



Klohn Crippen Berger

Teck Coal Limited

Elkview Operations

West Fork Tailings Facility and Lagoons A, B, C, and D

2022 Annual Facility Performance Report



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March 2023

March 15, 2022

Teck Coal Ltd.
Elkview Operations
Sparwood, British Columbia
VOB 2G1

Mr. Patrick Green, P.Eng.
Senior Engineer Advisor, Tailings

Dear Mr. Green:

West Fork Tailings Facility and Lagoons A, B, C, and D
2022 Annual Facility Performance Report

We are pleased to submit the 2022 Annual Facility Performance Report for the Teck Elkview Operations West Fork Tailings Facility, and Lagoons A, B, C, and D.

Please contact us if you have any questions regarding this report.

Yours truly,

KLOHN CRIPPEN BERGER LTD.



Michelle Murphy, P.Eng.
Project Manager

JK:jc

Teck Coal Limited

Elkview Operations

West Fork Tailings Facility and Lagoons A, B, C, and D

2022 Annual Facility Performance Report

EXECUTIVE SUMMARY

This report presents the 2022 Annual Facility Performance Report (AFPR) for the Teck Elkview Operations (EVO) West Fork Tailings Facility (WFTF) and the Lagoon Tailings Area, comprising Lagoons A, B, C, and D, between November 2021 to September 2022, herein referred to as the reporting period.

The 2022 AFPR site visit of the WFTF and Lagoons A, B, C, and D, was completed on September 20 and 21, 2022, by Mr. Michael Tin, P.Eng., and Mr. Justin Kelly, EIT, of Klohn Crippen Berger (KCB). The Tailings Storage Facility (TSF) Qualified Person at the time of the AFPR was Mr. Patrick Green, P.Eng., who was also present during part of the AFPR site visit. The Engineer of Record (EoR) for the tailings facilities is Mr. Andy Small, P. Eng., of KCB, who completed a separate site visit shortly after the 2022 AFPR site visit. This report was prepared under Mr. Small's supervision.

The WFTF, and Lagoons A, B, C, and D, appeared to be in good physical condition with no signs of structural distress based on observations during the 2022 AFPR. The excavated/removed embankment at the north perimeter of Lagoon B previously identified during the 2021 AFPR, was re-sloped using the exposed unsaturated tailings. The shallow tailings slope appears stable and no longer a facility concern. Tailings were being deposited to the Lagoon D cells at the time of the site visit; deposition was being operated in accordance with the procedures in the Operations, Maintenance, and Surveillance Manual.

Summary Description of Facilities

The WFTF is the primary active tailings storage facility at EVO and consists of a downstream-raised rockfill shell with upstream filter overlying an existing waste dump. The embankment is approximately 27 m high at its highest point, and the TSF contains an estimated 11.6 Mm³ of fine tailings.

Lagoons A, B, C, and D were constructed as ring dyke embankments. Lagoons A and C are inactive and contain an estimated 0.19 Mm³ and 4.66 Mm³ of tailings, respectively. Lagoon B receives occasional overflow process water from the Wash Plant and contains an estimated 0.30 Mm³. Lagoon D still receives a small portion of fine tailings and contains an estimated 22.78 Mm³ of tailings. Lagoons A and B were constructed without additional embankment raising. Lagoon C was constructed using a combination of downstream and upstream raising methods and Lagoon D was constructed by upstream raising only, both using a combination of Coarse Coal Rejects (CCR) or sand and gravel fill.

Summary of Key Hazards

The key external hazards for the WFTF and Lagoon Tailings Area are seismic and meteorological hazards, which are addressed through the selection of Inflow Design Flood (IDF) and Earthquake Design Ground Motion (EDGM).

Summary of Significant Changes in 2022

No significant changes to the WFTF, Lagoons A, B, C, and D were observed that would affect embankment stability. No signs of cracking, wet spots, or deformations were observed during the 2022 AFPR site visit that could affect the embankment stability.

Summary of WFTF Construction in 2022

The minimum crest elevation reached during the 2021 WFTF South Embankment construction campaign was 1683.5 m and 1682.7 m for the general fill and upstream filter zones, respectively. The 2022 construction campaign commenced on June 8, 2022, to raise the crest to El. 1685.7 m. EVO continued to raise the WFTF South Embankment to approximately El. 1690 m after the completion of planned construction ahead of schedule. The capacity as constructed is sufficient to store the projected tailings production to Q1, 2026.

Summary of Recommendations

Table E.1 presents the only Priority 2 recommendation¹ from the AFPR. There are no Priority 1 recommendations. Section 9 presents additional, lower priority recommendations. The recommendation shown in Table E.1 is a carry over from the 2021 AFPR and is being actioned by EVO in 2023.

Table E.1 Summary of Priority Recommendations

Action ID	Structure	Deficiency or Non-Conformance	Applicable Regulation or OMS Manual Reference	Recommended Action	Priority	Status / Recommended Deadline
2022 Recommendations						
2021-01	Lagoon C	Actual Deficiency. The Lagoon C crest has a low spot at the trestle at approximately El. 1126.6 m.	N/A	The low spot should be filled to at least El. 1128.5 m to accommodate the IDF plus freeboard requirements.	2	To be completed in 2023.

Notes: Recommendation priority guidelines specified in the Health, Safety and Reclamation Code for Mines in British Columbia (HSRC) Guidance Document (MEM 2016) and assigned by KCB. Refer to Table 9.1 for description of priorities.

¹ Recommendation priority guidelines specified in the HSRC Guidance Document (MEM 2016) and provided in Table 9.1.

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CLARIFICATIONS REGARDING THIS REPORT

This report is an instrument of service of Klohn Crippen Berger Ltd. (KCB). The report has been prepared for the exclusive use of Teck Coal Limited (Teck) and the applicable regulatory authorities for the specific application to the West Fork Tailings Facility (WFTF), and Lagoons A, B, C, and D Annual Facility Performance Review, and it may not be relied upon by any other party without KCB's written consent.

KCB has prepared this report in a manner consistent with the level of care, skill and diligence ordinarily provided by members of the same profession for projects of a similar nature at the time and place the services were rendered. KCB makes no warranty, express or implied.

Use of or reliance upon this instrument of service by the Client is subject to the following conditions:

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2. The Executive Summary is a selection of key elements of the report. It does not include details needed for the proper application of the findings and recommendations in the report.
3. The observations, findings and conclusions in this report are based on observed factual data and conditions that existed at the time of the work and should not be relied upon to precisely represent conditions at any other time.
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1 INTRODUCTION

1.1 General

Klohn Crippen Berger Ltd. (KCB) was engaged by Teck Coal Limited (Teck) to prepare the 2022 Annual Facility Performance Report (AFPR) for the West Fork Tailings Facility (WFTF) and the Lagoon Tailings Area (Lagoons A, B, C, and D) at the Elkview Operations (EVO) site. The 2022 AFPR includes a review of facility performance and available monitoring data from November 2021 to September 2022, herein referred to as the reporting period. The Health, Safety and Reclamation Code (HSRC) for Mines in British Columbia, by the British Columbia Ministry of Energy, Mines and Low Carbon Innovation (EMLI 2022) was considered for the AFPR.

The site visit for the WFTF and Lagoons A, B, C, and D was conducted on September 20 and 21, 2022, by Mr. Michael Tin, P.Eng., and Mr. Justin Kelly, EIT, of KCB. The previous site visit for these structures was conducted from September 15 to 16, 2021, by Mr. Andy Small, P.Eng., Mr. Dan Hughes-Games, P.Eng., and Mr. Tin, of KCB.

This report is organized as follows:

- Section 2: overview of the project background and facility description as it relates to the AFPR;
- Section 3: summary of activities since the last AFPR;
- Section 4: review of 2022 AFPR observations;
- Section 5: summary of 2022 climate aspects;
- Section 6: summary of water management aspects;
- Section 7: review of monitoring records;
- Section 8: review of documentation and relevant failure modes to support the facility safety assessment; and
- Section 9: recommendations for ongoing operations, maintenance, and surveillance of the facilities.

1.2 Engineer of Record and Tailings Storage Facility Qualified Person

Mr. Andy Small, P.Eng., as a representative of KCB, is the Engineer of Record (EoR) for the EVO tailings storage facilities (TSF), including the WFTF, and Lagoons A, B, C, and D. He has filled the role since 2014 while working with Wood PLC (previously Amec Foster Wheeler). Mr. Small joined KCB in August 2018 and has continued to provide support as the EoR for the EVO TSFs. He visited the site once in 2022 shortly after the AFPR site visit and supervised the preparation of this report.

Mr. Patrick Green, P.Eng., of EVO, is the TSF Qualified Person at the site (beginning in June 2021), as defined by the HSRC (EMLI 2022).

1.3 Consequence of Failure Framework

Teck has advised that it is aligned with the most conservative interpretation of the GISTM which, in turn, is consistent with Teck's safety culture. Commensurately, Teck has advised that consequence classification is not a part of its tailings management governance going forward and has indicated to EMLI in the 2021 AFPR that Teck will not be reporting the dam classifications in the AFPR. Instead, Teck intends to adopt the extreme consequence case design loading for any facility with a credible flow failure mode. For facilities without a credible failure mode in terms of a life safety issue, Teck will reduce credible risks to As-Low-As-Reasonably-Practicable (ALARP).

2 BACKGROUND

2.1 General

The EVO coal mine site is located approximately 3 km east of the town of Sparwood, in southeastern British Columbia. Underground coal mining at the site began in the late 1890s, with open pit mining operating since 1969. The site comprises a wash plant that processes the coal and creates the tailings that are stored in the following key tailings management facilities:

- West Fork Tailings Facility (WTF);
- Lagoon Tailings Area (Lagoons A, B, C, and D); and
- Coarse Coal Refuse (CCR) Dump.

The focus of this report is on the fine tailings facilities: WTF and Lagoons A, B, C, and D. These facilities are described in the following section.

2.2 Description of Facilities

2.2.1 West Fork Tailings Facility (WTF)

The WTF is an active TSF and was commissioned in 2006 with the purpose of serving as the primary fine tailings storage facility at EVO. The facility is located on the eastern perimeter of the EVO site, approximately 1 km east the Adit Pit. The location of the WTF is presented in Figure 2.1. The facility is confined by the Adit Waste Dump, West Fork/Cowboy Dump, Adit Ridge, and Cowboy Ridge. The TSF embankment overlies the West Fork/Cowboy Dump. Limited information is available on the surficial soils within the vicinity of the WTF, however previous studies suggest that the natural stratigraphy in the area comprised bare rock surfaces, colluvial fans, and mass-wasting debris (SRK 2019).

The Adit Filter Berm separates the WTF tailings surface from the Adit Waste Dump, with a design intent to limit tailings migration in the dump.

Fine refuse material is deposited into the WTF via a single discharge point, which is periodically moved along the embankment. The tailings deposition plan is designed to keep ponded water at the northern extent of the WTF, away from the embankment. The tailings surface elevation within the WTF typically rises at an approximate rate of 2 m to 4 m per year, depending on the production rate of fine tailings from the Wash Plant and on deposition locations.

The WTF embankment will require progressive raises as the tailings level increases. The WTF South Embankment crest was raised to a minimum of El. 1689.8 m during the 2022 construction campaign from June 8, 2022 to September 25, 2022.

General information about the WTF and the current configuration for the WTF is presented in Table 2.1.

Table 2.1 WFTF General Information and Configuration

Key Parameters	WFTF
Raise Method	Downstream
Minimum Crest Elevation ⁽¹⁾	1,689.8 m
Maximum Embankment Height	27 m
Maximum Impoundment Depth ⁽²⁾	90 m
Approximate Footprint	42.0 ha
Crest Length	634 m
Crest Width	40 m
Overall Downstream Slope	2.5H:1V
Overall Upstream Slope	2.5H:1V
Estimated Impounded Tailings Volume	11,552,600 m ³
Estimated Impounded Water Volume	300,000 m ³
Normal Operational Tailings Deposition Rate	6,500 m ³ /day
Tailings Deposition for the Reporting Period ⁽³⁾	974,600 m ³
Inflow Design Flood (IDF)	1/3 between 1,000 AEP and PMF
Earthquake Design Ground Motion (EDGM)	1/10,000 AEP
Adit Filter Berm	
Elevation	1,677.5 m
Side Slope	1.3H:1V
Typical Width	8 m

Source: Elkview Operations – 2018 TSF Dam Safety Review (SRK 2019), 2019 Adit Toe Berm IFC Drawings (KCB 2019), 2022 data (EVO 2022).

- Notes:
1. Minimum crest elevation achieved during the 2022 WFTF South Embankment raise construction campaign.
 2. Maximum impoundment depth estimated from WFTF crest elevation to lowest elevation of tailings placement.
 3. Tailings deposition quantity is approximate only. Based on tonnage values reported by EVO, and an assumed density of 0.95 t/m³.
 4. AEP is Annual Exceedance Probability. PMF is Probable Maximum Flood.



LEGEND

- CREEK
- - - TAILINGS FACILITY

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NOTES:
 1. DATUM, PROJECTION:
 EVO MINEGRID,
 2. NORTH ARROW ORIENTATED
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PROJECT

**TECK ELKVIEW OPERATIONS
2022 ANNUAL FACILITY PERFORMANCE REPORT**

TITLE

**WEST FORK TAILINGS FACILITY
PLAN LAYOUT**

SCALE	PROJECT No.	FIG No.
1:7,500	M09963A29	2.1

2.2.2 Lagoon Tailings Area

The Lagoon Tailings Area, comprising Lagoons A, B, C, and D is located on the western perimeter of the EVO site, immediately west of the Wash Plant. The location of the lagoon tailings facilities is presented in Figure 2.2. Lagoons A, B, and C do not receive new tailings. Lagoon D is occasionally used for tailings storage when needed (e.g., when the pump and tailings line to WFTF are down for maintenance). Lagoon B receives occasional overflow process water from the Wash Plant. Lagoon C occasionally receives sediment as part of routine maintenance of several sedimentation ponds' sumps. The general information and configuration for these facilities is presented in Table 2.2, with additional details provided in the following sections. The design criteria for each facility are summarized in their respective Operations, Maintenance, and Surveillance (OMS) Manuals.

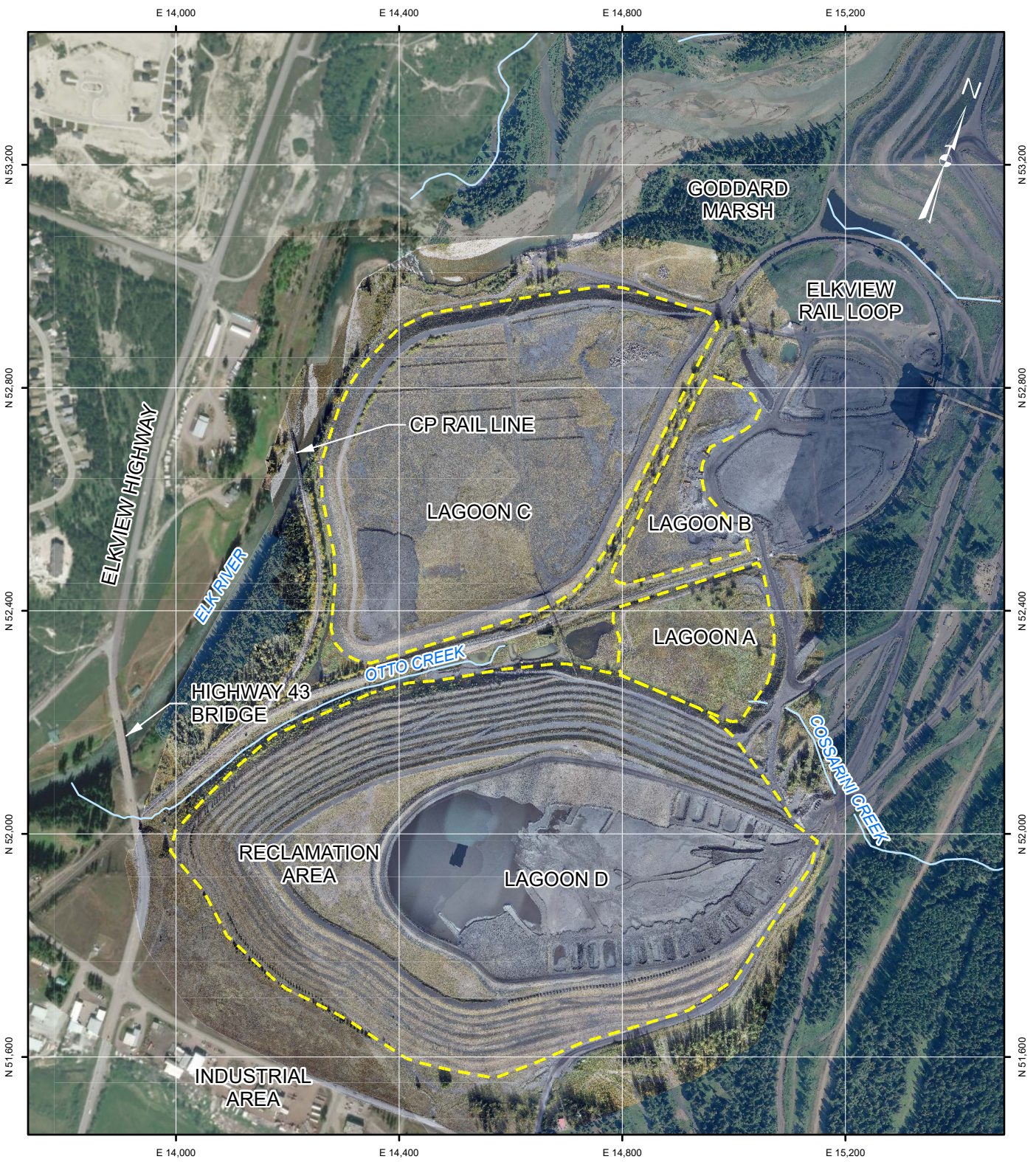
Lagoons A, B, C, and D have been constructed on the Elk River floodplain. A review of the Elk Valley late Quaternary geology and geomorphology indicated this area was previously covered by a glacial lake that deposited glaciolacustrine silts and clays along with areas of alluvial sediments (SRK 2019).

Table 2.2 Lagoons Tailings Area General Information and Configuration

Key Parameters	Lagoon A	Lagoon B	Lagoon C	Lagoon D
Tailings Deposition for the Reporting Period (m ³) ⁽¹⁾	None	None	None	10,700
Impounded Tailings Volume (m ³)	185,000	295,000	4,658,600	22,784,700 ⁽²⁾
Maximum Operating Pond Volume (m ³)	550	0	18,000	288,000
Approximate Footprint (ha)	6	4	33	61
Crest Length (m)	1,100	800	2,000	2,226
Crest Width (m)	6	6	6	6 to 10
Minimum Crest Elevation (m)	1119.0	1118.2	1129.3	1167.9 (west) ⁽³⁾ 1172.0 (east)
Maximum Embankment Height (m)	4	4	19	59
Raise Method	No raises	No raises	Upstream (east) Downstream (north, west, south)	Upstream
Overall Downstream Slope	1.8H:1V	1.75H:1V	1.75H:1V	2.7H:1V to 3.4H:1V
Inter-berm Side Slope	N/A	N/A	N/A	2H:1V (typical)
Spillway Elevation (El. m)	1118.3	N/A	N/A	N/A
Spillway Width (m)	5	N/A	N/A	N/A
Inflow Design Flood (IDF)	1/200 AEP	1/200 AEP	1/3 between 1/1,000 AEP and PMF	PMF
Earthquake Design Ground Motion (EDGM)	1/2,475 AEP	1/2,475 AEP	1/2,475 AEP	1/5,000 AEP

Source: Elkview Operations – 2018 TSF Dam Safety Review (SRK 2019) and 2022 data (EVO, 2022).

- Notes:
1. Tailings deposition quantity is approximate only. Based on tonnage values reported by EVO.
 2. Tailings volume deposited is approximate. Based on an assumed density of 0.95 t/m³.
 3. Lagoon D nominal crest elevation is 1168 m, with a minimum crest elevation of 1167.9 m measured at a low spot.
 4. AEP is Annual Exceedance Probability. PMF is Probable Maximum Flood.



LEGEND

- CREEK
- LAGOON
- BOUNDARY

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PROJECT TECK ELKVIEW OPERATIONS 2022 ANNUAL FACILITY PERFORMANCE REPORT	
TITLE LAGOON TAILINGS AREA PLAN LAYOUT	
SCALE 1:10,000	PROJECT No. M09963A29
	FIG No. 2.2

Lagoon A

Lagoon A is an inactive TSF that was used during the mine start-up period in the 1960s. Lagoon A is in the “active care” phase of closure.

The facility is impounded by embankments approximately 4 m in height at the north and west perimeter, by natural ground on the eastern perimeter, and by the north side of Lagoon D on the south perimeter. Construction records for Lagoon A are not available; however, site investigations indicate the starter embankment was primarily constructed using silty sand or sand and gravel (glacial till) materials.

The foundation is comprised of fluvial gravels, sands, and sandy silts overlying coarse-grained gravelly sand (glacial till) on the eastern portion of the foundation and glaciolacustrine clay on the western portion of the foundation.

Water from Cossarini Creek flows directly through Lagoon A and discharges out of a spillway at the western perimeter of the facility into a series of check dam ponds (Otto Ponds).

Lagoon B

Lagoon B is an active TSF and was used for initial tailings storage at the commencement of mining and processing in the 1960s. Lagoon B is considered an active facility because it receives emergency overflow process water from the Wash Plant when required. EVO have limited the quantity of plant water discharge to Lagoon B and direct process water through a series of sumps excavated within the Lagoon B tailings, i.e., a general pond does not form. Water within these sumps infiltrates through the tailings into the foundation soils.

Similar to Lagoon A, the tailings are impounded by 4 m high embankments to the west and south, coal stockpiles to the north, and natural ground to the east. Construction records are not available for Lagoon B; however, site investigations indicate the starter embankment was primarily constructed using silty sand or sand and gravel (glacial till) materials. The foundation is comprised of fluvial sands and gravels overlying glaciolacustrine clays interbedded with glaciofluvial sands and gravels. There is a low area on the west side of the lagoon that can act as a spillway, but it is not well protected against erosion.

Lagoon B has sufficient capacity to store the 24-hour duration event, 1/3 between 1:975-year and the Probable Maximum Precipitation (PMP) (Wood 2019). A spillway exists on the west side of the facility, but it is not well built and should not be relied upon to convey a flood flow.

Lagoon C

Lagoon C is an inactive TSF and was operated from 1970 to 1996, with tailings deposition ceasing in 1987. From 1987 to 1996, Lagoon C was used to retain temporary excess decant water from Lagoon D. Lagoon C is used to store sediments excavated as part of routine maintenance from several sedimentation ponds and sumps.

The starter embankment was constructed in 1970 using sand and gravel fill, with two subsequent raises completed in 1985 and 1986 using CCR. The upstream raise method was utilised on the eastern embankment due to site infrastructure constraints, while the north, south, and west embankments were raised using the downstream method. The foundation is comprised of fluvial sands and gravels, overlying glaciolacustrine clays and silts, overlying glaciofluvial sands and gravels interbedded with glaciolacustrine clays and silts. On the western portion of Lagoon C, there is limited clays and silts, with the sand a gravel deposit overlying bedrock that is elevated and exposed along the Elk River bank.

Additional infrastructure at Lagoon C includes:

- an out-of-service tailings pipeline used to decant water from Lagoon D to Lagoon C;
- wind fencing historically used to manage dust;
- power line infrastructure along the western embankment crest, and
- a natural gas pipeline buried adjacent to the embankment toe at the western perimeter.

There is no spillway for Lagoon C. Water that accumulates in the facility from precipitation exfiltrates to the foundation as seepage.

Lagoon C was designed to accommodate a 72-hour duration flood with the magnitude of 1/3 between the 1/1,000 annual exceedance probability (AEP) and the PMF (the IDF for the facility). However, due to the low spot in the crest at the trestle, the storage capacity is reduced to contain a 24-hour duration flood with a magnitude of 1/3 between the 1/1,000 AEP and the PMF.

Lagoon D

Lagoon D is an active ring-dyke TSF with tailings deposition commencing in the early 1970s. Since the commissioning of the WFTF in 2006, Lagoon D has become the secondary tailings storage location, with approximately 1% of fine tailings deposited in Lagoon D in the reporting period.

Since 2005, tailings have been deposited into shallow cells on the northeastern and southeastern perimeter of the ring-dyke. The cells vary in length and width; however, typical cell dimensions are 60 m long x 15 m wide, with cell depths ranging from 1.8 m to 4.1 m. This tailings management system enables faster consolidation of the tailings in individual cells while allowing bleed water to drain towards the centre of Lagoon D via solid pipes. Tailings from the cells are then excavated and placed on the Reclamation Area at the western portion of the facility.

The ring-dyke starter embankment was constructed in 1972 using locally borrowed sand and gravel. The north, south, and west perimeter of the facility was then raised using CCR by the upstream method. The eastern perimeter is confined by the natural hillside. The foundation is comprised of fluvial sands and gravels, overlying glaciolacustrine clays and silts, overlying glaciofluvial sands and gravels interbedded with glaciolacustrine clays and silts.

In 2018, the crest elevation of the active deposition area of Lagoon D was raised to El. 1,168 m to provide additional storage for water during flood events. Along the north and south sides of

Lagoon D, the embankment raise varied in height from 0 m to 2 m. The Inner Ring Road was raised 2 m.

There is no spillway for Lagoon D. Water that accumulates in the facility from precipitation and the Wash Plant exfiltrates to the foundation as seepage.

Lagoon D has sufficient capacity to effectively manage the pond and contain the 72-hour probable maximum precipitation (PMP) without a spillway. Water from the pond can also be pumped to and from the Wash Plant.

3 FACILITY ACTIVITIES IN 2022

The following operational and construction activities for the TSFs were undertaken between November 2021 and September 2022. A common activity for all TSFs was the completion of a site-wide LiDAR survey by EVO in August 2022.

3.1 WFTF

- The tailings elevation adjacent to the embankment was increased approximately 3 m on the western and central portion of the storage, and the beach elevation ranges from El. 1,678.0 m at the western portion of the beach to El. 1,675.4 m at the eastern portion of the beach. The rate of rise across the tailings beach is typical for the WFTF. The tailings elevation is surveyed at approximately three-month intervals.
- At the end of the WFTF South Embankment 2021 construction campaign, the WFTF embankment was raised to a minimum crest elevation of 1683.5 m and 1682.7 m for the general fill and upstream filter zones, respectively. The WFTF South Embankment 2022 raise to El. 1685.7 m commenced on June 6, 2022. Following completion of construction to El. 1685.7 m ahead of schedule, EVO continued to raise the WFTF South Embankment to approximately El. 1690 m, with construction ending on September 25, 2022. The general fill embankment zone was raised to a minimum crest elevation of 1689.8 m and the upstream filter zone was constructed to a minimum elevation of 1690.0 m. The remainder of the general fill embankment zone did not get completed to elevation 1690.0 m due to timing constraints and will be completed during the next scheduled embankment lift. The constructed storage capacity was assessed by EVO as being sufficient for projected deposition to Q1 of 2026.

3.2 Lagoon A

- No activities for Lagoon A took place in 2022.

3.3 Lagoon B

- Routine discharge of Wash Plant washdown water to excavated cells within the tailings at the southeast corner of Lagoon B continued through the reporting period. There were eight discharges into Lagoon B during the reporting period:
 - ◆ November 9, 2021
 - ◆ January 12, 2022
 - ◆ February 9, 2022
 - ◆ April 22 – May 3, 2022
 - ◆ June 29 – August 1, 2022
 - ◆ August 3, 2022
 - ◆ September 1, 2022
 - ◆ September 26, 2022

- A portion of the embankment on the northwest side of the facility was excavated prior to 2021 and identified during the 2021 AFPR. The edge of the excavation created an approximately 4 m high unsupported cut slope in the embankment. The cut was re-sloped by EVO in 2022 to approximately 2.9H:1V using the exposed unsaturated tailings. The shallow tailings slope appears stable and is no longer a concern to the facility.

3.4 Lagoon C

- Sediment excavated from several sumps and sedimentation ponds at the EVO site were placed, spread, and tracked-packed with a dozer along the southwest corner of Lagoon C. This is expected to continue as a routine operation to effectively maintain site sedimentation ponds and sumps. Approximately 9,600 m³ of material was placed on Lagoon C during the reporting period.

3.5 Lagoon D

- Intermittent deposition totalling approximately 10,700 m³ of tailings occurred at the Lagoon D cells throughout the reporting period (based on tonnage values reported by EVO and an assumed density of 0.95 tonnes/m³).
- Three deposition cells on the southwest corner of Lagoon D were reclaimed during the reporting period.

4 SITE OBSERVATIONS / RESULTS OF SITE VISIT

The site visit conducted by Mr. Tin and Mr. Kelly included observing the condition of the facilities to identify deficiencies and other potential concerns regarding the geotechnical stability of the landforms. There were no concerns related to water management. No signs of structural distress were observed for the facilities along their crest, upstream beach, downstream slope, abutments, and toe areas during the site visit.

Site visit checklist forms and selected photographs of the facilities are presented in Appendices I and II, respectively.

A list of notable observations is included in Table 4.1. Only observations that are of specific interest are included. The table indicates whether the observations are new and whether there is a possible dam safety concern to the facility that should be addressed. Comments and recommendations arising from notable observations are summarized in Section 9.

Table 4.1 List of Notable Observations

No.	Notable Observations	Change from 2021 AFPR?	Dam Safety Concern?	Photo Reference
WFTF				
WFTF-1	There were no observations of surface fine tailings migration into the abutments of the WFTF embankment. The subsidence of the tailings beach observed during the 2021 AFPR site visit around the 2013 raise area and along a portion of the Adit Filter Berm was not observed during the 2022 AFPR site visit.	No	No	IW-4, IW-7, IW-8
WFTF-2	An incised concavity was observed within the tailings along the eastern extent of the beach. The depression lies approximately 60 m from the embankment and adjoins with the natural hillside of Cowboy Ridge.	Yes	Possibly	IW-17, IW-18
Lagoon A				
N/A	No notable observations for the 2022 period.	N/A	N/A	N/A
Lagoon B				
LB-1	A minor erosion gully was observed at the southwest downstream slope of Lagoon B. The surface erosion is minor and does not appear to be eroding further.	No	No	N/A
LB-2	A portion of the embankment on the northwest side of the facility was previously excavated in 2021, creating an unsupported slope of exposed tailings. Resloping was completed in 2022 to approximately 2.9H:1V using the exposed unsaturated tailings. The shallow tailings slope appears stable and is no longer a concern to the facility.	Yes (feature may have existed in 2020 as well)	No	IB-7, IB-8

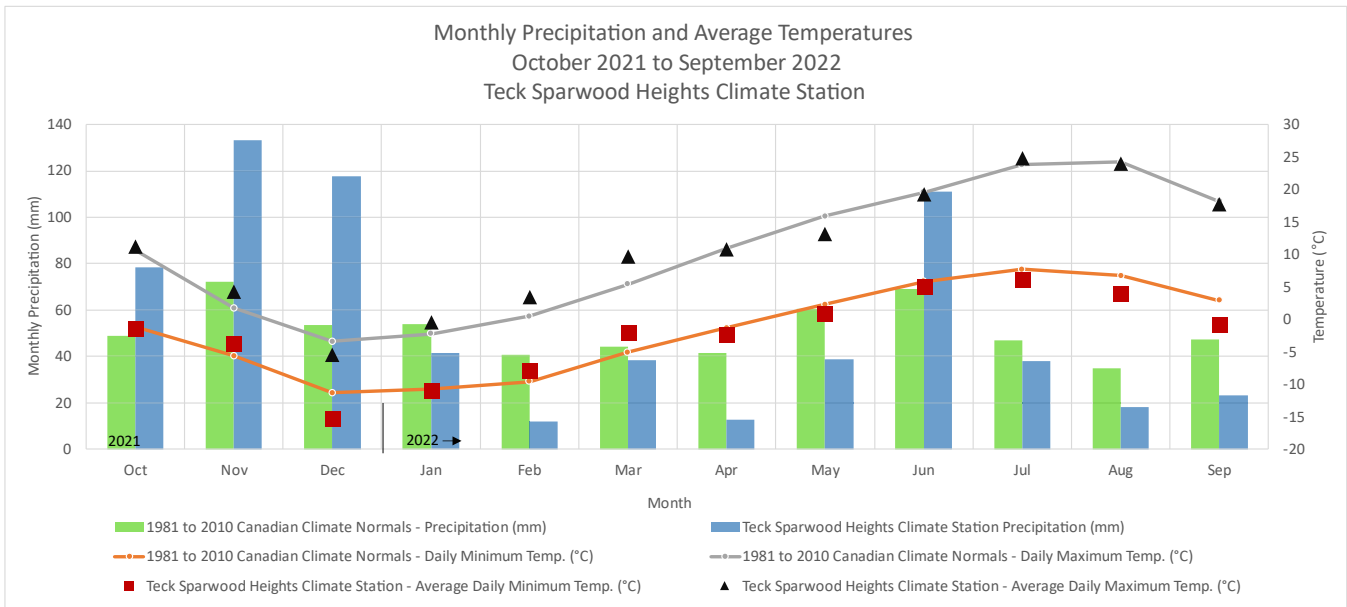
No.	Notable Observations	Change from 2021 AFPR?	Dam Safety Concern?	Photo Reference
Lagoon C				
LC-1	A local low spot on the crest near the trestle remains. Survey has previously confirmed the low spot elevation is El. 1126.6 m.	No	Yes	IC-9
LC-2	Erosion on the upstream side of the crest was observed at the north section of the Lagoon near the pumphouse. It is not expected that this erosion could propagate through the crest of the embankment and therefore is not an embankment safety concern.	No	No	IC-10
Lagoon D				
LD-1	Minor gully erosion of the downstream slope was observed at several locations along the Lagoon D embankment.	No	No	ID-15
LD-2	Minor erosion was observed along the south embankment crest, opposite the embankment crest road from tailings cell S-12. The erosion is likely from precipitation runoff.	Yes	No	ID-16

5 CLIMATE

Figure 5.1 presents the climate averages for Sparwood based on the Teck Sparwood Heights climate station. The Teck Sparwood Heights climate station data was used for this reporting period. The total recorded precipitation from October 2021 to September 2022 was approximately 664 mm, compared to the average annual precipitation at Sparwood of 614 mm (based on Environment Canada Sparwood climate normal from 1981 to 2010).

Precipitation during October 2021, November 2021, December 2021, and June 2022 was higher than the 1981-2010 Canadian climate normal for Sparwood. The precipitation for the reporting period has generally been lower during the remaining months in comparison the 1981-2010 Canadian climate normal for Sparwood. KCB is not aware of any instances of decreased facility performance during the high precipitation months.

Figure 5.1 Climate Averages for Sparwood



Note: 1. Source: Environment Canada Sparwood Climate Normals (1981 to 2010) (Climate ID 1157630; El. 1138 m), and EVO Sparwood Heights Climate Station (El. 1138 m).

6 WATER MANAGEMENT

The EVO Mine Water Management Plan was updated in June 2022 (Teck 2022a). A GoldSim water balance model review and update were previously completed by KCB for the 2021 hydrological year (KCB 2021b). The following sections summarize the water management strategies used at each facility.

6.1 WFTF

Tailings discharge into the facility is located along the WFTF embankment. The decant pond is subsequently formed at the northern portion of the impoundment, confined by the Adit Ridge and the Cowboy Ridge. The decant pond in the WFTF is not reclaimed and seeps into the tailings and adjacent waste rock dumps. The WFTF has sufficient freeboard to accommodate the 72-hour, 1/3 between the 1/1,000 AEP and PMF events (approximately equivalent to the 1/10,000 AEP event).

6.2 Lagoon A

Lagoon A does not receive any pumped tailings or water discharge from the Wash Plant, and rainfall typically infiltrates the tailings into the sand and gravel foundations, or ponds on the surface of the lagoon along with Cossarini Creek inflows and discharges through an open channel, riprap lined spillway. The spillway was designed to accommodate the 1/200 AEP event. Water at Lagoon A is managed passively by the spillway.

6.3 Lagoon B

On occasion, EVO pumps sediment-laden water from the Wash Plant to excavated cells within Lagoon B. As noted above, a spillway exists on the west side of the facility, but it does not have a defined channel or erosion protection and should not be relied upon to convey a flood flow. However, the facility can contain the 24-hr IDF. Pumped water and precipitation infiltrates through the tailings and into the natural ground surface. EVO uses the impoundment capacity of Lagoon B to receive overflow process water in emergency situations; Lagoon B was used for this purpose eight times during the reporting period (refer to Section 3.3).

6.4 Lagoon C

Lagoon C was designed to accommodate the 72-hour, 1/3 between the 1/1,000 AEP and PMF event (the IDF for the facility) while maintaining freeboard for wave runup. Lagoon C is utilized as a sediment disposal location for sediment excavated from various sumps and ponds.

Lagoon C does not have a spillway but has sufficient capacity to store the 24-hr IDF; however, due to the low spot in the crest at the trestle, it has less than the recommended freeboard during this event and would overtop at the low spot during the 72-hour IDF (KCB 2021c). Ponded water infiltrates through the tailings to the natural ground.

6.5 Lagoon D

Tailings deposition to Lagoon D is managed using shallow cells to enable faster consolidation of tailings, with bleed water draining towards the center of the structure via temporary solid pipes through the cell walls. As noted above, Lagoon D does not have an emergency spillway. The central decant pond is managed to maintain a 1.25 m minimum freeboard and 60 m wide beach relative to the ring-dyke embankments. The freeboard is measured with a staff gauge on the north side of the Inner Ring Road. Lagoon D can accommodate the 72-hour PMP event and the 30-day PMP event. Water from the decant pond can be transferred to the plant site by pumping.

6.6 Discharge Quantities and Quality

There is no surface water discharge from the tailings facilities, except for Cossarini Creek through Lagoon A.

EVO reports water quality data directly to the BC Ministry of Environment and Climate Change Strategy (BCECCS) under separate cover.

Seepage from the WFTF is expected to perch on shallow bedrock below the embankment and underlying waste dump, before travelling south through various waste dumps along the pre-mine Erickson Valley. Typically, the infiltration of rainfall or ponded water through the tailings occurs slowly, with no observed areas of seepage downstream of the WFTF embankment. KCB is not aware of any water quality exceedances related to the WFTF during the reporting period.

Rainfall infiltrating through the surface of the Lagoons typically drains to the ground surface level where it infiltrates into the underlying permeable foundation soils. The original ground comprises layers of sand and gravel, glaciolacustrine clay, and glacial till.

7 MONITORING AND INSTRUMENTATION REVIEW

The monitoring instrumentation for the TSFs comprises a network of VWP, standpipe piezometers, survey monuments, and inclinometers. Measurements are collected by the EVO Tailings Team, with the data evaluated against the Quantifiable Performance Objectives (QPOs) for the WFTF and Lagoon Tailings Area. The data is collected and reviewed by EVO, which advises KCB when there is an exceedance of a trigger level for the monitoring instruments.

The current monitoring program is considered sufficient to assess the performance of the facilities. During 2022, EVO documented the standards to be used for all tailings VWP calculations and corrections (Teck 2022b). The EVO Tailings Team also conducted a review and reconciliation of the instrumentation for the site in 2021.

A review of the monitoring and instrumentation data and procedures at site is presented below, with the location of each monitoring instrument and data shown in Appendix IV.

7.1 Piezometric Levels

7.1.1 WFTF

The WFTF was constructed using rock fill overlying a foundation consisting of an existing waste dump, which overlies natural ground understood to be mainly bedrock. Two groundwater monitoring wells were installed in the original West Fork Dump: WF-2 (South) and WF-3 (North). These instruments indicated piezometric levels in the foundation are considerably low and well beneath the base of the WFTF embankment. WF-3 (North), located on the crest of the WFTF South Embankment, was decommissioned during the 2022 construction campaign due to irregular and unreliable past VWP data.

Ten VWPs were installed in 2016 and 2017 at locations across the tailings deposition beach area. Since installation, eight instruments have consistently measured negative pore-water pressures, inferring a phreatic surface lower than the VWP tip elevations ranging from El. 1657.3 m to El. 1661.3 m. Only VWP 27171 and 29159 have recorded positive pore-pressures equivalent to a phreatic surface of approximately El. 1660.8 m and El. 1663.5 m, respectively. These two instruments are the most northeastern VWPs located on the beach and are near the pond under normal operating conditions (El. 1673.5 m in 2022).

7.1.2 Lagoon A

The two VWPs installed in Lagoon A indicate the phreatic surface elevation is at approximately El. 1115.4 m at the eastern extent of Lagoon A and El. 1114.6 m at the western extent. The phreatic surface elevation is approximately 1.5 to 2 m above the base of the tailings, equivalent to approximately 3.6 m below the embankment crest.

7.1.3 Lagoon B

There are no piezometers installed at Lagoon B. The pore pressures at the Lagoon B embankments are likely lower than Lagoon A since there is limited ponding in Lagoon B. Instrumentation monitoring has been considered unnecessary for Lagoon B due to the low consequence of failure.

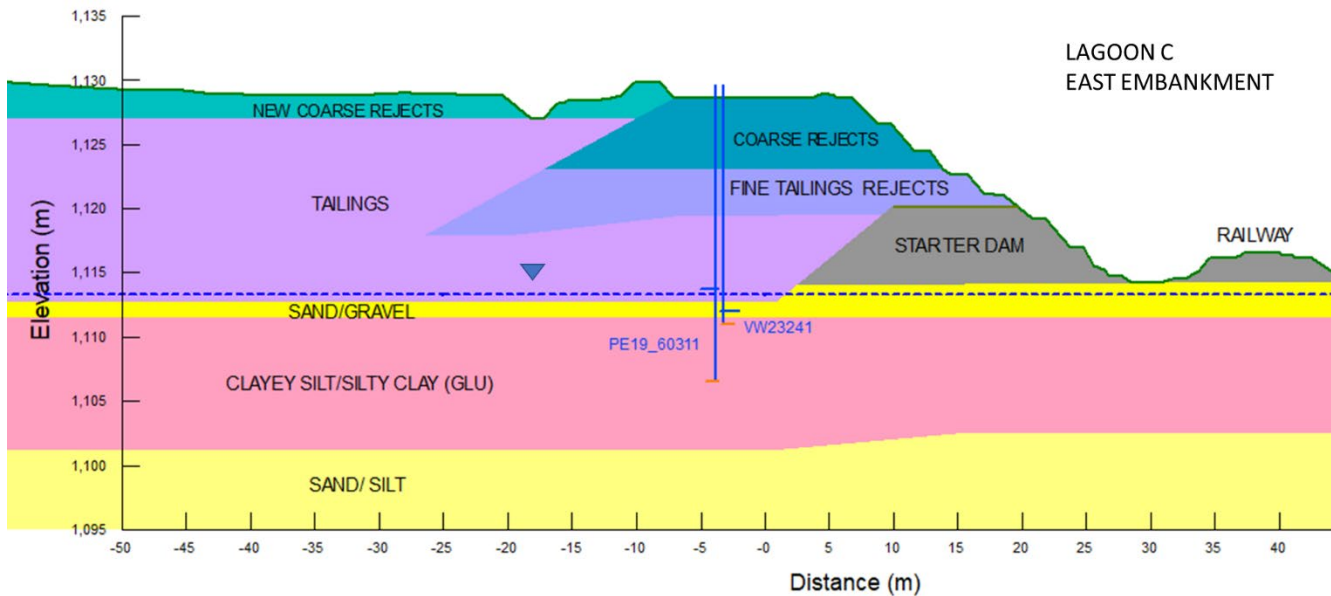
7.1.4 Lagoon C

The following instruments are used to interpret pore water pressure conditions of the Lagoon C embankments:

- 16 VVPs; and
- 6 standpipe piezometers.

Appendix IV presents the piezometer data for the reporting period and indicates that the porewater pressures within the Lagoon C embankments generally remain constant over the reporting period. These measurements are consistent with previous trends. The piezometric surface level ranges from El. 1109 m to El. 1114 m, and is generally near the base of the tailings or at the original ground surface level, as shown on the east embankment cross-section in Figure 7.1. The piezometers showed a peak water level during June, which likely correlates with an elevated Elk River water level during freshet.

Figure 7.1 Inferred Water Table of the Lagoon C East Embankment.



There were standpipe piezometers that were not read during the reporting period, either because they were scheduled to be decommissioned or because they are designated as backup instruments (only to be read when there is an alert level exceedance on another instrument). Additionally, there were VWPs that were not included in the instrumentation record because the data was determined to be erroneous and corrections to the data logging system and/or calibration of the instruments have not yet been completed (refer to Appendix IV).

7.1.5 Lagoon D

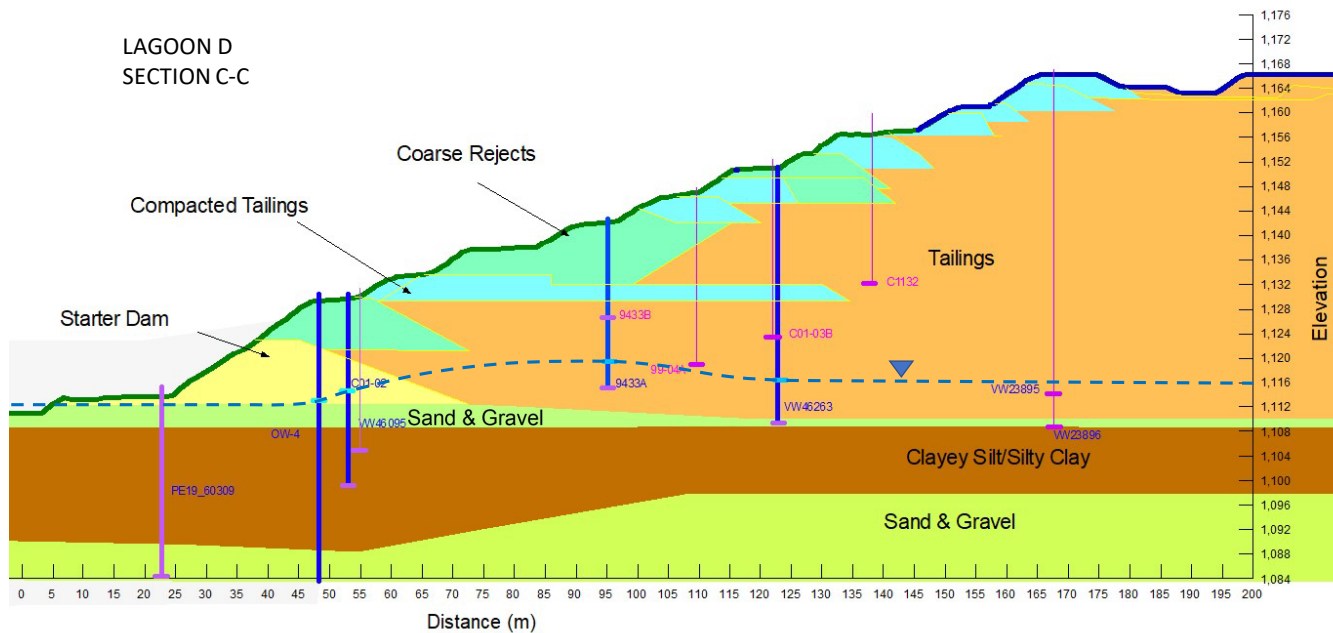
The following instruments are used to interpret pore water pressure conditions in the Lagoon D embankments:

- 25 VWPs (15 of which are read regularly); and
- 45 standpipe piezometers.

Appendix IV presents the piezometer data for the reporting period, which indicates that the porewater pressures within the Lagoon D embankments generally remain constant over the reporting period. These measurements are also consistent with previous trends. The phreatic surface level is generally measured between El. 1109 m to El. 1121 m, which is between approximately 3 m below the original ground surface level and to up to 10 m above the base of the tailings. The phreatic surface in the tailings is generally measured at approximately El. 1116 m. Piezometer levels measure up to 1121 m along the lower slope of a portion of the north embankment, suggesting a mounding of the phreatic surface from infiltration of precipitation (as shown on Figure 7.2). The mounding phreatic surface may be due to precipitation water accumulating in the coarse rejects and percolating downward through the compacted tailings. The cause of the mounding phreatic surface occurring over the current reporting period, as compared to the prior reporting periods, could be attributed to the higher-than-average precipitation during the month of June 2022. Hence, the piezometers in this area should be reviewed.

The facility piezometers generally indicate a downward gradient, suggesting drainage occurs through the gravel foundations below the Lagoon D embankment. This downward gradient has been observed since 2012.

Figure 7.2 Inferred Water Table of the Lagoon D North Embankment at Section C-C.



EVO’s reconciliation of operating instruments included an audit of several VWPs. Errors were found in the application of calibration constants for some instruments and, as a result, the measurements for some of these instruments appear to show an increase in the pore water pressures to previous reporting periods; however, the measurements are consistent with the historic data when that data is also corrected (refer to Appendix IV). There were some additional standpipe piezometers and VWPs that were not reported during the reporting period, because the data was determined to be erroneous and corrections to the data logging system and/or calibration of the instruments have not yet been completed.

7.2 Deformations

No significant movements or displacements were measured for Lagoons C and D during the reporting period, and there are no safety concerns for the facilities. A summary for each facility is presented below and instrumentation plots are provided in Appendix IV.

7.2.1 Lagoons A and B

There are no settlement or lateral movement monitoring instruments installed in Lagoons A or B. Routine inspections are adequate to monitor these facilities. No significant deformations have been observed during routine inspections.

7.2.2 Lagoon C

Eight survey monuments exist in four pairs at the embankment crest and toe along sections A-A, B-B, C-C, and D-D. Due to previous erroneous measurements and issues with survey accuracy, EVO discontinued reading the survey monuments and no measurements were taken during the reporting period.

7.2.3 Lagoon D

Five inclinometers are installed in Lagoon D (North “LD_N”, South “LD_S”, BH-D-19-02, BH-D-19-03 and BH-D-19-06). LD_N and LD_S have been monitored periodically since the first quarter of 2013 and LD_N was transitioned to an automated Shape Accelerometer Array system in June of 2019, which records weekly measurements. Inclinometers BH-D-19-02, BH-D-19-03, and BH-D-19-06 have been monitored since the second quarter of 2020. The inclinometers were most recently measured in July of 2022, except for BH-D-19-02 which was last measured in June 2021.

Displacements for Lagoon D inclinometers were consistent with previous trends and no significant discrete displacements or localized shear planes were recorded during the reporting period. Some inclinometer plots indicate local movement at the top of casing, which is common for slope inclinometer casings and represents disturbance due to frost action or other forces and is not a concern. The observed deformation trends are consistent with the Lagoon D tailings consolidating in three-dimensions under self-weight, with tailings at the top of casing settling towards the upstream direction.

Eight sets of survey monuments are installed along each section of Lagoon D for a total of 29 survey monuments (as shown in Appendix IV). But, due to previous erroneous measurements and issues with survey accuracy, EVO discontinued reading the survey monuments and no measurements were taken during the reporting period.

8 FACILITY SAFETY ASSESSMENT

The WFTF, and Lagoons A, B, C, and D, appeared to be in good physical condition with no signs of structural distress based on observations during the 2022 AFPR. The excavated/removed embankment at the north perimeter of Lagoon B that was identified during the 2021 AFPR was re-sloped in 2022 using the exposed tailings material. Tailings deposition to the Lagoon D south cells was observed during the AFPR site visit, and deposition was being operated in accordance with the procedures in the OMS Manual.

The following sections provide additional detail on specific facility safety categories and detail deficiencies where applicable.

8.1 Failure Modes Review

EVO reviews the risks associated with the WFTF and Lagoons annually. Discussion of the key failure modes is provided in the following sub-sections.

8.1.1 Definition of failure modes

A failure mode commences with an initiating event (trigger), which is a loading or physical condition that starts the failure process. The initiating event is followed by the failure progression, which is the mechanism that can lead to an impact of the facility (such as overtopping, instability, or internal erosion). Note that not all failure mechanisms will result in a breach of the embankment (a failure of the “embankment system”). The failure mechanism may become arrested or there may be interventions that prevent the failure mechanism from progressing to a breach.

A failure mode is the end state of failure where there is a loss of function; in this case, a breach of the embankment system and loss of tailings into the downstream environment.

8.1.2 Overtopping

WFTF

The 2022 AFPR site visit occurred shortly before the completion of the 2022 WFTF embankment raise to approximately El. 1690 m. The available freeboard during the 2022 AFPR site visit was approximately 13.2 m from the average tailings beach elevation to the minimum crest level (El. 1689.8 m), with an available impoundment capacity of approximately 4.7 Mm³, exceeding the 72-hr PMF volume of approximately 1.1 Mm³. Therefore, the failure mode via overtopping is effectively managed with the available impoundment capacity.

Lagoons A, B, C, and D

The passive water management strategy for Lagoons A, B, and C is to allow ponded water to infiltrate through the tailings and dissipate into the foundations. Lagoon D maintains an operational pond and is designed with adequate freeboard to meet the design criteria. The potential for overtopping for Lagoons A, B, C, and D is managed through appropriately designed impoundment capacity and

minimum freeboards. The freeboard and flood routing analyses completed for Lagoon B determined a sufficient capacity to store the 24-hour duration IDF event (Wood 2019).

A low spot in the Lagoon C crest continues to be observed below the decant tailings pipeline from Lagoon D. The low spot reduces the impoundment capacity volume to 79,000 m³ (without freeboard). This low spot has previously been recommended to be filled to El. 1128.5 m to accommodate the IDF and restore the recommended freeboard. EVO is in the process of addressing this recommendation.

8.1.3 Internal Erosion and Piping

WFTF

During the 2019 AFPR, tailings were observed to be migrating into the WFTF abutments where the 2013 embankment raise material may be too coarse (KCB 2020). This was not observed during the 2020 to 2022 AFPR site visits.

An incised concavity was observed during the 2022 AFPR within the tailings beach along the eastern extent of the facility, approximately 60 m from the south embankment and adjoining to Cowboy Ridge. The feature is likely the result of vertical migration of fine tailings into the WFTF foundation and/or the lower portion of the WFTF embankment. No signs of tailings migration have been observed by EVO within the downstream environment south of the WFTF.

The 2022 WFTF South Embankment raise was constructed to approximately El. 1690 m by October 2022 and includes a 5 m wide filter zone on the upstream side of the embankment to reduce the potential for tailings migration through the embankment. Tailings migration, if it were to occur through the embankment or abutments, does not pose a risk to facility safety for the WFTF.

Lagoons A, B, C, and D

Lagoons A, B, and C do not maintain ponds and have low piezometric pressures within the tailings and embankments. The conditions of the Lagoons remain relatively consistent, based on daily inspections by the EVO Road Crew and monthly inspections by the EVO Tailings Team. Given these observations and a lack of past issues, potential for failure due to internal erosion and piping is considered unlikely and is managed by the current surveillance program.

Lagoon D maintains an operational pond; however, monitoring instruments typically indicate a downward flow to the foundations. No piping of embankment or tailings material was observed during the 2022 AFPR site visit or routine inspections by EVO personnel. Piping erosion is not expected based on the groundwater flow pattern and filter compatibility between the tailings and the surrounding embankment fill materials.

Monitoring the embankment slopes and toes for seepage and erosion is part of the scheduled surveillance during routine inspections. The failure mode via piping and erosion is adequately managed by the current controls.

8.1.4 Slope Instability

No signs of slope instability were observed for the WFTF and Lagoons A, B, C, and D, during the 2022 AFPR site visit. Excavation of the Lagoon B north embankment occurred prior to the 2021 AFPR site visit, possibly as early as 2020. Remedial work was completed in 2022 to re-slope the embankment to approximately 2.9H:1V using the exposed unsaturated tailings. The shallow tailings slope appears stable and no longer a facility concern.

Based on previous geotechnical investigations, potential glaciolacustrine silty clay foundation units underlie portions of Lagoons A, B, C, and D. Stability analysis for these structures indicate that the structures have an acceptable FOS for relevant loading conditions.

The failure mode via slope instability is considered effectively managed with current design controls.

8.1.5 Surface Erosion

EVO personnel conduct routine inspections of the tailings facilities and monitor the downstream and upstream slopes for surface erosion caused by snowmelt or rainfall runoff. Erosion was observed on the surface of Lagoon C at a point near the pumphouse, which is not a facility safety concern but should be repaired as part of closure works. Minor gully surface erosion was also observed on Lagoon D at several downstream slope locations. The downstream minor erosion should be monitored, tracked, and repaired as needed. Minor erosion gullies were previously observed on the downstream slope of Lagoon B during the 2021 AFPR and no surface erosion was observed on Lagoon A.

The magnitude of surface erosion for the WFTF and Lagoons A, B, C, and D is not a concern to the safety of the embankments. EVO has been hydroseeding with a tackifier to control most of the erosion on the downstream slopes of the Lagoon structures.

The failure mode via surface erosion is effectively managed with the current controls.

8.1.6 Earthquake

The WFTF is not vulnerable to instability by seismic ground motions because the embankment was constructed using compacted, free-draining rockfill overlying bedrock foundations, and the seismic demand in the region is relatively low. The WFTF South Embankment was designed to accommodate a 1/10,000 AEP seismic event (KCB 2021). A 2016 seismic hazard analysis for the nearby Teck Fording River Operations, Greenhills Operations, and Coal Mountain Operations indicated the peak ground acceleration (PGA) for the 1/10,000 AEP is 0.3 g (Golder 2016).

Lagoons A and B are not vulnerable to seismic ground motions because of the low design seismicity and the relatively small height of the facilities (3 to 4 m embankment heights). EVO has adopted a 1/2,475 AEP seismic event for these structures.

Lagoons C and D have been designed to 1/2,475 AEP and 1/5,000 AEP seismic events, respectively, and the perimeter embankments have been assessed as being capable to withstand these seismic events.

The failure mode via an earthquake is considered managed by the configuration of the embankments.

8.2 OMS Manual and ERP

EVO has three separate OMS Manuals:

- Lagoons A, B and C;
- Lagoon D; and
- the WFTF.

All three OMS manuals were updated in January 2021. A subsequent update to the two Lagoons OMS manuals is expected to be issued in Q4 2022¹.

An Emergency Response Plan (ERP) was prepared for Lagoon D in October 2014 as a combined emergency preparedness plan and emergency response plan. The ERP was subjected to a tabletop test in 2018. An ERP was prepared for the WFTF in 2020 and is an adequate action plan in the event of an emergency at the WFTF.

A consolidated tailings ERP that includes Lagoons A, B, C, D and the WFTF is expected to be issued in Q4 2022².

8.3 Dam Safety Reviews

The last Dam Safety Review (DSR) completed for the EVO site was in 2018, which covered Lagoons A, B, C, and D and the WFTF (SRK 2019). DSRs are conducted at 5-year intervals and accordingly the next DSR is required in 2023 by the HSRC.

¹ Lagoons A, B and C Tailings Facilities OMS Manual and Lagoon D OMS Manual issued November 2022.

² Tailings & Water Storage Facilities ERP issued November 2022.

9 SUMMARY OF RECOMMENDATIONS

A summary of previous recommendations and recommendations from the 2022 AFPR are provided in Table 9.2. Recommendations are prioritized based on the framework recommended in the HSRC Guidance Document (MEM 2016), as shown in Table 9.1.

The action items in Table 9.2 are classified using the following terms, adapted from the BC Dam Safety Regulation Technical Resources (Gov. BC 2015) and the CDA Technical Bulletin: Dam Safety Reviews (CDA 2016):

- **Non-Conformance:** Defined as a deviation from established policies, procedures, operating instructions, maintenance requirements, or surveillance plans. A non-conformance is not an indication of unacceptable facility performance.
- **Potential Deficiency¹:** A facility performance condition that requires further evaluation to determine if the condition is a deficiency.
- **Actual Deficiency:** An unacceptable facility performance condition based on analysis results and/or site observations/instrumentation data with respect to criteria outlined in the HSRC (EMLI 2022), best practices, and/or applicable regulatory requirements.
- **Opportunity for Improvement:** Improvements to achieve good practices or reduce potential risk.

Table 9.1 Prioritization of Action Items (MEM 2016)

Priority	Description
1	A high probability or actual dam safety issues considered dangerous to life, health or the environment, or a significant risk of regulatory enforcement.
2	If not corrected, could likely result in dam safety issues leading to injury, environmental impact or significant regulatory enforcement; or, a repetitive deficiency that demonstrates a systematic breakdown of procedures.
3	Single occurrences of deficiencies or non-conformances that alone would not be expected to result in dam safety issues.
4	Best Management Practice – further improvements are necessary to meet best practices or reduce potential risks.

¹ Deficiency is defined as an inadequacy, or uncertainty in the adequacy, of the dam system to meet its performance goals in accordance with good dam safety practices (CDA 2016).

9.1 Summary of Previous and 2022 Recommendations

Outstanding recommendations related to previous AFPRs and additional recommendations arising from the 2022 AFPR for the EVO TSFs are presented in Table 9.2. Each recommendation is assigned a number with the prefix based on the year that item was recommended. Recommendations noted as completed or closed in this report are presented in gray and will be removed from the register in subsequent reports.

Table 9.2 Summary of Recommendations

Action ID	Facility	Deficiency or Non-Conformance	Applicable Regulation or OMS Manual Reference	Recommended Action	Priority	Status / Recommended Deadline
Previous Recommendations						
2019-01	Lagoon B	Potential Deficiency. Lagoon B does not meet regulatory compliance volume for flood storage.	HSRC 2022	Lagoon B can contain a 24-hour IDF event. But, the spillway cannot be relied upon, hence either the spillway should be upgraded or the facility should be modified to contain the 72-hour event that is 1/3 between the 1/1,000 year AEP and the PMP, per the HSRC.	3	Lagoon B was designed prior to contemporary regulations and can contain the 1:200 AEP IDF. EVO to review the requirement for this recommendation based on a risk assessment to be completed in 2023.
2021-01	Lagoon C	Actual Deficiency. The Lagoon C crest has a low spot at the trestle at approximately El. 1126.6 m.	N/A	The low spot should be filled to at least El. 1128.5 m to accommodate the IDF plus freeboard requirements.	2	Outstanding. To be completed in 2023.
2021-03	Lagoon C and D	Non-Conformance. Survey pins were not monitored during the 2020 to 2022 reporting period.	OMS Manual Section 6.4.4	Upgrade the surficial monitoring system to establish a means of observing surficial movement of the facility embankments.	3	Outstanding. EVO to review as part of risk assessment in 2023.
2021-02	Lagoon B	Potential Deficiency. The northern Lagoon B embankment was excavated by EVO personnel, exposing tailings.	N/A	The exposed tailings surface should be evaluated to determine whether remedial action is required.	3	Completed. Re-sloping of the embankment was done in 2022.
2022 Recommendations						
2022-01	WFTF	Potential Deficiency. An incised concavity is present on the eastern tailings beach, indicating tailings migration into the foundation and/or the lower WFTF embankment.	HSRC 2022	Continue monitoring the concavity for substantial enlargement. Monitor the downstream environment for signs of tailings migration. Provide monitoring data to the EoR as part of the annual facility assessments.	3	Re-evaluate need to monitor on an annual basis.

Notes: Recommendation priority guidelines specified in the HSRC Guidance Document (MEM 2016) and assigned by KCB. Refer Table 9.1 for description of priorities.

10 CLOSING

Based on the site visit observations and data reviewed, the WFTF and Lagoons A, B, C, and D, are in an adequate condition and they performed satisfactorily over the reporting period.

If you have any questions, please contact the undersigned.

KLOHN CRIPPEN BERGER LTD.

B.C. Permit to Practice No. 1000171

C.A. (Andy) Small, P.Eng.
Senior Geotechnical Engineer

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APPENDIX I

Site Visit Photographs

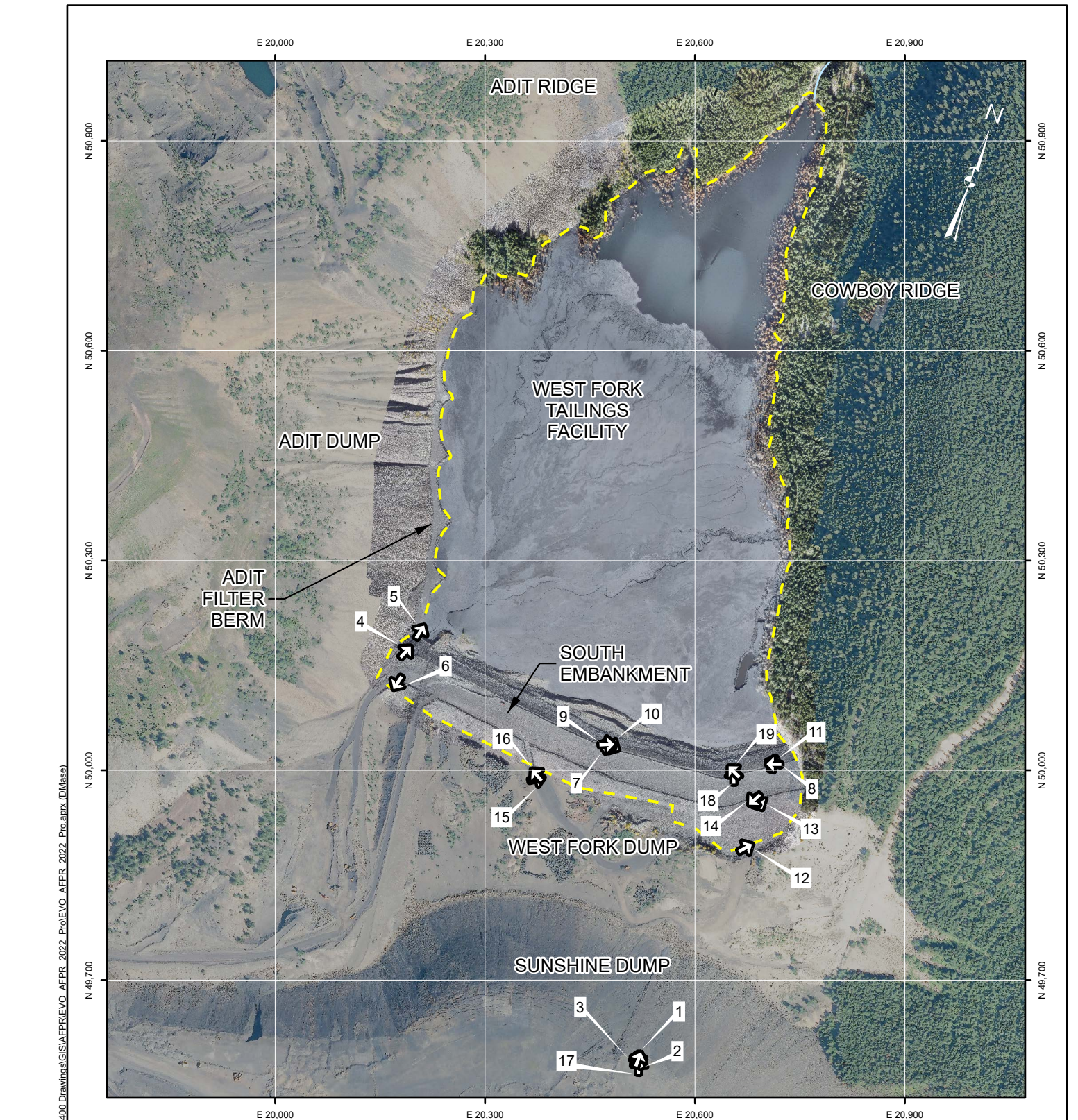
WFTF
Lagoon A
Lagoon B
Lagoon C
Lagoon D

Appendix I
Site Visit Photographs
(Taken on September 21 and 22, 2022 during annual site visit)

I-1.1 West Fork Tailings Facility (WTF)

The WTF photograph locations plan layout is presented on Figure I-1. The following general notes are applicable to the site visit photographs:

1. This appendix contains selected photos taken during the site visit, it does not include all of the photos that were taken.
2. The photo locations and direction taken are approximate only.



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LEGEND

- PHOTO LOCATIONS
- TAILINGS FACILITY

NOTES:
 1. DATUM, PROJECTION:
 EVO MINEGRID,
 2. NORTH ARROW ORIENTATED
 TO TRUE NORTH.
 3. IMAGERY FROM EVO
 (COLLECTED IN 2022)
 AND ESRI.

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: 2023-03-15



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PROJECT
 TECK ELKVIEW OPERATIONS
 2022 ANNUAL FACILITY PERFORMANCE REPORT

TITLE
 WEST FORK TAILINGS FACILITY
 PHOTOGRAPH LOCATIONS
 PLAN LAYOUT

SCALE 1:7,500	PROJECT No. M09963A29	FIG No. I-1
------------------	--------------------------	----------------

Photo IW-1 WFTF overview. (Looking north, from Sunshine Dump crest – Taken 21 September 2022)



Photo IW-2 WFTF south embankment and west abutment overview. Adit Filter Berm (AFB) in background. (Looking NW, from Sunshine Dump crest – Taken 21 September 2022)



Photo IW-3 WFTF south embankment and east abutment overview. (Looking NE, from Sunshine Dump crest – Taken 21 September 2022)



Photo IW-4 WFTF tailings beach, spigot, and WFTF embankment-AFB tie-in. (Looking NE – Taken 21 September 2022)



Photo IW-5 WFTF AFB. (Looking north – Taken 21 September 2022)



Photo IW-6 WFTF access roads and east embankment downstream slope. (Looking south – Taken 21 September 2022)



Photo IW-7 WFTF embankment tailings contact and typical upstream slope. (Looking east – Taken 21 September 2022)



Photo IW-8 WFTF embankment tailings contact and typical upstream slope. (Looking west – Taken 21 September 2022)



Photo IW-9 WFTF construction raise progress. (Looking west – Taken 21 September 2022)



Photo IW-10 WFTF crest typical condition. (Looking SE – Taken 21 September 2022)



Photo IW-11 WFTF upstream slope at east abutment. (Looking west – Taken 21 September 2022)



Photo IW-12 WFTF downstream slope at east abutment. (Looking South – Taken 21 September 2022)



Photo IW-13 WFTF downstream conditions. (Looking south – Taken 21 September 2022)



Photo IW-14 WFTF downstream conditions. (Looking SW – Taken 21 September 2022)



Photo IW-15 WFTF typical downstream slope. (Looking NE – Taken 21 September 2022)



Photo IW-16 WFTF typical downstream slope. (Looking NW – Taken 21 September 2022)



Photo IW-17 WFTF receding incised channel. (Looking north, from Sunshine Dump crest – Taken 21 September 2022)



Photo IW-18 WFTF receding incised channel. (Looking north – Taken 21 September 2022)



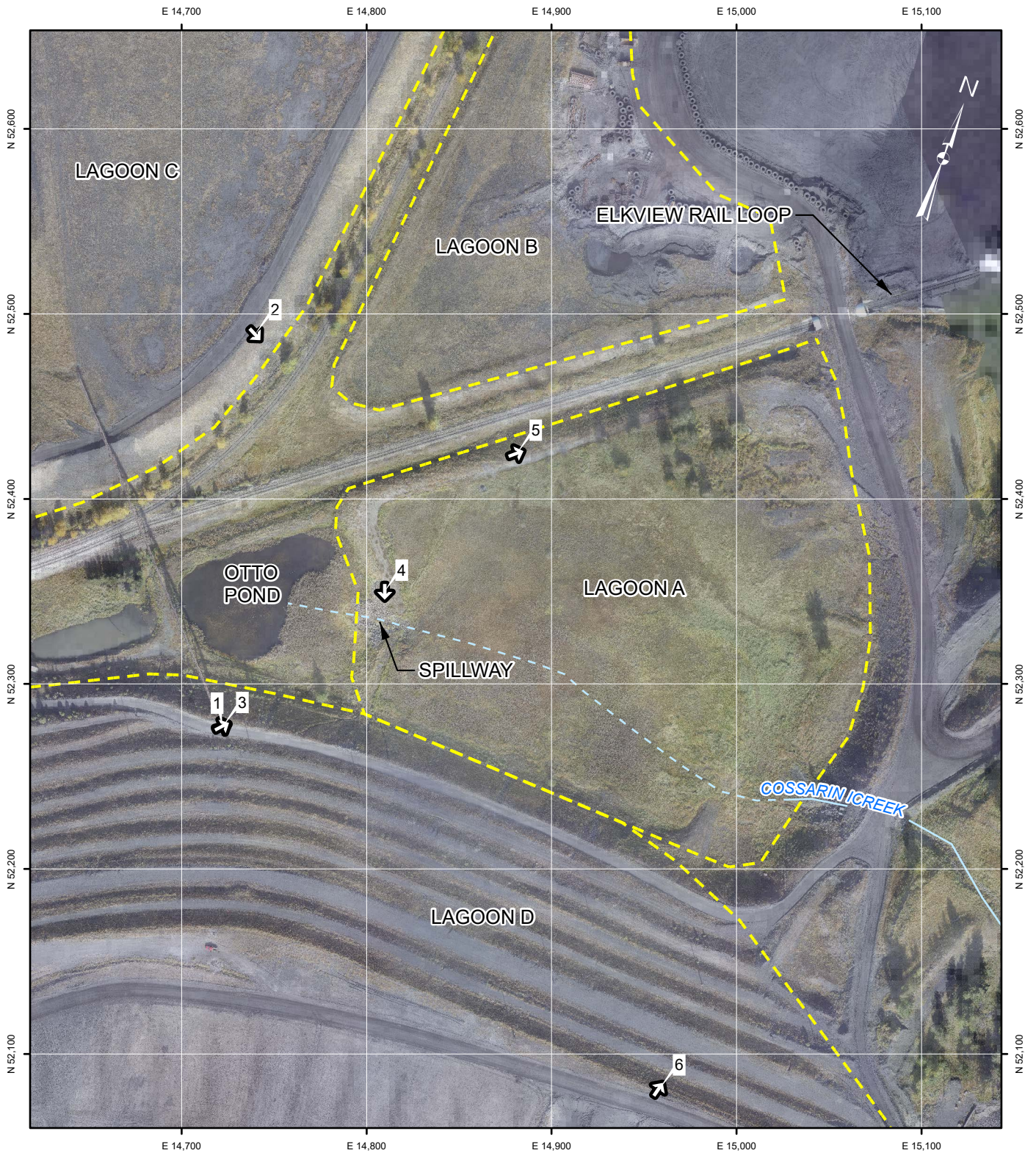
Photo IW-19 Adit Dump erosion above AFB. (Looking NW – Taken 21 September 2022)



I-1.2 Lagoon A

The Lagoon A photograph locations plan layout is presented on Figure I-2. The following general notes are applicable to the site visit photographs:

1. This appendix contains selected photos taken during the site visit, it does not include all of the photos that were taken.
2. The photo locations and direction taken are approximate only.



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LEGEND

- PHOTO LOCATION
- CREEK
- LAGOON BOUNDARY

NOTES:
 1. DATUM, PROJECTION: EVO MINEGRID.
 2. NORTH ARROW ORIENTATED TO TRUE NORTH.
 3. IMAGERY FROM EVO (COLLECTED IN 2022) AND ESRI.

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: 2023-03-15



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PROJECT
**TECK ELKVIEW OPERATIONS
 2022 ANNUAL FACILITY PERFORMANCE REPORT**

TITLE
**LAGOON A PHOTOGRAPH LOCATIONS
 PLAN LAYOUT**

SCALE 1:3,000	PROJECT No. M09963A29	FIG No. I-2
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Photo IA-1 Lagoon A general conditions and overview. (From Lagoon D, looking NE – Taken 20 September 2022)



Photo IA-2 Lagoon A general conditions and overview. (Looking SE, from Lagoon C crest – Taken 20 September 2022)



Photo IA-3 Lagoon A crest and spillway riprap. (From Lagoon D, looking NE – Taken 20 September 2022)



Photo IA-4 Lagoon A spillway and spillway riprap. (Looking south – Taken 20 September 2022)



Photo IA-5 Lagoon A crest typical conditions. (Looking NE – Taken 20 September 2022)



Photo IA-6 Cossarini Creek culvert outlets. (From Lagoon D, looking north – Taken 20 September 2022)



I-1.3 Lagoon B

The Lagoon B photograph locations plan layout is presented on Figure I-3. The following general notes are applicable to the site visit photographs:

1. This appendix contains selected photos taken during the site visit, it does not include all of the photos that were taken.
2. The photo locations and direction taken are approximate only.



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LEGEND

- PHOTO LOCATION
- LAGOON BOUNDARY

NOTES:
 1. DATUM, PROJECTION:
 EVO MINEGRID.
 2. NORTH ARROW ORIENTATED
 TO TRUE NORTH.
 3. IMAGERY FROM EVO
 (COLLECTED IN 2022)
 AND ESRI.

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: 2023-03-15



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CLIENT

PROJECT TECK ELKVIEW OPERATIONS 2022 ANNUAL FACILITY PERFORMANCE REPORT	
TITLE LAGOON B PHOTOGRAPH LOCATIONS PLAN LAYOUT	
SCALE 1:2,500	PROJECT No. M09963A29
	FIG No. I-3

Photo IB-1 Lagoon B overview. (Looking SE, from Coarse Coal Refuse (CCR) Dump crest – Taken 20 September 2021)



Photo IB-2 Lagoon B sump. (Looking SW – Taken 20 September 2022)



Photo IB-3 Lagoon B crest typical condition. (Looking SW – Taken 20 September 2022)



Photo IB-4 Lagoon B crest typical condition. (Looking north – Taken 20 September 2022)



Photo IB-5 Lagoon B crest and surface typical conditions. (Looking SE, from Lagoon C crest – Taken 20 September 2022)



Photo IB-6 Lagoon B crest and embankment. (Looking west – Taken 20 September 2022)



Photo IB-7 Lagoon B embankment resloping. (Looking NW – Taken 20 September 2022)



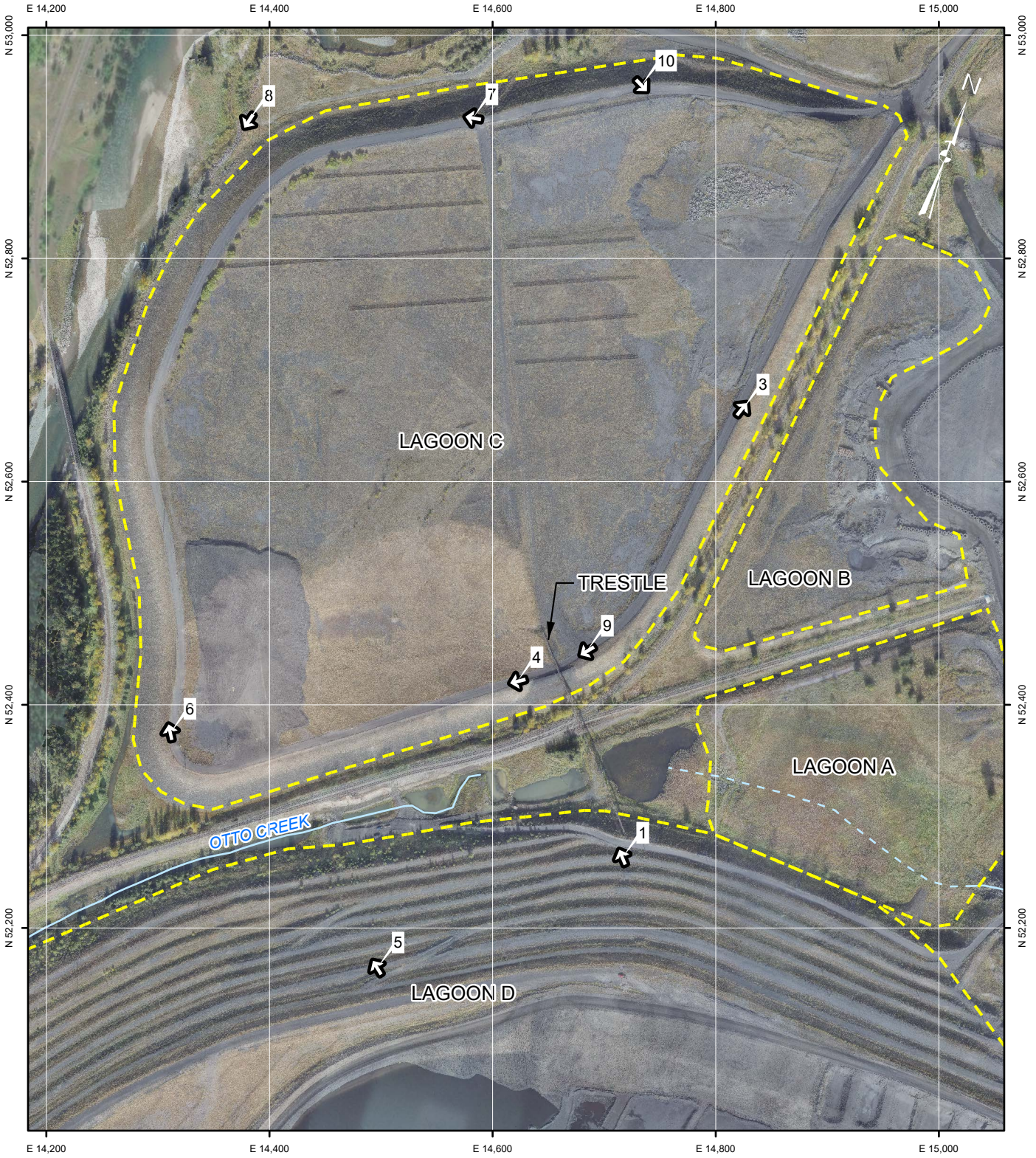
Photo IB-8 Lagoon B embankment resloping. (Looking SE – Taken 20 September 2022)



I-1.4 Lagoon C

The Lagoon C photograph locations plan layout is presented on Figure I-4. The following general notes are applicable to the site visit photographs:

1. This appendix contains selected photos taken during the site visit, it does not include all of the photos that were taken.
2. The photo locations and direction taken are approximate only.



LEGEND

- PHOTO LOCATION
- CREEK
- LAGOON BOUNDARY

NOTES:
 1. DATUM, PROJECTION: EVO MINEGRID
 2. NORTH ARROW ORIENTATED TO TRUE NORTH.
 3. IMAGERY FROM EVO (COLLECTED IN 2022) AND ESRI.

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: 2023-03-15



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CLIENT

Teck

PROJECT TECK ELKVIEW OPERATIONS 2022 ANNUAL FACILITY PERFORMANCE REPORT	
TITLE LAGOON C PHOTOGRAPH LOCATIONS PLAN LAYOUT	
SCALE	PROJECT No.
1:5,000	M09963A29
FIG No.	
1-4	

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Photo IC-1 Lagoon C overview. (Looking NW from Lagoon D crest – Taken 20 September 2022)



Photo IC-2 Lagoon C overview. (Looking SE from CCR Dump crest – Taken 20 September 2022)



Photo IC-3 Lagoon C crest and embankment typical conditions. (Looking north – Taken 20 September 2022)



Photo IC-4 Lagoon C crest and embankment typical conditions. (Looking SW – Taken 20 September 2022)



Photo IC-5 Lagoon C sediment placement and typical slope conditions. (Looking NW, from Lagoon D – Taken 20 September 2022)



Photo IC-6 Lagoon C crest and downstream slope typical conditions. (Looking north – Taken 20 September 2022)



Photo IC-7 Lagoon C downstream slope and toe riprap. (Looking west – Taken 20 September 2022)



Photo IC-8 Lagoon C toe riprap. (Looking SW – Taken 20 September 2022)



Photo IC-9 Lagoon C crest low spot and trestle structure. (Looking SW – Taken 20 September 2022)



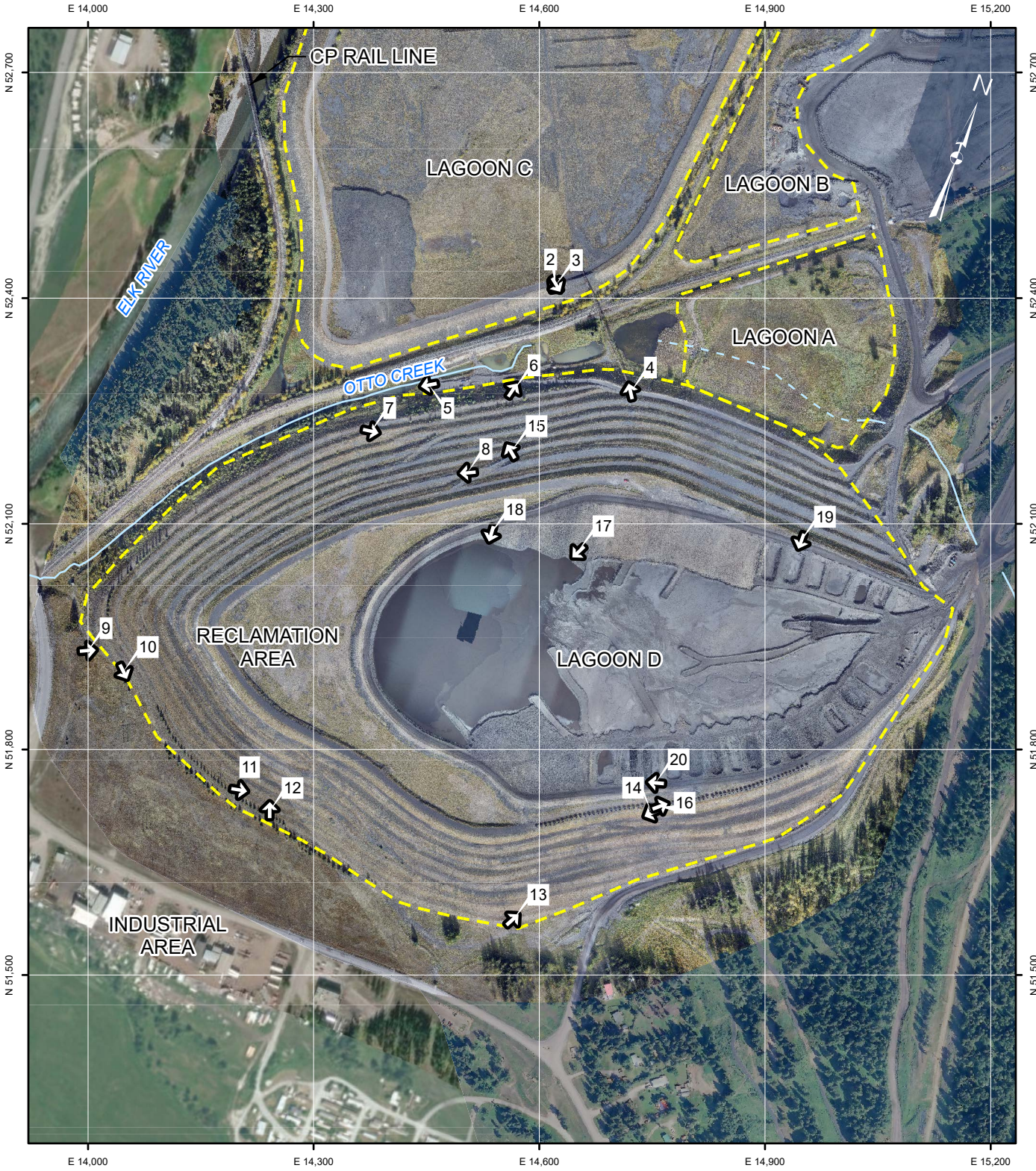
Photo IC-10 Lagoon C upstream slope erosion. (Looking SE – Taken 20 September 2022)



I-1.5 Lagoon D

The Lagoon D photograph locations plan layout is presented on Figure I-5. The following general notes are applicable to the site visit photographs:

1. This appendix contains selected photos taken during the site visit, it does not include all of the photos that were taken.
2. The photo locations and direction taken are approximate only.



LEGEND

- PHOTO LOCATION
- CREEK
- LAGOON BOUNDARY

NOTES:
 1. DATUM, PROJECTION:
 EVO MINEGRID,
 2. NORTH ARROW ORIENTATED
 TO TRUE NORTH.
 3. IMAGERY FROM EVO
 (COLLECTED IN 2022)
 AND ESRI.

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED: 2023-03-15



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PROJECT	TECK ELKVIEW OPERATIONS 2022 ANNUAL FACILITY PERFORMANCE REPORT	
TITLE	LAGOON D PHOTOGRAPH LOCATIONS PLAN LAYOUT	
SCALE	PROJECT No.	FIG No.
1:7,500	M09963A29	I-5

Photo ID-1 Lagoon D overview. (Looking SW, from CCR Dump crest – Taken 20 September 2022)



Photo ID-2 Lagoon D embankment. (Looking SW, from Lagoon C crest – Taken 20 September 2022)



Photo ID-3 Lagoon D decant pond transfer pipeline trestle and embankment. (Looking SE, from Lagoon C crest – Taken 20 September 2022)



Photo ID-4 Lagoon D decant pond transfer pipeline and trestle. (Looking NW, from Lagoon D – Taken 20 September 2022)



**Photo ID-5 Lagoon D ponding at the embankment toe (Otto Ponds) adjacent to the rail line.
(Looking SW – Taken 20 September 2022)**



**Photo ID-6 Lagoon D ponding at the embankment toe (Otto Creek) adjacent to the rail line.
(Looking north – Taken 20 September 2022)**



Photo ID-7 Lagoon D bench typical conditions. (Looking east – Taken 20 September 2022)



Photo ID-8 Lagoon D bench typical conditions. (Looking west – Taken 20 September 2022)



Photo ID-9 Lagoon D decant pipeline and embankment slope. (Looking east – Taken 20 September 2022)



Photo ID-10 Lagoon D bench typical conditions. (Looking SE – Taken 20 September 2022)



Photo ID-11 Lagoon D embankment. (Looking east – Taken 20 September 2022)



Photo ID-12 Lagoon D embankment. (Looking north – Taken 20 September 2022)



Photo ID-13 Lagoon D embankment. (Looking NE – Taken 20 September 2022)



Photo ID-14 Lagoon D crest and embankment slope. (Looking SW – Taken 20 September 2022)



Photo ID-15 Lagoon D minor bench minor erosion. (Looking NW – Taken 20 September 2022)



Photo ID-16 Lagoon D minor crest erosion. (Looking NE – Taken 20 September 2022)



Photo ID-17 Lagoon D tailings beach. (Looking SW– Taken 20 September 2022)



Photo ID-18 Lagoon D pond. (Looking south – Taken 20 September 2022)



Photo ID-19 Lagoon D north tailings cells. (Looking south – Taken 20 September 2022)



Photo ID-20 Lagoon D south tailings cells. (Looking west – Taken 20 September 2022)



APPENDIX II

Site Visit Checklists

WFTF
Lagoon A
Lagoon B
Lagoon C
Lagoon D

Annual Facility Performance Report Site Visit Checklist



Klohn Crippen Berger

Site	Teck Elkview Operations		
Structure	West Fork Tailings Facility (WFTF)		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,689.8 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None.
Date of Observations	September 21, 2022	Reservoir Level El.	1,676.6 m
Walk Over Review	Crest/slopes/Toe/Surface	Available Freeboard	13.2 m
Weather Conditions	Sunny	Notes: Reservoir Level is the average tailings beach level at the south end of the facility.	

ID	Observed Features	Yes	No	N/A	Comments
1.0 Upstream Embankment Slope					
1.1	Concern with Current or Previous Water Level		X		
1.2	Evidence of Wave or Other Erosion/Gullyng		X		
1.3	Evidence of Sloughing/Sliding		X		
1.4	Evidence of Cracking		X		
1.5	Evidence of Movement		X		
1.6	Other Deformation/Settlement/Sinkholes		X		
1.7	Other Unusual Conditions		X		
1.8	Repairs Required		X		
2.0 Embankment Crest					
2.1	Evidence of Shoulder/Erosion		X		
2.2	Evidence of Cracking		X		
2.3	Evidence of Movement		X		
2.4	Other Deformation/Settlement/Sinkholes		X		
2.5	Concerns with Low Areas on the Crest		X		
2.6	Concerns with crest width		X		
2.7	Other Unusual Conditions		X		
2.8	Repairs Required		X		
3.0 Downstream Embankment Slope					
3.1	Evidence of Erosion		X		
3.2	Evidence of Sloughing/Sliding		X		
3.3	Evidence of Cracking		X		
3.4	Evidence of Movement		X		
3.5	Any Other Deformation		X		
3.6	Signs of Phreatic Surface/Seepage		X		
3.7	Seepages Observed		X		
3.8	Is Seepage (if any) Turbid		X		
3.9	Other Unusual Conditions		X		
3.10	Repairs Required		X		
4.0 Embankment Abutments					
4.1	Seepages Observed		X		
4.2	Is Seepage (if any) Turbid		X		
4.3	Evidence of Erosion		X		No tailings migration was observed.
4.4	Evidence of Cracking		X		
4.5	Evidence of Movement		X		
4.6	Other Deformation/Settlement/Sinkholes		X		
4.7	Other Unusual Conditions		X		
4.8	Repairs Required		X		

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	West Fork Tailings Facility (WFTF)		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,689.8 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None.
Date of Observations	September 21, 2022	Reservoir Level El.	1,676.6 m
Walk Over Review	Crest/slopes/Toe/Surface	Available Freeboard	13.2 m
Weather Conditions	Sunny	Notes: Reservoir Level is the average tailings beach level at the south end of the facility.	

ID	Observed Features	Yes	No	N/A	Comments
5.0 Downstream Toe					
5.1	Seepages Observed		X		
5.2	Is Seepage (if any) Turbid		X		
5.3	Evidence of Soft Toe Condition		X		
5.4	Evidence of Sloughing/Sliding		X		
5.5	Evidence of Boils		X		
5.6	Evidence of Contamination/Vegetation Kills		X		
5.7	Excessive Vegetation		X		
5.8	Other Unusual Conditions		X		
5.9	Repairs Required		X		
6.0 Spillway					
6.1	Obstruction by debris or vegetation			X	
6.2	Lack of Erosion Protection			X	
6.3	Slope Deterioration (Sloughing, Erosion etc...)			X	
6.4	Other Unusual Conditions			X	
6.5	Repairs Required			X	
7.0 Other					
7.1	Other Unusual Conditions	X			Incised concavity on eastern beach.
7.2	Sketch (if required):				

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon A		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1119.0 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	1118.3 m
Date of Observations	September 20, 2022	Reservoir Level El.	1118.3 m (Ponding water at spillway invert)
Walk Over Review	Crest/Slopes/Toe	Available Freeboard	0.7 m
Weather Conditions	Mostly sunny, fog in low areas		

ID	Observed Features	Yes	No	N/A	Comments
1.0 Upstream Embankment Slope and Tailings Surface					
1.1	Concern with Current or Previous Water Level		X		
1.2	Evidence of Wave or Other Erosion/Gullyng		X		
1.3	Evidence of Sloughing/Sliding		X		
1.4	Evidence of Cracking		X		
1.5	Evidence of Movement		X		
1.6	Other Deformation/Settlement/Sinkholes		X		
1.7	Other Unusual Conditions		X		
1.8	Repairs Required		X		
2.0 Embankment Crest					
2.1	Evidence of Shoulder/Erosion		X		
2.2	Evidence of Cracking		X		
2.3	Evidence of Movement		X		
2.4	Other Deformation/Settlement/Sinkholes		X		
2.5	Concerns with Low Areas on the Crest		X		
2.6	Concerns with crest width		X		
2.7	Other Unusual Conditions		X		
2.8	Repairs Required		X		
3.0 Downstream Embankment Slope					
3.1	Evidence of Erosion		X		
3.2	Evidence of Sloughing/Sliding		X		
3.3	Evidence of Cracking		X		
3.4	Evidence of Movement		X		
3.5	Any Other Deformation		X		
3.6	Signs of Phreatic Surface/Seepage		X		
3.7	Seepages Observed		X		
3.8	Is Seepage (if any) Turbid		X		
3.9	Other Unusual Conditions		X		
3.10	Repairs Required		X		
4.0 Embankment Abutments					
4.1	Seepages Observed			X	
4.2	Is Seepage (if any) Turbid			X	
4.3	Evidence of Erosion			X	
4.4	Evidence of Cracking			X	
4.5	Evidence of Movement			X	
4.6	Other Deformation/Settlement/Sinkholes			X	
4.7	Other Unusual Conditions			X	
4.8	Repairs Required			X	

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon A		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1119.0 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	1118.3 m
Date of Observations	September 20, 2022	Reservoir Level El.	1118.3 m (Ponding water at spillway invert)
Walk Over Review	Crest/Slopes/Toe	Available Freeboard	0.7 m
Weather Conditions	Mostly sunny, fog in low areas		

ID	Observed Features	Yes	No	N/A	Comments
5.0 Downstream Toe					
5.1	Seepages Observed		X		
5.2	Is Seepage (if any) Turbid		X		
5.3	Evidence of Soft Toe Condition		X		
5.4	Evidence of Sloughing/Sliding		X		
5.5	Evidence of Boils		X		
5.6	Evidence of Contamination/Vegetation Kills		X		
5.7	Excessive Vegetation		X		
5.8	Other Unusual Conditions		X		
5.9	Repairs Required		X		
6.0 Spillway					
6.1	Obstruction by debris or vegetation		X		
6.2	Lack of Erosion Protection		X		
6.3	Slope Deterioration (Sloughing, Erosion etc...)		X		
6.4	Other Unusual Conditions		X		
6.5	Repairs Required		X		
7.0 Other					
7.1	Other Unusual Conditions		X		
7.2	Sketch (if required):				

Cossarini Creek culverts, located upstream of Lagoon A, were flowing at the time of site visit.

Annual Facility Performance Report Site Visit Checklist



Klohn Crippen Berger

Site	Teck Elkview Operations		
Structure	Lagoon B		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,118.5 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None. (1,118.2 m low spot)
Date of Observations	September 20, 2022	Reservoir Level El.	No pond observed
Walk Over Review	Crest/Slopes/Toe	Available Freeboard	0.33 m (tailings surface to low spot)
Weather Conditions	Mostly sunny		

ID	Observed Features	Yes	No	N/A	Comments
1.0 Upstream Embankment Slope and Tailings Surface					
1.1	Concern with Current or Previous Water Level		X		
1.2	Evidence of Wave or Other Erosion/Gullyng		X		
1.3	Evidence of Sloughing/Sliding		X		
1.4	Evidence of Cracking		X		
1.5	Evidence of Movement		X		
1.6	Other Deformation/Settlement/Sinkholes		X		
1.7	Other Unusual Conditions		X		
1.8	Repairs Required		X		
2.0 Embankment Crest					
2.1	Evidence of Shoulder/Erosion		X		
2.2	Evidence of Cracking		X		
2.3	Evidence of Movement		X		
2.4	Other Deformation/Settlement/Sinkholes		X		
2.5	Concerns with Low Areas on the Crest		X		
2.6	Concerns with crest width		X		
2.7	Other Unusual Conditions		X		Northern embankment resloped since previous inspection.
2.8	Repairs Required		X		
3.0 Downstream Embankment Slope					
3.1	Evidence of Erosion		X		
3.2	Evidence of Sloughing/Sliding		X		
3.3	Evidence of Cracking		X		
3.4	Evidence of Movement		X		
3.5	Any Other Deformation		X		
3.6	Signs of Phreatic Surface/Seepage		X		
3.7	Seepages Observed		X		
3.8	Is Seepage (if any) Turbid		X		
3.9	Other Unusual Conditions		X		Northern embankment resloped since previous inspection.
3.10	Repairs Required		X		
4.0 Embankment Abutments					
4.1	Seepages Observed			X	
4.2	Is Seepage (if any) Turbid			X	
4.3	Evidence of Erosion			X	
4.4	Evidence of Cracking			X	
4.5	Evidence of Movement			X	
4.6	Other Deformation/Settlement/Sinkholes			X	
4.7	Other Unusual Conditions			X	
4.8	Repairs Required			X	

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon B		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,118.5 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None. (1,118.2 m low spot)
Date of Observations	September 20, 2022	Reservoir Level El.	No pond observed
Walk Over Review	Crest/Slopes/Toe	Available Freeboard	0.33 m (tailings surface to low spot)
Weather Conditions	Mostly sunny		

ID	Observed Features	Yes	No	N/A	Comments
5.0 Downstream Toe					
5.1	Seepages Observed		X		
5.2	Is Seepage (if any) Turbid		X		
5.3	Evidence of Soft Toe Condition		X		
5.4	Evidence of Sloughing/Sliding		X		
5.5	Evidence of Boils		X		
5.6	Evidence of Contamination/Vegetation Kills		X		
5.7	Excessive Vegetation		X		
5.8	Other Unusual Conditions		X		
5.9	Repairs Required		X		
6.0 Spillway					
6.1	Obstruction by debris or vegetation			X	No spillway.
6.2	Lack of Erosion Protection			X	
6.3	Slope Deterioration (Sloughing, Erosion etc...)			X	
6.4	Other Unusual Conditions			X	
6.5	Repairs Required			X	
7.0 Other					
7.1	Other Unusual Conditions		X		
7.2	Sketch (if required):				

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon C		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,129.3 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None. (1,126.6 m low spot at trestle)
Date of Observations	September 20, 2022	Reservoir Level El.	No pond observed
Walk Over Review	Crest/Slopes/Toe/Crest Surface	Available Freeboard	Variable
Weather Conditions	Sunny		

ID	Observed Features	Yes	No	N/A	Comments
1.0 Upstream Embankment Slope and Tailings Surface					
1.1	Concern with Current or Previous Water Level		X		
1.2	Evidence of Wave or Other Erosion/Gullying	X			Upstream erosion at a point near the pumphouse (same condition as 2019 to 2021 inspection and not worsening). To be monitored.
1.3	Evidence of Sloughing/Sliding		X		
1.4	Evidence of Cracking		X		
1.5	Evidence of Movement		X		
1.6	Other Deformation/Settlement/Sinkholes		X		
1.7	Other Unusual Conditions		X		
1.8	Repairs Required		X		
2.0 Embankment Crest					
2.1	Evidence of Shoulder/Erosion		X		
2.2	Evidence of Cracking		X		
2.3	Evidence of Movement		X		
2.4	Other Deformation/Settlement/Sinkholes		X		
2.5	Concerns with Low Areas on the Crest	X			Minor localised low area at the trestle.
2.6	Concerns with crest width		X		
2.7	Other Unusual Conditions		X		
2.8	Repairs Required		X		
3.0 Downstream Embankment Slope					
3.1	Evidence of Erosion		X		
3.2	Evidence of Sloughing/Sliding		X		
3.3	Evidence of Cracking		X		
3.4	Evidence of Movement		X		
3.5	Any Other Deformation		X		
3.6	Signs of Phreatic Surface/Seepage		X		
3.7	Seepages Observed		X		
3.8	Is Seepage (if any) Turbid		X		
3.9	Other Unusual Conditions		X		
3.10	Repairs Required		X		
4.0 Embankment Abutments					
4.1	Seepages Observed			X	
4.2	Is Seepage (if any) Turbid			X	
4.3	Evidence of Erosion			X	
4.4	Evidence of Cracking			X	
4.5	Evidence of Movement			X	
4.6	Other Deformation/Settlement/Sinkholes			X	
4.7	Other Unusual Conditions			X	
4.8	Repairs Required			X	

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon C		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,129.3 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None. (1,126.6 m low spot at trestle)
Date of Observations	September 20, 2022	Reservoir Level El.	No pond observed
Walk Over Review	Crest/Slopes/Toe/Crest Surface	Available Freeboard	Variable
Weather Conditions	Sunny		

ID	Observed Features	Yes	No	N/A	Comments
5.0 Downstream Toe					
5.1	Seepages Observed		X		
5.2	Is Seepage (if any) Turbid		X		
5.3	Evidence of Soft Toe Condition		X		
5.4	Evidence of Sloughing/Sliding		X		
5.5	Evidence of Boils		X		
5.6	Evidence of Contamination/Vegetation Kills		X		
5.7	Excessive Vegetation		X		
5.8	Other Unusual Conditions		X		
5.9	Repairs Required		X		
6.0 Spillway					
6.1	Obstruction by debris or vegetation			X	
6.2	Lack of Erosion Protection			X	
6.3	Slope Deterioration (Sloughing, Erosion etc...)			X	
6.4	Other Unusual Conditions			X	
6.5	Repairs Required			X	
7.0 Other					
7.1	Other Unusual Conditions			X	
7.2	Sketch (if required):				

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon D		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,168.0 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None.
Date of Observations	September 20, 2022	Reservoir Level El.	1,165.0 m
Walk Over Review	Crest/Slopes/Toe/Crest Surface	Available Freeboard	3.0 m
Weather Conditions	Sunny		

ID	Observed Features	Yes	No	N/A	Comments
1.0 Upstream Embankment Slope and Tailings Surface					
1.1	Concern with Current or Previous Water Level		X		
1.2	Evidence of Wave or Other Erosion/Gullyng		X		
1.3	Evidence of Sloughing/Sliding		X		
1.4	Evidence of Cracking		X		
1.5	Evidence of Movement		X		
1.6	Other Deformation/Settlement/Sinkholes		X		
1.7	Other Unusual Conditions		X		
1.8	Repairs Required		X		
2.0 Embankment Crest					
2.1	Evidence of Shoulder/Erosion	X			Minor erosion on south embankment opposite cell S12.
2.2	Evidence of Cracking		X		
2.3	Evidence of Movement		X		
2.4	Other Deformation/Settlement/Sinkholes		X		
2.5	Concerns with Low Areas on the Crest		X		
2.6	Concerns with crest width		X		
2.7	Other Unusual Conditions		X		
2.8	Repairs Required		X		
3.0 Downstream Embankment Slope					
3.1	Evidence of Erosion	X			Minor gully erosion on benches at several locations.
3.2	Evidence of Sloughing/Sliding		X		
3.3	Evidence of Cracking		X		
3.4	Evidence of Movement		X		
3.5	Any Other Deformation		X		
3.6	Signs of Phreatic Surface/Seepage		X		
3.7	Seepages Observed		X		
3.8	Is Seepage (if any) Turbid		X		
3.9	Other Unusual Conditions	X			Minor animal burrows in south embankment benches.
3.10	Repairs Required		X		
4.0 Embankment Abutments					
4.1	Seepages Observed		X		
4.2	Is Seepage (if any) Turbid		X		
4.3	Evidence of Erosion		X		
4.4	Evidence of Cracking		X		
4.5	Evidence of Movement		X		
4.6	Other Deformation/Settlement/Sinkholes		X		
4.7	Other Unusual Conditions		X		
4.8	Repairs Required		X		

Annual Facility Performance Report Site Visit Checklist



Site	Teck Elkview Operations		
Structure	Lagoon D		
Reviewed by	Michael Tin P.Eng. / Justin Kelly EIT	Crest El.	1,168.0 m
Accompanied by	Trevor Munn P.Geo / Patrick Gilliland P.Eng	Spillway Invert El.	None.
Date of Observations	September 20, 2022	Reservoir Level El.	1,165.0 m
Walk Over Review	Crest/Slopes/Toe/Crest Surface	Available Freeboard	3.0 m
Weather Conditions	Sunny		

ID	Observed Features	Yes	No	N/A	Comments
5.0 Downstream Toe					
5.1	Seepages Observed		X		
5.2	Is Seepage (if any) Turbid		X		
5.3	Evidence of Soft Toe Condition		X		
5.4	Evidence of Sloughing/Sliding		X		
5.5	Evidence of Boils		X		
5.6	Evidence of Contamination/Vegetation Kills		X		
5.7	Excessive Vegetation		X		
5.8	Other Unusual Conditions		X		
5.9	Repairs Required		X		
6.0 Spillway					
6.1	Obstruction by debris or vegetation			X	
6.2	Lack of Erosion Protection			X	
6.3	Slope Deterioration (Sloughing, Erosion etc...)			X	
6.4	Other Unusual Conditions			X	
6.5	Repairs Required			X	
7.0 Other					
7.1	Other Unusual Conditions		X		
7.2	Sketch (if required):				

APPENDIX III

Lagoon C and Lagoon D Cross Sections (provided by EVO)

Lagoon C
Lagoon D

CROSS-SECTION

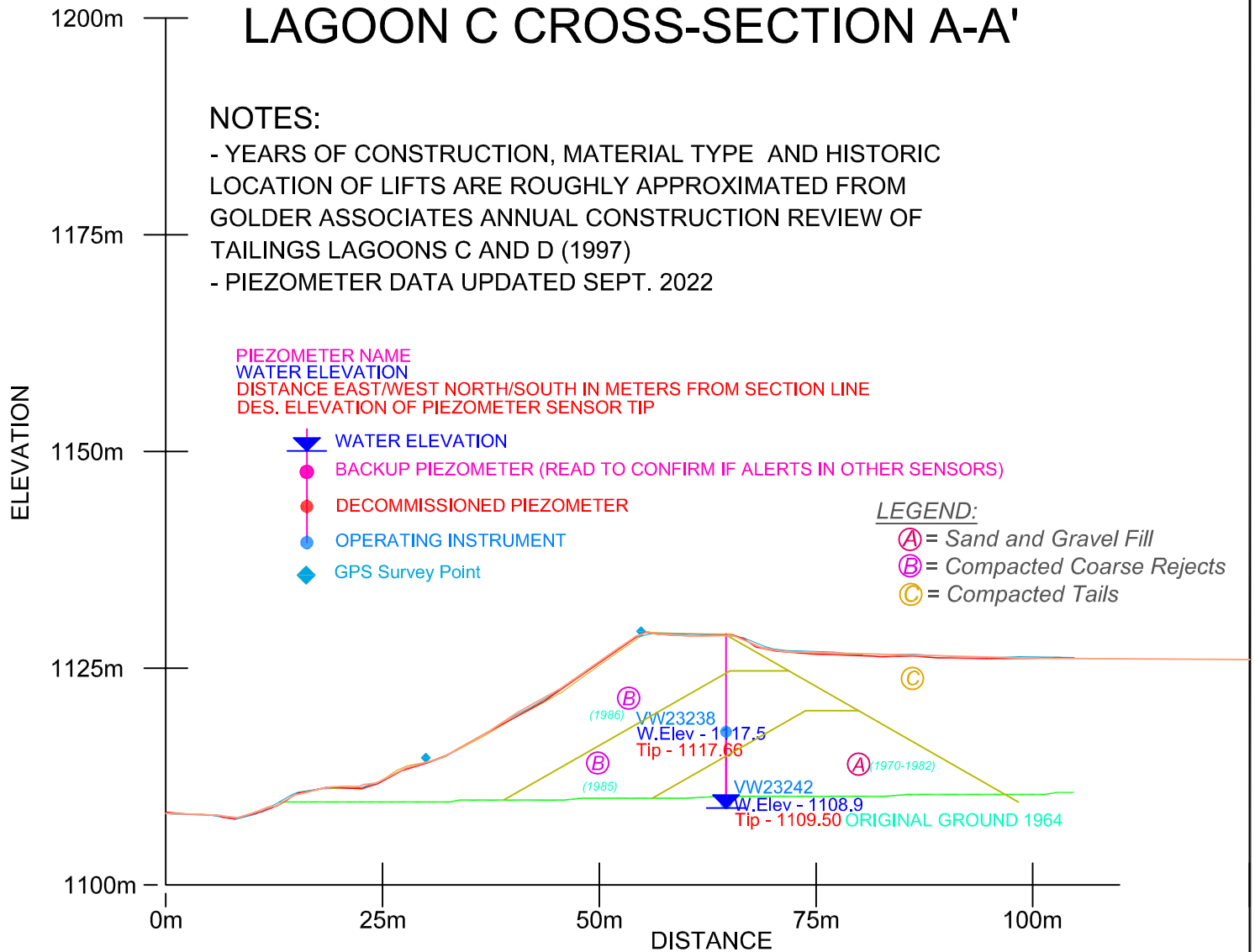
ORIGIN COORD: 14538.12E, 52909.99N

AZIMUTH: 144°50'19"

LAGOON C CROSS-SECTION A-A'

NOTES:

- YEARS OF CONSTRUCTION, MATERIAL TYPE AND HISTORIC LOCATION OF LIFTS ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1997)
- PIEZOMETER DATA UPDATED SEPT. 2022



PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP

- ▼ WATER ELEVATION
- BACKUP PIEZOMETER (READ TO CONFIRM IF ALERTS IN OTHER SENSORS)
- DECOMMISSIONED PIEZOMETER
- OPERATING INSTRUMENT
- ◆ GPS Survey Point

LEGEND:
 (A) = Sand and Gravel Fill
 (B) = Compacted Coarse Rejects
 (C) = Compacted Tails

<h2>Elkview Operations</h2>		
Tailings Engineering		
<h3>LAGOON C CROSS-SECTION A-A'</h3> <h3>2022</h3>		
DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. Yeomans	REV BY: T. Munn	

CROSS-SECTION
 ORIGIN COORD: 14267.12E, 52774.79N
 AZIMUTH: 115°6'0"

LAGOON C CROSS-SECTION B-B'

NOTES:

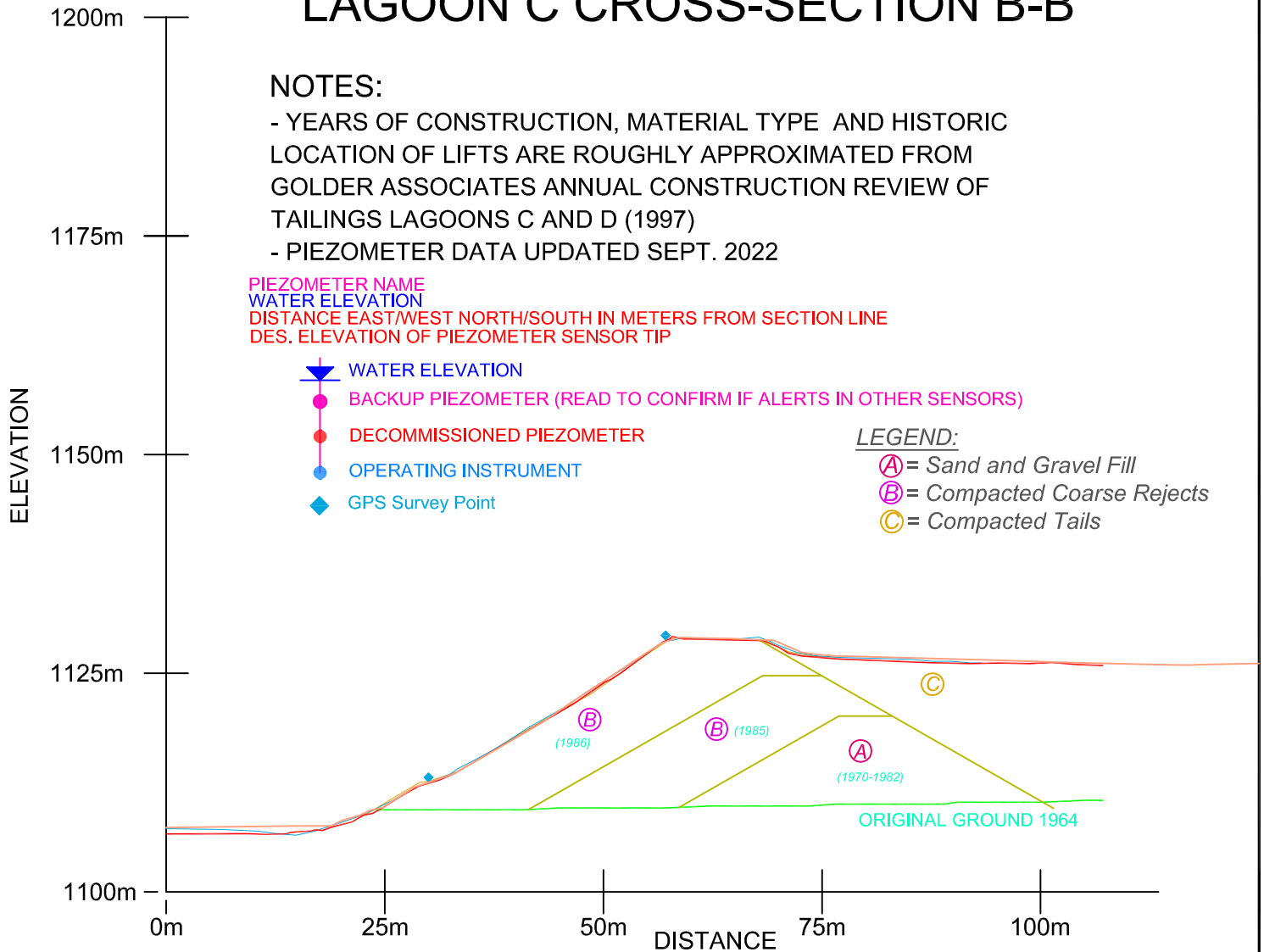
- YEARS OF CONSTRUCTION, MATERIAL TYPE AND HISTORIC LOCATION OF LIFTS ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1997)
- PIEZOMETER DATA UPDATED SEPT. 2022

PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP

- ▼ WATER ELEVATION
- BACKUP PIEZOMETER (READ TO CONFIRM IF ALERTS IN OTHER SENSORS)
- DECOMMISSIONED PIEZOMETER
- OPERATING INSTRUMENT
- ◆ GPS Survey Point

LEGEND:

- Ⓐ = Sand and Gravel Fill
- Ⓑ = Compacted Coarse Rejects
- Ⓒ = Compacted Tails



Elkview Operations

Tailings Engineering

LAGOON C CROSS-SECTION B-B' 2022

DATE: Oct. 2022
 DWN BY: A. Yeomans

SCALE:
 REV BY: T. Munn

DWG. NO. :

CROSS-SECTION

ORIGIN COORD: 14253.35E, 52508.06N

AZIMUTH: 82°8'31"

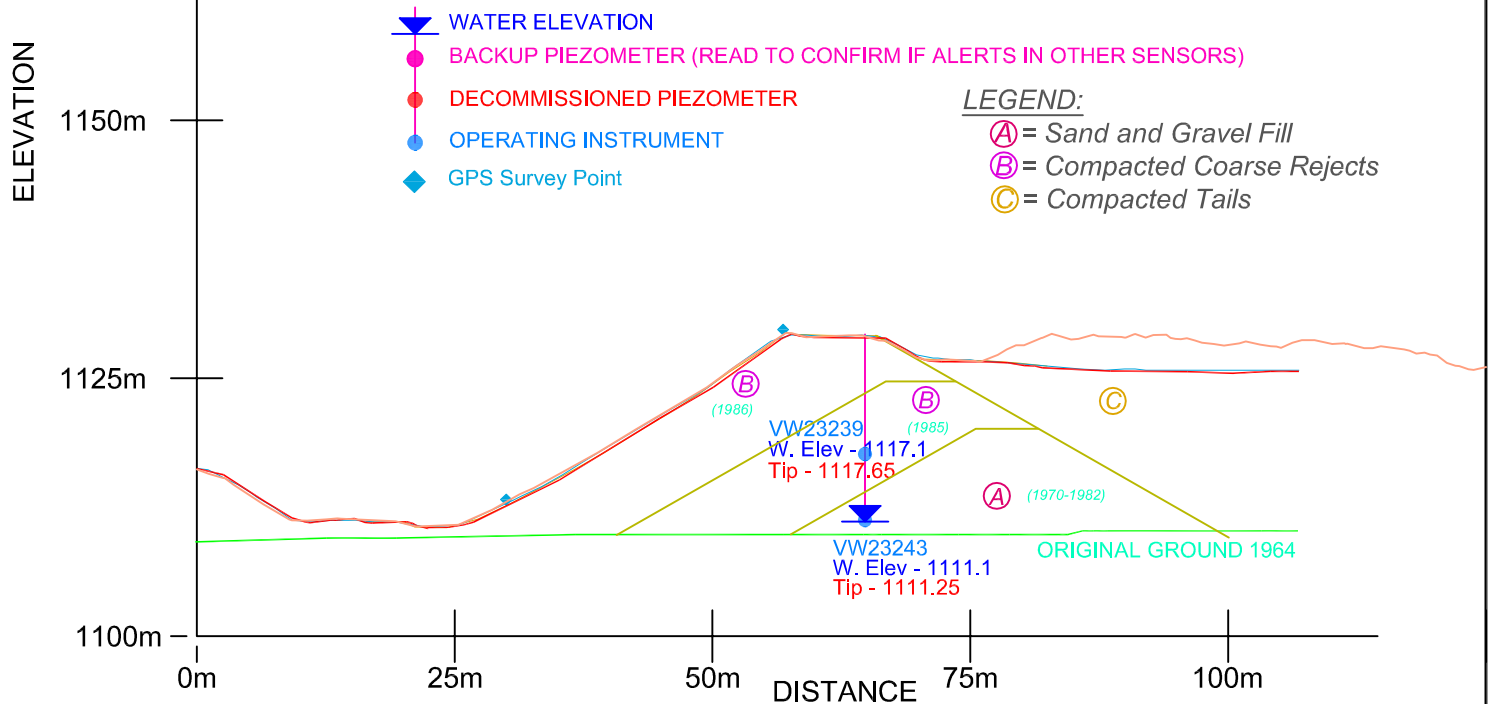
LAGOON C CROSS-SECTION C-C'

NOTES:

- YEARS OF CONSTRUCTION, MATERIAL TYPE AND HISTORIC LOCATION OF LIFTS ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1997)

- PIEZOMETER DATA UPDATED SEPT. 2022

PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP



Elkview Operations

Tailings Engineering

LAGOON C CROSS-SECTION C-C' 2022

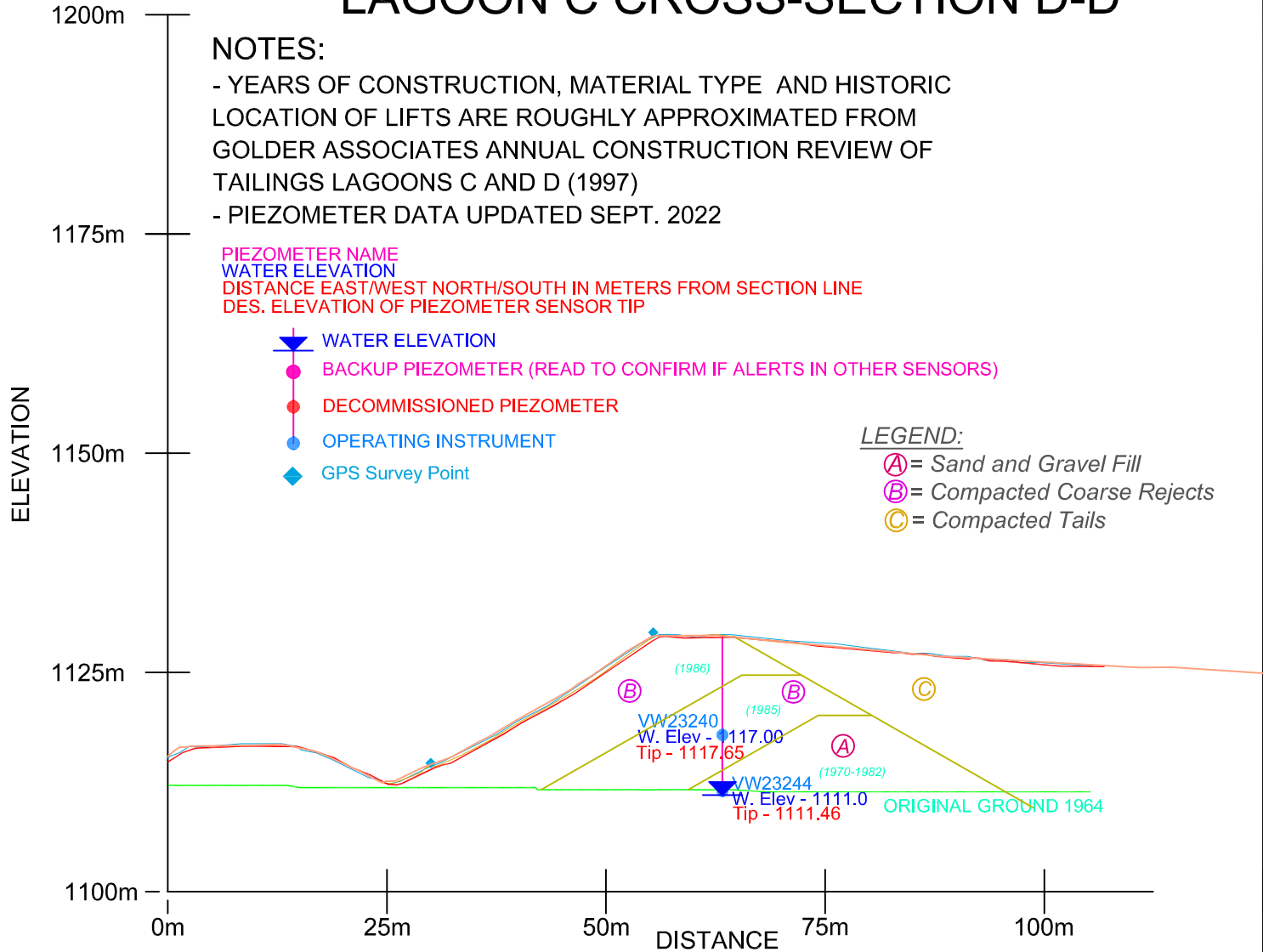
DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. Yeomans	REV BY: T. Munn	

CROSS-SECTION

ORIGIN COORD: 14489.78E, 52319.17N

AZIMUTH: 345°37'1"

LAGOON C CROSS-SECTION D-D'



Elkview Operations

Tailings Engineering

LAGOON C CROSS-SECTION D-D' 2022

DATE: Oct. 2022

SCALE:

DWG. NO. :

DWN BY: A. Yeomans

REV BY: T. Munn

CROSS-SECTION

ORIGIN COORD: 14278.06E, 52280.63N

AZIMUTH: 324°12'9"

LAGOON C CROSS-SECTION E-E'

NOTES:

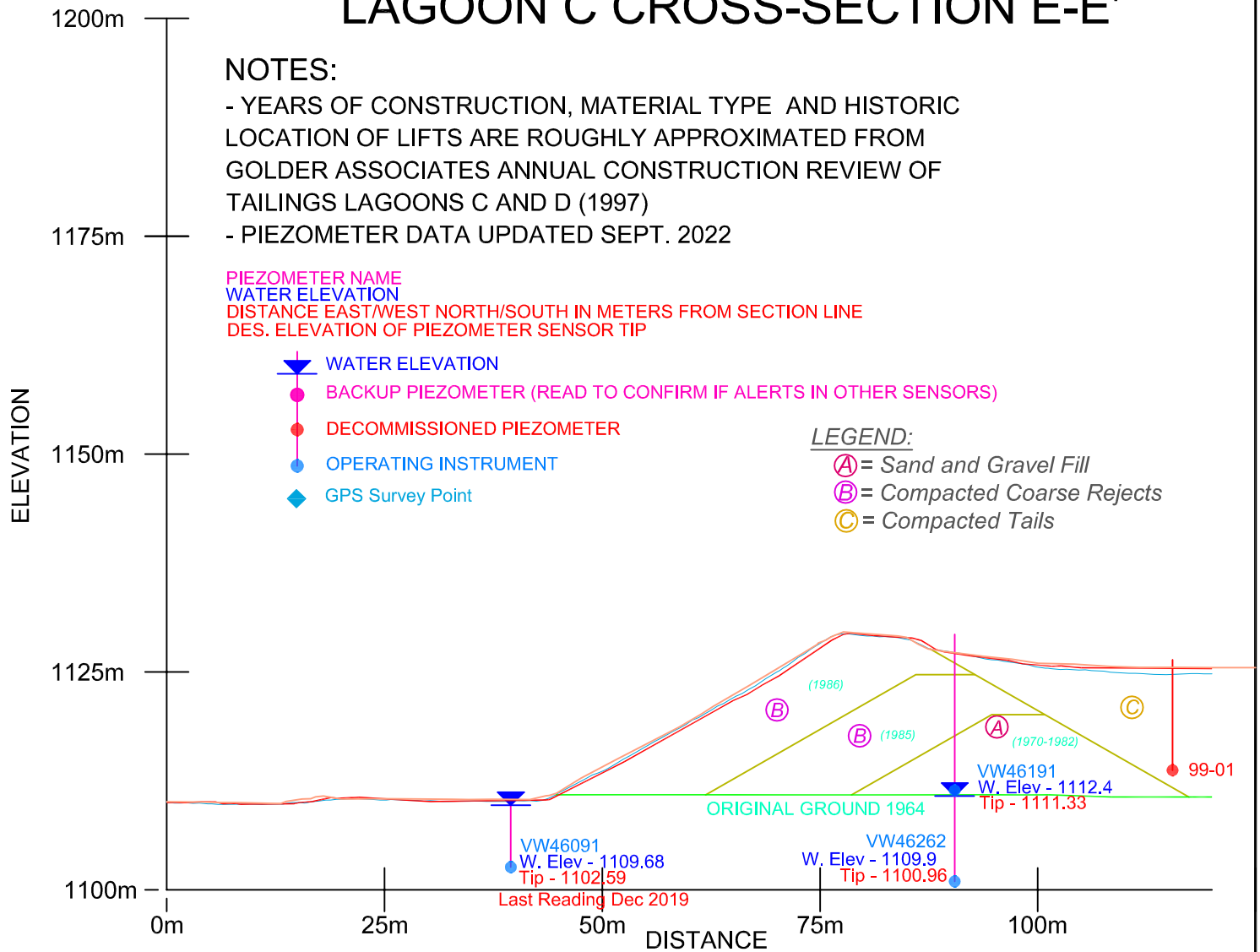
- YEARS OF CONSTRUCTION, MATERIAL TYPE AND HISTORIC LOCATION OF LIFTS ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1997)
- PIEZOMETER DATA UPDATED SEPT. 2022

PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP

- ▼ WATER ELEVATION
- BACKUP PIEZOMETER (READ TO CONFIRM IF ALERTS IN OTHER SENSORS)
- DECOMMISSIONED PIEZOMETER
- OPERATING INSTRUMENT
- ◆ GPS Survey Point

LEGEND:

- (A) = Sand and Gravel Fill
- (B) = Compacted Coarse Rejects
- (C) = Compacted Tails



Elkview Operations

Tailings Engineering

LAGOON C CROSS-SECTION E-E' 2022

DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. Yeomans	REV BY: T. Munn	

CROSS-SECTION

ORIGIN COORD: 14538.12E, 52909.99N






AZIMUTH: 144°50'19"

LAGOON C CROSS-SECTION G-G'




NOTES:

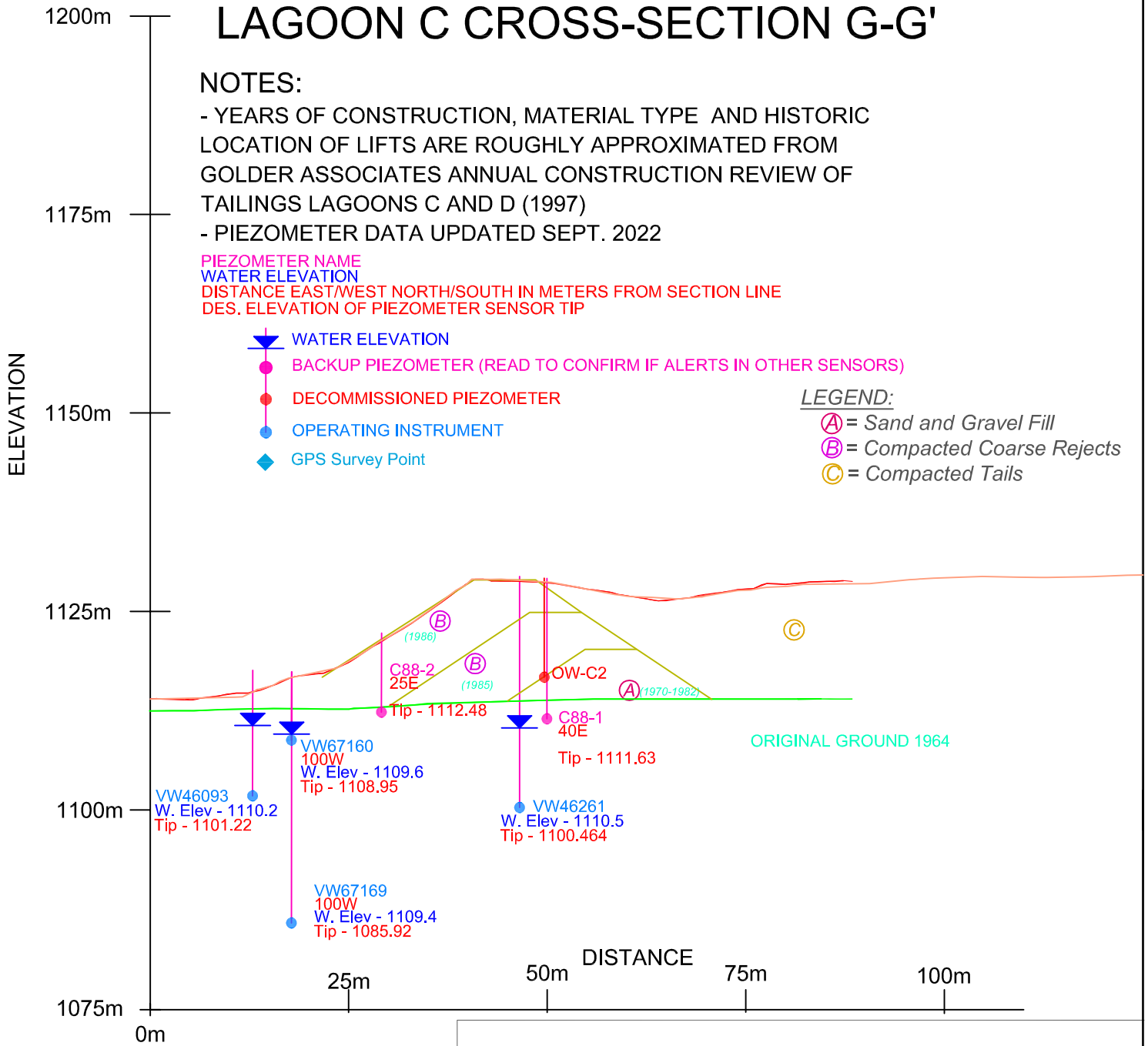
- YEARS OF CONSTRUCTION, MATERIAL TYPE AND HISTORIC LOCATION OF LIFTS ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1997)
- PIEZOMETER DATA UPDATED SEPT. 2022

PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP

-  WATER ELEVATION
-  BACKUP PIEZOMETER (READ TO CONFIRM IF ALERTS IN OTHER SENSORS)
-  DECOMMISSIONED PIEZOMETER
-  OPERATING INSTRUMENT
-  GPS Survey Point

LEGEND:

-  A = Sand and Gravel Fill
-  B = Compacted Coarse Rejects
-  C = Compacted Tails



Elkview Operations

Tailings Engineering

LAGOON C CROSS-SECTION G-G' 2022

DATE: Oct 2022

SCALE:

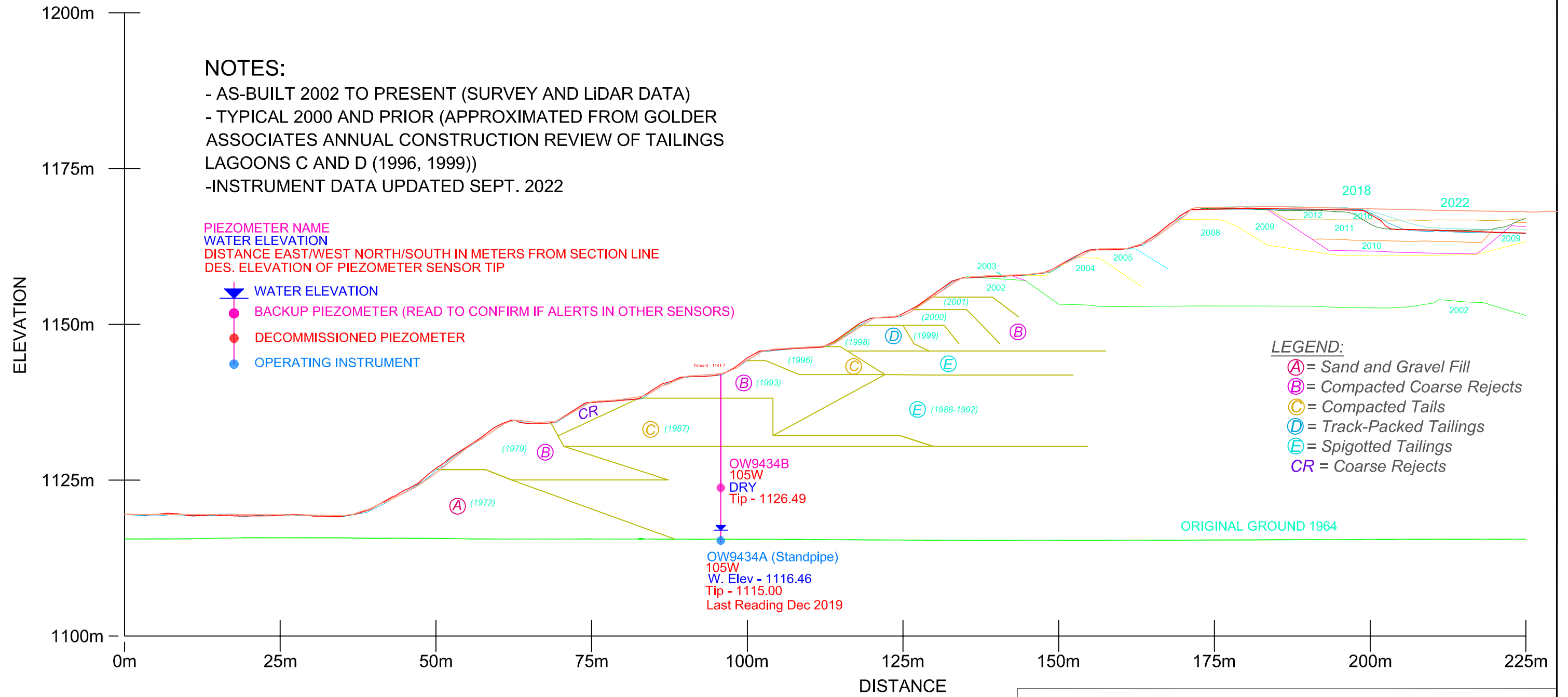
DWG. NO. :

DWN BY: A. Yeomans

REV BY: T. Munn

CROSS-SECTION
 ORIGIN COORD: 14960.53E, 52265.72N
 AZIMUTH: 202°53'07"

LAGOON D CROSS-SECTION A-A'



Elkview Operations

Tailings Engineering

LAGOON D CROSS-SECTION A-A' 2022





DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. YEOMANS	REV BY: T. Munn	

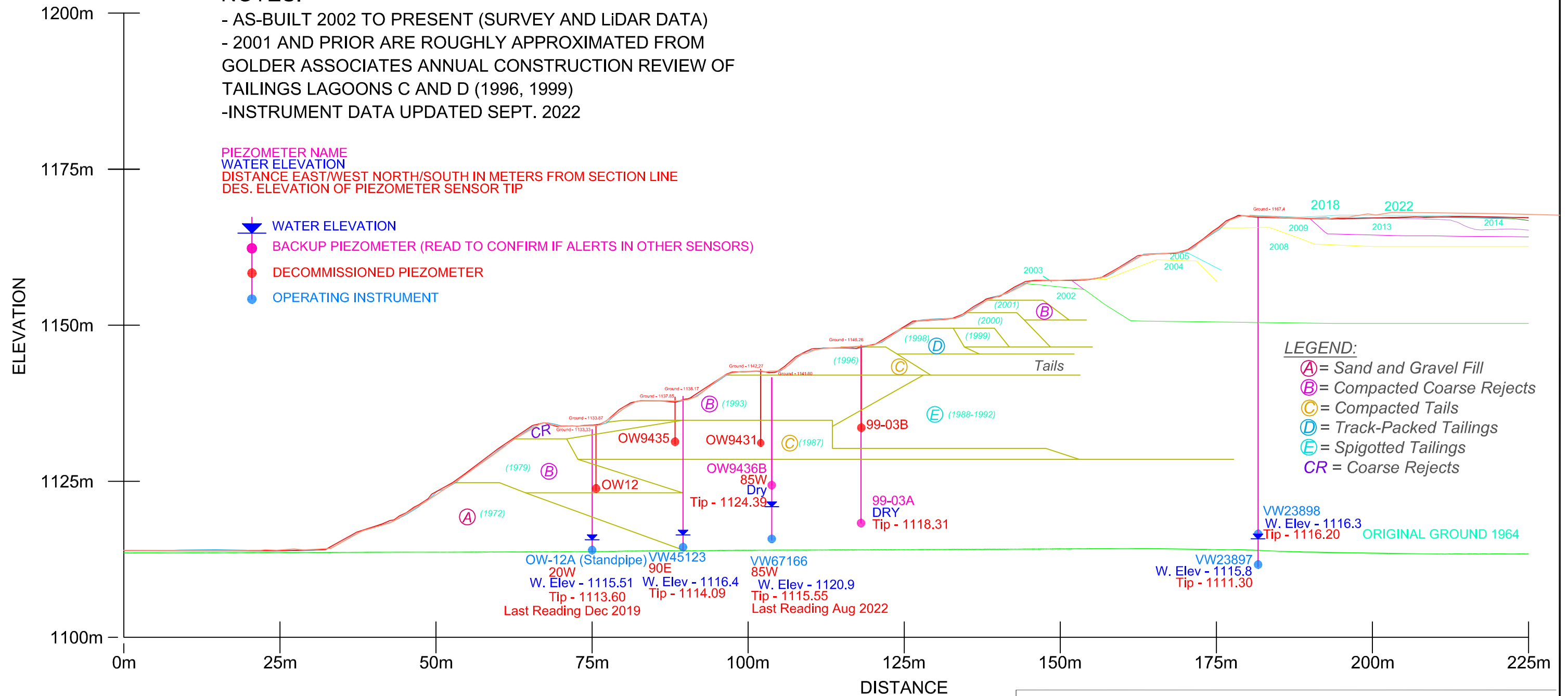
CROSS-SECTION
 ORIGIN COORD: 14726.30E, 52346.74N
 AZIMUTH: 182°47'27"

LAGOON D CROSS-SECTION B-B'

NOTES:
 - AS-BUILT 2002 TO PRESENT (SURVEY AND LIDAR DATA)
 - 2001 AND PRIOR ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1996, 1999)
 - INSTRUMENT DATA UPDATED SEPT. 2022

PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP

-  WATER ELEVATION
-  BACKUP PIEZOMETER (READ TO CONFIRM IF ALERTS IN OTHER SENSORS)
-  DECOMMISSIONED PIEZOMETER
-  OPERATING INSTRUMENT



Elkview Operations

Tailings Engineering

LAGOON D CROSS-SECTION B-B'
2022

DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. YEOMANS	REV BY: T. Munn	

CROSS-SECTION
 ORIGIN COORD: 14491.89E, 52303.38N
 AZIMUTH: 168°11'50"

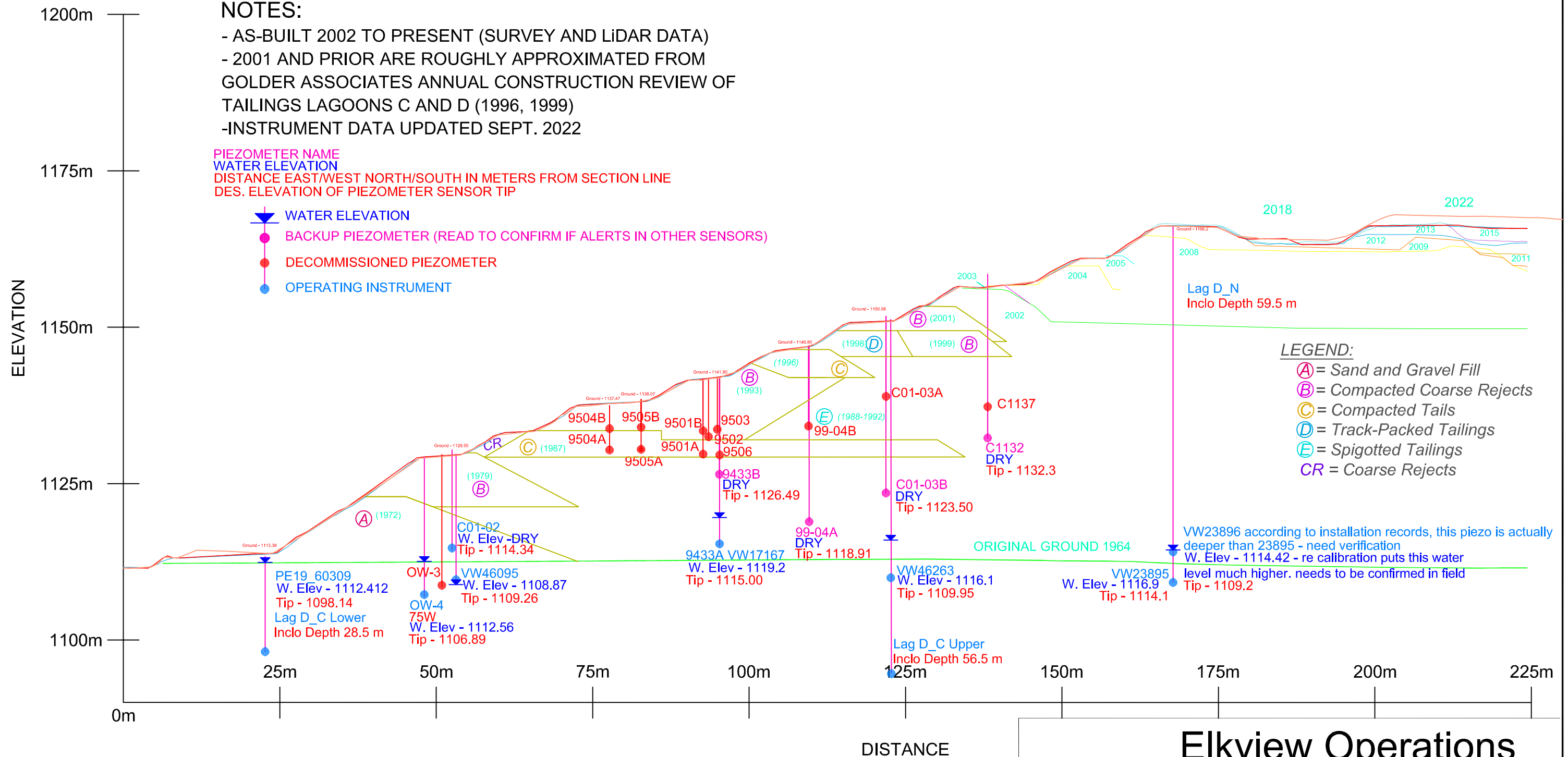
LAGOON D CROSS-SECTION C-C'

NOTES:

- AS-BUILT 2002 TO PRESENT (SURVEY AND LIDAR DATA)
- 2001 AND PRIOR ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1996, 1999)
- INSTRUMENT DATA UPDATED SEPT. 2022

PIEZOMETER NAME
 WATER ELEVATION
 DISTANCE EAST/WEST NORTH/SOUTH IN METERS FROM SECTION LINE
 DES. ELEVATION OF PIEZOMETER SENSOR TIP

- ▼ WATER ELEVATION
- BACKUP PIEZOMETER (READ TO CONFIRM IF ALERTS IN OTHER SENSORS)
- DECOMMISSIONED PIEZOMETER
- OPERATING INSTRUMENT



Elkview Operations

Tailings Engineering

LAGOON D CROSS-SECTION C-C'

2022

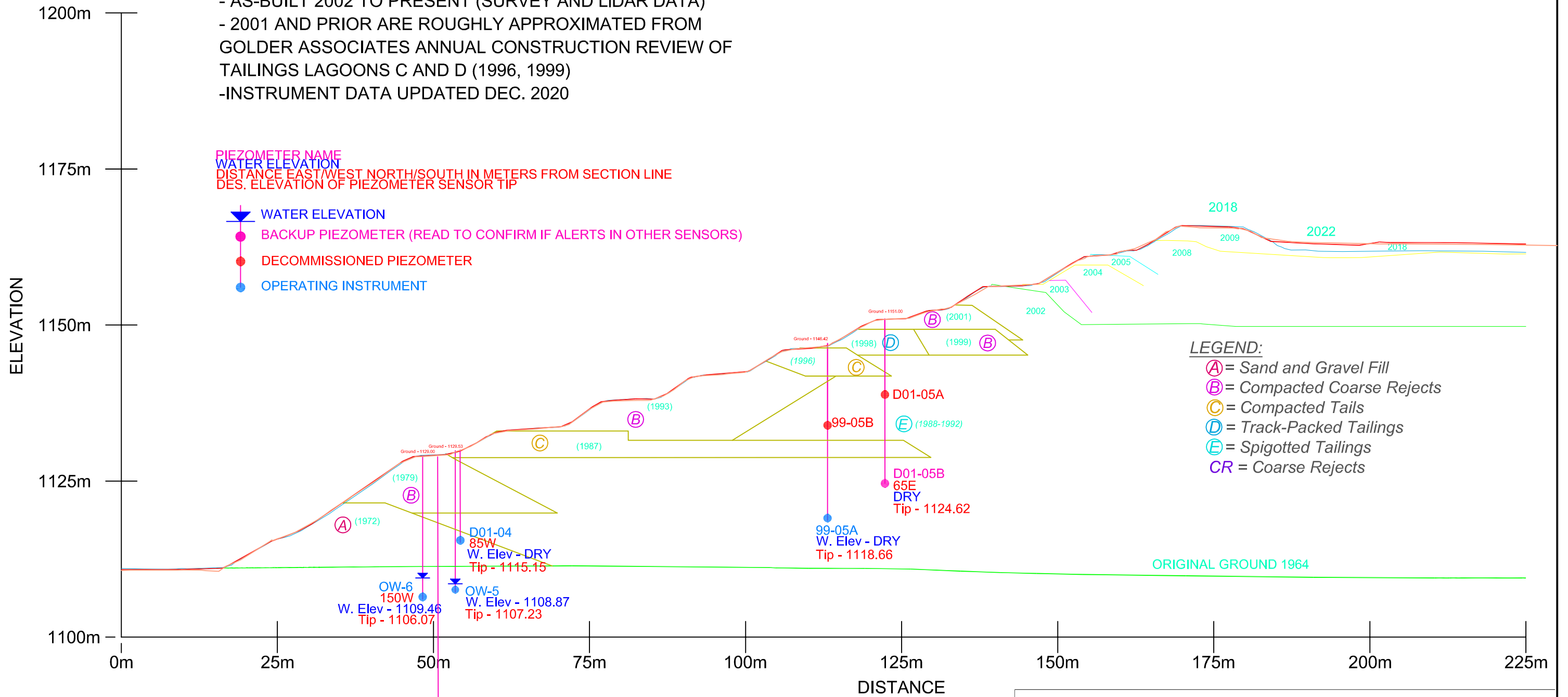
DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. YEOMANS	REV BY: T. Munn	

CROSS-SECTION
 ORIGIN COORD: 14249.70E, 52237.31N
 AZIMUTH: 155°43'21"

LAGOON D CROSS-SECTION D-D'

NOTES:

- AS-BUILT 2002 TO PRESENT (SURVEY AND LIDAR DATA)
- 2001 AND PRIOR ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1996, 1999)
- INSTRUMENT DATA UPDATED DEC. 2020



<h2>Elkview Operations</h2>		
Tailings Engineering		
LAGOON D CROSS-SECTION D-D'		
2022		
DATE: Oct. 2022	SCALE:	DWG. NO. :
DWN BY: A. YEOMANS	REV BY: T. Munn	

CROSS-SECTION
 ORIGIN COORD: 13974.88E, 51969.26N
 AZIMUTH: 90°31'40"

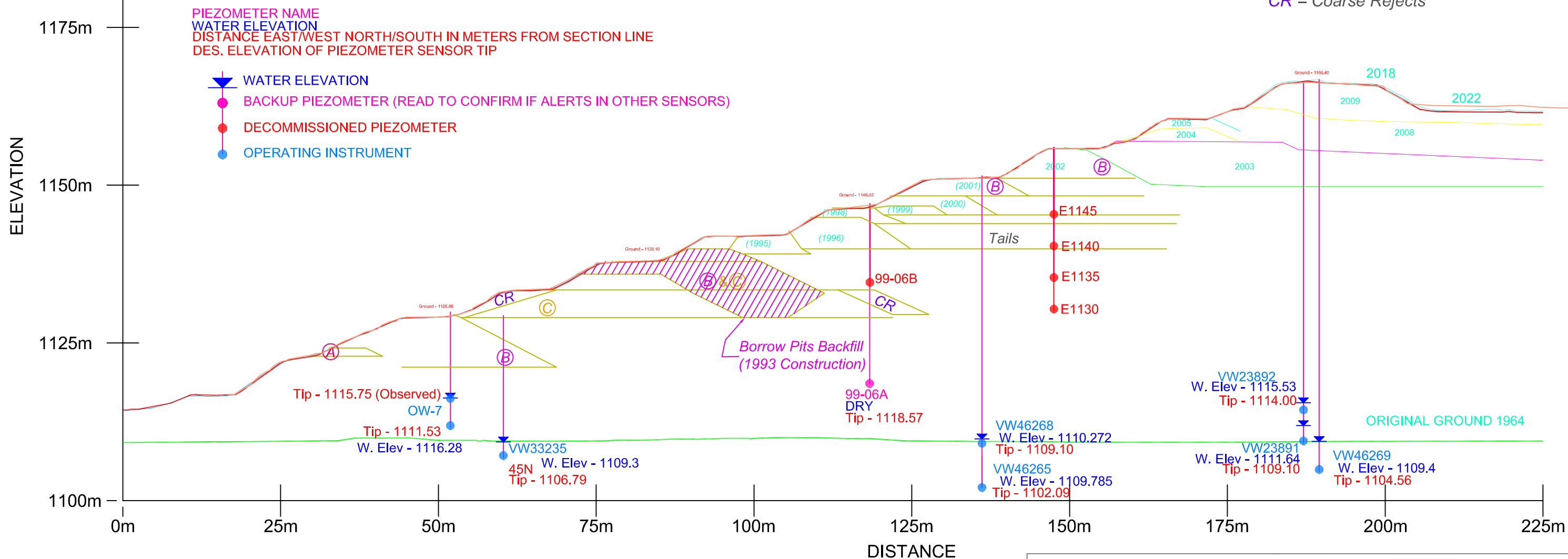
LAGOON D CROSS-SECTION E-E'

NOTES:

- AS-BUILT 2002 TO PRESENT (SURVEY AND LIDAR DATA)
- 2001 AND PRIOR ARE ROUGHLY APPROXIMATED FROM GOLDER ASSOCIATES ANNUAL CONSTRUCTION REVIEW OF TAILINGS LAGOONS C AND D (1996, 1999)
- INSTRUMENT DATA UPDATED SEPT. 2022

LEGEND:

- (A) = Sand and Gravel Fill
- (B) = Compacted Coarse Rejects
- (C) = Compacted Tails
- (D) = Track-Packed Tailings
- (E) = Spigotted Tailings
- CR = Coarse Rejects



Elkview Operations

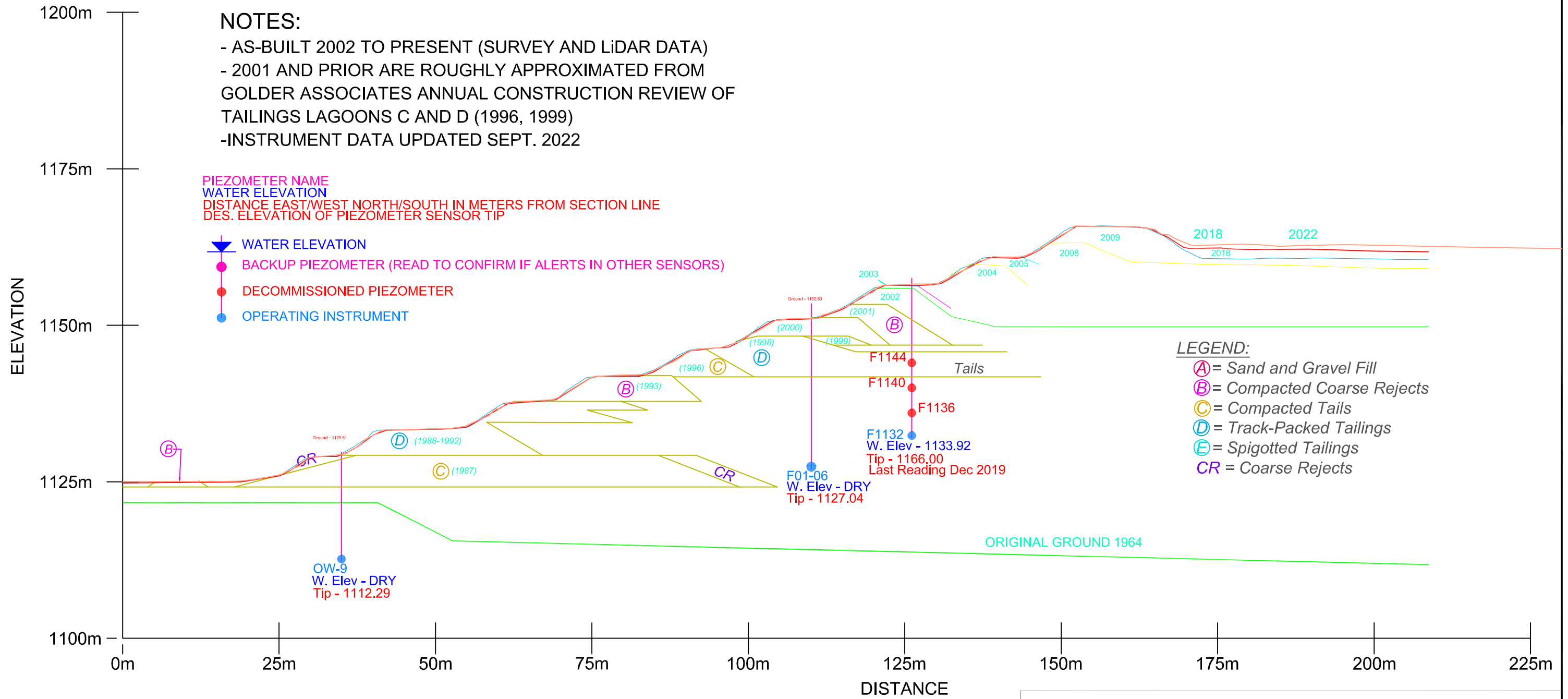
Tailings Engineering

LAGOON D CROSS-SECTION E-E'
 2022

DATE: Oct 2022	SCALE:	DWG. NO. :
DWN BY: A. YEOMANS	REV BY: T. Munn	

CROSS-SECTION
 ORIGIN COORD: 14225.89E, 51679.04N
 AZIMUTH: 24°05'20"

LAGOON D CROSS-SECTION F-F'



Elkview Operations

Tailings Engineering

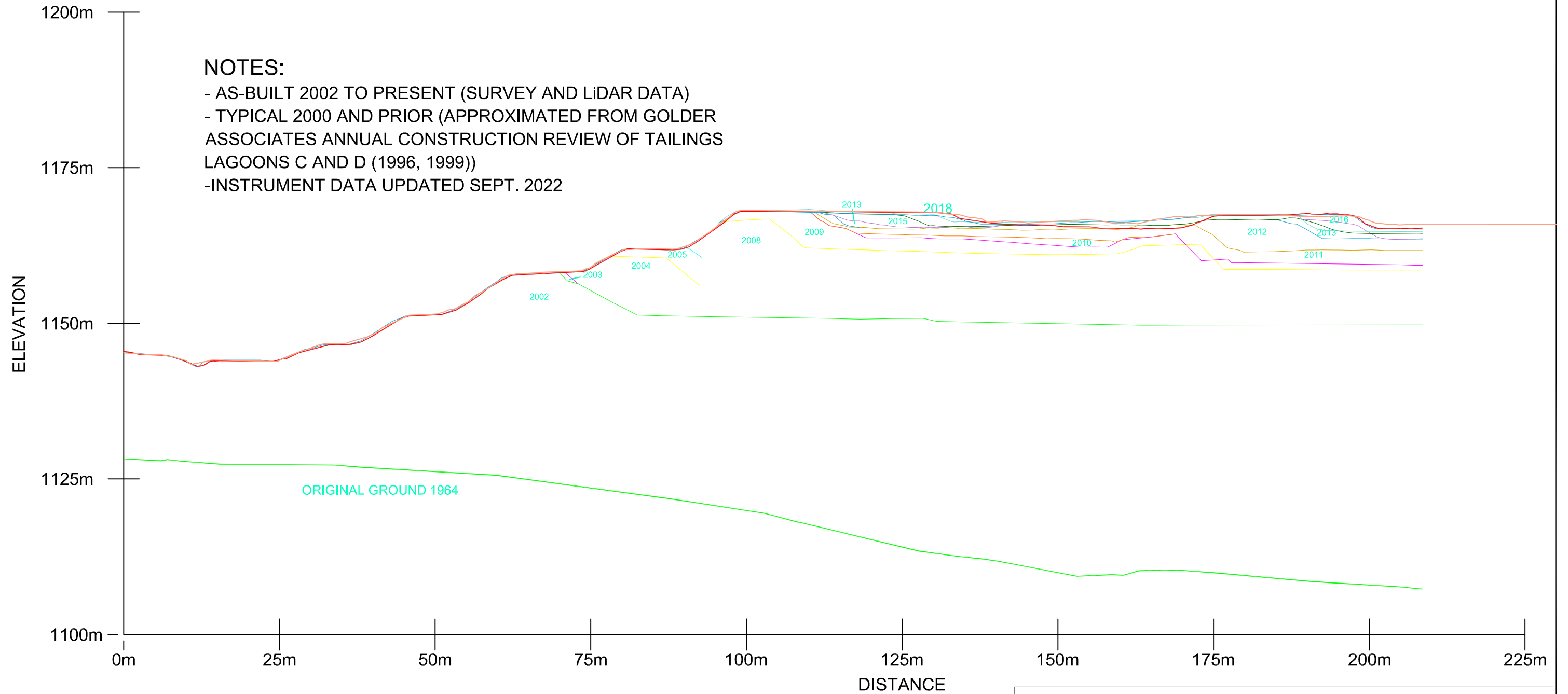
LAGOON D CROSS-SECTION F-F'

2022

DATE: Oct 2022	SCALE:	DWG. NO.:
DWN BY: A. YEOMANS	REV BY: T. Munn	

CROSS-SECTION
 ORIGIN COORD: 14865.68E, 51638.80N
 AZIMUTH: 350°43'36"

LAGOON D CROSS-SECTION H-H'



Elkview Operations		
Tailings Engineering		
LAGOON D CROSS-SECTION H-H' 2022		
DATE: Oct. 2022	SCALE:	DWG. NO. :
DWN BY: A. YEOMANS	REV BY: T. Munn	

APPENDIX IV

Monitoring Instrument Data and Plots (provided by EVO)

WFTF
Lagoon A
Lagoon C
Lagoon D

Appendix IV 2022 Piezometric Level Observations

Table IV-1 2022 Piezometric Level Observation

Structure	Piezometer ID	Stability Section	VWP Tip Elevation or Standpipe Screen Elevation (m)	Max Measured Water Table Elevation ¹ (m)	2022 Observations
WFTF	VWP VW27171	N/A	1657.08	1660.8	Steady increasing trend. 1.7 m increase from 2021.
WFTF	VWP VW27172	N/A	1658.06	N/A (below tip)	Reading is below VWP tip.
WFTF	VWP VW29155	N/A	1657.87	N/A (below tip)	Reading is below VWP tip.
WFTF	VWP VW29158	N/A	1657.31	1657.6	Steady trend. Increase from 2021 “dry” measurement to 0.3 m above VWP tip.
WFTF	VWP VW29159	N/A	1656.62	1663.3	Steady increasing trend. 2.0 m increase from 2021.
WFTF	VWP VW38582	N/A	1657.93	1658.0	Steady trend.
WFTF	VWP VW38583	N/A	1658.87	1658.9	Steady trend.
WFTF	VWP VW38584	N/A	1657.48	1657.5	Steady trend.
WFTF	VWP VW38585	N/A	1657.08	N/A (below tip)	Reading is below VWP tip.
WFTF	VWP VW38586	N/A	1661.31	1661.4	Steady trend.
WFTF	Standpipe WF-2 SOUTH (VWP 67219)	N/A	1536.38	1557.7	Steady trend. 10.3 m increase from 2021. Latest reading in August 2022.
WFTF	Standpipe WF-3 NORTH (VWP 67218)	N/A	1547.58	N/A	Decommissioned in 2022 due to irregular and unreliable past VWP data.
Lagoon A	VWP PE19_60307	A-A	1113.59	1114.8	Steady trend. 0.6 m increase during 2022 freshet.
Lagoon A	VWP PE19_60301	A-A	1112.69	1115.6	Steady trend. 0.1 m increase during 2022 freshet.
Lagoon C	VWP VW23238	A-A	1117.66	N/A (below tip)	Reading is below VWP tip.
Lagoon C	VWP VW23242	A-A	1109.50	N/A (below tip)	Reading is below VWP tip.
Lagoon C	VWP VW23239	C-C	1117.65	N/A (below tip)	Reading is below VWP tip.
Lagoon C	VWP VW23243	C-C	1111.25	N/A (below tip)	Reading is below VWP tip.

Structure	Piezometer ID	Stability Section	VWP Tip Elevation or Standpipe Screen Elevation (m)	Max Measured Water Table Elevation ¹ (m)	2022 Observations
Lagoon C	VWP VW46091	D-D	1102.59	1109.77	No measurements taken in 2020, 2021, or 2022. No datalogger present. 2019 water table elevation shown.
Lagoon C	VWP VW23240	D-D	1117.86	N/A (below tip)	Reading is below VWP tip.
Lagoon C	VWP VW23244	D-D	1111.46	N/A (below tip)	Reading is below VWP tip.
Lagoon C	Standpipe 99-01	E-E	1113.72	N/A	This is a backup instrument (not read in 2022).
Lagoon C	VWP VW46191	E-E	1111.33	1112.5	0.34 m increase since January 2022.
Lagoon C	VWP VW46262	E-E	1100.96	1109.9	Steady trend.
Lagoon C	VWP VW46261	G-G	1100.46	N/A (below tip)	Reading is below VWP tip.
Lagoon C	VWP VW46093	G-G	1101.22	1111.0	Steady trend. 1.0 m increase during 2022 freshet. Most recent reading in July 2022.
Lagoon C	Standpipe OW-C-88-1	G-G	1111.63	N/A	This is a backup instrument (not read in 2022).
Lagoon C	Standpipe OW-C-88-2	G-G	1112.48	N/A	This is a backup instrument (not read in 2022).
Lagoon C	Standpipe OW-C2	G-G	1116.87	N/A	Scheduled to be decommissioned (not read).
Lagoon C	Standpipe GT-9703 A (VWP 67169)	G-G	1085.92	1110.5	Steady trend. 1.3 m increase during the 2022 freshet.
Lagoon C	Standpipe GT-9703 B	G-G	1108.50	1110.51	Not read in 2022, however GT-9703 A trend is consistent. (2019 value shown)
Lagoon C	VWP VW23241	East Emb.	1118.60	Not Reported	Potential instrument malfunction or additional calibration required, and therefore not reported.
Lagoon C	VWP VW23245	East Emb.	1111.03	1112.0	Steady decreasing trend. 0.2 m decrease from October 2021.
Lagoon C	VWP VW_ PE19_60310	East Emb	1106.69	1113.7	Steady trend. 0.31 m increase during 2022 freshet.
Lagoon C	VWP VW_ PE19_60311	East Emb	1106.64	1112.8	Steady trend. 0.2 m increase in 2022 baseline compared to 2021. 0.66 m increase during 2022 freshet.
Lagoon D	VWP VW23897	AA-BB	1111.30	1116.0	0.35 m increase during 2022 freshet.
Lagoon D	VWP VW23898	AA-BB	1116.20	1116.5	Increase from 2021 “dry” measurement to 0.3 m above VWP tip during 2022 freshet.
Lagoon D	VWP VW45123	AA-BB	1114.09	1116.7	0.5 m increase during 2022 freshet.
Lagoon D	Standpipe OW-9434A	AA-BB	1115.00	Not Reported	Potential instrument malfunction or additional calibration required, and therefore not reported.

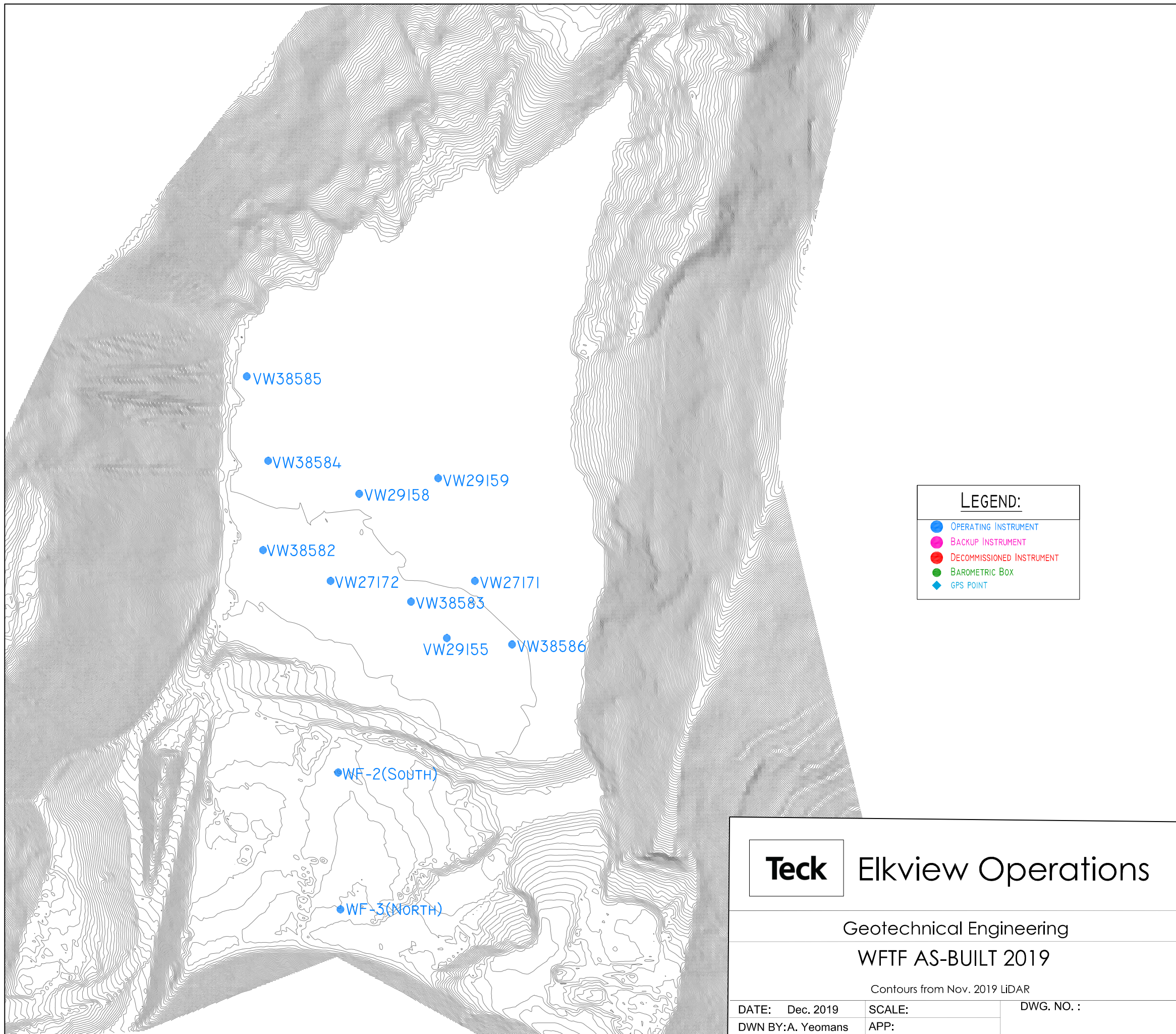
Structure	Piezometer ID	Stability Section	VWP Tip Elevation or Standpipe Screen Elevation (m)	Max Measured Water Table Elevation ¹ (m)	2022 Observations
	(VW 67168)				
Lagoon D	Standpipe OW-9434B	AA-BB	1123.77	1124.1	This is a backup instrument. EVO read in 2022 to verify nearby sentient VWP readings.
Lagoon D	Standpipe 99-03A	B-B	1118.31	N/A	Backup instrument. EVO attempted to read in 2022 to verify nearby sentient VWP readings, but standpipe was blocked.
Lagoon D	Standpipe 99-03B	B-B	1133.21	N/A	Scheduled to be decommissioned. EVO read in 2022 to verify nearby sentient VWP readings. Dry to El. 1133.6 m.
Lagoon D	Standpipe OW-12	B-B	1123.50	N/A	Scheduled to be decommissioned. EVO read in 2022 to verify nearby sentient VWP readings. Dry to El. 1123.5 m.
Lagoon D	Standpipe OW-12A (VWP 67201)	B-B	1113.60	1116.4	0.6 m increase during 2022 freshet.
Lagoon D	Standpipe OW-9431	B-B	1130.79	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9435	B-B	1130.97	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9436A (VW 67166)	BB-CC	1115.55	1120.9	0.3 m increase during 2022 freshet. Latest reading in August 2022.
Lagoon D	Standpipe OW-9436B	BB-CC	1124.39	N/A	This is a backup instrument (not read in 2021)
Lagoon D	Standpipe OW-9504A	BB-CC	1130.00	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9504B	BB-CC	1133.42	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9502	BB-CC	1132.14	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9501A	BB-CC	1129.37	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9501B	BB-CC	1133.09	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-3	BB-CC	1108.48	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW23895	C-C	1114.10	1117.0	Steady trend.
Lagoon D	VWP VW23896	C-C	1109.20	Not Reported	Note from EVO that datalogger is saturated and requires replacement (No readings for 2022)
Lagoon D	VWP VW65023 (C1137)	C-C	1137.05	N/A	Scheduled to be decommissioned (not read)
Lagoon D	VWP VW65026 (C1132)	C-C	1132.16	N/A	This is a backup instrument (not read in 2022).

Structure	Piezometer ID	Stability Section	VWP Tip Elevation or Standpipe Screen Elevation (m)	Max Measured Water Table Elevation ¹ (m)	2022 Observations
Lagoon D	VWP VW46263	C-C	1109.95	1116.3	0.5 m increase during 2022 freshet.
Lagoon D	Standpipe C01-03A	C-C	1138.95	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe C01-03B	C-C	1123.50	N/A	This is a backup instrument (not read in 2022).
Lagoon D	Standpipe OW-9505A	C-C	1130.11	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9505B	C-C	1133.65	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9503	C-C	1133.33	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9506	C-C	1129.26	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-9433A (VWP 67167)	C-C	1115.00	1119.3	0.2 m increase during 2022 freshet.
Lagoon D	Standpipe OW-9433B	C-C	1126.49	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe 99-04A	C-C	1118.91	N/A	Scheduled to be decommissioned. EVO read in 2022 to verify nearby sentient VWP readings. Dry to El. 1119.1 m.
Lagoon D	Standpipe 99-04B	C-C	1133.81	N/A	Scheduled to be decommissioned. EVO read in 2022 to verify nearby sentient VWP readings. Dry to El 1133.9 m
Lagoon D	VWP VW46095	C-C	1109.26	Not Reported	Potential instrument malfunction and therefore not reported.
Lagoon D	Standpipe C01-02 (VW 67197)	C-C	1114.34	1114.6	Steady trend.
Lagoon D	VWP PE19_60309	C-C	1098.14	Not Reported	Potential instrument malfunction and therefore not reported.
Lagoon D	Standpipe D01-05A	CC-DD	1138.55	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe D01-05B	CC-DD	1124.62	N/A	This is a backup instrument (not read in 2022)
Lagoon D	Standpipe OW-4 (VW 67205)	CC-DD	1106.89	1113.1	Steady trend.
Lagoon D	Standpipe OW-5 (VW 67204)	D-D	1107.23	1111.7	Steady trend. 2.0 m increase during 2022 freshet.
Lagoon D	Standpipe 99-05A	D-D	1118.66	1118.8	Steady trend.

Structure	Piezometer ID	Stability Section	VWP Tip Elevation or Standpipe Screen Elevation (m)	Max Measured Water Table Elevation ¹ (m)	2022 Observations
	(VW 67208)				
Lagoon D	Standpipe 99-05B	D-D	1133.54	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe D01-04 (VW 67198)	DD-EE	1115.15	1115.4	Steady trend.
Lagoon D	Standpipe OW-6 (VW 67206)	DD-EE	1106.07	1110.1	Steady trend.
Lagoon D	VWP VW 12394-136 (E1140)	DD-EE	1142.49	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW 12394-135 (E1145)	DD-EE	1144.61	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW 65025 (E1135)	DD-EE	1135.00	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW 65024 (E1130)	DD-EE	1130.00	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW23891	E-E	1109.10	1111.75	Note from EVO that datalogger requires replacement (No readings for 2022). Previous 2020 measurement shown.
Lagoon D	VWP VW23892	E-E	1114.00	1115.65	Note from EVO that datalogger requires replacement (No readings for 2022). Previous 2020 measurement shown.
Lagoon D	VWP VW46269	E-E	1104.56	1109.7	Steady trend.
Lagoon D	VWP VW46265	E-E	1102.09	1110.58	Note from EVO that there are no readings for 2022. Previous 2020 measurement shown.
Lagoon D	VWP VW46268	E-E	1109.10	1110.83	Note from EVO that there are no readings for 2022. Previous 2020 measurement shown.
Lagoon D	Standpipe 99-06A	E-E	1118.57	N/A	This is a backup instrument (not read in 2022)
Lagoon D	Standpipe 99-06B	E-E	1134.22	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe OW-7 (VWP 67162)	E-E	1111.53	Not Reported	Potential instrument malfunction and therefore not reported.
Lagoon D	VWP VW33235	E-E	1106.79	1109.6	Steady trend.
Lagoon D	VWP VW 62745 (F1144)	F-F	1144.00	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP	F-F	1140.00	N/A	Scheduled to be decommissioned (not read).

Structure	Piezometer ID	Stability Section	VWP Tip Elevation or Standpipe Screen Elevation (m)	Max Measured Water Table Elevation ¹ (m)	2022 Observations
	VW 65027 (F1140)				
Lagoon D	VWP VW 12394-134 (F1136)	F-F	1136.00	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW 66325 (F1132)	F-F	1132.00	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe F01-06	F-F	1127.04	N/A (below tip)	Not read in 2022. 2020 value shown.
Lagoon D	Standpipe OW-9	F-F	1112.29	N/A (below tip)	Not read in 2022. 2020 value shown.
Lagoon D	Standpipe GT-9701	FF-GG	1120.97	N/A (below tip)	Not read in 2022. 2020 value shown.
Lagoon D	Standpipe OW-10 (VWP 67195)	FF-GG	1121.16	N/A (below tip)	Not read in 2022. 2020 value shown
Lagoon D	Standpipe 99-07A	FF-GG	1118.64	N/A (below tip)	Not read in 2022. 2020 value shown
Lagoon D	Standpipe 99-07B	FF-GG	1134.48	N/A	Scheduled to be decommissioned (not read).
Lagoon D	VWP VW23885	G-G	1113.00	1114.80	Not read in 2022. 2021 value shown.
Lagoon D	VWP VW23886	G-G	1108.10	1112.10	Not read in 2022. 2021 value shown.
Lagoon D	VWP VW33234	G-G	1125.31	Not Reported	Potential instrument malfunction or additional calibration required, and therefore not reported.
Lagoon D	VWP VW46090	G-G	1124.58	Not Reported	Potential instrument malfunction or additional calibration required, and therefore not reported.
Lagoon D	VWP VW46092	G-G	1118.78	Not Reported	Potential instrument malfunction or additional calibration required, and therefore not reported.
Lagoon D	BH 30	G-G	1132.85	N/A	Scheduled to be decommissioned (not read).
Lagoon D	Standpipe BH 29A	GG-HH	1132.59	N/A	Scheduled to be decommissioned (not read).

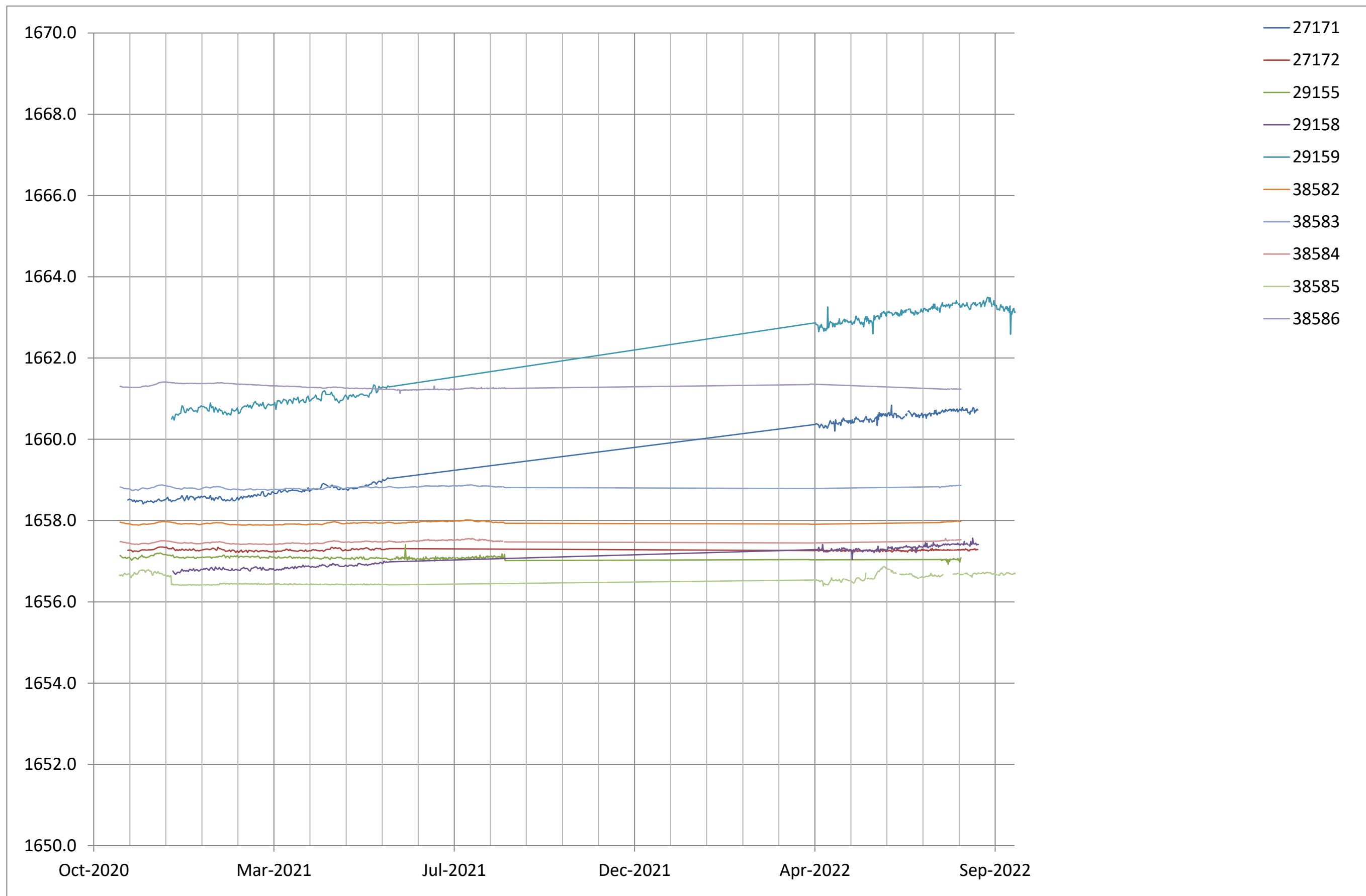
Note: 1. Max measured water table elevation refers to the maximum recorded level for the 2021/2022 period since the previous annual facility performance reporting period (up to October 2021). This level may vary from the drawing cross-sections which shows the levels from December 2020.



PROJECT: TECK (EVO)
LOCATION: WFTF

WFTF Piezometers Plots

COMMENTS:

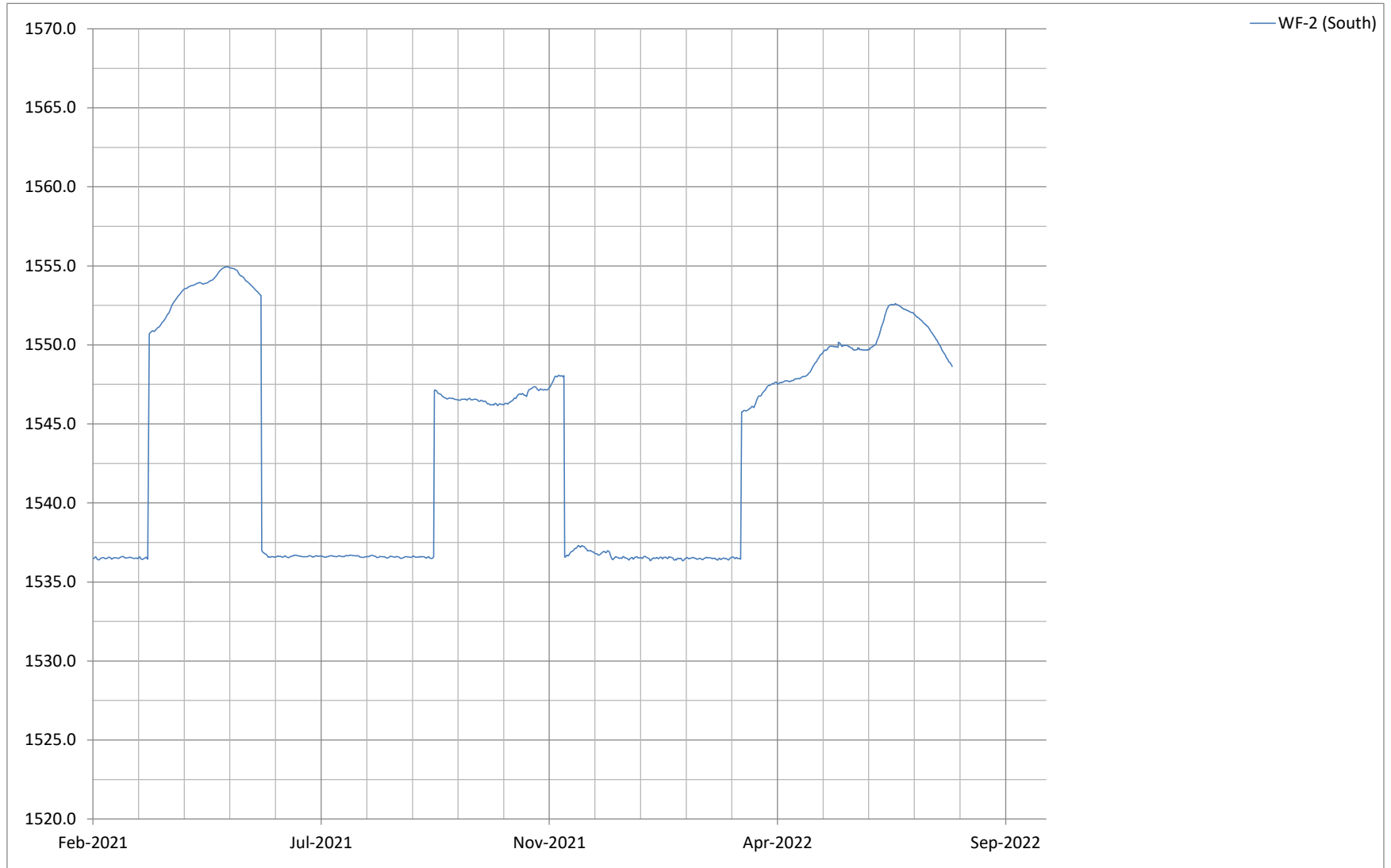


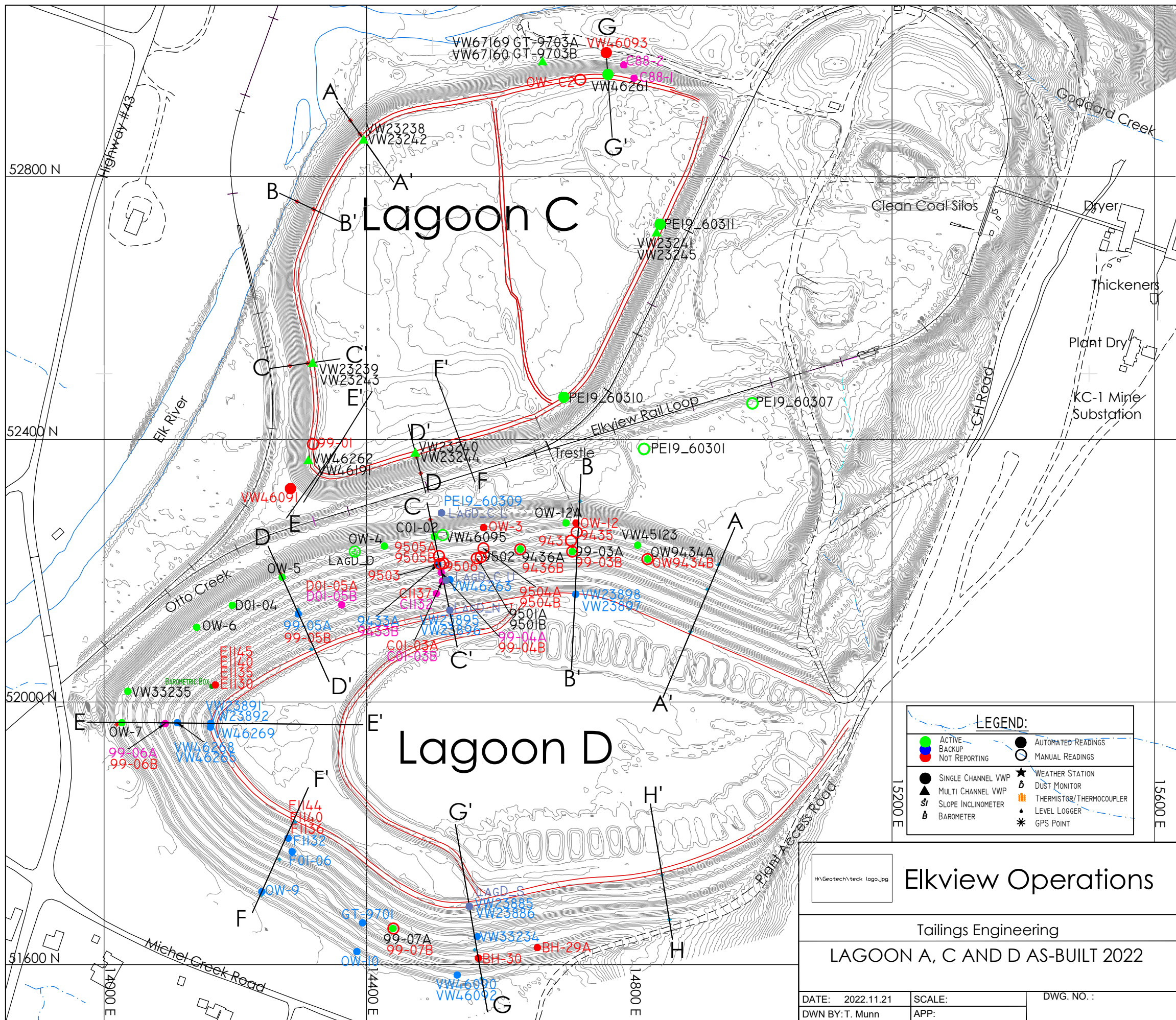
PROJECT: TECK (EVO)

LOCATION: WFTF

WFTF Piezometer Plots

COMMENTS:





LEGEND:

● ACTIVE	○ AUTOMATED READINGS
● BACKUP	○ MANUAL READINGS
● NOT REPORTING	★ WEATHER STATION
● SINGLE CHANNEL VWP	♠ DUST MONITOR
▲ MULTI CHANNEL VWP	⊞ THERMISTOR/THERMOCOUPLER
♠ SLOPE INCLINOMETER	⬮ LEVEL LOGGER
♠ BAROMETER	⋆ GPS POINT

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Elkview Operations

Tailings Engineering

LAGOON A, C AND D AS-BUILT 2022

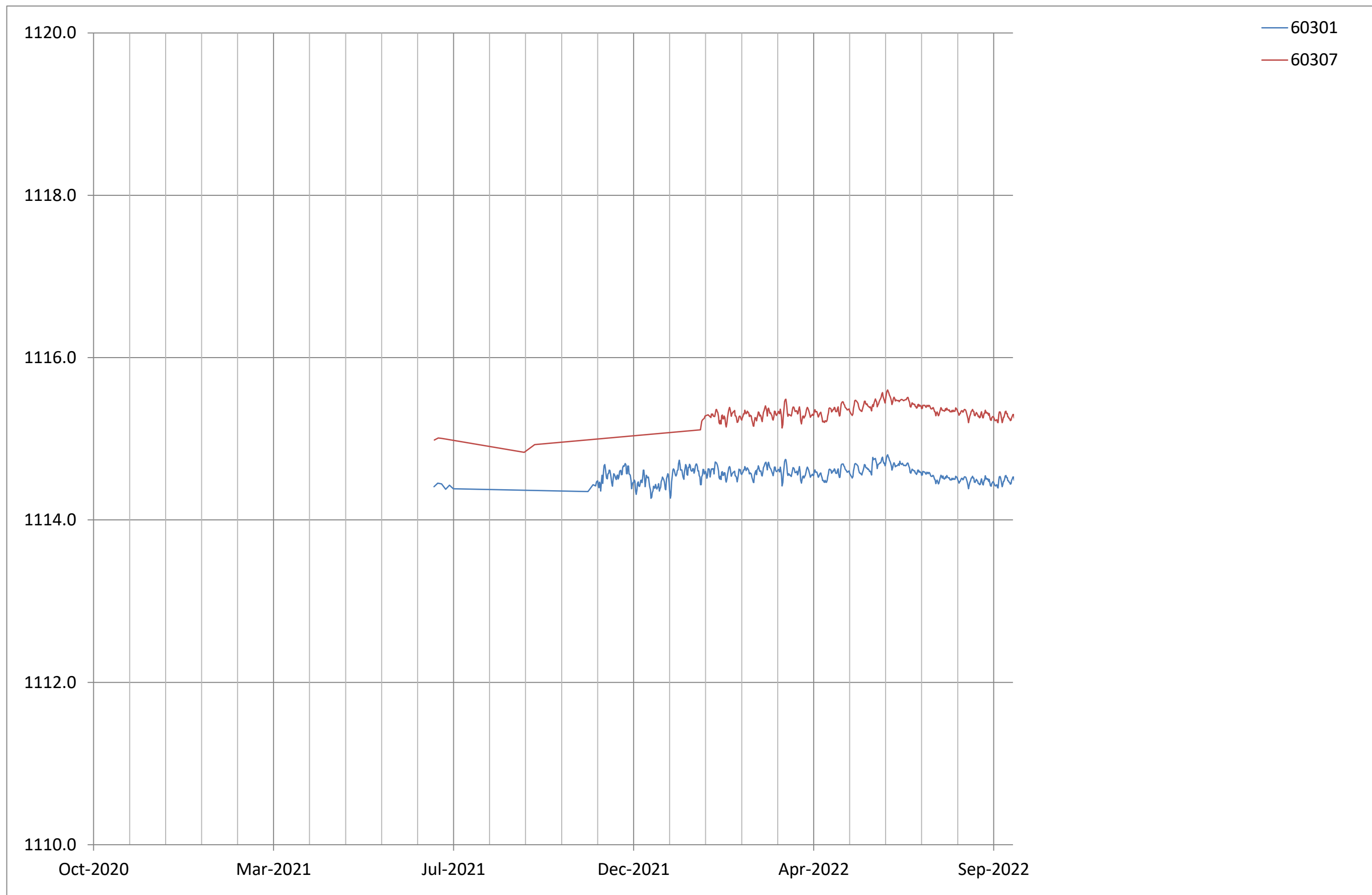
DATE: 2022.11.21	SCALE:	DWG. NO.:
DWN BY: T. Munn	APP:	

PROJECT: TECK (EVO)

LOCATION: Lagoon A

Lagoon A Piezometer Plots

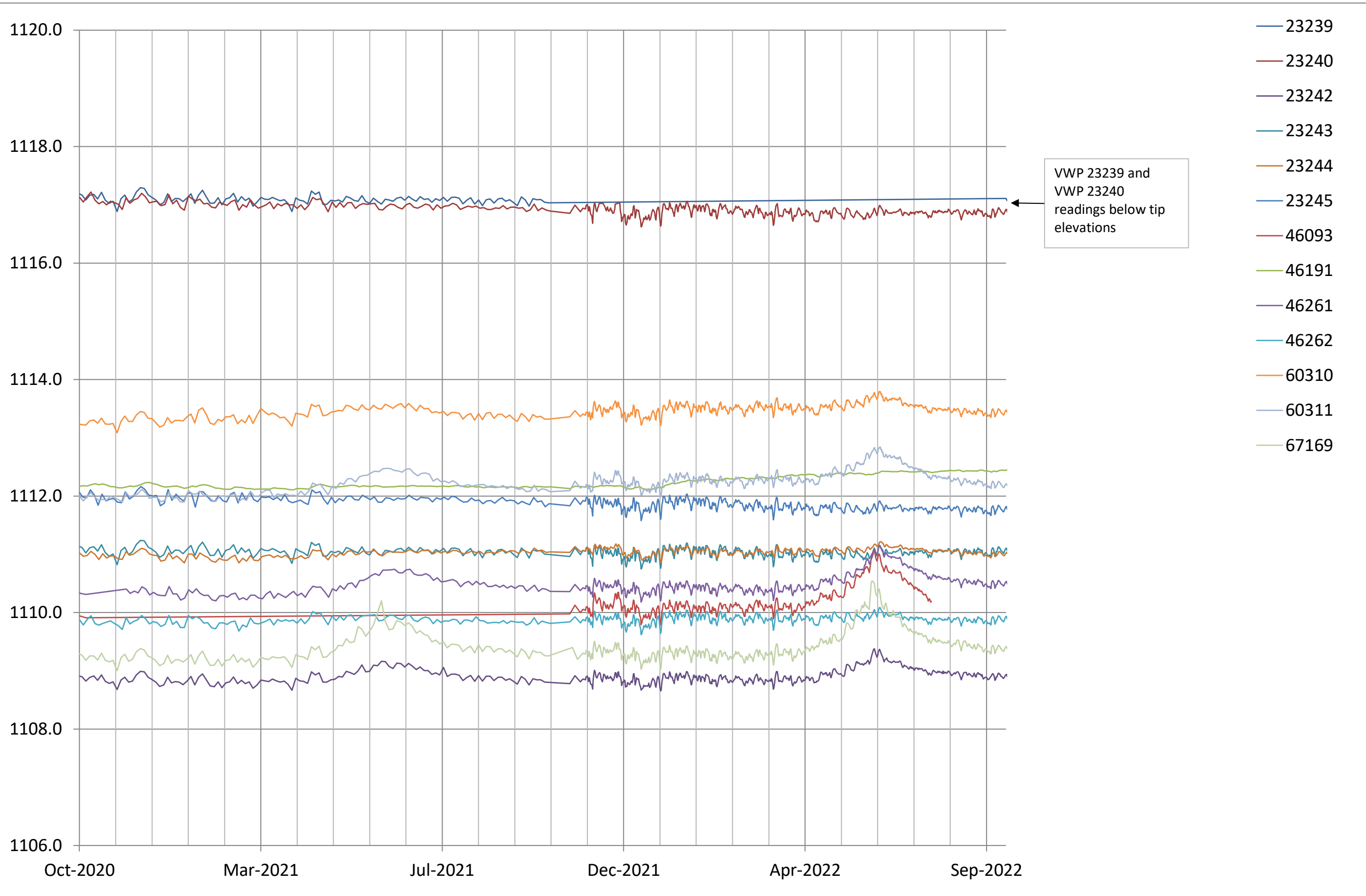
COMMENTS:



PROJECT: TECK (EVO)
LOCATION: Lagoon C

Lagoon C Piezometric Plots

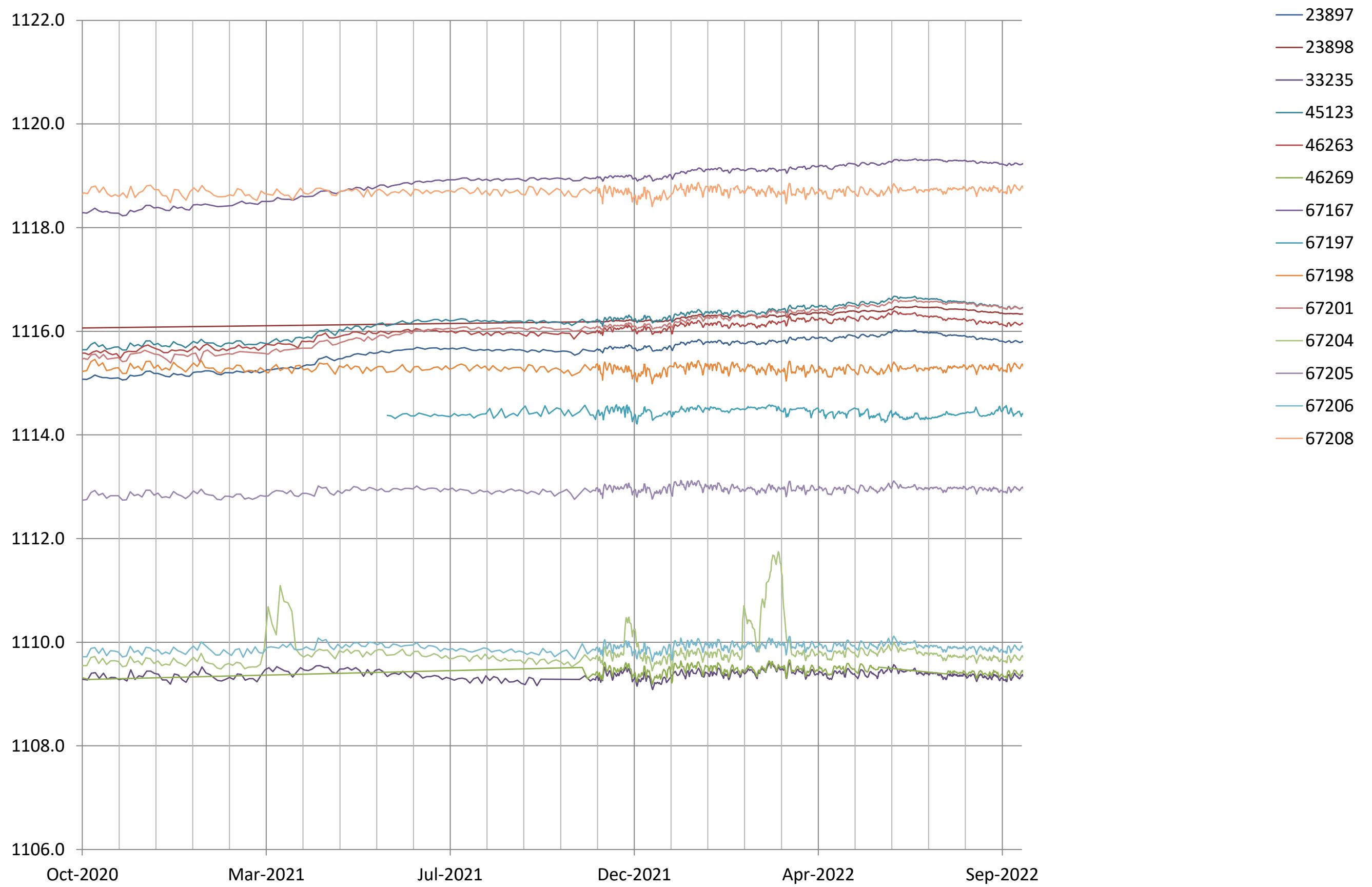
COMMENTS:



PROJECT: TECK (EVO)
LOCATION: Lagoon D

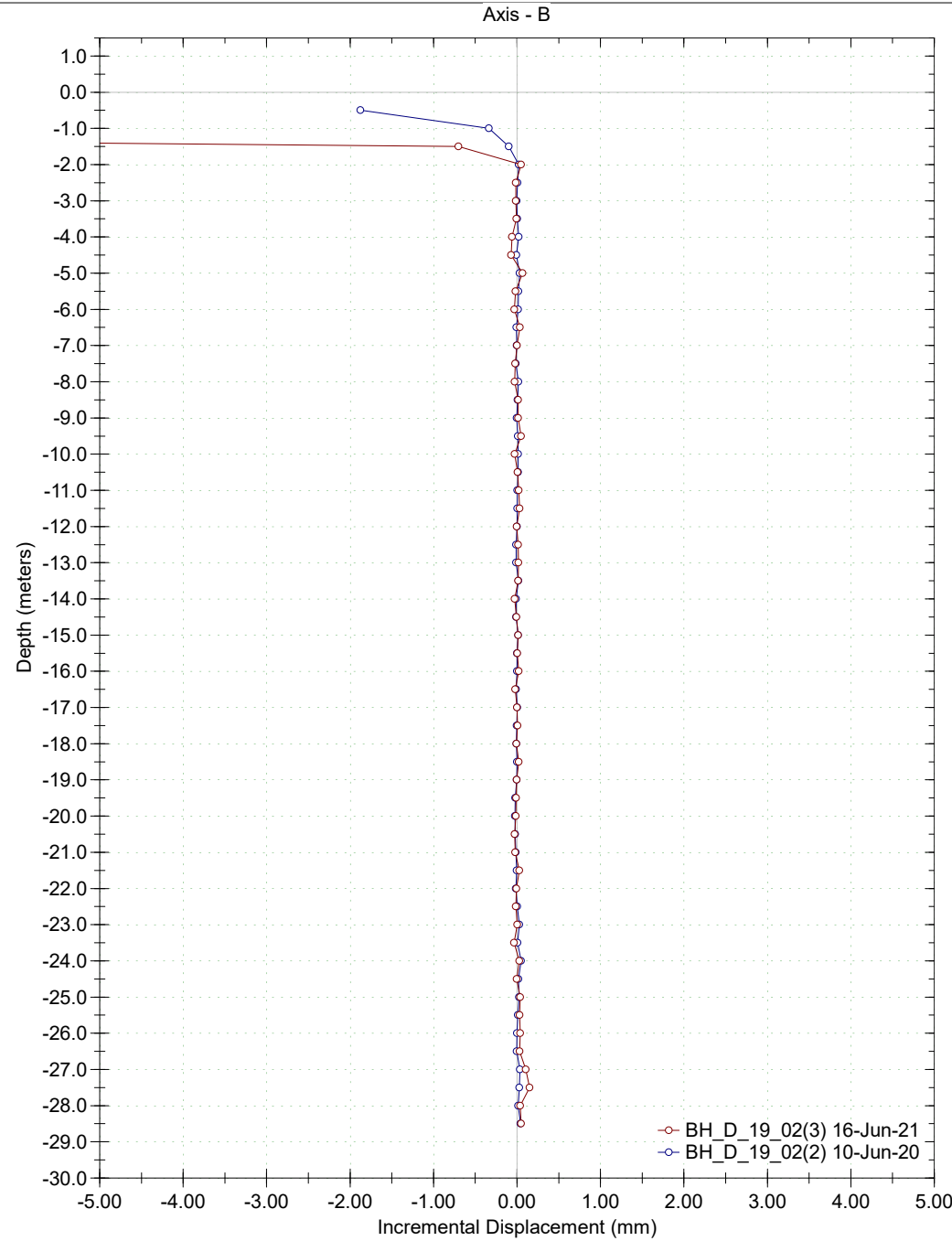
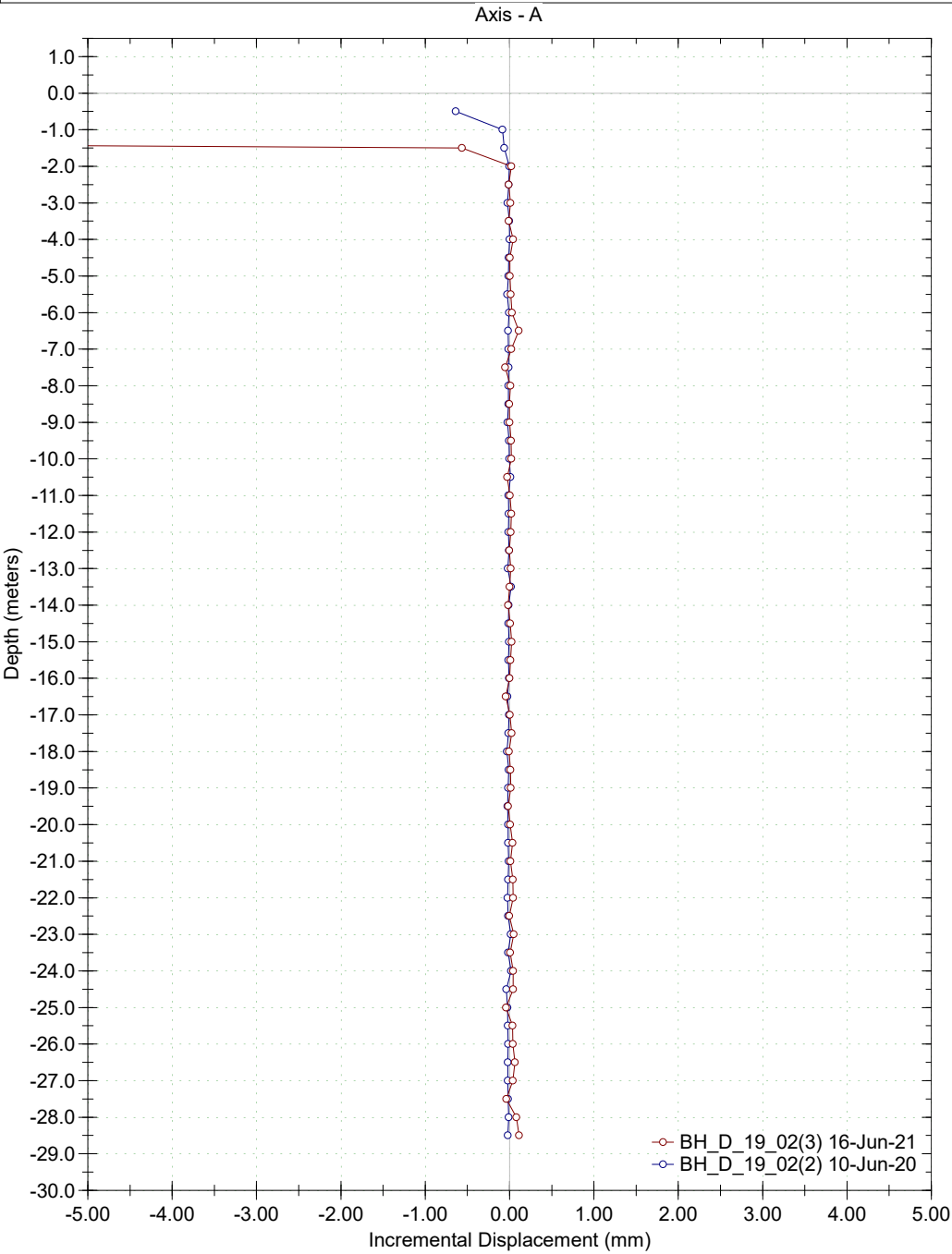
Lagoon D Peizometric Plots

COMMENTS:



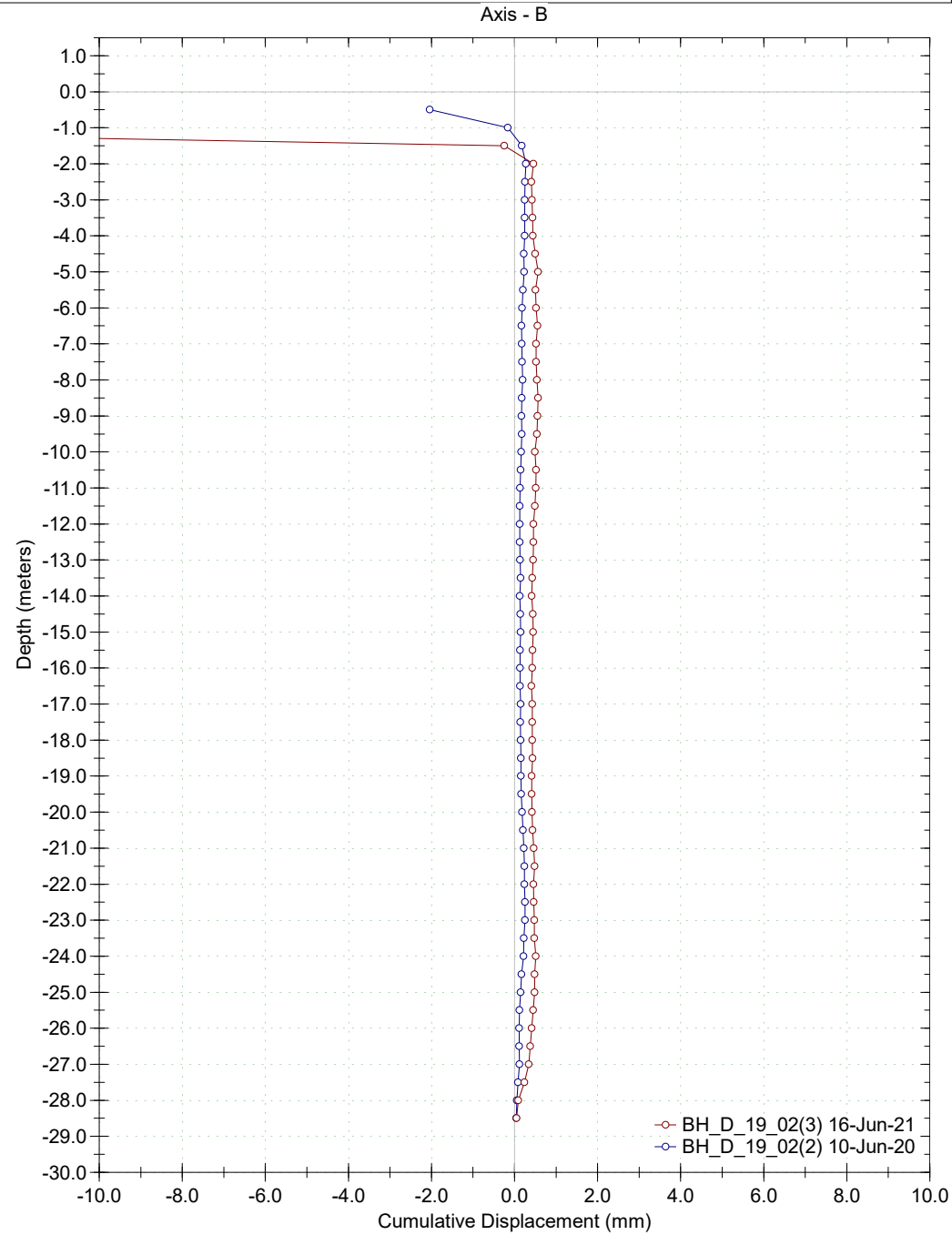
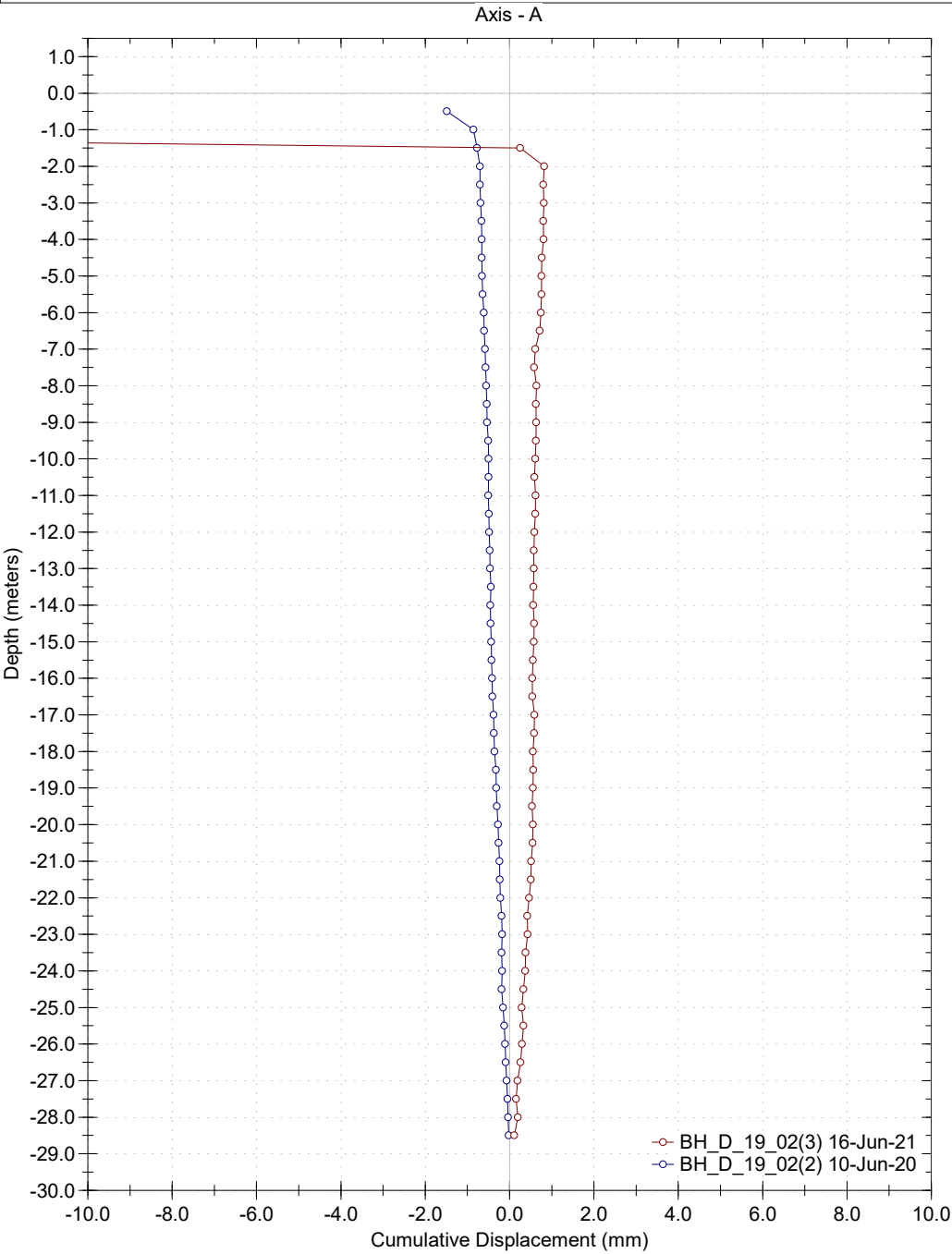
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Project : LagoonD
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 28.5 meters
A+ Groove Azimuth :
Base Reading : 2020 May 07 13:23
Applied Azimuth : 0.0 degrees



Borehole : BH_D_19_02
Project : LagoonD
Location :
Northing :
Easting :
Collar :

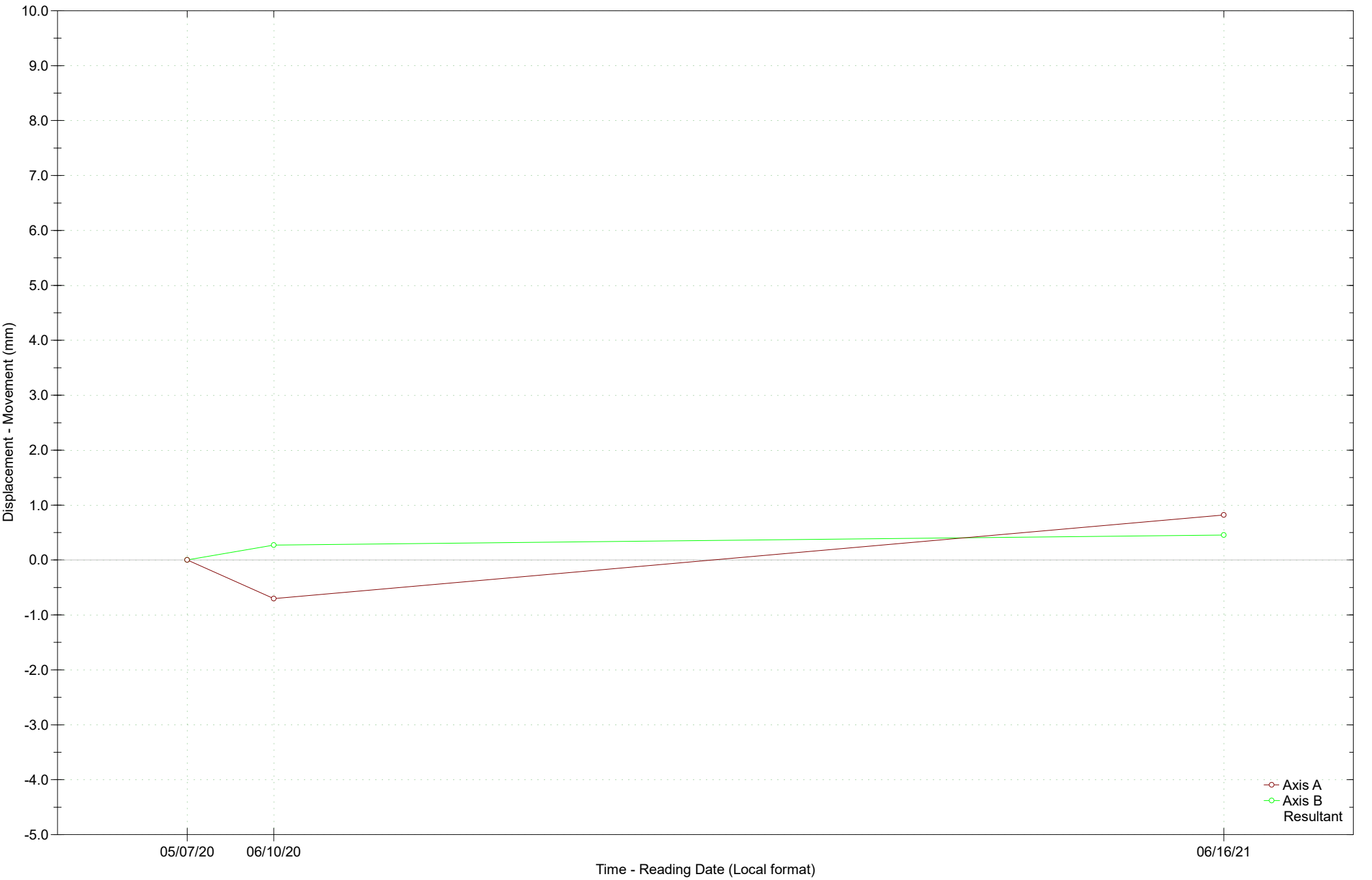
Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 28.5 meters
A+ Groove Azimuth :
Base Reading : 2020 May 07 13:23
Applied Azimuth : 0.0 degrees



Borehole : BH_D_19_02
Project : LagoonD
Location :
Northing :
Easting :
Collar :
Collar Elev : 0.00 meters

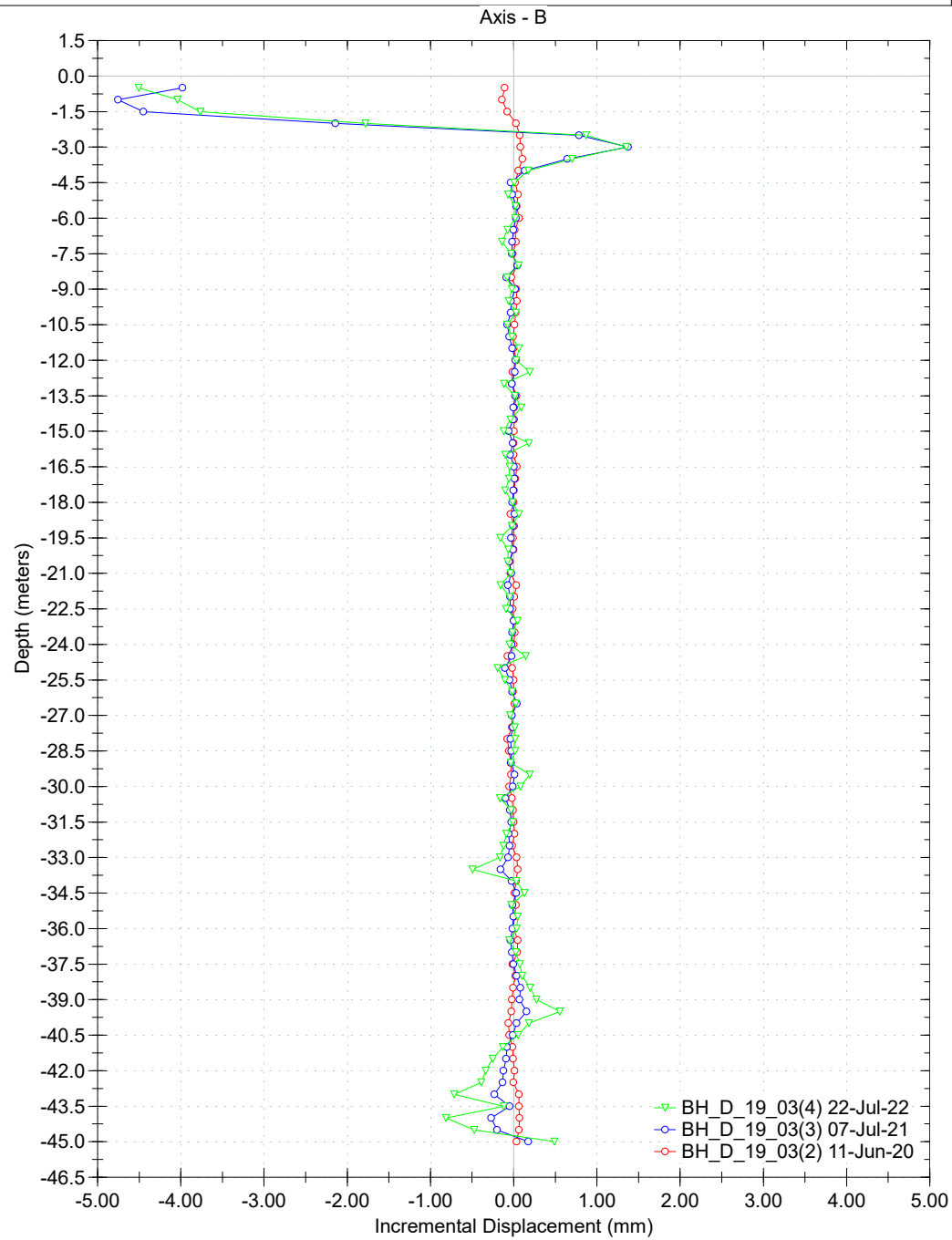
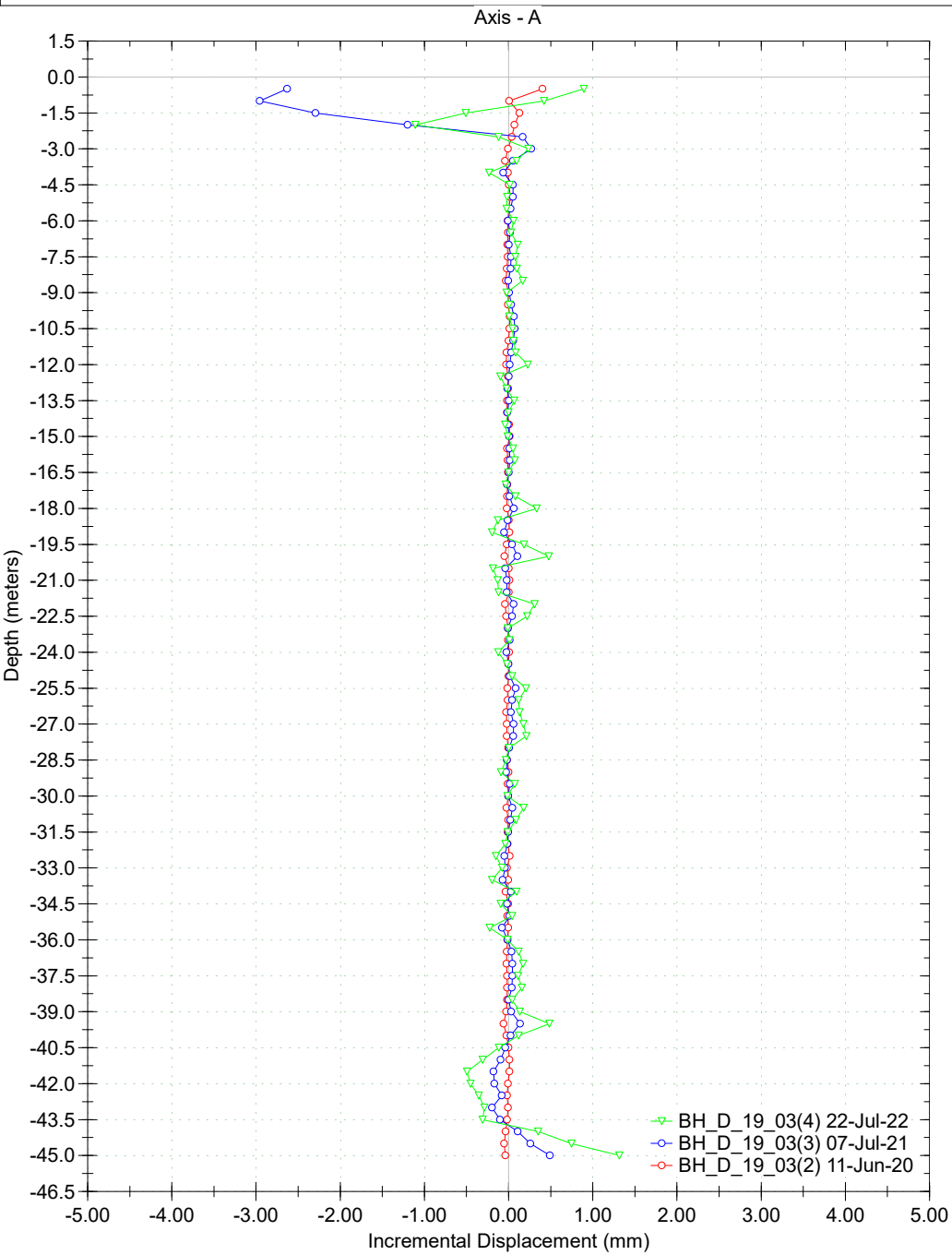
Spiral Correction : N/A
Movement Depth : 2.0 - 28.5 meters
Reading Depth : 28.5 meters
A+ Groove Azimuth :
Latest Reading : 2021 Jun 16 14:44
Initial Reading : 2020 May 07 13:23
Applied Azimuth : 0.0 degrees

Time Plot : 2.0 - 28.5 meters



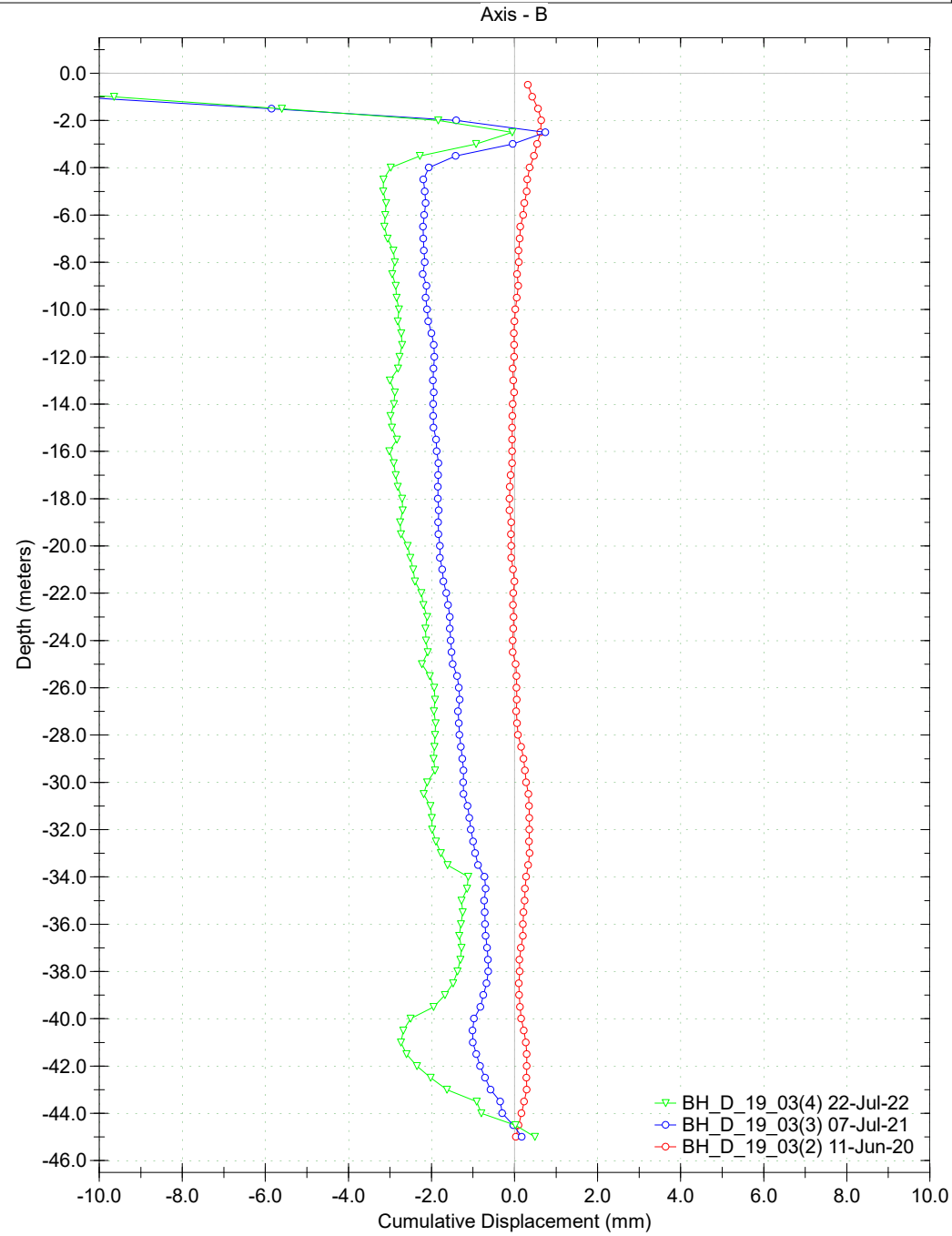
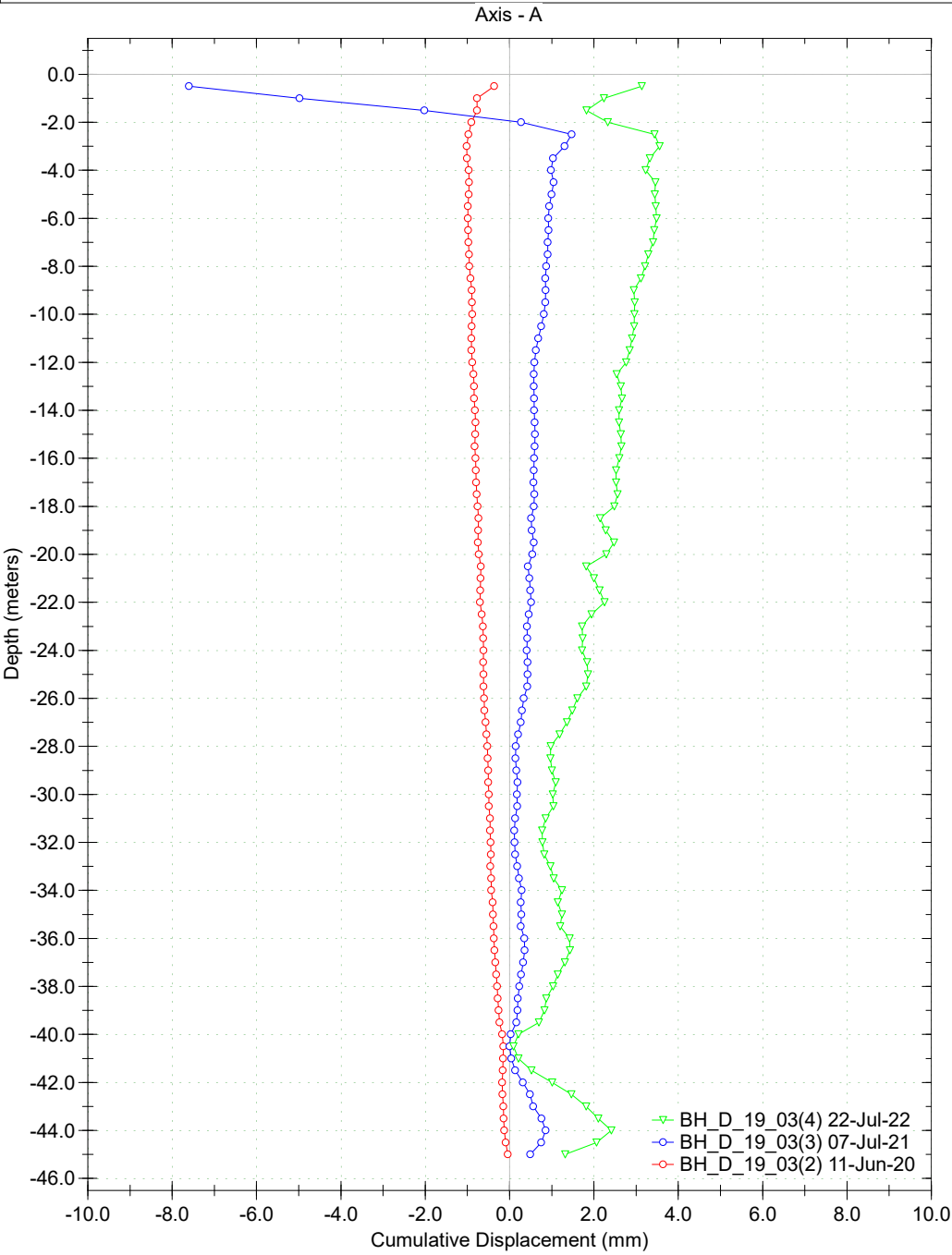
Borehole : BH_D_19_03
Project : LagoonD
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 45.0 meters
A+ Groove Azimuth :
Base Reading : 2020 May 07 14:23
Applied Azimuth : 0.0 degrees



Borehole : BH_D_19_03
Project : LagoonD
Location :
Northing :
Easting :
Collar :

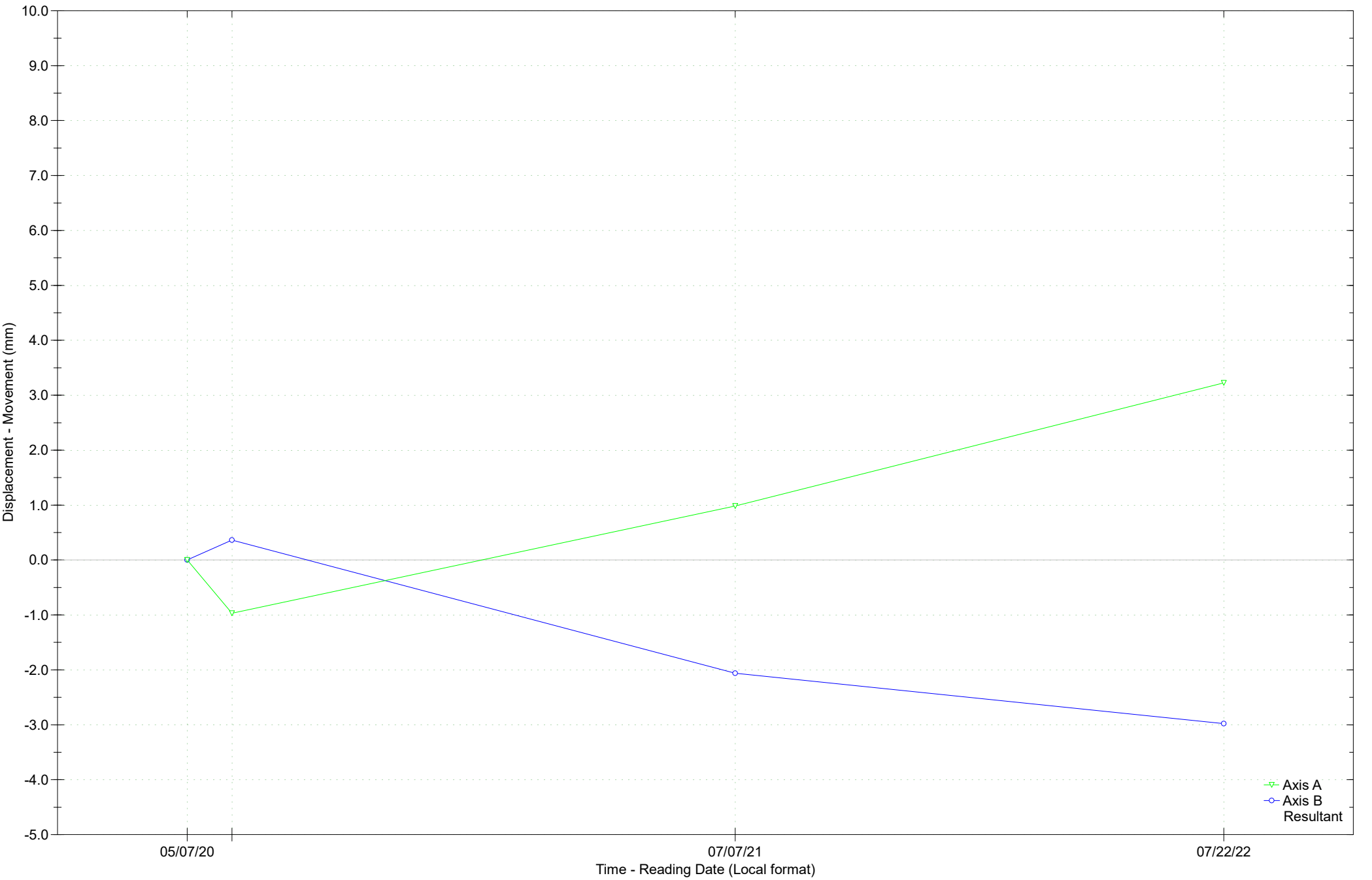
Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 45.0 meters
A+ Groove Azimuth :
Base Reading : 2020 May 07 14:23
Applied Azimuth : 0.0 degrees



Borehole : BH_D_19_03
Project : LagoonD
Location :
Northing :
Easting :
Collar :
Collar Elev : 0.00 meters

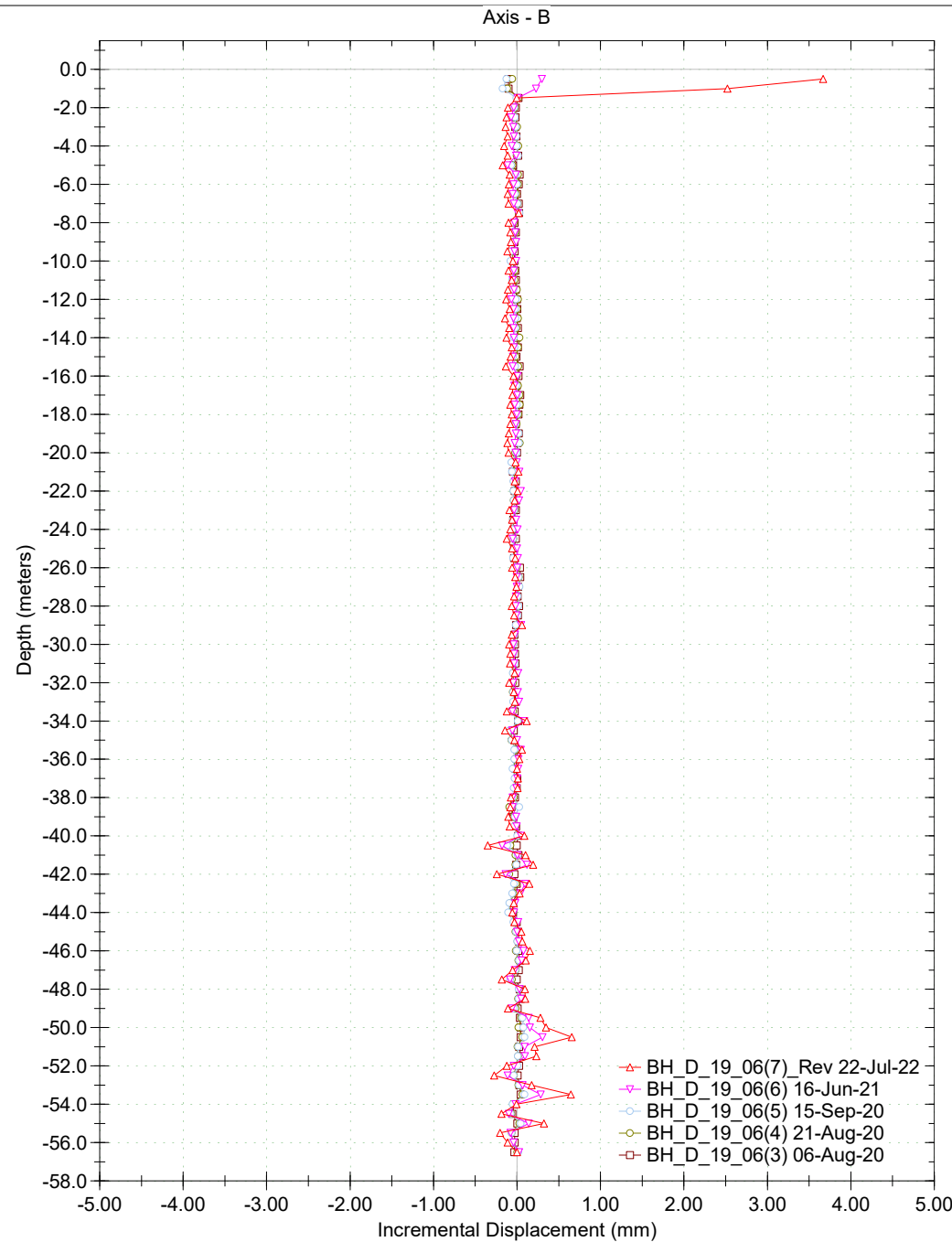
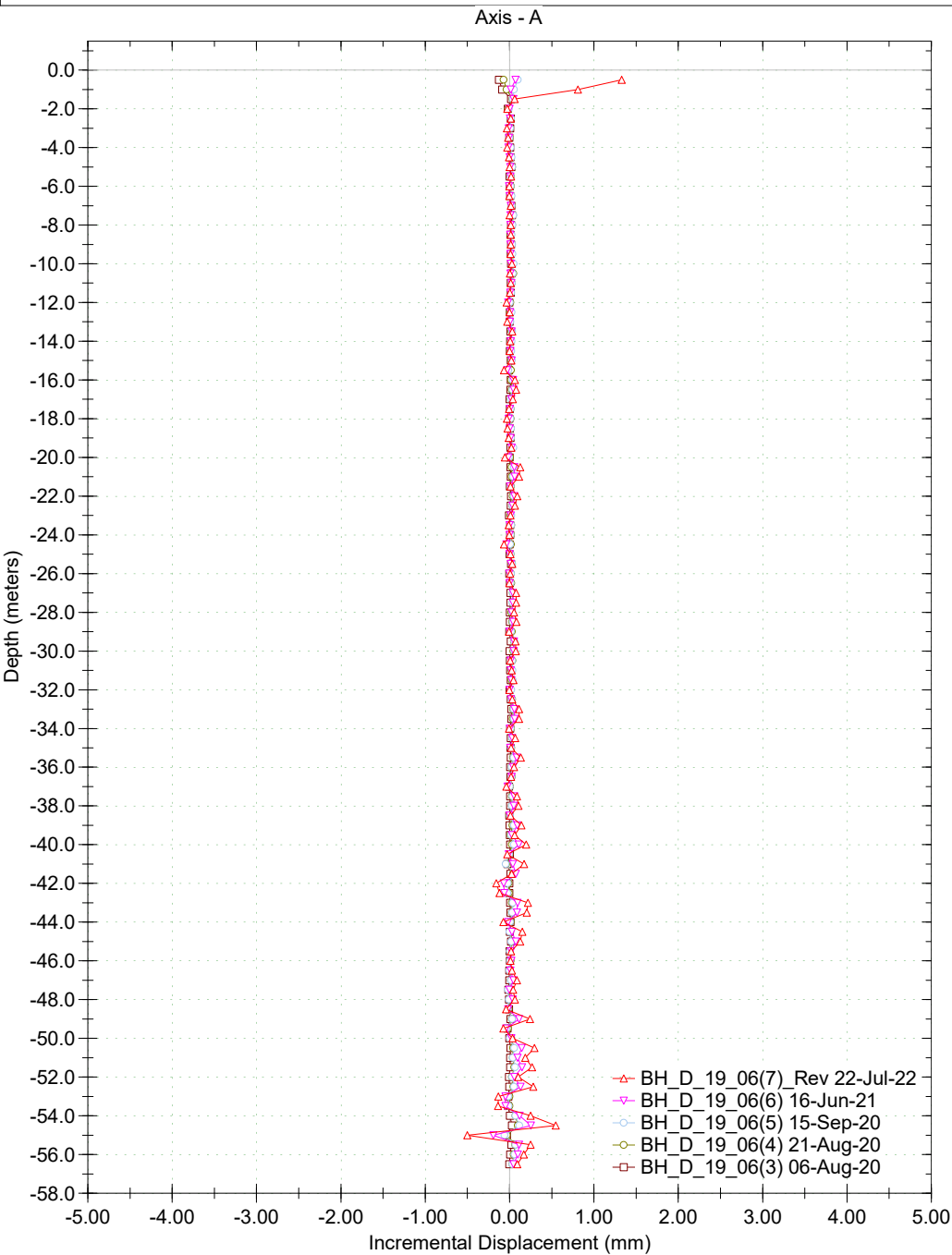
Spiral Correction : N/A
Movement Depth : 4.0 - 45.0 meters
Reading Depth : 45.0 meters
A+ Groove Azimuth :
Latest Reading : 2022 Jul 22 10:34
Initial Reading : 2020 May 07 14:23
Applied Azimuth : 0.0 degrees

Time Plot : 4.0 - 45.0 meters



Borehole : BH_D_19_06
Project : LagoonD
Location :
Northing :
Easting :
Collar :

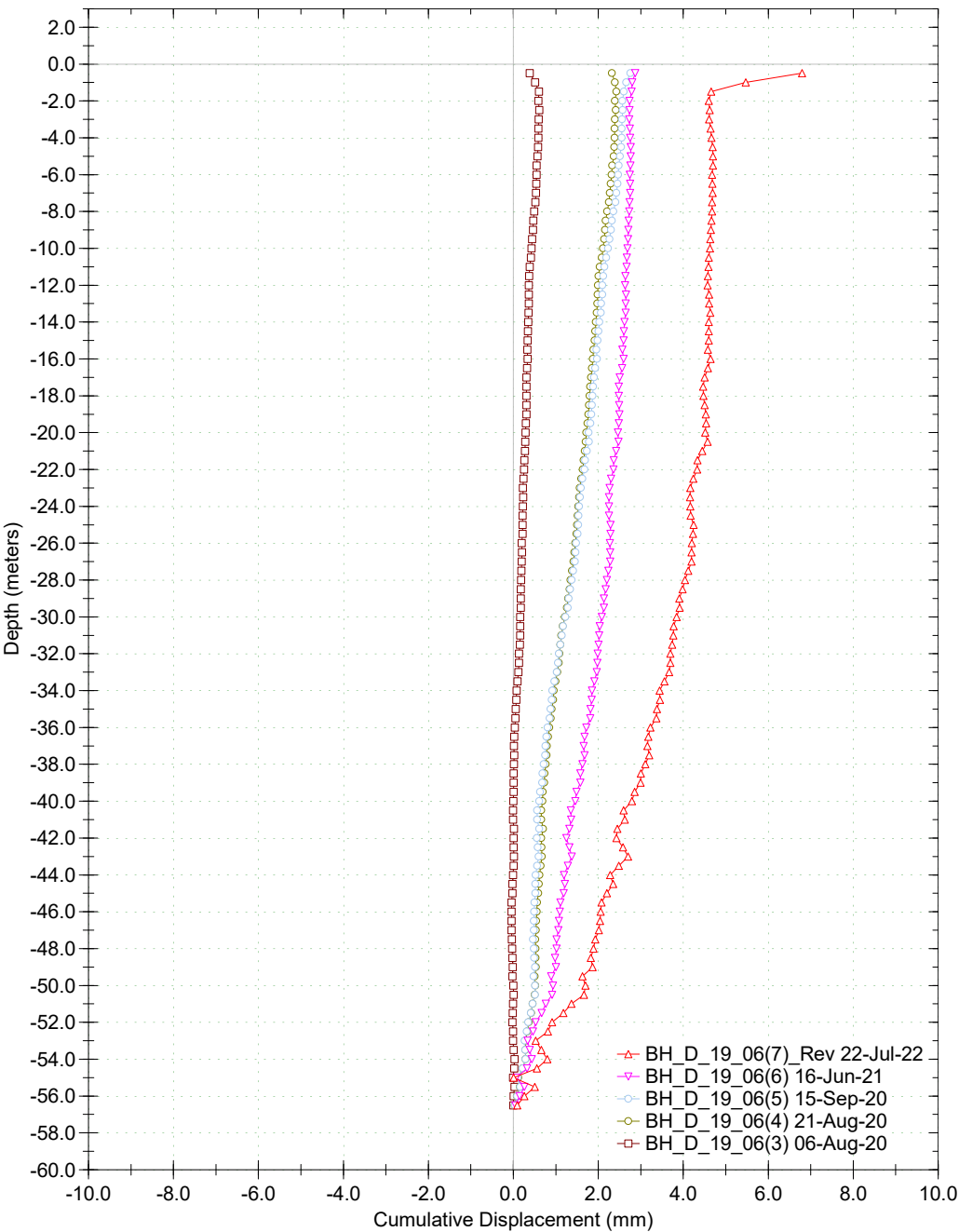
Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 56.5 meters
A+ Groove Azimuth :
Base Reading : 2020 Jun 10 15:05
Applied Azimuth : 0.0 degrees



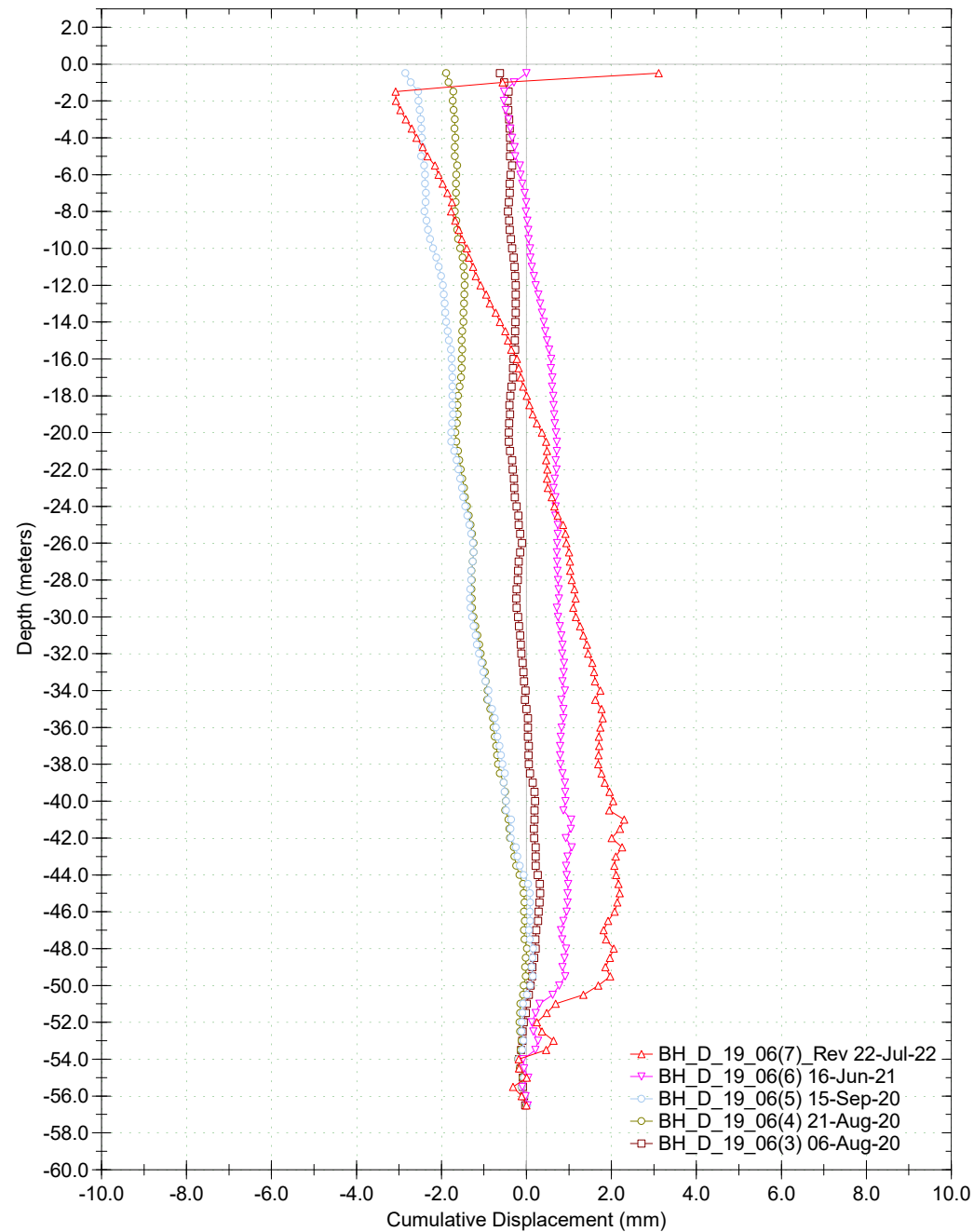
Borehole : BH_D_19_06
Project : LagoonD
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 56.5 meters
A+ Groove Azimuth :
Base Reading : 2020 Jun 10 15:05
Applied Azimuth : 0.0 degrees

Axis - A



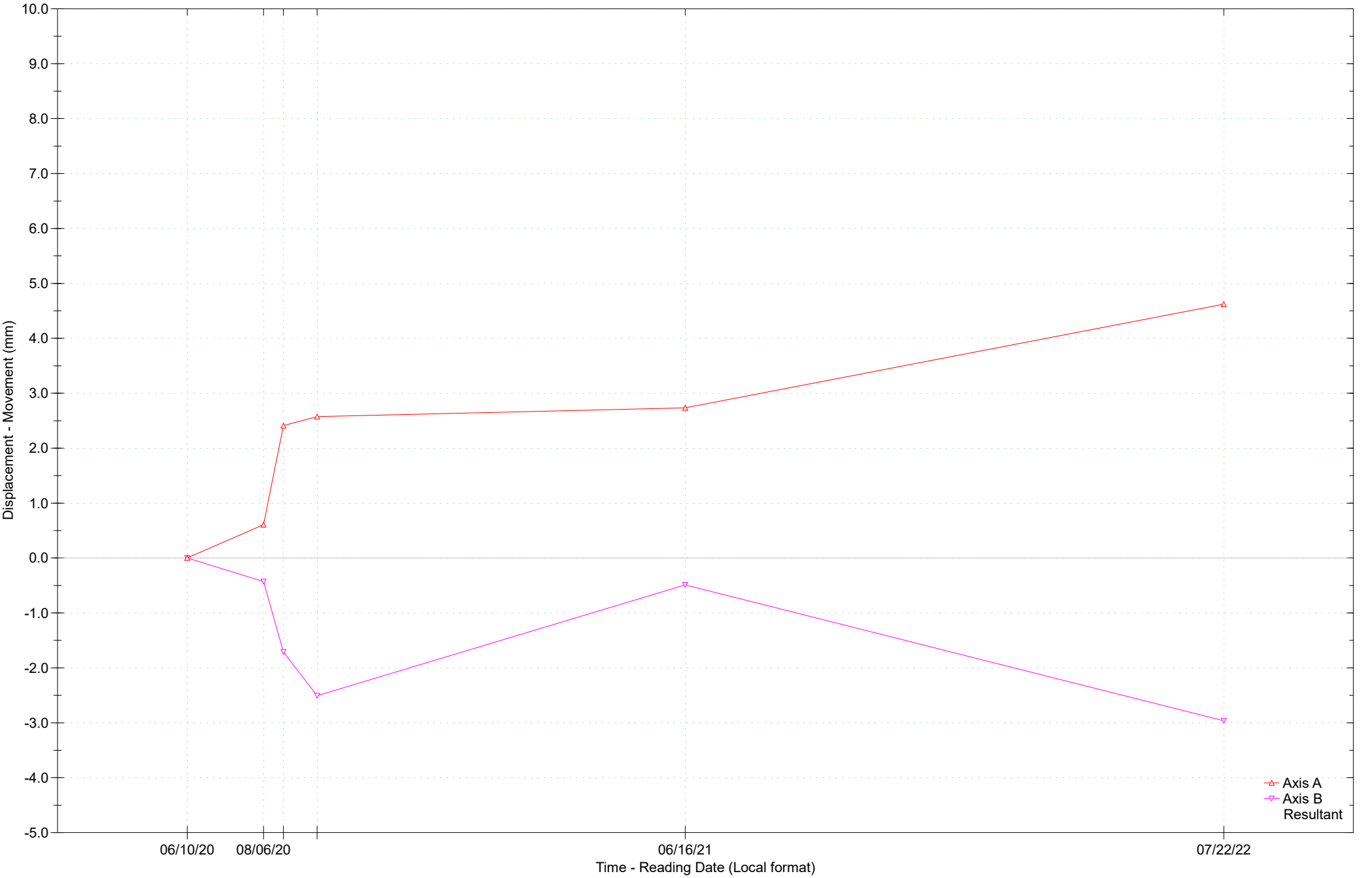
Axis - B



Borehole : BH_D_19_06
Project : LagoonD
Location :
Northing :
Easting :
Collar :
Collar Elev : 0.00 meters

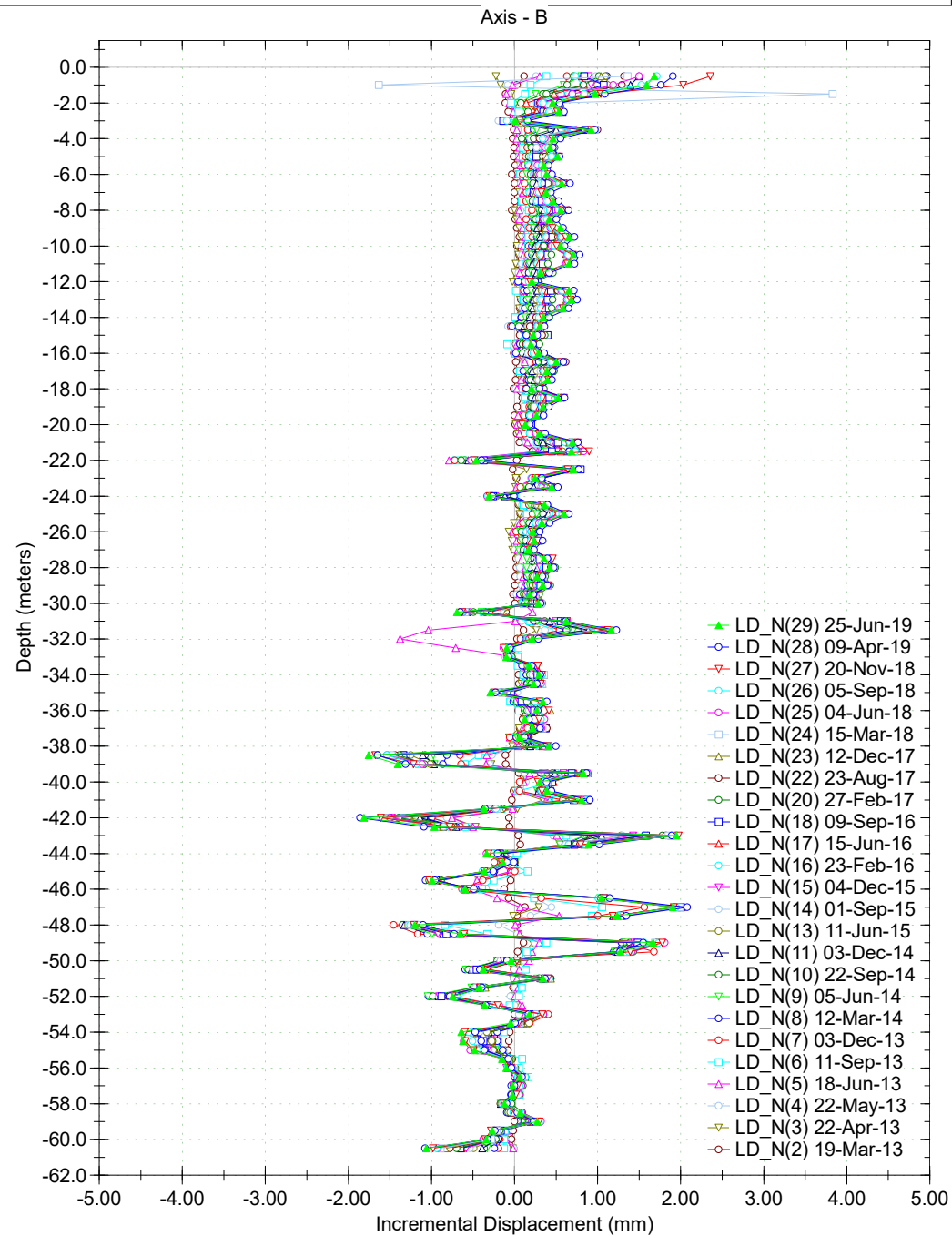
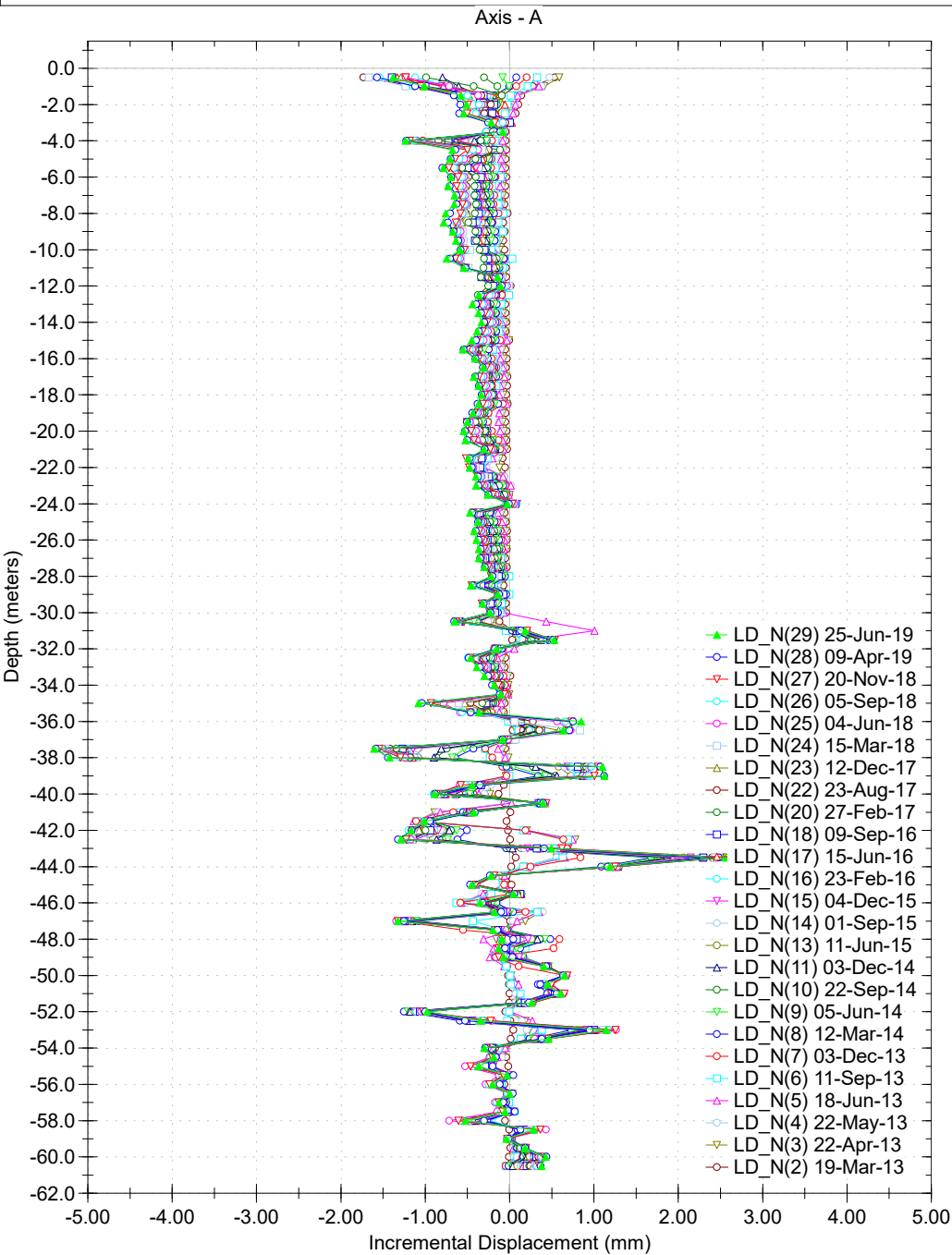
Spiral Correction : N/A
Movement Depth : 2.5 - 56.5 meters
Reading Depth : 56.5 meters
A+ Groove Azimuth :
Latest Reading : 2022 Jul 22 11:50
Initial Reading : 2020 Jun 10 15:05
Applied Azimuth : 0.0 degrees

Time Plot : 2.5 - 56.5 meters



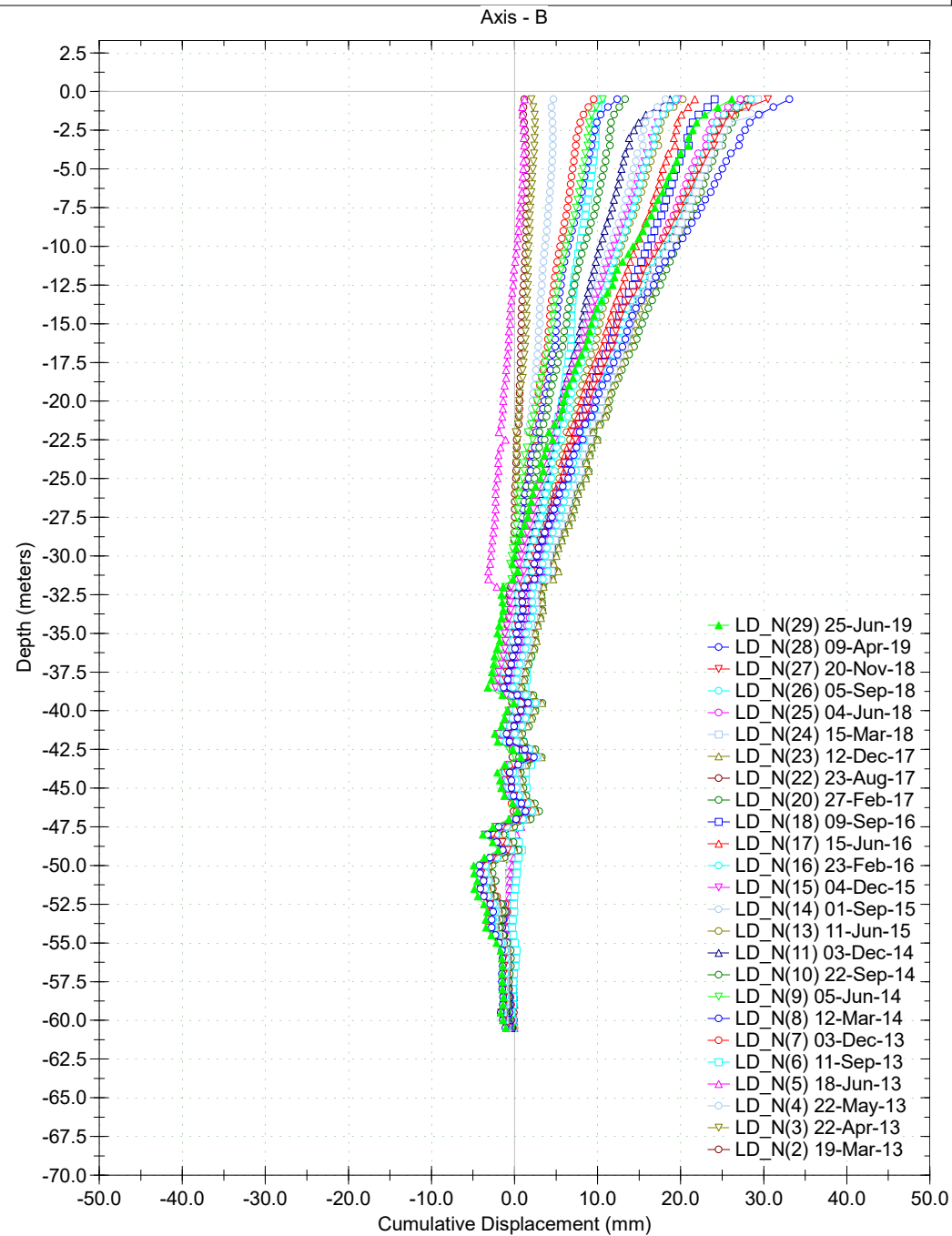
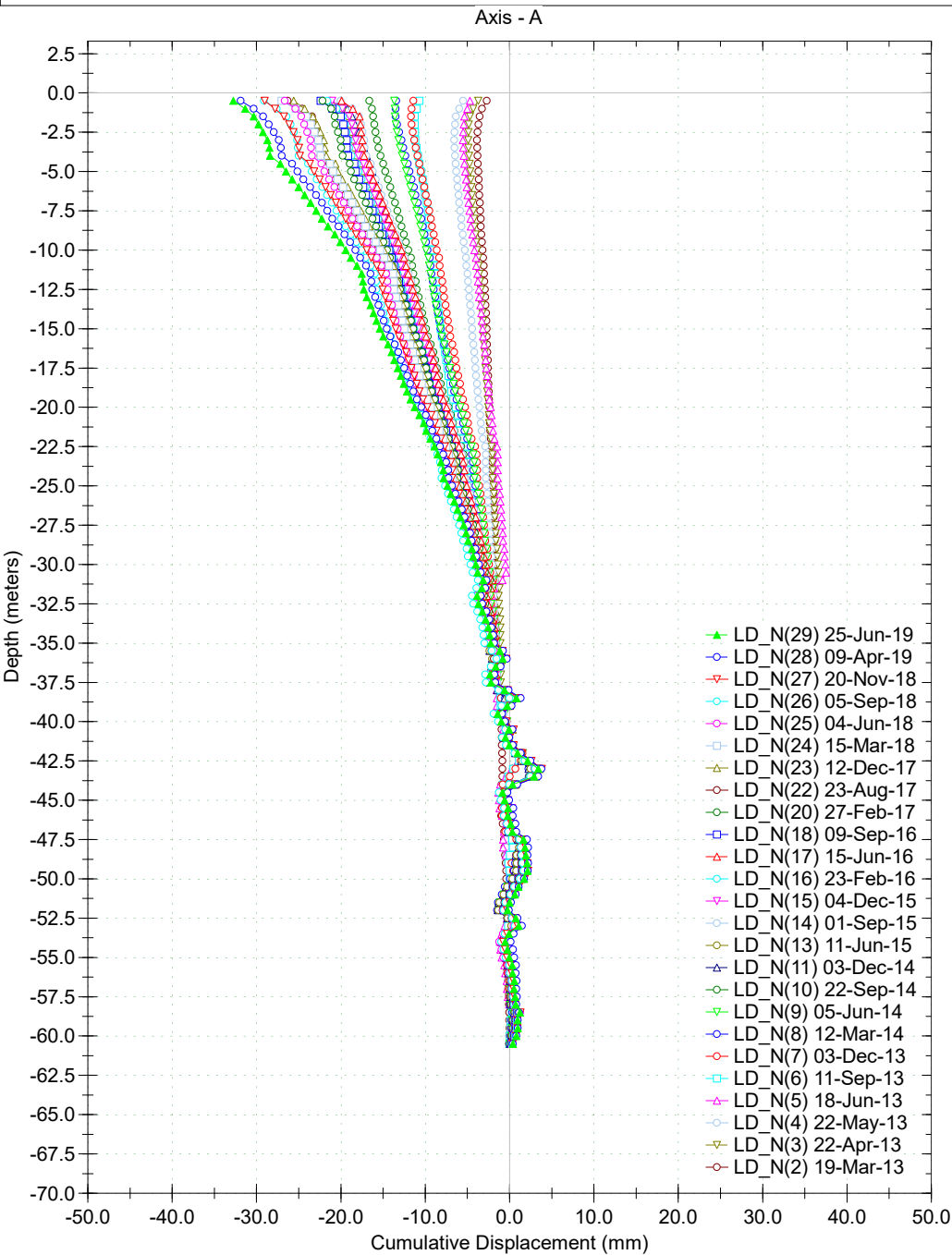
Borehole : LD_N
Project : LagoonD
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 60.5 meters
A+ Groove Azimuth :
Base Reading : 2013 Feb 20 11:27
Applied Azimuth : 0.0 degrees



Borehole : LD_N
Project : LagoonD
Location :
Northing :
Easting :
Collar :

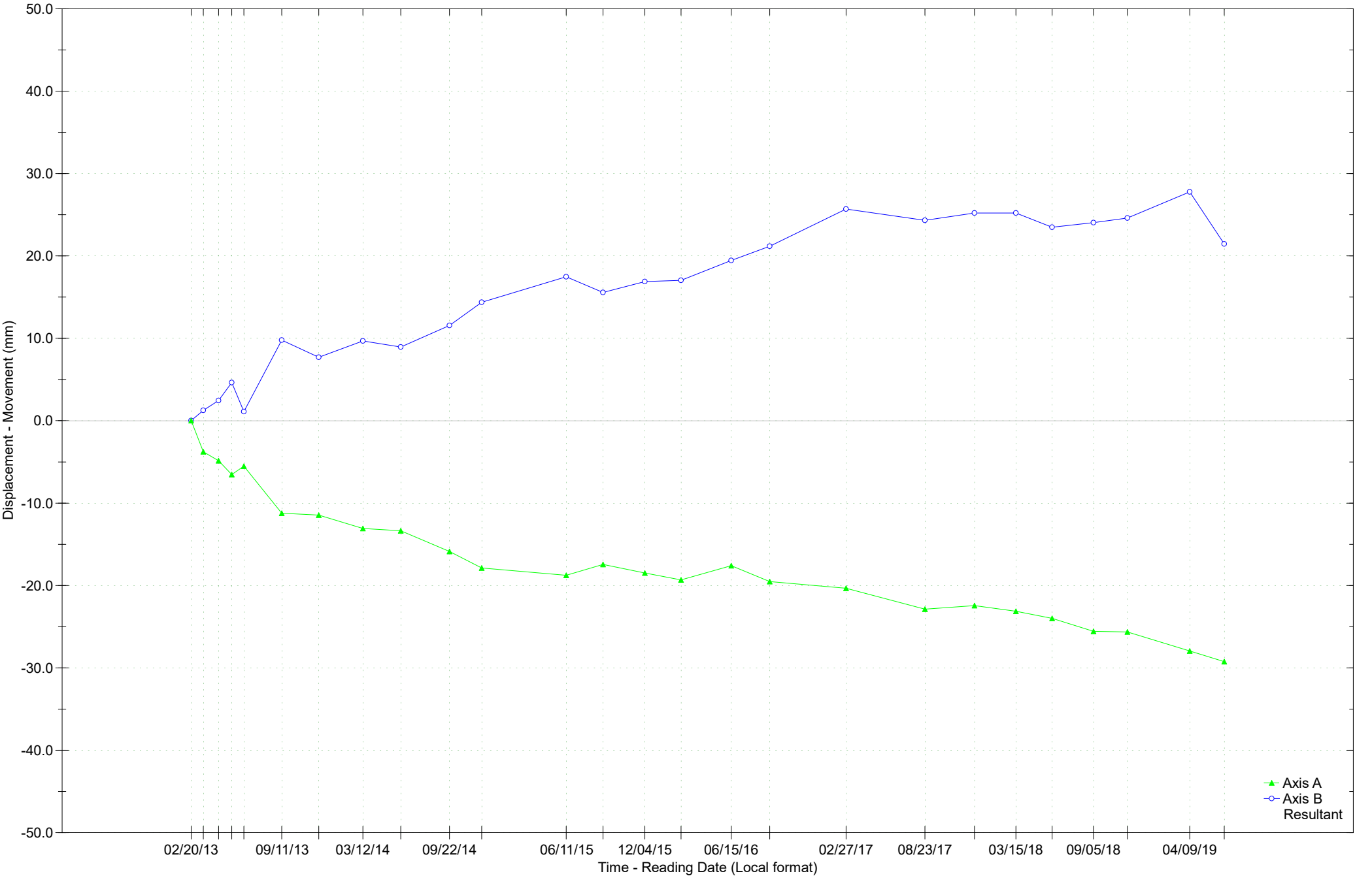
Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 60.5 meters
A+ Groove Azimuth :
Base Reading : 2013 Feb 20 11:27
Applied Azimuth : 0.0 degrees

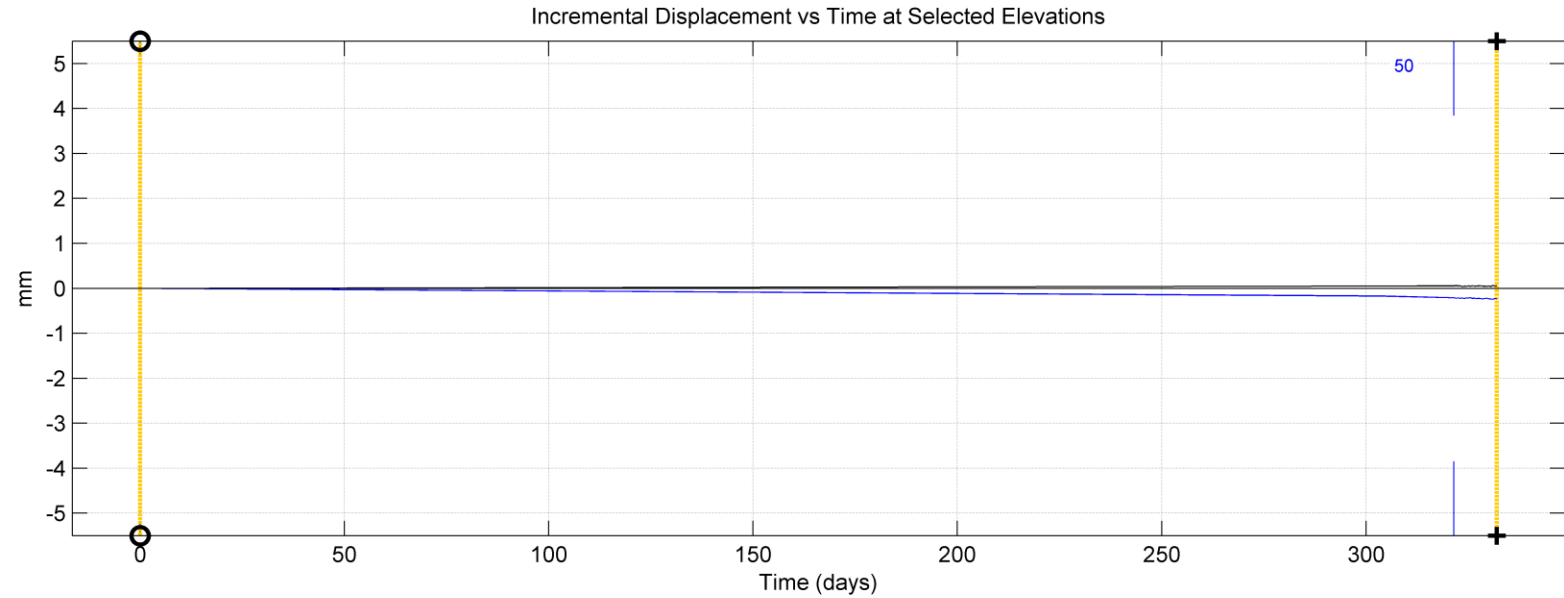
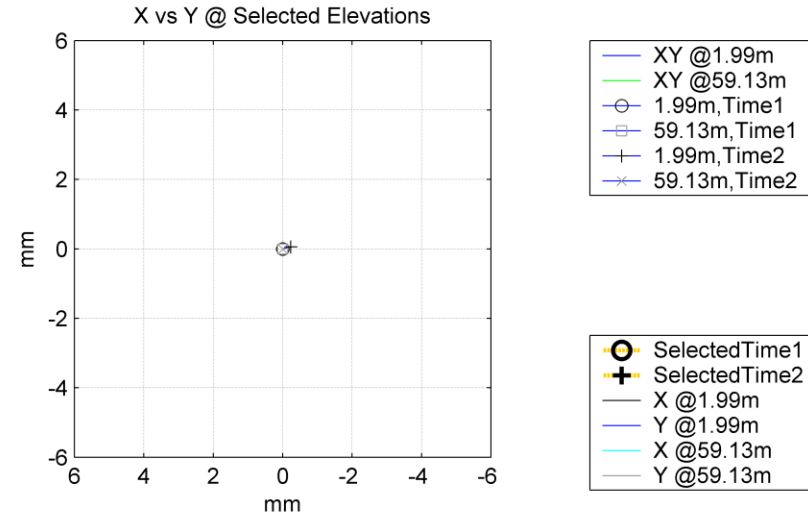
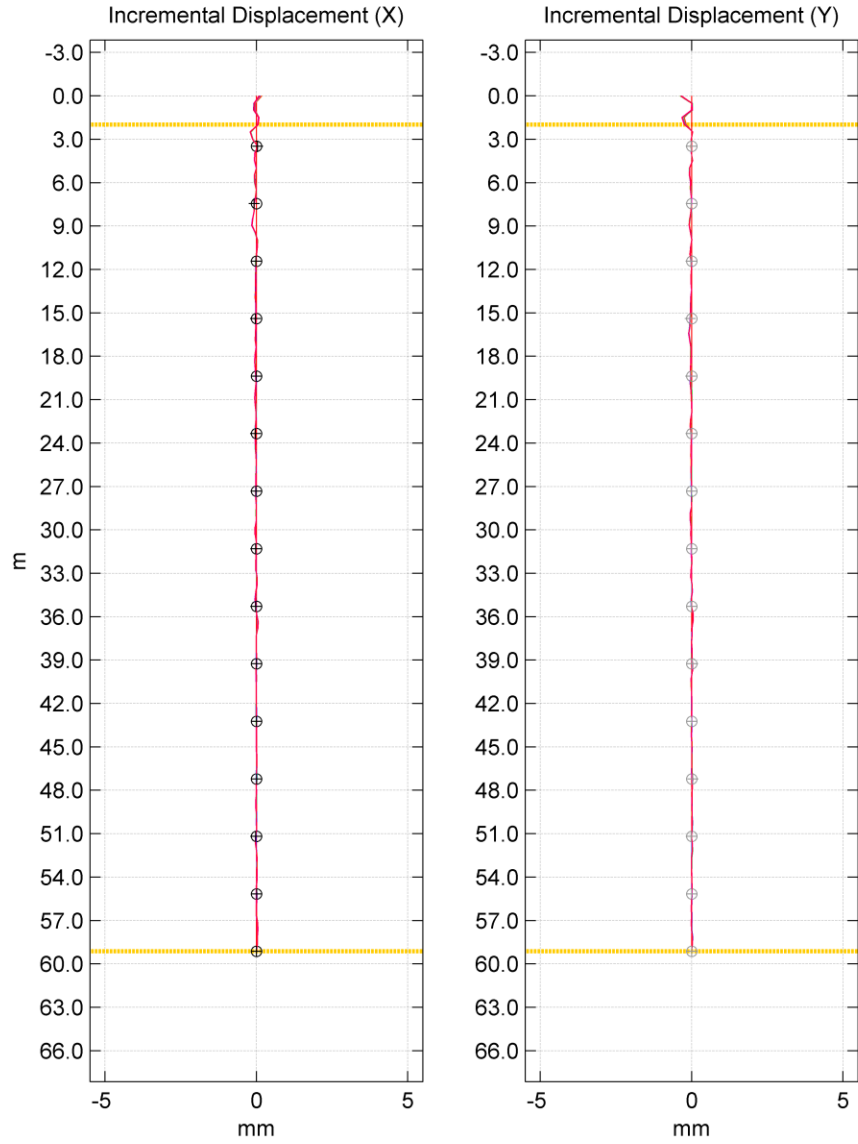


Borehole : LD_N
Project : LagoonD
Location :
Northing :
Easting :
Collar :
Collar Elev : 0.00 meters

Spiral Correction : N/A
Movement Depth : 2.5 - 60.5 meters
Reading Depth : 60.5 meters
A+ Groove Azimuth :
Latest Reading : 2019 Jun 25 14:56
Initial Reading : 2013 Feb 20 11:27
Applied Azimuth : 0.0 degrees

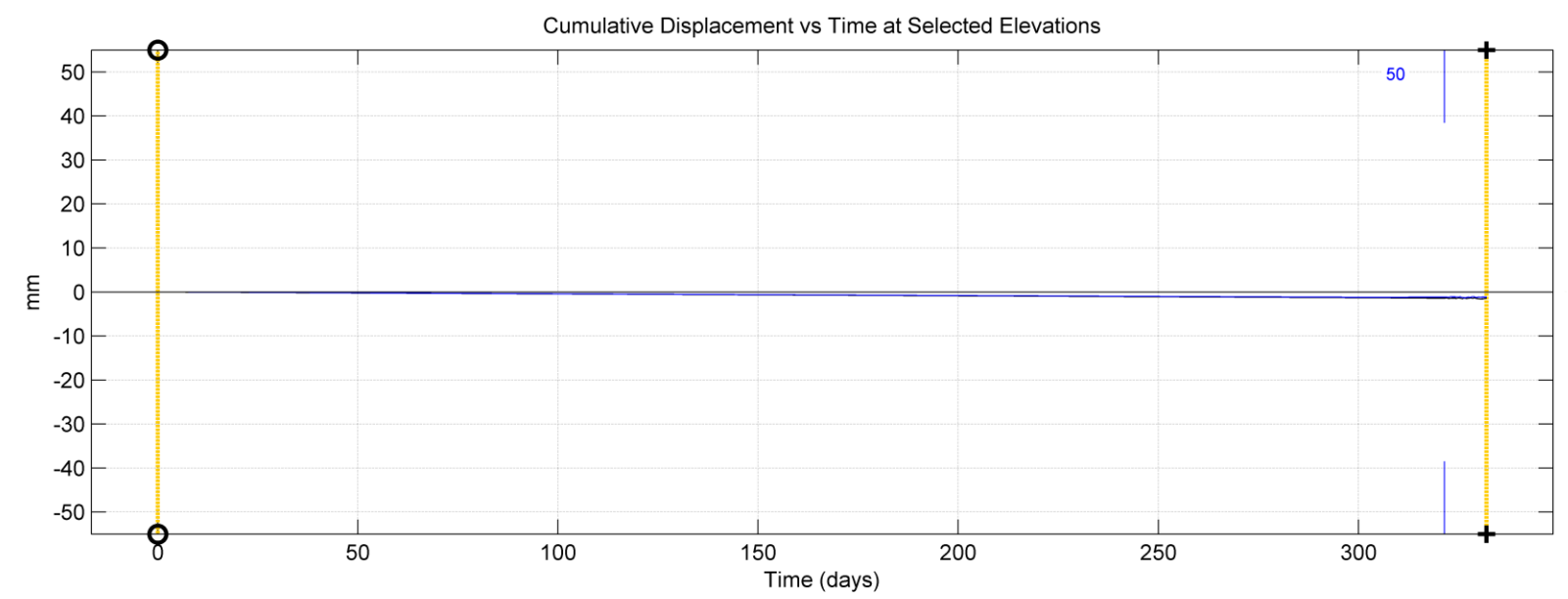
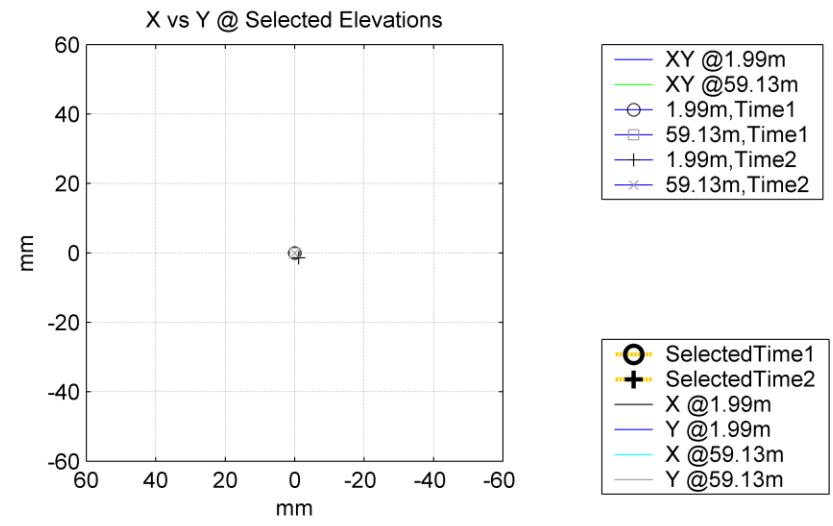
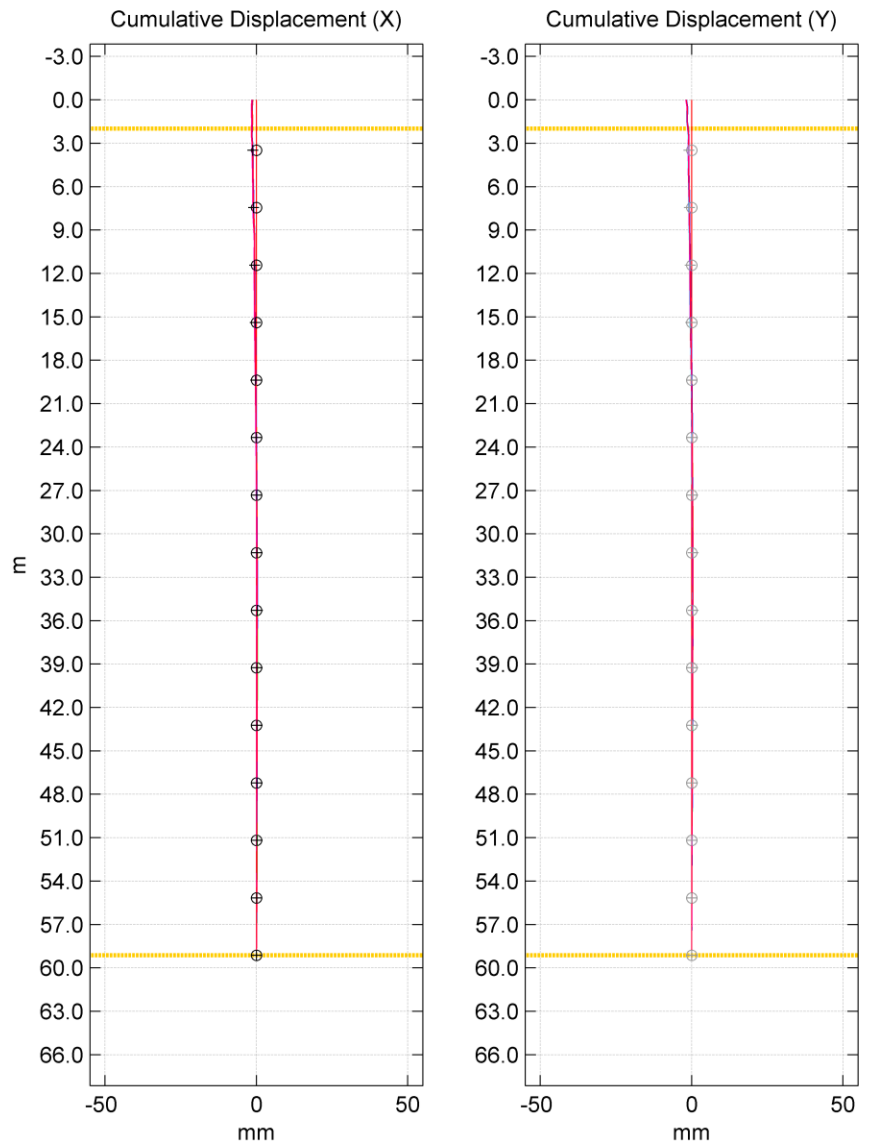
Time Plot : 2.5 - 60.5 meters





59.13 : 1.99 m. (vtx = 0 : 115)

29-Oct-2021 : 26-Sep-2022 [332.00 days]

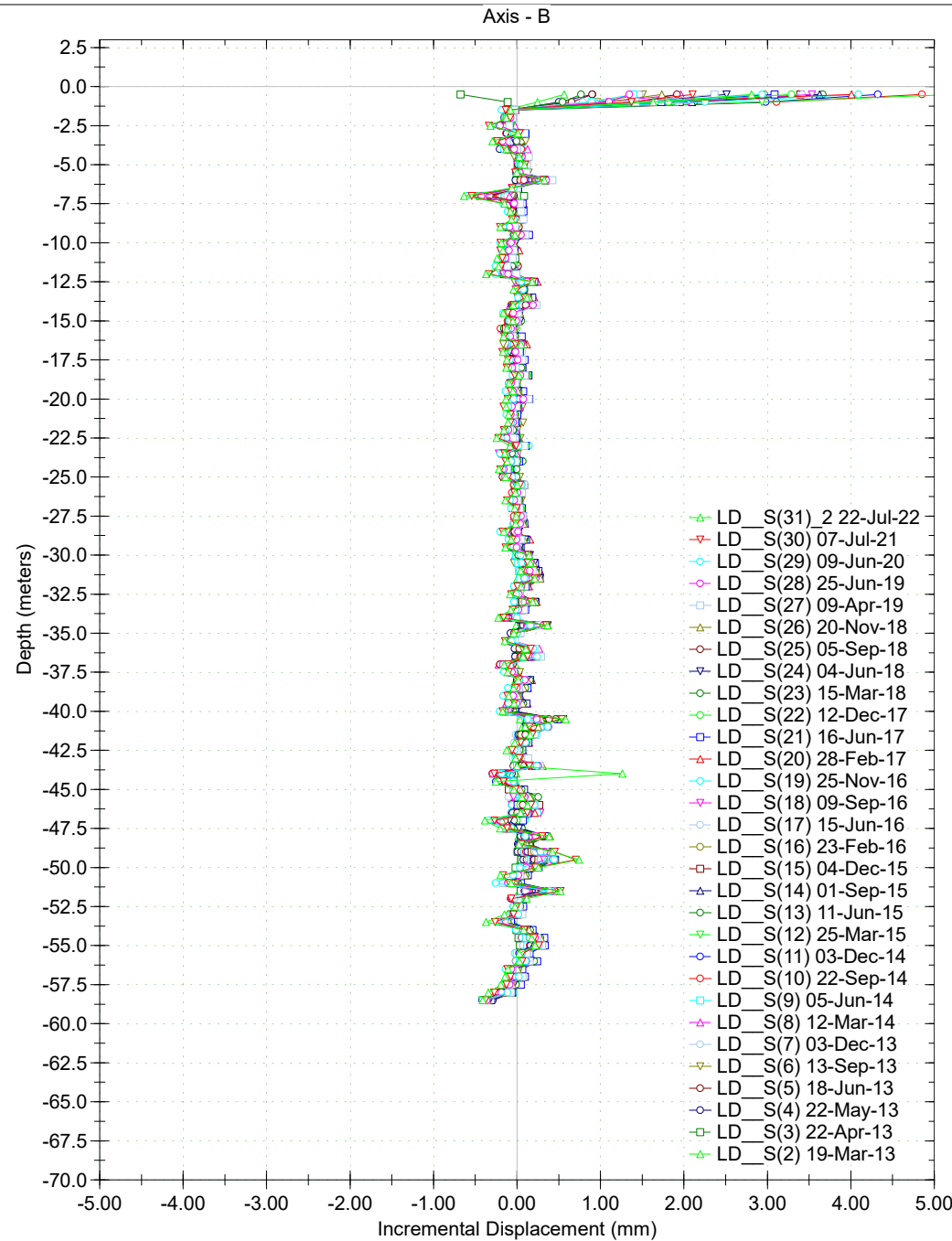
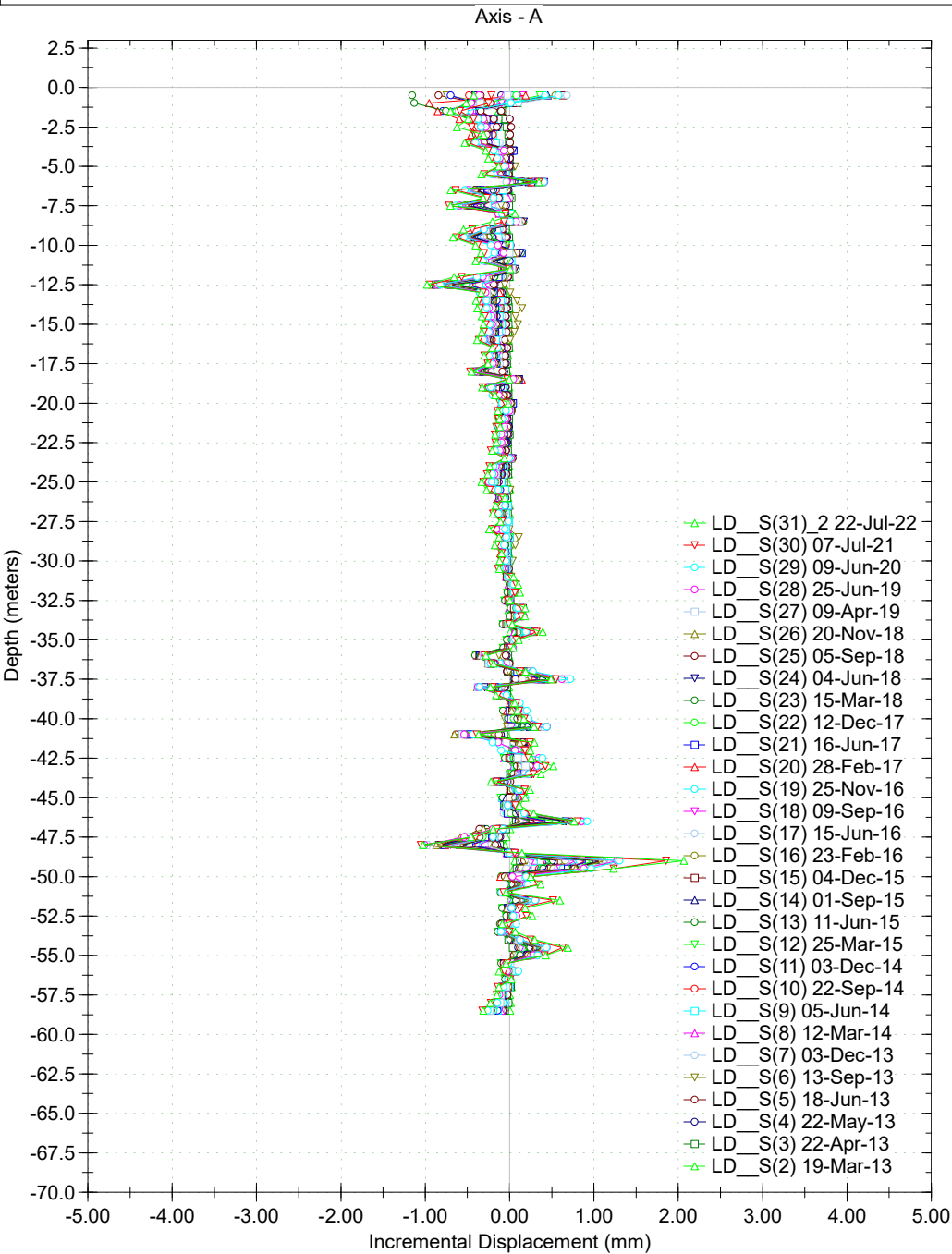


59.13 : 1.99 m. (vtx = 0 : 115)

29-Oct-2021 : 26-Sep-2022 [332.00 days]

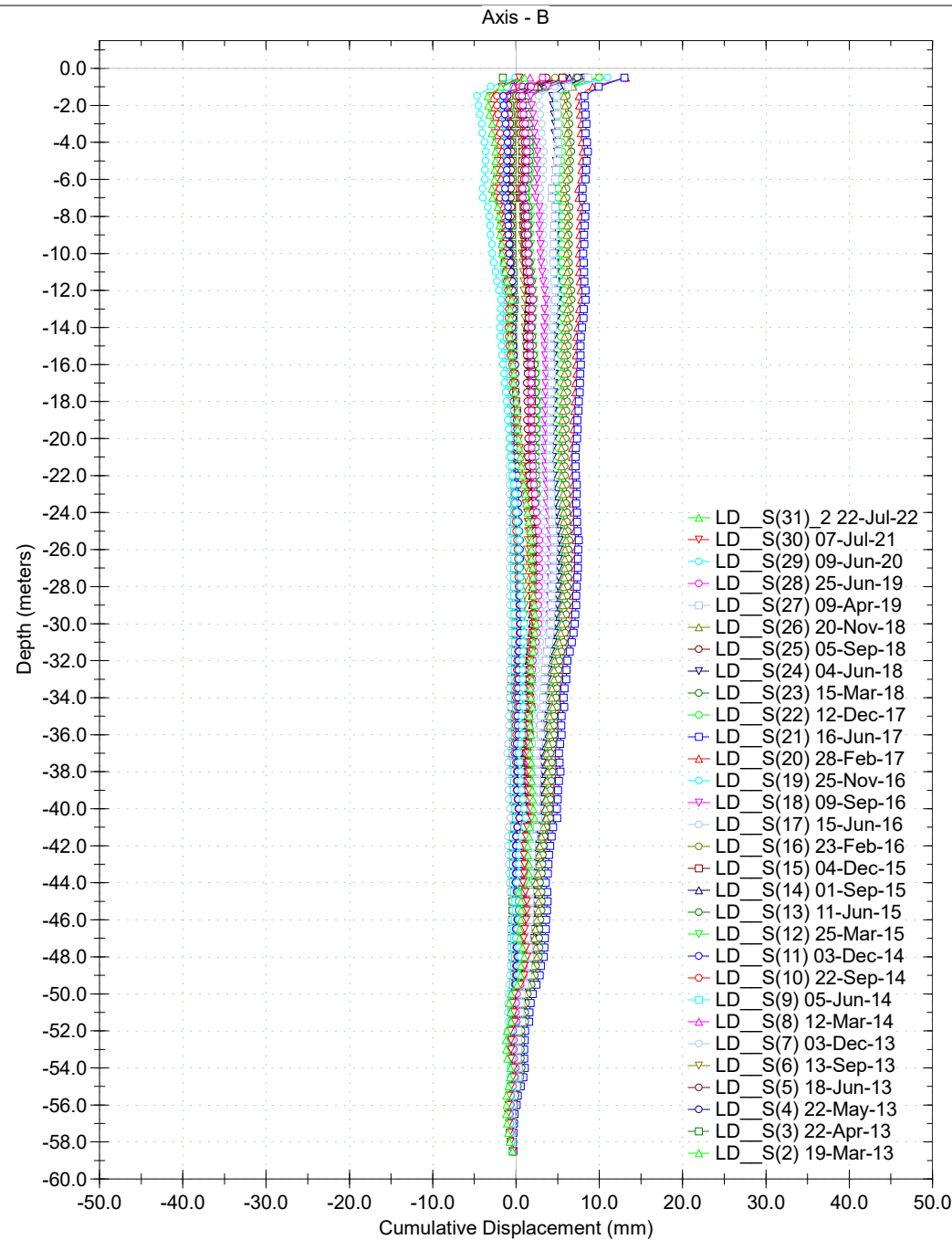
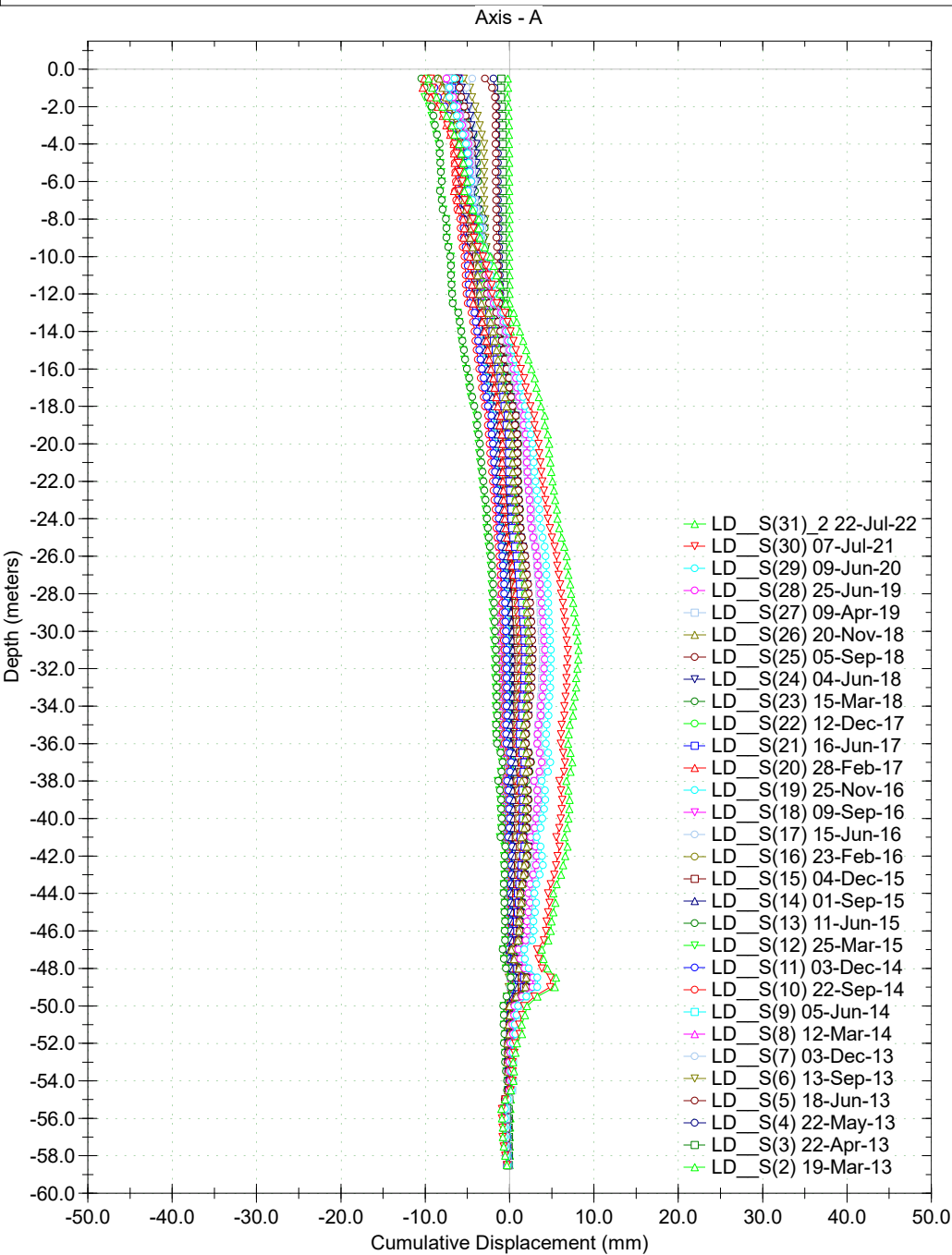
Borehole : LD__S
Project : LagoonD
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 58.5 meters
A+ Groove Azimuth :
Base Reading : 2013 Feb 20 12:51
Applied Azimuth : 0.0 degrees



Borehole : LD__S
Project : LagoonD
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 58.5 meters
A+ Groove Azimuth :
Base Reading : 2013 Feb 20 12:51
Applied Azimuth : 0.0 degrees



Borehole : LD__S
Project : LagoonD
Location :
Northing :
Easting :
Collar :
Collar Elev : 0.00 meters

Spiral Correction : N/A
Movement Depth : 2.0 - 58.5 meters
Reading Depth : 58.5 meters
A+ Groove Azimuth :
Latest Reading : 2022 Jul 22 12:46
Initial Reading : 2013 Feb 20 12:51
Applied Azimuth : 0.0 degrees

Time Plot : 2.0 - 58.5 meters

