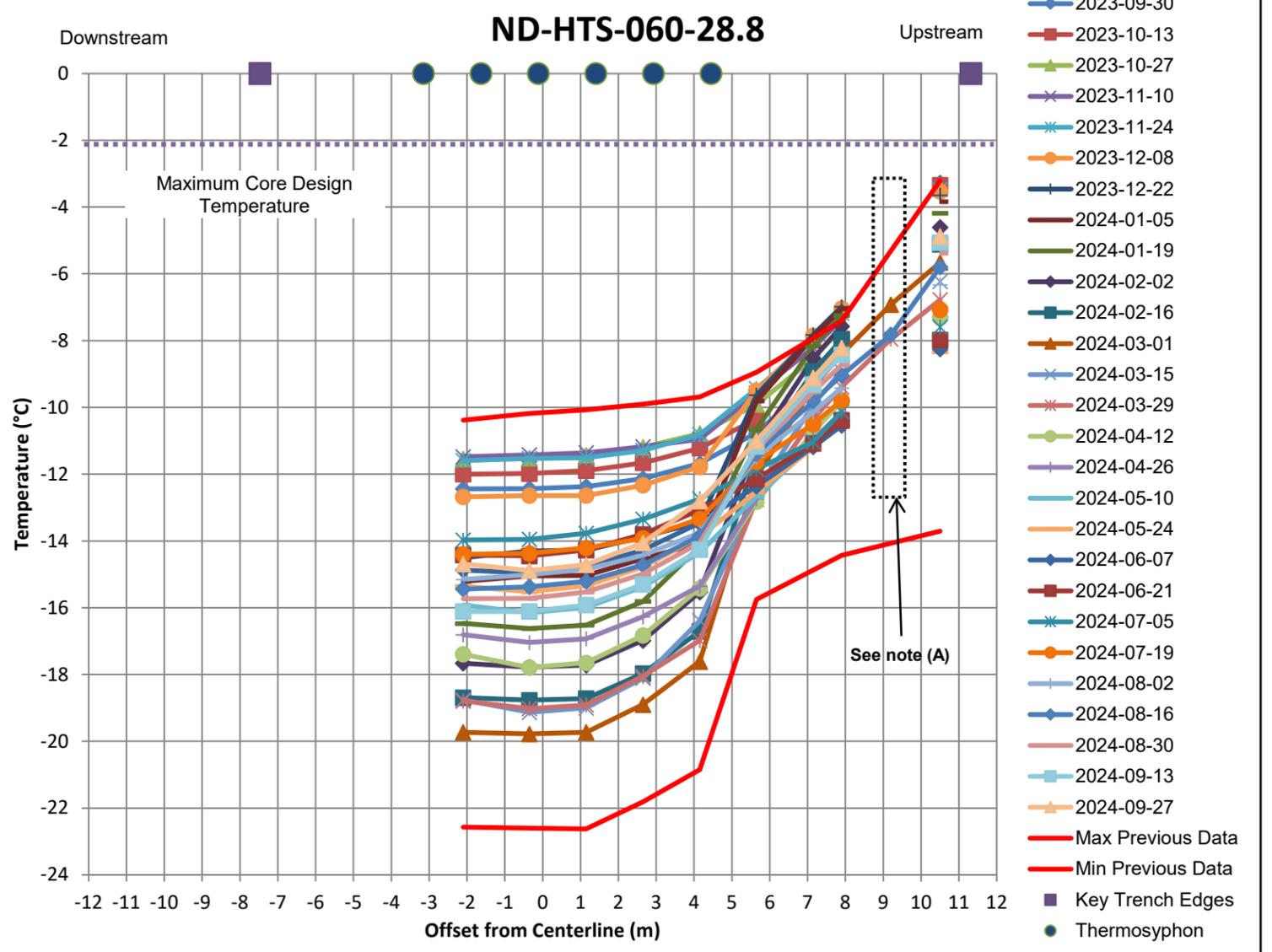
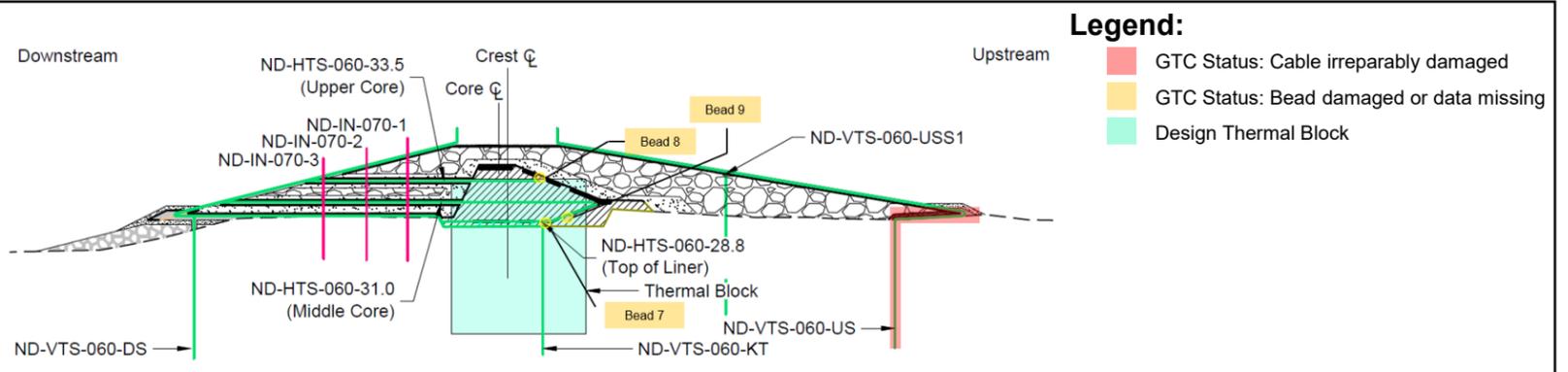
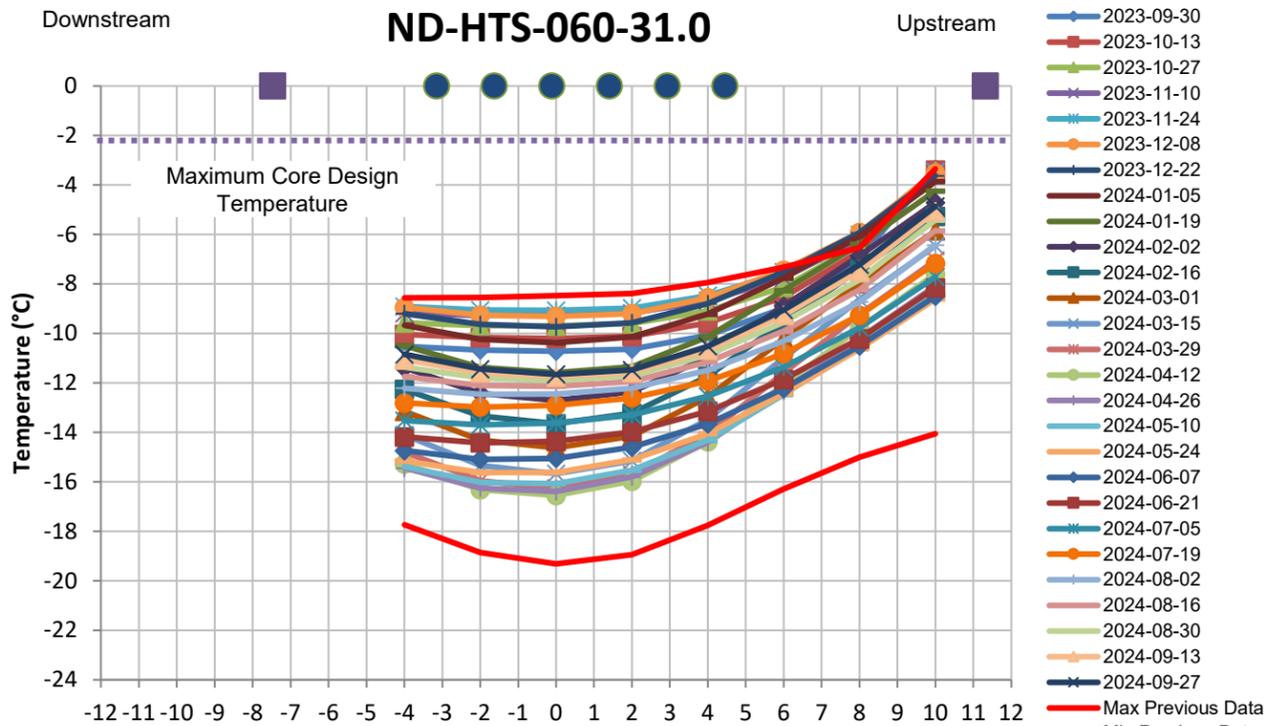
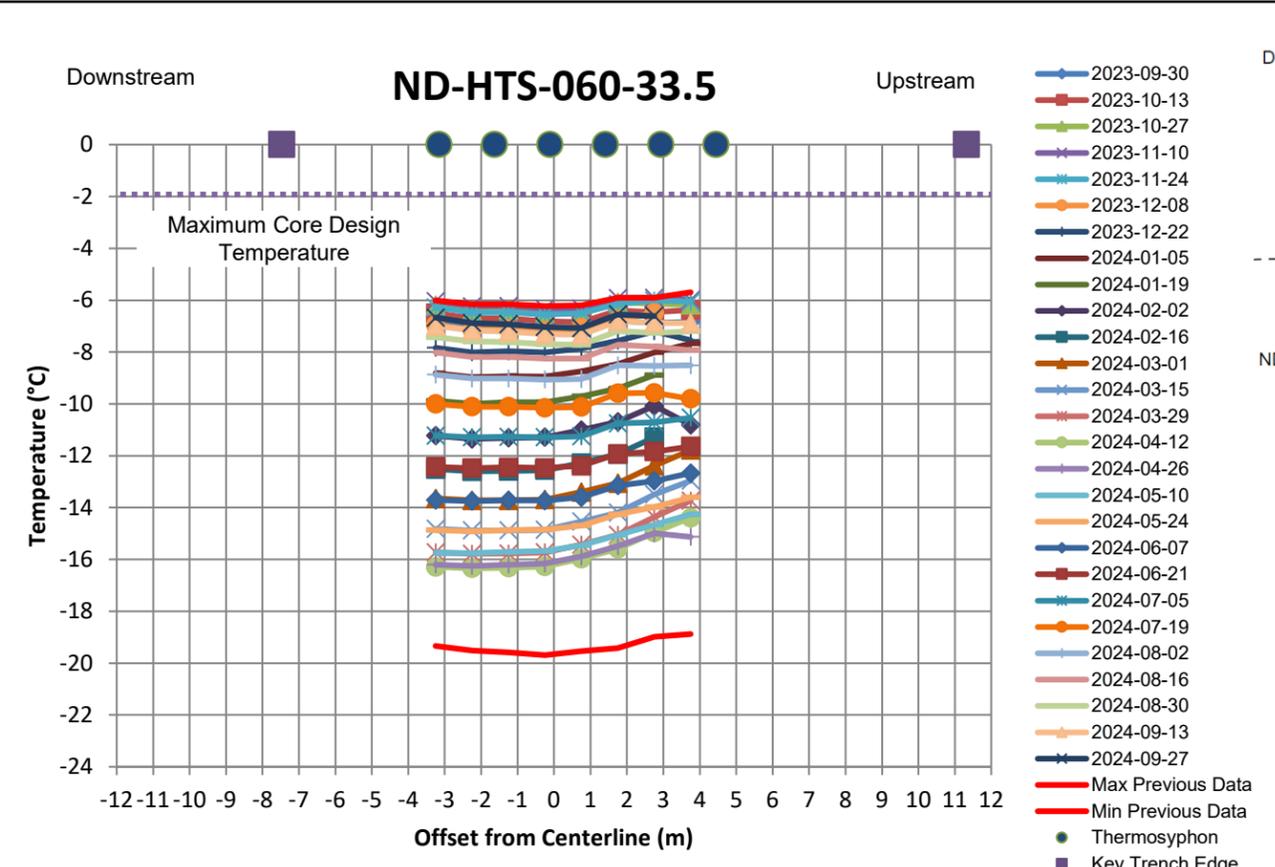


ND-HTS-060-31.0



- Notes:**
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
 - (A) Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.
 - (B) Erroneous data were filtered out due to possible instrumentation error.
 - (C) Notable temperature increase at the upstream-most beads observed. This is expected to be related to historically high reclaim pond water levels in 2023-2024.

| | | | | |
|---|-----------------|---|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+60 Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.3 |

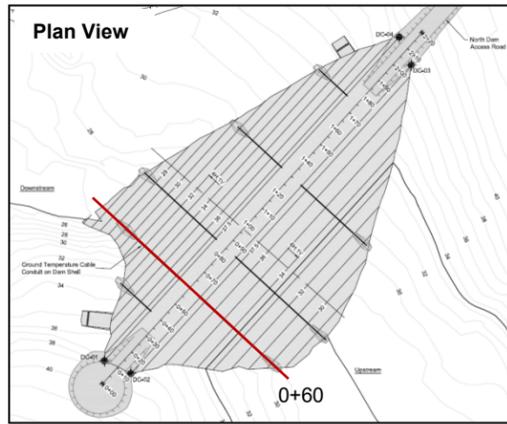


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block

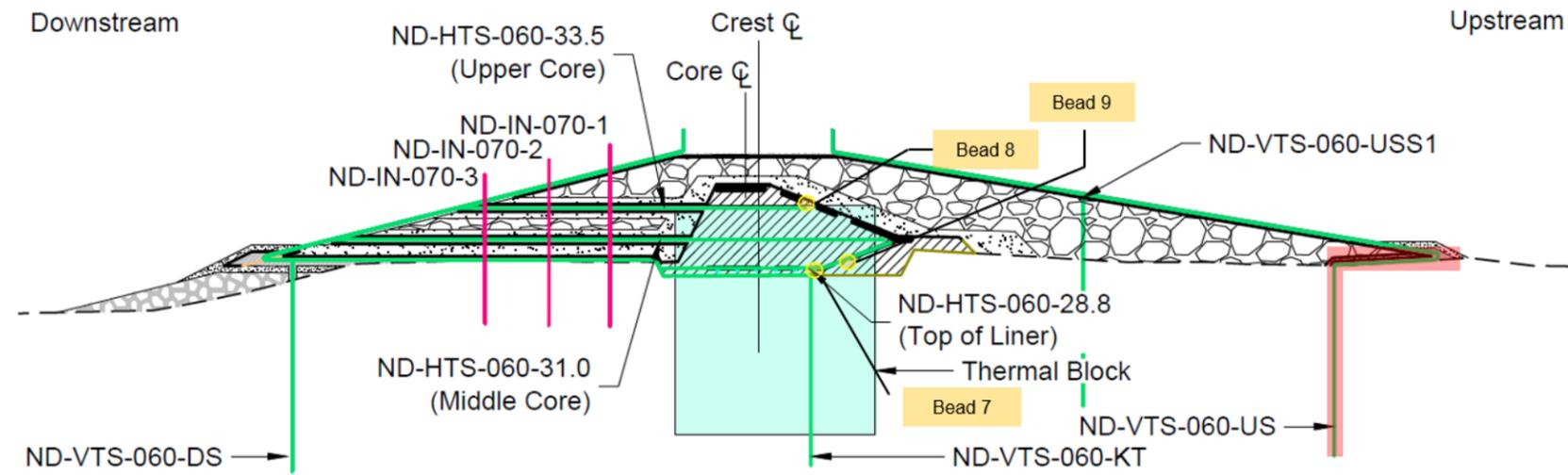
Notes:

- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded graphs between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Notable temperature increase observed in the upstream cables. This is expected to be related to historically high reclaim pond water levels in 2023-2024.
- (A)** Bead 9 active during January, March and August 2024 for ND-HTS-060-28.8.

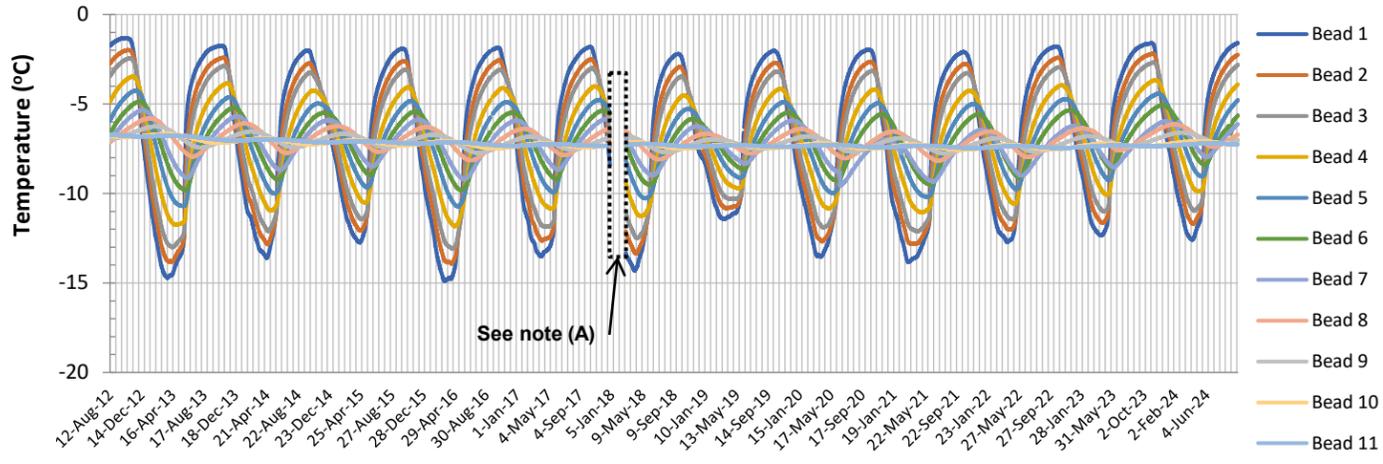
| | | | | |
|---|-----------------|--|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+60 Horizontal Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.4 |



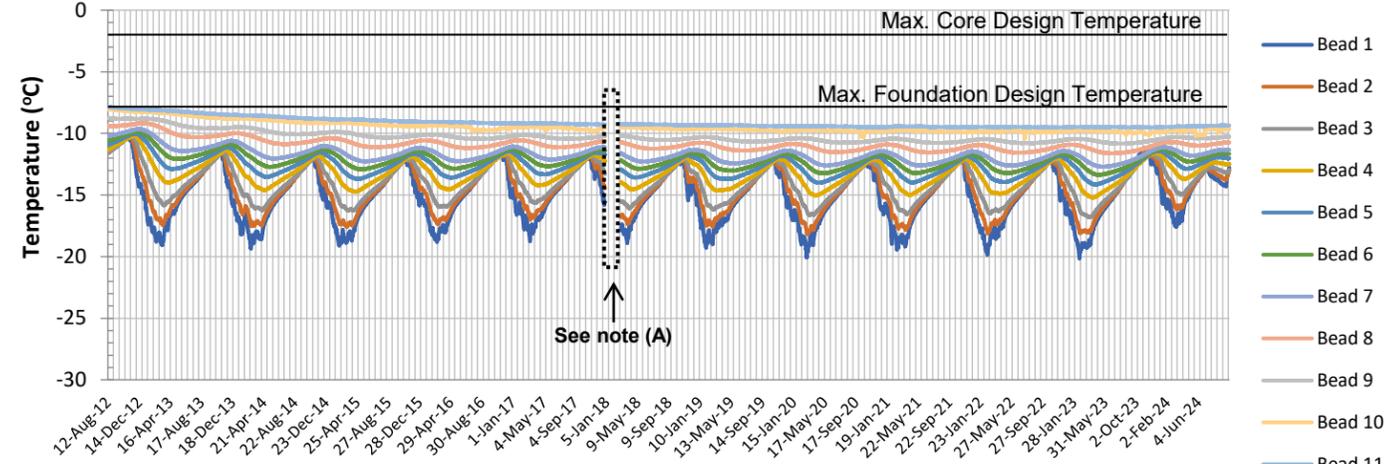
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block



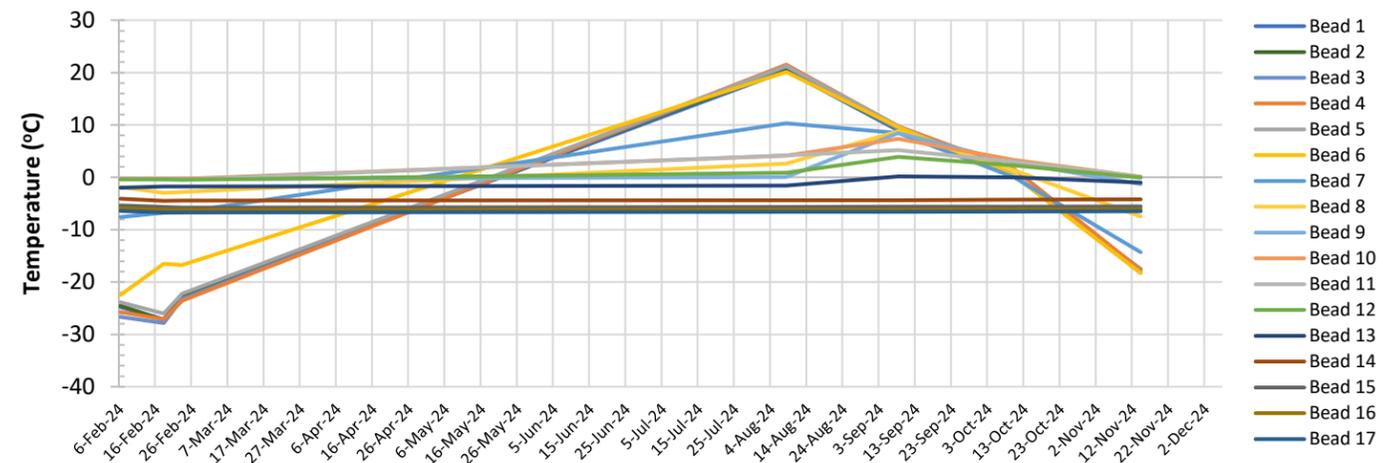
ND-VTS-060-DS



ND-VTS-060-KT

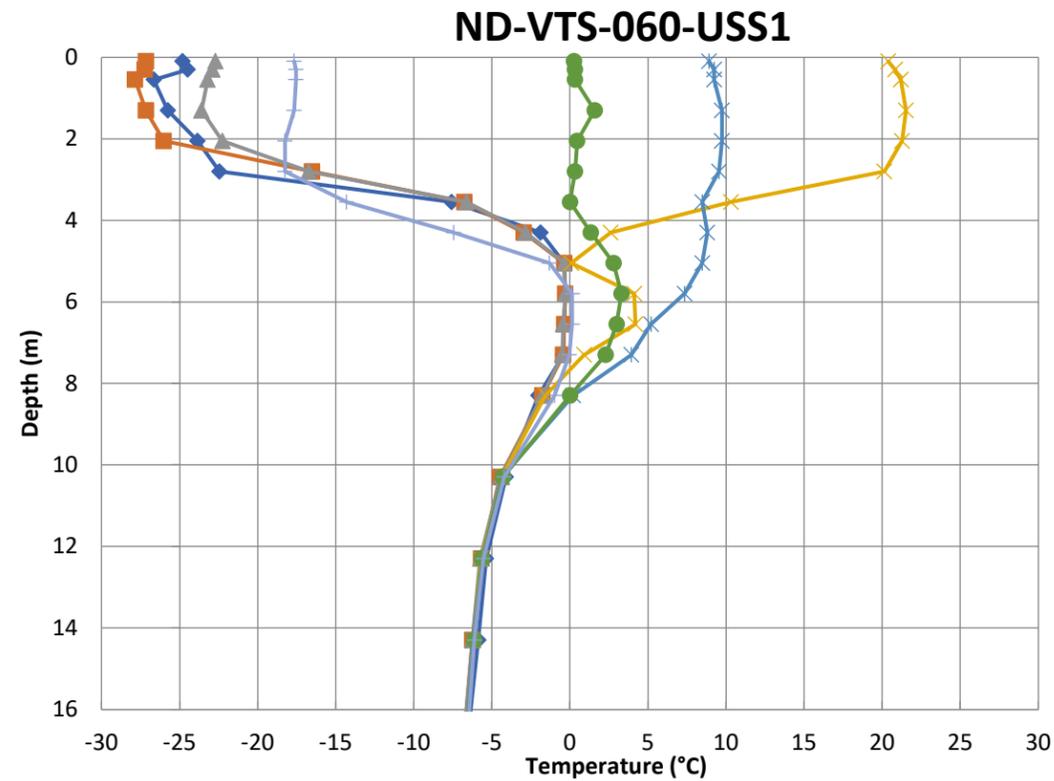


ND-VTS-060-USS1

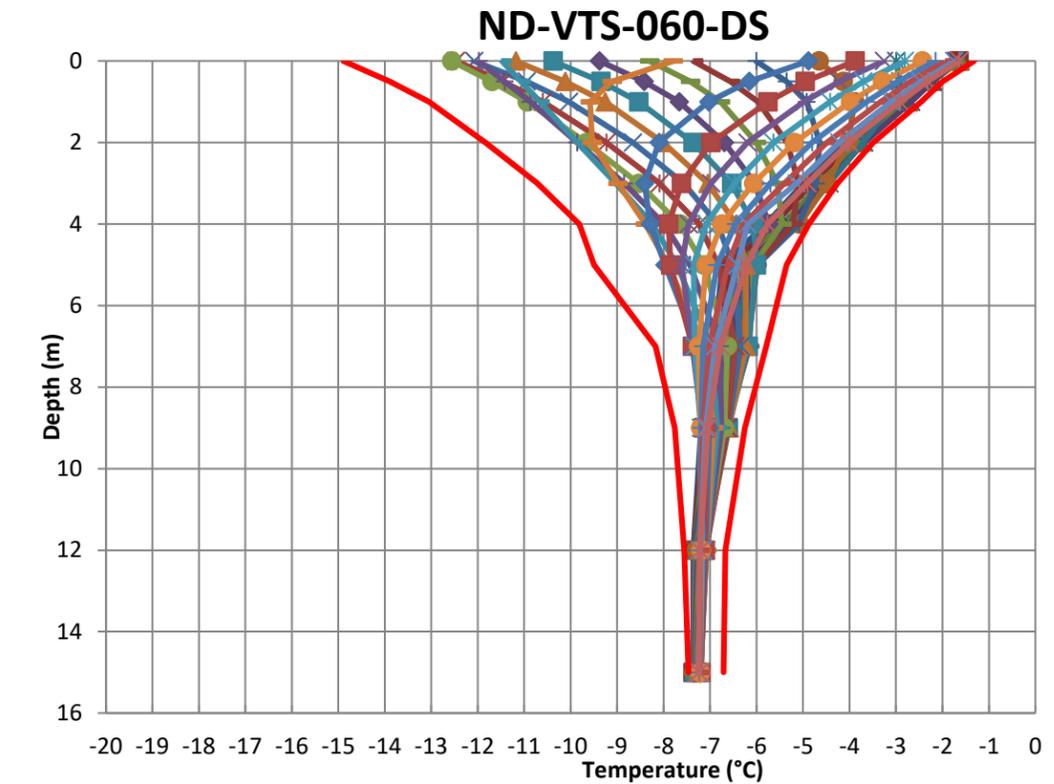


Notes:

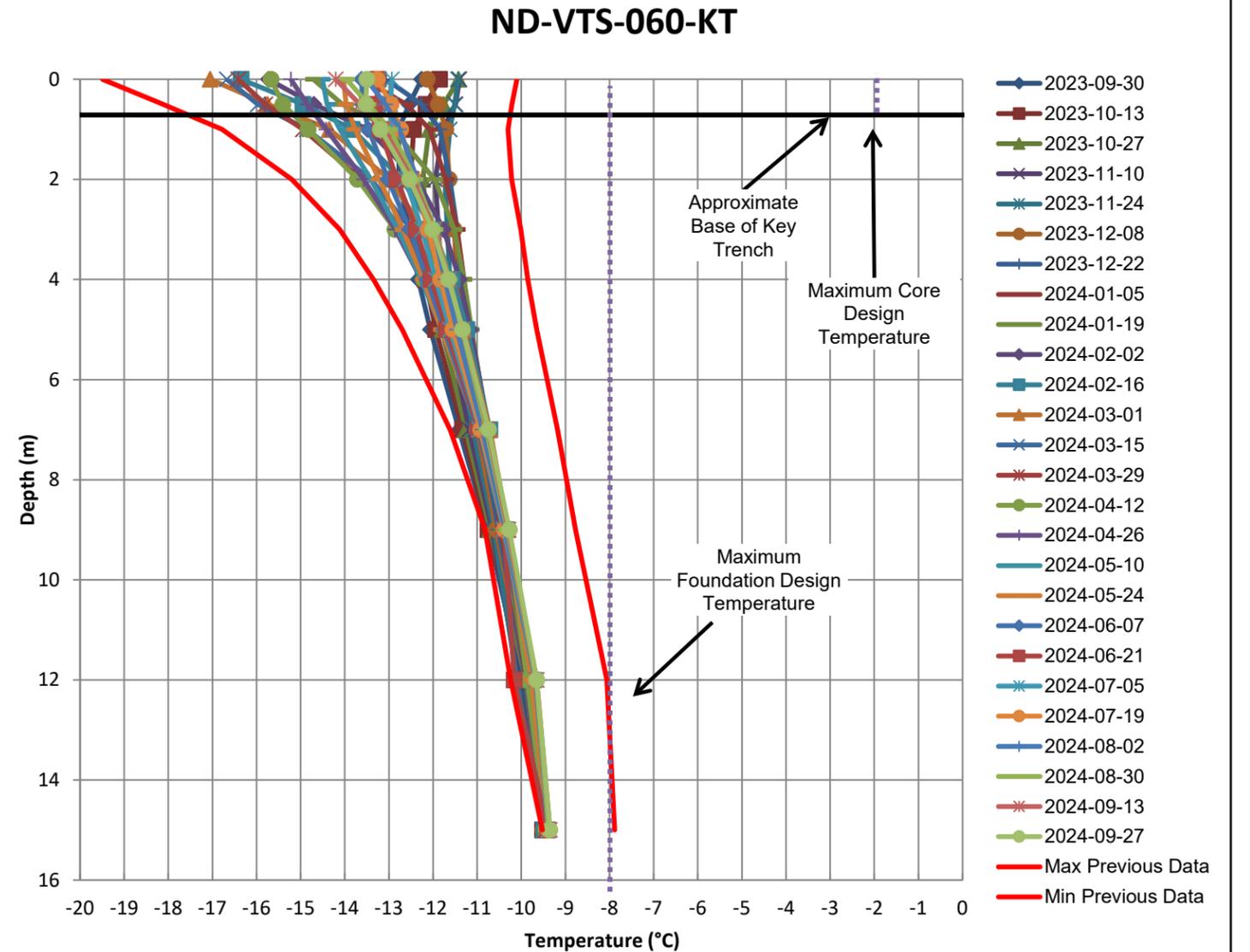
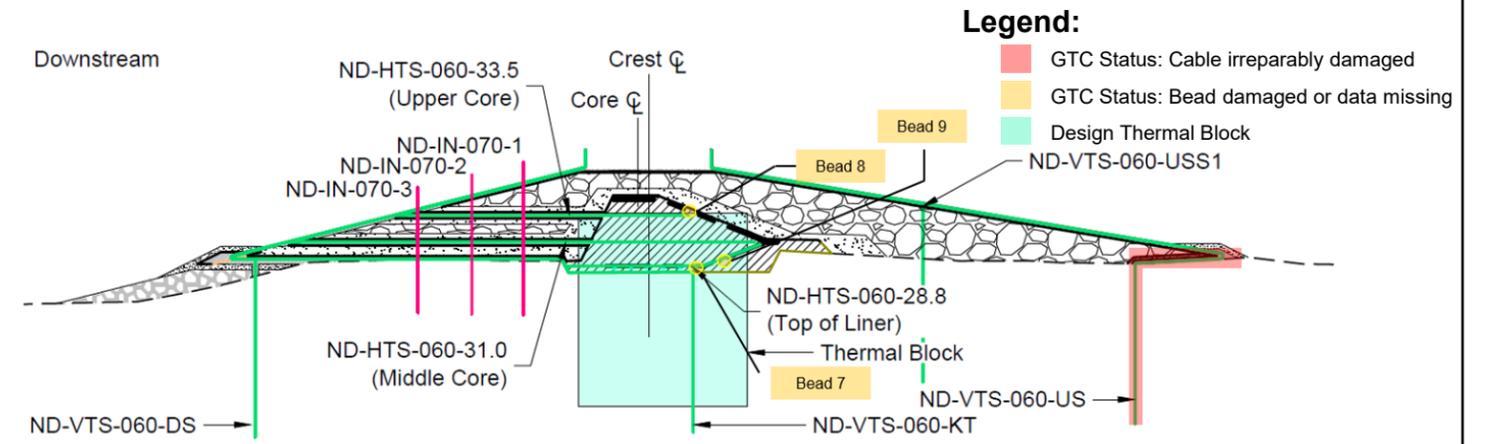
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- ND-VTS-060-US was damaged during construction.
- Recent ND-VTS-060-USS1 data were collected by both data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.
- **(A)** Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.



- 2024-02-06
- 2024-02-18
- 2024-02-23
- 2024-08-08
- 2024-09-08
- 2024-10-10
- 2024-11-14



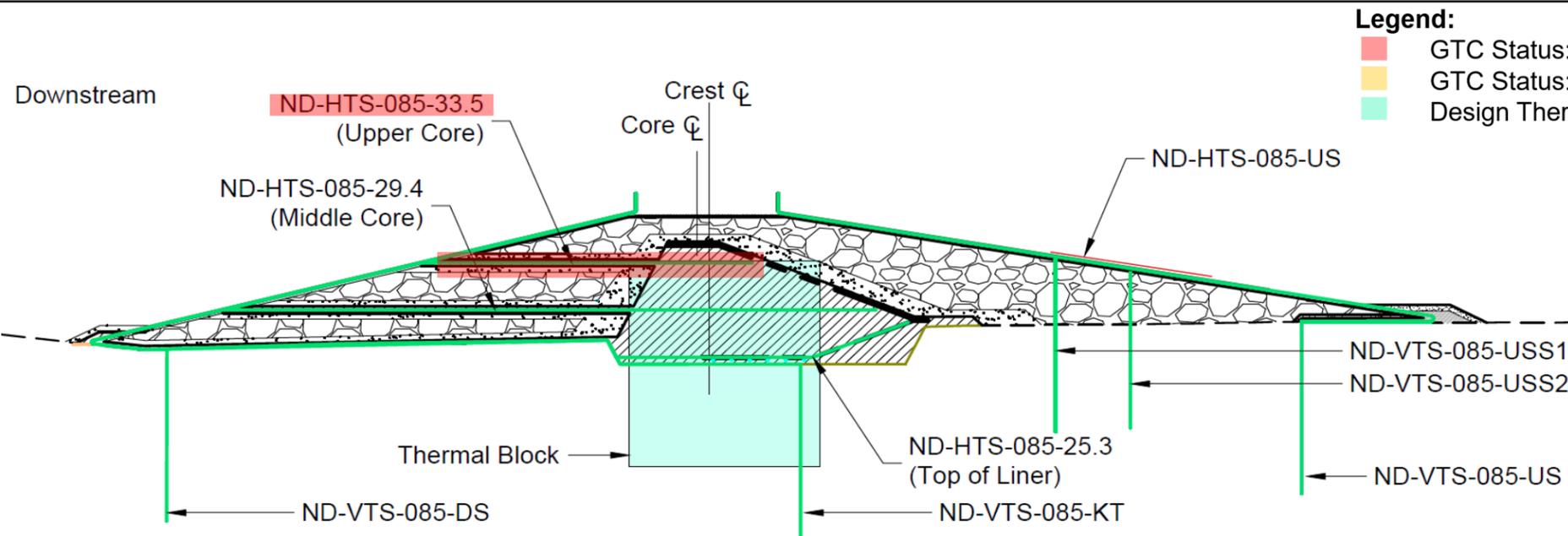
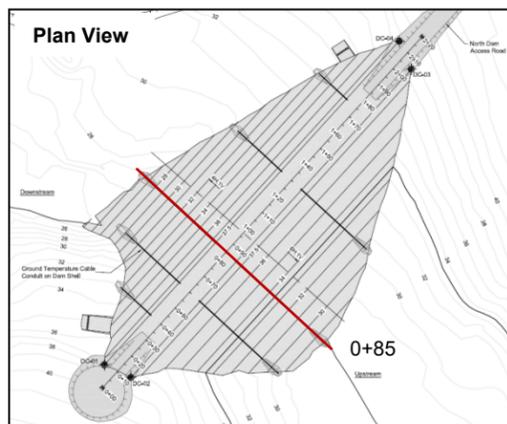
- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12



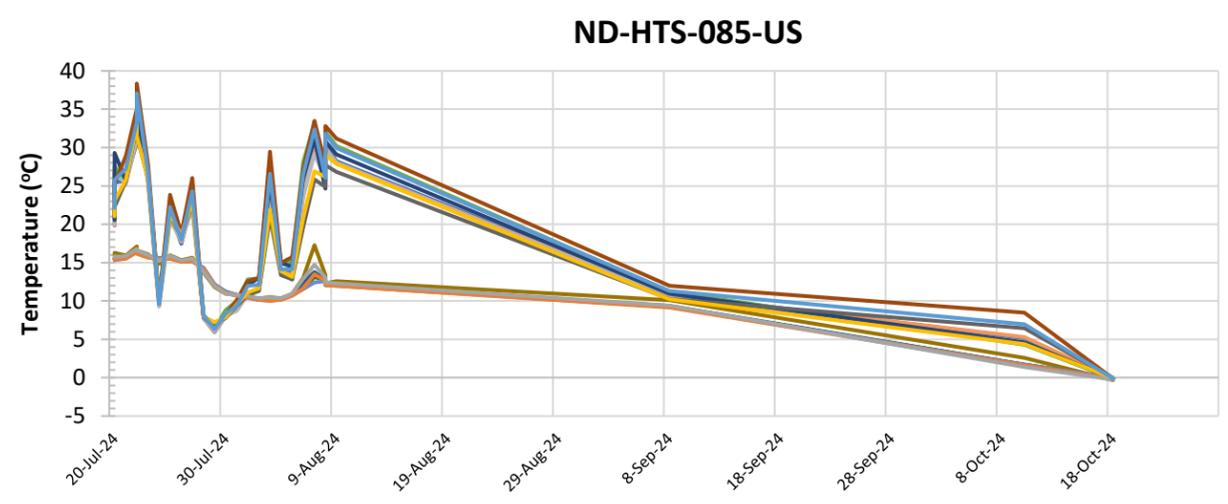
Notes:

- Vertical and horizontal offset graphs display data in two-week intervals. Due to limited data ND-VTS-060-USS1 displays select interval datasets from 2024.
- Previous data were recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).

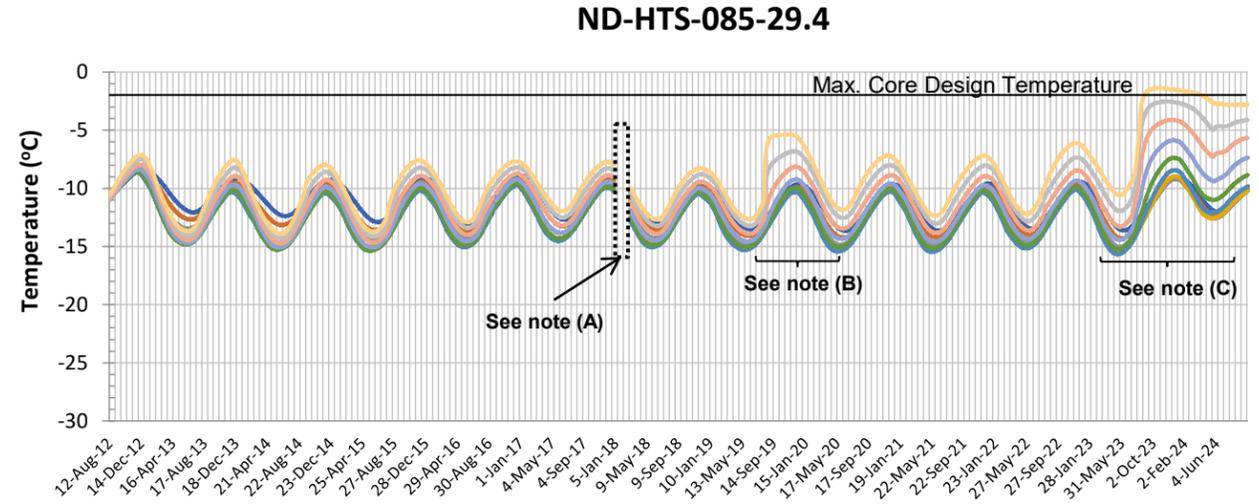
| | | | | |
|---|-----------------|--|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+60 Vertical Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.6 |



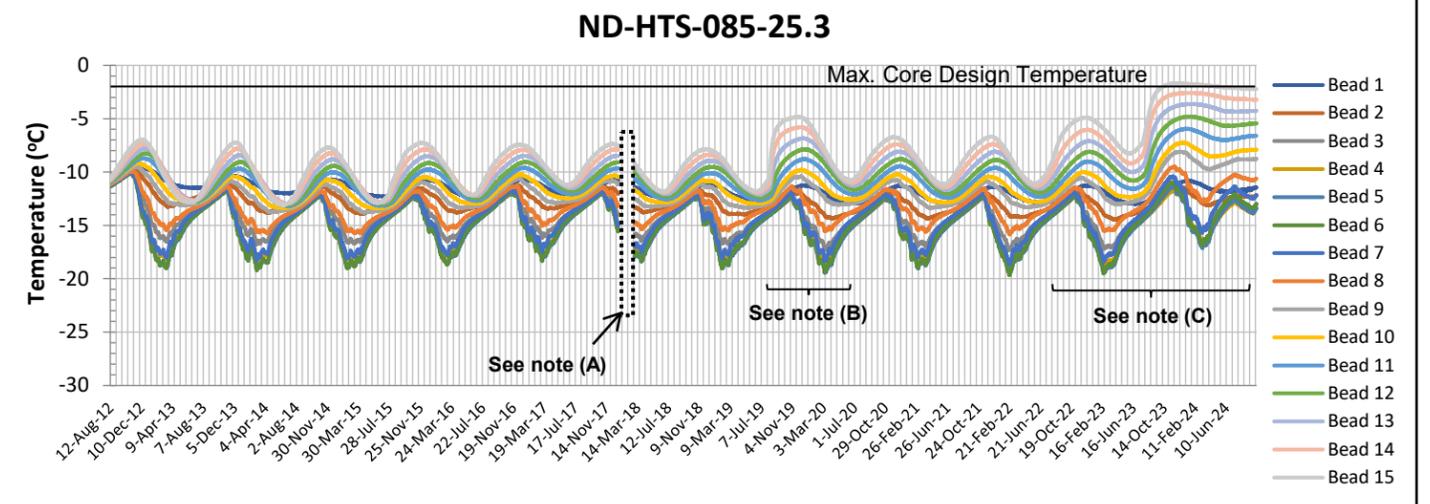
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block



- Bead 1
- Bead 2
- Bead 3
- Bead 4
- Bead 5
- Bead 6
- Bead 7
- Bead 8
- Bead 9
- Bead 10
- Bead 11
- Bead 12
- Bead 13
- Bead 14
- Bead 15



- Bead 1
- Bead 2
- Bead 3
- Bead 4
- Bead 5
- Bead 6
- Bead 7
- Bead 8
- Bead 9
- Bead 10

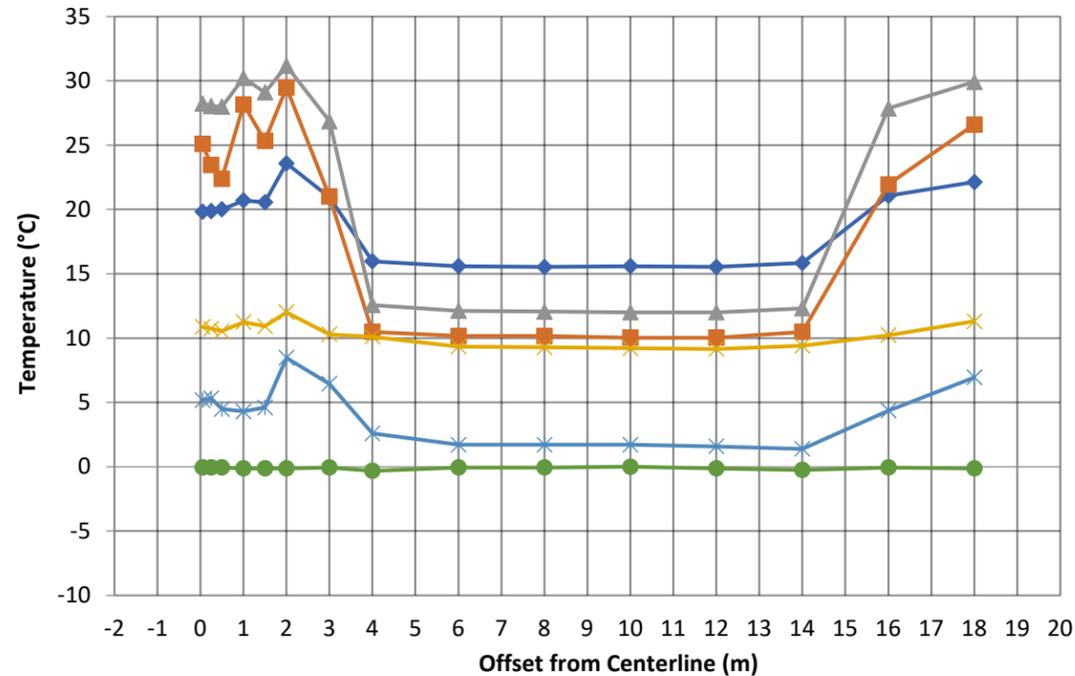


- Bead 1
- Bead 2
- Bead 3
- Bead 4
- Bead 5
- Bead 6
- Bead 7
- Bead 8
- Bead 9
- Bead 10
- Bead 11
- Bead 12
- Bead 13
- Bead 14
- Bead 15

Notes:

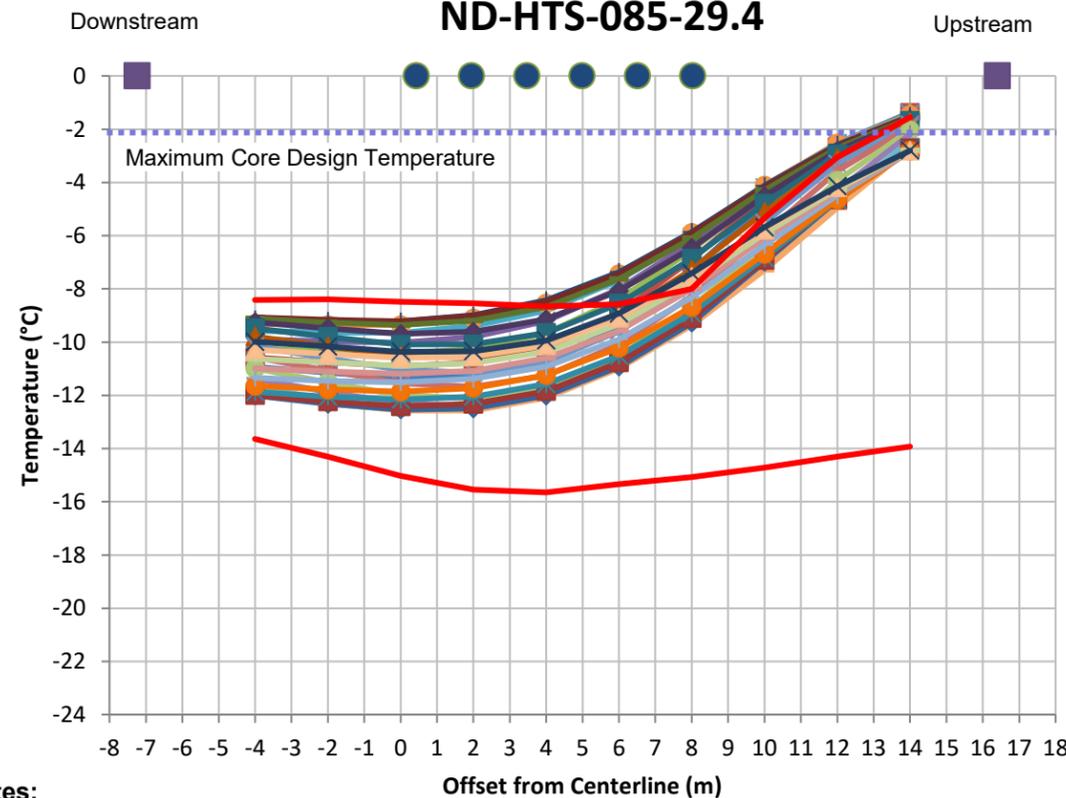
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Recent ND-HTS-085-US data were collected by both data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.
- **(A)** Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.
- **(B)** Notable temperature increase at the upstream-most beads observed in 2019. This is expected in response to the historically high reclaim pond water levels in 2019.
- **(C)** Notable temperature increase at the upstream-most beads observed in 2019. This is expected in response to the historically high reclaim pond water levels in 2023-2024.

ND-HTS-085-US

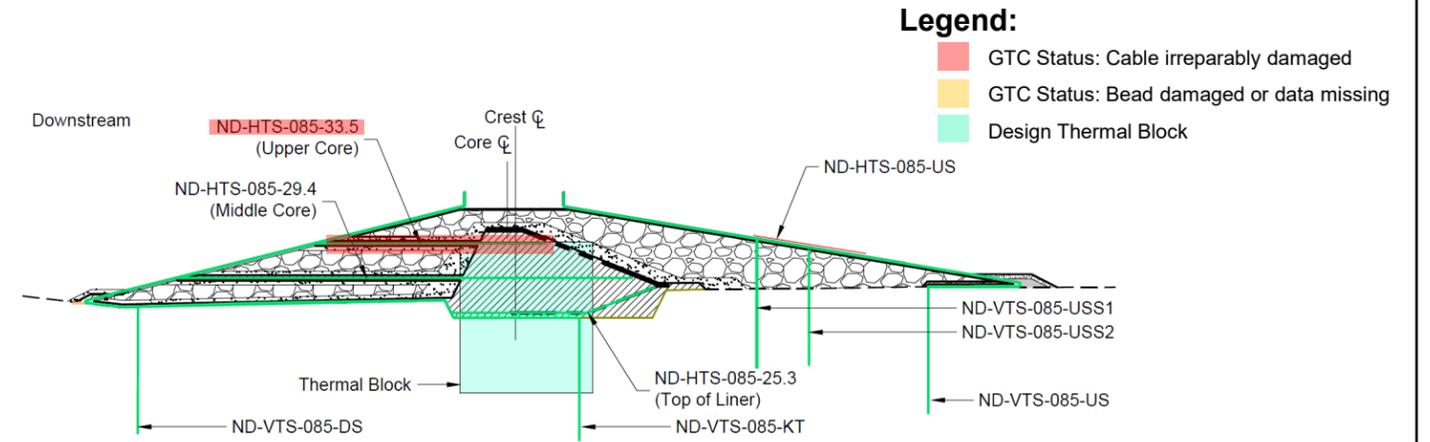


- 2024-07-20
- 2024-08-03
- 2024-08-09
- 2024-09-08
- 2024-10-10
- 2024-10-18

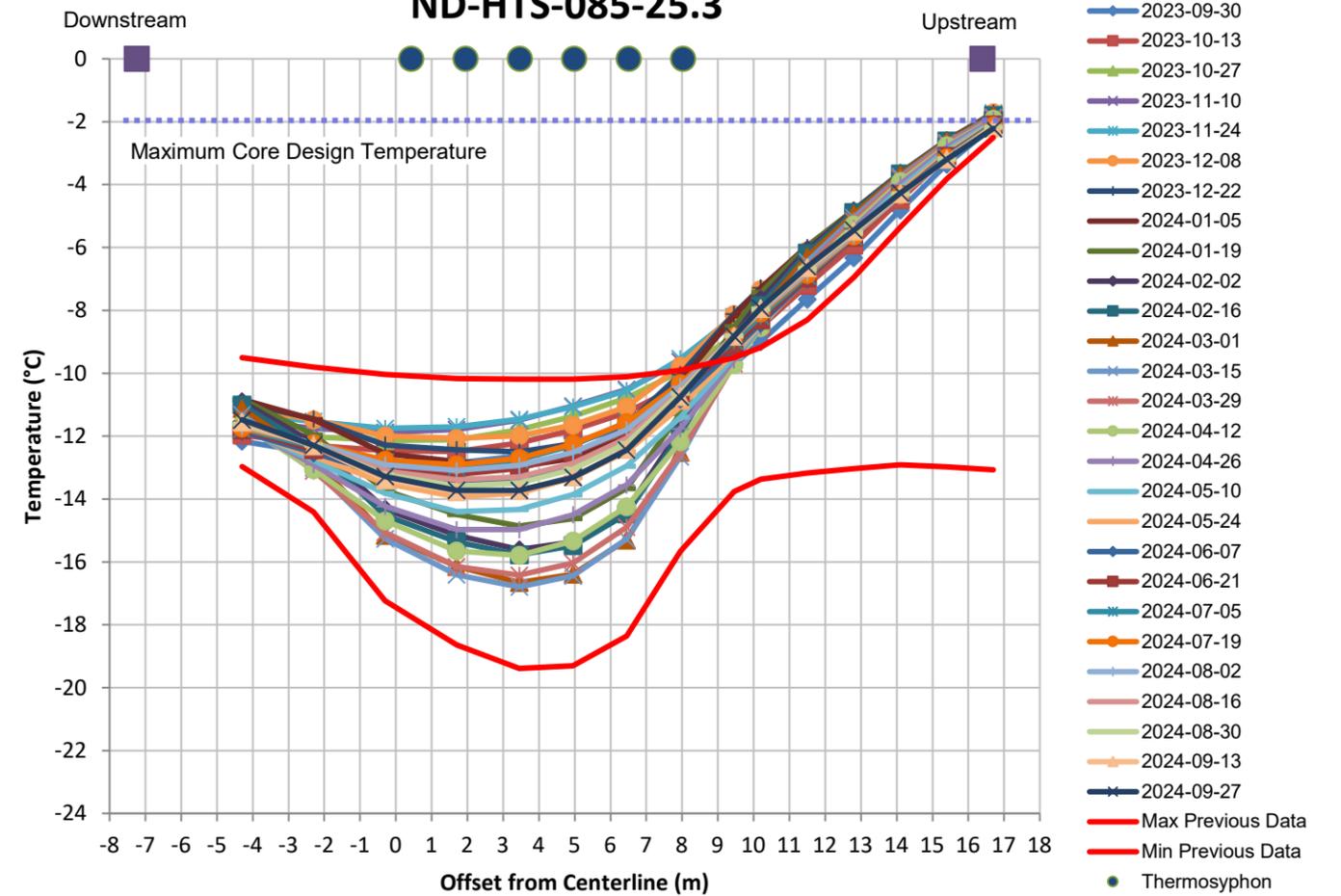
ND-HTS-085-29.4



- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data
- Thermosyphon
- Key Trench Edges



ND-HTS-085-25.3

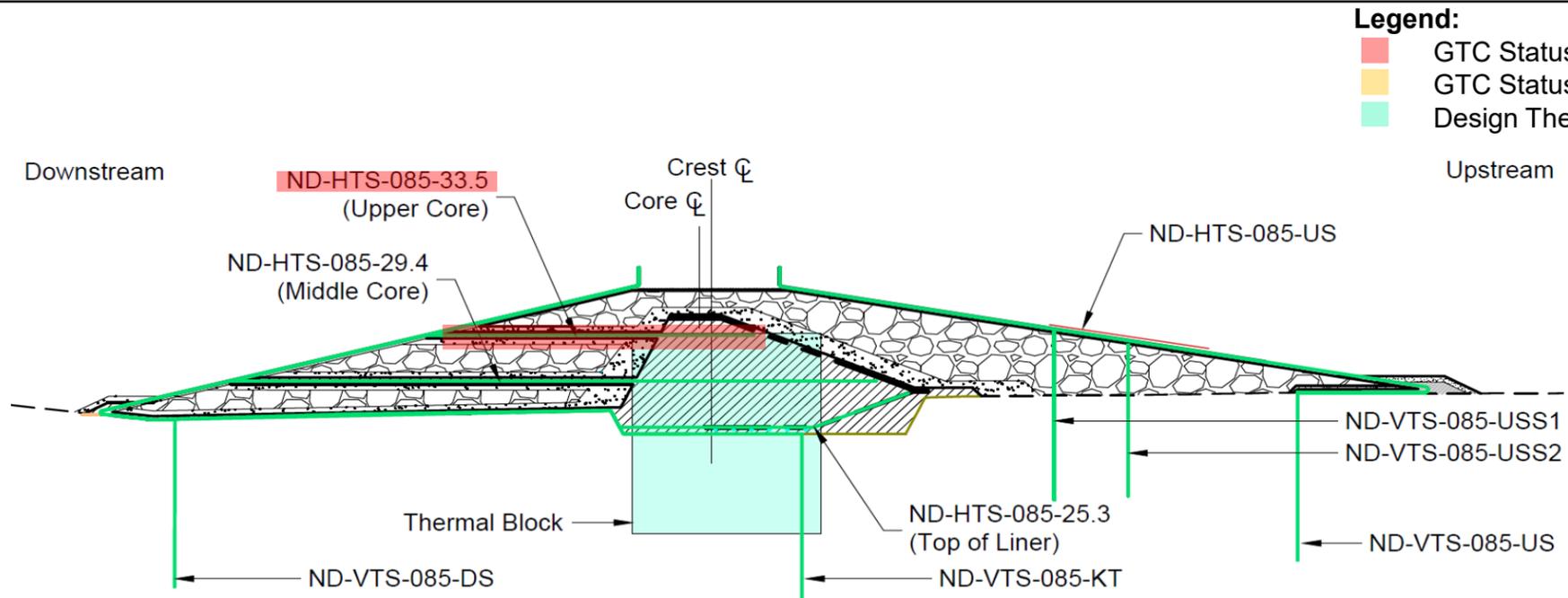
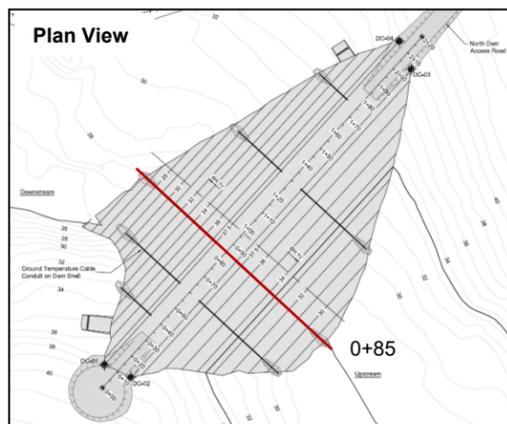


- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data
- Thermosyphon
- Key Trench Edges

Notes:

- Vertical and horizontal offset graphs display data in two-week intervals. Due to limited data ND-HTS-085-US displays select interval datasets from this reporting period.
- Previous Data were recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Erroneous data attributed to instrumentation error have been omitted.
- Notable temperature increase observed in the upstream cables. This is expected to be related to historically high reclaim pond water levels in 2023-2024.

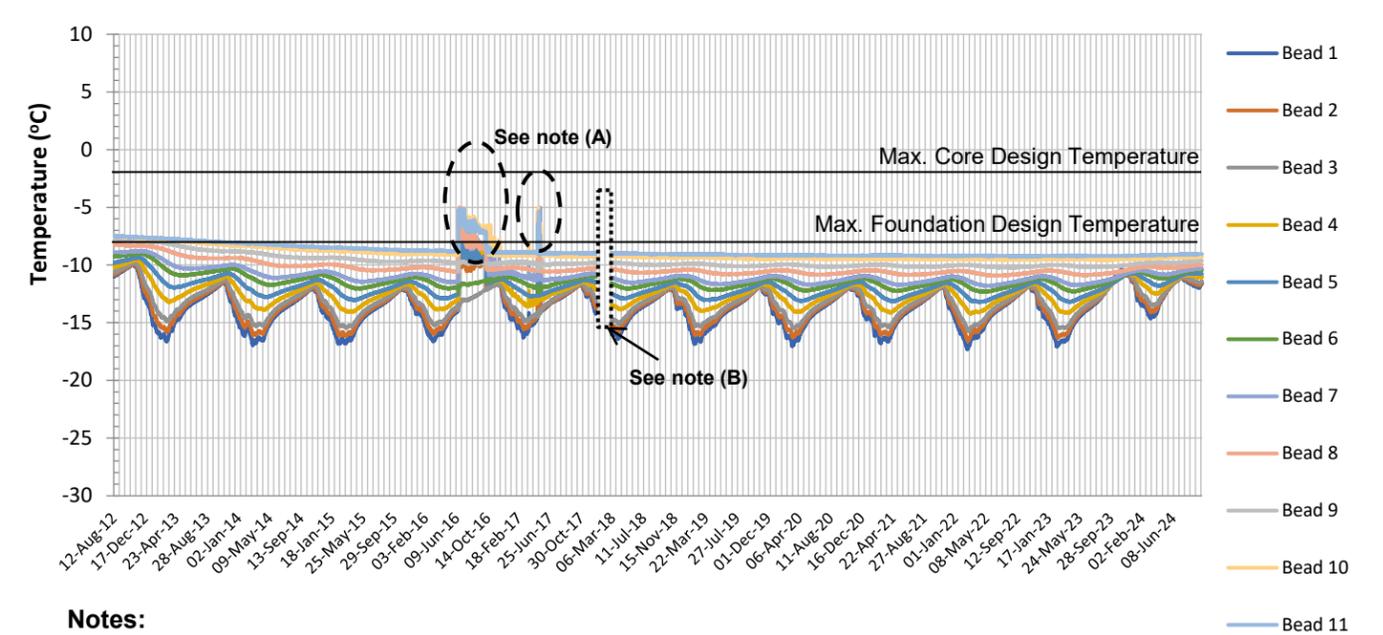
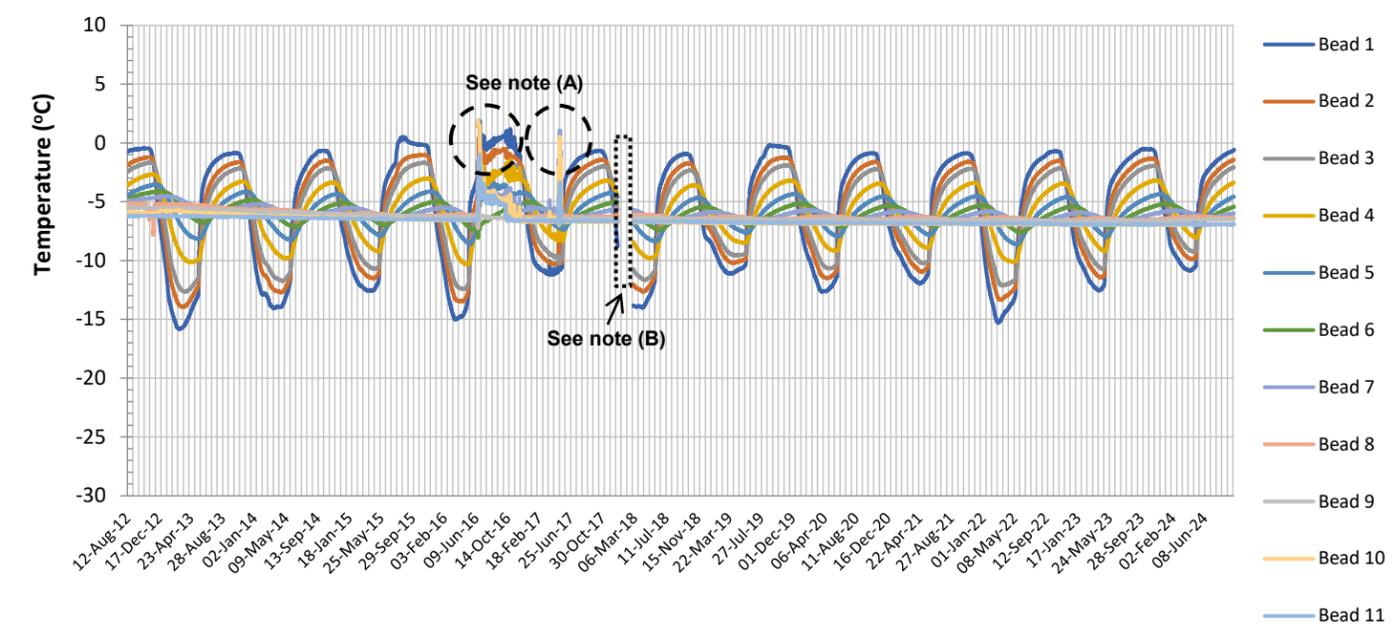
| | | | | |
|---|----------|--|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+85 Horizontal Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.8 |



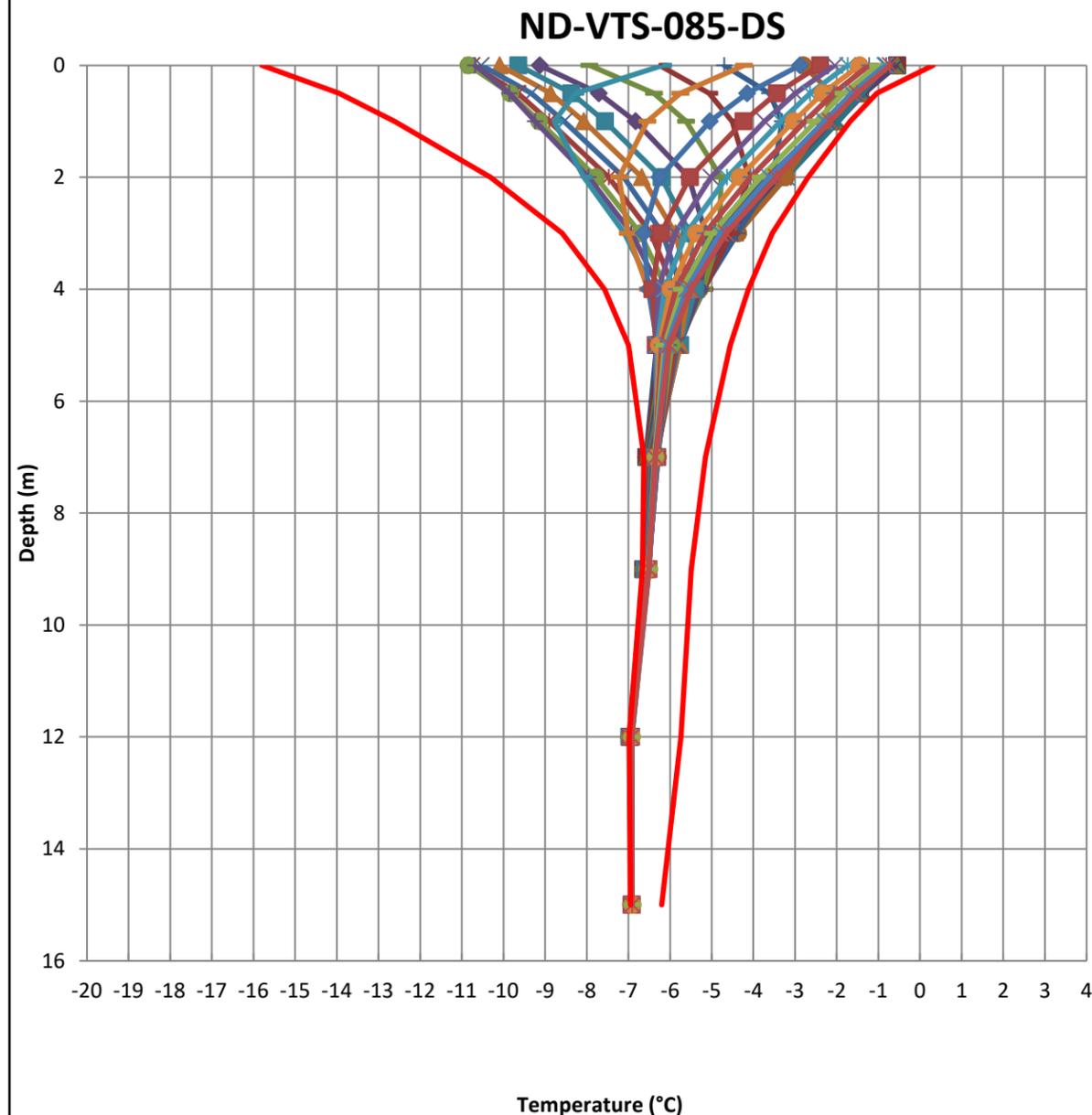
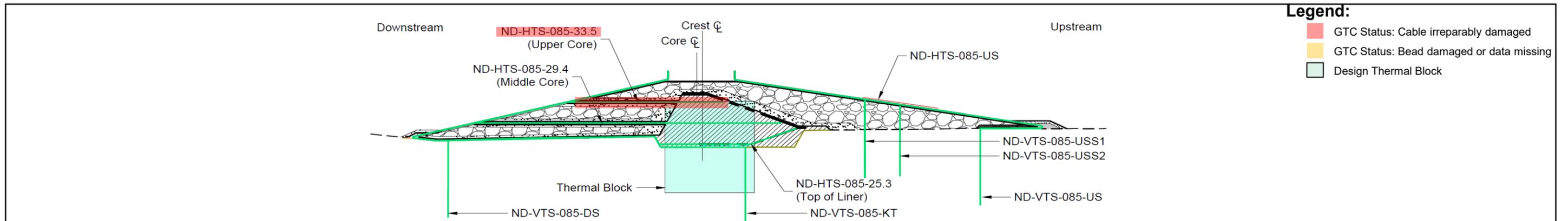
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block

ND-VTS-085-DS

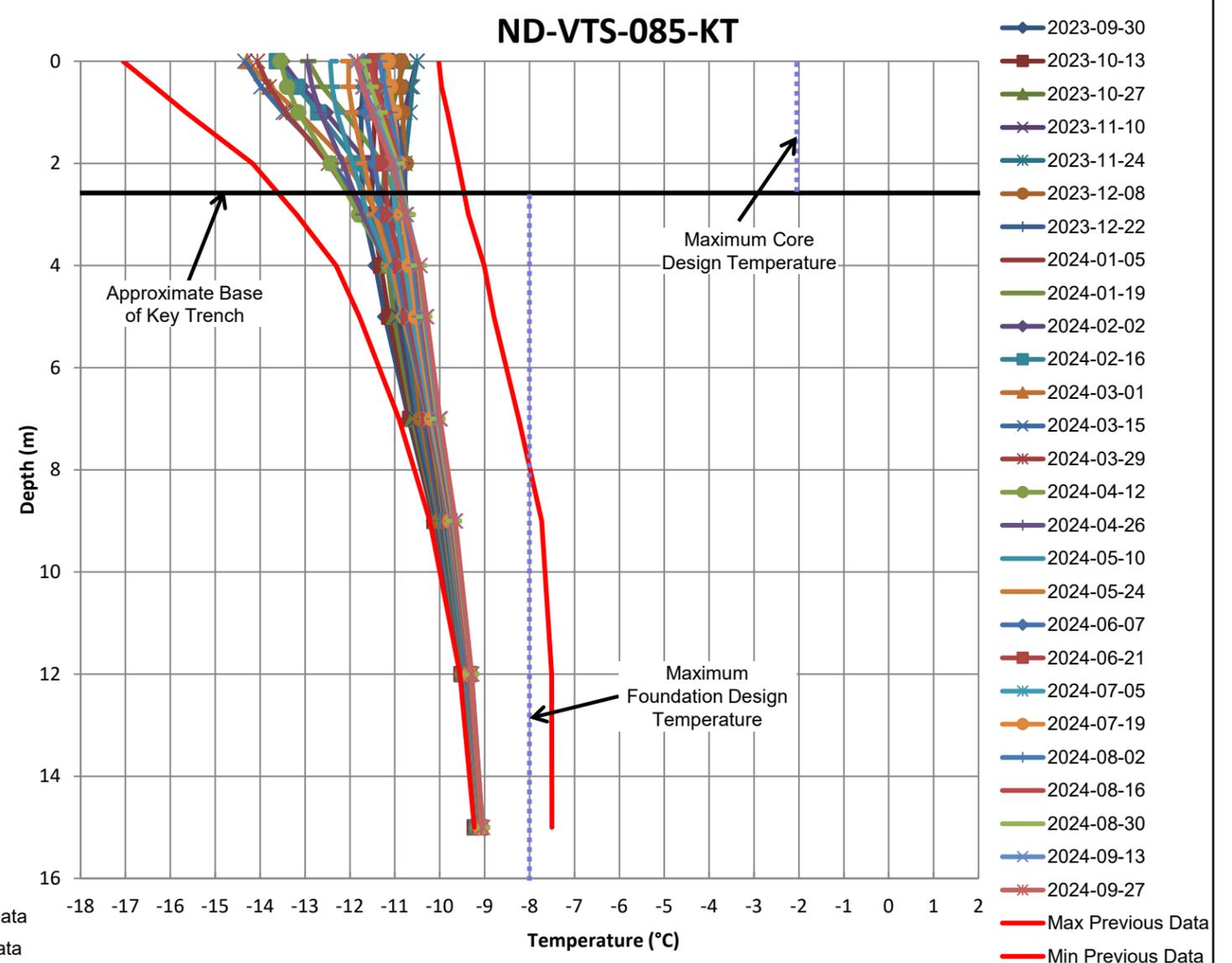
ND-VTS-085-KT



- Notes:**
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
 - **(A)** Temperature in Bead 1, 2, 4, 5, 7, 8, 10, 11 spiked in the Spring of 2016 and 2017. Erratic readings in some elevations suggest a data logger issue.
 - **(B)** Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.



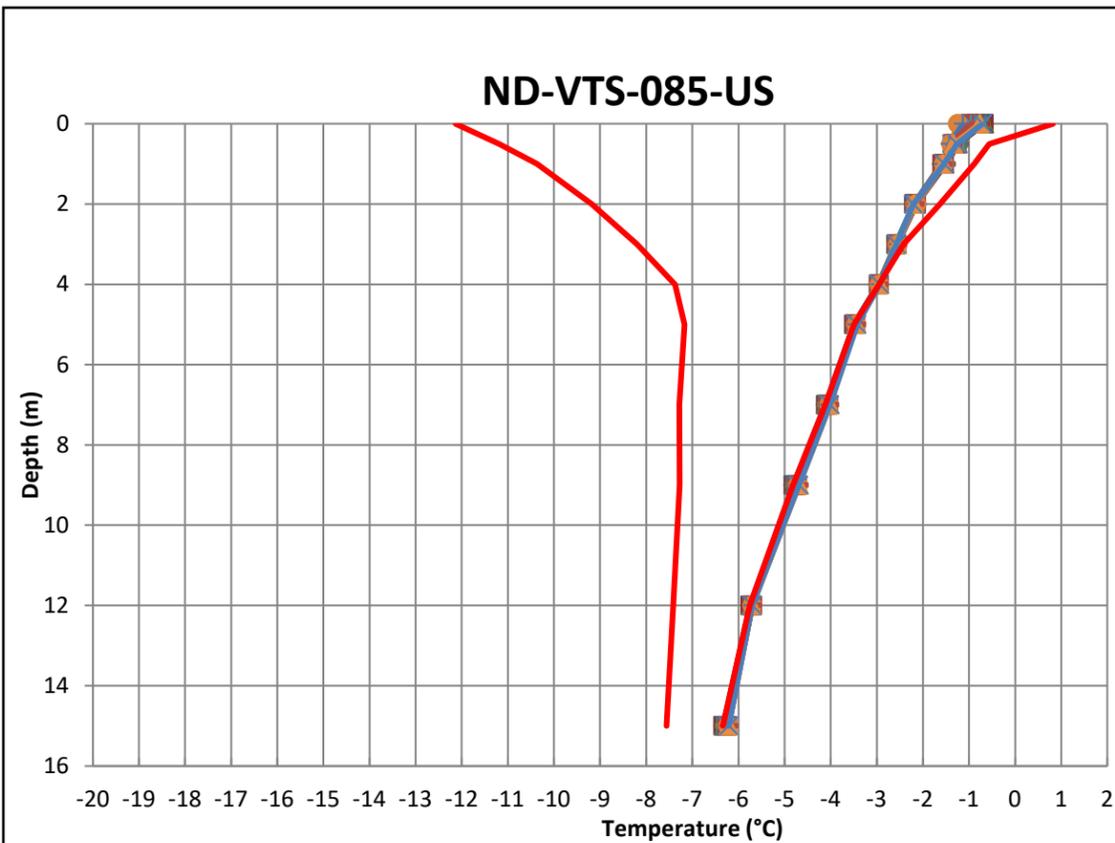
- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
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- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data



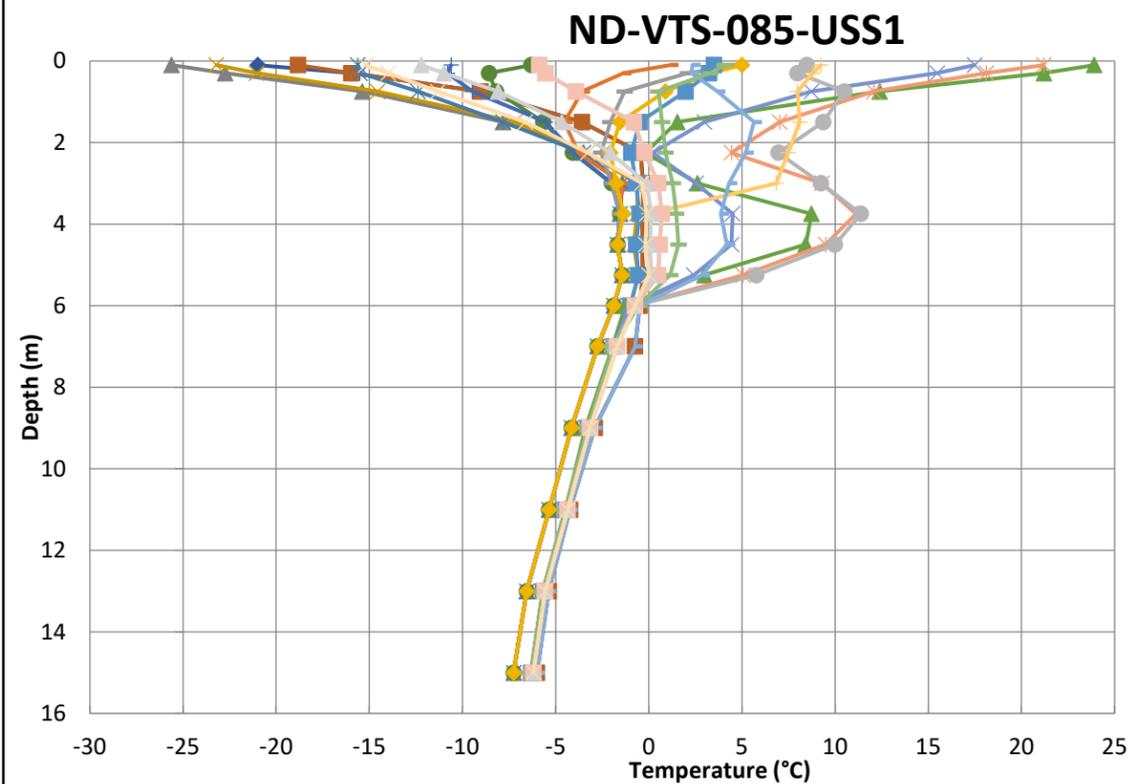
Note:

- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous Data was recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Erroneous data attributed to instrumentation error have been omitted.

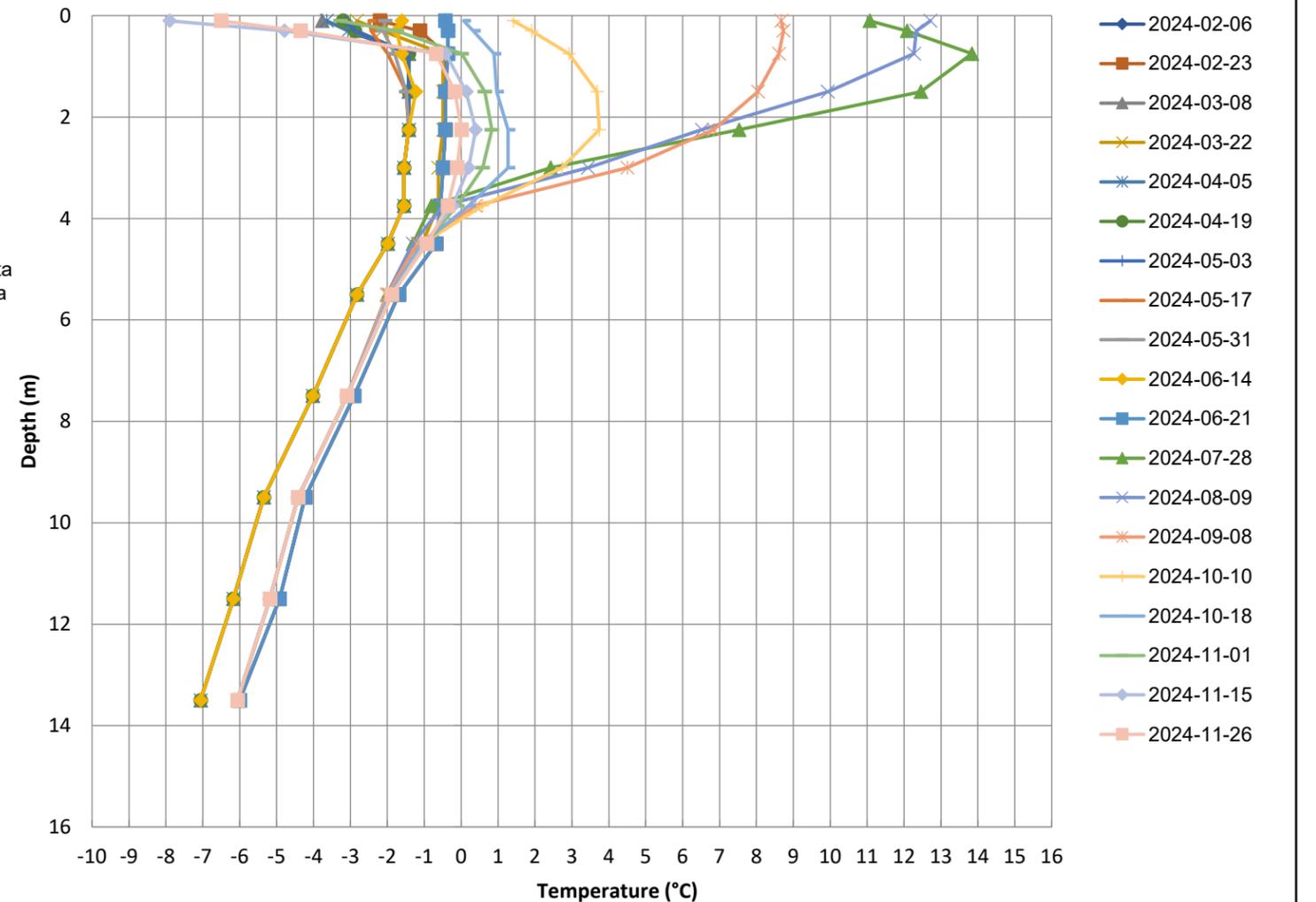
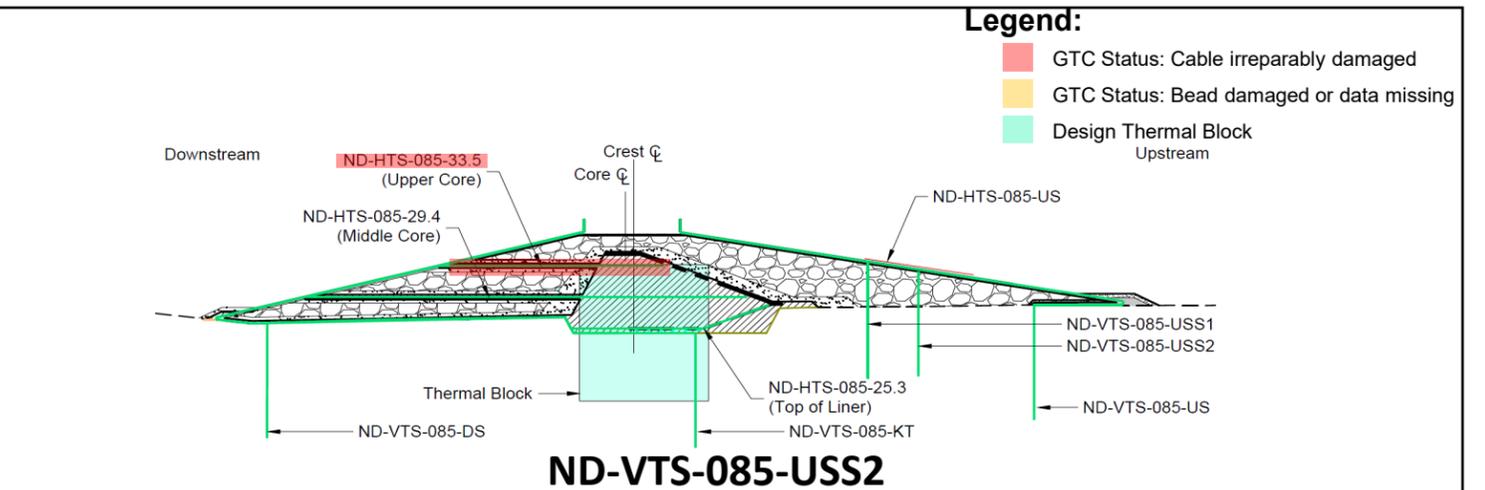
| | | | | |
|---|-----------------|--|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+85 Vertical Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.10 |



- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data



- 2024-02-06
- 2024-02-23
- 2024-03-07
- 2024-03-22
- 2024-04-04
- 2024-04-18
- 2024-04-30
- 2024-05-14
- 2024-05-28
- 2024-06-11
- 2024-06-21
- 2024-07-22
- 2024-08-08
- 2024-08-20
- 2024-09-03
- 2024-09-17
- 2024-10-01
- 2024-10-15
- 2024-10-29
- 2024-10-29
- 2024-11-12
- 2024-11-26

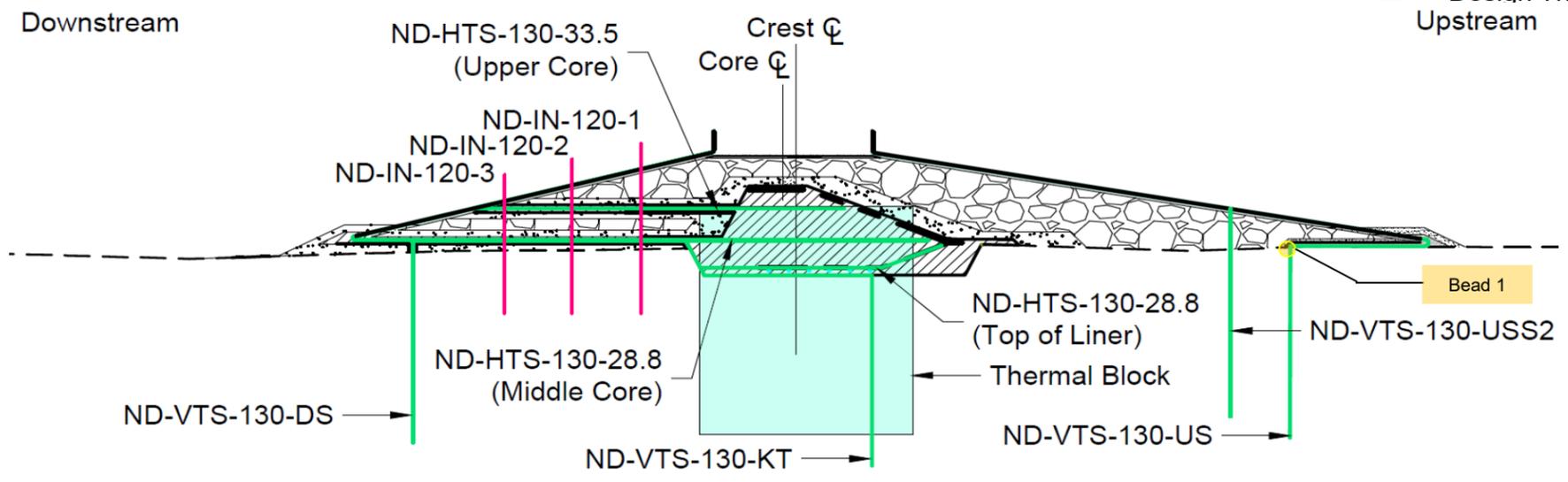
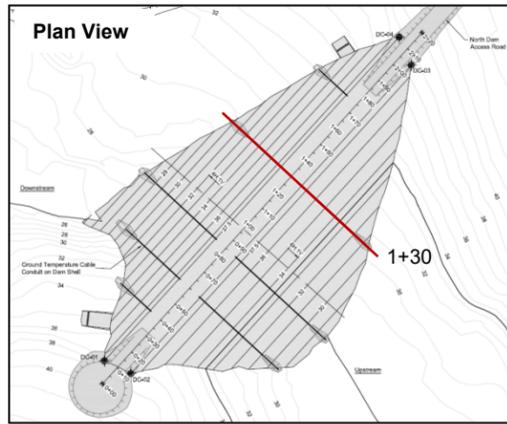


- 2024-02-06
- 2024-02-23
- 2024-03-08
- 2024-03-22
- 2024-04-05
- 2024-04-19
- 2024-05-03
- 2024-05-17
- 2024-05-31
- 2024-06-14
- 2024-06-21
- 2024-07-28
- 2024-08-09
- 2024-09-08
- 2024-10-10
- 2024-10-18
- 2024-11-01
- 2024-11-15
- 2024-11-26

Note:

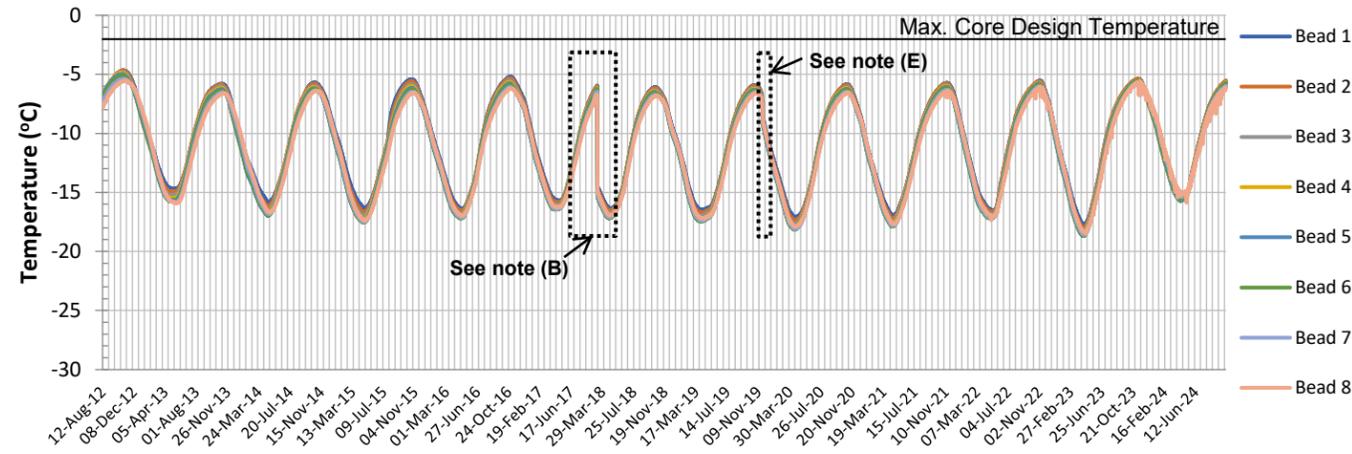
- Vertical and horizontal offset graphs display data in two-week intervals. Due to limited data ND-VTS-085-USS1 and ND-VTS-085-USS2 display select interval datasets from this reporting period.
- Previous Data was recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Erroneous data attributed to instrumentation error have been omitted.

| | | | | |
|---|-----------------|--|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+85 Vertical Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.12 |

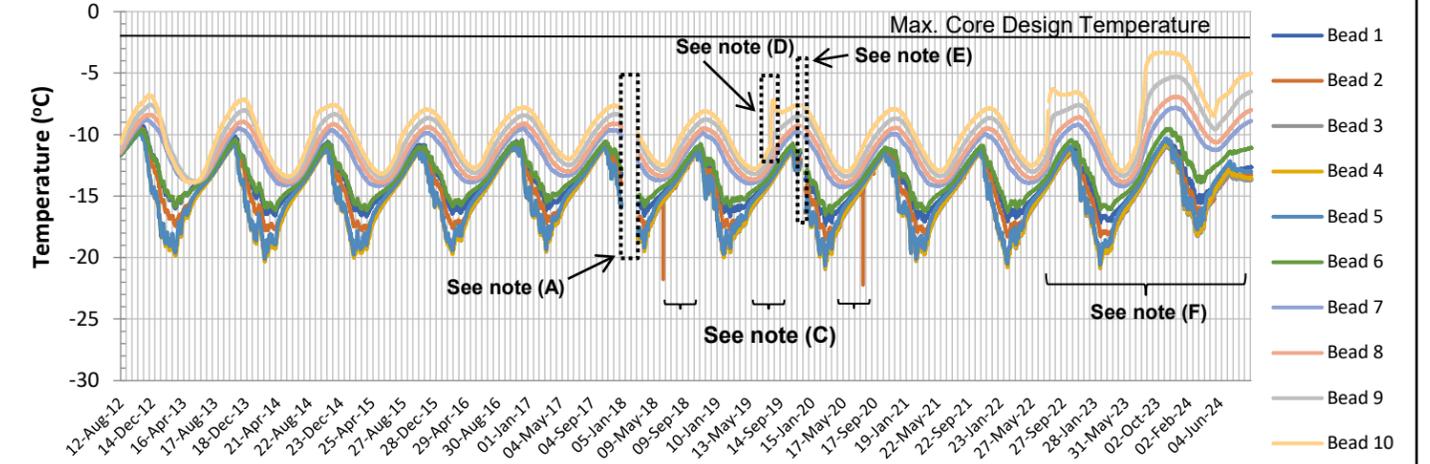


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block
 Upstream

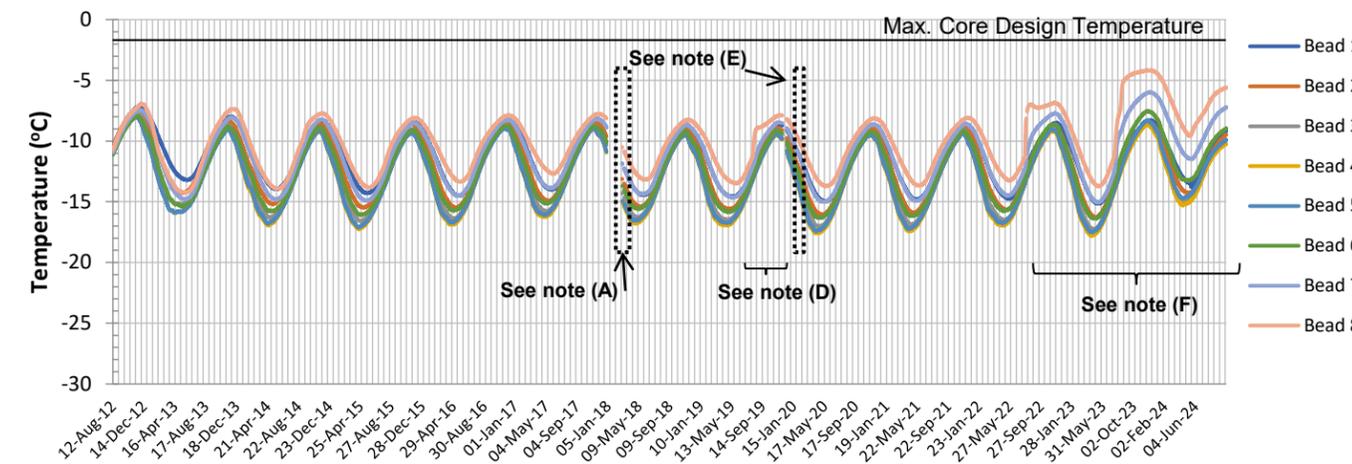
ND-HTS-130-33.5



ND-HTS-130-28.8

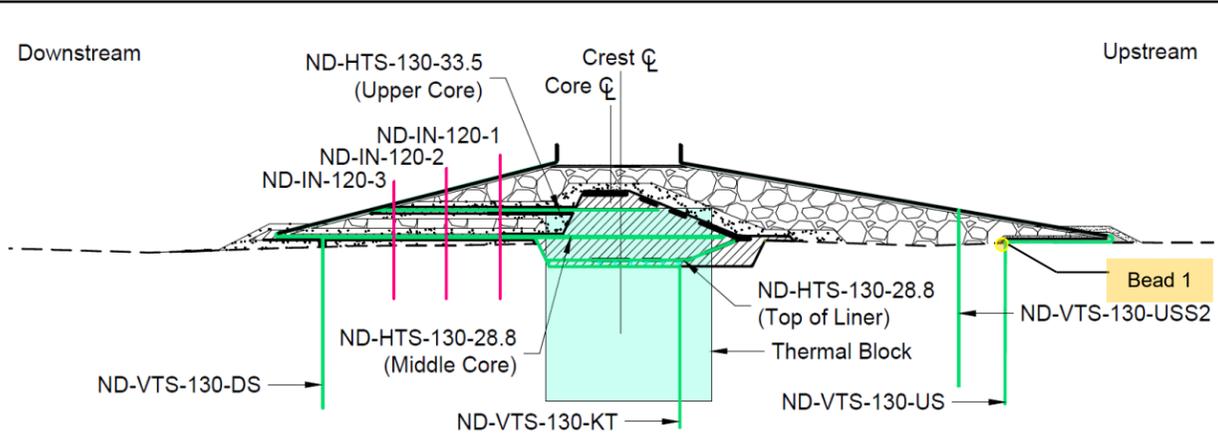


ND-HTS-130-31.0



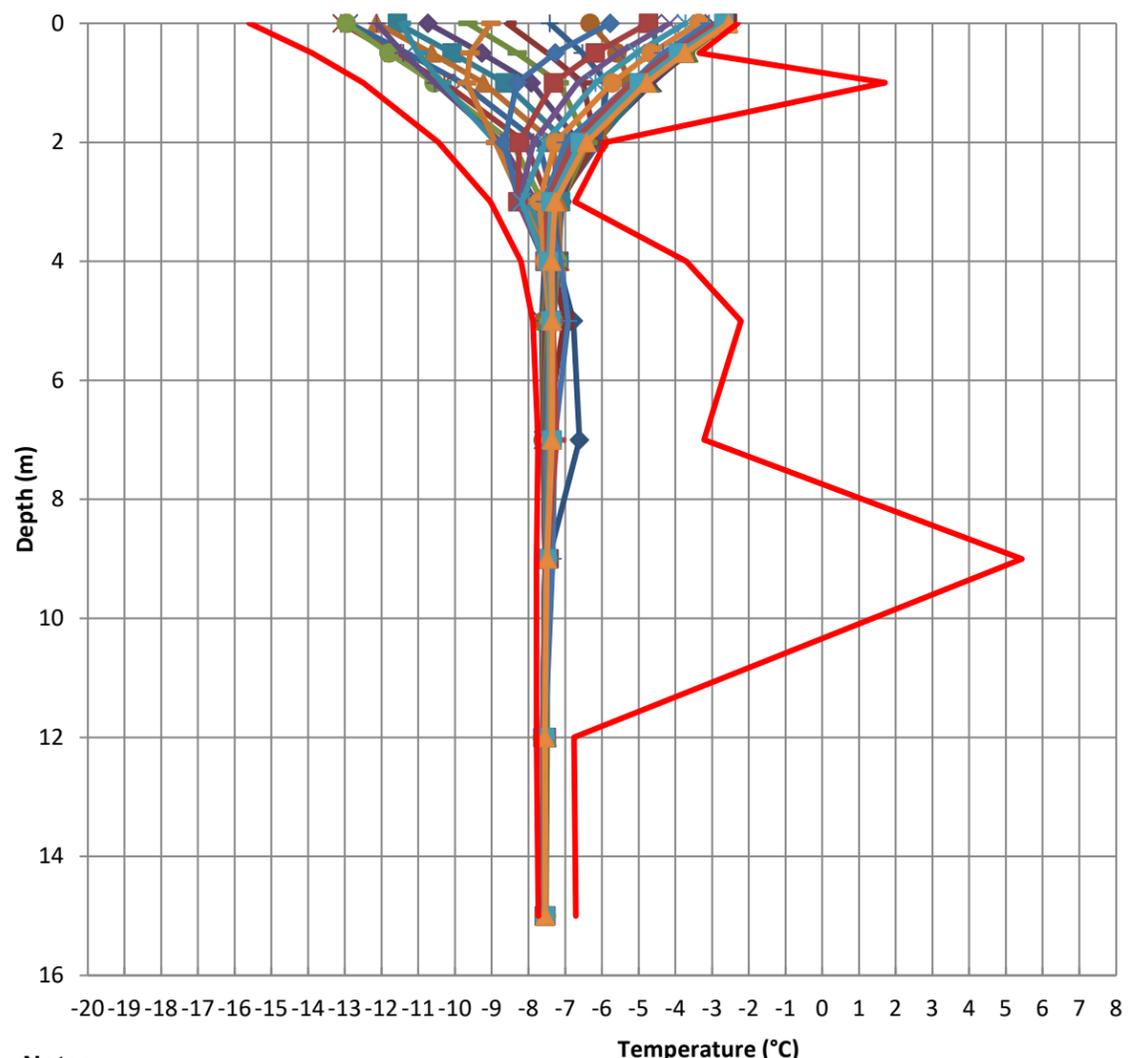
- Notes:**
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
 - **(A)** Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.
 - **(B)** ND-HTS-130-33.5 was disconnected from September 24, 2017 to March 3, 2018 due to damaged cable lead.
 - **(C)** Low temperature spikes and intermittent data logging from Bead 2 of ND-HTS-130-28.8 were observed in the Summer of 2018, 2019 and 2020. Attributed to instrumentation error.
 - **(D)** Notable temperature increase at the upstream-most beads observed in 2019. This is expected in response to the historically high reclaim pond water levels during that period.
 - **(E)** Data collection gaps between November 21, 2019 and December 20, 2019.
 - **(F)** Notable temperature increase at the upstream-most beads observed from 2022-2024. This is expected in response to the historically high reclaim pond water levels during that period.

| | | | | |
|---|-----------------|--|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+130 Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.13 |

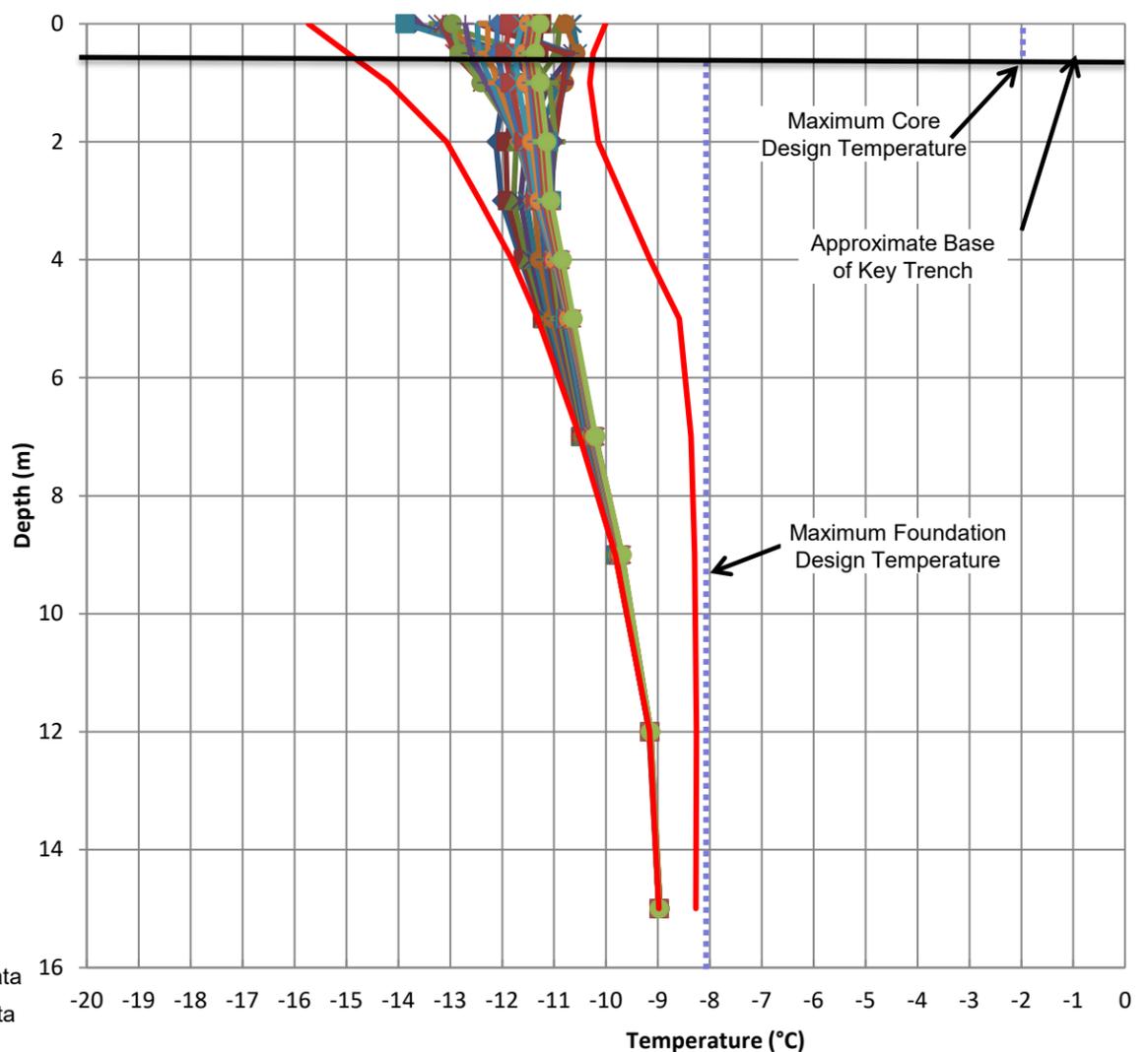


- Legend:**
- GTC Status: Cable irreparably damaged
 - GTC Status: Bead damaged or data missing
 - Design Thermal Block

ND-VTS-130-DS



ND-VTS-130-KT

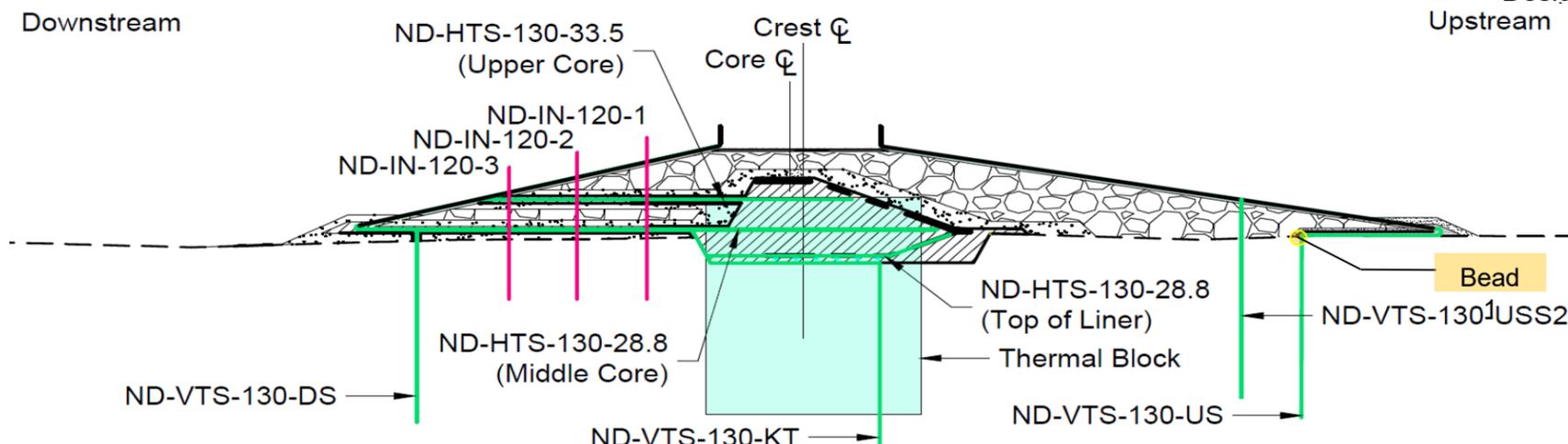
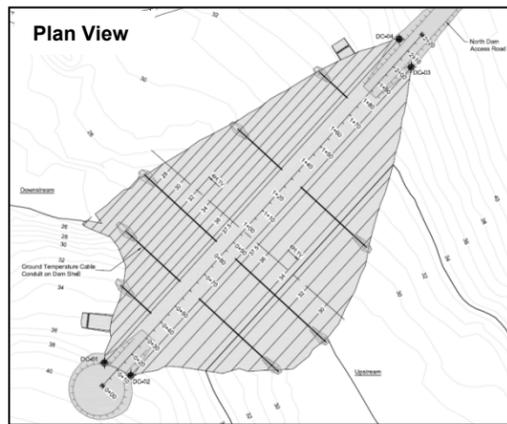


- ◆ 2023-09-30
- 2023-10-13
- ▲ 2023-10-27
- ✕ 2023-11-10
- ✱ 2023-11-24
- 2023-12-08
- ⊕ 2023-12-22
- 2024-01-05
- ▲ 2024-01-19
- ✕ 2024-02-02
- ✱ 2024-02-16
- 2024-03-01
- ⊕ 2024-03-15
- 2024-03-29
- ▲ 2024-04-12
- ✕ 2024-04-26
- ✱ 2024-05-10
- 2024-05-24
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- 2024-06-21
- ✕ 2024-07-05
- ✱ 2024-07-19
- 2024-08-02
- ⊕ 2024-08-16
- 2024-08-30
- ▲ 2024-09-13
- ✕ 2024-09-27
- Max Previous Data
- Min Previous Data

Notes:

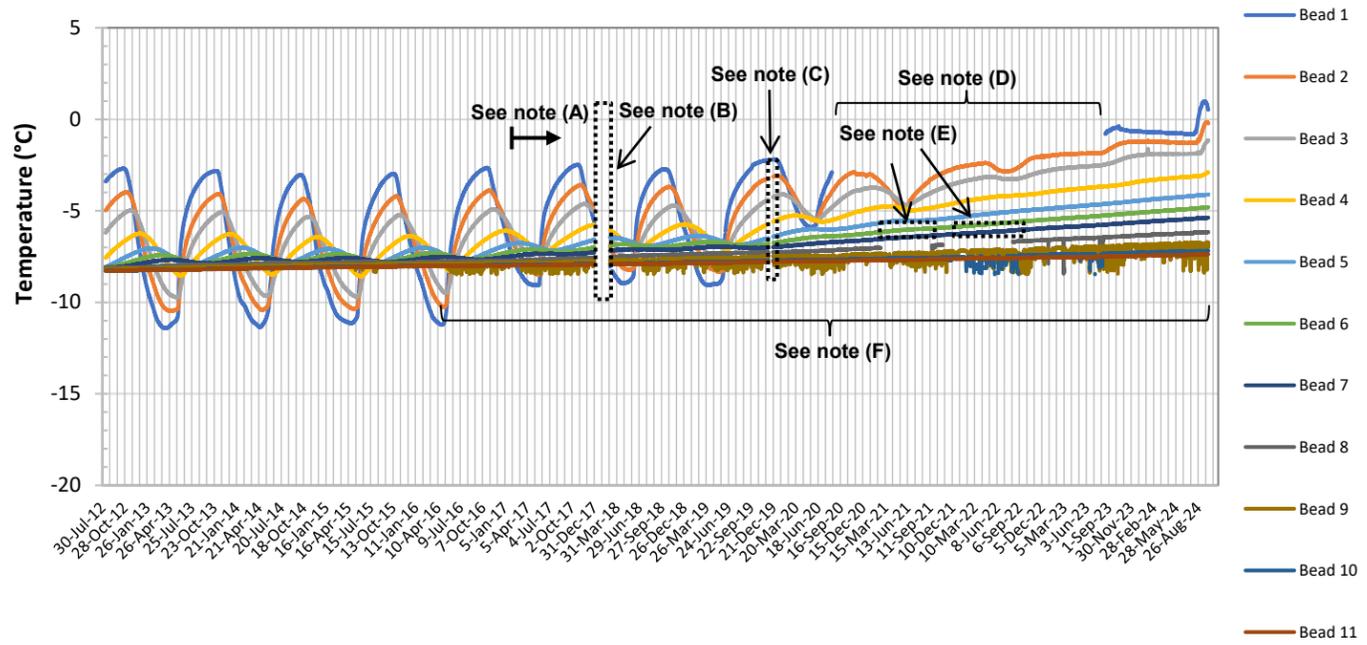
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous Data was recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Notable temperature increase observed in the upstream cables. This is expected to be related to historically high reclaim pond water levels in 2023-2024.
- Erroneous data attributed to instrumentation error has been omitted.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+130 Vertical Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.16 |

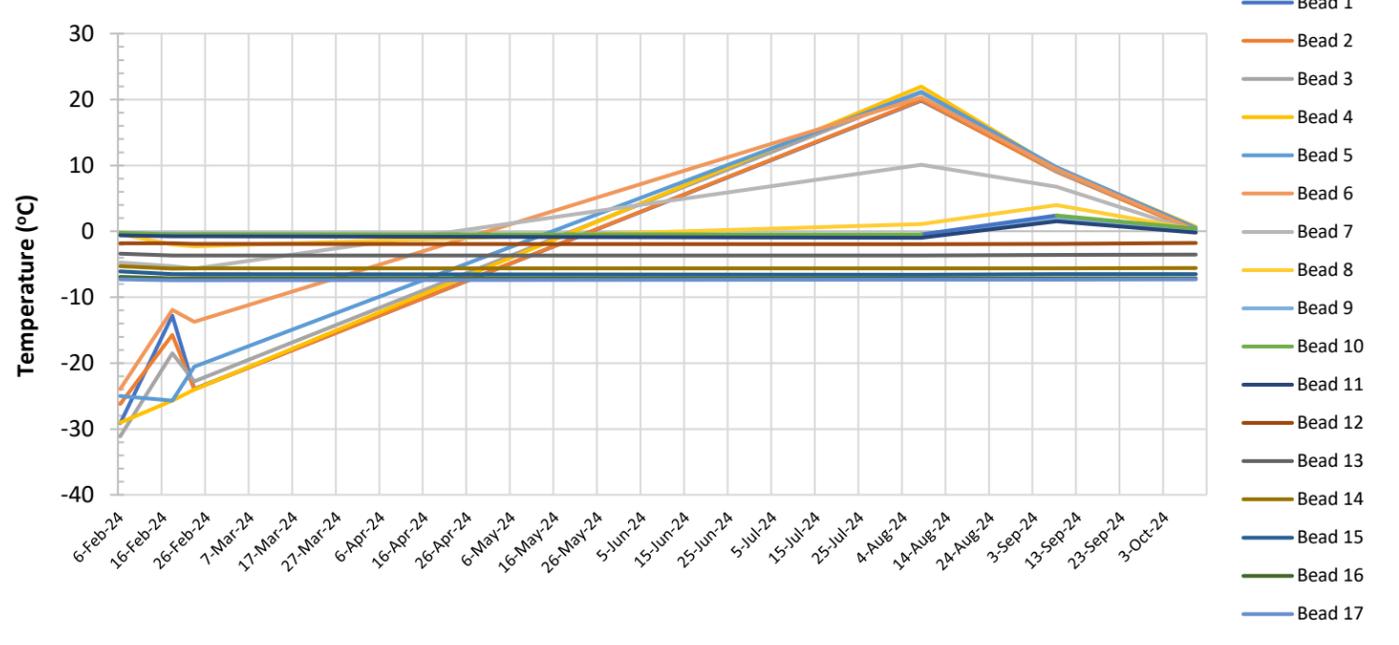


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
■ Design Thermal Block
 Upstream

ND-VTS-130-US

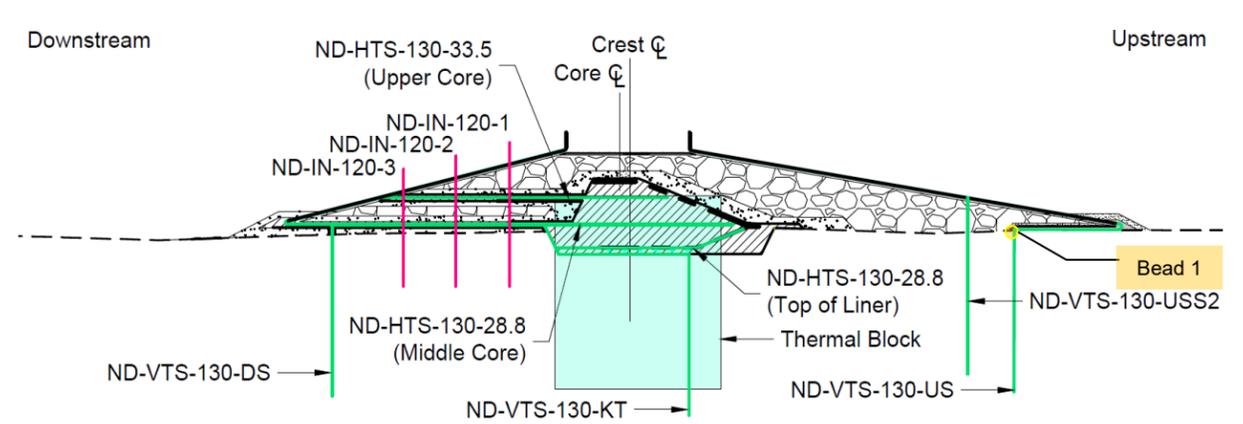


ND-VTS-130-USS1



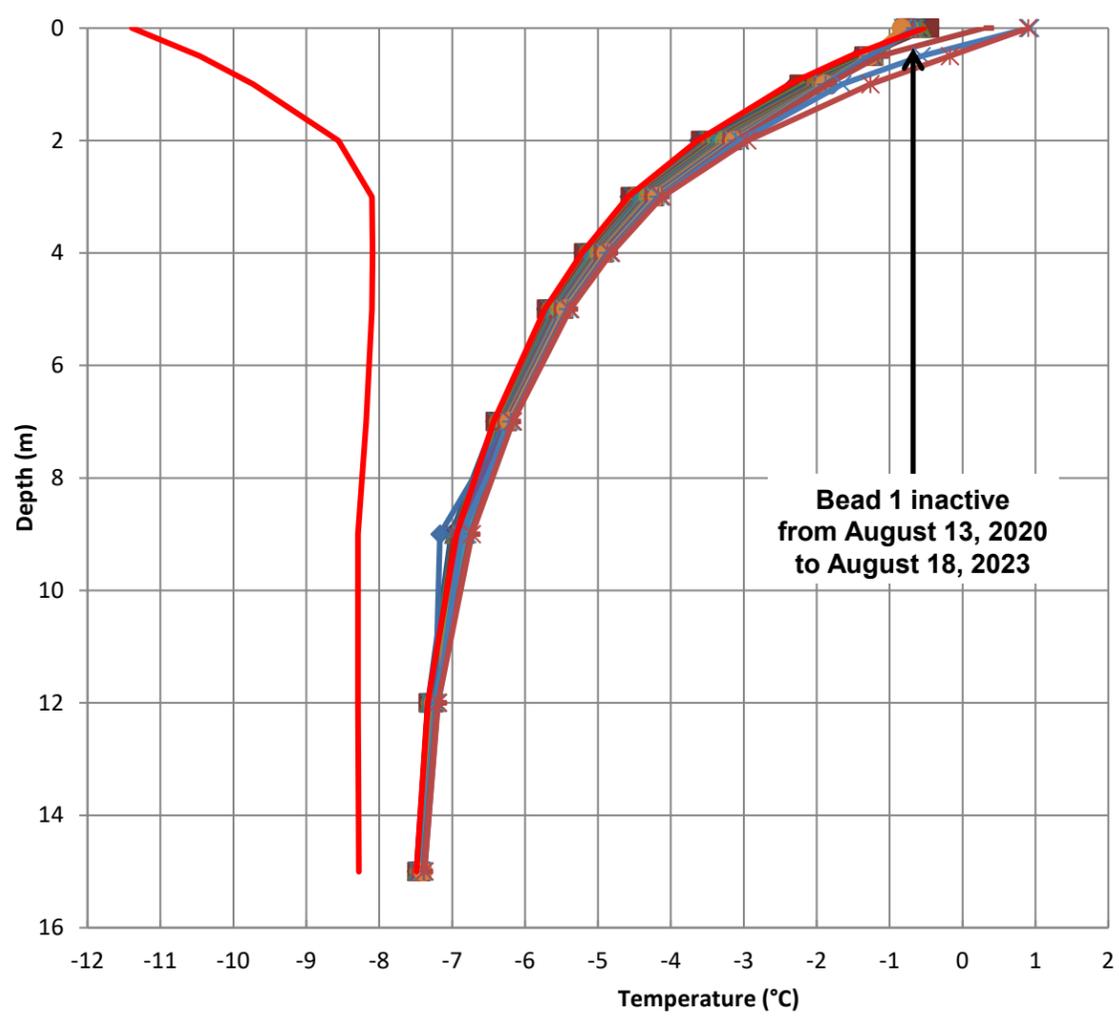
- Notes:**
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
 - Recent ND-VTS-130-USS1 data were collected by both data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.
 - **(A)** Notable temperature increase at the upstream-most beads during filling of the reclaim pond. This is in line with the expected thermal response to rising water levels.
 - **(B)** Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.
 - **(C)** Data collection gaps between November 21, 2019 and December 20, 2019.
 - **(D)** Bead 1 of ND-VTS-130-US was inactive between August 13, 2020 and August 18, 2023.
 - **(E)** Bead 8 of ND-VTS-130-US was inactive between February 25 and September 21, 2021, and between November 4, 2021 and August 11, 2022.
 - **(F)** Data collection errors for Bead 8, 9 and 10 filtered out when temperature spike fell below -8.5°C. Expected to be due to instrumentation error.

| | | | | |
|---|-----------------|--|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+130 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.17 |



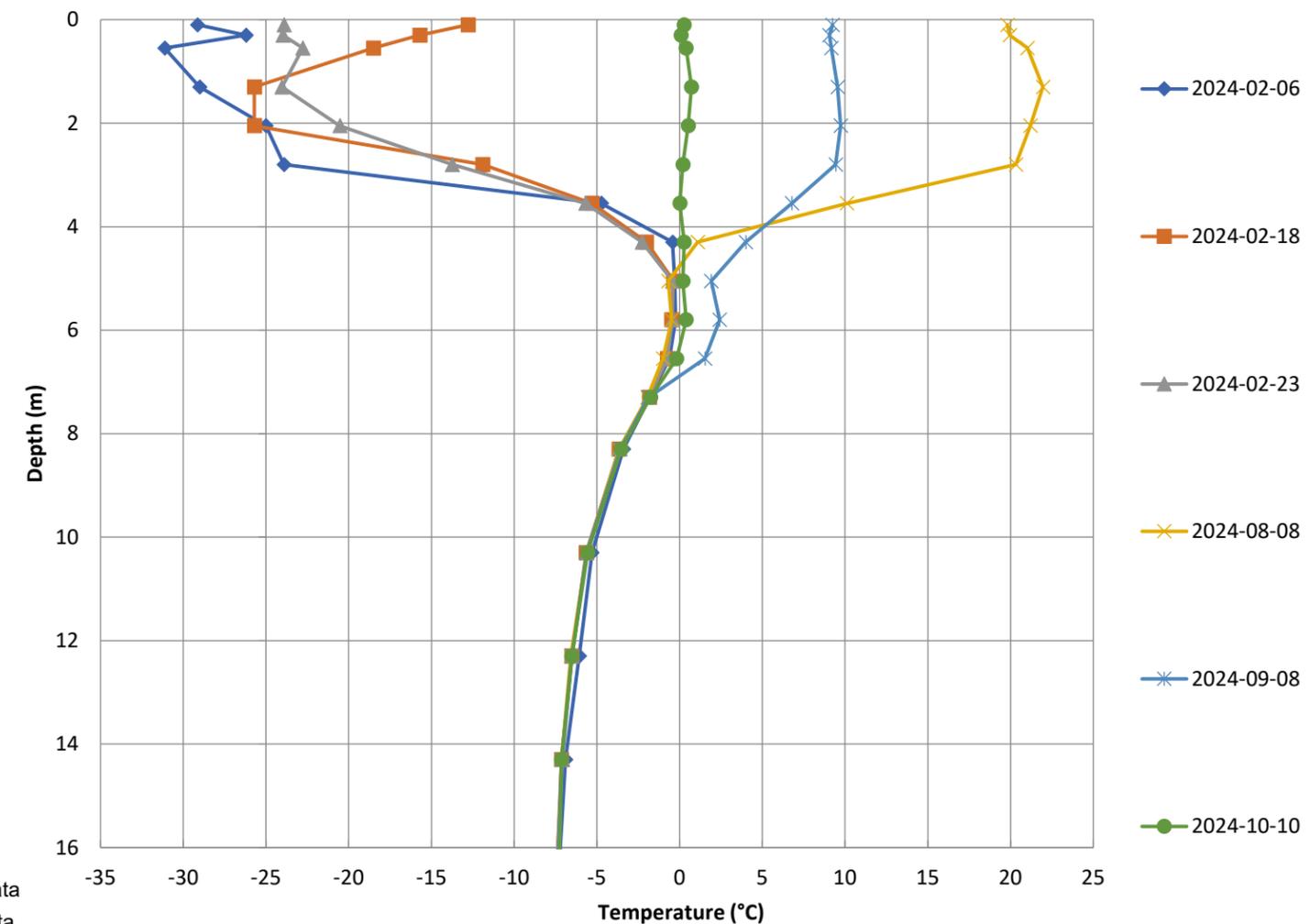
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing
 Design Thermal Block

ND-VTS-130-US



- ◆ 2023-09-30
- 2023-10-13
- ▲ 2023-10-27
- ✕ 2023-11-10
- ✱ 2023-11-24
- 2023-12-08
- ⊕ 2023-12-22
- 2024-01-05
- 2024-01-19
- ◆ 2024-02-02
- 2024-02-16
- ▲ 2024-03-01
- ✕ 2024-03-15
- ✱ 2024-03-29
- 2024-04-12
- ⊕ 2024-04-26
- 2024-05-10
- 2024-05-24
- ◆ 2024-06-07
- 2024-06-21
- ▲ 2024-07-05
- ✕ 2024-07-19
- ✱ 2024-08-02
- 2024-08-16
- ⊕ 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data

ND-VTS-130-USS1

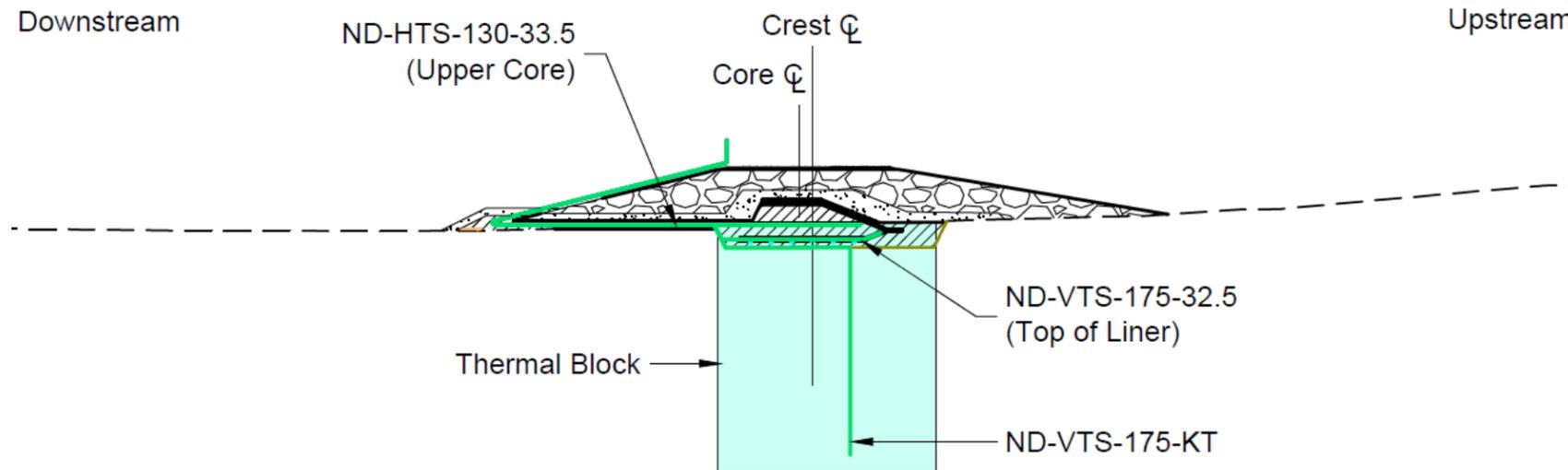
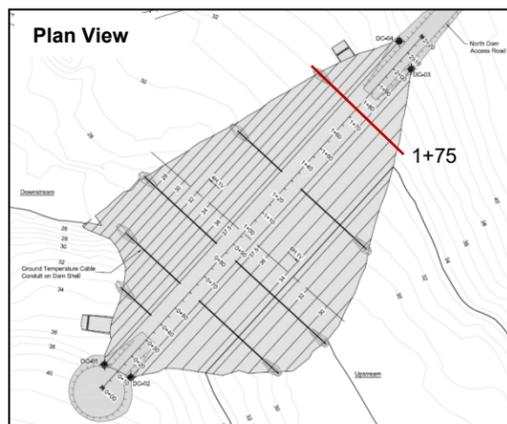


- ◆ 2024-02-06
- 2024-02-18
- ▲ 2024-02-23
- ✕ 2024-08-08
- ✱ 2024-09-08
- 2024-10-10

Notes:

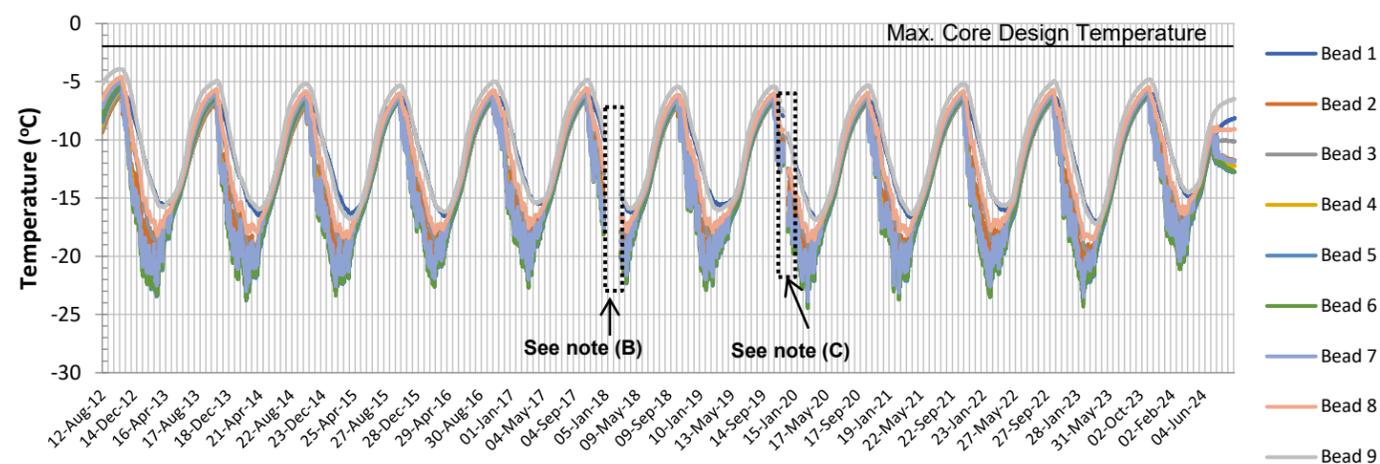
- Vertical and horizontal offset graphs display data in two-week intervals. Due to limited data ND-VTS-130-USS1 displays select interval datasets from this reporting period.
- Previous Data was recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Notable temperature increase observed in the upstream cables. This is expected to be related to historically high reclaim pond water levels in 2023-2024.
- Erroneous data attributed to instrumentation error has been omitted.

| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+130 Vertical Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.18 |

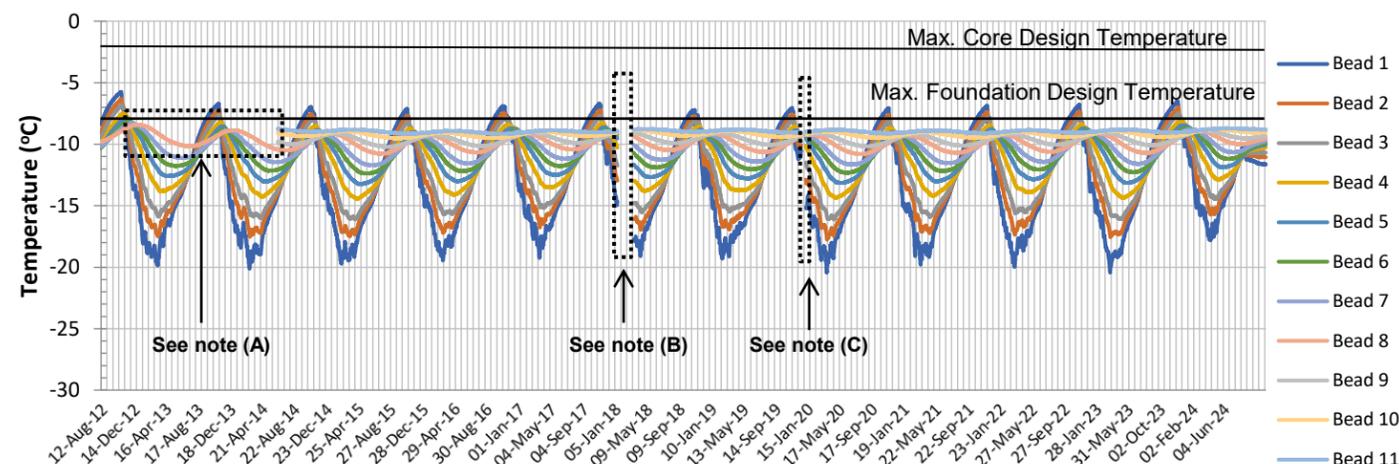


- Legend:**
- GTC Status: Cable irreparably damaged
 - GTC Status: Bead damaged or data missing
 - Design Thermal Block

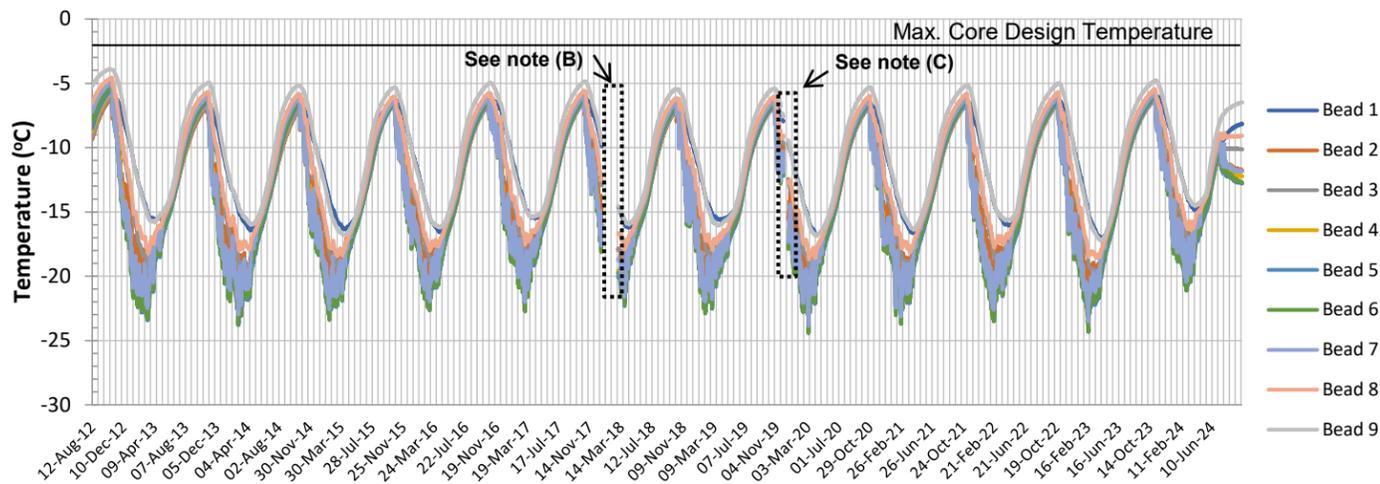
ND-HTS-175-33.5



ND-VTS-175-KT



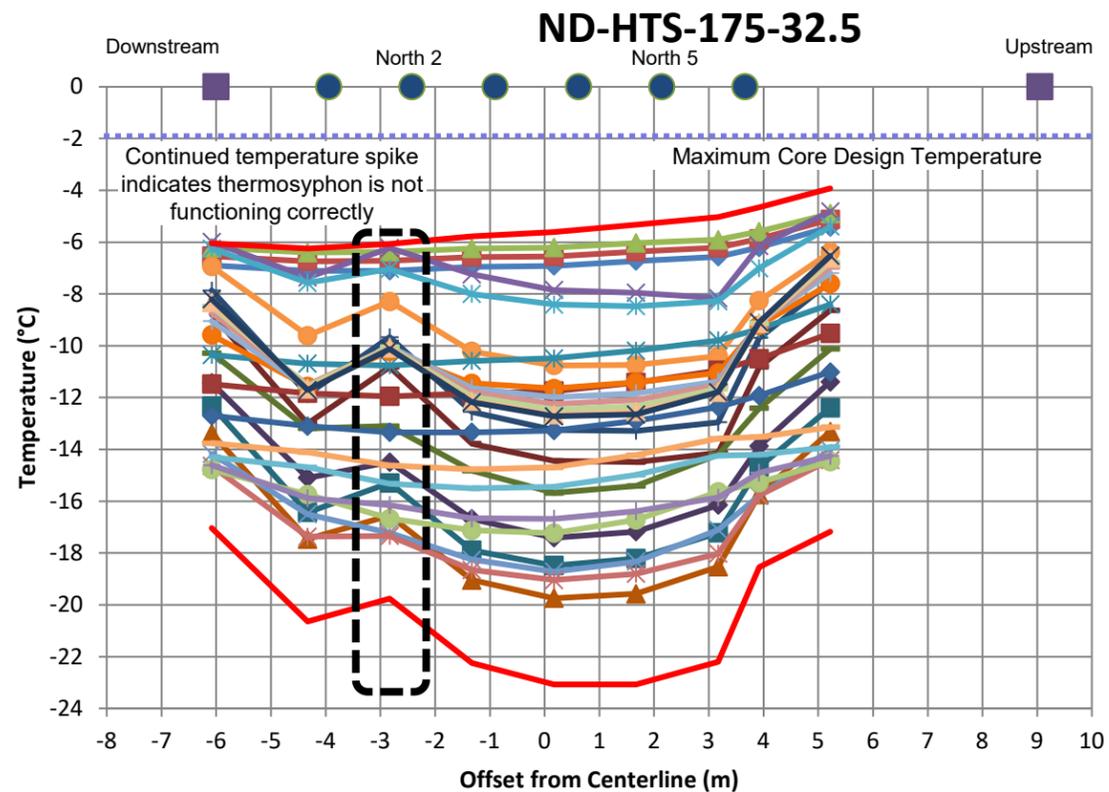
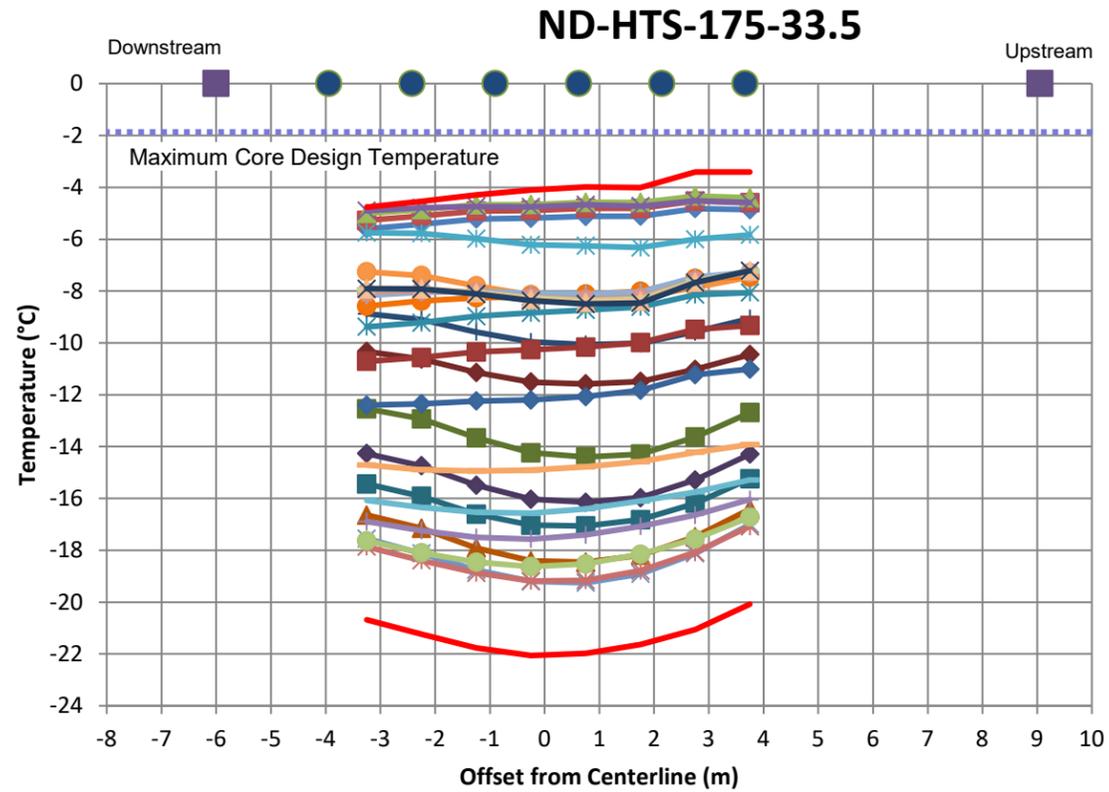
ND-HTS-175-32.5



Notes:

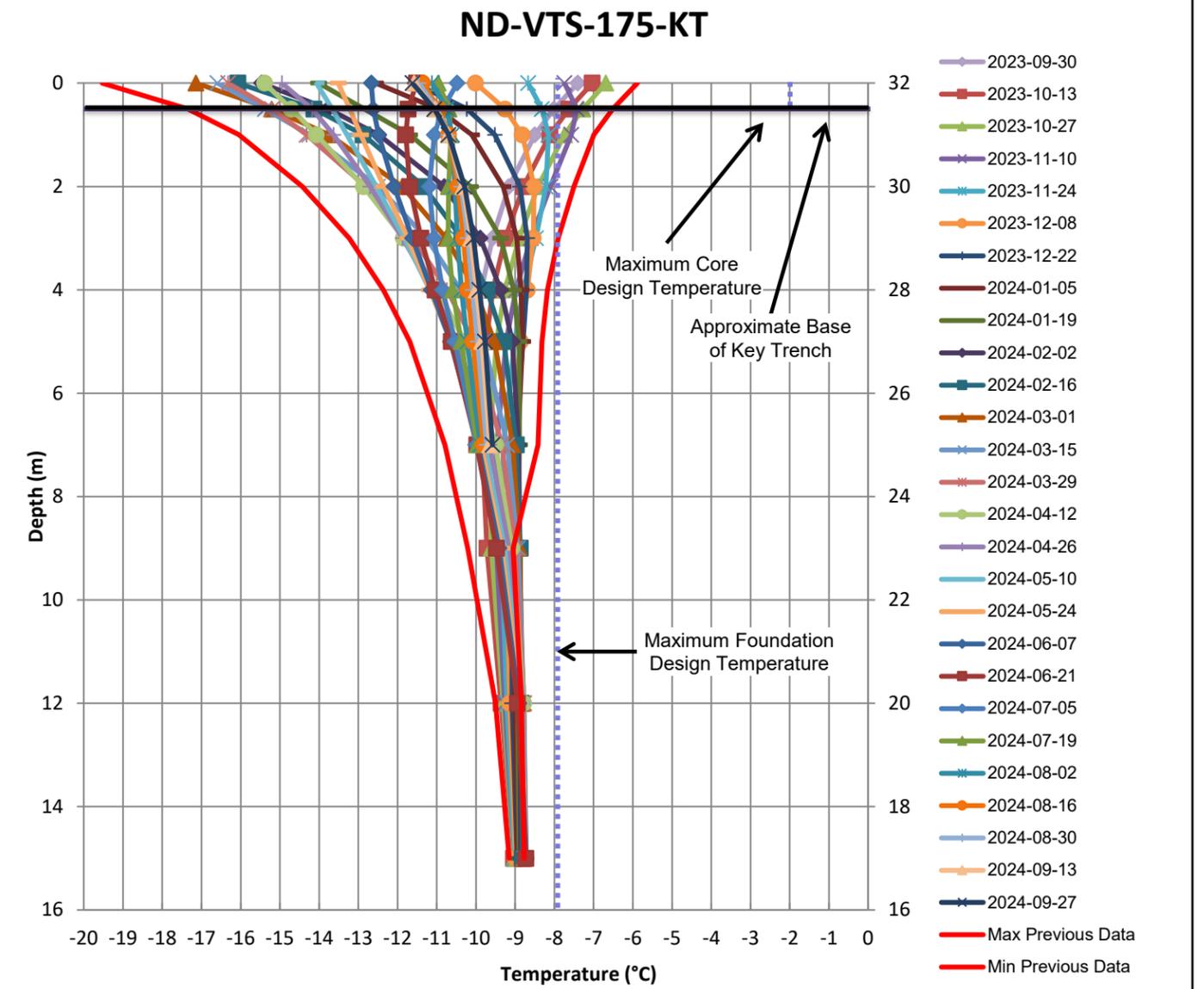
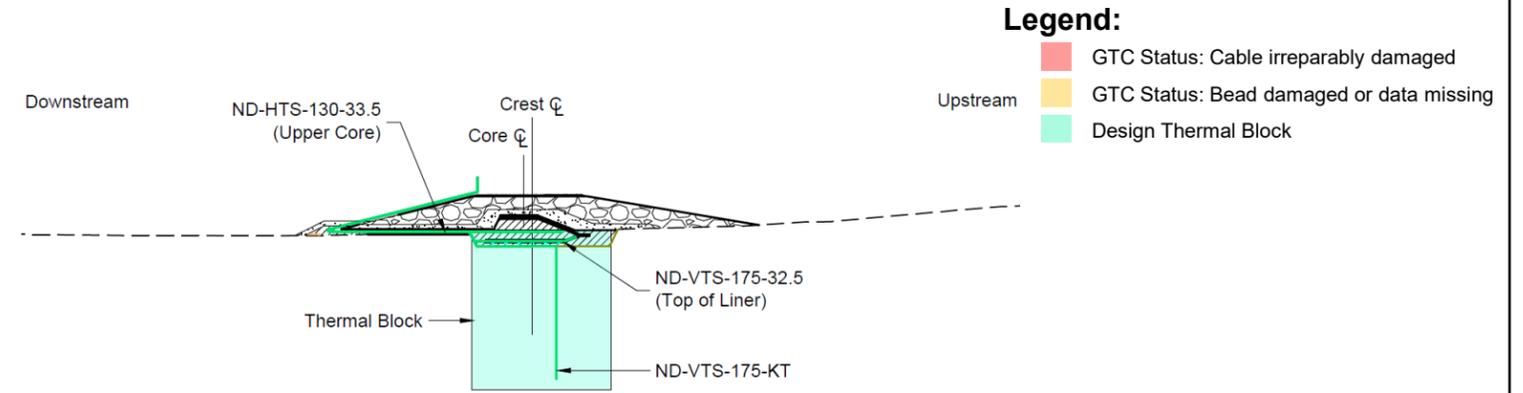
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- **(A)** Incorrectly connected to datalogger (as ND-HTS-175-KT) from August 9, 2012 to June 16, 2014; therefore, no readings for beads 9, 10 and 11.
- **(B)** Data logger was disconnected from January 1, 2018 to March 3, 2018 for recalibration.
- **(C)** Data collection gaps between November 21, 2019 and December 20, 2019.

| | | | | |
|---|-----------------|--|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+175 Ground Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.19 |



- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data
- Thermosyphon
- Key Trench Edges

- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data
- Thermosyphon
- Key Trench Edges



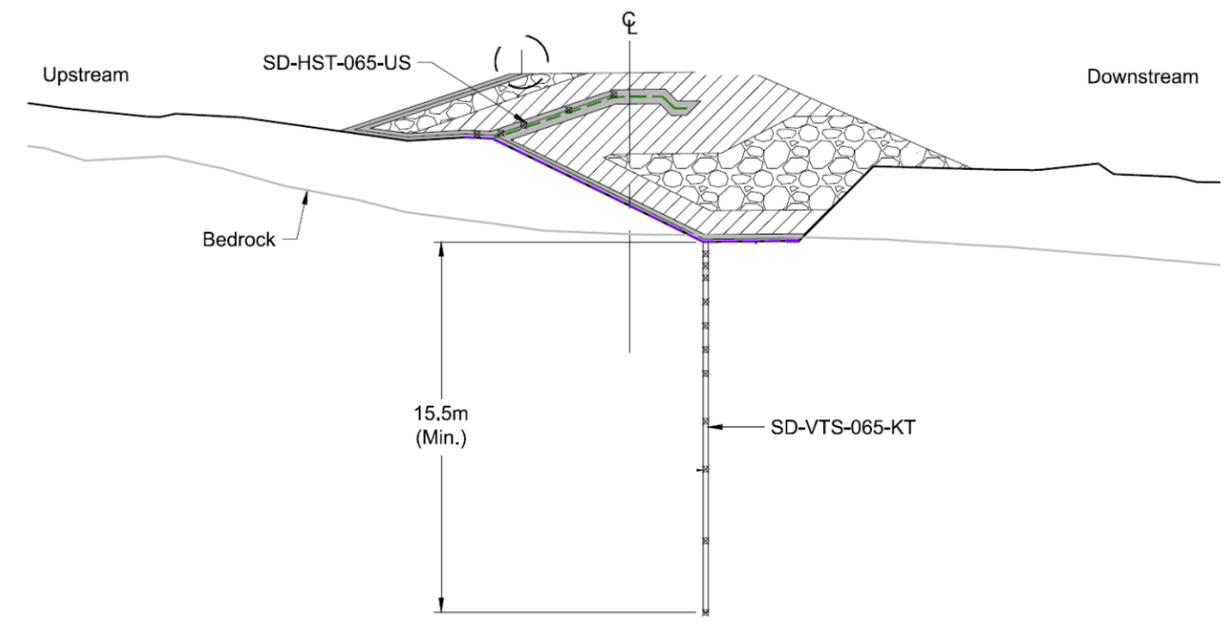
- Legend:**
- GTC Status: Cable irreparably damaged
 - GTC Status: Bead damaged or data missing
 - Design Thermal Block

Notes:

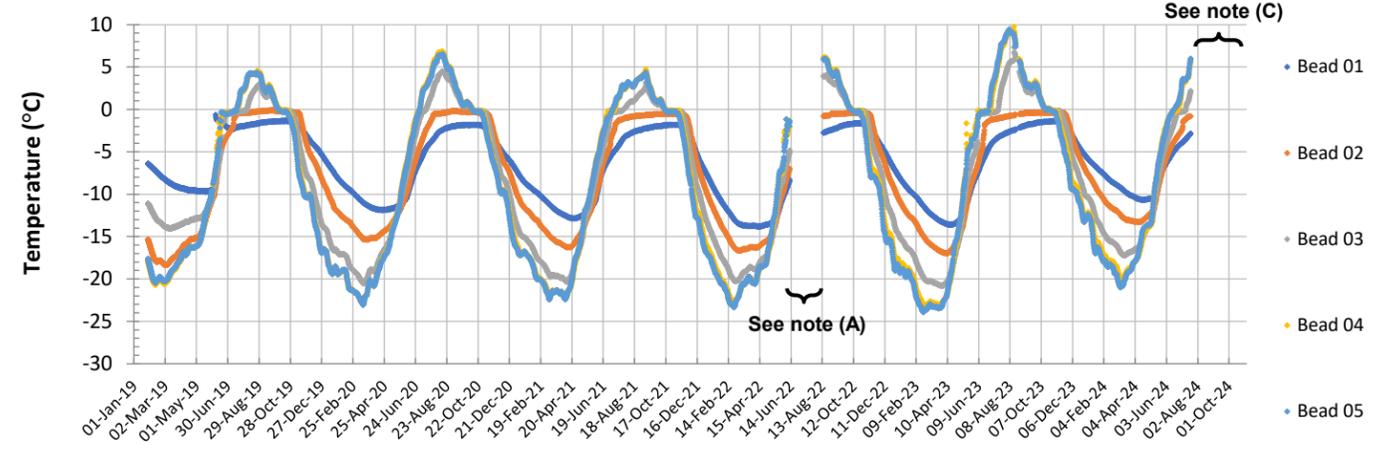
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between August 2012 and September 2023.
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).

| | | | | |
|---|-----------------|--|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+175 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR002489 Filename: 1_App_A_ND_GTC.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL | Figure: A.20 |

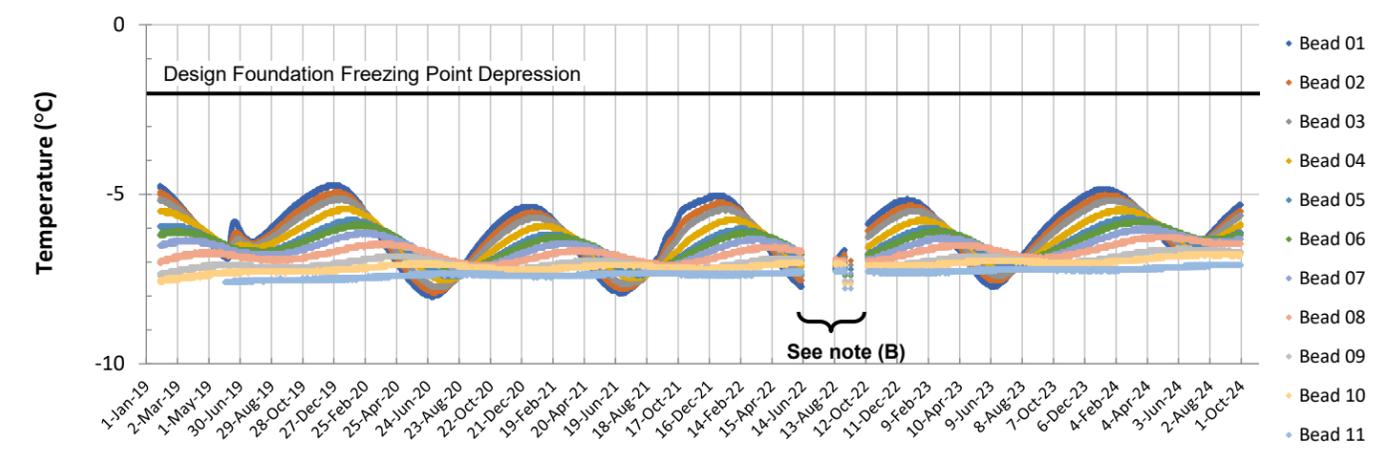
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



SD-HTS-065-US

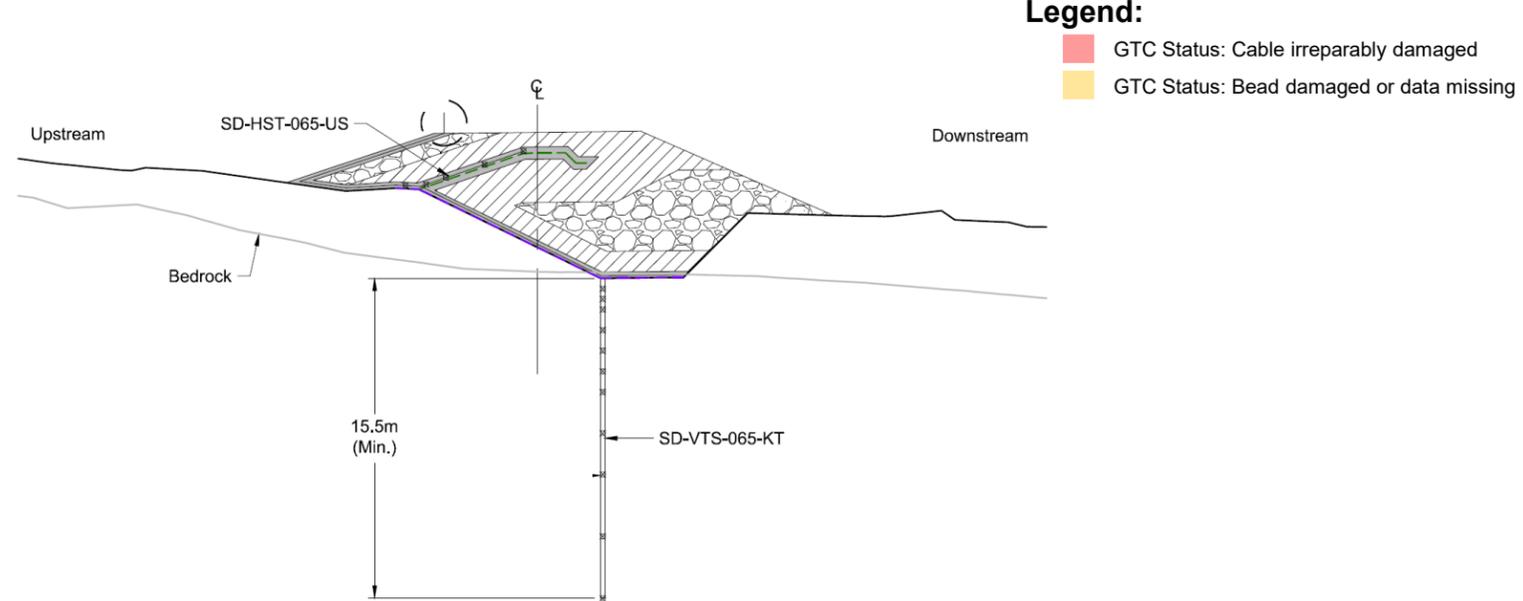
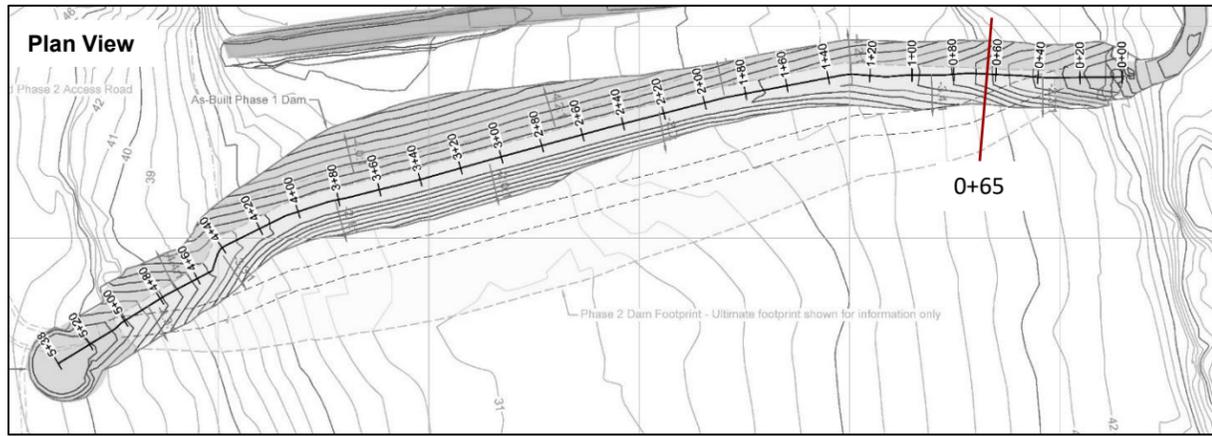


SD-VTS-065-KT

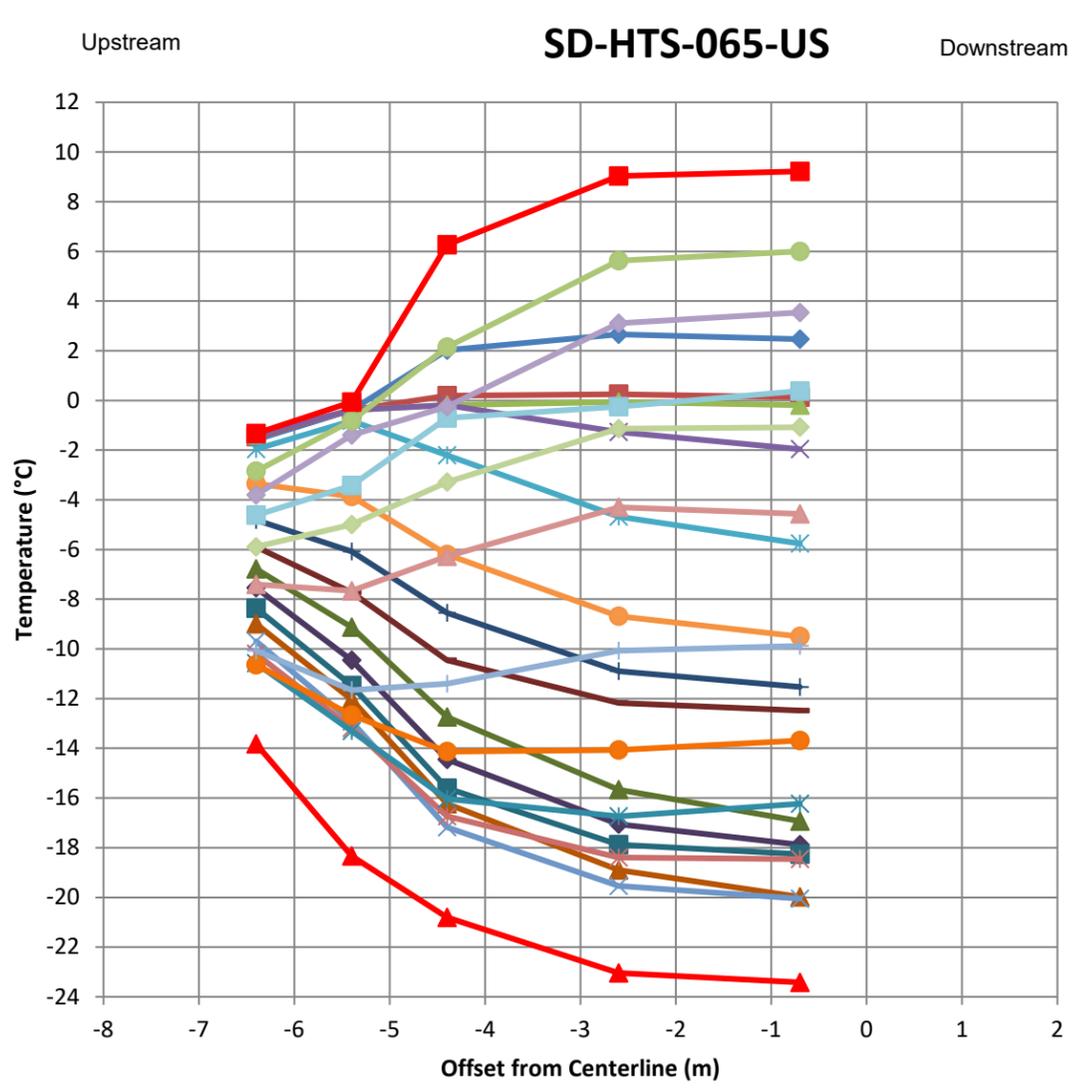


- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (January 27, 2019) is shown.
 - **(A)** No data collected between June 11, 2022 and August 15, 2022 for SD-HTS-065-US .
 - **(B)** No data collected between June 11, 2022 and August 15, 2022 and between September 2, 2022 and October 16, 2022 for SD-VTS-065-KT.
 - **(C)** No data collected after July 19, 2024 for SD-HTS-065-US.

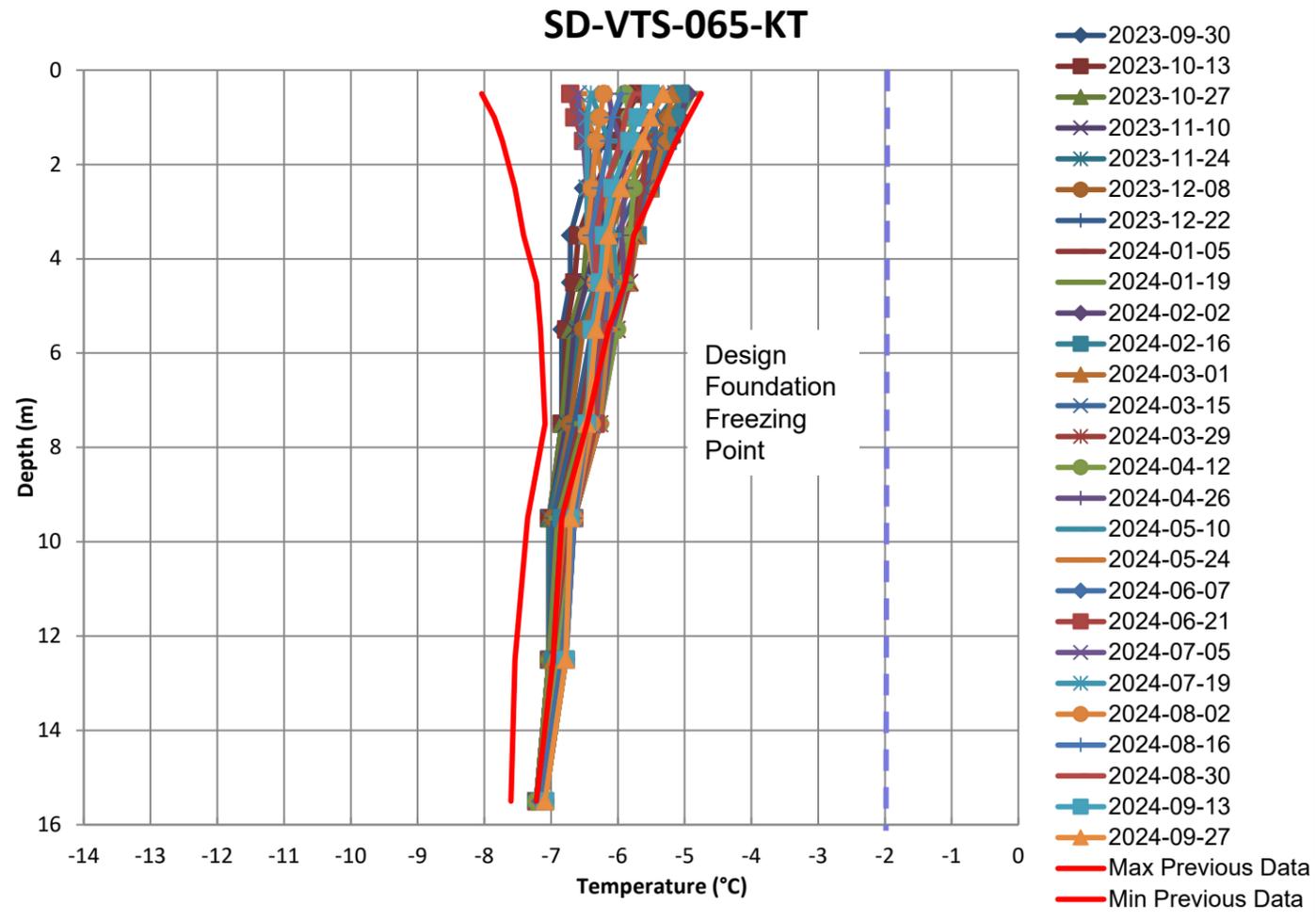
| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+65 Ground Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.21 |



Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



- ◆ 2023-09-30
- 2023-10-13
- ▲ 2023-10-27
- ✕ 2023-11-10
- ✱ 2023-11-24
- 2023-12-08
- ⊕ 2023-12-22
- 2024-01-05
- ▲ 2024-01-19
- ◆ 2024-02-02
- 2024-02-16
- ▲ 2024-03-01
- ✕ 2024-03-15
- ✱ 2024-03-29
- ✱ 2024-04-12
- 2024-04-26
- ⊕ 2024-05-10
- ✱ 2024-05-24
- ▲ 2024-06-07
- 2024-06-21
- ◆ 2024-07-05
- ▲ 2024-07-19
- Max Previous Data
- ▲ Min Previous Data

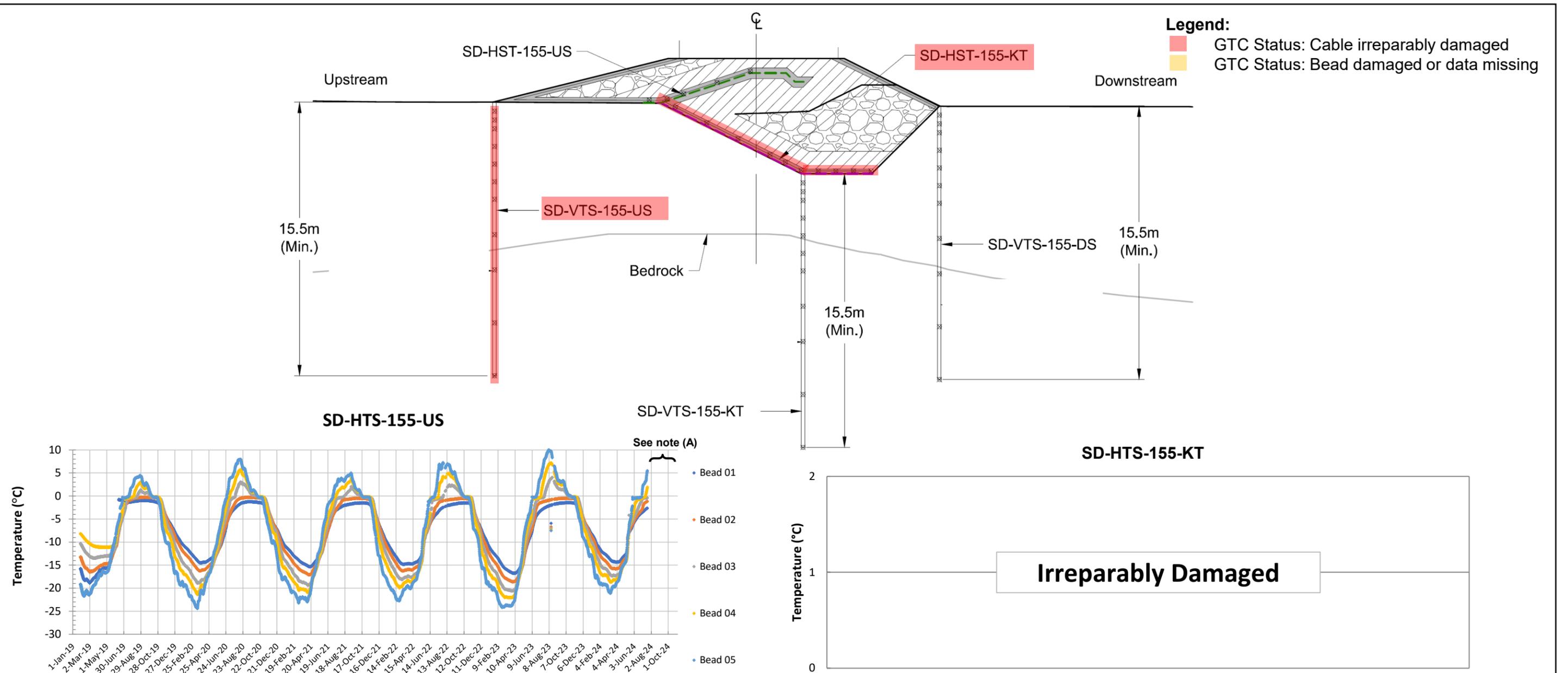


- ◆ 2023-09-30
- 2023-10-13
- ▲ 2023-10-27
- ✕ 2023-11-10
- ✱ 2023-11-24
- 2023-12-08
- ⊕ 2023-12-22
- 2024-01-05
- ▲ 2024-01-19
- ◆ 2024-02-02
- 2024-02-16
- ▲ 2024-03-01
- ✕ 2024-03-15
- ✱ 2024-03-29
- ▲ 2024-04-12
- ◆ 2024-04-26
- ⊕ 2024-05-10
- ▲ 2024-05-24
- 2024-06-07
- 2024-06-21
- ✕ 2024-07-05
- ✱ 2024-07-19
- 2024-08-02
- ⊕ 2024-08-16
- 2024-08-30
- 2024-09-13
- ▲ 2024-09-27
- Max Previous Data
- ▲ Min Previous Data

Notes:

- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between January 2019 and September 2023.
- No data collected after July 19, 2024 for SD-HTS-065-US.

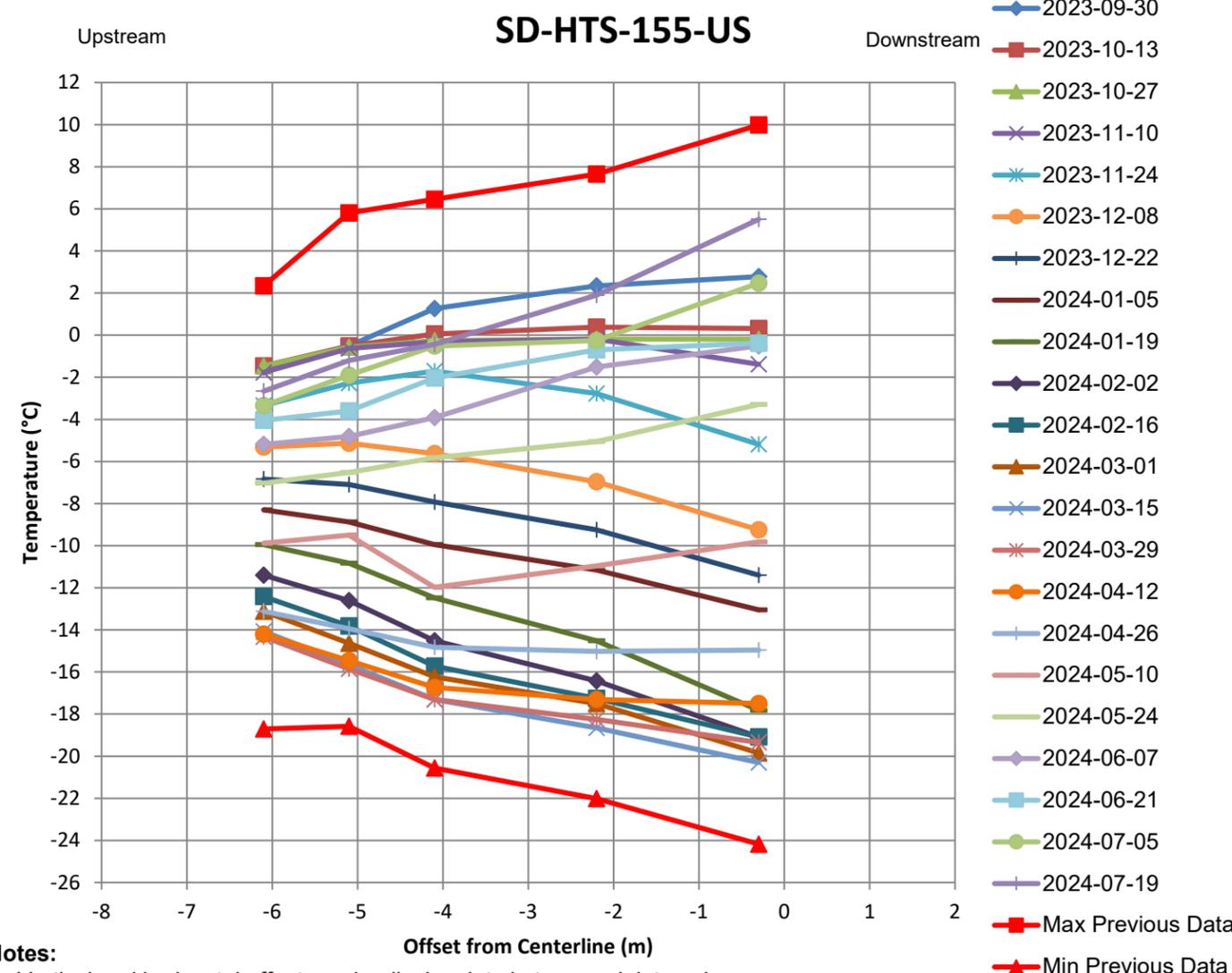
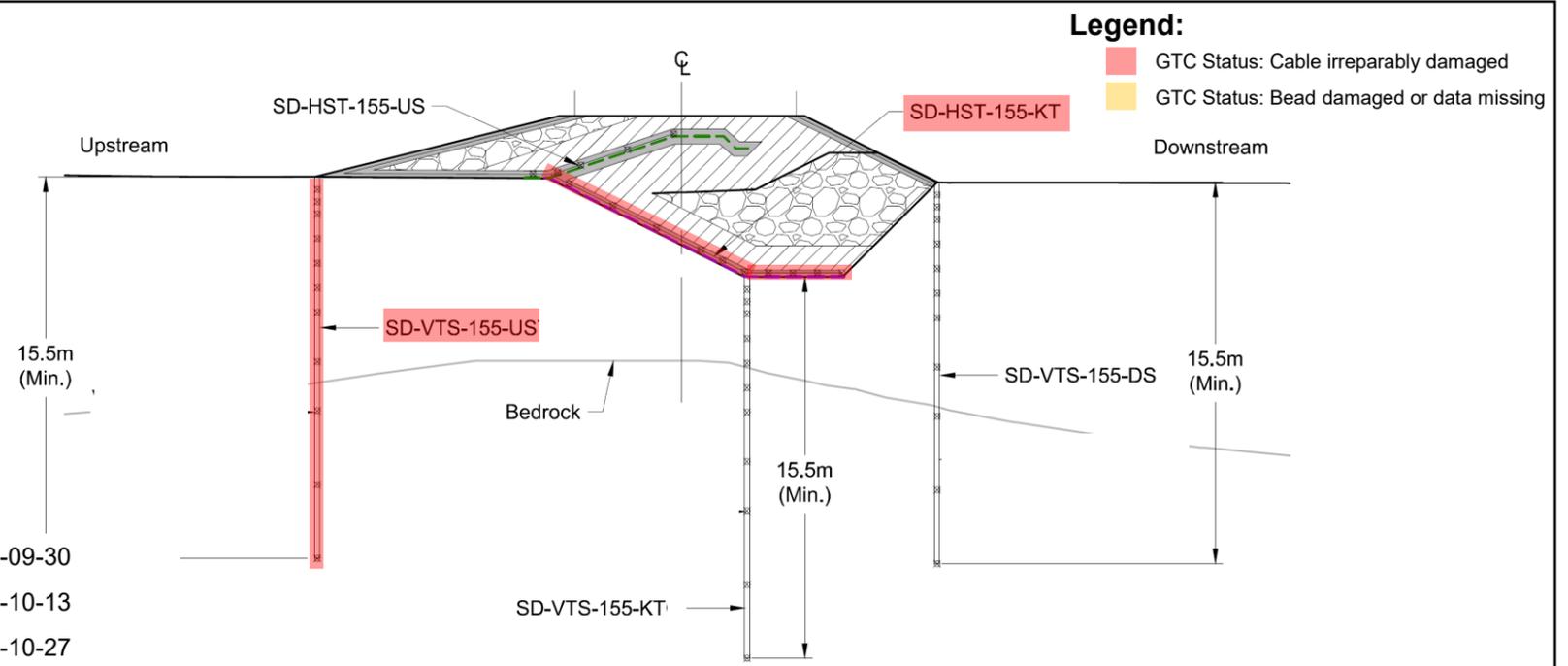
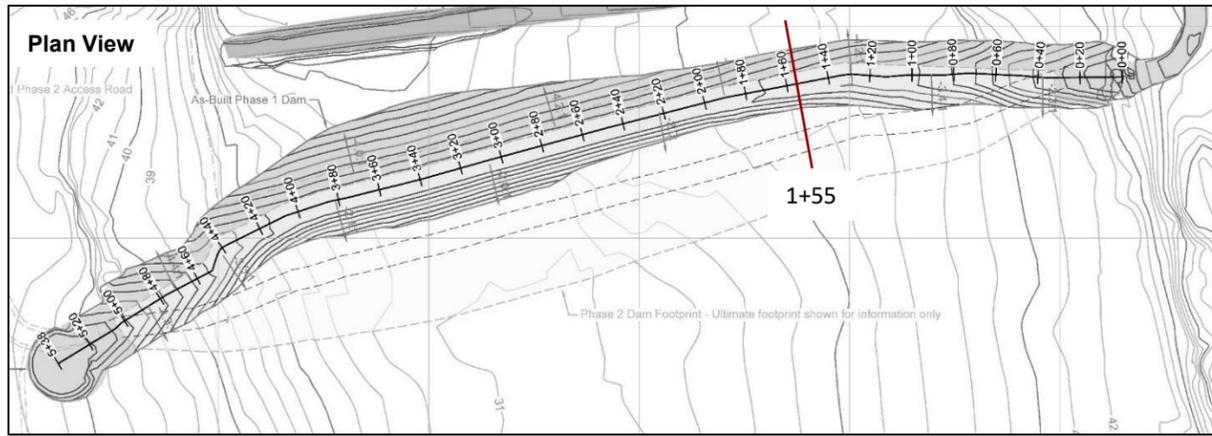
| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+65 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.22 |



Notes:

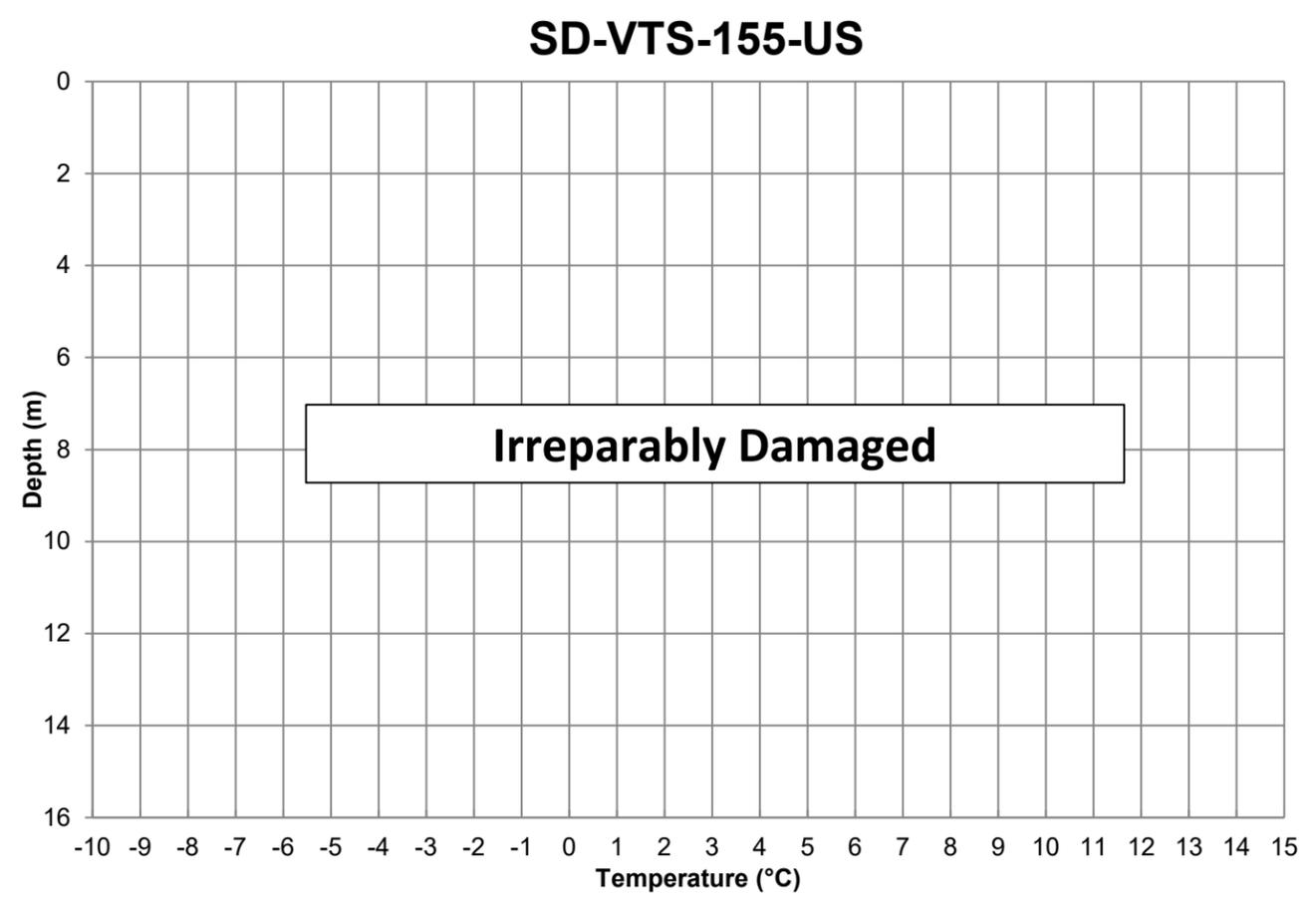
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
- SD-HTS-155-KT measurements during construction were collected between April and July 2018. Only data following final instrumentation commissioning (January 27, 2019) is shown.
- SD-HTS-155-KT cable irreparably damaged during construction.
- **(A)** No data collected after July 19, 2024 for SD-HTS-155-US.

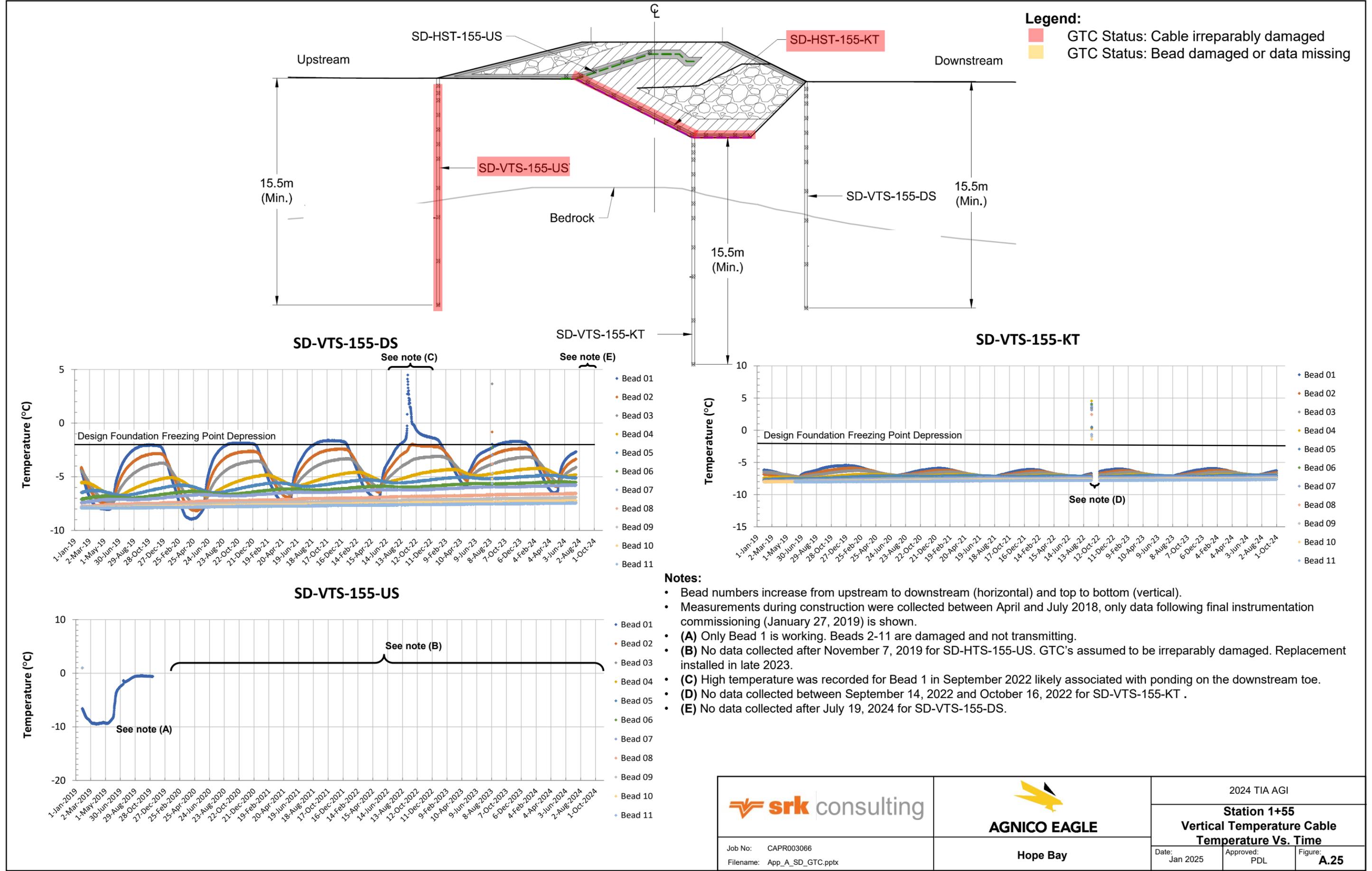
| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 1+55 Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.23 |



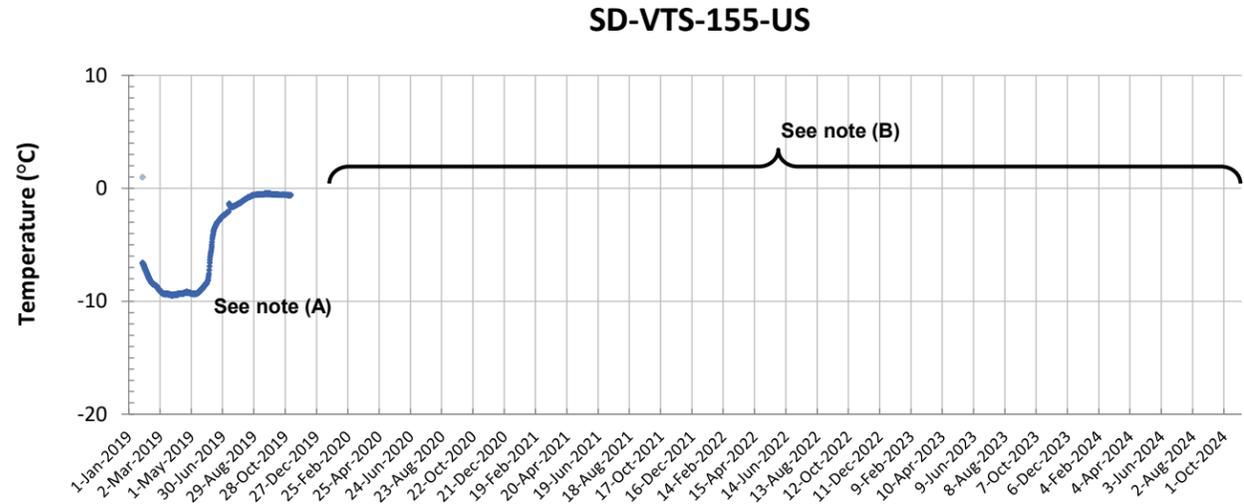
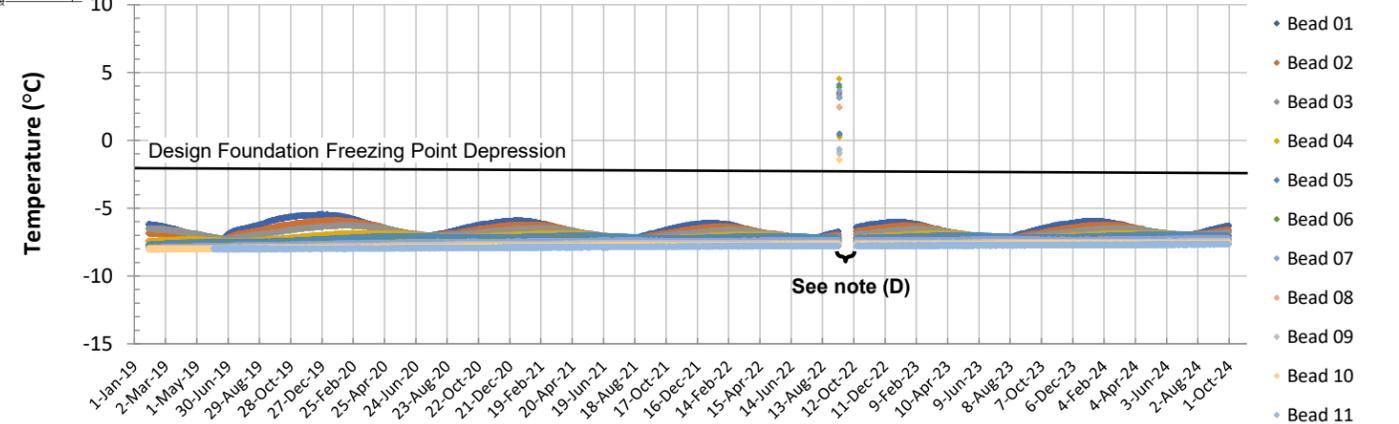
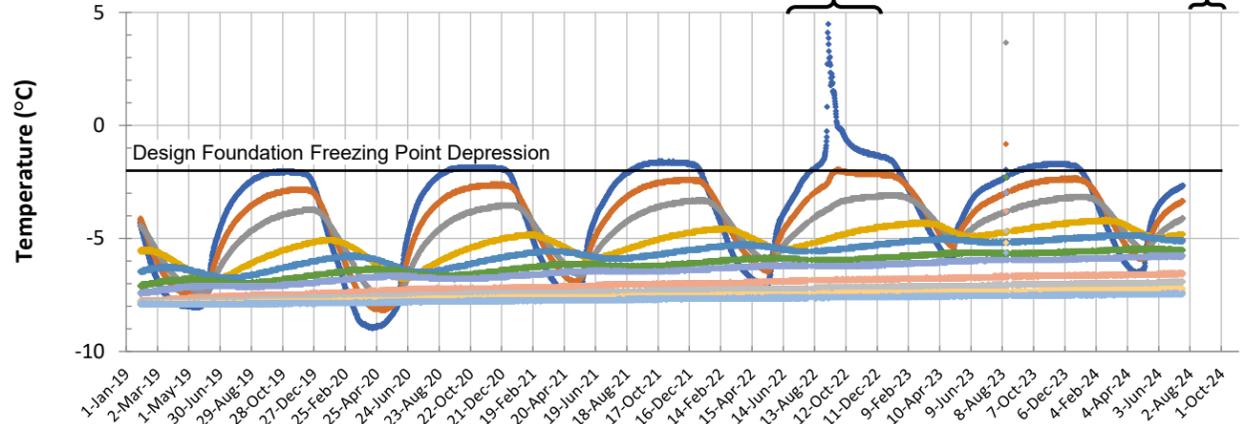
Notes:

- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between January 2019 and September 2023.
- SD-HTS-155-KT irreparably damaged during construction. Replacement installed in late 2023.
- No data collected after November 7, 2019 for SD-HTS-155-US. GTC's assumed to be irreparably damaged.
- No data collected after July 19, 2024 for SD-HTS-155-US.



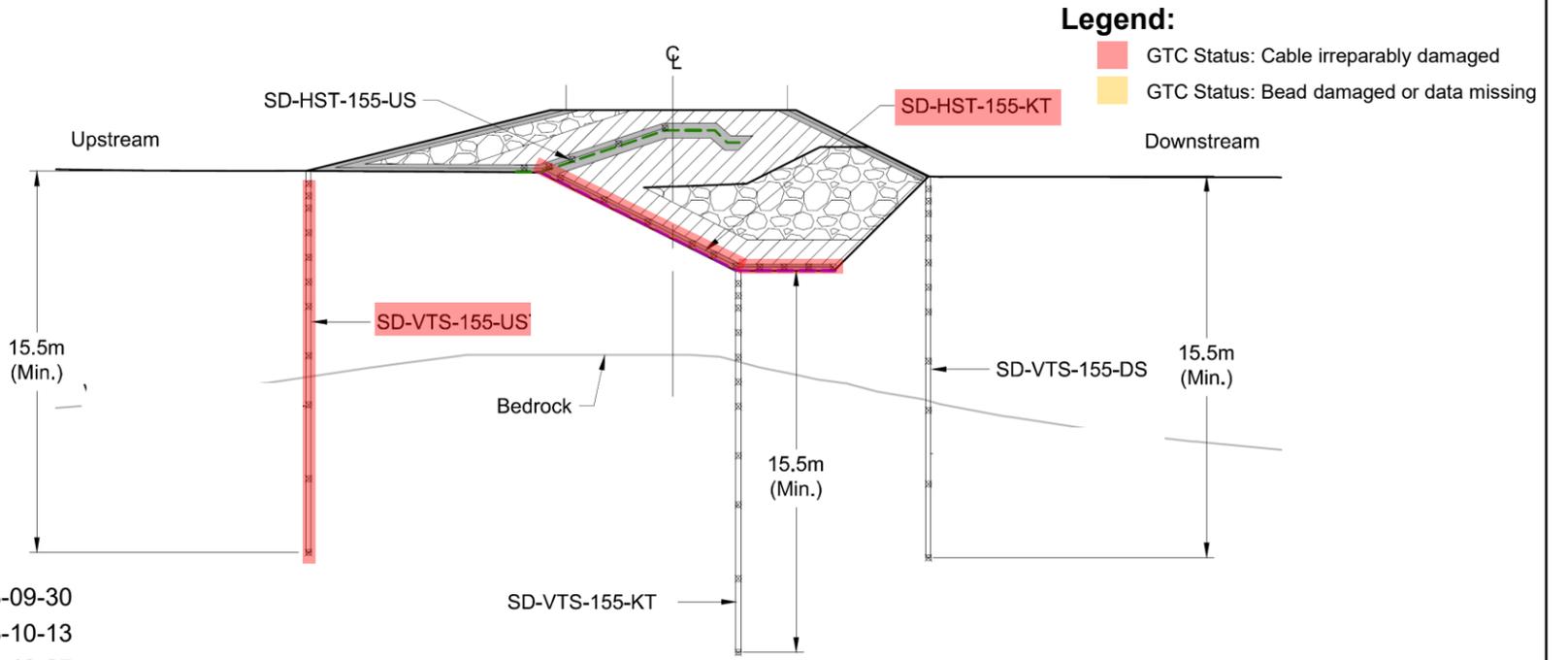
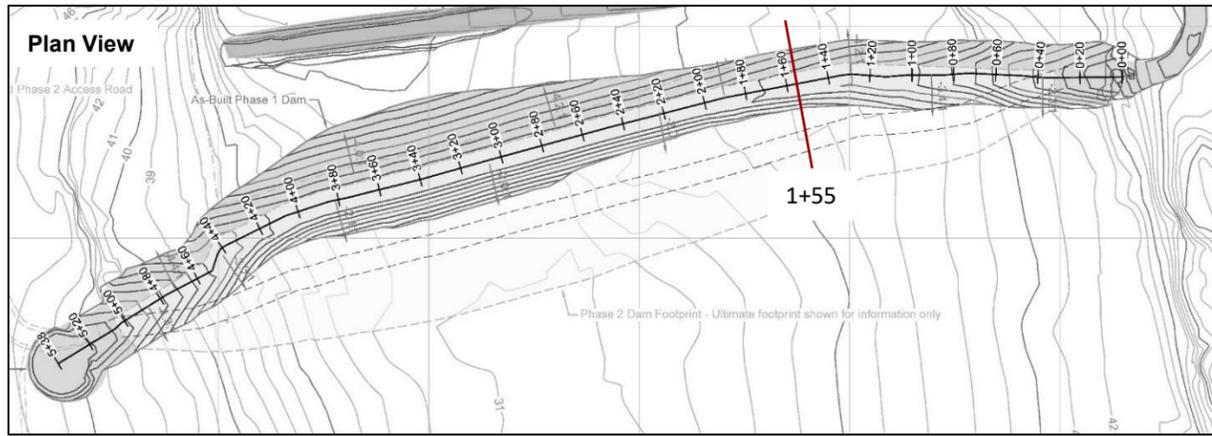


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

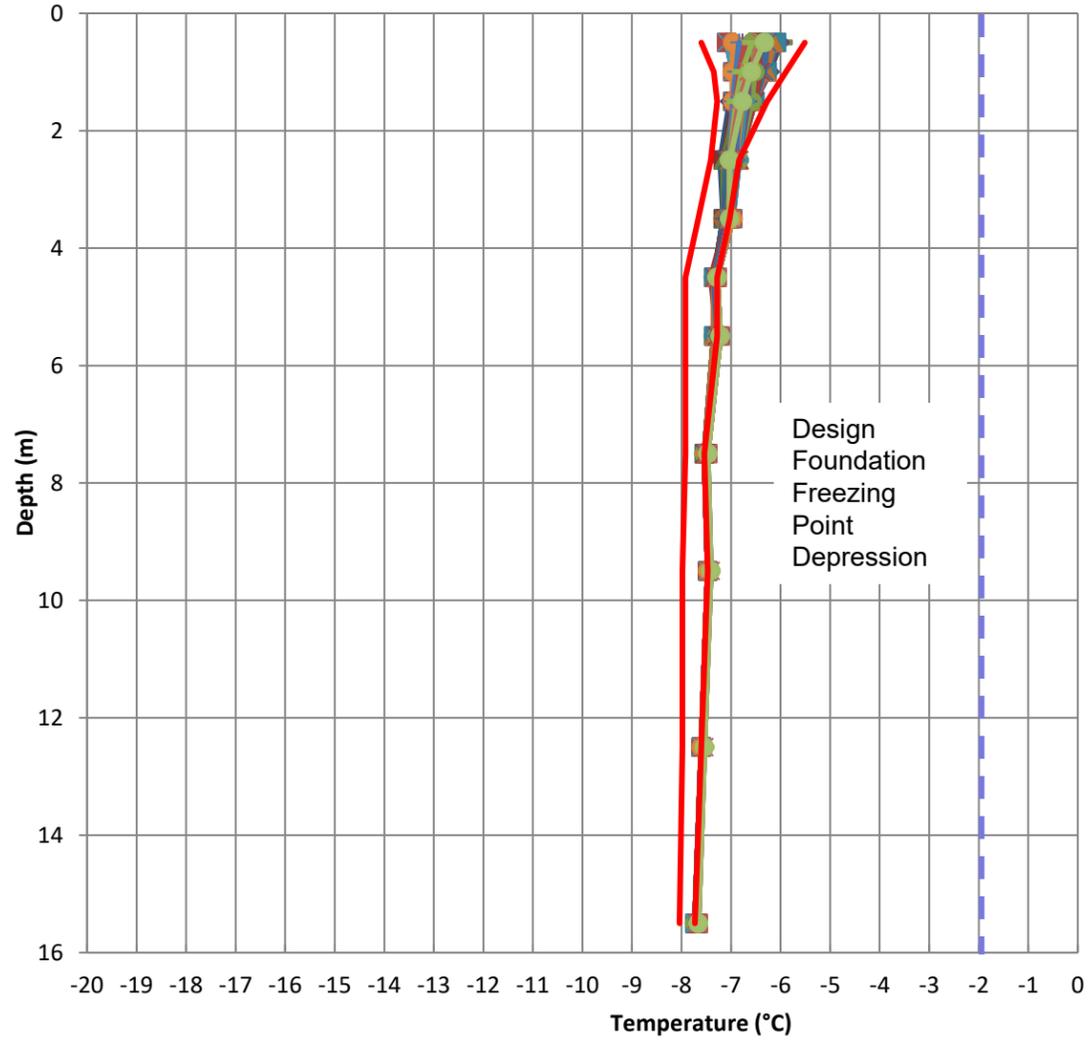


- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (January 27, 2019) is shown.
 - **(A)** Only Bead 1 is working. Beads 2-11 are damaged and not transmitting.
 - **(B)** No data collected after November 7, 2019 for SD-HTS-155-US. GTC's assumed to be irreparably damaged. Replacement installed in late 2023.
 - **(C)** High temperature was recorded for Bead 1 in September 2022 likely associated with ponding on the downstream toe.
 - **(D)** No data collected between September 14, 2022 and October 16, 2022 for SD-VTS-155-KT .
 - **(E)** No data collected after July 19, 2024 for SD-VTS-155-DS.

| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 1+55 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.25 |

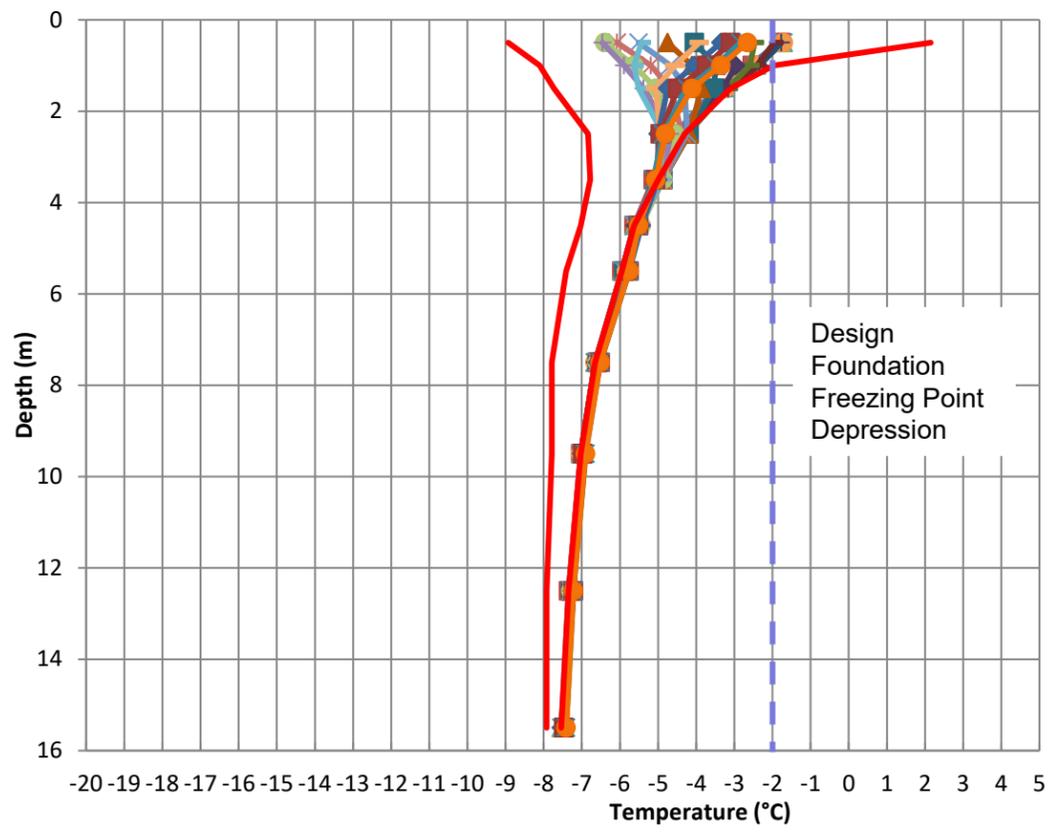


SD-VTS-155-KT



- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- 2024-08-02
- 2024-08-16
- 2024-08-30
- 2024-09-13
- 2024-09-27
- Max Previous Data
- Min Previous Data

SD-VTS-155-DS

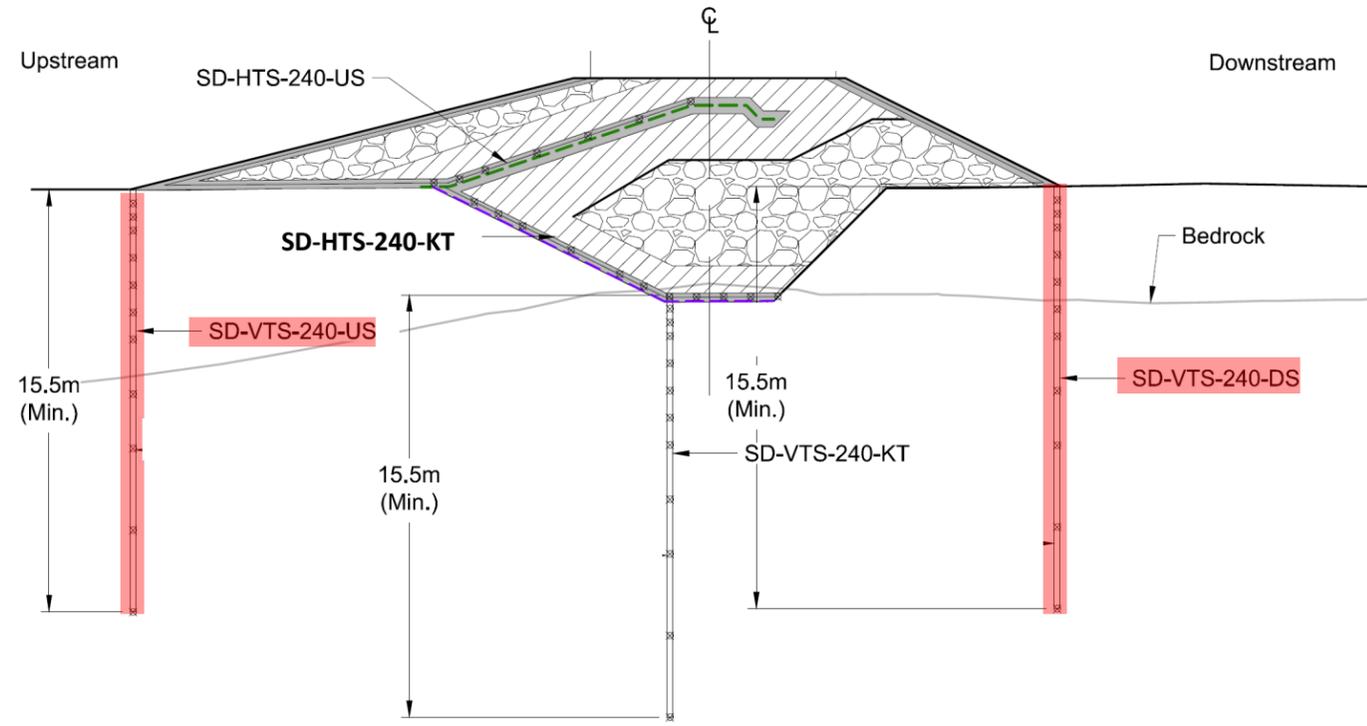


- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- Max Previous Data
- Min Previous Data

Notes

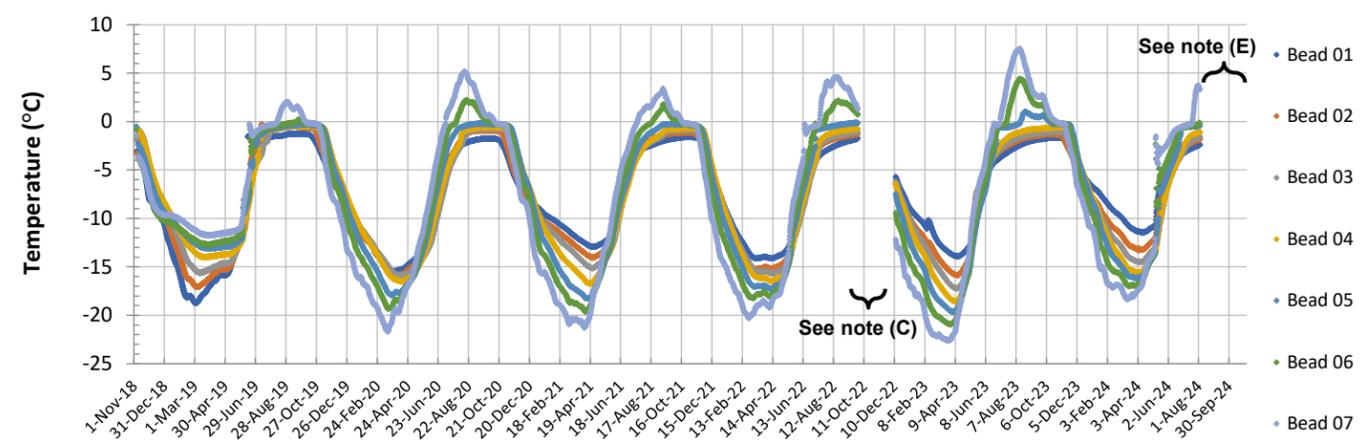
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data was recorded between January 2019 and September 2023.
- No data collected after July 19, 2024 for SD-VTS-155-DS.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 1+55 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.26 |

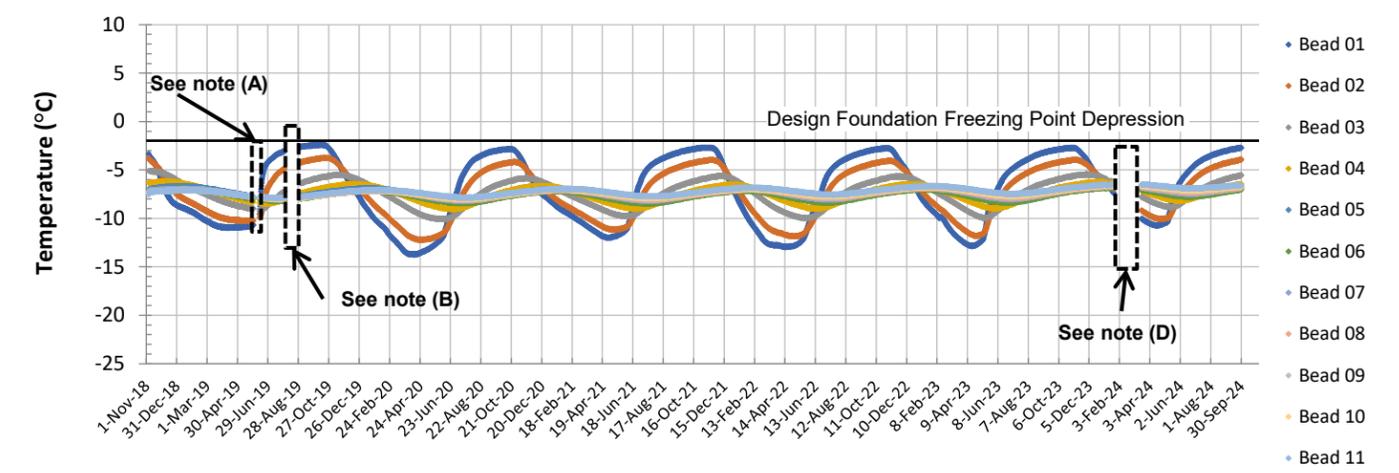


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

SD-HTS-240-US

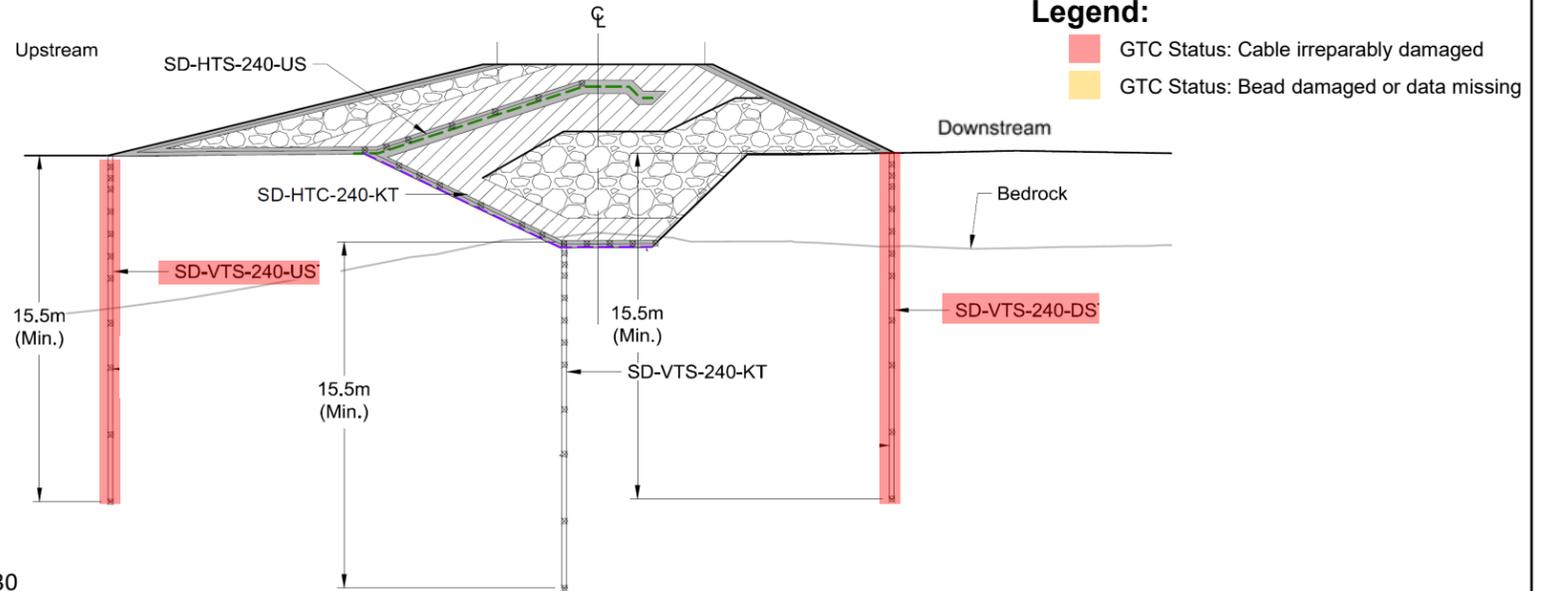
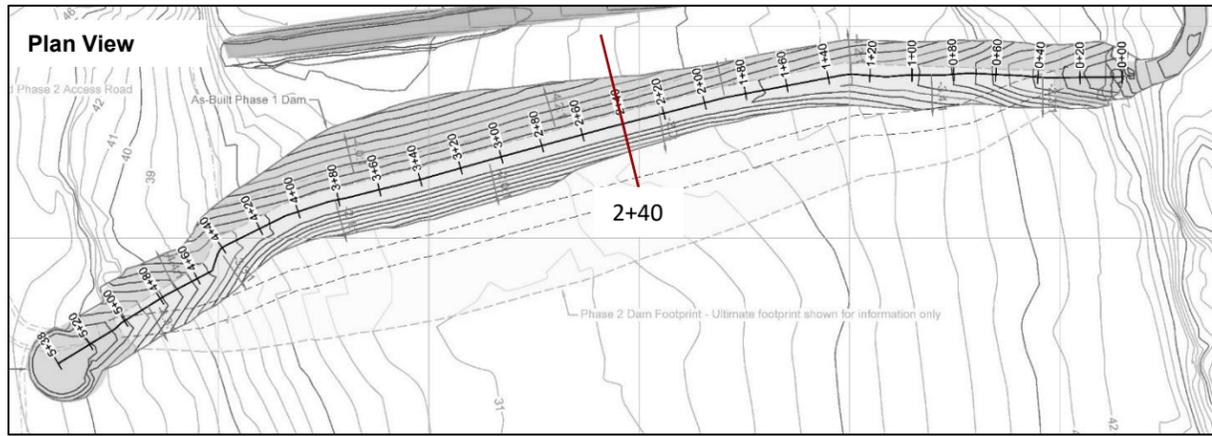


SD-HTS-240-KT

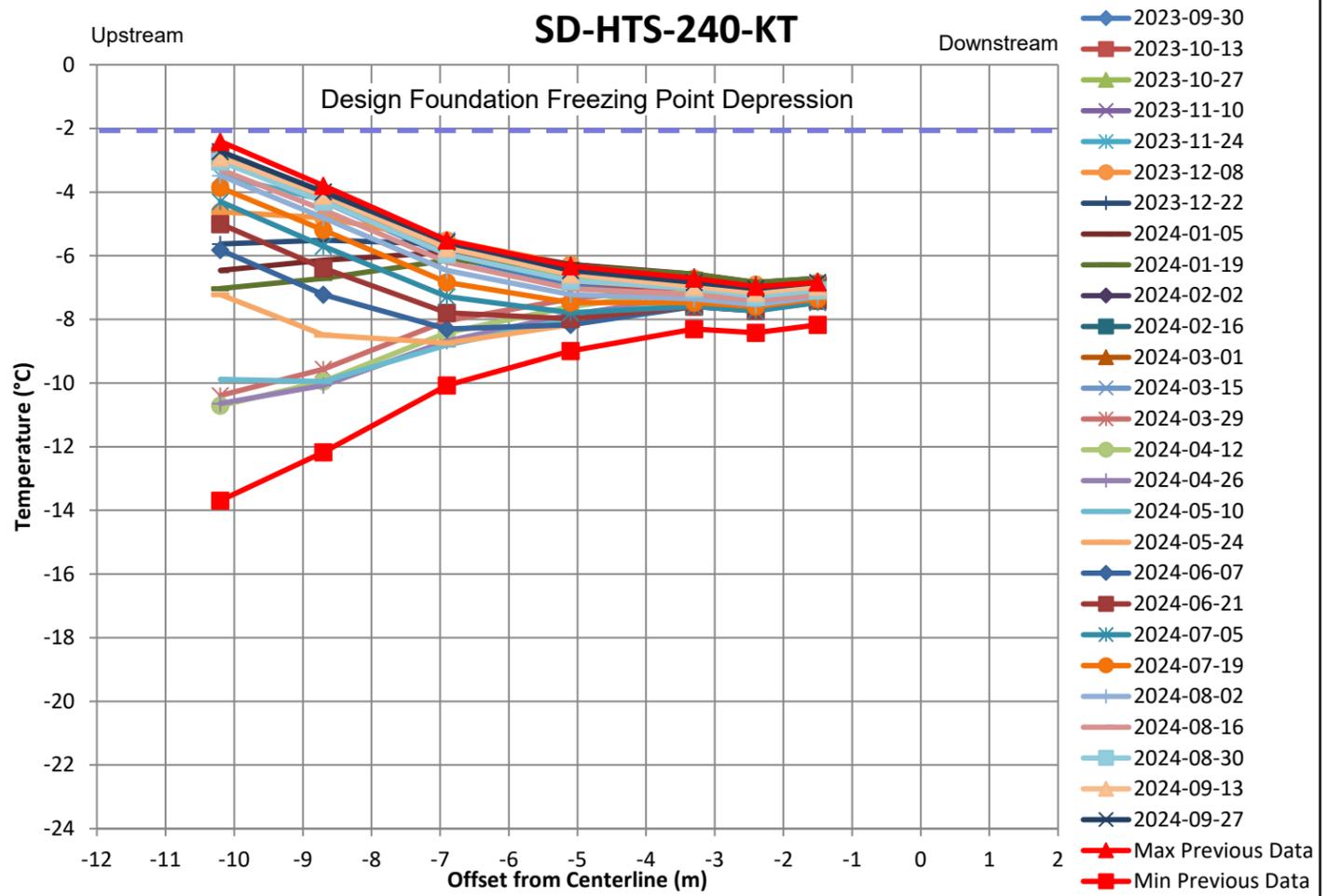
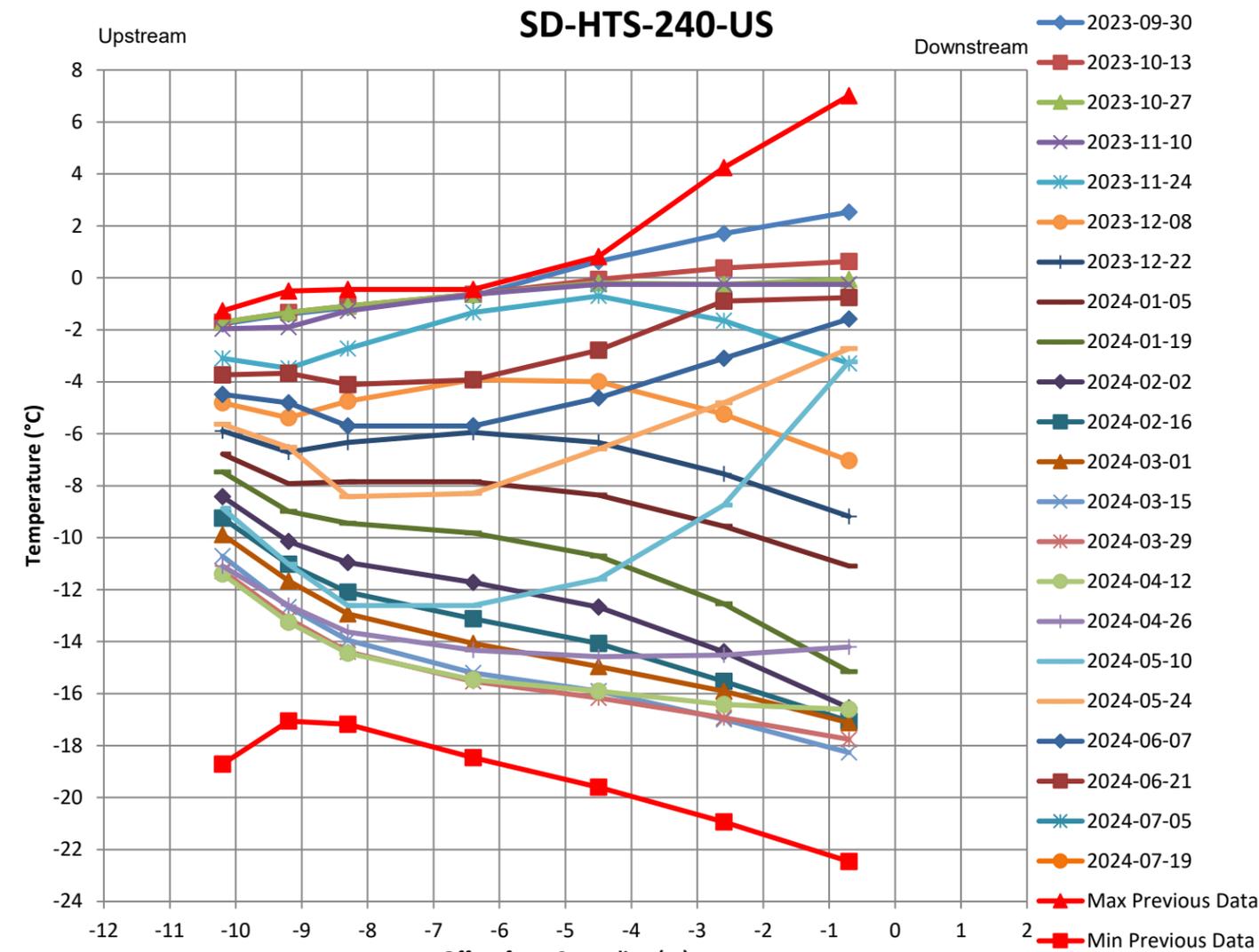


- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (November 6, 2018) is shown.
 - **(A)** No data collected between May 31, 2019 and June 13, 2019 for SD-HTS-240-KT.
 - **(B)** No data collected between August 1, 2019 to September 2, 2019 for SD-HTS-240-KT.
 - **(C)** No data collected between September 30, 2022 and December 12, 2022 for SD-HTS-240-US.
 - **(D)** Data collection gaps between January 23, 2024 and March 19, 2024 for SD-HTS-240-KT.
 - **(E)** No data collected after August 3, 2024 for SD-HTS-240-US.

| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 2+40 Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.27 |



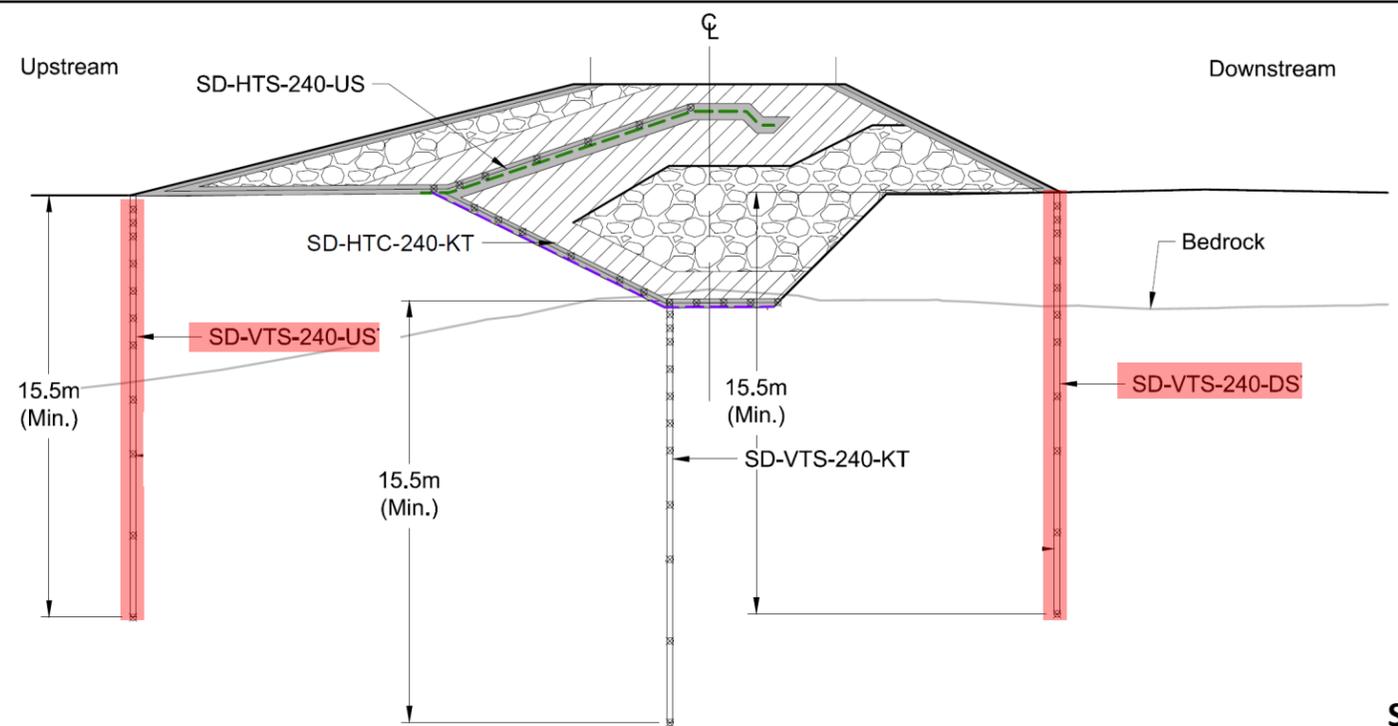
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



Notes:

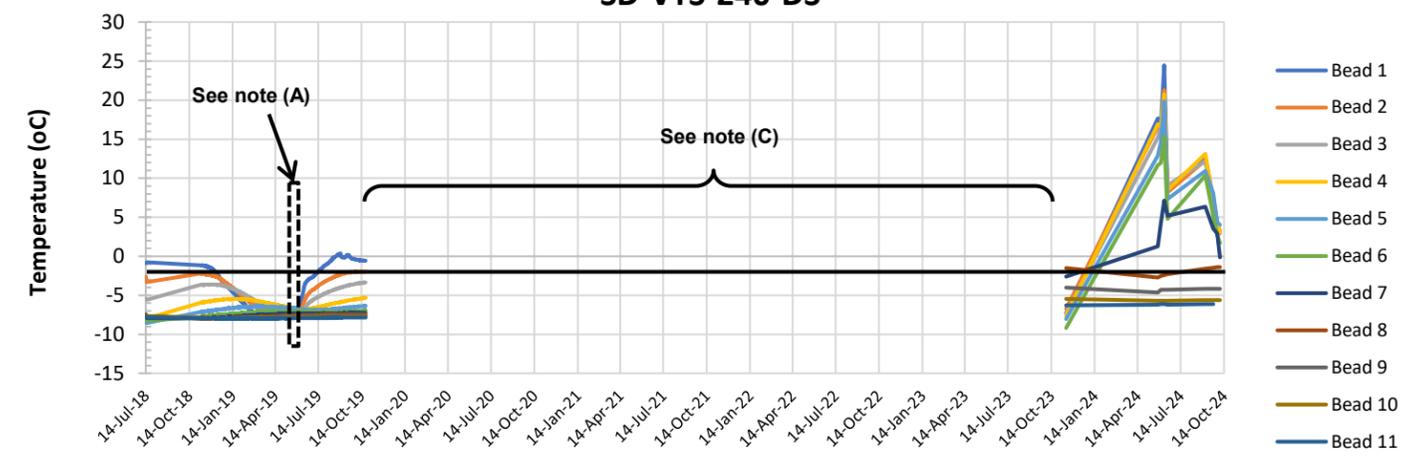
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between November 2018 and September 2023.
- No data collected between September 30, 2022 and December 12, 2022 for SD-HTS-240-US.
- SD-VTS-240-US and SD-VTS-240-DS replacement cables installed in late 2023.
- No data collected after July 19, 2024 for SD-HTS-240-US.

| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 2+40 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.28 |

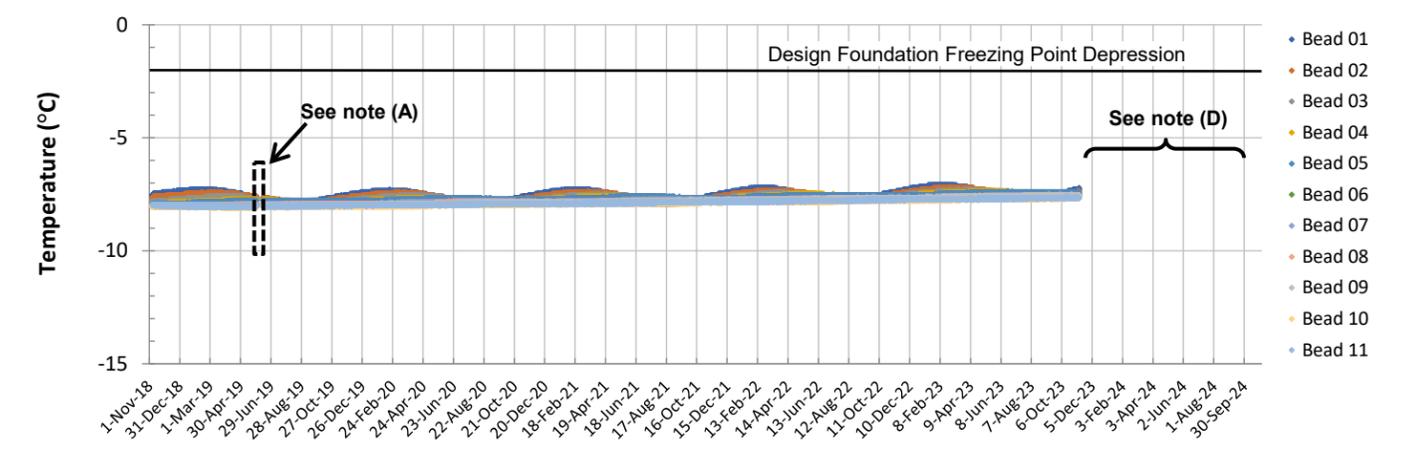


Legend:
█ GTC Status: Cable irreparably damaged
█ GTC Status: Bead damaged or data missing

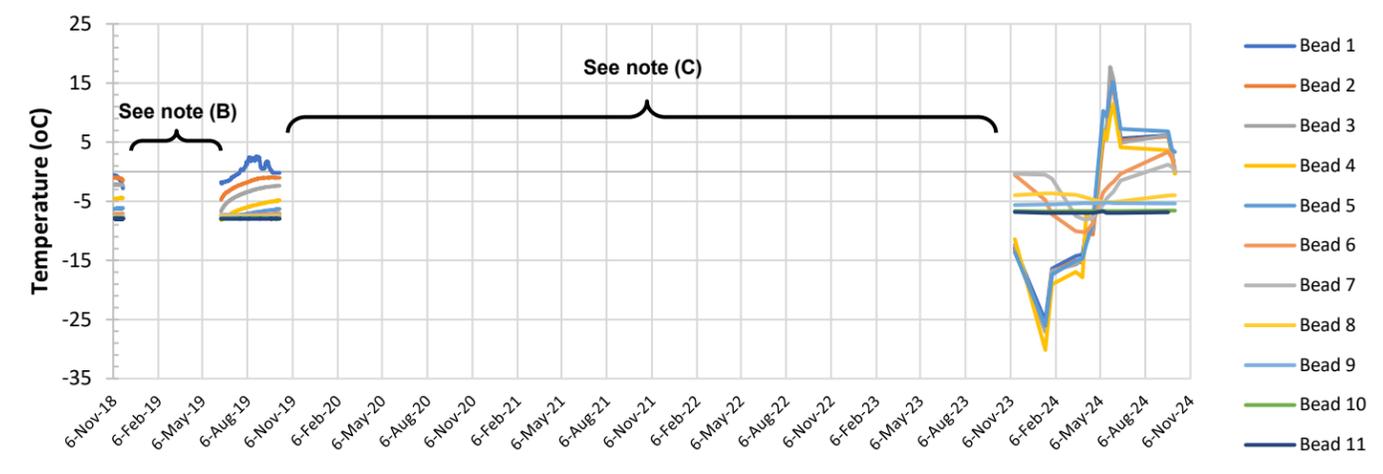
SD-VTS-240-DS



SD-VTS-240-KT



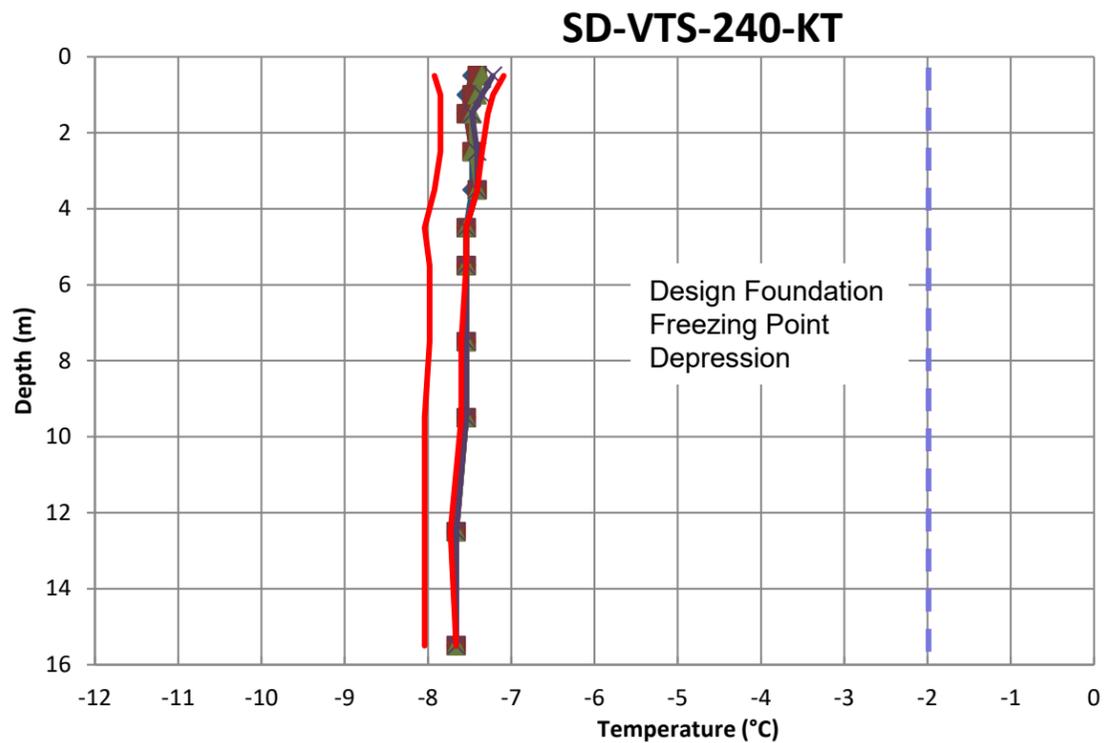
SD-VTS-240-US



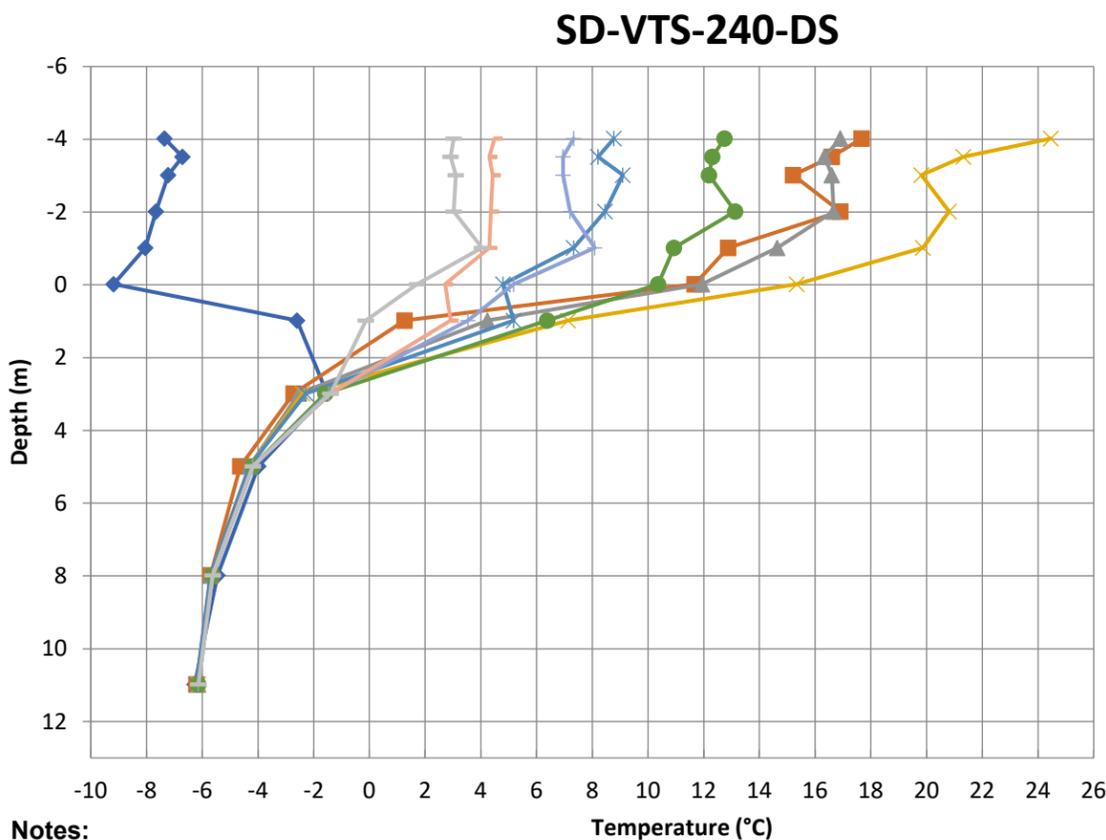
Notes:

- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
- Recent SD-VTS-240-DS and SD-VTS-240-US data were collected by both data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.
- Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (November 6, 2018) is shown.
- **(A)** No data collected between May 31, 2019 and June 13, 2019
- **(B)** No readings. Cable was damaged and repaired in June 2019
- **(C)** No data collected after October 10, 2019 for SD-VTS-240-US and after October 22, 2019 for SD-HTS-240-DS. Both cables were assumed to be irreparable. Replacement cables installed in late 2023.
- **(D)** No data collected after November 12, 2023 for SD-VTS-240-KT.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 2+40 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.29 |

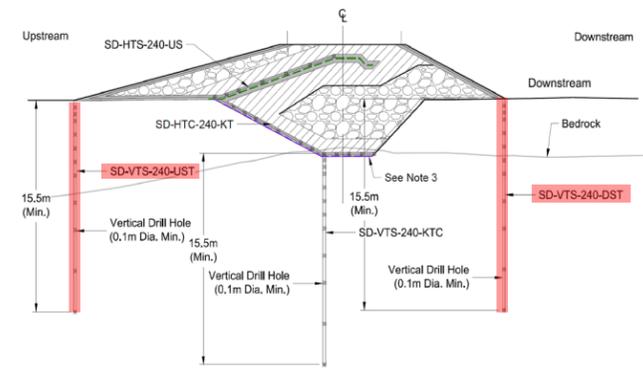


- ◆ 2023-09-30
- 2023-10-13
- ▲ 2023-10-27
- ✕ 2023-11-10
- Max Previous Data
- Min Previous Data



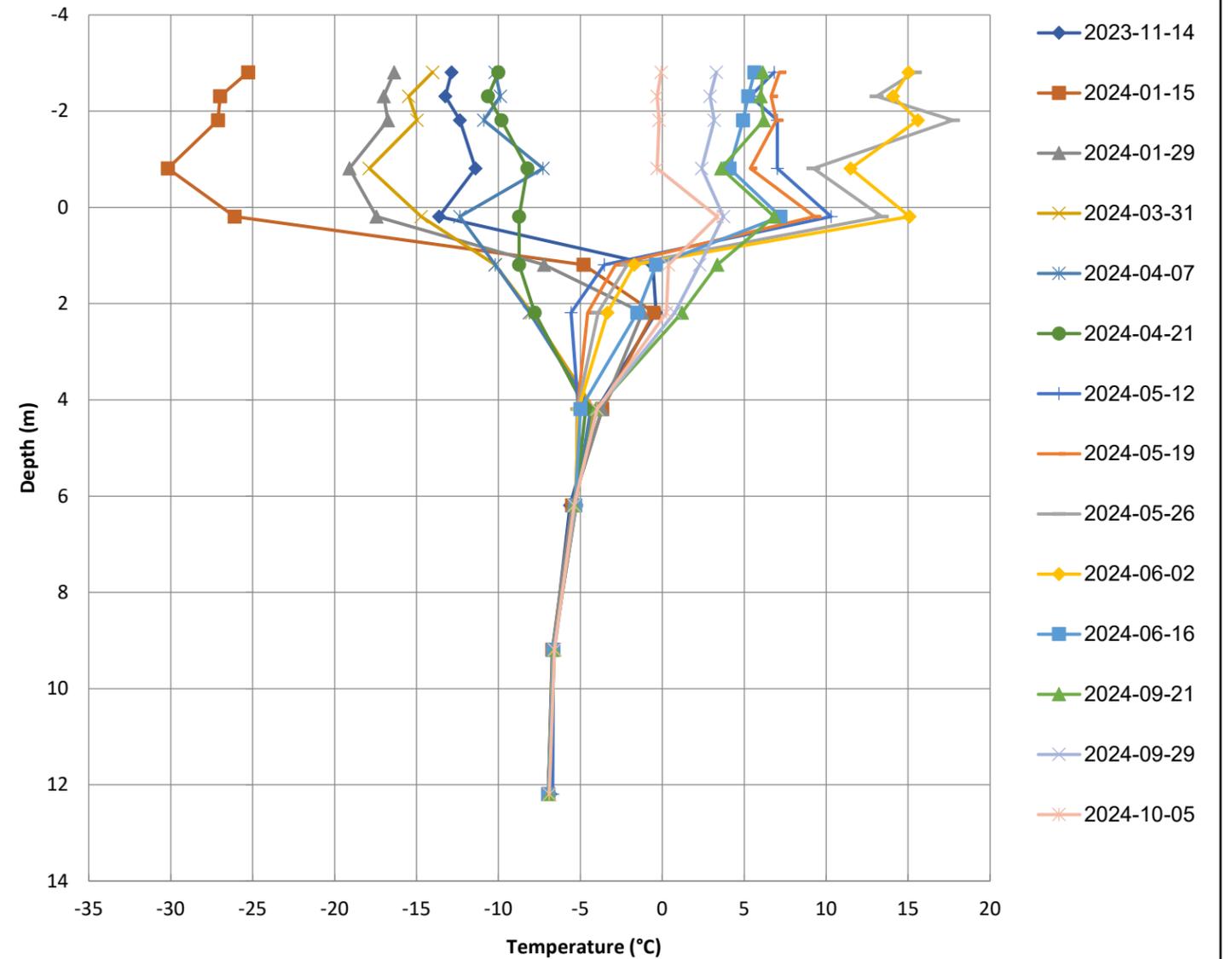
- ◆ 2023-11-14
- 2024-05-26
- ▲ 2024-06-02
- ✕ 2024-06-09
- ✕ 2024-06-16
- 2024-09-04
- ✕ 2024-09-21
- 2024-09-29
- 2024-10-05

- Notes:**
- Due to limited data graphs display select interval datasets from current reporting period.
 - Negative depths denote elevations above rock surface.
 - Previous data were recorded between November 2018 and September 2023.
 - No data collected after October 22, 2019 for SD-VTS-240-DS. GTC assumed to be irreparably damaged.
 - No data collected after November 12, 2023 for SD-VTS-240-KT.



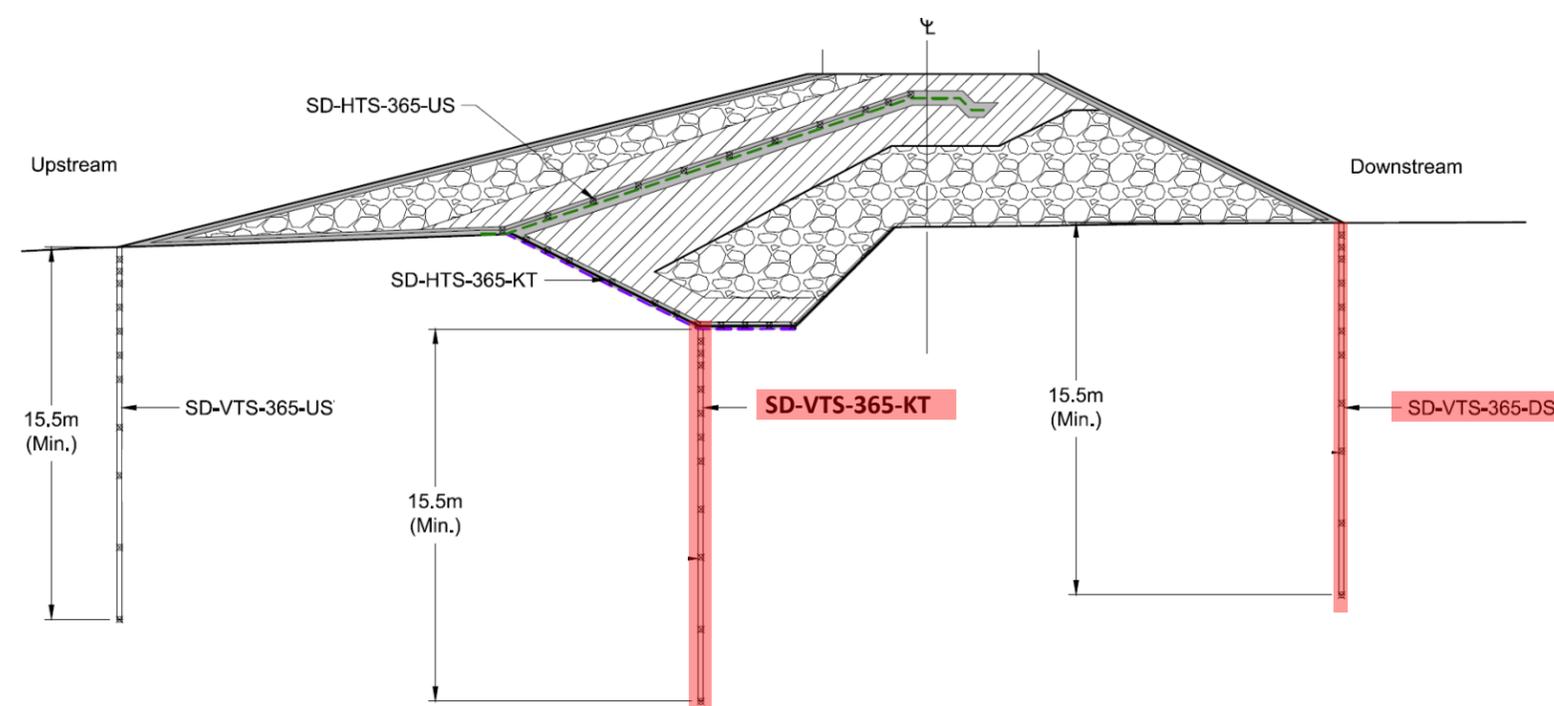
- Legend:**
- GTC Status: Cable irreparably damaged
 - GTC Status: Bead damaged or data missing

SD-VTS-240-US



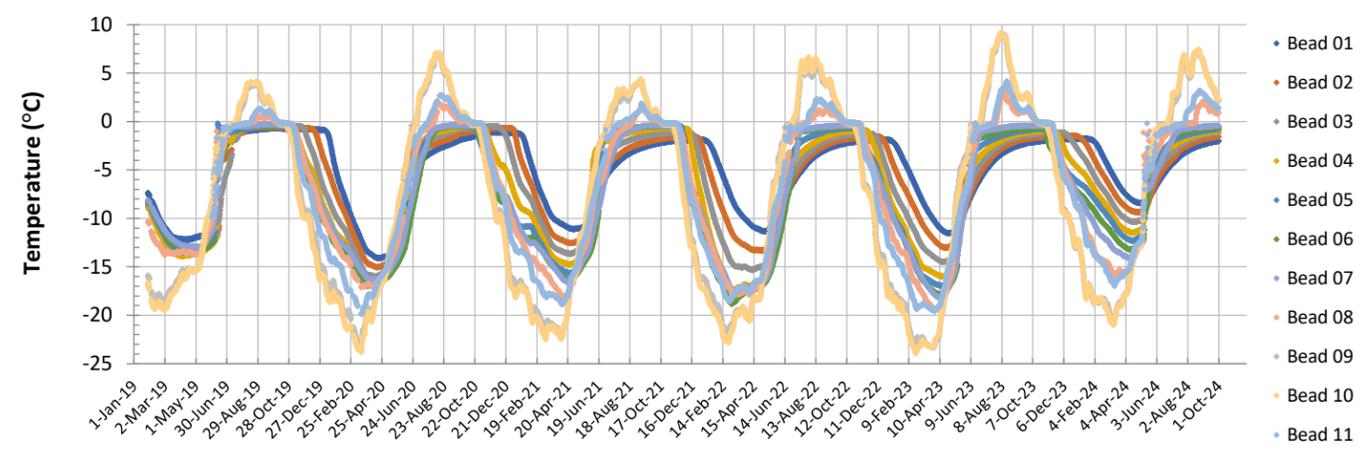
- ◆ 2023-11-14
- 2024-01-15
- ▲ 2024-01-29
- ✕ 2024-03-31
- ✕ 2024-04-07
- 2024-04-21
- ✕ 2024-05-12
- 2024-05-19
- 2024-05-26
- ◆ 2024-06-02
- 2024-06-16
- ▲ 2024-09-21
- ✕ 2024-09-29
- ✕ 2024-10-05

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 2+40 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.30 |

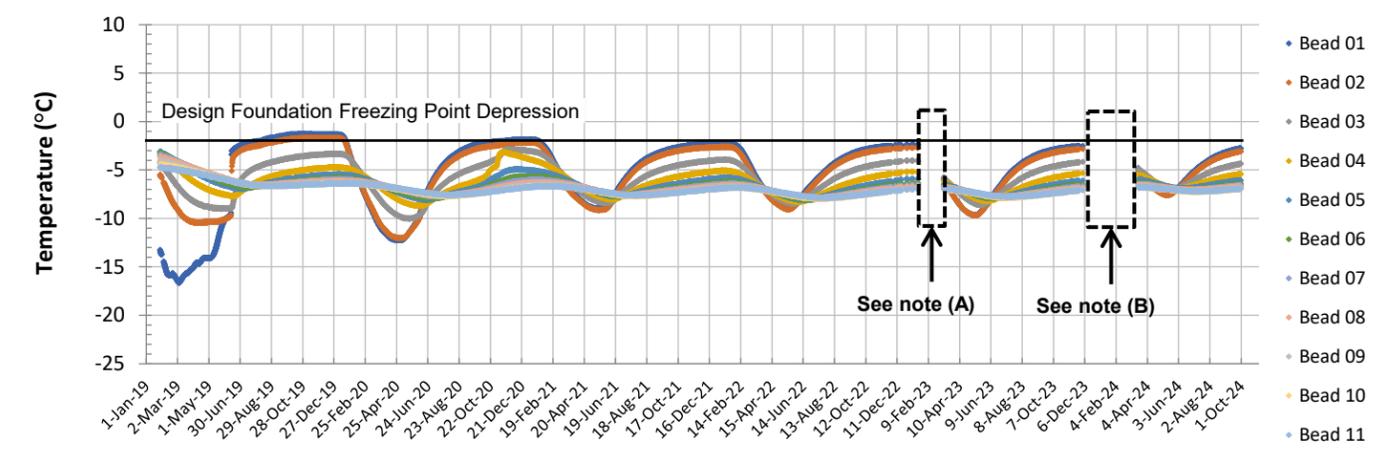


Legend:
█ GTC Status: Cable irreparably damaged
█ GTC Status: Bead damaged or data missing

SD-HTS-365-US

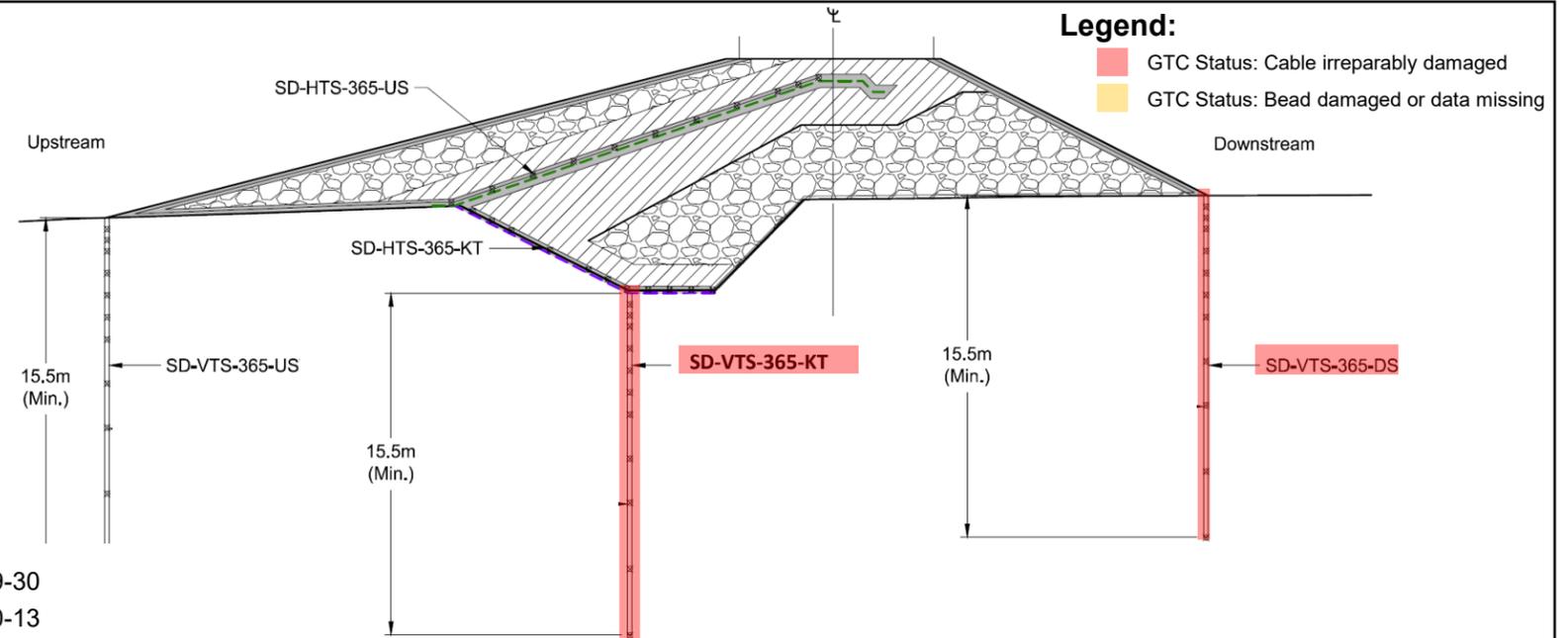
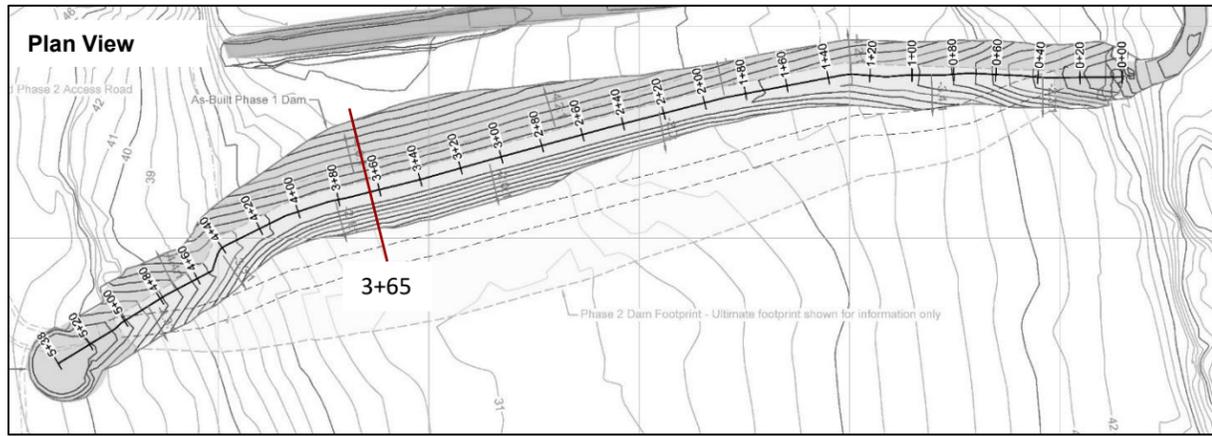


SD-HTS-365-KT

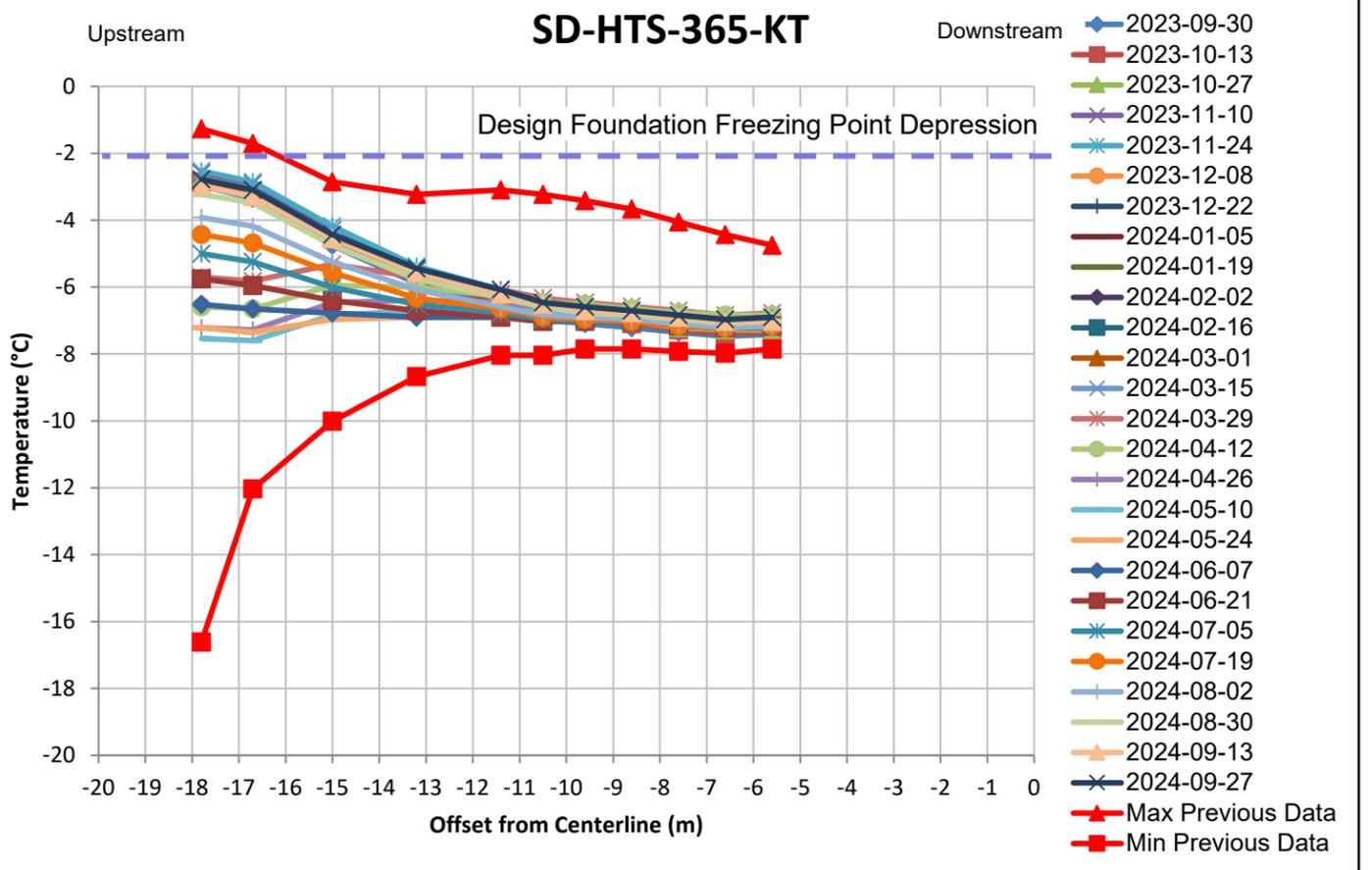
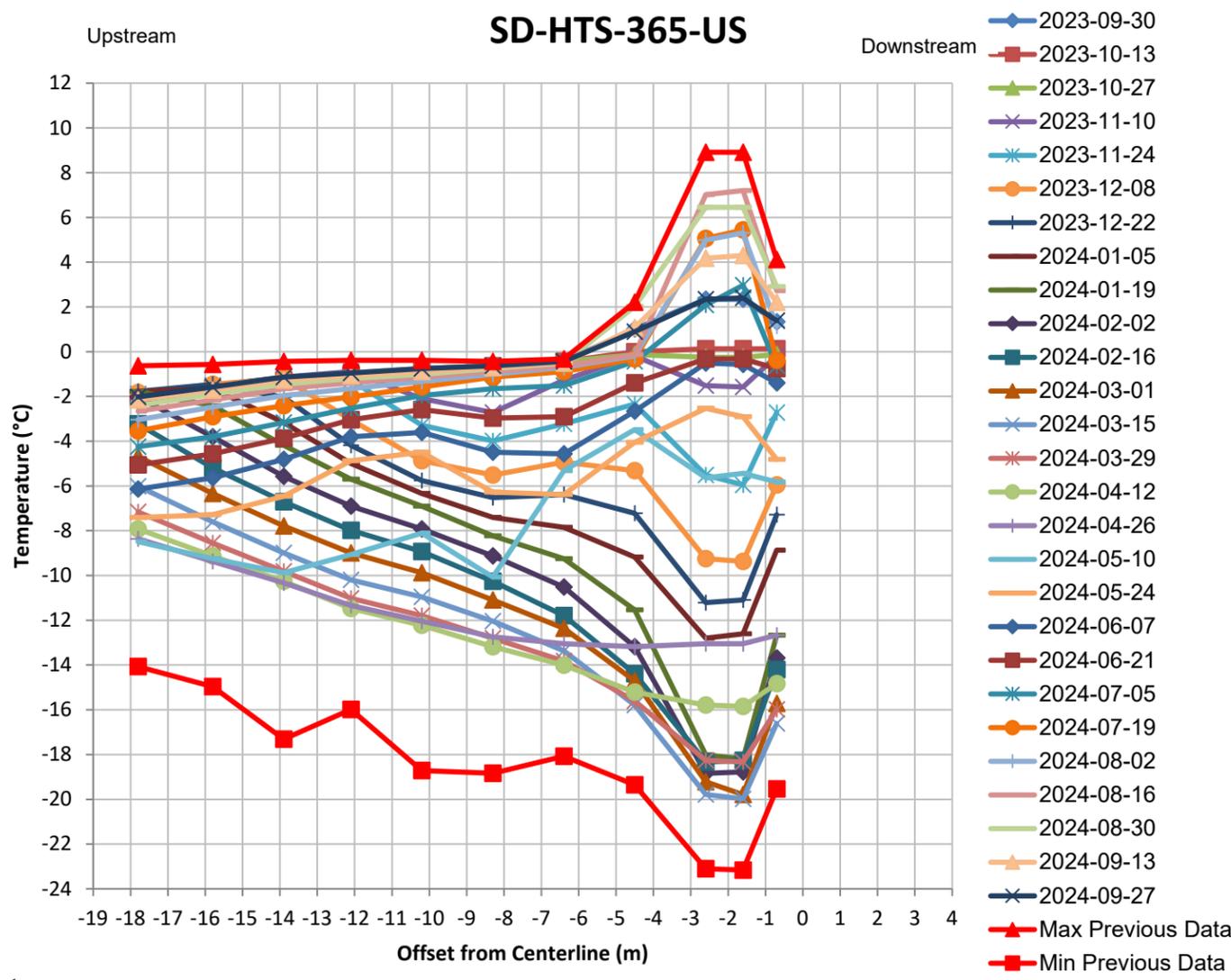


- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (January 27, 2019) is shown.
 - **(A)** Data collection gaps between November 30, 2022 and March 22, 2023 for SD-HTS-365-KT.
 - **(B)** No data collected between November 16, 2023 and December 12, 2023; and no data collected between December 12, 2023 to March 18, 2024.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 3+65 Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.31 |



Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

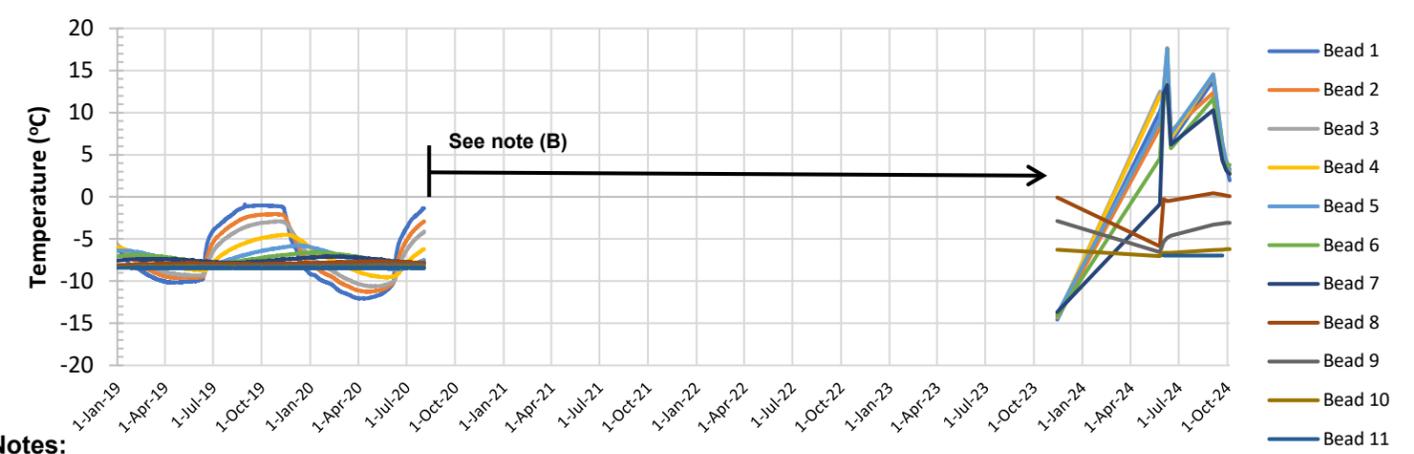
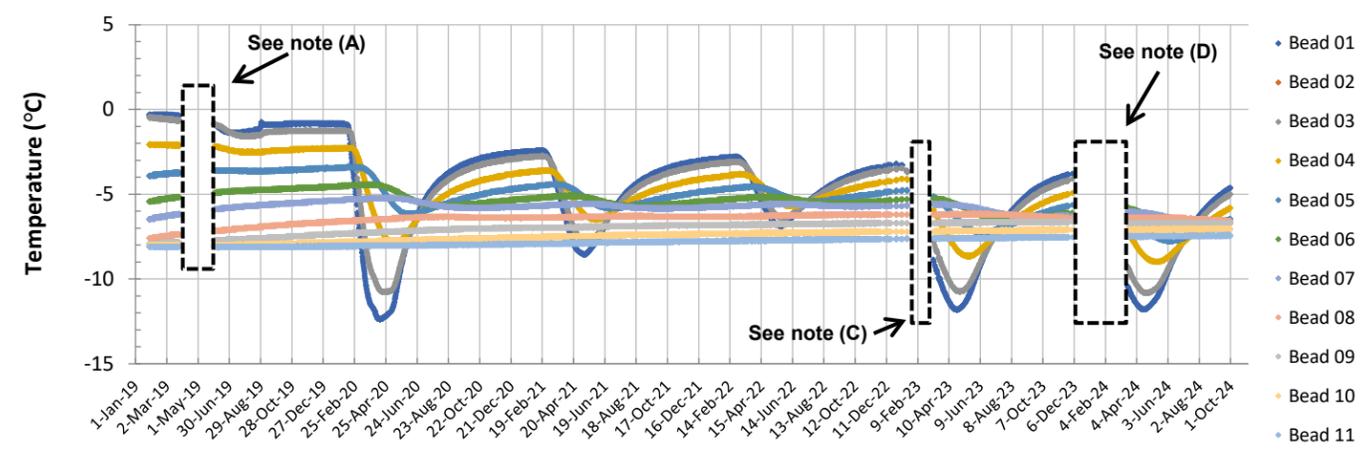
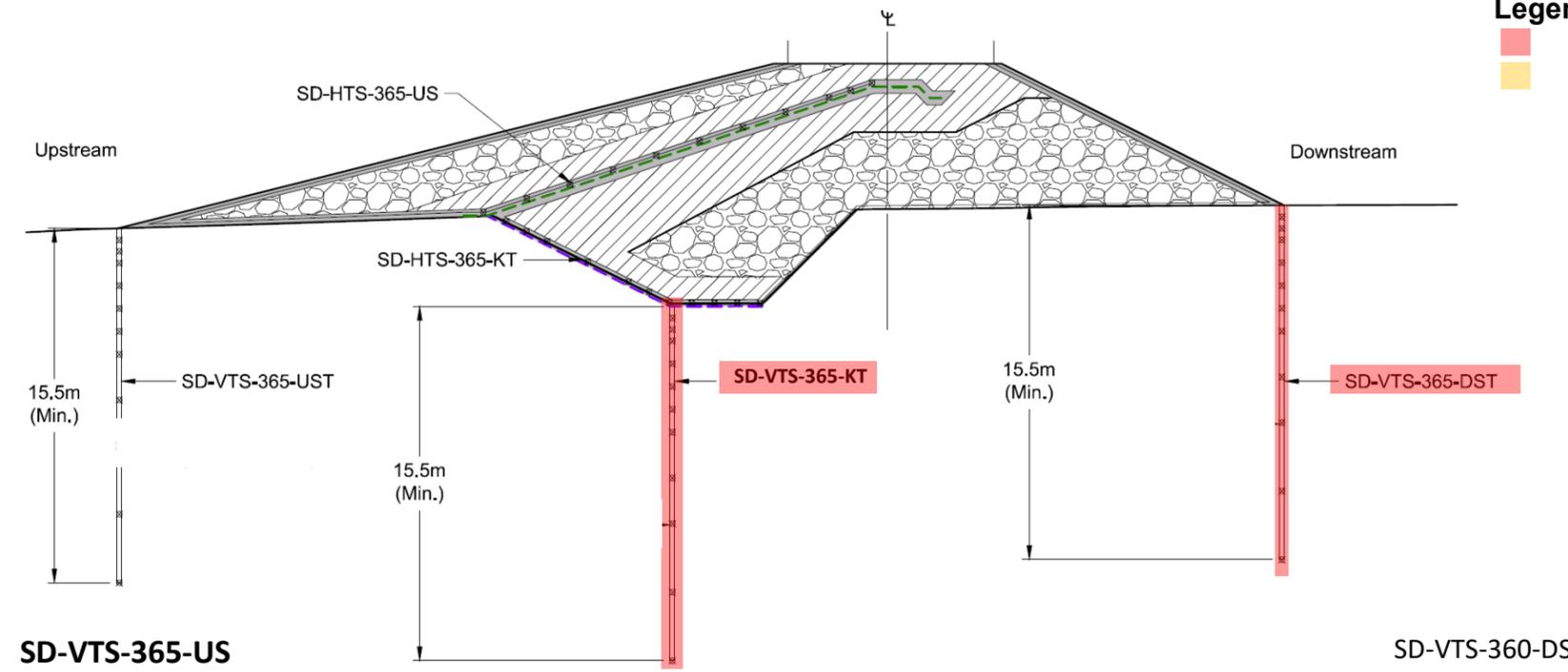


Notes:

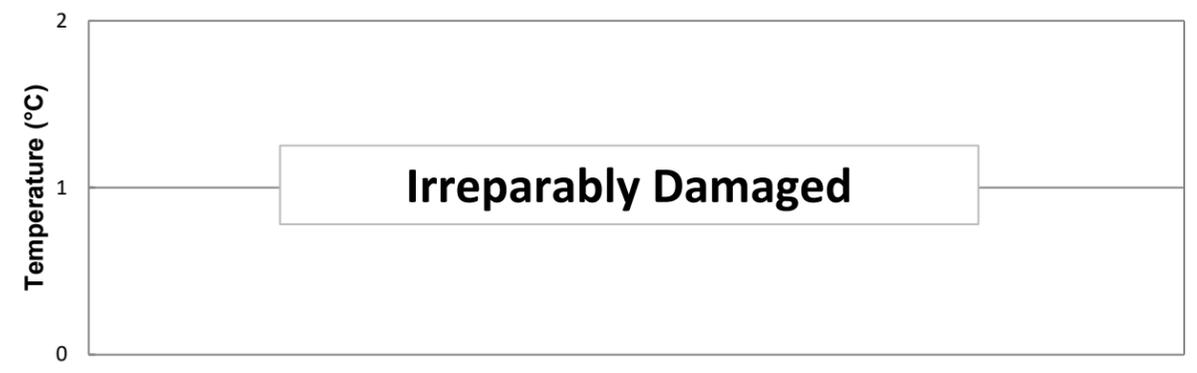
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between January 2019 and September 2023.
- No data collected between January 20, 2023 and March 11, 2023 for SD-HTS-365-KT.

| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 3+65 Horizontal Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.32 |

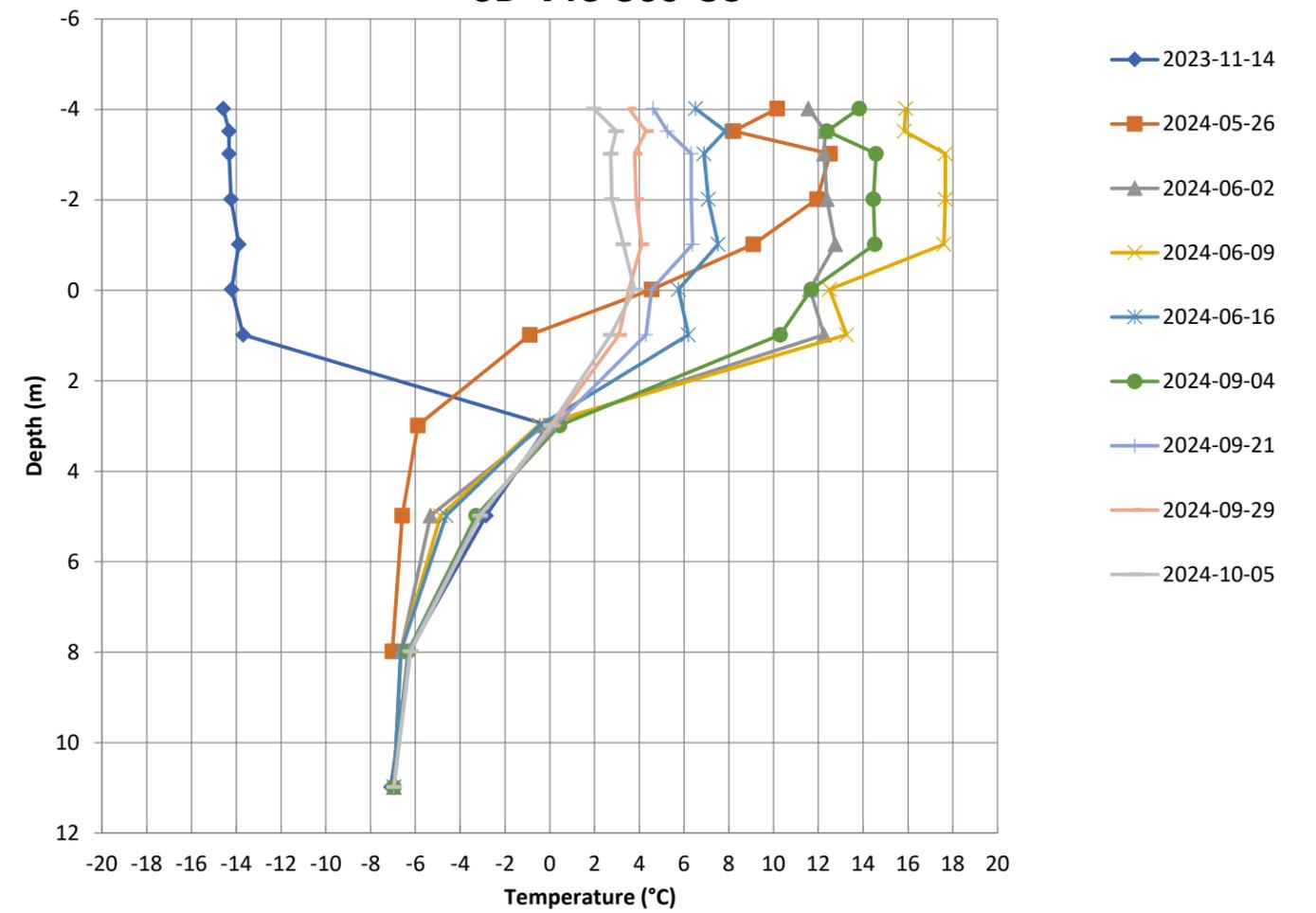
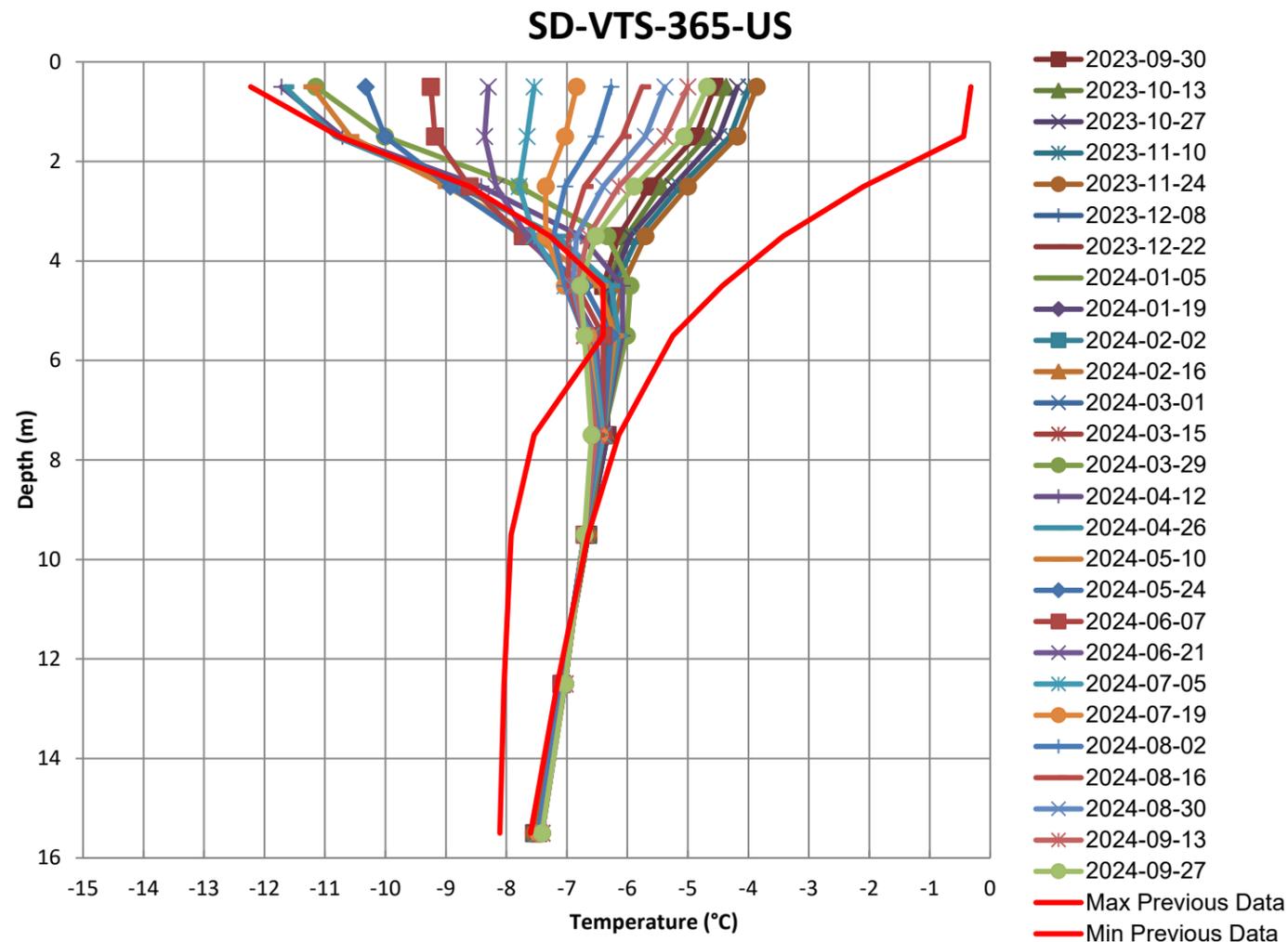
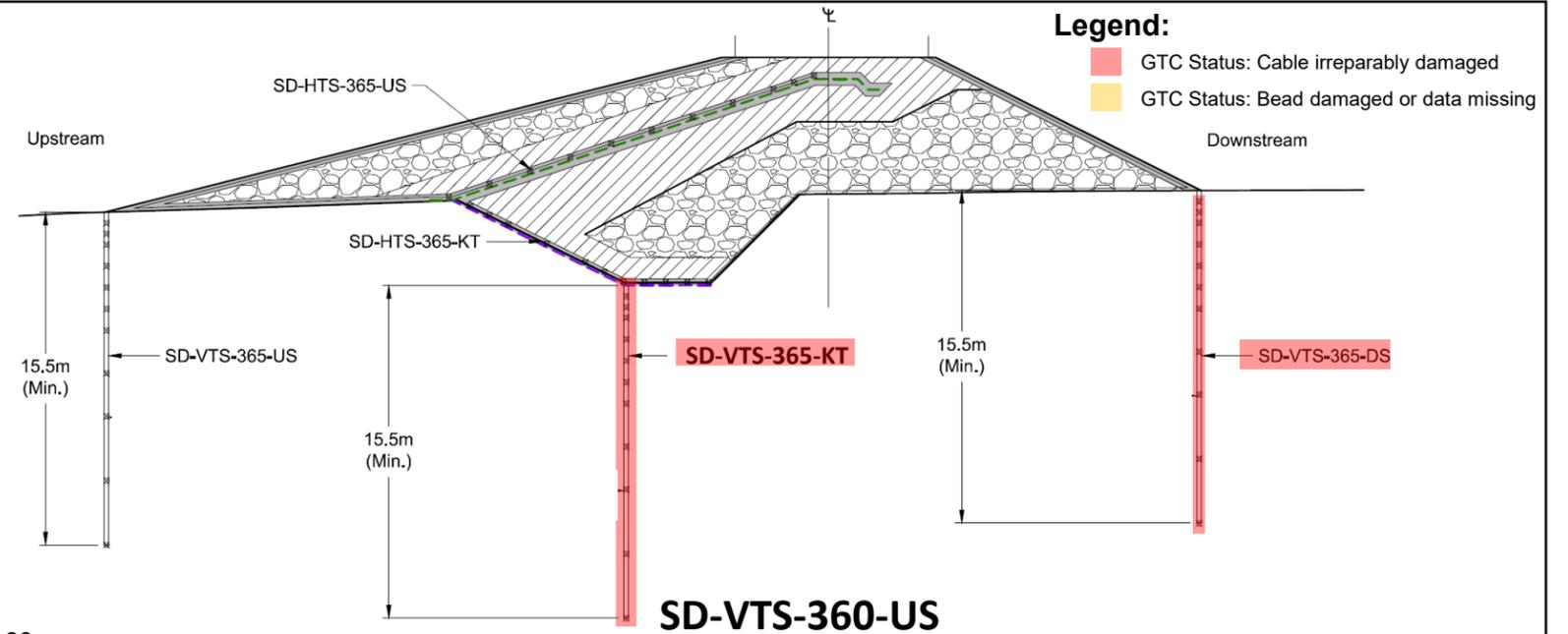
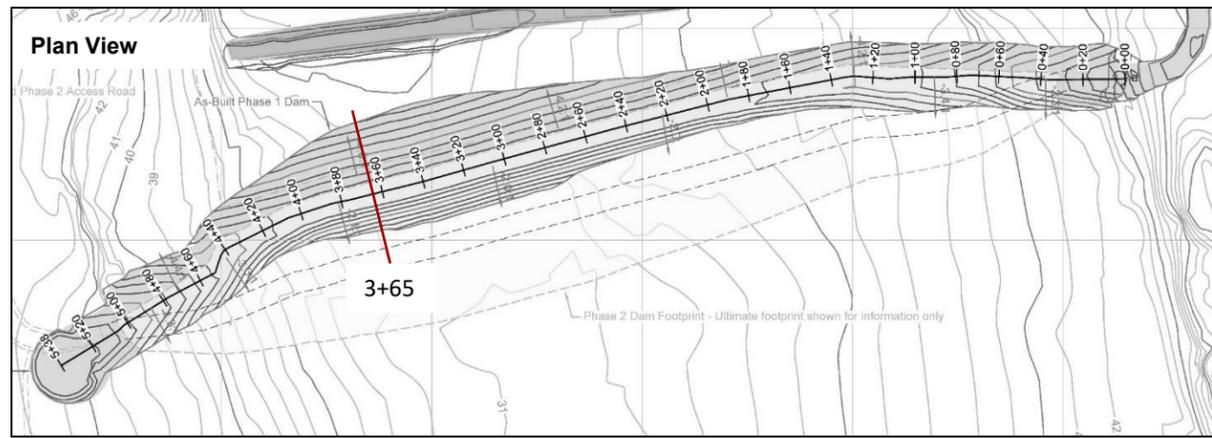
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



SD-VTS-365-KT



- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - SD-VTS-365-US cable damaged after construction but repaired and replaced with SD-VTS-360-DS. Data has been appended accordingly in place of SD-VTS-365-US.
 - Recent SD-VTS-360-VS data were collected by both data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.
 - SD-VTS-365-KT irreparably damaged after construction.
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (January 27, 2019) is shown.
 - **(A)** No data collected between March 13, 2019 and May 31, 2019 for SD-VTS-365-US.
 - **(B)** No data collected after August 3, 2020 SD-VTS-365-DS. GTC assumed to be irreparably damaged. Replacement cables installed in late 2023.
 - **(C)** No data collected between January 20, 2023 and March 11, 2023 for SD-VTS-365-US.
 - **(D)** Data collection gaps between November 16, 2023 to December 2, 2023. No data collected between December 2, 2023 and March 18, 2024 for SD-VTS-365-US.

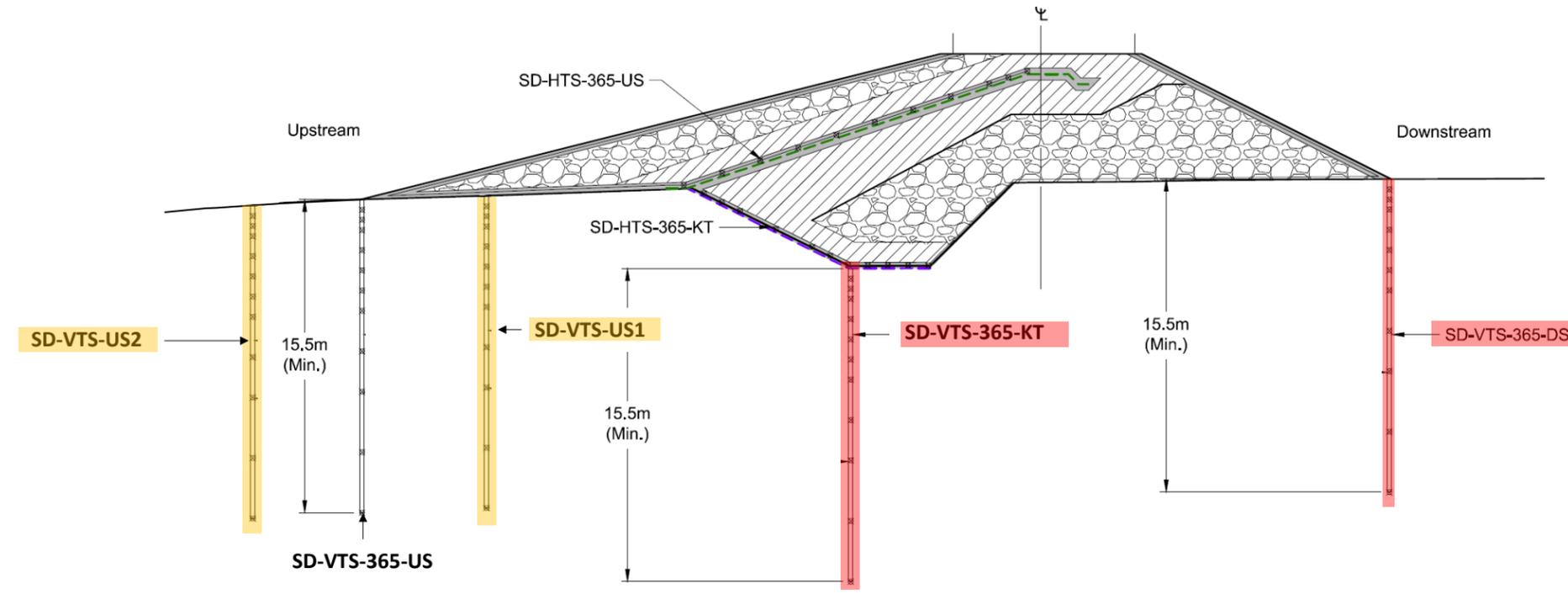


Notes:

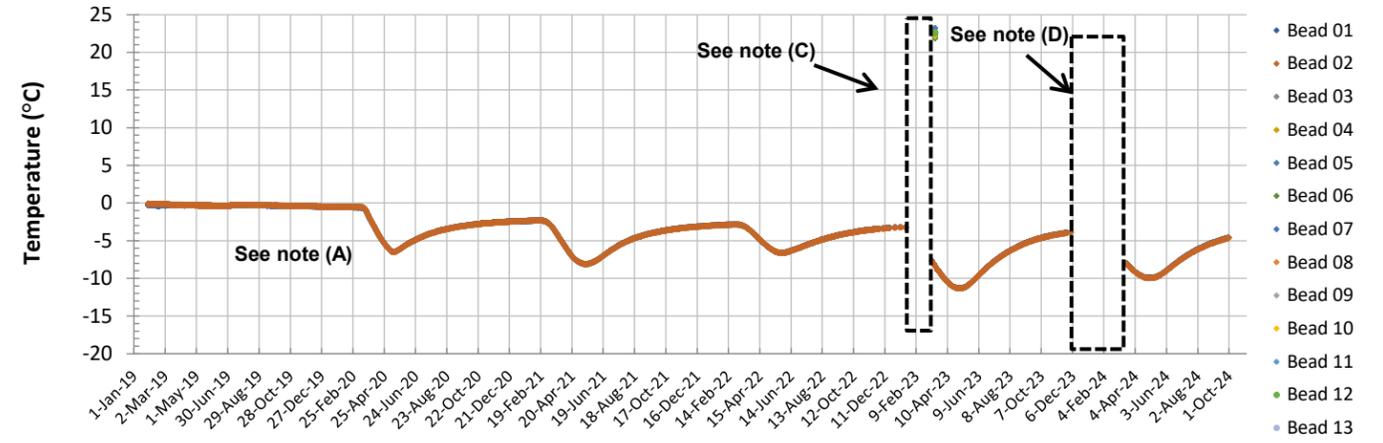
- Vertical and horizontal offset graphs display data in two-week intervals. Due to limited data SD-VTS-360-DS graph displays select interval datasets from this reporting period.
- Negative depths denote elevations above ground surface.
- Previous data were recorded between January 2019 and September 2023.
- No data collected between January 20, 2023 and March 11, 2023 for SD-VTS-365-US.
- No data collected after August 3, 2020 SD-VTS-365-DS. GTC assumed to be irreparably damaged.

| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 3+65 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.34 |

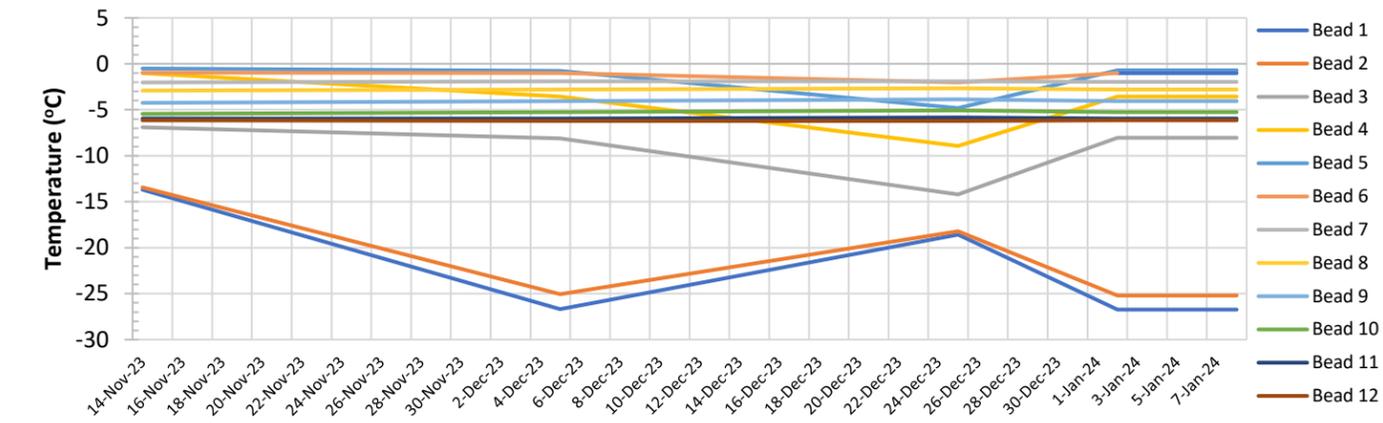
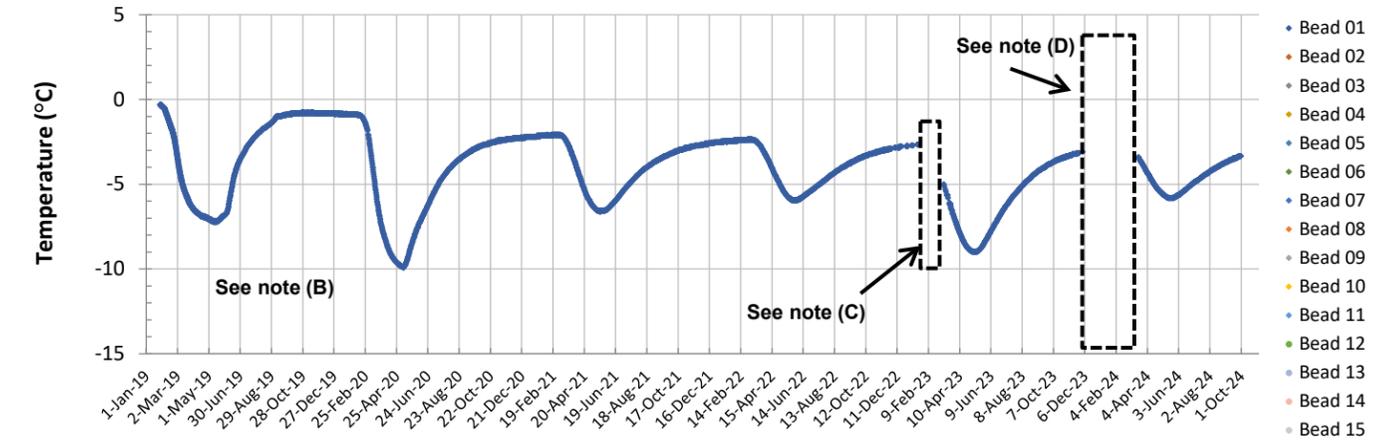
Legend:
█ GTC Status: Cable irreparably damaged
█ GTC Status: Bead damaged or data missing



SD-VTS-US1



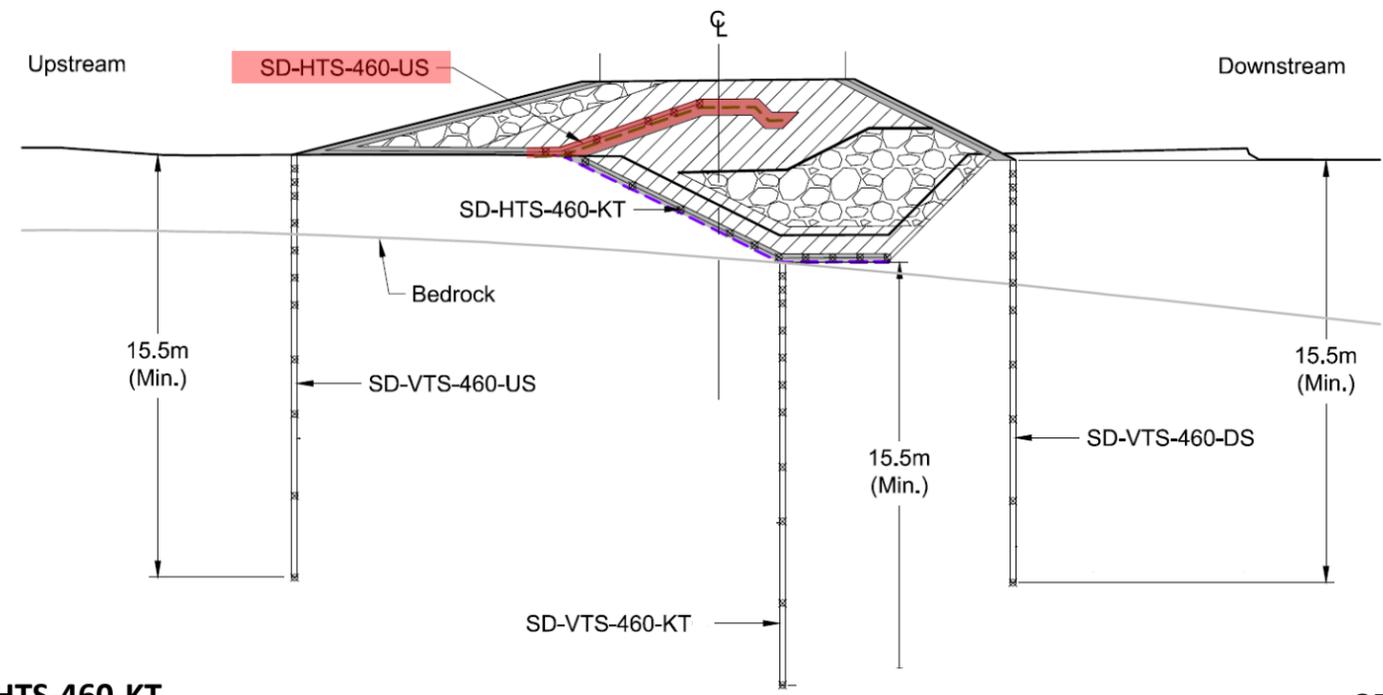
SD-VTS-US2



- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - Recent SD-VTS-US3 data were collected by manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent collection of data.
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (January 27, 2019) is shown.
 - Offset graphs for SD-VTS-US1, SD-VTS-US2 and SD-VTS-US3 are not provided.
 - **(A)** Only top two beads are working (Bead 01 and Bead 02) for SD-VTS-US1.
 - **(B)** Only top bead working (Bead 01) for SD-VTS-US2.
 - **(C)** No data collected between January 20, 2023 and March 11, 2023 for SD-VTS-US1 and SD-VTS-US2.
 - **(D)** No data collected between November 25, 2023 and March 18, 2024 for SD-VTS-US1 and SD-VTS-US2.

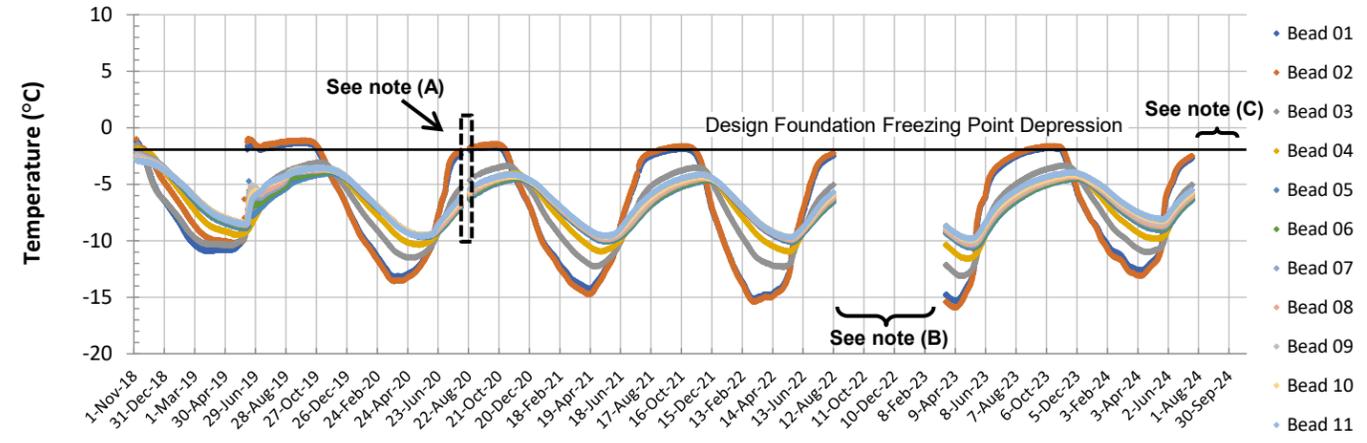
| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 3+65 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.35 |

Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



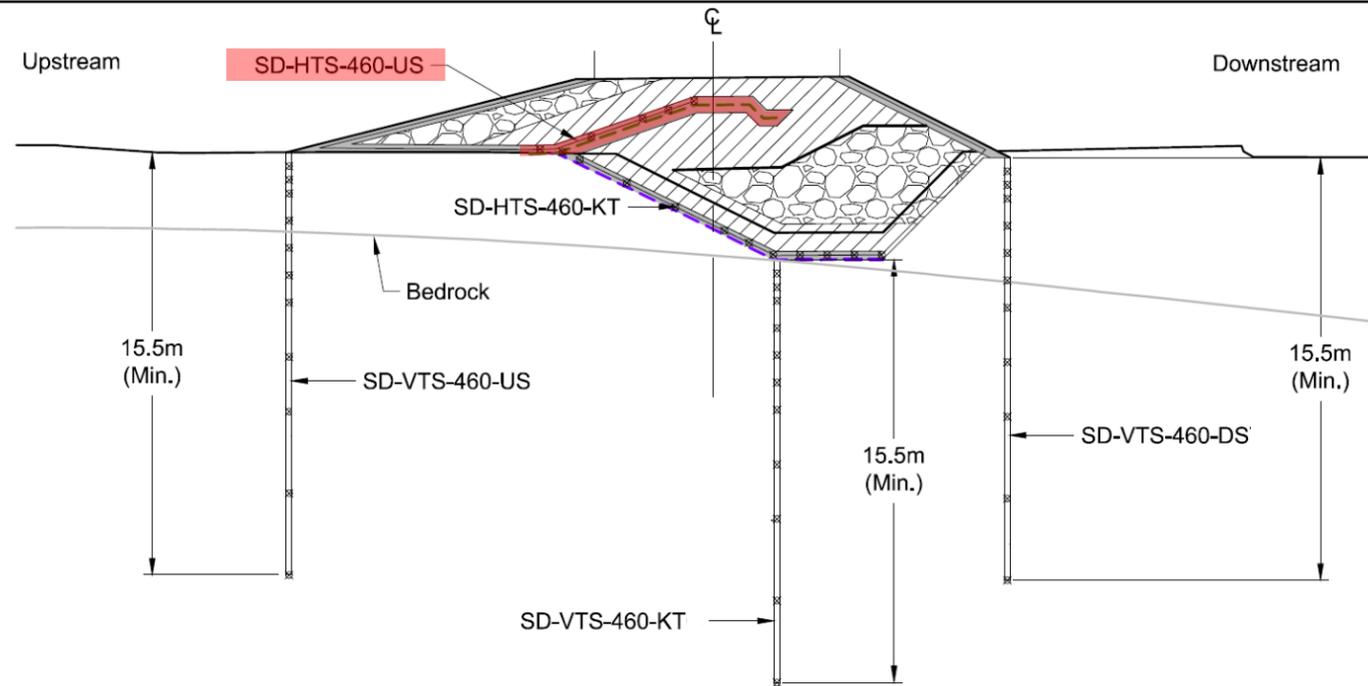
SD-HTS-460-KT

SD-HTS-460-US



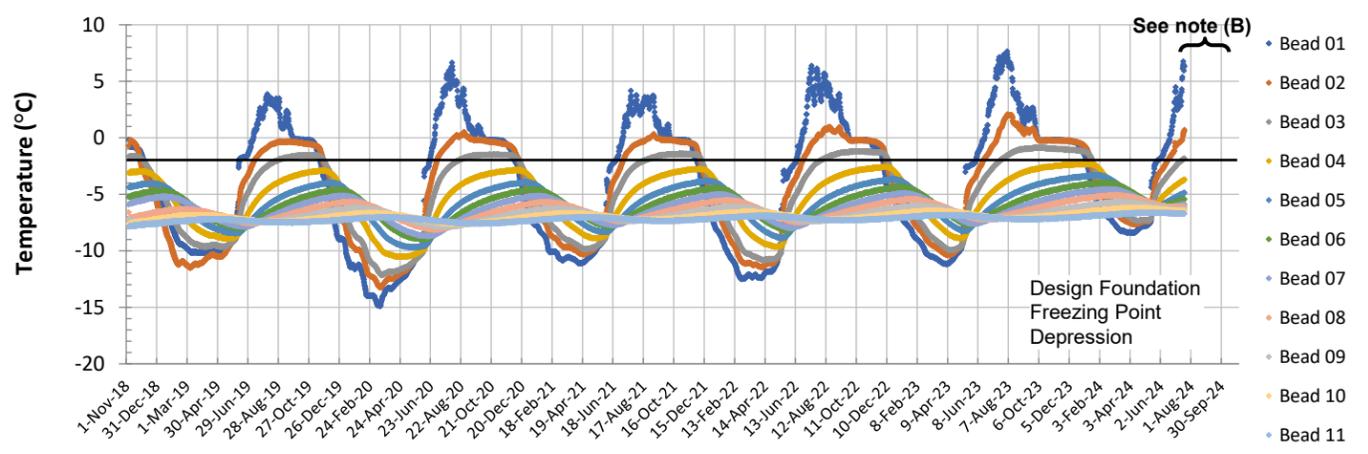
- Notes:**
- Bead numbers increase from upstream to downstream (horizontal) and top to bottom (vertical).
 - Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (November 6, 2018) is shown.
 - **(A)** Data collection gaps between August 7, 2020 and September 11, 2020 for SD-HTS-460-KT.
 - **(B)** No data collected between August 12, 2022 and March 21, 2023 for SD-HTS-460-KT.
 - **(C)** No data collected after July 19, 2024 for SD-HTS-460-KT.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 4+60 Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.36 |

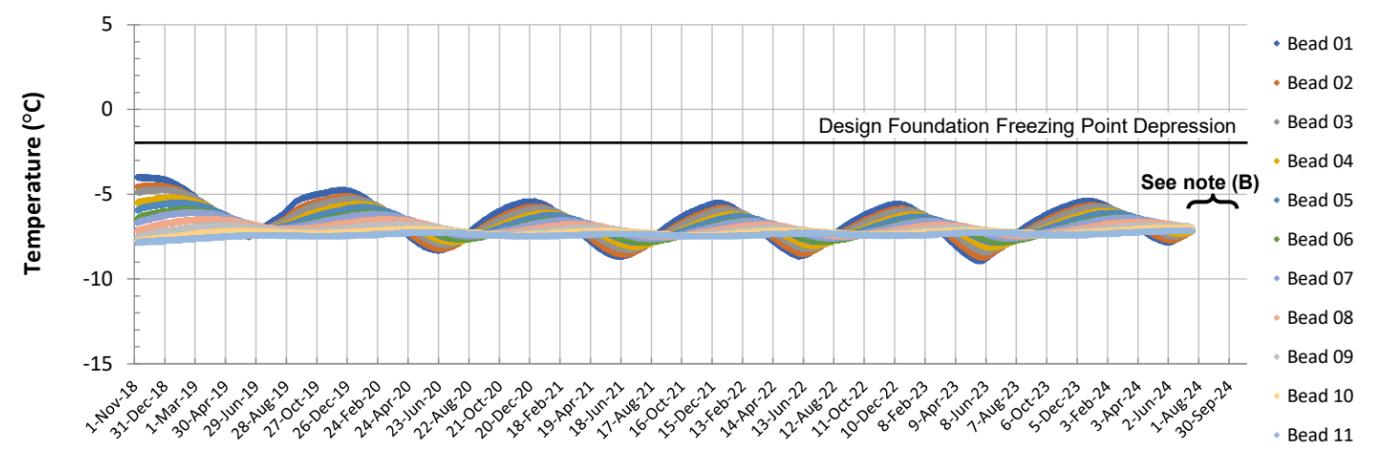


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

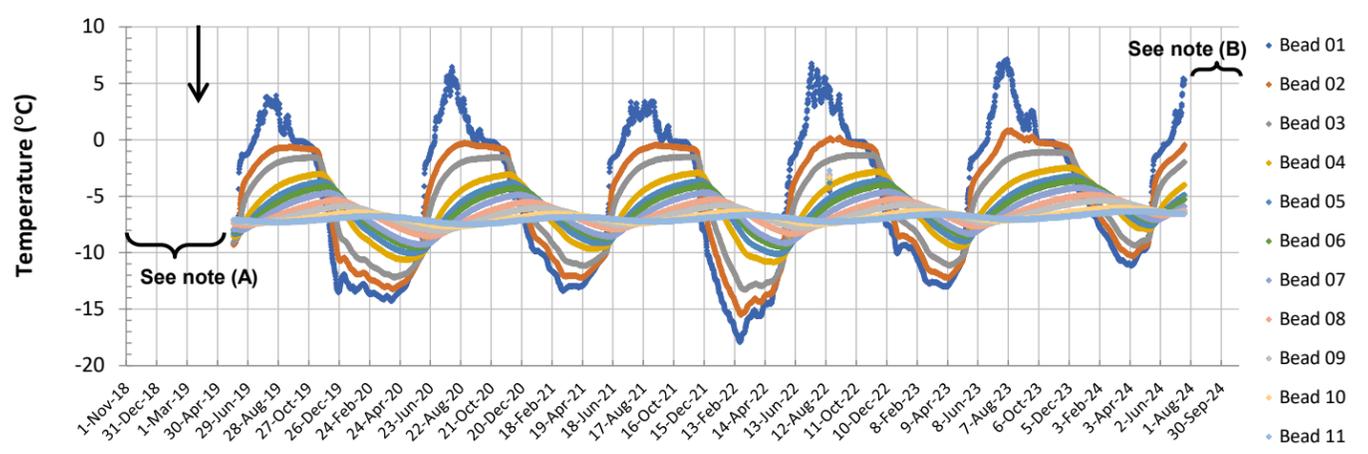
SD-VTS-460-DS



SD-VTS-460-KT



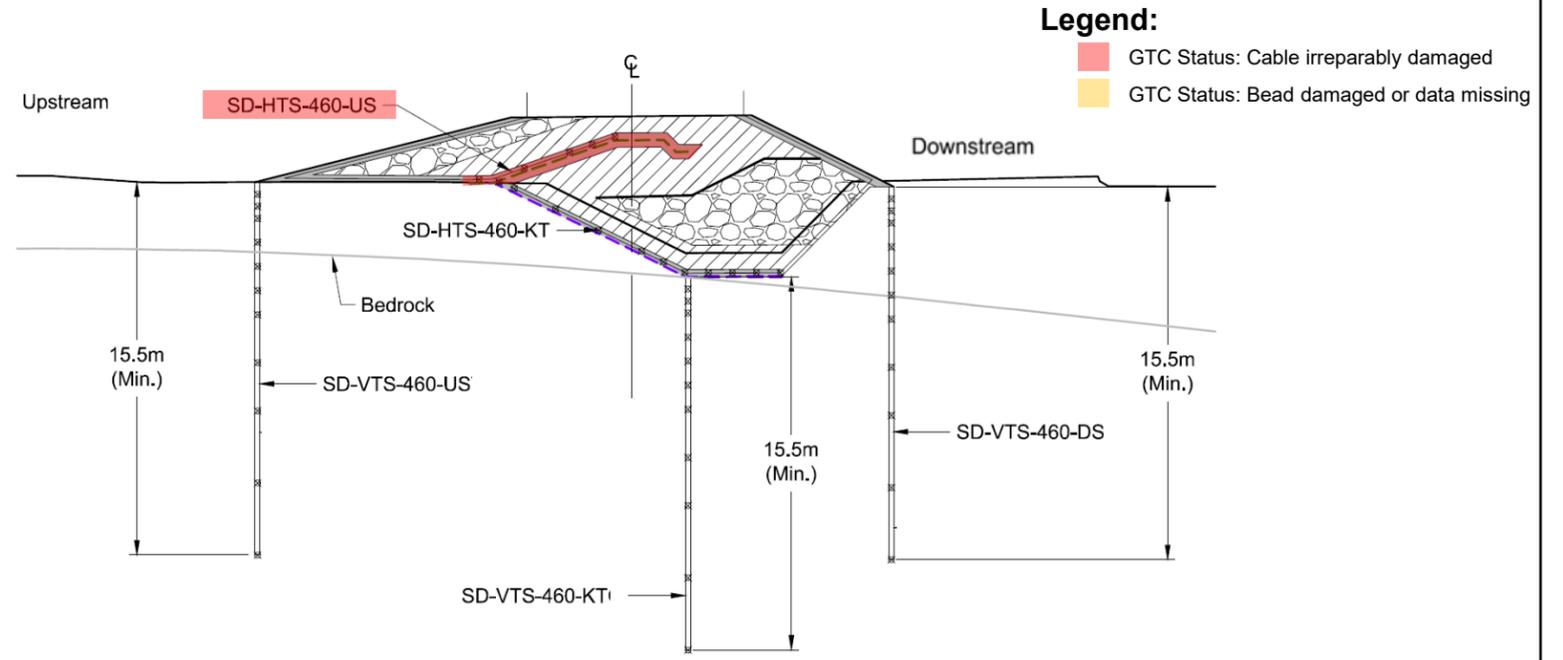
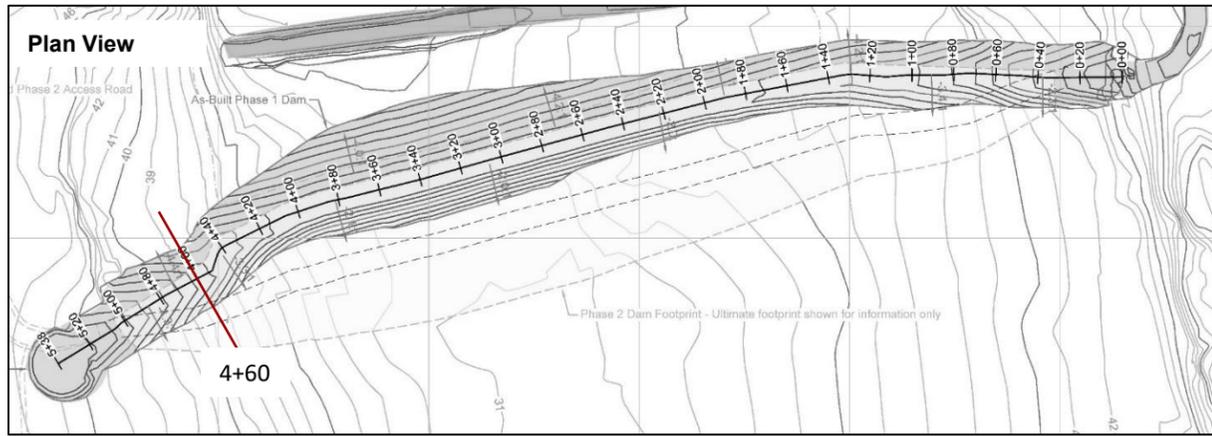
SD-VTS-460-US



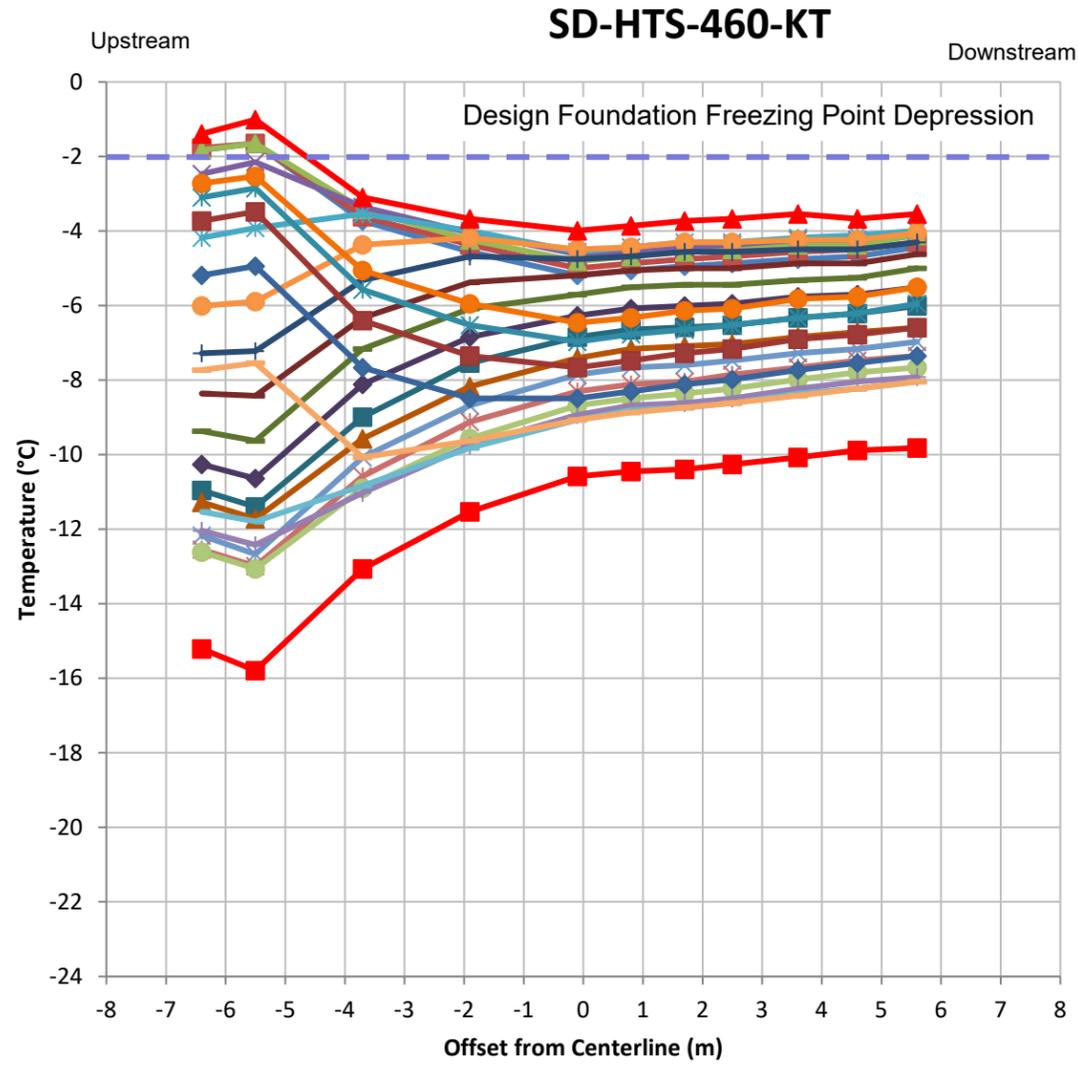
Notes:

- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (November 6, 2018) is shown.
- (A) SD-VTS-460-US cable was damaged after construction but repaired, started transmitting late August 2019.
- (B) No data collected after July 19, 2024 for SD-VTS-460-KT, SD-VTS-460-US, SD-VTS-460-DS.

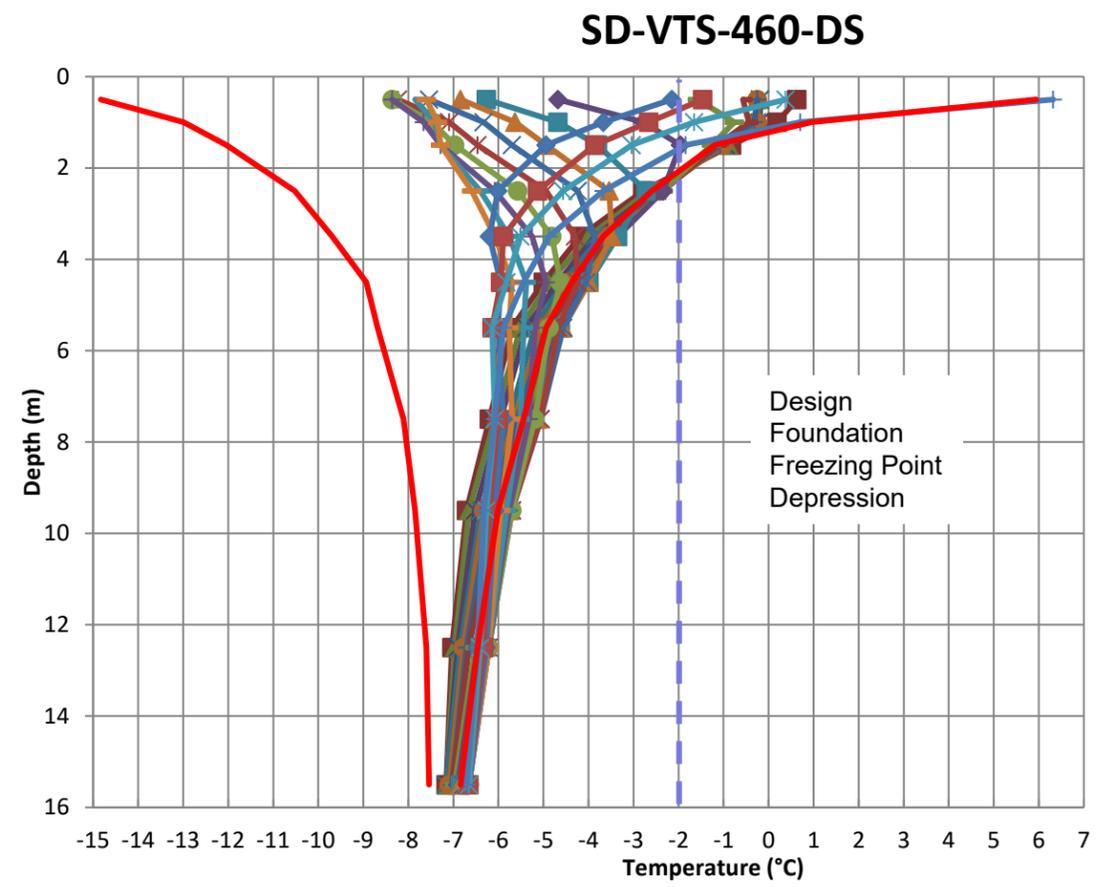
| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 4+60 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.37 |



Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- Max Previous Data
- Min Previous Data

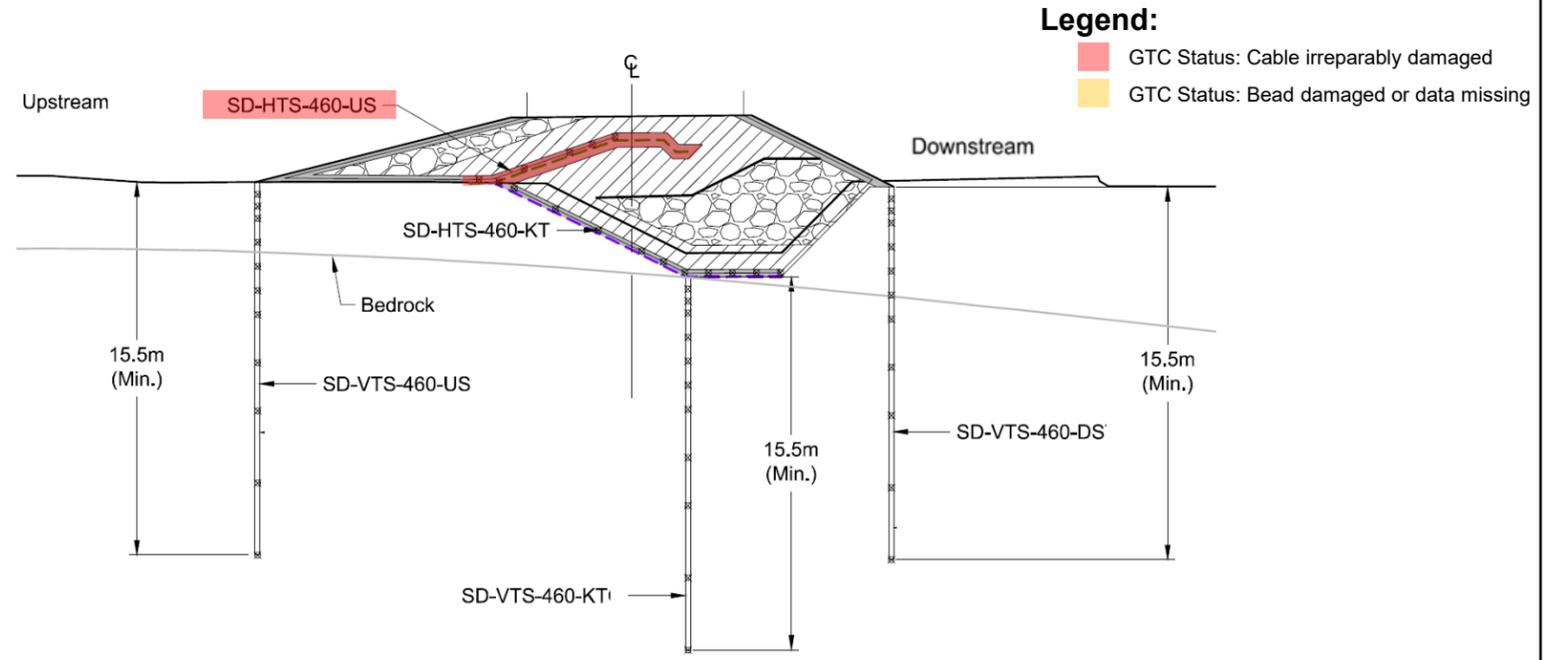
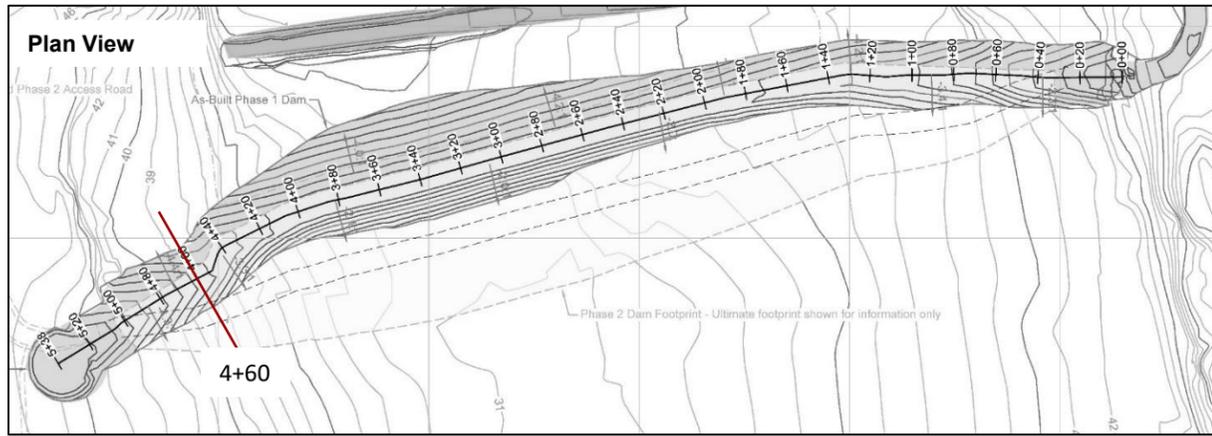


- 2023-09-30
- 2023-10-13
- 2023-10-27
- 2023-11-10
- 2023-11-24
- 2023-12-08
- 2023-12-22
- 2024-01-05
- 2024-01-19
- 2024-02-02
- 2024-02-16
- 2024-03-01
- 2024-03-15
- 2024-03-29
- 2024-04-12
- 2024-04-26
- 2024-05-10
- 2024-05-24
- 2024-06-07
- 2024-06-21
- 2024-07-05
- 2024-07-19
- Max Previous Data
- Min Previous Data

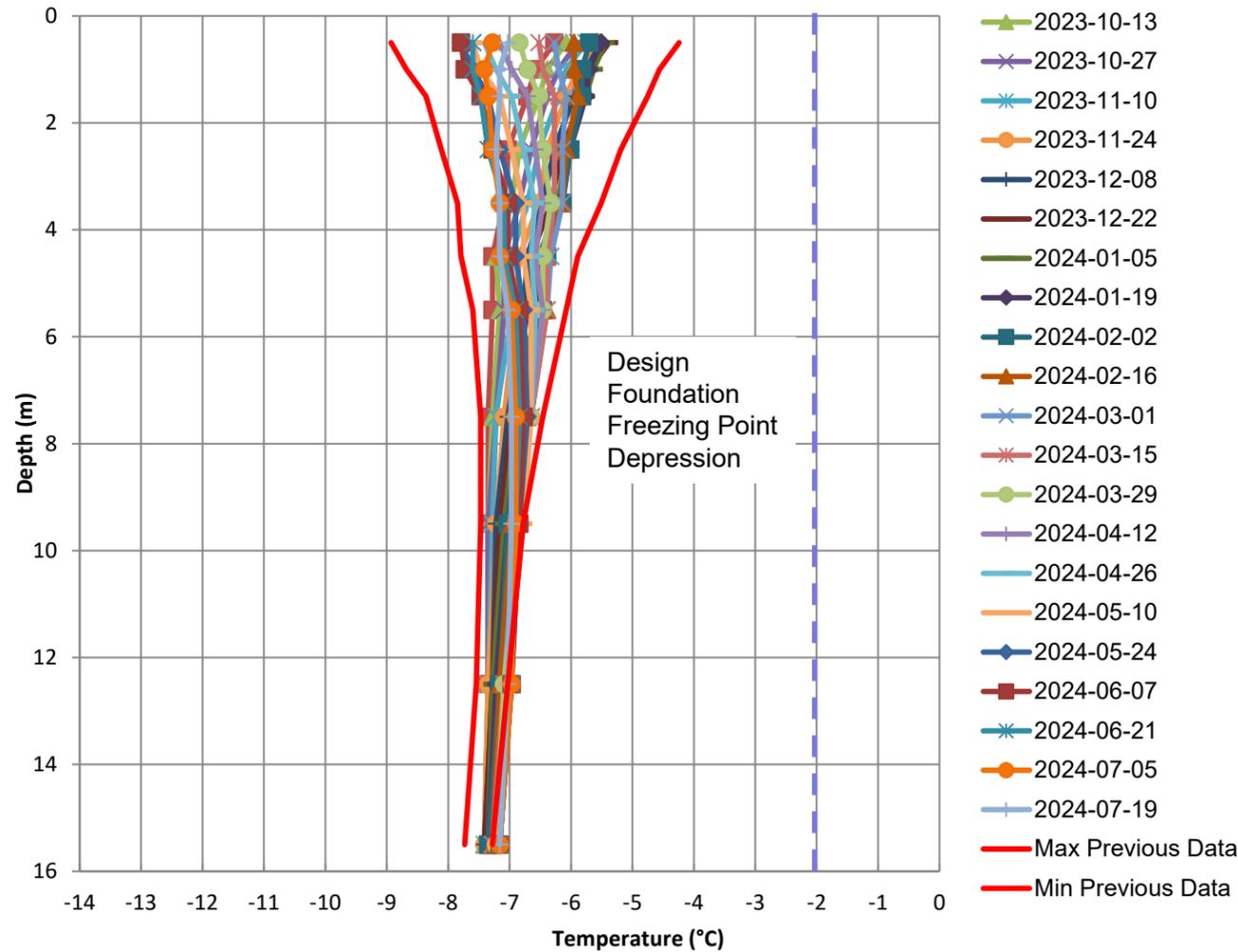
Notes:

- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between November 2018 and September 2023.
- Bead offset from centerline for SD-HTS-460-US is approximate.
- No data collected after July 19, 2024 for SD-HTS-460-KT and SD-VTS-460-DS.

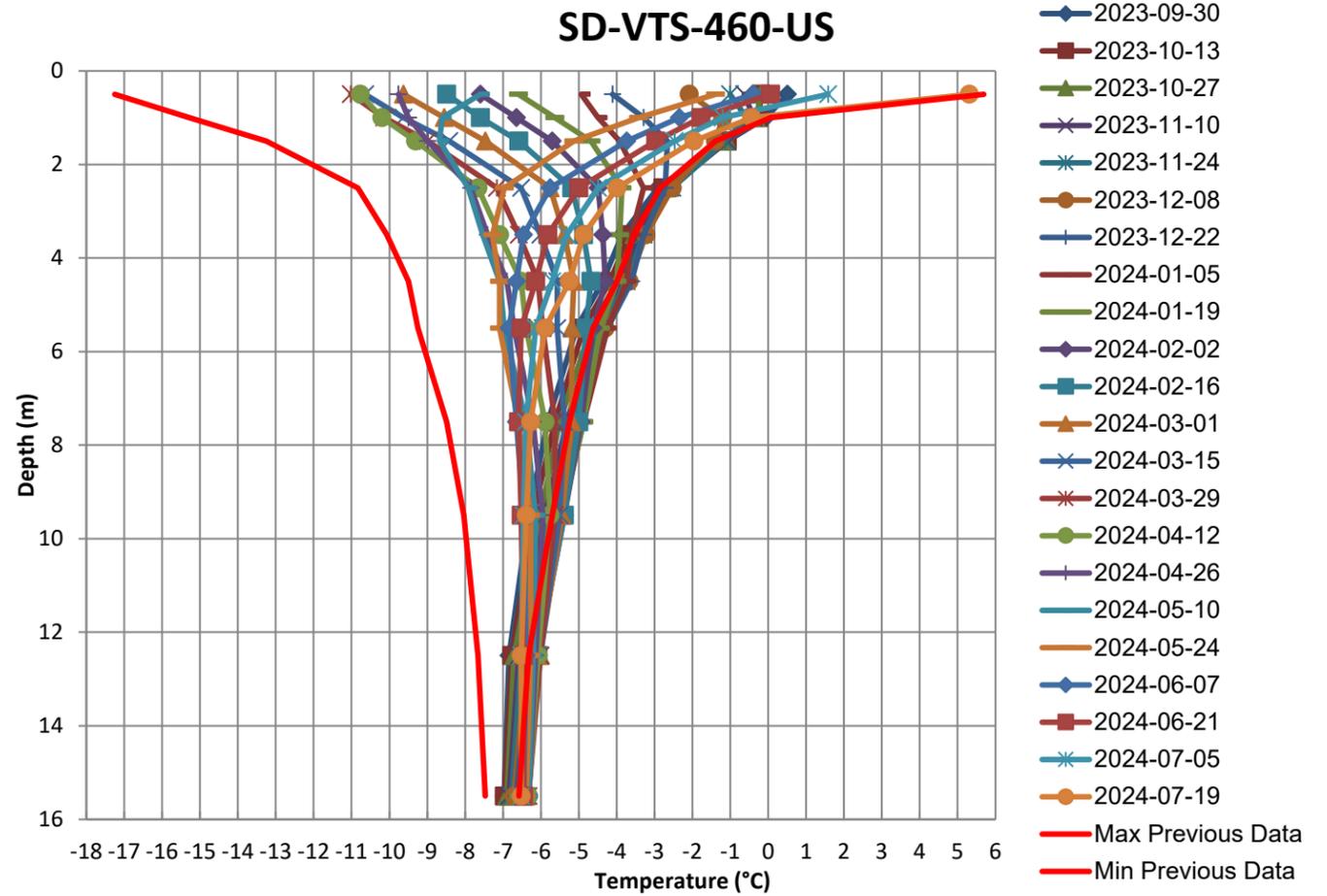
| | | | | |
|---|----------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 4+60 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.38 |



SD-VTS-460-KT



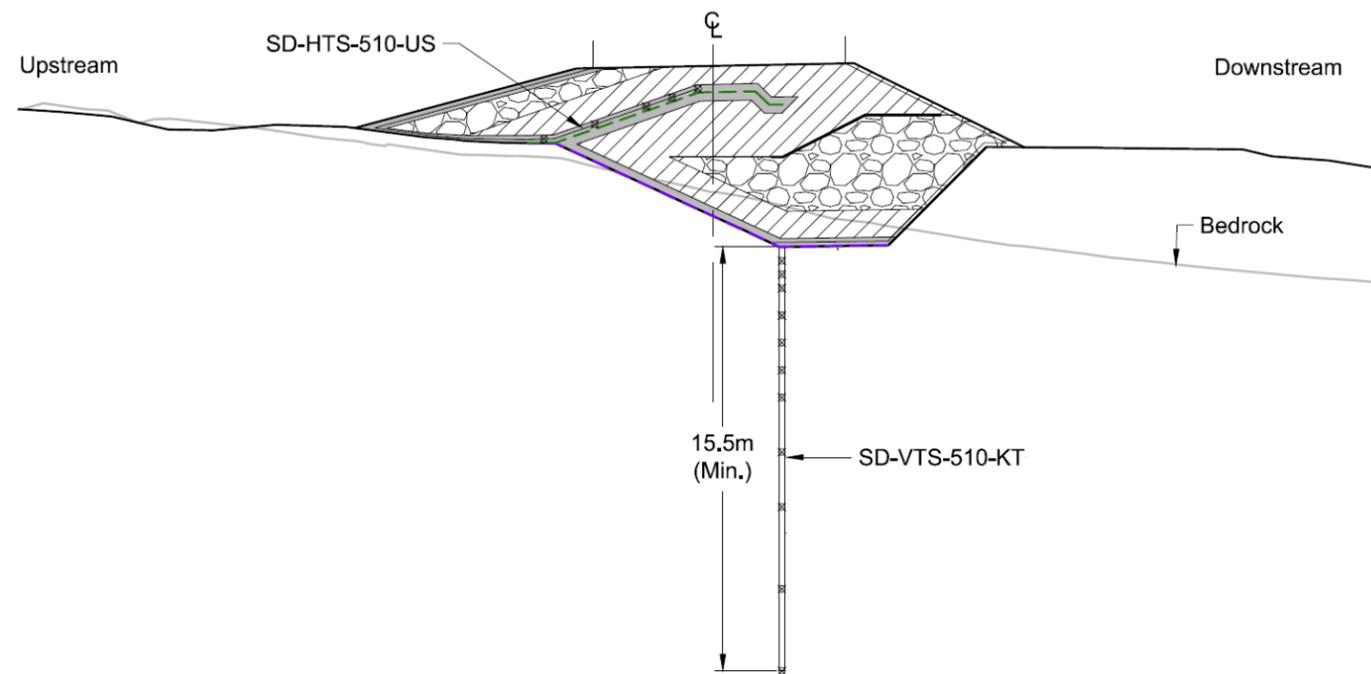
SD-VTS-460-US



Notes:

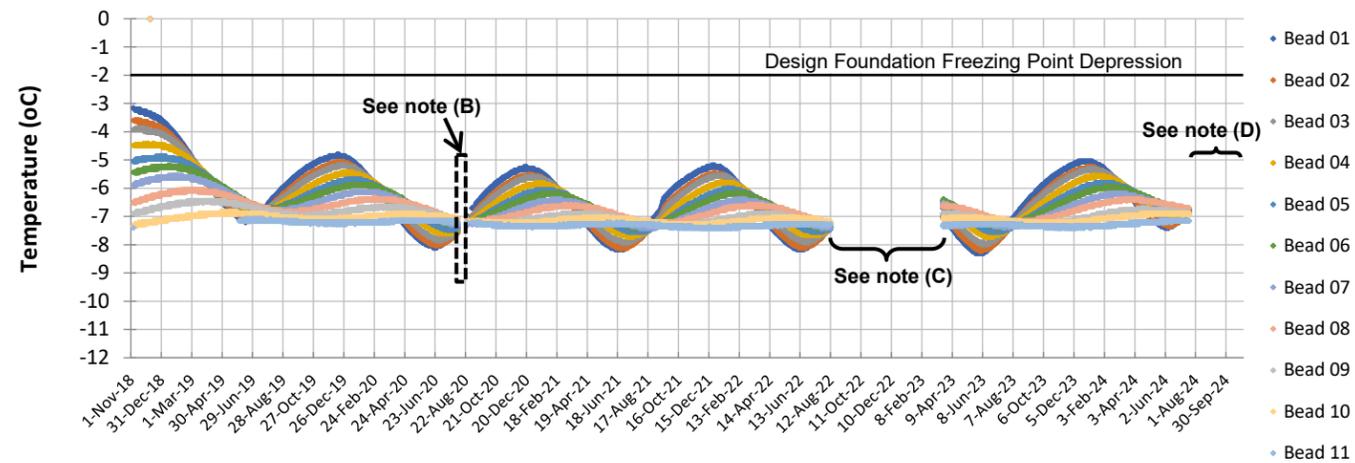
- Vertical and horizontal offset graphs display data in two-week intervals.
- Previous data were recorded between November 2018 and September 2023.
- No data collected after July 19, 2024 for SD-VTS-460-KT and SD-VTS-460-US.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 4+60 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.39 |

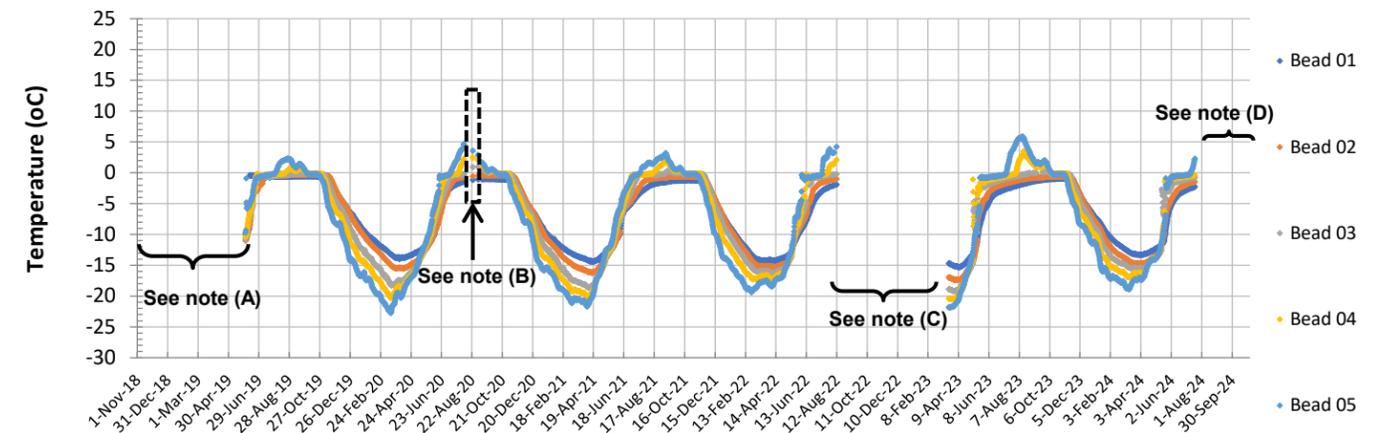


Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

SD-VTS-510-KT



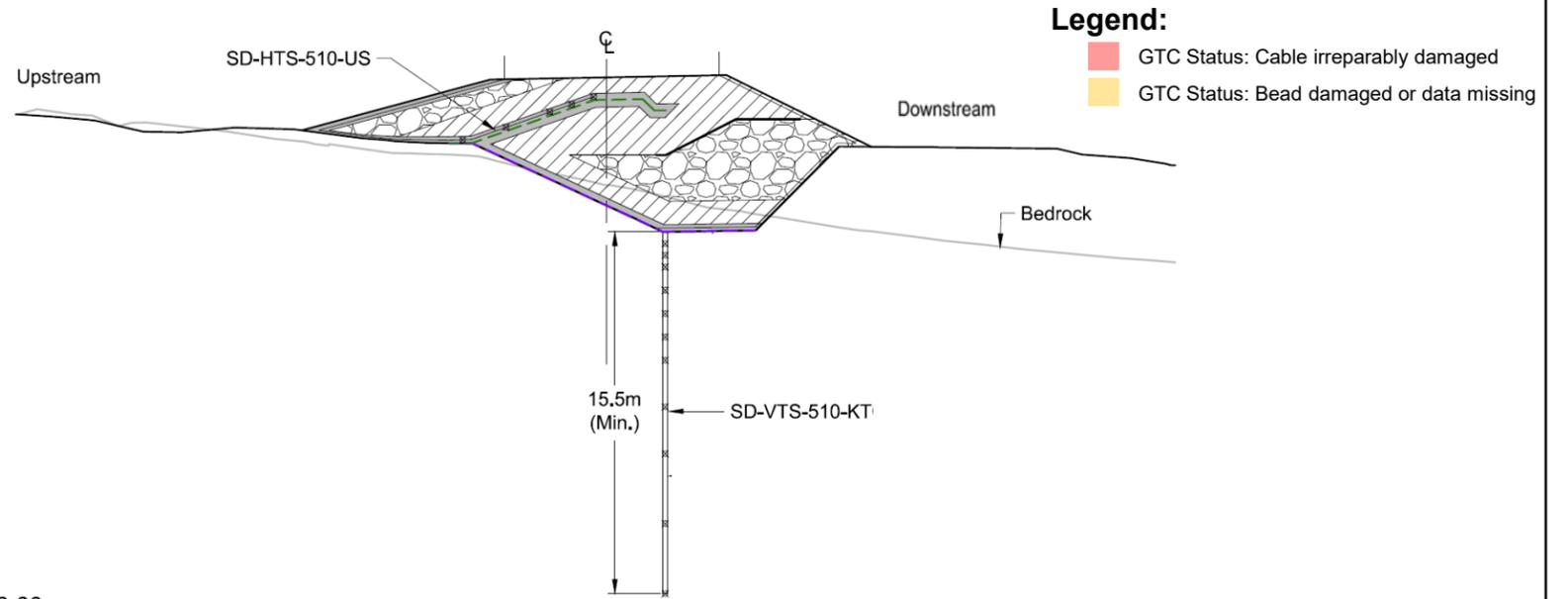
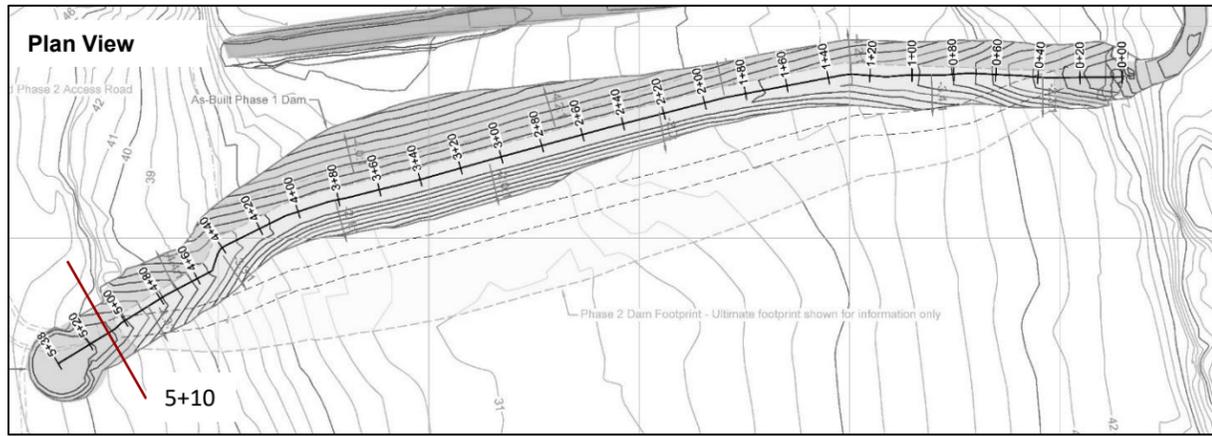
SD-HTS-510-US



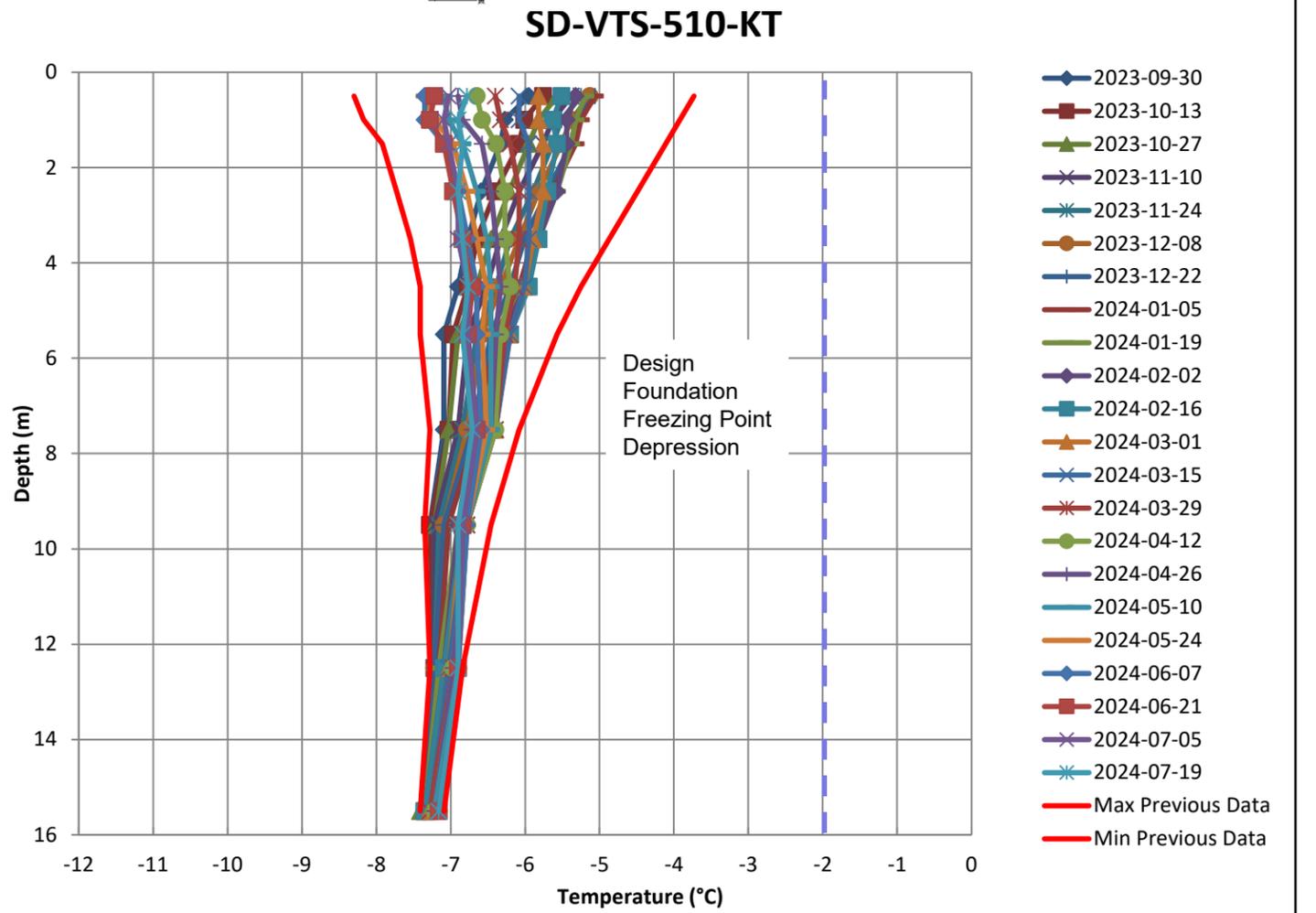
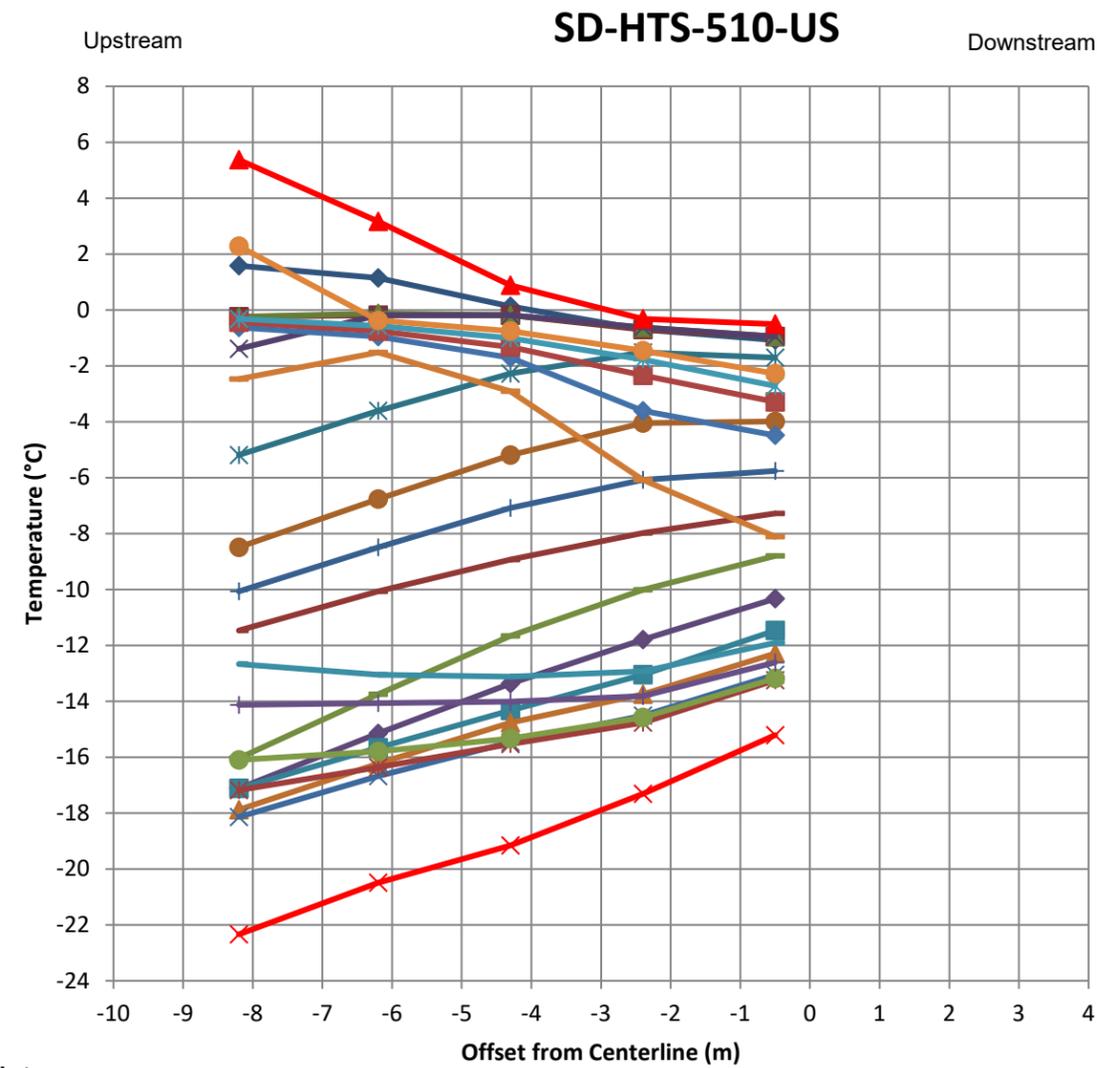
Notes:

- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (November 6, 2018) is shown.
- **(A)** SD-HTS-510-US cable was damaged after construction but repaired, started transmitting in May 2019.
- **(B)** Data collection gaps between August 7, 2020 and September 11, 2020.
- **(C)** No data collected between August 12, 2022 and March 21, 2023 for SD-VTS-510-KT and SD-HTS-510-US.
- **(D)** No data collected after July 19, 2024 for SD-VTS-510-KT and SD-HTS-510-US.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 5+10 Ground Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.40 |



Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing



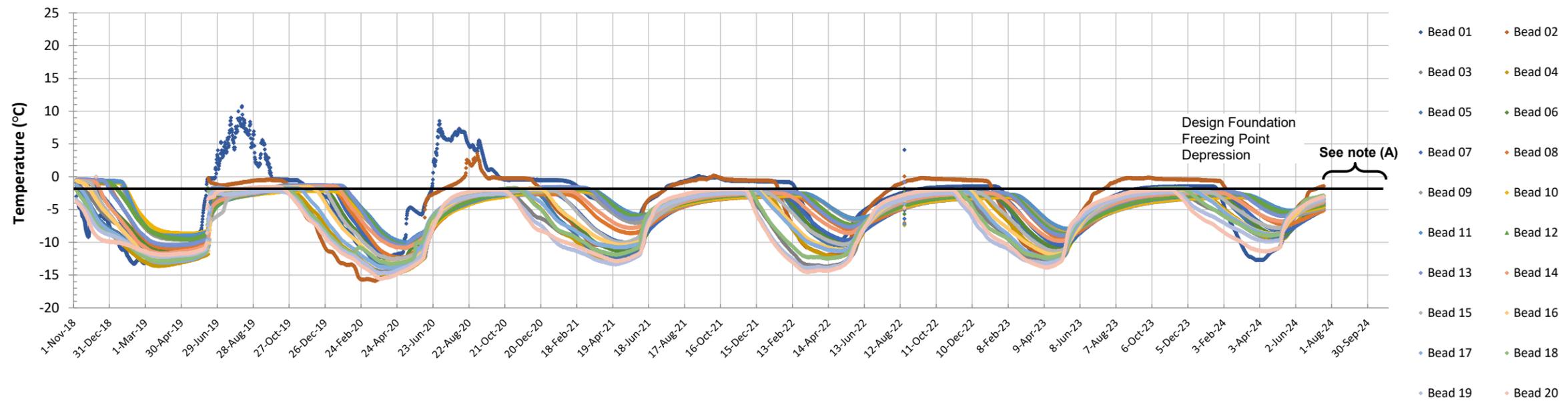
Notes:

- Vertical and horizontal offset graphs show display in two-week intervals.
- Previous data were recorded between November 2018 and September 2023.
- No data collected after July 19, 2024 for SD-HTS-510-US and SD-VTS-510-KT.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 5+10 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.41 |



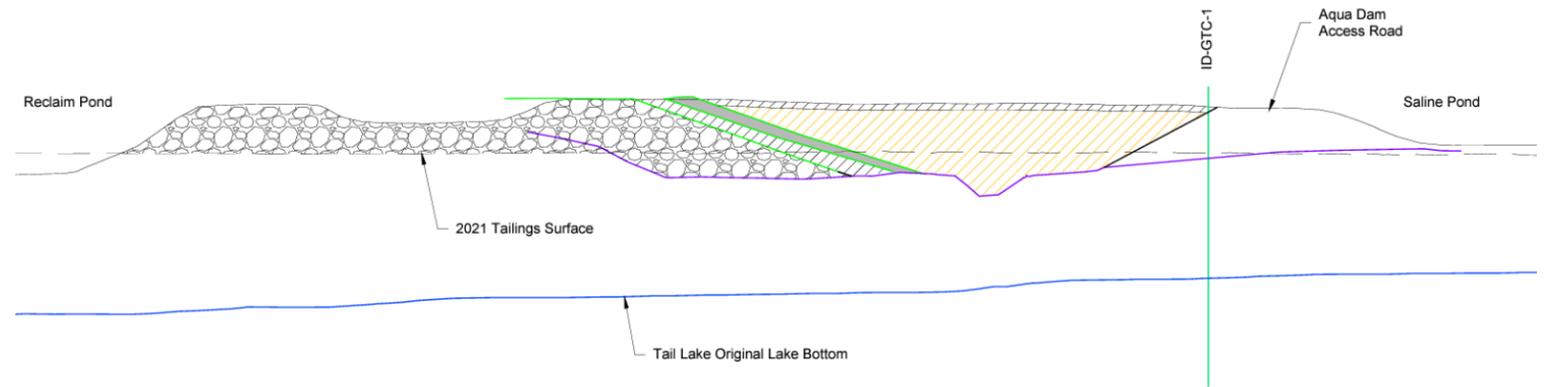
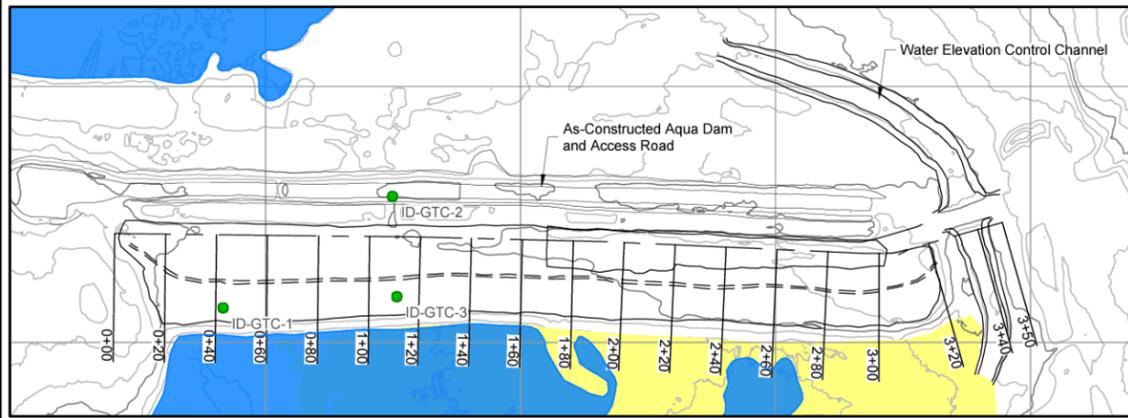
SD-HTS-B1-KT



Notes:

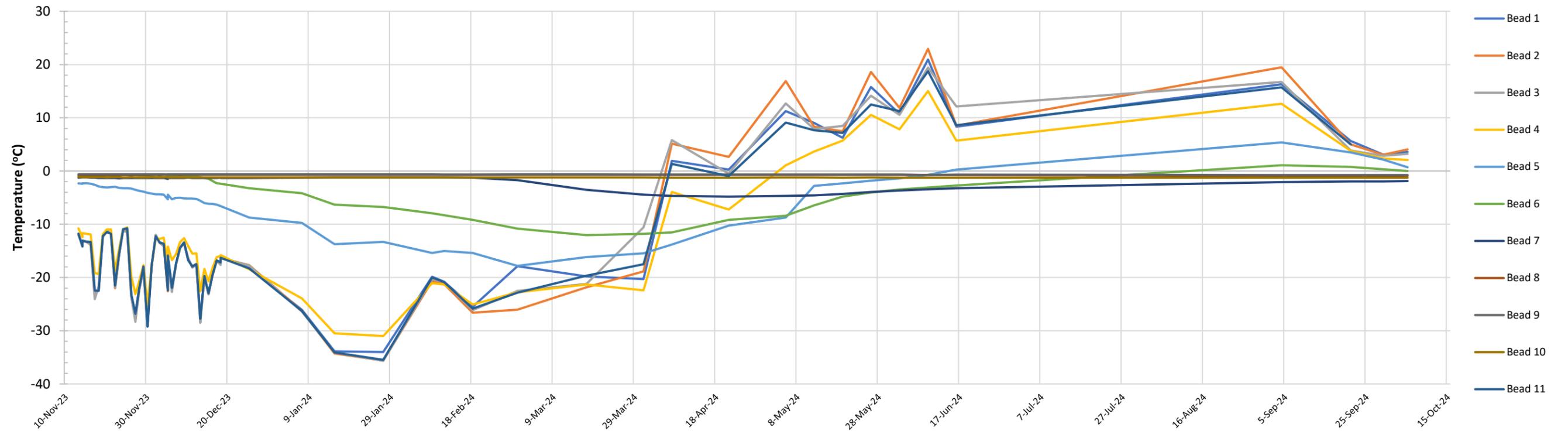
- Bead numbers increase from East to West.
- SD-HTS-B1-KT is located along upstream crest of key trench (not shown in drawing).
- Measurements during construction were collected between April and July 2018, only data following final instrumentation commissioning (November 6, 2018) is shown.
- **(A)** No data collected after July 19, 2024 for SD-HTS-B1-KT.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Key Trench Horizontal Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.42 |



Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

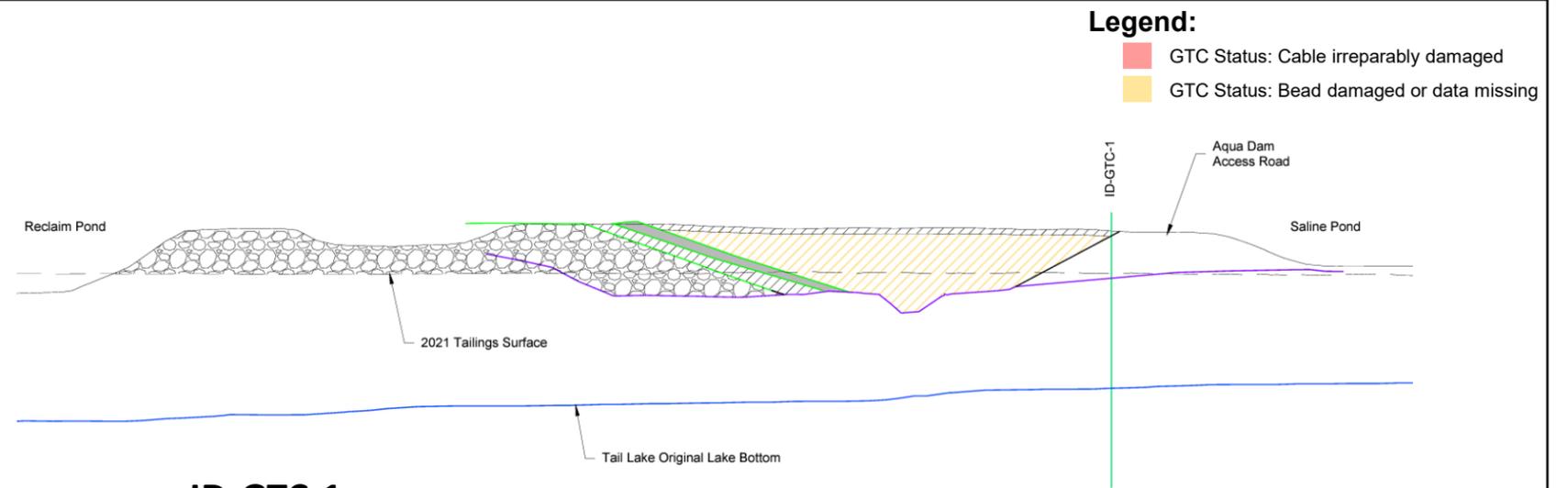
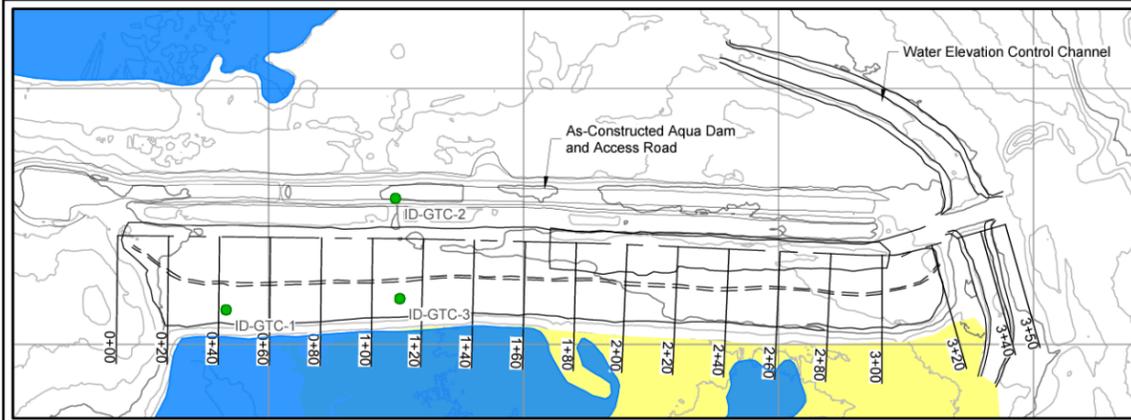
ID-GTC-1



Notes:

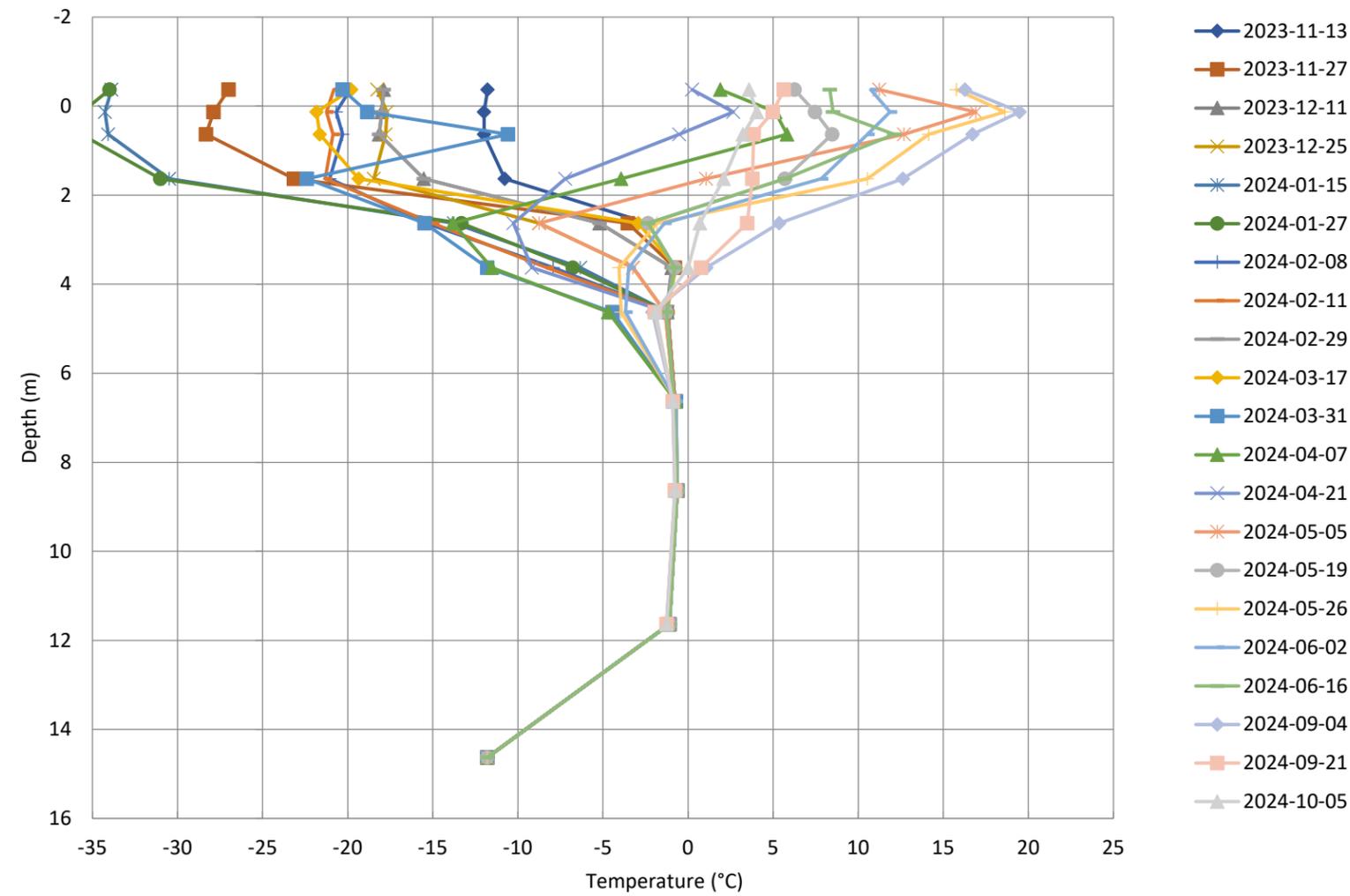
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Recent Interim Dike Ground Temperature Cable data were collected interchangeably via data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+40 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.43 |



Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

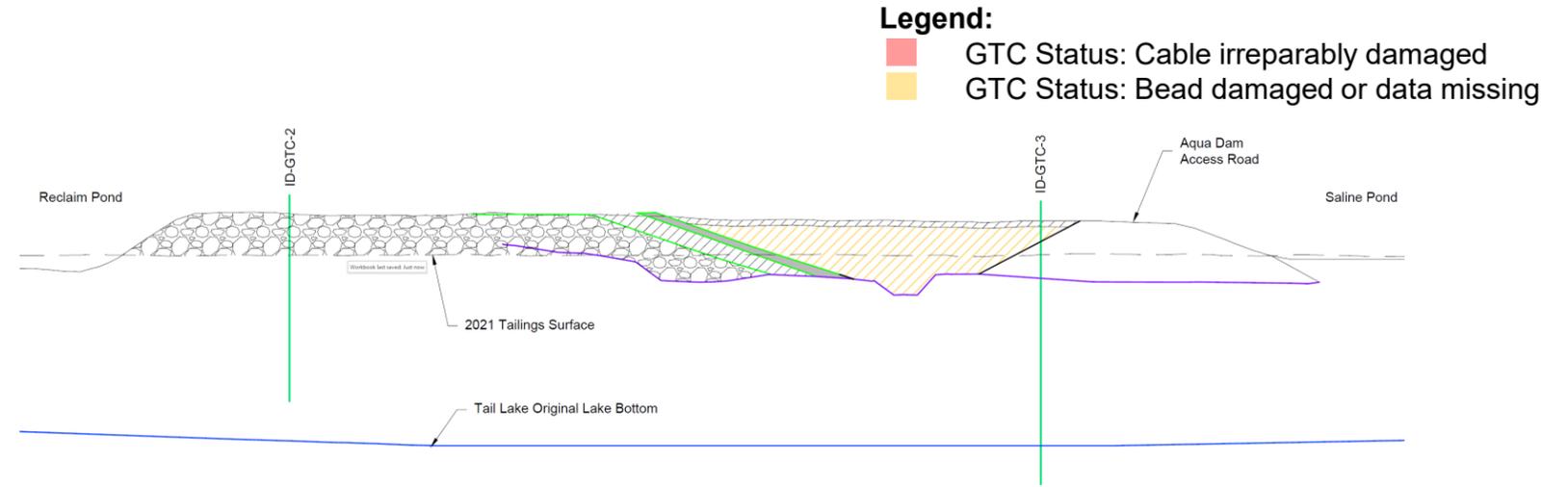
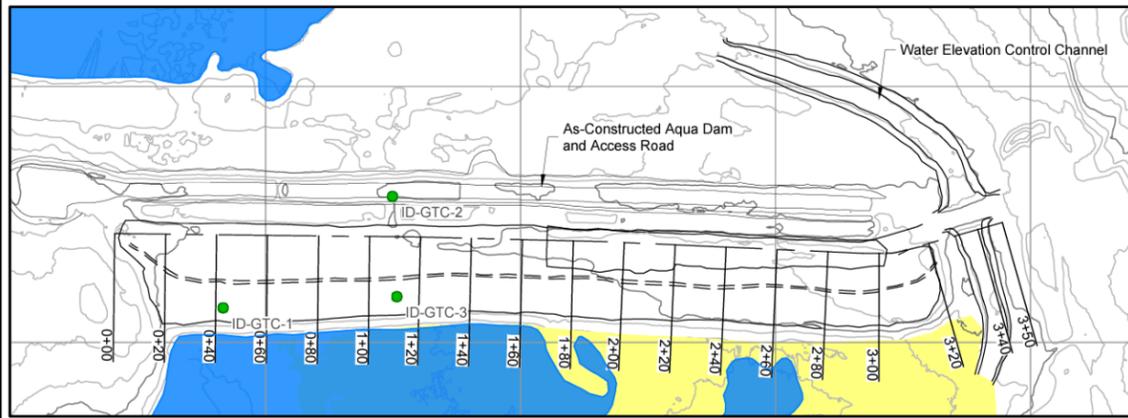
ID-GTC-1



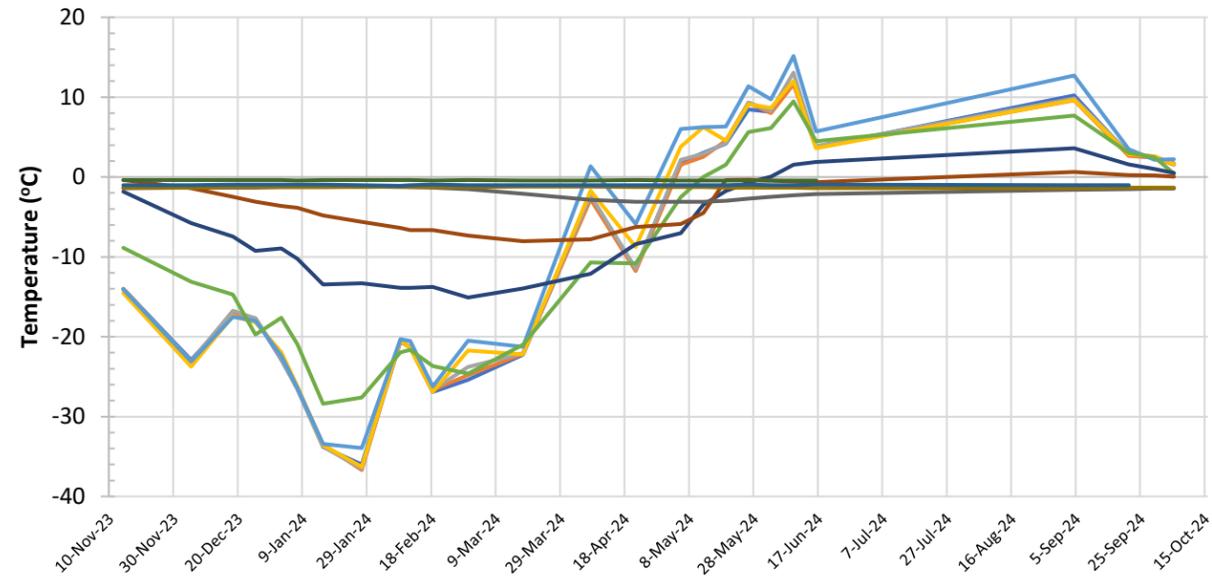
Notes:

- Due to limited data ID-GTC-1 displays select interval datasets from this reporting period.
- Negative depths denote elevations above ground surface.

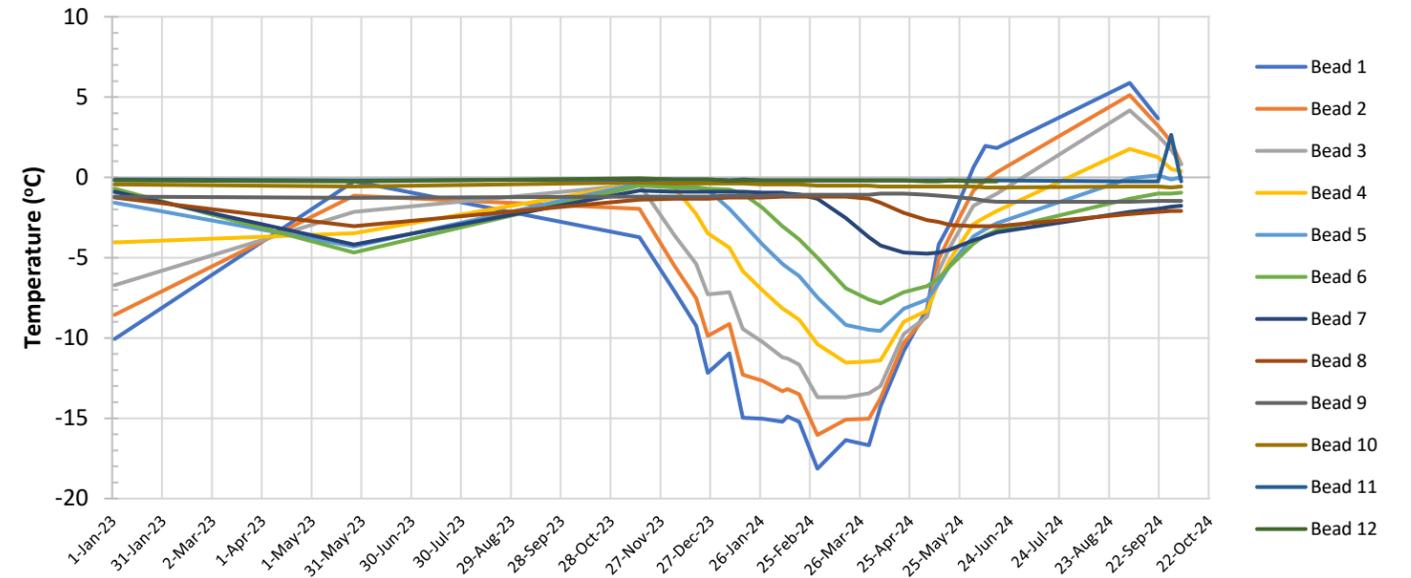
| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 0+40 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.44 |



ID-GTC-2



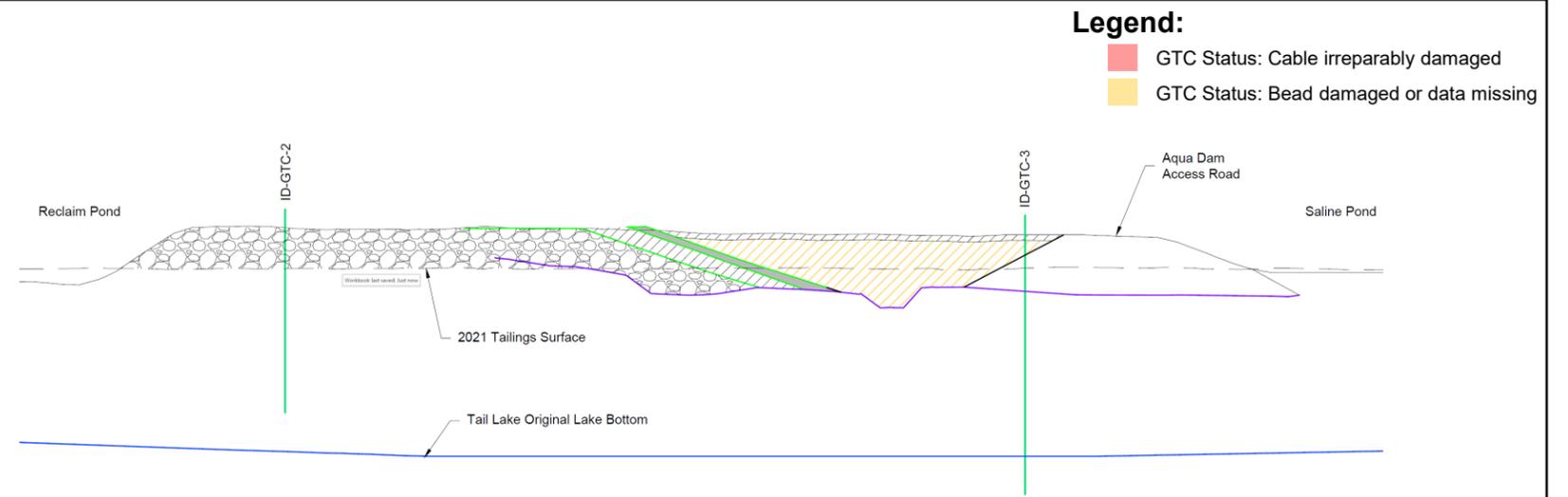
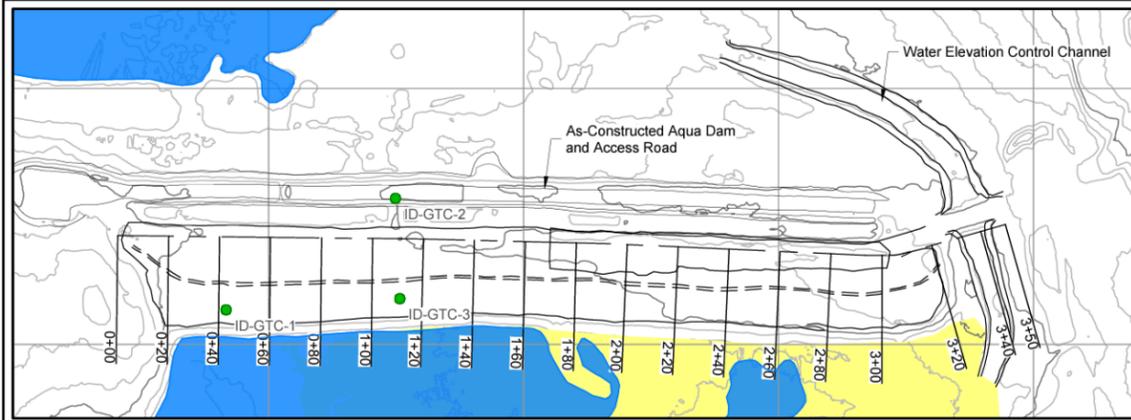
ID-GTC-3



Notes:

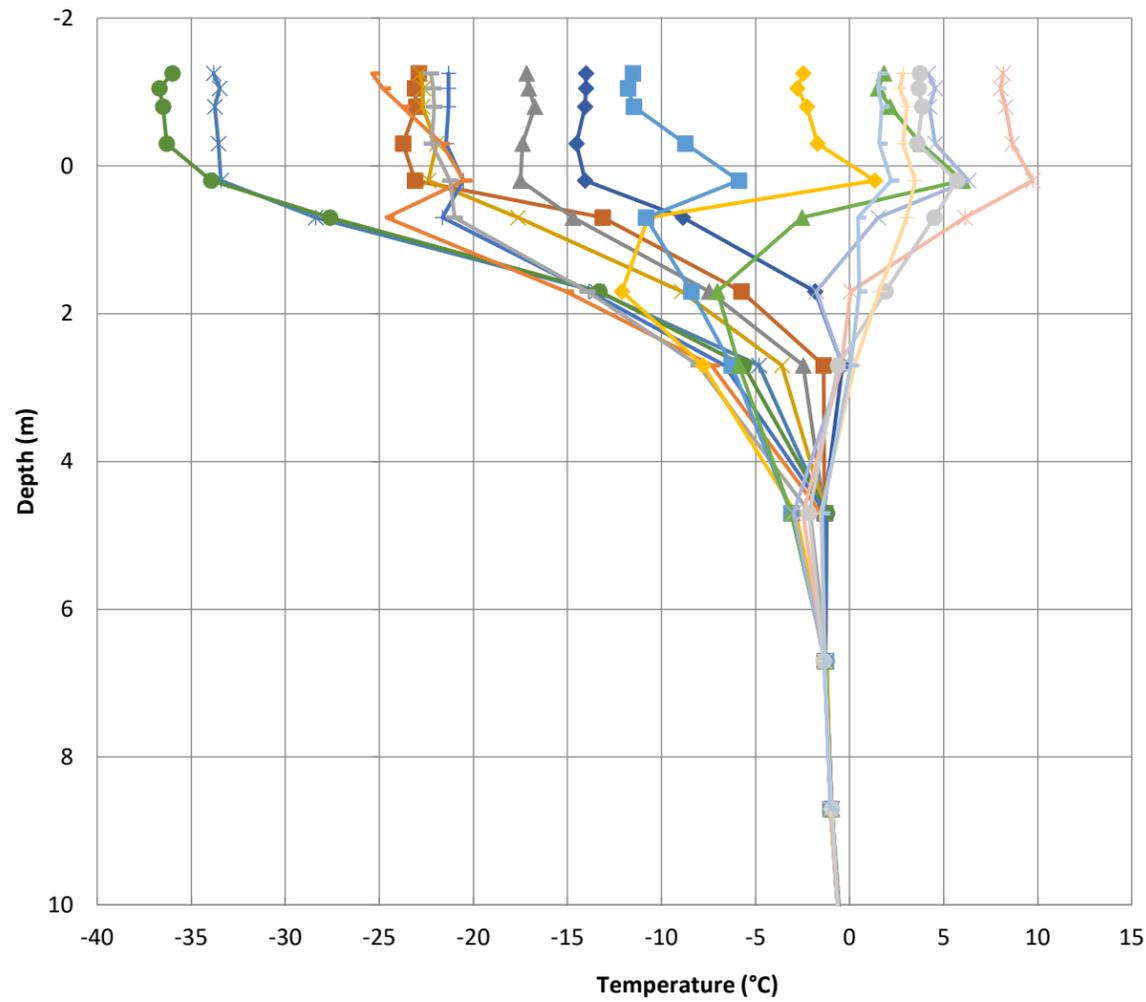
- Bead numbers increase from downstream to upstream (horizontal) and top to bottom (vertical).
- Recent Interim Dike Ground Temperature Cable data were collected interchangeably via data logger and manual collection methods. Data gaps that fall within this reporting period can be attributed to infrequent manual collection of data.

| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 1+10 Vertical Temperature Cable Temperature Vs. Time | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.45 |



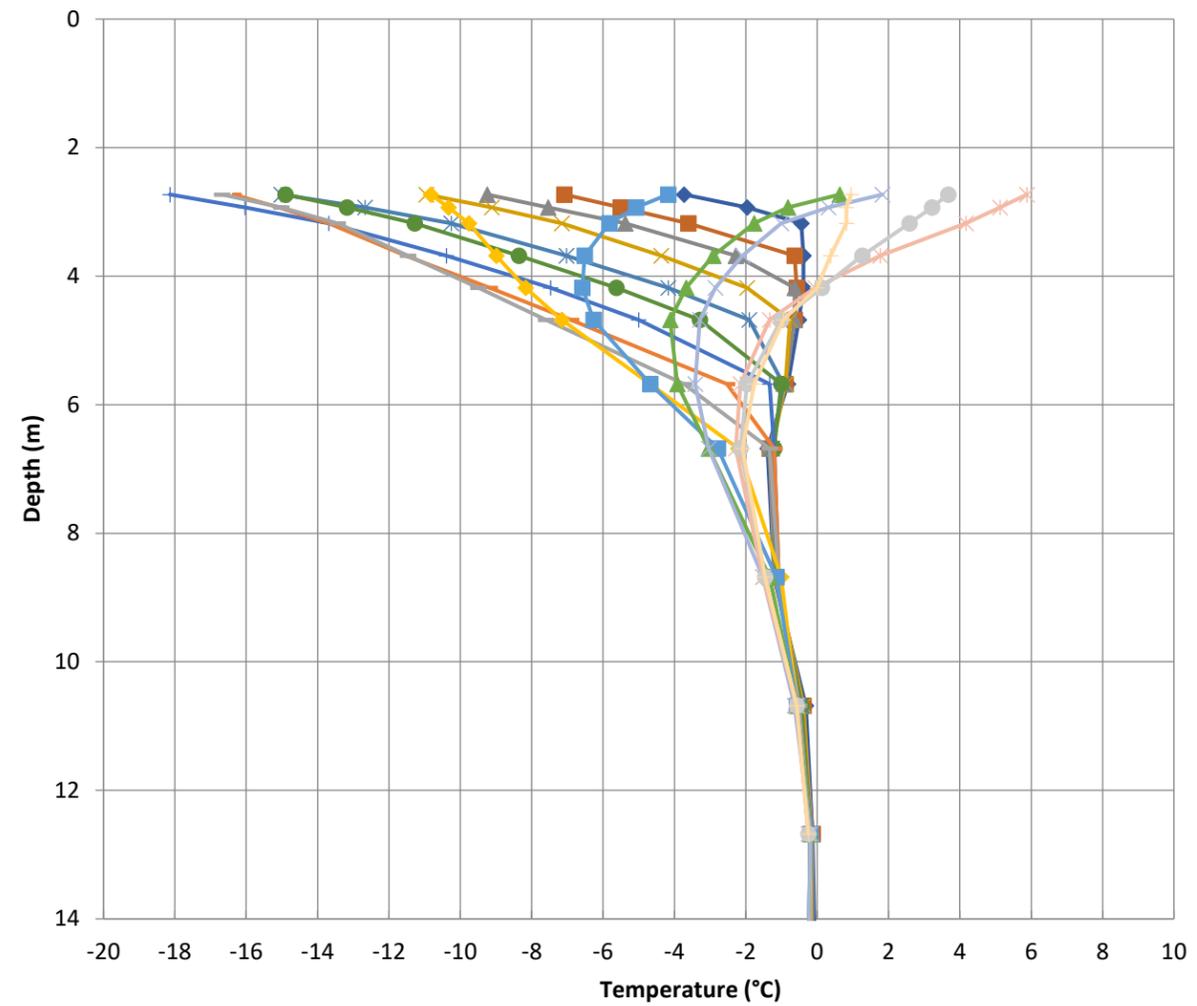
Legend:
■ GTC Status: Cable irreparably damaged
■ GTC Status: Bead damaged or data missing

ID-GTC-2



- ◆ 2023-11-14
- 2023-12-05
- ▲ 2023-12-18
- ✕ 2024-01-02
- ✕ 2024-01-15
- 2024-01-27
- ✕ 2024-02-11
- 2024-02-29
- 2024-03-17
- ◆ 2024-04-07
- 2024-04-21
- ▲ 2024-05-05
- ✕ 2024-05-19
- ✕ 2024-06-02
- 2024-06-16
- ✕ 2024-09-21
- 2024-10-05

ID-GTC-3



- ◆ 2023-11-14
- 2023-12-05
- ▲ 2023-12-18
- ✕ 2024-01-07
- ✕ 2024-01-27
- 2024-02-11
- ✕ 2024-02-29
- 2024-03-17
- 2024-03-31
- ◆ 2024-04-21
- 2024-05-12
- ▲ 2024-06-02
- ✕ 2024-06-16
- ✕ 2024-09-04
- 2024-09-21
- ✕ 2024-10-05

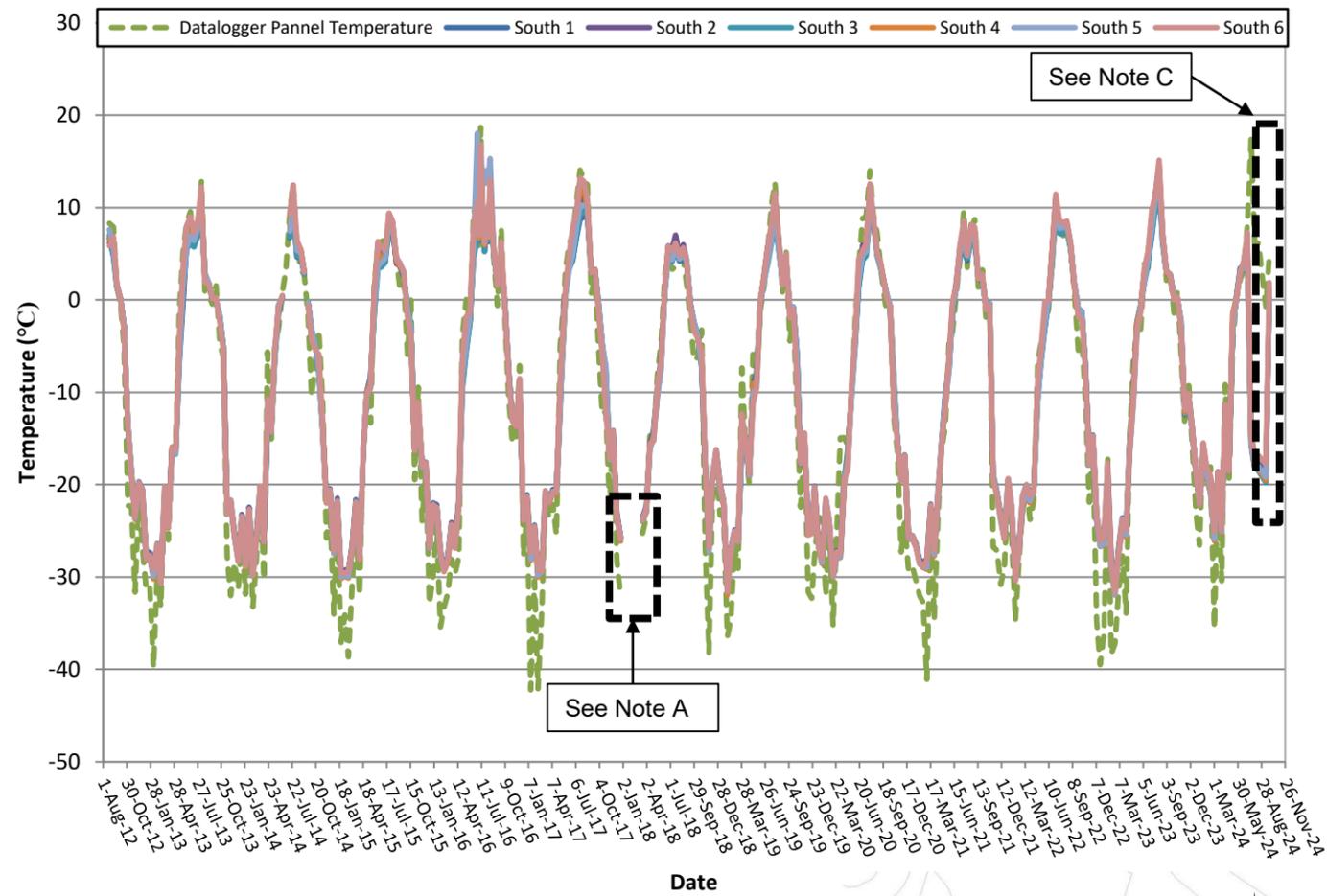
Notes:

- Due to limited data ID-GTC-2 and ID-GTC-3 graphs display select interval datasets from this reporting period.
- Negative depths denote elevations above ground surface.

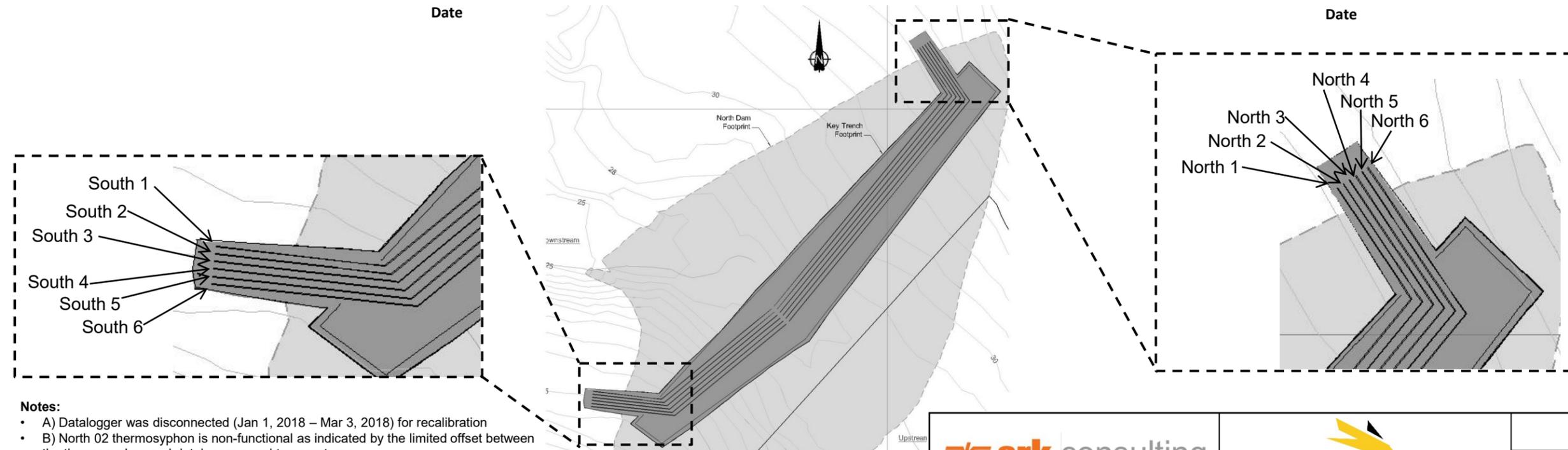
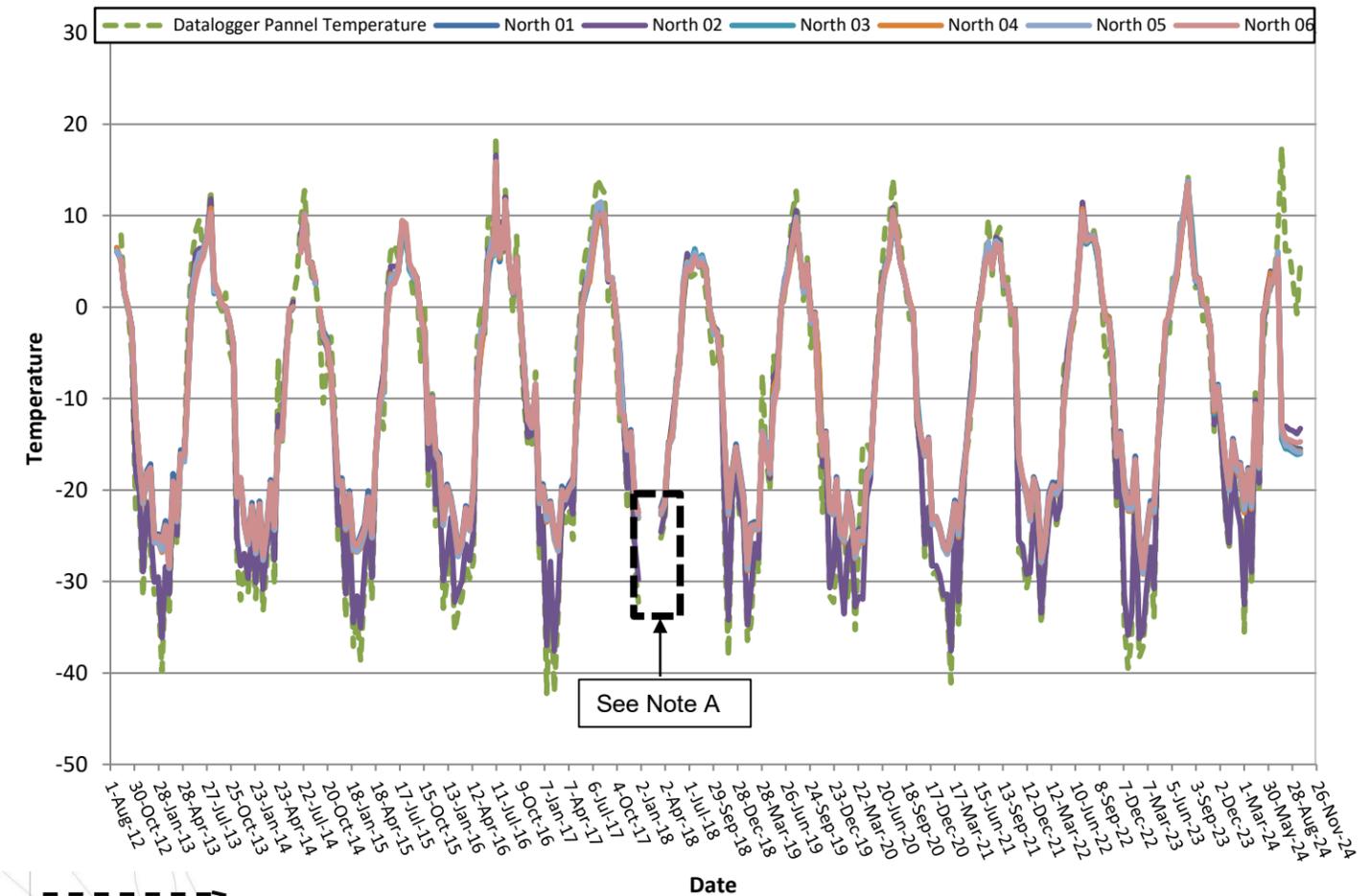
| | | | | |
|---|-----------------|---|---------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Station 1+10 Ground Temperature Cable Readings by Location | | |
| Job No: CAPR003066 Filename: App_A_SD_GTC.pptx | Hope Bay | Date: Jan 2025 | Approved: PDL | Figure: A.46 |

Appendix B Thermosyphons

South Thermosyphon Monitoring



North Thermosyphon Monitoring



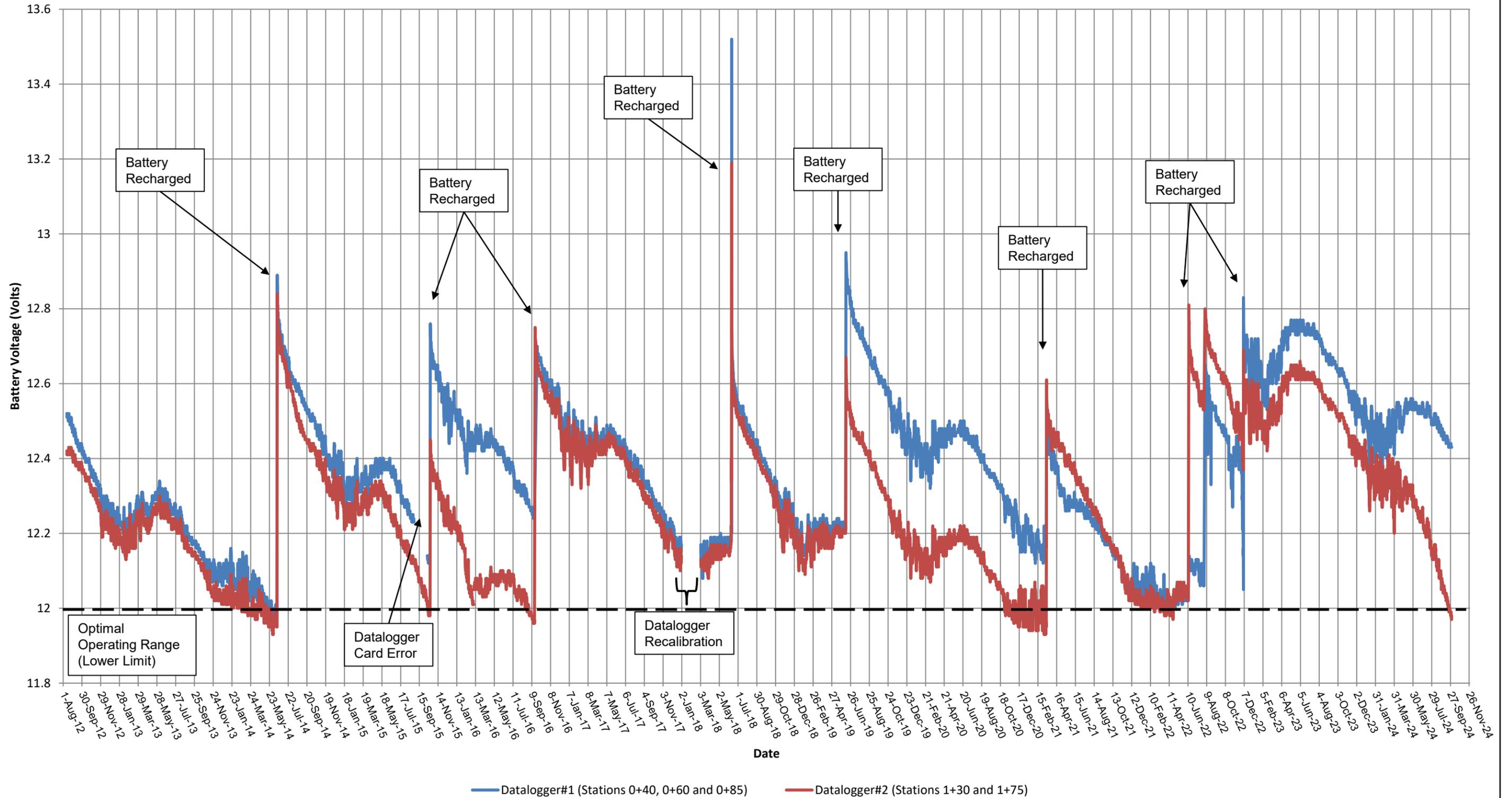
Notes:

- A) Datalogger was disconnected (Jan 1, 2018 – Mar 3, 2018) for recalibration
- B) North 02 thermosyphon is non-functional as indicated by the limited offset between the thermosyphon and datalogger panel temperatures
- C) All south thermosyphon monitors experienced higher temperatures after September 22, 2024

| | | | | |
|--|-----------------|--|---------------|--------------------|
| | | 2024 TIA AGI | | |
| | | North Dam Thermosyphon Monitoring | | |
| Job No: CAPR003066 Filename: App_B_Thermosyphons.pptx | Hope Bay | Date: Feb 2025 | Approved: PDL | Figure: B.1 |

Appendix C Datalogger Battery Levels

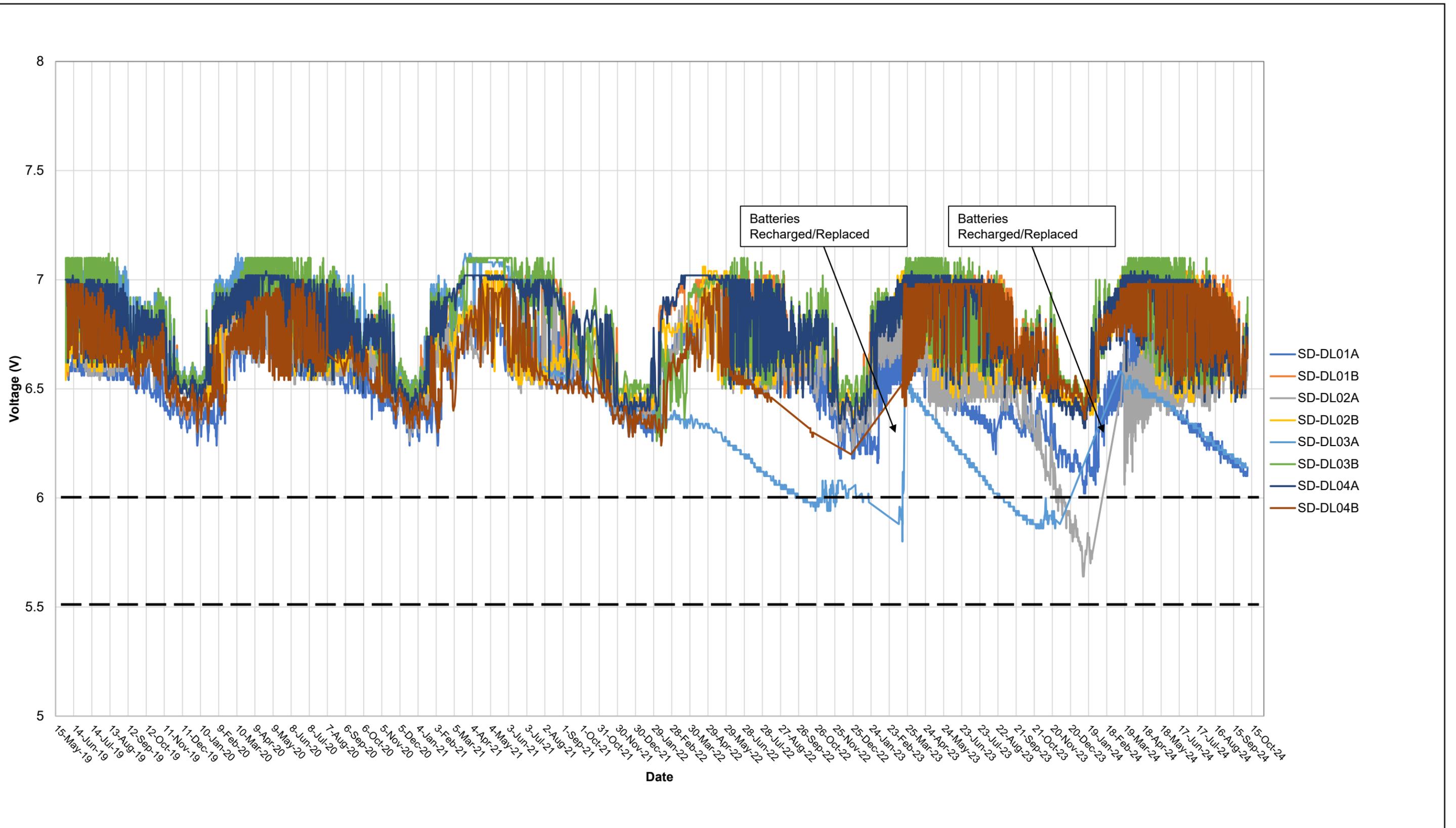
Battery Voltage



Notes:

1. Operating voltage range is 9.6 to 16 V
2. Optimal operating voltage is 12 to 14 V
3. Data logger will shut down if voltage drops below 9.6 V

| | | | | |
|---|---|---|--|--|
|  Job No: CAPR003066 Filename: App_C_Batteries.pptx |  Hope Bay | 2024 TIA AGI | | |
| | | North Dam Datalogger Battery Voltage with Time Date: Oct. 2024 Approved: PDL Figure: C.1 | | |



Notes:

1. Full voltage: 6.6 V or more
2. Transmission minimum: approximately 6.0 V
3. Datalogging minimum: 5.5 V

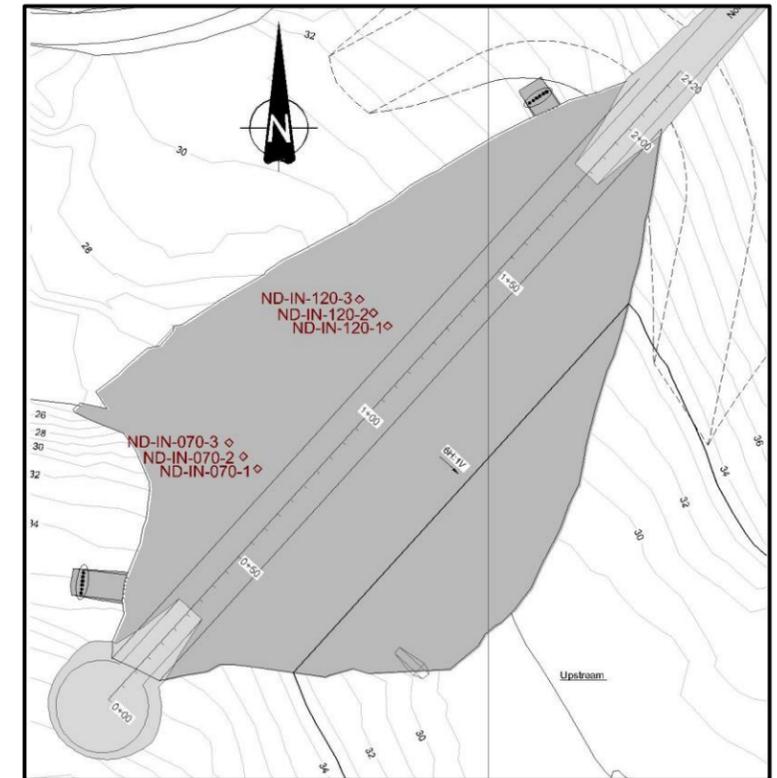
| | | | | |
|---|--|---|---------------|--------------------|
|  Job No: CAPR003066 Filename: App_C_Batteries.pptx |  AGNICO EAGLE Hope Bay | 2024 TIA AGI | | |
| | | South Dam Datalogger Battery Voltage with Time | | |
| | | Date: Oct. 2024 | Approved: PDL | Figure: C.2 |

Appendix D Inclinometers

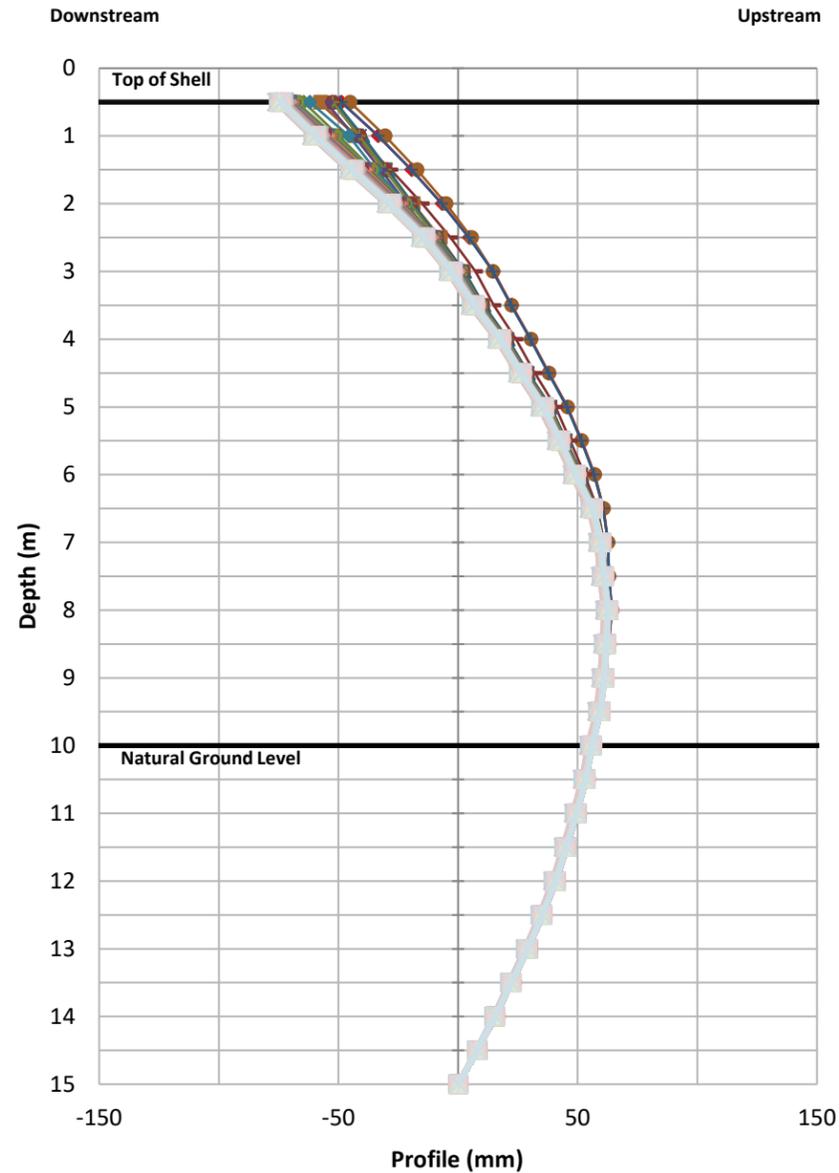
| Date | Inclinometers Measured | | | | | | Comments |
|----------|------------------------|-------|-------|-------|-------|-------|---|
| | 070-1 | 070-2 | 070-3 | 120-1 | 120-2 | 120-3 | |
| Sep-2023 | | | | | | | |
| Oct-2023 | | | | | | | |
| Nov-2023 | | | | | | | |
| Dec-2023 | | | | | | | |
| Jan-2024 | | | | | | | |
| Feb-2024 | | | | | | | |
| Mar-2024 | | | | | | | |
| Apr-2024 | | | | | | | |
| May-2024 | | | | | | | |
| Jun-2024 | | | | | | | No measurements provided (120-1, 120-2, 120-3) |
| Jul-2024 | | | | | | | Two surveys provided on July 11 and July 20, 2024 (120-1, 120-2, 120-3) |
| Aug-2024 | | | | | | | |
| Sep-2024 | | | | | | | Error measurements (check sum values above threshold) were noted. These measurements are not presented. |

Notes:

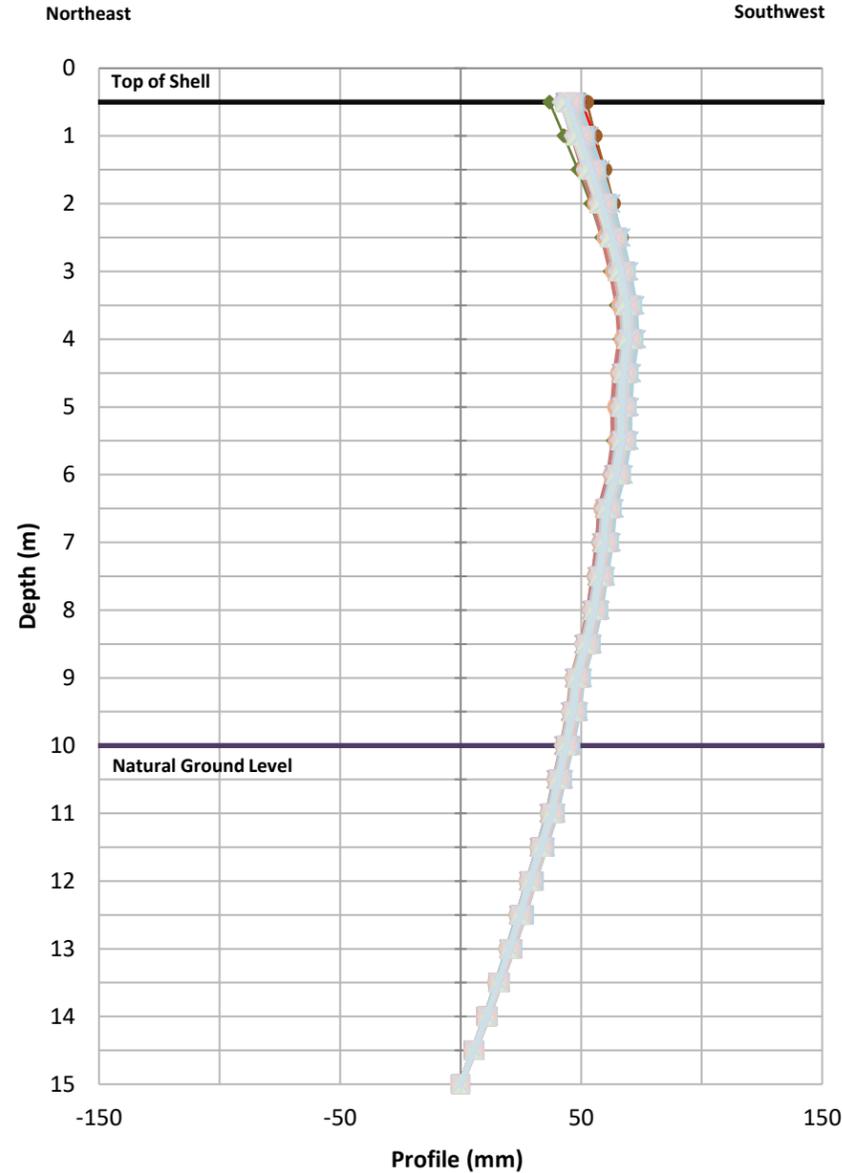
1. Green indicates good quality inclinometer survey data
2. Orange indicated poor quality inclinometer survey data, or data where collection issues were noted
3. Grey indicates that no survey data was collected



Profile Perpendicular to Centerline

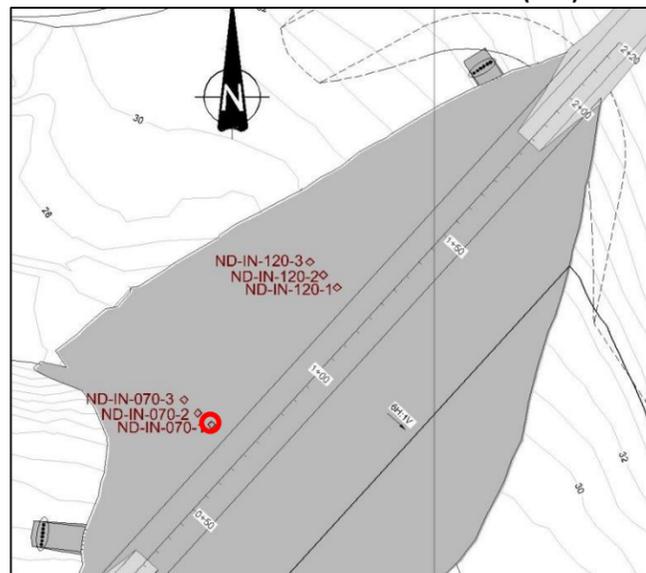


Profile Parallel to Centerline



LEGEND:

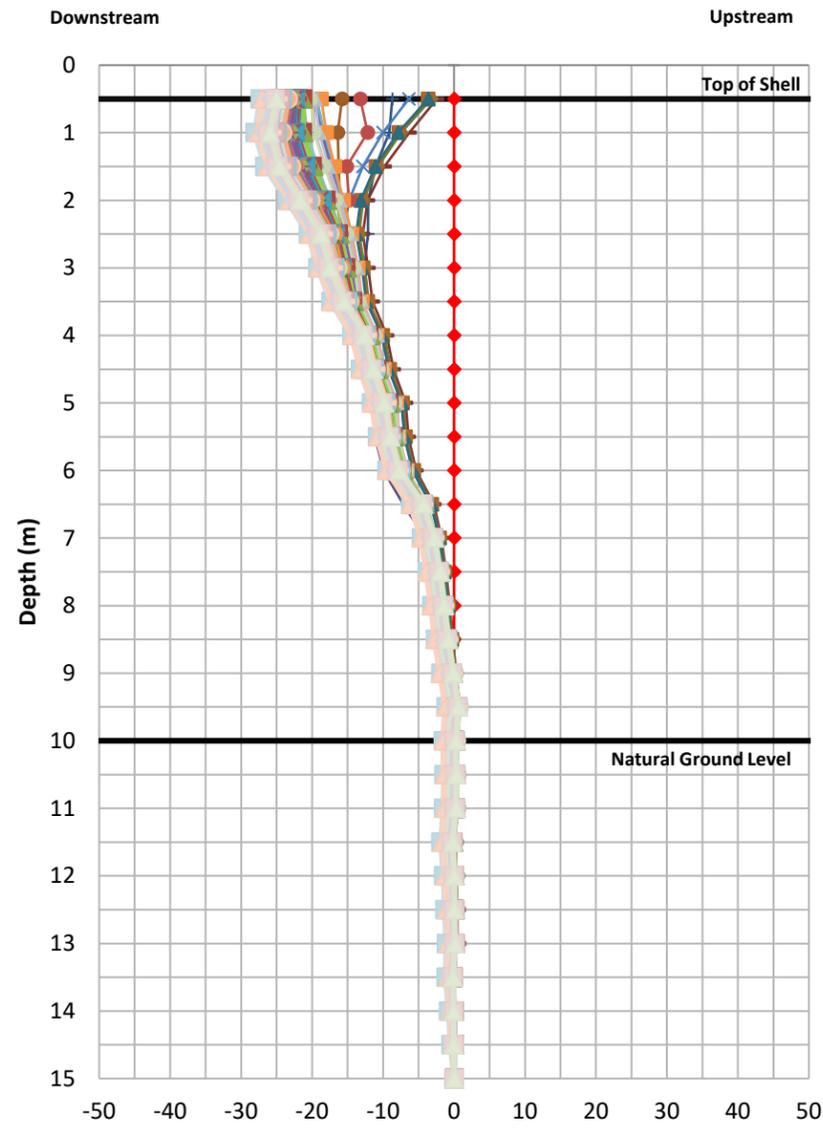
- ◆ Initial Reading (9/8/2012)
- ◆ 9/9/2012 X
- ◆ 2013-10-01
- ◆ 2014-07-12
- ◆ 2014-09-01
- ◆ 2015-02-02
- ◆ 2015-04-08
- ◆ 2015-05-18
- ◆ 2015-07-09
- ◆ 2015-09-04
- ◆ 2015-11-25
- ◆ 2016-02-08
- ◆ 2016-04-11
- ◆ 2016-08-14
- ◆ 2016-11-26
- ◆ 2017-01-26
- ◆ 2017-03-23
- ◆ 2017-05-20
- ◆ 2017-07-16
- ◆ 2017-09-14
- ◆ 2017-11-16
- ◆ 2018-01-16
- ◆ 2018-03-21
- ◆ 2018-05-19
- ◆ 2018-07-07
- ◆ 2018-09-29
- ◆ 2018-11-10
- ◆ 2019-01-25
- ◆ 2019-04-14
- ◆ 2019-06-11
- ◆ 2019-08-25
- ◆ 2019-10-26
- ◆ 2020-01-16
- ◆ 2020-03-10
- ◆ 2020-07-12
- ◆ 2020-09-11
- ◆ 2020-11-19
- ◆ 2021-01-20
- ◆ 2021-06-09
- ◆ 2021-08-14
- ◆ 2021-10-02
- ◆ 2021-12-11
- ◆ 2022-02-11
- ◆ 2022-04-25
- ◆ 2022-08-20
- ◆ 2022-10-08
- ◆ 2023-04-28
- ◆ 2023-06-15
- ◆ 2023-09-24
- ◆ 2023-11-05
- ◆ 2024-01-05
- ◆ 2024-03-10
- ◆ 2024-05-03
- ◆ 2024-07-20
- ◆ 2024-09-10
- ◆ 9/9/2012 X
- ◆ 2013-07-26
- ◆ 2014-05-18
- ◆ 2014-08-08
- ◆ 2014-10-01
- ◆ 2015-03-21
- ◆ 2015-04-16
- ◆ 2015-06-25
- ◆ 2015-08-02
- ◆ 2015-10-09
- ◆ 2015-12-30
- ◆ 2016-03-07
- ◆ 2016-07-02
- ◆ 2016-09-25
- ◆ 2016-12-24
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- ◆ 2017-06-25
- ◆ 2017-08-09
- ◆ 2017-10-14
- ◆ 2017-12-16
- ◆ 2018-02-16
- ◆ 2018-04-20
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- ◆ 2018-08-03
- ◆ 2018-10-21
- ◆ 2019-01-01
- ◆ 2019-02-14
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- ◆ 2020-06-06
- ◆ 2020-08-08
- ◆ 2020-10-20
- ◆ 2020-12-23
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- ◆ 2023-10-10
- ◆ 2023-12-02
- ◆ 2024-02-10
- ◆ 2024-04-06
- ◆ 2024-06-27
- ◆ 2024-08-19



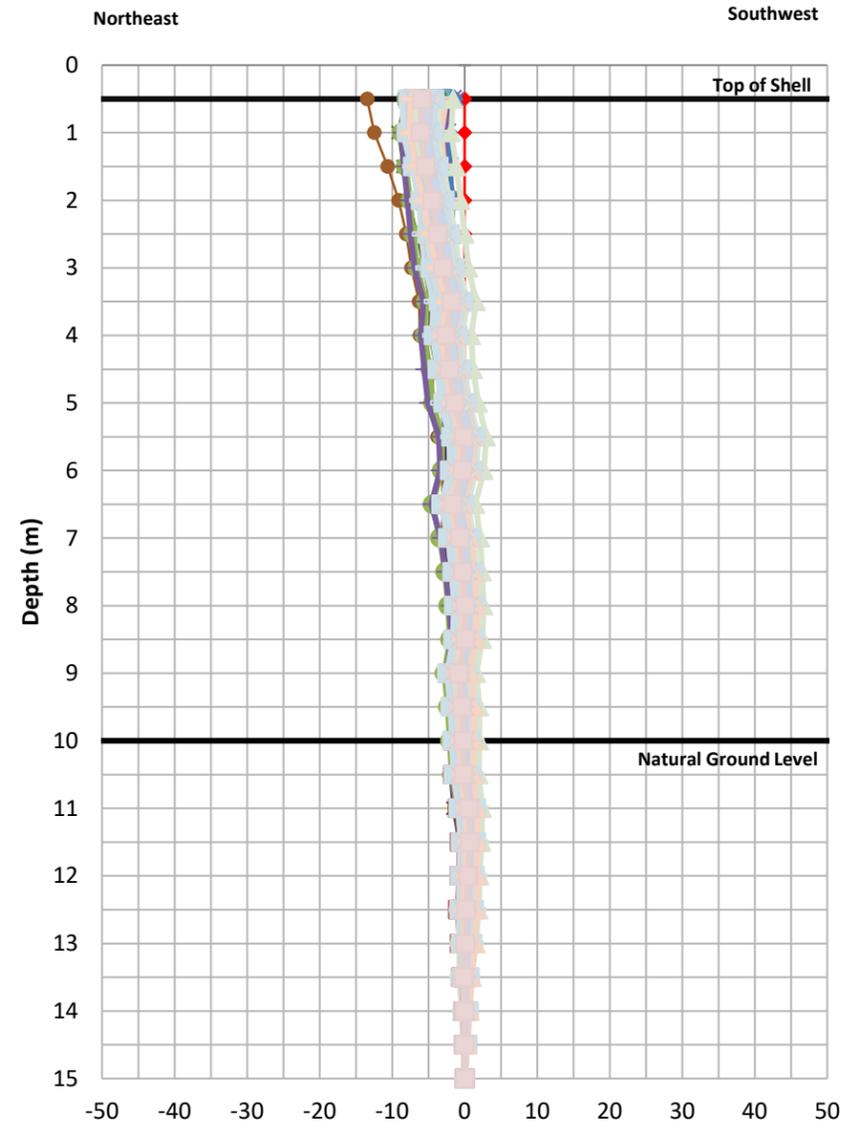
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|------------------------------------|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-1 Profiles | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.2 |

Displacement Perpendicular to Centerline



Displacement Parallel to Centerline

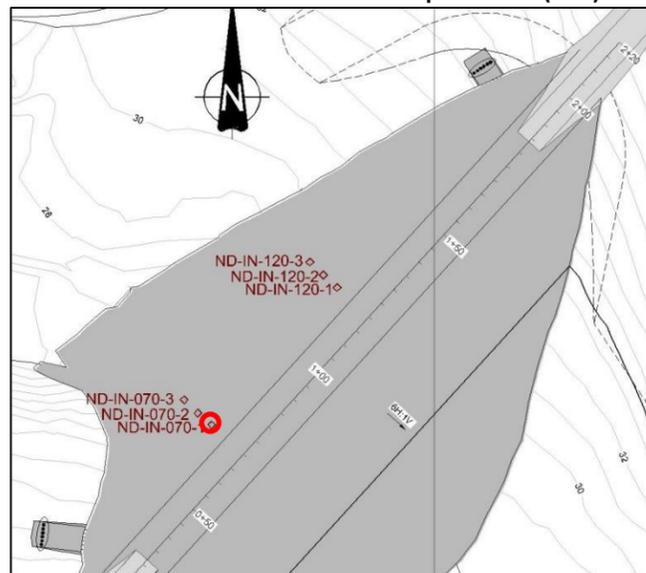


LEGEND:

- ◆ Initial Reading (9/8/2012)
- ◆ 9/9/2012 X
- ◆ 2013-10-01
- ◆ 2014-07-12
- ◆ 2014-09-01
- ◆ 2015-02-02
- ◆ 2015-04-08
- ◆ 2015-05-18
- ◆ 2015-07-09
- ◆ 2015-09-04
- ◆ 2015-11-25
- ◆ 2016-02-08
- ◆ 2016-04-11
- ◆ 2016-08-14
- ◆ 2016-11-26
- ◆ 2017-01-26
- ◆ 2017-03-23
- ◆ 2017-05-20
- ◆ 2017-07-16
- ◆ 2017-09-14
- ◆ 2017-11-16
- ◆ 2018-01-16
- ◆ 2018-03-21
- ◆ 2018-05-19
- ◆ 2018-07-07
- ◆ 2018-09-29
- ◆ 2018-11-10
- ◆ 2019-01-25
- ◆ 2019-04-14
- ◆ 2019-06-11
- ◆ 2019-08-25
- ◆ 2019-10-26
- ◆ 2020-01-16
- ◆ 2020-03-10
- ◆ 2020-07-12
- ◆ 2020-09-11
- ◆ 2020-11-19
- ◆ 2021-01-20
- ◆ 2021-06-09
- ◆ 2021-08-14
- ◆ 2021-10-02
- ◆ 2021-12-11
- ◆ 2022-02-11
- ◆ 2022-04-25
- ◆ 2022-08-20
- ◆ 2022-10-08
- ◆ 2023-04-28
- ◆ 2023-06-15
- ◆ 2023-09-24
- ◆ 2023-11-05
- ◆ 2024-01-05
- ◆ 2024-03-10
- ◆ 2024-05-03
- ◆ 2024-07-20
- ◆ 2024-09-10
- ◆ 9/9/2012 X
- ◆ 2013-07-26
- ◆ 2014-05-18
- ◆ 2014-08-08
- ◆ 2014-10-01
- ◆ 2015-03-21
- ◆ 2015-04-16
- ◆ 2015-06-25
- ◆ 2015-08-02
- ◆ 2015-10-09
- ◆ 2015-12-30
- ◆ 2016-03-07
- ◆ 2016-07-02
- ◆ 2016-09-25
- ◆ 2016-12-24
- ◆ 2017-02-23
- ◆ 2017-04-15
- ◆ 2017-06-25
- ◆ 2017-08-09
- ◆ 2017-10-14
- ◆ 2017-12-16
- ◆ 2018-02-16
- ◆ 2018-04-20
- ◆ 2018-06-08
- ◆ 2018-08-03
- ◆ 2018-10-21
- ◆ 2019-01-01
- ◆ 2019-02-14
- ◆ 2019-05-10
- ◆ 2019-07-27
- ◆ 2019-09-28
- ◆ 2019-11-23
- ◆ 2020-02-18
- ◆ 2020-06-06
- ◆ 2020-08-08
- ◆ 2020-10-20
- ◆ 2020-12-23
- ◆ 2021-02-20
- ◆ 2021-07-11
- ◆ 2021-09-04
- ◆ 2021-11-13
- ◆ 2022-01-17
- ◆ 2022-03-27
- ◆ 2022-05-16
- ◆ 2022-07-25
- ◆ 2022-09-18
- ◆ 2022-11-04
- ◆ 2023-05-08
- ◆ 2023-07-14
- ◆ 2023-10-10
- ◆ 2023-12-02
- ◆ 2024-02-10
- ◆ 2024-04-06
- ◆ 2024-06-27
- ◆ 2024-08-19

Displacement (mm)

Displacement (mm)

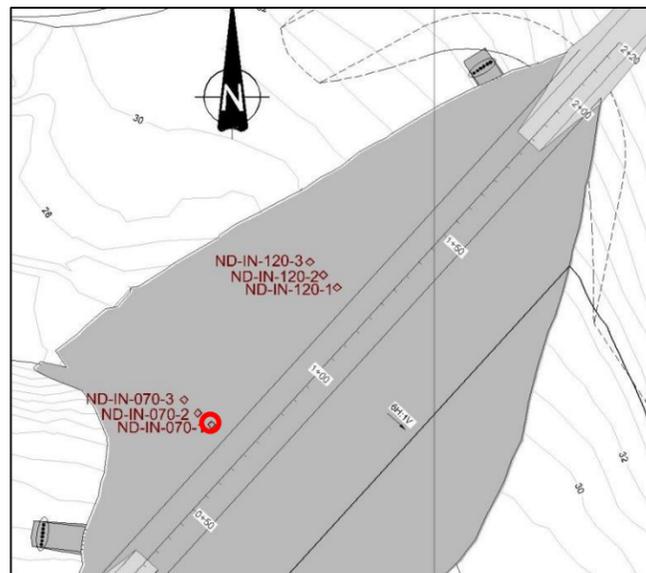
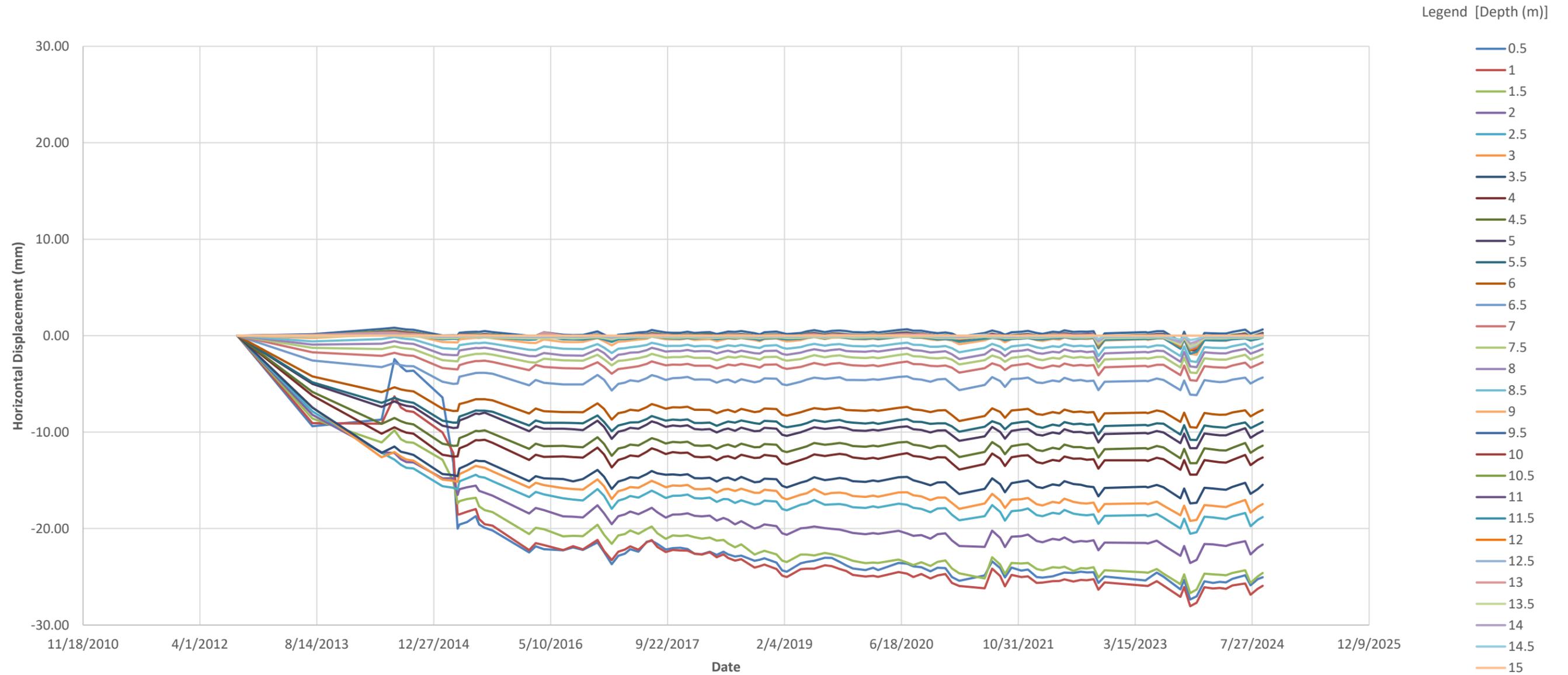


Notes:

1. Manufacturer's accuracy is +/- 0.25 mm per location
2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-1 Displacements | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.3 |

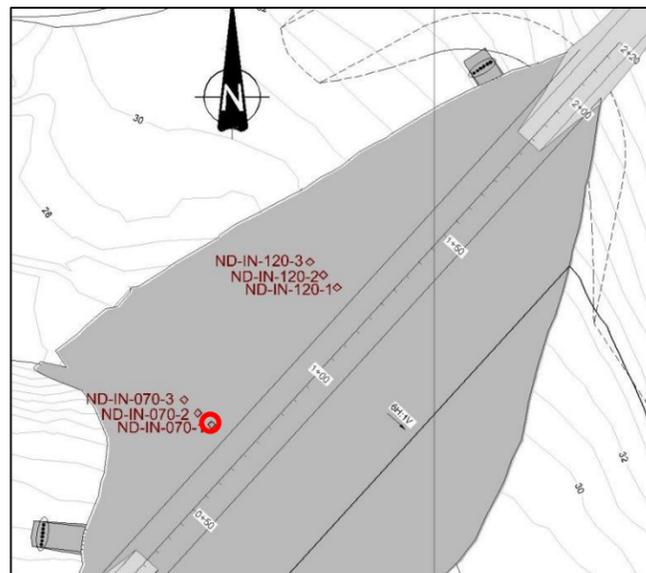
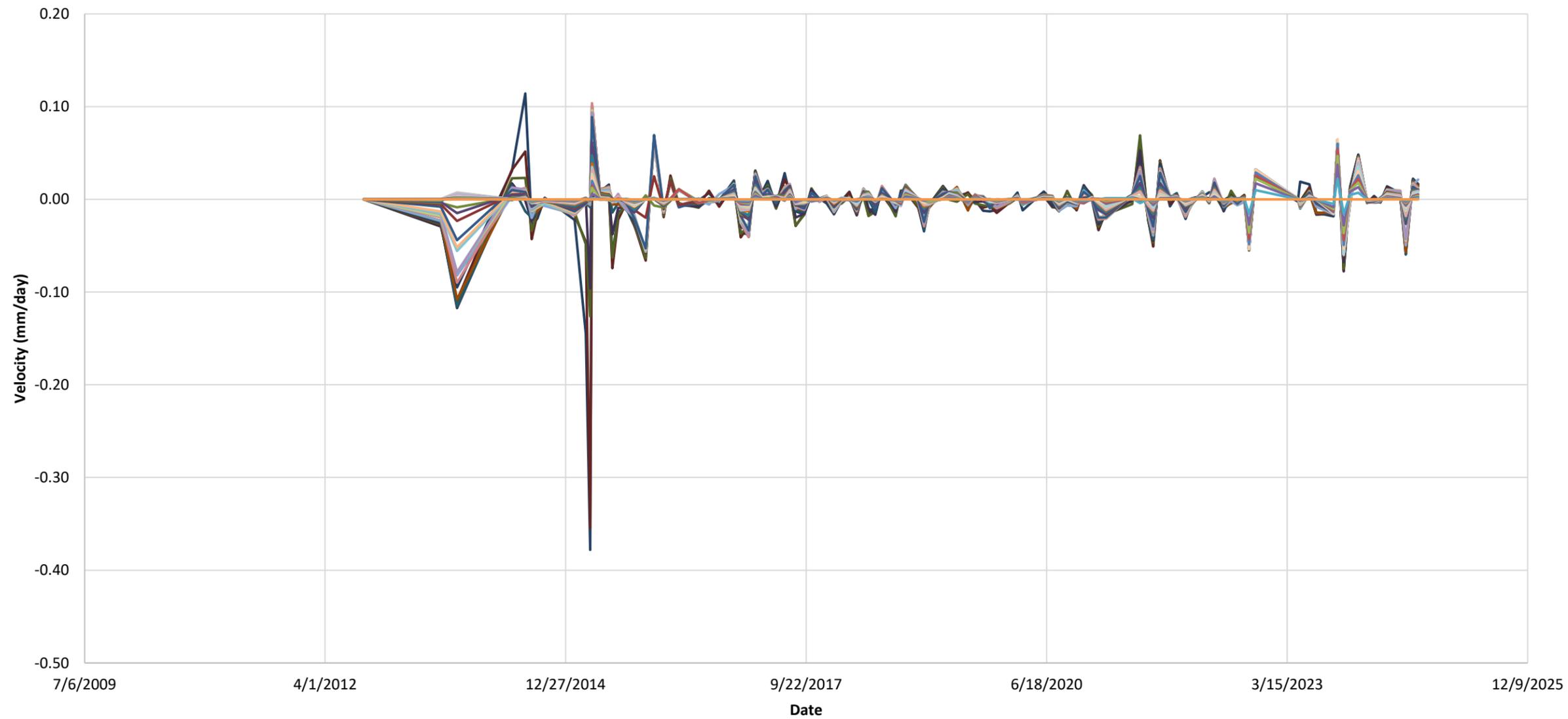
Inclinometer 070-1A Timeseries



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-1A Displacement Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.4 |

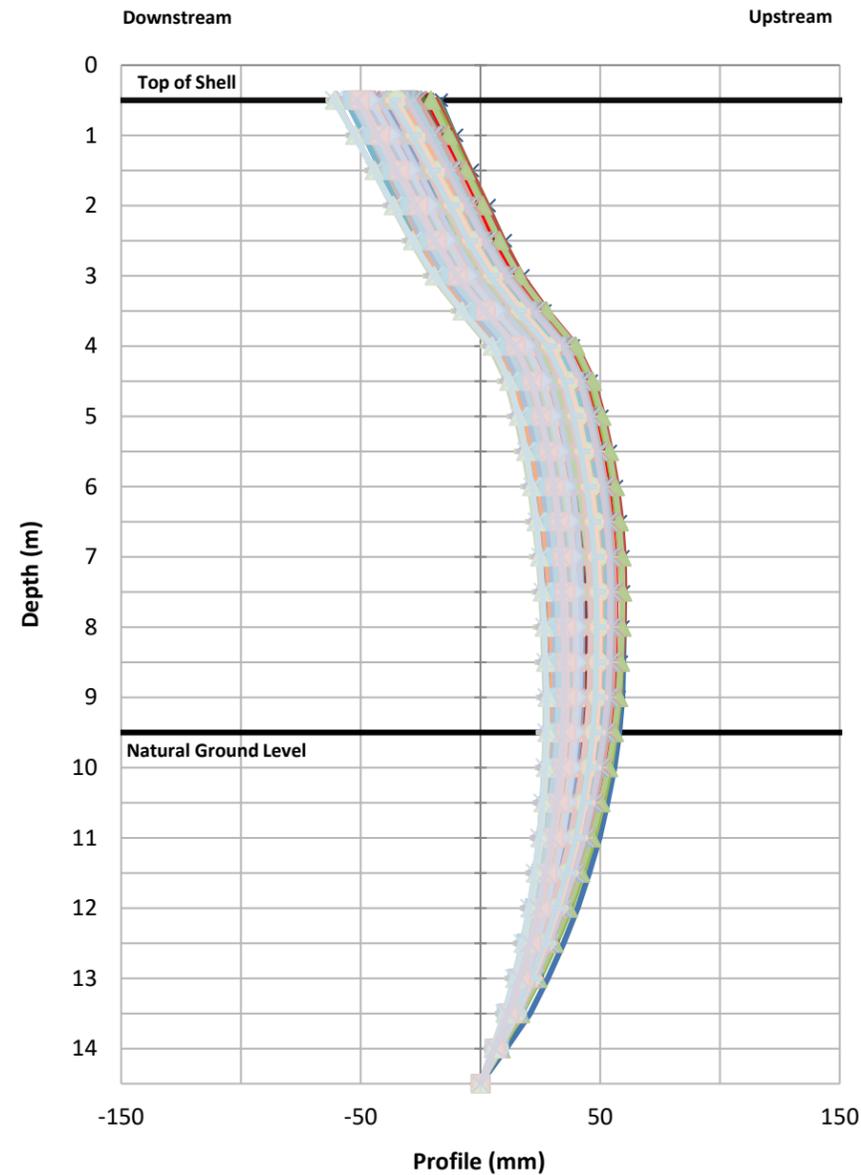
Inclinometer 070-1A Timeseries



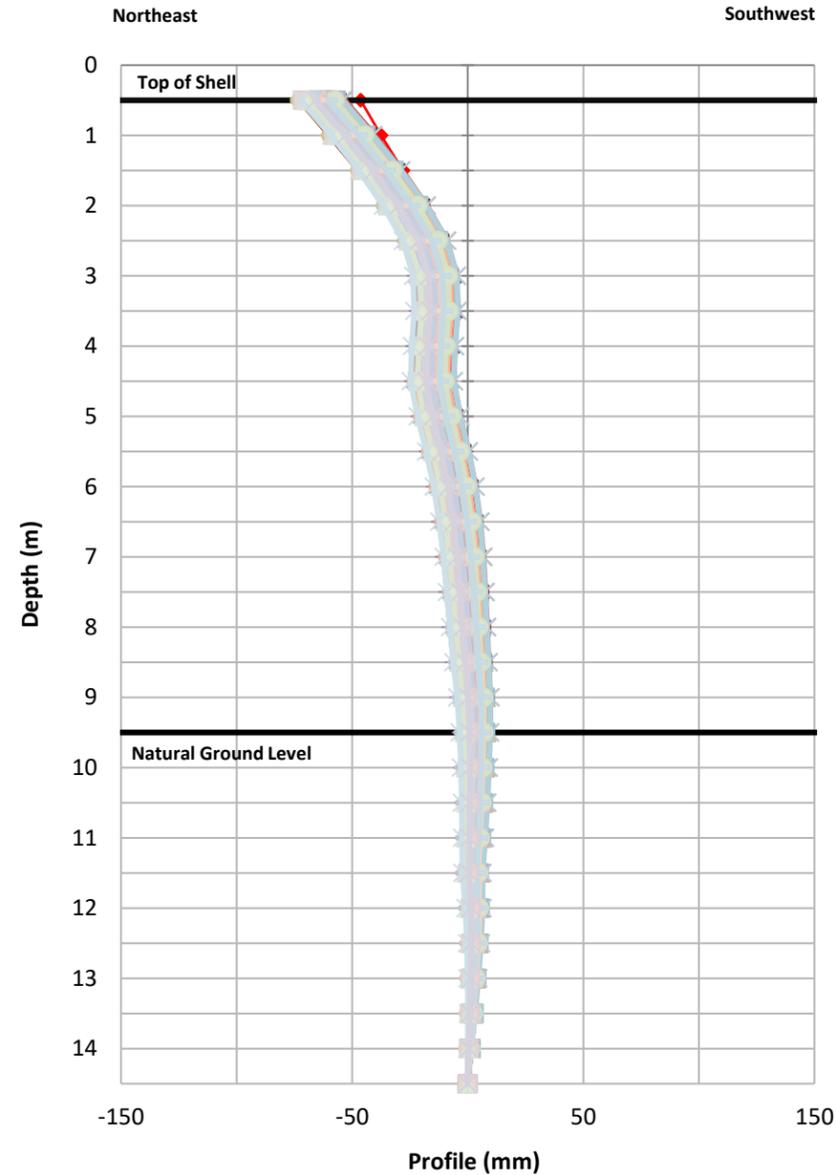
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|---|---|---|------------------|--------------------|
|  Job No: CAPR003066 Filename: App_D_Inclinometers.pptx |  Hope Bay | 2024 TIA AGI | | |
| | | Inclinometer 070-1A Velocity Time Series | | |
| | | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.5 |

Profile Perpendicular to Centerline

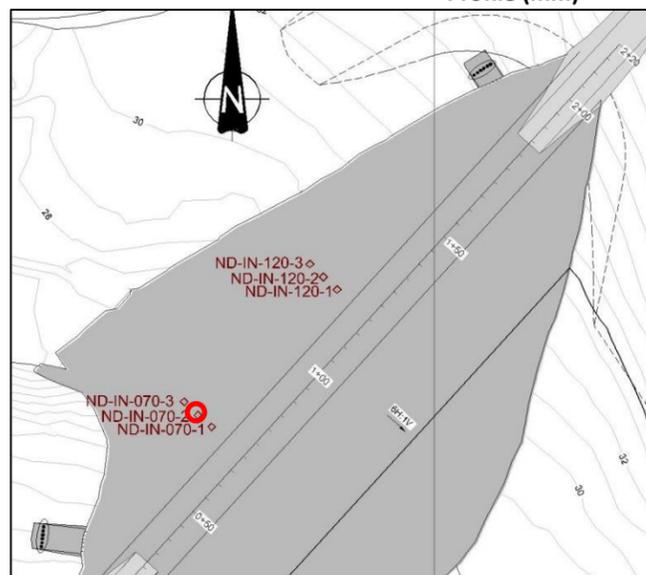


Profile Parallel to Centerline



LEGEND:

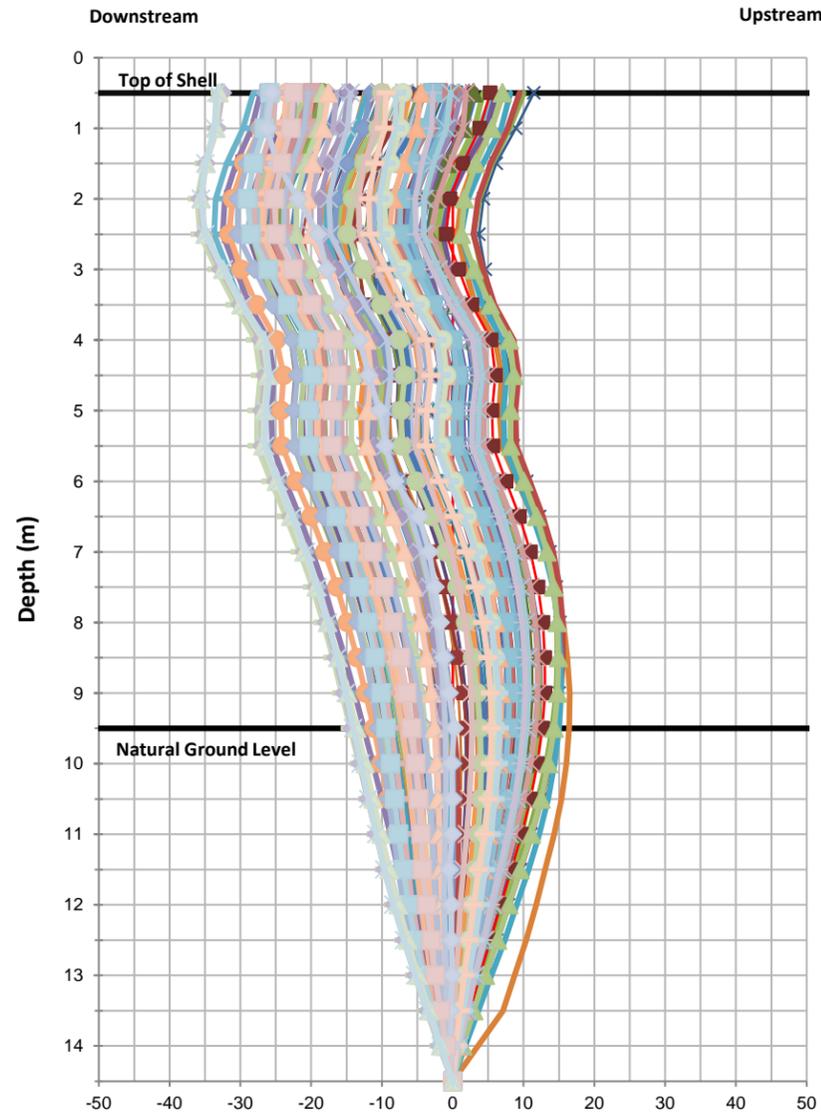
- ◆ Initial Reading (9/8/2012)
- 2013-10-01
- 2014-07-12
- 2014-09-01
- ✕ 2015-02-01
- 2015-04-16
- 2015-06-25
- ✕ 2015-08-02
- 2015-09-04
- 2015-11-25
- ✕ 2016-02-08
- 2016-04-11
- 2016-08-14
- ▲ 2016-11-26
- ▲ 2017-02-23
- 2017-04-15
- 2017-06-25
- 2017-08-09
- 2017-10-14
- 2017-12-16
- 2018-02-16
- 2018-04-20
- 2018-06-08
- 2018-08-03
- 2018-10-21
- 2019-01-01
- 2019-02-14
- 2019-05-10
- 2019-07-27
- 2019-09-28
- 2019-11-23
- 2020-02-18
- 2020-06-06
- 2020-08-08
- ▲ 2020-10-20
- ▲ 2020-12-23
- ✕ 2021-02-20
- 2021-07-11
- 2021-09-04
- 2021-11-13
- ✕ 2022-01-17
- 2022-03-27
- 2022-05-16
- ▲ 2022-07-25
- ▲ 2022-09-18
- ✕ 2022-11-04
- 2023-05-08
- 2023-07-14
- 2023-08-13
- ✕ 2023-10-10
- 2023-12-02
- 2024-02-10
- ▲ 2024-04-06
- ▲ 2024-06-27
- ✕ 2024-09-07
- ✕ 2013-07-26
- 2014-05-20
- 2014-08-08
- ▲ 2014-10-01
- 2015-03-21
- 2015-05-18
- ▲ 2015-07-09
- 2015-08-08
- 2015-10-09
- ▲ 2015-12-30
- 2016-03-07
- 2016-07-02
- 2016-09-26
- 2016-12-24
- 2017-03-23
- 2017-05-20
- ▲ 2017-07-16
- 2017-09-14
- 2017-11-16
- 2018-01-16
- 2018-03-21
- 2018-05-19
- 2018-07-07
- 2018-09-29
- 2018-11-10
- 2019-01-28
- 2019-04-14
- 2019-06-11
- 2019-08-25
- 2019-10-26
- 2020-01-16
- ▲ 2020-03-10
- 2020-07-12
- 2020-09-11
- 2020-11-19
- ✕ 2021-01-20
- 2021-06-09
- 2021-08-14
- 2021-10-04
- ▲ 2021-12-11
- ✕ 2022-02-10
- 2022-04-25
- 2022-06-24
- 2022-08-20
- 2022-10-08
- 2023-04-28
- 2023-06-15
- 2023-08-11
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- ✕ 2023-11-04
- 2024-01-05
- 2024-03-10
- 2024-05-03
- ✕ 2024-08-19



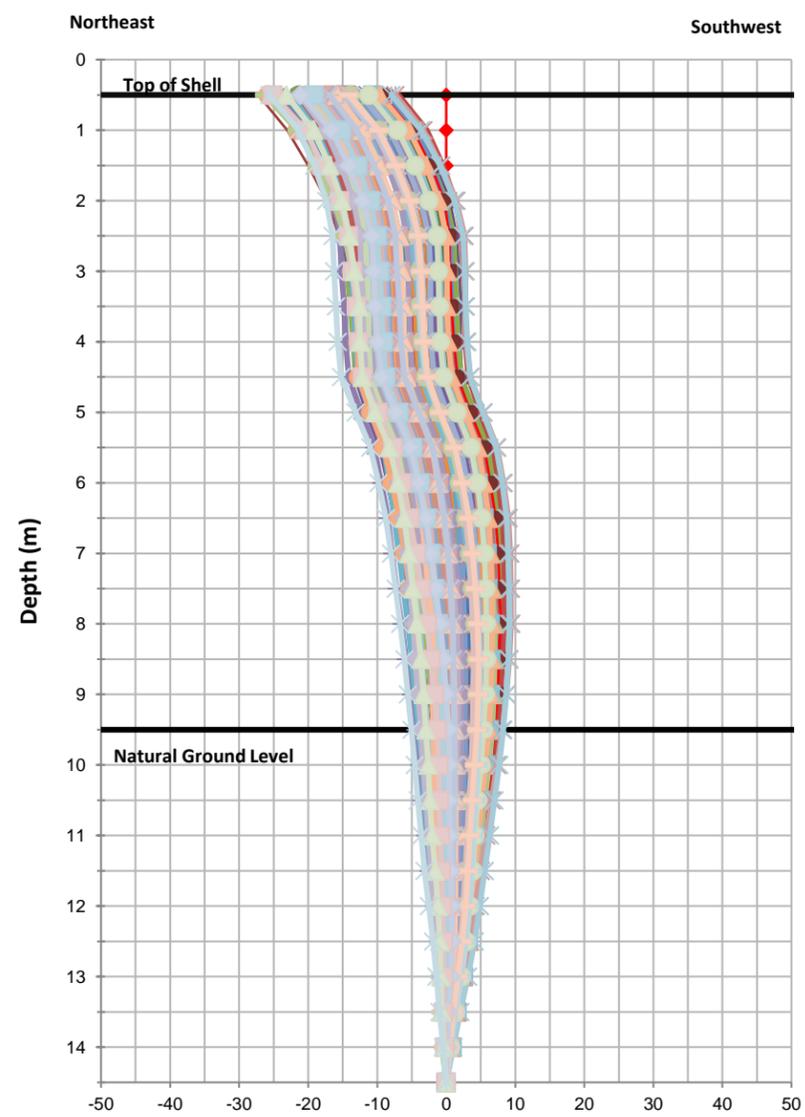
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|------------------------------------|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-2 Profiles | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.6 |

Displacement Perpendicular to Centerline



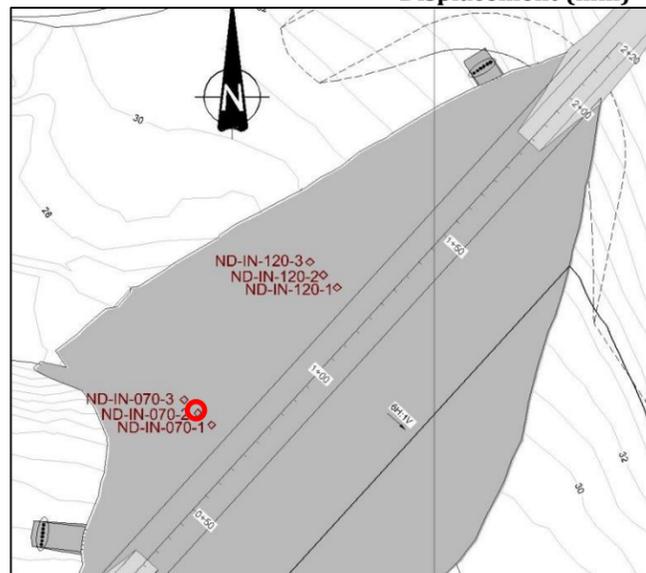
Displacement Parallel to Centerline



LEGEND:

- ◆ Initial Reading (9/8/2012)
- 2013-10-01
- 2014-07-12
- 2014-09-01
- × 2015-02-01
- 2015-04-16
- 2015-06-25
- × 2015-08-02
- 2015-09-04
- 2015-11-25
- × 2016-02-08
- 2016-04-11
- 2016-08-14
- ▲ 2016-11-26
- ▲ 2017-02-23
- 2017-04-15
- 2017-06-25
- 2017-08-09
- 2017-10-14
- 2017-12-16
- 2018-02-16
- 2018-04-20
- 2018-06-08
- 2018-08-03
- 2018-10-21
- 2019-01-01
- 2019-02-14
- 2019-05-10
- 2019-07-27
- 2019-09-28
- 2019-11-23
- 2020-02-18
- 2020-06-06
- 2020-08-08
- ▲ 2020-10-20
- ▲ 2020-12-23
- × 2021-02-20
- 2021-07-11
- 2021-09-04
- 2021-11-13
- × 2022-01-17
- 2022-03-27
- 2022-05-16
- ▲ 2022-07-25
- ▲ 2022-09-18
- × 2022-11-04
- 2023-05-08
- 2023-07-14
- 2023-08-13
- × 2023-10-10
- 2023-12-02
- 2024-02-10
- ▲ 2024-04-06
- ▲ 2024-06-27
- × 2024-09-07
- × 2013-07-26
- 2014-05-20
- 2014-08-08
- ▲ 2014-10-01
- 2015-03-21
- ▲ 2015-05-18
- ▲ 2015-07-09
- 2015-08-08
- ▲ 2015-10-09
- ▲ 2015-12-30
- 2016-03-07
- 2016-07-02
- 2016-09-26
- 2016-12-24
- 2017-03-23
- 2017-05-20
- ▲ 2017-07-16
- 2017-09-14
- 2017-11-16
- 2018-01-16
- 2018-03-21
- 2018-05-19
- 2018-07-07
- 2018-09-29
- 2018-11-10
- 2019-01-28
- 2019-04-14
- 2019-06-11
- 2019-08-25
- 2019-10-26
- 2020-01-16
- ▲ 2020-03-10
- 2020-07-12
- 2020-09-11
- 2020-11-19
- × 2021-01-20
- 2021-06-09
- 2021-08-14
- ▲ 2021-10-04
- ▲ 2021-12-11
- × 2022-02-10
- 2022-04-25
- 2022-06-24
- 2022-08-20
- × 2022-10-08
- 2023-04-28
- 2023-06-15
- ▲ 2023-08-11
- ▲ 2023-09-24
- × 2023-11-04
- 2024-01-05
- 2024-03-10
- 2024-05-03
- × 2024-08-19

Displacement (mm)



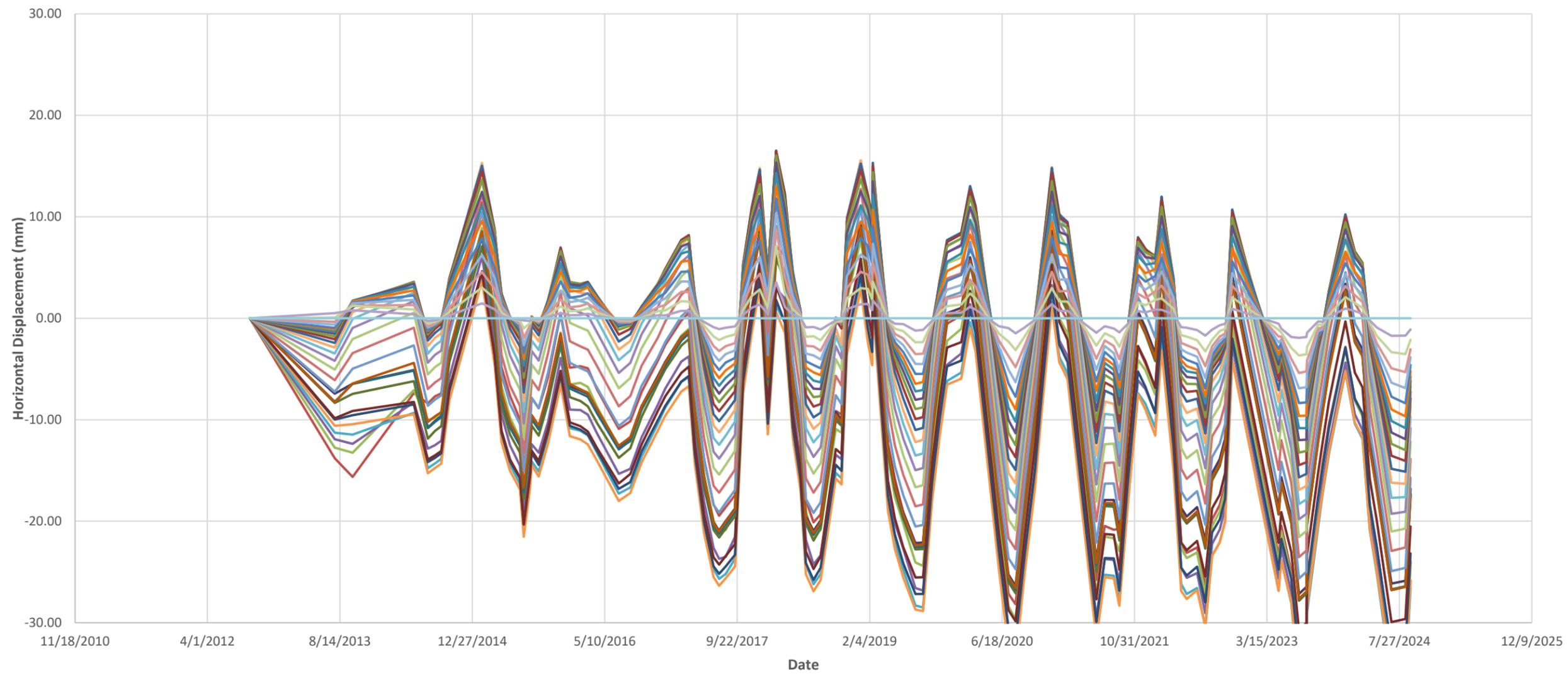
Notes:

1. Manufacturer's accuracy is +/- 0.25 mm per location
2. Survey data excluded from the charts is noted on Figure D.1

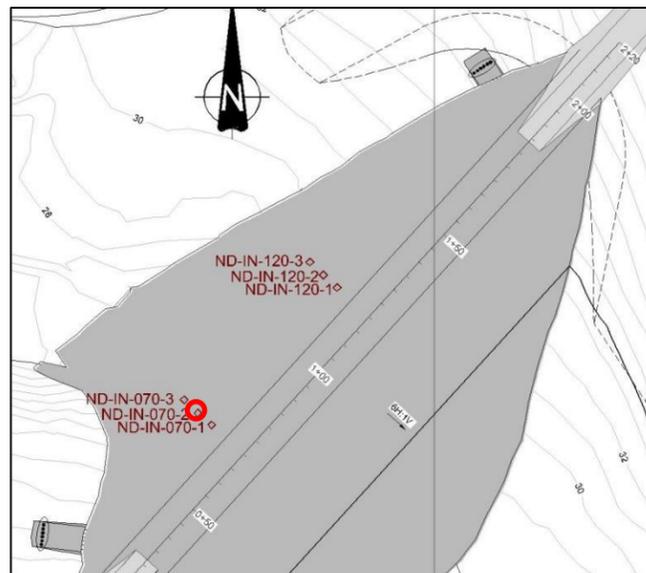
| | | | | |
|--|----------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-2 Displacements | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.7 |

Inclinometer 070-2A Timeseries

Legend [Depth (m)]



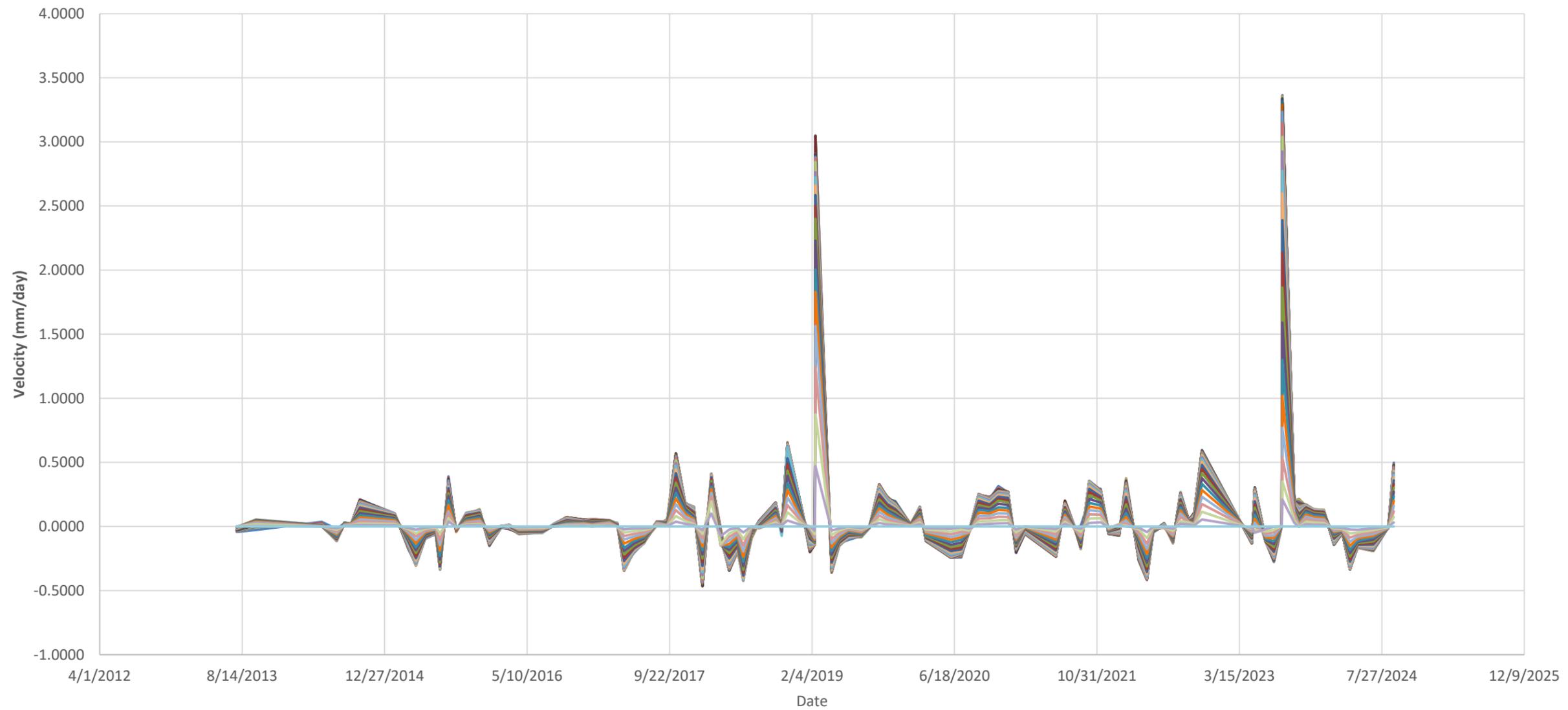
- 0.5
- 1.0
- 1.5
- 2.0
- 2.5
- 3.0
- 3.5
- 4.0
- 4.5
- 5.0
- 5.5
- 6.0
- 6.5
- 7.0
- 7.5
- 8.0
- 8.5
- 9.0
- 9.5
- 10.0
- 10.5
- 11.0
- 11.5
- 12.0
- 12.5
- 13.0
- 13.5
- 14.0
- 14.5



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

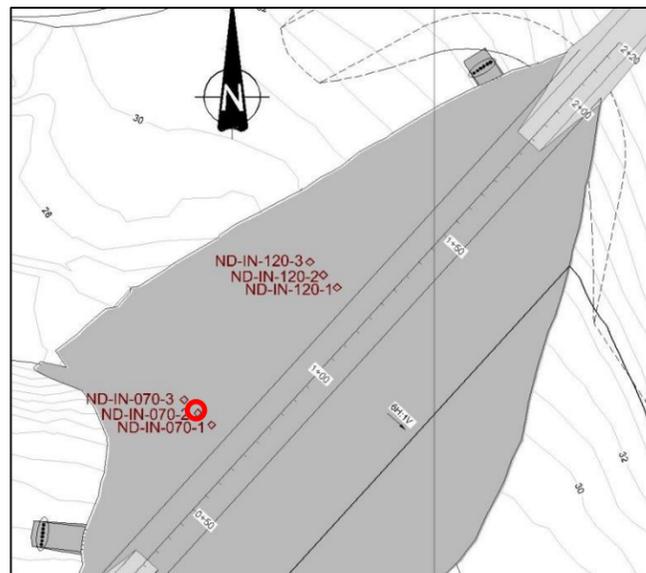
| | | | | |
|--|----------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-2A Displacement Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.8 |

Inclinometer 070-2A Velocity Timeseries



Legend [Depth (m)]

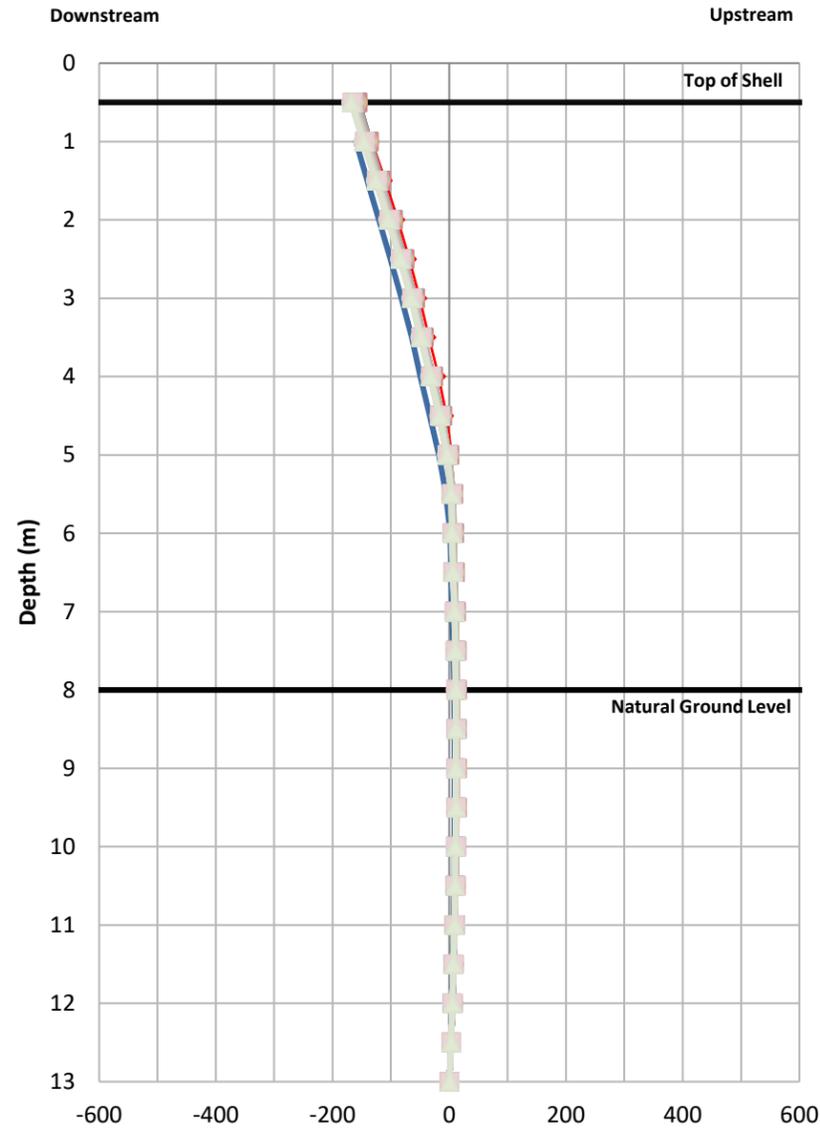
- 0.5
- 1.0
- 1.5
- 2.0
- 2.5
- 3.0
- 3.5
- 4.0
- 4.5
- 5.0
- 5.5
- 6.0
- 6.5
- 7.0
- 7.5
- 8.0
- 8.5
- 9.0
- 9.5
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- 12.0
- 12.5
- 13.0
- 13.5
- 14.0
- 14.5



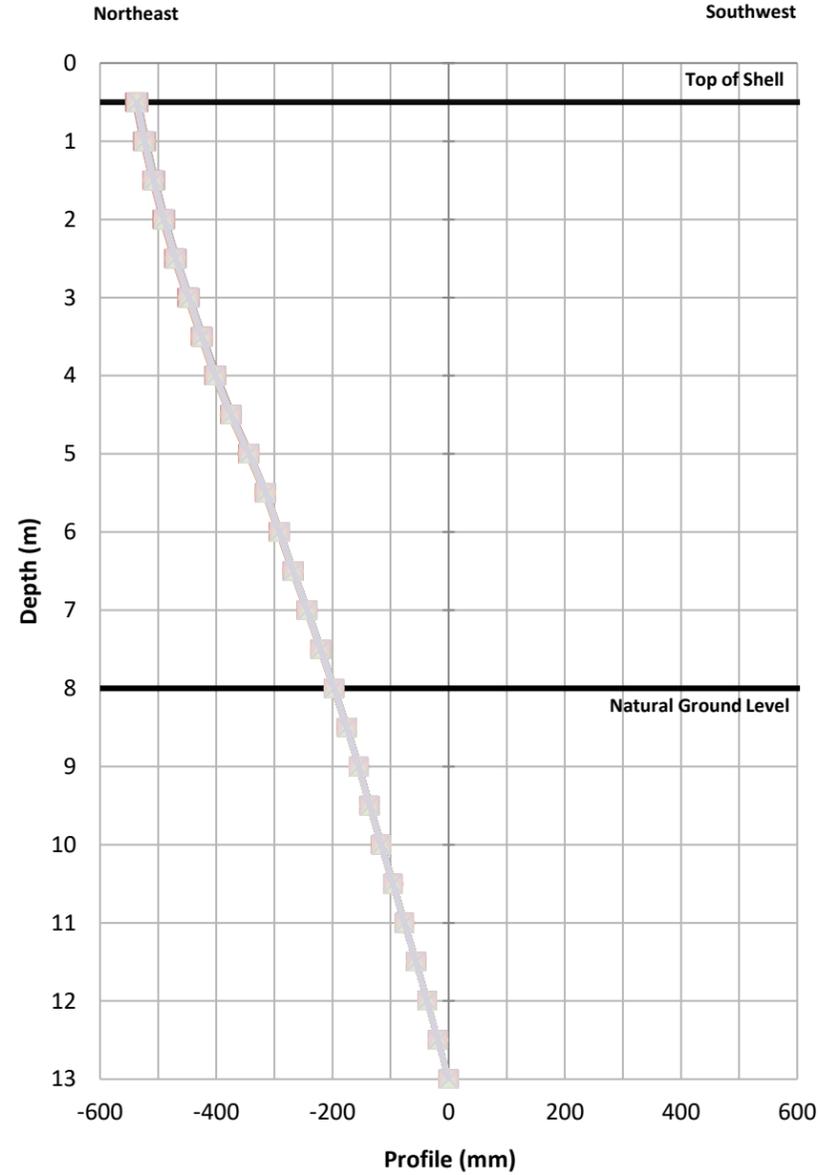
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|---|---|---|---------------------|-----------------------|
|  Job No: CAPR003066 Filename: App_D_Inclinometers.pptx |  Hope Bay | 2024 TIA AGI | | |
| | | Inclinometer 070-2A Velocity Time Series | | |
| | | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.9 |

Profile Perpendicular to Centerline

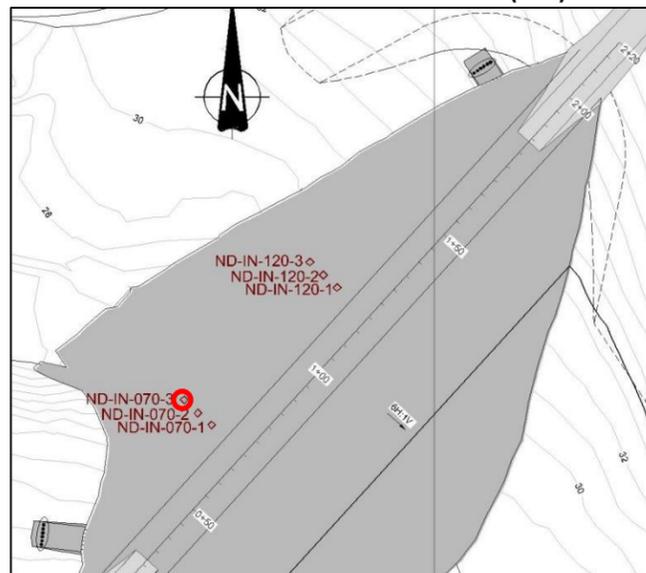


Profile Parallel to Centerline



LEGEND:

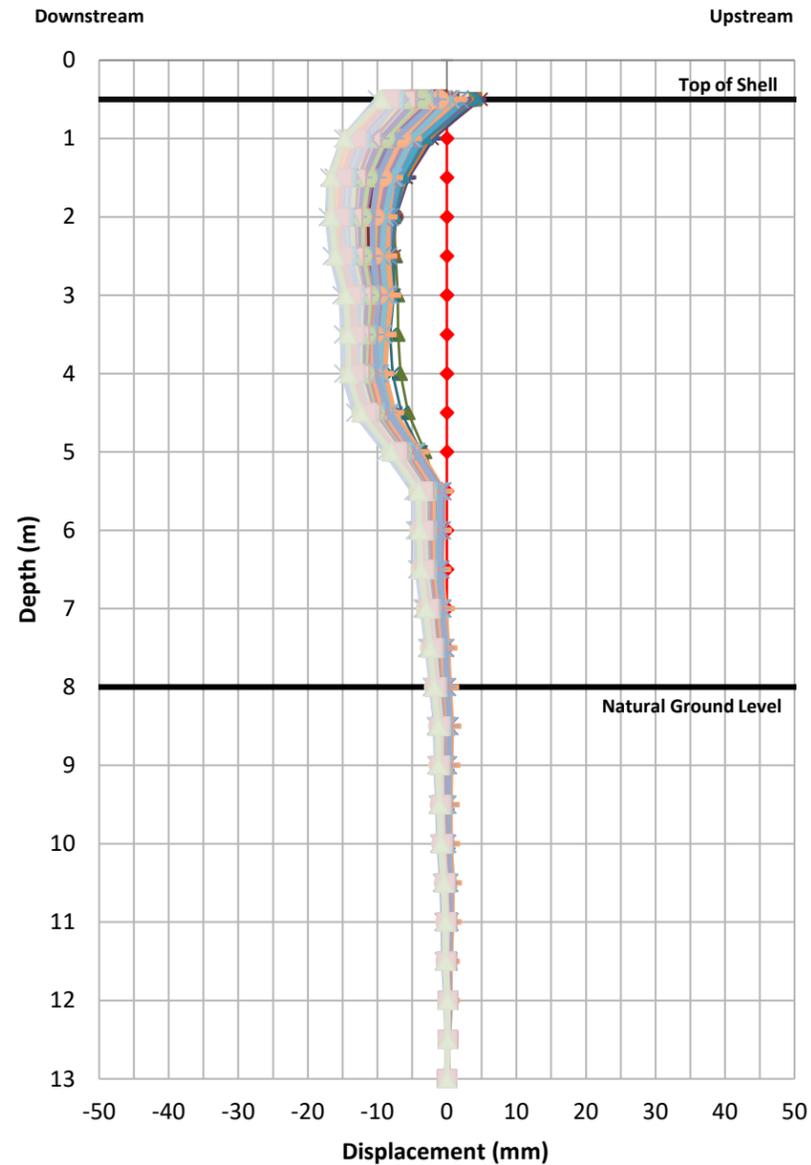
- ◆ Initial Reading (9/9/2012)
- ✱ 2013-10-01
- ✱ 2014-07-12
- ✱ 2014-09-01
- ✱ 2015-02-01
- ✱ 2015-04-16
- ✱ 2015-06-25
- ✱ 2015-08-02
- ✱ 2015-10-09
- ✱ 2015-12-30
- ✱ 2016-03-07
- ✱ 2016-07-02
- ✱ 2016-09-25
- ✱ 2016-12-24
- ✱ 2017-03-23
- ✱ 2017-05-20
- ✱ 2017-07-16
- ✱ 2017-09-14
- ✱ 2017-11-17
- ✱ 2018-03-21
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- ✱ 2019-10-26
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- ✱ 2021-08-14
- ✱ 2021-10-03
- ✱ 2021-12-11
- ✱ 2022-02-10
- ✱ 2022-04-25
- ✱ 2022-06-24
- ✱ 2022-08-20
- ✱ 2022-10-08
- ✱ 2023-04-28
- ✱ 2023-06-15
- ✱ 2023-08-11
- ✱ 2023-10-10
- ✱ 2023-12-02
- ✱ 2024-02-11
- ✱ 2024-04-06
- ✱ 2024-06-27
- ✱ 2024-09-07
- ✱ 2013-07-26
- ✱ 2014-05-20
- ✱ 2014-08-08
- ✱ 2014-10-01
- ✱ 2015-03-21
- ✱ 2015-05-18
- ✱ 2015-07-09
- ✱ 2015-09-04
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- ✱ 2016-02-08
- ✱ 2016-04-11
- ✱ 2016-08-14
- ✱ 2016-11-26
- ✱ 2017-02-23
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- ✱ 2017-06-25
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- ✱ 2017-10-14
- ✱ 2017-12-16
- ✱ 2018-02-16
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- ✱ 2019-02-14
- ✱ 2019-05-10
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- ✱ 2019-09-28
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- ✱ 2020-06-06
- ✱ 2020-08-08
- ✱ 2020-10-20
- ✱ 2020-12-24
- ✱ 2021-02-20
- ✱ 2021-07-11
- ✱ 2021-09-04
- ✱ 2021-11-13
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- ✱ 2022-03-28
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- ✱ 2023-09-24
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- ✱ 2024-03-10
- ✱ 2024-05-04
- ✱ 2024-08-19



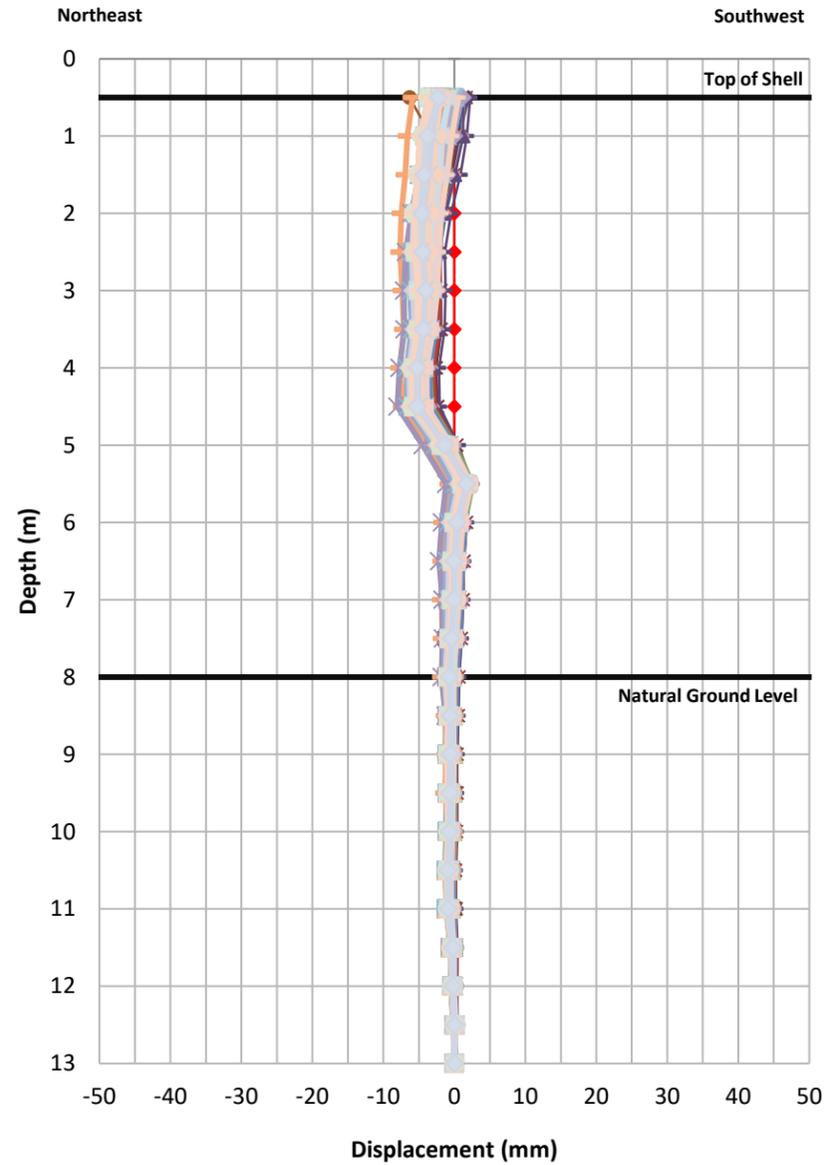
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|------------------------------------|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-3 Profiles | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.10 |

Displacement Perpendicular to Centerline

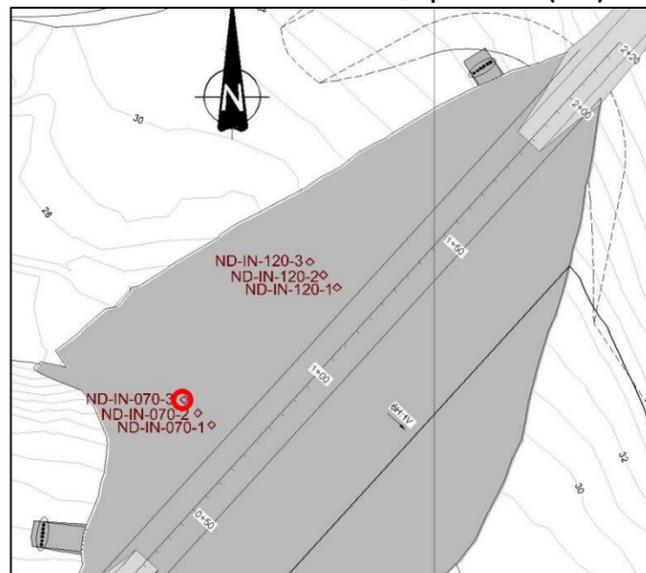


Displacement Parallel to Centerline



LEGEND:

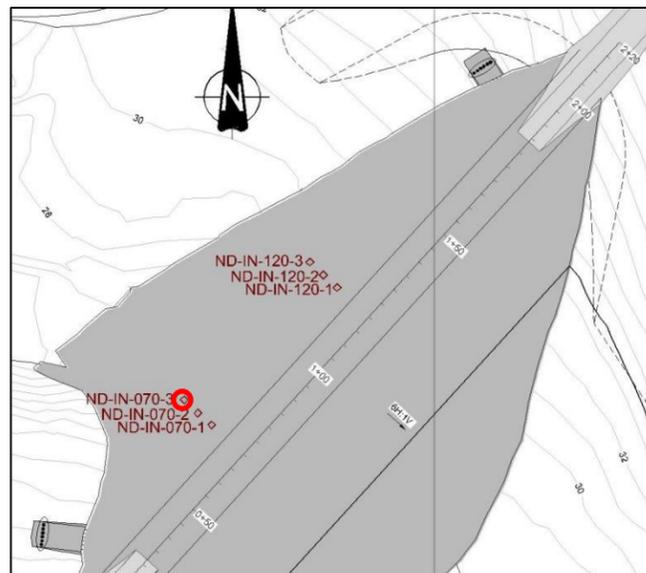
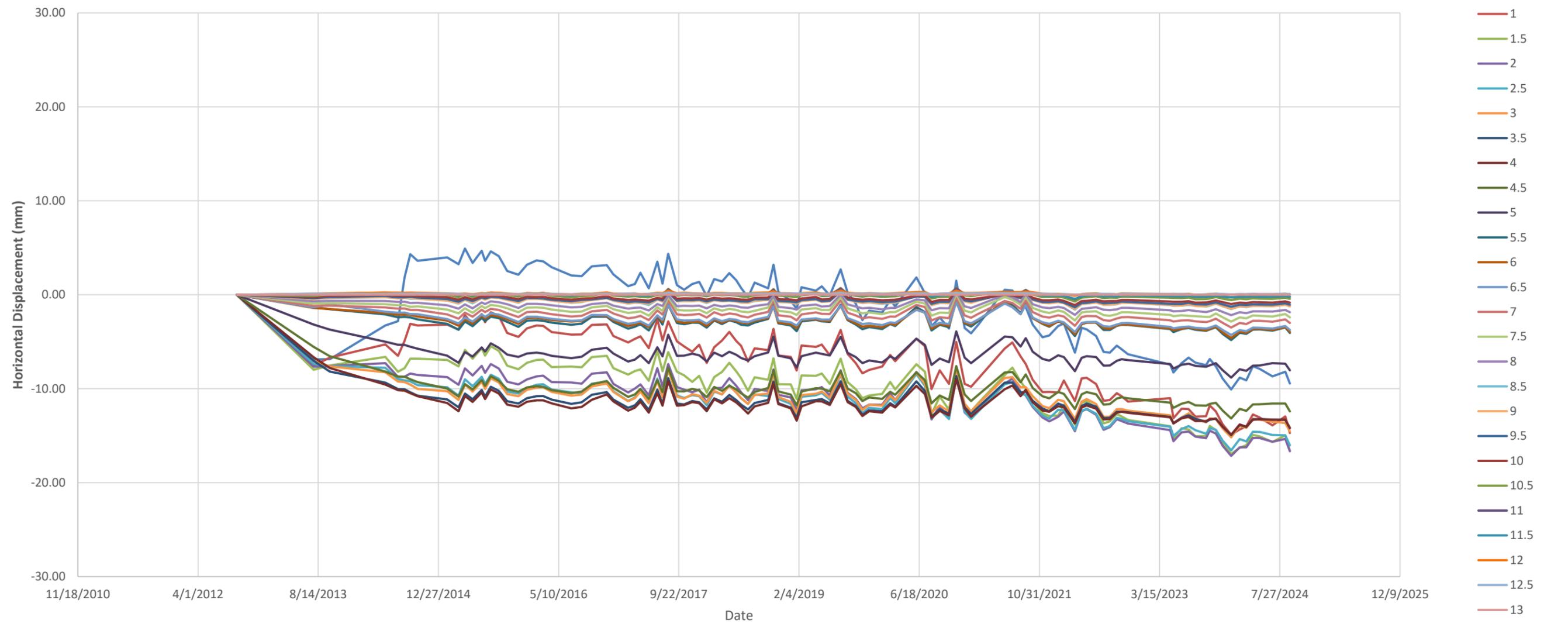
- ◆ Initial Reading (9/9/2012)
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- ◆ 2013-10-01
- ◆ 2014-05-20
- ◆ 2014-07-12
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- ◆ 2015-02-01
- ◆ 2015-03-21
- ◆ 2015-04-16
- ◆ 2015-05-18
- ◆ 2015-06-25
- ◆ 2015-07-09
- ◆ 2015-08-02
- ◆ 2015-08-09
- ◆ 2015-10-09
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- ◆ 2016-04-11
- ◆ 2016-07-02
- ◆ 2016-08-14
- ◆ 2016-09-25
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- ◆ 2019-07-27
- ◆ 2019-08-25
- ◆ 2019-09-28
- ◆ 2019-10-26
- ◆ 2019-11-23
- ◆ 2020-01-16
- ◆ 2020-02-18
- ◆ 2020-03-10
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- ◆ 2020-08-08
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- ◆ 2021-09-04
- ◆ 2021-10-03
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- ◆ 2021-12-11
- ◆ 2022-01-17
- ◆ 2022-02-10
- ◆ 2022-03-28
- ◆ 2022-04-25
- ◆ 2022-05-16
- ◆ 2022-06-24
- ◆ 2022-07-25
- ◆ 2022-08-20
- ◆ 2022-09-18
- ◆ 2022-10-08
- ◆ 2022-11-04
- ◆ 2022-11-04
- ◆ 2023-04-28
- ◆ 2023-05-12
- ◆ 2023-06-15
- ◆ 2023-07-14
- ◆ 2023-08-11
- ◆ 2023-09-24
- ◆ 2023-10-10
- ◆ 2023-11-04
- ◆ 2023-12-02
- ◆ 2024-01-07
- ◆ 2024-02-11
- ◆ 2024-03-10
- ◆ 2024-04-06
- ◆ 2024-05-04
- ◆ 2024-06-27
- ◆ 2024-08-19
- ◆ 2024-09-07



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-3 Displacements | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.11 |

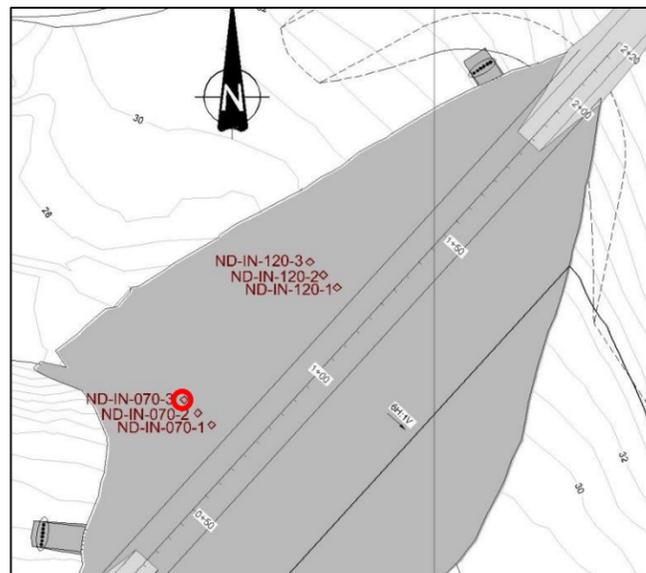
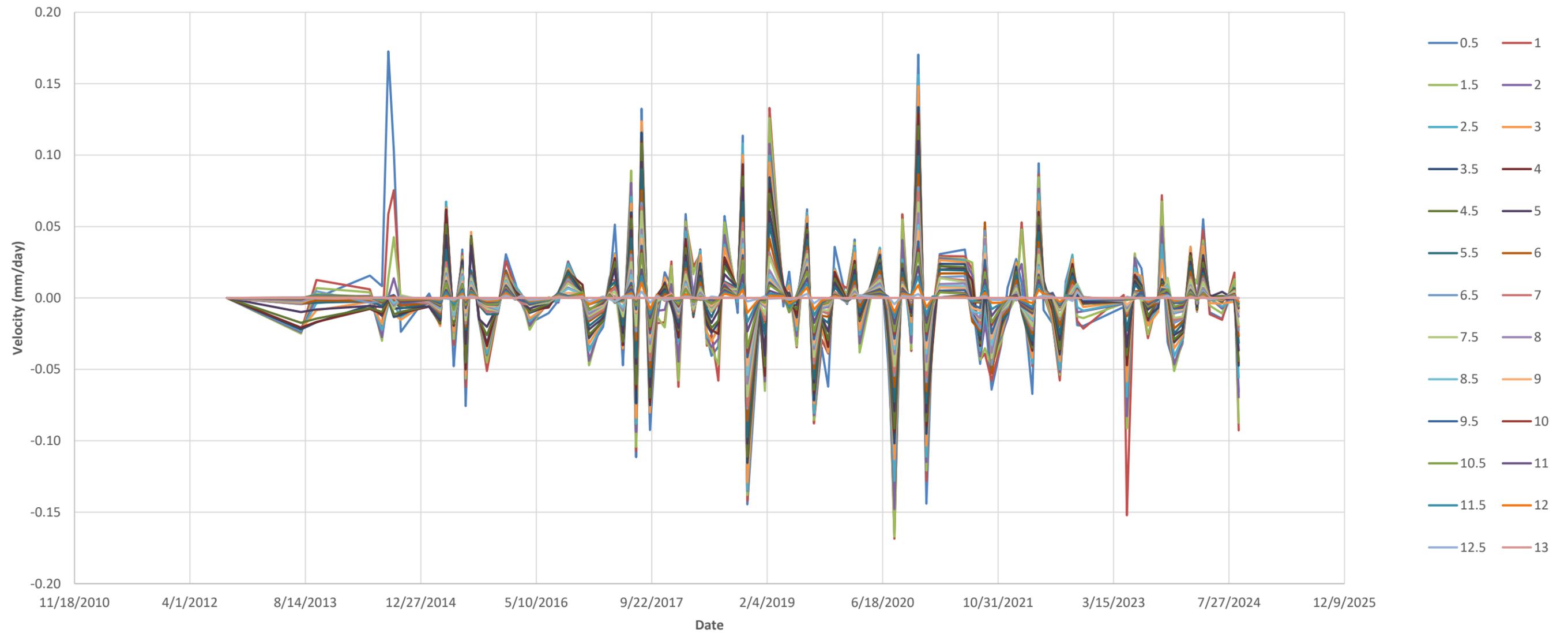
Inclinometer 070-3A Timeseries



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|---|---|---|------------------|---------------------|
|  Job No: CAPR003066 Filename: App_D_Inclinometers.pptx |  Hope Bay | 2024 TIA AGI | | |
| | | Inclinometer 070-3A Displacement Time Series | | |
| | | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.12 |

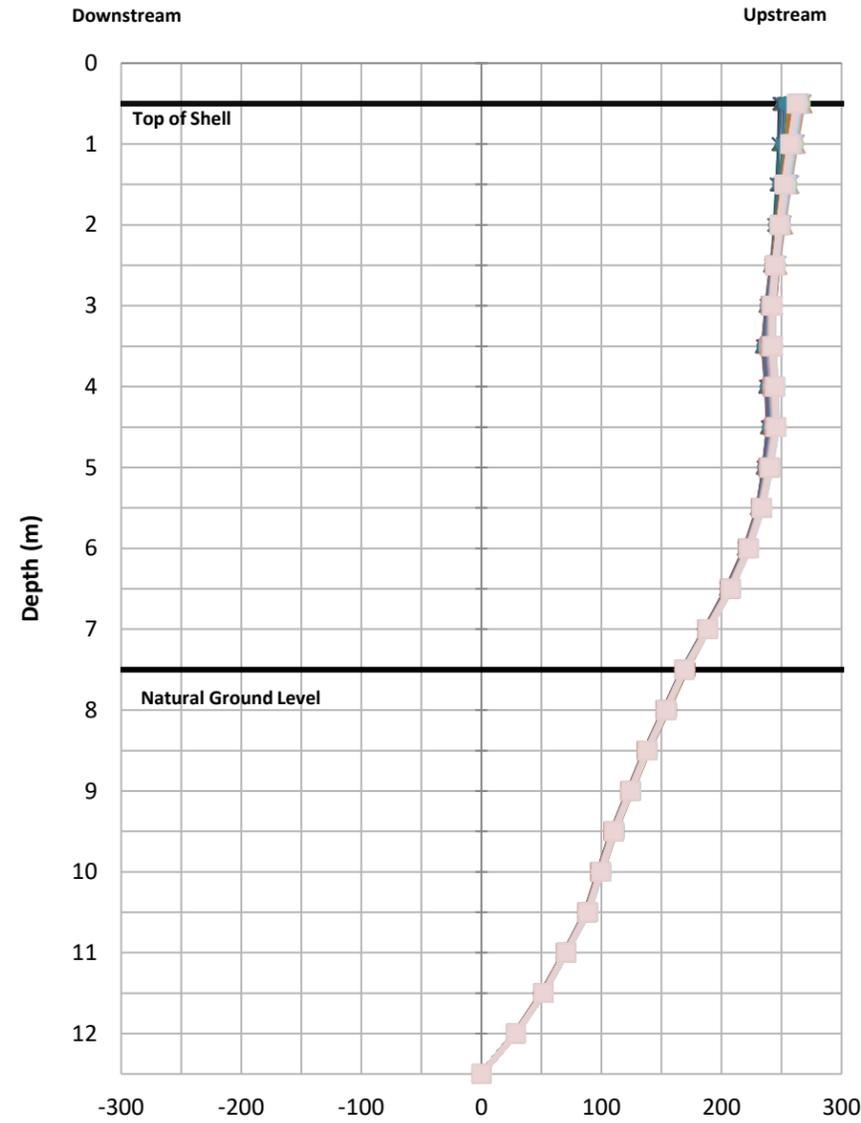
Inclinometer 070-3A Velocity Timeseries



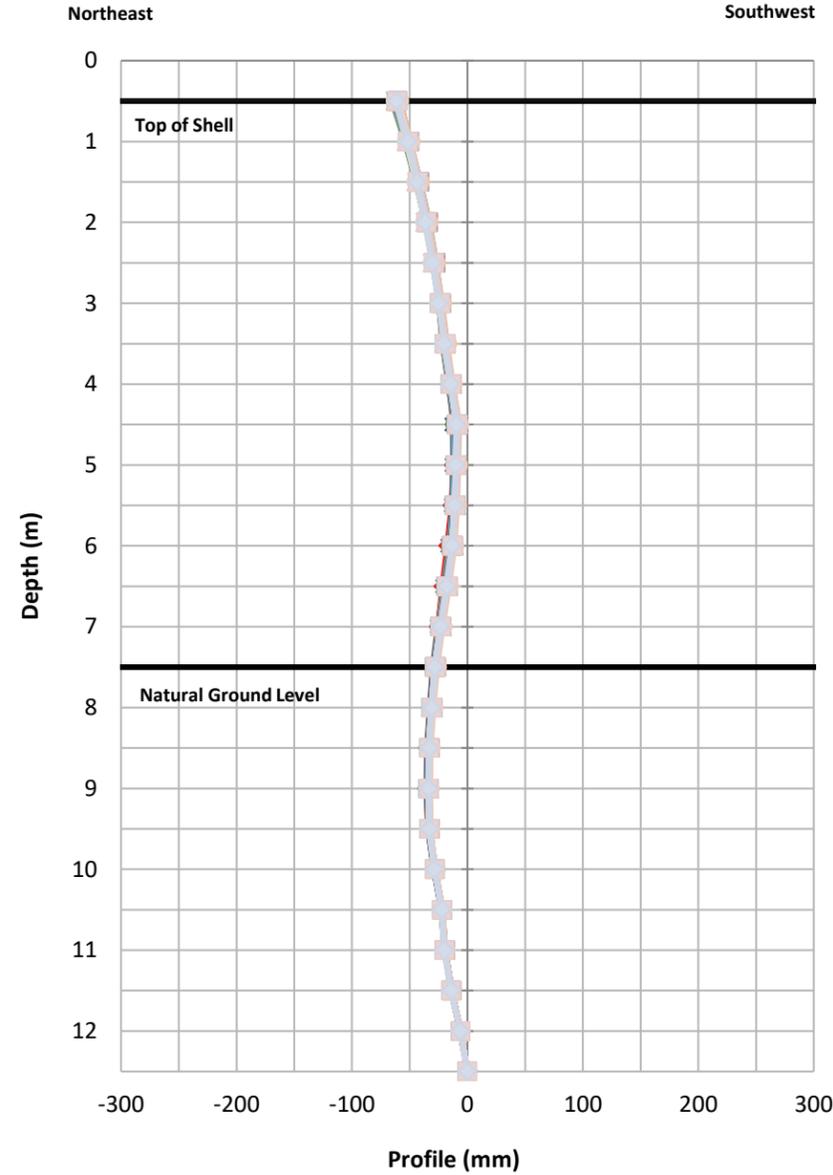
- Notes:**
1. Manufacture's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 070-3A Velocity Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.13 |

Profile Perpendicular to Centerline



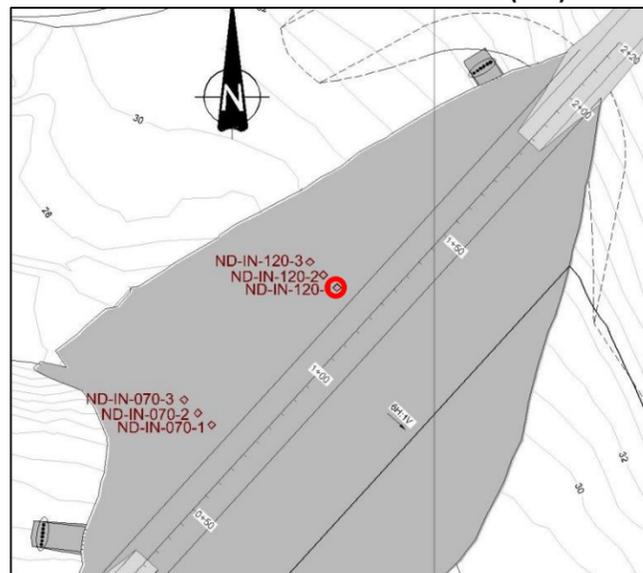
Profile Parallel to Centerline



LEGEND:

- ◆ Initial Reading (9/8/2012)
- ✕ 2013-08-28
- 2014-05-20
- 2014-08-08
- 2014-10-01
- ✕ 2015-03-21
- ✕ 2015-05-18
- 2015-07-09
- 2015-09-04
- ✕ 2015-11-25
- 2016-03-07
- 2016-07-02
- 2016-09-25
- 2016-12-24
- 2017-03-23
- 2017-05-20
- ▲ 2017-07-16
- 2017-09-14
- 2017-11-17
- 2018-01-16
- 2018-03-21
- 2018-05-19
- 2018-07-07
- 2018-09-29
- 2018-11-10
- 2019-01-28
- 2019-04-15
- 2019-06-12
- 2019-08-25
- 2019-11-24
- 2020-02-18
- ▲ 2020-06-06
- ✕ 2020-08-08
- ✕ 2020-10-20
- 2020-12-23
- 2021-02-20
- ✕ 2021-07-11
- 2021-09-04
- 2021-11-15
- ◆ 2022-01-18
- ▲ 2022-03-28
- ✕ 2022-05-16
- 2022-07-25
- 2022-09-18
- 2022-11-05
- ✕ 2023-05-13
- 2023-07-14
- 2023-09-24
- ◆ 2023-11-04
- ▲ 2024-01-07
- ✕ 2024-03-14
- 2024-05-04
- 2024-07-20
- 2024-09-07
- ▲ 2013-07-26
- ✕ 2013-10-01
- 2014-07-12
- ◆ 2014-09-01
- ▲ 2015-02-02
- 2015-04-16
- 2015-06-25
- ▲ 2015-08-02
- ▲ 2015-10-09
- 2015-12-30
- 2016-04-11
- 2016-08-14
- 2016-11-26
- ▲ 2017-02-23
- 2017-04-15
- 2017-06-25
- 2017-08-09
- 2017-10-14
- 2017-12-16
- 2018-02-16
- 2018-04-20
- 2018-06-08
- 2018-08-03
- 2018-10-21
- 2019-01-01
- 2019-02-16
- 2019-05-10
- 2019-07-27
- 2019-09-28
- 2020-01-20
- ✕ 2020-03-12
- ✕ 2020-07-12
- 2020-09-11
- 2020-11-19
- ◆ 2021-01-20
- ▲ 2021-06-09
- ✕ 2021-08-14
- 2021-10-03
- 2021-12-11
- 2022-02-10
- ✕ 2022-04-29
- 2022-06-24
- 2022-08-20
- ◆ 2022-10-08
- ▲ 2023-04-28
- ✕ 2023-06-16
- 2023-08-11
- 2023-10-10
- 2023-12-07
- ✕ 2024-02-12
- 2024-04-06
- 2024-07-11
- ◆ 2024-08-31

Profile (mm)



Notes:

1. Manufacturer's accuracy is +/- 0.25 mm per location
2. Survey data excluded from the charts is noted on Figure D.1



2024 TIA AGI

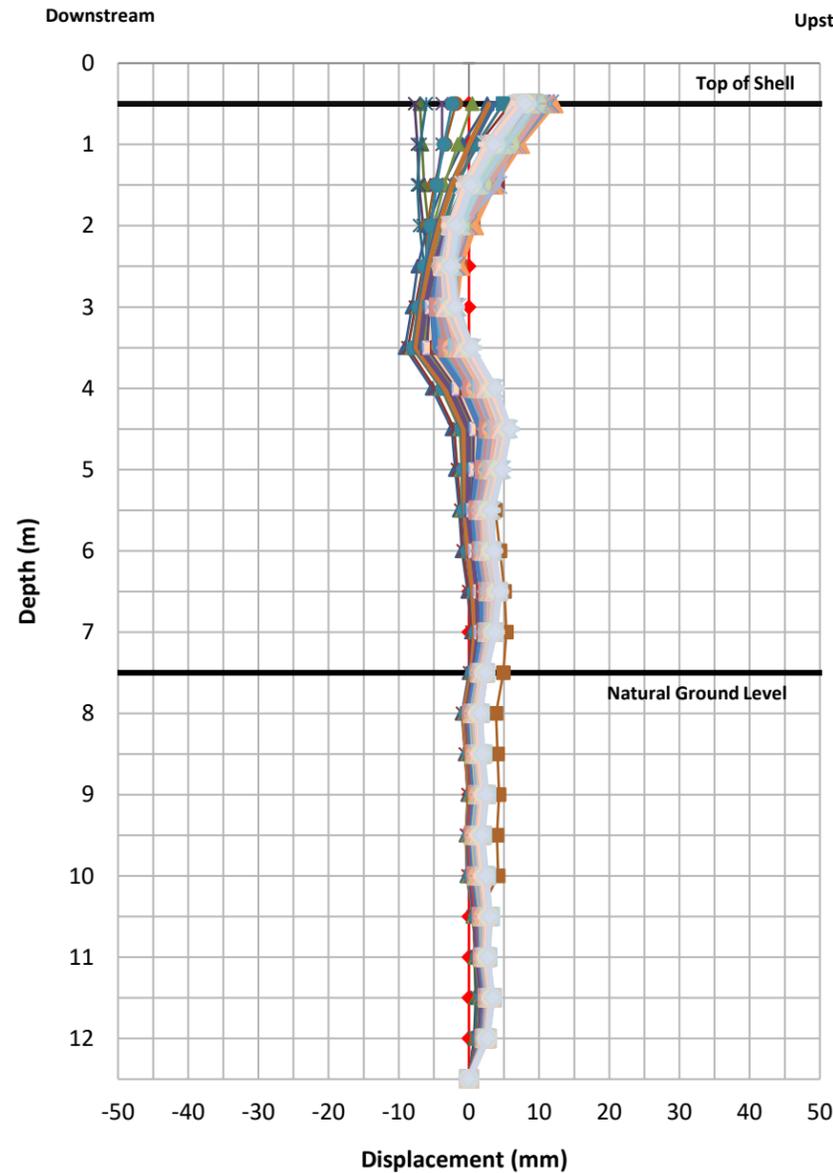
Inclinometer 120-1 Profiles

Job No: CAPR003066
 Filename: App_D_Inclinometers.pptx

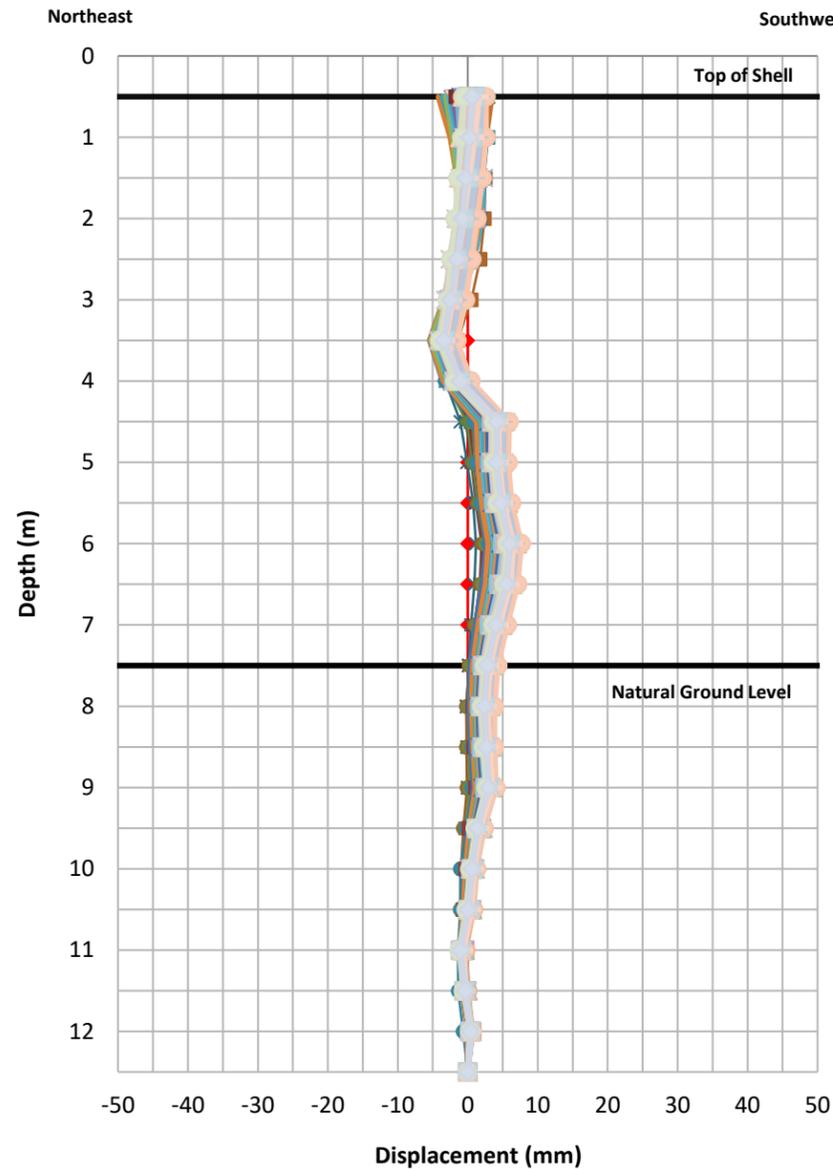
Hope Bay

Date: Oct. 2024
 Approved: PDL/AN
 Figure: D.14

Displacement Perpendicular to Centerline

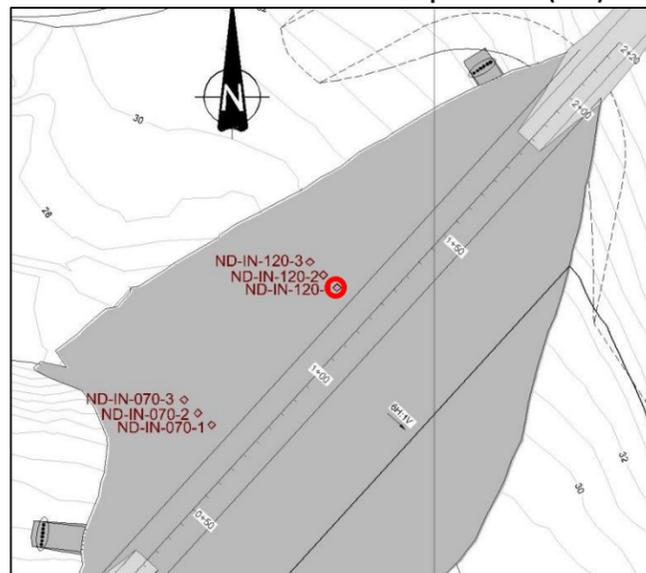


Displacement Parallel to Centerline



LEGEND:

- ◆ Initial Reading (9/8/2012)
- ✕ 2013-08-28
- 2014-05-20
- 2014-08-08
- 2014-10-01
- ✕ 2015-03-21
- ✕ 2015-05-18
- ✕ 2015-07-09
- 2015-09-04
- ✕ 2015-11-25
- 2016-03-07
- 2016-07-02
- 2016-09-25
- 2016-12-24
- 2017-03-23
- 2017-05-20
- ▲ 2017-07-16
- 2017-09-14
- 2017-11-17
- 2018-01-16
- 2018-03-21
- 2018-05-19
- 2018-07-07
- 2018-09-29
- 2018-11-10
- 2019-01-28
- 2019-04-15
- 2019-06-12
- 2019-08-25
- 2019-11-24
- 2020-02-18
- ▲ 2020-06-06
- ✕ 2020-08-08
- 2020-10-20
- 2020-12-23
- 2021-02-20
- ✕ 2021-07-11
- 2021-09-04
- 2021-11-15
- 2022-01-18
- ▲ 2022-03-28
- ✕ 2022-05-16
- ✕ 2022-07-25
- 2022-09-18
- 2022-11-05
- ✕ 2023-05-13
- 2023-07-14
- 2023-09-24
- 2023-11-04
- ▲ 2024-01-07
- ✕ 2024-03-14
- ✕ 2024-05-04
- 2024-07-20
- 2024-09-07
- ▲ 2013-07-26
- ✕ 2013-10-01
- ✕ 2014-07-12
- ▲ 2014-09-01
- ▲ 2015-02-02
- 2015-04-16
- 2015-06-25
- ▲ 2015-08-02
- ▲ 2015-10-09
- 2015-12-30
- 2016-04-11
- 2016-08-14
- 2016-11-26
- ▲ 2017-02-23
- 2017-04-15
- 2017-06-25
- 2017-08-09
- 2017-10-14
- 2017-12-16
- 2018-02-16
- 2018-04-20
- 2018-06-08
- 2018-08-03
- 2018-10-21
- 2019-01-01
- 2019-02-16
- 2019-05-10
- 2019-07-27
- 2019-09-28
- 2020-01-20
- ✕ 2020-03-12
- ✕ 2020-07-12
- 2020-09-11
- 2020-11-19
- 2021-01-20
- ▲ 2021-06-09
- ✕ 2021-08-14
- ✕ 2021-10-03
- 2021-12-11
- 2022-02-10
- ✕ 2022-04-29
- 2022-06-24
- 2022-08-20
- 2022-10-08
- ▲ 2023-04-28
- ✕ 2023-06-16
- ✕ 2023-08-11
- 2023-10-10
- 2023-12-07
- ✕ 2024-02-12
- 2024-04-06
- 2024-07-11
- 2024-08-31

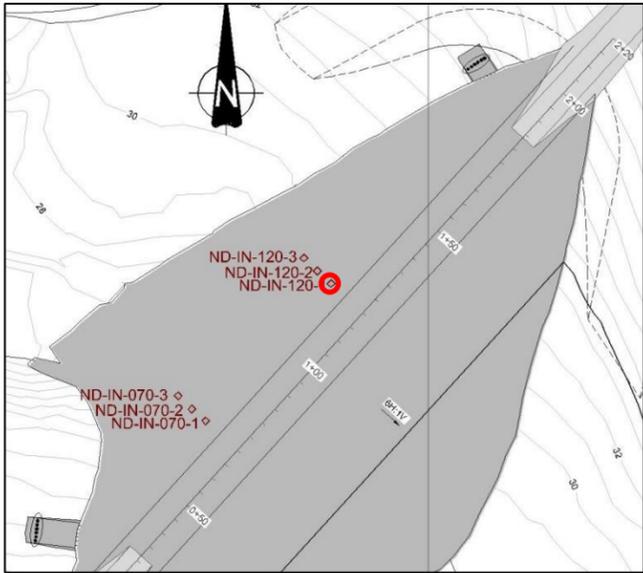
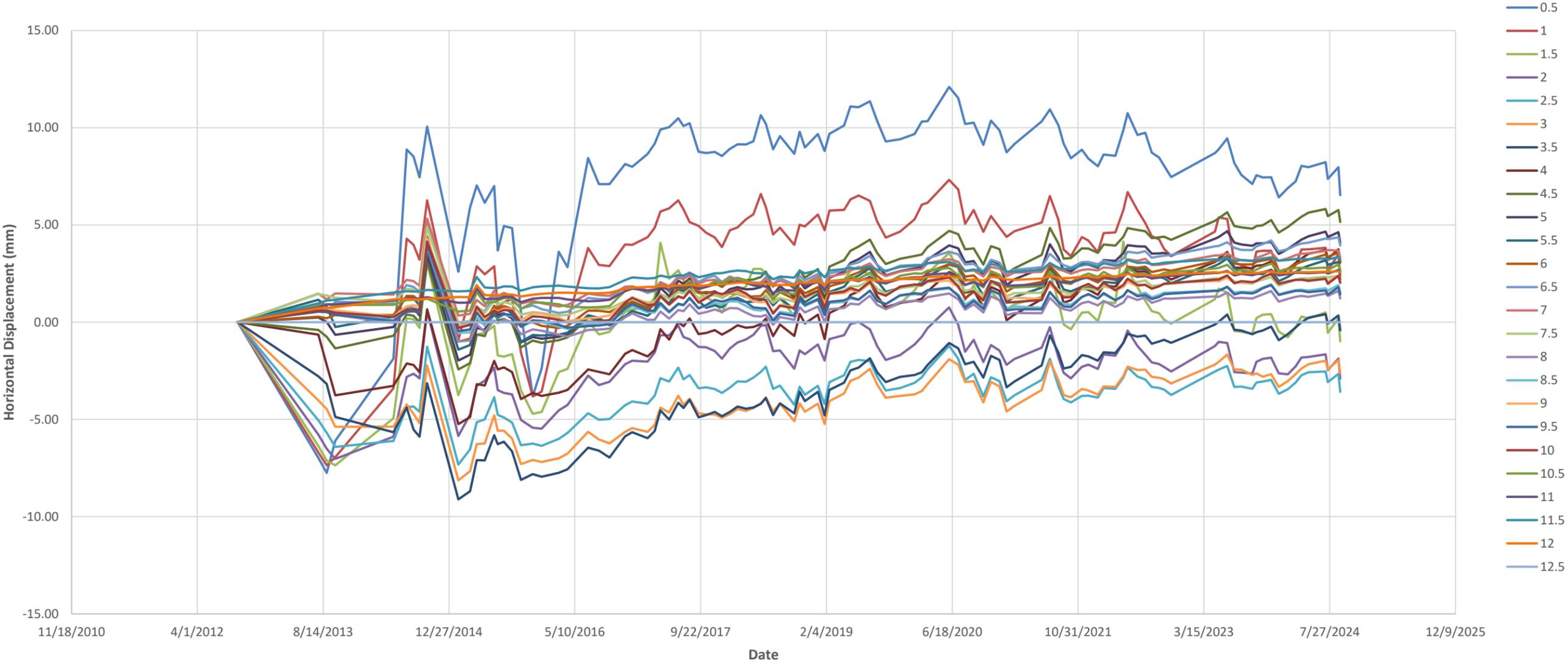


- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-1 Displacements | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.15 |

Inclinometer 120-1A Timeseries

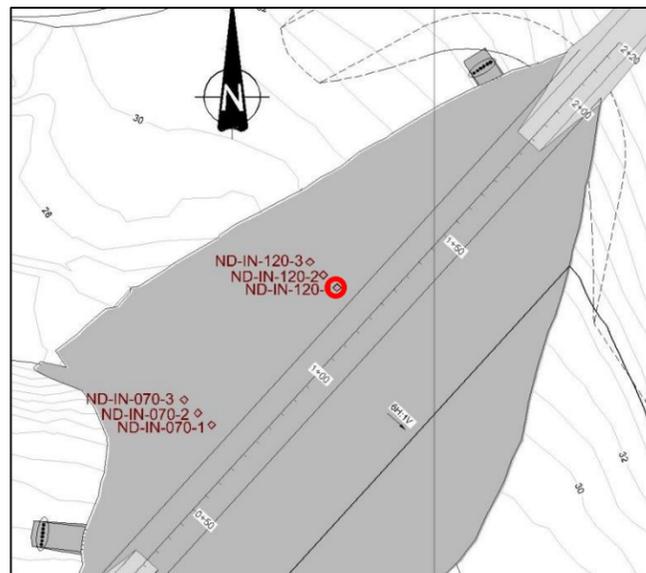
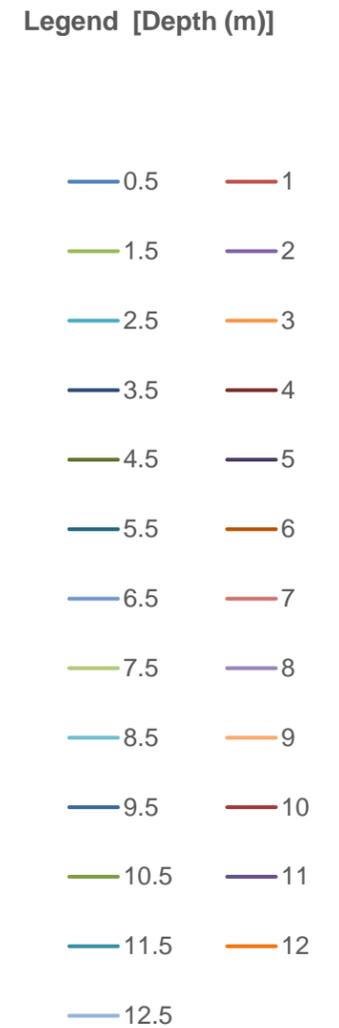
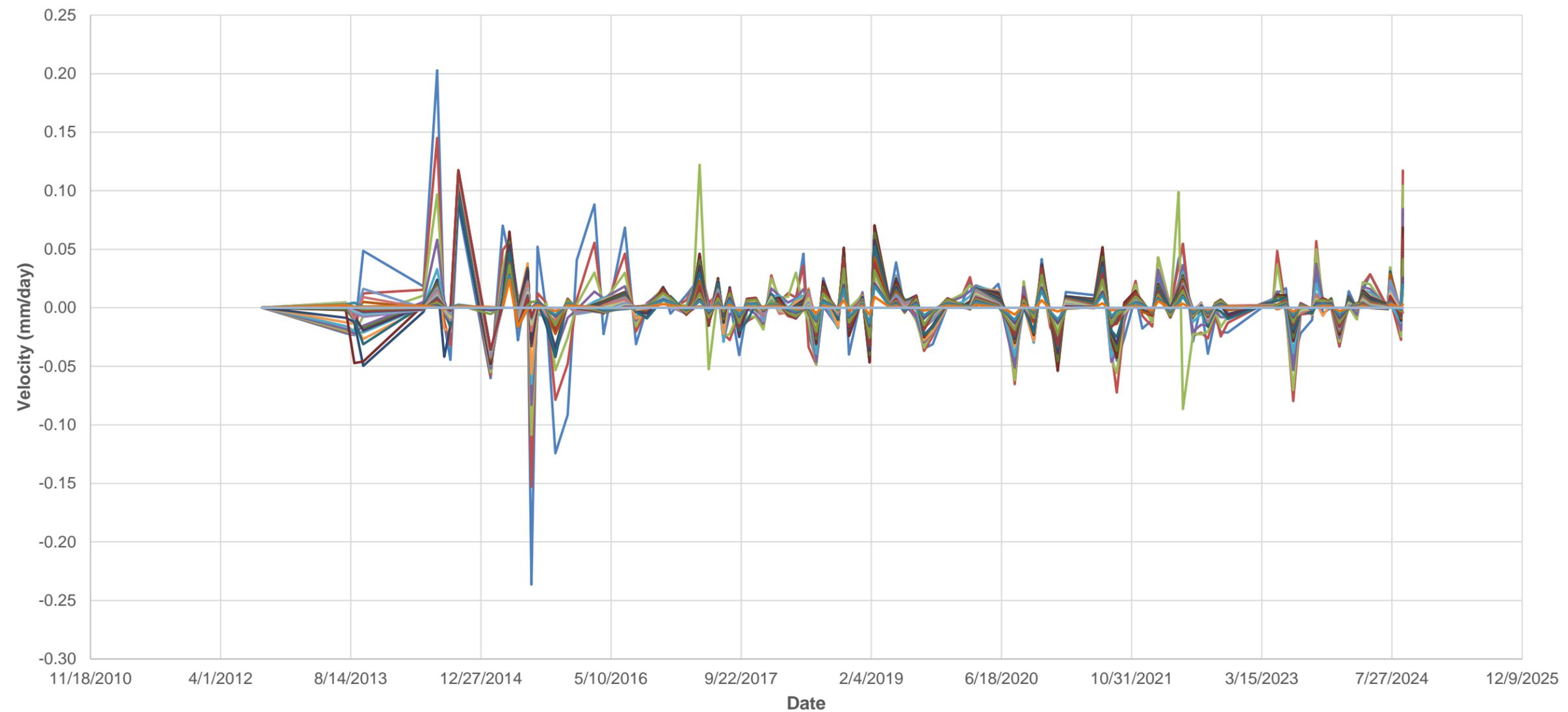
Legend [Depth (m)]



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-1A Displacement Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.16 |

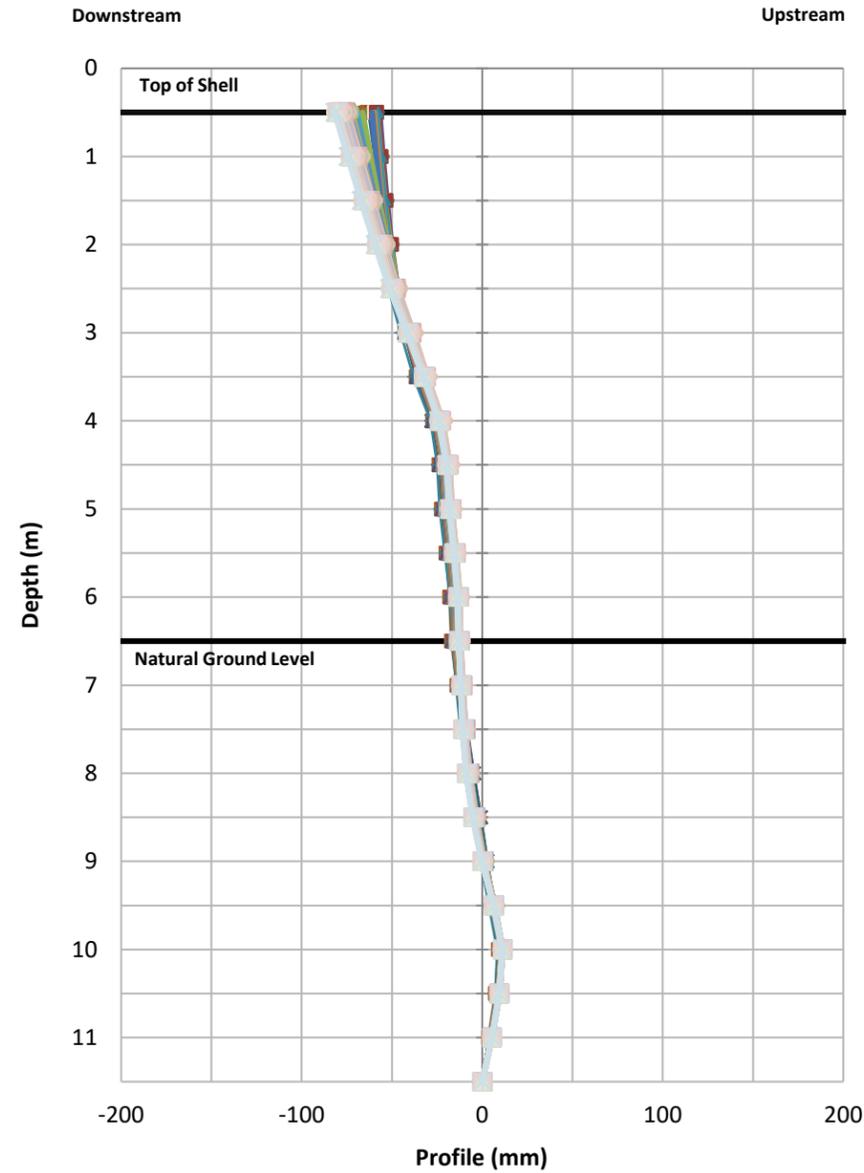
Inclinometer 120-1A Velocity Timeseries



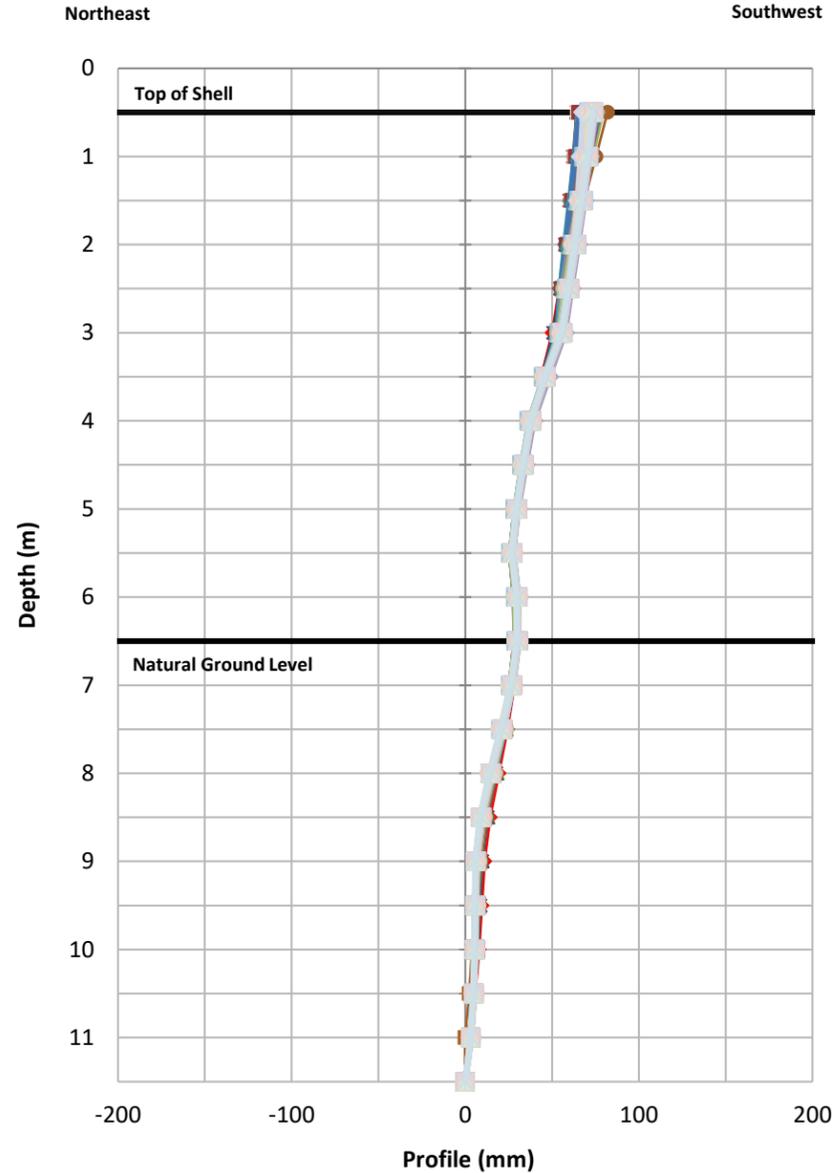
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-1A Velocity Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.17 |

Profile Perpendicular to Centerline

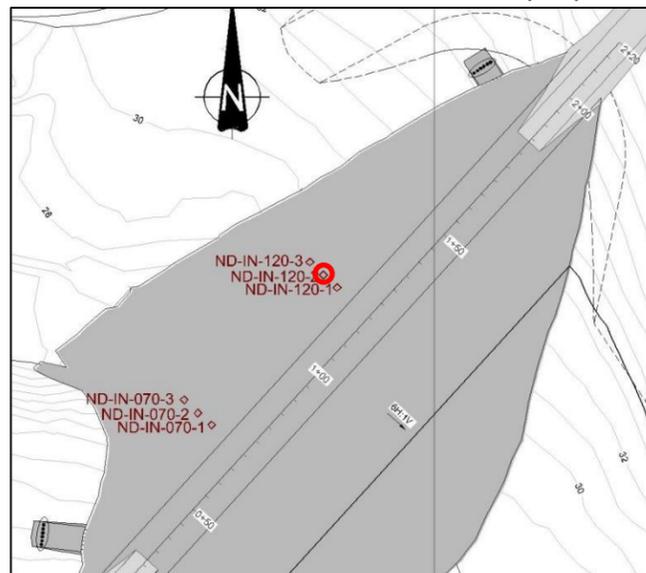


Profile Parallel to Centerline



LEGEND:

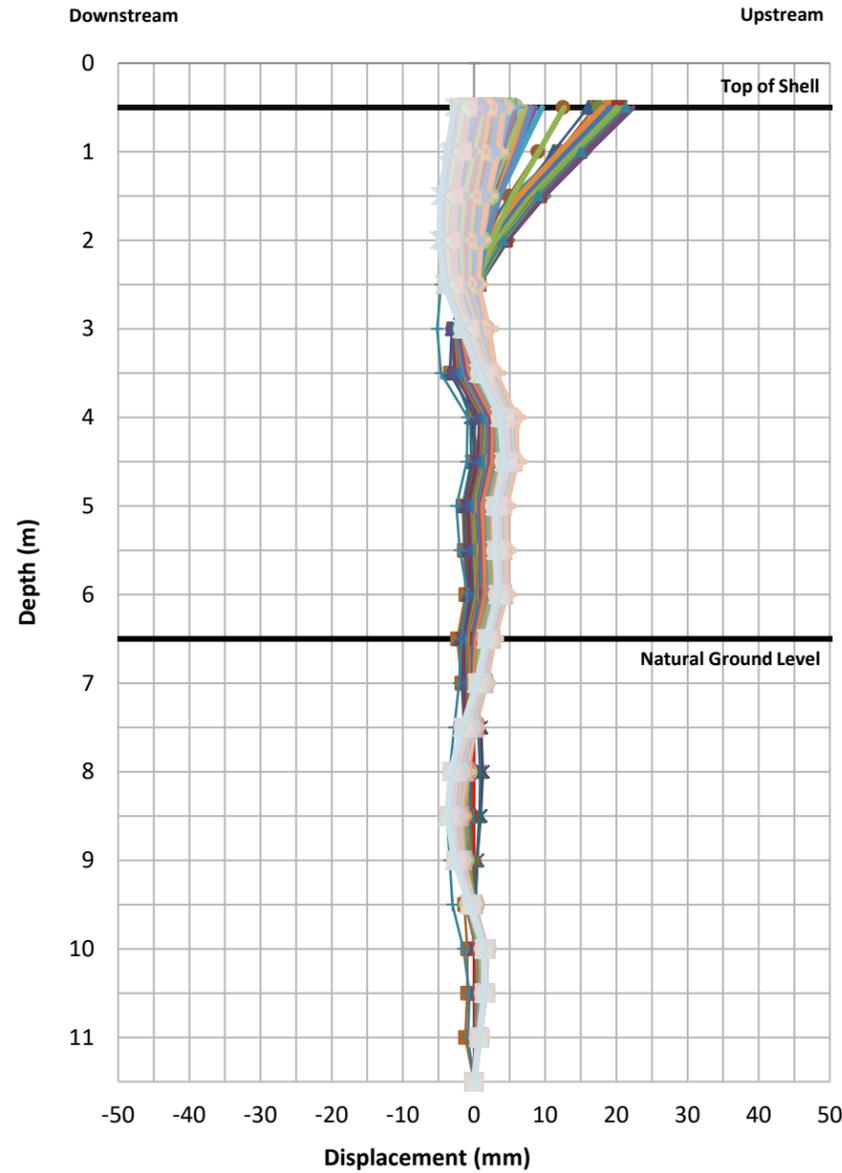
- ◆ Initial Reading (9/8/2012)
- ✕ 2013-08-28
- 2014-05-20
- 2014-08-08
- 2014-10-01
- ✕ 2015-03-21
- ✕ 2015-04-20
- ◆ 2015-06-26
- ▲ 2015-08-02
- 2015-10-09
- 2015-12-30
- 2016-03-07
- 2016-07-02
- 2016-09-25
- 2016-11-26
- 2017-03-23
- 2017-05-20
- ▲ 2017-07-16
- 2017-09-14
- 2017-11-17
- 2018-01-16
- 2018-03-21
- 2018-05-19
- 2018-07-07
- 2018-09-30
- 2018-11-10
- 2019-01-25
- 2019-05-10
- 2019-07-27
- 2019-09-28
- 2019-11-24
- 2020-02-18
- 2020-06-06
- 2020-08-08
- ◆ 2020-10-20
- ▲ 2020-12-24
- ✕ 2021-02-20
- 2021-07-11
- 2021-09-04
- 2021-11-15
- ✕ 2022-01-18
- 2022-03-28
- 2022-05-16
- ◆ 2022-07-25
- ▲ 2022-09-18
- ✕ 2022-11-05
- 2023-05-13
- 2023-07-14
- 2023-09-24
- ✕ 2023-11-04
- 2024-01-07
- 2024-03-14
- 2024-05-04
- ▲ 2024-07-20
- ✕ 2024-09-07
- ▲ 2013-07-26
- ✕ 2013-10-01
- 2014-07-12
- ◆ 2014-09-01
- ▲ 2015-02-02
- 2015-04-16
- 2015-05-19
- 2015-07-09
- ✕ 2015-09-04
- 2015-11-25
- ◆ 2016-02-08
- 2016-04-11
- 2016-08-14
- 2016-12-24
- ▲ 2017-02-23
- 2017-04-15
- 2017-06-25
- 2017-08-09
- 2017-10-14
- 2017-12-16
- 2018-02-17
- 2018-04-20
- 2018-06-08
- 2018-08-03
- 2018-10-21
- 2019-01-01
- 2019-04-15
- 2019-06-12
- 2019-08-25
- 2019-10-26
- 2020-01-20
- 2020-03-12
- ✕ 2020-07-12
- 2020-09-11
- 2020-11-19
- ✕ 2021-01-20
- 2021-06-09
- 2021-08-14
- ◆ 2021-10-03
- ▲ 2021-12-11
- ✕ 2022-02-10
- 2022-04-29
- 2022-06-24
- 2022-08-20
- ✕ 2022-10-08
- 2023-04-28
- 2023-06-16
- ◆ 2023-08-11
- ▲ 2023-10-10
- ✕ 2023-12-07
- 2024-02-11
- 2024-04-06
- 2024-07-11
- ✕ 2024-08-31



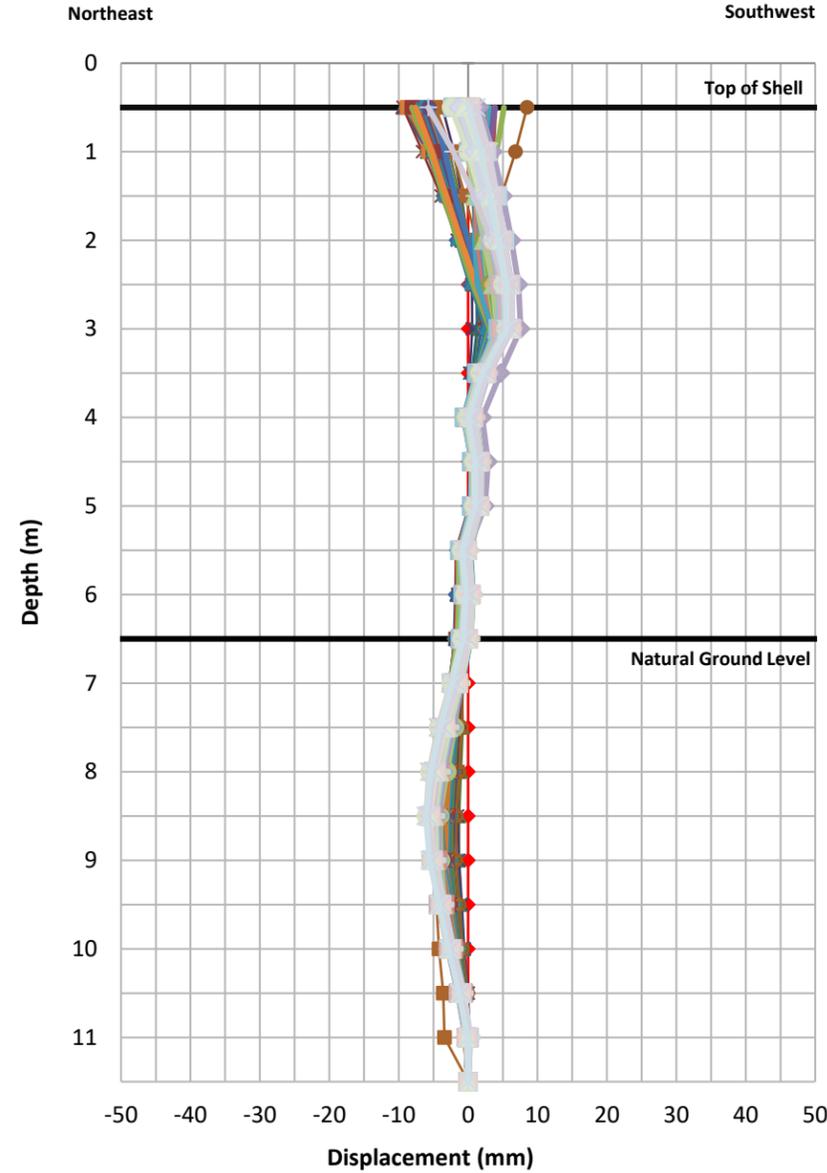
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|------------------------------------|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-2 Profiles | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.18 |

Displacement Perpendicular to Centerline

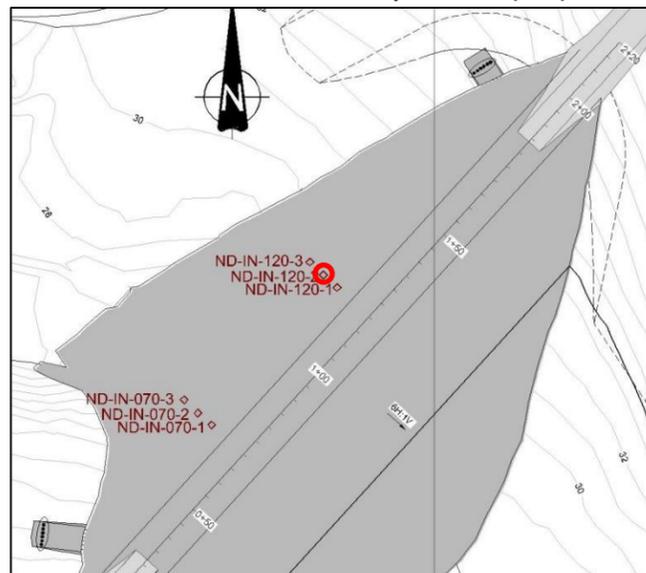


Displacement Parallel to Centerline



LEGEND:

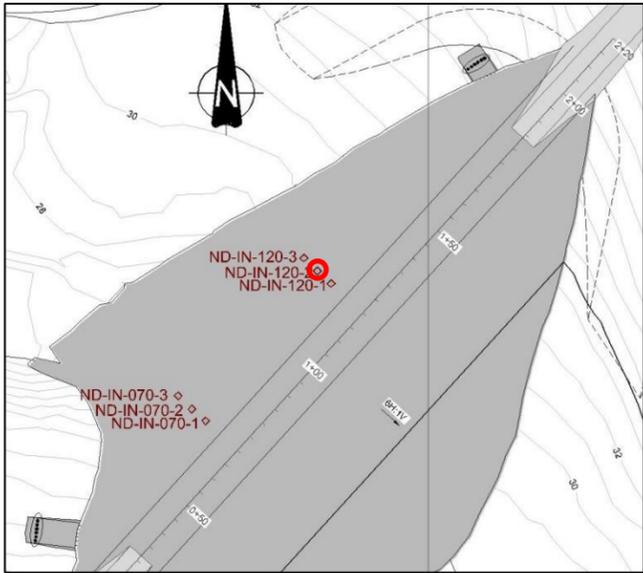
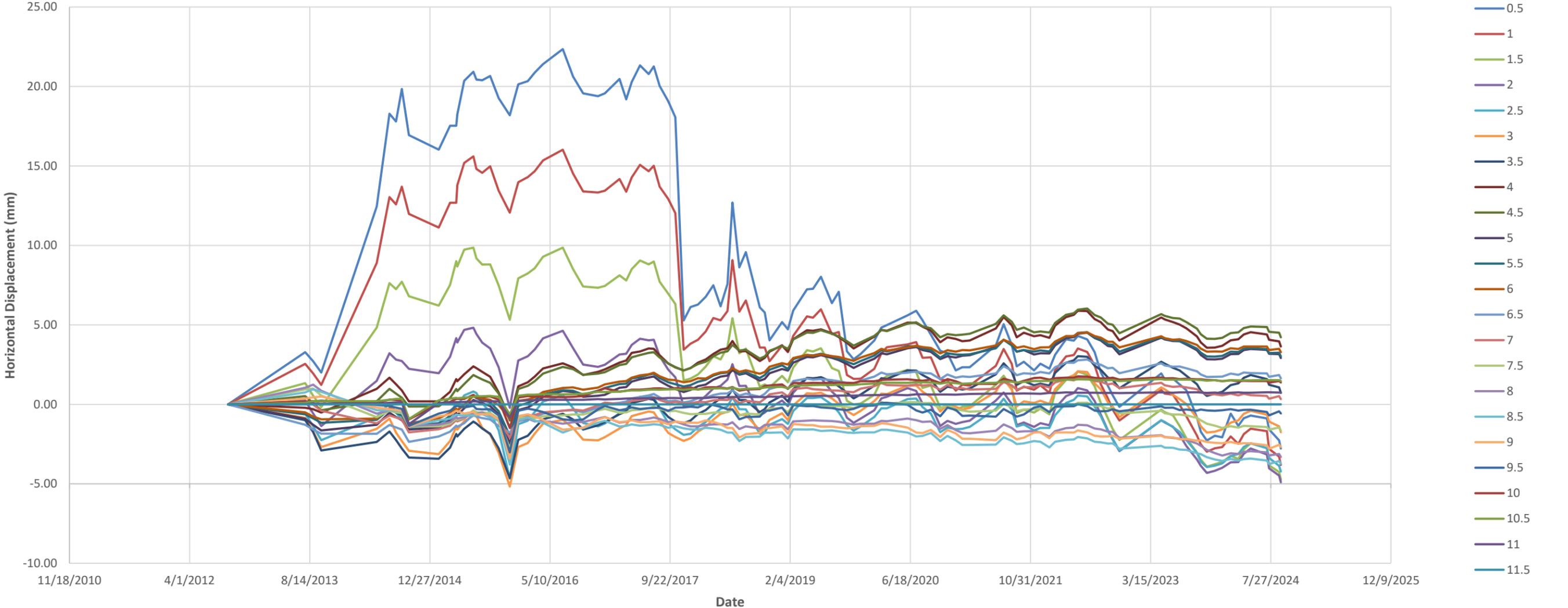
- ◆ Initial Reading (9/8/2012)
- ✕ 2013-08-28
- 2014-05-20
- 2014-08-08
- 2014-10-01
- ✕ 2015-03-21
- ✕ 2015-04-20
- ◆ 2015-06-26
- ▲ 2015-08-02
- 2015-10-09
- 2015-12-30
- 2016-03-07
- 2016-07-02
- 2016-09-25
- 2016-11-26
- 2017-03-23
- 2017-05-20
- ▲ 2017-07-16
- 2017-09-14
- 2017-11-17
- 2018-01-16
- 2018-03-21
- 2018-05-19
- 2018-07-07
- 2018-09-30
- 2018-11-10
- 2019-01-25
- 2019-05-10
- 2019-07-27
- 2019-09-28
- 2019-11-24
- 2020-02-18
- 2020-06-06
- 2020-08-08
- 2020-10-20
- ▲ 2020-12-24
- ✕ 2021-02-20
- 2021-07-11
- 2021-09-04
- 2021-11-15
- ✕ 2022-01-18
- 2022-03-28
- 2022-05-16
- 2022-07-25
- ▲ 2022-09-18
- ✕ 2022-11-05
- 2023-05-13
- 2023-07-14
- 2023-09-24
- ✕ 2023-11-04
- 2024-01-07
- 2024-03-14
- 2024-05-04
- ▲ 2024-07-20
- ✕ 2024-09-07
- ▲ 2013-07-26
- ✕ 2013-10-01
- 2014-07-12
- ◆ 2014-09-01
- ▲ 2015-02-02
- 2015-04-16
- 2015-05-19
- 2015-07-09
- ✕ 2015-09-04
- 2015-11-25
- 2016-02-08
- 2016-04-11
- 2016-08-14
- 2016-12-24
- ▲ 2017-02-23
- 2017-04-15
- 2017-06-25
- 2017-08-09
- 2017-10-14
- 2017-12-16
- 2018-02-17
- 2018-04-20
- 2018-06-08
- 2018-08-03
- 2018-10-21
- 2019-01-01
- 2019-04-15
- 2019-06-12
- 2019-08-25
- 2019-10-26
- 2020-01-20
- 2020-03-12
- ✕ 2020-07-12
- 2020-09-11
- 2020-11-19
- ✕ 2021-01-20
- 2021-06-09
- 2021-08-14
- 2021-10-03
- ▲ 2021-12-11
- ✕ 2022-02-10
- 2022-04-29
- 2022-06-24
- 2022-08-20
- ✕ 2022-10-08
- 2023-04-28
- 2023-06-16
- 2023-08-11
- ▲ 2023-10-10
- ✕ 2023-12-07
- 2024-02-11
- 2024-04-06
- 2024-07-11
- ✕ 2024-08-31



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-2 Displacements | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.19 |

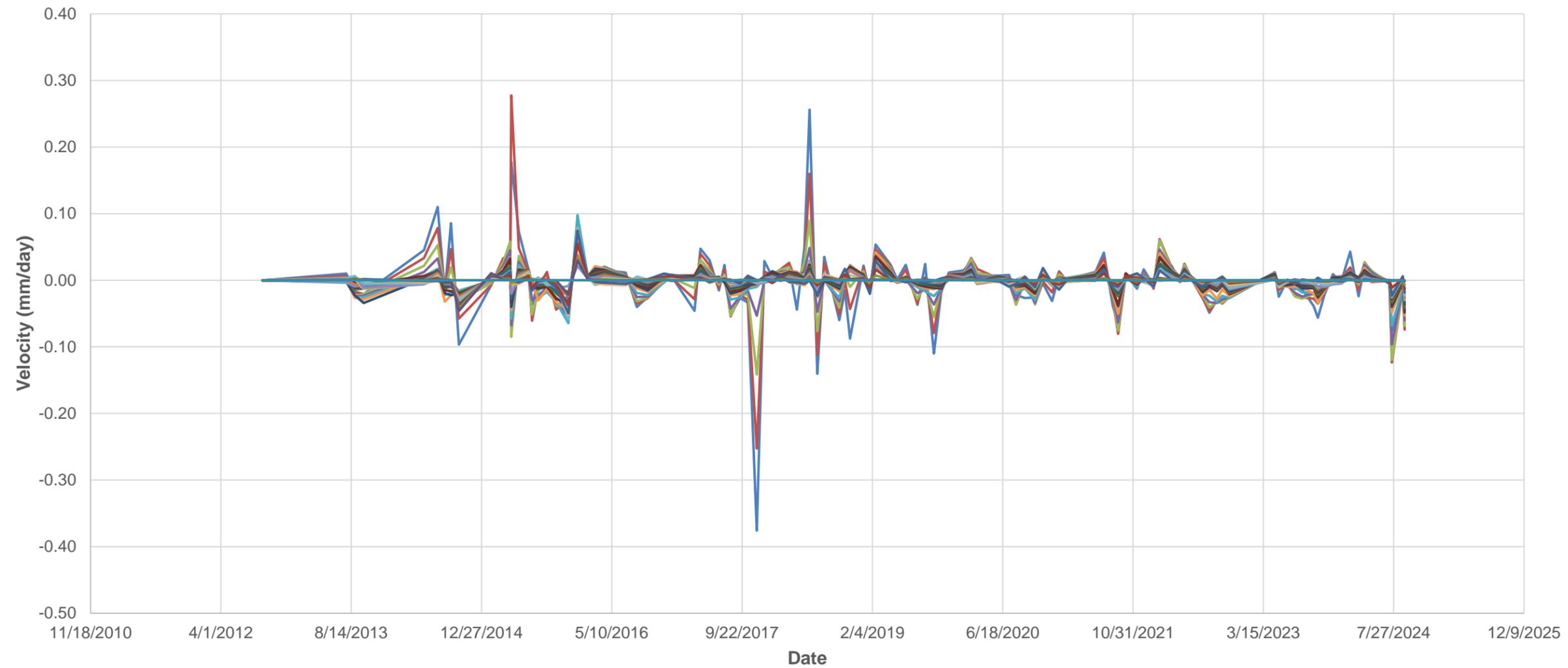
Inclinometer 120-2A Timeseries



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

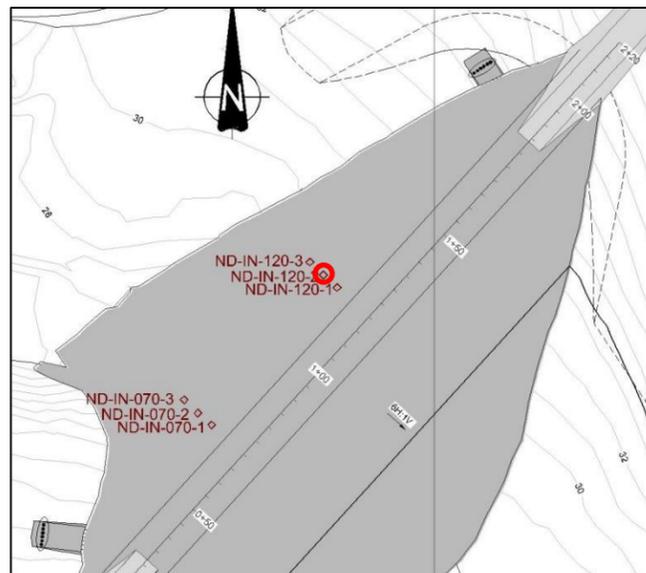
| | | | | |
|--|-----------------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-2A Displacement Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.20 |

Inclinometer 120-2A Velocity Timeseries



Legend [Depth (m)]

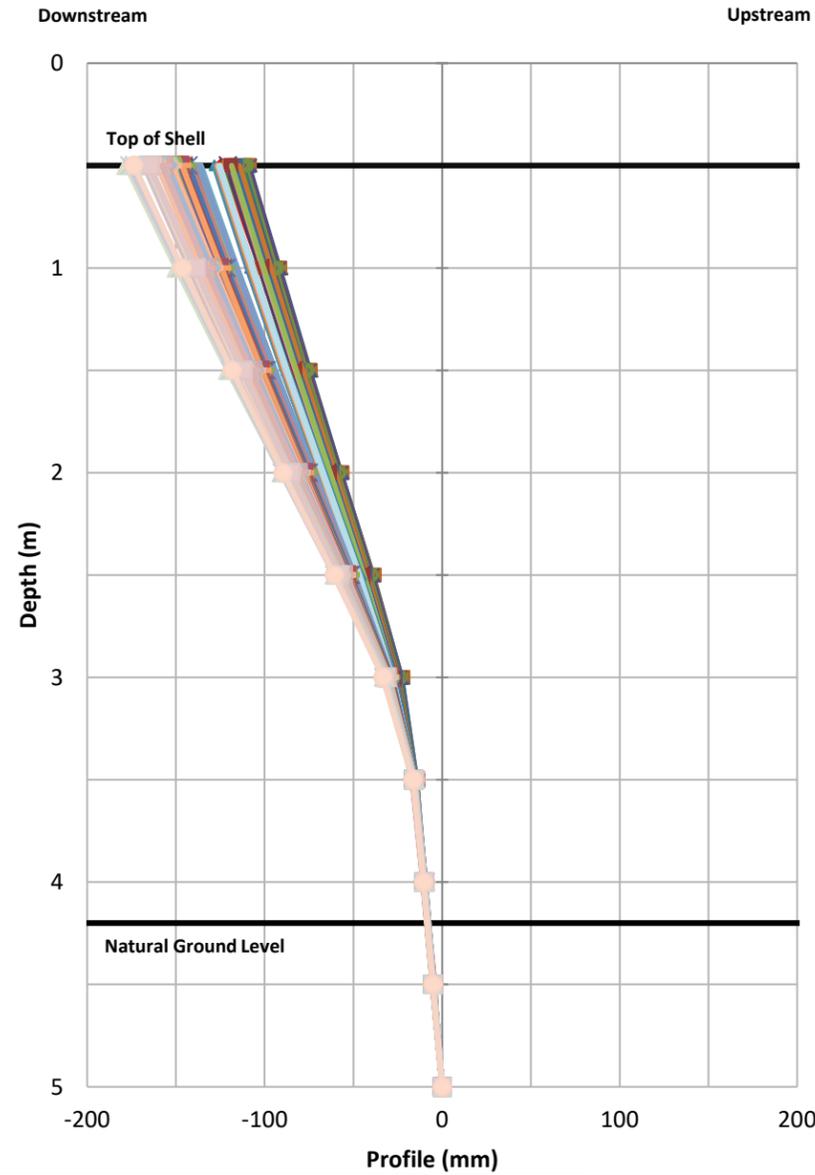
- 0.5
- 1
- 1.5
- 2
- 2.5
- 3
- 3.5
- 4
- 4.5
- 5
- 5.5
- 6
- 6.5
- 7
- 7.5
- 8
- 8.5
- 9
- 9.5
- 10
- 10.5
- 11
- 11.5



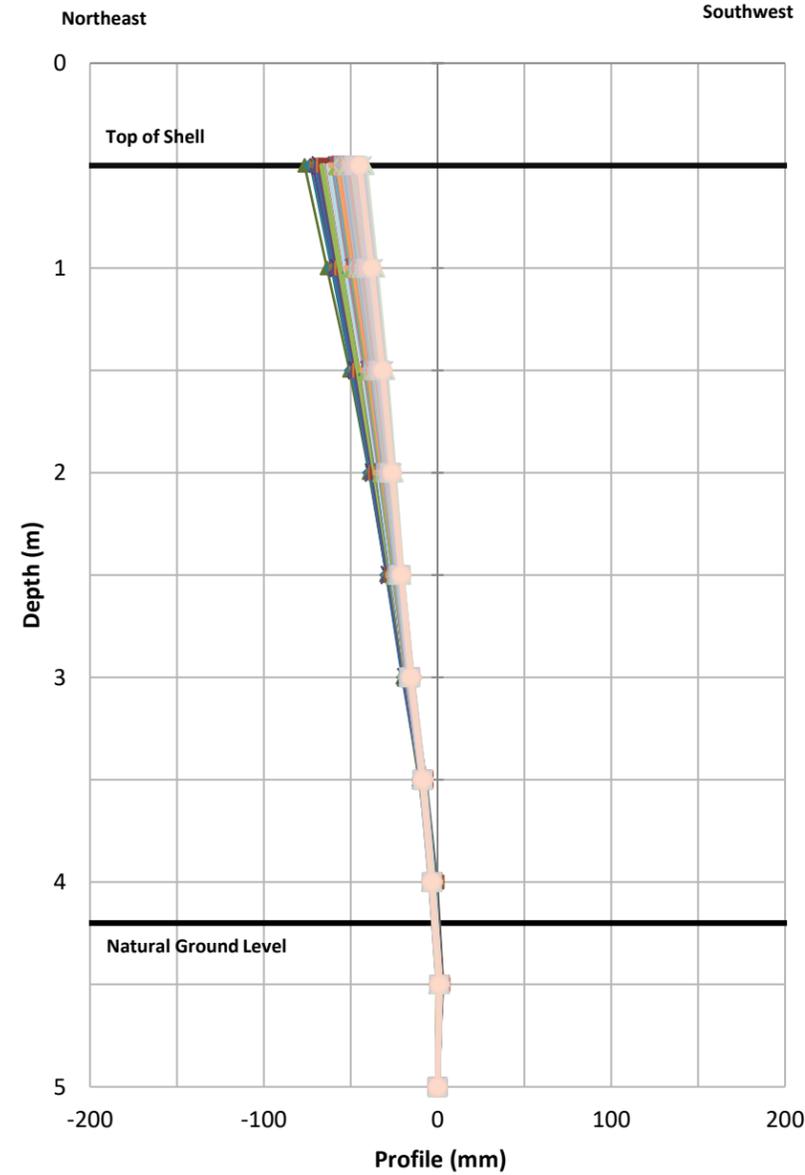
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-2A Velocity Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.21 |

Profile Perpendicular to Centerline

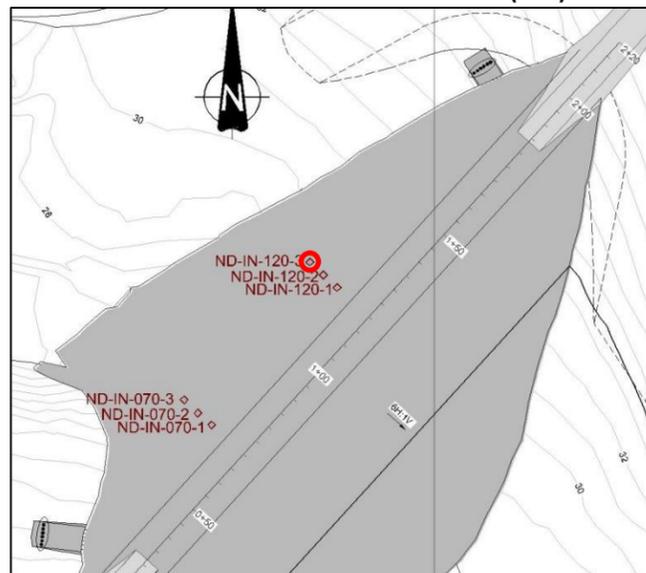


Profile Parallel to Centerline



LEGEND:

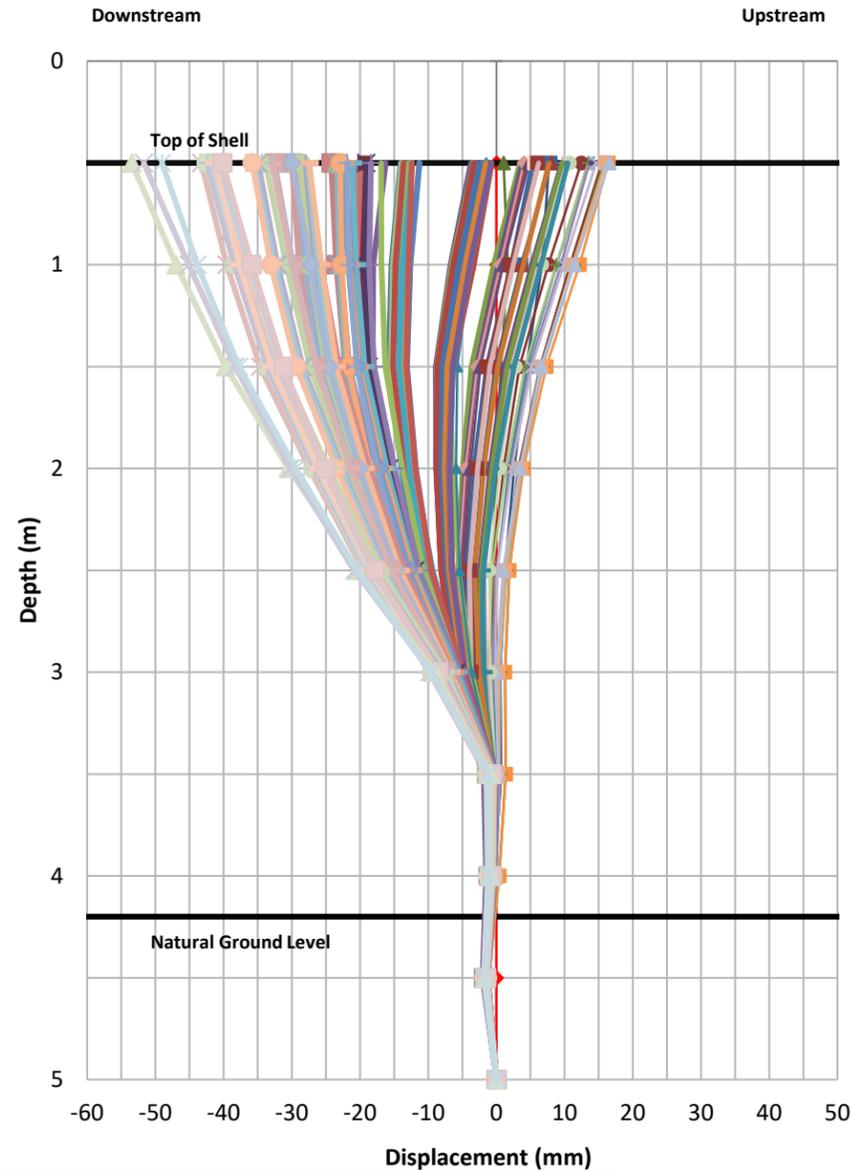
- ◆ Initial Reading (9/8/2012)
- ◆ 2013-07-26
- ◆ 2014-05-20
- ◆ 2014-06-18
- ◆ 2014-07-06
- ◆ 2014-07-12
- ◆ 2014-08-08
- ◆ 2014-09-01
- ◆ 2014-10-01
- ◆ 2015-02-02
- ◆ 2015-03-21
- ◆ 2015-04-20
- ◆ 2015-05-20
- ◆ 2015-06-26
- ◆ 2015-07-09
- ◆ 2015-08-02
- ◆ 2015-08-28
- ◆ 2015-09-04
- ◆ 2015-10-09
- ◆ 2015-11-25
- ◆ 2015-12-30
- ◆ 2016-02-08
- ◆ 2016-03-07
- ◆ 2016-04-11
- ◆ 2016-07-02
- ◆ 2016-08-14
- ◆ 2016-09-25
- ◆ 2016-11-26
- ◆ 2017-01-03
- ◆ 2017-01-26
- ◆ 2017-02-23
- ◆ 2017-03-23
- ◆ 2017-04-15
- ◆ 2017-05-20
- ◆ 2017-06-25
- ◆ 2017-07-16
- ◆ 2017-08-09
- ◆ 2017-09-14
- ◆ 2017-10-14
- ◆ 2017-11-17
- ◆ 2017-12-16
- ◆ 2018-01-17
- ◆ 2018-02-17
- ◆ 2018-03-21
- ◆ 2018-04-20
- ◆ 2018-05-19
- ◆ 2018-06-08
- ◆ 2018-07-07
- ◆ 2018-08-03
- ◆ 2018-09-29
- ◆ 2018-10-21
- ◆ 2018-11-10
- ◆ 2019-01-01
- ◆ 2019-01-25
- ◆ 2019-04-15
- ◆ 2019-05-10
- ◆ 2019-06-12
- ◆ 2019-07-27
- ◆ 2019-08-25
- ◆ 2019-09-28
- ◆ 2019-10-26
- ◆ 2019-11-24
- ◆ 2019-12-11
- ◆ 2020-01-20
- ◆ 2020-02-18
- ◆ 2020-03-12
- ◆ 2020-06-06
- ◆ 2020-07-12
- ◆ 2020-08-08
- ◆ 2020-09-11
- ◆ 2020-10-20
- ◆ 2020-11-19
- ◆ 2020-12-23
- ◆ 2021-01-20
- ◆ 2021-02-20
- ◆ 2021-06-09
- ◆ 2021-07-11
- ◆ 2021-08-14
- ◆ 2021-09-04
- ◆ 2021-10-03
- ◆ 2021-11-15
- ◆ 2021-12-11
- ◆ 2022-01-18
- ◆ 2022-02-10
- ◆ 2022-03-28
- ◆ 2022-04-29
- ◆ 2022-05-16
- ◆ 2022-06-24
- ◆ 2022-07-25
- ◆ 2022-08-20
- ◆ 2022-09-18
- ◆ 2022-10-09
- ◆ 2022-11-06
- ◆ 2023-04-28
- ◆ 2023-05-13
- ◆ 2023-06-16
- ◆ 2023-07-14
- ◆ 2023-08-11
- ◆ 2023-09-24
- ◆ 2023-10-10
- ◆ 2023-11-04
- ◆ 2023-12-07
- ◆ 2024-01-07
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- ◆ 2024-07-20
- ◆ 2024-08-31
- ◆ 2024-09-07



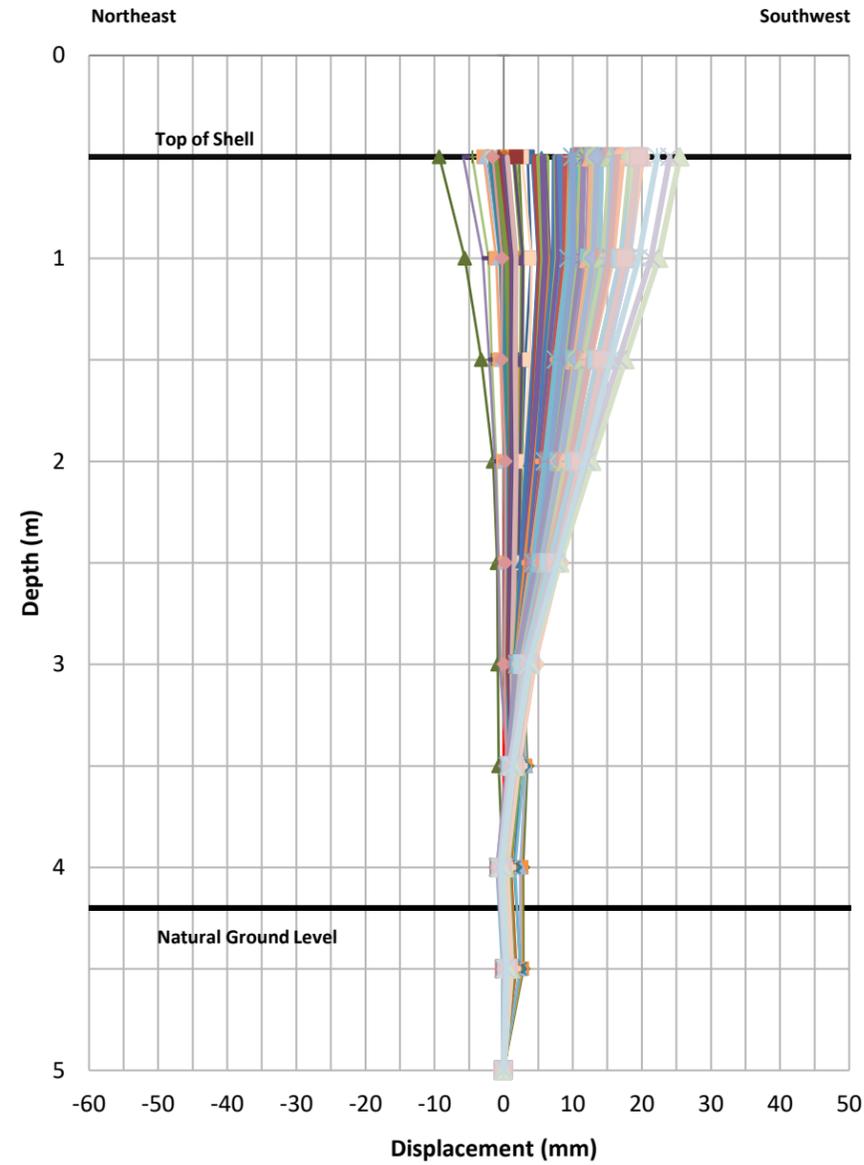
- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|------------------------------------|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-3 Profiles | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.22 |

Displacement Perpendicular to Centerline

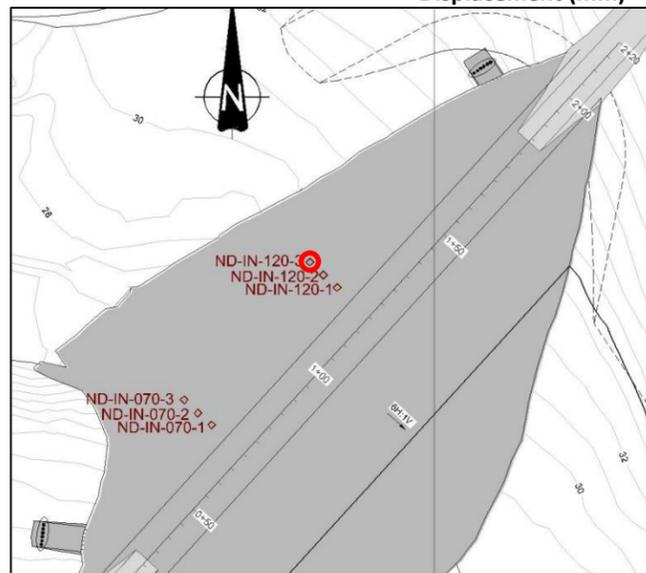


Displacement Parallel to Centerline



LEGEND:

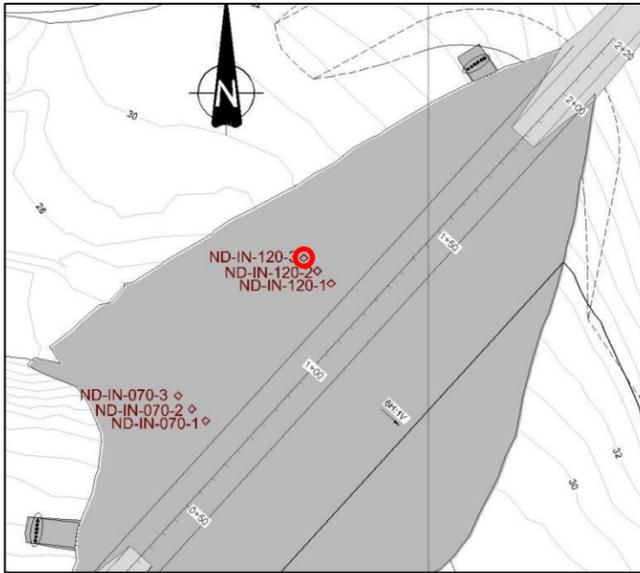
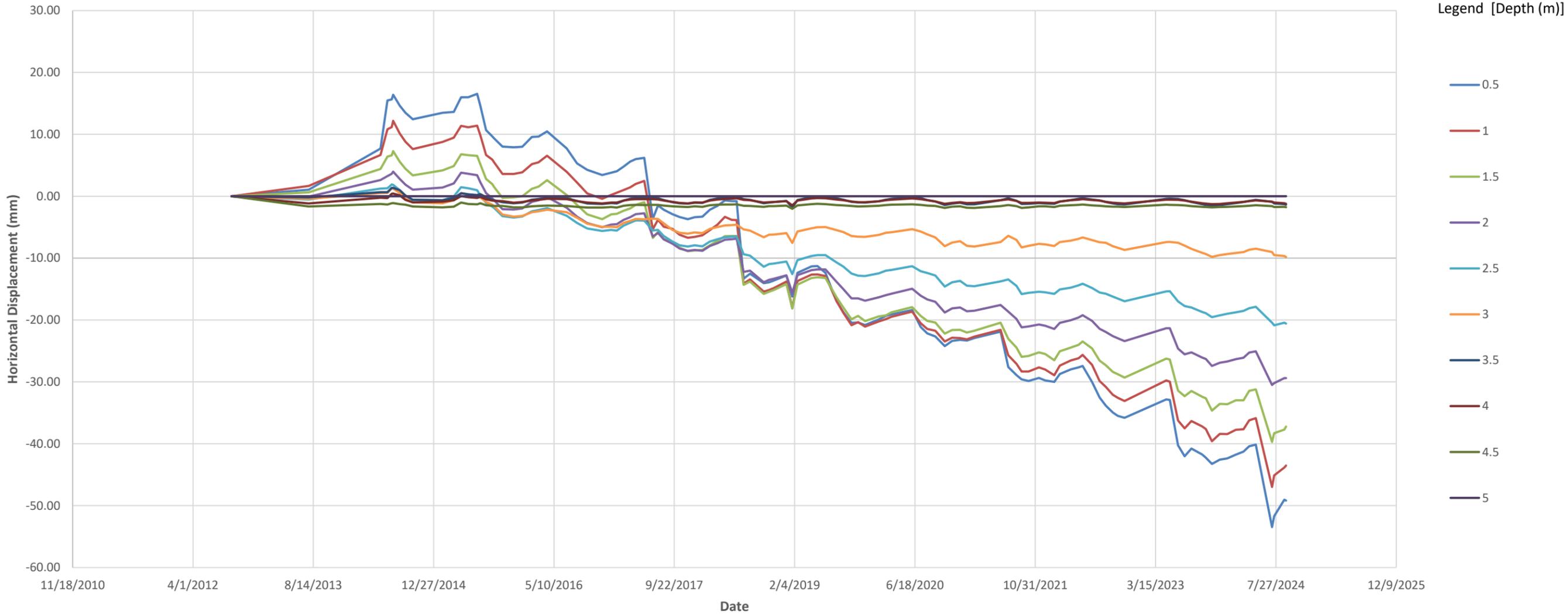
- ◆ Initial Reading (9/8/2012)
- ◆ 2013-07-26
- ◆ 2014-05-20
- ◆ 2014-06-18
- ◆ 2014-07-06
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- ◆ 2014-08-08
- ◆ 2014-09-01
- ◆ 2014-10-01
- ◆ 2015-02-02
- ◆ 2015-03-21
- ◆ 2015-04-20
- ◆ 2015-05-20
- ◆ 2015-06-26
- ◆ 2015-07-09
- ◆ 2015-08-02
- ◆ 2015-08-28
- ◆ 2015-09-04
- ◆ 2015-10-09
- ◆ 2015-11-25
- ◆ 2015-12-30
- ◆ 2016-02-08
- ◆ 2016-03-07
- ◆ 2016-04-11
- ◆ 2016-07-02
- ◆ 2016-08-14
- ◆ 2016-09-25
- ◆ 2016-11-26
- ◆ 2017-01-03
- ◆ 2017-01-26
- ◆ 2017-02-23
- ◆ 2017-03-23
- ◆ 2017-04-15
- ◆ 2017-05-20
- ◆ 2017-06-25
- ◆ 2017-07-16
- ◆ 2017-08-09
- ◆ 2017-09-14
- ◆ 2017-10-14
- ◆ 2017-11-17
- ◆ 2017-12-16
- ◆ 2018-01-17
- ◆ 2018-02-17
- ◆ 2018-03-21
- ◆ 2018-04-20
- ◆ 2018-05-19
- ◆ 2018-06-08
- ◆ 2018-07-07
- ◆ 2018-08-03
- ◆ 2018-09-29
- ◆ 2018-10-21
- ◆ 2018-11-10
- ◆ 2019-01-01
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- ◆ 2019-07-27
- ◆ 2019-08-25
- ◆ 2019-09-28
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- ◆ 2022-03-28
- ◆ 2022-04-29
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- ◆ 2023-10-10
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- ◆ 2024-05-04
- ◆ 2024-07-11
- ◆ 2024-07-20
- ◆ 2024-08-31
- ◆ 2024-09-07



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|-----------------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-3 Displacements | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.23 |

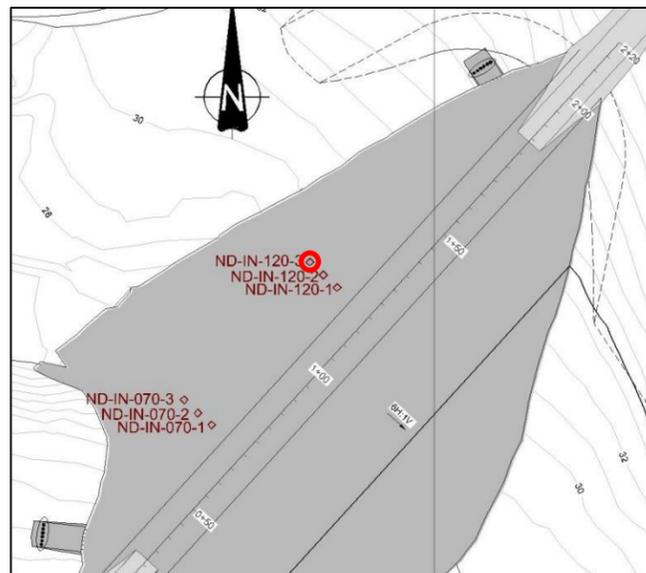
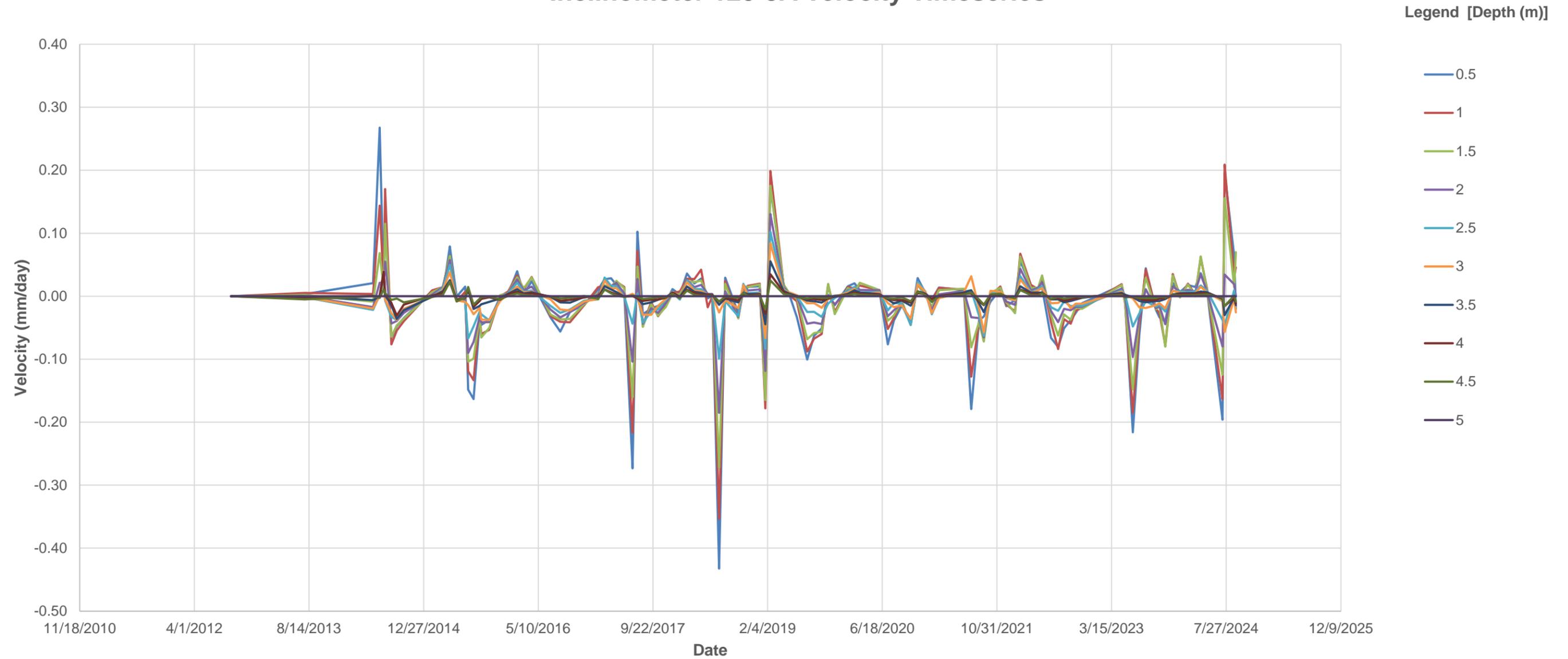
Inclinometer 120-3A Timeseries



- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

| | | | | |
|--|----------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-3A Displacement Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.24 |

Inclinometer 120-3A Velocity Timeseries

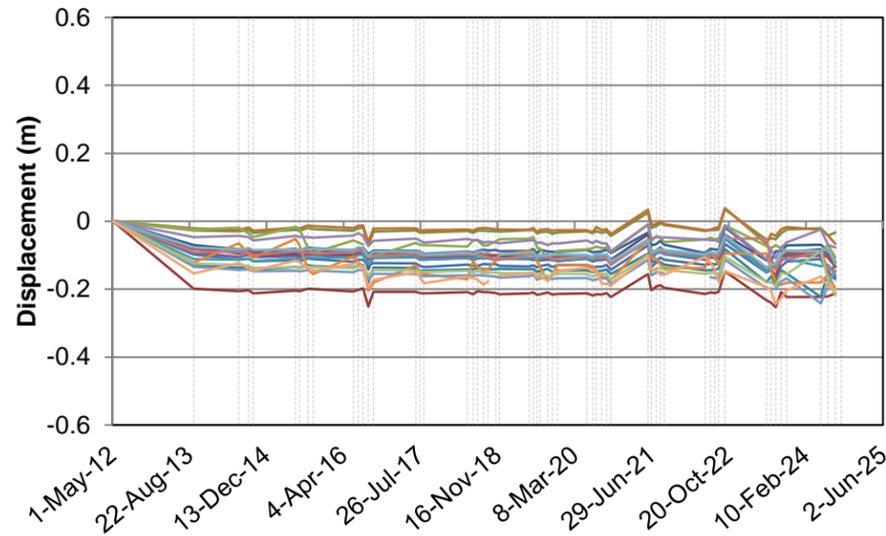


- Notes:**
1. Manufacturer's accuracy is +/- 0.25 mm per location
 2. Survey data excluded from the charts is noted on Figure D.1

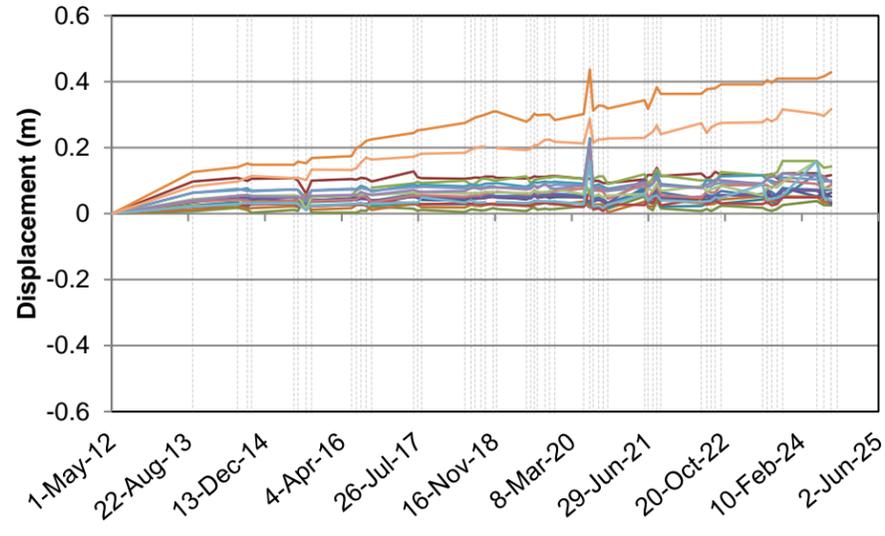
| | | | | |
|--|-----------------|---|------------------|---------------------|
| | | 2024 TIA AGI | | |
| | | Inclinometer 120-3A Velocity Time Series | | |
| Job No: CAPR003066 Filename: App_D_Inclinometers.pptx | Hope Bay | Date: Oct. 2024 | Approved: PDL/AN | Figure: D.25 |

Appendix E Survey Monitoring

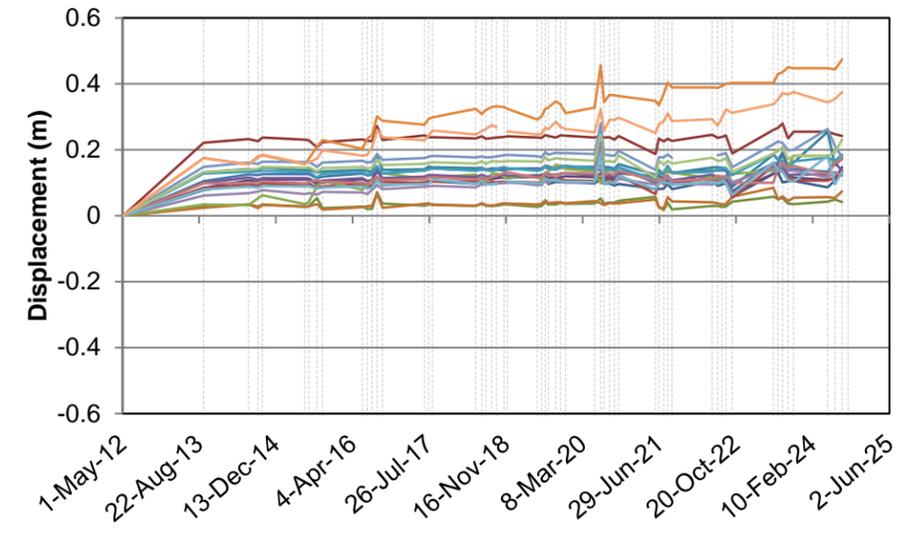
Vertical Displacement



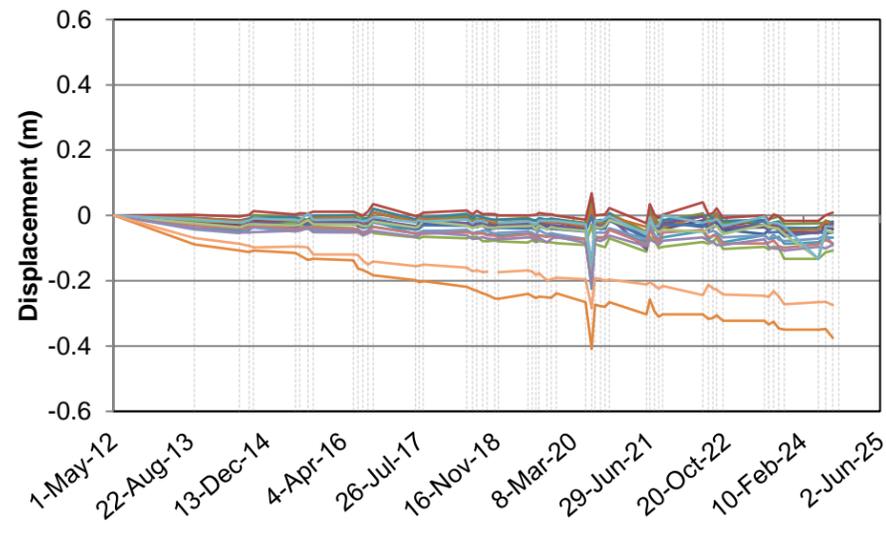
Horizontal Displacement



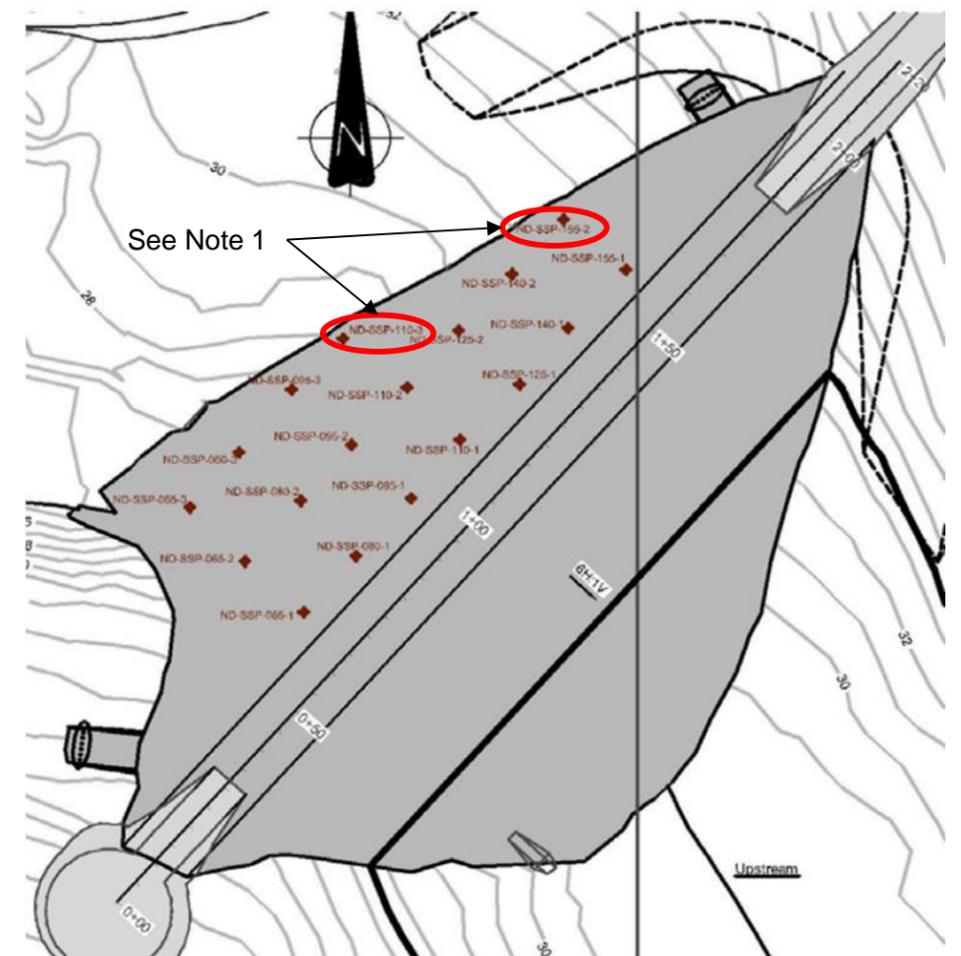
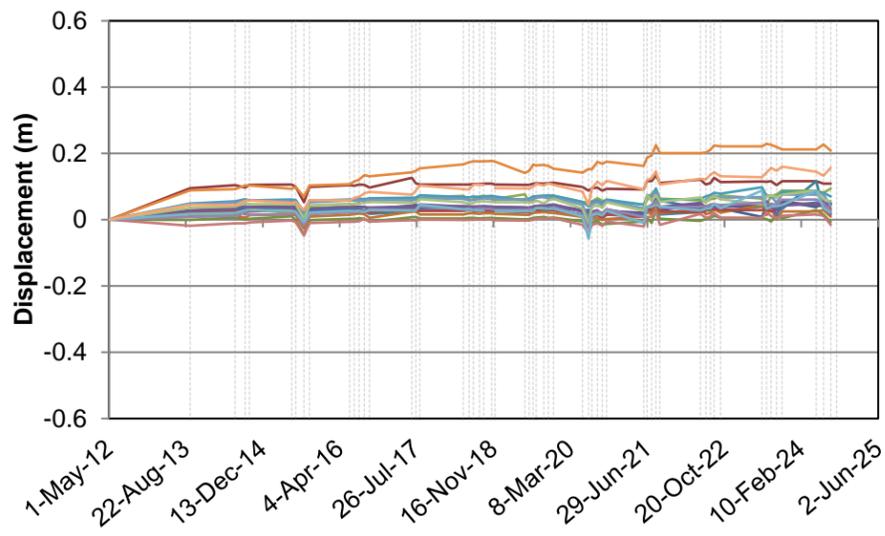
Total Displacement



Change in Easting



Change in Northing



LEGEND:

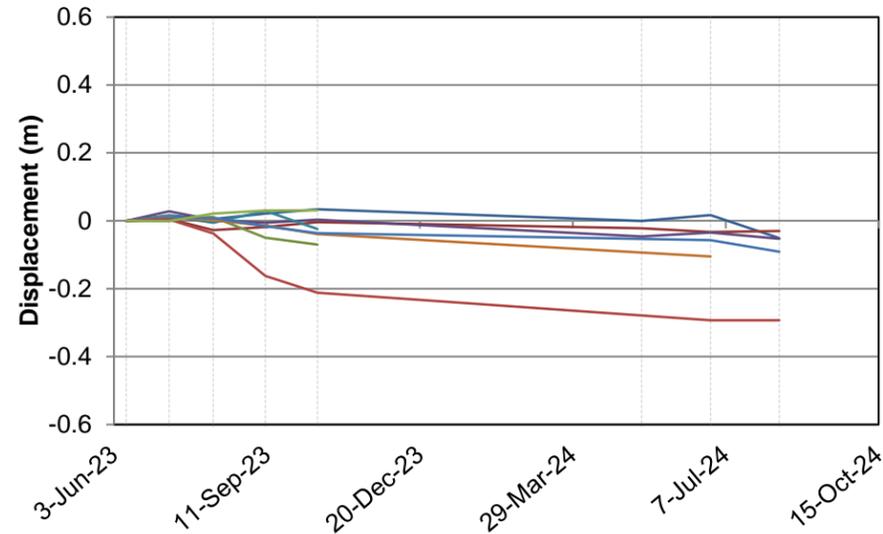
| | |
|----------------|----------------|
| — ND-SSP-065-1 | — ND-SSP-065-2 |
| — ND-SSP-065-3 | — ND-SSP-080-1 |
| — ND-SSP-080-2 | — ND-SSP-080-3 |
| — ND-SSP-095-1 | — ND-SSP-095-2 |
| — ND-SSP-095-3 | — ND-SSP-110-1 |
| — ND-SSP-110-2 | — ND-SSP-110-3 |
| — ND-SSP-125-1 | — ND-SSP-125-2 |
| — ND-SSP-140-1 | — ND-SSP-140-2 |
| — ND-SSP-155-1 | — ND-SSP-155-2 |
| | — Survey Date |

NOTES:

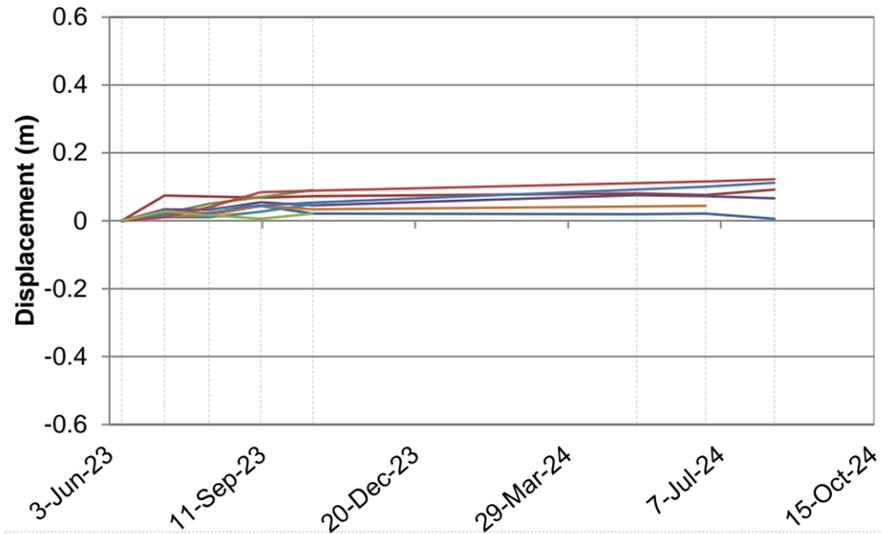
1. The anomalous increased horizontal displacement is observed at ND-SSP-110-3 and ND-SSP-155-2 near the downstream toe.
2. Offset of 15 cm was applied to readings that proceed August, 2024. This is mostly likely due to the new permanent survey station, as noted by Agnico Eagle.
3. Erroneous data were eliminated.

| | | | | |
|---|------------------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Surface Survey Monitoring Points Displacement Timeseries | | |
| Job No: CAPR003066 Filename: App_E_SurveyMonitoring.pptx | DORIS TIA | Date: Oct. 2024 | Approved: PDL/AN | Figure: E.1 |

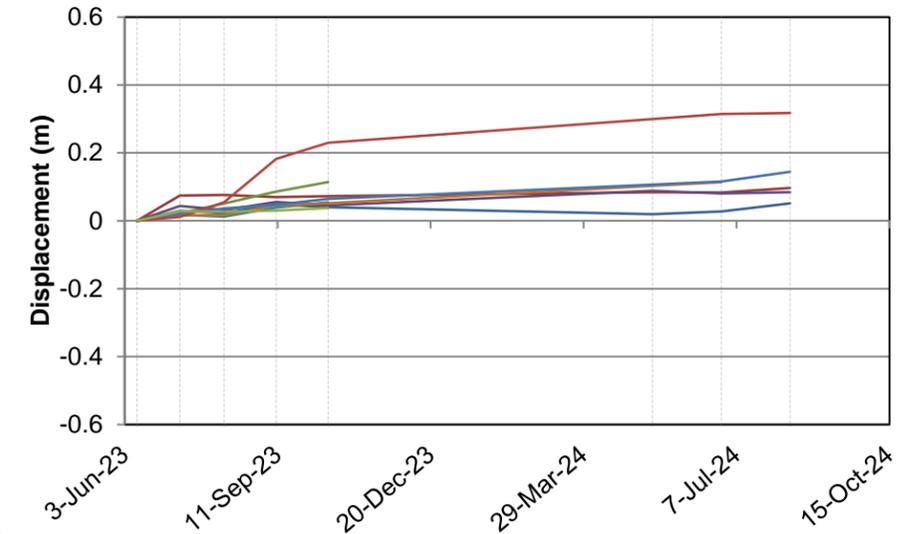
Vertical Displacement



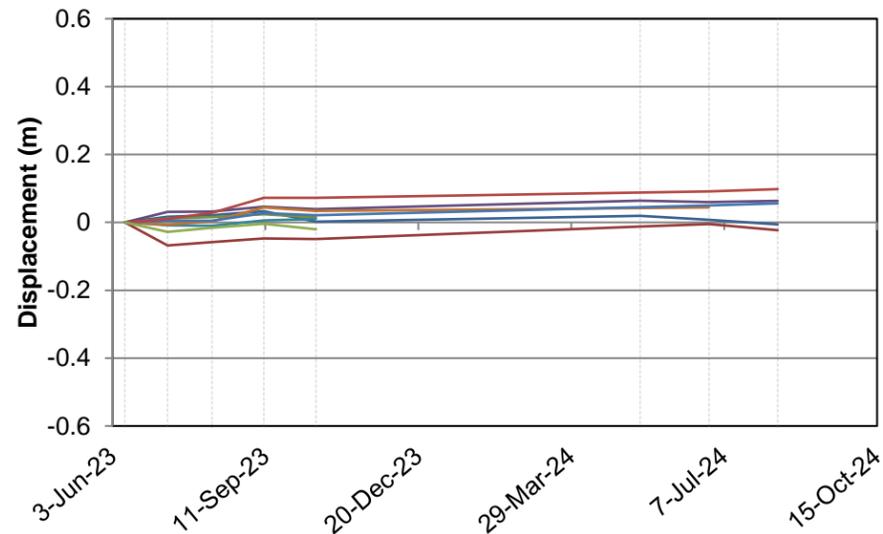
Horizontal Displacement



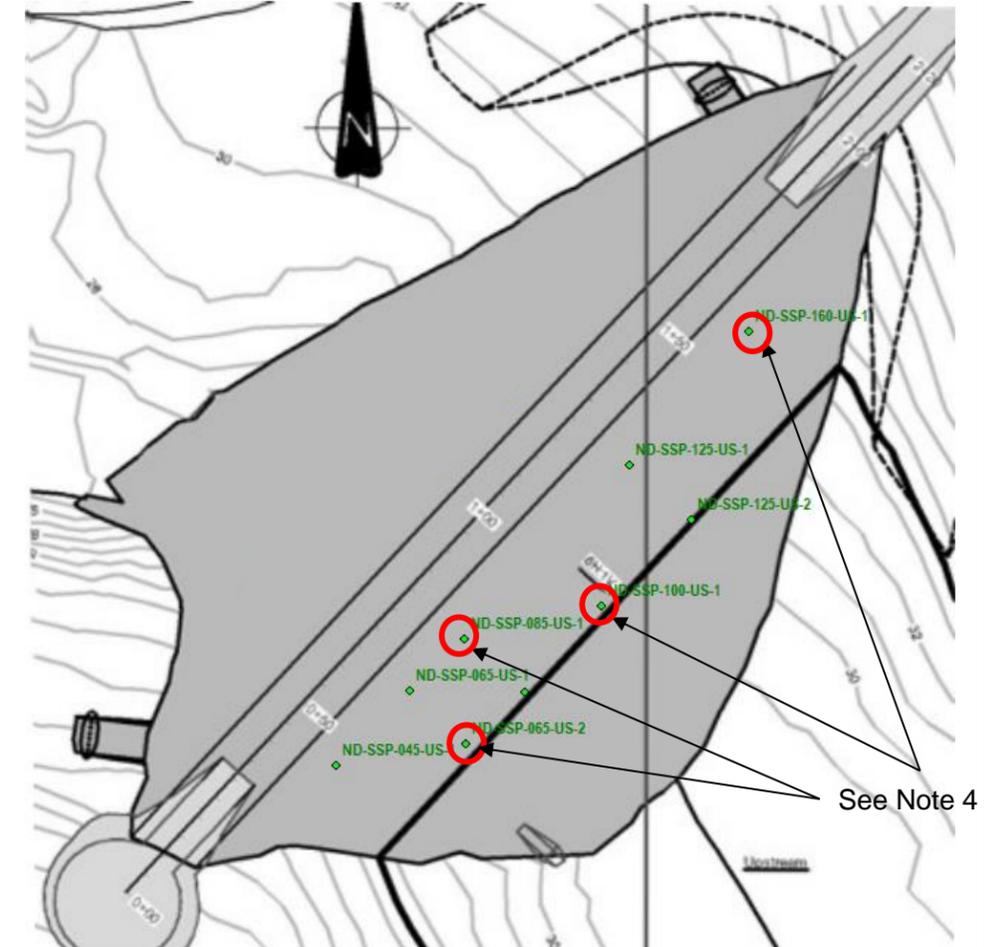
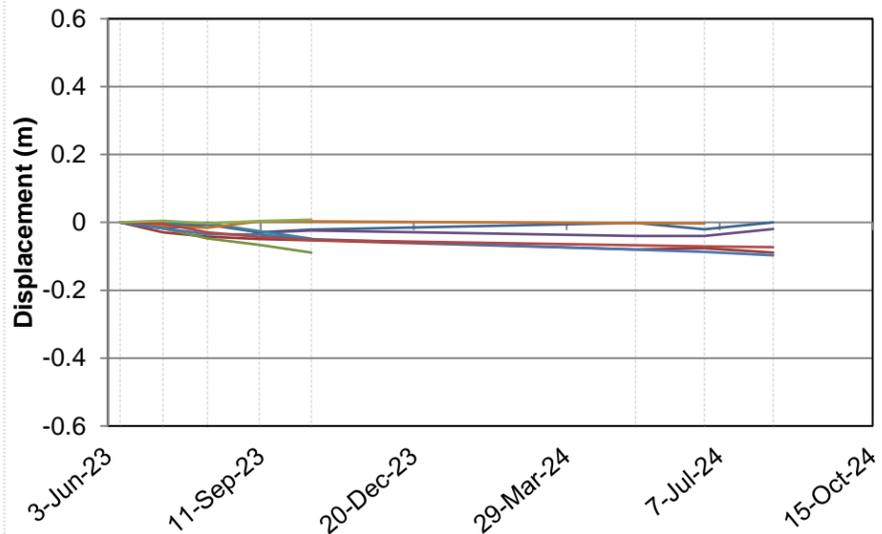
Total Displacement



Change in Easting



Change in Northing



LEGEND:

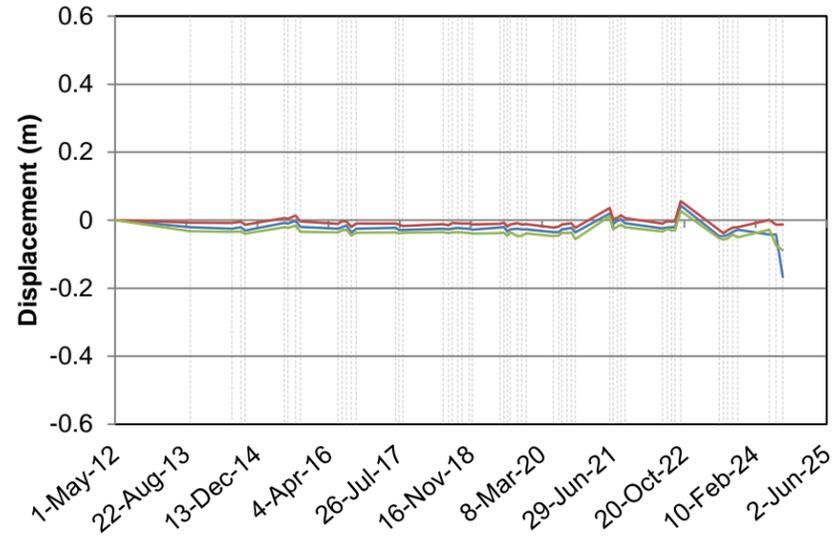
- ND-SSP-045-US-1
- ND-SSP-065-US-2
- ND-SSP-085-US-2
- ND-SSP-125-US-1
- ND-SSP-160-US-1
- ND-SSP-065-US-1
- ND-SSP-085-US-1
- ND-SSP-100-US-1
- ND-SSP-125-US-2
- Survey Dates

NOTES:

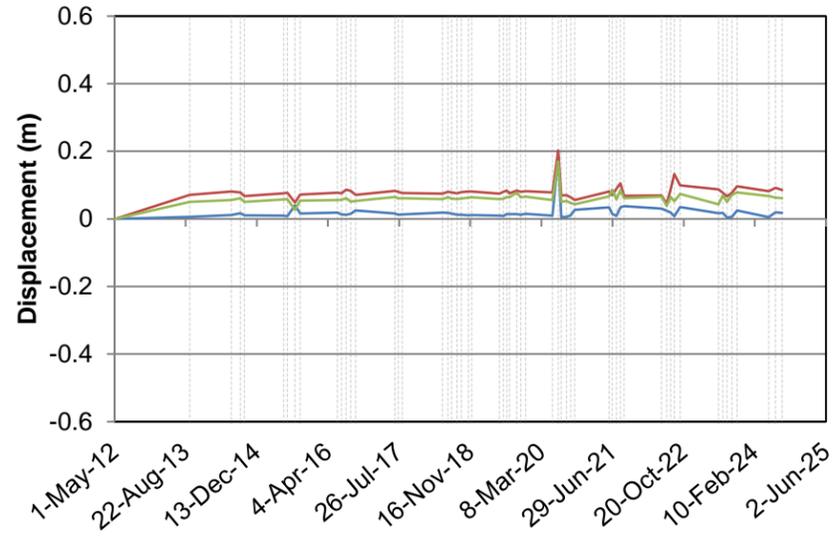
1. Survey of upstream monitoring points started on June 11, 2023.
2. No data received for SSP-100-US-1 after June 2024 reading.
3. Offset of 15cm was applied to readings that proceed August, 2024. This is mostly likely due to the new permanent survey station, as noted by Agnico Eagle.
4. No data received since October 14, 2023 for SSP-065-US-2, SSP-085-US-1, SSP-100-US-1, SSP-160-US-1. These survey point were damaged due to snow removal.
5. The latest data were received on August 11, 2024

| | | | | |
|---|--|-----------------|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | Upstream Surface Survey Monitoring Points Displacement Timeseries | | | |
| Job No: CAPR003066 Filename: App_E_SurveyMonitoring.pptx | DORIS TIA | Date: Oct. 2024 | Approved: PDL/AN | Figure: E.2 |

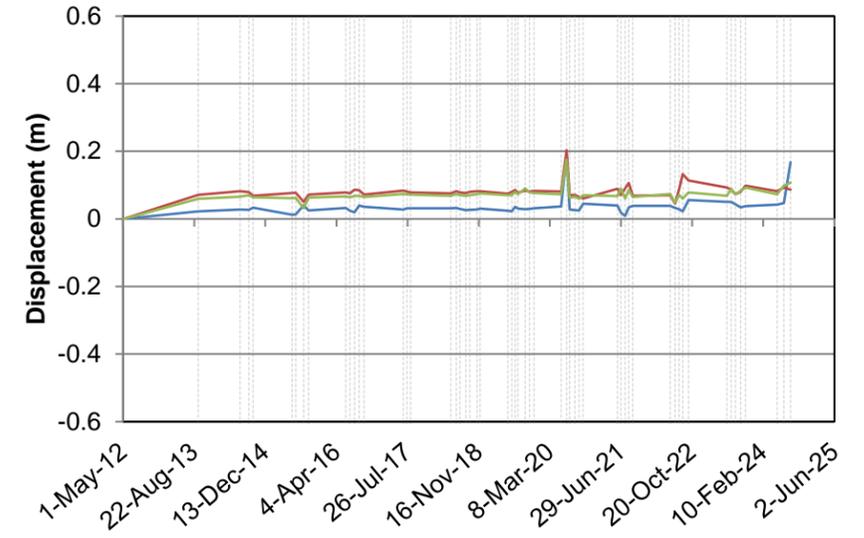
Vertical Displacement



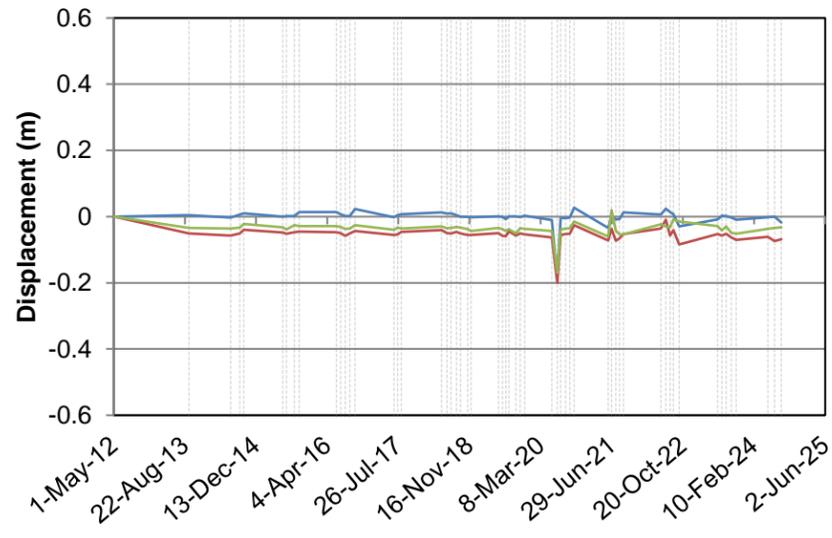
Horizontal Displacement



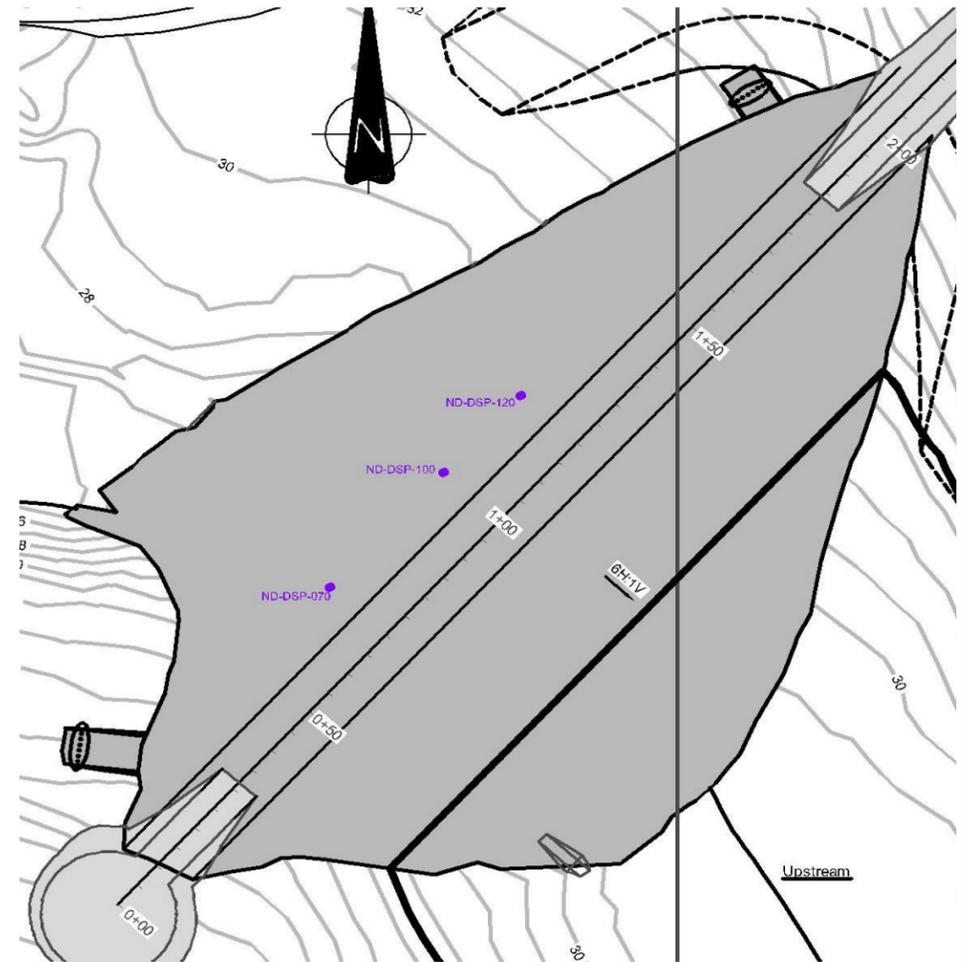
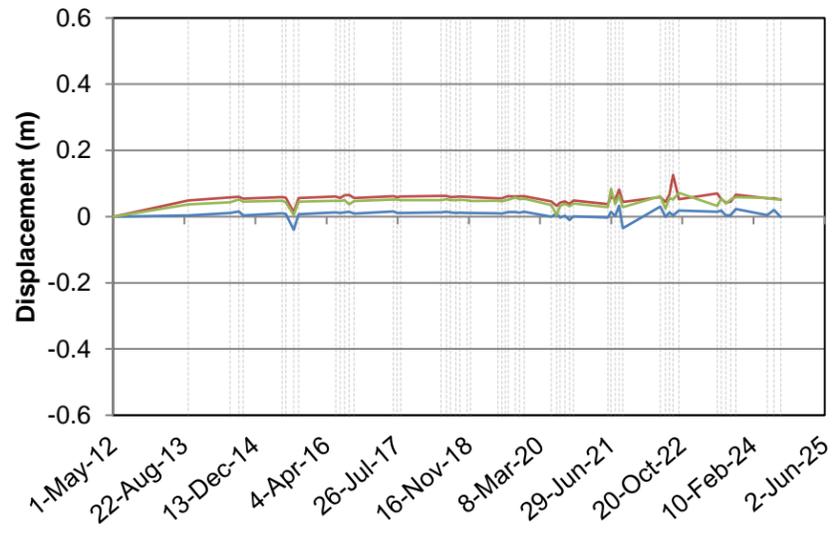
Total Displacement



Change in Easting



Change in Northing



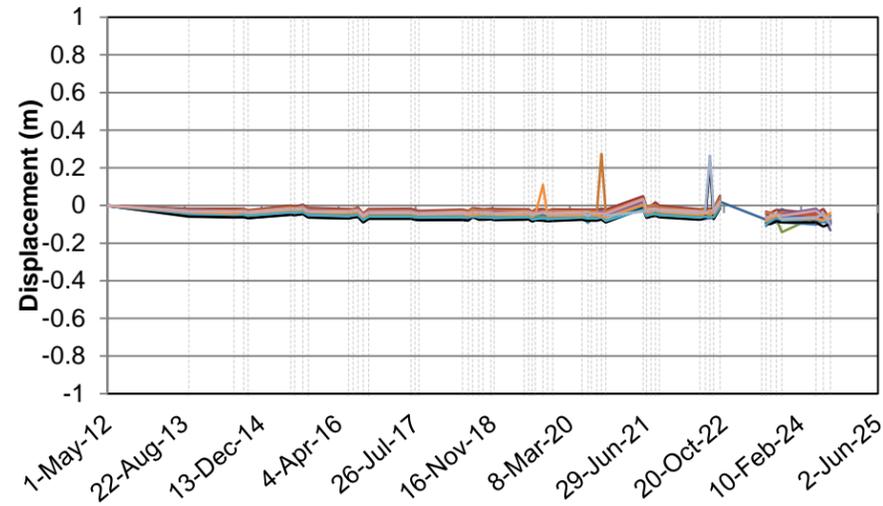
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- ND-DSP-070
- ND-DSP-100
- ND-DSP-120
- Survey Date

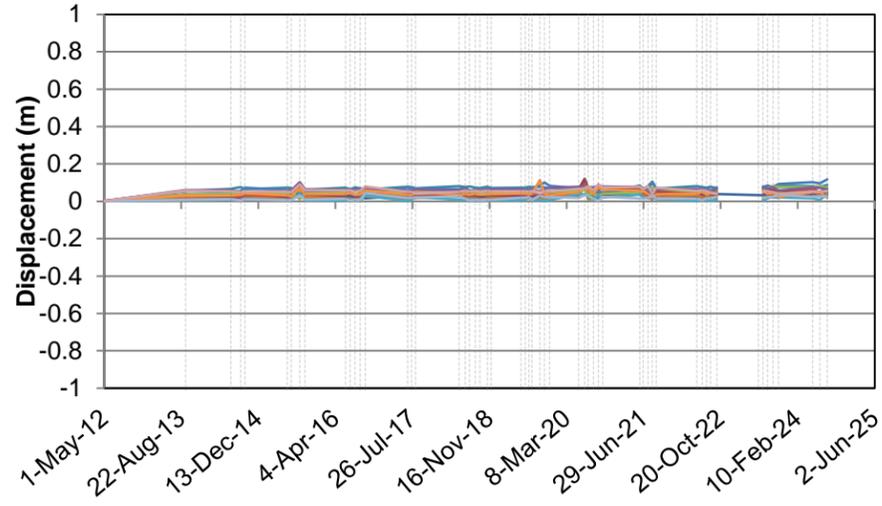
NOTES:

1. Survey of upstream surface survey monitoring points started on June 11, 2023.
2. Offset of 15cm was applied to readings that proceed August, 2024. This is mostly likely due to the new permanent survey station, as noted by Agnico Eagle.
3. The latest data were received on August 11, 2024.

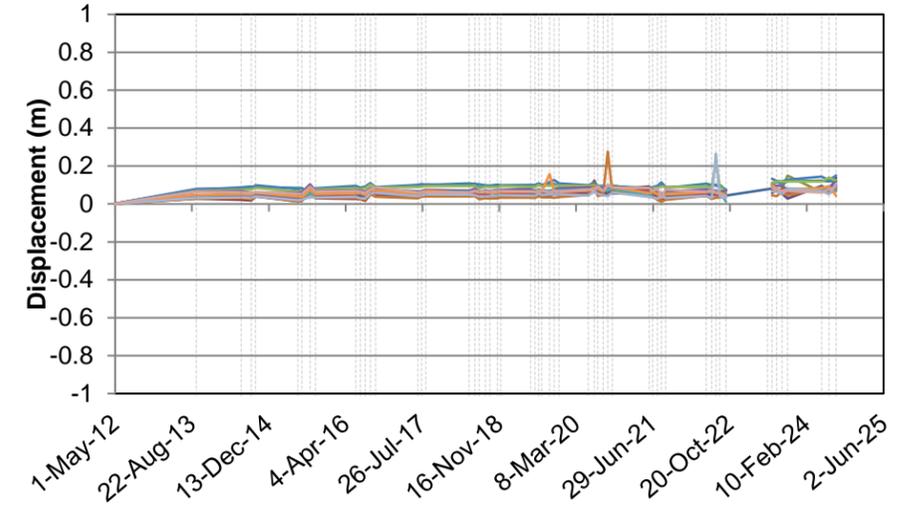
Vertical Displacement



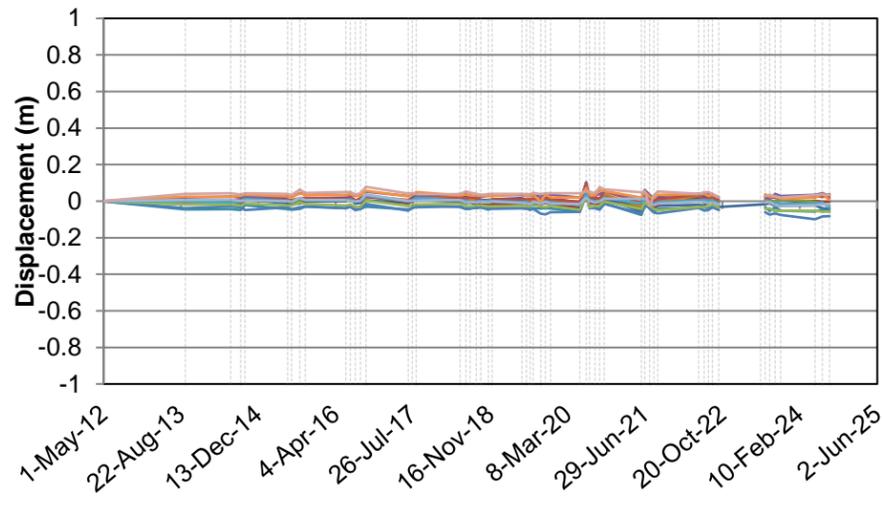
Horizontal Displacement



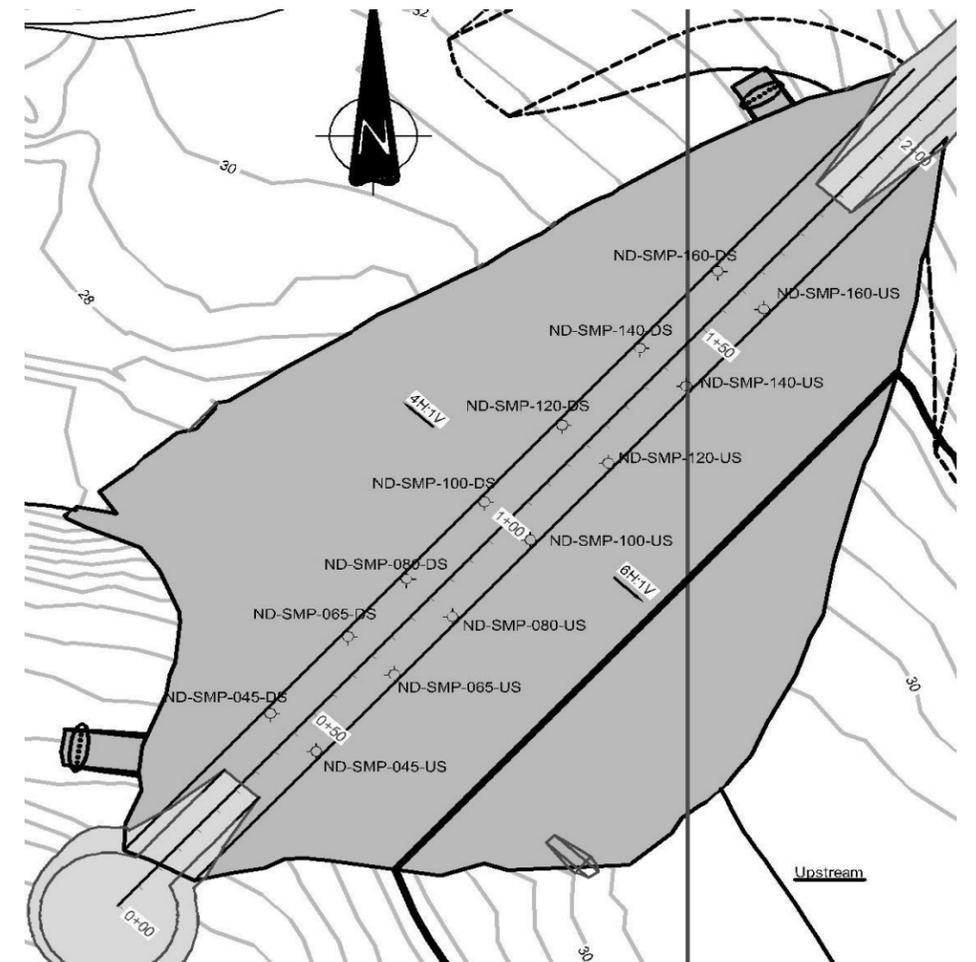
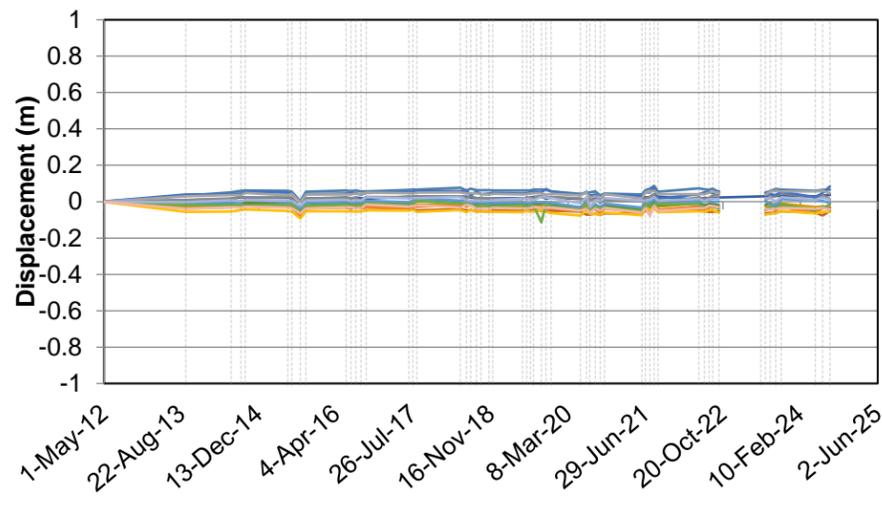
Total Displacement



Change in Easting



Change in Northing



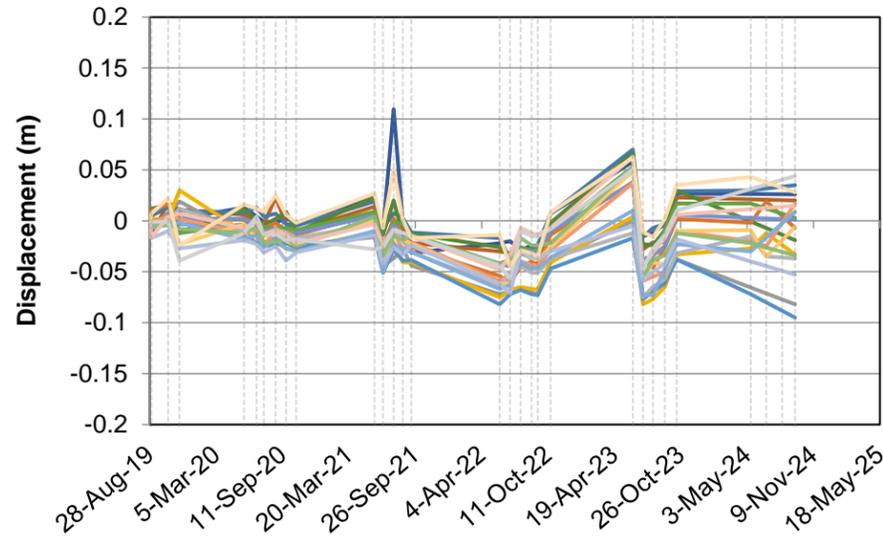
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| | |
|-----------------|-----------------|
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| — ND-SMP-065-DS | — ND-SMP-065-US |
| — ND-SMP-080-DS | — ND-SMP-080-US |
| — ND-SMP-100-DS | — ND-SMP-100-US |
| — ND-SMP-120-DS | — ND-SMP-120-US |
| — ND-SMP-140-DS | — ND-SMP-140-US |
| — ND-SMP-160-DS | — ND-SMP-160-US |
| | — Survey Date |

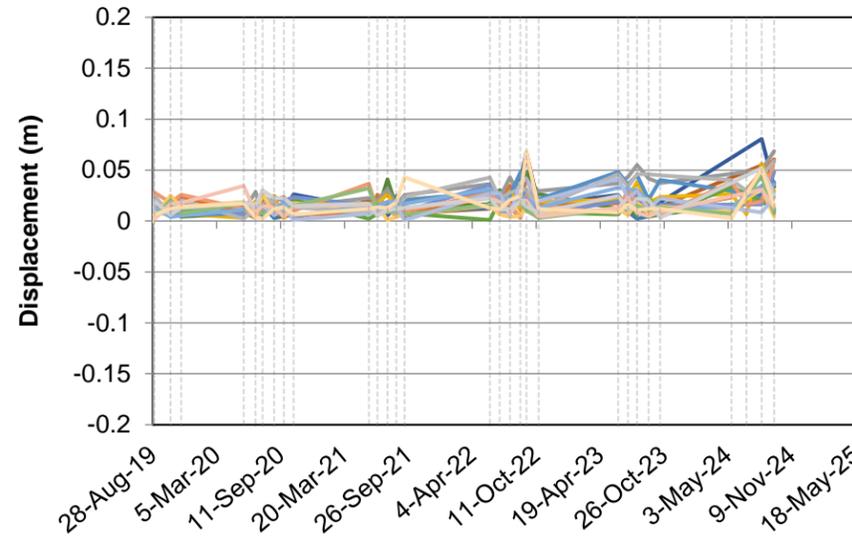
NOTES:

1. Offset of 15cm was applied to readings that proceed August, 2024. This is mostly likely due to the new permanent survey station, as noted by Agnico Eagle.
2. The latest data were received on August 11, 2024.
3. Erroneous data were eliminated.

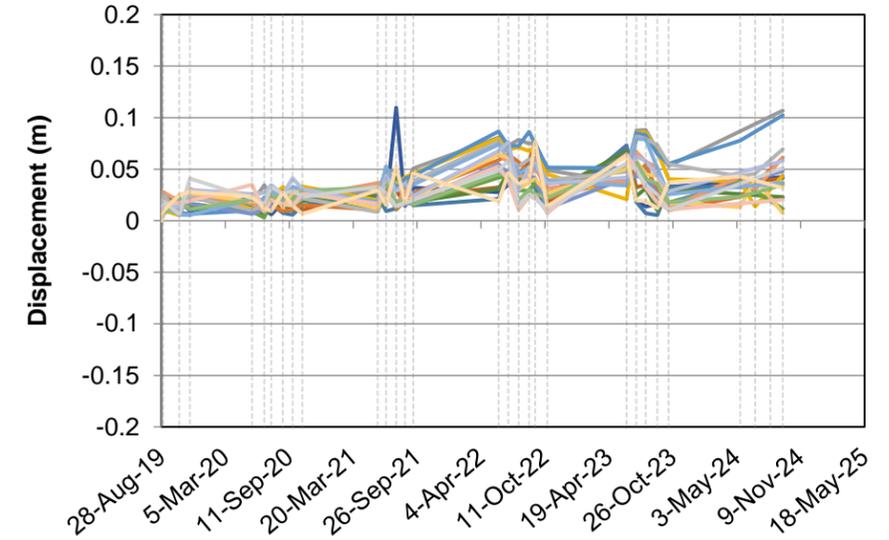
Vertical Displacement



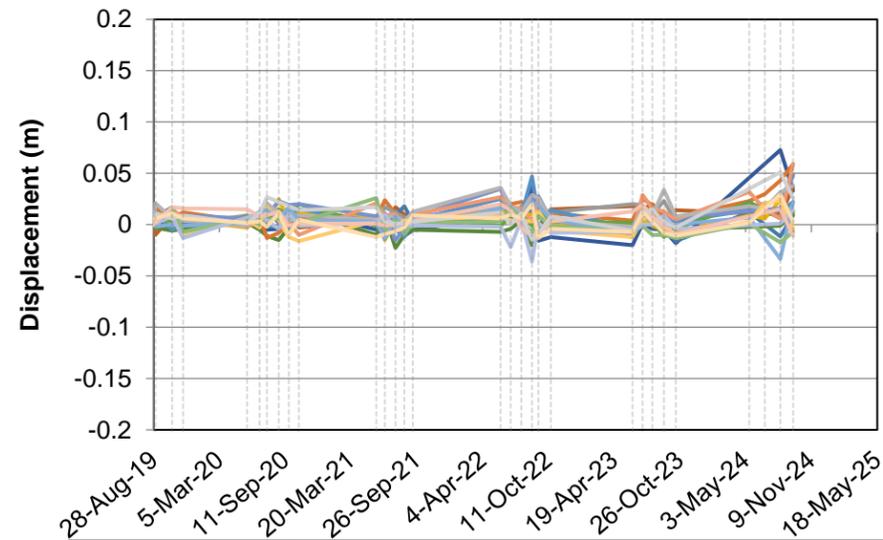
Horizontal Displacement



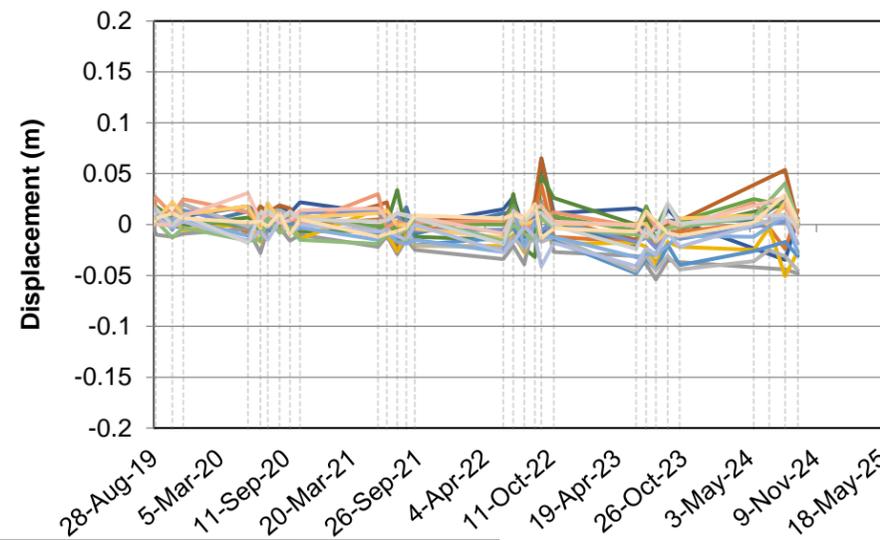
Total Displacement



Change in Easting



Change in Northing

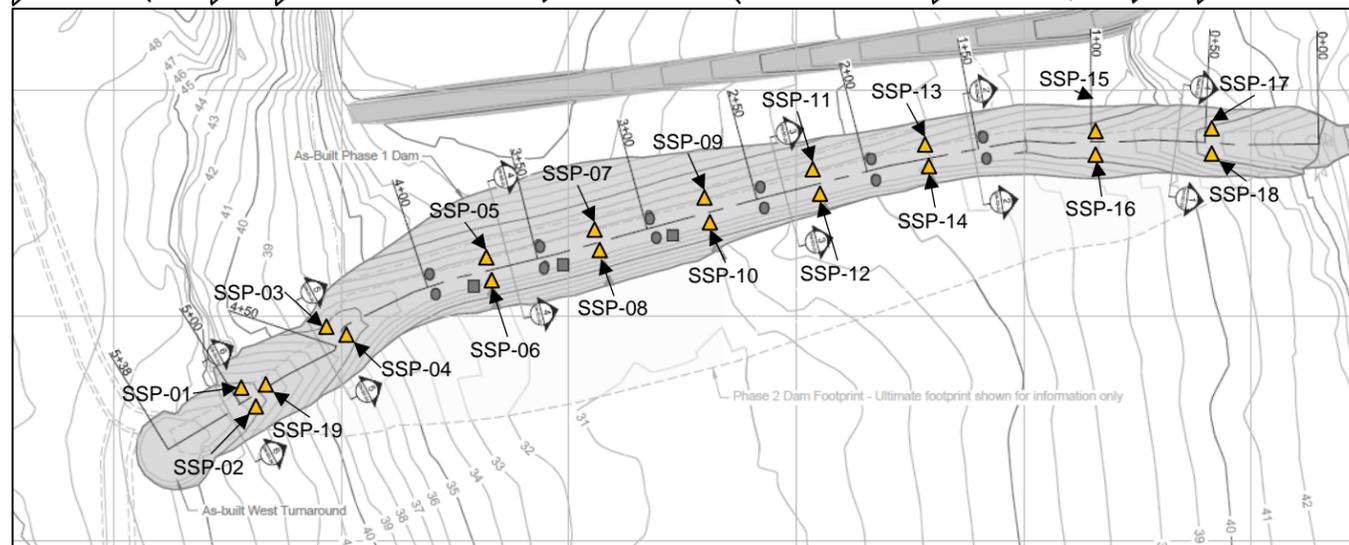


LEGEND:

- SD-SSP-01
- SD-SSP-02
- SD-SSP-03
- SD-SSP-04
- SD-SSP-05
- SD-SSP-06
- SD-SSP-07
- SD-SSP-08
- SD-SSP-09
- SD-SSP-10
- SD-SSP-11
- SD-SSP-12
- SD-SSP-13
- SD-SSP-14
- SD-SSP-15
- SD-SSP-16
- SD-SSP-17
- SD-SSP-18
- SD-SSP-19
- Survey Date

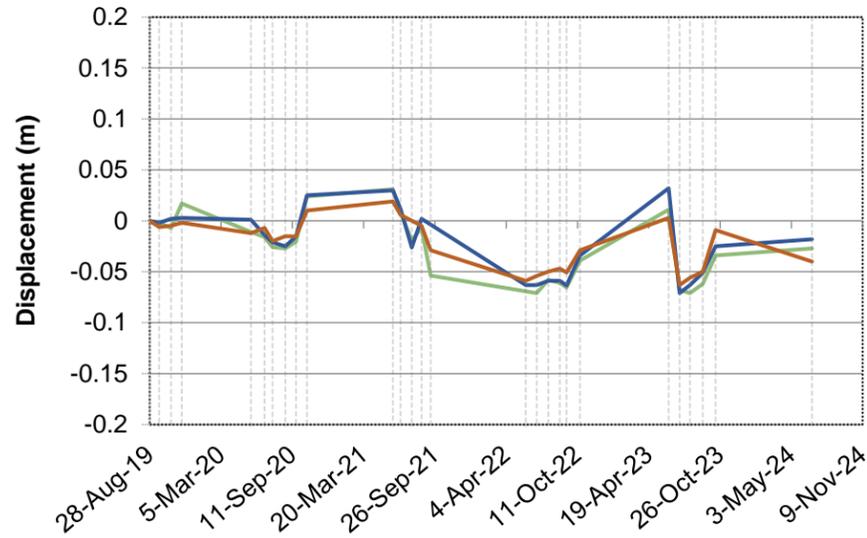
NOTES:

1. SD-SSP-08 was noted to be damaged on May 13, 2024.
2. Elevation data not received in August, 2024.
3. Erroneous data were eliminated.

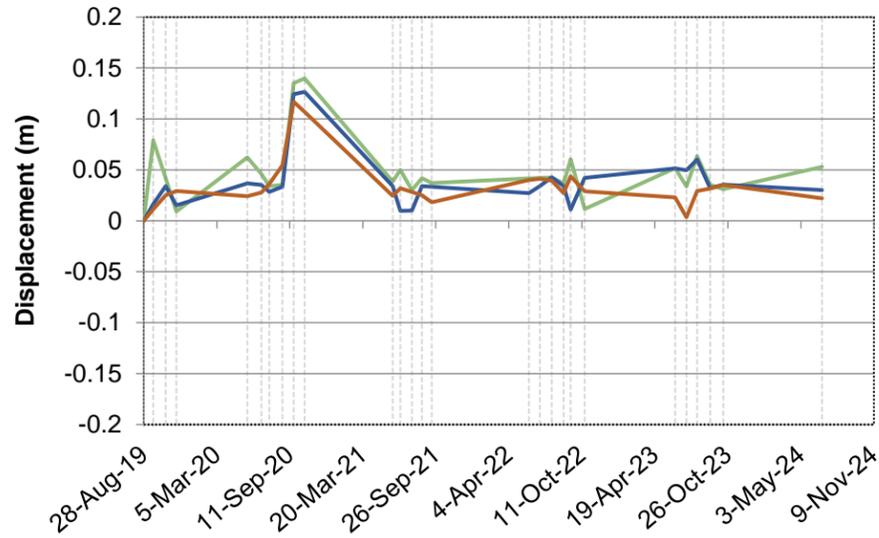


| | | | | |
|---|---|-----------------|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | Surficial Survey Monitoring Points Displacement Timeseries | | | |
| Job No: CAPR003066 Filename: App_E_SurveyMonitoring.pptx | DORIS TIA | Date: Oct. 2024 | Approved: PDL/AN | Figure: E.5 |

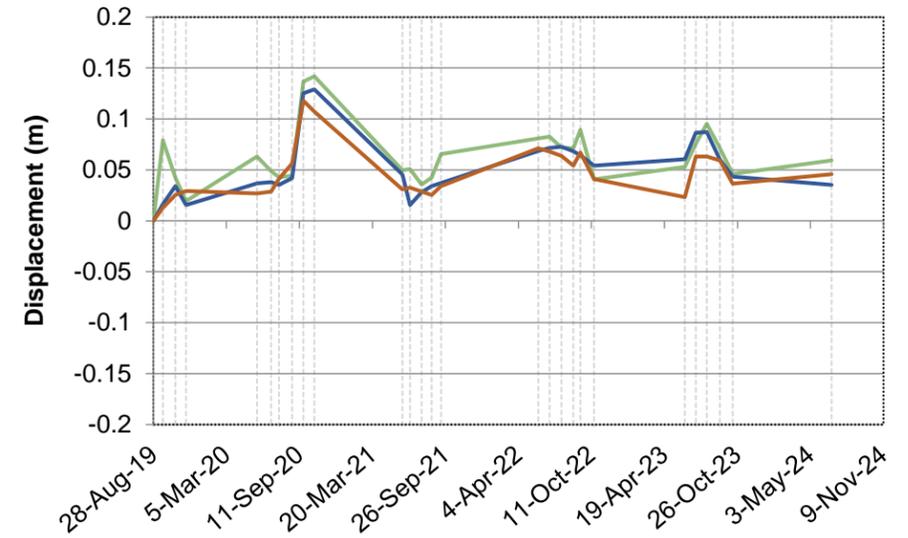
Vertical Displacement



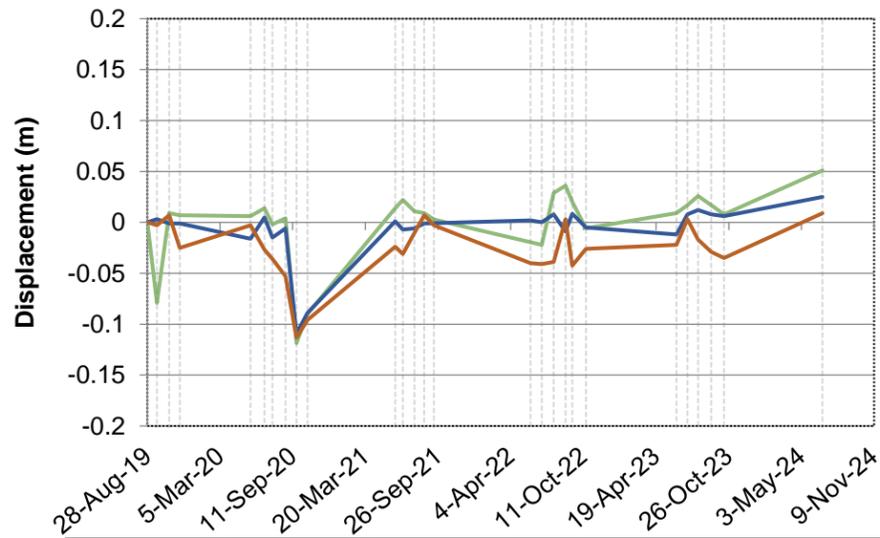
Horizontal Displacement



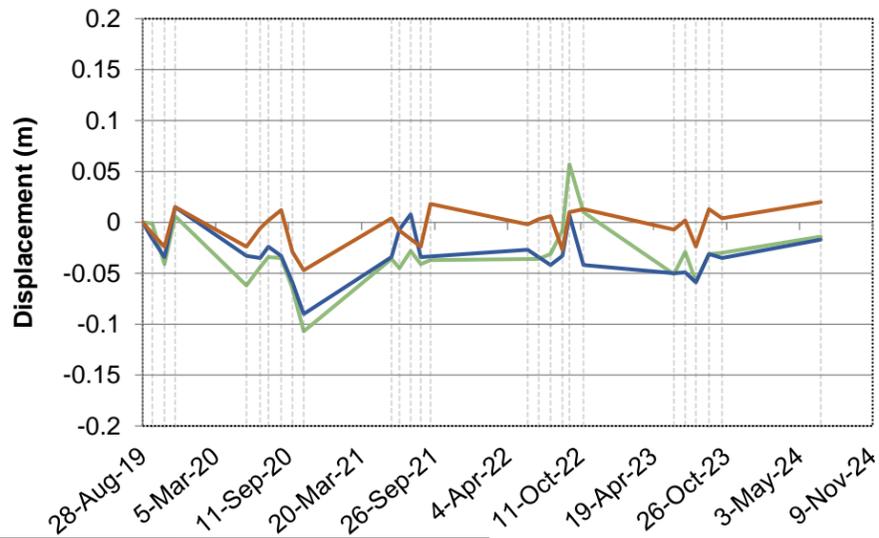
Total Displacement



Change in Easting



Change in Northing

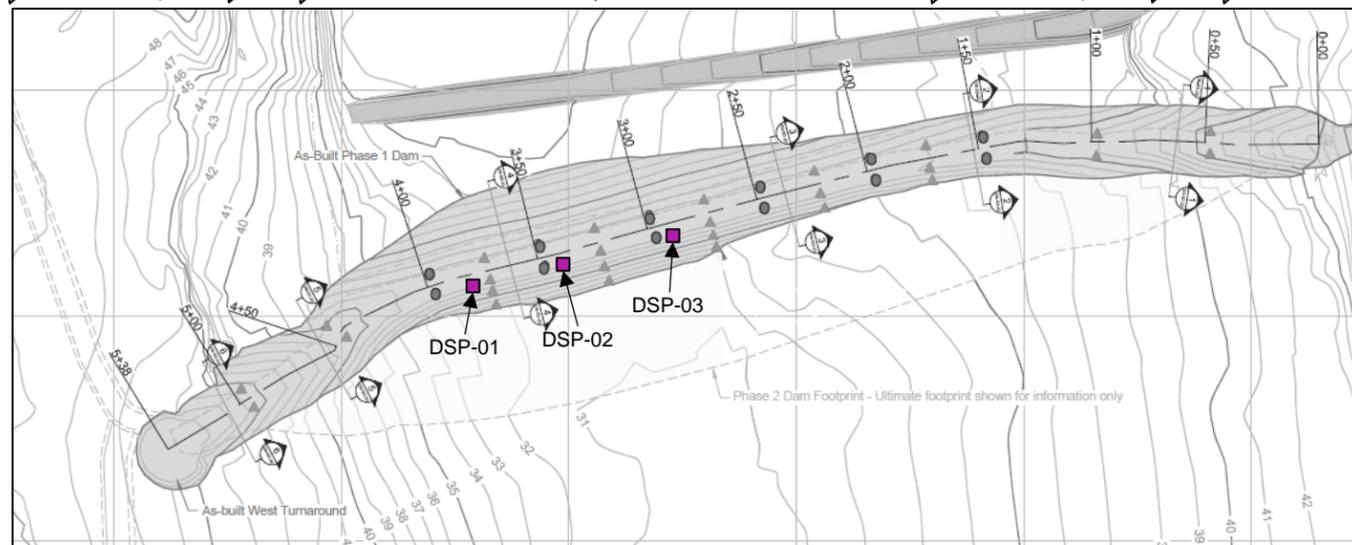


LEGEND:

- SD-DSP-01
- SD-DSP-02
- SD-DSP-03
- Survey Date

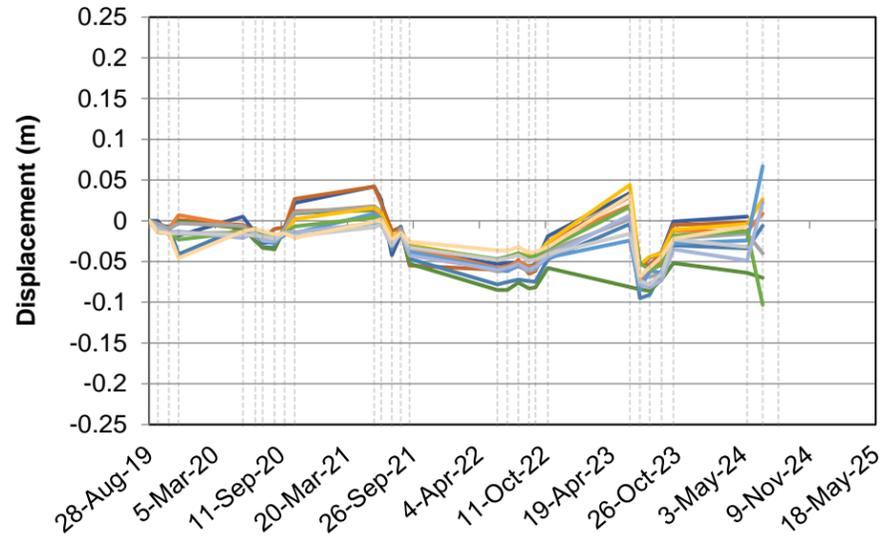
NOTES:

1. One reading received for deep settlement points in 2024

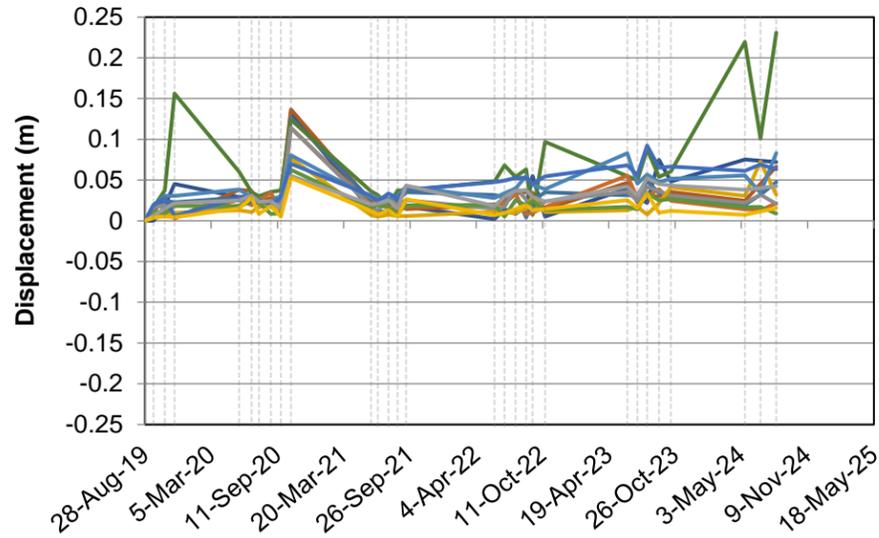


| | | | | |
|---|------------------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Deep Settlement Points Displacement Timeseries | | |
| Job No: CAPR003066 Filename: App_E_SurveyMonitoring.pptx | DORIS TIA | Date: Oct. 2024 | Approved: PDL/AN | Figure: E.6 |

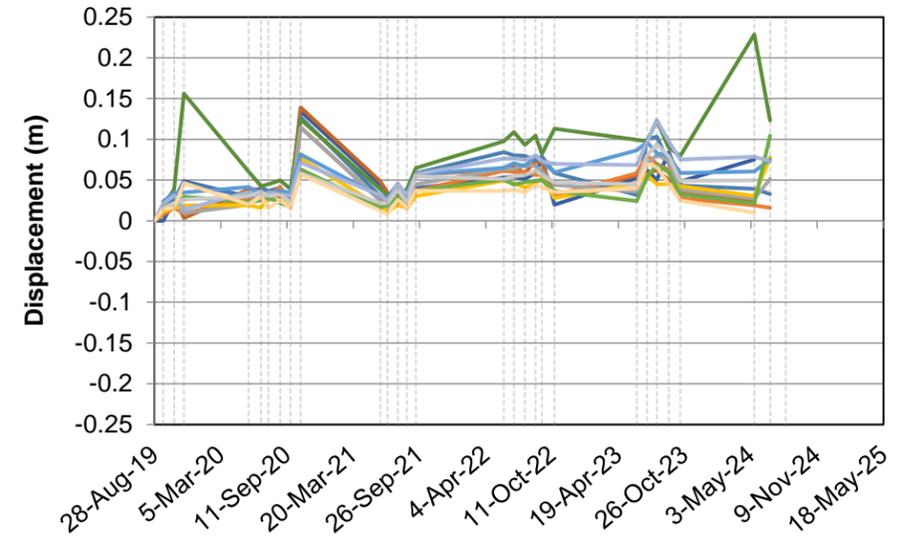
Vertical Displacement



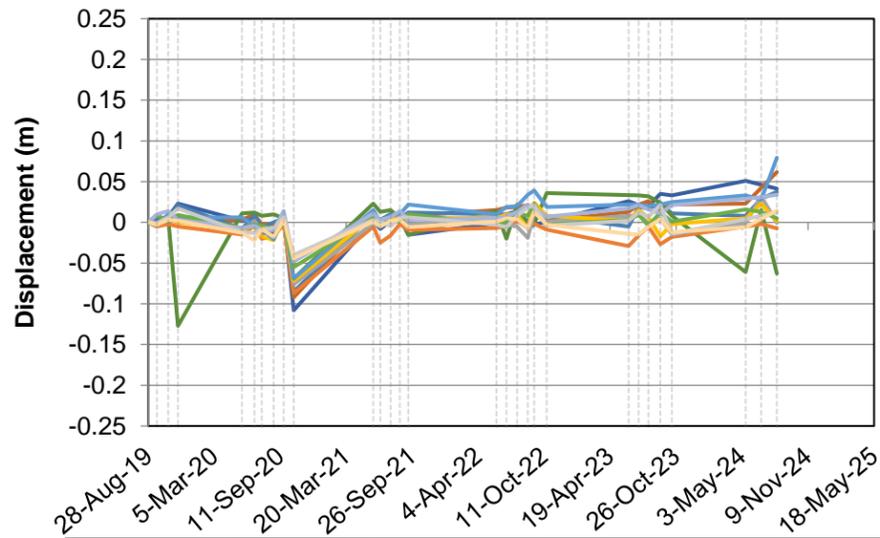
Horizontal Displacement



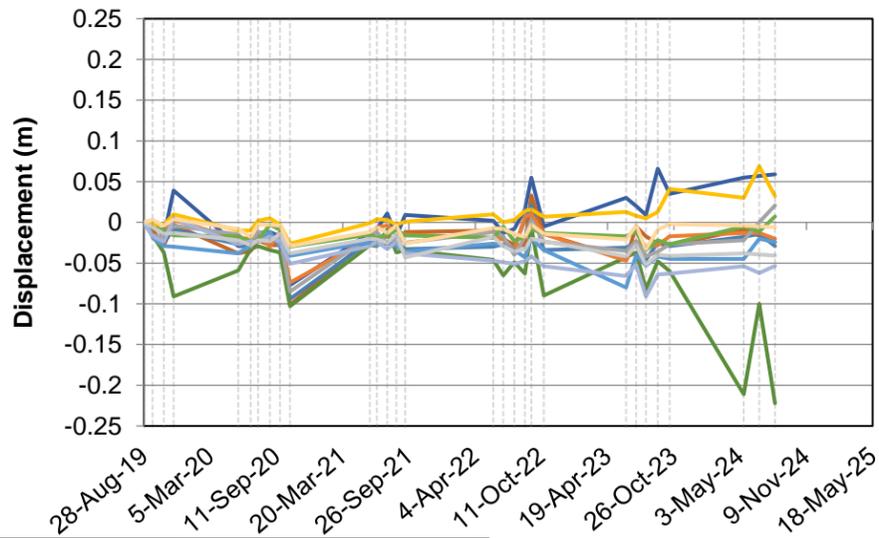
Total Displacement



Change in Easting



Change in Northing

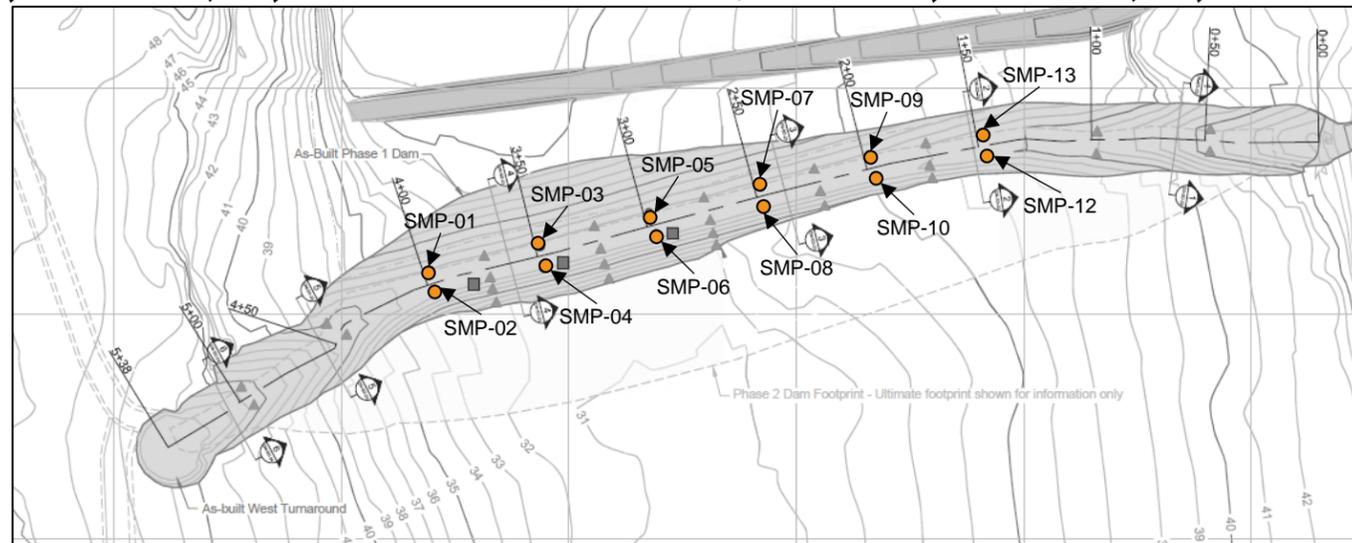


LEGEND:

- SD-SMP-01
- SD-SMP-02
- SD-SMP-03
- SD-SMP-04
- SD-SMP-05
- SD-SMP-06
- SD-SMP-07
- SD-SMP-08
- SD-SMP-09
- SD-SMP-10
- SD-SMP-11
- SD-SMP-12
- SD-SMP-13
- Survey Date

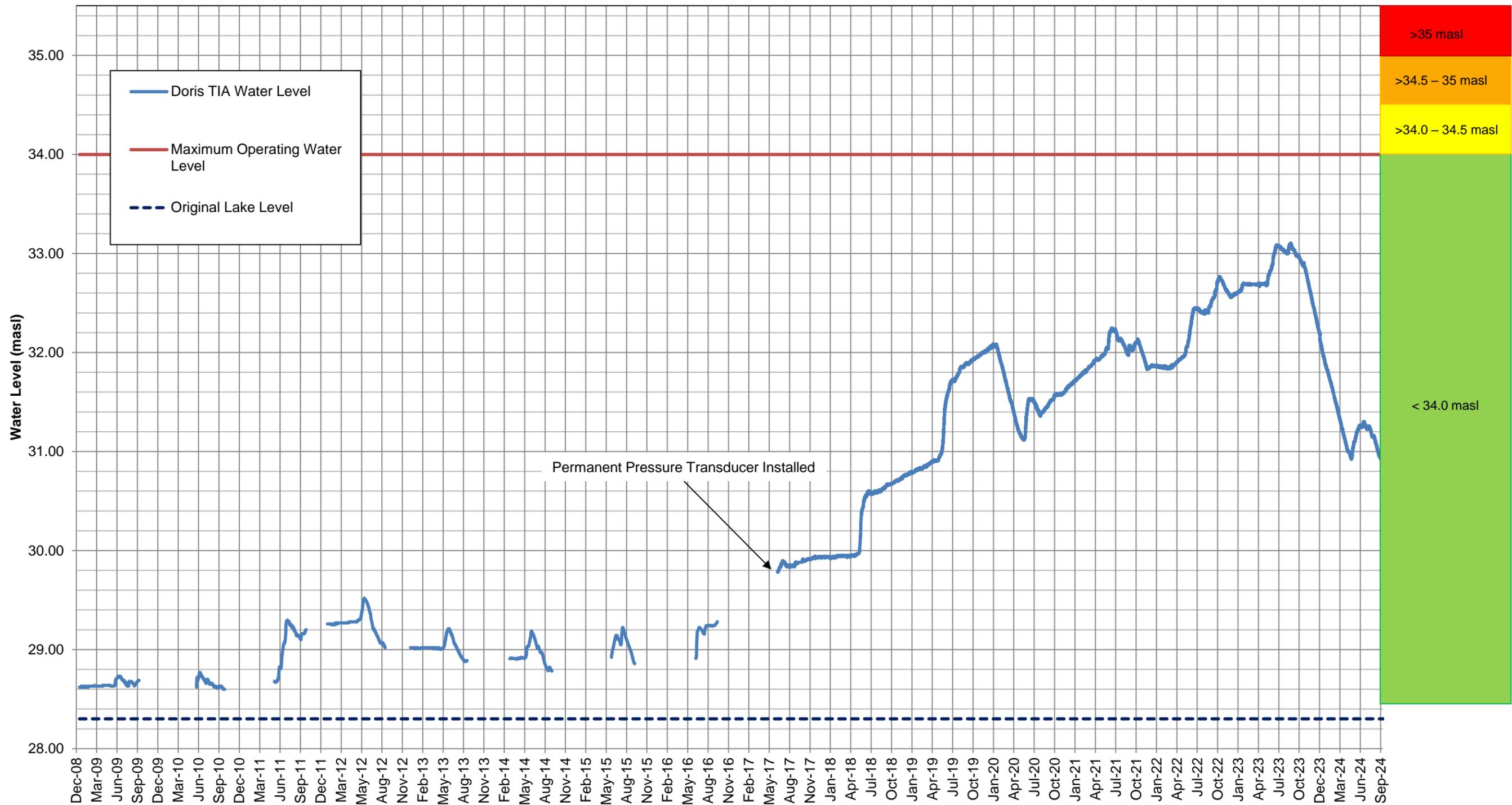
NOTES:

1. SD-SMP-04 was noted to be damaged on May 13, 2024.
2. Elevation data not received in August 2024.



| | | | | |
|---|-----------|---|------------------|--------------------|
| | | 2024 TIA AGI | | |
| | | Crest Survey Monitoring Points Displacement Timeseries | | |
| Job No: CAPR003066 Filename: App_E_SurveyMonitoring.pptx | DORIS TIA | Date: Oct. 2024 | Approved: PDL/AN | Figure: E.7 |

Appendix F TIA Reclaim Pond Water Levels

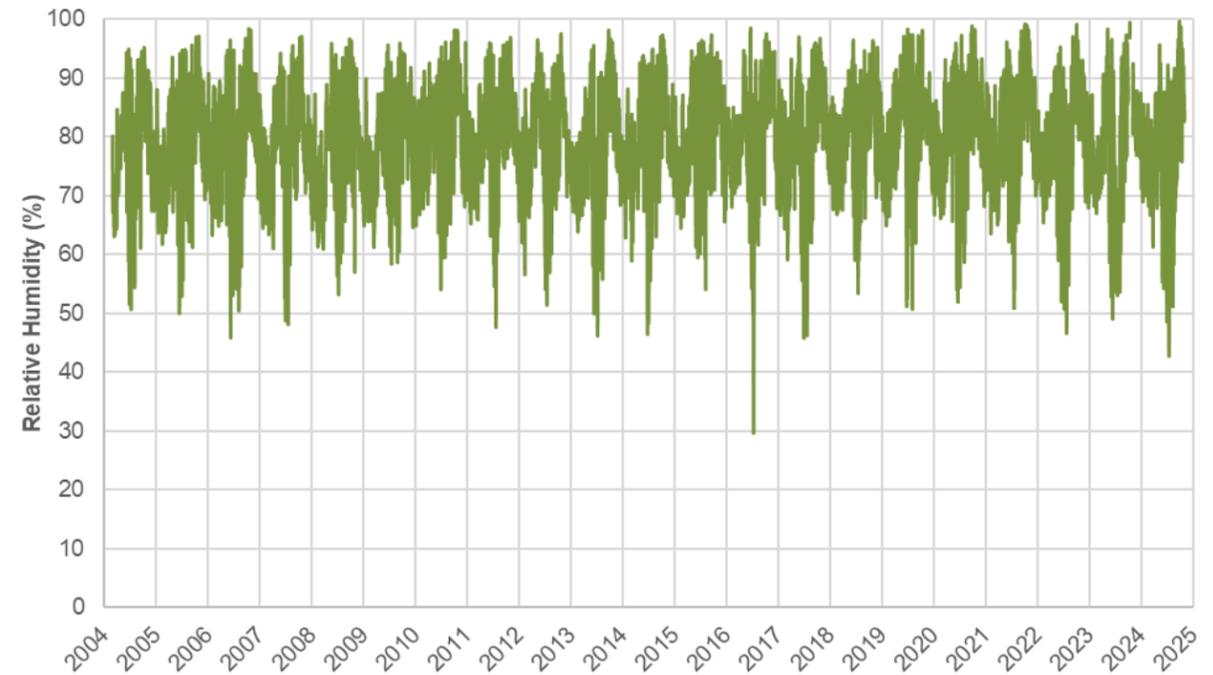
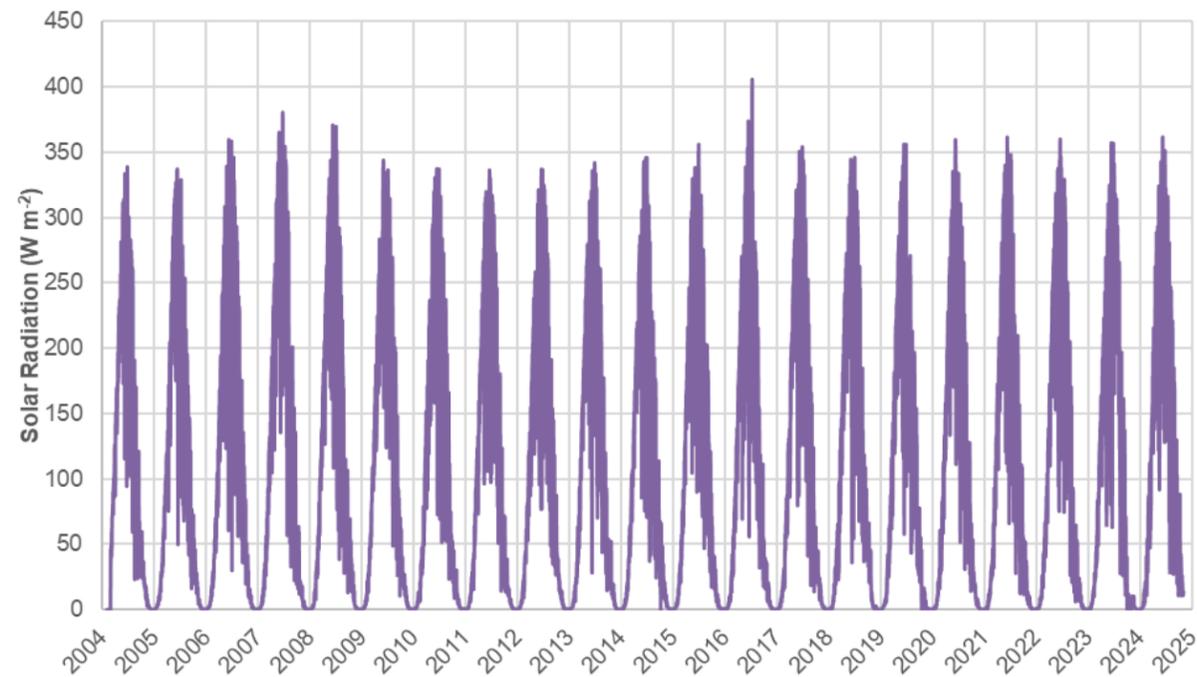
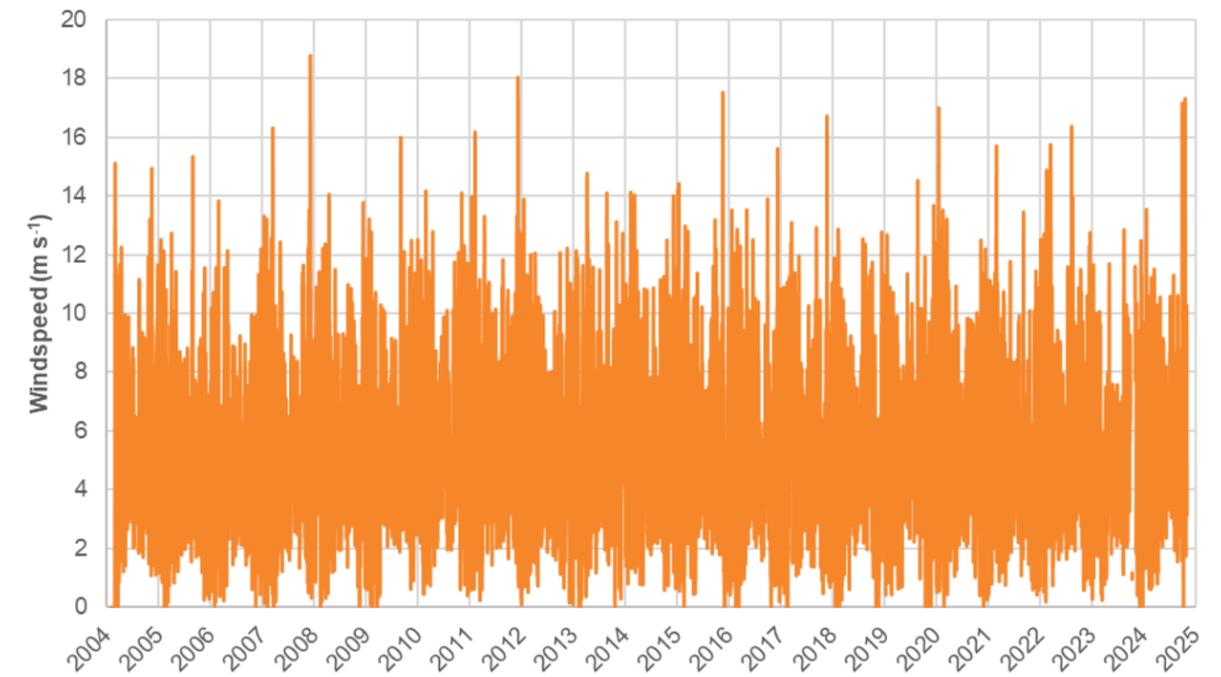
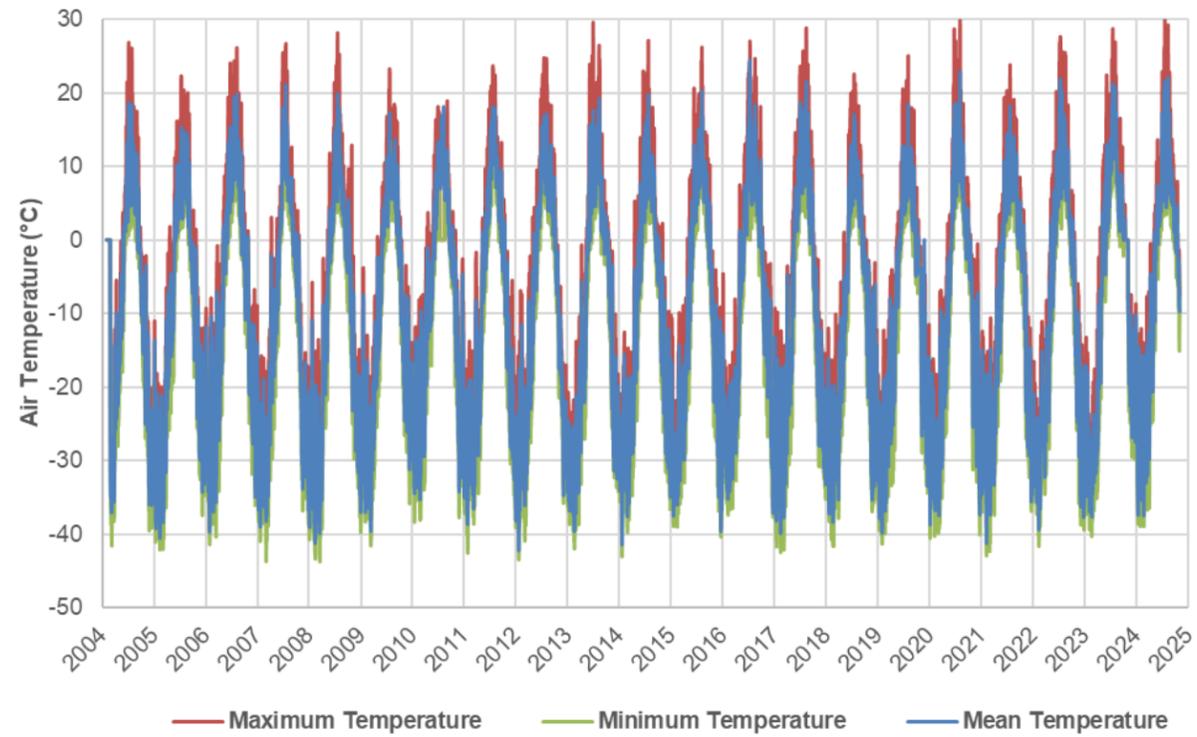


Notes:

- Water level collected by permanent pressure transducer installed Summer 2017

| | | | | |
|---|--|--|--|--|
|  Job No: CAPR003066 Filename: App_F_WaterLevel.pptx |  AGNICO EAGLE Hope Bay | 2024 TIA AGI | | |
| | | TIA Reclaim Pond Water Level Date: Oct. 2024 Approved: PDL/AN Figure: F.1 | | |

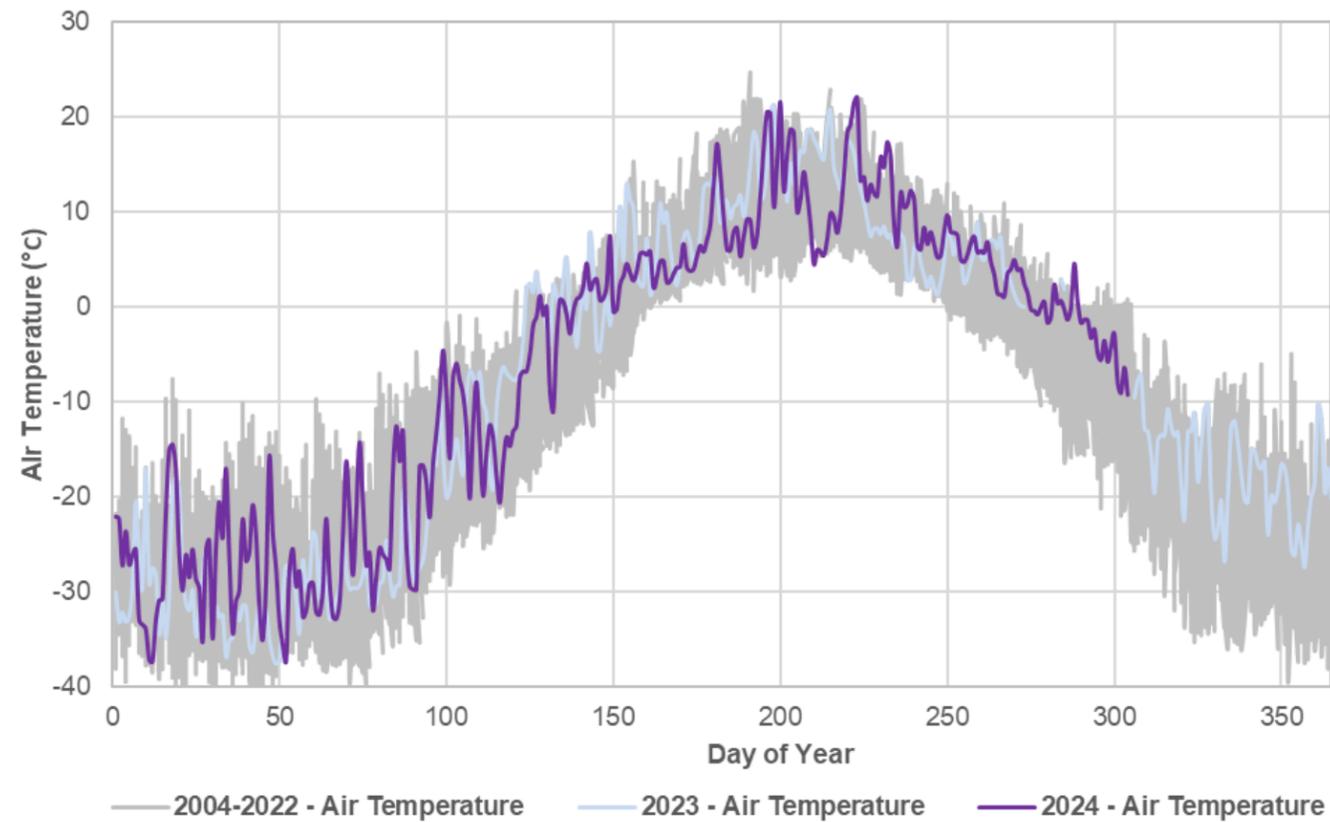
Appendix G Climate Data



Note:

1. Mean daily values measured at Doris Meteorological Station
2. Data record from February 2004 to October 2024

| | | | | |
|---|---|---|------------------|---------------------|
|  |  | 2024 TIA AGI | | |
| | | Doris Meteorological Station (Select Climate Parameters) | | |
| Job No: CAPR003066 | Hope Bay | Date: Dec, 2024 | Approved: CWS | Figure: 1 |

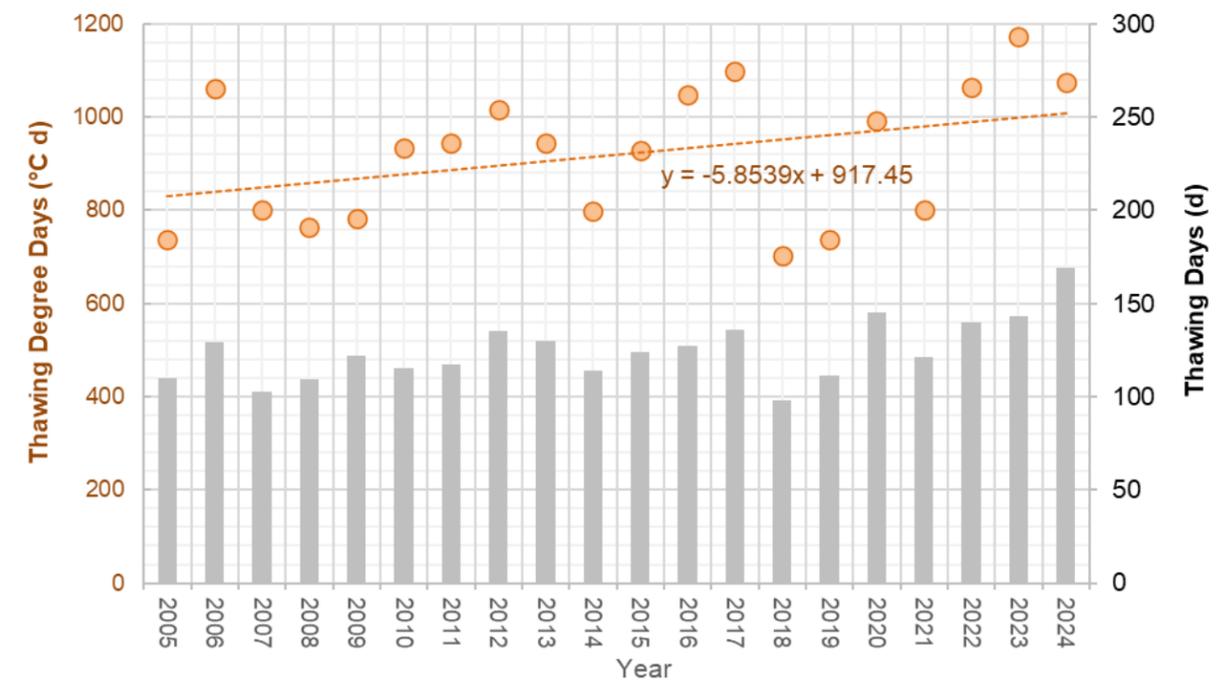
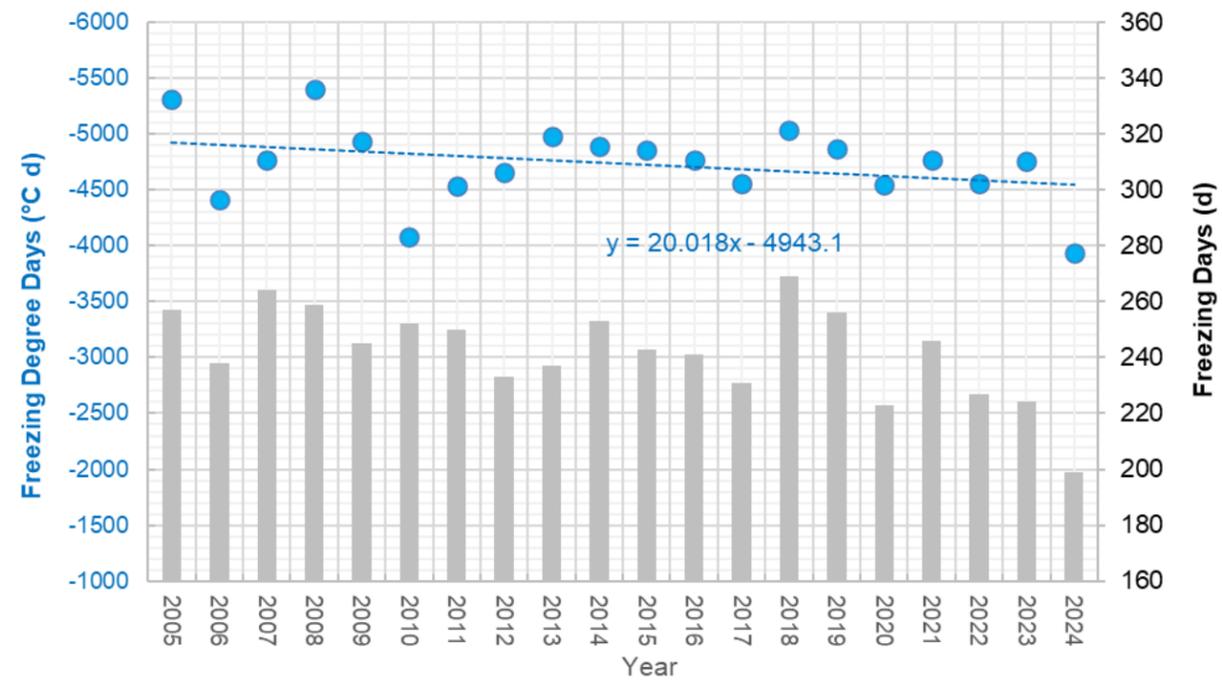


| Year | Mean Annual Air Temperature (°C) |
|----------------|----------------------------------|
| 2005 | -12.5 |
| 2006 | -9.1 |
| 2007 | -10.8 |
| 2008 | -12.6 |
| 2009 | -11.3 |
| 2010 | -8.6 |
| 2011 | -9.8 |
| 2012 | -9.9 |
| 2013 | -11.0 |
| 2014 | -11.2 |
| 2015 | -10.7 |
| 2016 | -10.1 |
| 2017 | -9.4 |
| 2018 | -11.8 |
| 2019 | -11.3 |
| 2020 | -9.7 |
| 2021 | -10.8 |
| 2022 | -9.5 |
| 2023 | -9.8 |
| 2024 | -7.8 |
| Average | -10.4 |

Note:

1. Doris meteorological station air temperature plotted year of year
2. Mean annual air temperature based on thermal year period (Oct. 1 to Sep. 30)

| | | | | |
|---|---|------------------------|------------------|---------------------|
|  Job No: CAPR003066 |  Hope Bay | 2024 TIA AGI | | |
| | | Air Temperature | | |
| | | Date: Dec, 2024 | Approved: CWS | Figure: 2 |



Note:

- Freezing and thaw degree days calculated from mean daily air temperature for thermal year period (Oct. 1 to Sep. 30)

| | | | | |
|---|---|---|--|--|
|  Job No: CAPR003066 |  Hope Bay | 2024 TIA AGI | | |
| | | Freezing and Thawing Degree Days Date: Dec, 2024 Approved: CWS Figure: 3 | | |