**REPORT**

# 2024 Annual Facility Performance Report

*LTV Tailings Storage Facility – Hoyt Lakes, Minnesota*

Submitted to:

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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

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# Executive Summary

WSP USA Inc. (WSP) has prepared this Annual Facility Performance Report (AFPR) for the LTV Tailings Storage Facility (TSF) owned by NewRange Copper Nickel LLC (NewRange) and located near Hoyt Lakes, Minnesota. The LTV TSF, formerly known as the LTV Steel Mining Company (LTVSMC) Tailings Basin is adjacent to the former LTVSMC plant, which ceased operations in 2001 and has since been in care and maintenance status since that time.

WSP completed this AFPR and associated dam safety inspection for the LTV TSF to evaluate the performance and operation of the LTV TSF. The AFPR is used to identify any deficiencies that require action or reasonable improvements that would be worthwhile in terms of dam safety best practices. This report summarizes the results of the dam safety inspection, which is due by January 31 of each year, to comply with Dam Safety Permits 2016-1380 and 1981-2100 annual dam safety reporting requirements managed by NewRange. Additional background information regarding the LTV TSF is provided in APPENDIX A.

NewRange currently holds and manages Minnesota Department of Nature Resources (MDNR) Dam Safety Permits 2016-1380 (issued November 1, 2018) and 1981-2100. Dam Safety Permits 2016-1380 and 1981-2100 were transferred by the MDNR from Cliffs Erie L.L.C. to PolyMet Mining Inc. (Polymet) effective November 1, 2018. PolyMet is now NewRange following a conversion and name change under Minnesota Statues § 302A.682-692 in February 2023. This 2024 AFPR presents the dam safety inspection, instrumentation monitoring findings, and a review of the dam safety management documentation for the LTV TSF to comply with the above-referenced dam safety permit conditions.

NewRange initiated an EoR transition for the facility starting in 2024. Historically, Mr. Tom Radue with Barr Engineering Co. served as the EoR for the LTV TSF. The EoR role is being transitioned to WSP and this transition is anticipated to be complete in 2025. For the purposes of this document, LTV TSF and LTVSMC Tailings Basin refer to the same facility and LTVSMC Tailings Basin is the facility name listed in the MDNR Dam Safety Permits referenced herein.

No construction activities occurred at the LTV TSF in 2024. Minor maintenance activities that occurred include access road grading, surface erosion repairs, and improvements to the Cell 1E North Embankment. Cell 1E is used to manage excess site water and receives pumped seepage from around the TSF perimeter and water pumped to manage the maximum water level in Cell 2E. The Cell 1E pond level is maintained by a combination of pumping of water from Cell 1E with pH treatment to off-site release at the headwaters of Second Creek, and intermittent pumping of water to an off-site pit.

The site inspection of Cells 1E, 2E, and 2W of the LTV TSF was completed on June 18th, 19th, and 20th, 2024 by four members of WSP's engineering team including Christopher N. Hatton, Professional Engineer (PE), Ryan F. Shedivy, (Minnesota PE #58506), Jason Stianson, Canadian licenced Professional Engineer (P.Eng.), and Jeremy Price, PE. WSP was accompanied by the Responsible Tailings Facility Engineer (RTFE), Erik Olson, for general NewRange site tours that took place throughout the site inspection. The LTV TSF was in satisfactory physical condition with no visual signs of distress, significant settlement, or significant ground movement observed that would suggest potential geotechnical instability or poor performance. Two recommendations, one Priority 2 (EGBC 2024) involving large erosion gullies and one Priority 3 related to an access road washout, were verbally reported to NewRange following the inspection and have since been completed. Of the remaining recommendations provided, two (2) are of Priority 3, and thirteen (13) are of Priority 4 according to EGBC (2024).

# Table of Contents

**1.0 INTRODUCTION ..... 1**

**2.0 DAM SAFETY MANAGEMENT ..... 1**

**3.0 FACILITY DESCRIPTION ..... 1**

3.1 Cell 1E ..... 2

3.2 Cell 2E ..... 3

3.3 Cell 2W ..... 3

**4.0 2024 TAILINGS STORAGE FACILITY ACTIVITIES ..... 3**

4.1 Operations ..... 3

4.2 Maintenance ..... 4

4.3 Construction ..... 4

**5.0 2024 INSPECTION AND OBSERVATIONS ..... 4**

5.1 LTV TSF General Observations ..... 5

5.2 Cell 1E Observations ..... 6

5.3 Cell 2E Observations ..... 6

5.4 Cell 2W Observations ..... 6

**6.0 SUMMARY OF INSTRUMENTATION MONITORING DATA ..... 7**

6.1.1 Pond Levels ..... 8

6.1.2 Piezometers ..... 8

6.1.3 Slope Inclinometers ..... 9

**7.0 CONCLUSIONS AND RECOMMENDATIONS ..... 11**

**TABLES**

Table 1: Summary of 2024 Tailings Cell Conditions ..... 2

Table 2: LTV TSF Section Naming Convention ..... 8

Table 3: 2024 Recommendations for the LTV TSF ..... 12

Table 4: Addressed Recommendations for the LTV TSF ..... 13

## FIGURES

Figure 1: Project Location Map ..... 18
Figure 2: TSF Aerial Overview ..... 19
Figure 3: TSF Embankment and Seep Pump-Back Identification ..... 20
Figure 4: Existing Instrumentation ..... 21
Figure 5: Inspection Photo Locations ..... 22
Figure 6: Photolog Detail Map 1 ..... 23
Figure 7: Photolog Detail Map 2 ..... 24
Figure 8: Photolog Detail Map 2 ..... 25

## APPENDICES

**APPENDIX A**
General LTV TSF Information

**APPENDIX B**
Annual Facility Performance Report Photos

**APPENDIX C**
Instrumentation Data

**APPENDIX D**
Hoyt Lakes Tailings Basin Instrumentation Report

# Abbreviations and Term Definitions

| Abbreviation | Definition |
|---|---|
| AFPR | Annual Facility Performance Report |
| CAP | Contingency Action Plan, developed by PolyMet in 2019 based on Flotation Tailings Basin expansion of the LTV TSF rather than the existing conditions. |
| CMP | Corrugated Metal Pipe |
| DSR | Dam Safety Review |
| EGBC | Engineers and Geoscientists British Columbia |
| EoR | Engineer of Record |
| IDF | Inflow Design Flood |
| MDNR | Minnesota Department of Natural Resources |
| MPCA | Minnesota Pollution Control Agency |
| OMS | Operations, Maintenance, and Surveillance documentation |
| RTFE | Responsible Tailings Facility Engineer |
| JSA | Job Safety Analysis |
| JHEA | Job Hazard and Environment Analysis |
| TSF | Tailings Storage Facility |
| SD | Seepage discharge. An area of seepage discharge with numbered identifiers. (e.g., SD026 is the discharge point south of Cell 1E, and the location where treated water is discharged to the environment). |
| SI | Slope Inclinometer |

# 1.0 INTRODUCTION

The Annual Facility Performance Report (AFPR) is conducted to evaluate the performance and operation of the LTV Tailings Storage Facility (TSF) at the former LTV Steel Mining Company (LTVSMC) plant, which is owned by NewRange Copper Nickel LLC (NewRange), located near Hoyt Lakes, Minnesota. The AFPR is used to identify any deficiencies that require action or reasonable improvements that would be worthwhile in terms of dam safety best practices. The AFPR considered the following:

- 2024 activities
- operational, safety, monitoring, and emergency documentation
- climate data and water management
- instrumentation
- dam safety

NewRange currently holds and manages Minnesota Department of Nature Resources (MDNR) Dam Safety Permits 2016-1380 (issued November 1, 2018) and 1981-2100. Dam Safety Permits 2016-1380 and 1981-2100 were transferred by the MDNR from Cliffs Erie L.L.C. to PolyMet Mining Inc. (Polymet) effective November 1, 2018. PolyMet is now NewRange following a conversion and name change under Minnesota Statues § 302A.682-692 in February 2023. This 2024 AFPR presents the dam safety inspection, instrumentation monitoring findings, and a review of the dam safety management documentation for the LTVSMC Tailings Basin to comply with the above-referenced dam safety permit conditions. For the purposes of this document, LTV TSF and LTVSMC Tailings Basin refer to the same facility and LTVSMC Tailings Basin is the facility name listed in the MDNR Dam Safety Permits referenced herein.

# 2.0 DAM SAFETY MANAGEMENT

A Dam Safety Management system is in place to guide the safe management of the facility including defined dam safety roles and responsibilities.

The LTV TSF transitioned ownership from PolyMet to NewRange in February 2023 and most of the key dam safety management staff related to the LTV TSF changed through the transition process. Key dam safety positions currently involved with the LTV TSF include the Owner (NewRange), Accountable Executive (AE), and Responsible Tailings Facility Engineer (RTFE) who are both NewRange representatives. The Engineer of Record (EoR) and the third-party company undertaking instrument surveillance remained consistent through the transition in 2023.

NewRange initiated an EoR transition for the facility starting in 2024. Historically, Mr. Tom Radue with Barr Engineering Co. served as the EoR for the LTV TSF. The EoR role is being transitioned to WSP USA Inc. (WSP) and WSP is responsible for conducting the 2024 AFPR. The EoR transition is anticipated to be complete in 2025.

# 3.0 FACILITY DESCRIPTION

The LTV TSF is in St. Louis County, Minnesota, located approximately 5 miles north of the town of Hoyt Lakes and 60 miles north of Duluth (Figure 1). The TSF comprises three adjacent cells identified as Cell 1E, Cell 2E, and Cell 2W, covering about 3,000 acres (Figure 2). Measuring toe to toe, the facility is approximately 2.5 miles in an east-west direction, and 1.9 miles in the north-south direction.

The original ground within the footprint of the LTV TSF ranges from approximate elevation 1640 ft in the southeast corner to 1490 ft in the northwest corner, generally sloping to the north towards the Embarrass River. Topography surrounding the facility on the east and south sides is generally higher and contains more topographic relief than the north and west sides. The topography north of the facility is generally flat and primarily consists of wetlands. The eastern border of the facility is generally formed by bedrock outcrops and natural ground highpoints (Figure 3).

Figure 3 presents the layout of the LTV TSF with the embankment naming conventions. The TSF currently has ponds in both Cell 1E and 2E with no pond in Cell 2W. The perimeter embankments containing the existing tailings cells are constructed with hydraulically placed tailings following the upstream construction technique. Operations ceased in 2001 (Barr, 2024a) with the embankments constructed to elevation (El.) 1675 ft at Cell 1E, El. 1575 ft at Cell 2E, and 1740 ft at Cell 2W, as stated in previous AFPRs (Barr, 2024a). Since operations ceased in 2001, the facility has been in care and maintenance and there has been no construction activities. Site activities have focused on regular maintenance and water management including pumping to maintain tailings pond levels, collection and pumping of perimeter seepage back to tailings ponds, and pond water treatment for off-site release. Table 1 presents a summary of the current TSF conditions including minimum crest elevations and water conditions.

The LTV TSF embankments are considered to have a Class II hazard classification based on Part 6115.0340 of the MDNR Statutes. The components of the three cells are further described below.

**Table 1: Summary of 2024 Tailings Cell Conditions**

| Area | Minimum TSF Embankment Crest Elevation (ft) | Maximum Embankment Height (ft)[3] | Maximum Allowable Pond Elevation (ft)[2] | 2024 Pond Elevation Range (ft) |
|---|---|---|---|---|
| Cell 1E | 1672 | 140 | 1661 | 1652.6 – 1654.6 (1651.4-1655.8) [1] |
| Cell 2E | 1572 | 98 | 1561 | 1558.0 – 1559.3 (1558.3–1559.2) [1] |
| Cell 2W | 1740 | 250 | N/A | No pond. |

1. Range of pond elevations recorded between May and November 2023.
2. Permit 1918-2100 requires 11 feet of freeboard under normal operating conditions.
3. Measured from toe at native ground elevation to crest.

## 3.1 Cell 1E

Cell 1E is the southeastern quarter of the LTV TSF and covers approximately 980 acres. Cell 1E is contained by Cell 1E North Embankment, Cell 1E South Embankment, native high ground to the east and southeast, and Cell 2W East Embankment to the west (Figure 3). The approximate maximum embankment height of Cell 1E is 140 ft above native ground and is located at the west side of the North Embankment. The minimum containment elevation around the perimeter of Cell 1E is El. 1672 ft and is located on the east side of the North Embankment. The pond in Cell 1E stores precipitation, runoff from abutments, and water returned from seepage collection and pumping. The pond level is managed by pumping water to off-site locations. The side slope surfaces of the Cell 1E North and South embankment have been reclaimed through seeding of mixed grasses, legumes, and herbaceous ground cover.

South of Cell 1E is the Railroad Embankment that serves as the southern containment for an area between the Railroad Embankment and the downstream slope of the Cell 1E South Embankment where some tailings deposition occurred in the early years of operations. The Railroad Embankment crest slopes from approximately El. 1700 ft on the west end to approximately El. 1680 ft on the east end and the taconite tailings contained by the Railroad Embankment are at an approximate elevation of 1640 ft. The southern (downstream) toe of the Railroad Embankment is adjacent to Seep 32 and 33 Combined with water ponded to approximate elevation 1530 ft (Figure 3).

## 3.2 Cell 2E

Cell 2E is in the northeastern quarter of the TSF and covers approximately 620 acres. Cell 2E is contained by the Cell 2E North Embankment to the north, Cell 2E East Embankment and native high ground to the east, Cell 1E North Embankment to the south, and Cell 2W East Embankment to the west (Figure 3). The approximate maximum embankment height of Cell 2E is 95 ft above native ground and is located at the central section of the North Embankment. The minimum containment elevation around the perimeter of Cell 2E is El. 1572 ft and is located on the west side of the North Embankment. The pond in Cell 2E stores precipitation, stormwater runoff from abutments, and potential seepage through the Cell 1E North Embankment. The Cell 2E pond level is managed through pumping of water to Cell 1E. The side slope surfaces of Cell 2E North and East embankments have been reclaimed through seeding of mixed grasses, legumes, and herbaceous ground cover.

## 3.3 Cell 2W

Cell 2W comprises the western half of the tailings basin and covers approximately 1,450 acres. Cell 2W is encompassed by the Cell 2W perimeter embankments to the north, south, east, and west. The Cell 2W embankments are the tallest of the three cells. The approximate maximum embankment height of Cell 2W is 250 ft above native ground and is located at eastern side of the North Embankment. The minimum containment elevation around the perimeter of Cell 2W is up to El. 1740 ft. There are localized areas on east side of Cell 2W with elevations as low as El. 1725 ft where any excess surface water is directed into Cells 1E and 2E. Cell 2W has been reclaimed through seeding of mixed grasses, legumes, and herbaceous ground cover on the surface of the stored tailings as well as the embankment side slopes.

Southwest of Cell 2W is the Emergency Basin that was constructed in a topographic low area to contain material discharged from the main tailings thickeners in the event of a power failure, accidental overflows, and spillage during LTVSMC plant operations. Floor drainage from the former LTVSMC Concentrator Building also reached the Emergency Basin. These materials were deposited hydraulically through an underground emergency tunnel terminating at the southeast side of the emergency basin.

# 4.0 2024 TAILINGS STORAGE FACILITY ACTIVITIES

## 4.1 Operations

No tailings operational activities occurred in 2024 as the facility has been in a care and maintenance status since operations ceased in 2001.

Water management activities included pumping from Cell 2E to Cell 1E (to maintain the Cell 2E pond level), pumping collected seepage into Cell 1E, pumping and pH treatment of water from Cell 1E for off-site release to the headwaters of Second Creek (beginning in February 2017), and intermittent pumping of water to an off-site pit (since September 2016). Seepage water from Cell 1E and Cell 2W is transferred into Cell 1E as a short-term

mitigation action instituted in 2011 through a Consent Decree between Cliffs Erie and the Minnesota Pollution Control Agency (MPCA) and now managed by NewRange and the MPCA.

Seepage water from Cell 1E is collected in a sump located in a small pond area downstream (south) of the Railroad Embankment, referred to as Seep 32 and 33 Combined (Barr, 2024a), and pumped back into Cell 1E. Similarly, seepage water from toe drains on the northwest corner of Cell 2W, referred to as SD004, is collected by a sump and pumped to a ponded area northwest of the Emergency Basin, adjacent to the Cell 2W West Embankment and referred to as SD006, then pumped back to Cell 1E. Operation of these pumpback systems was initiated in July 2011, and locations are presented in Figure 3.

## 4.2 Maintenance

Minor maintenance activities occurred including access road grading, surface erosion repairs, and improvements to the Cell 1E North Embankment. Cell 1E North Embankment improvements included placement of coarse tailings borrow material from LTV TSF Cell 2W to fill in low spots along the north dam beach, increasing freeboard. Local contractors are utilized to assist with site maintenance as needed.

## 4.3 Construction

No construction activities occurred in 2024.

# 5.0 2024 INSPECTION AND OBSERVATIONS

The site inspection of Cells 1E, 2E, and 2W of the LTV TSF was completed on June 18th, 19th, and 20th, 2024 by four members of WSP's engineering team including Christopher N. Hatton, Professional Engineer (PE), Ryan F. Shedivy, PE, Jason Stianson, Canadian licenced Professional Engineer (P.Eng.), and Jeremy Price, PE. WSP was accompanied by the RTFE, Erik Olson, for general NewRange site tours that took place throughout the site inspection. Throughout the inspection, a series of meetings were held with the NewRange management and engineering teams, as well as with an employee previously employed by LTVSMC who was involved with historic operations during active mining in the 1990s. The meetings were held to interview staff and discuss various dam safety related topics and historic site conditions. The inspection team discussed design, construction history, and historic operational aspects of the facility. Prior to the site inspection, WSP conducted a preliminary review of the design and construction documents provided by NewRange.

The weather leading up to and during the inspection included heavy rain fall including a storm that occurred on June 18, 2024 (the first day of the inspection) resulting in 5 inches of rain over a period of about 9 hours. The rainfall was representative of the 200-year, 6-hour, storm event. Isolated showers persisted in the following days including periods with partly cloudy to sunny conditions. The temperature typically ranged from 60 to 70 degrees Fahrenheit.

The inspection of the LTV TSF included observations of the ponds, upstream slopes, crests, downstream slopes, toes, instrumentation, and infrastructure. The details of the site inspection are provided in APPENDIX B including photographs with descriptions and GPS locations. Photos of Cell 1E are from Photo B-1 through Photo B-35, Cell 2E are from Photo B-36 through Photo B-56 and Cell 2W are from Photo B-57 through Photo B-86. A plan view of site inspection photograph locations is provided in Figure 5. Comments and recommendations pertaining to the observations are provided in the following sections, including general observations pertaining to the LTV TSF as well as the individual tailings cells. Recommendations listed are also included on Tables 4 and 5 and include an identification number corresponding to those tables.

## 5.1 LTV TSF General Observations

The LTV TSF was in satisfactory physical condition. No visual signs of distress, significant settlement, or significant ground movement was observed that would suggest potential geotechnical instability or poor performance.

- The crests of the embankments appeared to be in satisfactory condition with no visually evident signs of settlement, surface cracking, or significantly localized depressions. The crest alignments appeared to be suitable with no visual signs of movement (Photo B-19, Photo B-47, Photo B-73). Desiccation was observed in a few locations on the crest, indicating localized ponding due to the recent rainfall on the day of and/or prior to the inspection. The areas continue to be monitored and addressed with regular maintenance and do not pose a dam safety concern.
- The timing of the 2024 inspection provided a unique opportunity to observe the facility during and immediately after a significant precipitation event (i.e., equivalent to the 200-year, 6 hour storm), both in terms of physical performance and instrumentation response. The physical performance appeared to be suitable with limited ponding and limited erosion in most areas. Ponding water was generally limited but perhaps most noticeable on the crest of Cell 1E. Surface water was generally well managed except for runoff from Cell 2W near the east access road ramp from Cell 1E that resulted in the most significant gulley erosion on the downstream slope of Cell 1E (Photo B-36), runoff from the east abutment of Cell 2E that flowed across the crest and into the pond, and erosion that washed out a culvert through an access road (Photo B-34) beyond the extent of the TSF.
- The downstream slopes and toe areas of the embankments appeared to be in stable condition with no signs of significant scarps or bulging. Some minor depressions and erosion gullies were observed along the downstream slopes (Photo B-74, Photo B-78). The areas continue to be monitored and addressed with regular maintenance and do not pose a dam safety concern.
- A detailed assessment of seepage areas along the downstream toe of the TSF perimeter containment was completed by Barr in 2022 and is documented in the 2023 Annual Report (Barr 2024a). No seepage flows were measured during the 2024 inspection for comparison to measurements documented in Barr (2024a).
- Some undulation and perceptible elevation difference were observed on the TSF crests and downstream and upstream slopes (Photo B-58). The undulations are not currently a dam safety concern as the minimum crest elevation provides the necessary freeboard in combination with the maximum pond level (based on a 2011 survey with sufficient resolution for evaluating crest elevations). No topographic survey has been completed since 2011 and it is recommended that an updated crest survey be completed for the Cell 1E, 2E, and 2W Embankments (recommendation 2024-OMS-2).
- TSF crest areas did not appear to be sloped toward interior regions and were crowned or sloped downstream, away from impoundments. It is best practice to have the crests sloped to the interior of the impoundment to limit damage from runoff on the downstream embankment slopes. Crest geometry should be confirmed as part of recommended crest elevation survey (recommendation 2024-OMS-2).
- Animal burrows approximately 1.5 feet in diameter were frequently observed on the downstream slopes and should be backfilled (Photo B-61) (recommendations 2024-1E-4, 2024-2E-2, 2024-2W-2).

- The TSF downstream slopes were generally established with vegetation, primarily grasses. Some areas of the downstream slopes had isolated groups of established trees and a vegetation management plan should be developed (recommendation 2024-OMS-1).
- Miscellaneous abandoned pipes and slash piles were observed at multiple locations across the TSF.

## 5.2 Cell 1E Observations

- An 8-10 ft deep erosion gully was observed on the downstream side of the Cell 1E North Embankment crest near left abutment with Cell 2W (Photo B-36). This gully was created due to runoff from the rain event on July 18th and exposed the Barge Decant pipe from Cell 2W to Cell 1E. It was recommended during the inspection that this area should be backfilled with like material (tailings), surveyed, and marked for future closure of the Barge Decant pipe (recommendation 2024-1E-1). This recommendation was completed following the inspection.
- Multiple erosional cuts were observed through the downstream and upstream safety berms of the Cell 1E North and South embankment crests due to ponded water from the recent storm event eroding and discharging down the safety berm (Photo B-6, Photo B-18).
- Erosion damage resulting from rain event on July 18th on an access road east of Cell 1E (Photo B-*34*). Damage included washout of the culvert beneath the access road (access road is not part of Cell 1E containment). Reinstatement of access road was recommended during the 2024 inspection and has been completed (recommendation 2024-1E-2).
- Isolated zones of mature trees and shrubs were observed on western tailings beach slope (Photo B-*68*).
- Gully erosion from seepage transfer pipeline discharge in southwest corner of basin was observed(Photo B-10), however, erosion did not appear to be affecting embankment integrity.
- Multiple locations of clear seepage were observed near the downstream toe of the north embankment and did not appear to be a dam safety concern.
- The corrugated metal pipe (CMP) outlet was observed to be dry near the downstream toe at the center of the Cell 1E North Embankment (Photo B-25). The pipe inlet location should be identified with development of a pipe reclamation plan (recommendation 2024-1E-3).

## 5.3 Cell 2E Observations

- Runoff from hillside at the south abutment of the Cell 2E East Embankment was flowing along the crest and into the impoundment through the tailings beach. The water flow resulted in some crest erosion and it is best practice to route this flow away from the impoundment and crest areas (Photo B-38) (recommendation 2024-1E-1).
- Multiple erosion features were observed on the downstream slopes and access roads from surface water runoff down-gradient of notched outlets on benches (Photo B-44).

## 5.4 Cell 2W Observations

- The Gravity Decant inlet appears to have been abandoned with a trash rack in the basin of Cell 2W (Photo B-65). Pipe alignment is buried and routed to Cell 1E and the outlet in Cell 1E was dry with no vegetation surrounding it, likely due to the proximity of the Cell 2E dewatering pipe outlet in Cell 1E that creates periodic

submerged conditions when operating. A Gravity Decant reclamation plan should be developed (recommendation 2023-2W-2).

- The Barge Decant inlet was not found in the basin of Cell 2W, but the outlet was identified in the Cell 1E basin (Photo B-17). A section of the buried barge decant pipe was exposed beneath the Cell 1E North Embankment crest on its western end from erosion due to the rain event on June 18th, 2024 (Photo B-36). The Barge Decant inlet, outlet, and pipe locations should be identified by survey and marked in the field and a reclamation plan should be developed (recommendation 2024-2W-*1*).
- Significantly forested areas, with trees up to 50 feet tall, were observed surrounding the downstream toe, beyond the downstream perimeter access road (Photo B-63), as well as on the downstream slopes of Cell 2W (Photo B-*76*). A vegetation management plan should be developed to evaluate the extent of tree removal that will be beneficial and to identify a suitable approach given the size and overall density of vegetation growth (recommendation 2024-OMS-1).
- Visible ponding in localized depression of interior observed from crest, likely temporary from rain event on June 18, 2024.

# 6.0 SUMMARY OF INSTRUMENTATION MONITORING DATA

Inclinometers, piezometers, settlement plates, and weirs were monitored by LTVSMC during operations on a quarterly basis to identify water levels and potential movement in the TSF embankments. Upon closure in 2001, Northeast Technical Services, Inc. (NTS) began monitoring the instruments at a reduced frequency, generally twice annually with select piezometers and inclinometers monitored more frequently. Piezometers installed after 2016 are monitored monthly during non-freezing conditions. Currently, the monitored instrumentation includes the following:

- Twenty (20) standpipe piezometers
- Sixty-five (65) vibrating wire piezometers
- Seven (7) slope inclinometers

NTS completed video inspection of all standpipe piezometers and inclinometers and slug testing of all standpipe piezometers in late 2024 and the report has not been issued with the results at the time of this report. Instrumentation readings from the last 5 years have been monitored according to the frequency established by the previous EoR (either monthly or quarterly readings) and have, in general, presented steady readings. However, most instruments require manual readings with no data loggers or telemetry system established, making it difficult to observe real-time instrumentation data following upset or emergency conditions or during five months of the year when the facility is under winter conditions.

In general, the instrumentation is concentrated along established cross sections around the TSF, historically denoted as Sections A, B, and D through K, to aid in evaluating readings and their effect on stability of the facility. WSP has revised the cross section naming convention to be more closely aligned with the cross section's respective cell. The updated cross section names and their respective historic names are presented in Table 2. Additionally, sections have been added around the LTV TSF that were not previously included in annual reporting.

**Table 2: LTV TSF Section Naming Convention**

| Updated Section Name | Historic Section Name |
|---|---|
| 1E-A | n/a |
| 1E-B | D |
| 1E-C | K |
| 2E-A | J |
| 2E-B | F |
| 2E-C | n/a |
| 2E-D | n/a |
| 2E-E | G |

| Updated Section Name | Historic Section Name |
|---|---|
| 2W-A | B |
| 2W-B | A |
| 2W-C | H |
| 2W-D | I |
| 2W-E | n/a |
| 2W-F | n/a |
| 2W-G | E |

Note: "n/a" indicates no previous historic cross-section.

The instrumentation locations are presented in Figure 4 and a summary of the instrument locations, statuses, and reading frequencies are presented in Table C-1 in APPENDIX C. WSP has received instrumentation data through December 2024, summarized in Sections 6.1.1, 6.1.2, and 6.1.3. The instrumentation readings made available for review generally indicate steady conditions for the LTV TSF and do not indicate a risk to the integrity of the facility. Data presentation is limited to time history plots with no embankment cross section data included. Cross sections presenting instrumentation locations and readings should be developed (recommendation 2024-OMS-3).

### 6.1.1 Pond Levels

Pond level measurements available through 2024 are presented in Figure C-1. Pond levels were managed in Cell 1E and 2E to maintain required freeboard throughout 2024 according to MDNR Dam Safety Permit 1981-2100.

### 6.1.2 Piezometers

The LTV TSF utilizes both standpipe and vibrating wire piezometer types that are still actively monitored. Pneumatic piezometers have historically been monitored as well but were decommissioned in 2022 due to their poor condition (Barr 2024a) and will not documented in future AFPRs. Piezometer readings through December 2024 are presented in APPENDIX C in terms of total head versus time. It should be noted that a portion of the piezometers are dry, indicating that some water levels may be lower than presented in APPENDIX C.

Of the sixty-five (65) vibrating wire piezometers, fifty-six (56) are monitored by NTS monthly and nine (9) are automatically and remotely monitored via a telemetry system that NTS, WSP, and NewRange do not currently have access to. It is recommended that NewRange and WSP personnel gain access to the remote monitoring system so that readings can be evaluated (recommendation 2024-OMS-4). The nine (9) piezometers that are remotely monitored are installed along Section 1E-C, located on the Cell 1E North Embankment (Figure 4). Of the twenty (20) standpipe piezometers, seven (7) are monitored monthly and thirteen (13) are monitored semi-annually (twice per year). Data for instrumentation requiring manual readings is not collected during the winter months, approximately November through March.

In general, piezometer readings have been stable, dry, or shown seasonal trends since the end of operations in 2001 through December 2024 and do not present a dam safety concern. Seasonal piezometer reading trends include increasing total heads through the spring, summer, and early fall before decreasing throughout the winter,

depending on annual precipitation trends. WSP is in general concurrence with observations previously noted in the 2023 AFPR (Barr, 2024a) as summarized below, grouped by cell.

### *Cell 1E*

- **Section 1E-B**: Standpipe piezometers D-1 and D-4 showed increasing hydraulic head between the spring of 2012 and the fall of 2016 (Figure C-3). This is likely related to increasing Cell 1E pond water levels due to seepage pump back operations from SD-004, SD-006, and Seep 32 and 33 Combined locations (Figure 3) initiated in 2011. Additionally due to the high pond water level in Cell 1E, total head fluctuations of approximately 8 ft were observed from piezometers D-1, D-2, and D-4 in 2017, but all three standpipes have been relatively consistent (2 ft – 4 ft fluctuations) since 2018 (Figure C-4).
- **Section 1E-C**: Vibrating wire piezometers along Section 1E-C were installed in 2016 and record readings consistent with the Cell 1E pond water levels and seasonal climate trends.

### Cell 2E

- **Section 2E-A and Section 2E-B**: Piezometer reading trends are generally consistent with the seasonal fluctuations in Cell 2E pond water level (Figure C-7 and Figure C-8, respectively).
- **Section 2E-E**: Piezometers in the upstream section of the embankment including 2E_2018_PZ_G4_VW (75'), 2E_2018_PZ_G1_VW (48'), 2E_2018_PZ_G1_VW (52'), 2E_2018_PZ_G1_VW (58'), and 2E_2018_PZ_G4_VW (70') record readings that trend with the changing Cell 2E pond water levels (Figure C-10 and Figure C-11).

### *Cell 2W*

- **Section 2W-A:** Standpipe piezometer readings have been relatively stable since the early 2000's with minor fluctuations of 1 – 2 feet (Figure C-12). (Note: it appears that two of the instruments may be dry. The convention for reporting the status dry instrument tips will be revisited in the 2025 reporting period).
- **Section 2W-B:** Stable standpipe piezometer readings are consistent with static condition of Cell 2W (Figure C-13).
- **Section 2W-C**: Piezometers readings collected through the reporting period generally remain below historically high 2018 levels with minor fluctuation limited to 1 ft. in 2024 (Figure C-14).
- **Section 2W-G:** Readings for standpipe piezometer E-5 were ceased in 2013 due to a blockage in the standpipe approximately 20 ft below the ground surface. In general, pneumatic piezometer head readings decreased through 2004 following the cease of operations in 2001. Readings for pneumatic piezometers DH96-11 and DH96-10 fluctuated approximately 8 ft between 2004 and 2013 and were relatively stable with minor fluctuations consistent with Emergency Basin water elevations between 2013 and 2022 when they were decommissioned (Figure C-16). The decommissioned pneumatic piezometers will not be documented in future AFPRs.

## 6.1.3 Slope Inclinometers

Of the seven (7) slope inclinometers (SIs), three (3) are monitored monthly, three (3) are monitored three times per year, and one (1) is monitored semi-annually (Barr 2024a). In general, apparent shear zones have been identified in the native peat, fine tailings, and slimes layers within the TSF foundation and downstream slopes. However, the rate of movement detected has not been accelerating according to the SI readings received to date

and the recorded movement does not pose a dam safety concern. The following presents SI observations at each cross section grouped by cell. SI readings are presented in APPENDIX C.

### *Cell 2W*

- **Section 2W-B**: NTS has indicated that SI DH96-18 installed near the mid-slope along Section 2W-B has historically suggested two poorly defined apparent shear zones. Very small cumulative displacements (0.2 – 0.3 inches) have been recorded since 1998 at depths approximately 100 feet and 87 feet below the ground surface. Data prior to 2020 was not available for review and records from 2020 through 2024 indicate essentially no movement (Figure C-22 - Figure C-24).
- **Section 2W-C:** NTS indicates that DH96-28 is installed near the toe of Section 2W-C and had recorded slow, continual movement approximately 50 – 58 feet below ground since readings began in 1998. This indicates an apparent shear zone within the fine tailings and slimes and is consistent with readings from a nearby SI that was decommissioned. Data provided since 2020 shows little to no movement up to 2024 (Figure C-25 to Figure C-27).
- **Section 2W-G**: SI DH96-10 near the mid slope along Section 2W-G has indicated a very slow rate (~0.1 inch of cumulative displacement) of continual movement since readings began, indicating an apparent shear zone approximately 98 – 101 feet below ground surface (Figure C-19 - Figure C-21).

### *Cell 2E*

- **Section 2E-B and Section 2E-A:** Inclinometers 2E_2018_IN-F1 (F-1), 2E_2018_IN-F3 (F-3), 2E_2018_IN-F4 (F-4), were installed in 2018, replacing DH96-37, DH96-46, and DH96-47. Since installation, F-1 and F-3 have recorded small cumulative deflections (~0.25 inch) (Figure C-28 - Figure C-30 and Figure C-31 - Figure C-33), indicating apparent shear zones within native peat, while F-4 has recorded only minimal cumulative deflections (~0.1 inch) in the coarse tailings approximately 4 ft below ground (Figure C-34 - Figure C-36). However, F-4 is not properly bedded into the bedrock beneath the peat layer and is unlikely to show accurate movements within the peat layer. Barr (2024a) noted that there may be a leak in the casing of F-3 and recommended the casing be flushed to clear debris and for the unsupported casing to be supported above the ground surface.

### *Cell 1E*

- **Section 1E-C**: Inclinometer K2 was installed in 2016 through the mid-slope bench along Section 1E-C. Minor (less than 0.25 inches of cumulative displacement) broad zone movement has been recorded to about 80 ft. depth (Figure C-37 - Figure C-39), with some irregular movement near the ground surface which Barr (2024a) has attributed to the unsupported inclinometer casing moving rather than displacement within the soil. It was recommended in Barr (2024a) that measures are taken to stabilize the casing.

# 7.0 CONCLUSIONS AND RECOMMENDATIONS

The recommended actions for the LTV TSF resulting from the 2024 annual dam safety inspection as well as the status of outstanding recommendations carried over from the 2023 AFPR (Barr, 2024a) are summarized in Table 3. Recommendations are categorized by cell, and observations that apply to the entire Facility are recorded as OMS recommendations. The recommendations have been prioritised according to the following priority rating definitions (EGBC 2024):

- **Priority 1 —** high probability or actual dam safety issues considered dangerous to life, health, or the environment, or risk of regulatory enforcement if not addressed immediately.
- **Priority 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.
- **Priority 3 —** single occurrences of deficiencies or non-conformances that alone would not be expected to result in dam safety issues.
- **Priority 4 —** best management practice; further improvements are necessary to meet industry best practices or reduce potential risks.

Recommendations from the 2023 AFPR that have been addressed are summarized in Table 4 including comments to indicate how the item was closed.

**Table 3: 2024 Recommendations for the LTV TSF**

| Facility | ID Number | Observation | Recommended Action | Report Section | Priority | Recommended Deadline | Status as of 2024 AFPR |
|---|---|---|---|---|---|---|---|
| 1E | 2024-1E-1 | Erosional gully (up to 10 feet deep and 4 to 5 feet wide) on downstream crest/slope of Cell 1E north embankment identified during 2024 DSR inspection and caused by runoff from the July 18th rain event | Should be properly backfilled and protected against future erosion. | 5.2 | 2 | End of Q4 2025 | Complete |
| 1E | 2024-1E-2 | Access road repair | Reinstate access road east of Cell 1E. | 5.2 | 3 | End of Q4 2025 | Complete |
| 1E | 2024-1E-3 | The inlet for a CMP was identified at the center of the downstream toe of the Cell 1E North Embankment. The remainder of the alignment to the pipe outlet is unknown. | The alignment for the CMP should be located and a reclamation plan should be developed for the CMP inlet, outlet, and pipeline. | 5.2 | 4 | End of Q4 2025 | New |
| 1E | 2024-1E-4 | Animal burrows backfill | Animal burrows identified on embankment slopes should be backfilled. WSP has geolocated (with images) many of the burrows identified during the site visit for locating in the field. | 5.1 | 4 | End of Q4 2025 | New |
| | | | | | | | |
| 2E | 2024-2E-1 | Surface water diversion | Runoff from the hillside east of Cell 2E should be assessed to determine the feasibility for diverting runoff around the TSF through surface water diversion structures. | 5.3 | 4 | End of Q4 2025 | New |
| 2E | 2024-2E-2 | Animal burrows backfill | Animal burrows identified on embankment slopes should be backfilled. WSP has geolocated (with images) many of the burrows identified during the site visit for locating in the field. | 5.1 | 4 | End of Q4 2025 | New |
| 2E | 2023-2E-1 | Eroded filter material replacement | Replace eroded filter material at Seep 2E_N_C2 (Seep 34) using additional filter material stockpiled near the seep (Barr, 2024a). | Barr, 2024a, Table 2 | 4 | End of Q2 2025 | Not Started |
| 2E | 2023-2E-2 | Pipeline inspection | Inspect pipeline between Cell 1E and Cell 2E for damage and repair as necessary prior to use. Several surficial gouges were noted in the pipeline along the tailings beach during previous site visits but did not appear to fully penetrate the pipe wall. While in use, monitor the pipeline for signs of leakage and promptly address issues as needed (Barr, 2024a). | Barr, 2024a, Table 2 | 4 | End of Q2 2025 | Not Started |
| | | | | | | | |
| 2W | 2024-2W-1 | Barge Decant unknown pipe alignment and reclamation plan | The Barge Decant inlet, outlet, and pipe alignment should be identified by survey, marked in the field, and a reclamation plan should be developed. | 5.2, 5.2 | 4 | End of Q4 2025 | New |
| 2W | 2024-2W-2 | Animal burrows backfill | Animal burrows identified on embankment slopes should be backfilled. WSP has geolocated (with images) many of the burrows identified during the site visit for locating in the field. | 5.1 | 4 | End of Q4 2025 | New |
| 2W | 2023-2W-1 | Culvert or high permeability zone investigation | Investigate the possible presence of a culvert or high permeability zone beneath the Cell 2W dam toe road near area of observed seepage (south of Seeps 8 and 9) (Barr, 2024a). This could be done with targeted excavation in the area, though care should be taken to limit excavation extents and depths. Investigate condition of nearby culvert beneath access road adjacent to area of apparent seepage, and repair or replace if needed to help manage area surface water. Continue to inspect area of wet ground conditions, looking for any notable increases in the size and/or relative severity of the wet ground noted, as this may be an indicator of changed conditions upstream/upslope warranting further review (e.g., broken seep water transfer pipeline, other) (Bar, 2024a). | Barr, 2024a, Table 2 | 4 | End of Q2 2025 | Not Started |
| 2W | 2023-2W-2 | Gravity Decant reclamation plan | Establish a permanent Cell 2W decant structure reclamation plan to prevent surface water flow towards and into the structure. This may include activities such as:<br>▪ Considering long-term Cell 1E and 2E development plans that may affect structure location and reclamation approach.<br>▪ Grading surrounding ground away from the structure.<br>▪ Probing material in the structure to help confirm there are no voids.<br>▪ Installing a permanent seal, such as cement and bentonite grout, in the upper concrete riser segment.<br>▪ Mounding soil around and over the sealed concrete riser to divert water away from the structure.<br>▪ Establishing a marker to permanently identify the structure location.<br>Coordinate decant structure reclamation plan implementation with future LTV Project Cell 1E and Cell 2E dam construction and LTVSMC coarse tailings borrow activities or concurrent with other pipe removal and abandonment activities.<br>Barr recommended implementing the decant reclamation plan before initiating Cell 2E operations so as not to preclude the potential need to access the lower end of the structure if still present. | Barr, 2024a, Table 2 | 4 | End of Q2 2025 | Not Started |

**Table 3: 2024 Recommendations for the LTV TSF**

| Facility | ID Number | Observation | Recommended Action | Report Section | Priority | Recommended Deadline | Status as of 2024 AFPR |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1E, 2E, 2W | 2023-OMS- 1 | The 2023 AFPR identified the need to develop an unused pipe removal and/or abandonment plan per the Dam Safety Permit 2016-1380 prior to dam construction and flotation tailings deposition. | Include an unused pipe abandonment/removal plan section in the OMS Manual to detail the requirements per Dam Safety Permit 2016-1380, drawings indicating the location of unused pipelines, and the required abandonment/removal requirements and timelines. | Barr, 2024a, Table 12 | 4 | End of Q2 2025 | Not Started |
| 1E, 2E, 2W | 2024-OMS-1 | Mature trees exist on the downstream slopes and surrounding the downstream toes of Cells 1E, 2E, and 2W. | Develop a vegetation management plan to be added to OMS manual. | 5.1, 5.2 | 4 | End of Q4 2025 | New |
| 1E, 2E, 2W | 2024-OMS-2 | Survey with sufficient resolution (1 ft) for determining embankment crest elevations and slopes has not been completed since 2011. | Perform a crest elevation survey for the cell 1E, 2E, and 2W Embankments. | 5.1 | 3 | End of Q4 2025 | New |
| 1E, 2E, 2W | 2024-OMS-3 | Instrumentation data presented is limited to time history plots with no embankment cross section data included. | Develop cross sections presenting instrumentation locations and readings. | 6.0 | 4 | End of Q4 2025 | New |
| 1E, 2E, 2W | 2024-OMS-4 | WSP and NewRange do not have access to the readings for the nine (9) piezometers that are remotely monitored via a telemetry system installed on the Cell 1E North Embankment. | Gain access to the piezometers that are remotely monitored via telemetry. | 6.1.2 | 3 | End of Q4 2025 | New |

Note: Grey-shaded rows indicate completed actions.

**Table 4: Addressed Recommendations for the LTV TSF**

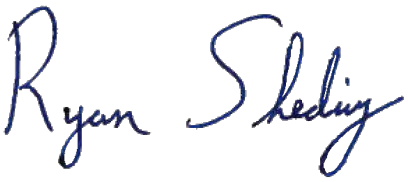
| Facility | ID Number | Observation | Recommended Action | Report Section | Priority | Actions Taken | Status as of 2024 AFPR |
|---|---|---|---|---|---|---|---|
| 2W | 2023-AFPR | - | Monitor for signs of worsening surface erosion, particularly after heavy rainfalls. Immediately report signs of changed conditions to the EOR, as they may require prompt implementation of remedial measures. | - | - | Inspection checklist included in OMS Manual and includes items to observe erosion among other inspection details. Inspection requirements after precipitation effects have been defined in the OMS storm recovery plan. | Addressed |
| 2W/1E | 2023-AFPR | - | Visually monitor power poles for changes in inclination. | - | - | Observation of power pole alignment/inclination added to the OMS Manual inspection considerations. | Addressed |
| 2W | 2023-AFPR | - | Develop a plan for repairing surface erosion in conjunction with pipe abandonment or removal in accordance with the dam safety permit. Allow the EOR to review and provide feedback. The repair plan might include regrading to prevent water from ponding along dam benches, backfilling surface erosion gullies with compacted coarse tailings, and establishing vegetation. Riprap installation could also be considered. If used, riprap extents should be sufficient to prevent flow from eroding around the riprap extents. Monitor for signs of worsening conditions, particularly after heavy rainfalls. Immediately report signs of changed conditions to the EOR, as they may require prompt implementation of remedial measures. | - | - | 2024 AFPR OMS recommendation (2023-OMS- 1) added to develop a pipeline abandonment plan that addresses all sub-recommendations and considerations associated with pipeline abandonment. The pipeline abandonment plan will outlie requirements for the items identified in the recommendation including suitable repair/abandonment and reporting to be prepared for each related work scope. | Addressed |
| 2E | 2023-AFPR | Several surficial gouges were noted in the pipeline (between Cell 1E and 2E) along the tailings beach during previous site visits but did not appear to fully penetrate the pipe wall. | Inspect pipeline between Cell 1E and Cell 2E for damage and repair as necessary prior to use. While in use, monitor the pipeline for signs of leakage and promptly address issues as needed. | - | - | Inspection of pipeline between Cell 1E and 2E added to OMS inspection check list. There are no remaining pipeline deficiencies to address and the pipeline condition will continue to be monitored as part of regular surveillance. | Addressed |
| 1E/2E/2W | 2023-AFPR | - | Periodically review and be familiar with the location and content of the Contingency Action Plan for the Flotation Tailings Basin (FTB) (Attachment F of Reference (9) (Barr, 2024a)). Review and update the Contingency Action Plan (including per conditions of the Dam Safety Permit), such that the Plan remains current and comprehensive relative to current and changing conditions at the TMF. Follow additional observation, reporting, and response actions as listed therein. | - | - | | Addressed |

**Table 4: Addressed Recommendations for the LTV TSF**

| Facility | ID Number | Observation | Recommended Action | Report Section | Priority | Actions Taken | Status as of 2024 AFPR |
|---|---|---|---|---|---|---|---|
| 1E/2E | 2023-AFPR | - | Continue to control Cell 1E and Cell 2E pond elevations such that a 200-foot minimum beach width is maintained while the cells are idle. | - | - | Pond elevations and beach width measurement frequencies and control measures included in OMS manual. | Addressed |
| 1E | 2023-AFPR | - | As needed, install and remove stop logs associated with hydraulic structures located east of Cell 1E and south of the Railroad Embankment to maintain appropriate water levels. Monitor hydraulic structures and the Cell 1E inflow culvert for signs of debris and beaver impacts and address as needed. | - | - | Hydraulic structure maintenance and monitoring frequencies and methods included in OMS manual. | Addressed |
| 1E/2E/2W | 2023-AFPR | - | Continue evaluating existing surface water runoff control around the TMF and dam slopes for signs of surficial erosion. Identify areas where significant surficial erosion has occurred and repair these areas, including re-establishing vegetation and/or placing armor or riprap. If necessary, divert future water flow into engineered channels to prevent surficial erosion. | - | - | Surface water runoff and erosion observation frequencies, as well as erosion repair measures included in the OMS manual. | Addressed |
| 1E | 2023-AFPR | - | Maintain a footpath for safe access to Seep 32 (south side of railroad embankment). Continue clearing vegetation as needed to maintain sightlines for ongoing inspection and observation. | - | - | Vegetation clearing and footpath maintenance criteria included in the OMS manual. | Addressed |
| 1E | 2023-AFPR | - | Create and maintain a footpath to allow safe access to the Cell 1E waterline if interested in continuing to collect beach length measurements. | - | - | Cell 1E beach maintenance required for safe access to pond included in the OMS manual. | Addressed |
| 1E/2E | 2023-AFPR | - | Consistent with past practices at the site, continue to utilize herbicide applications and cutting to control woody vegetation along downstream toe and slopes of dams where a pond is present (e.g., Cell 1E and Cell 2E interior and perimeter dams). Refer to FEMA 534 Technical Manual (reference (10)) for guidance. | - | - | Vegetation management plan included in the OMS manual. | Addressed |
| 1E/2E/2W | 2023-AFPR | - | Continue to perform the annual dam safety inspection in the spring while pond elevations may be elevated due to spring precipitation and meltwater, and prior to significant spring vegetation growth, as dam access and visibility are generally better in the spring than in the fall. | - | - | Annual dam safety inspection frequency and timing included in the OMS manual. | Addressed |
| 1E/2E | 2023-AFPR | - | Continue to monitor flow through culvert downstream of the bedrock outcrop area (Seep 1E 2E_E1) for changes in flow rate during monthly dam safety site visits. | - | - | Hydraulic structure flow monitoring requirements and intermittent dam safety inspection frequencies included in the OMS manual. | Addressed |
| | 2023-AFPR | - | Monitor animal burrow locations for signs of seepage and/or roof collapse. If relatively large burrows, clusters of burrows, or signs of seepage and/or roof collapse are observed, follow recommendations provided in FEMA 473 Technical Manual (reference (11)). Communicate plan for addressing burrows with EOR prior to starting work. Also monitor for signs of seepage from animal burrows. If observed, immediately report to the EOR, as this may require prompt implementation of remedial measures. | - | - | Animal burrow backfilling criteria included in the OMS manual. | Addressed |
| 1E/2E/2W | 2023-AFPR | - | Continue scheduled reclamation inspections and, if needed, establish vegetation in areas around the TMF where none exists. This may include erosion control along dam slopes and dust control along beaches. | - | - | Requirements for inspections of reclamation cover included in the OMS manual. | Addressed |
| 1E/2E/2W | 2023-AFPR | - | Continue routine inspections, looking for signs of sloughing, cracking, surface erosion, and seepage. Careful attention should be paid to seepage areas, looking for signs of an increased seepage rate, sloughing, cracking, boils, and internal erosion (material transport) and/or piping. Promptly report signs of sloughing, cracking, concentrated seepage, boiling, internal erosion, and/or piping to the EOR, as these may require rapid implementation of remedial measures. Review conditions within and around downstream ponds that contain discolored water, as indicated herein. Look for signs of seepage, bubbling, and internal erosion. Immediately report signs of these conditions to the EOR, as these may require rapid implementation of remedial measures. Consider future water sample collection to further assess the cause of the discoloration. Perform routine inspections at the following frequency:<br>• Prior to initiating tailings deposition or new dam construction: at least three times per week during non-frozen conditions and as may be recommended by the EOR pending review of findings during each annual dam safety inspection.<br>• Prior to initiating tailings deposition or new dam construction, when access is difficult during winter conditions, at least two times per week for seep areas along the Cell 2E north dam and Cell 1E-2E splitter dam.<br>• After initiating tailings deposition or new dam construction: daily, including inspection of all dams, paying close attention to the seepage areas discussed in this document.<br><br>EOR to perform inspections at least twice yearly prior to initiating tailings deposition and/or new dam construction. EOR inspections to be performed more frequently after initiating tailings deposition and/or new dam construction. | - | - | Requirements for facility inspections completed by the Owner and EoR included in the OMS. | Addressed |

# Signature Page

**WSP Projects Inc.**



Ryan Shedivy, PE
*Assistant Vice President, Geological Engineer*

Jason Stianson
*Senior Geotechnical Engineer*
*WSP Canada Inc.*

Jeremy Price
*Senior Geotechnical Engineer*

RS/JS/JP/rd

https://wsponline.sharepoint.com/sites/global-newrangeportfolio/project files/5_technical work/02_tailings/08_annual report/02_rev0/us0033486.3977-008-rpt-0-2024_annual_summary_31jan2025.docx

# REFERENCES

Barr 2024a. Tailings Basin Annual Report and Dam Safety Inspection and Instrumentation Monitoring Findings for Year 2023, MDNR Dam Safety Permits 1981-2100 and 2016-1380, January 2024.

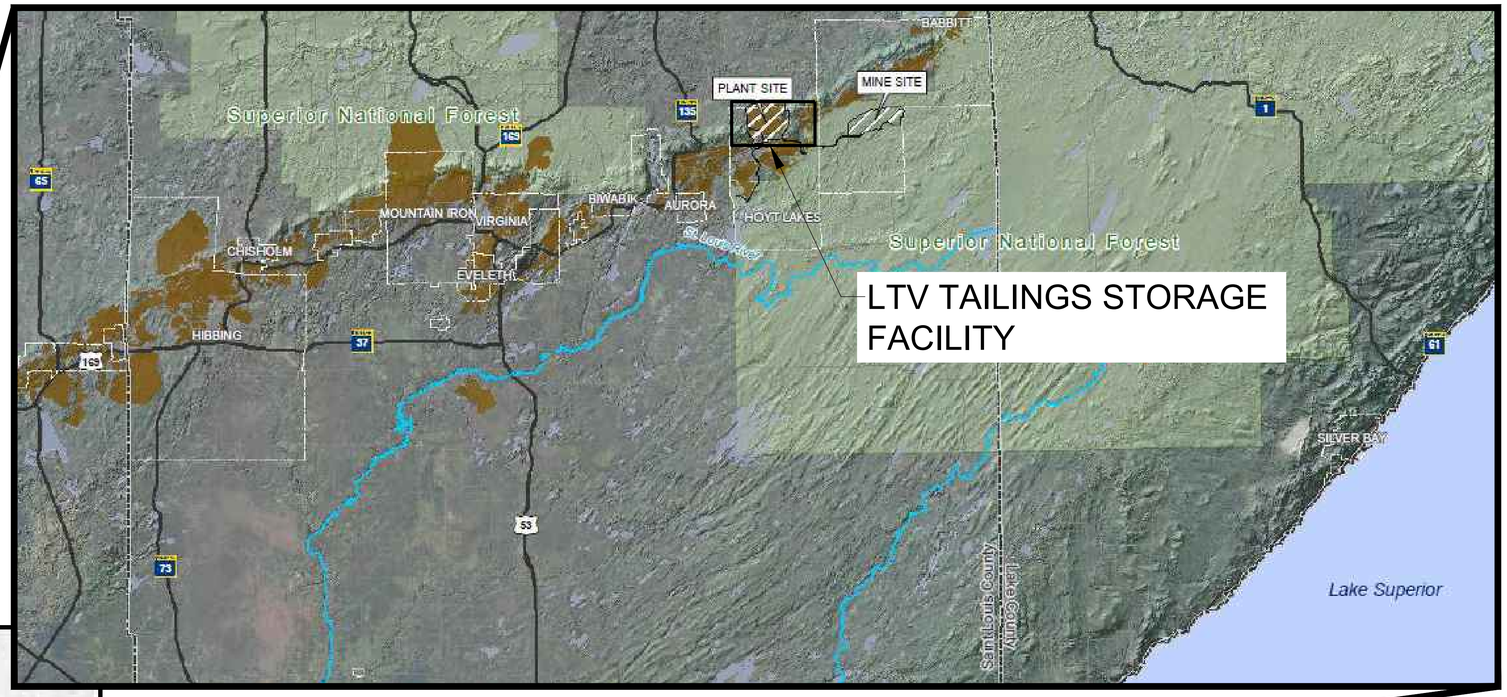
Barr. 2024b. Geotechnical Data Report (Draft for Client Review), 2023/2024 Geotechnical Investigation Conducted at the NorthMet Tailings Basin, Prepared for NewRange Copper Nickel LLC., July 10, 2024.

LCI. (Lettis Consultants International). 2024. Development of Site-Specific Seismic Design Ground Motions for the NewRange Copper Nickel LLC NorthMet Tailings Basin, Hoyt Lakes, Minnesota. Issued April 8, 2024.

PolyMet. (PolyMet Mining). 2011. NorthMet Project, Geotechnical Data Package, Volume 1 – Flotation Tailings Basin, Attachment – Probabilistic Seismic Hazard Analysis, Version 1. Issued September 23, 2011.

Professional Engineers and Geoscientists of British Columbia. (EGBC). 2024. Code Guidance on the Health, Safety, and Reclamation Code for Mines in British Columbia – Part 10 – Tailings Storage Facilities (TSF) and Dams. June 2024.

# FIGURES




CLIENT
NEWRANGE COPPER NICKEL LLC.
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT

| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | JP |
| PREPARED | JP |
| REVIEWED | JS |
| APPROVED | RS |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**FIGURE 1 - PROJECT LOCATION MAP**

| PROJECT NO. | REV. | FIGURE |
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**REFERENCE**

1. AERIAL IMAGERY FROM MAXAR VIVID, CAPTURED SEPTEMBER 14, 2023.

0 800 1600
1" = 800' FEET

CLIENT
NEWRANGE COPPER NICKEL LLC.
6500 KENSINGTON DRIVE
HOYT LAKES,MN 55750

CONSULTANT

| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | JP |
| PREPARED | JP |
| REVIEWED | JS |
| APPROVED | RS |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**FIGURE 2- LTV TSF AERIAL OVERVIEW**

| PROJECT NO. | REV. | FIGURE |
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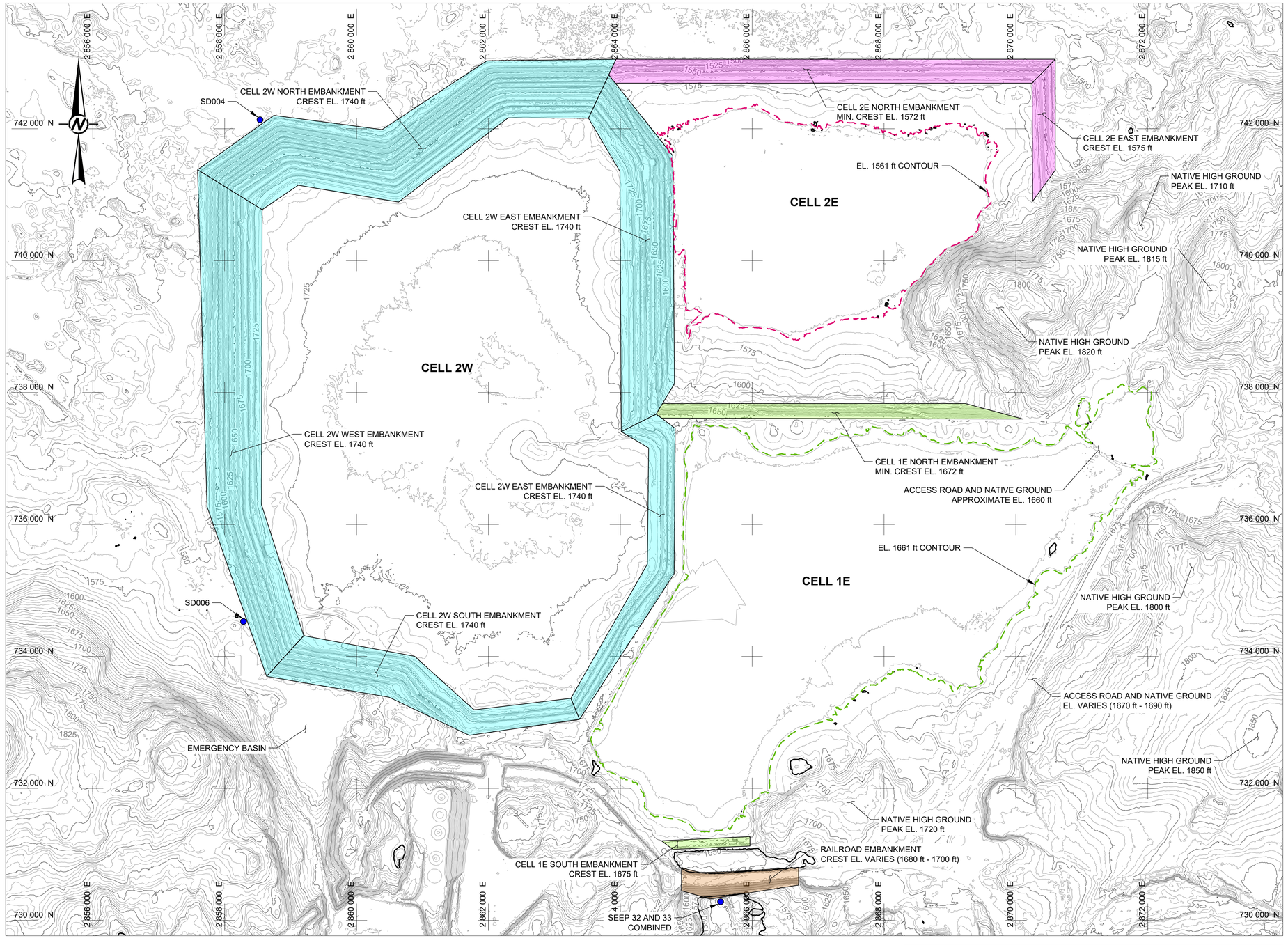


**LEGEND**

- 11000 — EXISTING GROUND TOPOGRAPHY (5 ft CONTOUR INTERVAL) (REFERENCE 1)
- CELL 1E EMBANKMENTS
- CELL 2E EMBANKMENTS
- CELL 2W EMBANKMENTS
- RAILROAD EMBANKMENT
- ELEVATION 1561 ft CONTOUR
- ELEVATION 1661 ft CONTOUR
- SEEP COLLECTION AND PUMP-BACK SYSTEM

**REFERENCE**

1. EXISTING GROUND TOPOGRAPHY RECEIVED ROM NEWRANGE IN ELECTRONIC FILE "Newrange_Sections_Base.dwg" PRODUCED FROM 2010 LIDAR SURVEY.

0 800 1600
1" = 800' FEET

CLIENT
NEWRANGE COPPER NICKEL LLC.
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | JP |
| PREPARED | JP |
| REVIEWED | JS |
| APPROVED | RS |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**FIGURE 3 - LTV TSF EMBANKMENT AND SEEP PUMPBANK IDENTIFICATION**

| PROJECT NO. | REV. | FIGURE |
|---|---|---|
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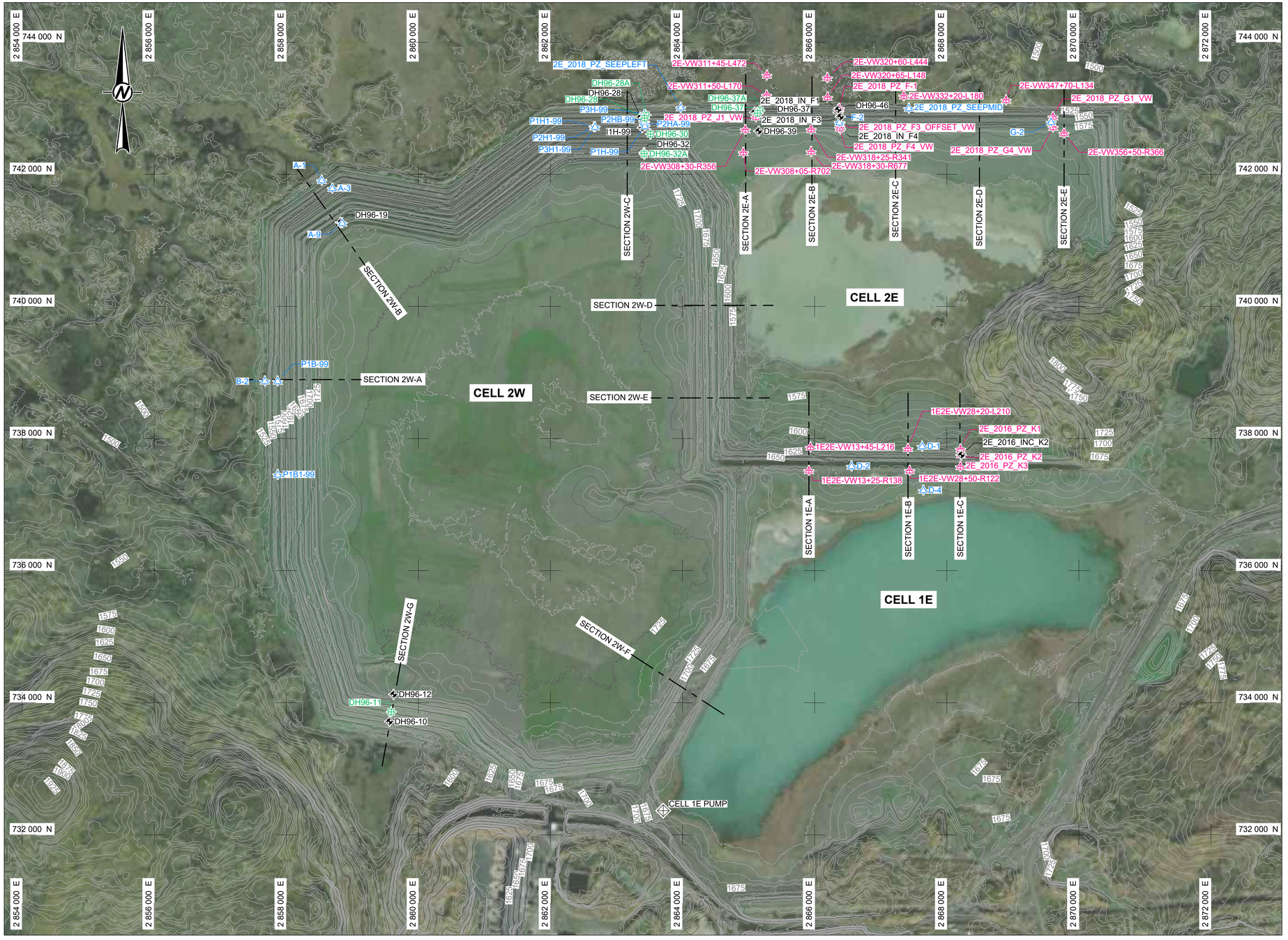


**LEGEND**

- 11000 — EXISTING GROUND TOPOGRAPHY (10 ft CONTOUR INTERVAL) (REFERENCE 1)
- VIBRATING WIRE PIEZOMETER (REFERENCE 4)
- STANDPIPE PIEZOMETER (REFERENCE 4)
- PNEUMATIC PIEZOMETER (REFERENCE 4)
- POWER STATION / PUMP HOUSE (REFERENCE 4)
- INCLINOMETER (REFERENCE 4)
- CROSS SECTION LOCATION

**REFERENCES**

1. EXISTING GROUND TOPOGRAPHY RECEIVED FROM NEWRANGE IN JULY 2024 IN ELECTRONIC FILE "Newrange_Sections_Base.dwg".
2. COORDINATE SYSTEM REFERENCE IS NAD83 MINNESOTA STATE PLANE NORTH.
3. VERTICAL DATUM REFERENCE IS FEET ABOVE MEAN SEA LEVEL (AMSL).
4. INSTRUMENTATION AND ALIGNMENT LOCATIONS PROVIDED BY NEWRANGE IN ELECTRONIC FILE "Newrange_Sections_Base.dwg".

0 800 1600
1" = 800' FEET

CLIENT
NEWRANGE COPPER NICKEL LLC.
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55

CONSULTANT
wsp

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| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | JP |
| PREPARED | JP |
| REVIEWED | JS |
| APPROVED | RS |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**FIGURE 4 - EXISTING INSTRUMENTATION**

| PROJECT NO. | REV. | FIGURE |
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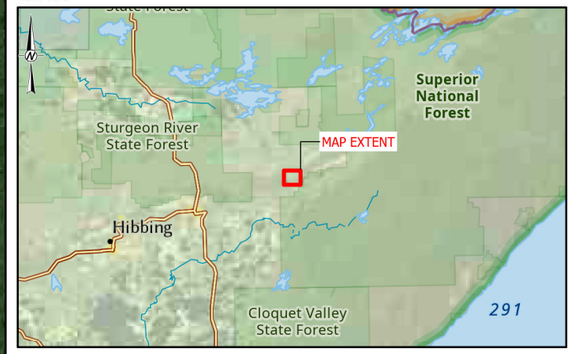
KEY MAP




LEGEND

□ SURVEY DATA LOCATIONS

0 750 1,500 3,000
Feet

**NOTES**
1. ALL LOCATIONS ARE APPROXIMATE.
2. LOCATIONS INSPECTED 06/2024.

**REFERENCES**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE MINNESOTA NORTH FIPS 2201 FEET.
2. AERIAL IMAGERY: ESRI BASEMAP SERVICE. MAXAR, VIVID. IMAGERY CAPTURED 9/14/2023.

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6500 KENSINGTON DRIVE, HOYTE LAKES, MN 55750

PROJECT
NORTHMET PROJECT LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**PHOTOLOG OVERVIEW MAP**

CONSULTANT
wsp

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| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | AR |
| PREPARED | RHG |
| REVIEWED | JRP |
| APPROVED | RFS |

PROJECT NO.
US0033486.3977

FIGURE
5

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

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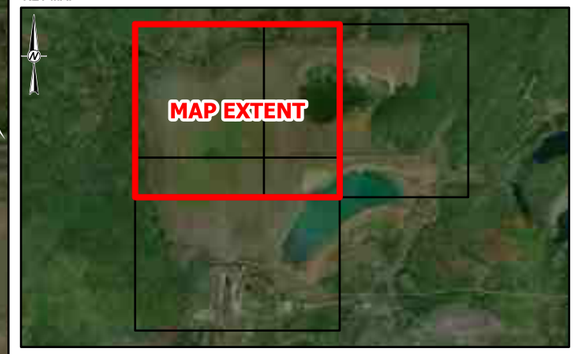
KEY MAP




LEGEND

8 SURVEY DATA LOCATIONS

0 400 800 1,600 Feet

**NOTES**
1. ALL LOCATIONS ARE APPROXIMATE.
2. LOCATIONS INSPECTED 06/2024.

**REFERENCES**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE MINNESOTA NORTH FIPS 2201 FEET.
2. AERIAL IMAGERY: ESRI BASEMAP SERVICE. MAXAR. VIVID. IMAGERY CAPTURED 9/14/2023.

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PROJECT
NORTHMET PROJECT LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**PHOTOLOG DETAIL MAP 1**

CONSULTANT

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| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | AR |
| PREPARED | RHG |
| REVIEWED | JRP |
| APPROVED | RFS |

PROJECT NO. US0033486.3977

FIGURE 6

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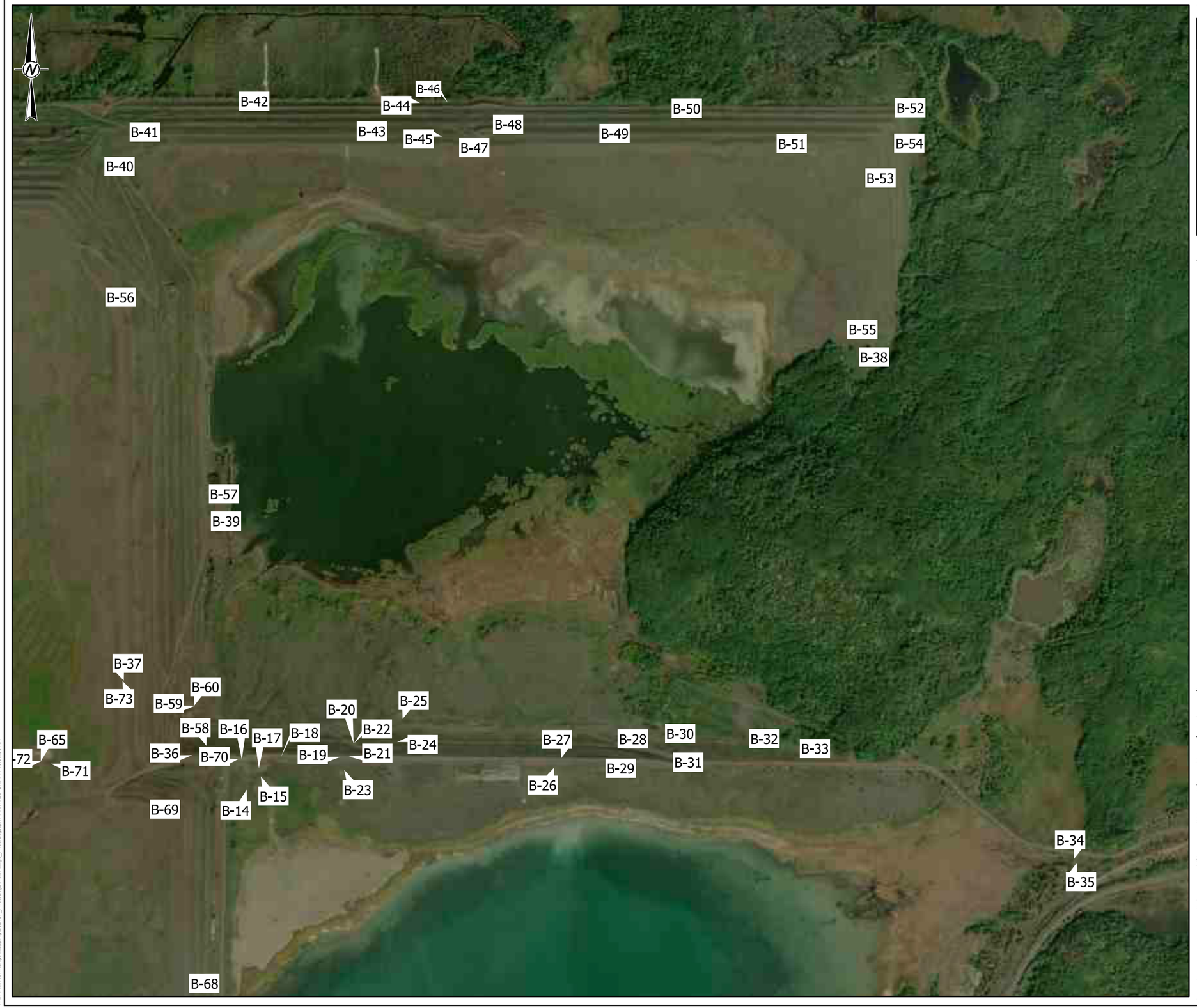
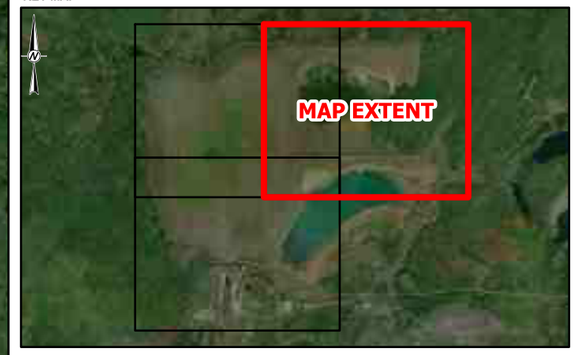



KEY MAP




LEGEND

8 SURVEY DATA LOCATIONS

0 400 800 1,600 Feet

**NOTES**
1. ALL LOCATIONS ARE APPROXIMATE.
2. LOCATIONS INSPECTED 06/2024.

**REFERENCES**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE MINNESOTA NORTH FIPS 2201 FEET.
2. AERIAL IMAGERY: ESRI BASEMAP SERVICE. MAXAR. VIVID. IMAGERY CAPTURED 9/14/2023.

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PROJECT
NORTHMET PROJECT LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**PHOTOLOG DETAIL MAP 2**

CONSULTANT
wsp

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| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | AR |
| PREPARED | RHG |
| REVIEWED | JRP |
| APPROVED | RFS |

PROJECT NO. US0033486.3977

FIGURE 7

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

0 1 in

PATH: M:\NewRange\Mapping\202407_PhotoLogs\NewRange_PhotoLog.aprx PRINTED ON: AT: 10:59:00 AM

KEY MAP

LEGEND

8 SURVEY DATA LOCATIONS

0 400 800 1,600
Feet

**NOTES**
1. ALL LOCATIONS ARE APPROXIMATE.
2. LOCATIONS INSPECTED 06/2024.

**REFERENCES**
1. COORDINATE SYSTEM: NAD 1983 STATEPLANE MINNESOTA NORTH FIPS 2201 FEET.
2. AERIAL IMAGERY: ESRI BASEMAP SERVICE. MAXAR. VIVID. IMAGERY CAPTURED 9/14/2023.

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PROJECT
NORTHMET PROJECT LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REPORT

TITLE
**PHOTOLOG DETAIL MAP 3**

CONSULTANT

| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| DESIGNED | AR |
| PREPARED | RHG |
| REVIEWED | JRP |
| APPROVED | RFS |

PROJECT NO. US0033486.3977

FIGURE 8

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

# General LTV TSF Information

# Appendix A – General Tailings Basin Information

The paragraphs that follow provide general tailings basin information, including discussion of site geology and details regarding initial tailings basin development.

## Site Geology

The Rainy Lobe glacial deposits form the major surficial deposits at the site. In general, the Quaternary geology of the region is a thin (0 to 30 feet, but locally thicker with a range of 0 to 150 feet) blanket of glacial deposits including till, lacustrine materials, and outwash. Low spots are generally peat bog or open wetland. Topography is subdued and drainage is poor. The till is generally observed to be silty clayey sand with gravel, cobbles, and boulders.

Near the tailings basin, the uppermost bedrock unit is the Giants Range batholith, including quartz monzonite, monzodiorite, and monzogranite. Below the southeast corner of Cell 1E the uppermost bedrock is sedimentary schist with a seam of volcanic schist. Depth to bedrock varies from 0 to 150 feet below ground surface with the greatest depths (>50 feet) occurring at the tailings basin (Reference (1)). An upper weathered layer of bedrock ranging from approximately 10 to 40 feet thick has been observed at the site.

In some boring locations, peat deposits have been encountered between the tailings dams / fill and the glacial deposits. These peat deposits are discontinuous. On top of the glacial deposits are numerous wetlands and minor surface water drainages. These features are assumed to represent surficial expressions of the water table. Figure A-1 presents a site map with the peat locations delineated.

## Initial Tailings Basin Development

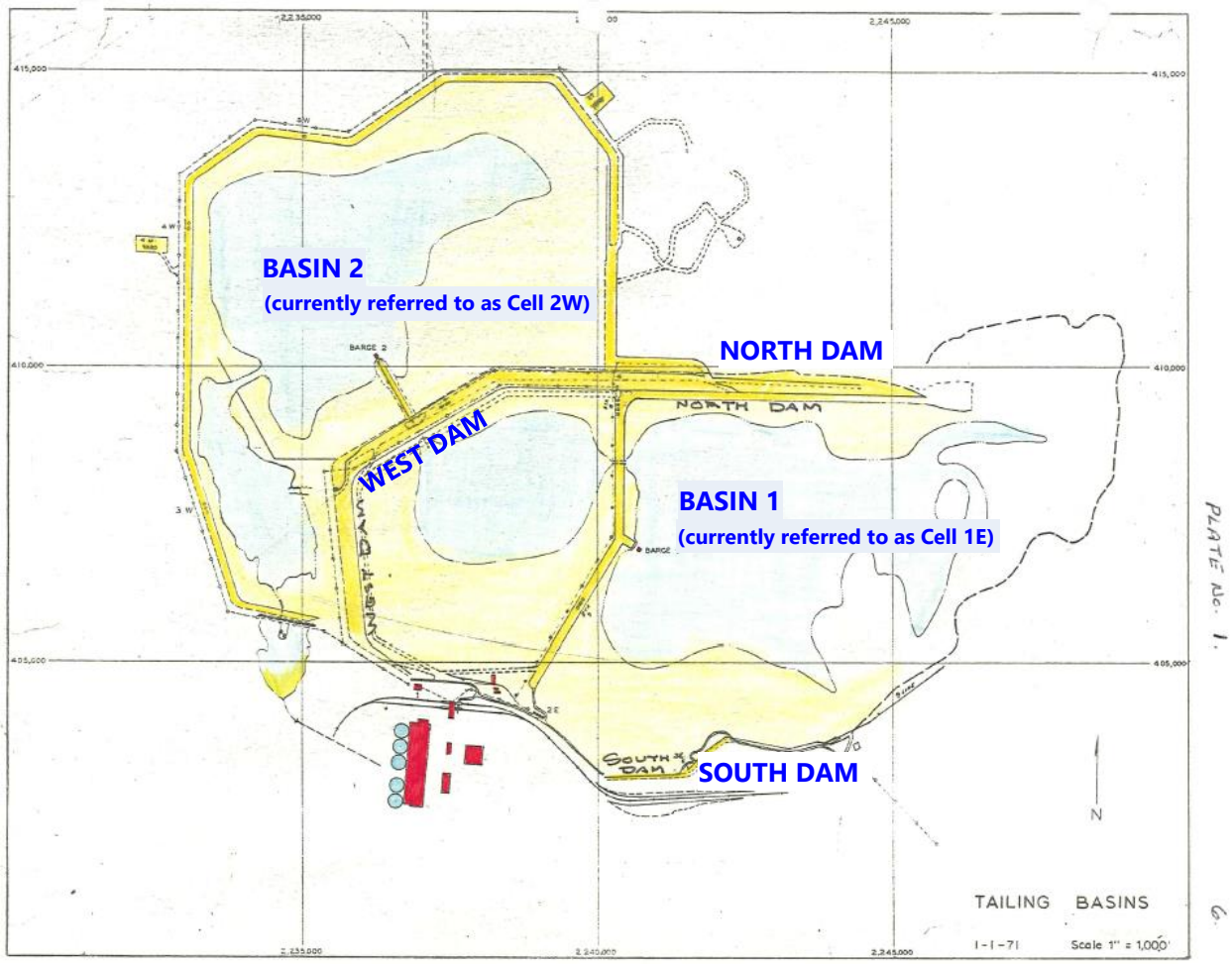
The LTV Steel Mining Company (LTVSMC) owned and operated the site for approximately 15 years until operations ceased at the end of 2001. Development of the site began in the 1950s and operated under Erie Mining Company ownership prior to operations by LTVSMC. Cliffs Erie L.L.C. obtained the property in 2001, and Poly Met Mining, Inc. (PolyMet) obtained the property in 2018.

Many of the perimeter dams were constructed with a rock, sand, and gravel starter dam. Portions of the perimeter dams are founded on a layer of peat overlying the glacial till. The existing tailings basin dams were constructed using the upstream method with hydraulic filling. The coarsest tailings settled out nearest the point of discharge, providing a layer of coarse tailings surrounding the rock starter dam and along the upstream face of the dam. These coarse materials were periodically pushed up with a dozer on the dam crest to progressively raise the perimeter dams, creating a berm. Finer tailings and slimes settled out at greater distances from the point of discharge (i.e., farther upstream in the basin) and are generally located near the center of the cells. In some areas, finer tailings and slimes are located nearer the downstream toe where spigot discharge did not occur for extended periods of time.

The Tailings Basin Manual (Reference (2)) stated that:

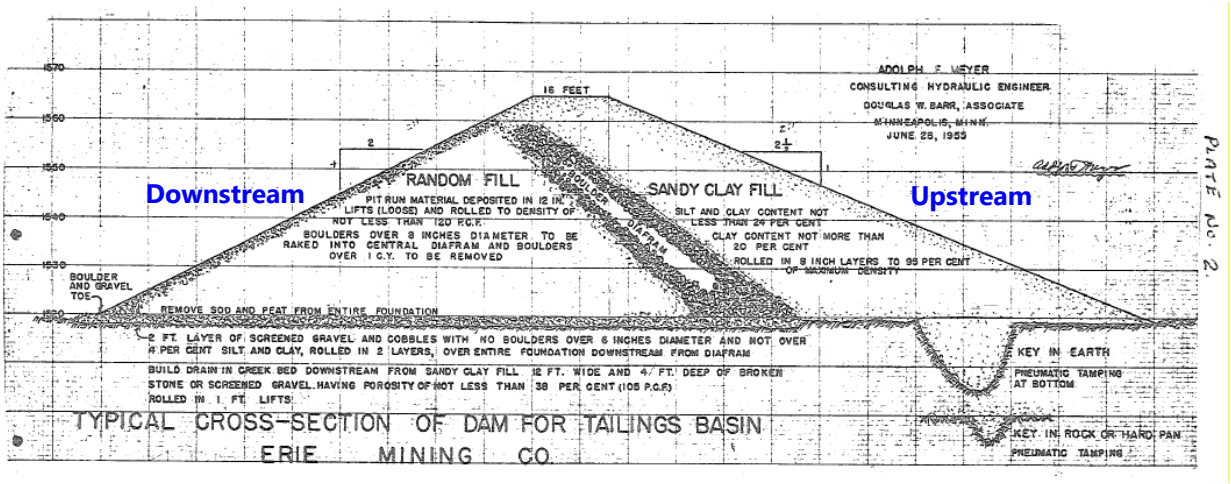
> *The original earth fill "starter" dams were constructed in 1955 by S. J. Groves and Sons, contractor. These earthen dams, which were referred to as the South, West and North dams, (Illustration A.1), were designed by Adolph F. Meyer and Douglas W. Barr, his associate. The dams were designed to use the local type of earth available. The North and South dams were designed with boulder diaphragms and filter beds to drain the water from the boulder diaphragm to the down toe [sic] (Illustration A.2). The West dam, which was smaller, is a homogenous dam of glacial till with the excess boulders deposited on the downstream toe (Ref. 413-K Mine Engineering files). These earth dams now represent an insignificant part of the mass of the present tailing dams (Illustration A.3).*

Note that blue text labels in Illustration A.1, Illustration A.2, and Illustration A.3 were added by Barr to provide clarity and context for the document excerpts presented herein.



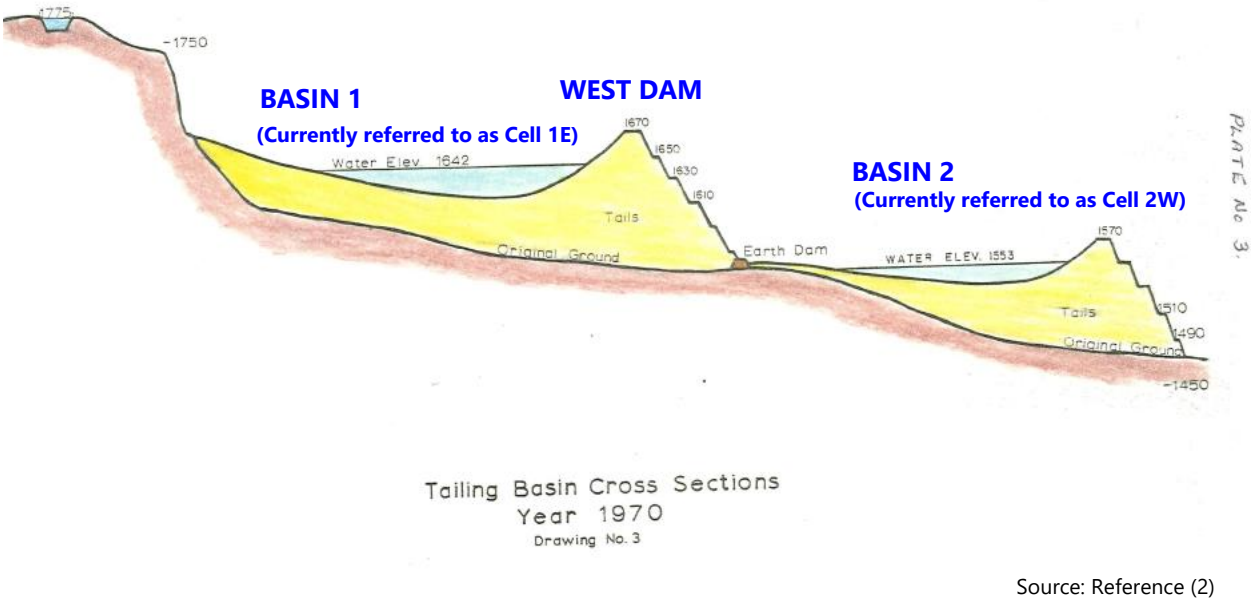

Source: Reference (2)

**Illustration A.1 Original 1955 Plan for Earthen Dams – Plate No. 1 from Tailings Basin Manual**




Source: Reference (2)

**Illustration A.2 Typical Starter Dam Design Cross-Section – Plate No. 2 from Tailings Basin Manual**




Source: Reference (2)

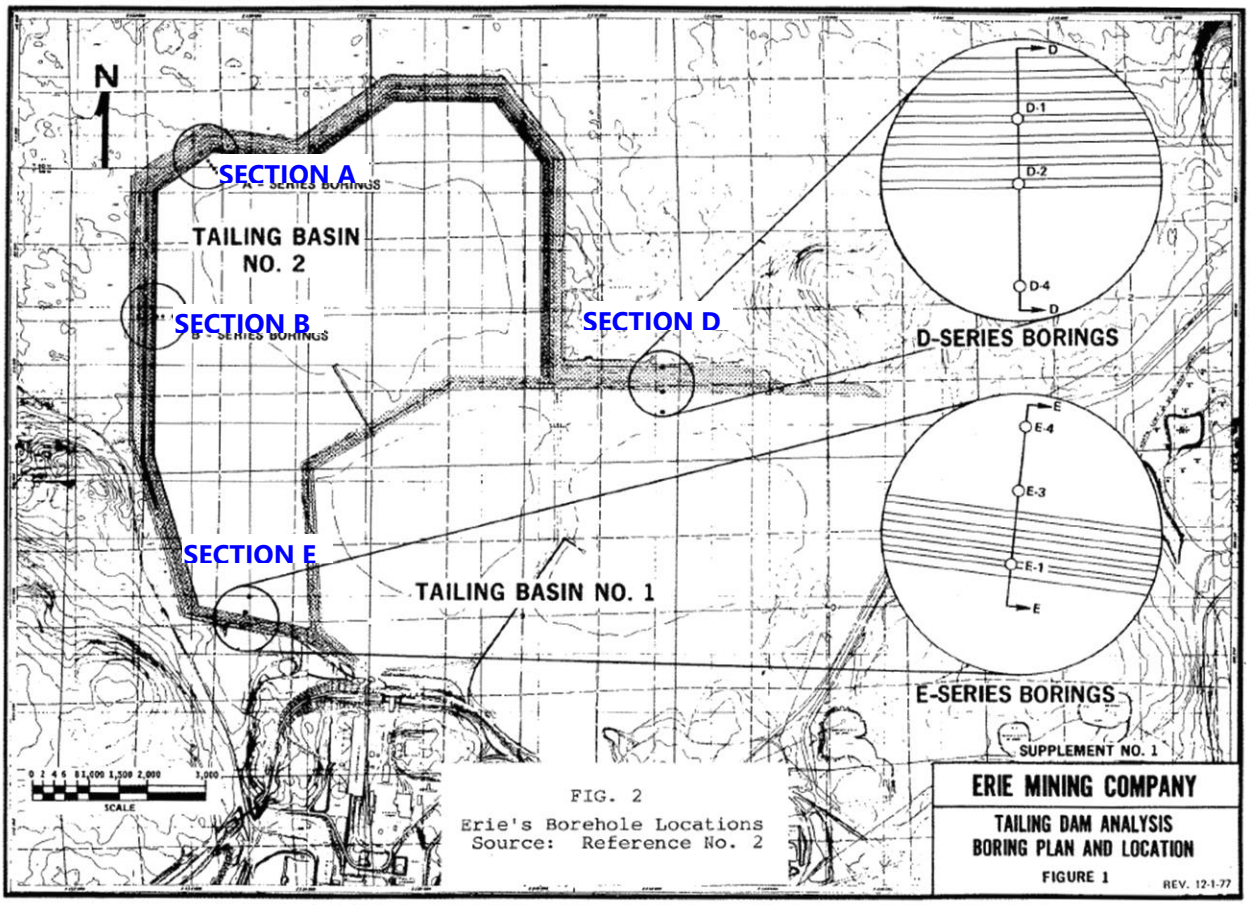
**Illustration A.3 Long-Range Cross-Section through Basin 1 and Basin 2 – Plate No. 3 from Tailings Basin Manual**

By 1968, the tailings basin consisted of two cells (Basin 1 and Basin 2) that cover much of the areas currently referred to as Cell 2W and Cell 1E. The tailings basin also included the Emergency Basin still present today. The dams were raised by spigotting tailings from the crest, relying on coarse tailings settling out near the deposition point to form the perimeter dam and allowing finer tailings to flow towards the center of the basins. Spigots were located at regular 80-foot intervals along the pipes (Reference (3)). The dams were raised approximately 10 feet per year (Reference (4)).

The Tailings Basin Manual (Reference (2)) describes 1970 investigation for expansion of the Basin 2 dam (refer to Illustration A.1 for location of the area historically known as Basin 2). The investigation included a number of soil borings along a significant portion of the Basin 2 dam, including along the southern two-

thirds of the north-south trending segment of the Basin 2 west dam (the north-south trending dam segment adjacent the "Section B" label on Illustration A.4). Most borings found suitable foundation material, though muskeg was observed under already deposited tailings under portions of the proposed alignment for the southern extension of the Basin 2 west dam. In lieu of re-routing the dam, a "counterweight" was placed over the muskeg section. It was noted that "no mud wave developed."

In considering the tailings beaches within the basins, material adjacent to the berms contains approximately 12% fines content, increasing up to approximately 20% fines within the first 200 feet of deposition. The fines content plateaued between 200 and 300 feet upstream of the dam, then increased rapidly such that the fines content 450 to 500 feet upstream of the dam was approximately 50% (Reference (5)). Section A and Section D (shown on Illustration A.4) were reported to have had spigotting operations directed towards them, producing inclusion of fines into the outer shell. As such, the fine tailings and slimes layers are of variable thicknesses and lateral extent due to changing tailings deposition points and durations. Figure A-2 (Reference (6)) in this report identifies the grain size classifications of the LTVSMC coarse tailings, fine tailings, and slimes.




Source: Reference (5)

**Illustration A.4 1977 Pond Layout and Design Sections**

Typical dam conditions during operations, as documented along the north slope of Basin 2, are shown in Illustration A.5.

Source: Reference (6)

**Illustration A.5 Typical Development, View along Northern Portion of Basin 2**

A major investigation was completed in the late 1990s (Reference (7), Reference (8), Reference (9)). During operations and at the start of closure in 2001, Cell 2W was allowed to drain to Cell 1E through a decant structure. Cell 2W is now mostly dry and vegetated. Due to abandonment of the Cell 2W decant structure after closure, Cell 2W does not have a designed outlet. Cells 1E and 2E have no outlet structure and, until recently, have been dewatering only through evaporation and seepage. The pond in Cell 1E is now recharged with water captured by the seepage collection and pumpback system installed in 2011 and located south of Cell 1E at the base of the railroad embankment. Cell 1E also receives water from a seepage and surface water collection and pumpback system from the west side of Cell 2W. That system collects discharges from PolyMet's National Pollutant Discharge Elimination System (NPDES) permitted outfalls SD004 and SD006.

## References

1. **Jisra, M.A., Chandler, V.W. and Lively, R.S.** Bedrock Geology of the Mesabi Iron Range. [Map]. s.l. : Minnesota Geological Survey, 2005. Miscellaneous Map M-163.

2. **Erie Mining Company.** Tailing Dam Manual. 1972.

3. —. The Disposal of Tailing at Erie Mining Company's Hoyt Lakes Plant. August 1968.

4. **Kaiser Engineers, Inc.** Engineering and Exonomic Analyses of Tailing Disposal System. September 1968. Prepared for Erie Mining Company.

5. **Katsoulis, M. P.,.** Hydromechanical Adequacy of the Erie Tailings Dam with Post-Operational Permanent Pools. 1986.

6. **Ebasco Services Incorporated.** Tailings Dam Investigation and Analysis Engineering Report: Supplement No. 1. June 1978.

7. **Sitka Corp.** LTV Steel Mining Comany Geotechnical Assessment of Tailings Impoundment Phase 1 [for LTV Steel Mining Company]. March 1995.

8. —. Data Report for 1996 Tailings Dam Investigations. Prepared for LTV Steel Mining Company. November 20, 1996.

9. —. Phase 3 Geotechnical Assessment of Tailings Basin. Prepared for LTV Steel Mining Company. July 31, 1997.

# Figures

Barr Footer:ArcGIS 10.6, 2019-01-25 14:31 File: I:\Client\PolyMet_Mining\Work_Orders\Mine_Engineering_Assistance\Maps\Reports\Dam_Safety_Inspections\2018\Figure 7 Peat Deposits.mxd User: arm2

Image Source: St. Louis County (2016)

Peat

0 1,500 3,000

Feet

Figure A-1
PEAT DEPOSITS
2022 Dam Safety Inspection
Poly Met Mining, Inc.
Hoyt Lakes, Minnesota

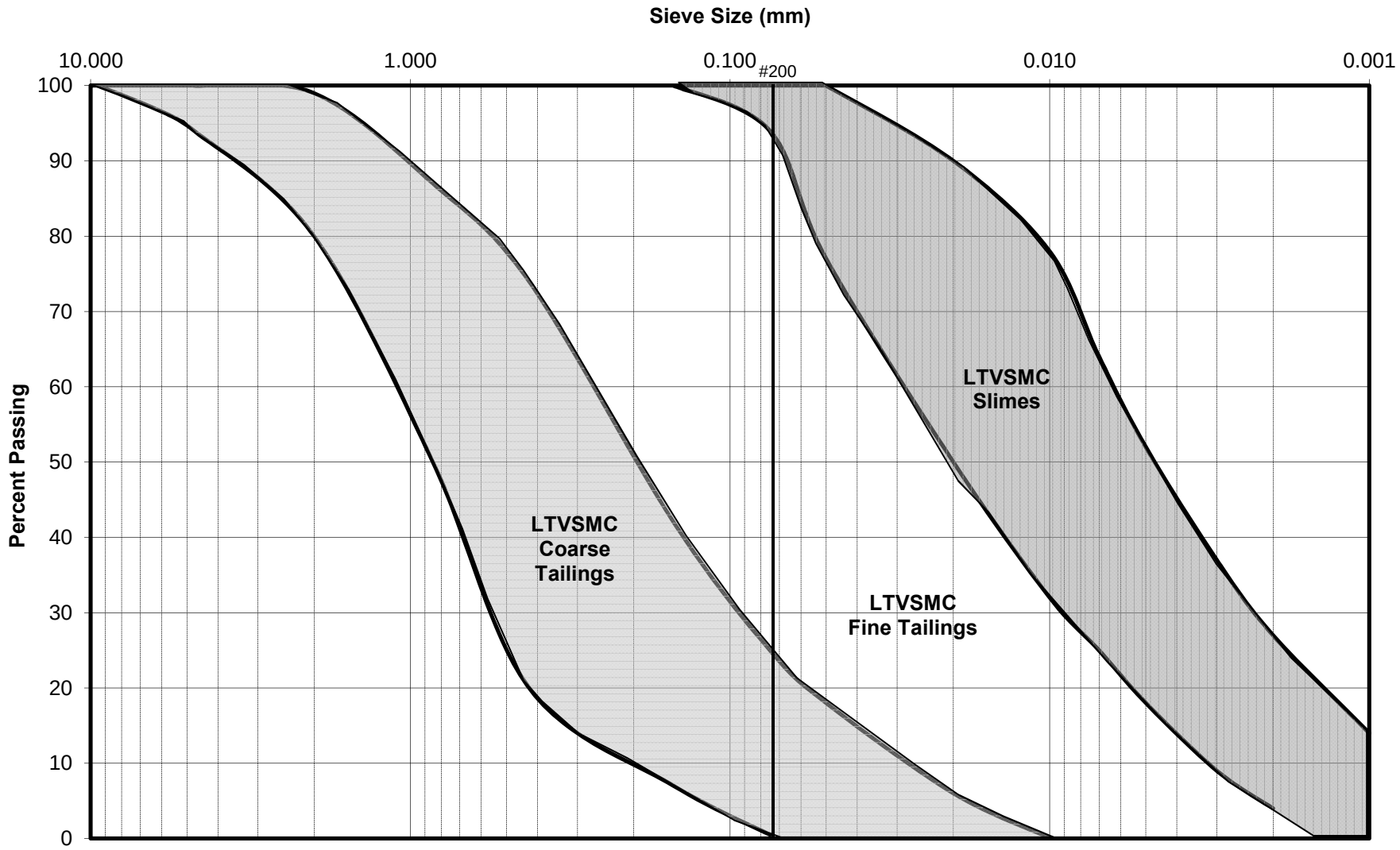



**Figure A-2 Tailings Classifications (Ebasco, 1978)**

**APPENDIX B**

# Annual Facility Performance Report Photos

Photo Log: B-1

Date: June 20, 2024

Location: Railroad Embankment

Field Notes: Surface water pond, water flowing in from east.

Coordinates:
47.59815, -92.12317

Photo Log: B-2

Date: June 20, 2024

Location:

Field Notes: SD026 pump flow measurement, pumping water to pH treatment building.

Coordinates:
47.59843, -92.12416

Photo Log: B-3

Date: June 20, 2024

Location:

Field Notes: Center Pipe from Cell 1E decant area. Right pipe, with flow meter, flows to pH treatment building, is treated, and then discharged south of SD026. Left pipe, of two middle pipes, goes to Area 2 pit.

Coordinates:
47.59841, -92.12416

Photo Log: B-4

Date: June 20, 2024

Location:

Field Notes: Prior to wye fitting: center pipe from Cell 1E. After wye fitting: second pipe from right with flow meter goes to pH building and treated, then discharged south of SD026. Second pipe from left discharges to Area 2 pit.

Coordinates:
47.599, -92.12659

Photo Log: B-5

Date: June 20, 2024

Location: Emergency Pond

Field Notes: Overview of Emergency Basin pond from Cell 2W downstream toe, looking south.

Coordinates:
47.60909, -92.15038

Photo Log: B-6

Date: June 19, 2024

Location: Cell 1E, South Embankment, Crest

Field Notes: Crest surface erosion, looking east.

Coordinates:
47.60098, -92.1274

Photo Log: B-7

Date: June 19, 2024

Location: Cell 1E

Field Notes: Overview looking north.

Coordinates:
47.60172, -92.12873

Photo Log: B-8

Date: June 19, 2024

Location: Cell 1E

Field Notes: Pipe from pumped decant out of Cell 1E leaking at flange

Coordinates:
47.60338, -92.13019

Photo Log: B-9

Date: June 19, 2024

Location: Cell 1E

Field Notes: Decant structure in Cell 1E, actively pumping.

Coordinates:
47.60489, -92.13144

Photo Log: B-10

Date: June 19, 2024

Location: Cell 1E

Field Notes: Erosion gully from pumped seepage discharge into Cell 1E, looking east.

Coordinates:
47.60664, -92.13092

Photo Log: B-11

Date: June 19, 2024

Location: Cell 1E, West

Field Notes: Upstream crest looking north to pond and barge.

Coordinates:
47.60773, -92.12997

Photo Log: B-12

Date: June 19, 2024

Location: Cell 1E, West, Tailings Beach

Field Notes: Looking east at tailings beach and pond, culvert with erosion.

Coordinates:
47.60982, -92.12797

Photo Log: B-13

Date: June 19, 2024

Location: Cell 1E, West, Upstream Slope

Field Notes: Looking east from west abutment, historic barge structure (not operational).

Coordinates:
47.61176, -92.12613

Photo Log: B-14

Date: June 18, 2024

Location: Cell 1E, North Embankment, Upstream Slope

Field Notes: Upstream slope, water transfer pipeline between Cells 1E and 2E.

Coordinates:
47.618, -92.125

Photo Log: B-15

Date: June 18, 2024

Location: Cell 1E, North, Tailings Beach

Field Notes: Outlet of Cell 2W Gravity Decant pipe onto tailings beach.

Coordinates:
47.6183, -92.12452

Photo Log: B-16

Date: June 18, 2024

Location: Cell 2E, North Embankment, Downstream Crest

Field Notes: Looking north from crest onto Cell 2E, water transfer pipeline between Cells 1E and 2E.

Coordinates:
47.61868, -92.12515

Photo Log: B-17

Date: June 19, 2024

Location: Cell 1E, North Embankment, Upstream Slope

Field Notes: Upstream slope and tailings beach area, Cell 1E outlet of Cell 2W Gravity Decant and Barge Decant pipes extending from upstream slope.

Coordinates:
47.61848, -92.12458

Photo Log: B-18

Date: June 19, 2024

Location: Cell 1E, North Embankment, Crest

Field Notes: Erosion feature extending from small area of ponding.

Coordinates:
47.61873, -92.12384

Photo Log: B-19

Date: June 19, 2024

Location: Cell 1E, North Embankment, Crest

Field Notes: Suitable condition of crest, looking west.

Coordinates:
47.61871, -92.12185

Photo Log: B-20

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: Significant erosion (2-3 ft) along cross slope road on downstream crest.

Coordinates:
47.61902, -92.1214

Photo Log: B-21

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: Erosion along access ramp area with slope irregularities due to road graded material.

Coordinates:
47.61872, -92.12157

Photo Log: B-22

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: 8 foot deep, erosion gully near access road to toe

Coordinates:
47.61902, -92.12139

Photo Log: B-23

Date: June 19, 2024

Location: Cell 1E, North Embankment, Upstream Slope

Field Notes: Piezometer Installation on upstream slope.

Coordinates:
47.61842, -92.12173

Photo Log: B-24

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: Little to no vegetation in areas with slight erosion.

Coordinates:
47.61904, -92.11994

Photo Log: B-25

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Toe

Field Notes: 4 ft diameter culvert outlet, inlet is unidentified.

Coordinates:
47.61956, -92.11975

Photo Log: B-26

Date: June 19, 2024

Location: Cell 1E, North Embankment, Upstream Slope

Field Notes: Vegetation on upstream slope and tailings beach, looking east.

Coordinates:
47.61841, -92.11471

Photo Log: B-27

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: Minor surface erosion on unvegetated area, looking west.

Coordinates:
47.61862, -92.11446

Photo Log: B-28

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: Erosion gully, 4 to 5 ft deep.

Coordinates:
47.61903, -92.11205

Photo Log: B-29

Date: June 19, 2024

Location: Cell 1E, North Embankment, Upstream Slope

Field Notes: Instrumentation and telemetry installation.

Coordinates:
47.61837, -92.11247

Photo Log: B-30

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Toe

Field Notes: Clear seepage flowing at approximately 2 gallons per minute flow rate.

Coordinates:
47.61914, -92.11047

Photo Log: B-31

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Slope

Field Notes: Surface erosion on north side of access road along downstream slope.

Coordinates:
47.61848, -92.11021

Photo Log: B-32

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Toe

Field Notes: Heavy vegetation (cat tails, trees, shrubs) and flowing water near toe contact with adjacent native hillside.

Coordinates:
47.61899, -92.10765

Photo Log: B-33

Date: June 19, 2024

Location: Cell 1E, North Embankment, Downstream Toe

Field Notes: Flowing water from recent storm event at embankment abutment.

Coordinates:
47.61876, -92.10595

Photo Log: B-34

Date: June 19, 2024

Location: Cell 1E, East Abutment

Field Notes: Significant erosion, eroded culvert and access road from recent storm event.

Coordinates:
47.61619, -92.09734

Photo Log: B-35

Date: June 19, 2024

Location: Cell 1E, East Abutment

Field Notes: Pond east of Cell 1E

Coordinates:
47.6161, -92.09725

Photo Log: B-36

Date: June 19, 2024

Location: Cell 1E, North Embankment, Crest

Field Notes: Eroded gully exposing pipe from historic Barge Decant system from Cell 2W to discharge point on Cell 1E. Looking north.

Coordinates:
47.6188, -92.12681

Photo Log: B-37

Date: June 18, 2024

Location: Cell 2E, South Tailings Beach

Field Notes: Downstream slope overview and Cell 2E vegetated tailings beach. Looking east.

Coordinates:
47.62051, -92.12907

Photo Log: B-38

Date: June 19, 2024

Location: Cell 2E, East Abutment

Field Notes: Surface water runon to Cell 2E from east abutment.

Coordinates:
47.6276, -92.10382

Photo Log: B-39

Date: June 19, 2024

Location: Cell 2E, West, Tailings Beach and Pond

Field Notes: Decant pump, looking southeast.

Coordinates:
47.62408, -92.12558

Photo Log: B-40

Date: June 19, 2024

Location: Cell 2E, North Embankment, Upstream Slope

Field Notes: Vegetation on Cell 2E tailings beach near North Embankment, looking east.

Coordinates:
47.63215, -92.12899

Photo Log: B-41

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope and Toe

Field Notes: Pond north of downstream toe with channel.

Coordinates:
47.63291, -92.12814

Photo Log: B-42

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Erosion fully backfilled with rock, continued sediment erosion.

Coordinates:
47.63358, -92.12445

Photo Log: B-43

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Vegetation

Coordinates:
47.63287, -92.12053

Photo Log: B-44

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Surface erosion from outlet of bench notch.

Coordinates:
47.6335, -92.1189

Photo Log: B-45

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Inlet of pipeline laying parallel to slope.

Coordinates:
47.63273, -92.11818

Photo Log: B-46

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Debris, downed power line, piping, and surface erosion observed.

Coordinates:
47.6335, -92.11798

Photo Log: B-47

Date: June 19, 2024

Location: Cell 2E, North Embankment, Crest

Field Notes: Crest perimeter road in suitable condition, looking west.

Coordinates:
47.63246, -92.11711

Photo Log: B-48

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Bench with vegetation and light surface erosion.

Coordinates:
47.63298, -92.11596

Photo Log: B-49

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Varying vegetation on slope and bench

Coordinates:
47.63274, -92.1124

Photo Log: B-50

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Riprap-lined channel outlet discharging onto access road.

Coordinates:
47.63329, -92.10998

Photo Log: B-51

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Instrument installation, looking north.

Coordinates:
47.63246, -92.10647

Photo Log: B-52

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Toe

Field Notes: Man-made pond downstream of toe low flow channel as outlet.

Coordinates:
47.63324, -92.10248

Photo Log: B-53

Date: June 19, 2024

Location: Cell 2E, East Embankment, Downstream Slope

Field Notes: Vegetation on slope with some surface erosion.

Coordinates:
47.63165, -92.10353

Photo Log: B-54

Date: June 19, 2024

Location: Cell 2E, East Embankment, Downstream Toe

Field Notes: Pond beyond downstream toe.

Coordinates:
47.63243, -92.10253

Photo Log: B-55

Date: June 19, 2024

Location: Cell 2E, East Abutment and Tailings Beach

Field Notes: Sparse vegetation on tailings beach with trees at abutment area.

Coordinates:
47.62824, -92.10418

Photo Log: B-56

Date: June 19, 2024

Location: Cell 2E, North Embankment, Downstream Slope

Field Notes: Booster station, overview of pond and vegetated tailings beach

Coordinates:
47.62918, -92.12902

Photo Log: B-57

Date: June 19, 2024

Location: Cell 2W, East Embankment, Downstream Slope Abutment

Field Notes: Undulating vegetated topography, looking west. Cell 2E decant pump house on right.

Coordinates:
47.62469, -92.12564

Photo Log: B-58

Date: June 19, 2024

Location: Cell 2W, East Embankment, Downstream Slope

Field Notes: Light vegetation with undulations and minor erosion on 2W East Embankment downstream slope.

Coordinates:
47.619, -92.12633

Photo Log: B-59

Date: June 19, 2024

Location: Cell 2W, East Embankment, Downstream Slope

Field Notes: Light vegetation and surface erosion on undulating downstream slope.

Coordinates:
47.61991, -92.12671

Photo Log: B-60

Date: June 19, 2024

Location: Cell 2W, East Embankment, Downstream Slope

Field Notes: Erosion gully, possible perforated pipe outlet that was buried, runs N/S along downstream toe of Cell 2W.

Coordinates:
47.61991, -92.12673

Photo Log: B-61

Date: June 19, 2024

Location: Cell 2W, North Embankment, Downstream Slope

Field Notes: Animal burrow on downstream slope of Cell 2W.

Coordinates:
47.62737, -92.1515

Photo Log: B-62

Date: June 20, 2024

Location: Cell 2W, North Embankment, Downstream Slope

Field Notes: Bench with medium dense vegetation, shrubs, and trees.

Coordinates:
47.63293, -92.1326

Photo Log: B-63

Date: June 20, 2024

Location: Cell 2W, North Embankment, Downstream Toe

Field Notes: Heavy vegetation on north and south sides of toe access road.

Coordinates:
47.63351, -92.13505

Photo Log: B-64

Date: June 20, 2024

Location: Cell 2W, South Embankment, Downstream Slope

Field Notes: Well vegetated downstream slope.

Coordinates:
47.60649, -92.13265

Photo Log: B-65

Date: June 18, 2024

Location: Cell 2W, East, Tailings Beach

Field Notes: Gravity Decant Inlet that reports to Cell 1E.

Coordinates:
47.6187, -92.13188

Photo Log: B-66

Date: June 19, 2024

Location: Cell 2W, East Embankment, Downstream Slope

Field Notes: Bench with areas of surface erosion.

Coordinates:
47.60796, -92.13125

Photo Log: B-67

Date: June 19, 2024

Location: Cell 2W, East, Tailings Beach

Field Notes: Vegetated tailings beach, looking west.

Coordinates:
47.61245, -92.12842

Photo Log: B-68

Date: June 19, 2024

Location: Cell 2W, East Embankment, Downstream Slope

Field Notes: Thick vegetation on second bench, looking north.

Coordinates:
47.61346, -92.12649

Photo Log: B-69

Date: June 18, 2024

Location: Cell 2W, East, Downstream Slope

Field Notes: Vegetated downstream slopes with benching, looking north.

Coordinates:
47.61757, -92.12774

Photo Log: B-70

Date: June 18, 2024

Location: Cell 2W, East, Downstream Slope

Field Notes: Looking north.

Coordinates:
47.61869, -92.12527

Photo Log: B-71

Date: June 18, 2024

Location: Cell 2W, East, Tailings Beach

Field Notes: Ponded water adjacent to historic gravity decant in Cell 2W.

Coordinates:
47.61864, -92.13154

Photo Log: B-72

Date: June 18, 2024

Location: Cell 2W, East, Tailings Beach

Field Notes: Coarse tailings borrow in Cell 2W, looking south.

Coordinates:
47.61871, -92.13185

Photo Log: B-73

Date: June 19, 2024

Location: Cell 2W, East Embankment, Crest

Field Notes: Suitable crest condition.

Coordinates:
47.6205, -92.12911

Photo Log: B-74

Date: June 20, 2024

Location: Cell 2W, North Embankment, Downstream Slope

Field Notes: Erosion gulley and some bulging along bench.

Coordinates:
47.63291, -92.13435

Photo Log: B-75

Date: June 20, 2024

Location: Cell 2W, North Embankment, Downstream Slope

Field Notes: Looking west.

Coordinates:
47.62886, -92.14149

Photo Log: B-76

Date: June 20, 2024

Location: Cell 2W, North Embankment, Downstream Slope

Field Notes: Downstream slope bench, looking east.

Coordinates:
47.63033, -92.14737

Photo Log: B-77

Date: June 20, 2024

Location: Cell 2W, West Embankment, Downstream Toe

Field Notes: Well vegetated, with ponded water on access road.

Coordinates:
47.6254, -92.15508

Photo Log: B-78

Date: June 20, 2024

Location: Cell 2W, West Embankment, Downstream Slope

Field Notes: Surface erosion/gully below bench.

Coordinates:
47.6171, -92.15388

Photo Log: B-79

Date: June 20, 2024

Location: Cell 2W, West Embankment, Downstream Slope

Field Notes: Vegetated downstream slope and benching overview.

Coordinates:
47.61604, -92.15342

Photo Log: B-80

Date: June 20, 2024

Location: Cell 2W, West Embankment, Downstream Slope

Field Notes: Surface erosion parallel to slope, looking up-slope.

Coordinates:
47.61505, -92.15375

Photo Log: B-81

Date: June 20, 2024

Location: Cell 2W, West Embankment, Downstream Slope

Field Notes: Access road and bench with check dams and erosion protection, looking south.

Coordinates:
47.61401, -92.15355

Photo Log: B-82

Date: June 20, 2024

Location: Cell 2W, South Embankment, Downstream Slope

Field Notes: Downstream slope benching with pipeline.

Coordinates:
47.60878, -92.14279

Photo Log: B-83

Date: June 20, 2024

Location: Cell 2W, South Embankment, Downstream Toe

Field Notes: Standing water in channel, looking north.

Coordinates:
47.60705, -92.14377

Photo Log: B-84

Date: June 20, 2024

Location: Cell 2W, South Embankment, Downstream Slope

Field Notes: Well vegetated, suitable condition of downstream slope.

Coordinates:
47.60674, -92.13975

Photo Log: B-85

Date: June 20, 2024

Location: Cell 2W, South Embankment, Downstream Slope

Field Notes: Pipeline alignment on second bench of downstream slope.

Coordinates:
47.6062, -92.13808

Photo Log: B-86

Date: June 20, 2024

Location: Cell 2W, South Embankment, Downstream Slope

Field Notes: Well vegetated slope, looking west.

Coordinates:
47.60645, -92.13418

**APPENDIX C**

# Instrumentation Data

| Instrument ID | Embankment | Cross-Section | Location | Type | VW Identifier | Condition / Recommendation | Ground Surface Elevation (feet) | Boring Total Depth (feet) | Reading Frequency |
|---|---|---|---|---|---|---|---|---|---|
| D-1 | 1E North | 1E-B | Toe | SP | - | Suspect[4] | 1612 | 83.3 | Monthly |
| D-2 | 1E North | 1E-B | Crest | SP | - | Functional[4] | 1674.2 | NR | Monthly |
| D-4 | 1E North | 1E-B | Beach | SP | - | Functional[4] | 1656 | 93.5 | Monthly |
| 2E_2016_PZ_K1 (K1) | 1E North | 1E-C | Toe | VW | Top | Non-functional | 1602.6 | 29.5 | Automated |
| | | | | VW | Bottom | Non-functional | | | Automated |
| 2E_2016_PZ_K2 (K2) | 1E North | 1E-C | Mid-slope | VW | Top | Functional | 1629.7 | 97 | Automated |
| | | | | VW | Middle | Functional | | | Automated |
| | | | | VW | Bottom | Functional | | | Automated |
| | | | | VW | Bedrock | Functional | 1629.4 | | Automated |
| 2E_2016_IN_K2 (K2) | 1E North | 1E-C | Mid-slope | INC | - | Functional | 1629.7 | NR | 3x per year |
| 2E_2016_PZ_K3 (K3) | 1E North | 1E-C | Crest | VW | Top | Non-functional | 1675.2 | 112.5 | Automated |
| | | | | VW | Middle | Functional | | | Automated |
| | | | | VW | Bottom | Functional | | | Automated |
| G-2 | 2E North | 2E-E | Crest | SP | - | Functional[4] | 1574.6 | NR | Monthly |
| 2E_2018_PZ_G1 (G1) | 2E North | 2E-E | Mid-slope | VW | 48' | Functional | 1553 | 60 | Monthly |
| | | | | VW | 52' | Functional | | | Monthly |
| | | | | VW | 58' | Functional | | | Monthly |
| 2E_2018_PZ_G4 (G4) | 2E North | 2E-E | Beach | VW | 50' | Functional | 1583.6 | 81 | Monthly |
| | | | | VW | 70' | Functional | | | Monthly |
| | | | | VW | 75' | Functional | | | Monthly |
| 2E_2018_PZ_SeepMid | 2E North | 2E-B/2E-E | Toe | SP | - | Functional | 1513 | 34.6 | Monthly |
| F-2 | 2E North | 2E-B | Toe | SP | - | Functional[4] | 1571.3 | NR | Monthly |
| PN1F-99 (DH-96-49) | 2E North | 2E-B | Mid-slope | PN | - | Decommission | 1583.8 | 91 | Bi-annually |
| 2E_2018_PZ_F1 (F1) | 2E North | 2E-B | Near toe | VW | 40' (Peat) | Functional | 1511.3 | 49.5 | Monthly |
| | | | | VW | 46' (Till) | Functional | | | Monthly |
| 2E_2018_IN_F1 (F1) | 2E North | 2E-B | Near toe | INC | - | Functional | 1511.6 | 68 | Monthly |
| 2E_2018_PZ_F3 (F3) | 2E North | 2E-B | Mid-slope | VW | 66' (FT) | Functional | 1571.3 | 118.1 | Monthly |
| | | | | VW | 86' (FT) | Functional | | | Monthly |
| | | | | VW | 100' (Peat) | Functional | | | Monthly |
| 2E_2018_IN_F3 (F3) | 2E North | 2E-B | Mid-slope | INC | - | Functional | 1552.1 | 105.5 | Monthly |
| 2E_2018_PZ_F4 (F4) | 2E North | 2E-B | Crest | VW | 75' (FT) | Functional | 1582.9 | 129.7 | Monthly |
| | | | | VW | 111' (Peat) | Functional | | | Monthly |
| | | | | VW | 124' (Till) | Functional | | | Monthly |
| 2E_2018_IN_F4 (F4) | 2E North | 2E-B | Crest | INC | - | Functional | 1583.1 | 120 | Monthly |
| DH-96-37 | 2E North | 2E-A | Toe | PN | - | Decommission | 1530.7 | 58.5 | Monthly |
| DH-96-37A | 2E North | 2E-A | Toe | PN | - | Decommission | 1530.7 | NR | Monthly |
| 2E_2018_PZ_J1 | 2E North | 2E-A | Mid-slope | VW | 42' | Functional | 1550.7 | 79.9 | Monthly |
| | | | | VW | 67' | Functional | | | Monthly |
| | | | | VW | 75' | Functional | | | Monthly |
| 2E_2018_PZ_SeepLeft | 2E North | 2E-A/2W-C | Toe | SP | - | Functional | 1511.4 | 32.1 | Monthly |
| P3H-99 | 2W North | 2W-C | Mid-slope | SP | - | Functional[3] | 1532 | NR | Bi-annually |
| P2HA-99 | 2W North | 2W-C | Mid-slope | SP | - | Functional[3] | 1571 | 71.6 | Bi-annually |
| P2HB-99 | 2W North | 2W-C | Mid-slope | SP | - | Functional[3] | 1571 | 49.5 | Bi-annually |
| P1H-99 | 2W North | 2W-C | Mid-slope | SP | - | Functional[3] | 1593.4 | 92.5 | Bi-annually |
| I1H-99 (DH-99-1) | 2W North | 2W-C | Mid-slope | INC | - | Suspect | 1593.1 | 111.7 | 2x per year |
| DH-96-30 | 2W North | 2W-C | Mid-slope | PN | - | Decommission | 1635.5 | 133 | Bi-annually |
| DH-96-32 | 2W North | 2W-C | Mid-slope | PN | - | Decommission | 1712.1 | 218 | Bi-annually |
| DH96-32 | 2W North | 2W-C | Mid-slope | INC | - | Decommission | 1712 | NR | NR |
| DH-96-32A | 2W North | 2W-C | Mid-slope | PN | - | Decommission | NR | NR | Bi-annually |
| DH-96-28 | 2W North | 2W-C | Mid-slope | INC | - | Functional | 1554 | 68 | 3x per year |
| DH-96-28 | 2W North | 2W-C | Mid-slope | PN | - | Decommission | 1554.5 | 68 | Bi-annually |
| DH-96-28A | 2W North | 2W-C | Mid-slope | PN | - | Decommission | NR | NR | Bi-annually |
| P1H1-99 | 2W North | West of 2W-C | Mid-slope | SP | - | Functional[3] | 1591 | 96 | Bi-annually |
| P2H1-99 | 2W North | West of 2W-C | Mid-slope | SP | - | Functional[3] | 1591.2 | 80 | Bi-annually |
| P3H1-99 | 2W North | West of 2W-C | Mid-slope | SP | - | Functional[3] | 1591.2 | 66.5 | Bi-annually |
| A-1 | 2W North | 2W-B | Toe | SP | - | Functional[3] | 1513.5 | 39 | Bi-annually |
| A-3 | 2W North | 2W-B | Mid-slope | SP | - | Functional[3] | 1569.4 | 100 | Bi-annually |
| A-9 | 2W North | 2W-B | Crest | SP | - | Functional[3] | 1710.7 | NR | Bi-annually |
| DH-96-18 | 2W North | 2W-B | Mid-slope | INC | - | Functional | 1569.5 | NR | 3x per year |
| DH-96-19 | 2W North | 2W-B | Crest | INC | - | Decommission | 1709.1 | 235 | 2x per year |
| B-2 | 2W West | 2W-A | Toe | SP | - | Functional[3] | 1530 | 40 | Bi-annually |
| P1B-99 | 2W West | 2W-A | Mid-slope | SP | - | Functional[3] | 1572.1 | 52 | Bi-annually |
| P1B1-99 | 2W West | South of 2W-A | Toe | SP | - | Functional[3] | 1572.1 | 42 | Bi-annually |
| DH-96-10 | 2W South | 2W-G | Mid-slope | PN | - | Decommission | 1611.4 | 119.5 | Bi-annually |
| DH-96-10 | 2W South | 2W-G | Mid-slope | INC | - | Functional | 1611.5 | 119.5 | 3x per year |
| DH-96-11 | 2W South | 2W-G | Mid-slope | PN | - | Decommission | 1650.5 | 142 | Bi-annually |
| DH-96-12 | 2W South | 2W-G | Crest | INC | - | Suspect | 1716.4 | 218 | 2x per year |
| E-5 | 2W South | 2W-G | Crest | SP | - | Decommission | 1715.7 | NR | Bi-annually |

Notes:

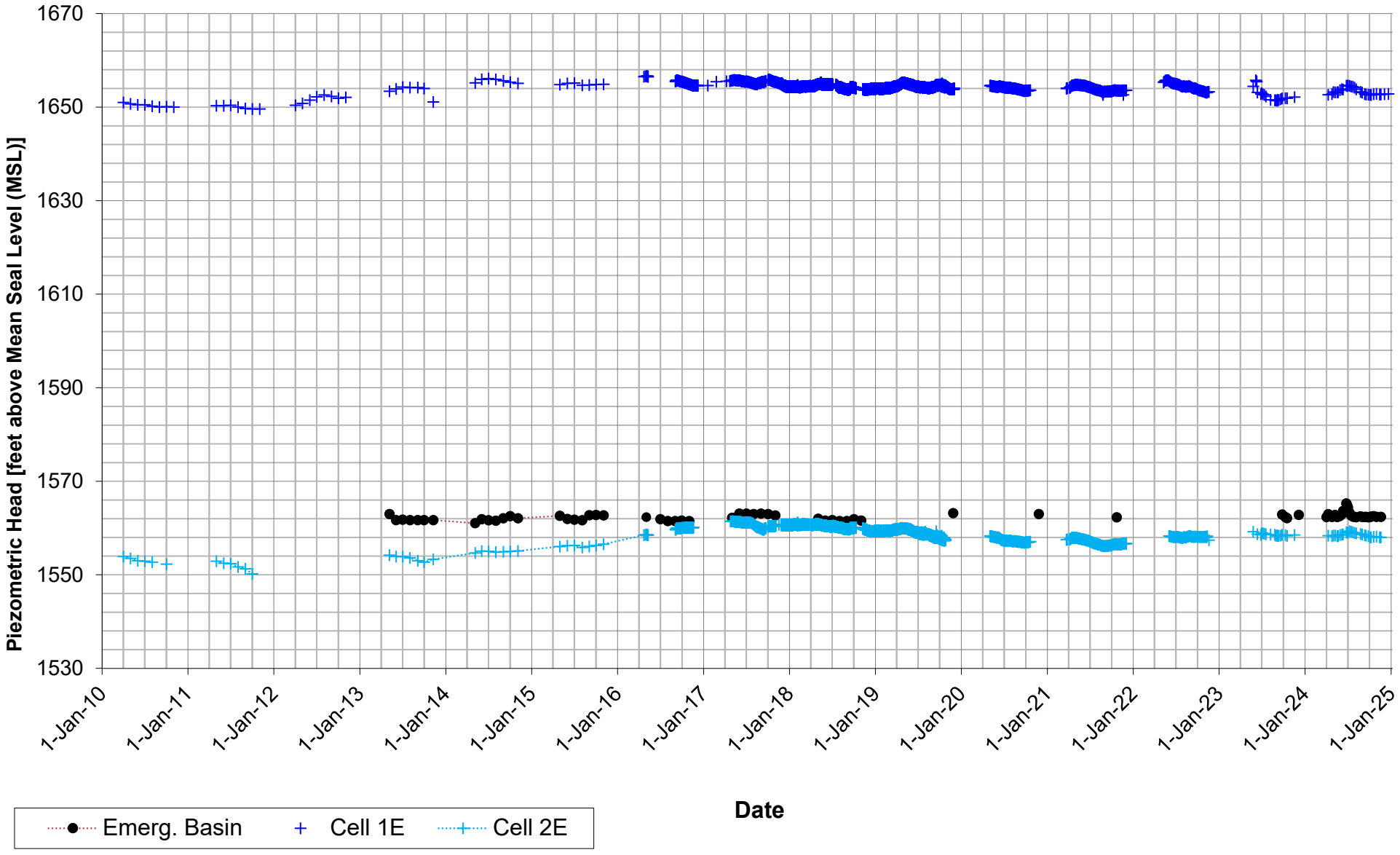
NR = Not reported

(1) SP = Standpipe piezometer, PN = pneumatic piezometer, VW = vibrating wire piezometer, INC = inclinometer

(2) Monthly = read manually once a month, Bi-annually = read manually at least twice a year, Automated = connected to a remote datalogging system

(3) Indicates a maintenance recommendation, i.e. redeveloping the piezometer.

(4) Indicates a maintenance and testing recommendation, i.e. redeveloping the piezometer and performing a slug test to review the piezometric response.




NOTES

Sources: LTV TSF pond water level tracking spreadsheet. Data for Emergency Basin from NTS annual report. Pond level reporting was generally halted between November and May due to frozen conditions.

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

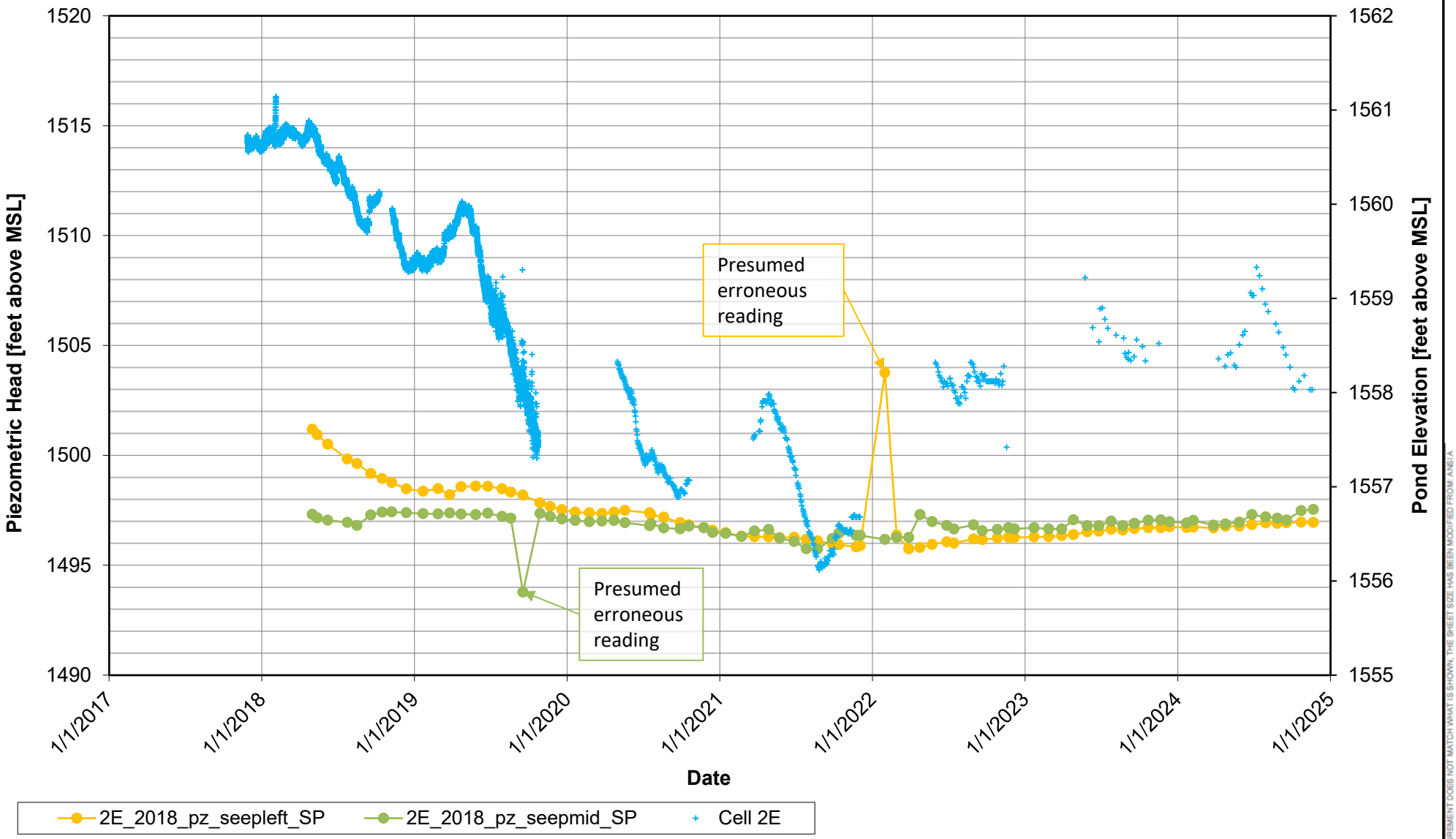
| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
POND ELEVATIONS

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. Data for Cell 2E pond from NewRange.

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT

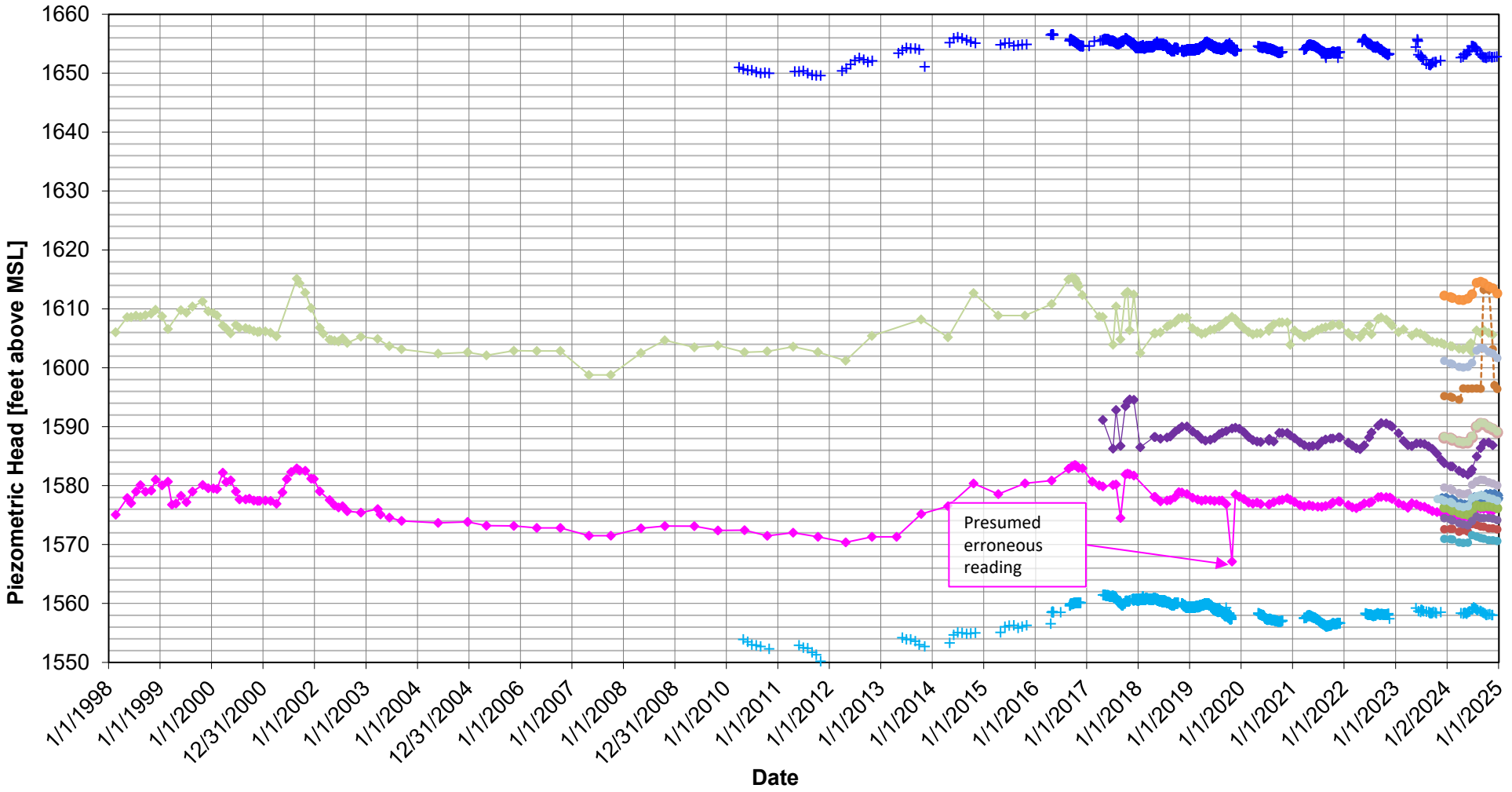
| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SEEPS
CELL 2E NORTH EMBANKMENT

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: A/B/J/A
1 in
0




NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

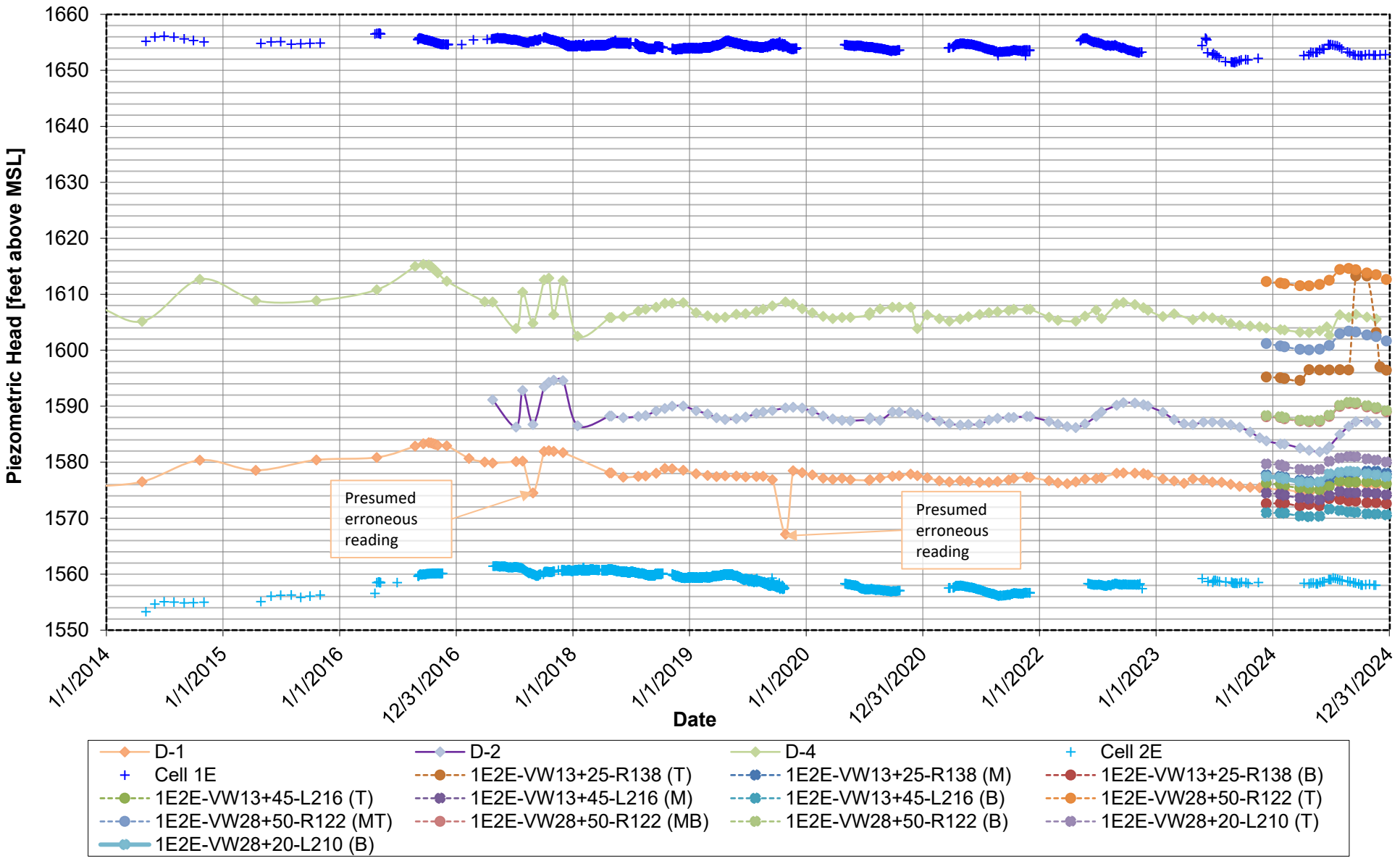
| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 1E-B

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

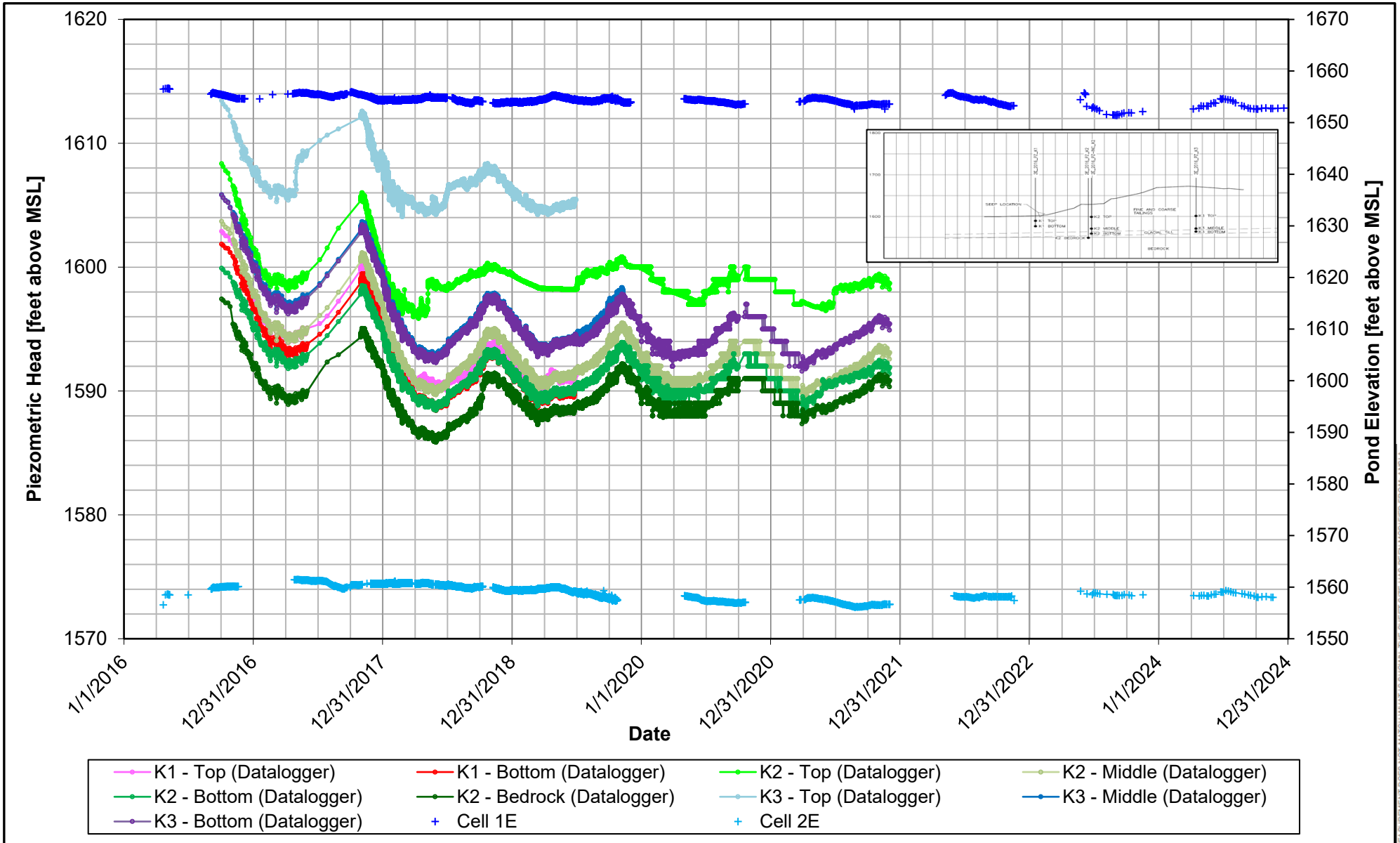
| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 1E-B – LAST 10 YEARS

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. Piezometers K1 Top, K1 Bottom and K3 Top destroyed by lightning June 30 2019.

CLIENT
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HOYT LAKES, MN 55750

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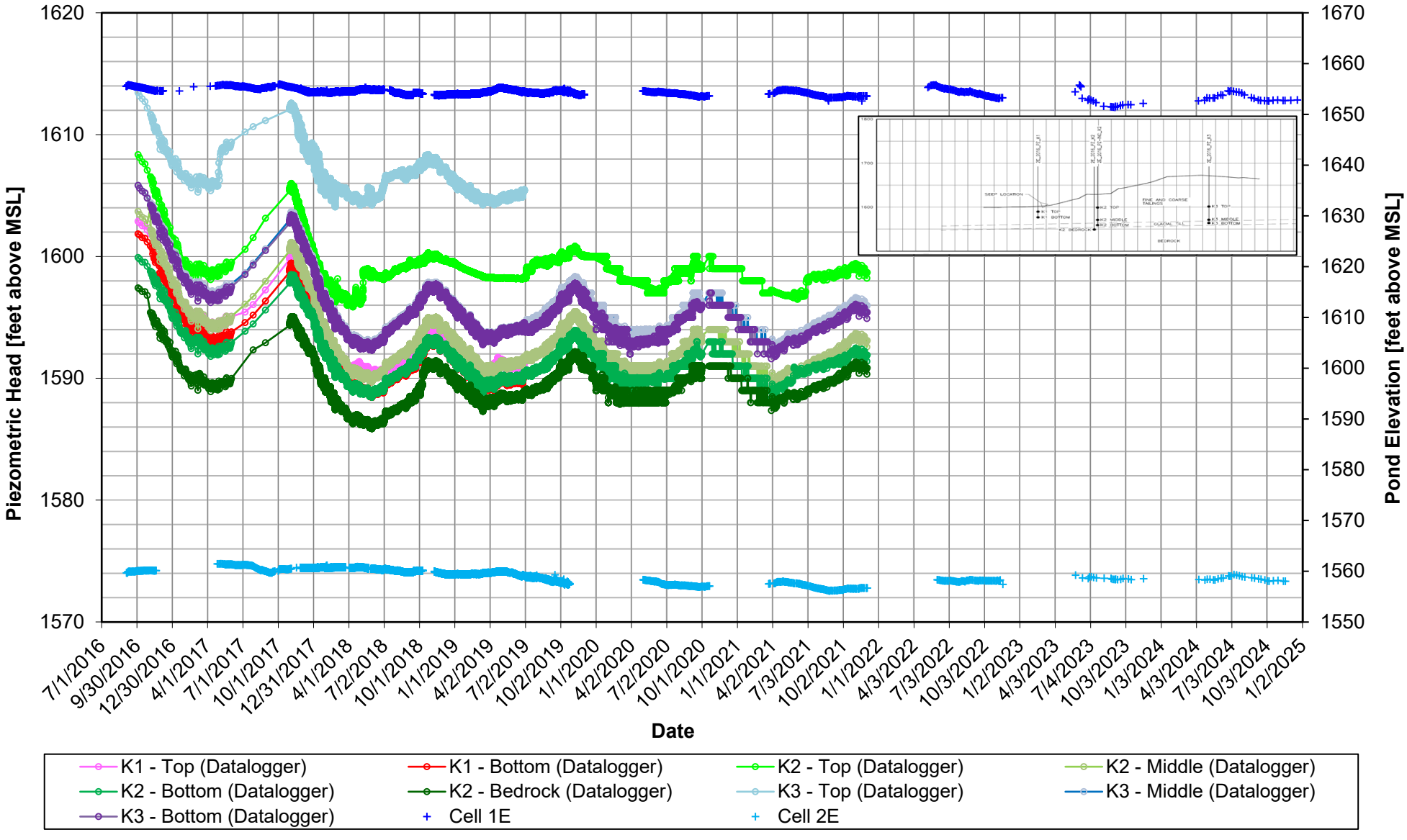
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 1E-C

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

1. Piezometers K1 Top, K1 Bottom and K3 Top destroyed by lightning June 30 2019.

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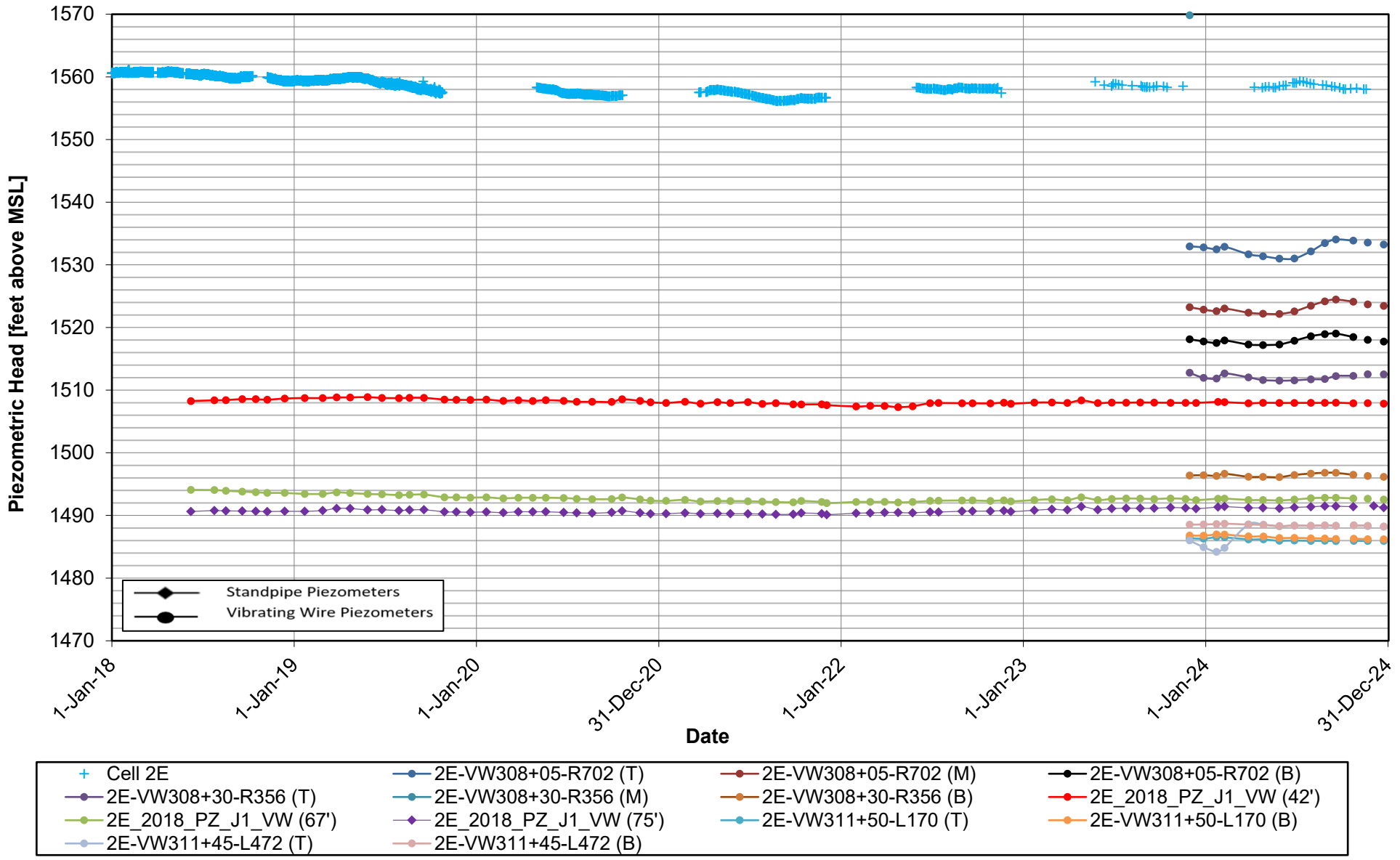
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 1E-C – INCREASED SCALE

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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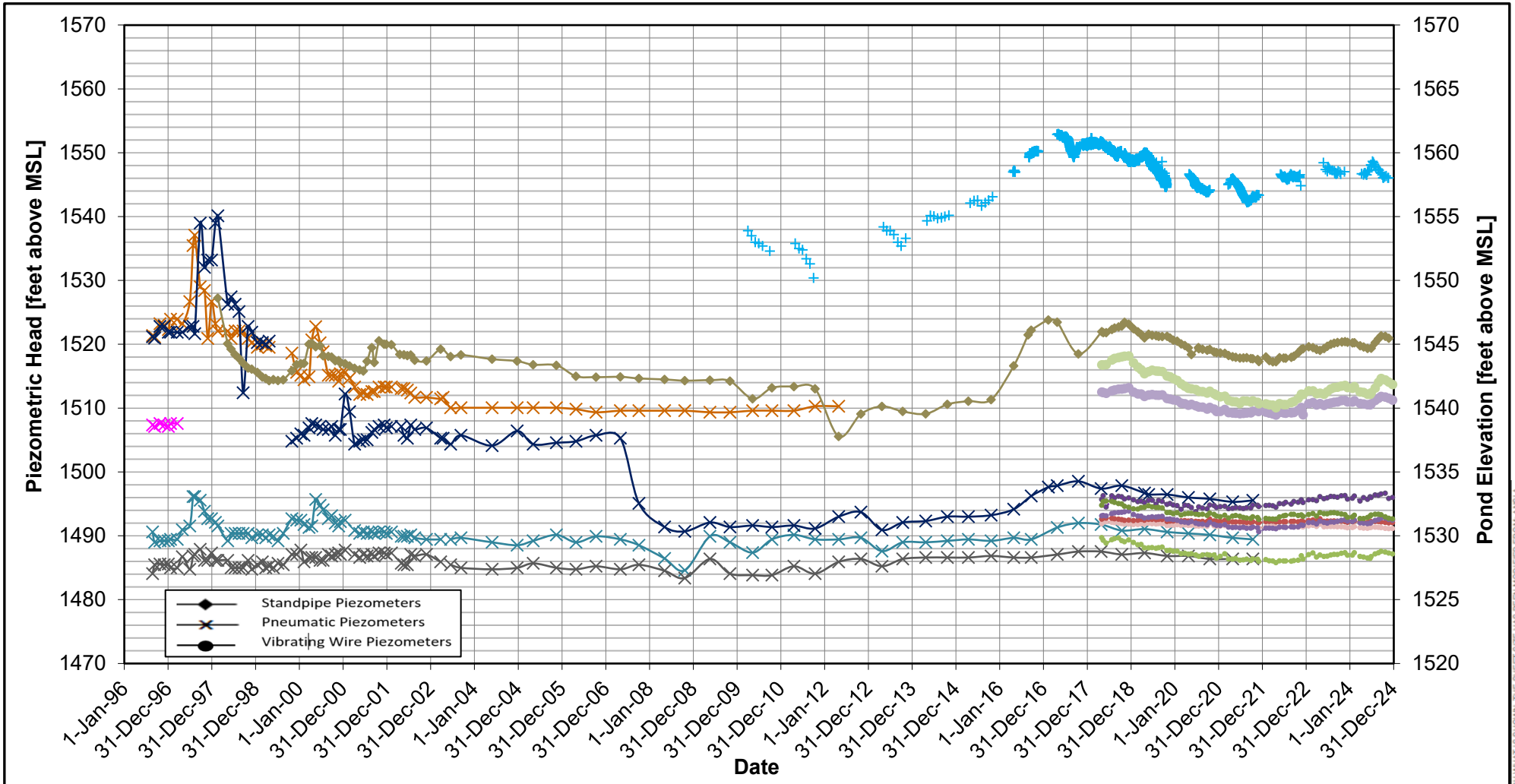
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2E-A

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




DH96-37A
DH96-37
DH96-39
(DH96-40) PN1J-99
(DH96-49) PN1F-99
F-2
2E_2018_PZ_F1_VW (Peat_40')
2E_2018_PZ_F1_VW (Till_46')
2E_2018_PZ_F3_offset_VW (FT_66')
2E_2018_PZ_F3_offset_VW (FT_85')
2E_2018_PZ_F3_offset_VW (Peat_100')
2E_2018_PZ_F4_VW (FT_75')
2E_2018_PZ_F4_VW (Peat_111')
2E_2018_PZ_F4_VW (Till_124')
Cell 2E

NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.
2. DH96-39 and DH96-40 have been either blocked or destroyed and can no longer be measured.

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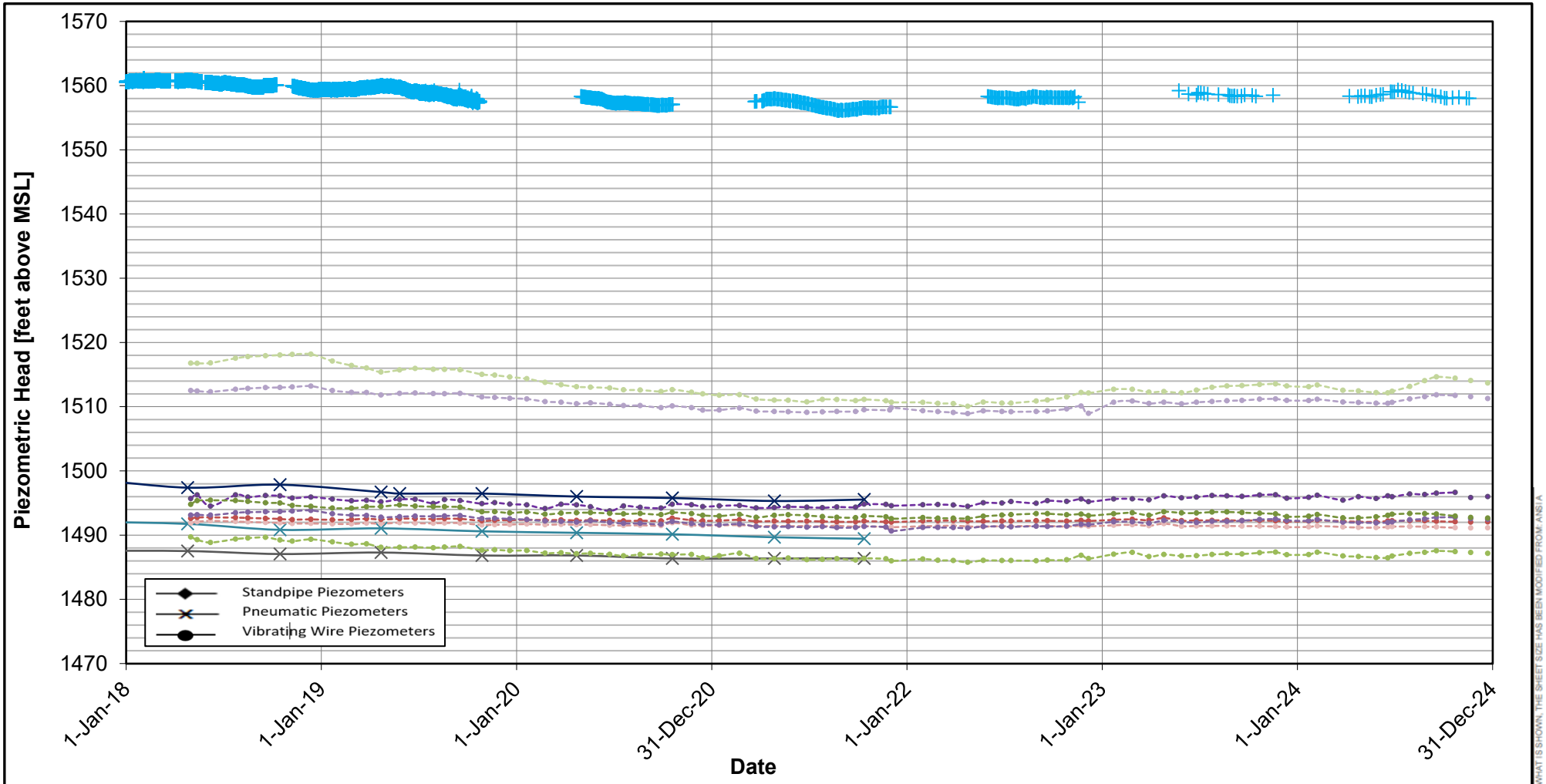
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2E-B

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




| | | |
|---|---|---|
| Cell 2E | DH96-37A | DH96-37 |
| DH96-39 | (DH96-40) PN1J-99 | (DH96-49) PN1F-99 |
| F-2 | 2E_2018_PZ_F1_VW (Peat_40') | 2E_2018_PZ_F1_VW (Till_46') |
| 2E_2018_PZ_F3_offset_VW (FT_66') | 2E_2018_PZ_F3_offset_VW (FT_85') | 2E_2018_PZ_F3_offset_VW (Peat_100') |
| 2E_2018_PZ_F4_VW (FT_75') | 2E_2018_PZ_F4_VW (Peat_111') | 2E_2018_PZ_F4_VW (Till_124') |

NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.

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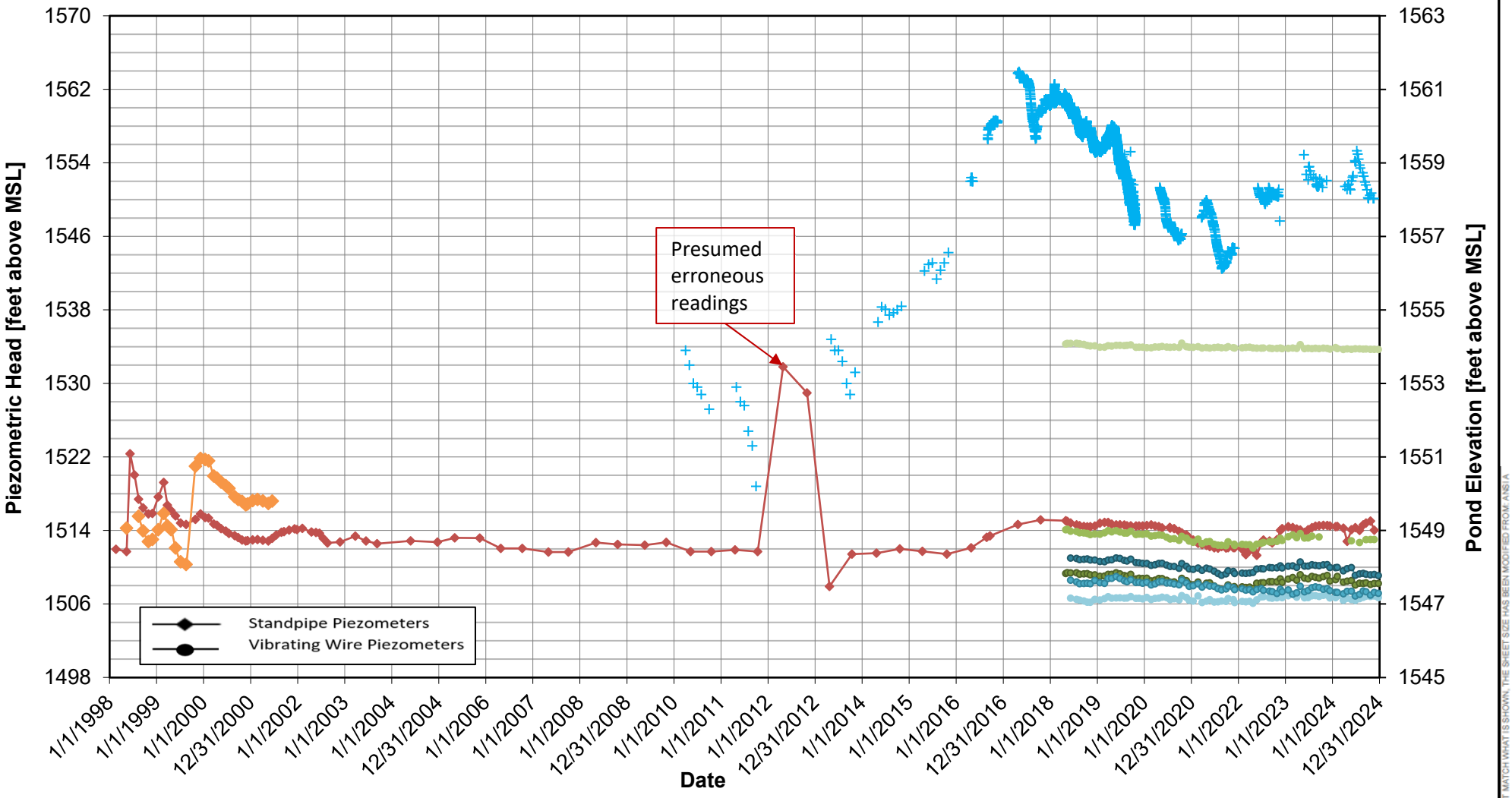
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2E-B – LAST 6 YEARS

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




G-2 | G-3 | 2E_2018_PZ_G4_VW (50') | 2E_2018_PZ_G4_VW (70') | 2E_2018_PZ_G4_VW (75') | 2E_2018_PZ_G1_VW (48') | 2E_2018_PZ_G1_VW (52') | 2E_2018_PZ_G1_VW (58') | Cell 2E | 2E-VW356+50-R366 (T) | 2E-VW356+50-R366 (B)

NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.
2. G-3 appears to have been either destroyed or blocked and has not been measured since 2001.

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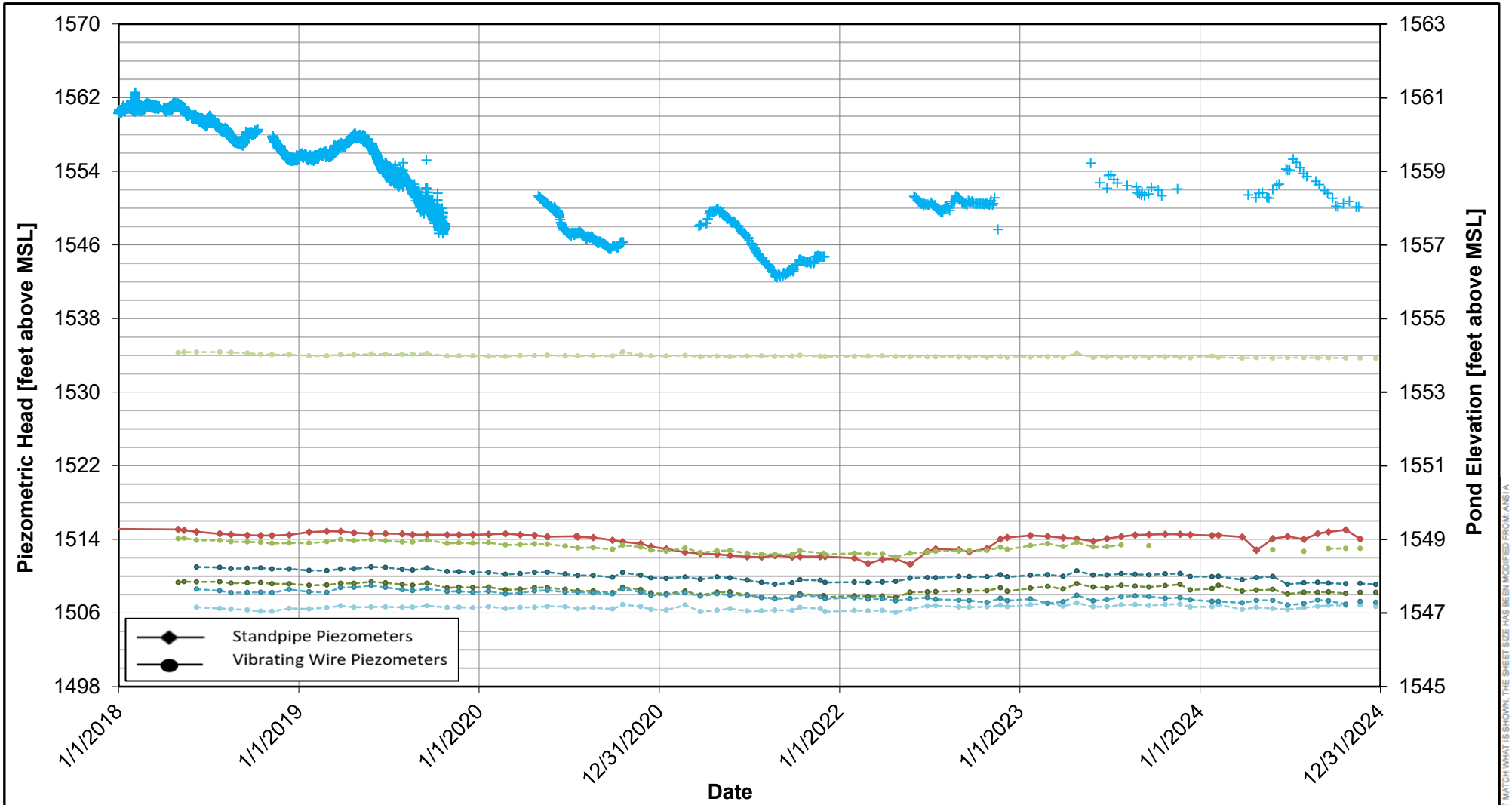
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2E-E

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.
2. G-3 appears to have been either destroyed or blocked and has not been measured since 2001.

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| DESIGNED | - |
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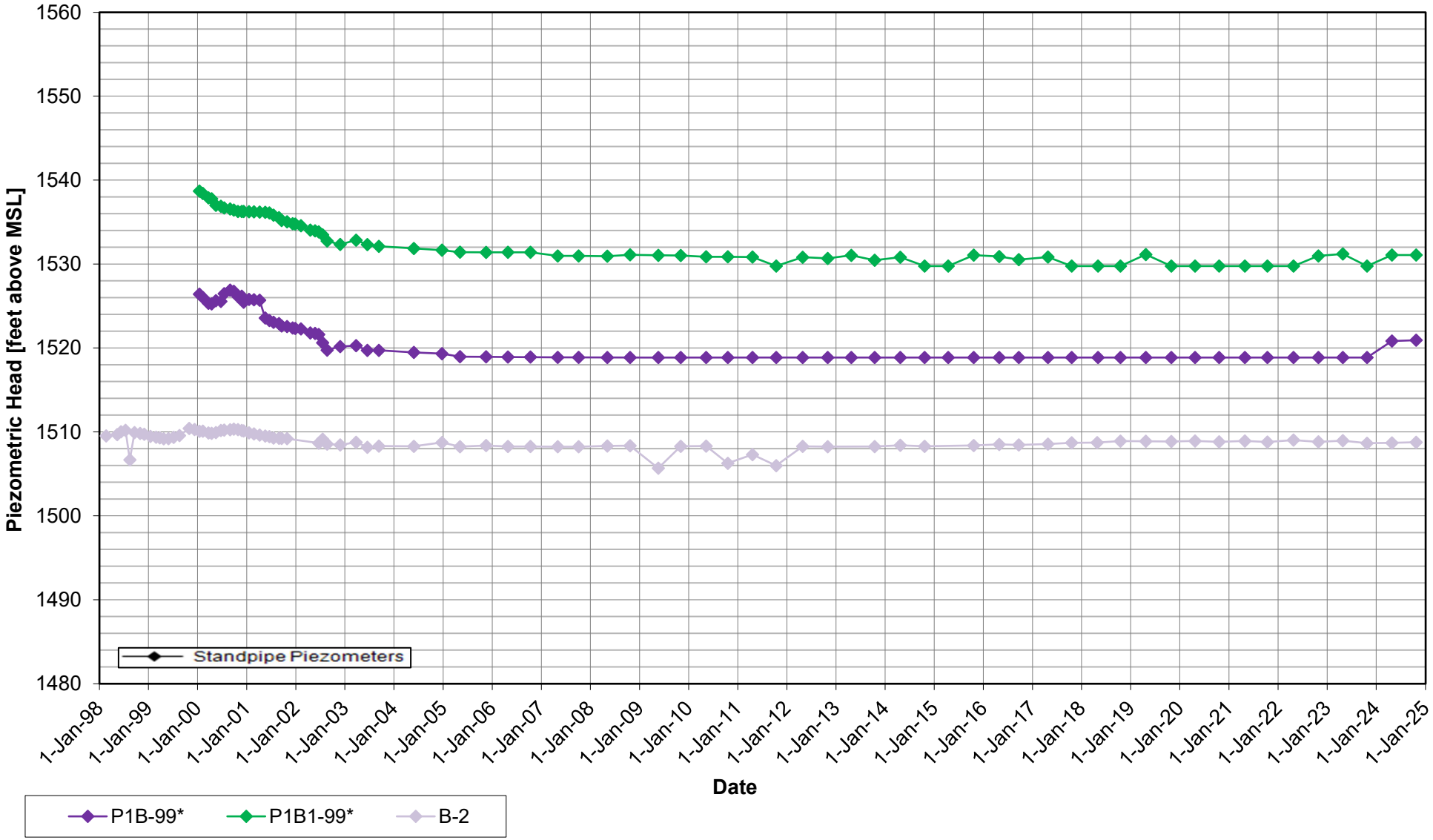
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2E-E – LAST 6 YEARS

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-11

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. *Indicates the well is dry. The actual depth of the piezometric surface may be lower than appears on the graph.
2. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.

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| DESIGNED | - |
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PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

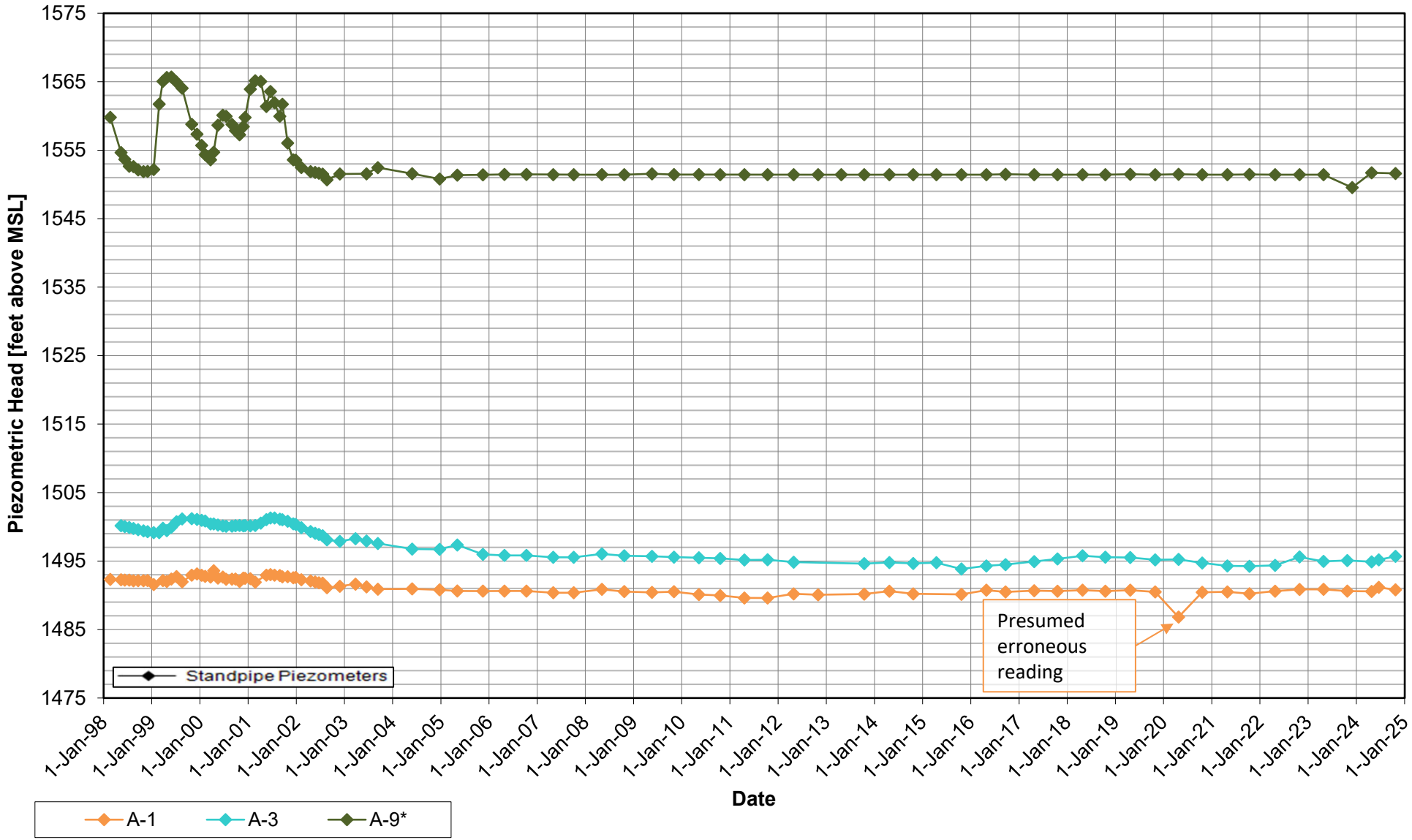
TITLE
PIEZOMETER READINGS
SECTION 2W-A

PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. *Indicates the well is dry. The actual depth of the piezometric surface may be lower than appears on the graph.
2. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.

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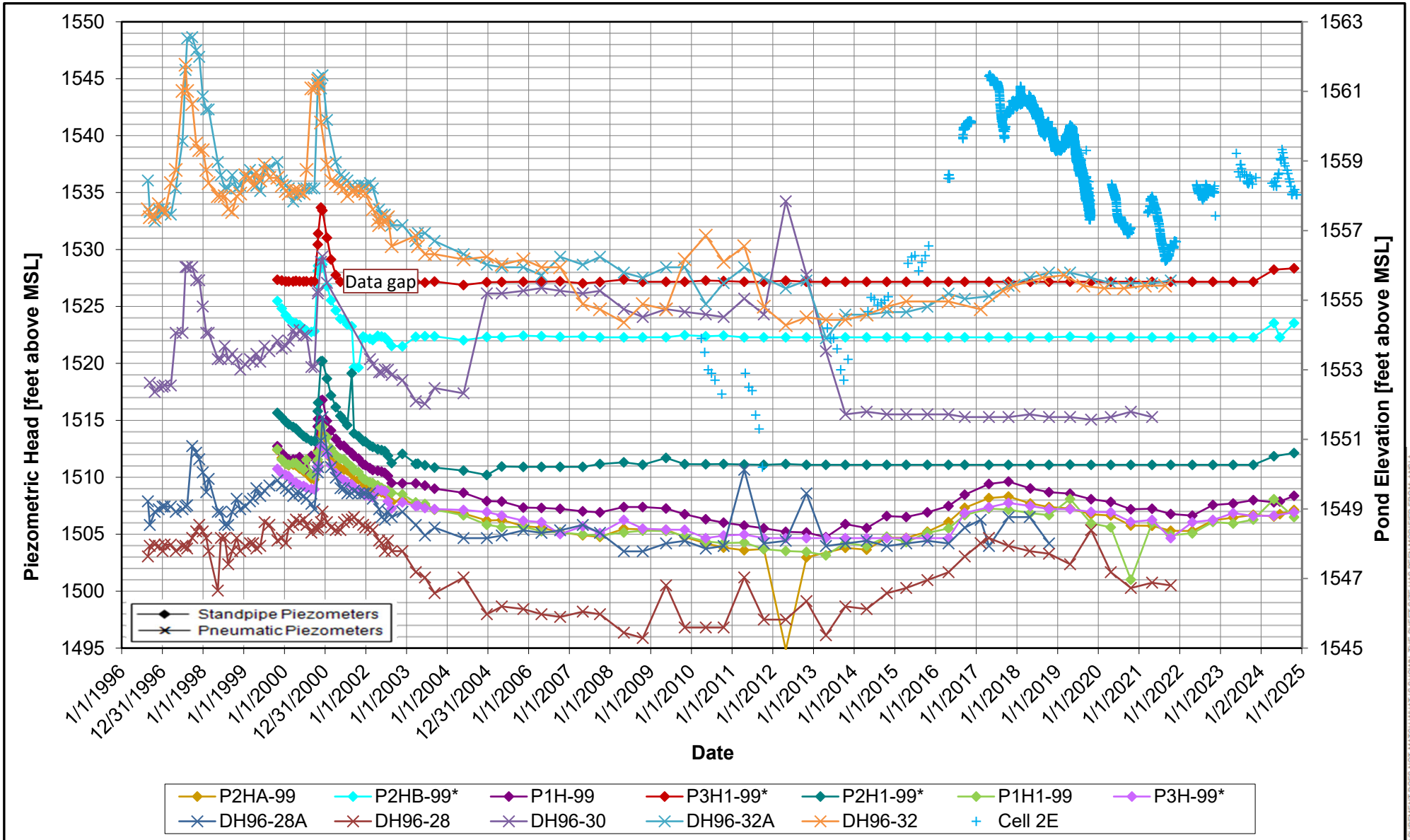
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2W-B

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-13

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.
2. DH96-28A was reported as non-functional in 2019.
3. *Indicates the well is dry. The actual depth of the piezometric surface may be lower than appears on the graph.

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| DESIGNED | - |
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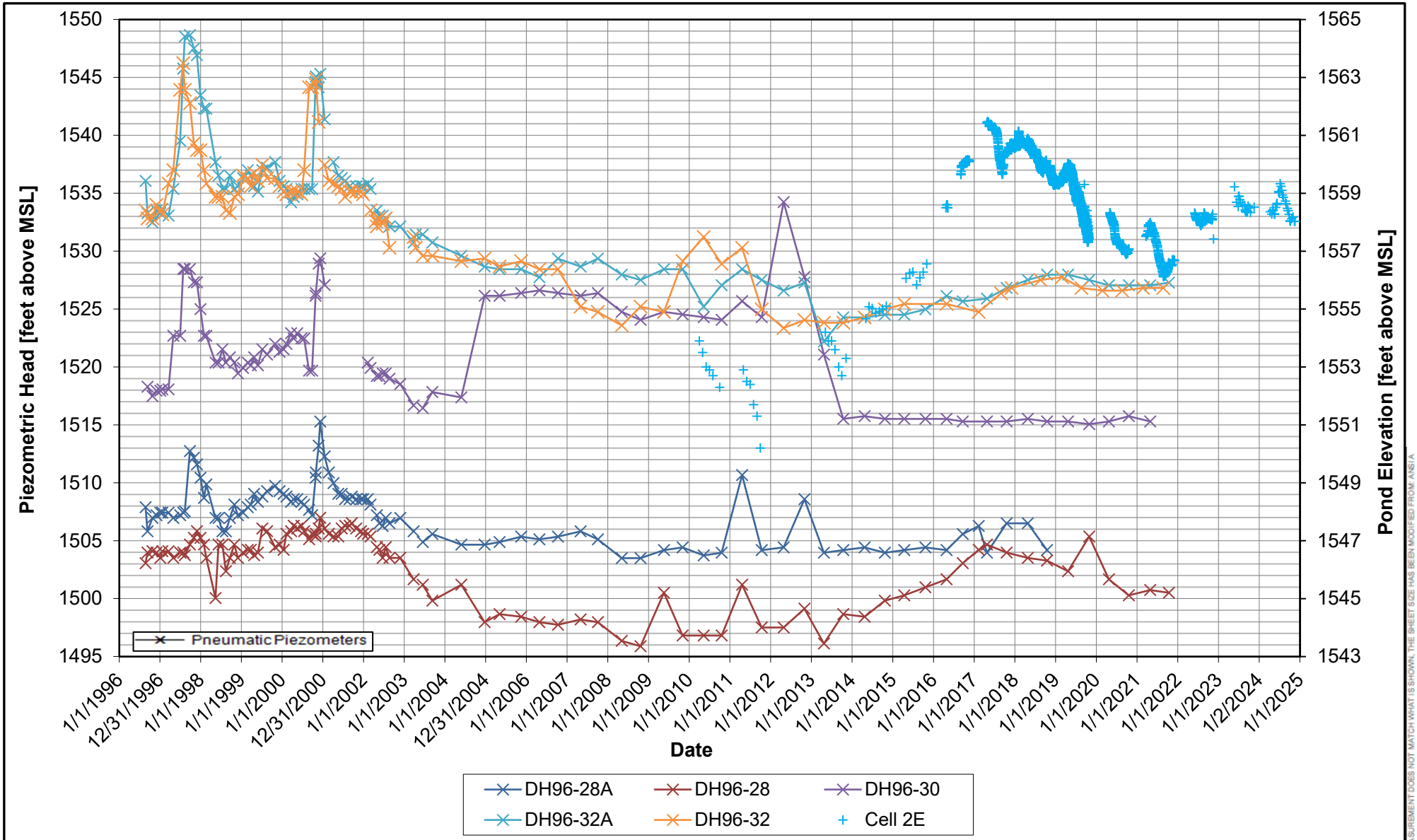
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2W-C

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-14

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. As of April, 2019, NTS reported that the diaphragm on 28A appears stuck, as applying up to 80 psi pressure has not been able to induce gas flow across the pneumatic cell.
2. All pneumatics have been recommended for decommissioning.

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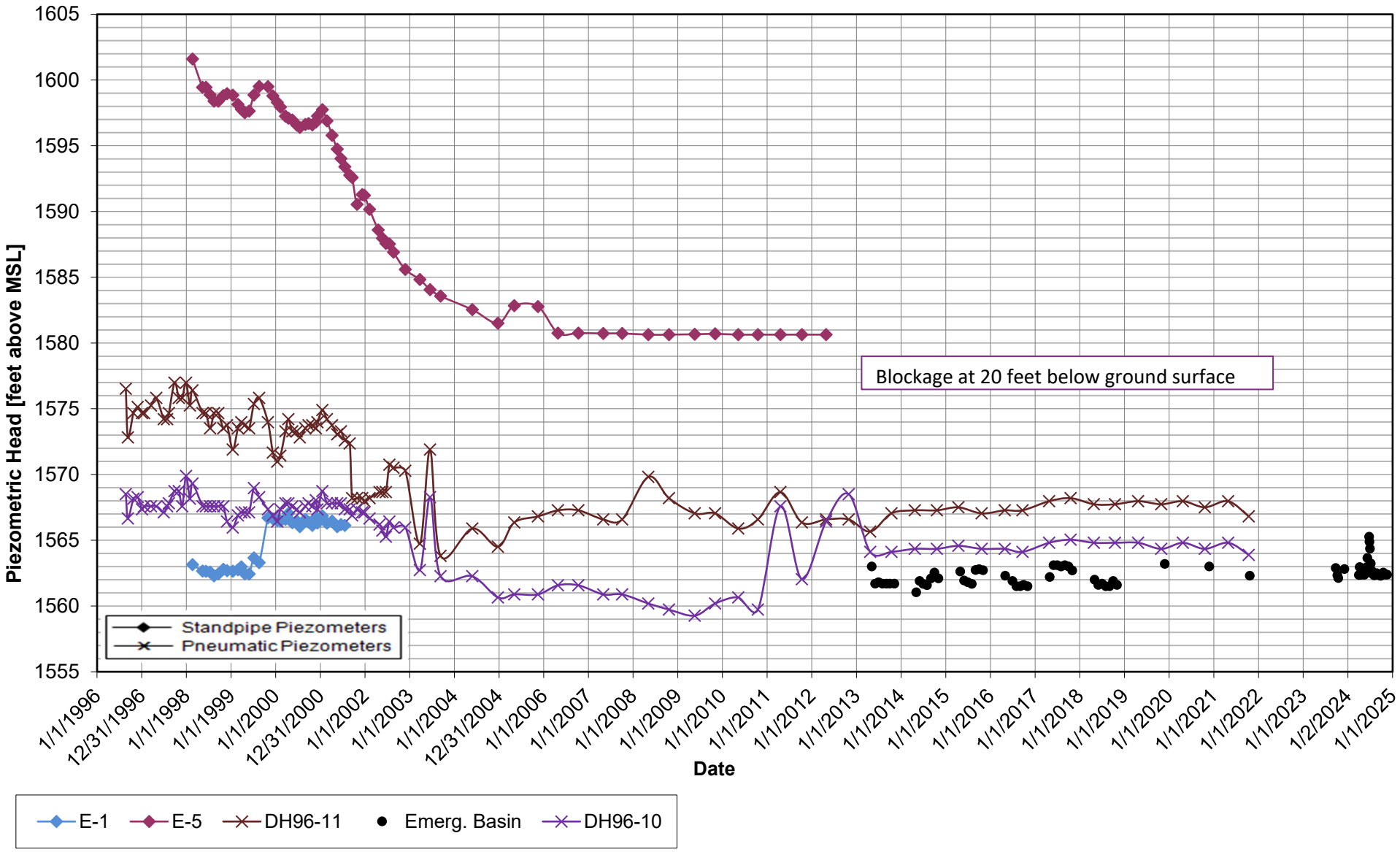
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2W-C (PNEUMATIC ONLLY)

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-15

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. E-1 and E-5 have blockages and can no longer be measured.

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| REVIEWED | - |
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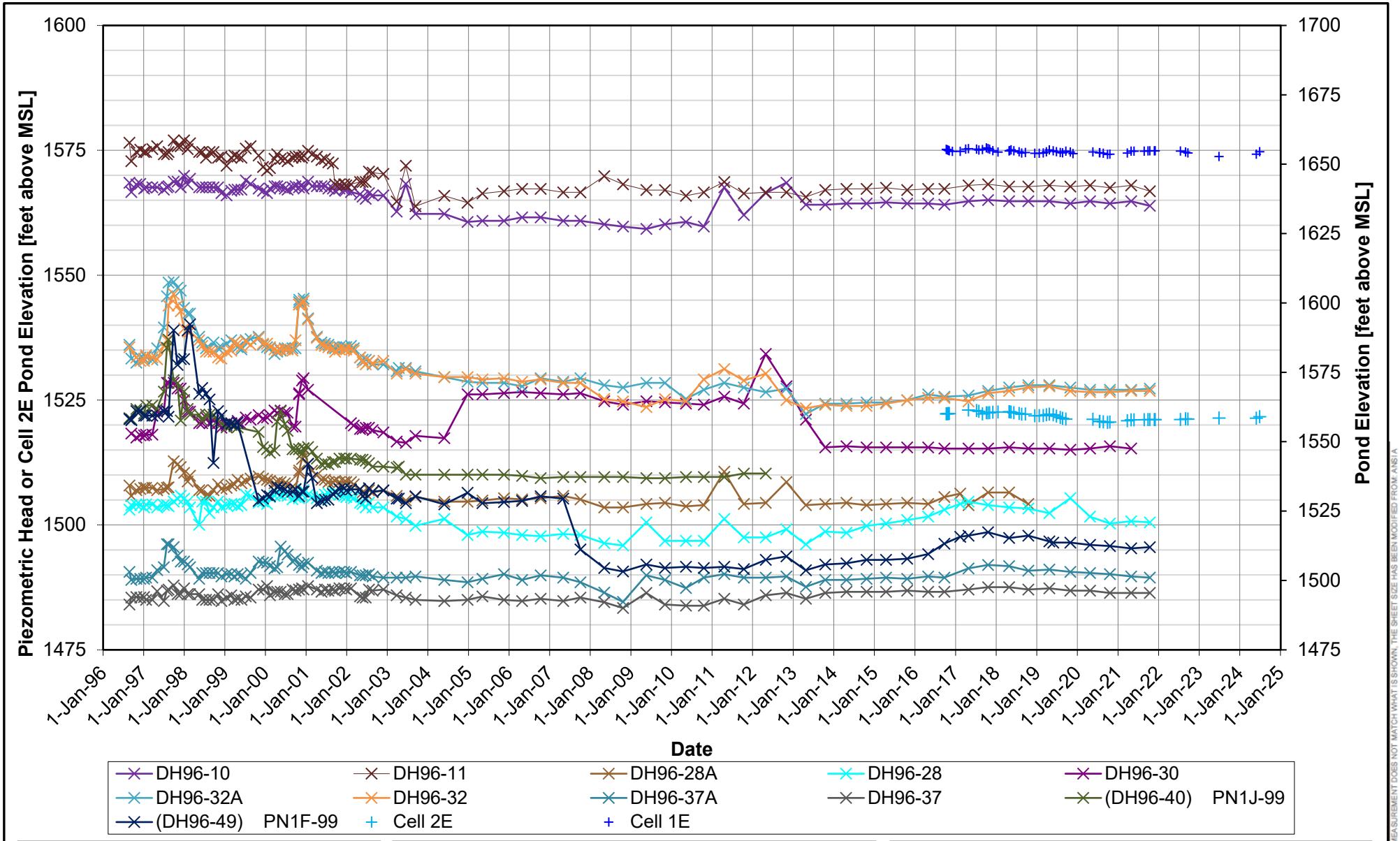
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
SECTION 2W-G

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-16

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. DH96-40 has been destroyed and can no longer be measured.
2. DH96-28A was reported as non-functional in 2019.

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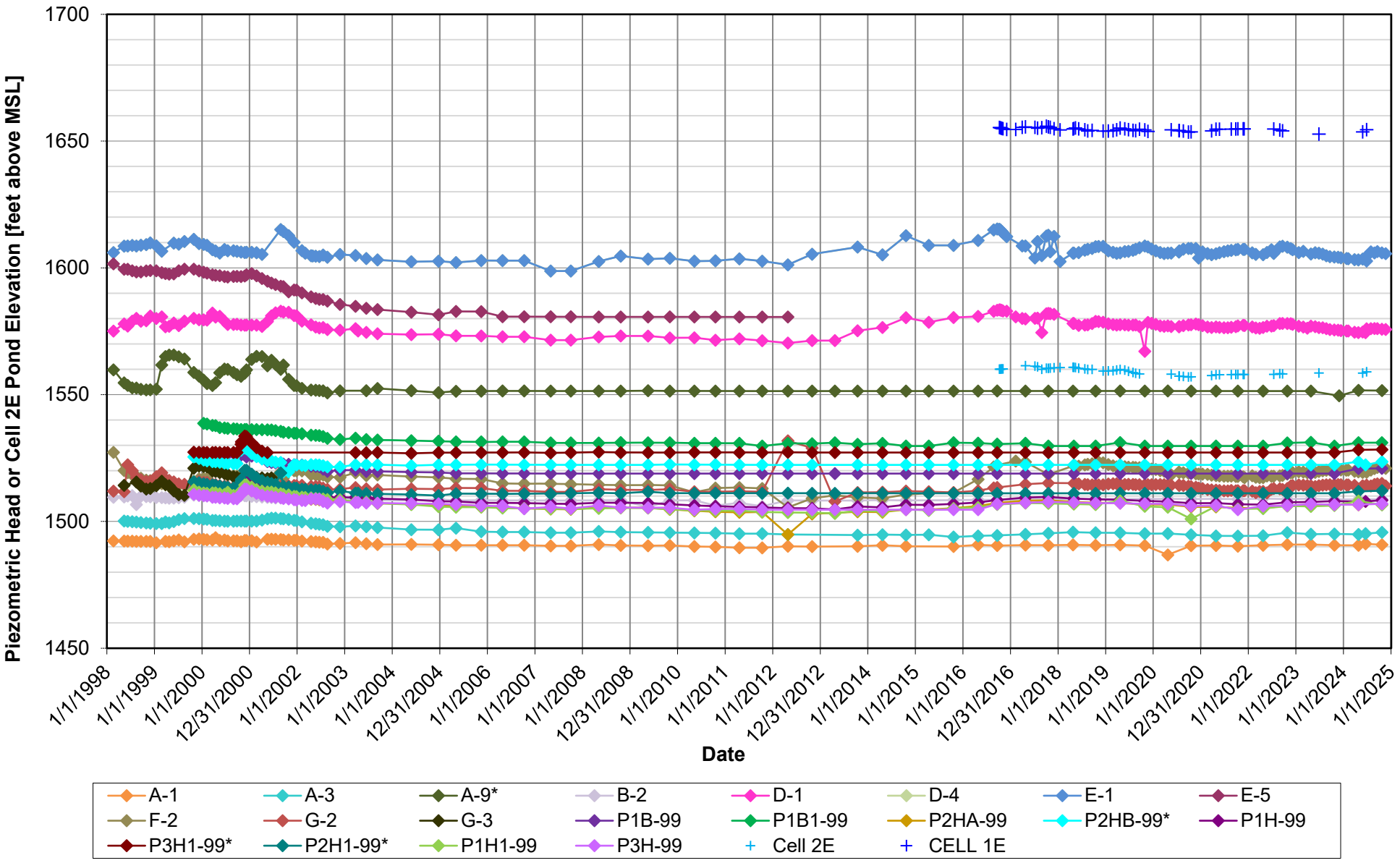
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
Piezometer Readings
COMPILED PNEUMATIC

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-17

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

1. Standpipe piezometer levels have been calculated based on top of casing elevations surveyed in December 2018.
2. E-1, E-5, and G-3 have been either destroyed or blocked and can no longer be measured.
3. *Indicates the well is dry. The actual depth of the piezometric surface may be lower than appears on the graph.

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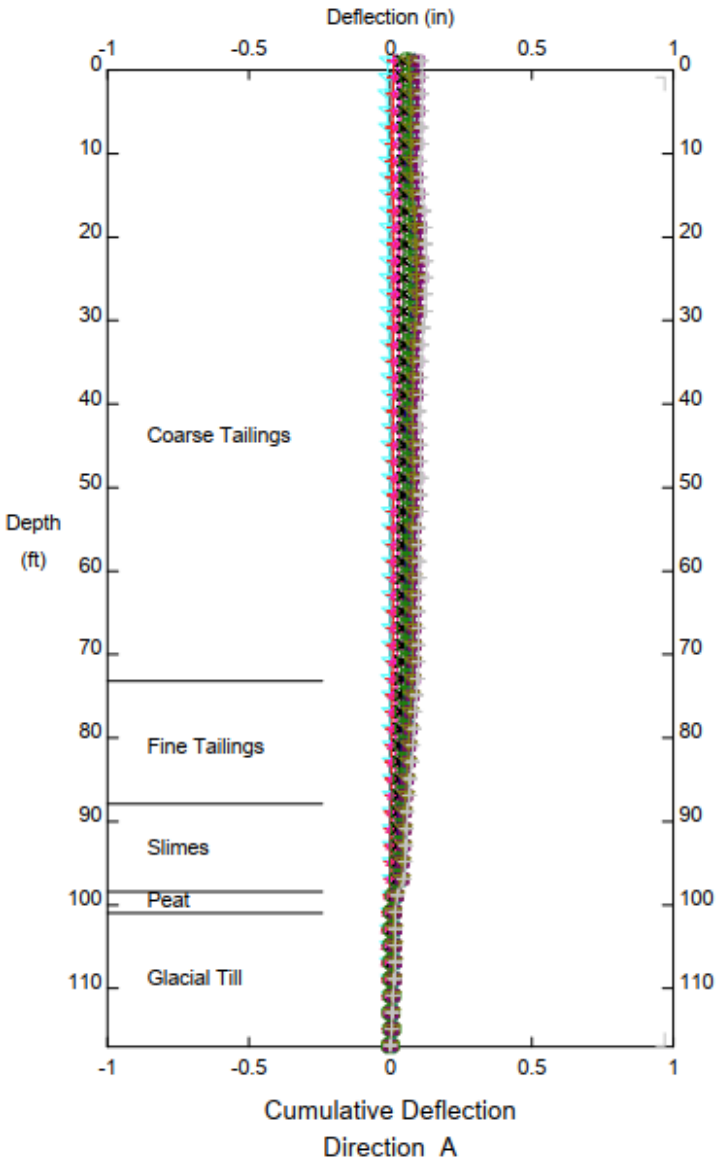
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
PIEZOMETER READINGS
COMPILED STANDPIPE

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-18

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




LEGEND

| | |
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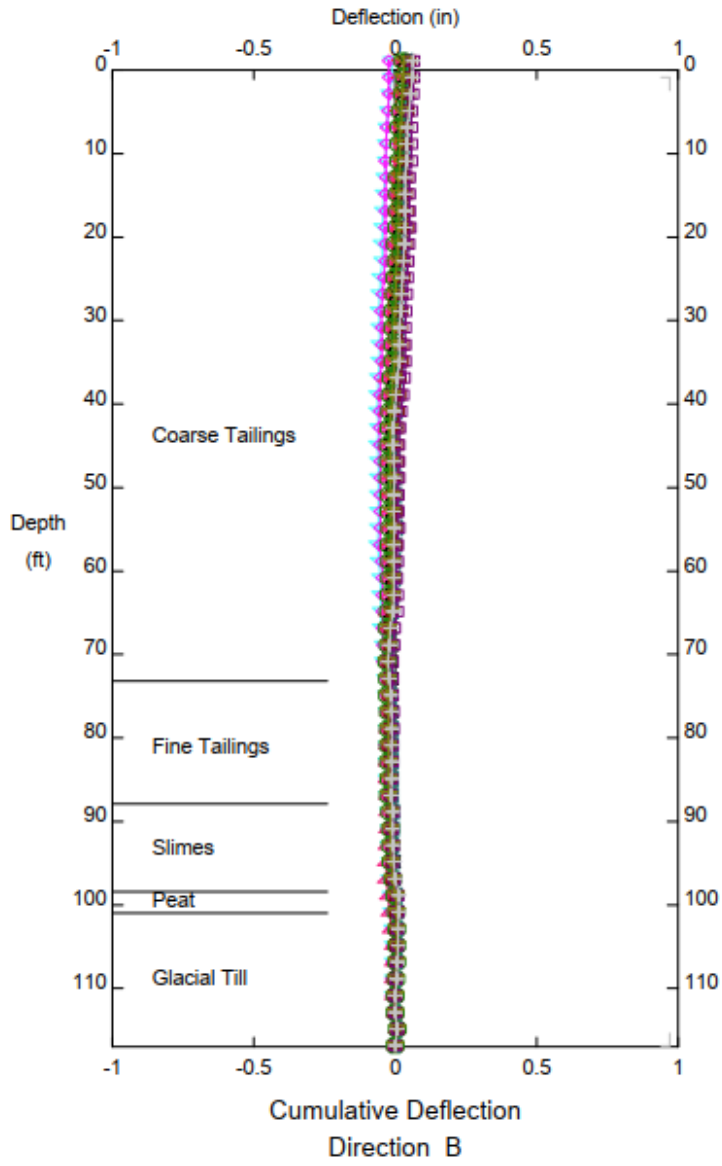
| Initial | 8 May 2020 |
| | 19 Oct 2020 |
| | 27 Apr 2021 |
| | 13 Oct 2021 |
| | 25 Apr 2022 |
| | 27 Jul 2022 |
| | 28 Oct 2022 |
| | 27 Apr 2023 |
| | 26 Jul 2023 |
| | 23 Oct 2023 |
| | 26 Apr 2024 |
| | 30 Jul 2024 |
| | 23 Oct 2024 |

Ref. Elevation 1611.49




NOTES

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PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

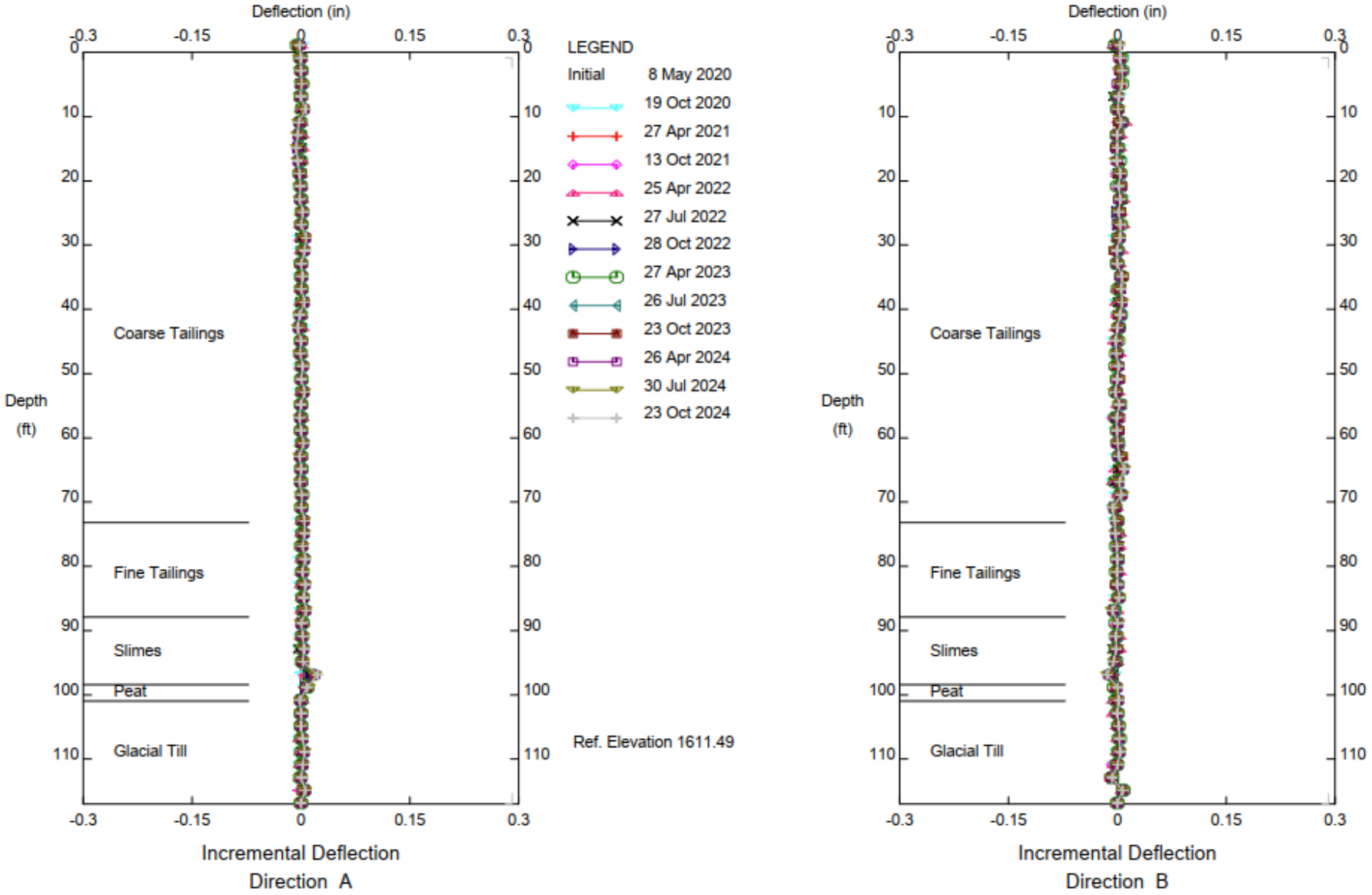
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-10

PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-19

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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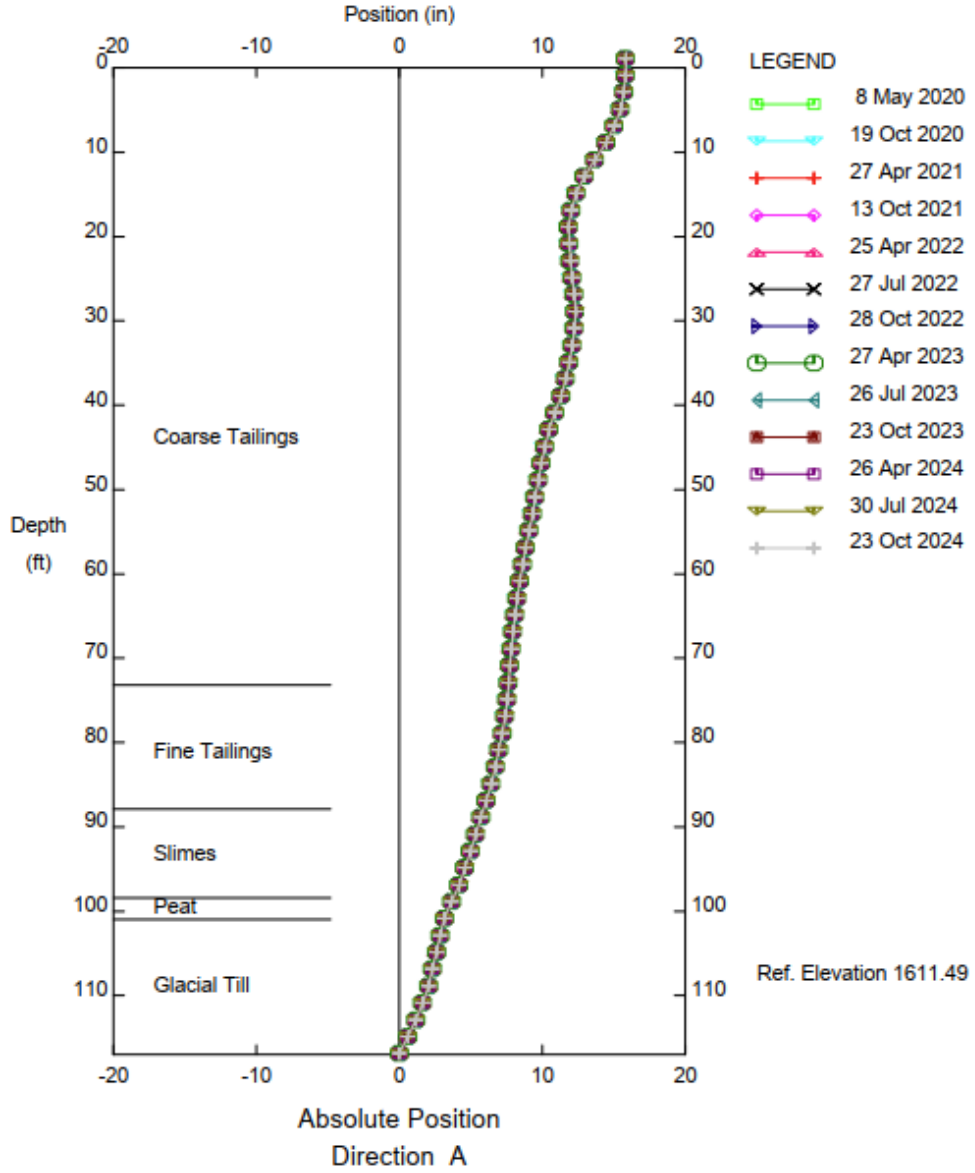
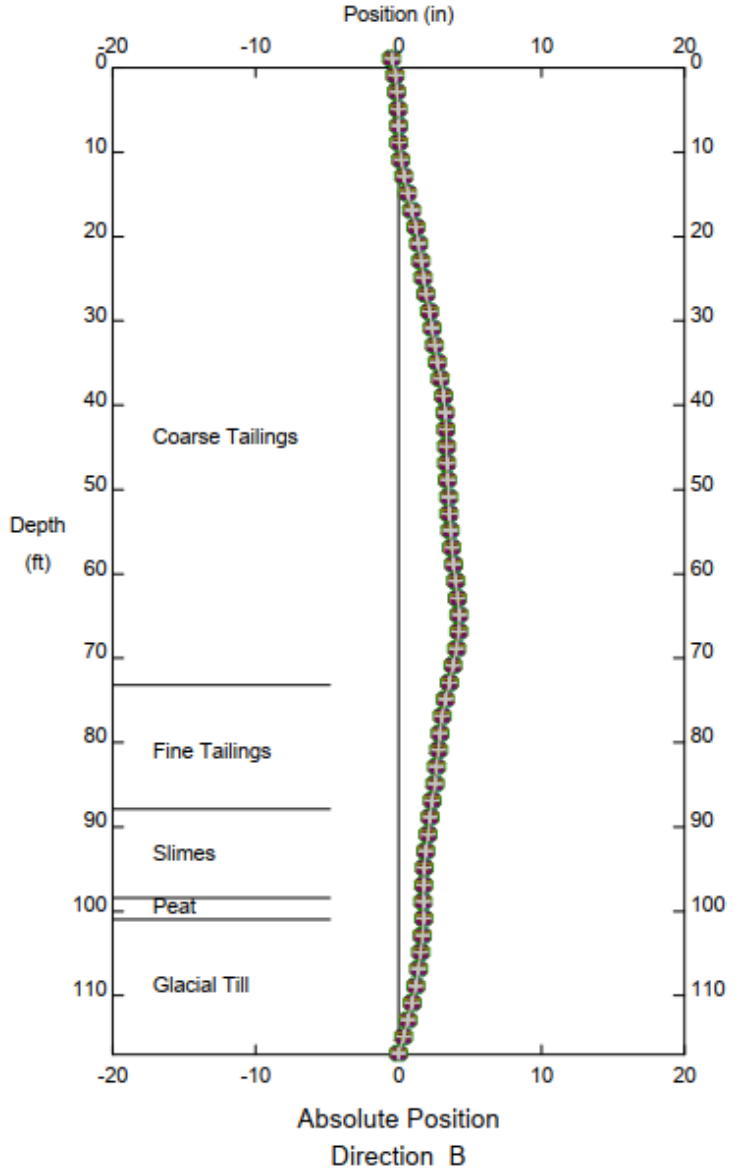
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-10

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-20

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

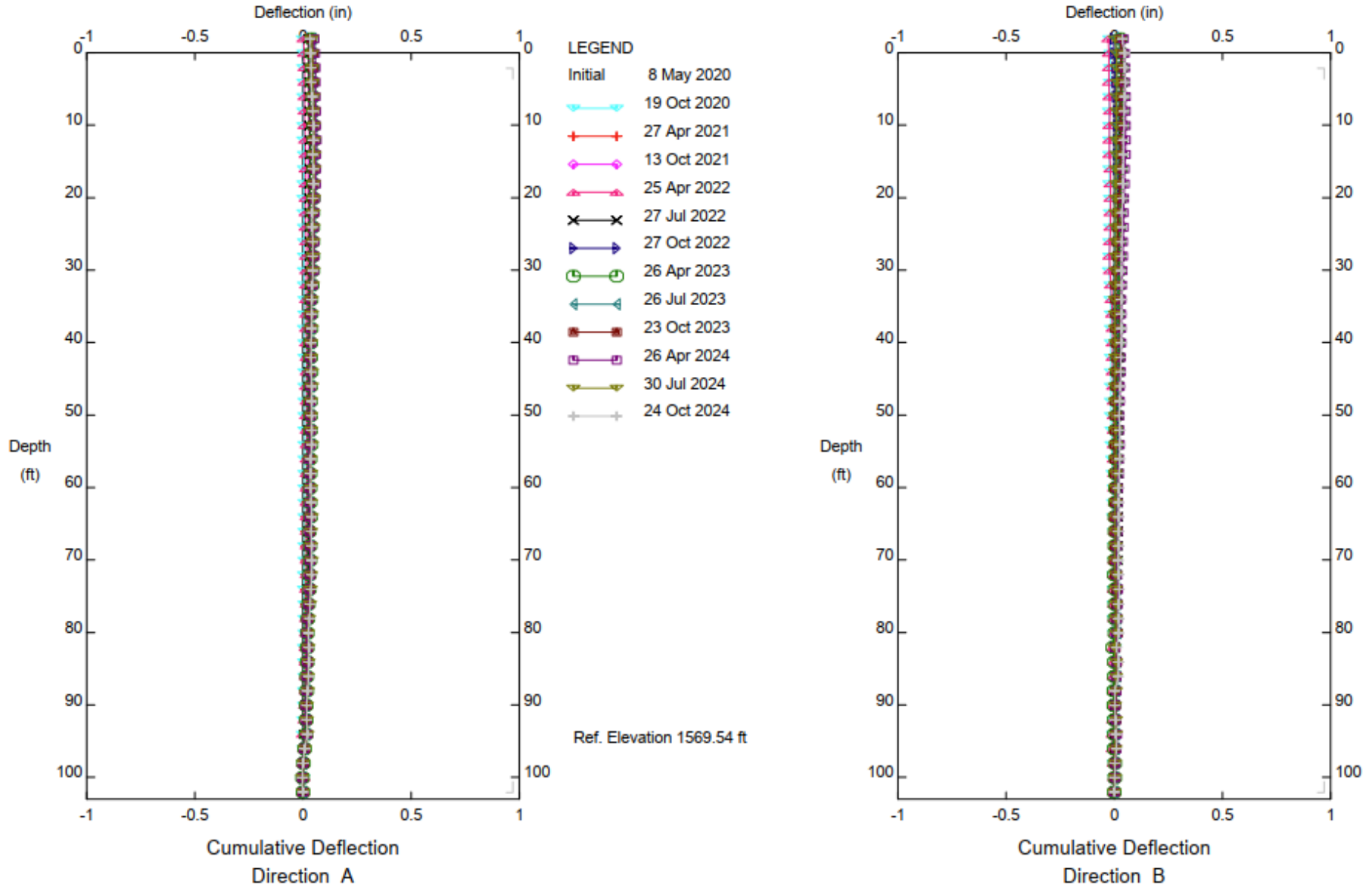
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-10

PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-21

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

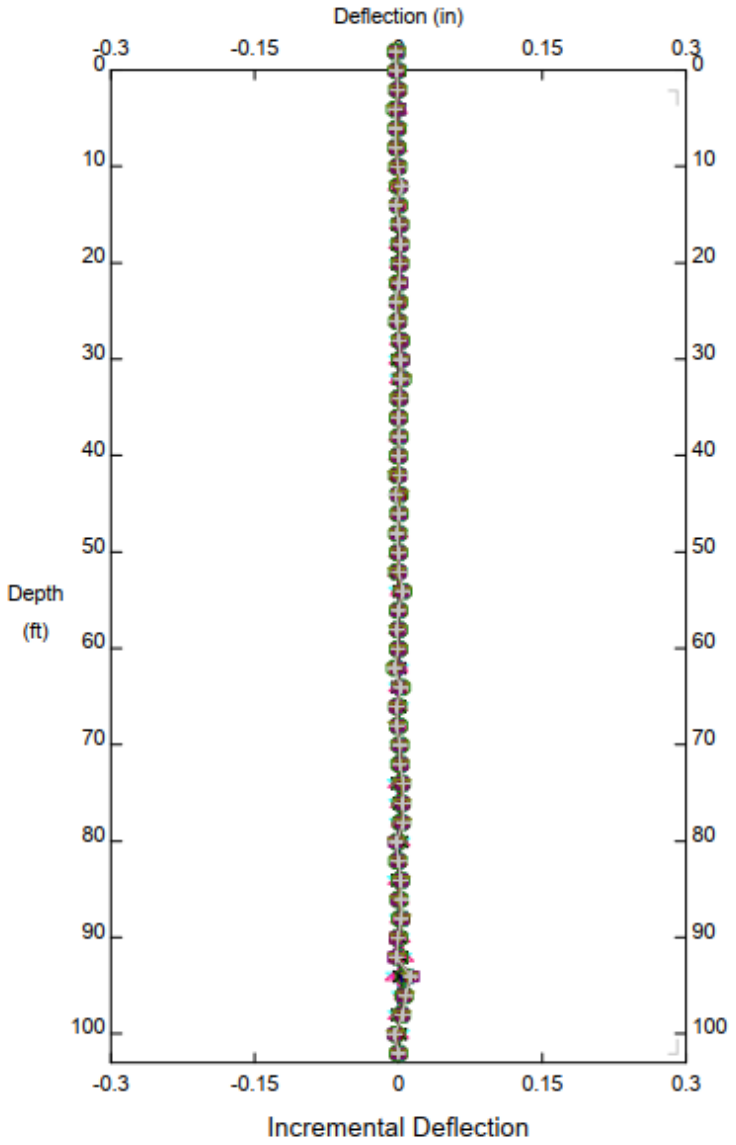
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-18

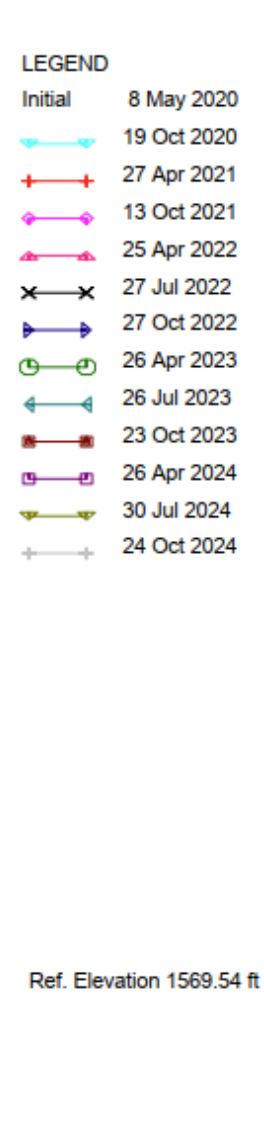
PROJECT NO.
US0033486.3977

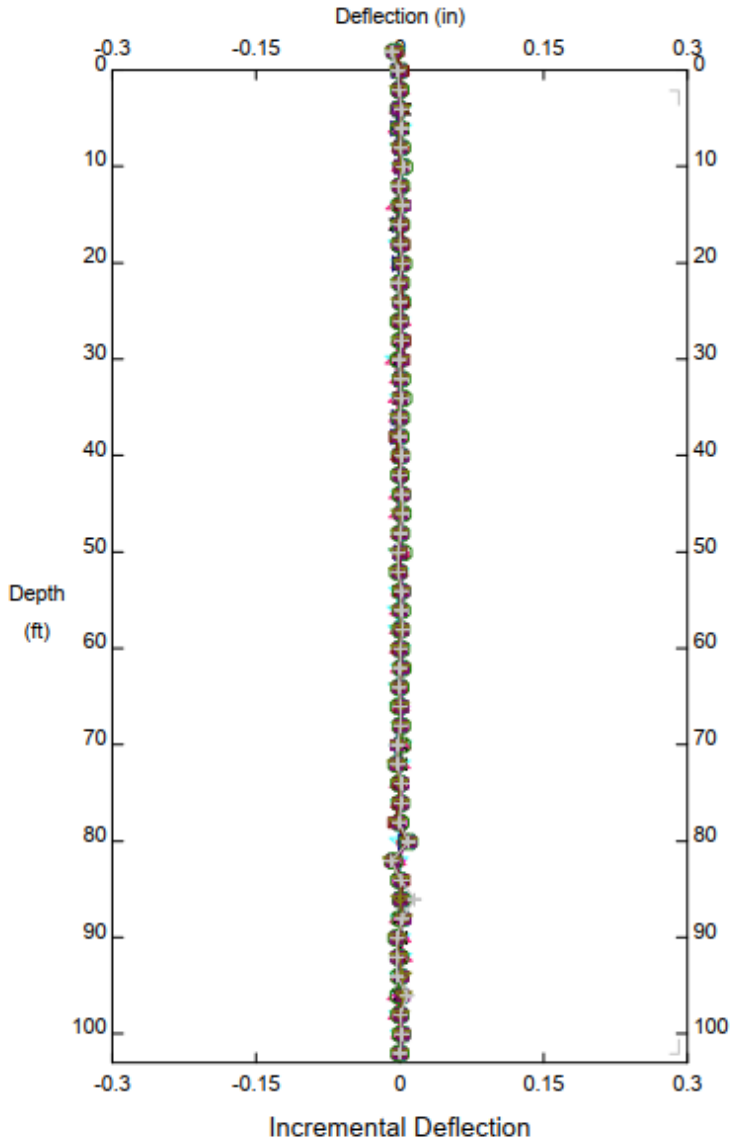
REV.
0

FIGURE
C-22

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

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|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

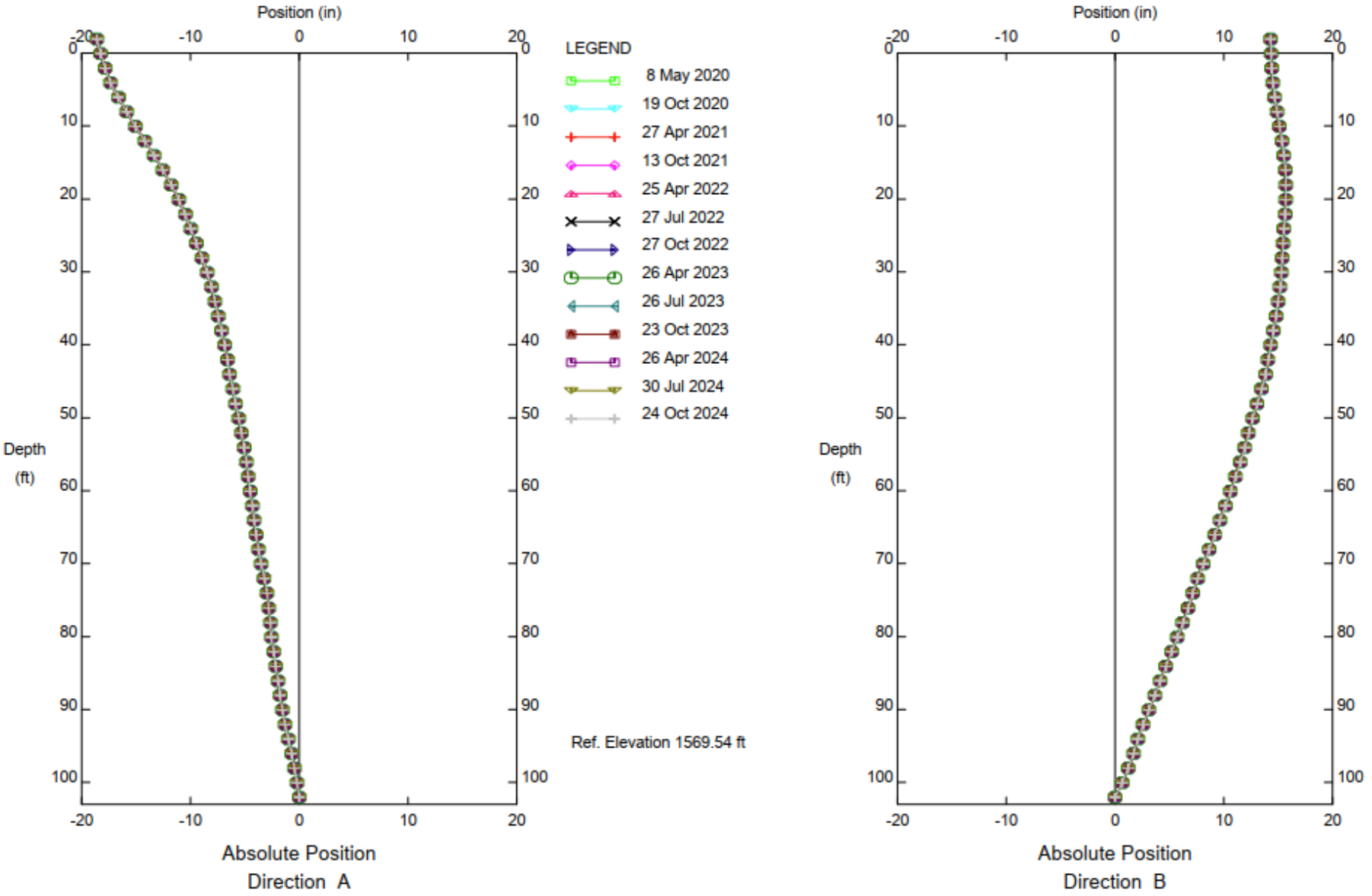
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-18

PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-23

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

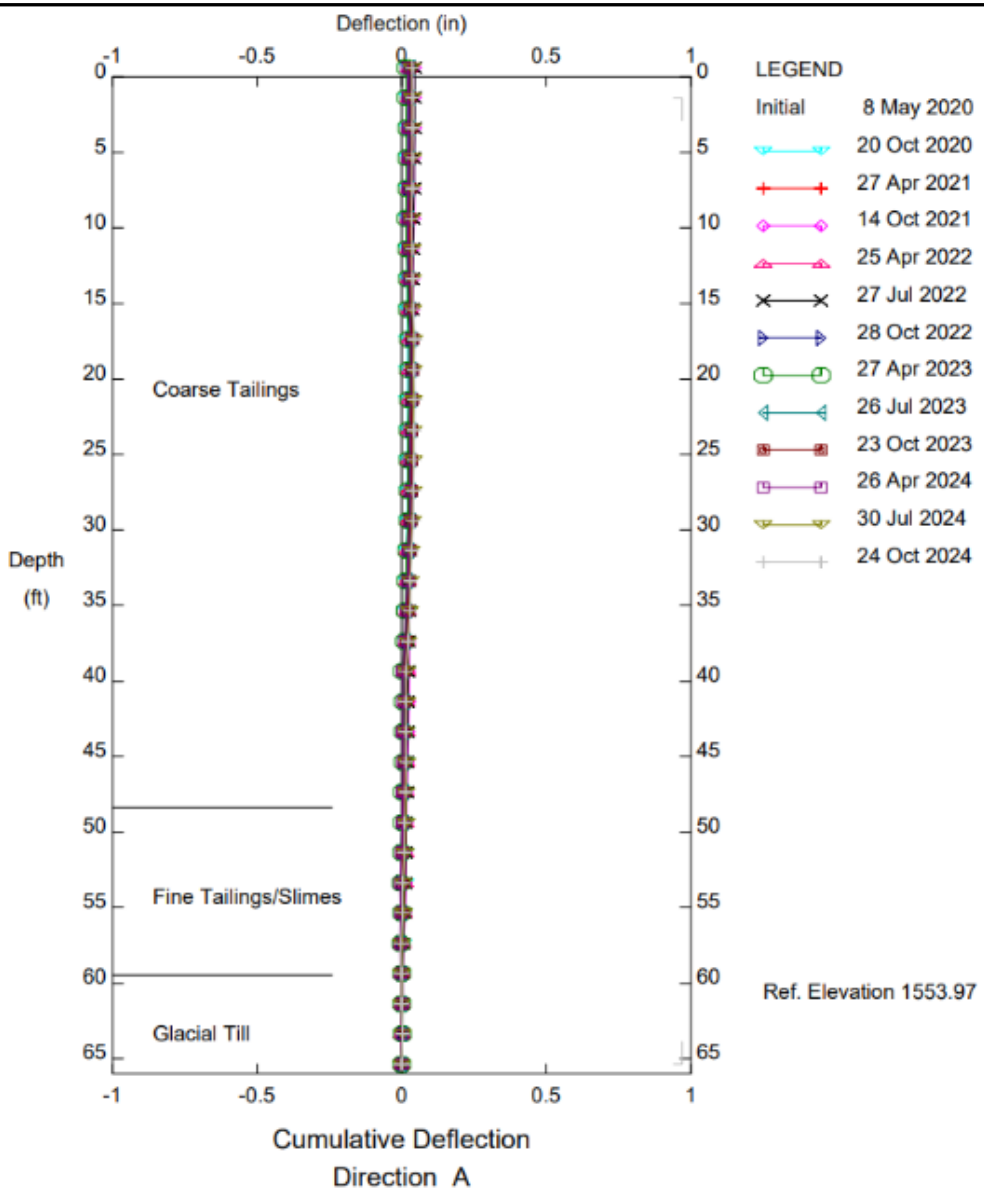
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-18

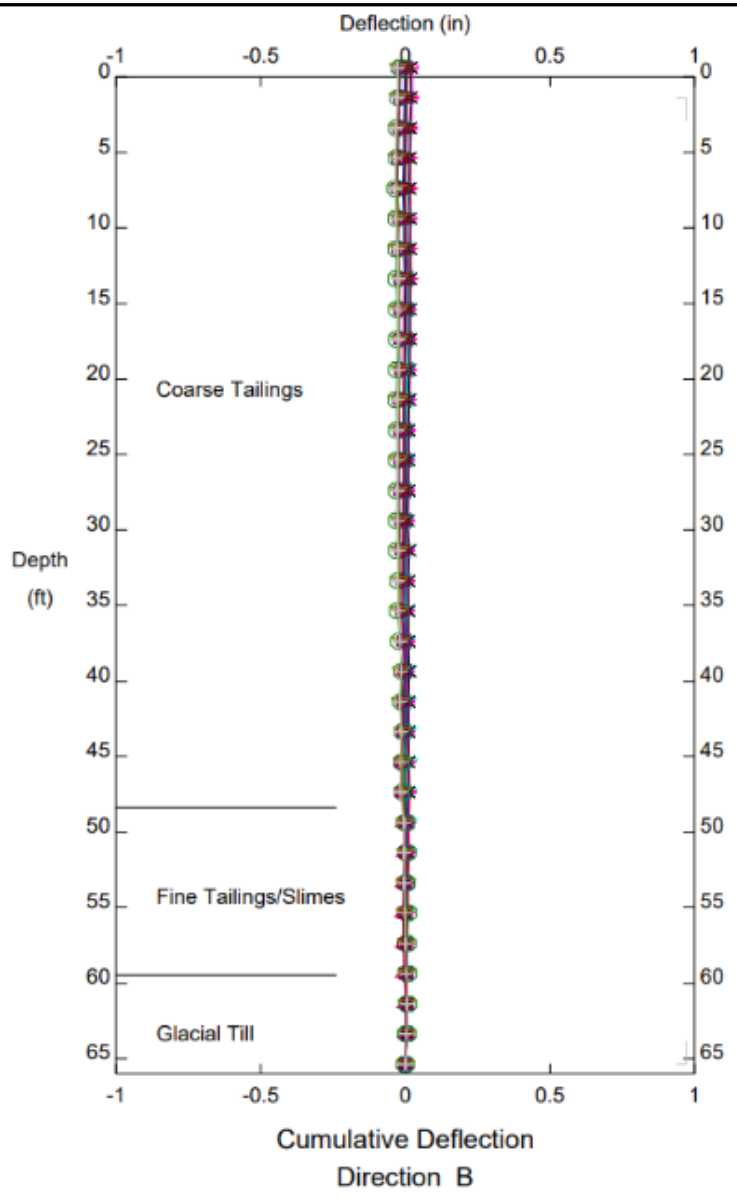
PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-24

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

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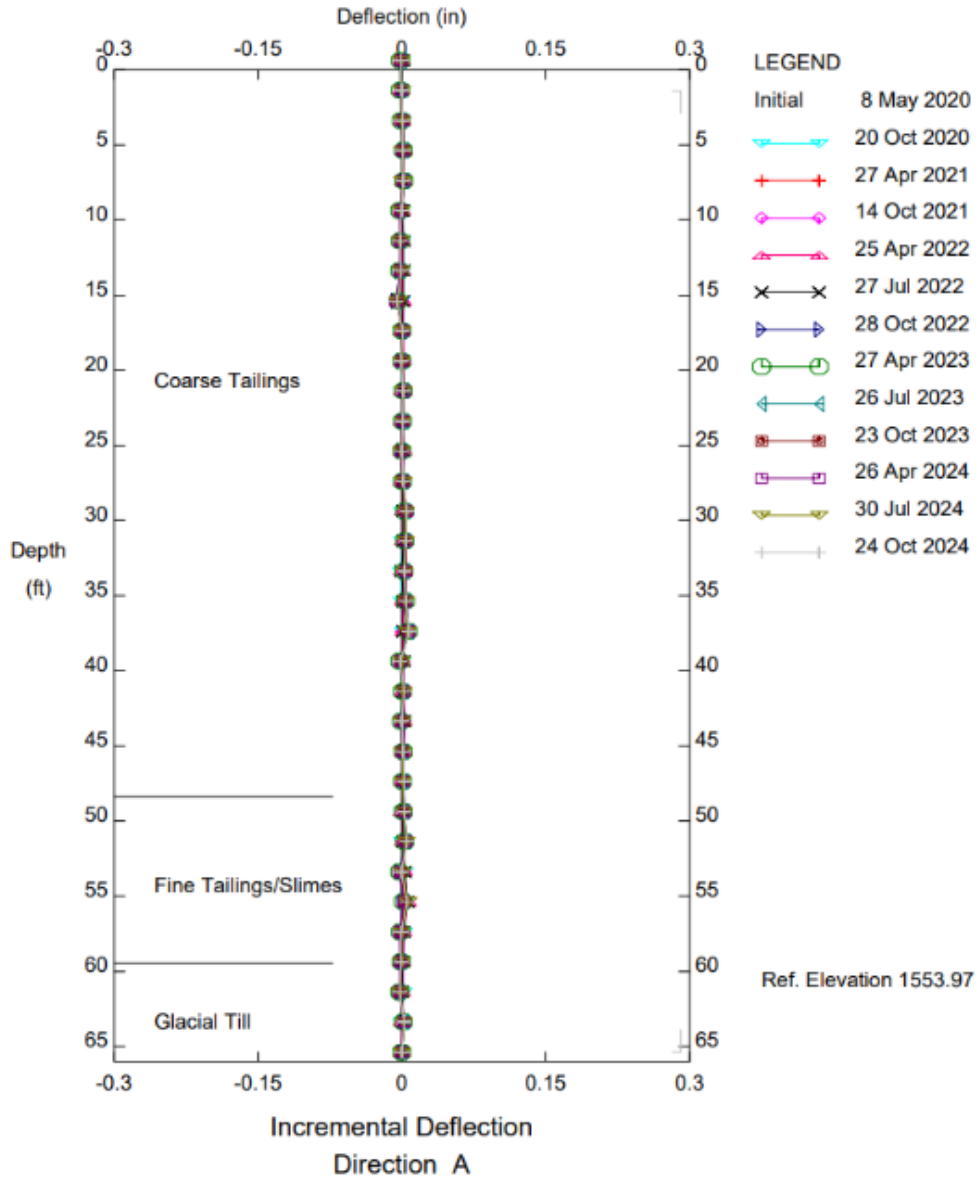
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-28

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-25

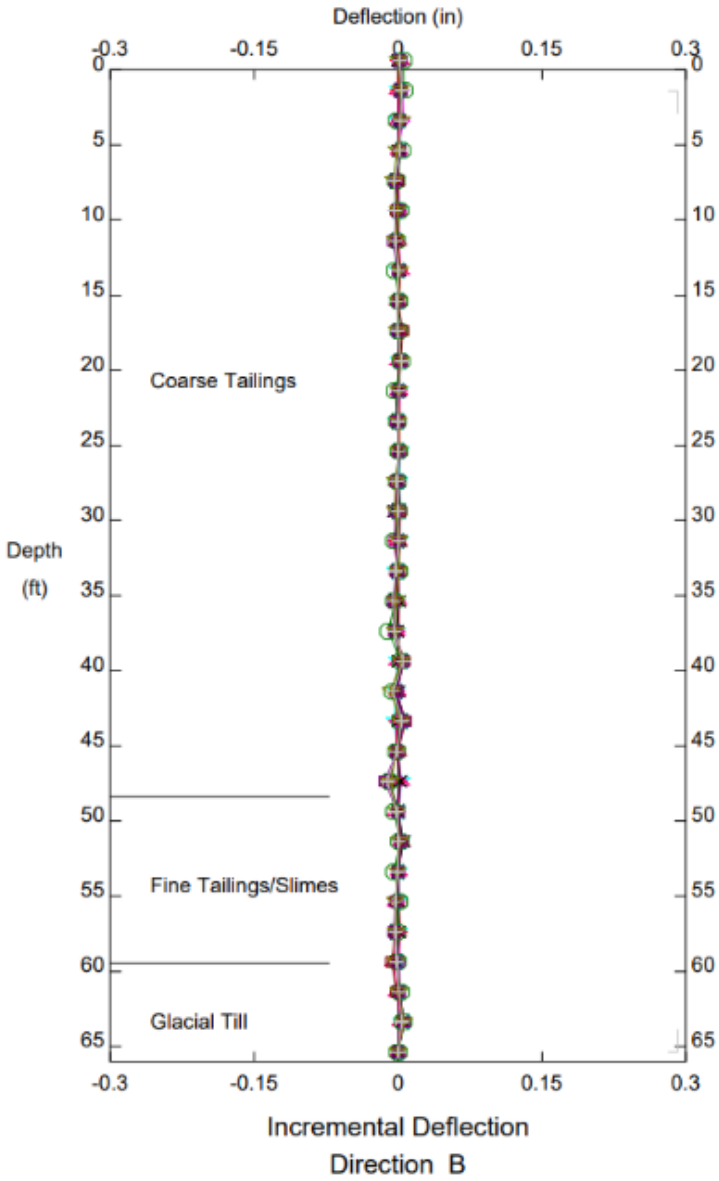
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




LEGEND

| | |
|---|---|
| Initial | 8 May 2020 |
| | 20 Oct 2020 |
| | 27 Apr 2021 |
| | 14 Oct 2021 |
| | 25 Apr 2022 |
| | 27 Jul 2022 |
| | 28 Oct 2022 |
| | 27 Apr 2023 |
| | 26 Jul 2023 |
| | 23 Oct 2023 |
| | 26 Apr 2024 |
| | 30 Jul 2024 |
| | 24 Oct 2024 |

Ref. Elevation 1553.97




NOTES

CLIENT
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6500 KENSINGTON DRIVE
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CONSULTANT
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|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

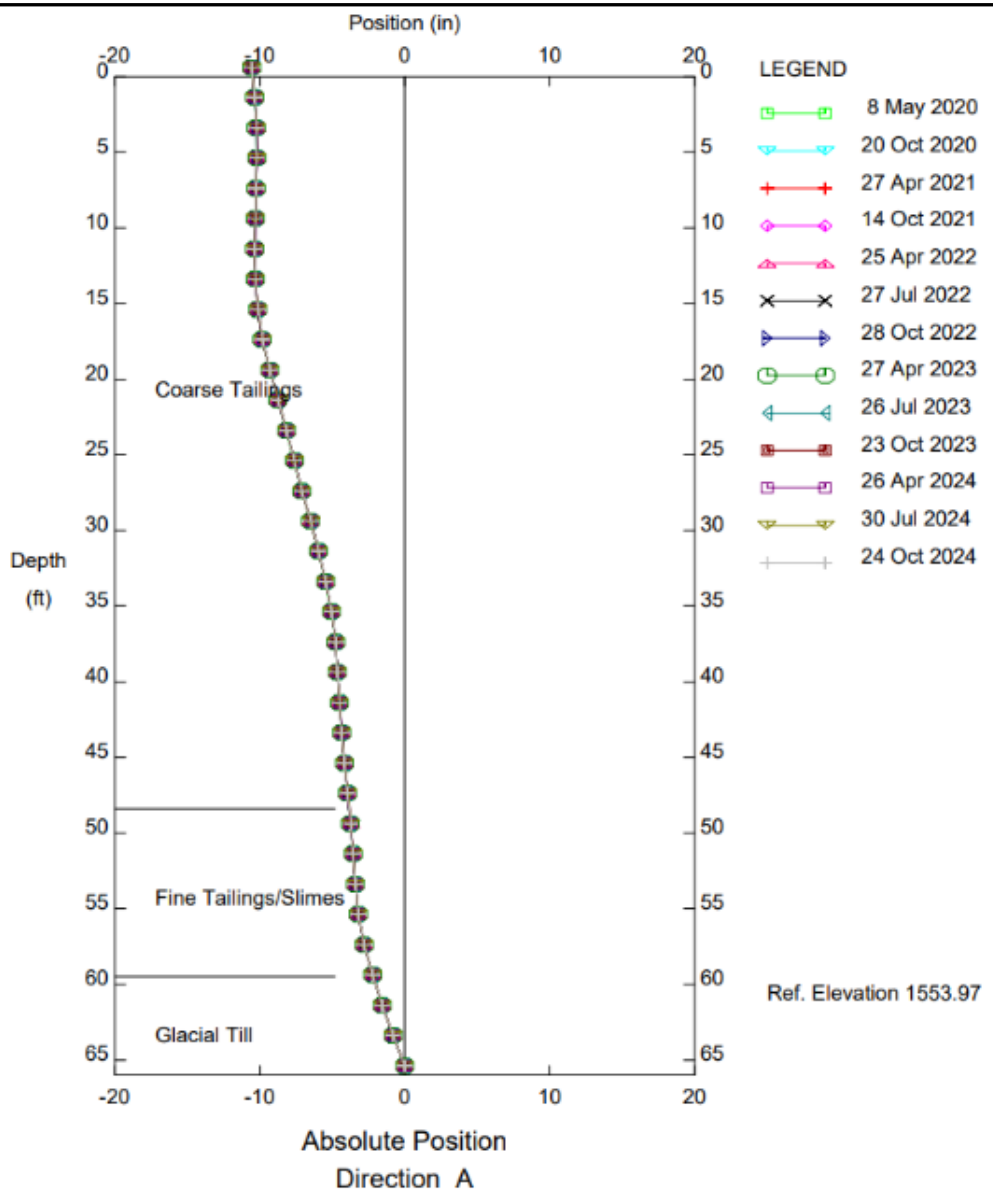
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-28

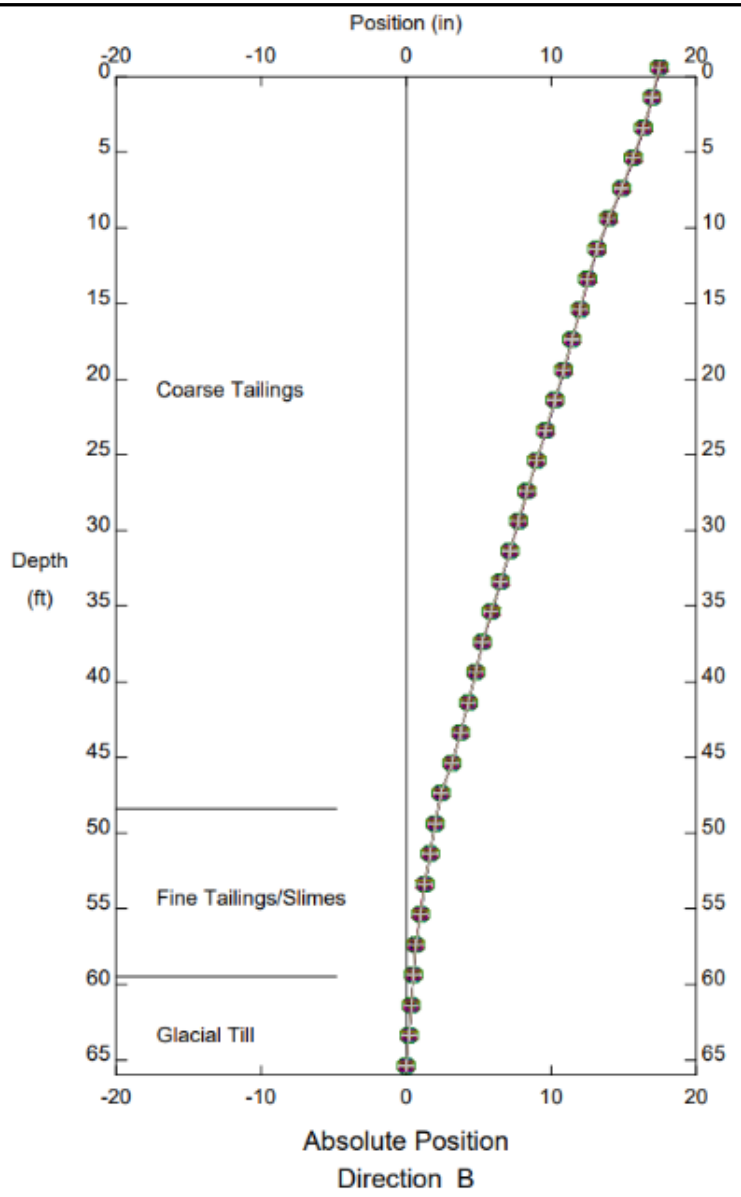
PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-26

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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HOYT LAKES, MN 55750

CONSULTANT

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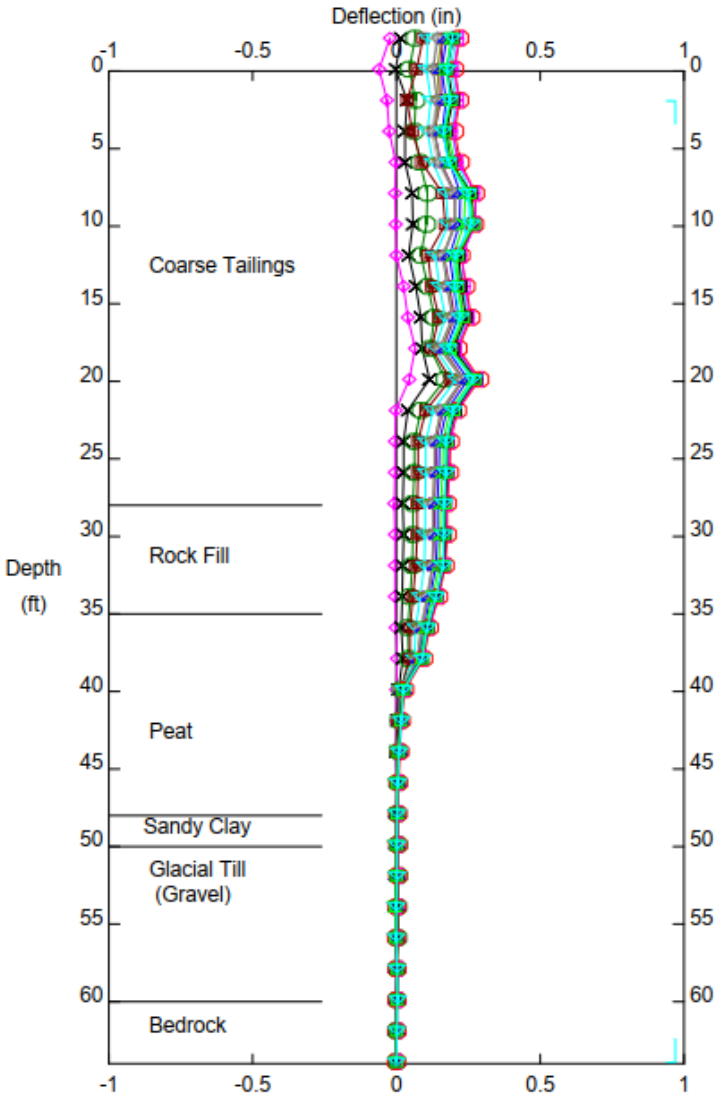
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

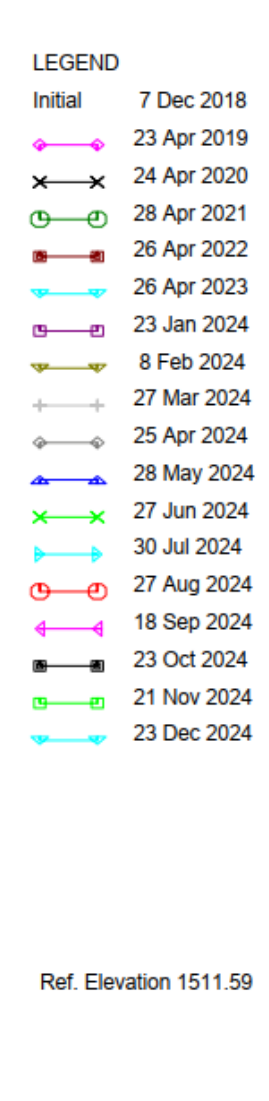
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

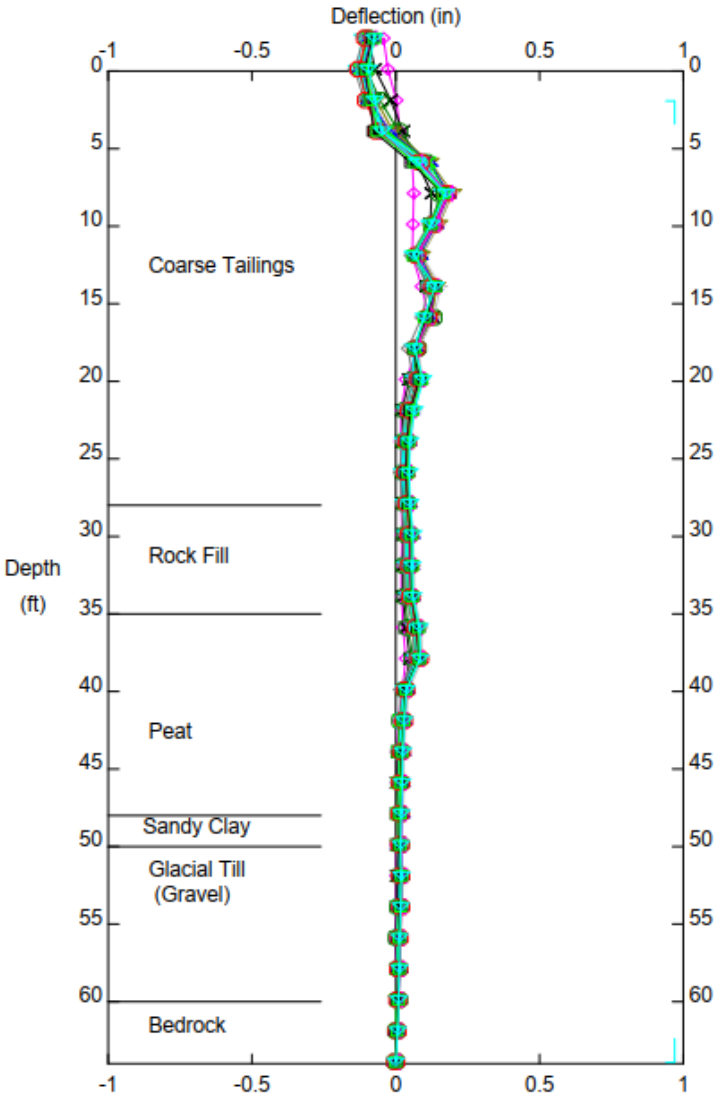
TITLE
SLOPE INCLINOMETERS
INCLINOMETER DH96-28

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-27

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
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6500 KENSINGTON DRIVE
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CONSULTANT
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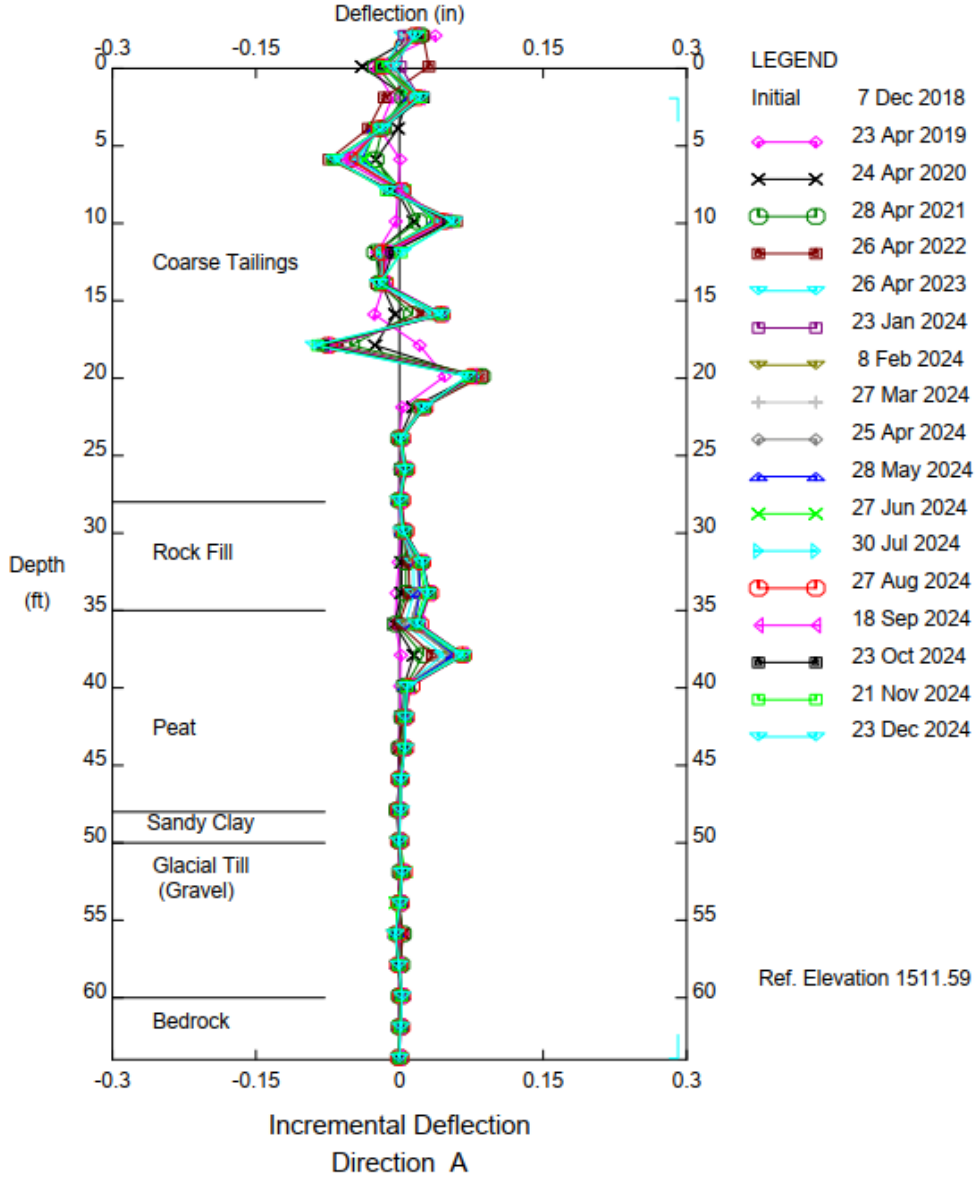
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-1

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-28

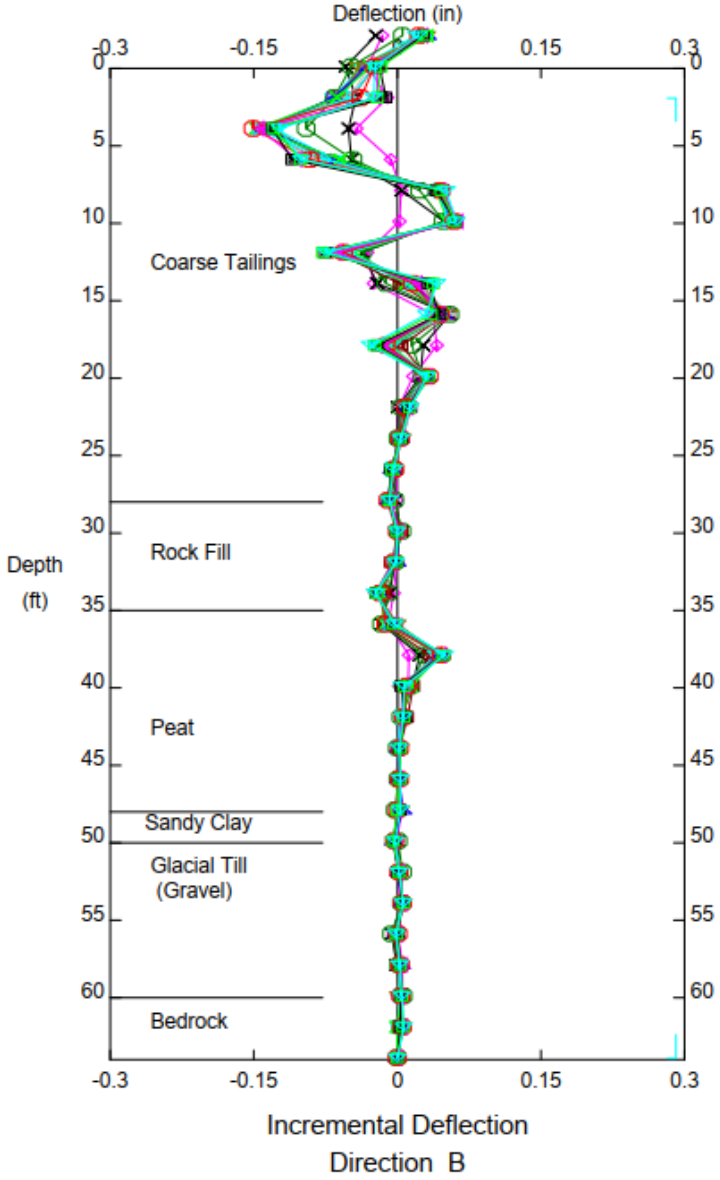
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




LEGEND

| | |
|---|---|
| Initial | 7 Dec 2018 |
| | 23 Apr 2019 |
| | 24 Apr 2020 |
| | 28 Apr 2021 |
| | 26 Apr 2022 |
| | 26 Apr 2023 |
| | 23 Jan 2024 |
| | 8 Feb 2024 |
| | 27 Mar 2024 |
| | 25 Apr 2024 |
| | 28 May 2024 |
| | 27 Jun 2024 |
| | 30 Jul 2024 |
| | 27 Aug 2024 |
| | 18 Sep 2024 |
| | 23 Oct 2024 |
| | 21 Nov 2024 |
| | 23 Dec 2024 |

Ref. Elevation 1511.59




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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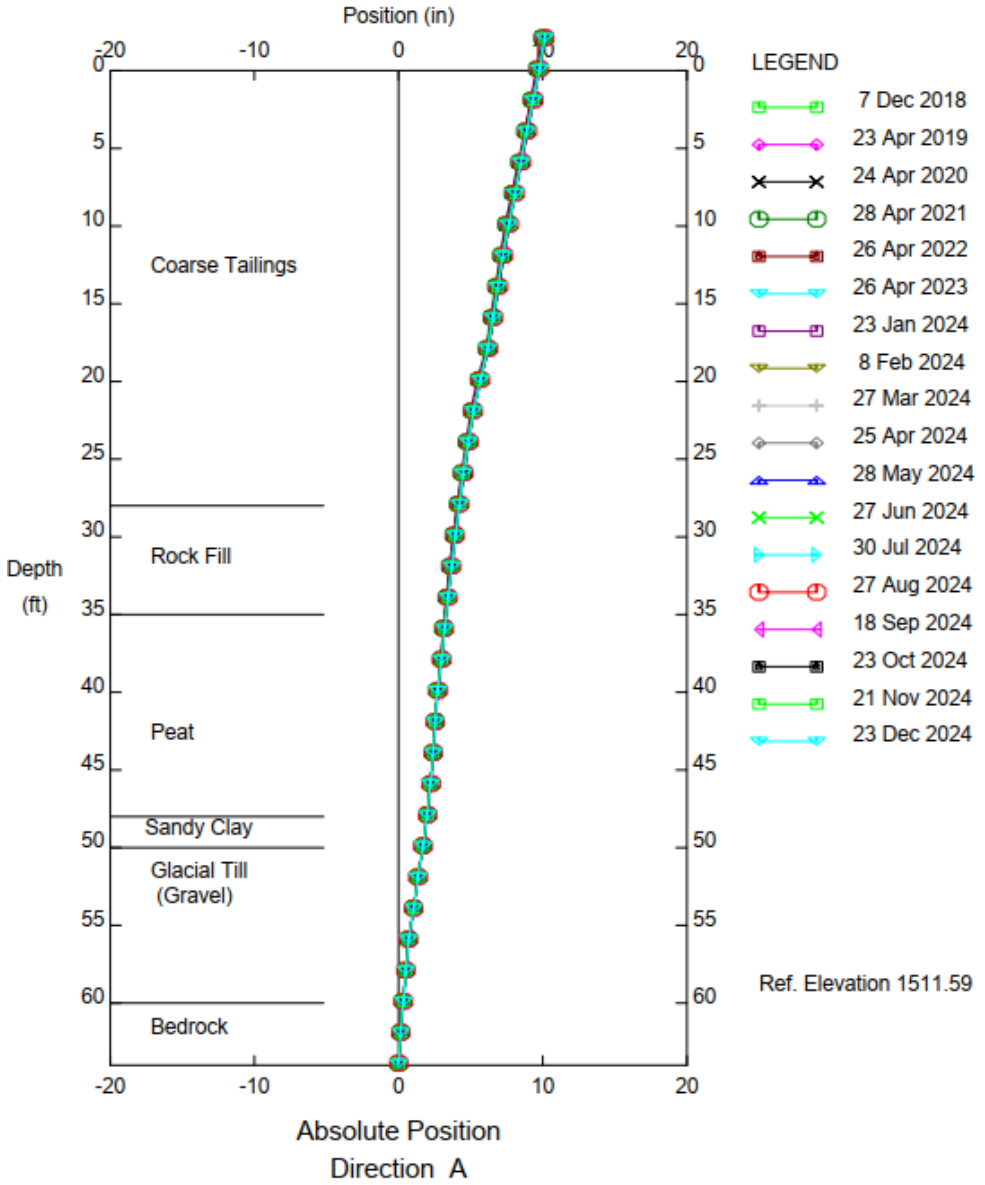
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

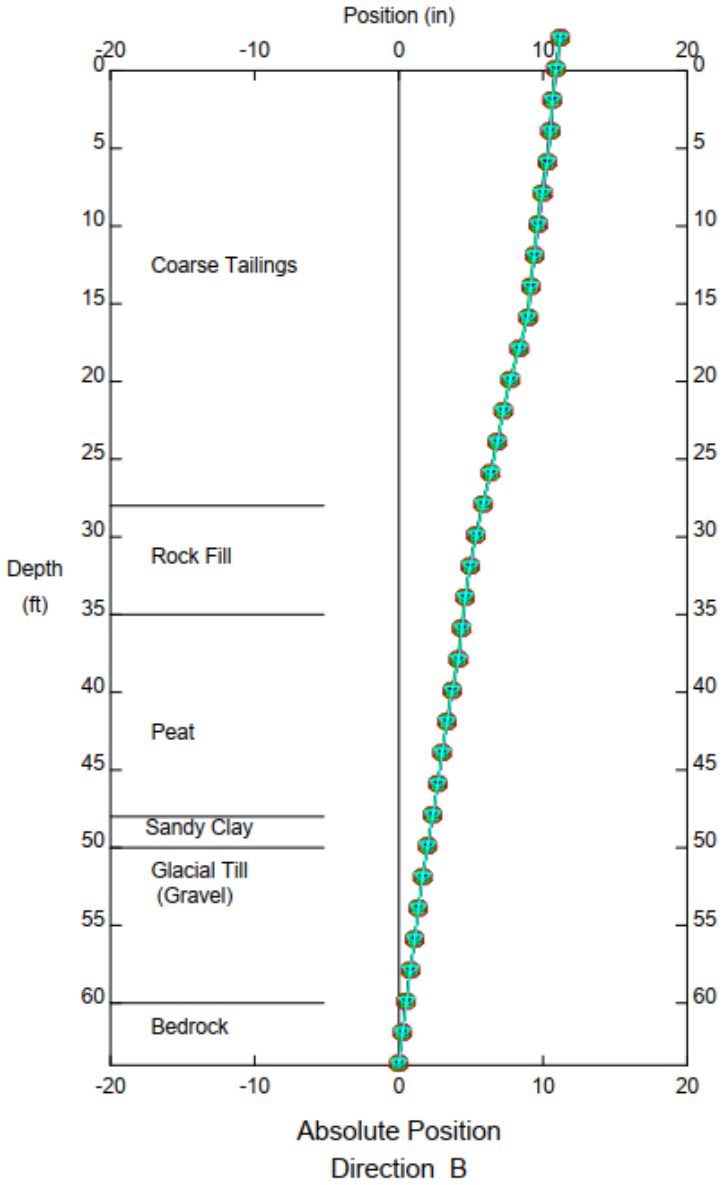
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-1

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-29

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

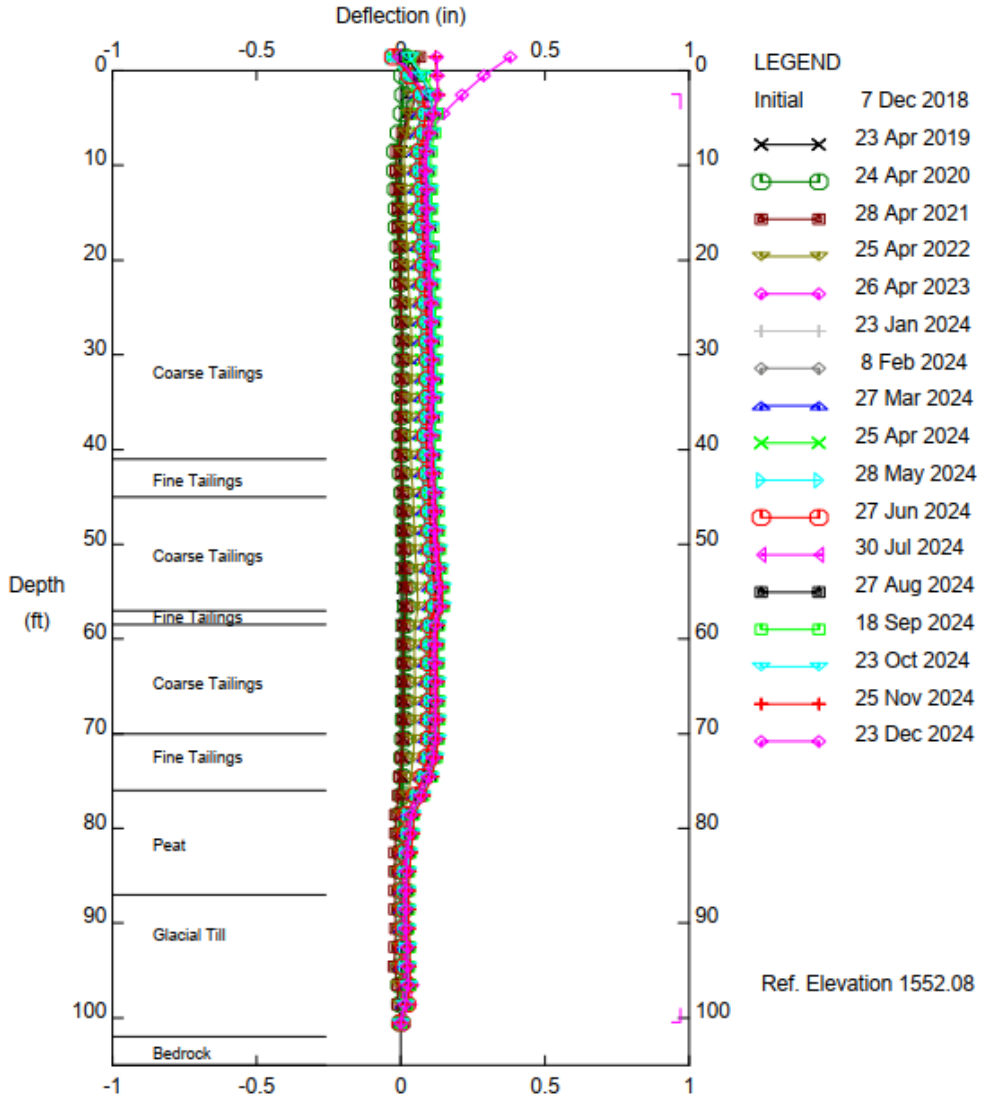
TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-1

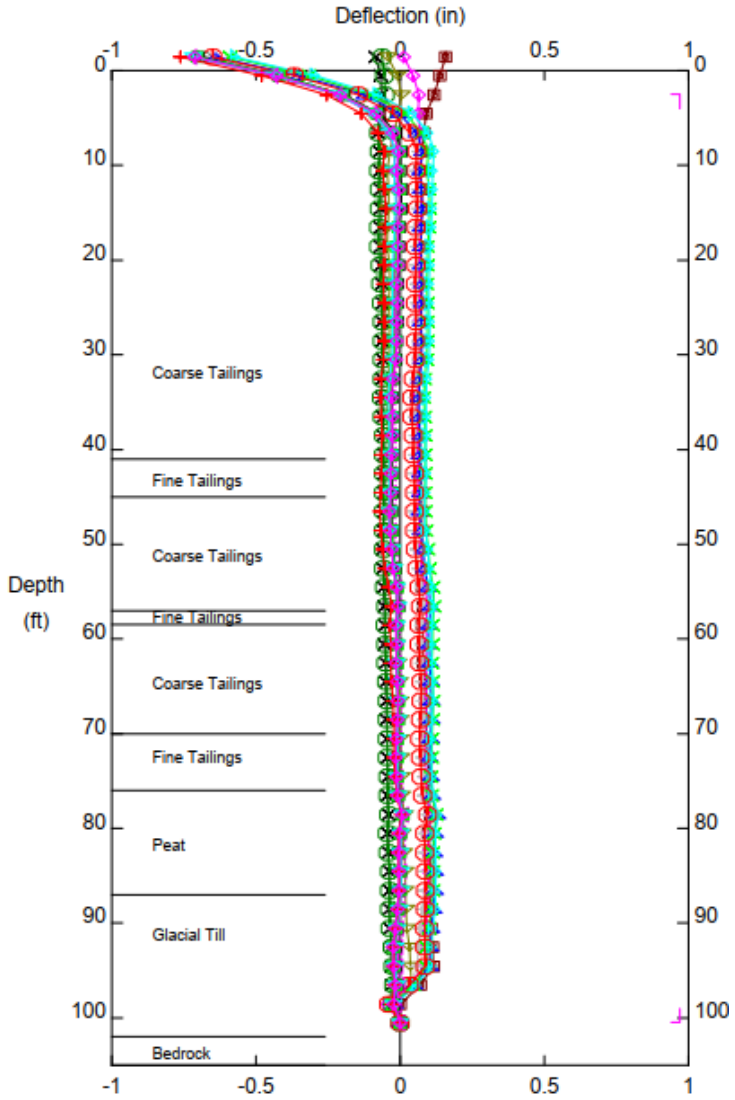
PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-30

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

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| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
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| REVIEWED | - |
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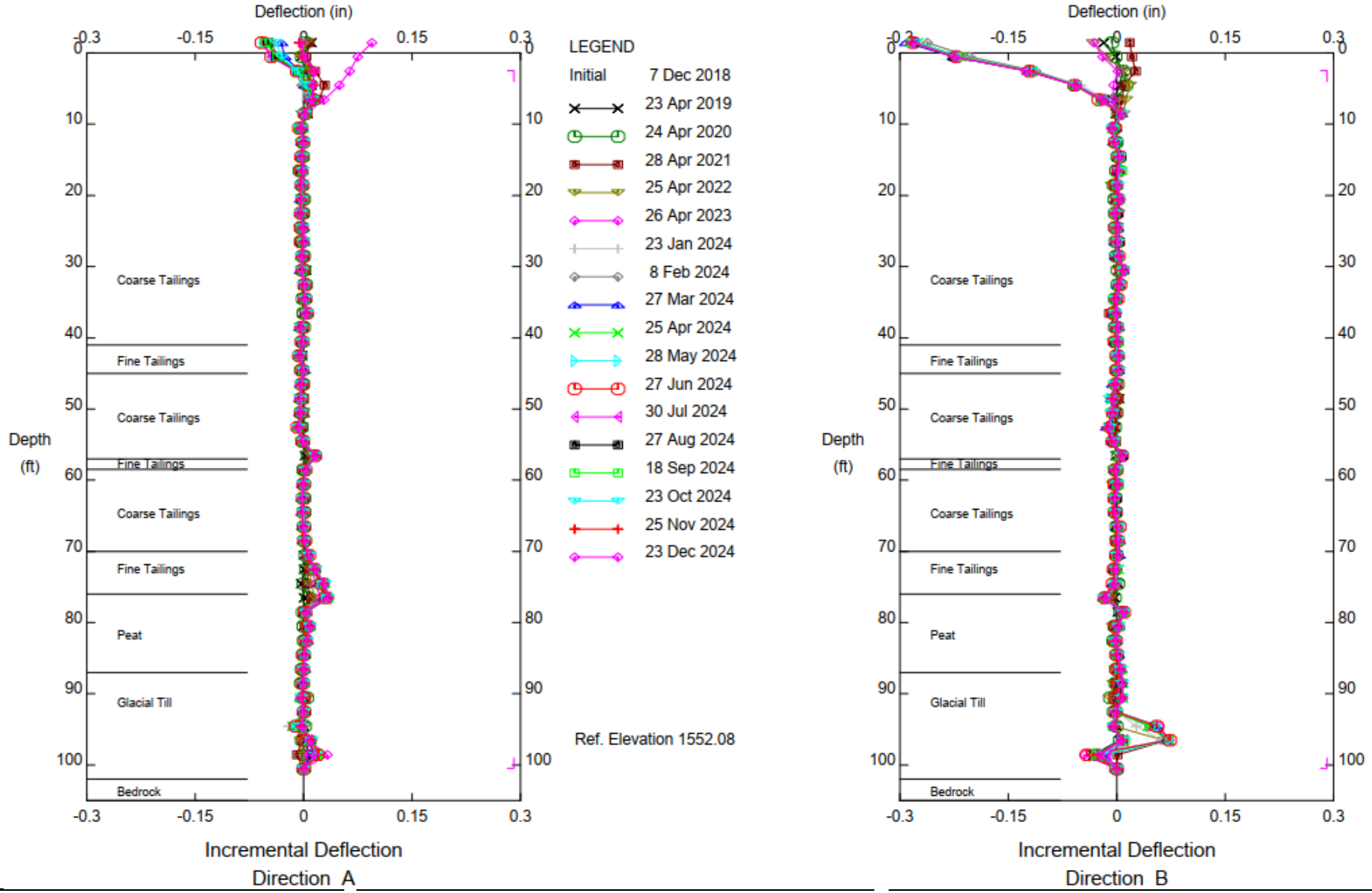
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-3

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-31

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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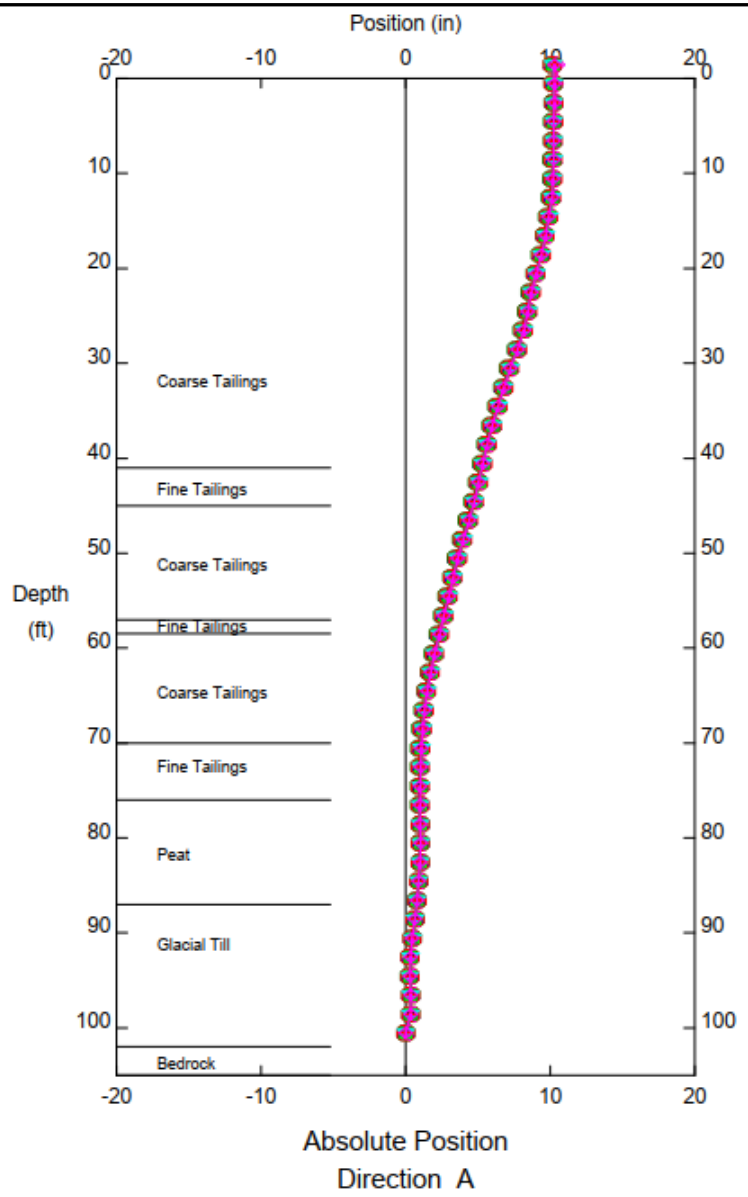
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

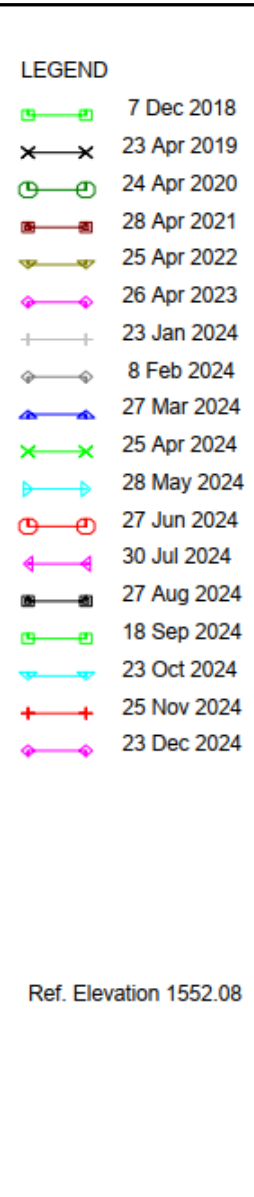
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

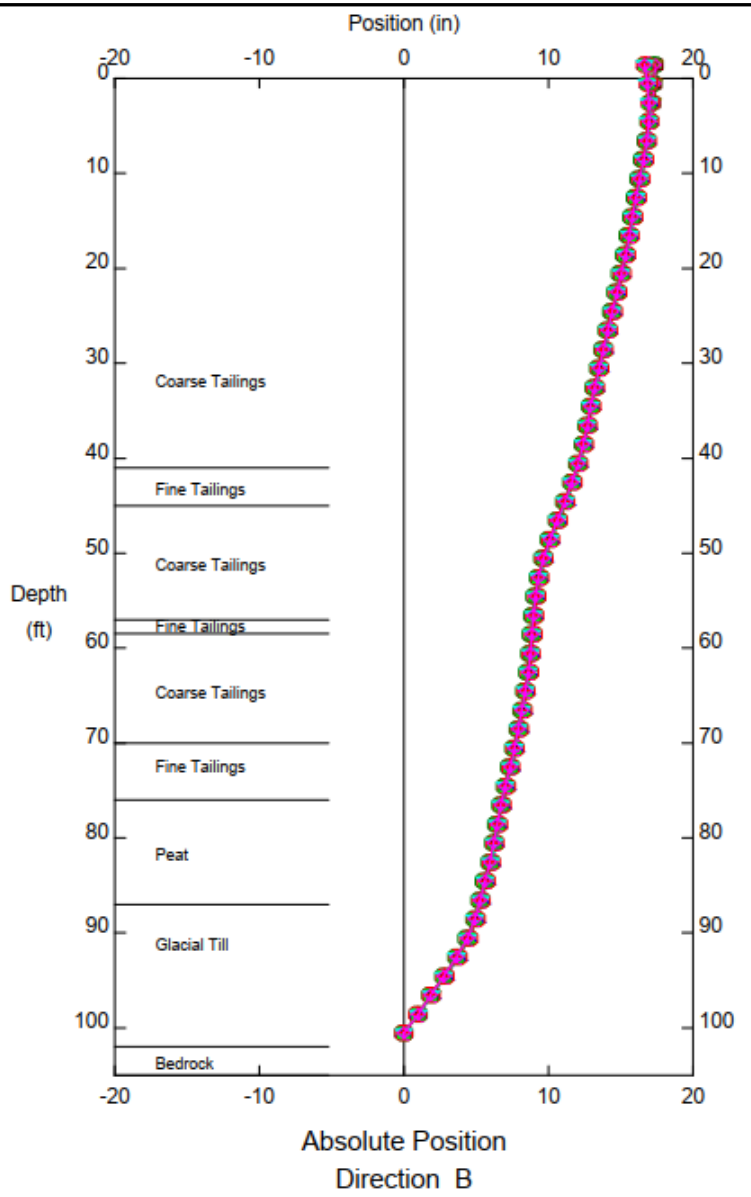
TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-3

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-32

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT

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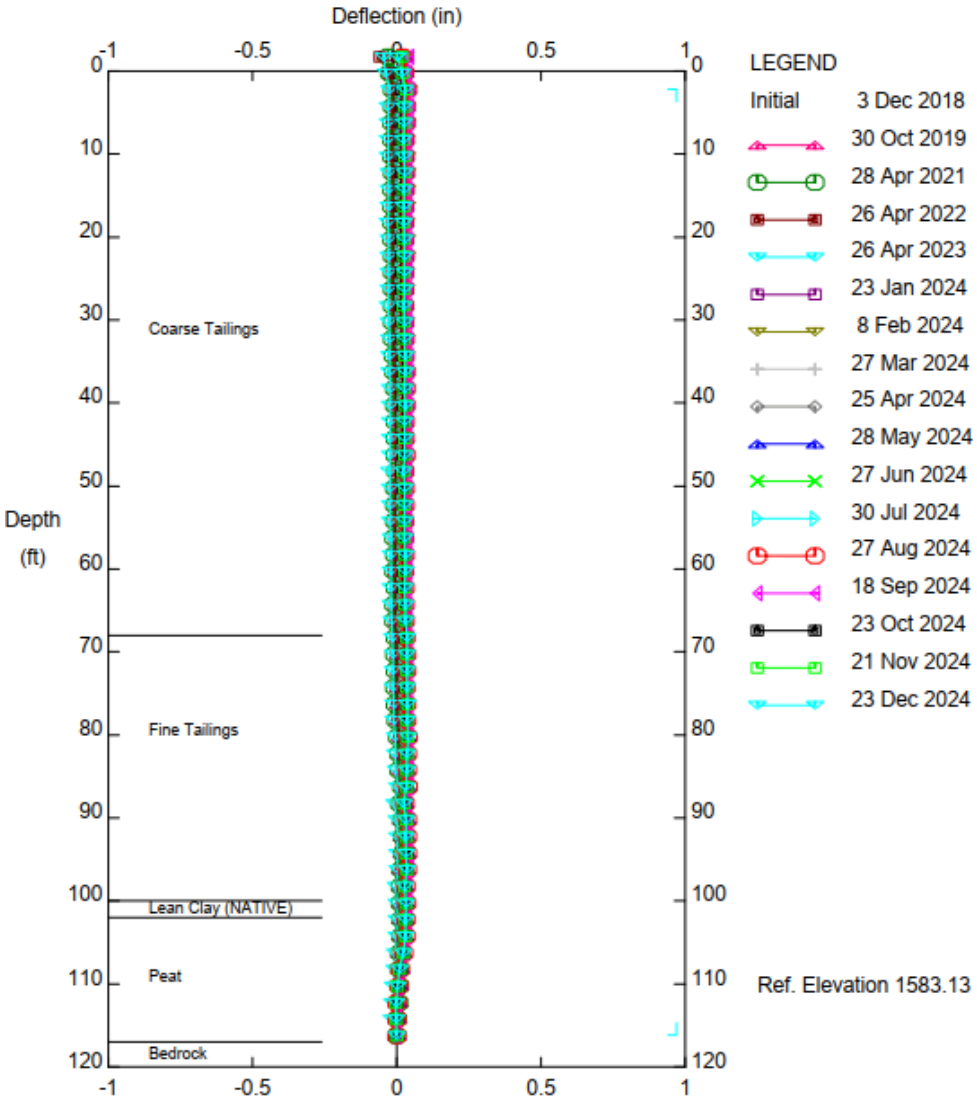
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

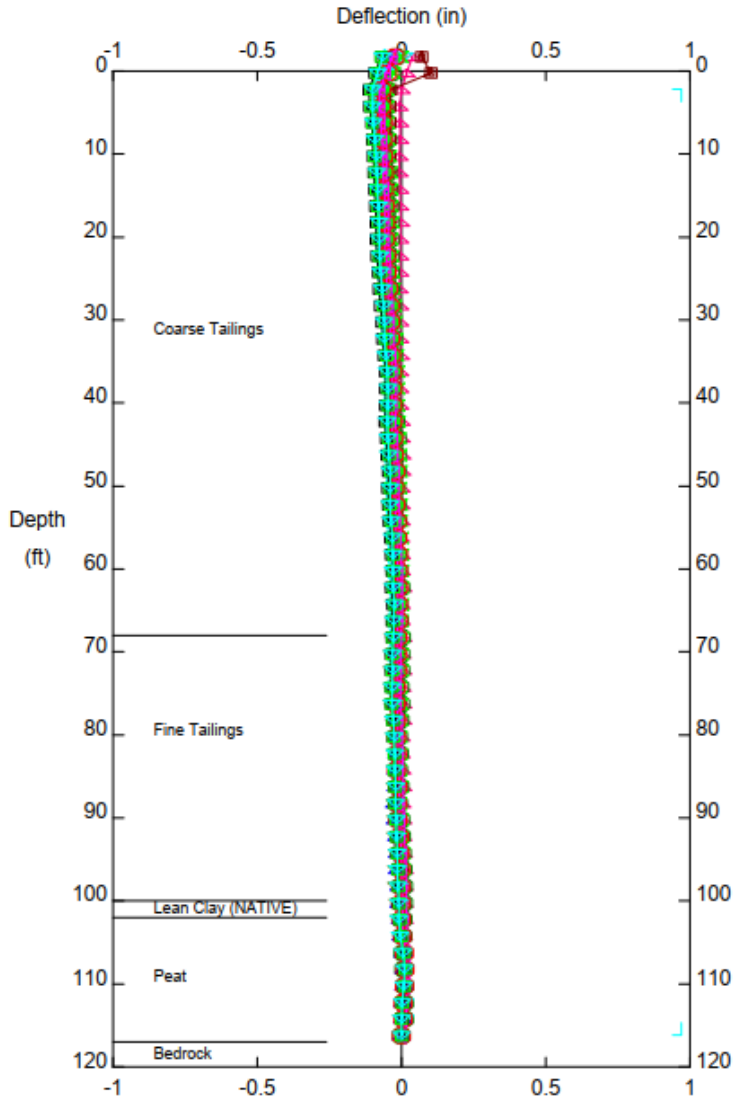
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-3

PROJECT NO. US0033486.3977 | REV. 0 | FIGURE C-33

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
wsp

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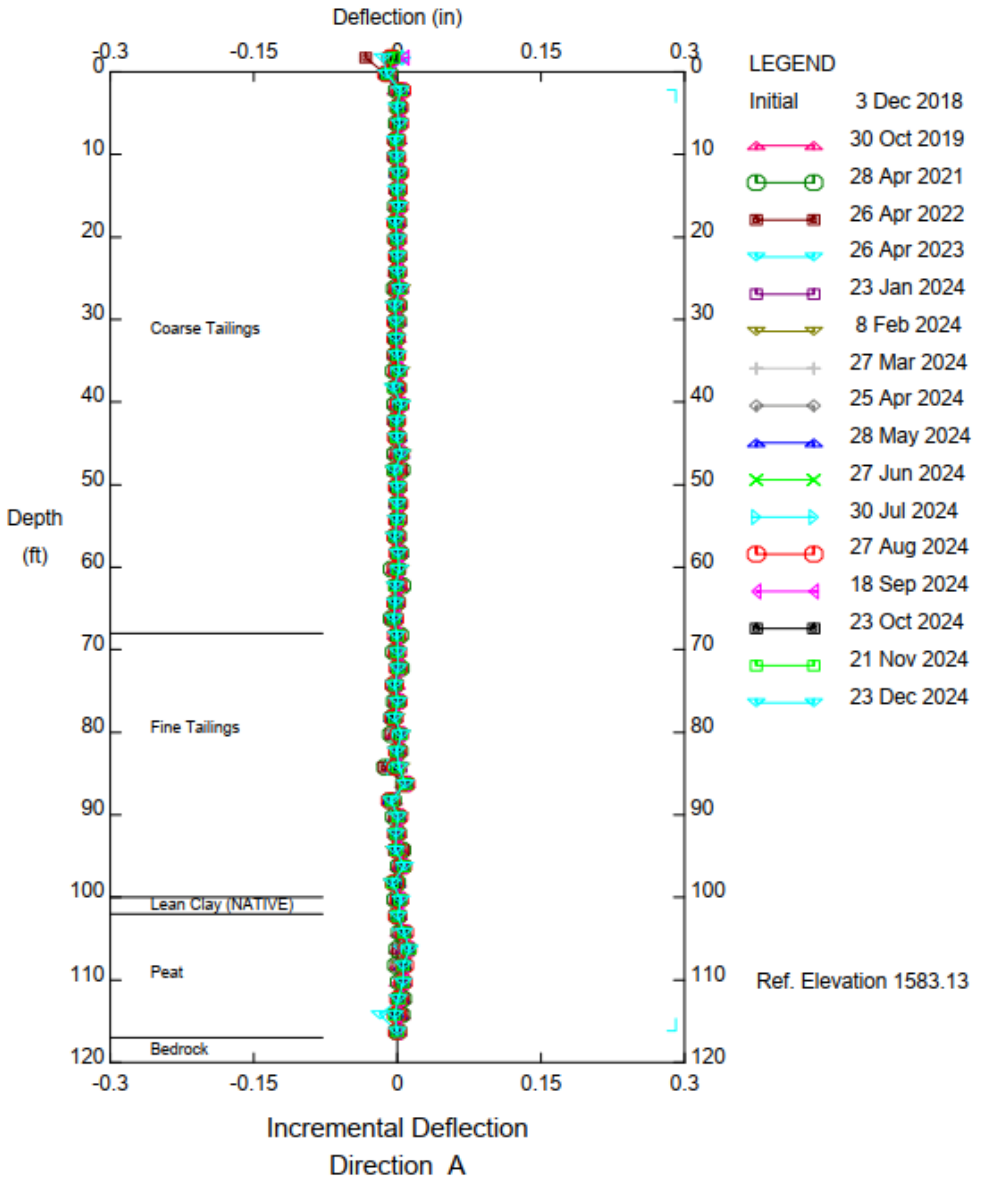
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

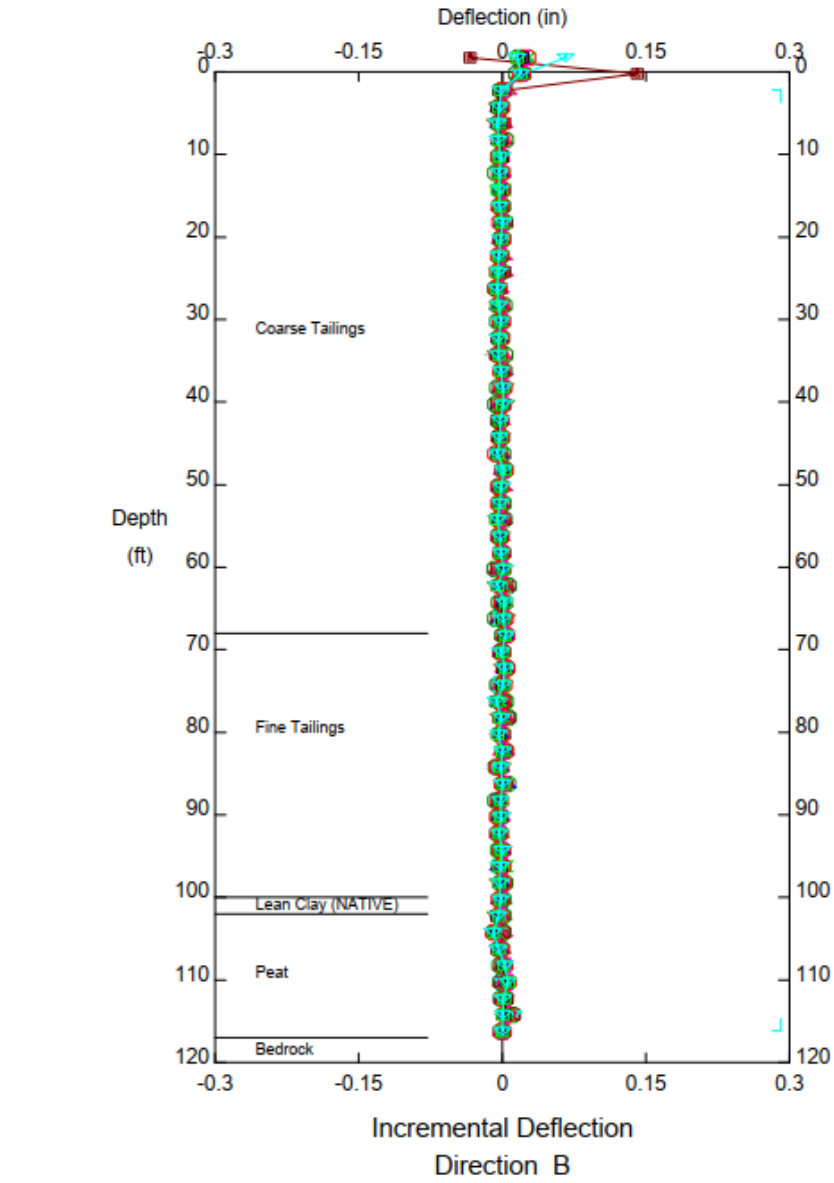
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-4

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-34

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




LEGEND

| | |
|---|---|
| Initial | 3 Dec 2018 |
| | 30 Oct 2019 |
| | 28 Apr 2021 |
| | 26 Apr 2022 |
| | 26 Apr 2023 |
| | 23 Jan 2024 |
| | 8 Feb 2024 |
| | 27 Mar 2024 |
| | 25 Apr 2024 |
| | 28 May 2024 |
| | 27 Jun 2024 |
| | 30 Jul 2024 |
| | 27 Aug 2024 |
| | 18 Sep 2024 |
| | 23 Oct 2024 |
| | 21 Nov 2024 |
| | 23 Dec 2024 |

Ref. Elevation 1583.13

NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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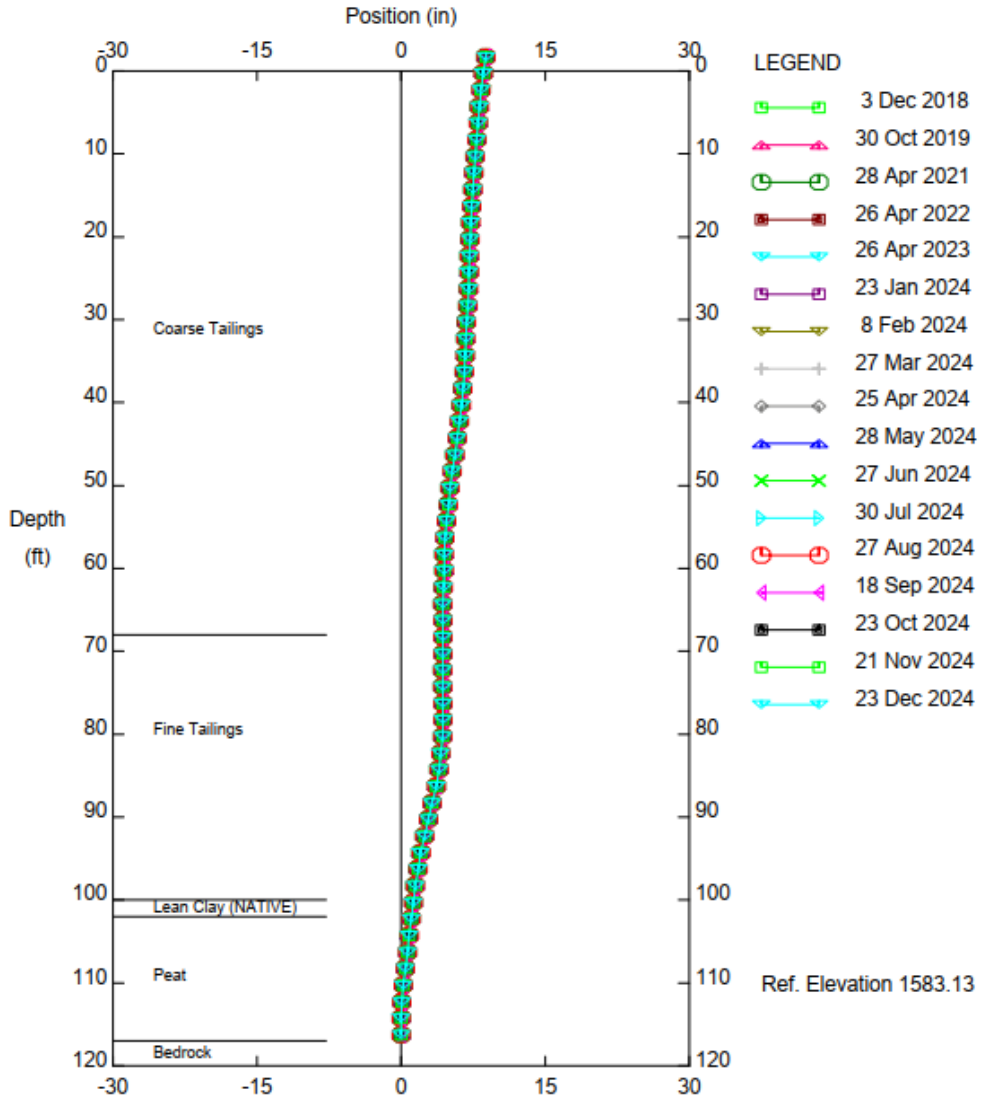
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

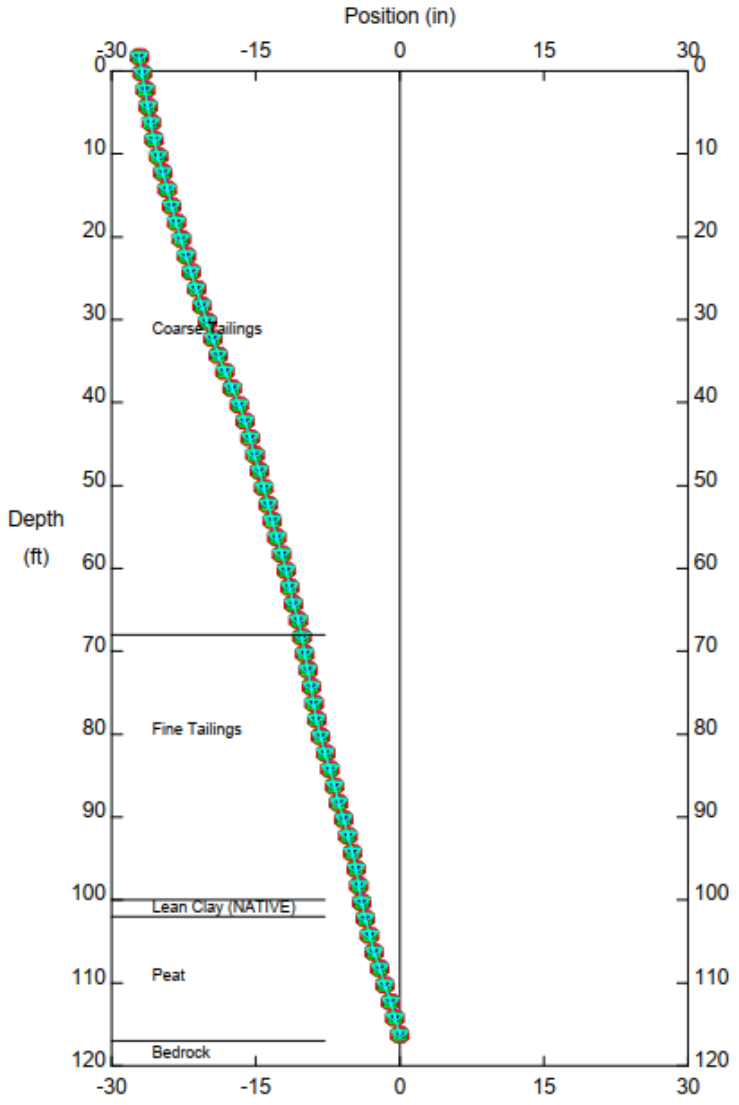
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-4

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-35

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

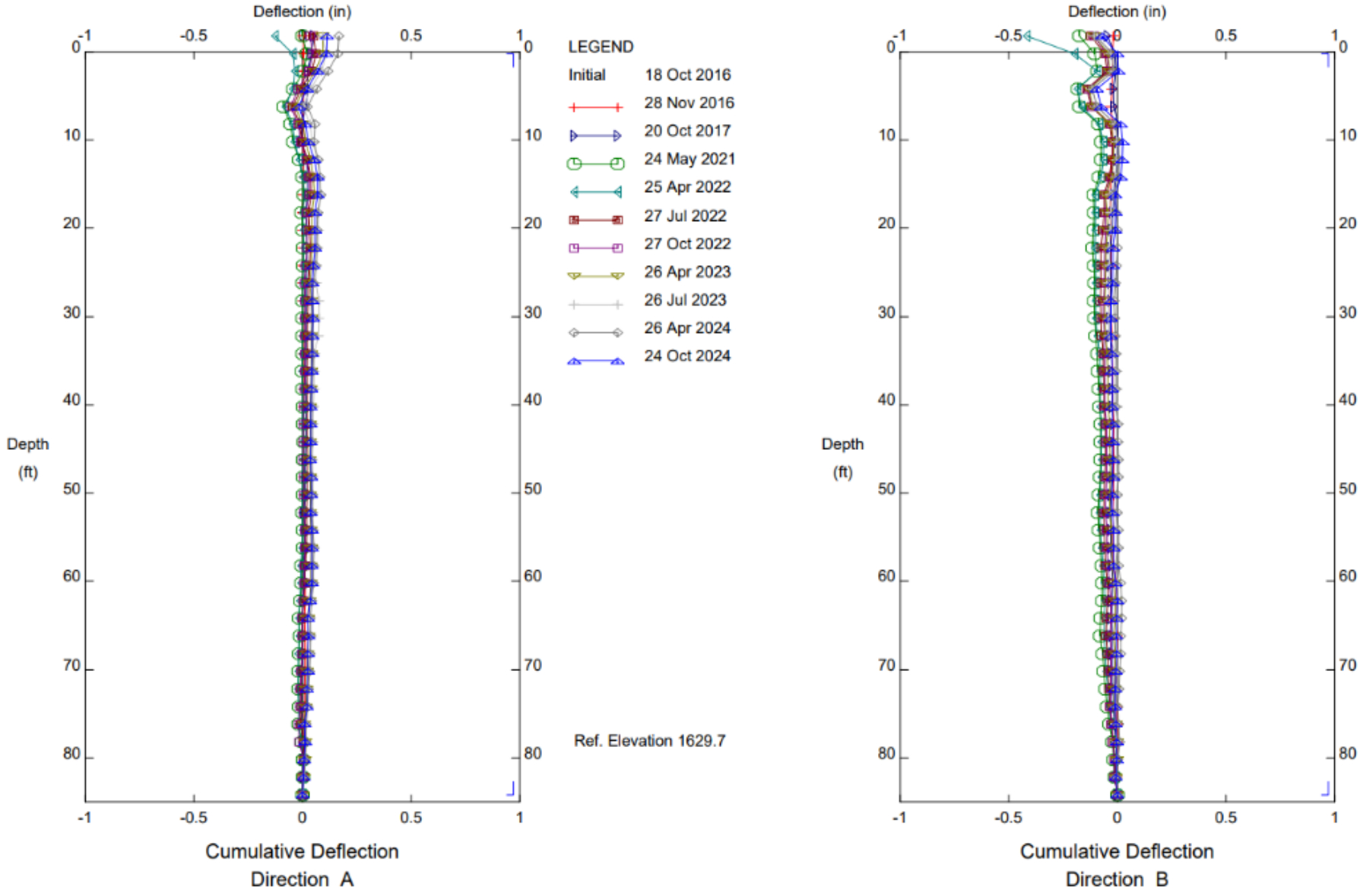
TITLE
SLOPE INCLINOMETERS
INCLINOMETER F-4

PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-36

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
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6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT
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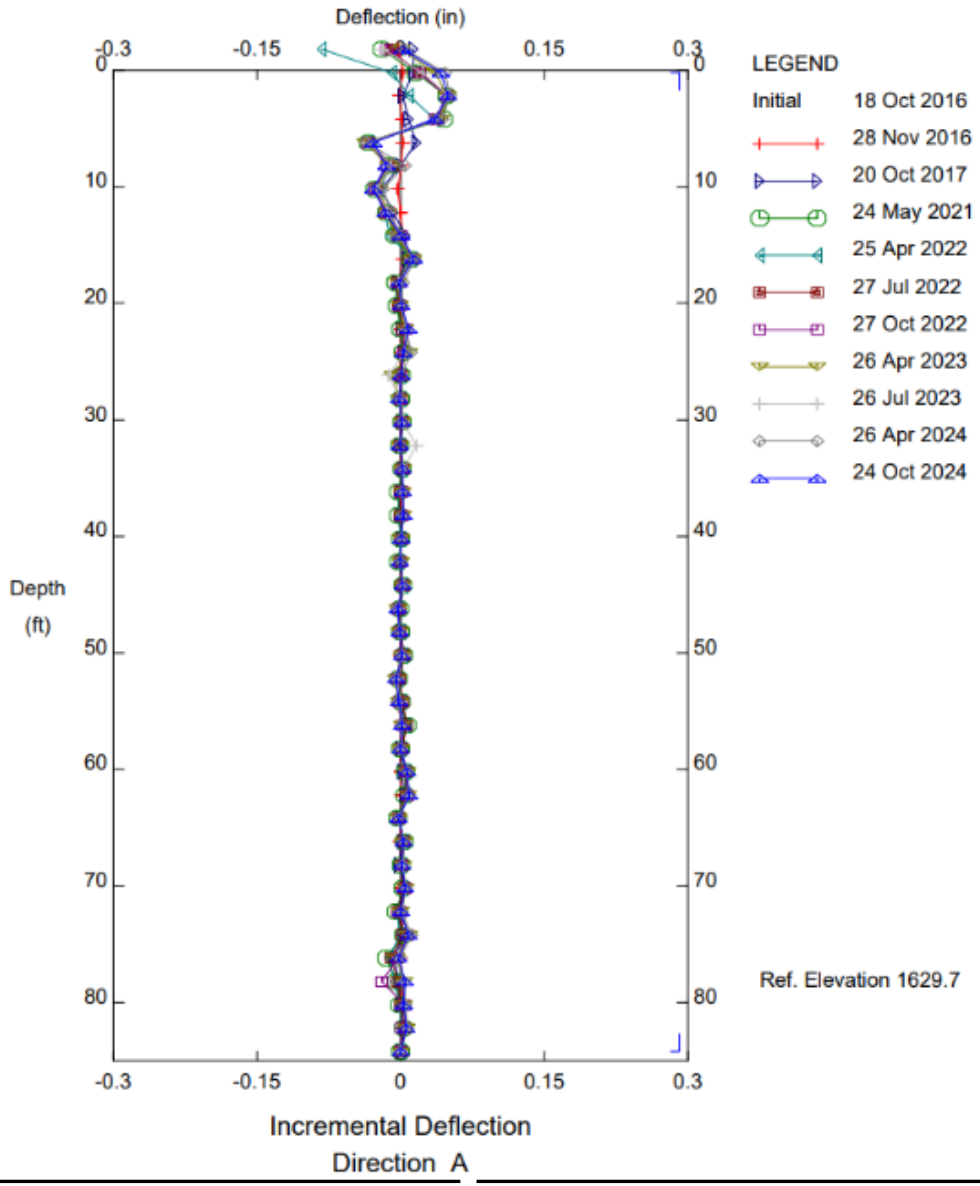
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

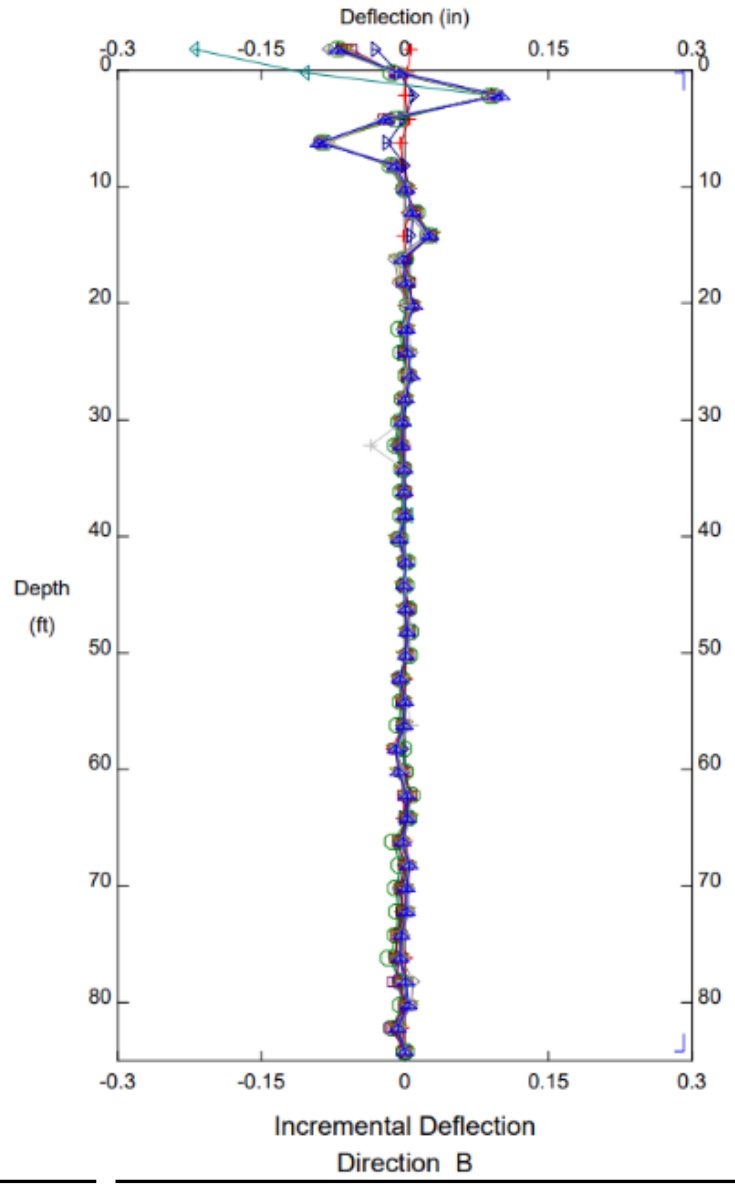
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER K-2

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-37

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

CLIENT
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

CONSULTANT

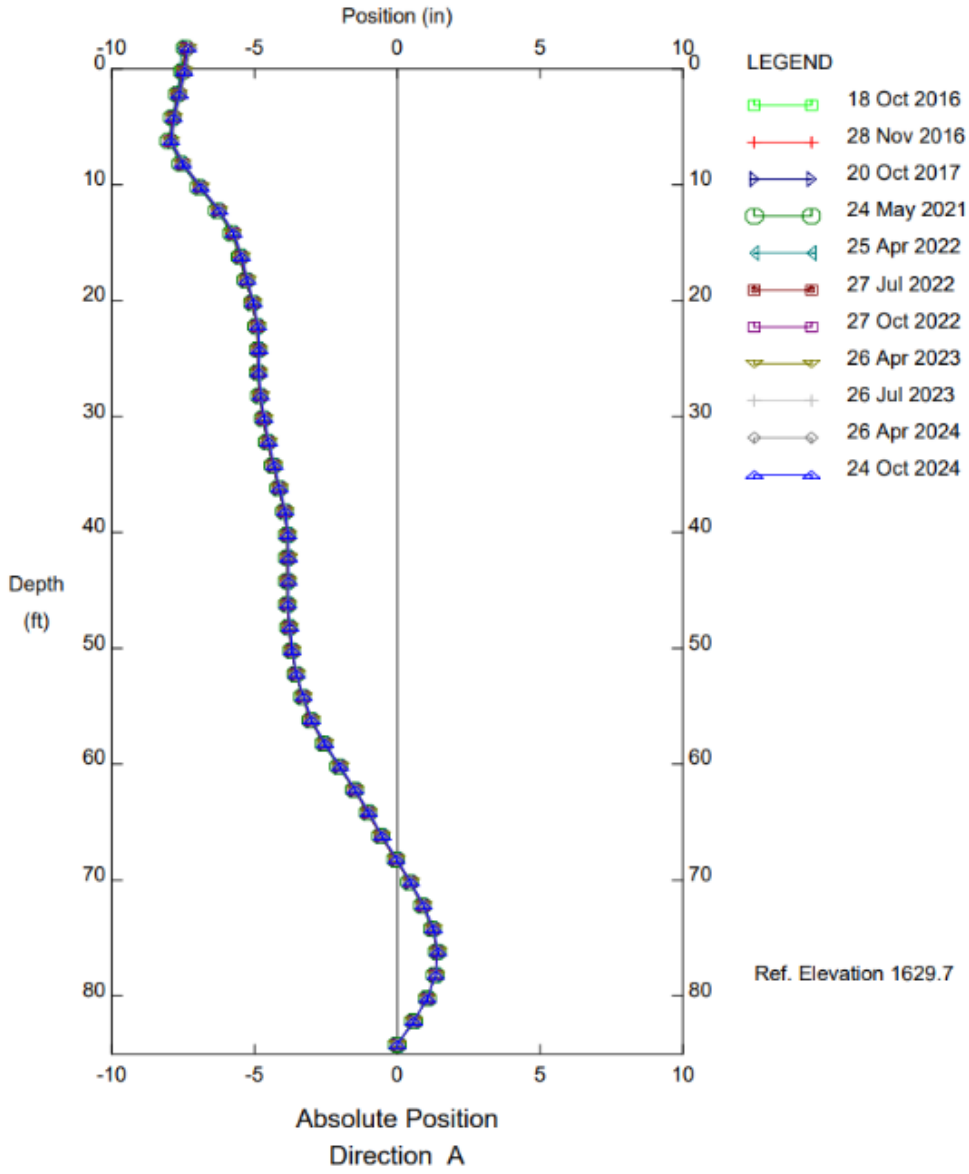
| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

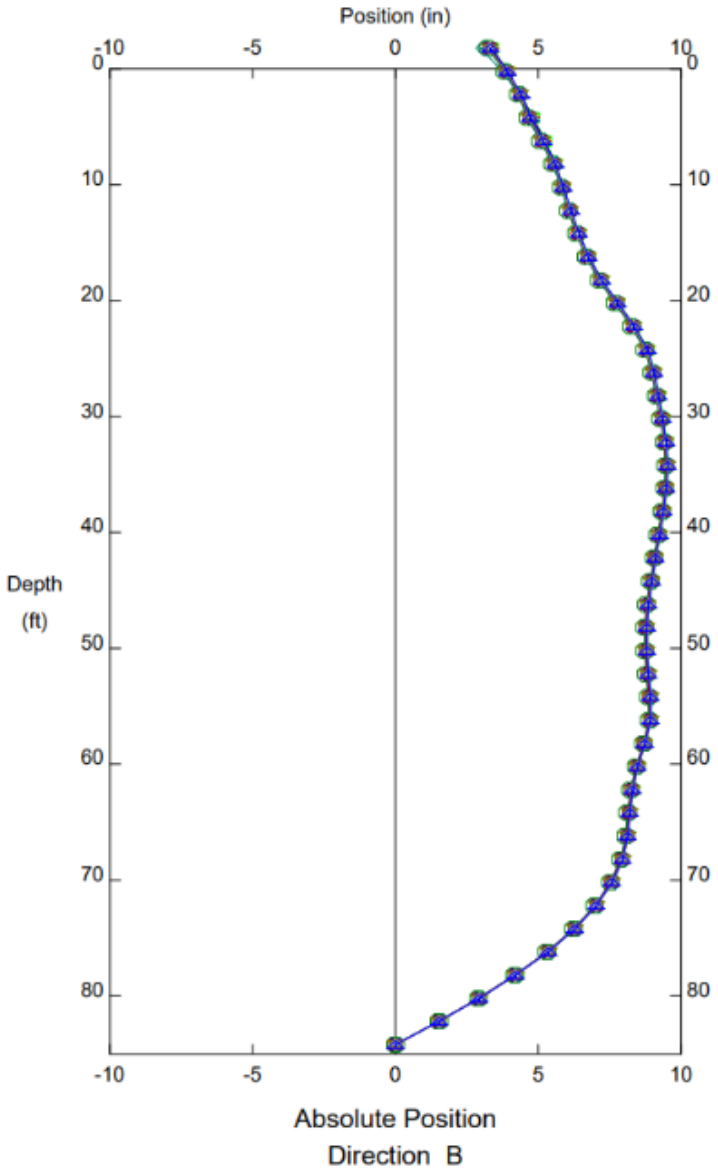
PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER K-2

PROJECT NO. US0033486.3977
REV. 0
FIGURE C-38

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A
1 in
0




NOTES

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wsp

| | |
|---|---|
| YYYY-MM-DD | 2025-01-31 |
| PREPARED | - |
| DESIGNED | - |
| REVIEWED | - |
| APPROVED | - |

PROJECT
LTV TAILINGS STORAGE FACILITY
ANNUAL FACILITY PERFORMANCE REVIEW

TITLE
SLOPE INCLINOMETERS
INCLINOMETER K-2

PROJECT NO.
US0033486.3977

REV.
0

FIGURE
C-39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI A
1 in
0

**APPENDIX D**

# Hoyt Lakes Tailings Basin Instrumentation Report

# 2024 INCLINOMETER AND PIEZOMETER DATA AND INSTRUMENTATION REVIEW

## LTVSMC TAILINGS BASIN
## HOYT LAKES, MN

**PREPARED FOR:**
NEWRANGE COPPER NICKEL LLC
6500 KENSINGTON DRIVE
HOYT LAKES, MN 55750

**PREPARED BY:**
NORTHEAST TECHNICAL SERVICES, INC.
526 CHESTNUT STREET
VIRGINIA, MINNESOTA 55792

**NTS PROJECT 7157B**

**JANUARY 2025**

Environmental Science & Engineering

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

1-29-25

EVAN C. JOHNSON, PE
GEOTECHNICAL ENGINEER
LICENSE NO. 53755
01-29-2025

EVAN C. JOHNSON
LICENSED PROFESSIONAL ENGINEER
53755
STATE OF MINNESOTA

January 29, 2025

Mr. Erik Olson
NewRange Copper Nickel LLC
6500 Kensington Drive
Hoyt Lakes, MN 55750

**RE: LTVSMC TAILINGS BASIN – 2024 PIEZOMETER AND INCLINOMETER MONITORING DATA**

Dear Mr. Olson,

Monitoring of the geotechnical instrumentation installed at the LTVSMC Tailings Basin has been completed to-date in accordance with the prescribed schedule throughout 2024. A total of 20 standpipe piezometers, 65 vibrating wire piezometers, and 7 inclinometers were monitored throughout 2024. An additional 9 vibrating wire piezometers (K-section) are installed on the LTVSMC Tailings Basin but were not directly monitored by NTS in 2024.

We have reviewed the collected data within this submittal for acquisition processes, data reduction, and presentation quality. The data was acquired in general conformance with instrumentation manufacturer's recommendations and industry practice. We have exercised reasonable care in reviewing the data for errors or omissions.

The data provided in this report and delivered electronically with this report is valid for use in engineering design and assessment.

We have appreciated the opportunity to assist with this project. Please contact Evan Johnson by phone at 218-780-9100 or via email at ejohnson@netechnical.com if you have any questions regarding this report.

Sincerely,
Northeast Technical Services, Inc.

Evan C. Johnson, PE
Geotechnical Engineer
MN License 53755

Cc: Kurt Doran, NTS (Secondary Data Retention)

# Table of Contents

**1.0 PROJECT DESCRIPTION AND SCOPE OF WORK ..... 2**

1.1 MONITORING FREQUENCY ..... 2
1.2 DATES OF MONITORING ..... 3

**2.0 WATER LEVEL MEASUREMENTS ..... 5**

2.1 MONITORING EQUIPMENT ..... 5
2.2 MONITORING PROCEDURE ..... 5
2.3 WATER LEVEL DATA SPECIFIC NOTES ..... 5
2.4 DOWNHOLE LOGGING ..... 7
2.5 STANDPIPE PIEZOMETER SLUG TESTING ..... 7

**3.0 INCLINOMETER MEASUREMENTS ..... 8**

3.1 MONITORING PROCEDURE ..... 8
3.2 INCLINOMETER PLOTS ..... 9
3.3 INCLINOMETER POINTS OF INTEREST ..... 10
3.4 DOWNHOLE LOGGING ..... 10
3.5 INCLINOMETER ORIENTATION ..... 11

**4.0 CONCLUSION ..... 12**

**5.0 BIBLIOGRAPHY ..... 12**

# Figures

FIGURE 1: LTVSMC TAILINGS BASIN GEOTECHNICAL INSTRUMENTATION

# Appendices

APPENDIX A: STATIC WATER LEVEL MEASUREMENTS
APPENDIX B: INCLINOMETER SUMMARY TABLE
APPENDIX C: 2024 INCLINOMETER GRAPHS & DATA
APPENDIX D: INSTALLATION BORING LOGS
APPENDIX E: 2023 VIBRATING WIRE INSTALLATION DATA
APPENDIX F: 2022 MONITORING RECOMMENDATION LETTER – APRIL 2022

# 1.0 Project Description and Scope of Work

NTS has conducted monitoring of the geotechnical instrumentation installed on the LTVSMC Tailings Basin (Tailings Basin) located in Hoyt Lakes, MN. During 2024 this instrumentation consisted of 20 standpipe piezometers, 65 vibrating wire piezometers, and 7 inclinometers. The instrument locations can be seen in the attached Figure 1.

The NTS scope of work is to monitor the geotechnical installations, assess the data for accuracy and usefulness, and provides the collected data, with qualifications to NewRange and WSP, who is the Engineer of Record for the Tailings Basin, for analysis.

## 1.1 Monitoring Frequency

There are 4 monitoring schedules currently utilized at the Tailings Basin for measurement of the geotechnical instrumentation. These schedules are:

**Automated Monitoring-** All vibrating wire locations installed in the K-section located on the Splitter Dike between Cell 1E and Cell 2E (9 vibrating wire piezometers) were historically monitored automatically and remotely. NTS does not complete routine monitoring or data collection at these locations. Eight additional vibrating wire locations had dataloggers installed, and daily monitoring commenced on February 9, 2024, as indicated in Table 3 below.

1. **Monthly Monitoring-** A total of 48 Vibrating Wire installations, 7 stand-pipe piezometers, and 3 inclinometers are monitored monthly. These include piezometer locations located primarily on the north perimeter dike of Cell 2E as well as on the Splitter Dike located between Cell 1E and Cell 2E.

2. **Three Events per Year Monitoring-** Three inclinometer locations are monitored at a frequency of three times per year. These locations are DH96-10, DH96-28, and K-2. The monitoring events were carried out in April, July, and October (K-2 was also monitored in November following removal of a floating obstruction; this is discussed below).

3. **Semi-Annual Monitoring-** Thirteen stand-pipe locations and 1 inclinometer location are monitored semi-annually in April and October of each year.

Tables 1-3 below indicates the monitored locations and their associated monitoring frequency.

The locations monitored and monitoring frequency in 2024 were set forth in the letter report titled *'2022 Instrumentation Monitoring Recommendations'* (BARR Engineering, Inc., Apr 2022). The vibrating wire piezometers installed in 2023 were all designated to be monitored monthly.

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### 1.2 Dates of Monitoring

Monitoring was completed on the following dates:

- 1/23/2024- Monthly
- 2/08/2024- Monthly
- 3/27/2024- Monthly
- 4/25/2204- Monthly + 3x/year + Semi-Annual
- 4/26/2024- Monthly + 3x/year + Semi-Annual
- 5/28/2024- Monthly
- 6/27/2024- Monthly
- 7/30/2024- Monthly + 3x/year
- 8/27/2024- Monthly
- 9/18/2024- Monthly
- 10/23/2024- Monthly + 3x/year + Semi-Annual
- 10/24/2024- Monthly + 3x/year + Semi-Annual
- 11/21/2024- Monthly
- 11/25/2024 – K2
- 12/03/2024- Monthly
- 12/23/2024- Monthly

**Table 1: Standpipe Piezometer Locations & Monitoring Frequency**

| Standpipe Piezometer | Monitoring Frequency |
|---|---|
| A-1 | Semi-annual, April & October |
| A-3 | |
| A-9 | |
| B-2 | |
| P2HA-99 | |
| P2HB-99 | |
| P1H-99 | |
| P3H1-99 | |
| P2H1-99 | |
| P1H1-99 | |
| P3H-99 | |
| P1B1-99 | |
| P1B-99 | |
| D-1 | Monthly |
| D-2 | |
| D-4 | |
| F-2 | |
| G-2 | |
| 2E_2018_pz_seepleft_SP | |
| 2E_2018_pz_seepmid_SP | |

**Table 2: Inclinometer Installations & Monitoring Frequency**

| Inclinometer | Monitoring Frequency |
|---|---|
| DH96-10 | 3x per year, April, July, October |
| DH96-28 | |
| 2E_2018_IN_K-2 | |
| DH96-18 | Semi-annual, April & October |
| 2E_2018_IN_F-1 | Monthly |
| 2E_2018_IN_F-3 | |
| 2E_2018_IN_F-4 | |
| | |

| Table 3: Vibrating Wire Piezometer Locations & Monitoring Frequency | | | |
|---|---|---|---|
| **Vibrating Wire Piezometer** | **Monitoring Frequency** | **Vibrating Wire Piezometer** | **Monitoring Frequency** |
| **Cell 1E-2E Splitter Dike** | | **Cell 2E North Perimeter Dike (cont'd)** | |
| 2E_2016_PZ_K1 Top | Continuous (Currently Not Functioning) | 2E-VW318+30-R677 (T) | Monthly |
| 2E_2016_PZ_K1 – Bottom | | 2E-VW318+30-R677 (M) | |
| 2E_2016_PZ_K2 – Top | | 2E-VW318+30-R677 (B) | |
| 2E_2016_PZ_K2 - Middle | | 2E-VW318+25-R341 (T) | |
| 2E_2016_PZ_K2 – Bottom | | 2E-VW318+25-R341 (MT) | |
| 2E_2016_PZ_K2 – Bedrock | | 2E-VW318+25-R341 (MB) | |
| 2E_2016_PZ_K3 – Top | | 2E-VW318+25-R341 (B) | |
| 2E_2016_PZ_K3 – Middle | | 2E-VW320+60-L444 (T) | Daily (by logger) |
| 2E_2016_PZ_K3 – Bottom | | 2E-VW320+60-L444 (B) | |
| 1E2E-VW13+25-R138 (T) | Monthly | 2E-VW320+65-L148 (T) | |
| 1E2E-VW13+25-R138 (M) | | 2E-VW320+65-L148 (B) | |
| 1E2E-VW13+25-R138 (B) | | 2E_2018_PZ_F-1 (Peat_40') | Monthly |
| 1E2E-VW13+45-L216 (T) | | 2E_2018_PZ_F-1 (Till_46') | |
| 1E2E-VW13+45-L216 (M) | | 2E_2018_PZ_F3_offset_VW (FT_66') | |
| 1E2E-VW13+45-L216 (B) | | 2E_2018_PZ_F3_offset_VW (FT_85') | |
| 1E2E-VW28+50-R122 (T) | | 2E_2018_PZ_F3_offset_VW (Peat_100') | |
| 1E2E-VW28+50-R122 (MT) | | 2E_2018_PZ_F4_VW (FT_75') | |
| 1E2E-VW28+50-R122 (MB) | | 2E_2018_PZ_F4_VW (Peat_111') | |
| 1E2E-VW28+50-R122 (B) | | 2E_2018_PZ_F4_VW (Till_124') | |
| 1E2E-VW28+20-L210 (T) | | 2E-VW332+20-L180 (T) | |
| 1E2E-VW28+20-L210 (B) | | 2E-VW332+20-L180 (B) | |
| **Cell 2E North Perimeter Dike** | | 2E-VW347+70-L134 (T) | |
| 2E-VW308+05-R702 (T) | Monthly | 2E-VW347+70-L134 (B) | |
| 2E-VW308+05-R702 (M) | | 2E_2018_PZ_G1_VW (48') | |
| 2E-VW308+05-R702 (B) | | 2E_2018_PZ_G1_VW (52') | |
| 2E-VW308+30-R356 (T) | | 2E_2018_PZ_G1_VW (58') | |
| 2E-VW308+30-R356 (M) | | 2E_2018_PZ_G4_VW (50') | |
| 2E-VW308+30-R356 (B) | | 2E_2018_PZ_G4_VW (70') | |
| 2E_2018_PZ_J1_VW (42') | | 2E_2018_PZ_G4_VW (75') | |
| 2E_2018_PZ_J1_VW (67') | | 2E-VW356+50-R366 (T) | |
| 2E_2018_PZ_J1_VW (75') | | 2E-VW356+50-R366 (B) | |
| 2E-VW311+45-L472 (T) | Daily (by logger) | | |
| 2E-VW311+45-L472 (B) | | | |
| 2E-VW311+50-L170 (T) | | | |
| 2E-VW311+50-L170 (B) | | | |

# 2.0 Water Level Measurements

All water level measurements collected during 2024 can be seen in Appendix A.

## 2.1 Monitoring Equipment

Two devices are utilized to monitor the piezometers present on the Tailings Basin. Monitoring of the standpipe piezometers consists of using a calibrated electronic static water level indicator which measures water level from casing to 0.01-foot resolution, and are calibrated annually to an accuracy of .01 feet/10 feet. Vibrating Wire (VW) installations are monitored utilizing a Slope Indicator VW Manual Data Recorder that records piezometer cell frequency with a resolution of 0.1 Hertz and temperature with a resolution of 0.1 degrees Celsius. The Slope Indicator VW Manual Data Recorder does not require recurring calibration per the manufacturer, but only when readings are suspect.

## 2.2 Monitoring Procedure

Standpipe piezometer readings consist of raising and lowering the static water level electronic reading probe and ensuring a consistent depth is indicated. If questionable indications are given, the probe sensitivity is decreased until a definitive water level is measured.

Vibrating wire piezometer measurements were collected utilizing the sweep C frequency range (1400-3500 Hz). Frequency (Hertz) and temperature readings are provided in Appendix A. NTS has reviewed the spreadsheet calculations that determine the pressure head associated with frequency and temperature readings as well as barometric pressure adjustment.

For the new vibrating wire installations, NTS utilized the installation data provided by BARR to determine the ‘C’ factor utilized in the polynomial calculation of pressure head for each vibrating wire piezometer. This installation data can be found in Appendix E.

Inclinometer static water levels were also measured in similar fashion to the standpipe piezometers. It is understood that inclinometer casings are intended to be sealed and water levels within the casing should not represent the groundwater potentiometric surface. These readings are collected to look for changes that may be affecting the integrity of the inclinometer readings.

## 2.3 Water Level Data Specific Notes

The water level data collected through 2024 has been consistent with one exception noted and discussed below at vibrating wire location 1E2E-VW13+25-R138 (T). Standpipe piezometers have shown a maximum fluctuation of 3.5 feet (D-2) with no distinct trends observed, with all other standpipe piezometer locations indicating less than 2.5 feet fluctuation. With the exception

of 1E2E-VW13+25-R138 (T), vibrating wire measurements had a maximum fluctuation of 4.4 feet (2E-VW347+70-L134 (T)).

The following points of interest have been identified within the 2024 water level dataset:

1.) Vibrating wire installation 1E2E-VW13+25-R138 (T) indicated a jump of 16.8 feet from the August 27 2024 reading to the September 18 2024 reading (elevation 1596.5 to 1613.3 feet). Prior to this jump, the vibrating wire had been reading zero head pressure, indicating the installation was not submerged. The deeper vibrating wire tips installed at this location (42 feet lower and 58 feet lower) did not indicate a meaningful change in pressure during this period. The October 23 2024 reading indicated the same heightened pressure as September. On November 21 2024, the 1E2E-VW13+25-R138 (T) transducer was measured to have decreased in head pressure by 10 feet (elevation 1603.2 feet), and was rechecked on December 3 2024, indicating another decrease of 6 feet (elevation 1597.0 feet). The final reading of the year on December 23 2024 again indicated zero head pressure at this location. With the multiple heightened readings observed as well as the installation indicating multiple readings of decreasing pressure, it would appear that these readings are accurate. NTS has not investigated the potential cause of change in subsurface conditions that may have occurred during this timeframe.

2.) Vibrating Wire 2E-VW311+45-L472 (T) indicated a rise of 3.8 feet between the February 2024 and March 2024 readings from a water elevation of 1484.8 feet to 1488.6 feet. Following this approximate 4-foot jump, the location remained stable at the heightened pressure for the remainder of the year, steadily decreasing to 1488.2 in December. This jump in pressure was not reflected in the corresponding 2E-VW311+45-L472 (B) transducer installed approximately 8 feet lower than the ‘Top’ unit. However, the jump in pressure did cause both units to now be reporting near identical pressure heads. Therefore, it is thought that the earlier readings that indicated a pressure of 4-feet less were artificially low from installation.

3.) Vibrating Wire installation 2E_2018_PZ_G4_VW (70') has functioned erratically throughout 2024, as it did in 2023. Erratic behavior was first observed in August 2023 when the installation would not stabilize a temperature reading. Then, in October 2023, a frequency reading could not be obtained and has continued to be the case during the period through the April 2024 event. In May 2024, NTS removed the wire conduit and inspected the wire for potential damage. None was apparent. NTS also stripped the wire ends to expose and contact ‘fresh’ copper for connecting to the reader. This maintenance appeared to help as readings were able to be collected in all months following except August and December. There is likely a broken wire within the vibrating wire jacket that is not indicated by an obvious nick in the jacket. A wire splice above ground may be appropriate to eliminate the potential broken wire within the jacket.

4.) Vibrating wire installation 2E-VW308+30-R356 (M) was monitored in November and December 2023. The December reading indicated an unstable frequency reading. The field staff attempted to collect a representative value but the value collected would indicate a water level reading approximately 40 feet above ground surface and is likely unrepresentative of true hydraulic pressure head. No stable readings could be obtained in 2024. Field staff attempted to identify any defects in the wire at the surface but were unable to do so.

5.) Vibrating wire installation 2E-VW311+50-L170 (T) which is connected to a datalogger, lost temperature readings from June 28 to July 30 2024. This was caused by the temperature wires becoming detached inside the logger box. This was corrected on July 30.

## 2.4 Downhole Logging

Standpipe piezometers of interest were observed by downhole videologging. The downhole logging included a forward-facing camera as well as two wide angle side cameras to provide 360-degree coverage of the sidewall. The provided logs included an overlay of depth with the video. The piezometer video logs were captured in November 2024 and provided to NewRange on December 20 2024. Table 4 provides a list of the logged piezometer locations.

**Table 4:**
**Videologged Standpipe Piezometers**

| |
|---|
| D-1 |
| D-2 |
| D-4 |
| F-2 |
| G-2 |

## 2.5 Standpipe Piezometer Slug Testing

Slug testing was completed at 7 piezometer locations to obtain an estimated hydraulic conductivity of the aquifer at the screened depth at each location. Details regarding some of this historic locations could not be obtained and therefore estimates were made regarding screen length, sand pack diameter, soil strata, and aquifer properties.

Hydraulic conductivity estimates were created utilizing AQTESOLV software assessing the log of water level response to the introduction of the slug utilizing Bouwer and Rice analysis. A simplified spreadsheet solutions of Bouwer and Rice was also completed as a secondary check of the AQTESOLV solutions. Table 5 below provides the estimated hydraulic conductivies of the screen aquifer for each piezometer location tested.

**Table 5: Slug Test Hydraulic Conductivities**

| Well | K-value (cm/sec) |
|---|---|
| D-1 | 6.77E-06 |
| D-2 | 4.76E-05 |
| P1H-99 | 1.64E-05 |
| P1H1-99 | 5.33E-07 |
| P2HA-99 | 4.07E-05 |
| 2E_2018_pz_seepleft_SP | 1.93E-06 |
| 2E_2018_pz_seepmid_SP | 7.85E-05 |

# 3.0 Inclinometer Measurements

Two inclinometer systems have been utilized to monitor the Tailings Basin inclinometer installations. The 'historical' locations installed between 1996 and 1999 had been monitored utilizing a Roc-Test RT-20E probe with associated 250-foot cable through 2019. The K-section inclinometer installed in 2016 and the F-section inclinometers installed in 2018 are monitored utilizing a Slope Indicator Digitilt AT Inclinometer probe with associated 300-foot cable. Measurements are collected on an Asus Nexus 4 tablet via Bluetooth connection with the inclinometer system.

During the April 2020 monitoring event, the historical probe (Roc-Test RT-20E) suffered damage and was not repairable. NTS had proceeded to collect surveys of the historical installations utilizing the modern Slope Indicator AT Inclinometer system. Currently, all inclinometer locations are monitored utilizing the AT system. The May 8, 2020 survey will be utilized as the baseline reading for the historical locations which include DH96-10, DH96-18, and DH96-28. Installations 2E_2018_IN_F-1, 2E_2018_IN_F-3, and 2E_2018_IN_F-4 will continue to utilize the baseline reading collected in December 2018.

Installation 2E_2016_IN_K-2 was initially surveyed in October 2016 and monitored through 2017. Following the October 2017 reading, an automated inclinometer probe was installed. This probe remained in place until May 2021, when a manual inclinometer survey was collected. 2E_2016_IN_K-2 began to be monitored manually in 2022 on a regular basis at a frequency of 3 surveys per year.

All inclinometer measurements have been stored in a Slope Indicator DigiPro2 database. This database has been provided electronically with delivery of this report.

## 3.1 Monitoring Procedure

When collecting measurements of an inclinometer installation, the inclinometer probe is connected to the cable reel and the cable reel connected to the data collector (wirelessly with AT system). The probe is set into the inclinometer casing track; oriented with the guide wheels in the 'A'

direction (parallel with slope). The probe is gently lowered to the bottom of the casing and allowed to sit a few minutes at the bottom to allow the inclinometer probe temperature to stabilize. The probe is then pulled in 2-foot intervals utilizing the cable 'stops' placed into a 'cable gate' that is placed on top of the inclinometer casing to ensure exact 2 feet intervals at the same location as previous surveys. Readings are collected at each 2-foot interval indicating the 'tilt' in both the 'A' & 'B' axes. Once the first pull is complete, the inclinometer sensor is rotated 180 degrees, lowered to the bottom, and pulled again in similar fashion in 2-foot intervals. Once completed, the checksum (difference between first and second pull readings) readings are assessed to ensure the survey is valid. The recorded tilt at each depth is the average of the 2 readings (2nd reading data inversed). Averaging of the two readings will eliminate at bias from vertical of the inclinometer probe.

### 3.2 Inclinometer Plots

Inclinometer plots are shown in Appendix C. For each installation a cumulative displacement plot, incremental displacement plot, and absolute position plot have been created. The cumulative displacement plot is the raw collected data displayed graphically indicating the total amount of displacement at the surface as compared to the 'initial' dataset. The incremental displacement plot is utilized to understand the exact depths that displacement has occurred. The absolute position plot represents the actual placement of the casing in the earth. Each plot utilizes a different horizontal scale and should be noted when assessing the data.

In addition to the above described plots, Appendix C also includes Time Displacement series plots as requested in the 2022 monitoring recommendations. These plots utilize time as the x-axis and displacement as the y-axis. Displacement is measured as compared to the baseline dataset and as referenced from the bottom of the installation. Plotted lines provide displacement in the A-axis at a specific depth in the installation. Table 6 provides the requested time series plots. Multiple depths are plotted together for the same installation.

**Table 6: Time Displacement Plots Provided**

| Location | Time Displacement Plot Depth |
|---|---|
| DH96-10 (Total Depth: 118 ft) | 2.0 |
| | 40.4 |
| | 96.4 |
| DH96-18 (Total Depth: 104 ft) | 2.0 |
| | 19.0 |
| | 83.0 |
| | 99.0 |
| DH96-28 (Total Depth: 66 ft) | 2.0 |
| | 49.6 |
| 2E_2018_IN_F1 (Total Depth: 66 ft) | 2.0 |
| | 19.9 |
| | 39.9 |
| 2E_2016_IN_K2 (Total Depth: 86 ft) | 2.0 |
| | 75.0 |

The ‘Inclinometer Summary Table’ in Appendix B describes the physical characteristics of each inclinometer installation as well as provides any relevant operator notes.

When using the historical datasets, corrections had been applied to some of the inclinometer plots to account for potential systematic errors that had arisen from long term monitoring (cable stretch, casing shift, etc.). With a new baseline acquired in 2020 utilizing the new AT probe for the three historical locations, there is no need for corrections to be applied. All data displayed in the graphs and provided in the database is the raw, uncorrected data.

### 3.3 Inclinometer Points of Interest

The following points of interest have been identified within the inclinometer dataset.

1.) Inclinometer 2E_2018_IN_F1 has shown continuous sequential movement in the A axis from installation in 2018 between depths of 0 to 40 feet through 2023 with a maximum displacement of approximately 0.27 inches at a depth of 24 feet compared to the baseline. However, the monthly surveys through 2024 have indicated no discernable movement.

2.) Great care is taken when monitoring F-3 due to the upper portion of the casing ‘floating’ within the borehole. Inclinometer readings vary in the upper 10 feet, but likely do not represent true earth movement at this depth. The grout likely settled after completing the installation. It is recommended that the borehole be grouted to near the top to minimize measurement disturbance and accurately measure earth movement. Beginning in May, 2023, the upper portion of the casing was braced within the protective casing to minimize movement in the upper 10 feet. This can be seen as approximately 0.5 inch movement in the upper 10 feet beginning in May 2023.

3.) Inclinometer 2E_2018_IN_K-2 was unable to be monitored in October 2023 due to a mass of sludge at the top of the water column at approximately 30 feet depth. In April, July, and October 2024, the inclinometer was able to be monitored even though it was clear the sludge/blockage was still present at the top of the water column. NTS was able to flush the installation on November 25 2024 and clear the blockage. The blockage was shown to be rodent remains. An additional survey was completed following the flushing of the installation to ensure previous surveys were valid. All 4 surveys completed in 2E_2018_IN_K-2 in 2024 were very comparable and indicating no movement in that timeframe.

### 3.4 Downhole logging

In addition to the standpipe piezometers being observed by downhole videologging, each active and historic inclinometer casing was also inspected. The downhole logging included a forward-facing camera as well as two wide angle side cameras to provide 360 degree coverage of the sidewall. The provided logs include an overlay of depth with the video. The piezometer and

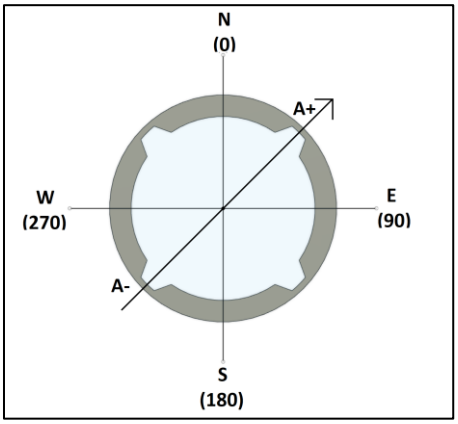
inclinometer video logs were captured in November 2024 and provided to NewRange on December 20 2024. Table 7 provides a list of the logged inclinometer locations.

**Table 7: Videologged Inclinometers**

| **Actively Monitored Locations** |
|---|
| DH96-10 |
| DH96-18 |
| DH96-28 |
| 2E_2018_IN_K-2 |
| 2E_2018_IN_F-1 |
| 2E_2018_IN_F-3 |
| 2E_2018_IN_F-4 |
| **Historically Monitored Locations** |
| DH96-12 |
| DH96-19 |
| DH96-32 |
| I1H-99 |

## 3.5 Inclinometer Orientation

The 2022 Monitoring Recommendations requested that the inclinometer orientations be reviewed to ensure that databased orientations match actual orientations. Inclinometer orientations are typically measured with a line drawn through the A-axis grooves, with the A+ groove (downhill) the referenced azimuth. Orientations were collected utilizing a 4 foot straight edge oriented along the A-axis and high accuracy GPS points collected at the end of the straight edge. These measurements generally agreed with the compass measurements and were considered more reliable. The orientations collected with the high accuracy GPS have been updated in the Digipro II database installation descriptions provided with this report. Graphic 1 below indicates the azimuth utilized in recording the measurements.



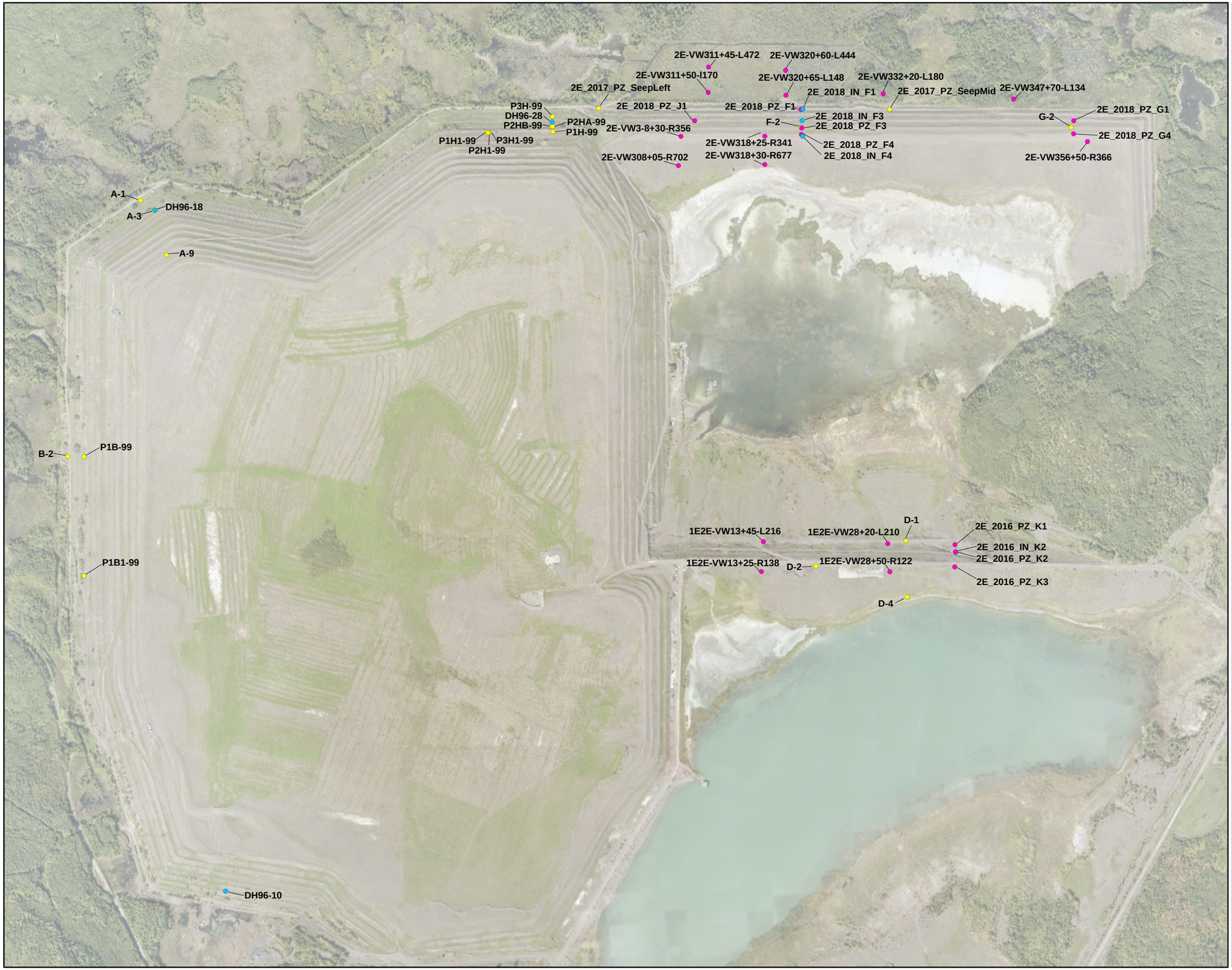

**Graphic 1: Inclinometer Orientation Reference**

# 4.0 Conclusion

The scope for NTS services was focused on LTVSMC Lakes Tailings Basin provided the notes and comments are observed. NTS did not include review of the data with respect to engineering design documentation for the tailing basin, operations and maintenance issues, or dam safety concerns. We have not reviewed basin operations in depth that may further explain observed readings. It is understood that WSP will complete this engineering review.

# 5.0 Bibliography

BARR Engineering, Inc. (Apr 2022). *2022 Instrumentation Monitoring Recommendations.*




N

0 500 1,000 2,000

Feet

**1 inch = 1,100 feet**

## Legend

- Inclinometer
- Pneumatic Piezometer
- Standpipe Piezometer
- Vibrating Wire Piezometer

Notes:

-Background image has been provided by Saint Louis County Web Services, App. Image date: May, 2021

# Figure 1
# **LTVSMC** Tailings Basin Geotechnical Instrumentation

**LTVSMC** Tailings Basin
NewRange Copper Nickel LLC
Hoyt Lakes, MN (St. Louis)

Environmental Science & Engineering
www.netechnical.com

Date Drawn : January 5, 2024
Drawn By : Evan Johnson
NTS Project #: 7157B

1

# Appendix A
# Static Water Level Data

| **LTVSMC TAILING BASIN** PNEUMATIC PIEZOMETERS (DISCONTINUED) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | DH96-10 | DH96-11 | DH96-28A | DH96-28 | DH96-30 | DH96-32A | DH96-32 | DH96-37A | DH96-37 | DH96-39 | (DH96-40) PN1J-99 | (DH96-49) PN1F-99 |
| Pressure Cell Elev. (ft) | 1513.30 | 1512.30 | 1503.50 | 1488.50 | 1514.60 | 1519.20 | 1516.20 | 1484.60 | 1474.60 | 1499.50 | 1505.90 | 1487.00 |
| 1999 Elev. (ft) | | | | | | | | | | | | 1497.19 |
| Date | CALCULATED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | |
| 8/24/1996 | 1568.51 | 1576.52 | 1507.89 | 1503.05 | | 1536.06 | 1535.60 | 1490.61 | 1484.07 | 1507.35 | 1521.38 | 1521.19 |
| 9/10/1996 | 1566.66 | 1572.82 | 1505.81 | 1503.98 | 1518.30 | 1533.29 | #N/A | 1488.99 | 1485.46 | 1507.12 | 1521.15 | 1520.96 |
| 10/25/1996 | 1568.16 | 1574.67 | 1506.97 | 1504.09 | 1517.49 | 1532.48 | 1533.53 | 1489.22 | 1485.57 | 1507.59 | 1523.23 | 1522.81 |
| 11/29/1996 | 1568.28 | 1575.13 | 1507.20 | 1503.98 | 1517.95 | 1533.52 | 1532.83 | 1489.22 | 1485.46 | 1507.35 | 1522.99 | 1522.81 |
| 1/3/1997 | 1567.35 | 1574.67 | 1507.43 | 1503.52 | 1517.95 | 1533.29 | 1532.83 | 1489.22 | 1485.57 | 1507.12 | 1522.30 | 1521.88 |
| 1/21/1997 | 1567.59 | 1574.67 | 1507.43 | 1504.09 | 1518.07 | 1533.64 | 1533.99 | 1489.45 | 1485.00 | 1507.59 | 1523.92 | 1521.88 |
| 3/18/1997 | 1567.59 | 1575.25 | 1507.43 | 1504.09 | 1518.07 | 1533.06 | 1533.53 | 1489.45 | 1485.00 | 1507.59 | 1523.92 | 1521.88 |
| 4/30/1997 | 1567.59 | 1575.83 | 1506.97 | 1503.52 | 1522.69 | 1535.37 | 1533.18 | 1490.95 | 1486.73 | | 1523.23 | 1521.88 |
| 6/30/1997 | 1567.12 | 1574.21 | 1507.20 | 1503.98 | 1522.69 | 1539.53 | 1535.84 | 1491.53 | 1484.76 | | 1526.69 | 1522.81 |
| 7/28/1997 | 1567.59 | 1574.21 | 1507.43 | 1503.98 | 1528.46 | 1545.77 | 1536.99 | 1496.15 | 1486.84 | | 1535.47 | 1522.81 |
| 8/11/1997 | 1567.82 | 1574.67 | 1507.54 | 1503.75 | 1528.46 | 1548.54 | 1543.92 | 1496.15 | 1487.07 | | 1537.09 | 1521.65 |
| 9/26/1997 | 1568.74 | 1576.98 | 1512.74 | 1504.67 | 1528.46 | 1548.65 | 1546.23 | 1495.57 | 1487.88 | | 1529.00 | 1538.98 |
| 10/31/1997 | 1568.74 | 1575.83 | 1512.16 | 1505.25 | 1527.31 | 1547.50 | 1543.92 | 1493.84 | 1486.15 | | 1528.42 | 1532.05 |
| 11/28/1997 | 1567.59 | 1575.83 | 1511.59 | 1505.83 | 1527.31 | 1546.92 | 1542.77 | 1492.69 | 1486.15 | | 1520.92 | 1533.20 |
| 12/29/1997 | 1569.90 | 1576.98 | 1510.43 | 1505.25 | 1525.00 | 1543.46 | 1539.30 | 1492.69 | 1487.31 | | 1526.69 | 1533.20 |
| 1/30/1998 | 1568.16 | 1575.25 | 1508.70 | 1504.67 | 1522.69 | 1542.30 | 1538.72 | 1492.11 | 1486.15 | | 1523.23 | 1538.98 |
| 2/20/1998 | 1569.32 | 1576.40 | 1509.85 | 1503.52 | 1522.69 | 1542.30 | 1538.72 | 1491.53 | 1486.15 | | 1522.07 | 1540.13 |
| 5/13/1998 | 1567.59 | 1574.67 | 1506.97 | 1500.05 | 1520.38 | 1537.68 | 1536.99 | 1489.22 | 1486.15 | | 1522.07 | 1526.27 |
| 6/10/1998 | 1567.59 | 1574.67 | 1506.97 | 1504.67 | 1520.38 | 1536.53 | 1535.84 | 1490.38 | 1485.00 | | 1520.92 | 1527.43 |
| 7/14/1998 | 1567.59 | 1573.52 | 1505.81 | 1504.67 | 1521.53 | 1535.37 | 1534.68 | 1490.38 | 1485.00 | | 1522.07 | 1526.27 |
| 8/15/1998 | 1567.59 | 1574.67 | 1505.81 | 1502.36 | 1520.38 | 1535.37 | 1534.68 | 1490.38 | 1485.00 | | 1522.07 | 1525.12 |
| 9/19/1998 | 1567.59 | 1574.67 | 1506.97 | 1503.52 | 1520.84 | 1536.53 | 1534.68 | 1490.38 | 1485.00 | | 1522.07 | 1512.41 |
| 10/30/1998 | 1567.59 | 1573.52 | 1508.12 | 1504.67 | 1520.38 | 1535.37 | 1533.53 | 1490.38 | 1486.15 | | 1520.92 | 1522.81 |
| 11/30/1998 | 1566.43 | 1573.75 | 1507.20 | 1503.52 | 1519.45 | 1535.60 | 1533.29 | 1489.68 | 1484.76 | | 1520.22 | 1521.88 |
| 1/15/1999 | 1565.97 | 1571.90 | 1507.43 | 1503.98 | 1519.91 | 1536.29 | 1534.68 | 1490.14 | 1485.46 | | 1519.53 | 1520.26 |
| 2/26/1999 | 1566.89 | 1573.52 | 1507.89 | 1504.21 | 1520.38 | 1536.99 | 1534.91 | 1490.14 | 1485.92 | | 1519.99 | 1520.26 |
| 3/26/1999 | 1567.12 | 1573.98 | 1508.12 | 1504.21 | 1520.14 | 1536.53 | 1536.53 | 1489.68 | 1485.00 | | 1519.76 | 1520.03 |
| 4/24/1999 | 1567.12 | 1573.75 | 1509.04 | 1503.75 | 1520.84 | 1535.60 | 1536.30 | 1490.14 | 1485.23 | | 1519.53 | 1520.50 |
| 5/29/1999 | 1567.12 | 1573.52 | 1508.35 | 1503.98 | 1520.14 | 1535.14 | 1535.60 | 1489.91 | 1485.00 | | | |
| 7/7/1999 | 1568.97 | 1575.36 | 1508.81 | 1506.06 | 1521.53 | 1536.99 | 1536.76 | 1489.22 | 1485.69 | | | |
| 8/19/1999 | 1568.28 | 1575.83 | 1509.28 | 1505.83 | 1521.07 | 1537.22 | 1536.07 | 1490.38 | 1485.46 | | | |
| 10/30/1999 | 1567.35 | 1573.98 | 1509.74 | 1504.44 | 1521.99 | 1537.68 | 1537.45 | 1492.69 | 1487.07 | | 1518.61 | 1504.81 |
| 12/9/1999 | 1566.89 | 1571.67 | 1509.28 | 1504.67 | 1521.30 | 1536.06 | 1536.30 | 1492.45 | 1487.07 | | 1515.60 | 1505.28 |
| 1/14/2000 | 1566.43 | 1570.97 | 1509.04 | 1504.21 | 1521.53 | 1535.60 | 1536.30 | 1492.45 | 1487.77 | | 1515.14 | 1505.97 |
| 2/9/2000 | 1567.35 | 1571.44 | 1508.81 | 1505.59 | 1521.99 | 1535.37 | 1535.60 | 1491.76 | 1485.92 | | 1514.45 | 1505.74 |
| 3/21/2000 | 1567.82 | 1573.28 | 1508.35 | 1505.83 | 1522.92 | 1534.22 | 1535.14 | 1491.30 | 1486.61 | | 1514.91 | 1506.89 |
| 4/14/2000 | 1567.82 | 1574.21 | 1508.58 | 1506.29 | 1522.45 | 1534.68 | 1534.91 | 1491.53 | 1486.61 | | 1520.68 | 1507.59 |
| 5/16/2000 | 1567.59 | 1573.28 | 1508.58 | 1506.06 | 1522.92 | 1534.91 | 1535.14 | 1495.69 | 1486.61 | | 1522.76 | 1507.35 |
| 6/22/2000 | 1567.35 | 1573.28 | 1508.35 | 1506.29 | 1522.45 | 1535.37 | 1535.14 | 1494.76 | 1486.15 | | 1520.22 | 1507.12 |
| 7/17/2000 | 1567.12 | 1572.82 | 1508.12 | 1505.83 | 1522.45 | 1535.37 | 1535.14 | 1494.07 | 1486.15 | | 1518.84 | 1506.66 |
| 8/30/2000 | 1567.59 | 1573.52 | 1507.66 | 1505.13 | 1519.68 | 1535.37 | 1534.91 | 1492.69 | 1487.07 | | 1515.14 | 1506.66 |
| 9/26/2000 | 1567.82 | 1573.75 | 1507.20 | 1505.59 | 1519.68 | 1535.37 | 1536.99 | 1493.15 | 1486.84 | | 1515.14 | 1507.12 |
| 10/27/2000 | 1567.59 | 1573.75 | 1510.43 | 1505.36 | 1526.15 | 1544.61 | 1544.15 | 1491.99 | 1487.07 | | 1515.14 | 1505.74 |
| 10/30/2000 | | | 1510.89 | 1505.59 | 1526.38 | 1545.07 | 1544.15 | | | | | |
| 11/24/2000 | 1568.05 | 1573.52 | 1513.20 | 1506.06 | 1528.92 | 1544.15 | 1544.38 | 1491.53 | 1487.31 | | 1514.22 | 1506.66 |
| 12/8/2000 | 1567.35 | 1573.98 | 1515.28 | 1506.98 | 1529.38 | 1545.30 | 1544.84 | 1492.22 | 1487.07 | | 1515.37 | 1506.66 |
| 1/17/2001 | 1568.74 | 1574.90 | 1512.28 | 1506.06 | 1527.07 | 1541.38 | 1541.15 | 1492.45 | 1487.77 | | 1515.60 | 1512.21 |
| 2/23/2001 | 1567.82 | 1574.21 | 1510.89 | 1505.59 | | | | | | | 1514.68 | 1509.43 |
| 4/6/2001 | 1567.82 | 1573.75 | 1509.97 | 1505.36 | | 1537.68 | 1537.45 | 1490.84 | 1487.07 | | 1513.29 | 1504.35 |
| 5/18/2001 | 1567.82 | 1573.05 | 1509.04 | 1505.36 | | 1536.53 | 1536.07 | 1490.38 | 1486.61 | | 1512.14 | 1504.81 |
| 6/18/2001 | 1567.82 | 1573.28 | 1509.04 | 1506.06 | | 1536.29 | 1535.84 | 1490.61 | 1487.07 | | 1512.37 | 1505.04 |
| 7/19/2001 | 1567.35 | 1572.59 | 1508.58 | 1506.29 | | 1536.06 | 1535.60 | 1490.38 | 1486.84 | | 1512.14 | 1505.04 |
| 8/28/2001 | 1567.35 | 1572.36 | 1508.58 | 1506.29 | | 1535.60 | 1535.37 | 1490.61 | 1487.07 | | 1512.60 | 1506.20 |
| 9/17/2001 | 1566.89 | 1568.20 | 1508.81 | 1506.52 | | 1535.37 | 1534.68 | 1490.38 | 1486.84 | | 1512.60 | 1506.66 |
| 10/27/2001 | 1567.35 | 1568.20 | 1508.58 | 1506.06 | | 1535.60 | 1535.14 | 1490.61 | 1487.31 | | 1513.29 | 1507.12 |
| 12/8/2001 | 1567.12 | 1568.20 | 1508.58 | 1505.83 | | 1535.60 | 1535.14 | 1490.61 | 1487.31 | | 1513.29 | 1507.35 |
| 12/27/2001 | 1567.12 | 1567.97 | 1508.58 | 1505.59 | | 1535.60 | 1535.14 | 1490.38 | 1487.07 | | 1513.29 | 1506.89 |
| 2/7/2002 | 1566.66 | 1568.20 | 1508.58 | 1505.59 | 1520.38 | 1535.83 | 1535.14 | 1490.61 | 1487.31 | | 1513.29 | 1507.12 |
| 3/4/2002 | | | 1508.12 | 1505.36 | 1519.91 | 1535.37 | 1534.91 | | | | | |

| **LTVSMC TAILING BASIN** PNEUMATIC PIEZOMETERS (DISCONTINUED) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | DH96-10 | DH96-11 | DH96-28A | DH96-28 | DH96-30 | DH96-32A | DH96-32 | DH96-37A | DH96-37 | DH96-39 | (DH96-40) PN1J-99 | (DH96-49) PN1F-99 |
| Pressure Cell Elev. (ft) | 1513.30 | 1512.30 | 1503.50 | 1488.50 | 1514.60 | 1519.20 | 1516.20 | 1484.60 | 1474.60 | 1499.50 | 1505.90 | 1487.00 |
| 1999 Elev. (ft) | | | | | | | | | | | | 1497.19 |
| Date | CALCULATED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | |
| 4/18/2002 | | | | | | | | | | | | |
| 4/30/2002 | 1566.20 | 1568.66 | 1507.20 | 1504.44 | 1519.22 | 1533.52 | 1533.53 | 1489.91 | 1485.69 | | 1513.06 | 1507.12 |
| 5/23/2002 | 1565.74 | 1568.66 | 1506.50 | 1504.21 | 1519.22 | 1533.06 | 1532.60 | 1489.91 | 1485.46 | | 1513.06 | 1505.74 |
| 6/20/2002 | 1565.28 | 1568.66 | 1506.27 | 1503.52 | 1519.45 | 1533.06 | 1532.14 | 1489.91 | 1485.46 | | 1512.83 | 1505.28 |
| 7/19/2002 | 1566.43 | 1570.74 | 1506.97 | 1504.44 | 1519.45 | 1532.83 | 1532.83 | 1490.14 | 1487.07 | | 1512.37 | 1507.35 |
| 8/21/2002 | 1565.97 | 1570.51 | 1506.50 | 1503.52 | 1518.99 | 1532.14 | 1532.37 | 1489.68 | 1486.84 | | 1511.68 | 1506.66 |
| 11/26/2002 | 1565.97 | 1570.28 | 1506.97 | 1503.52 | 1518.53 | 1532.14 | 1532.83 | 1489.45 | 1487.07 | | 1511.68 | 1506.89 |
| 3/25/2003 | 1562.73 | 1564.74 | 1505.81 | 1501.67 | 1516.68 | 1530.75 | 1530.29 | 1489.45 | 1485.92 | | 1511.44 | 1505.28 |
| 4/14/2003 | | | | | | 1531.44 | | | | | 1511.68 | 1505.28 |
| 6/16/2003 | 1568.28 | 1571.90 | 1504.89 | 1501.21 | 1516.45 | 1531.44 | 1531.22 | 1489.45 | 1485.46 | | 1510.06 | 1504.35 |
| 9/10/2003 | 1562.27 | 1563.81 | 1505.58 | 1499.82 | 1517.83 | 1530.75 | 1530.29 | 1489.68 | 1485.00 | | 1510.06 | 1505.74 |
| 5/27/2004 | 1562.27 | 1565.89 | 1504.66 | 1501.21 | 1517.37 | 1529.60 | 1529.60 | 1488.99 | 1484.76 | | 1510.06 | 1504.12 |
| 12/22/2004 | 1560.66 | 1564.51 | 1504.66 | 1497.97 | 1526.15 | 1528.67 | 1529.60 | 1488.53 | 1485.00 | | 1510.06 | 1506.43 |
| 5/5/2005 | 1560.89 | 1566.35 | 1504.89 | 1498.66 | 1526.15 | 1528.44 | 1529.14 | 1489.22 | 1485.69 | | 1510.06 | 1504.35 |
| 11/15/2005 | 1560.89 | 1566.82 | 1505.35 | 1498.43 | 1526.38 | 1528.44 | 1529.37 | 1490.14 | 1485.00 | | 1510.06 | 1504.58 |
| 4/27/2006 | 1561.58 | 1567.28 | 1505.12 | 1497.97 | 1526.61 | 1527.75 | 1528.67 | 1488.99 | 1484.76 | | 1509.83 | 1504.81 |
| 10/11/2006 | 1561.58 | 1567.28 | 1505.35 | 1497.74 | 1526.38 | 1529.36 | 1529.14 | 1489.91 | 1485.23 | | 1509.37 | 1505.74 |
| 5/2/2007 | 1560.89 | 1566.59 | 1505.81 | 1498.20 | 1526.15 | 1528.67 | 1528.44 | 1489.45 | 1484.76 | | 1509.60 | 1505.28 |
| 10/4/2007 | 1560.89 | 1566.59 | 1505.12 | 1497.97 | 1526.38 | 1529.36 | 1528.44 | 1488.53 | 1485.46 | | 1509.60 | 1495.09 |
| 5/5/2008 | 1560.19 | 1569.82 | 1503.50 | 1496.35 | 1524.76 | 1527.98 | 1525.21 | 1486.45 | 1484.53 | | 1509.60 | 1491.39 |
| 10/21/2008 | 1559.73 | 1568.20 | 1503.50 | 1495.89 | 1524.07 | 1527.52 | 1524.75 | 1484.60 | 1483.38 | | 1509.60 | 1490.70 |
| 5/19/2009 | 1559.27 | 1567.05 | 1504.19 | 1500.51 | 1524.76 | 1528.44 | 1523.59 | 1489.91 | 1486.38 | | 1509.37 | 1492.08 |
| 11/2/2009 | 1560.19 | 1567.05 | 1504.42 | 1496.82 | 1524.53 | 1528.44 | 1525.21 | 1488.99 | 1484.07 | | 1509.37 | 1491.39 |
| 5/10/2010 | 1560.66 | 1565.89 | 1503.73 | 1496.82 | 1524.30 | 1525.21 | 1524.75 | 1487.37 | 1483.84 | | 1509.60 | 1491.62 |
| 10/18/2010 | 1559.73 | 1566.59 | 1503.96 | 1496.82 | 1524.07 | 1527.05 | 1529.14 | 1489.45 | 1483.84 | | 1509.60 | 1491.39 |
| 4/20/2011 | 1567.59 | 1568.66 | 1510.66 | 1501.21 | 1525.69 | 1528.44 | 1531.22 | 1490.14 | 1485.23 | | 1509.60 | 1491.62 |
| 10/13/2011 | 1562.04 | 1566.35 | 1504.19 | 1497.51 | 1524.30 | 1527.52 | 1528.91 | 1489.45 | 1484.07 | | 1510.29 | 1491.16 |
| 4/27/2012 | 1566.43 | 1566.59 | 1504.42 | 1497.51 | 1534.24 | 1526.59 | 1530.29 | 1489.45 | 1485.92 | | 1510.29 | 1493.01 |
| 10/30/2012 | 1568.51 | 1566.59 | 1508.58 | 1499.13 | 1527.77 | 1527.29 | 1524.98 | 1489.68 | 1486.38 | | | 1493.70 |
| 4/23/2013 | 1564.12 | 1565.66 | 1503.96 | 1496.12 | 1521.07 | 1522.20 | 1523.36 | 1487.60 | 1485.23 | | | 1490.93 |
| 10/14/2013 | 1564.12 | 1567.05 | 1504.19 | 1498.66 | 1515.52 | 1524.28 | 1524.05 | 1488.99 | 1486.38 | | | 1492.08 |
| 4/23/2014 | 1564.35 | 1567.28 | 1504.42 | 1498.43 | 1515.76 | 1524.28 | 1523.82 | 1488.99 | 1486.61 | | | 1492.31 |
| 10/21/2014 | 1564.35 | 1567.28 | 1503.96 | 1499.82 | 1515.52 | 1524.51 | 1523.82 | 1489.22 | 1486.61 | | | 1493.01 |
| 4/14/2015 | 1564.58 | 1567.51 | 1504.19 | 1500.28 | 1515.52 | 1524.51 | 1524.29 | 1489.45 | 1486.61 | | | 1493.01 |
| 10/21/2015 | 1564.35 | 1567.05 | 1504.42 | 1500.97 | 1515.52 | 1524.98 | 1524.98 | 1489.22 | 1486.84 | | | 1493.24 |
| 4/27/2016 | 1564.35 | 1567.28 | 1504.19 | 1501.67 | 1515.52 | 1526.13 | 1525.44 | 1489.68 | 1486.61 | | | 1494.16 |
| 8/25/2016 | | | | | | | | | | | | |
| 9/20/2016 | 1564.12 | 1567.28 | 1505.58 | 1503.05 | 1515.29 | 1525.67 | 1525.44 | 1489.45 | 1486.61 | | | 1496.24 |
| 10/7/2016 | | | | | | | | | | | | |
| 10/14/2016 | | | | | | | | | | | | |
| 10/21/2016 | | | | | | | | | | | | |
| 10/27/2016 | | | | | | | | | | | | |
| 11/4/2016 | | | | | | | | | | | | |
| 12/2/2016 | | | | | | | | | | | | |
| 2/10/2017 | | | 1506.27 | 1504.21 | | | | | | | | 1497.63 |
| 3/31/2017 | | | | | | | | | | | | |
| 4/25/2017 | 1564.81 | 1567.97 | 1503.96 | 1504.67 | 1515.29 | 1525.90 | 1524.75 | 1491.30 | 1487.07 | | | 1497.86 |
| 7/7/2017 | | | | | | | | | | | | |
| 7/28/2017 | | | | | | | | | | | | |
| 8/29/2017 | | | | | | | | | | | | |
| 10/3/2017 | | | | | | | | | | | | |
| 10/18/2017 | 1565.04 | 1568.20 | 1506.50 | 1503.98 | 1515.29 | 1526.82 | 1526.36 | 1491.99 | 1487.54 | | | 1498.55 |
| 11/2/2017 | | | | | | | | | | | | |
| 12/1/2017 | | | | | | | | | | | | |
| 1/16/2018 | | | | | | | | | | | | |
| 4/26/2018 | 1564.81 | 1567.74 | 1506.50 | 1503.52 | 1515.52 | 1527.52 | 1526.83 | 1491.76 | 1487.54 | | | 1497.40 |
| 5/2/2018 | | | | | | | | | | | | |
| 5/14/2018 | | | | | | | | | | | | |
| 6/8/2018 | | | | | | | | | | | | |

| **LTVSMC TAILING BASIN** PNEUMATIC PIEZOMETERS (DISCONTINUED) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | DH96-10 | DH96-11 | DH96-28A | DH96-28 | DH96-30 | DH96-32A | DH96-32 | DH96-37A | DH96-37 | DH96-39 | (DH96-40) PN1J-99 | (DH96-49) PN1F-99 |
| Pressure Cell Elev. (ft) | 1513.30 | 1512.30 | 1503.50 | 1488.50 | 1514.60 | 1519.20 | 1516.20 | 1484.60 | 1474.60 | 1499.50 | 1505.90 | 1487.00 |
| 1999 Elev. (ft) | | | | | | | | | | | | 1497.19 |
| Date | CALCULATED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | |
| 7/25/2018 | | | | | | | | | | | | |
| 8/17/2018 | | | | | | | | | | | | |
| 9/19/2018 | | | | | | | | | | | | |
| 10/16/2018 | 1564.81 | 1567.74 | 1504.19 | 1503.28 | 1515.29 | 1527.98 | 1527.52 | 1490.84 | 1487.07 | | | 1497.86 |
| 11/8/2018 | | | | | | | | | | | | |
| 12/13/2018 | | | | | | | | | | | | |
| 1/22/2019 | | | | | | | | | | | | |
| 2/27/2019 | | | | | | | | | | | | |
| 3/27/2019 | | | | | | | | | | | | |
| 4/23/2019 | 1564.81 | 1567.97 | | 1502.36 | 1515.29 | 1527.98 | 1527.75 | 1491.07 | 1487.31 | | | 1496.70 |
| 5/28/2019 | | | | | | | | | | | | |
| 6/26/2019 | | | | | | | | | | | | |
| 7/30/2019 | | | | | | | | | | | | |
| 8/20/2019 | | | | | | | | | | | | |
| 9/18/2019 | | | | | | | | | | | | |
| 10/29/2019 | 1564.35 | 1567.74 | | 1505.36 | 1515.06 | 1527.52 | 1526.83 | 1490.61 | 1486.84 | | | 1496.47 |
| 11/22/2019 | | | | | | | | | | | | |
| 12/20/2019 | | | | | | | | | | | | |
| 1/21/2020 | | | | | | | | | | | | |
| 2/24/2020 | | | | | | | | | | | | |
| 3/25/2020 | | | | | | | | | | | | |
| 4/23/2020 | 1564.81 | 1567.97 | | 1501.67 | 1515.29 | 1527.05 | 1526.60 | 1490.38 | 1486.84 | | | 1496.01 |
| 5/19/2020 | | | | | | | | | | | | |
| 7/17/2020 | | | | | | | | | | | | |
| 7/20/2020 | | | | | | | | | | | | |
| 8/20/2020 | | | | | | | | | | | | |
| 9/28/2020 | | | | | | | | | | | | |
| 10/19/2020 | 1564.35 | 1567.51 | | 1500.28 | 1515.76 | 1527.05 | 1526.60 | 1490.14 | 1486.38 | | | 1495.78 |
| 11/24/2020 | | | | | | | | | | | | |
| 12/15/2020 | | | | | | | | | | | | |
| 1/15/2021 | | | | | | | | | | | | |
| 2/22/2021 | | | | | | | | | | | | |
| 3/25/2021 | | | | | | | | | | | | |
| 4/28/2021 | 1564.81 | 1567.97 | | 1500.74 | 1515.29 | 1527.05 | 1526.83 | 1489.68 | 1486.38 | | | 1495.32 |
| 5/24/2021 | | | | | | | | | | | | |
| 6/28/2021 | | | | | | | | | | | | |
| 7/27/2021 | | | | | | | | | | | | |
| 8/23/2021 | | | | | | | | | | | | |
| 9/27/2021 | | | | | | | | | | | | |
| 10/13/2021 | 1563.89 | 1566.82 | | 1500.51 | | 1527.29 | 1526.83 | 1489.45 | 1486.38 | | | 1495.55 |
| 11/23/2021 | | | | | | | | | | | | |
| 11/30/2021 | | | | | | | | | | | | |
| 12/3/2021 | | | | | | | | | | | | |
| 1/31/2022 | | | | | | | | | | | | |
| 2/28/2022 | | | | | | | | | | | | |
| 3/29/2022 | | | | | | | | | | | | |
| 4/25/2022 | | | | | | | | | | | | |
| 5/24/2022 | | | | | | | | | | | | |
| 6/28/2022 | | | | | | | | | | | | |
| 7/15/2022 | | | | | | | | | | | | |
| 8/31/2022 | | | | | | | | | | | | |
| 9/21/2022 | | | | | | | | | | | | |
| 10/27/2022 | | | | | | | | | | | | |
| 11/23/2022 | | | | | | | | | | | | |
| 12/7/2022 | | | | | | | | | | | | |
| 1/23/2023 | | | | | | | | | | | | |
| 2/27/2023 | | | | | | | | | | | | |
| 3/30/2023 | | | | | | | | | | | | |
| 4/27/2023 | | | | | | | | | | | | |

| **LTVSMC TAILING BASIN** PNEUMATIC PIEZOMETERS (DISCONTINUED) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | DH96-10 | DH96-11 | DH96-28A | DH96-28 | DH96-30 | DH96-32A | DH96-32 | DH96-37A | DH96-37 | DH96-39 | (DH96-40) PN1J-99 | (DH96-49) PN1F-99 |
| Pressure Cell Elev. (ft) | 1513.30 | 1512.30 | 1503.50 | 1488.50 | 1514.60 | 1519.20 | 1516.20 | 1484.60 | 1474.60 | 1499.50 | 1505.90 | 1487.00 |
| 1999 Elev. (ft) | | | | | | | | | | | | 1497.19 |
| Date | CALCULATED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | |
| 5/30/2023 | | | | | | | | | | | | |
| 6/27/2023 | | | | | | | | | | | | |
| 7/26/2023 | | | | | | | | | | | | |
| 8/23/2023 | | | | | | | | | | | | |
| 9/20/2023 | | | | | | | | | | | | |
| 10/23/2023 | | | | | | | | | | | | |
| 10/24/2023 | | | | | | | | | | | | |
| 10/27/2023 | | | | | | | | | | | | |
| 11/22/2023 | | | | | | | | | | | | |
| 11/30/2023 | | | | | | | | | | | | |
| 12/13/2023 | | | | | | | | | | | | |
| 1/23/2024 | | | | | | | | | | | | |
| 1/26/2024 | | | | | | | | | | | | |
| 2/8/2024 | | | | | | | | | | | | |
| 3/27/2024 | | | | | | | | | | | | |
| 4/25/2024 | | | | | | | | | | | | |
| 4/26/2024 | | | | | | | | | | | | |
| 5/28/2024 | | | | | | | | | | | | |
| 6/19/2024 | | | | | | | | | | | | |
| 6/27/2024 | | | | | | | | | | | | |
| 7/30/2024 | | | | | | | | | | | | |
| 8/27/2024 | | | | | | | | | | | | |
| 9/18/2024 | | | | | | | | | | | | |
| 10/23/2024 | | | | | | | | | | | | |
| 10/24/2024 | | | | | | | | | | | | |
| 11/21/2024 | | | | | | | | | | | | |
| 12/23/2024 | | | | | | | | | | | | |

| LTVSMC TAILING BASIN STANDPIPE PIEZOMETERS | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | PIEZOMETER | 2E_2018_pz_seepleft_SP | 2E_2018_pz_seepmid_SP | A-1 | A-3 | A-9 | B-2 | D-1 | D-2 | D-4 | E-1 | E-5 | F-2 | G-2 | G-3 | P1B-99 | P1B1-99 | P2HA-99 | P2HB-99 | P1H-99 | P3H1-99 | P2H1-99 | P1H1-99 | P3H-99 |
| Pressure Cell Elev. (ft) | Pressure Cell Elev. (ft) | 1514.25 | 1515.61 | 1515.53 | 1572.30 | 1715.56 | 1530.48 | 1613.32 | 1676.97 | 1657.69 | 1570.30 | 1718.10 | 1573.79 | 1578.81 | 1579.50 | 1574.57 | 1574.44 | 1573.8 | 1573.6 | 1595.77 | 1593.9 | 1593.8 | 1593.8 | 1534.1 |
| 1999 Elev. (ft) | 1999 Elev. (ft) | | | | | | | | | N/A | 1574.04 | 1717.75 | | | 1589.38 | | | | | | | | | |
| Date | Date | MEASURED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | | | | | | | | | | | | |
| 8/24/1996 | 8/24/1996 | | | | | | | | | | | | | | | | | | | | | | | |
| 9/10/1996 | 9/10/1996 | | | | | | | | | | | | | | | | | | | | | | | |
| 10/25/1996 | 10/25/1996 | | | | | | | | | | | | | | | | | | | | | | | |
| 11/29/1996 | 11/29/1996 | | | | | | | | | | | | | | | | | | | | | | | |
| 1/3/1997 | 1/3/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 1/21/1997 | 1/21/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 3/18/1997 | 3/18/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 4/30/1997 | 4/30/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 6/30/1997 | 6/30/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 7/28/1997 | 7/28/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 8/11/1997 | 8/11/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 9/26/1997 | 9/26/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 10/31/1997 | 10/31/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 11/28/1997 | 11/28/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 12/29/1997 | 12/29/1997 | | | | | | | | | | | | | | | | | | | | | | | |
| 1/30/1998 | 1/30/1998 | | | | | | | | | | | | | | | | | | | | | | | |
| 2/20/1998 | 2/20/1998 | | | 1492.34 | | 1559.81 | 1509.53 | 1575.08 | | 1606.03 | 1563.15 | 1601.61 | 1527.23 | 1511.96 | | | | | | | | | | |
| 5/13/1998 | 5/13/1998 | | | 1492.29 | 1500.18 | 1554.66 | 1509.68 | 1577.90 | | 1608.59 | 1562.66 | 1599.45 | 1520.09 | 1511.71 | 1514.25 | | | | | | | | | |
| 6/10/1998 | 6/10/1998 | | | 1492.23 | 1500.04 | 1553.67 | 1510.02 | 1577.03 | | 1608.61 | 1562.64 | 1599.45 | 1519.25 | 1522.35 | | | | | | | | | | |
| 7/14/1998 | 7/14/1998 | | | 1492.23 | 1499.92 | 1552.66 | 1510.20 | 1579.00 | | 1608.84 | 1562.58 | 1598.88 | 1518.38 | 1520.05 | | | | | | | | | | |
| 8/15/1998 | 8/15/1998 | | | 1492.13 | 1499.77 | 1552.62 | 1506.68 | 1580.10 | | 1608.64 | 1562.30 | 1598.40 | 1517.81 | 1517.41 | 1515.55 | | | | | | | | | |
| 9/19/1998 | 9/19/1998 | | | 1492.15 | 1499.60 | 1552.14 | 1509.93 | 1578.98 | | 1608.93 | 1562.45 | 1598.40 | 1517.05 | 1516.46 | 1513.96 | | | | | | | | | |
| 10/30/1998 | 10/30/1998 | | | 1492.14 | 1499.42 | 1551.88 | 1509.83 | 1579.17 | | 1609.18 | 1562.79 | 1598.82 | 1516.29 | 1515.81 | 1512.79 | | | | | | | | | |
| 11/30/1998 | 11/30/1998 | | | 1492.16 | 1499.30 | 1551.92 | 1509.73 | 1581.01 | | 1609.85 | 1562.69 | 1598.97 | 1516.11 | 1515.86 | 1513.02 | | | | | | | | | |
| 1/15/1999 | 1/15/1999 | | | 1491.59 | 1499.16 | 1552.18 | 1509.47 | 1580.06 | | 1608.73 | 1562.65 | 1598.85 | 1515.59 | 1517.65 | 1514.08 | | | | | | | | | |
| 2/26/1999 | 2/26/1999 | | | | 1499.16 | 1561.73 | 1509.38 | 1580.68 | | 1606.59 | 1562.76 | 1598.15 | 1514.88 | 1519.23 | 1515.86 | | | | | | | | | |
| 3/26/1999 | 3/26/1999 | | | 1492.16 | 1499.80 | 1565.06 | 1509.30 | 1576.78 | | | 1562.98 | 1597.78 | 1514.64 | 1516.76 | 1514.50 | | | | | | | | | |
| 4/24/1999 | 4/24/1999 | | | 1492.03 | 1499.46 | 1565.62 | 1509.19 | 1576.97 | | | 1562.45 | 1597.52 | 1514.31 | 1516.18 | 1514.10 | | | | | | | | | |
| 5/29/1999 | 5/29/1999 | | | 1492.38 | 1499.95 | 1565.70 | 1509.20 | 1578.29 | | 1609.77 | 1562.44 | 1597.64 | 1514.47 | 1515.59 | 1512.10 | | | | | | | | | |
| 7/7/1999 | 7/7/1999 | | | 1492.74 | 1500.75 | 1564.96 | 1509.36 | 1577.21 | | 1609.35 | 1563.66 | 1598.87 | 1514.32 | 1514.81 | 1510.59 | | | | | | | | | |
| 8/19/1999 | 8/19/1999 | | | 1491.97 | 1501.16 | 1564.06 | 1509.58 | 1579.00 | | 1610.39 | 1563.30 | 1599.52 | 1514.43 | 1514.66 | 1510.30 | | | | | | | | | |
| 10/30/1999 | 10/30/1999 | | | 1492.95 | 1501.20 | 1558.80 | 1510.42 | 1580.12 | | 1611.27 | 1562.96 | 1599.85 | 1515.84 | 1515.21 | 1511.12 | | | 1512.41 | 1525.48 | 1512.73 | 1527.35 | 1515.65 | 1512.46 | 1510.74 |
| 12/9/1999 | 12/9/1999 | | | 1493.13 | 1501.10 | 1557.34 | 1510.30 | 1579.57 | | 1609.58 | 1562.90 | 1599.15 | 1516.82 | 1515.81 | 1511.97 | | | 1511.71 | 1524.83 | 1512.13 | 1527.28 | 1515.27 | 1511.56 | 1510.32 |
| 1/14/2000 | 1/14/2000 | | | 1492.93 | 1500.95 | 1555.71 | 1510.08 | 1579.52 | | 1609.28 | 1562.76 | 1598.65 | 1516.97 | 1515.41 | 1511.85 | 1526.42 | 1538.69 | 1511.19 | 1524.23 | 1511.77 | 1527.20 | 1514.88 | 1511.21 | 1510.20 |
| 2/9/2000 | 2/9/2000 | | | 1492.78 | 1500.85 | 1554.36 | 1510.10 | 1579.42 | | 1608.89 | 1562.72 | 1598.30 | 1517.01 | 1515.36 | 1511.70 | 1526.02 | 1538.41 | 1511.06 | 1523.90 | 1511.57 | 1527.20 | 1514.65 | 1511.11 | 1510.09 |
| 3/21/2000 | 3/21/2000 | | | 1492.68 | 1500.43 | 1553.61 | 1509.88 | 1582.22 | | 1607.18 | 1562.86 | 1597.60 | 1520.01 | 1514.71 | 1510.05 | 1525.32 | 1537.89 | 1511.11 | 1523.58 | 1511.57 | 1527.20 | 1514.42 | 1511.25 | 1509.55 |
| 4/14/2000 | 4/14/2000 | | | 1493.60 | 1500.43 | 1554.72 | 1509.84 | 1580.62 | | 1606.67 | 1563.30 | 1597.45 | 1520.15 | 1514.57 | 1509.82 | 1525.25 | 1537.78 | 1511.06 | 1523.53 | 1511.55 | 1527.25 | 1514.28 | 1511.26 | 1509.54 |
| 5/16/2000 | 5/16/2000 | | | 1492.53 | 1500.28 | 1558.66 | 1509.93 | 1580.91 | | 1605.83 | 1562.60 | 1597.31 | 1519.61 | 1514.21 | 1509.38 | 1525.63 | 1537.00 | 1510.78 | 1523.38 | 1511.77 | 1527.21 | 1513.95 | 1510.96 | 1509.32 |
| 6/22/2000 | 6/22/2000 | | | 1492.68 | 1500.13 | 1560.11 | 1510.18 | 1579.02 | | 1607.28 | 1562.72 | 1596.93 | 1519.79 | 1513.94 | 1509.00 | 1525.55 | 1536.88 | 1510.53 | 1523.04 | 1510.91 | 1527.20 | 1513.62 | 1510.68 | 1509.24 |
| 7/17/2000 | 7/17/2000 | | | 1492.35 | 1500.08 | 1559.96 | 1510.23 | 1577.68 | | 1606.78 | 1562.30 | 1596.75 | 1518.21 | 1513.68 | 1508.70 | 1526.47 | 1536.69 | 1510.36 | 1522.89 | 1510.67 | 1527.21 | 1513.46 | 1511.56 | 1509.09 |
| 8/30/2000 | 8/30/2000 | | | 1492.36 | 1500.10 | 1558.77 | 1510.26 | 1577.67 | | 1606.74 | 1562.85 | 1596.97 | 1518.11 | 1513.44 | 1507.80 | 1526.89 | 1536.56 | 1509.91 | 1522.76 | 1511.87 | 1527.19 | 1513.20 | 1510.26 | 1508.98 |
| 9/26/2000 | 9/26/2000 | | | 1492.38 | 1500.18 | 1557.88 | 1510.33 | 1577.80 | | 1606.54 | 1562.63 | 1597.04 | 1517.99 | 1513.22 | 1507.49 | 1526.75 | 1536.44 | 1509.81 | 1522.83 | 1511.85 | 1527.20 | 1513.19 | 1510.16 | 1508.94 |
| 10/27/2000 | 10/27/2000 | | | 1492.03 | 1500.20 | 1557.25 | 1510.28 | 1577.48 | | 1606.25 | 1562.39 | 1596.95 | 1517.42 | 1512.96 | 1507.28 | 1526.13 | 1536.26 | 1511.31 | 1528.13 | 1514.47 | 1530.44 | 1515.80 | 1511.56 | 1510.64 |
| 10/30/2000 | 10/30/2000 | | | | | | | | | | | | | | | | | 1512.34 | 1528.58 | 1515.12 | 1531.40 | 1516.55 | 1512.17 | 1511.04 |
| 11/24/2000 | 11/24/2000 | | | 1492.53 | 1500.15 | 1558.46 | 1510.18 | 1577.42 | | 1606.06 | | | 1517.45 | 1512.86 | | 1526.17 | 1536.26 | 1513.78 | 1529.02 | 1516.73 | 1533.69 | 1520.18 | 1514.36 | 1512.77 |
| 12/8/2000 | 12/8/2000 | | | 1492.49 | 1500.19 | 1559.79 | 1510.13 | 1577.44 | | 1606.15 | | | 1517.13 | 1512.89 | | 1525.45 | 1536.26 | 1513.81 | 1528.69 | 1516.79 | 1533.43 | 1520.20 | 1514.46 | 1512.75 |
| 1/17/2001 | 1/17/2001 | | | 1492.43 | 1500.15 | 1563.92 | 1509.90 | 1577.48 | | 1606.18 | | | 1516.97 | 1512.97 | | 1525.79 | 1536.24 | 1512.15 | 1526.80 | 1514.95 | 1531.03 | 1518.66 | 1513.53 | 1512.05 |
| 2/23/2001 | 2/23/2001 | | | 1491.93 | 1500.20 | 1565.15 | 1509.77 | 1577.41 | | 1605.97 | | | 1516.61 | 1513.01 | | 1525.75 | 1536.22 | 1511.67 | 1525.54 | 1514.12 | 1529.13 | 1517.18 | 1512.53 | 1511.09 |
| 4/6/2001 | 4/6/2001 | | | | 1500.55 | 1565.04 | 1509.63 | 1576.92 | | 1605.34 | | | 1516.25 | 1512.93 | | 1525.69 | 1536.20 | 1511.08 | 1524.66 | 1513.37 | 1527.75 | 1516.16 | 1511.97 | 1510.37 |
| 5/18/2001 | 5/18/2001 | | | 1492.95 | 1501.06 | 1561.39 | 1509.51 | 1578.87 | | | | | 1515.99 | 1512.86 | | 1523.57 | 1536.16 | 1510.78 | 1523.91 | 1512.83 | 1527.17 | 1515.40 | 1511.63 | 1509.93 |
| 6/18/2001 | 6/18/2001 | | | 1493.03 | 1501.30 | 1563.58 | 1509.45 | 1581.11 | | | | | 1515.81 | 1513.15 | | 1523.28 | 1536.09 | 1510.67 | 1523.87 | 1512.77 | | 1515.02 | 1511.58 | 1509.76 |
| 7/19/2001 | 7/19/2001 | | | 1492.95 | 1501.30 | 1561.94 | 1509.28 | 1582.32 | | | | | 1517.34 | 1513.51 | | 1523.07 | 1535.82 | 1510.61 | 1523.43 | 1512.45 | | 1514.58 | 1511.27 | 1509.53 |
| 8/28/2001 | 8/28/2001 | | | 1492.89 | 1501.13 | 1559.96 | 1509.25 | 1582.94 | | 1615.10 | | | 1519.49 | 1513.81 | | 1522.91 | 1535.53 | 1510.31 | 1523.26 | 1512.14 | | 1519.13 | 1510.93 | 1509.39 |
| 9/17/2001 | 9/17/2001 | | | 1492.71 | 1501.05 | 1561.72 | 1509.24 | 1582.58 | | 1614.34 | | | 1517.15 | 1513.87 | | 1522.63 | 1535.19 | 1509.70 | 1519.65 | 1511.87 | | 1513.86 | 1510.61 | 1509.09 |
| 10/27/2001 | 10/27/2001 | | | 1492.72 | 1500.83 | 1556.05 | 1509.20 | 1582.54 | | 1612.74 | | | 1520.54 | 1514.04 | | 1522.56 | 1535.04 | 1509.83 | 1519.64 | 1511.65 | | 1513.60 | 1510.46 | 1508.89 |
| 12/8/2001 | 12/8/2001 | | | 1492.57 | 1500.45 | 1553.61 | | 1581.18 | | 1610.14 | | | 1520.01 | 1514.18 | | 1522.38 | 1534.81 | 1509.19 | 1522.36 | 1511.15 | | 1513.17 | 1509.91 | 1508.57 |
| 12/27/2001 | 12/27/2001 | | | 1492.63 | 1500.36 | 1553.55 | | 1581.14 | | | | | 1520.00 | 1514.10 | | 1522.33 | 1534.76 | 1509.11 | 1522.26 | 1511.08 | | 1513.14 | 1509.79 | 1508.42 |
| 2/7/2002 | 2/7/2002 | | | 1492.28 | 1499.88 | 1552.48 | | 1579.03 | | 1606.79 | | | 1519.93 | 1514.23 | | 1522.27 | 1534.57 | 1508.89 | 1522.18 | 1510.81 | | 1512.79 | 1509.56 | 1508.32 |
| 3/4/2002 | 3/4/2002 | | | | | | | | | 1605.79 | | | | | | | | 1508.70 | 1522.06 | 1510.64 | | 1512.67 | 1509.50 | 1508.25 |
| 4/18/2002 | 4/18/2002 | | | 1492.12 | 1499.31 | 1551.87 | | 1577.57 | | 1604.78 | | | 1518.42 | 1513.84 | | 1521.79 | 1534.04 | 1508.76 | 1522.42 | 1510.58 | | 1512.47 | 1509.29 | 1508.90 |
| 4/30/2002 | 4/30/2002 | | | | | | | | | 1604.69 | | | | | | | | | | | | | | |
| 5/23/2002 | 5/23/2002 | | | 1491.96 | 1499.07 | 1551.76 | | 1576.68 | | 1604.59 | | | 1518.35 | 1513.78 | | 1521.73 | 1533.96 | 1508.70 | 1522.37 | 1510.50 | | 1512.39 | 1509.08 | 1508.85 |
| 6/20/2002 | 6/20/2002 | | | 1491.83 | 1498.89 | 1551.63 | 1508.67 | 1576.31 | | 1604.47 | | | 1518.22 | 1513.70 | | 1521.61 | 1533.84 | 1508.59 | 1522.29 | 1510.39 | | 1512.30 | 1508.89 | 1508.79 |
| 7/19/2002 | 7/19/2002 | | | 1491.78 | 1498.70 | 1551.52 | 1509.13 | 1576.52 | | 1605.05 | | | 1518.32 | 1513.14 | | 1520.62 | 1533.48 | 1508.38 | 1521.99 | 1510.13 | | 1511.89 | 1508.85 | 1507.90 |
| 8/21/2002 | 8/21/2002 | | | 1491.12 | 1498.10 | 1550.69 | 1508.56 | 1575.67 | | 1604.21 | | | 1517.50 | 1512.64 | | 1519.75 | 1532.75 | 1507.83 | 1521.54 | 1509.50 | | 1511.25 | 1508.64 | 1507.27 |
| 11/26/2002 | 11/26/2002 | | | 1491.33 | 1497.89 | 1551.53 | 1508.45 | 1575.44 | | 1605.28 | | | 1517.39 | 1512.75 | | 1520.17 | 1532.33 | 1508.01 | 1521.50 | 1509.47 | | 1512.06 | 1508.51 | 1507.80 |
| 3/25/2003 | 3/25/2003 | | | 1491.64 | 1498.28 | | 1508.77 | 1576.04 | | 1604.89 | | | 1519.23 | 1513.38 | | 1520.28 | 1532.85 | 1507.62 | 1522.35 | 1509.47 | 1527.16 | 1511.17 | 1507.80 | 1507.47 |
| 4/14/2003 | 4/14/2003 | | | | | | | 1575.12 | | | | | | | | | | | | | | 1511.19 | | 1507.52 |
| 6/16/2003 | 6/16/2003 | | | 1491.24 | 1497.93 | 1551.56 | 1508.18 | 1574.59 | | 1603.69 | | | 1518.07 | 1512.85 | | 1519.71 | 1532.32 | 1507.51 | 1522.39 | 1509.28 | 1527.10 | 1511.05 | 1507.66 | 1507.30 |
| 9/10/2003 | 9/10/2003 | | | 1490.90 | 1497.58 | 1552.46 | 1508.32 | 1574.02 | | 1603.14 | | | 1518.34 | 1512.57 | | 1519.72 | 1532.11 | 1507.17 | 1522.38 | 1509.00 | 1527.19 | 1510.86 | 1507.16 | 1507.21 |
| 5/27/2004 | 5/27/2004 | | | 1490.95 | 1496.76 | 1551.57 | 1508.29 | 1573.69 | | 1602.40 | | | 1517.68 | 1512.87 | | 1519.47 | 1531.86 | 1506.83 | 1522.04 | 1508.65 | 1526.88 | 1510.59 | 1506.67 | 1507.13 |
| 12/22/2004 | 12/22/2004 | | | 1490.81 | 1496.72 | 1550.80 | 1508.74 | 1573.85 | | 1602.63 | | | 1517.36 | 1512.74 | | 1519.32 | 1531.65 | 1506.21 | 1522.33 | 1507.91 | 1527.13 | 1510.20 | 1505.83 | 1506.96 |
| 5/5/2005 | 5/5/2005 | | | 1490.64 | 1497.36 | 1551.36 | 1508.25 | 1573.21 | | 1602.11 | | | 1516.79 | 1513.20 | | 1518.96 | 1531.41 | 1506.25 | 1522.32 | 1507.88 | 1527.15 | 1510.95 | 1505.62 | 1506.64 |
| 11/15/2005 | 11/15/2005 | | | 1490.62 | 1495.98 | 1551.41 | 1508.38 | 1573.18 | | 1602.90 | | | 1516.71 | 1513.17 | | 1518.95 | 1531.39 | 1505.72 | 1522.43 | 1507.34 | 1527.17 | 1510.92 | 1505.65 | 1506.19 |
| 4/27/2006 | 4/27/2006 | | | 1490.63 | 1495.83 | 1551.47 | 1508.27 | 1572.83 | | 1602.86 | | | 1514.99 | 1512.05 | | 1518.92 | 1531.40 | 1505.58 | 1522.39 | 1507.31 | 1527.18 | 1510.92 | 1505.27 | 1506.06 |
| 10/11/2006 | 10/11/2006 | | | 1490.63 | 1495.83 | 1551.47 | 1508.27 | 1572.83 | | 1602.86 | | | 1514.85 | 1512.05 | | 1518.92 | 1531.40 | 1505.18 | 1522.34 | 1507.23 | 1527.21 | 1510.92 | 1505.15 | 1505.02 |
| 5/2/2007 | 5/2/2007 | | | 1490.38 | 1495.56 | 1551.43 | 1508.24 | 1571.52 | | 1598.79 | | | 1514.90 | 1511.65 | | 1518.88 | 1530.97 | 1504.91 | 1522.37 | 1507.02 | 1527.03 | 1510.92 | 1504.99 | 1505.70 |
| 10/4/2007 | 10/4/2007 | | | 1490.38 | 1495.56 | 1551.43 | 1508.24 | 1571.52 | | 1598.79 | | | 1514.65 | 1511.65 | | 1518.88 | 1530.97 | 1504.77 | 1522.30 | 1506.93 | 1527.15 | 1511.16 | 1504.89 | 1505.11 |
| 5/5/2008 | 5/5/2008 | | | 1490.88 | 1496.05 | 1551.45 | 1508.33 | 1572.76 | | 1602.52 | | | 1514.50 | 1512.69 | | 1518.87 | 1530.93 | 1505.49 | 1522.30 | 1507.39 | 1527.37 | 1511.31 | 1505.16 | 1506.26 |
| 10/21/2008 | 10/21/2008 | | | 1490.55 | 1495.78 | 1551.43 | 1508.36 | 1573.15 | | 1604.67 | | | 1514.30 | 1512.48 | | 1518.87 | 1531.10 | 1505.43 | 1522.30 | 1507.39 | 1527.17 | 1511.10 | 1505.32 | 1505.50 |
| 5/19/2009 | 5/19/2009 | | | 1490.43 | 1495.70 | 1551.56 | 1505.68 | 1573.14 | | 1603.47 | | | 1514.38 | 1512.40 | | 1518.87 | 1531.04 | 1505.40 | 1522.31 | 1507.26 | 1527.17 | 1511.70 | 1505.29 | 1505.41 |
| 11/2/2009 | 11/2/2009 | | | 1490.54 | 1495.58 | 1551.45 | 1508.29 | 1572.41 | | 1603.79 | | | 1514.23 | 1512.71 | | 1518.87 | 1531.02 | 1504.76 | 1522.48 | 1506.76 | 1527.17 | 1511.15 | 1504.83 | 1505.40 |
| 5/10/2010 | 5/10/2010 | | | 1490.12 | 1495.49 | 1551.45 | 1508.32 | 1572.46 | | 1602.63 | | | 1511.46 | 1511.71 | | 1518.87 | 1530.86 | 1504.20 | 1522.38 | 1506.32 | 1527.28 | 1511.14 | 1504.37 | 1504.66 |
| 10/18/2010 | 10/18/2010 | | | 1489.98 | 1495.39 | 1551.43 | 1506.27 | 1571.50 | | 1602.78 | | | 1513.18 | 1511.71 | | 1518.87 | 1530.86 | 1503.83 | 1522.44 | 1506.02 | 1527.24 | 1511.16 | 1504.22 | 1504.89 |
| 4/20/2011 | 4/20/2011 | | | 1489.62 | 1495.16 | 1551.43 | 1507.30 | 1572.03 | | 1603.58 | | | 1513.37 | 1511.89 | | 1518.87 | 1530.83 | 1503.60 | 1522.30 | 1505.76 | 1527.17 | 1511.12 | 1504.27 | 1504.98 |
| 10/13/2011 | 10/13/2011 | | | 1489.61 | 1495.20 | 1551.43 | 1505.99 | 1571.31 | | 1602.67 | | | 1513.02 | 1511.70 | | 1518.87 | 1529.76 | 1503.71 | 1522.30 | 1505.53 | 1527.17 | 1511.09 | 1503.70 | 1504.66 |
| 4/27/2012 | 4/27/2012 | | | 1490.22 | 1494.85 | 1551.43 | 1508.28 | 1570.38 | | 1601.20 | | | 1505.57 | 1531.82 | | 1518.87 | 1530.81 | 1494.86 | 1522.30 | 1505.22 | 1527.27 | 1511.16 | 1503.53 | 1504.66 |
| 10/30/2012 | 10/30/2012 | | | 1490.08 | | 1551.43 | 1508.25 | 1571.32 | | 1605.41 | | | 1509.09 | 1528.97 | | 1518.87 | 1530.67 | 1502.97 | 1522.30 | 1505.16 | 1527.17 | 1511.09 | 1503.46 | 1504.66 |
| 4/23/2013 | 4/23/2013 | | | | | 1551.43 | | 1571.32 | | | | | 1510.27 | 1507.91 | | 1518.87 | 1531.04 | | | 1504.74 | 1527.17 | 1511.09 | 1503.15 | 1504.66 |
| 10/14/2013 | 10/14/2013 | | | 1490.19 | 1494.63 | 1551.43 | 1508.26 | 1575.20 | | 1608.20 | | | 1509.48 | 1511.43 | | 1518.87 | 1530.45 | 1503.81 | 1522.30 | 1505.89 | 1527.17 | 1511.09 | 1504.24 | 1504.66 |
| 4/23/2014 | 4/23/2014 | | | 1490.61 | 1494.80 | 1551.43 | 1508.41 | 1576.52 | | 1605.17 | | | 1509.10 | 1511.53 | | 1518.87 | 1530.81 | 1503.65 | 1522.30 | 1505.55 | 1527.17 | 1511.09 | 1503.98 | 1504.66 |
| 10/21/2014 | 10/21/2014 | | | 1490.22 | 1494.66 | 1551.43 | 1508.29 | 1580.38 | | 1612.68 | | | 1510.60 | 1512.00 | | 1518.87 | 1529.76 | 1504.70 | 1522.30 | 1506.60 | 1527.17 | 1511.09 | 1504.79 | 1504.66 |
| 4/14/2015 | 4/14/2015 | | | | 1494.77 | 1551.43 | | 1578.56 | | 1608.87 | | | 1511.09 | 1511.73 | | 1518.87 | 1529.76 | 1504.69 | 1522.30 | 1506.52 | 1527.17 | 1511.09 | 1504.31 | 1504.66 |

| LTVSMC TAILING BASIN STANDPIPE PIEZOMETERS | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | PIEZOMETER | 2E_2018_pz_seepleft_SP | 2E_2018_pz_seepmid_SP | A-1 | A-3 | A-9 | B-2 | D-1 | D-2 | D-4 | E-1 | E-5 | F-2 | G-2 | G-3 | P1B-99 | P1B1-99 | P2HA-99 | P2HB-99 | P1H-99 | P3H1-99 | P2H1-99 | P1H1-99 | P3H-99 |
| Pressure Cell Elev. (ft) | Pressure Cell Elev. (ft) | 1514.25 | 1515.61 | 1515.53 | 1572.30 | 1715.56 | 1530.48 | 1613.32 | 1676.97 | 1657.69 | 1570.30 | 1718.10 | 1573.79 | 1578.81 | 1579.50 | 1574.57 | 1574.44 | 1573.8 | 1573.6 | 1595.77 | 1593.9 | 1593.8 | 1593.8 | 1534.1 |
| 1999 Elev. (ft) | 1999 Elev. (ft) | | | | | | | | | N/A | 1574.04 | 1717.75 | | | 1589.38 | | | | | | | | | |
| Date | Date | MEASURED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | | | | | | | | | | | | |
| 10/21/2015 | 10/21/2015 | | | 1490.14 | 1493.86 | 1551.43 | 1508.39 | 1580.41 | | 1608.87 | | | 1511.34 | 1511.43 | | 1518.87 | 1531.06 | 1505.23 | 1522.30 | 1506.93 | 1527.17 | 1511.09 | 1505.12 | 1504.66 |
| 4/27/2016 | 4/27/2016 | | | 1490.76 | 1494.30 | 1551.43 | 1508.52 | 1580.86 | | 1610.82 | | | 1516.62 | 1512.11 | | 1518.87 | 1530.90 | 1506.08 | 1522.30 | 1507.48 | 1527.17 | 1511.09 | 1505.52 | 1504.66 |
| 8/25/2016 | 8/25/2016 | | | | | | | 1582.87 | | 1614.99 | | | 1521.49 | 1513.25 | | | | | | | | | | |
| 9/20/2016 | 9/20/2016 | | | 1490.50 | 1494.49 | 1551.49 | 1508.45 | 1583.32 | | 1615.35 | | | 1522.21 | 1513.41 | | 1518.87 | 1530.52 | 1507.32 | 1522.30 | 1508.48 | 1527.17 | 1511.09 | 1506.69 | 1506.88 |
| 10/7/2016 | 10/7/2016 | | | | | | | 1583.50 | | 1615.24 | | | | | | | | | | | | | | |
| 10/14/2016 | 10/14/2016 | | | | | | | 1583.46 | | 1614.97 | | | | | | | | | | | | | | |
| 10/21/2016 | 10/21/2016 | | | | | | | 1583.32 | | 1614.56 | | | | | | | | | | | | | | |
| 10/27/2016 | 10/27/2016 | | | | | | | 1583.20 | | 1614.29 | | | | | | | | | | | | | | |
| 11/4/2016 | 11/4/2016 | | | | | | | 1583.03 | | 1613.81 | | | | | | | | | | | | | | |
| 12/2/2016 | 12/2/2016 | | | | | | | 1582.95 | | 1612.34 | | | | | | | | | | | | | | |
| 2/10/2017 | 2/10/2017 | | | | | | | 1580.69 | | | | | 1523.81 | | | | | | | | | | | |
| 3/31/2017 | 3/31/2017 | | | | | | | 1580.05 | | 1608.69 | | | | | | | | | | | | | | |
| 4/25/2017 | 4/25/2017 | | | 1490.68 | 1494.93 | 1551.43 | 1508.56 | 1579.86 | 1591.16 | 1608.63 | | | 1523.46 | 1514.65 | | 1518.87 | 1530.83 | 1508.18 | 1522.30 | 1509.42 | 1527.17 | 1511.09 | 1507.25 | 1507.37 |
| 7/7/2017 | 7/7/2017 | | | | | | | 1580.12 | 1586.29 | 1603.91 | | | | | | | | | | | | | | |
| 7/28/2017 | 7/28/2017 | | | | | | | 1580.21 | 1592.84 | 1610.39 | | | | | | | | | | | | | | |
| 8/29/2017 | 8/29/2017 | | | | | | | 1574.51 | 1586.76 | 1604.84 | | | | | | | | | | | | | | |
| 10/3/2017 | 10/3/2017 | | | | | | | 1581.92 | 1593.50 | 1612.57 | | | | | | | | | | | | | | |
| 10/18/2017 | 10/18/2017 | | | 1490.61 | 1495.32 | 1551.43 | 1508.71 | 1582.07 | 1594.28 | 1612.89 | | | 1518.49 | 1515.16 | | 1518.87 | 1529.76 | 1508.32 | 1522.30 | 1509.63 | 1527.17 | 1511.09 | 1507.16 | 1507.75 |
| 11/2/2017 | 11/2/2017 | | | | | | | 1581.94 | 1594.65 | 1606.36 | | | | | | | | | | | | | | |
| 12/1/2017 | 12/1/2017 | | | | | | | 1581.72 | 1594.58 | 1612.44 | | | | | | | | | | | | | | |
| 1/16/2018 | 1/16/2018 | | | | | | | | 1586.53 | 1602.52 | | | | | | | | | | | | | | |
| 4/26/2018 | 4/26/2018 | | | 1490.76 | 1495.78 | 1551.43 | 1508.73 | 1578.09 | 1588.27 | 1605.84 | | | | | | | | | | | | | | |
| 5/2/2018 | 5/2/2018 | 1501.19 | 1497.32 | | | | | 1578.09 | 1588.27 | 1605.84 | | | 1521.98 | 1515.07 | | 1518.87 | 1529.76 | 1507.70 | 1522.30 | 1509.02 | 1527.17 | 1511.09 | 1506.86 | 1507.48 |
| 5/14/2018 | 5/14/2018 | 1500.94 | 1497.16 | | | | | | | | | | 1521.82 | 1514.99 | | | | | | | | | | |
| 6/8/2018 | 6/8/2018 | 1500.51 | 1497.05 | | | | | 1577.34 | 1587.97 | 1606.01 | | | 1521.82 | 1514.81 | | | | | | | | | | |
| 7/25/2018 | 7/25/2018 | 1499.84 | 1496.95 | | | | | 1577.47 | 1588.18 | 1606.98 | | | 1522.31 | 1514.62 | | | | | | | | | | |
| 8/17/2018 | 8/17/2018 | 1499.63 | 1496.81 | | | | | 1577.56 | 1588.35 | 1607.34 | | | 1522.54 | 1514.52 | | | | | | | | | | |
| 9/19/2018 | 9/19/2018 | 1499.18 | 1497.29 | | | | | 1578.03 | 1589.15 | 1607.69 | | | 1522.71 | 1514.44 | | | | | | | | | | |
| 10/16/2018 | 10/16/2018 | 1498.95 | 1497.42 | 1490.61 | 1495.57 | 1551.43 | 1508.91 | 1578.91 | 1589.60 | 1608.37 | | | 1522.86 | 1514.40 | | 1518.87 | 1529.76 | 1507.39 | 1522.30 | 1508.70 | 1527.17 | 1511.09 | 1506.68 | 1507.21 |
| 11/8/2018 | 11/8/2018 | 1498.77 | 1497.43 | | | | | 1578.84 | 1590.02 | 1608.44 | | | 1523.45 | 1514.41 | | | | | | | | | | |
| 12/13/2018 | 12/13/2018 | 1498.48 | 1497.39 | | | | | 1578.58 | 1590.05 | 1608.49 | | | 1523.15 | 1514.48 | | | | | | | | | | |
| 1/22/2019 | 1/22/2019 | 1498.37 | 1497.35 | | | | | 1577.95 | 1589.21 | 1606.71 | | | 1522.44 | 1514.80 | | | | | | | | | | |
| 2/27/2019 | 2/27/2019 | 1498.49 | 1497.34 | | | | | 1577.65 | 1588.64 | 1606.15 | | | 1521.95 | 1514.88 | | | | | | | | | | |
| 3/27/2019 | 3/27/2019 | 1498.21 | 1497.38 | | | | | 1577.44 | 1587.95 | 1605.76 | | | 1521.53 | 1514.88 | | | | | | | | | | |
| 4/23/2019 | 4/23/2019 | 1498.58 | 1497.33 | 1490.76 | 1495.52 | 1551.49 | 1508.89 | 1577.58 | 1587.65 | 1605.92 | | | 1521.01 | 1514.70 | | 1518.87 | 1531.14 | 1507.26 | 1522.36 | 1508.57 | 1527.18 | 1511.11 | 1508.10 | 1507.20 |
| 5/28/2019 | 5/28/2019 | 1498.60 | 1497.31 | | | | | 1577.53 | 1587.79 | 1606.44 | | | 1521.58 | 1514.62 | | | | | | | | | | |
| 6/26/2019 | 6/26/2019 | 1498.59 | 1497.37 | | | | | 1577.40 | 1588.07 | 1606.54 | | | 1521.40 | 1514.63 | | | | | | | | | | |
| 7/30/2019 | 7/30/2019 | 1498.48 | 1497.23 | | | | | 1577.45 | 1588.73 | 1606.96 | | | 1521.34 | 1514.60 | | | | | | | | | | |
| 8/20/2019 | 8/20/2019 | 1498.33 | 1497.14 | | | | | 1577.49 | 1589.00 | 1607.34 | | | 1521.24 | 1514.51 | | | | | | | | | | |
| 9/18/2019 | 9/18/2019 | 1498.20 | 1493.78 | | | | | 1576.87 | 1589.26 | 1607.94 | | | 1521.21 | 1514.51 | | | | | | | | | | |
| 10/29/2019 | 10/29/2019 | 1497.84 | 1497.36 | 1490.50 | 1495.19 | 1551.43 | 1508.86 | 1567.12 | 1589.72 | 1608.64 | | | 1521.26 | 1514.50 | | 1518.87 | 1529.76 | 1506.75 | 1522.30 | 1508.08 | 1527.17 | 1511.09 | 1505.96 | 1506.97 |
| 11/22/2019 | 11/22/2019 | 1497.68 | 1497.22 | | | | | 1578.50 | 1589.84 | 1608.26 | | | 1520.98 | 1514.49 | | | | | | | | | | |
| 12/20/2019 | 12/20/2019 | 1497.53 | 1497.11 | | | | | 1578.13 | 1589.68 | 1607.42 | | | 1520.65 | 1514.49 | | | | | | | | | | |
| 1/21/2020 | 1/21/2020 | 1497.42 | 1497.04 | | | | | 1577.74 | 1589.09 | 1606.69 | | | 1520.49 | 1514.55 | | | | | | | | | | |
| 2/24/2020 | 2/24/2020 | 1497.39 | 1496.98 | | | | | 1577.15 | 1588.27 | 1606.06 | | | 1520.05 | 1514.61 | | | | | | | | | | |
| 3/25/2020 | 3/25/2020 | 1497.36 | 1497.01 | | | | | 1576.94 | 1587.74 | 1605.66 | | | 1519.81 | 1514.49 | | | | | | | | | | |
| 4/23/2020 | 4/23/2020 | 1497.42 | 1497.04 | 1486.83 | 1495.25 | 1551.49 | 1508.93 | 1577.15 | 1587.50 | 1605.85 | | | 1519.44 | 1514.43 | | 1518.87 | 1529.76 | 1506.65 | 1522.30 | 1507.84 | 1527.17 | 1511.09 | 1505.61 | 1506.94 |
| 5/19/2020 | 5/19/2020 | 1497.50 | 1496.94 | | | | | 1576.88 | 1587.42 | 1605.86 | | | 1518.39 | 1514.29 | | | | | | | | | | |
| 7/17/2020 | 7/17/2020 | 1497.39 | 1496.80 | | | | | 1576.78 | 1587.63 | 1606.26 | | | 1519.48 | 1514.34 | | | | | | | | | | |
| 7/20/2020 | 7/20/2020 | 1497.31 | 1496.89 | | | | | 1576.87 | 1587.94 | 1606.73 | | | 1519.32 | 1514.26 | | | | | | | | | | |
| 8/20/2020 | 8/20/2020 | 1497.19 | 1496.70 | | | | | 1577.21 | 1587.49 | 1607.38 | | | 1519.22 | 1514.20 | | | | | | | | | | |
| 9/28/2020 | 9/28/2020 | 1496.94 | 1496.66 | | | | | 1577.50 | 1588.98 | 1607.69 | | | 1519.06 | 1513.91 | | | | | | | | | | |
| 10/19/2020 | 10/19/2020 | 1496.84 | 1496.78 | 1490.45 | 1494.73 | 1551.43 | 1508.82 | 1577.61 | 1588.95 | 1607.69 | | | 1519.22 | 1513.74 | | 1518.87 | 1529.76 | 1505.76 | 1522.30 | 1507.20 | 1527.17 | 1511.09 | 1501.01 | 1506.08 |
| 11/24/2020 | 11/24/2020 | 1496.71 | 1496.71 | | | | | 1577.89 | 1588.95 | 1607.69 | | | 1518.80 | 1513.53 | | | | | | | | | | |
| 12/15/2020 | 12/15/2020 | 1496.60 | 1496.49 | | | | | 1577.61 | 1588.55 | 1603.89 | | | 1518.70 | 1513.21 | | | | | | | | | | |
| 1/15/2021 | 1/15/2021 | 1496.49 | 1496.45 | | | | | 1577.22 | 1588.05 | 1606.32 | | | 1518.65 | 1512.96 | | | | | | | | | | |
| 2/22/2021 | 2/22/2021 | 1496.33 | 1496.31 | | | | | 1576.70 | 1587.36 | 1605.64 | | | 1518.58 | 1512.61 | | | | | | | | | | |
| 3/25/2021 | 3/25/2021 | 1496.30 | 1496.56 | | | | | 1576.50 | 1586.89 | 1605.19 | | | 1518.24 | 1512.46 | | | | | | | | | | |
| 4/28/2021 | 4/28/2021 | 1496.29 | 1496.63 | 1490.51 | 1494.30 | 1551.43 | 1508.93 | 1576.72 | 1586.64 | 1605.55 | | | 1518.05 | 1512.38 | | 1518.87 | 1529.76 | 1505.74 | 1522.30 | 1507.24 | 1527.17 | 1511.09 | 1506.01 | 1506.26 |
| 5/24/2021 | 5/24/2021 | 1496.26 | 1496.23 | | | | | 1576.55 | 1586.76 | 1605.99 | | | 1517.95 | 1512.25 | | | | | | | | | | |
| 6/28/2021 | 6/28/2021 | 1496.28 | 1496.08 | | | | | 1576.43 | 1586.79 | 1606.39 | | | 1517.85 | 1512.11 | | | | | | | | | | |
| 7/27/2021 | 7/27/2021 | 1496.18 | 1495.75 | | | | | 1576.42 | 1587.52 | 1606.71 | | | 1517.86 | 1512.07 | | | | | | | | | | |
| 8/23/2021 | 8/23/2021 | 1496.11 | 1495.74 | | | | | 1576.57 | 1587.85 | 1606.89 | | | 1517.90 | 1512.25 | | | | | | | | | | |
| 9/27/2021 | 9/27/2021 | 1495.97 | 1496.21 | | | | | 1576.84 | 1587.99 | 1607.10 | | | 1517.76 | 1512.09 | | | | | | | | | | |
| 10/13/2021 | 10/13/2021 | 1495.94 | 1496.46 | 1490.24 | 1494.25 | 1551.46 | 1508.80 | 1577.14 | 1588.01 | 1607.31 | | | 1517.73 | 1512.13 | | 1518.87 | 1529.76 | 1505.31 | 1522.30 | 1506.78 | 1527.17 | 1511.09 | 1504.92 | 1504.66 |
| 11/23/2021 | 11/23/2021 | 1495.84 | 1496.36 | | | | | 1577.37 | 1588.20 | 1607.30 | | | 1517.62 | 1512.13 | | | | | | | | | | |
| 11/30/2021 | 11/30/2021 | | | | | | | | | | | | | | | | | | | | | | | |
| 12/3/2021 | 12/3/2021 | 1495.89 | 1496.36 | | | | | 1577.28 | 1588.18 | 1607.31 | | | 1517.30 | 1512.13 | | | | | | | | | | |
| 1/31/2022 | 1/31/2022 | 1503.77 | 1496.18 | | | | | 1576.71 | 1587.31 | 1605.92 | | | 1518.02 | 1511.96 | | | | | | | | | | |
| 2/28/2022 | 2/28/2022 | 1496.37 | 1496.27 | | | | | 1576.32 | 1586.82 | 1605.35 | | | 1517.44 | 1511.37 | | | | | | | | | | |
| 3/29/2022 | 3/29/2022 | 1495.75 | 1496.27 | | | | | 1576.17 | 1586.38 | | | | 1517.26 | 1511.84 | | | | | | | | | | |
| 4/25/2022 | 4/25/2022 | 1495.81 | 1497.31 | 1490.61 | 1494.38 | 1551.43 | 1509.03 | 1576.50 | 1586.19 | 1605.20 | | | 1517.28 | 1511.87 | | 1518.87 | 1529.76 | 1505.29 | 1522.30 | 1506.64 | 1527.17 | 1511.09 | 1505.08 | 1506.06 |
| 5/24/2022 | 5/24/2022 | 1495.95 | 1496.99 | | | | | 1577.00 | 1586.85 | 1606.09 | | | 1517.91 | 1511.29 | | | | | | | | | | |
| 6/28/2022 | 6/28/2022 | 1496.07 | 1496.81 | | | | | 1577.07 | 1588.20 | 1607.19 | | | 1517.85 | 1512.69 | | | | | | | | | | |
| 7/15/2022 | 7/15/2022 | 1496.01 | 1496.65 | | | | | 1577.25 | 1589.03 | 1605.69 | | | 1517.83 | 1512.96 | | | | | | | | | | |
| 8/31/2022 | 8/31/2022 | 1496.20 | 1496.84 | | | | | 1578.04 | 1590.18 | 1608.28 | | | 1517.96 | 1512.86 | | | | | | | | | | |
| 9/21/2022 | 9/21/2022 | 1496.17 | 1496.57 | | | | | 1578.10 | 1590.64 | 1608.54 | | | 1518.14 | 1512.65 | | | | | | | | | | |
| 10/27/2022 | 10/27/2022 | 1496.24 | 1496.63 | 1490.87 | 1495.61 | 1551.43 | 1508.82 | 1578.05 | 1590.58 | 1608.17 | | | 1518.69 | 1513.00 | | 1518.87 | 1530.97 | 1506.22 | 1522.30 | 1507.57 | 1527.17 | 1511.09 | 1506.08 | 1506.26 |
| 11/23/2022 | 11/23/2022 | 1496.27 | 1496.71 | | | | | 1578.00 | 1590.28 | 1607.61 | | | 1519.22 | 1514.02 | | | | | | | | | | |
| 12/7/2022 | 12/7/2022 | 1496.26 | 1496.66 | | | | | 1577.75 | 1590.04 | 1607.15 | | | 1519.32 | 1514.21 | | | | | | | | | | |
| 1/23/2023 | 1/23/2023 | 1496.29 | 1496.71 | | | | | 1577.02 | 1588.90 | 1606.04 | | | 1519.61 | 1514.42 | | | | | | | | | | |
| 2/27/2023 | 2/27/2023 | 1496.30 | 1496.66 | | | | | 1576.67 | 1587.61 | 1606.51 | | | 1519.48 | 1514.32 | | | | | | | | | | |
| 3/30/2023 | 3/30/2023 | 1496.35 | 1496.65 | | | | | 1576.24 | 1586.88 | | | | 1519.20 | 1514.17 | | | | | | | | | | |
| 4/27/2023 | 4/27/2023 | 1496.40 | 1497.07 | 1490.88 | 1494.96 | 1551.43 | 1508.96 | 1577.04 | 1586.74 | 1605.47 | | | 1519.04 | 1514.06 | | 1518.87 | 1531.20 | 1506.46 | 1522.30 | 1507.70 | 1527.17 | 1511.09 | 1505.94 | 1506.86 |
| 5/30/2023 | 5/30/2023 | 1496.52 | 1496.80 | | | | | 1576.84 | 1587.18 | 1605.99 | | | 1519.33 | 1513.80 | | | | | | | | | | |
| 6/27/2023 | 6/27/2023 | 1496.55 | 1496.80 | | | | | 1576.47 | 1587.19 | 1605.79 | | | 1519.70 | 1514.08 | | | | | | | | | | |
| 7/26/2023 | 7/26/2023 | 1496.64 | 1497.01 | | | | | 1576.42 | 1587.07 | 1605.44 | | | 1519.99 | 1514.31 | | | | | | | | | | |
| 8/23/2023 | 8/23/2023 | 1496.60 | 1496.80 | | | | | 1576.06 | 1586.68 | 1604.79 | | | 1520.16 | 1514.47 | | | | | | | | | | |
| 9/20/2023 | 9/20/2023 | 1496.67 | 1496.91 | | | | | 1575.70 | 1586.25 | 1604.43 | | | 1520.29 | 1514.52 | | | | | | | | | | |
| 10/23/2023 | 10/23/2023 | 1496.71 | 1497.05 | | | | | 1575.53 | 1585.41 | 1604.31 | | | | 1514.56 | | | | | | | | | | |
| 10/24/2023 | 10/24/2023 | | | 1490.62 | 1495.09 | | 1508.66 | | | | | | | | | 1518.87 | 1529.76 | 1506.71 | 1522.30 | 1508.00 | 1527.17 | 1511.09 | 1506.29 | 1506.61 |
| 10/27/2023 | 10/27/2023 | | | | | | | | | | | | 1520.36 | | | | | | | | | | | |
| 11/22/2023 | 11/22/2023 | 1496.71 | 1497.07 | | | | | 1575.44 | 1584.36 | 1604.21 | | | 1520.42 | 1514.55 | | | | | | | | | | |

| **LTVSMC TAILING BASIN** STANDPIPE PIEZOMETERS | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIEZOMETER | PIEZOMETER | 2E_2018_pz_seepleft_SP | 2E_2018_pz_seepmid_SP | A-1 | A-3 | A-9 | B-2 | D-1 | D-2 | D-4 | E-1 | E-5 | F-2 | G-2 | G-3 | P1B-99 | P1B1-99 | P2HA-99 | P2HB-99 | P1H-99 | P3H1-99 | P2H1-99 | P1H1-99 | P3H-99 |
| Pressure Cell Elev. (ft) | Pressure Cell Elev. (ft) | 1514.25 | 1515.61 | 1515.53 | 1572.30 | 1715.56 | 1530.48 | 1613.32 | 1676.97 | 1657.69 | 1570.30 | 1718.10 | 1573.79 | 1578.81 | 1579.50 | 1574.57 | 1574.44 | 1573.8 | 1573.6 | 1595.77 | 1593.9 | 1593.8 | 1593.8 | 1534.1 |
| 1999 Elev. (ft) | 1999 Elev. (ft) | | | | | | | | | N/A | 1574.04 | 1717.75 | | | 1589.38 | | | | | | | | | |
| Date | Date | MEASURED ELEVATIONS (USFT, NAVD88) | | | | | | | | | | | | | | | | | | | | | | |
| 11/30/2023 | 11/30/2023 | | | | | 1549.56 | | | | | | | | | | | | | | | | | | |
| 12/13/2023 | 12/13/2023 | 1496.75 | 1496.98 | | | | | 1575.28 | 1583.82 | 1603.97 | | | 1520.32 | 1514.49 | | | | | | | | | | |
| 1/23/2024 | 1/23/2024 | 1496.72 | 1496.93 | | | | | | | | | | 1520.22 | | | | | | | | | | | |
| 1/26/2024 | 1/26/2024 | | | | | | | 1575.12 | 1583.27 | 1603.69 | | | | 1514.41 | | | | | | | | | | |
| 2/8/2024 | 2/8/2024 | 1496.74 | 1497.04 | | | | | 1575.15 | 1583.25 | 1603.61 | | | 1520.25 | 1514.44 | | | | | | | | | | |
| 3/27/2024 | 3/27/2024 | 1496.70 | 1496.83 | | | | | 1574.63 | 1582.53 | 1603.24 | | | 1519.77 | 1514.26 | | | | | | | | | | |
| 4/25/2024 | 4/25/2024 | 1496.78 | 1496.88 | | | | | 1574.50 | 1582.13 | 1603.15 | | | 1519.58 | 1512.81 | | | | | | | | | | |
| 4/26/2024 | 4/26/2024 | | | 1490.58 | 1494.90 | 1551.71 | 1508.70 | | | | | | | | | 1520.83 | 1531.07 | 1506.56 | 1523.55 | 1507.81 | 1528.23 | 1511.85 | 1508.08 | 1506.63 |
| 5/28/2024 | 5/28/2024 | 1496.78 | 1496.96 | | | | | 1574.74 | 1581.87 | 1603.49 | | | 1519.35 | 1514.08 | | | | | | | | | | |
| 6/19/2024 | 6/19/2024 | | | 1491.17 | 1495.19 | | | 1574.46 | 1582.26 | 1604.19 | | | | | | | | 1506.77 | 1522.30 | 1507.88 | | | | |
| 6/27/2024 | 6/27/2024 | 1496.85 | 1497.31 | | | | | 1576.02 | 1582.77 | 1602.69 | | | 1519.39 | 1514.31 | | | | | | | | | | |
| 7/30/2024 | 7/30/2024 | 1496.93 | 1497.20 | | | | | 1576.05 | 1584.97 | 1606.35 | | | 1520.27 | 1514.01 | | | | | | | | | | |
| 8/27/2024 | 8/27/2024 | 1496.91 | 1497.14 | | | | | 1576.09 | 1586.39 | 1605.89 | | | 1520.87 | 1514.62 | | | | | | | | | | |
| 9/18/2024 | 9/18/2024 | 1496.94 | 1497.06 | | | | | 1576.05 | 1587.27 | 1606.42 | | | 1521.33 | 1514.81 | | | | | | | | | | |
| 10/23/2024 | 10/23/2024 | 1496.96 | 1497.49 | | | | 1508.77 | 1575.82 | 1587.33 | 1605.94 | | | 1521.26 | 1515.03 | | 1520.93 | 1531.07 | | | | | | | |
| 10/24/2024 | 10/24/2024 | | | 1490.81 | 1495.69 | 1551.61 | | | | | | | | | | | | 1507.14 | 1523.55 | 1508.38 | 1528.35 | 1512.13 | 1506.51 | 1506.94 |
| 11/21/2024 | 11/21/2024 | 1496.95 | 1497.54 | | | | | 1575.71 | 1586.87 | 1605.60 | | | 1520.94 | 1514.03 | | | | | | | | | | |
| 12/23/2024 | 12/23/2024 | 1496.76 | 1497.33 | | | | | 1575.61 | 1586.19 | 1604.67 | | | 1520.59 | 1514.88 | | | | | | | | | | |

# LTVSMC TAILING BASIN VIBRATING WIRE ELEVATIONS

| PIEZOMETER / DATE | 2E_2018_PZ_F1_VW (Peat_40') | 2E_2018_PZ_F1_VW (Till_46') | 2E_2018_PZ_F3_offset_VW (FT_66') | 2E_2018_PZ_F3_offset_VW (FT_85') | 2E_2018_PZ_F3_offset_VW (Peat_100') | 2E_2018_PZ_F4_VW (FT_75') | 2E_2018_PZ_F4_VW (Peat_111') | 2E_2018_PZ_F4_VW (Till_124') | 2E_2018_PZ_G4_VW (50') | 2E_2018_PZ_G4_VW (70') | 2E_2018_PZ_G4_VW (75') | 2E_2018_PZ_G1_VW (48') | 2E_2018_PZ_G1_VW (52') | 2E_2018_PZ_G1_VW (58') | 2E_2018_PZ_J1_VW (42') | 2E_2018_PZ_J1_VW (67') | 2E_2018_PZ_J1_VW (75') | 2E-VW308+05-R702 (T) | 2E-VW308+05-R702 (M) | 2E-VW308+05-R702 (B) | 2E-VW308+30-R356 (T) | 2E-VW308+30-R356 (M) | 2E-VW308+30-R356 (B) | 2E-VW311+50-L170 (T) | 2E-VW311+50-L170 (B) | 2E-VW318+30-R677 (T) | 2E-VW318+30-R677 (M) | 2E-VW318+30-R677 (B) | 2E-VW318+25-R341 (T) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/2/2018 | 1491.88 | 1492.60 | 1512.51 | 1493.12 | 1495.69 | 1516.77 | 1489.72 | 1494.78 | 1534.29 | 1514.08 | 1509.31 | | | | | | | | | | | | | | | | | | | |
| 5/14/2018 | 1492.08 | 1492.75 | 1512.44 | 1493.17 | 1496.28 | 1516.76 | 1489.29 | 1495.37 | 1534.36 | 1514.12 | 1509.40 | | | | | | | | | | | | | | | | | | | |
| 6/8/2018 | 1492.24 | 1492.76 | 1512.33 | 1493.11 | 1494.51 | 1516.82 | 1488.86 | 1495.44 | 1534.35 | 1513.91 | 1509.38 | 1506.62 | 1508.59 | 1510.99 | 1508.26 | 1494.09 | 1490.63 | | | | | | | | | | | | | |
| 7/25/2018 | 1492.11 | 1492.74 | 1512.70 | 1493.48 | 1496.27 | 1517.55 | 1489.39 | 1495.38 | 1534.36 | 1513.88 | 1509.39 | 1506.50 | 1508.40 | 1510.95 | 1508.38 | 1494.06 | 1490.78 | | | | | | | | | | | | | |
| 8/17/2018 | 1492.06 | 1492.67 | 1512.84 | 1493.58 | 1495.93 | 1517.79 | 1489.55 | 1495.24 | 1534.31 | 1513.74 | 1509.23 | 1506.42 | 1508.20 | 1510.82 | 1508.42 | 1493.95 | 1490.73 | | | | | | | | | | | | | |
| 9/19/2018 | 1491.97 | 1492.60 | 1512.97 | 1493.64 | 1496.17 | 1517.92 | 1489.67 | 1495.04 | 1534.25 | 1513.72 | 1509.28 | 1506.32 | 1508.22 | 1510.86 | 1508.58 | 1493.82 | 1490.71 | | | | | | | | | | | | | |
| 10/16/2018 | 1491.90 | 1492.52 | 1513.00 | 1493.66 | 1496.11 | 1518.04 | 1489.23 | 1494.99 | 1534.12 | 1513.67 | 1509.30 | 1506.19 | 1508.25 | 1510.89 | 1508.57 | 1493.72 | 1490.68 | | | | | | | | | | | | | |
| 11/8/2018 | 1491.80 | 1492.41 | 1513.07 | 1493.75 | 1495.77 | 1518.14 | 1489.06 | 1494.62 | 1534.08 | 1513.55 | 1509.16 | 1506.18 | 1508.21 | 1510.78 | 1508.48 | 1493.61 | 1490.63 | | | | | | | | | | | | | |
| 12/13/2018 | 1491.83 | 1492.46 | 1513.20 | 1493.86 | 1495.93 | 1518.18 | 1489.35 | 1494.48 | 1534.09 | 1513.61 | 1509.16 | 1506.49 | 1508.55 | 1510.78 | 1508.66 | 1493.60 | 1490.67 | | | | | | | | | | | | | |
| 1/22/2019 | 1491.75 | 1492.38 | 1512.52 | 1493.33 | 1495.62 | 1517.11 | 1488.95 | 1494.21 | 1533.93 | 1513.59 | 1509.00 | 1506.43 | 1508.30 | 1510.62 | 1508.75 | 1493.45 | 1490.67 | | | | | | | | | | | | | |
| 2/27/2019 | 1491.76 | 1492.43 | 1512.24 | 1493.09 | 1495.35 | 1516.42 | 1488.59 | 1494.19 | 1533.94 | 1513.74 | 1509.04 | 1506.58 | 1508.24 | 1510.60 | 1508.74 | 1493.45 | 1490.79 | | | | | | | | | | | | | |
| 3/27/2019 | 1491.87 | 1492.56 | 1512.21 | 1493.06 | 1495.43 | 1516.02 | 1488.64 | 1494.41 | 1534.10 | 1513.98 | 1509.22 | 1506.78 | 1508.76 | 1510.78 | 1508.85 | 1493.69 | 1491.12 | | | | | | | | | | | | | |
| 4/23/2019 | 1491.79 | 1492.44 | 1511.83 | 1492.78 | 1495.20 | 1515.39 | 1488.11 | 1494.46 | 1534.06 | 1513.85 | 1509.22 | 1506.62 | 1508.78 | 1510.80 | 1508.84 | 1493.59 | 1491.12 | | | | | | | | | | | | | |
| 5/28/2019 | 1491.95 | 1492.57 | 1512.06 | 1492.87 | 1495.55 | 1515.72 | 1488.10 | 1494.70 | 1534.14 | 1513.97 | 1509.39 | 1506.66 | 1508.98 | 1511.00 | 1508.90 | 1493.43 | 1490.89 | | | | | | | | | | | | | |
| 6/26/2019 | 1491.87 | 1492.57 | 1512.13 | 1492.96 | 1495.57 | 1515.94 | 1488.14 | 1494.52 | 1534.14 | 1513.84 | 1509.28 | 1506.66 | 1508.77 | 1510.95 | 1508.75 | 1493.39 | 1490.94 | | | | | | | | | | | | | |
| 7/30/2019 | 1491.84 | 1492.50 | 1512.03 | 1492.93 | 1494.93 | 1515.82 | 1488.03 | 1494.43 | 1534.11 | 1513.71 | 1509.08 | 1506.62 | 1508.53 | 1510.74 | 1508.73 | 1493.26 | 1490.78 | | | | | | | | | | | | | |
| 8/20/2019 | 1491.89 | 1492.56 | 1512.02 | 1492.99 | 1495.54 | 1515.80 | 1488.14 | 1494.43 | 1534.13 | 1513.71 | 1509.01 | 1506.64 | 1508.42 | 1510.67 | 1508.77 | 1493.31 | 1490.88 | | | | | | | | | | | | | |
| 9/18/2019 | 1491.87 | 1492.54 | 1512.08 | 1493.04 | 1495.39 | 1515.73 | 1488.23 | 1494.35 | 1534.19 | 1513.91 | 1509.22 | 1506.79 | 1508.64 | 1510.87 | 1508.79 | 1493.34 | 1490.91 | | | | | | | | | | | | | |
| 10/29/2019 | 1491.59 | 1492.24 | 1511.51 | 1492.58 | 1494.91 | 1515.03 | 1487.67 | 1493.63 | 1533.92 | 1513.56 | 1508.72 | 1506.60 | 1508.33 | 1510.50 | 1508.49 | 1492.91 | 1490.58 | | | | | | | | | | | | | |
| 11/22/2019 | 1491.62 | 1492.31 | 1511.43 | 1492.62 | 1495.05 | 1514.91 | 1487.72 | 1493.65 | 1533.94 | 1513.61 | 1508.80 | 1506.62 | 1508.35 | 1510.47 | 1508.47 | 1492.90 | 1490.56 | | | | | | | | | | | | | |
| 12/20/2019 | 1491.66 | 1492.32 | 1511.31 | 1492.52 | 1494.82 | 1514.63 | 1487.58 | 1493.46 | 1533.94 | 1513.58 | 1508.77 | 1506.55 | 1508.25 | 1510.41 | 1508.44 | 1492.84 | 1490.52 | | | | | | | | | | | | | |
| 1/21/2020 | 1491.73 | 1492.40 | 1511.20 | 1492.42 | 1494.71 | 1514.35 | 1487.60 | 1493.60 | 1533.89 | 1513.64 | 1508.80 | 1506.71 | 1508.36 | 1510.41 | 1508.50 | 1492.90 | 1490.56 | | | | | | | | | | | | | |
| 2/24/2020 | 1491.62 | 1492.34 | 1510.79 | 1492.19 | 1494.14 | 1513.79 | 1487.20 | 1493.25 | 1533.88 | 1513.38 | 1508.50 | 1506.48 | 1508.07 | 1510.20 | 1508.30 | 1492.73 | 1490.46 | | | | | | | | | | | | | |
| 3/25/2020 | 1491.68 | 1492.36 | 1510.69 | 1492.13 | 1494.80 | 1513.42 | 1487.26 | 1493.43 | 1533.97 | 1513.43 | 1508.58 | 1506.60 | 1508.18 | 1510.27 | 1508.39 | 1492.84 | 1490.59 | | | | | | | | | | | | | |
| 4/23/2020 | 1491.62 | 1492.30 | 1510.46 | 1492.02 | 1494.71 | 1513.11 | 1487.11 | 1493.49 | 1533.95 | 1513.50 | 1508.76 | 1506.62 | 1508.40 | 1510.41 | 1508.27 | 1492.83 | 1490.59 | | | | | | | | | | | | | |
| 5/19/2020 | 1491.64 | 1492.34 | 1510.59 | 1492.23 | 1494.43 | 1513.03 | 1487.17 | 1493.50 | 1534.01 | 1513.47 | 1508.75 | 1506.73 | 1508.45 | 1510.43 | 1508.42 | 1492.83 | 1490.60 | | | | | | | | | | | | | |
| 6/24/2020 | 1491.54 | 1492.26 | 1510.36 | 1491.97 | 1493.76 | 1512.91 | 1487.01 | 1493.39 | 1533.96 | 1513.26 | 1508.57 | 1506.68 | 1508.28 | 1510.23 | 1508.30 | 1492.80 | 1490.49 | | | | | | | | | | | | | |
| 7/20/2020 | 1491.51 | 1492.22 | 1510.17 | 1491.84 | 1494.53 | 1512.63 | 1486.77 | 1493.30 | 1533.93 | 1513.07 | 1508.38 | 1506.47 | 1508.27 | 1510.08 | 1508.14 | 1492.67 | 1490.42 | | | | | | | | | | | | | |
| 8/20/2020 | 1491.53 | 1492.25 | 1510.17 | 1491.83 | 1494.33 | 1512.59 | 1486.98 | 1493.36 | 1533.95 | 1513.11 | 1508.40 | 1506.56 | 1508.18 | 1510.07 | 1508.15 | 1492.61 | 1490.37 | | | | | | | | | | | | | |
| 9/28/2020 | 1491.49 | 1492.21 | 1509.85 | 1491.70 | 1494.22 | 1512.37 | 1487.05 | 1493.19 | 1533.92 | 1512.92 | 1508.19 | 1506.44 | 1508.08 | 1509.88 | 1508.14 | 1492.62 | 1490.48 | | | | | | | | | | | | | |
| 10/19/2020 | 1491.93 | 1492.65 | 1510.12 | 1492.11 | 1494.81 | 1512.66 | 1486.97 | 1493.53 | 1534.37 | 1513.36 | 1508.79 | 1506.91 | 1508.59 | 1510.40 | 1508.55 | 1492.88 | 1490.74 | | | | | | | | | | | | | |
| 11/24/2020 | 1491.55 | 1492.32 | 1509.85 | 1491.79 | 1494.73 | 1512.25 | 1486.99 | 1493.35 | 1534.00 | 1513.15 | 1508.54 | 1506.71 | 1508.27 | 1510.10 | 1508.30 | 1492.58 | 1490.42 | | | | | | | | | | | | | |
| 12/15/2020 | 1491.49 | 1492.23 | 1509.46 | 1491.63 | 1494.44 | 1512.00 | 1486.49 | 1493.08 | 1533.94 | 1512.84 | 1508.17 | 1506.39 | 1507.90 | 1509.81 | 1508.07 | 1492.38 | 1490.26 | | | | | | | | | | | | | |
| 1/15/2021 | 1491.53 | 1492.26 | 1509.48 | 1491.60 | 1494.56 | 1511.78 | 1486.77 | 1492.98 | 1533.92 | 1512.71 | 1508.08 | 1506.31 | 1507.98 | 1509.76 | 1507.97 | 1492.34 | 1490.28 | | | | | | | | | | | | | |
| 2/22/2021 | 1491.59 | 1492.38 | 1509.79 | 1491.74 | 1494.62 | 1511.86 | 1487.17 | 1493.21 | 1533.99 | 1513.06 | 1508.39 | 1506.88 | 1508.18 | 1509.90 | 1508.14 | 1492.50 | 1490.40 | | | | | | | | | | | | | |
| 3/25/2021 | 1491.41 | 1492.16 | 1509.30 | 1491.35 | 1494.24 | 1511.19 | 1486.37 | 1492.77 | 1533.85 | 1512.56 | 1507.92 | 1506.15 | 1507.83 | 1509.65 | 1507.85 | 1492.24 | 1490.28 | | | | | | | | | | | | | |
| 4/28/2021 | 1491.44 | 1492.19 | 1509.24 | 1491.29 | 1494.30 | 1511.03 | 1486.34 | 1493.08 | 1533.90 | 1512.75 | 1508.25 | 1506.30 | 1508.09 | 1509.90 | 1508.09 | 1492.31 | 1490.33 | | | | | | | | | | | | | |
| 5/24/2021 | 1491.39 | 1492.16 | 1509.21 | 1491.32 | 1494.42 | 1510.99 | 1486.43 | 1493.18 | 1533.85 | 1512.79 | 1508.29 | 1506.47 | 1507.94 | 1509.80 | 1507.94 | 1492.30 | 1490.28 | | | | | | | | | | | | | |
| 6/28/2021 | 1491.42 | 1492.18 | 1509.12 | 1491.23 | 1494.35 | 1510.74 | 1486.18 | 1493.07 | 1533.91 | 1512.49 | 1507.94 | 1506.21 | 1507.91 | 1509.56 | 1508.09 | 1492.28 | 1490.27 | | | | | | | | | | | | | |
| 7/27/2021 | 1491.38 | 1492.14 | 1509.19 | 1491.32 | 1494.26 | 1511.13 | 1486.23 | 1492.88 | 1533.94 | 1512.39 | 1507.72 | 1506.23 | 1507.66 | 1509.31 | 1507.82 | 1492.21 | 1490.24 | | | | | | | | | | | | | |
| 8/23/2021 | 1491.46 | 1492.08 | 1509.24 | 1491.17 | 1494.39 | 1511.12 | 1486.33 | 1492.77 | 1533.88 | 1512.38 | 1507.59 | 1506.31 | 1507.53 | 1509.12 | 1507.93 | 1492.15 | 1490.17 | | | | | | | | | | | | | |
| 9/27/2021 | 1491.29 | 1492.08 | 1509.26 | 1491.20 | 1494.35 | 1510.95 | 1486.13 | 1492.71 | 1533.88 | 1512.34 | 1507.65 | 1506.27 | 1507.64 | 1509.27 | 1507.75 | 1492.11 | 1490.20 | | | | | | | | | | | | | |
| 10/13/2021 | 1491.40 | 1492.19 | 1509.52 | 1491.35 | 1494.82 | 1511.14 | 1486.38 | 1492.97 | 1534.00 | 1512.75 | 1508.07 | 1506.59 | 1507.92 | 1509.60 | 1507.71 | 1492.32 | 1490.39 | | | | | | | | | | | | | |
| 11/23/2021 | 1491.26 | 1492.06 | | 1491.25 | 1494.78 | 1510.92 | 1486.32 | 1492.85 | 1533.89 | | | 1506.47 | 1507.78 | 1509.54 | 1507.74 | 1492.16 | 1490.29 | | | | | | | | | | | | | |
| 11/30/2021 | | | 1509.47 | | | | | | | 1512.49 | 1507.89 | | | | | | | | | | | | | | | | | | | |
| 12/3/2021 | 1491.24 | 1492.03 | 1509.84 | 1490.64 | 1494.57 | 1510.70 | 1485.99 | 1492.56 | 1533.85 | 1512.37 | 1507.72 | 1506.15 | 1507.55 | 1509.31 | 1507.62 | 1491.97 | 1490.13 | | | | | | | | | | | | | |
| 1/31/2022 | 1491.39 | 1492.21 | 1509.37 | 1491.19 | 1494.74 | 1510.68 | 1486.27 | 1492.73 | 1533.88 | 1512.48 | 1507.85 | 1506.27 | 1507.65 | 1509.35 | 1507.40 | 1492.16 | 1490.36 | | | | | | | | | | | | | |
| 2/28/2022 | 1491.42 | 1492.24 | 1509.22 | 1491.19 | 1494.77 | 1510.51 | 1486.08 | 1492.64 | 1533.91 | 1512.45 | 1507.80 | 1506.23 | 1507.50 | 1509.33 | 1507.50 | 1492.17 | 1490.40 | | | | | | | | | | | | | |
| 3/29/2022 | 1491.48 | 1492.27 | 1509.10 | 1491.17 | 1494.69 | 1510.48 | 1486.05 | 1492.63 | 1533.94 | 1512.44 | 1507.83 | 1506.28 | 1507.57 | 1509.36 | 1507.49 | 1492.18 | 1490.48 | | | | | | | | | | | | | |
| 4/25/2022 | 1491.36 | 1492.17 | 1508.93 | 1491.10 | 1494.47 | 1510.05 | 1485.78 | 1492.61 | 1533.86 | 1512.08 | 1507.68 | 1506.08 | 1507.32 | 1509.43 | 1507.30 | 1492.09 | 1490.48 | | | | | | | | | | | | | |
| 5/24/2022 | 1491.33 | 1492.16 | 1509.34 | 1491.35 | 1495.03 | 1510.71 | 1486.07 | 1492.94 | 1533.84 | 1512.50 | 1508.25 | 1506.44 | 1507.57 | 1509.80 | 1507.43 | 1492.15 | 1490.42 | | | | | | | | | | | | | |
| 6/28/2022 | 1491.39 | 1492.20 | 1509.26 | 1491.34 | 1495.00 | 1510.56 | 1486.05 | 1493.11 | 1533.84 | 1512.60 | 1508.29 | 1506.77 | 1507.67 | 1509.84 | 1507.94 | 1492.34 | 1490.57 | | | | | | | | | | | | | |
| 7/15/2022 | 1491.40 | 1492.20 | 1509.21 | 1491.30 | 1495.22 | 1510.56 | 1486.05 | 1493.20 | 1533.84 | 1512.70 | 1508.31 | 1506.79 | 1507.48 | 1509.82 | 1507.96 | 1492.36 | 1490.55 | | | | | | | | | | | | | |
| 8/31/2022 | 1491.43 | 1492.25 | 1509.26 | 1491.39 | 1494.96 | 1510.88 | 1486.02 | 1493.35 | 1533.83 | 1512.76 | 1508.42 | 1506.66 | 1507.40 | 1509.96 | 1507.91 | 1492.41 | 1490.68 | | | | | | | | | | | | | |
| 9/21/2022 | 1491.43 | 1492.25 | 1509.33 | 1491.35 | 1495.36 | 1511.04 | 1486.10 | 1493.35 | 1533.80 | 1512.77 | 1508.42 | 1506.63 | 1507.34 | 1509.94 | 1507.92 | 1492.41 | 1490.70 | | | | | | | | | | | | | |
| 10/27/2022 | 1491.35 | 1492.18 | 1509.66 | 1491.41 | 1495.25 | 1511.52 | 1486.17 | 1493.18 | 1533.81 | 1512.81 | 1508.41 | 1506.67 | 1507.14 | 1509.93 | 1507.88 | 1492.33 | 1490.70 | | | | | | | | | | | | | |
| 11/23/2022 | 1491.48 | 1492.28 | 1510.09 | 1491.69 | 1495.64 | 1512.20 | 1486.86 | 1493.28 | 1533.85 | 1513.14 | 1508.73 | 1506.84 | 1507.59 | 1510.14 | 1508.01 | 1492.42 | 1490.76 | | | | | | | | | | | | | |
| 12/7/2022 | 1491.38 | 1492.22 | 1508.95 | 1491.64 | 1495.21 | 1512.13 | 1486.36 | 1493.03 | 1533.79 | 1512.90 | 1508.35 | 1506.68 | 1507.32 | 1509.92 | 1507.84 | 1492.25 | 1490.62 | | | | | | | | | | | | | |
| 1/23/2023 | 1491.53 | 1492.39 | 1510.70 | 1492.07 | 1495.63 | 1512.71 | 1487.04 | 1493.32 | 1533.81 | 1513.32 | 1508.70 | 1506.89 | 1507.53 | 1510.10 | 1508.03 | 1492.46 | 1490.83 | | | | | | | | | | | | | |
| 2/27/2023 | 1491.63 | 1492.47 | 1510.88 | 1492.07 | 1495.66 | 1512.72 | 1487.32 | 1493.47 | 1533.85 | 1513.52 | 1508.88 | 1507.08 | 1507.05 | 1510.15 | 1508.04 | 1492.59 | 1491.00 | | | | | | | | | | | | | |
| 3/30/2023 | 1491.46 | 1492.33 | 1510.50 | 1491.84 | 1495.49 | 1512.26 | 1486.66 | 1493.09 | 1533.80 | 1513.21 | 1508.58 | 1506.74 | 1507.21 | 1509.97 | 1507.96 | 1492.43 | 1490.89 | | | | | | | | | | | | | |
| 4/27/2023 | 1491.80 | 1492.67 | 1510.70 | 1492.29 | 1496.12 | 1512.35 | 1486.99 | 1493.64 | 1534.22 | 1513.66 | 1509.18 | 1507.09 | 1507.93 | 1510.57 | 1508.37 | 1492.90 | 1491.42 | | | | | | | | | | | | | |
| 5/30/2023 | 1491.40 | 1492.25 | 1510.45 | 1492.09 | 1495.81 | 1512.17 | 1486.75 | 1493.46 | 1533.78 | 1513.17 | 1508.81 | 1506.67 | 1507.32 | 1510.11 | 1507.95 | 1492.48 | 1490.92 | | | | | | | | | | | | | |
| 6/27/2023 | 1491.43 | 1492.30 | 1510.69 | 1491.97 | 1495.93 | 1512.57 | 1486.80 | 1493.45 | 1533.83 | 1513.19 | 1508.73 | 1506.70 | 1507.46 | 1510.12 | 1508.03 | 1492.64 | 1491.10 | | | | | | | | | | | | | |
| 7/26/2023 | 1491.45 | 1492.30 | 1510.81 | 1492.16 | 1496.16 | 1513.01 | 1486.99 | 1493.60 | 1533.79 | 1513.39 | 1508.99 | 1506.89 | 1507.76 | 1510.27 | 1508.01 | 1492.72 | 1491.16 | | | | | | | | | | | | | |
| 8/23/2023 | 1491.45 | 1492.32 | 1510.93 | 1492.13 | 1496.12 | 1513.23 | 1487.08 | 1493.61 | 1533.82 | | 1508.90 | 1506.91 | 1507.86 | 1510.19 | 1508.04 | 1492.70 | 1491.15 | | | | | | | | | | | | | |
| 9/20/2023 | 1491.41 | 1492.27 | 1510.97 | 1492.26 | 1496.03 | 1513.27 | 1487.06 | 1493.52 | 1533.78 | 1513.30 | 1508.81 | 1506.81 | 1507.79 | 1510.16 | 1508.02 | 1492.63 | 1491.15 | | | | | | | | | | | | | |
| 10/23/2023 | 1491.40 | 1492.28 | 1511.18 | 1492.42 | 1496.25 | 1513.46 | 1487.25 | 1493.40 | 1533.83 | | 1508.97 | 1506.93 | 1507.59 | 1510.25 | 1507.99 | 1492.72 | 1491.27 | | | | | | | | | | | | | |
| 10/27/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/22/2023 | 1491.35 | 1492.23 | 1511.21 | 1492.49 | 1496.29 | 1513.56 | 1487.35 | 1493.31 | 1533.81 | | 1509.10 | 1506.96 | 1507.67 | 1510.28 | 1507.98 | 1492.65 | 1491.20 | | | | | | | | | | | | | |
| 11/30/2023 | | | | | | | | | | | | | | | | | | 1532.95 | 1523.25 | 1518.13 | 1512.78 | 1569.84 | 1496.39 | 1486.37 | 1486.81 | 1533.54 | 1530.55 | 1523.86 | 1519.61 |
| 12/13/2023 | 1491.25 | 1492.12 | 1510.98 | 1492.30 | 1495.75 | 1513.23 | 1486.95 | 1492.89 | 1533.73 | | 1508.50 | 1506.65 | 1507.44 | 1509.95 | 1507.97 | 1492.46 | 1491.08 | | | | | | | | | | | | | |
| 12/28/2023 | | | | | | | | | | | | | | | | | | 1532.80 | 1522.86 | 1517.78 | 1511.98 | 1610.73 | 1496.43 | 1486.29 | 1486.77 | 1533.11 | 1530.10 | 1523.51 | 1519.52 |
| 1/23/2024 | 1491.28 | 1492.18 | 1510.96 | 1492.23 | 1495.88 | 1513.10 | 1486.98 | 1492.94 | | | | | | | | | | 1532.48 | 1522.61 | 1517.53 | 1511.86 | | 1496.32 | 1486.55 | 1486.98 | 1532.74 | 1529.78 | 1523.32 | 1519.30 |
| 1/26/2024 | | | | | | | | | 1533.90 | | 1508.64 | 1506.69 | 1507.26 | 1509.95 | 1508.13 | 1492.68 | 1491.35 | | | | | | | | | | | | |
| 2/8/2024 | 1491.42 | 1492.30 | 1511.15 | 1492.44 | 1496.22 | 1513.37 | 1487.34 | 1493.22 | 1533.79 | | 1508.99 | 1506.88 | 1507.25 | 1509.98 | 1508.10 | 1492.70 | 1491.43 | 1532.90 | 1523.04 | 1517.93 | 1512.68 | | 1496.66 | 1486.52 | 1486.98 | 1533.45 | 1530.14 | 1523.58 | 1519.48 |
| 3/27/2024 | 1491.27 | 1492.18 | 1510.73 | 1492.02 | 1495.44 | 1512.54 | 1486.76 | 1492.69 | 1533.70 | | 1508.37 | 1506.39 | 1507.10 | 1509.60 | 1507.91 | 1492.48 | 1491.22 | 1531.70 | 1522.37 | 1517.29 | 1512.04 | | 1496.18 | 1486.19 | 1486.67 | 1532.53 | 1529.40 | 1523.17 | 1518.81 |
| 4/25/2024 | 1491.19 | 1492.08 | 1510.66 | 1491.97 | 1495.98 | 1512.46 | 1486.66 | 1492.70 | 1533.75 | | 1508.47 | 1506.61 | 1507.37 | 1509.84 | 1507.98 | 1492.47 | 1491.22 | 1531.38 | 1522.21 | 1517.21 | 1511.62 | | 1496.16 | | | 1532.04 | 1529.14 | 1523.22 | 1518.65 |
| 4/26/2024 | | | | | | | | | | | | | | | | | | | | | | | | 1486.18 | 1486.65 | | | | | |
| 5/28/2024 | 1491.18 | 1492.08 | 1510.53 | 1491.90 | 1495.70 | 1512.18 | 1486.52 | 1492.84 | 1533.71 | 1512.87 | 1508.55 | 1506.48 | 1507.38 | 1509.96 | 1507.96 | 1492.41 | 1491.14 | 1531.00 | 1522.17 | 1517.30 | 1511.52 | | 1496.12 | 1485.97 | 1486.41 | 1531.87 | 1529.13 | 1523.59 | 1518.41 |
| 6/19/2024 | 1491.28 | 1492.19 | 1510.52 | 1491.96 | 1496.11 | 1512.15 | 1486.46 | 1493.08 | | | | | | | | | | | | | | | | | | | | | | |
| 6/27/2024 | 1491.33 | 1492.22 | 1510.68 | 1492.06 | 1495.98 | 1512.40 | 1486.74 | 1493.24 | 1533.77 | | 1508.06 | 1506.37 | 1506.86 | 1509.12 | 1507.96 | 1492.54 | 1491.30 | 1531.01 | 1522.57 | 1517.88 | 1511.57 | | 1496.47 | 1486.01 | 1486.42 | 1532.21 | 1529.71 | 1524.48 | 1518.49 |
| 7/30/2024 | 1491.35 | 1492.24 | 1511.21 | 1492.38 | 1496.40 | 1513.15 | 1487.16 | 1493.37 | 1533.75 | 1512.68 | 1508.25 | 1506.57 | 1507.03 | 1509.27 | 1507.97 | 1492.76 | 1491.39 | 1532.15 | 1523.48 | 1518.61 | 1511.73 | | 1496.69 | 1485.95 | 1486.36 | 1533.40 | 1530.71 | 1524.96 | 1519.25 |
| 8/27/2024 | 1491.32 | 1492.23 | 1511.56 | 1492.52 | 1496.33 | 1514.05 | 1487.32 | 1493.35 | 1533.73 | | 1508.23 | 1506.72 | 1507.41 | 1509.32 | 1507.97 | 1492.83 | 1491.50 | 1533.46 | 1524.18 | 1518.95 | 1511.78 | | 1496.82 | 1485.96 | 1486.34 | 1534.15 | 1531.20 | 1524.87 | 1520.07 |
| 9/18/2024 | 1491.27 | 1492.16 | 1511.84 | 1492.78 | 1496.54 | 1514.65 | 1487.56 | 1493.29 | 1533.74 | 1513.00 | 1508.29 | 1506.84 | 1507.32 | 1509.23 | 1508.00 | 1492.83 | 1491.48 | 1534.06 | 1524.47 | 1519.04 | 1512.26 | | 1496.81 | 1485.91 | 1486.27 | 1534.41 | 1531.32 | 1524.63 | 1520.40 |
| 10/23/2024 | 1491.16 | 1492.09 | 1511.74 | 1492.78 | 1496.66 | 1514.43 | 1487.44 | 1492.96 | 1533.71 | 1513.01 | 1508.12 | 1506.82 | 1506.95 | 1509.17 | 1507.90 | 1492.72 | 1491.40 | 1533.87 | 1524.12 | 1518.49 | 1512.29 | | 1496.50 | | | 1533.81 | 1530.75 | 1523.84 | 1520.18 |
| 10/24/2024 | | | | | | | | | | | | | | | | | | | | | | | | 1485.94 | 1486.30 | | | | | |
| 11/21/2024 | 1491.12 | 1492.02 | 1511.56 | 1492.55 | 1495.84 | 1514.07 | 1487.29 | 1492.74 | 1533.71 | 1513.02 | 1508.23 | 1506.86 | 1507.25 | 1509.20 | 1507.92 | 1492.69 | | 1533.56 | 1523.70 | 1518.04 | 1512.55 | | 1496.32 | 1485.93 | 1486.22 | | 1530.29 | 1523.38 | 1519.88 |
| 12/3/2024 | | | | | | | | | | | | | | | | | 1491.53 | | | | | | | | | 1533.64 | | | | |
| 12/23/2024 | 1491.13 | 1492.06 | 1511.26 | 1492.46 | 1495.99 | 1513.69 | 1487.15 | 1492.65 | 1533.69 | | 1508.23 | 1506.70 | 1507.15 | 1509.08 | 1507.86 | 1492.55 | 1491.26 | 1533.24 | 1523.45 | 1517.76 | 1512.53 | | 1496.18 | 1485.93 | 1486.20 | 1533.31 | 1529.97 | 1523.14 | 1519.50 |

# LTVSMC TAILING BASIN VIBRATING WIRE ELEVATIONS

| PIEZOMETER / DATE | 2E-VW318+25-R341 (MT) | 2E-VW318+25-R341 (MB) | 2E-VW318+25-R341 (B) | 2E-VW320+65-L148 (T) | 2E-VW320+65-L148 (B) | 2E-VW356+50-R366 (T) | 2E-VW356+50-R366 (B) | 1E2E-VW13+25-R138 (T) | 1E2E-VW13+25-R138 (M) | 1E2E-VW13+25-R138 (B) | 1E2E-VW13+45-L216 (T) | 1E2E-VW13+45-L216 (M) | 1E2E-VW13+45-L216 (B) | 1E2E-VW28+50-R122 (T) | 1E2E-VW28+50-R122 (MT) | 1E2E-VW28+50-R122 (MB) | 1E2E-VW28+50-R122 (B) | 1E2E-VW28+20-L210 (T) | 1E2E-VW28+20-L210 (B) | 2E-VW311+45-L472 (T) | 2E-VW311+45-L472 (B) | 2E-VW320+60-L444 (T) | 2E-VW320+60-L444 (B) | 2E-VW332+20-L180 (T) | 2E-VW332+20-L180 (B) | 2E-VW347+70-L134 (T) | 2E-VW347+70-L134 (B) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/2/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/14/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/8/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/25/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/17/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/19/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/16/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/8/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/13/2018 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/22/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/27/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/27/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4/23/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/28/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/26/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/30/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/20/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/18/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/29/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/22/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/20/2019 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/21/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/24/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/25/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4/23/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/19/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/24/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/21/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/20/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/17/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/20/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/17/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/15/2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/15/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/22/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/25/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4/28/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/24/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/28/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/27/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/23/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/27/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/13/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/23/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/30/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/3/2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/31/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/28/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/29/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4/25/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/24/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/28/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/15/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/31/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/21/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/27/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/23/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/7/2022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/23/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/27/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/30/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4/27/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/30/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/27/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7/26/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/23/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/20/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/23/2023 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10/27/2023 | | | | | | | | 1595.70 | 1578.18 | 1573.04 | 1576.65 | 1574.87 | 1571.33 | 1612.40 | 1601.45 | 1588.31 | 1588.52 | 1579.97 | 1577.72 | | | | | | | | | |
| 11/22/2023 | | | | | | | | 1595.52 | 1578.03 | 1573.05 | 1576.52 | 1574.77 | 1571.33 | 1612.53 | 1601.56 | 1588.29 | 1588.51 | 1579.89 | 1577.65 | | | | | | | | | |
| 11/30/2023 | 1499.98 | 1500.21 | 1510.81 | 1488.49 | 1488.11 | 1520.01 | 1514.44 | | | | | | | | | | | | | 1486.03 | 1488.54 | 1484.26 | 1483.45 | 1491.38 | 1493.04 | 1511.71 | 1509.12 |
| 12/13/2023 | | | | | | | | 1595.21 | 1577.73 | 1572.61 | 1576.24 | 1574.48 | 1570.97 | 1612.27 | 1601.19 | 1588.11 | 1588.31 | 1579.69 | 1577.43 | | | | | | | | | |
| 12/28/2023 | 1499.99 | 1500.33 | 1510.58 | 1488.50 | 1488.10 | 1519.99 | 1514.44 | | | | | | | | | | | | | 1484.95 | 1488.58 | 1484.23 | 1483.41 | 1492.28 | 1493.58 | 1511.74 | 1509.50 |
| 1/23/2024 | 1499.87 | 1500.18 | 1510.50 | 1488.75 | 1488.24 | | | | | | | | | | | | | | | 1484.21 | 1488.64 | 1484.53 | 1483.51 | 1491.17 | 1492.99 | 1511.35 | 1509.03 |
| 1/26/2024 | | | | | | 1520.09 | 1514.32 | 1595.09 | 1577.49 | 1572.67 | 1576.03 | 1574.30 | 1570.93 | 1612.01 | 1600.77 | 1587.98 | 1588.13 | 1579.52 | 1577.25 | | | | | | | | | |
| 2/8/2024 | 1500.16 | 1500.49 | 1510.67 | 1488.65 | 1488.15 | 1519.93 | 1514.45 | 1594.95 | 1577.26 | 1572.67 | 1575.78 | 1574.07 | 1570.88 | 1611.87 | 1600.62 | 1587.76 | 1587.93 | 1579.22 | 1577.02 | 1484.84 | 1488.70 | 1484.53 | 1483.54 | 1491.76 | 1493.45 | 1511.46 | 1509.18 |
| 3/27/2024 | 1499.68 | 1500.08 | 1510.39 | 1488.58 | 1488.06 | 1519.65 | 1513.91 | 1594.60 | 1576.78 | 1572.18 | 1575.40 | 1573.63 | 1570.37 | 1611.53 | 1600.16 | 1587.38 | 1587.49 | 1578.74 | 1576.51 | 1488.58 | 1488.56 | 1484.48 | 1483.26 | 1490.96 | 1492.84 | 1511.32 | 1508.72 |
| 4/25/2024 | 1499.62 | 1499.97 | 1510.42 | | | 1519.62 | 1514.15 | 1596.51 | 1576.60 | 1572.45 | 1575.20 | 1573.43 | 1570.27 | 1611.50 | 1600.05 | 1587.23 | 1587.38 | 1578.55 | 1576.35 | | | | | 1491.36 | 1493.05 | 1511.31 | 1509.56 |
| 4/26/2024 | | | | 1488.43 | 1487.82 | | | | | | | | | | | | | | | 1488.53 | 1488.50 | 1484.27 | 1482.96 | | | | |
| 5/28/2024 | 1499.49 | 1499.91 | 1510.60 | 1488.25 | 1487.83 | 1519.39 | 1514.30 | 1596.47 | 1576.35 | 1572.20 | 1575.04 | 1573.26 | 1570.33 | 1611.74 | 1600.17 | 1587.29 | 1587.47 | 1578.71 | 1576.51 | 1488.29 | 1488.32 | 1483.92 | 1482.74 | 1491.54 | 1492.93 | 1511.15 | 1511.99 |
| 6/19/2024 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/27/2024 | 1499.60 | 1499.95 | 1511.19 | 1488.30 | 1487.84 | 1519.34 | 1513.76 | 1596.48 | 1576.77 | 1573.47 | 1575.65 | 1574.00 | 1571.60 | 1612.49 | 1600.85 | 1588.18 | 1588.41 | 1580.15 | 1577.91 | 1488.40 | 1488.40 | 1483.90 | 1482.69 | 1491.00 | 1492.80 | 1511.40 | 1512.14 |
| 7/30/2024 | 1500.02 | 1500.56 | 1511.51 | 1488.26 | 1487.88 | 1519.30 | 1514.05 | 1596.51 | 1577.88 | 1573.34 | 1576.63 | 1574.75 | 1571.38 | 1614.43 | 1602.95 | 1589.95 | 1590.15 | 1580.74 | 1578.19 | 1488.33 | 1488.38 | 1483.90 | 1482.64 | 1490.16 | 1492.19 | 1511.01 | 1508.76 |
| 8/27/2024 | 1500.27 | 1500.86 | 1511.43 | 1488.25 | 1487.86 | 1519.78 | 1514.01 | 1596.47 | 1577.88 | 1573.06 | 1576.42 | 1574.51 | 1571.10 | 1614.61 | 1603.41 | 1590.48 | 1590.70 | 1581.01 | 1578.38 | 1488.42 | 1488.44 | 1483.89 | 1482.58 | 1490.15 | 1492.15 | 1510.95 | 1508.21 |
| 9/18/2024 | 1500.47 | 1501.21 | 1511.28 | 1488.28 | 1487.83 | 1520.33 | 1513.91 | 1613.28 | 1578.14 | 1573.04 | 1576.45 | 1574.51 | 1571.01 | 1614.37 | 1603.27 | 1590.41 | 1590.62 | 1580.96 | 1578.27 | 1488.38 | 1488.36 | 1483.89 | 1482.56 | 1489.75 | 1491.91 | 1510.94 | 1507.84 |
| 10/23/2024 | 1500.38 | 1500.99 | 1510.74 | | | 1520.90 | 1513.69 | 1613.25 | 1578.40 | 1572.76 | 1576.48 | 1574.52 | 1570.76 | 1613.81 | 1602.73 | 1589.86 | 1590.10 | 1580.57 | 1577.92 | | | | | 1490.76 | 1492.68 | 1510.91 | 1507.71 |
| 10/24/2024 | | | | 1488.29 | 1487.84 | | | | | | | | | | | | | | | 1488.42 | 1488.43 | 1483.93 | 1482.57 | | | | |
| 11/21/2024 | 1500.18 | 1501.03 | 1510.45 | 1488.32 | 1487.84 | 1520.96 | 1513.65 | 1603.16 | 1578.39 | 1572.76 | 1576.43 | 1574.42 | 1570.73 | 1613.50 | 1602.43 | 1589.55 | 1589.77 | 1580.36 | 1577.75 | 1488.32 | 1488.36 | 1483.90 | 1482.54 | 1491.06 | 1492.90 | 1510.97 | 1507.87 |
| 12/3/2024 | | | | | | | | 1597.03 | | | | | | | | | | | | | | | | | | | |
| 12/23/2024 | 1499.97 | 1500.78 | 1510.30 | 1488.43 | 1487.91 | 1520.72 | 1513.50 | 1596.42 | 1578.04 | 1572.58 | 1576.15 | 1574.17 | 1570.61 | 1612.63 | 1601.65 | 1589.00 | 1589.21 | 1580.04 | 1577.44 | 1488.24 | 1488.24 | 1484.01 | 1482.60 | 1490.75 | 1492.79 | 1511.01 | 1507.85 |

Appendix A: Water Level Logger Data

| | | | BH-31A-23<br>2E-VW320+65-L148 (T) (Logger)<br>2260743 | | | | | BH-31A-23<br>2E-VW320+65-L148 (B) (Logger)<br>2260753 | | | | | BH-102-23<br>2E-VW311+45-L472 (T) (Logger)<br>2260738 | | | | | BH-102-23<br>2E-VW311+45-L472 (B) (Logger)<br>2260740 | | | | | BH-103-23<br>2E-VW320+60-L444 (T) (Logger)<br>2260742 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | -4.852E-08 | | | | | -2.259E-08 | | | | | -4.995E-08 | | | | | -4.717E-08 | | | | | 2.634E-08 | | | | |
| B | | | -0.02334 | | | | | -0.02291 | | | | | -0.02318 | | | | | -0.02218 | | | | | -0.02414 | | | | |
| C(calibrated) | | | 219.3799946 | | | | | 217.3687202 | | | | | 216.5102467 | | | | | 198.1718896 | | | | | 220.6131611 | | | | |
| Thermal Factor, K (psi/C) | | | -0.008068 | | | | | -0.01479 | | | | | -0.01495 | | | | | -0.009436 | | | | | -0.01462 | | | | |
| Field zero B reading (Hertz) | | | 3036.856928 | | | | | 3066.072406 | | | | | 3026.483108 | | | | | 2961.604295 | | | | | 3038.404186 | | | | |
| Field zero B reading (Digits) | | | 9222.5 | | | | | 9400.8 | | | | | 9159.6 | | | | | 8771.1 | | | | | 9231.9 | | | | |
| Field zero temperature (deg C) | | | 23.9 | | | | | 23.9 | | | | | 16.9 | | | | | 16.9 | | | | | 21.4 | | | | |
| Field Sea Level Pressure (Hg) | | | 29.83 | | | | | 29.83 | | | | | 29.94 | | | | | 29.94 | | | | | 29.93 | | | | |
| Field Sea Level Pressure (mbar) | | | 1010.160137 | | | | | 1010.160137 | | | | | 1013.885166 | | | | | 1013.885166 | | | | | 1013.546527 | | | | |
| Factory zero B reading | | | 9208 | | | | | 9388 | | | | | 9144 | | | | | 8759 | | | | | 9220 | | | | |
| Ground Surface Elevation (ft) | | | 1486.1 | | | | | 1486.1 | | | | | 1485 | | | | | 1485 | | | | | 1484.9 | | | | |
| Tip Depth (ft) | | | 14.49 | | | | | 25.21 | | | | | 18.81 | | | | | 26.78 | | | | | 29.53 | | | | |
| Tip Elevation (ft) | | | 1471.61 | | | | | 1460.89 | | | | | 1466.19 | | | | | 1458.22 | | | | | 1455.37 | | | | |
| Date | Reading ID | Barometric Pressure (mbar) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) |
| 2/9/2024 | 1 | 990.1800461 | 8936.8 | 7.7 | 2989.448 | 16.9 | 1488.6 | 8918.0 | 7.5 | 2986.3021 | 27.2 | 1488.1 | 8841.2 | 8.0 | 2973.4155 | 18.8 | 1485.0 | 8215.9 | 8.0 | 2866.3391 | 30.4 | 1488.7 | | | | | |
| 2/10/2024 | 2 | 1008.466545 | 8926.4 | 7.7 | 2987.708 | 16.9 | 1488.5 | 8907.7 | 7.5 | 2984.577 | 27.2 | 1488.0 | 8841.6 | 8.0 | 2973.4828 | 18.2 | 1484.3 | 8206.4 | 8.0 | 2864.6815 | 30.3 | 1488.5 | | | | | |
| 2/11/2024 | 3 | 1016.593878 | 8921.5 | 7.7 | 2986.888 | 16.9 | 1488.5 | 8902.8 | 7.5 | 2983.756 | 27.1 | 1488.0 | 8841.8 | 8.0 | 2973.5164 | 17.9 | 1484.1 | 8201.8 | 8.0 | 2863.8785 | 30.3 | 1488.5 | | | | | |
| 2/12/2024 | 4 | 1007.450628 | 8926.7 | 7.7 | 2987.758 | 16.9 | 1488.5 | 8908.0 | 7.5 | 2984.6273 | 27.2 | 1488.1 | 8842.0 | 8.0 | 2973.5501 | 18.2 | 1484.4 | 8207.0 | 8.0 | 2864.7862 | 30.3 | 1488.5 | | | | | |
| 2/13/2024 | 5 | 1013.546128 | 8923.2 | 7.7 | 2987.173 | 16.9 | 1488.5 | 8904.6 | 7.5 | 2984.0576 | 27.2 | 1488.0 | 8842.4 | 8.0 | 2973.6173 | 17.9 | 1484.1 | 8203.7 | 8.0 | 2864.2102 | 30.3 | 1488.5 | | | | | |
| 2/14/2024 | 6 | 1016.593878 | 8921.8 | 7.7 | 2986.938 | 16.9 | 1488.5 | 8902.9 | 7.5 | 2983.7728 | 27.1 | 1488.0 | 8842.6 | 8.0 | 2973.651 | 17.8 | 1484.0 | 8202.0 | 8.0 | 2863.9134 | 30.3 | 1488.5 | | | | | |
| 2/15/2024 | 7 | 1016.593878 | 8921.7 | 7.7 | 2986.921 | 16.9 | 1488.5 | 8903.0 | 7.5 | 2983.7895 | 27.1 | 1488.0 | 8842.9 | 8.0 | 2973.7014 | 17.8 | 1484.0 | 8202.0 | 8.0 | 2863.9134 | 30.3 | 1488.5 | | | | | |
| 2/16/2024 | 8 | 1022.689377 | 8918.1 | 7.7 | 2986.319 | 16.9 | 1488.5 | 8899.4 | 7.5 | 2983.1862 | 27.1 | 1488.0 | 8843.3 | 8.0 | 2973.7687 | 17.6 | 1483.8 | 8198.5 | 8.0 | 2863.3023 | 30.3 | 1488.5 | | | | | |
| 2/17/2024 | 9 | 1017.609794 | 8921.0 | 7.7 | 2986.804 | 16.9 | 1488.5 | 8902.3 | 7.5 | 2983.6722 | 27.1 | 1488.0 | 8843.2 | 8.0 | 2973.7518 | 17.8 | 1484.0 | 8201.4 | 8.0 | 2863.8087 | 30.3 | 1488.5 | | | | | |
| 2/18/2024 | 10 | 1000.677851 | 8930.4 | 7.7 | 2988.377 | 16.9 | 1488.6 | 8911.8 | 7.5 | 2985.2638 | 27.2 | 1488.1 | 8843.0 | 8.0 | 2973.7182 | 18.3 | 1484.5 | 8210.9 | 8.0 | 2865.4668 | 30.3 | 1488.6 | 8716.9 | 6.1 | 2952.4397 | 29.1 | 1484.4 |
| 2/19/2024 | 11 | 1015.239322 | 8921.6 | 7.7 | 2986.905 | 17.0 | 1488.6 | 8903.3 | 7.5 | 2983.8398 | 27.2 | 1488.1 | 8843.0 | 8.0 | 2973.7182 | 17.9 | 1484.0 | 8202.5 | 8.0 | 2864.0007 | 30.3 | 1488.5 | 8708.2 | 6.1 | 2950.9659 | 29.1 | 1484.4 |
| 2/20/2024 | 12 | 1017.948433 | 8920.3 | 7.7 | 2986.687 | 16.9 | 1488.5 | 8901.8 | 7.5 | 2983.5884 | 27.2 | 1488.0 | 8842.9 | 8.0 | 2973.7014 | 17.8 | 1484.0 | 8201.0 | 8.0 | 2863.7388 | 30.3 | 1488.5 | 8706.9 | 6.1 | 2950.7457 | 29.0 | 1484.4 |
| 2/21/2024 | 13 | 1012.191572 | 8923.3 | 7.7 | 2987.189 | 17.0 | 1488.6 | 8904.9 | 7.5 | 2984.1079 | 27.2 | 1488.1 | 8842.2 | 8.0 | 2973.5837 | 18.0 | 1484.2 | 8204.0 | 8.0 | 2864.2626 | 30.3 | 1488.5 | 8710.0 | 6.1 | 2951.2709 | 29.1 | 1484.4 |
| 2/22/2024 | 14 | 1009.482462 | 8925.0 | 7.7 | 2987.474 | 17.0 | 1488.6 | 8906.3 | 7.5 | 2984.3425 | 27.2 | 1488.1 | 8840.6 | 8.0 | 2973.3146 | 18.2 | 1484.4 | 8205.4 | 8.0 | 2864.5069 | 30.3 | 1488.6 | 8711.1 | 6.1 | 2951.4573 | 29.1 | 1484.5 |
| 2/23/2024 | 15 | 1005.080156 | 8927.9 | 7.7 | 2987.959 | 16.9 | 1488.5 | 8909.2 | 7.5 | 2984.8283 | 27.2 | 1488.1 | 8839.2 | 8.0 | 2973.0792 | 18.4 | 1484.6 | 8208.1 | 8.0 | 2864.9782 | 30.3 | 1488.6 | 8713.9 | 6.1 | 2951.9316 | 29.1 | 1484.5 |
| 2/24/2024 | 16 | 1015.9166 | 8921.8 | 7.7 | 2986.938 | 16.9 | 1488.5 | 8903.4 | 7.5 | 2983.8566 | 27.1 | 1488.0 | 8837.9 | 8.0 | 2972.8606 | 18.1 | 1484.3 | 8202.3 | 8.0 | 2863.9658 | 30.3 | 1488.5 | 8708.1 | 6.1 | 2950.949 | 29.0 | 1484.4 |
| 2/25/2024 | 17 | 999.6619344 | 8931.7 | 7.7 | 2988.595 | 16.9 | 1488.5 | 8912.8 | 7.5 | 2985.4313 | 27.2 | 1488.1 | 8836.6 | 8.0 | 2972.6419 | 18.7 | 1484.9 | 8211.6 | 8.0 | 2865.5889 | 30.3 | 1488.6 | 8717.6 | 6.1 | 2952.5582 | 29.1 | 1484.4 |
| 2/26/2024 | 18 | 1010.159739 | 8924.8 | 7.7 | 2987.44 | 16.9 | 1488.6 | 8906.4 | 7.5 | 2984.3592 | 27.2 | 1488.1 | 8835.2 | 8.0 | 2972.4064 | 18.5 | 1484.6 | 8205.3 | 8.0 | 2864.4895 | 30.3 | 1488.5 | 8711.0 | 6.1 | 2951.4403 | 29.1 | 1484.5 |
| 2/27/2024 | 19 | 994.2437125 | 8934.7 | 7.7 | 2989.097 | 16.9 | 1488.5 | 8915.7 | 7.5 | 2985.9169 | 27.2 | 1488.1 | 8834.1 | 8.0 | 2972.2214 | 19.1 | 1485.2 | 8214.5 | 8.0 | 2866.0949 | 30.4 | 1488.6 | 8720.1 | 6.1 | 2952.9815 | 29.1 | 1484.5 |
| 2/28/2024 | 20 | 1008.466545 | 8925.8 | 7.7 | 2987.608 | 16.9 | 1488.6 | 8907.6 | 7.5 | 2984.5603 | 27.2 | 1488.1 | 8832.6 | 8.0 | 2971.969 | 18.7 | 1484.8 | 8206.5 | 8.0 | 2864.6989 | 30.3 | 1488.5 | 8712.0 | 6.1 | 2951.6097 | 29.1 | 1484.5 |
| 2/29/2024 | 21 | 1023.028016 | 8917.8 | 7.7 | 2986.269 | 16.9 | 1488.5 | 8899.0 | 7.5 | 2983.1192 | 27.1 | 1488.0 | 8823.3 | 8.0 | 2970.404 | 18.7 | 1484.9 | 8198.0 | 8.0 | 2863.215 | 30.3 | 1488.5 | 8703.7 | 6.1 | 2950.2034 | 29.0 | 1484.4 |
| 3/1/2024 | 22 | 1011.852934 | 8923.7 | 7.7 | 2987.256 | 16.9 | 1488.6 | 8905.1 | 7.5 | 2984.1414 | 27.2 | 1488.1 | 8796.6 | 8.0 | 2965.9063 | 20.5 | 1486.7 | 8204.2 | 8.0 | 2864.2975 | 30.3 | 1488.5 | 8710.1 | 6.1 | 2951.2879 | 29.1 | 1484.4 |
| 3/2/2024 | 23 | 1008.805184 | 8925.4 | 7.7 | 2987.541 | 17.0 | 1488.6 | 8906.8 | 7.5 | 2984.4262 | 27.2 | 1488.1 | 8765.1 | 8.0 | 2960.5912 | 22.4 | 1488.6 | 8205.9 | 8.0 | 2864.5942 | 30.3 | 1488.6 | 8711.5 | 6.1 | 2951.525 | 29.1 | 1484.5 |
| 3/3/2024 | 24 | 1009.8211 | 8924.7 | 7.7 | 2987.424 | 17.0 | 1488.6 | 8906.1 | 7.5 | 2984.309 | 27.2 | 1488.1 | 8763.9 | 8.0 | 2960.3885 | 22.4 | 1488.6 | 8204.9 | 8.0 | 2864.4197 | 30.4 | 1488.6 | 8710.8 | 6.1 | 2951.4064 | 29.1 | 1484.5 |
| 3/4/2024 | 25 | 1002.371045 | 8929.9 | 7.7 | 2988.294 | 16.9 | 1488.5 | 8911.0 | 7.5 | 2985.1298 | 27.2 | 1488.1 | 8769.4 | 8.0 | 2961.3173 | 22.4 | 1488.6 | 8209.6 | 8.0 | 2865.24 | 30.4 | 1488.6 | 8715.5 | 6.1 | 2952.2026 | 29.1 | 1484.5 |
| 3/5/2024 | 26 | 1018.96435 | 8920.0 | 7.7 | 2986.637 | 16.9 | 1488.5 | 8901.4 | 7.5 | 2983.5214 | 27.1 | 1488.0 | 8759.9 | 8.0 | 2959.7128 | 22.3 | 1488.5 | 8200.3 | 8.0 | 2863.6166 | 30.3 | 1488.5 | 8706.0 | 6.1 | 2950.5932 | 29.1 | 1484.4 |
| 3/6/2024 | 27 | 1020.996183 | 8918.9 | 7.7 | 2986.453 | 16.9 | 1488.5 | 8900.0 | 7.5 | 2983.2868 | 27.2 | 1488.0 | 8758.1 | 8.0 | 2959.4087 | 22.4 | 1488.6 | 8198.7 | 8.0 | 2863.3372 | 30.3 | 1488.5 | 8704.7 | 6.1 | 2950.3729 | 29.1 | 1484.4 |
| 3/7/2024 | 28 | 1015.239322 | 8922.5 | 7.7 | 2987.055 | 16.9 | 1488.5 | 8903.7 | 7.5 | 2983.9068 | 27.1 | 1488.0 | 8761.1 | 8.0 | 2959.9155 | 22.4 | 1488.6 | 8202.2 | 8.0 | 2863.9483 | 30.3 | 1488.5 | 8708.2 | 6.1 | 2950.9659 | 29.1 | 1484.4 |
| 3/8/2024 | 29 | 1020.318905 | 8919.8 | 7.7 | 2986.603 | 16.9 | 1488.5 | 8900.8 | 7.5 | 2983.4209 | 27.1 | 1488.0 | 8758.8 | 8.0 | 2959.527 | 22.4 | 1488.5 | 8199.3 | 8.0 | 2863.442 | 30.3 | 1488.5 | 8705.5 | 6.1 | 2950.5084 | 29.0 | 1484.4 |
| 3/9/2024 | 30 | 1018.287072 | 8921.2 | 7.7 | 2986.838 | 16.9 | 1488.5 | 8902.1 | 7.5 | 2983.6387 | 27.1 | 1488.0 | 8759.7 | 8.0 | 2959.679 | 22.4 | 1488.6 | 8200.5 | 8.0 | 2863.6515 | 30.3 | 1488.5 | 8706.8 | 6.1 | 2950.7287 | 29.0 | 1484.4 |
| 3/10/2024 | 31 | 1018.625711 | 8921.1 | 7.7 | 2986.821 | 16.9 | 1488.5 | 8902.0 | 7.5 | 2983.622 | 27.1 | 1488.0 | 8759.8 | 8.0 | 2959.6959 | 22.4 | 1488.6 | 8200.4 | 8.0 | 2863.6341 | 30.3 | 1488.5 | 8706.6 | 6.1 | 2950.6948 | 29.0 | 1484.4 |
| 3/11/2024 | 32 | 1013.207489 | 8924.5 | 7.7 | 2987.39 | 16.9 | 1488.5 | 8905.3 | 7.5 | 2984.1749 | 27.1 | 1488.0 | 8762.5 | 8.0 | 2960.152 | 22.4 | 1488.6 | 8203.7 | 8.0 | 2864.2102 | 30.3 | 1488.5 | 8710.2 | 6.1 | 2951.3048 | 29.0 | 1484.4 |
| 3/12/2024 | 33 | 1005.757434 | 8928.9 | 7.7 | 2988.127 | 16.9 | 1488.5 | 8909.5 | 7.5 | 2984.8786 | 27.2 | 1488.0 | 8766.5 | 8.0 | 2960.8276 | 22.4 | 1488.6 | 8207.7 | 8.0 | 2864.9084 | 30.3 | 1488.6 | 8713.8 | 6.1 | 2951.9146 | 29.1 | 1484.4 |
| 3/13/2024 | 34 | 1009.8211 | 8926.5 | 7.7 | 2987.725 | 16.9 | 1488.5 | 8907.3 | 7.5 | 2984.51 | 27.1 | 1488.0 | 8764.8 | 8.0 | 2960.5405 | 22.4 | 1488.6 | 8205.4 | 8.0 | 2864.5069 | 30.3 | 1488.5 | 8711.6 | 6.1 | 2951.542 | 29.1 | 1484.4 |
| 3/14/2024 | 35 | 1017.948433 | 8921.6 | 7.7 | 2986.905 | 16.9 | 1488.5 | 8902.3 | 7.5 | 2983.6722 | 27.1 | 1488.0 | 8759.9 | 8.0 | 2959.7128 | 22.4 | 1488.6 | 8200.4 | 8.0 | 2863.6341 | 30.3 | 1488.5 | 8706.8 | 6.1 | 2950.7287 | 29.1 | 1484.4 |
| 3/15/2024 | 36 | 1022.689377 | 8919.3 | 7.7 | 2986.52 | 16.8 | 1488.4 | 8900.0 | 7.5 | 2983.2868 | 27.1 | 1488.0 | 8757.5 | 8.0 | 2959.3074 | 22.4 | 1488.5 | 8198.0 | 8.0 | 2863.215 | 30.3 | 1488.5 | 8704.6 | 6.1 | 2950.3559 | 29.0 | 1484.4 |
| 3/16/2024 | 37 | 1001.355129 | 8932.2 | 7.7 | 2988.679 | 16.8 | 1488.4 | 8912.8 | 7.5 | 2985.4313 | 27.1 | 1488.0 | 8769.1 | 8.0 | 2961.2666 | 22.4 | 1488.6 | 8210.4 | 8.0 | 2865.3796 | 30.3 | 1488.6 | 8717.2 | 6.1 | 2952.4905 | 29.0 | 1484.4 |
| 3/17/2024 | 38 | 1010.159739 | 8926.0 | 7.7 | 2987.641 | 16.9 | 1488.5 | 8907.0 | 7.5 | 2984.4598 | 27.1 | 1488.0 | 8764.6 | 8.0 | 2960.5067 | 22.4 | 1488.6 | 8205.1 | 8.0 | 2864.4546 | 30.3 | 1488.6 | 8711.5 | 6.1 | 2951.525 | 29.1 | 1484.4 |
| 3/18/2024 | 39 | 1020.996183 | 8919.9 | 7.7 | 2986.62 | 16.9 | 1488.5 | 8901.0 | 7.5 | 2983.4544 | 27.1 | 1488.0 | 8758.8 | 8.0 | 2959.527 | 22.3 | 1488.5 | 8199.2 | 8.0 | 2863.4245 | 30.3 | 1488.5 | 8705.7 | 6.1 | 2950.5423 | 29.0 | 1484.4 |
| 3/19/2024 | 40 | 1002.032406 | 8932.2 | 7.7 | 2988.679 | 16.8 | 1488.4 | 8912.8 | 7.5 | 2985.4313 | 27.1 | 1488.0 | 8769.1 | 8.0 | 2961.2666 | 22.4 | 1488.6 | 8210.9 | 8.0 | 2865.4668 | 30.3 | 1488.5 | 8717.5 | 6.1 | 2952.5413 | 29.0 | 1484.4 |
| 3/20/2024 | 41 | 1012.191572 | 8925.0 | 7.7 | 2987.474 | 16.9 | 1488.5 | 8905.7 | 7.5 | 2984.2419 | 27.1 | 1488.0 | 8763.8 | 8.0 | 2960.3716 | 22.4 | 1488.5 | 8204.0 | 8.0 | 2864.2626 | 30.3 | 1488.5 | 8710.3 | 6.1 | 2951.3217 | 29.1 | 1484.4 |
| 3/21/2024 | 42 | 1023.366655 | 8918.7 | 7.6 | 2986.419 | 16.8 | 1488.5 | 8899.6 | 7.5 | 2983.2197 | 27.1 | 1488.0 | 8757.5 | 8.0 | 2959.3074 | 22.3 | 1488.5 | 8197.8 | 8.0 | 2863.1801 | 30.3 | 1488.5 | 8704.3 | 6.1 | 2950.3051 | 29.0 | 1484.4 |
| 3/22/2024 | 43 | 1022.689377 | 8918.7 | 7.6 | 2986.419 | 16.9 | 1488.5 | 8899.5 | 7.5 | 2983.203 | 27.1 | 1488.0 | 8757.4 | 8.0 | 2959.2905 | 22.4 | 1488.5 | 8197.7 | 8.0 | 2863.1626 | 30.3 | 1488.5 | 8704.4 | 6.1 | 2950.322 | 29.0 | 1484.4 |
| 3/23/2024 | 44 | 1025.398488 | 8917.6 | 7.6 | 2986.235 | 16.8 | 1488.4 | 8898.3 | 7.5 | 2983.0018 | 27.1 | 1488.0 | 8756.1 | 8.0 | 2959.0708 | 22.3 | 1488.5 | 8196.3 | 8.0 | 2862.9181 | 30.3 | 1488.5 | 8703.0 | 6.1 | 2950.0847 | 29.0 | 1484.4 |
| 3/24/2024 | 45 | 1021.334822 | 8920.0 | 7.6 | 2986.637 | 16.8 | 1488.4 | 8900.8 | 7.5 | 2983.4209 | 27.1 | 1488.0 | 8758.0 | 8.0 | 2959.3918 | 22.4 | 1488.6 | 8198.7 | 8.0 | 2863.3372 | 30.3 | 1488.5 | 8705.5 | 6.1 | 2950.5084 | 29.0 | 1484.4 |
| 3/25/2024 | 46 | 1012.86885 | 8924.1 | 7.6 | 2987.323 | 16.9 | 1488.5 | 8905.2 | 7.5 | 2984.1582 | 27.1 | 1488.0 | 8762.5 | 8.0 | 2960.152 | 22.4 | 1488.6 | 8203.3 | 8.0 | 2864.1404 | 30.3 | 1488.6 | 8709.9 | 6.1 | 2951.254 | 29.1 | 1484.4 |
| 3/26/2024 | 47 | 1005.757434 | 8928.0 | 7.6 | 2987.976 | 16.9 | 1488.5 | 8909.4 | 7.5 | 2984.8618 | 27.2 | 1488.0 | 8766.5 | 8.0 | 2960.8276 | 22.4 | 1488.6 | 8207.8 | 8.0 | 2864.9258 | 30.3 | 1488.6 | 8713.7 | 6.1 | 2951.8977 | 29.1 | 1484.5 |
| 3/27/2024 | 48 | 1001.355129 | 8929.3 | 7.6 | 2988.193 | 17.0 | 1488.6 | 8910.9 | 7.5 | 2985.1131 | 27.2 | 1488.1 | 8769.3 | 8.0 | 2961.3004 | 22.4 | 1488.6 | 8209.8 | 8.0 | 2865.2749 | 30.4 | 1488.6 | 8715.0 | 6.1 | 2952.1179 | 29.2 | 1484.5 |
| 3/28/2024 | 49 | 1011.852934 | 8923.2 | 7.6 | 2987.173 | 17.0 | 1488.6 | 8905.0 | 7.5 | 2984.1247 | 27.2 | 1488.1 | 8763.5 | 8.0 | 2960.3209 | 22.4 | 1488.6 | 8204.1 | 8.0 | 2864.28 | 30.3 | 1488.6 | 8709.0 | 6.1 | 2951.1015 | 29.1 | 1484.5 |
| 3/29/2024 | 50 | 1016.593878 | 8920.1 | 7.6 | 2986.654 | 17.0 | 1488.6 | 8901.7 | 7.5 | 2983.5717 | 27.2 | 1488.1 | 8760.5 | 8.0 | 2959.8142 | 22.4 | 1488.6 | 8200.8 | 8.0 | 2863.7039 | 30.3 | 1488.6 | 8705.8 | 6.1 | 2950.5593 | 29.1 | 1484.5 |
| 3/30/2024 | 51 | 1013.207489 | 8922.8 | 7.6 | 2987.106 | 17.0 | 1488.6 | 8904.4 | 7.5 | 2984.0241 | 27.2 | 1488.1 | 8762.3 | 8.0 | 2960.1182 | 22.4 | 1488.6 | 8203.3 | 8.0 | 2864.1404 | 30.3 | 1488.5 | 8708.5 | 6.1 | 2951.0168 | 29.1 | 1484.5 |
| 3/31/2024 | 52 | 1013.884767 | 8922.3 | 7.6 | 2987.022 | 17.0 | 1488.6 | 8903.9 | 7.5 | 2983.9403 | 27.2 | 1488.1 | 8762.0 | 8.0 | 2960.0676 | 22.4 | 1488.6 | 8202.7 | 8.0 | 2864.0356 | 30.3 | 1488.6 | 8707.8 | 6.1 | 2950.8982 | 29.1 | 1484.5 |
| 4/1/2024 | 53 | 1015.577961 | 8921.6 | 7.6 | 2986.905 | 16.9 | 1488.5 | 8903.0 | 7.5 | 2983.7895 | 27.2 | 1488.1 | 8760.9 | 8.0 | 2959.8818 | 22.4 | 1488.6 | 8201.4 | 8.0 | 2863.8087 | 30.3 | 1488.6 | 8706.8 | 6.1 | 2950.7287 | 29.1 | 1484.5 |
| 4/2/2024 | 54 | 1014.223406 | 8922.6 | 7.6 | 2987.072 | 16.9 | 1488.5 | 8904.0 | 7.5 | 2983.9571 | 27.2 | 1488.1 | 8761.4 | 8.0 | 2959.9662 | 22.4 | 1488.6 | 8202.0 | 8.0 | 2863.9134 | 30.4 | 1488.6 | 8707.8 | 6.1 | 2950.8982 | 29.1 | 1484.5 |
| 4/3/2024 | 55 | 1010.498378 | 8925.4 | 7.6 | 2987.541 | 16.9 | 1488.5 | 8906.6 | 7.5 | 2984.3927 | 27.1 | 1488.0 | 8763.3 | 8.0 | 2960.2871 | 22.4 | 1488.6 | 8204.4 | 8.0 | 2864.3324 | 30.4 | 1488.6 | 8710.3 | 6.1 | 2951.3217 | 29.1 | 1484.5 |
| 4/4/2024 | 56 | 1010.837017 | 8924.9 | 7.6 | 2987.457 | 16.9 | 1488.5 | 8906.2 | 7.5 | 2984.3257 | 27.2 | 1488.0 | 8763.1 | 8.0 | 2960.2534 | 22.4 | 1488.6 | 8203.7 | 8.0 | 2864.2102 | 30.4 | 1488.6 | 8709.7 | 6.1 | 2951.2201 | 29.1 | 1484.5 |
| 4/5/2024 | 57 | 1018.287072 | 8921.4 | 7.6 | 2986.871 | 16.9 | 1488.5 | 8902.1 | 7.5 | 2983.6387 | 27.1 | 1488.0 | 8758.9 | 8.0 | 2959.5439 | 22.4 | 1488.6 | 8199.2 | 8.0 | 2863.4245 | 30.4 | 1488.6 | 8705.6 | 6.1 | 2950.5254 | 29.1 | 1484.5 |
| 4/6/2024 | 58 | 1024.721211 | 8918.0 | 7.6 | 2986.302 | 16.8 | 1488.4 | 8898.6 | 7.5 | 2983.0521 | 27.1 | 1488.0 | 8755.5 | 8.0 | 2958.9694 | 22.4 | 1488.6 | 8195.7 | 8.0 | 2862.8133 | 30.3 | 1488.6 | 8702.3 | 6.1 | 2949.9661 | 29.1 | 1484.4 |
| 4/7/2024 | 59 | 1018.625711 | 8922.1 | 7.6 | 2986.988 | 16.8 | 1488.4 | 8902.6 | 7.5 | 2983.7225 | 27.1 | 1488.0 | 8759.1 | 8.0 | 2959.5777 | 22.4 | 1488.6 | 8199.8 | 8.0 | 2863.5293 | 30.3 | 1488.6 | 8706.5 | 6.1 | 2950.6779 | 29.0 | 1484.4 |
| 4/8/2024 | 60 | 1010.837017 | 8926.3 | 7.6 | 2987.691 | 16.8 | 1488.4 | 8907.2 | 7.5 | 2984.4933 | 27.1 | 1488.0 | 8763.3 | 8.0 | 2960.2871 | 22.4 | 1488.6 | 8204.4 | 8.0 | 2864.3324 | 30.3 | 1488.6 | 8711.2 | 6.1 | 2951.4742 | 29.0 | 1484.4 |
| 4/9/2024 | 61 | 1006.773351 | 8928.7 | 7.6 | 2988.093 | 16.8 | 1488.4 | 8909.4 | 7.5 | 2984.8618 | 27.1 | 1488.0 | 8765.8 | 8.0 | 2960.7094 | 22.4 | 1488.6 | 8206.5 | 8.0 | 2864.6989 | 30.4 | 1488.6 | 8713.6 | 6.1 | 2951.8808 | 29.1 | 1484.4 |
| 4/10/2024 | 62 | 1008.127906 | 8928.1 | 7.6 | 2987.993 | 16.8 | 1488.4 | 8908.8 | 7.5 | 2984.7613 | 27.1 | 1488.0 | 8765.1 | 8.0 | 2960.5912 | 22.4 | 1488.6 | 8205.9 | 8.0 | 2864.5942 | 30.4 | 1488.6 | 8713.1 | 6.1 | 2951.7961 | 29.0 | 1484.4 |
| 4/11/2024 | 63 | 1007.111989 | 8928.8 | 7.6 | 2988.11 | 16.8 | 1488.4 | 8909.6 | 7.5 | 2984.8953 | 27.1 | 1488.0 | 8766.0 | 8.0 | 2960.7431 | 22.4 | 1488.6 | 8206.9 | 8.0 | 2864.7688 | 30.3 | 1488.6 | 8713.9 | 6.1 | 2951.9316 | 29.0 | 1484.4 |
| 4/12/2024 | 64 | 1009.482462 | 8927.5 | 7.6 | 2987.892 | 16.8 | 1488.4 | 8908.1 | 7.5 | 2984.644 | 27.1 | 1488.0 | 8765.0 | 8.0 | 2960.5743 | 22.4 | 1488.6 | 8205.6 | 8.0 | 2864.5418 | 30.3 | 1488.6 | 8713.1 | 6.1 | 2951.7961 | 29.0 | 1484.4 |
| 4/13/2024 | 65 | 1016.932517 | 8923.3 | 7.6 | 2987.189 | 16.8 | 1488.4 | 8904.1 | 7.5 | 2983.9739 | 27.1 | 1488.0 | 8761.1 | 8.0 | 2959.9155 | 22.3 | 1488.5 | 8201.7 | 8.0 | 2863.861 | 30.3 | 1488.5 | 8709.2 | 6.1 | 2951.1354 | 29.0 | 1484.3 |
| 4/14/2024 | 66 | 1005.080156 | 8930.7 | 7.6 | 2988.428 | 16.8 | 1488.4 | 8911.4 | 7.5 | 2985.1968 | 27.1 | 1488.0 | 8768.1 | 8.0 | 2961.0978 | 22.4 | 1488.5 | 8209.0 | 8.0 | 2865.1352 | 30.3 | 1488.5 | 8716.6 | 6.1 | 2952.3889 | 28.9 | 1484.3 |
| 4/15/2024 | 67 | 1013.884767 | 8924.6 | 7.6 | 2987.407 | 16.8 | 1488.4 | 8905.8 | 7.5 | 2984.2587 | 27.1 | 1488.0 | 8763.0 | 8.0 | 2960.2365 | 22.3 | 1488.5 | 8203.3 | 8.0 | 2864.1404 | 30.3 | 1488.5 | 8711.2 | 6.1 | 2951.4742 | 28.9 | 1484.3 |
| 4/16/2024 | 68 | 1018.96435 | 8922.2 | 7.6 | 2987.005 | 16.8 | 1488.4 | 8903.2 | 7.5 | 2983.8231 | 27.0 | 1487.9 | 8760.5 | 8.0 | 2959.8142 | 22.3 | 1488.5 | 8200.8 | 8.0 | 2863.7039 | 30.3 | 1488.5 | 8708.8 | 6.1 | 2951.0676 | 28.9 | 1484.3 |
| 4/17/2024 | 69 | 1005.080156 | 8931.3 | 7.6 | 2988.528 | 16.7 | 1488.4 | 8911.6 | 7.5 | 2985.2303 | 27.1 | 1488.0 | 8767.4 | 8.0 | 2960.9796 | 22.4 | 1488.6 | 8208.6 | 8.0 | 2865.0654 | 30.3 | 1488.5 | 8717.3 | 6.1 | 2952.5074 | 28.9 | 1484.3 |
| 4/18/2024 | 70 | 1011.514295 | 8927.1 | 7.6 | 2987.825 | 16.8 | 1488.4 | 8908.0 | 7.5 | 2984.6273 | 27.0 | 1487.9 | 8764.2 | 8.0 | 2960.4392 | 22.4 | 1488.5 | 8204.8 | 8.0 | 2864.4022 | 30.3 | 1488.5 | 8713.2 | 6.1 | 2951.813 | 28.9 | 1484.3 |
| 4/19/2024 | 71 | 1013.207489 | 8926.2 | 7.6 | 2987.675 | 16.8 | 1488.4 | 8907.2 | 7.5 | 2984.4933 | 27.0 | 1487.9 | 8763.6 | 8.0 | 2960.3378 | 22.3 | 1488.5 | 8204.4 | 8.0 | 2864.3324 | 30.3 | 1488.5 | 8712.8 | 6.1 | 2951.7452 | 28.9 | 1484.3 |
| 4/20/2024 | 72 | 1016.593878 | 8923.7 | 7.6 | 2987.256 | 16.8 | 1488.4 | 8904.6 | 7.5 | 2984.0576 | 27.1 | 1487.9 | 8762.0 | 8.0 | 2960.0676 | 22.3 | 1488.5 | 8202.3 | 8.0 | 2863.9658 | 30.3 | 1488.5 | 8710.3 | 6.1 | 2951.3217 | 28.9 | 1484.3 |
| 4/21/2024 | 73 | 1018.96435 | 8922.9 | 7.6 | 2987.122 | 16.8 | 1488.4 | 8903.9 | 7.5 | 2983.9403 | 27.0 | 1487.9 | 8760.9 | 8.0 | 2959.8818 | 22.3 | 1488.5 | 8201.5 | 8.0 | 2863.8261 | 30.2 | 1488.5 | 8710.1 | 6.1 | 2951.2879 | 28.8 | 1484.2 |
| 4/22/2024 | 74 | 1013.884767 | 8926.1 | 7.6 | 2987.658 | 16.7 | 1488.4 | 8907.0 | 7.5 | 2984.4598 | 27.0 | 1487.9 | 8763.7 | 8.0 | 2960.3547 | 22.3 | 1488.5 | 8204.6 | 8.0 | 2864.3673 | 30.2 | 1488.5 | 8713.1 | 6.1 | 2951.7961 | 28.8 | 1484.2 |
| 4/23/2024 | 75 | 1000.677851 | 8933.8 | 7.6 | 2988.946 | 16.8 | 1488.4 | 8914.7 | 7.5 | 2985.7495 | 27.0 | 1487.9 | 8771.5 | 8.0 | 2961.6718 | 22.3 | 1488.5 | 8212.3 | 8.0 | 2865.7111 | 30.3 | 1488.5 | 8720.7 | 6.1 | 2953.0831 | 28.9 | 1484.2 |
| 4/24/2024 | 76 | 1021.673461 | 8920.8 | 7.6 | 2986.771 | 16.8 | 1488.4 | 8901.8 | 7.5 | 2983.5884 | 27.0 | 1487.9 | 8759.8 | 8.0 | 2959.6959 | 22.3 | 1488.4 | 8199.6 | 8.0 | 2863.4944 | 30.2 | 1488.5 | 8708.0 | 6.1 | 2950.9321 | 28.9 | 1484.2 |
| 4/25/2024 | 77 | 1023.705294 | 8920.3 | 7.6 | 2986.687 | 16.7 | 1488.4 | 8901.1 | 7.5 | 2983.4711 | 27.0 | 1487.9 | 8758.6 | 8.0 | 2959.4932 | 22.3 | 1488.4 | 8198.8 | 8.0 | 2863.3547 | 30.2 | 1488.4 | 8707.4 | 6.1 | 2950.8304 | 28.8 | 1484.2 |
| 4/26/2024 | 78 | 1018.287072 | 8923.5 | 7.6 | 2987.223 | 16.7 | 1488.4 | 8904.5 | 7.5 | 2984.0409 | 27.0 | 1487.9 | 8761

Appendix A: Water Level Logger Data

| | | | BH-31A-23<br>2E-VW320+65-L148 (T) (Logger)<br>2260743 | | | | | BH-31A-23<br>2E-VW320+65-L148 (B) (Logger)<br>2260753 | | | | | BH-102-23<br>2E-VW311+45-L472 (T) (Logger)<br>2260738 | | | | | BH-102-23<br>2E-VW311+45-L472 (B) (Logger)<br>2260740 | | | | | BH-103-23<br>2E-VW320+60-L444 (T) (Logger)<br>2260742 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | -4.852E-08 | | | | | -2.259E-08 | | | | | -4.995E-08 | | | | | -4.717E-08 | | | | | 2.634E-08 | | | | |
| B | | | -0.02334 | | | | | -0.02291 | | | | | -0.02318 | | | | | -0.02218 | | | | | -0.02414 | | | | |
| C(calibrated) | | | 219.3799946 | | | | | 217.3687202 | | | | | 216.5102467 | | | | | 198.1718896 | | | | | 220.6131611 | | | | |
| Thermal Factor, K (psi/C) | | | -0.008068 | | | | | -0.01479 | | | | | -0.01495 | | | | | -0.009436 | | | | | -0.01462 | | | | |
| Field zero B reading (Hertz) | | | 3036.856928 | | | | | 3066.072406 | | | | | 3026.483108 | | | | | 2961.604295 | | | | | 3038.404186 | | | | |
| Field zero B reading (Digits) | | | 9222.5 | | | | | 9400.8 | | | | | 9159.6 | | | | | 8771.1 | | | | | 9231.9 | | | | |
| Field zero temperature (deg C) | | | 23.9 | | | | | 23.9 | | | | | 16.9 | | | | | 16.9 | | | | | 21.4 | | | | |
| Field Sea Level Pressure (Hg) | | | 29.83 | | | | | 29.83 | | | | | 29.94 | | | | | 29.94 | | | | | 29.93 | | | | |
| Field Sea Level Pressure (mbar) | | | 1010.160137 | | | | | 1010.160137 | | | | | 1013.885166 | | | | | 1013.885166 | | | | | 1013.546527 | | | | |
| Factory zero B reading | | | 9208 | | | | | 9388 | | | | | 9144 | | | | | 8759 | | | | | 9220 | | | | |
| Ground Surface Elevation (ft) | | | 1486.1 | | | | | 1486.1 | | | | | 1485 | | | | | 1485 | | | | | 1484.9 | | | | |
| Tip Depth (ft) | | | 14.49 | | | | | 25.21 | | | | | 18.81 | | | | | 26.78 | | | | | 29.53 | | | | |
| Tip Elevation (ft) | | | 1471.61 | | | | | 1460.89 | | | | | 1466.19 | | | | | 1458.22 | | | | | 1455.37 | | | | |
| Date | Reading ID | Barometric Pressure (mbar) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) |
| 7/30/2024 | 173 | 1011.175656 | 8929.3 | 7.4 | 2988.193 | 16.7 | 1488.3 | 8909.3 | 7.5 | 2984.8451 | 27.0 | 1487.9 | 8768.8 | 7.9 | 2961.216 | 22.1 | 1488.3 | 8208.8 | 8.0 | 2865.1003 | 30.1 | 1488.3 | 8720.9 | 6.1 | 2953.117 | 28.5 | 1483.9 |
| 7/31/2024 | 174 | 1012.191572 | 8928.7 | 7.4 | 2988.093 | 16.7 | 1488.3 | 8908.9 | 7.5 | 2984.778 | 27.0 | 1487.9 | 8768.2 | 7.9 | 2961.1147 | 22.1 | 1488.3 | 8208.1 | 8.0 | 2864.9782 | 30.1 | 1488.3 | 8720.5 | 6.1 | 2953.0493 | 28.5 | 1483.9 |
| 8/1/2024 | 175 | 1014.562045 | 8927.4 | 7.4 | 2987.875 | 16.7 | 1488.3 | 8907.6 | 7.5 | 2984.5603 | 27.0 | 1487.8 | 8766.9 | 7.9 | 2960.8951 | 22.1 | 1488.3 | 8206.8 | 8.0 | 2864.7513 | 30.1 | 1488.3 | 8719.2 | 6.1 | 2952.8292 | 28.5 | 1483.9 |
| 8/2/2024 | 176 | 1017.948433 | 8925.4 | 7.4 | 2987.541 | 16.7 | 1488.3 | 8905.6 | 7.5 | 2984.2252 | 27.0 | 1487.8 | 8764.8 | 7.9 | 2960.5405 | 22.1 | 1488.3 | 8204.6 | 8.0 | 2864.3673 | 30.1 | 1488.3 | 8717.2 | 6.1 | 2952.4905 | 28.5 | 1483.9 |
| 8/3/2024 | 177 | 1017.948433 | 8925.1 | 7.4 | 2987.491 | 16.7 | 1488.3 | 8905.3 | 7.5 | 2984.1749 | 27.0 | 1487.9 | 8764.6 | 7.9 | 2960.5067 | 22.1 | 1488.3 | 8204.5 | 8.0 | 2864.3498 | 30.1 | 1488.3 | 8716.9 | 6.1 | 2952.4397 | 28.5 | 1483.9 |
| 8/4/2024 | 178 | 1017.271155 | 8925.6 | 7.4 | 2987.574 | 16.7 | 1488.3 | 8905.7 | 7.5 | 2984.2419 | 27.0 | 1487.9 | 8763.9 | 7.9 | 2960.3885 | 22.2 | 1488.4 | 8203.7 | 8.0 | 2864.2102 | 30.2 | 1488.4 | 8717.0 | 6.0 | 2952.4566 | 28.5 | 1483.9 |
| 8/5/2024 | 179 | 1019.980266 | 8923.7 | 7.4 | 2987.256 | 16.7 | 1488.3 | 8903.9 | 7.5 | 2983.9403 | 27.0 | 1487.9 | 8762.2 | 7.9 | 2960.1013 | 22.2 | 1488.4 | 8202.1 | 8.0 | 2863.9309 | 30.2 | 1488.4 | 8715.2 | 6.0 | 2952.1518 | 28.5 | 1483.9 |
| 8/6/2024 | 180 | 1022.350738 | 8922.3 | 7.4 | 2987.022 | 16.7 | 1488.3 | 8902.4 | 7.5 | 2983.689 | 27.0 | 1487.9 | 8760.9 | 7.9 | 2959.8818 | 22.2 | 1488.4 | 8200.7 | 8.0 | 2863.6864 | 30.2 | 1488.4 | 8713.9 | 6.0 | 2951.9316 | 28.5 | 1483.9 |
| 8/7/2024 | 181 | 1019.980266 | 8924.2 | 7.4 | 2987.34 | 16.7 | 1488.3 | 8904.3 | 7.5 | 2984.0074 | 27.0 | 1487.8 | 8762.8 | 7.9 | 2960.2027 | 22.2 | 1488.3 | 8202.8 | 8.0 | 2864.0531 | 30.1 | 1488.3 | 8715.9 | 6.0 | 2952.2703 | 28.5 | 1483.9 |
| 8/8/2024 | 182 | 1013.546128 | 8927.9 | 7.4 | 2987.959 | 16.7 | 1488.3 | 8908.0 | 7.5 | 2984.6273 | 27.0 | 1487.9 | 8765.5 | 7.9 | 2960.6587 | 22.2 | 1488.4 | 8205.6 | 8.0 | 2864.5418 | 30.2 | 1488.4 | 8719.2 | 6.0 | 2952.8292 | 28.5 | 1483.9 |
| 8/9/2024 | 183 | 1014.900683 | 8926.8 | 7.4 | 2987.775 | 16.7 | 1488.3 | 8907.0 | 7.5 | 2984.4598 | 27.0 | 1487.9 | 8764.9 | 7.9 | 2960.5574 | 22.2 | 1488.4 | 8204.7 | 8.0 | 2864.3848 | 30.2 | 1488.4 | 8718.2 | 6.0 | 2952.6598 | 28.5 | 1483.9 |
| 8/10/2024 | 184 | 1017.271155 | 8925.6 | 7.4 | 2987.574 | 16.7 | 1488.3 | 8905.9 | 7.5 | 2984.2755 | 27.0 | 1487.8 | 8763.4 | 7.9 | 2960.304 | 22.2 | 1488.4 | 8203.5 | 8.0 | 2864.1753 | 30.2 | 1488.4 | 8717.0 | 6.0 | 2952.4566 | 28.5 | 1483.9 |
| 8/11/2024 | 185 | 1018.287072 | 8924.9 | 7.4 | 2987.457 | 16.7 | 1488.3 | 8905.2 | 7.5 | 2984.1582 | 27.0 | 1487.9 | 8763.1 | 7.9 | 2960.2534 | 22.2 | 1488.4 | 8203.0 | 8.0 | 2864.088 | 30.2 | 1488.4 | 8716.4 | 6.0 | 2952.355 | 28.5 | 1483.9 |
| 8/12/2024 | 186 | 1019.641628 | 8924.0 | 7.4 | 2987.306 | 16.7 | 1488.3 | 8904.2 | 7.5 | 2983.9906 | 27.0 | 1487.9 | 8762.4 | 7.9 | 2960.1351 | 22.2 | 1488.4 | 8202.2 | 8.0 | 2863.9483 | 30.2 | 1488.4 | 8715.4 | 6.0 | 2952.1856 | 28.5 | 1483.9 |
| 8/13/2024 | 187 | 1020.996183 | 8923.3 | 7.4 | 2987.189 | 16.7 | 1488.3 | 8903.5 | 7.5 | 2983.8733 | 27.0 | 1487.9 | 8761.9 | 7.9 | 2960.0507 | 22.2 | 1488.4 | 8201.7 | 8.0 | 2863.861 | 30.2 | 1488.4 | 8714.9 | 6.0 | 2952.1009 | 28.5 | 1483.9 |
| 8/14/2024 | 188 | 1021.673461 | 8922.9 | 7.4 | 2987.122 | 16.7 | 1488.3 | 8903.2 | 7.5 | 2983.8231 | 27.0 | 1487.8 | 8761.8 | 7.9 | 2960.0338 | 22.2 | 1488.3 | 8201.6 | 8.0 | 2863.8436 | 30.1 | 1488.4 | 8714.6 | 6.0 | 2952.0501 | 28.5 | 1483.9 |
| 8/15/2024 | 189 | 1016.255239 | 8926.6 | 7.4 | 2987.742 | 16.6 | 1488.3 | 8906.8 | 7.5 | 2984.4262 | 26.9 | 1487.8 | 8764.9 | 7.9 | 2960.5574 | 22.2 | 1488.3 | 8205.1 | 8.0 | 2864.4546 | 30.1 | 1488.4 | 8718.2 | 6.0 | 2952.6598 | 28.5 | 1483.9 |
| 8/16/2024 | 190 | 1007.111989 | 8931.6 | 7.4 | 2988.578 | 16.7 | 1488.3 | 8911.5 | 7.5 | 2985.2136 | 27.0 | 1487.9 | 8768.4 | 7.9 | 2961.1484 | 22.3 | 1488.5 | 8208.5 | 8.0 | 2865.048 | 30.3 | 1488.5 | 8722.3 | 6.0 | 2953.354 | 28.6 | 1483.9 |
| 8/17/2024 | 191 | 1012.191572 | 8928.0 | 7.4 | 2987.976 | 16.7 | 1488.3 | 8908.2 | 7.5 | 2984.6608 | 27.0 | 1487.9 | 8765.7 | 7.9 | 2960.6925 | 22.3 | 1488.4 | 8205.5 | 8.0 | 2864.5244 | 30.2 | 1488.5 | 8719.0 | 6.0 | 2952.7953 | 28.6 | 1483.9 |
| 8/18/2024 | 192 | 1017.948433 | 8924.8 | 7.4 | 2987.44 | 16.7 | 1488.3 | 8905.0 | 7.5 | 2984.1247 | 27.0 | 1487.9 | 8762.8 | 7.9 | 2960.2027 | 22.2 | 1488.4 | 8202.6 | 8.0 | 2864.0182 | 30.2 | 1488.4 | 8715.9 | 6.0 | 2952.2703 | 28.6 | 1483.9 |
| 8/19/2024 | 193 | 1022.689377 | 8922.4 | 7.4 | 2987.039 | 16.7 | 1488.3 | 8902.7 | 7.5 | 2983.7393 | 27.0 | 1487.8 | 8760.8 | 7.9 | 2959.8649 | 22.2 | 1488.4 | 8200.6 | 8.0 | 2863.669 | 30.2 | 1488.4 | 8713.8 | 6.0 | 2951.9146 | 28.5 | 1483.9 |
| 8/20/2024 | 194 | 1026.753044 | 8920.3 | 7.5 | 2986.687 | 16.6 | 1488.3 | 8900.4 | 7.5 | 2983.3538 | 26.9 | 1487.8 | 8758.8 | 7.9 | 2959.527 | 22.1 | 1488.3 | 8198.5 | 8.0 | 2863.3023 | 30.1 | 1488.4 | 8711.8 | 6.0 | 2951.5759 | 28.5 | 1483.9 |
| 8/21/2024 | 195 | 1025.398488 | 8920.8 | 7.5 | 2986.771 | 16.7 | 1488.3 | 8901.0 | 7.5 | 2983.4544 | 27.0 | 1487.8 | 8759.5 | 7.9 | 2959.6452 | 22.2 | 1488.3 | 8199.2 | 8.0 | 2863.4245 | 30.1 | 1488.4 | 8712.5 | 6.0 | 2951.6944 | 28.5 | 1483.9 |
| 8/22/2024 | 196 | 1023.028016 | 8922.4 | 7.5 | 2987.039 | 16.6 | 1488.3 | 8902.7 | 7.5 | 2983.7393 | 26.9 | 1487.8 | 8761.1 | 7.9 | 2959.9155 | 22.1 | 1488.3 | 8201.0 | 8.0 | 2863.7388 | 30.1 | 1488.3 | 8714.1 | 6.0 | 2951.9654 | 28.5 | 1483.9 |
| 8/23/2024 | 197 | 1019.302989 | 8924.9 | 7.5 | 2987.457 | 16.6 | 1488.2 | 8905.2 | 7.5 | 2984.1582 | 26.9 | 1487.8 | 8763.4 | 7.9 | 2960.304 | 22.1 | 1488.3 | 8203.4 | 8.0 | 2864.1578 | 30.1 | 1488.3 | 8716.6 | 6.0 | 2952.3889 | 28.5 | 1483.8 |
| 8/24/2024 | 198 | 1020.318905 | 8924.0 | 7.5 | 2987.306 | 16.7 | 1488.3 | 8904.1 | 7.5 | 2983.9739 | 27.0 | 1487.8 | 8762.5 | 7.9 | 2960.152 | 22.2 | 1488.3 | 8202.3 | 8.0 | 2863.9658 | 30.1 | 1488.4 | 8715.5 | 6.0 | 2952.2026 | 28.5 | 1483.9 |
| 8/25/2024 | 199 | 1020.318905 | 8923.9 | 7.5 | 2987.29 | 16.7 | 1488.3 | 8904.3 | 7.5 | 2984.0074 | 26.9 | 1487.8 | 8762.5 | 7.9 | 2960.152 | 22.2 | 1488.3 | 8202.5 | 8.0 | 2864.0007 | 30.1 | 1488.4 | 8715.7 | 6.0 | 2952.2364 | 28.5 | 1483.9 |
| 8/26/2024 | 200 | 1018.287072 | 8925.3 | 7.5 | 2987.524 | 16.6 | 1488.3 | 8905.6 | 7.5 | 2984.2252 | 26.9 | 1487.8 | 8763.6 | 7.9 | 2960.3378 | 22.2 | 1488.4 | 8203.7 | 8.0 | 2864.2102 | 30.1 | 1488.4 | 8716.9 | 6.0 | 2952.4397 | 28.5 | 1483.9 |
| 8/27/2024 | 201 | 1016.932517 | 8924.6 | 7.5 | 2987.407 | 16.7 | 1488.3 | 8904.9 | 7.5 | 2984.1079 | 27.0 | 1487.9 | 8763.1 | 7.9 | 2960.2534 | 22.2 | 1488.4 | 8202.6 | 8.0 | 2864.0182 | 30.2 | 1488.5 | 8716.2 | 6.0 | 2952.3211 | 28.6 | 1483.9 |
| 8/28/2024 | 202 | 1021.673461 | 8923.0 | 7.5 | 2987.139 | 16.7 | 1488.3 | 8903.3 | 7.5 | 2983.8398 | 27.0 | 1487.8 | 8761.0 | 7.9 | 2959.8986 | 22.2 | 1488.4 | 8200.8 | 8.0 | 2863.7039 | 30.2 | 1488.4 | 8714.4 | 6.0 | 2952.0163 | 28.5 | 1483.9 |
| 8/29/2024 | 203 | 1023.366655 | 8922.5 | 7.5 | 2987.055 | 16.6 | 1488.2 | 8902.8 | 7.5 | 2983.756 | 26.9 | 1487.8 | 8760.4 | 7.9 | 2959.7973 | 22.2 | 1488.4 | 8200.5 | 8.0 | 2863.6515 | 30.1 | 1488.4 | 8714.0 | 6.0 | 2951.9485 | 28.5 | 1483.8 |
| 8/30/2024 | 204 | 1013.546128 | 8927.5 | 7.5 | 2987.892 | 16.7 | 1488.3 | 8907.8 | 7.5 | 2984.5938 | 27.0 | 1487.9 | 8765.6 | 7.9 | 2960.6756 | 22.2 | 1488.4 | 8205.4 | 8.0 | 2864.5069 | 30.2 | 1488.4 | 8718.9 | 6.0 | 2952.7784 | 28.5 | 1483.9 |
| 8/31/2024 | 205 | 1015.9166 | 8926.5 | 7.5 | 2987.725 | 16.7 | 1488.3 | 8906.7 | 7.5 | 2984.4095 | 27.0 | 1487.9 | 8764.9 | 7.9 | 2960.5574 | 22.2 | 1488.4 | 8204.7 | 8.0 | 2864.3848 | 30.2 | 1488.4 | 8717.9 | 6.0 | 2952.609 | 28.5 | 1483.9 |
| 9/1/2024 | 206 | 1017.271155 | 8925.3 | 7.5 | 2987.524 | 16.7 | 1488.3 | 8905.7 | 7.5 | 2984.2419 | 27.0 | 1487.9 | 8764.3 | 7.9 | 2960.456 | 22.2 | 1488.3 | 8203.8 | 8.0 | 2864.2276 | 30.2 | 1488.4 | 8716.9 | 6.0 | 2952.4397 | 28.5 | 1483.9 |
| 9/2/2024 | 207 | 1025.737127 | 8920.7 | 7.5 | 2986.754 | 16.7 | 1488.3 | 8901.0 | 7.5 | 2983.4544 | 26.9 | 1487.8 | 8759.6 | 7.9 | 2959.6621 | 22.1 | 1488.3 | 8199.2 | 8.0 | 2863.4245 | 30.1 | 1488.3 | 8712.3 | 6.0 | 2951.6605 | 28.5 | 1483.9 |
| 9/3/2024 | 208 | 1023.028016 | 8922.6 | 7.5 | 2987.072 | 16.6 | 1488.2 | 8902.9 | 7.5 | 2983.7728 | 26.9 | 1487.8 | 8761.2 | 7.9 | 2959.9324 | 22.1 | 1488.3 | 8201.1 | 8.0 | 2863.7563 | 30.1 | 1488.3 | 8714.4 | 6.0 | 2952.0163 | 28.5 | 1483.8 |
| 9/4/2024 | 209 | 1018.625711 | 8924.8 | 7.5 | 2987.44 | 16.7 | 1488.3 | 8905.2 | 7.5 | 2984.1582 | 27.0 | 1487.8 | 8763.6 | 7.9 | 2960.3378 | 22.2 | 1488.3 | 8203.4 | 8.0 | 2864.1578 | 30.1 | 1488.4 | 8716.7 | 6.0 | 2952.4058 | 28.5 | 1483.9 |
| 9/5/2024 | 210 | 1018.287072 | 8925.1 | 7.5 | 2987.491 | 16.7 | 1488.3 | 8905.4 | 7.5 | 2984.1917 | 27.0 | 1487.8 | 8763.8 | 7.9 | 2960.3716 | 22.2 | 1488.3 | 8203.6 | 8.0 | 2864.1927 | 30.1 | 1488.4 | 8716.8 | 6.0 | 2952.4227 | 28.5 | 1483.9 |
| 9/6/2024 | 211 | 1024.721211 | 8921.6 | 7.5 | 2986.905 | 16.6 | 1488.2 | 8901.8 | 7.5 | 2983.5884 | 26.9 | 1487.8 | 8760.1 | 7.9 | 2959.7466 | 22.1 | 1488.3 | 8199.9 | 8.0 | 2863.5468 | 30.1 | 1488.3 | 8713.3 | 6.0 | 2951.8299 | 28.5 | 1483.8 |
| 9/7/2024 | 212 | 1027.76896 | 8919.5 | 7.5 | 2986.553 | 16.7 | 1488.3 | 8899.8 | 7.5 | 2983.2533 | 26.9 | 1487.8 | 8758.1 | 7.9 | 2959.4087 | 22.2 | 1488.3 | 8197.7 | 8.0 | 2863.1626 | 30.1 | 1488.4 | 8711.3 | 6.0 | 2951.4911 | 28.5 | 1483.8 |
| 9/8/2024 | 213 | 1018.96435 | 8925.0 | 7.5 | 2987.474 | 16.6 | 1488.2 | 8905.2 | 7.5 | 2984.1582 | 26.9 | 1487.8 | 8763.0 | 7.9 | 2960.2365 | 22.2 | 1488.4 | 8203.0 | 8.0 | 2864.088 | 30.2 | 1488.4 | 8716.7 | 6.0 | 2952.4058 | 28.5 | 1483.8 |
| 9/9/2024 | 214 | 1015.9166 | 8926.0 | 7.5 | 2987.641 | 16.7 | 1488.3 | 8906.4 | 7.5 | 2984.3592 | 27.0 | 1487.9 | 8764.6 | 7.9 | 2960.5067 | 22.2 | 1488.4 | 8204.3 | 8.0 | 2864.3149 | 30.2 | 1488.4 | 8717.7 | 6.0 | 2952.5751 | 28.5 | 1483.9 |
| 9/10/2024 | 215 | 1016.932517 | 8926.0 | 7.5 | 2987.641 | 16.7 | 1488.3 | 8906.3 | 7.5 | 2984.3425 | 26.9 | 1487.8 | 8764.3 | 7.9 | 2960.456 | 22.2 | 1488.4 | 8204.3 | 8.0 | 2864.3149 | 30.2 | 1488.4 | 8717.6 | 6.0 | 2952.5582 | 28.5 | 1483.9 |
| 9/11/2024 | 216 | 1012.191572 | 8928.7 | 7.5 | 2988.093 | 16.7 | 1488.3 | 8909.0 | 7.5 | 2984.7948 | 27.0 | 1487.9 | 8767.2 | 7.9 | 2960.9458 | 22.2 | 1488.4 | 8207.1 | 8.0 | 2864.8037 | 30.2 | 1488.4 | 8720.2 | 6.0 | 2952.9985 | 28.5 | 1483.9 |
| 9/12/2024 | 217 | 1016.593878 | 8926.0 | 7.5 | 2987.641 | 16.7 | 1488.3 | 8906.3 | 7.5 | 2984.3425 | 27.0 | 1487.9 | 8764.6 | 7.9 | 2960.5067 | 22.2 | 1488.4 | 8204.4 | 8.0 | 2864.3324 | 30.2 | 1488.4 | 8717.5 | 6.0 | 2952.5413 | 28.5 | 1483.9 |
| 9/13/2024 | 218 | 1020.318905 | 8923.7 | 7.5 | 2987.256 | 16.7 | 1488.3 | 8904.2 | 7.5 | 2983.9906 | 26.9 | 1487.8 | 8762.6 | 7.9 | 2960.1689 | 22.2 | 1488.3 | 8202.3 | 8.0 | 2863.9658 | 30.1 | 1488.4 | 8715.4 | 6.0 | 2952.1856 | 28.5 | 1483.9 |
| 9/14/2024 | 219 | 1020.996183 | 8923.7 | 7.5 | 2987.256 | 16.6 | 1488.3 | 8904.1 | 7.5 | 2983.9739 | 26.9 | 1487.8 | 8762.4 | 7.9 | 2960.1351 | 22.1 | 1488.3 | 8202.3 | 8.0 | 2863.9658 | 30.1 | 1488.3 | 8715.4 | 6.0 | 2952.1856 | 28.5 | 1483.8 |
| 9/15/2024 | 220 | 1019.302989 | 8924.6 | 7.5 | 2987.407 | 16.7 | 1488.3 | 8904.9 | 7.5 | 2984.1079 | 26.9 | 1487.8 | 8763.1 | 7.9 | 2960.2534 | 22.2 | 1488.3 | 8203.0 | 8.0 | 2864.088 | 30.1 | 1488.4 | 8716.2 | 6.0 | 2952.3211 | 28.5 | 1483.9 |
| 9/16/2024 | 221 | 1018.96435 | 8924.8 | 7.5 | 2987.44 | 16.7 | 1488.3 | 8905.2 | 7.5 | 2984.1582 | 26.9 | 1487.8 | 8763.4 | 7.9 | 2960.304 | 22.2 | 1488.3 | 8203.3 | 8.0 | 2864.1404 | 30.1 | 1488.4 | 8716.4 | 6.0 | 2952.355 | 28.5 | 1483.9 |
| 9/17/2024 | 222 | 1018.287072 | 8925.4 | 7.5 | 2987.541 | 16.6 | 1488.2 | 8905.8 | 7.5 | 2984.2587 | 26.9 | 1487.8 | 8763.8 | 7.9 | 2960.3716 | 22.2 | 1488.3 | 8203.8 | 8.0 | 2864.2276 | 30.1 | 1488.4 | 8717.0 | 6.0 | 2952.4566 | 28.5 | 1483.9 |
| 9/18/2024 | 223 | 1013.546128 | 8928.1 | 7.5 | 2987.993 | 16.6 | 1488.3 | 8908.6 | 7.5 | 2984.7278 | 26.9 | 1487.8 | 8766.7 | 7.9 | 2960.8614 | 22.2 | 1488.3 | 8206.7 | 8.0 | 2864.7338 | 30.1 | 1488.4 | 8719.8 | 6.0 | 2952.9307 | 28.5 | 1483.9 |
| 9/19/2024 | 224 | 1011.852934 | 8929.1 | 7.5 | 2988.16 | 16.6 | 1488.3 | 8909.7 | 7.5 | 2984.9121 | 26.9 | 1487.8 | 8767.7 | 7.9 | 2961.0302 | 22.2 | 1488.3 | 8207.8 | 8.0 | 2864.9258 | 30.1 | 1488.4 | 8720.8 | 6.0 | 2953.1001 | 28.5 | 1483.9 |
| 9/20/2024 | 225 | 1005.418795 | 8933.0 | 7.5 | 2988.812 | 16.6 | 1488.3 | 8913.2 | 7.5 | 2985.4983 | 27.0 | 1487.9 | 8771.1 | 7.9 | 2961.6043 | 22.2 | 1488.4 | 8211.1 | 8.0 | 2865.5017 | 30.2 | 1488.4 | 8724.3 | 6.0 | 2953.6926 | 28.5 | 1483.9 |
| 9/21/2024 | 226 | 1011.175656 | 8929.3 | 7.5 | 2988.193 | 16.7 | 1488.3 | 8909.7 | 7.5 | 2984.9121 | 27.0 | 1487.8 | 8767.8 | 7.9 | 2961.0471 | 22.2 | 1488.4 | 8207.7 | 8.0 | 2864.9084 | 30.2 | 1488.4 | 8720.7 | 6.0 | 2953.0831 | 28.5 | 1483.9 |
| 9/22/2024 | 227 | 1015.577961 | 8926.5 | 7.5 | 2987.725 | 16.7 | 1488.3 | 8907.1 | 7.5 | 2984.4765 | 27.0 | 1487.8 | 8765.3 | 7.9 | 2960.6249 | 22.2 | 1488.3 | 8205.0 | 8.0 | 2864.4371 | 30.2 | 1488.4 | 8718.1 | 6.0 | 2952.6429 | 28.5 | 1483.9 |
| 9/23/2024 | 228 | 1018.96435 | 8925.0 | 7.5 | 2987.474 | 16.6 | 1488.2 | 8905.4 | 7.5 | 2984.1917 | 26.9 | 1487.8 | 8763.2 | 7.9 | 2960.2703 | 22.2 | 1488.4 | 8203.2 | 8.0 | 2864.1229 | 30.1 | 1488.4 | 8716.6 | 6.0 | 2952.3889 | 28.5 | 1483.9 |
| 9/24/2024 | 229 | 1012.530211 | 8929.1 | 7.5 | 2988.16 | 16.6 | 1488.2 | 8909.4 | 7.5 | 2984.8618 | 26.9 | 1487.8 | 8766.7 | 7.9 | 2960.8614 | 22.2 | 1488.4 | 8206.9 | 8.0 | 2864.7688 | 30.2 | 1488.4 | 8720.5 | 6.0 | 2953.0493 | 28.5 | 1483.9 |
| 9/25/2024 | 230 | 1012.191572 | 8928.8 | 7.5 | 2988.11 | 16.7 | 1488.3 | 8909.3 | 7.5 | 2984.8451 | 26.9 | 1487.8 | 8767.0 | 7.9 | 2960.912 | 22.2 | 1488.4 | 8207.0 | 8.0 | 2864.7862 | 30.2 | 1488.4 | 8720.5 | 6.0 | 2953.0493 | 28.5 | 1483.9 |
| 9/26/2024 | 231 | 1015.239322 | 8926.7 | 7.5 | 2987.758 | 16.7 | 1488.3 | 8907.2 | 7.5 | 2984.4933 | 27.0 | 1487.8 | 8765.0 | 7.9 | 2960.5743 | 22.2 | 1488.4 | 8204.8 | 8.0 | 2864.4022 | 30.2 | 1488.4 | 8718.3 | 6.0 | 2952.6768 | 28.5 | 1483.9 |
| 9/27/2024 | 232 | 1016.593878 | 8926.6 | 7.5 | 2987.742 | 16.6 | 1488.2 | 8907.0 | 7.5 | 2984.4598 | 26.9 | 1487.8 | 8764.6 | 7.9 | 2960.5067 | 22.2 | 1488.4 | 8204.6 | 8.0 | 2864.3673 | 30.1 | 1488.4 | 8718.2 | 6.0 | 2952.6598 | 28.5 | 1483.9 |
| 9/28/2024 | 233 | 1017.271155 | 8925.6 | 7.5 | 2987.574 | 16.7 | 1488.3 | 8906.1 | 7.5 | 2984.309 | 26.9 | 1487.8 | 8763.8 | 7.9 | 2960.3716 | 22.2 | 1488.4 | 8203.8 | 8.0 | 2864.2276 | 30.2 | 1488.4 | 8717.3 | 6.0 | 2952.5074 | 28.5 | 1483.9 |
| 9/29/2024 | 234 | 1021.673461 | 8922.8 | 7.5 | 2987.106 | 16.7 | 1488.3 | 8903.3 | 7.5 | 2983.8398 | 27.0 | 1487.8 | 8761.2 | 7.9 | 2959.9324 | 22.2 | 1488.4 | 8200.8 | 8.0 | 2863.7039 | 30.2 | 1488.4 | 8714.5 | 6.0 | 2952.0332 | 28.5 | 1483.9 |
| 9/30/2024 | 235 | 1017.271155 | 8926.0 | 7.5 | 2987.641 | 16.6 | 1488.2 | 8906.5 | 7.5 | 2984.376 | 26.9 | 1487.8 | 8763.8 | 7.9 | 2960.3716 | 22.2 | 1488.4 | 8204.0 | 8.0 | 2864.2626 | 30.2 | 1488.4 | 8717.8 | 6.0 | 2952.5921 | 28.5 | 1483.8 |
| 10/1/2024 | 236 | 1016.255239 | 8926.0 | 7.5 | 2987.641 | 16.7 | 1488.3 | 8906.7 | 7.5 | 2984.4095 | 27.0 | 1487.8 | 8764.7 | 7.9 | 2960.5236 | 22.2 | 1488.4 | 8204.3 | 8.0 | 2864.3149 | 30.2 | 1488.4 | 8717.8 | 6.0 | 2952.5921 | 28.5 | 1483.9 |
| 10/2/2024 | 237 | 1015.239322 | 8927.9 | 7.5 | 2987.959 | 16.6 | 1488.2 | 8908.4 | 7.5 | 2984.6943 | 26.9 | 1487.8 | 8765.4 | 7.9 | 2960.6418 | 22.2 | 1488.4 | 8205.8 | 8.0 | 2864.5768 | 30.1 | 1488.3 | 8719.6 | 6.0 | 2952.8969 | 28.4 | 1483.8 |
| 10/3/2024 | 238 | 1010.159739 | 8929.5 | 7.5 | 2988.227 | 16.7 | 1488.3 | 8910.0 | 7.5 | 2984.9623 | 27.0 | 1487.9 | 8768.0 | 7.9 | 2961.0809 | 22.2 | 1488.4 | 8207.6 | 8.0 | 2864.8909 | 30.2 | 1488.4 | 8721.0 | 6.0 | 2953.1339 | 28.5 | 1483.9 |
| 10/4/2024 | 239 | 1023.366655 | 8922.1 | 7.5 | 2986.988 | 16.7 | 1488.3 | 8902.6 | 7.5 | 2983.7225 | 26.9 | 1487.8 | 8760.6 | 7.9 | 2959.8311 | 22.2 | 1488.3 | 8200.2 | 8.0 | 2863.5991 | 30.2 | 1488.4 | 8713.8 | 6.0 | 2951.9146 | 28.5 | 1483.9 |
| 10/5/2024 | 240 | 1021.334822 | 8923.9 | 7.5 | 2987.29 | 16.6 | 1488.2 | 8904.5 | 7.5 | 2984.0409 | 26.9 | 1487.8 | 8761.8 | 7.9 | 2960.0338 | 22.2 | 1488.4 | 8202.0 | 8.0 | 2863.9134 | 30.1 | 1488.3 | 8715.7 | 6.0 | 2952.2364 | 28.5 | 1483.8 |
| 10/6/2024 | 241 | 1002.032406 | 8934.7 | 7.5 | 2989.097 | 16.7 | 1488.3 | 8914.7 | 7.5 | 2985.7495 | 27.0 | 1487.9 | 8772.4 | 7.9 | 2961.8238 | 22.2 | 1488.4 | 8212.2 | 8.0 | 2865.6936 | 30.2 | 1488.5 | 8725.7 | 6.0 | 2953.9296 | 28.6 | 1483.9 |
| 10/7/2024 | 242 | 1019.980266 | 8924.1 | 7.5 | 2987.323 | 16.7 | 1488.3 | 8904.9 | 7.5 | 2984.1079 | 26.9 | 1487.8 | 8762.6 | 7.9 | 2960.1689 | 22.2 | 1488.4 | 8202.4 | 8.0 | 2863.9832 | 30.2 | 1488.4 | 8716.1 | 6.0 | 2952.3042 | 28.5 | 1483.8 |
| 10/8/2024 | 243 | 1018.96435 | 8924.5 | 7.5 | 2987.39 | 16.7 | 1488.3 | 8905.3 | 7.5 | 2984.1749 | 26.9 | 1487.8 | 8762.9 | 7.9 | 2960.2196 | 22.2 | 1488.4 | 8202.7 | 8.0 | 2864.0356 | 30.2 | 1488.4 | 8716.3 | 6.0 | 2952.3381 | 28.5 | 1483.9 |
| 10/9/2024 | 244 | 1018.625711 | 8924.7 | 7.6 | 2987.424 | 16.7 | 1488.3 | 8905.3 | 7.5 | 2984.1749 | 26.9 | 1487.8 | 8762.8 | 7.9 | 2960.2027 | 22.2 | 1488.4 | 8202.6 | 8.0 | 2864.0182 | 30.2 | 1488.4 | 8716.5 | 6.0 | 2952.3719 | 28.5 | 1483.9 |
| 10/10/2024 | 245 | 1019.980266 | 8924.2 | 7.6 | 2987.34 | 16.6 | 1488.3 | 8904.8 | 7.5 | 2984.0912 | 26.9 | 1487.8 | 8762.2 | 7.9 | 2960.1013 | 22.2 | 1488.4 | 8202.1 | 8.0 | 2863.9309 | 30.2 | 1488.4 | 8715.9 | 6.0 | 2952.2703 | 28.5 | 1483.9 |
| 10/11/2024 | 246 | 1014.562045 | 8928.0 | 7.6 | 2987.976 | 16.6 | 1488.2 | 8908.5 | 7.5 | 2984.711 | 26.9 | 1487.8 | 8765.6 | 7.9 | 2960.6756 | 22.2 | 1488.4 | 8205.8 | 8.0 | 2864.5768 | 30.2 | 1488.4 | 8719.6 | 6.0 | 2952.8969 | 28.5 | 1483.8 |
| 10/12/2024 | 247 | 1022.350738 | 8922.5 | 7.6 | 2987.055 | 16.7 | 1488.3 | 8903.3 | 7.5 | 2983.8398 | 26.9 | 1487.8 | 8760.8 | 7.9 | 2959.8649 | 22.2 | 1488.4 | 8200.6 | 8.0 | 2863.669 | 30.2 | 1488.4 | 8714.0 | 6.0 | 2951.9485 | 28.5 | 1483.9 |
| 10/13/2024 | 248 | 1012.86885 | 8929.1 | 7.6 | 2988.16 | 16.6 | 1488.2 | 8909.3 | 7.5 | 2984.8451 | 26.9 | 1487.8 | 8765.8 | 7.9 | 2960.7094 | 22.2 | 1488.4 | 8206.0 | 8.0 | 2864.6117 | 30.2 | 1488.4 | 8720.2 | 6.0 | 2952.9985 | 28.5 | 1483.9 |
| 10/14/2024 | 249 | 1023.705294 | 

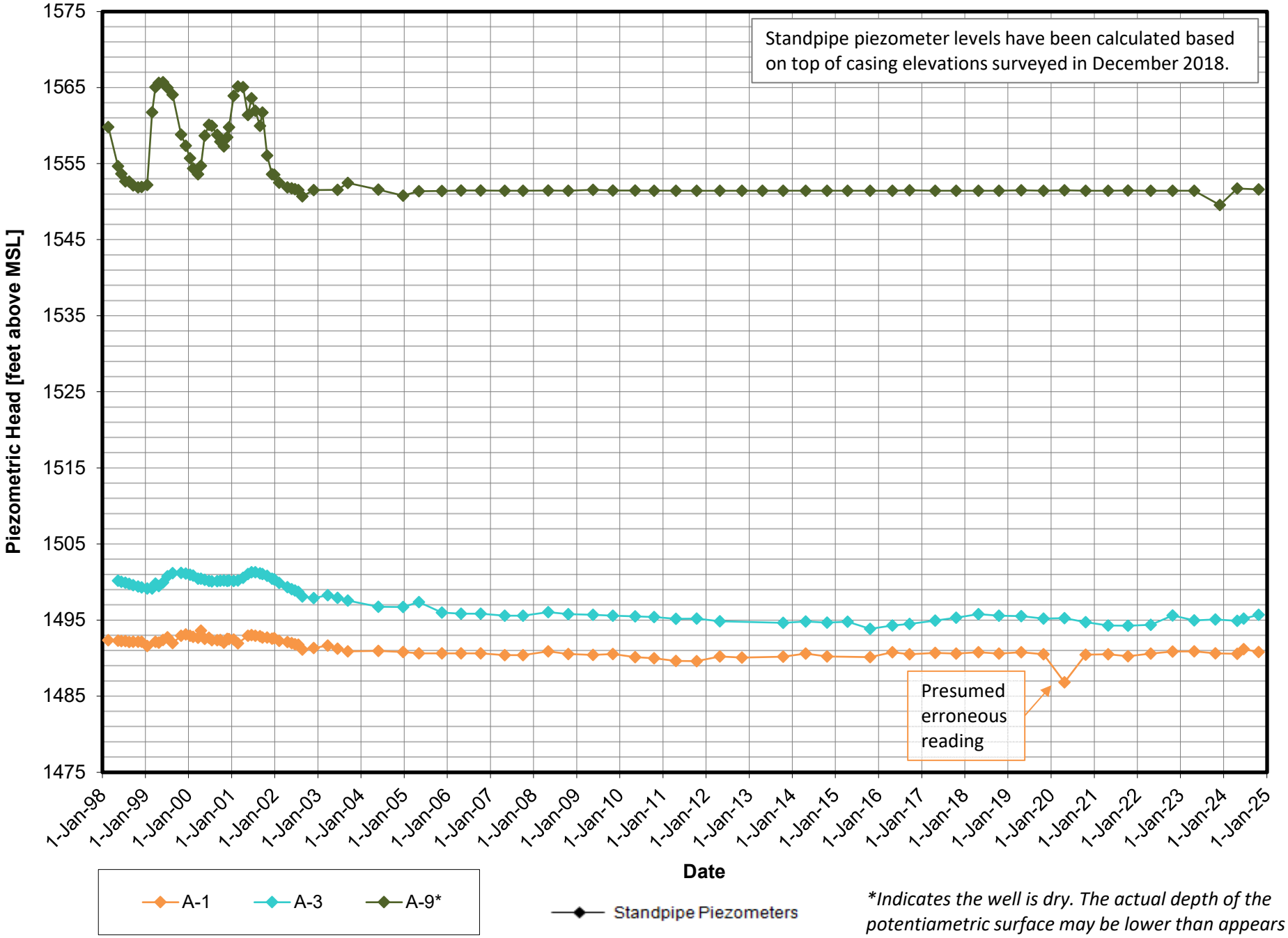
Appendix A: Water Level Logger Data

| | | | BH-103-23<br>2E-VW320+60-L444(B) (Logger)<br>2260752 | | | | | FVT-27-23<br>2E-VW311+50-L170(T) (Logger)<br>2260739 | | | | | FVT-27-23<br>2E-VW311+50-L170 (B) (Logger)<br>2260748 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | 2.661E-08 | | | | | -3.925E-08 | | | | | -2.992E-08 | | | | |
| B | | | -0.02394 | | | | | -0.02362 | | | | | -0.02317 | | | | |
| C(calibrated) | | | 213.9380181 | | | | | 216.3820341 | | | | | 210.8705404 | | | | |
| Thermal Factor, K (psi/C) | | | -0.01136 | | | | | -0.01355 | | | | | -0.01682 | | | | |
| Field zero B reading (Hertz) | | | 3004.49663 | | | | | 3004.263637 | | | | | 2999.41661 | | | | |
| Field zero B reading (Digits) | | | 9027 | | | | | 9025.6 | | | | | 8996.5 | | | | |
| Field zero temperature (deg C) | | | 20.8 | | | | | 18.7 | | | | | 18.5 | | | | |
| Field Sea Level Pressure (Hg) | | | 29.93 | | | | | 30.01 | | | | | 30.01 | | | | |
| Field Sea Level Pressure (mbar) | | | 1013.546527 | | | | | 1016.255639 | | | | | 1016.255639 | | | | |
| Factory zero B reading | | | 9013 | | | | | 9013 | | | | | 8979 | | | | |
| Ground Surface Elevation (ft) | | | 1484.9 | | | | | 1485.6 | | | | | 1485.6 | | | | |
| Tip Depth (ft) | | | 44.5 | | | | | 9.3 | | | | | 17.2 | | | | |
| Tip Elevation (ft) | | | 1440.4 | | | | | 1476.3 | | | | | 1468.4 | | | | |
| Date | Reading ID | Barometric Pressure (mbar) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) |
| 2/9/2024 | 1 | 1008.1800461 | 8253.0 | 6.2 | 2872.8035 | 43.1 | 1483.5 | 8867.5 | 6.6 | 2977.8348 | 10.1 | 1486.4 | 8682.5 | 6.9 | 2946.6082 | 18.5 | 1486.9 |
| 2/10/2024 | 2 | 1008.466545 | 8243.2 | 6.2 | 2871.0974 | 43.0 | 1483.4 | 8858.8 | 6.6 | 2976.3736 | 10.0 | 1486.3 | 8673.6 | 6.9 | 2945.0976 | 18.4 | 1486.8 |
| 2/11/2024 | 3 | 1016.593878 | 8238.8 | 6.1 | 2870.331 | 43.0 | 1483.4 | 8854.5 | 6.6 | 2975.6512 | 10.0 | 1486.3 | 8669.2 | 6.9 | 2944.3505 | 18.3 | 1486.7 |
| 2/12/2024 | 4 | 1007.450628 | 8243.9 | 6.1 | 2871.2193 | 43.0 | 1483.4 | 8859.5 | 6.6 | 2976.4912 | 10.0 | 1486.3 | 8673.9 | 6.9 | 2945.1486 | 18.4 | 1486.8 |
| 2/13/2024 | 5 | 1013.546128 | 8240.6 | 6.1 | 2870.6445 | 43.0 | 1483.4 | 8856.5 | 6.6 | 2975.9872 | 10.0 | 1486.3 | 8671.1 | 6.9 | 2944.6732 | 18.3 | 1486.7 |
| 2/14/2024 | 6 | 1016.593878 | 8239.1 | 6.1 | 2870.3832 | 43.0 | 1483.4 | 8854.3 | 6.6 | 2975.6176 | 10.0 | 1486.3 | 8669.1 | 6.9 | 2944.3335 | 18.3 | 1486.7 |
| 2/15/2024 | 7 | 1016.593878 | 8239.2 | 6.1 | 2870.4007 | 43.0 | 1483.4 | 8854.2 | 6.6 | 2975.6008 | 10.0 | 1486.3 | 8669.0 | 6.9 | 2944.3166 | 18.4 | 1486.8 |
| 2/16/2024 | 8 | 1022.689377 | 8235.9 | 6.1 | 2869.8258 | 42.9 | 1483.3 | 8850.9 | 6.5 | 2975.0462 | 10.0 | 1486.3 | 8665.7 | 6.9 | 2943.7561 | 18.3 | 1486.7 |
| 2/17/2024 | 9 | 1017.609794 | 8238.8 | 6.1 | 2870.331 | 43.0 | 1483.4 | 8852.4 | 6.5 | 2975.2983 | 10.1 | 1486.4 | 8667.3 | 6.9 | 2944.0279 | 18.4 | 1486.8 |
| 2/18/2024 | 10 | 1000.677851 | 8248.2 | 6.1 | 2871.968 | 43.0 | 1483.4 | 8860.8 | 6.5 | 2976.7096 | 10.2 | 1486.5 | 8676.5 | 6.9 | 2945.5899 | 18.5 | 1486.9 |
| 2/19/2024 | 11 | 1015.239322 | 8240.2 | 6.1 | 2870.5749 | 43.0 | 1483.4 | 8852.4 | 6.5 | 2975.2983 | 10.1 | 1486.4 | 8668.3 | 6.9 | 2944.1977 | 18.4 | 1486.8 |
| 2/20/2024 | 12 | 1017.948433 | 8239.7 | 6.1 | 2870.4878 | 42.9 | 1483.3 | 8850.4 | 6.5 | 2974.9622 | 10.2 | 1486.5 | 8666.3 | 6.9 | 2943.858 | 18.5 | 1486.9 |
| 2/21/2024 | 13 | 1012.191572 | 8243.0 | 6.1 | 2871.0625 | 42.9 | 1483.3 | 8853.7 | 6.5 | 2975.5168 | 10.2 | 1486.5 | 8669.3 | 6.9 | 2944.3675 | 18.5 | 1486.9 |
| 2/22/2024 | 14 | 1009.482462 | 8244.4 | 6.1 | 2871.3063 | 42.9 | 1483.3 | 8855.8 | 6.5 | 2975.8696 | 10.1 | 1486.4 | 8671.0 | 6.9 | 2944.6562 | 18.5 | 1486.9 |
| 2/23/2024 | 15 | 1005.080156 | 8247.0 | 6.1 | 2871.759 | 42.9 | 1483.3 | 8859.6 | 6.5 | 2976.508 | 10.1 | 1486.4 | 8674.6 | 6.8 | 2945.2674 | 18.4 | 1486.8 |
| 2/24/2024 | 16 | 1015.9166 | 8241.3 | 6.1 | 2870.7664 | 42.9 | 1483.3 | 8855.2 | 6.5 | 2975.7688 | 10.0 | 1486.3 | 8669.8 | 6.8 | 2944.4524 | 18.3 | 1486.7 |
| 2/25/2024 | 17 | 999.6619344 | 8250.5 | 6.1 | 2872.3684 | 42.9 | 1483.3 | 8862.8 | 6.5 | 2977.0455 | 10.1 | 1486.4 | 8677.7 | 6.8 | 2945.7936 | 18.4 | 1486.8 |
| 2/26/2024 | 18 | 1010.159739 | 8244.3 | 6.1 | 2871.2889 | 42.9 | 1483.3 | 8857.9 | 6.5 | 2976.2224 | 10.0 | 1486.3 | 8672.7 | 6.8 | 2944.9448 | 18.4 | 1486.8 |
| 2/27/2024 | 19 | 994.2437125 | 8253.3 | 6.1 | 2872.8557 | 43.0 | 1483.4 | 8867.3 | 6.5 | 2977.8012 | 10.0 | 1486.3 | 8681.8 | 6.8 | 2946.4894 | 18.4 | 1486.8 |
| 2/28/2024 | 20 | 1008.466545 | 8245.3 | 6.1 | 2871.463 | 42.9 | 1483.3 | 8861.0 | 6.4 | 2976.7432 | 9.9 | 1486.2 | 8675.2 | 6.8 | 2945.3692 | 18.3 | 1486.7 |
| 2/29/2024 | 21 | 1023.028016 | 8237.2 | 6.1 | 2870.0523 | 42.9 | 1483.3 | 8851.0 | 6.4 | 2975.063 | 10.0 | 1486.3 | 8665.8 | 6.8 | 2943.7731 | 18.3 | 1486.7 |
| 3/1/2024 | 22 | 1011.852934 | 8243.5 | 6.1 | 2871.1496 | 42.9 | 1483.3 | 8853.9 | 6.4 | 2975.5504 | 10.2 | 1486.5 | 8669.5 | 6.8 | 2944.4015 | 18.5 | 1486.9 |
| 3/2/2024 | 23 | 1008.805184 | 8245.0 | 6.1 | 2871.4108 | 42.9 | 1483.3 | 8856.0 | 6.4 | 2975.9032 | 10.2 | 1486.5 | 8671.6 | 6.8 | 2944.7581 | 18.5 | 1486.9 |
| 3/3/2024 | 24 | 1009.8211 | 8244.1 | 6.1 | 2871.2541 | 42.9 | 1483.3 | 8856.7 | 6.4 | 2976.0208 | 10.1 | 1486.4 | 8671.4 | 6.8 | 2944.7241 | 18.4 | 1486.8 |
| 3/4/2024 | 25 | 1002.371045 | 8248.7 | 6.1 | 2872.055 | 42.9 | 1483.3 | 8863.3 | 6.4 | 2977.1295 | 10.0 | 1486.3 | 8677.9 | 6.8 | 2945.8276 | 18.3 | 1486.7 |
| 3/5/2024 | 26 | 1018.96435 | 8239.4 | 6.1 | 2870.4355 | 42.9 | 1483.3 | 8854.8 | 6.4 | 2975.7016 | 9.9 | 1486.2 | 8669.1 | 6.8 | 2944.3335 | 18.3 | 1486.7 |
| 3/6/2024 | 27 | 1020.996183 | 8238.3 | 6.1 | 2870.2439 | 42.9 | 1483.3 | 8853.4 | 6.4 | 2975.4664 | 9.9 | 1486.2 | 8667.5 | 6.8 | 2944.0618 | 18.3 | 1486.7 |
| 3/7/2024 | 28 | 1015.239322 | 8241.9 | 6.1 | 2870.8709 | 42.9 | 1483.3 | 8856.5 | 6.4 | 2975.9872 | 9.9 | 1486.2 | 8670.5 | 6.8 | 2944.5713 | 18.3 | 1486.7 |
| 3/8/2024 | 29 | 1020.318905 | 8238.9 | 6.1 | 2870.3484 | 42.9 | 1483.3 | 8854.5 | 6.4 | 2975.6512 | 9.9 | 1486.2 | 8668.5 | 6.8 | 2944.2316 | 18.3 | 1486.7 |
| 3/9/2024 | 30 | 1018.287072 | 8240.4 | 6.1 | 2870.6097 | 42.8 | 1483.2 | 8855.6 | 6.4 | 2975.836 | 9.9 | 1486.2 | 8669.4 | 6.8 | 2944.3845 | 18.3 | 1486.7 |
| 3/10/2024 | 31 | 1018.625711 | 8240.3 | 6.1 | 2870.5923 | 42.8 | 1483.2 | 8855.6 | 6.4 | 2975.836 | 9.8 | 1486.1 | 8669.4 | 6.8 | 2944.3845 | 18.3 | 1486.7 |
| 3/11/2024 | 32 | 1013.207489 | 8243.6 | 6.1 | 2871.167 | 42.8 | 1483.2 | 8858.1 | 6.4 | 2976.256 | 9.9 | 1486.2 | 8672.0 | 6.8 | 2944.826 | 18.3 | 1486.7 |
| 3/12/2024 | 33 | 1005.757434 | 8247.6 | 6.1 | 2871.8635 | 42.9 | 1483.3 | 8862.5 | 6.3 | 2976.9951 | 9.9 | 1486.2 | 8676.3 | 6.8 | 2945.556 | 18.3 | 1486.7 |
| 3/13/2024 | 34 | 1009.8211 | 8245.3 | 6.1 | 2871.463 | 42.9 | 1483.3 | 8861.1 | 6.3 | 2976.76 | 9.8 | 1486.1 | 8674.8 | 6.8 | 2945.3013 | 18.3 | 1486.7 |
| 3/14/2024 | 35 | 1017.948433 | 8240.7 | 6.1 | 2870.6619 | 42.8 | 1483.2 | 8856.4 | 6.3 | 2975.9704 | 9.8 | 1486.1 | 8670.1 | 6.8 | 2944.5034 | 18.2 | 1486.6 |
| 3/15/2024 | 36 | 1022.689377 | 8238.5 | 6.1 | 2870.2787 | 42.8 | 1483.2 | 8854.0 | 6.3 | 2975.5672 | 9.8 | 1486.1 | 8667.7 | 6.8 | 2944.0958 | 18.2 | 1486.6 |
| 3/16/2024 | 37 | 1001.355129 | 8251.0 | 6.1 | 2872.4554 | 42.8 | 1483.2 | 8865.7 | 6.3 | 2977.5325 | 9.9 | 1486.2 | 8679.1 | 6.8 | 2946.0312 | 18.3 | 1486.7 |
| 3/17/2024 | 38 | 1010.159739 | 8245.5 | 6.1 | 2871.4979 | 42.8 | 1483.2 | 8860.8 | 6.3 | 2976.7096 | 9.8 | 1486.1 | 8674.8 | 6.8 | 2945.3013 | 18.3 | 1486.7 |
| 3/18/2024 | 39 | 1020.996183 | 8239.8 | 6.1 | 2870.5052 | 42.8 | 1483.2 | 8855.0 | 6.3 | 2975.7352 | 9.8 | 1486.1 | 8669.0 | 6.8 | 2944.3166 | 18.2 | 1486.6 |
| 3/19/2024 | 40 | 1002.032406 | 8251.5 | 6.1 | 2872.5424 | 42.8 | 1483.2 | 8864.9 | 6.3 | 2977.3982 | 9.9 | 1486.2 | 8678.7 | 6.8 | 2945.9633 | 18.3 | 1486.7 |
| 3/20/2024 | 41 | 1012.191572 | 8244.6 | 6.1 | 2871.3412 | 42.8 | 1483.2 | 8859.9 | 6.3 | 2976.5584 | 9.8 | 1486.1 | 8674.0 | 6.8 | 2945.1655 | 18.2 | 1486.6 |
| 3/21/2024 | 42 | 1023.366655 | 8238.8 | 6.1 | 2870.331 | 42.8 | 1483.2 | 8853.6 | 6.3 | 2975.5 | 9.8 | 1486.1 | 8667.7 | 6.8 | 2944.0958 | 18.2 | 1486.6 |
| 3/22/2024 | 43 | 1022.689377 | 8239.1 | 6.1 | 2870.3832 | 42.8 | 1483.2 | 8853.3 | 6.3 | 2975.4495 | 9.8 | 1486.1 | 8667.3 | 6.8 | 2944.0279 | 18.2 | 1486.6 |
| 3/23/2024 | 44 | 1025.398488 | 8237.7 | 6.1 | 2870.1394 | 42.8 | 1483.2 | 8852.5 | 6.3 | 2975.3151 | 9.8 | 1486.1 | 8666.4 | 6.8 | 2943.875 | 18.2 | 1486.6 |
| 3/24/2024 | 45 | 1021.334822 | 8240.3 | 6.1 | 2870.5923 | 42.8 | 1483.2 | 8854.4 | 6.3 | 2975.6344 | 9.8 | 1486.1 | 8668.1 | 6.8 | 2944.1637 | 18.2 | 1486.6 |
| 3/25/2024 | 46 | 1012.86885 | 8244.6 | 6.1 | 2871.3412 | 42.8 | 1483.2 | 8858.5 | 6.2 | 2976.3232 | 9.9 | 1486.2 | 8672.3 | 6.8 | 2944.8769 | 18.3 | 1486.7 |
| 3/26/2024 | 47 | 1005.757434 | 8248.5 | 6.1 | 2872.0202 | 42.8 | 1483.2 | 8862.7 | 6.2 | 2977.0287 | 9.9 | 1486.2 | 8676.5 | 6.8 | 2945.5899 | 18.3 | 1486.7 |
| 3/27/2024 | 48 | 1001.355129 | 8249.7 | 6.1 | 2872.2291 | 42.9 | 1483.3 | 8865.1 | 6.2 | 2977.4318 | 9.9 | 1486.2 | 8679.2 | 6.8 | 2946.0482 | 18.3 | 1486.7 |
| 3/28/2024 | 49 | 1011.852934 | 8244.0 | 6.1 | 2871.2367 | 42.9 | 1483.3 | 8859.3 | 6.2 | 2976.4576 | 9.9 | 1486.2 | 8673.3 | 6.8 | 2945.0467 | 18.3 | 1486.7 |
| 3/29/2024 | 50 | 1016.593878 | 8240.9 | 6.1 | 2870.6968 | 42.9 | 1483.3 | 8856.3 | 6.2 | 2975.9536 | 9.9 | 1486.2 | 8670.3 | 6.8 | 2944.5373 | 18.3 | 1486.7 |
| 3/30/2024 | 51 | 1013.207489 | 8243.6 | 6.1 | 2871.167 | 42.8 | 1483.2 | 8858.4 | 6.2 | 2976.3064 | 9.9 | 1486.2 | 8672.3 | 6.8 | 2944.8769 | 18.3 | 1486.7 |
| 3/31/2024 | 52 | 1013.884767 | 8243.1 | 6.1 | 2871.0799 | 42.8 | 1483.2 | 8858.1 | 6.2 | 2976.256 | 9.9 | 1486.2 | 8672.0 | 6.8 | 2944.826 | 18.3 | 1486.7 |
| 4/1/2024 | 53 | 1015.577961 | 8242.2 | 6.1 | 2870.9232 | 42.8 | 1483.2 | 8857.3 | 6.2 | 2976.1216 | 9.9 | 1486.2 | 8671.1 | 6.8 | 2944.6732 | 18.3 | 1486.7 |
| 4/2/2024 | 54 | 1014.223406 | 8243.1 | 6.1 | 2871.0799 | 42.8 | 1483.2 | 8858.0 | 6.2 | 2976.2392 | 9.9 | 1486.2 | 8671.8 | 6.8 | 2944.792 | 18.3 | 1486.7 |
| 4/3/2024 | 55 | 1010.498378 | 8245.6 | 6.1 | 2871.5153 | 42.8 | 1483.2 | 8860.2 | 6.2 | 2976.6088 | 9.9 | 1486.2 | 8674.0 | 6.8 | 2945.1655 | 18.3 | 1486.7 |
| 4/4/2024 | 56 | 1010.837017 | 8245.1 | 6.1 | 2871.4282 | 42.8 | 1483.2 | 8860.1 | 6.2 | 2976.592 | 9.9 | 1486.2 | 8673.8 | 6.7 | 2945.1316 | 18.3 | 1486.7 |
| 4/5/2024 | 57 | 1018.287072 | 8241.2 | 6.1 | 2870.749 | 42.8 | 1483.2 | 8856.1 | 6.2 | 2975.92 | 9.8 | 1486.1 | 8669.8 | 6.7 | 2944.4524 | 18.3 | 1486.7 |
| 4/6/2024 | 58 | 1024.721211 | 8238.1 | 6.1 | 2870.2091 | 42.8 | 1483.2 | 8852.8 | 6.2 | 2975.3655 | 9.8 | 1486.1 | 8666.4 | 6.7 | 2943.875 | 18.2 | 1486.6 |
| 4/7/2024 | 59 | 1018.625711 | 8242.3 | 6.1 | 2870.9406 | 42.7 | 1483.1 | 8856.4 | 6.2 | 2975.9704 | 9.8 | 1486.1 | 8670.0 | 6.7 | 2944.4864 | 18.2 | 1486.6 |
| 4/8/2024 | 60 | 1010.837017 | 8247.0 | 6.1 | 2871.759 | 42.7 | 1483.1 | 8860.5 | 6.2 | 2976.6592 | 9.8 | 1486.1 | 8674.3 | 6.7 | 2945.2165 | 18.3 | 1486.7 |
| 4/9/2024 | 61 | 1006.773351 | 8249.2 | 6.1 | 2872.1421 | 42.8 | 1483.2 | 8862.8 | 6.1 | 2977.0455 | 9.8 | 1486.1 | 8676.8 | 6.7 | 2945.6408 | 18.3 | 1486.7 |
| 4/10/2024 | 62 | 1008.127906 | 8248.9 | 6.1 | 2872.0898 | 42.7 | 1483.1 | 8862.1 | 6.1 | 2976.9279 | 9.8 | 1486.1 | 8676.2 | 6.7 | 2945.539 | 18.2 | 1486.6 |
| 4/11/2024 | 63 | 1007.111989 | 8250.0 | 6.1 | 2872.2813 | 42.7 | 1483.1 | 8862.8 | 6.1 | 2977.0455 | 9.8 | 1486.1 | 8677.0 | 6.7 | 2945.6748 | 18.2 | 1486.6 |
| 4/12/2024 | 64 | 1009.482462 | 8248.8 | 6.1 | 2872.0724 | 42.7 | 1483.1 | 8861.7 | 6.1 | 2976.8608 | 9.8 | 1486.1 | 8675.8 | 6.7 | 2945.4711 | 18.2 | 1486.6 |
| 4/13/2024 | 65 | 1016.932517 | 8245.1 | 6.1 | 2871.4282 | 42.6 | 1483.0 | 8857.6 | 6.1 | 2976.172 | 9.8 | 1486.1 | 8671.9 | 6.7 | 2944.809 | 18.2 | 1486.6 |
| 4/14/2024 | 66 | 1005.080156 | 8252.5 | 6.1 | 2872.7165 | 42.6 | 1483.0 | 8864.4 | 6.1 | 2977.3142 | 9.8 | 1486.1 | 8678.7 | 6.7 | 2945.9633 | 18.2 | 1486.6 |
| 4/15/2024 | 67 | 1013.884767 | 8247.0 | 6.1 | 2871.759 | 42.6 | 1483.0 | 8859.2 | 6.1 | 2976.4408 | 9.8 | 1486.1 | 8673.6 | 6.7 | 2945.0976 | 18.2 | 1486.6 |
| 4/16/2024 | 68 | 1018.96435 | 8244.9 | 6.1 | 2871.3934 | 42.6 | 1483.0 | 8856.5 | 6.1 | 2975.9872 | 9.8 | 1486.1 | 8671.0 | 6.7 | 2944.6562 | 18.2 | 1486.6 |
| 4/17/2024 | 69 | 1005.080156 | 8253.1 | 6.1 | 2872.8209 | 42.6 | 1483.0 | 8863.7 | 6.1 | 2977.1967 | 9.9 | 1486.2 | 8678.0 | 6.7 | 2945.8445 | 18.3 | 1486.7 |
| 4/18/2024 | 70 | 1011.514295 | 8249.2 | 6.1 | 2872.1421 | 42.6 | 1483.0 | 8861.0 | 6.1 | 2976.7432 | 9.8 | 1486.1 | 8675.1 | 6.7 | 2945.3523 | 18.2 | 1486.6 |
| 4/19/2024 | 71 | 1013.207489 | 8248.9 | 6.1 | 2872.0898 | 42.6 | 1483.0 | 8859.8 | 6.1 | 2976.5416 | 9.8 | 1486.1 | 8674.3 | 6.7 | 2945.2165 | 18.2 | 1486.6 |
| 4/20/2024 | 72 | 1016.593878 | 8246.4 | 6.1 | 2871.6546 | 42.6 | 1483.0 | 8857.9 | 6.1 | 2976.2224 | 9.8 | 1486.1 | 8672.4 | 6.7 | 2944.8939 | 18.2 | 1486.6 |
| 4/21/2024 | 73 | 1018.96435 | 8246.3 | 6.1 | 2871.6372 | 42.5 | 1482.9 | 8856.7 | 6.1 | 2976.0208 | 9.8 | 1486.1 | 8671.3 | 6.7 | 2944.7071 | 18.2 | 1486.6 |
| 4/22/2024 | 74 | 1013.884767 | 8249.4 | 6.1 | 2872.1769 | 42.5 | 1482.9 | 8859.5 | 6.1 | 2976.4912 | 9.8 | 1486.1 | 8674.0 | 6.7 | 2945.1655 | 18.2 | 1486.6 |
| 4/23/2024 | 75 | 1000.677851 | 8256.8 | 6.1 | 2873.4648 | 42.5 | 1482.9 | 8867.0 | 6.1 | 2977.7508 | 9.8 | 1486.1 | 8681.7 | 6.7 | 2946.4725 | 18.2 | 1486.6 |
| 4/24/2024 | 76 | 1021.673461 | 8243.9 | 6.1 | 2871.2193 | 42.5 | 1482.9 | 8855.1 | 6.1 | 2975.752 | 9.8 | 1486.1 | 8670.0 | 6.7 | 2944.4864 | 18.1 | 1486.5 |
| 4/25/2024 | 77 | 1023.705294 | 8243.9 | 6.1 | 2871.2193 | 42.5 | 1482.9 | 8854.0 | 6.0 | 2975.5672 | 9.8 | 1486.1 | 8668.7 | 6.7 | 2944.2656 | 18.1 | 1486.5 |
| 4/26/2024 | 78 | 1018.287072 | 8247.3 | 6.1 | 2871.8113 | 42.5 | 1482.9 | 8857.0 | 6.0 | 2976.0712 | 9.8 | 1486.1 | 8671.6 | 6.7 | 2944.7581 | 18.2 | 1486.6 |
| 4/27/2024 | 79 | 1006.096073 | 8254.3 | 6.1 | 2873.0298 | 42.5 | 1482.9 | 8863.8 | 6.0 | 2977.2135 | 9.8 | 1486.1 | 8678.3 | 6.7 | 2945.8954 | 18.2 | 1486.6 |
| 4/28/2024 | 80 | 1017.271155 | 8246.6 | 6.1 | 2871.6894 | 42.5 | 1482.9 | 8857.2 | 6.0 | 2976.1048 | 9.8 | 1486.1 | 8671.8 | 6.7 | 2944.792 | 18.2 | 1486.6 |
| 4/29/2024 | 81 | 1015.577961 | 8248.7 | 6.1 | 2872.055 | 42.5 | 1482.9 | 8858.2 | 6.0 | 2976.2728 | 9.8 | 1486.1 | 8672.7 | 6.7 | 2944.9448 | 18.2 | 1486.6 |
| 4/30/2024 | 82 | 1008.805184 | 8251.9 | 6.1 | 2872.6121 | 42.5 | 1482.9 | 8861.9 | 6.0 | 2976.8944 | 9.8 | 1486.1 | 8676.4 | 6.7 | 2945.5729 | 18.2 | 1486.6 |
| 5/1/2024 | 83 | 1005.418795 | 8254.6 | 6.1 | 2873.082 | 42.5 | 1482.9 | 8863.8 | 6.0 | 2977.2135 | 9.8 | 1486.1 | 8678.4 | 6.7 | 2945.9124 | 18.2 | 1486.6 |
| 5/2/2024 | 84 | 1016.593878 | 8248.2 | 6.1 | 2871.968 | 42.5 | 1482.9 | 8858.0 | 6.0 | 2976.2392 | 9.8 | 1486.1 | 8672.6 | 6.7 | 2944.9278 | 18.2 | 1486.6 |
| 5/3/2024 | 85 | 1010.159739 | 8252.2 | 6.1 | 2872.6643 | 42.5 | 1482.9 | 8861.3 | 6.0 | 2976.7936 | 9.8 | 1486.1 | 8676.0 | 6.7 | 2945.5051 | 18.2 | 1486.6 |
| 5/4/2024 | 86 | 1015.577961 | 8249.5 | 6.1 | 2872.1943 | 42.4 | 1482.8 | 8858.6 | 6.0 | 2976.34 | 9.8 | 1486.1 | 8673.5 | 6.7 | 2945.0806 | 18.1 | 1486.5 |
| 5/5/2024 | 87 | 1015.9166 | 8249.0 | 6.1 | 2872.1072 | 42.5 | 1482.9 | 8858.1 | 6.0 | 2976.256 | 9.8 | 1486.1 | 8672.9 | 6.7 | 2944.9788 | 18.2 | 1486.6 |
| 5/6/2024 | 88 | 1016.593878 | 8248.8 | 6.1 | 2872.0724 | 42.4 | 1482.8 | 8857.5 | 6.0 | 2976.1552 | 9.8 | 1486.1 | 8672.4 | 6.7 | 2944.8939 | 18.2 | 1486.6 |
| 5/7/2024 | 89 | 1007.111989 | 8254.8 | 6.1 | 2873.1168 | 42.4 | 1482.8 | 8863.0 | 6.0 | 2977.0791 | 9.8 | 1486.1 | 8678.0 | 6.7 | 2945.8445 | 18.2 | 1486.6 |
| 5/8/2024 | 90 | 1001.355129 | 8257.6 | 6.1 | 2873.604 | 42.5 | 1482.9 | 8866.3 | 6.0 | 2977.6333 | 9.8 | 1486.1 | 8681.4 | 6.6 | 2946.4216 | 18.2 | 1486.6 |
| 5/9/2024 | 91 | 1014.562045 | 8250.1 | 6.1 | 2872.2987 | 42.4 | 1482.8 | 8859.0 | 6.0 | 2976.4072 | 9.8 | 1486.1 | 8674.1 | 6.6 | 2945.1825 | 18.1 | 1486.5 |
| 5/10/2024 | 92 | 1016.593878 | 8249.8 | 6.1 | 2872.2465 | 42.4 | 1482.8 | 8858.2 | 6.0 | 2976.2728 | 9.8 | 1486.1 | 8673.2 | 6.6 | 2945.0297 | 18.1 | 1486.5 |
| 5/11/2024 | 93 | 1010.159739 | 8253.2 | 6.1 | 2872.8383 | 42.4 | 1482.8 | 8861.8 | 6.0 | 2976.8776 | 9.8 | 1486.1 | 8676.8 | 6.6 | 2945.6408 | 18.1 | 1486.5 |
| 5/12/2024 | 94 | 1004.06424 | 8256.7 | 6.1 | 2873.4474 | 42.4 | 1482.8 | 8864.9 | 6.0 | 2977.3982 | 9.8 | 1486.1 | 8679.8 | 6.6 | 2946.15 | 18.2 | 1486.6 |
| 5/13/2024 | 95 | 1008.466545 | 8254.1 | 6.1 | 2872.995 | 42.4 | 1482.8 | 8862.8 | 6.0 | 2977.0455 | 9.8 | 1486.1 | 8678.0 | 6.6 | 2945.8445 | 18.1 | 1486.5 |
| 5/14/2024 | 96 | 1013.546128 | 8251.0 | 6.1 | 2872.4554 | 42.4 | 1482.8 | 8859.5 | 5.9 | 2976.4912 | 9.8 | 1486.1 | 8674.8 | 6.6 | 2945.3013 | 18.1 | 1486.5 |
| 5/15/2024 | 97 | 1015.239322 | 8250.6 | 6.1 | 2872.3858 | 42.4 | 1482.8 | 8858.9 | 5.9 | 2976.3904 | 9.8 | 1486.1 | 8674.2 | 6.6 | 2945.1995 | 18.1 | 1486.5 |
| 5/16/2024 | 98 | 1011.175656 | 8253.1 | 6.1 | 2872.8209 | 42.4 | 1482.8 | 8861.1 | 5.9 | 2976.76 | 9.8 | 1486.1 | 8676.3 | 6.6 | 2945.556 | 18.1 | 1486.5 |
| 5/17/2024 | 99 | 1006.773351 | 8255.1 | 6.1 | 2873.169 | 42.4 | 1482.8 | 8863.7 | 5.9 | 2977.1967 | 9.8 | 1486.1 | 8678.8 | 6.6 | 2945.9803 | 18.2 | 1486.6 |
| 5/18/2024 | 100 | 1003.725601 | 8257.1 | 6.1 | 2873.517 | 42.4 | 1482.8 | 8865.6 | 5.9 | 2977.5157 | 9.8 | 1486.1 | 8680.7 | 6.6 | 2946.3028 | 18.2 | 1486.6 |
| 5/19/2024 | 101 | 1010.837017 | 8253.0 | 6.1 | 2872.8035 | 42.4 | 1482.8 | 8862.0 | 5.9 | 2976.9112 | 9.8 | 1486.1 | 8677.3 | 6.6 | 2945.7257 | 18.1 | 1486.5 |
| 5/20/2024 | 102 | 1013.546128 | 8252.3 | 6.1 | 2872.6817 | 42.4 | 1482.8 | 8860.7 | 5.9 | 2976.6928 | 9.7 | 1486.0 | 8676.1 | 6.6 | 2945.522 | 18.1 | 1486.5 |
| 5/21/2024 | 103 | 1012.191572 | 8252.4 | 6.1 | 2872.6991 | 42.4 | 1482.8 | 8861.1 | 5.9 | 2976.76 | 9.8 | 1486.1 | 8676.6 | 6.6 | 2945.6069 | 18.1 | 1486.5 |
| 5/22/2024 | 104 | 993.5664348 | 8261.5 | 6.1 | 2874.2825 | 42.5 | 1482.9 | 8870.7 | 5.9 | 2978.372 | 9.9 | 1486.2 | 8685.5 | 6.6 | 2947.1172 | 18.2 | 1486.6 |
| 5/23/2024 | 105 | 1007.789267 | 8253.5 | 6.1 | 2872.8905 | 42.5 | 1482.9 | 8863.3 | 5.9 | 2977.1295 | 9.8 | 1486.1 | 8678.3 | 6.6 | 2945.8954 | 18.1 | 1486.5 |
| 5/24/2024 | 106 | 1012.86885 | 8251.7 | 6.1 | 2872.5772 | 42.4 | 1482.8 | 8860.7 | 5.9 | 2976.6928 | 9.8 | 1486.1 | 8675.9 | 6.6 | 2945.4881 | 18.1 | 1486.5 |
| 5/25/2024 | 107 | 1001.355129 | 8258.5 | 6.1 | 2873.7606 | 42.4 | 1482.8 | 8867.3 | 5.9 | 2977.8012 | 9.8 | 1486.1 | 8682.6 | 6.6 | 2946.6252 | 18.1 | 1486.5 |
| 5/26/2024 | 108 | 1007.450628 | 8255.2 | 6.1 | 2873.1864 | 42.4 | 1482.8 | 8864.3 | 5.9 | 2977.2974 | 9.7 | 1486.0 | 8679.7 | 6.6 | 2946.1331 | 18.1 | 1486.5 |
| 5/27/2024 | 109 | 1009.143823 | 8254.7 | 6.1 | 2873.0994 | 42.4 | 1482.8 | 8863.6 | 5.9 | 2977.1799 | 9.7 | 1486.0 | 8679.0 | 6.6 | 2946.0143 | 18.1 | 1486.5 |
| 5/28/2024 | 110 | 1013.546128 | 8252.2 | 6.1 | 2872.6643 | 42.4 | 1482.8 | 8861.2 | 5.9 | 2976.7768 | 9.7 | 1486.0 | 8676.6 | 6.6 | 2945.6069 | 18.0 | 1486.4 |
| 5/29/2024 | 111 | 1024.043933 | 8246.4 | 6.1 | 2871.6546 | 42.3 | 1482.7 | 8855.4 | 5.9 | 2975.8024 | 9.7 | 1486.0 | 8670.8 | 6.6 | 2944.6222 | 18.0 | 1486.4 |
| 5/30/2024 | 112 | 1023.028016 | 8247.3 | 6.1 | 2871.8113 | 42.3 | 1482.7 | 8855.9 | 5.9 | 2975.8864 | 9.7 | 1486.0 | 8671.2 | 6.6 | 2944.6901 | 18.0 | 1486.4 |
| 5/31/2024 | 113 | 1017.271155 | 8250.7 | 6.1 | 2872.4032 | 42.3 | 1482.7 | 8859.3 | 5.9 | 2976.4576 | 9.7 | 1486.0 | 8674.5 | 6.6 | 2945.2504 | 18.0 | 1486.4 |
| 6/1/2024 | 114 | 1016.593878 | 8251.5 | 6.1 | 2872.5424 | 42.3 | 1482.7 | 8859.9 | 6.0 | 2976.5584 | 9.7 | 1486.0 | 8675.3 | 6.6 | 2945.3862 | 18.0 | 1486.4 |
| 6/2/2024 | 115 | 1013.546128 | 8252.8 | 6.1 | 2872.7687 | 42.3 | 1482.7 | 8861.5 | 6.0 | 2976.8272 | 9.7 | 1486.0 | 8676.9 | 6.6 | 2945.6578 | 18.0 | 1486.4 |
| 6/3/2024 | 116 | 1009.143823 | 8255.9 | 6.1 | 2873.3082 | 42.3 | 1482.7 | 8864.2 | 6.0 | 2977.2806 | 9.7 | 1486.0 | 8679.5 | 6.6 | 2946.0991 | 18.0 | 1486.4 |
| 6/4/2024 | 117 | 1005.757434 | 8257.2 | 6.1 | 2873.5344 | 42.4 | 1482.8 | 8865.8 | 6.0 | 2977.5493 | 9.7 | 1486.0 | 8681.3 | 6.6 | 2946.4046 | 18.1 | 1486.5 |
| 6/5/2024 | 118 | 1001.693768 | 8256.8 | 6.1 | 2873.4648 | 42.5 | 1482.9 | 8867.1 | 6.0 | 2977.7676 | 9.8 | 1486.1 | 8682.0 | 6.6 | 2946.5234 | 18.2 | 1486.6 |
| 6/6/2024 | 119 | 997.6301012 | 8260.5 | 6.1 | 2874.1086 | 42.5 | 1482.9 | 8869.8 | 6.0 | 2978.2209 | 9.8 | 1486.1 | 8685.0 | 6.6 | 2947.0324 | 18.1 | 1486.5 |
| 6/7/2024 | 120 | 1004.741517 | 8256.5 | 6.1 | 2873.4126 | 42.4 | 1482.8 | 8865.8 | 6.0 | 2977.5493 | 9.8 | 1486.1 | 8681.1 | 6.6 | 2946.3706 | 18.1 | 1486.5 |
| 6/8/2024 | 121 | 1009.8211 | 8254.4 | 6.1 | 2873.0472 | 42.4 | 1482.8 | 8863.4 | 6.0 | 2977.1463 | 9.7 | 1486.0 | 8678.9 | 6.

Appendix A: Water Level Logger Data

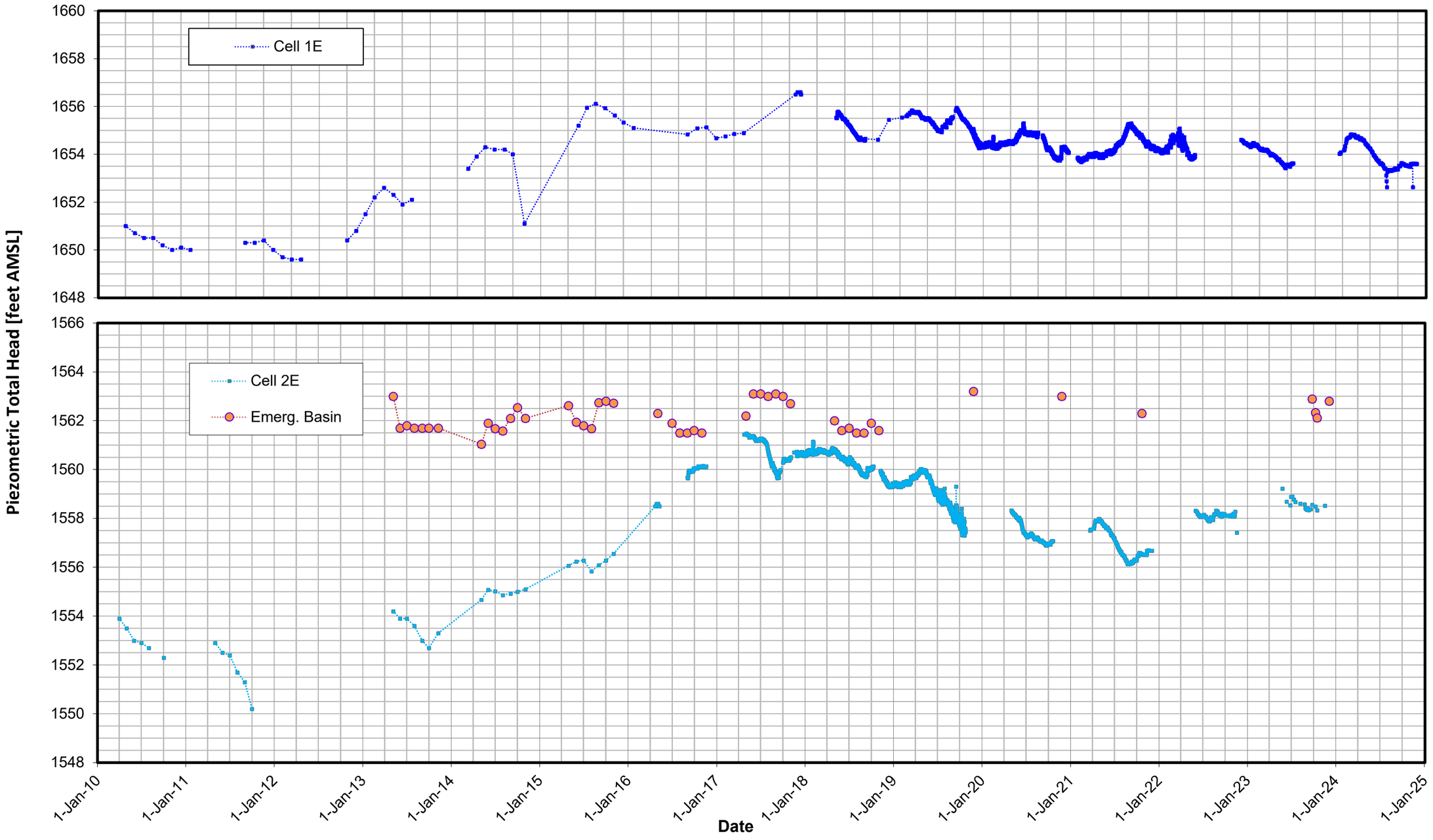
| | | | BH-103-23<br>2E-VW320+60-L444(B) (Logger)<br>2260752 | | | | | FVT-27-23<br>2E-VW311+50-L170(T) (Logger)<br>2260739 | | | | | FVT-27-23<br>2E-VW311+50-L170 (B) (Logger)<br>2260748 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | 2.661E-08 | | | | | -3.925E-08 | | | | | -2.992E-08 | | | | |
| B | | | -0.02394 | | | | | -0.02362 | | | | | -0.02317 | | | | |
| C(calibrated) | | | 213.9380181 | | | | | 216.3820341 | | | | | 210.8705404 | | | | |
| Thermal Factor, K (psi/C) | | | -0.01136 | | | | | -0.01355 | | | | | -0.01682 | | | | |
| Field zero B reading (Hertz) | | | 3004.49663 | | | | | 3004.263637 | | | | | 2999.41661 | | | | |
| Field zero B reading (Digits) | | | 9027 | | | | | 9025.6 | | | | | 8996.5 | | | | |
| Field zero temperature (deg C) | | | 20.8 | | | | | 18.7 | | | | | 18.5 | | | | |
| Field Sea Level Pressure (Hg) | | | 29.93 | | | | | 30.01 | | | | | 30.01 | | | | |
| Field Sea Level Pressure (mbar) | | | 1013.546527 | | | | | 1016.255639 | | | | | 1016.255639 | | | | |
| Factory zero B reading | | | 9013 | | | | | 9013 | | | | | 8979 | | | | |
| Ground Surface Elevation (ft) | | | 1484.9 | | | | | 1485.6 | | | | | 1485.6 | | | | |
| Tip Depth (ft) | | | 44.5 | | | | | 9.3 | | | | | 17.2 | | | | |
| Tip Elevation (ft) | | | 1440.4 | | | | | 1476.3 | | | | | 1468.4 | | | | |
| Date | Reading ID | Barometric Pressure (mbar) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) | B Units | deg C | Hertz | Pressure head (ft) | Total Head (ft, NAVD88) |
| 7/30/2024 | 173 | 1011.175656 | 8256.5 | 6.1 | 2873.4126 | 42.2 | 1482.6 | 8863.9 | -76.6 | 2977.2303 | | | 8680.6 | 6.6 | 2946.2858 | 17.9 | 1486.3 |
| 7/31/2024 | 174 | 1012.191572 | 8256.1 | 6.1 | 2873.343 | 42.2 | 1482.6 | 8863.5 | 6.7 | 2977.1631 | 9.6 | 1485.9 | 8680.0 | 6.6 | 2946.184 | 17.9 | 1486.3 |
| 8/1/2024 | 175 | 1014.562045 | 8254.9 | 6.1 | 2873.1342 | 42.2 | 1482.6 | 8862.1 | 6.7 | 2976.9279 | 9.6 | 1485.9 | 8678.8 | 6.6 | 2945.9803 | 17.9 | 1486.3 |
| 8/2/2024 | 176 | 1017.948433 | 8253.0 | 6.1 | 2872.8035 | 42.2 | 1482.6 | 8860.0 | 6.8 | 2976.5752 | 9.6 | 1485.9 | 8676.8 | 6.6 | 2945.6408 | 17.9 | 1486.3 |
| 8/3/2024 | 177 | 1017.948433 | 8252.7 | 6.1 | 2872.7513 | 42.2 | 1482.6 | 8859.8 | 6.8 | 2976.5416 | 9.6 | 1485.9 | 8676.7 | 6.6 | 2945.6239 | 17.9 | 1486.3 |
| 8/4/2024 | 178 | 1017.271155 | 8252.8 | 6.1 | 2872.7687 | 42.2 | 1482.6 | 8859.7 | 6.8 | 2976.5248 | 9.6 | 1485.9 | 8676.2 | 6.6 | 2945.539 | 17.9 | 1486.3 |
| 8/5/2024 | 179 | 1019.980266 | 8251.1 | 6.1 | 2872.4728 | 42.2 | 1482.6 | 8858.0 | 6.8 | 2976.2392 | 9.7 | 1486.0 | 8674.6 | 6.6 | 2945.2674 | 17.9 | 1486.3 |
| 8/6/2024 | 180 | 1022.350738 | 8249.8 | 6.1 | 2872.2465 | 42.2 | 1482.6 | 8856.6 | 6.8 | 2976.004 | 9.7 | 1486.0 | 8673.3 | 6.6 | 2945.0467 | 17.9 | 1486.3 |
| 8/7/2024 | 181 | 1019.980266 | 8251.8 | 6.1 | 2872.5946 | 42.2 | 1482.6 | 8858.4 | 6.9 | 2976.3064 | 9.6 | 1485.9 | 8675.3 | 6.6 | 2945.3862 | 17.9 | 1486.3 |
| 8/8/2024 | 182 | 1013.546128 | 8255.1 | 6.1 | 2873.169 | 42.2 | 1482.6 | 8861.8 | 6.9 | 2976.8776 | 9.7 | 1486.0 | 8678.4 | 6.6 | 2945.9124 | 17.9 | 1486.3 |
| 8/9/2024 | 183 | 1014.900683 | 8254.1 | 6.1 | 2872.995 | 42.2 | 1482.6 | 8861.1 | 6.9 | 2976.76 | 9.6 | 1485.9 | 8677.6 | 6.6 | 2945.7766 | 17.9 | 1486.3 |
| 8/10/2024 | 184 | 1017.271155 | 8252.9 | 6.1 | 2872.7861 | 42.2 | 1482.6 | 8859.7 | 6.9 | 2976.5248 | 9.6 | 1485.9 | 8676.3 | 6.6 | 2945.556 | 17.9 | 1486.3 |
| 8/11/2024 | 185 | 1018.287072 | 8252.3 | 6.1 | 2872.6817 | 42.2 | 1482.6 | 8859.3 | 6.9 | 2976.4576 | 9.6 | 1485.9 | 8675.9 | 6.7 | 2945.4881 | 17.9 | 1486.3 |
| 8/12/2024 | 186 | 1019.641628 | 8251.4 | 6.1 | 2872.525 | 42.2 | 1482.6 | 8858.3 | 7.0 | 2976.2896 | 9.6 | 1485.9 | 8675.1 | 6.7 | 2945.3523 | 17.9 | 1486.3 |
| 8/13/2024 | 187 | 1020.996183 | 8250.9 | 6.1 | 2872.438 | 42.2 | 1482.6 | 8857.8 | 7.0 | 2976.2056 | 9.6 | 1485.9 | 8674.6 | 6.7 | 2945.2674 | 17.9 | 1486.3 |
| 8/14/2024 | 188 | 1021.673461 | 8250.7 | 6.1 | 2872.4032 | 42.2 | 1482.6 | 8857.5 | 7.0 | 2976.1552 | 9.6 | 1485.9 | 8674.3 | 6.7 | 2945.2165 | 17.9 | 1486.3 |
| 8/15/2024 | 189 | 1016.255239 | 8254.1 | 6.1 | 2872.995 | 42.2 | 1482.6 | 8860.7 | 7.0 | 2976.6928 | 9.6 | 1485.9 | 8677.6 | 6.7 | 2945.7766 | 17.9 | 1486.3 |
| 8/16/2024 | 190 | 1007.111989 | 8258.2 | 6.1 | 2873.7084 | 42.3 | 1482.7 | 8865.0 | 7.0 | 2977.415 | 9.7 | 1486.0 | 8681.6 | 6.7 | 2946.4555 | 18.0 | 1486.4 |
| 8/17/2024 | 191 | 1012.191572 | 8255.0 | 6.1 | 2873.1516 | 42.3 | 1482.7 | 8862.2 | 7.1 | 2976.9447 | 9.7 | 1486.0 | 8678.9 | 6.7 | 2945.9973 | 18.0 | 1486.4 |
| 8/18/2024 | 192 | 1017.948433 | 8252.0 | 6.1 | 2872.6295 | 42.2 | 1482.6 | 8859.0 | 7.1 | 2976.4072 | 9.7 | 1486.0 | 8675.9 | 6.7 | 2945.4881 | 17.9 | 1486.3 |
| 8/19/2024 | 193 | 1022.689377 | 8250.0 | 6.1 | 2872.2813 | 42.2 | 1482.6 | 8856.9 | 7.1 | 2976.0544 | 9.6 | 1485.9 | 8673.7 | 6.7 | 2945.1146 | 17.9 | 1486.3 |
| 8/20/2024 | 194 | 1026.753044 | 8248.0 | 6.1 | 2871.9331 | 42.2 | 1482.6 | 8854.7 | 7.1 | 2975.6848 | 9.6 | 1485.9 | 8671.7 | 6.7 | 2944.775 | 17.9 | 1486.3 |
| 8/21/2024 | 195 | 1025.398488 | 8248.7 | 6.1 | 2872.055 | 42.2 | 1482.6 | 8855.3 | 7.1 | 2975.7856 | 9.6 | 1485.9 | 8672.3 | 6.7 | 2944.8769 | 17.9 | 1486.3 |
| 8/22/2024 | 196 | 1023.028016 | 8250.4 | 6.1 | 2872.351 | 42.1 | 1482.5 | 8857.0 | 7.2 | 2976.0712 | 9.6 | 1485.9 | 8673.9 | 6.7 | 2945.1486 | 17.9 | 1486.3 |
| 8/23/2024 | 197 | 1019.302989 | 8252.8 | 6.1 | 2872.7687 | 42.1 | 1482.5 | 8859.2 | 7.2 | 2976.4408 | 9.6 | 1485.9 | 8676.1 | 6.7 | 2945.522 | 17.9 | 1486.3 |
| 8/24/2024 | 198 | 1020.318905 | 8251.7 | 6.1 | 2872.5772 | 42.2 | 1482.6 | 8858.2 | 7.2 | 2976.2728 | 9.6 | 1485.9 | 8675.3 | 6.7 | 2945.3862 | 17.9 | 1486.3 |
| 8/25/2024 | 199 | 1020.318905 | 8251.9 | 6.1 | 2872.6121 | 42.2 | 1482.6 | 8858.3 | 7.2 | 2976.2896 | 9.6 | 1485.9 | 8675.4 | 6.7 | 2945.4032 | 17.9 | 1486.3 |
| 8/26/2024 | 200 | 1018.287072 | 8253.2 | 6.1 | 2872.8383 | 42.2 | 1482.6 | 8859.5 | 7.3 | 2976.4912 | 9.6 | 1485.9 | 8676.6 | 6.7 | 2945.6069 | 17.9 | 1486.3 |
| 8/27/2024 | 201 | 1016.932517 | 8252.4 | 6.1 | 2872.6991 | 42.2 | 1482.6 | 8859.0 | 7.3 | 2976.4072 | 9.7 | 1486.0 | 8675.9 | 6.7 | 2945.4881 | 18.0 | 1486.4 |
| 8/28/2024 | 202 | 1021.673461 | 8250.7 | 6.1 | 2872.4032 | 42.2 | 1482.6 | 8857.2 | 7.3 | 2976.1048 | 9.6 | 1485.9 | 8674.2 | 6.7 | 2945.1995 | 17.9 | 1486.3 |
| 8/29/2024 | 203 | 1023.366655 | 8250.4 | 6.1 | 2872.351 | 42.1 | 1482.5 | 8856.7 | 7.3 | 2976.0208 | 9.6 | 1485.9 | 8673.6 | 6.8 | 2945.0976 | 17.9 | 1486.3 |
| 8/30/2024 | 204 | 1013.546128 | 8255.1 | 6.1 | 2873.169 | 42.2 | 1482.6 | 8861.5 | 7.3 | 2976.8272 | 9.7 | 1486.0 | 8678.6 | 6.8 | 2945.9464 | 17.9 | 1486.3 |
| 8/31/2024 | 205 | 1015.9166 | 8254.2 | 6.1 | 2873.0124 | 42.2 | 1482.6 | 8860.7 | 7.4 | 2976.6928 | 9.6 | 1485.9 | 8677.9 | 6.8 | 2945.8276 | 17.9 | 1486.3 |
| 9/1/2024 | 206 | 1017.271155 | 8253.2 | 6.1 | 2872.8383 | 42.2 | 1482.6 | 8860.0 | 7.4 | 2976.5752 | 9.6 | 1485.9 | 8677.2 | 6.8 | 2945.7087 | 17.9 | 1486.3 |
| 9/2/2024 | 207 | 1025.737127 | 8248.8 | 6.1 | 2872.0724 | 42.1 | 1482.5 | 8855.2 | 7.4 | 2975.7688 | 9.6 | 1485.9 | 8672.5 | 6.8 | 2944.9109 | 17.9 | 1486.3 |
| 9/3/2024 | 208 | 1023.028016 | 8250.8 | 6.1 | 2872.4206 | 42.1 | 1482.5 | 8857.0 | 7.4 | 2976.0712 | 9.6 | 1485.9 | 8674.1 | 6.8 | 2945.1825 | 17.9 | 1486.3 |
| 9/4/2024 | 209 | 1018.625711 | 8253.0 | 6.1 | 2872.8035 | 42.2 | 1482.6 | 8859.3 | 7.4 | 2976.4576 | 9.6 | 1485.9 | 8676.5 | 6.8 | 2945.5899 | 17.9 | 1486.3 |
| 9/5/2024 | 210 | 1018.287072 | 8253.3 | 6.1 | 2872.8557 | 42.1 | 1482.5 | 8859.5 | 7.5 | 2976.4912 | 9.6 | 1485.9 | 8676.8 | 6.8 | 2945.6408 | 17.9 | 1486.3 |
| 9/6/2024 | 211 | 1024.721211 | 8249.8 | 6.1 | 2872.2465 | 42.1 | 1482.5 | 8855.8 | 7.5 | 2975.8696 | 9.6 | 1485.9 | 8673.1 | 6.8 | 2945.0127 | 17.9 | 1486.3 |
| 9/7/2024 | 212 | 1027.76896 | 8247.8 | 6.1 | 2871.8983 | 42.1 | 1482.5 | 8853.8 | 7.5 | 2975.5336 | 9.6 | 1485.9 | 8671.2 | 6.8 | 2944.6901 | 17.9 | 1486.3 |
| 9/8/2024 | 213 | 1018.96435 | 8253.1 | 6.1 | 2872.8209 | 42.1 | 1482.5 | 8858.8 | 7.5 | 2976.3736 | 9.6 | 1485.9 | 8676.1 | 6.8 | 2945.522 | 17.9 | 1486.3 |
| 9/9/2024 | 214 | 1015.9166 | 8254.2 | 6.1 | 2873.0124 | 42.2 | 1482.6 | 8860.3 | 7.5 | 2976.6256 | 9.6 | 1485.9 | 8677.6 | 6.8 | 2945.7766 | 17.9 | 1486.3 |
| 9/10/2024 | 215 | 1016.932517 | 8254.1 | 6.1 | 2872.995 | 42.2 | 1482.6 | 8860.1 | 7.6 | 2976.592 | 9.6 | 1485.9 | 8677.5 | 6.8 | 2945.7597 | 17.9 | 1486.3 |
| 9/11/2024 | 216 | 1012.191572 | 8256.7 | 6.1 | 2873.4474 | 42.2 | 1482.6 | 8862.8 | 7.6 | 2977.0455 | 9.6 | 1485.9 | 8680.2 | 6.8 | 2946.2179 | 17.9 | 1486.3 |
| 9/12/2024 | 217 | 1016.593878 | 8254.1 | 6.1 | 2872.995 | 42.2 | 1482.6 | 8860.2 | 7.6 | 2976.6088 | 9.6 | 1485.9 | 8677.6 | 6.8 | 2945.7766 | 17.9 | 1486.3 |
| 9/13/2024 | 218 | 1020.318905 | 8252.0 | 6.1 | 2872.6295 | 42.2 | 1482.6 | 8858.1 | 7.6 | 2976.256 | 9.6 | 1485.9 | 8675.5 | 6.9 | 2945.4202 | 17.9 | 1486.3 |
| 9/14/2024 | 219 | 1020.996183 | 8252.0 | 6.1 | 2872.6295 | 42.1 | 1482.5 | 8858.0 | 7.6 | 2976.2392 | 9.6 | 1485.9 | 8675.4 | 6.9 | 2945.4032 | 17.9 | 1486.3 |
| 9/15/2024 | 220 | 1019.302989 | 8252.8 | 6.1 | 2872.7687 | 42.1 | 1482.5 | 8858.5 | 7.6 | 2976.3232 | 9.6 | 1485.9 | 8676.1 | 6.9 | 2945.522 | 17.9 | 1486.3 |
| 9/16/2024 | 221 | 1018.96435 | 8253.1 | 6.1 | 2872.8209 | 42.1 | 1482.5 | 8858.8 | 7.7 | 2976.3736 | 9.6 | 1485.9 | 8676.5 | 6.9 | 2945.5899 | 17.9 | 1486.3 |
| 9/17/2024 | 222 | 1018.287072 | 8253.6 | 6.1 | 2872.9079 | 42.1 | 1482.5 | 8859.4 | 7.7 | 2976.4744 | 9.6 | 1485.9 | 8676.9 | 6.9 | 2945.6578 | 17.9 | 1486.3 |
| 9/18/2024 | 223 | 1013.546128 | 8256.3 | 6.1 | 2873.3778 | 42.1 | 1482.5 | 8862.3 | 7.7 | 2976.9615 | 9.6 | 1485.9 | 8679.7 | 6.9 | 2946.1331 | 17.9 | 1486.3 |
| 9/19/2024 | 224 | 1011.852934 | 8257.5 | 6.1 | 2873.5866 | 42.1 | 1482.5 | 8863.2 | 7.7 | 2977.1127 | 9.6 | 1485.9 | 8680.8 | 6.9 | 2946.3197 | 17.9 | 1486.3 |
| 9/20/2024 | 225 | 1005.418795 | 8260.8 | 6.1 | 2874.1607 | 42.2 | 1482.6 | 8866.6 | 7.7 | 2977.6837 | 9.6 | 1485.9 | 8684.2 | 6.9 | 2946.8967 | 17.9 | 1486.3 |
| 9/21/2024 | 226 | 1011.175656 | 8257.4 | 6.1 | 2873.5692 | 42.2 | 1482.6 | 8863.3 | 7.7 | 2977.1295 | 9.6 | 1485.9 | 8680.9 | 6.9 | 2946.3367 | 17.9 | 1486.3 |
| 9/22/2024 | 227 | 1015.577961 | 8254.9 | 6.1 | 2873.1342 | 42.2 | 1482.6 | 8860.8 | 7.8 | 2976.7096 | 9.6 | 1485.9 | 8678.4 | 6.9 | 2945.9124 | 17.9 | 1486.3 |
| 9/23/2024 | 228 | 1018.96435 | 8253.4 | 6.1 | 2872.8731 | 42.1 | 1482.5 | 8859.0 | 7.8 | 2976.4072 | 9.6 | 1485.9 | 8676.5 | 6.9 | 2945.5899 | 17.9 | 1486.3 |
| 9/24/2024 | 229 | 1012.530211 | 8257.2 | 6.1 | 2873.5344 | 42.1 | 1482.5 | 8862.6 | 7.8 | 2977.0119 | 9.6 | 1485.9 | 8680.1 | 6.9 | 2946.2009 | 17.9 | 1486.3 |
| 9/25/2024 | 230 | 1012.191572 | 8257.2 | 6.1 | 2873.5344 | 42.1 | 1482.5 | 8862.7 | 7.8 | 2977.0287 | 9.6 | 1485.9 | 8680.3 | 6.9 | 2946.2349 | 17.9 | 1486.3 |
| 9/26/2024 | 231 | 1015.239322 | 8255.1 | 6.1 | 2873.169 | 42.2 | 1482.6 | 8860.7 | 7.8 | 2976.6928 | 9.6 | 1485.9 | 8678.3 | 7.0 | 2945.8954 | 17.9 | 1486.3 |
| 9/27/2024 | 232 | 1016.593878 | 8255.0 | 6.1 | 2873.1516 | 42.1 | 1482.5 | 8860.5 | 7.9 | 2976.6592 | 9.6 | 1485.9 | 8678.1 | 7.0 | 2945.8615 | 17.8 | 1486.2 |
| 9/28/2024 | 233 | 1017.271155 | 8254.2 | 6.1 | 2873.0124 | 42.1 | 1482.5 | 8859.6 | 7.9 | 2976.508 | 9.6 | 1485.9 | 8677.2 | 7.0 | 2945.7087 | 17.9 | 1486.3 |
| 9/29/2024 | 234 | 1021.673461 | 8251.5 | 6.1 | 2872.5424 | 42.1 | 1482.5 | 8857.0 | 7.9 | 2976.0712 | 9.6 | 1485.9 | 8674.5 | 7.0 | 2945.2504 | 17.9 | 1486.3 |
| 9/30/2024 | 235 | 1017.271155 | 8254.7 | 6.1 | 2873.0994 | 42.1 | 1482.5 | 8859.8 | 7.9 | 2976.5416 | 9.6 | 1485.9 | 8677.3 | 7.0 | 2945.7257 | 17.9 | 1486.3 |
| 10/1/2024 | 236 | 1016.255239 | 8254.8 | 6.1 | 2873.1168 | 42.1 | 1482.5 | 8860.3 | 7.9 | 2976.6256 | 9.6 | 1485.9 | 8677.9 | 7.0 | 2945.8276 | 17.9 | 1486.3 |
| 10/2/2024 | 237 | 1015.239322 | 8256.6 | 6.1 | 2873.43 | 42.1 | 1482.5 | 8861.2 | 7.9 | 2976.7768 | 9.6 | 1485.9 | 8679.1 | 7.0 | 2946.0312 | 17.8 | 1486.2 |
| 10/3/2024 | 238 | 1010.159739 | 8258.0 | 6.1 | 2873.6736 | 42.2 | 1482.6 | 8863.5 | 7.9 | 2977.1631 | 9.6 | 1485.9 | 8681.2 | 7.0 | 2946.3876 | 17.9 | 1486.3 |
| 10/4/2024 | 239 | 1023.366655 | 8250.9 | 6.1 | 2872.438 | 42.1 | 1482.5 | 8856.3 | 8.0 | 2975.9536 | 9.6 | 1485.9 | 8673.9 | 7.0 | 2945.1486 | 17.9 | 1486.3 |
| 10/5/2024 | 240 | 1021.334822 | 8252.8 | 6.1 | 2872.7687 | 42.1 | 1482.5 | 8857.7 | 8.0 | 2976.1888 | 9.6 | 1485.9 | 8675.4 | 7.0 | 2945.4032 | 17.8 | 1486.2 |
| 10/6/2024 | 241 | 1002.032406 | 8262.6 | 6.1 | 2874.4739 | 42.2 | 1482.6 | 8867.6 | 8.0 | 2977.8516 | 9.7 | 1486.0 | 8685.5 | 7.0 | 2947.1172 | 17.9 | 1486.3 |
| 10/7/2024 | 242 | 1019.980266 | 8253.1 | 6.1 | 2872.8209 | 42.1 | 1482.5 | 8858.3 | 8.0 | 2976.2896 | 9.6 | 1485.9 | 8676.0 | 7.0 | 2945.5051 | 17.8 | 1486.2 |
| 10/8/2024 | 243 | 1018.96435 | 8253.5 | 6.1 | 2872.8905 | 42.1 | 1482.5 | 8858.5 | 8.0 | 2976.3232 | 9.6 | 1485.9 | 8676.3 | 7.0 | 2945.556 | 17.9 | 1486.3 |
| 10/9/2024 | 244 | 1018.625711 | 8253.5 | 6.1 | 2872.8905 | 42.1 | 1482.5 | 8858.5 | 8.0 | 2976.3232 | 9.6 | 1485.9 | 8676.2 | 7.1 | 2945.539 | 17.9 | 1486.3 |
| 10/10/2024 | 245 | 1019.980266 | 8253.1 | 6.1 | 2872.8209 | 42.1 | 1482.5 | 8857.9 | 8.0 | 2976.2224 | 9.6 | 1485.9 | 8675.7 | 7.1 | 2945.4541 | 17.9 | 1486.3 |
| 10/11/2024 | 246 | 1014.562045 | 8256.7 | 6.1 | 2873.4474 | 42.1 | 1482.5 | 8861.6 | 8.1 | 2976.844 | 9.6 | 1485.9 | 8679.2 | 7.1 | 2946.0482 | 17.9 | 1486.3 |
| 10/12/2024 | 247 | 1022.350738 | 8251.5 | 6.1 | 2872.5424 | 42.1 | 1482.5 | 8856.5 | 8.1 | 2975.9872 | 9.6 | 1485.9 | 8674.3 | 7.1 | 2945.2165 | 17.9 | 1486.3 |
| 10/13/2024 | 248 | 1012.86885 | 8257.3 | 6.1 | 2873.5518 | 42.1 | 1482.5 | 8861.9 | 8.1 | 2976.8944 | 9.6 | 1485.9 | 8679.6 | 7.1 | 2946.1161 | 17.9 | 1486.3 |
| 10/14/2024 | 249 | 1023.705294 | 8249.7 | 6.1 | 2872.2291 | 42.2 | 1482.6 | 8855.4 | 8.1 | 2975.8024 | 9.6 | 1485.9 | 8672.8 | 7.1 | 2944.9618 | 17.9 | 1486.3 |
| 10/15/2024 | 250 | 1029.123516 | 8247.3 | 6.1 | 2871.8113 | 42.1 | 1482.5 | 8852.6 | 8.1 | 2975.3319 | 9.6 | 1485.9 | 8670.2 | 7.1 | 2944.5203 | 17.9 | 1486.3 |
| 10/16/2024 | 251 | 1030.139432 | 8247.1 | 6.1 | 2871.7765 | 42.1 | 1482.5 | 8852.0 | 8.1 | 2975.2311 | 9.6 | 1485.9 | 8669.7 | 7.1 | 2944.4354 | 17.9 | 1486.3 |
| 10/17/2024 | 252 | 1016.593878 | 8254.9 | 6.1 | 2873.1342 | 42.1 | 1482.5 | 8859.6 | 8.1 | 2976.508 | 9.6 | 1485.9 | 8677.2 | 7.1 | 2945.7087 | 17.9 | 1486.3 |
| 10/18/2024 | 253 | 1013.884767 | 8256.4 | 6.1 | 2873.3952 | 42.1 | 1482.5 | 8861.5 | 8.1 | 2976.8272 | 9.6 | 1485.9 | 8679.1 | 7.1 | 2946.0312 | 17.9 | 1486.3 |
| 10/19/2024 | 254 | 1023.705294 | 8250.5 | 6.1 | 2872.3684 | 42.1 | 1482.5 | 8855.6 | 8.2 | 2975.836 | 9.6 | 1485.9 | 8673.3 | 7.1 | 2945.0467 | 17.9 | 1486.3 |
| 10/20/2024 | 255 | 1020.996183 | 8252.8 | 6.1 | 2872.7687 | 42.1 | 1482.5 | 8857.5 | 8.2 | 2976.1552 | 9.6 | 1485.9 | 8675.3 | 7.1 | 2945.3862 | 17.8 | 1486.2 |
| 10/21/2024 | 256 | 1016.255239 | 8255.0 | 6.1 | 2873.1516 | 42.1 | 1482.5 | 8860.0 | 8.2 | 2976.5752 | 9.6 | 1485.9 | 8677.8 | 7.2 | 2945.8106 | 17.9 | 1486.3 |
| 10/22/2024 | 257 | 1012.530211 | 8257.8 | 6.1 | 2873.6388 | 42.1 | 1482.5 | 8862.6 | 8.2 | 2977.0119 | 9.6 | 1485.9 | 8680.4 | 7.2 | 2946.2519 | 17.9 | 1486.3 |
| 10/23/2024 | 258 | 1012.86885 | 8256.8 | 6.1 | 2873.4648 | 42.1 | 1482.5 | 8862.0 | 8.2 | 2976.9112 | 9.6 | 1485.9 | 8679.9 | 7.2 | 2946.167 | 17.9 | 1486.3 |
| 10/24/2024 | 259 | 1016.593878 | 8255.4 | 6.1 | 2873.2212 | 42.1 | 1482.5 | 8860.1 | 8.2 | 2976.592 | 9.6 | 1485.9 | 8678.1 | 7.2 | 2945.8615 | 17.8 | 1486.2 |
| 10/25/2024 | 260 | 1012.86885 | 8256.2 | 6.1 | 2873.3604 | 42.2 | 1482.6 | 8861.3 | 8.2 | 2976.7936 | 9.7 | 1486.0 | 8679.0 | 7.2 | 2946.0143 | 17.9 | 1486.3 |
| 10/26/2024 | 261 | 1027.76896 | 8248.0 | 6.1 | 2871.9331 | 42.1 | 1482.5 | 8853.3 | 8.2 | 2975.4495 | 9.6 | 1485.9 | 8671.1 | 7.2 | 2944.6732 | 17.8 | 1486.2 |
| 10/27/2024 | 262 | 1025.059849 | 8250.6 | 6.1 | 2872.3858 | 42.1 | 1482.5 | 8855.2 | 8.2 | 2975.7688 | 9.6 | 1485.9 | 8673.1 | 7.2 | 2945.0127 | 17.8 | 1486.2 |
| 10/28/2024 | 263 | 1016.593878 | 8254.9 | 6.1 | 2873.1342 | 42.1 | 1482.5 | 8859.5 | 8.3 | 2976.4912 | 9.6 | 1485.9 | 8677.5 | 7.2 | 2945.7597 | 17.9 | 1486.3 |
| 10/29/2024 | 264 | 1003.725601 | 8262.0 | 6.1 | 2874.3695 | 42.2 | 1482.6 | 8866.9 | 8.3 | 2977.734 | 9.7 | 1486.0 | 8684.9 | 7.2 | 2947.0154 | 17.9 | 1486.3 |
| 10/30/2024 | 265 | 1005.418795 | 8261.2 | 6.1 | 2874.2303 | 42.2 | 1482.6 | 8866.0 | 8.3 | 2977.5829 | 9.6 | 1485.9 | 8684.2 | 7.2 | 2946.8967 | 17.9 | 1486.3 |
| 10/31/2024 | 266 | 1016.255239 | 8254.6 | 6.1 | 2873.082 | 42.1 | 1482.5 | 8859.7 | 8.3 | 2976.5248 | 9.6 | 1485.9 | 8677.7 | 7.2 | 2945.7936 | 17.9 | 1486.3 |
| 11/1/2024 | 267 | 1018.96435 | 8253.0 | 6.1 | 2872.8035 | 42.1 | 1482.5 | 8858.2 | 8.3 | 2976.2728 | 9.6 | 1485.9 | 8676.2 | 7.2 | 2945.539 | 17.9 | 1486.3 |
| 11/2/2024 | 268 | 1024.721211 | 8250.5 | 6.1 | 2872.3684 | 42.1 | 1482.5 | 8855.2 | 8.3 | 2975.7688 | 9.6 | 1485.9 | 8673.3 | 7.2 | 2945.0467 | 17.8 | 1486.2 |
| 11/3/2024 | 269 | 1022.0121 | 8252.0 | 6.1 | 2872.6295 | 42.1 | 1482.5 | 8856.7 | 8.3 | 2976.0208 | 9.6 | 1485.9 | 8674.9 | 7.2 | 2945.3183 | 17.8 | 1486.2 |
| 11/4/2024 | 270 | 1008.127906 | 8259.8 | 6.1 | 2873.9868 | 42.1 | 1482.5 | 8864.4 | 8.3 | 2977.3142 | 9.6 | 1485.9 | 8682.5 | 7.3 | 2946.6082 | 17.9 | 1486.3 |
| 11/5/2024 | 271 | 1008.805184 | 8259.3 | 6.1 | 2873.8998 | 42.1 | 1482.5 | 8864.2 | 8.3 | 2977.2806 | 9.6 | 1485.9 | 8682.5 | 7.3 | 2946.6082 | 17.9 | 1486.3 |
| 11/6/2024 | 272 | 1012.191572 | 8257.3 | 6.1 | 2873.5518 | 42.1 | 1482.5 | 8862.4 | 8.3 | 2976.9783 | 9.6 | 1485.9 | 8680.6 | 7.3 | 2946.2858 | 17.8 | 1486.2 |
| 11/7/2024 | 273 | 1021.334822 | 8252.3 | 6.1 | 2872.6817 | 42.1 | 1482.5 | 8857.2 | 8.3 | 2976.1048 | 9.6 | 1485.9 | 8675.5 | 7.3 | 2945.4202 | 17.8 | 1486.2 |
| 11/8/2024 | 274 | 1017.609794 | 8254.5 | 6.1 | 2873.0646 | 42.1 | 1482.5 | 8859.3 | 8.3 | 2976.4576 | 9.6 | 1485.9 | 8677.5 | 7.3 | 2945.7597 | 17.8 | 1486.2 |
| 11/9/2024 | 275 | 1025.398488 | 8250.3 | 6.1 | 2872.3335 | 42.1 | 1482.5 | 8854.8 | 8.3 | 2975.7016 | 9.6 | 1485.9 | 8673.2 | 7.3 | 2945.0297 | 17.8 | 1486.2 |
| 11/10/2024 | 276 | 1013.884767 | 8256.7 | 6.1 | 2873.4474 | 42.1 | 1482.5 | 8861.2 | 8.3 | 2976.7768 | 9.6 | 1485.9 | 8679.6 | 7.3 | 2946.1161 | 17.8 | 1486.2 |
| 11/11/2024 | 277 | 1003.048323 | 8262.6 | 6.1 | 2874.4739 | 42.2 | 1482.6 | 8867.3 | 8.3 | 2977.8012 | 9.7 | 1486.0 | 8685.8 | 7.3 | 2947.1681 | 17.9 | 1486.3 |
| 11/12/2024 | 278 | 1024.721211 | 8250.4 | 6.1 | 2872.351 | 42.1 | 1482.5 | 8855.5 | 8.3 | 2975.8192 | 9.6 | 1485.9 | 8673.8 | 7.3 | 2945.1316 | 17.8 | 1486.2 |
| 11/13/2024 | 279 | 1019.302989 | 8253.9 | 6.1 | 2872.9601 | 42.1 | 1482.5 | 8858.4 | 8.3 | 2976.3064 | 9.6 | 1485.9 | 8676.9 | 7.3 | 2945.6578 | 17.8 | 1486.2 |
| 11/14/2024 | 280 | 1012.530211 | 8257.5 | 6.1 | 2873.5866 | 42.1 | 1482.5 | 8862.1 | 8.3 | 2976.9279 | 9.6 | 1485.9 | 8680.7 | 7.3 | 2946.3028 | 17.8 | 1486.2 |
| 11/15/2024 | 281 | 1016.593878 | 8255.3 | 6.1 | 2873.2038 | 42.1 | 1482.5 | 8860.0 | 8.3 | 2976.5752 | 9.6 | 1485.9 | 8678.5 | 7.3 | 2945.9294 | 17.8 | 1486.2 |
| 11/16/2024 | 282 | 1017.609794 | 8254.8 | 6.1 | 2873.1168 | 42.1 | 1482.5 | 8859.5 | 8.3 | 2976.4912 | 9.6 | 1485.9 | 8677.9 | 7.3 | 2945.8276 | 17.8 | 1486.2 |
| 11/17/2024 | 283 | 1003.386962 | 8262.7 | 6.1 | 2874.4913 | 42.1 | 1482.5 | 8867.2 | 8.3 | 2977.7844 | 9.6 | 1485.9 | 8685.8 | 7.3 | 2947.1681 | 17.9 | 1486.3 |
| 11/18/2024 | 284 | 1009.143823 | 8259.5 | 6.1 | 2873.9346 | 42.1 | 1482.5 | 8864.3 | 8.3 | 2977.2974 | 9.6 | 1485.9 | 8682.9 | 7.4 | 2946.6761 | 17.8 | 1486.2 |
| 11/19/2024 | 285 | 1000.000573 | 8264.3 | 6.1 | 2874.7696 | 42.2 | 1482.6 | 8868.5 | 8.3 | 2978.0027 | 9.7 | 1486.0 | 8687.5 | 7.4 | 2947.4565 | 17.9 | 1486.3 |
| 11/20/2024 | 286 | 999.6619344 | 8264.3 | 6.1 | 2874.7696 | 42.2 | 1482.6 | 8869.5 | 8.3 | 2978.1706 | 9.6 | 1485.9 | 8687.9 | 7.4 | 2947.5244 | 17.9 | 1486.3 |
| 11/21/2024 | 287 | 1010.159739 | 8258.4 | 6.1 | 2873.7432 | 42.1 | 1482.5 | 8863.7 | 8.3 | 2977.1967 | 9.6 | 1485.9 | 8682.3 | 7.4 | 2946.5743 | 17.8 | 1486.2 |
| 11/22/2024 | 288 | 1019.302989 | 8253.6 | 6.1 | 2872.9079 | 42.1 | 1482.5 | 8858.5 | 8.3 | 2976.3232 | 9.6 | 1485.9 | 8677.0 | 7.4 | 2945.6748 | 17.8 | 1486.2 |
| 11/23/2024 | 289 | 1017.271155 | 8254.8 | 6.1 | 2873.1168 | 42.1 | 1482.5 | 8859.4 | 8.3 | 2976.4744 | 9.6 | 1485.9 | 8678.1 | 7.4 | 2945.8615 | 17.8 | 1486.2 |
| 11/24/2024 | 290 | 1014.562045 | 8256.1 | 6.1 | 2873.343 | 42.1 | 1482.5 | 8860.7 | 8.3 | 2976.6928 | 9.6 | 1485.9 | 8679.3 | 7.4 | 2946.0652 | 17.8 | 1486.2 |
| 11/25/2024 | 291 | 1015.577961 | 8255.5 | 6.1 | 2873.2386 | 42.1 | 1482.5 | 8860.2 | 8.3 | 2976.6088 | 9.6 | 1485.9 | 8678.7 | 7.4 | 2945.9633 | 17.8 | 1486.2 |
| 11/26/2024 | 292 | 1017.271155 | 8254.5 | 6.1 | 2873.0646 | 42.1 | 1482.5 | 8859.4 | 8.3 | 2976.4744 | 9.6 | 1485.9 | 8677.9 | 7.4 | 2945.8276 | 17.8 | 1486.2 |
| 11/27/2024 | 293 | 1015.9166 | 8255.3 | 6.1 | 2873.2038 | 42.1 | 1482.5 | 8860.1 | 8.3 | 2976.592 | 9.6 | 1485.9 | 8678.6 | 7.4 |

# Appendix A: Piezometers at Cross-Section A (Cell 2W)



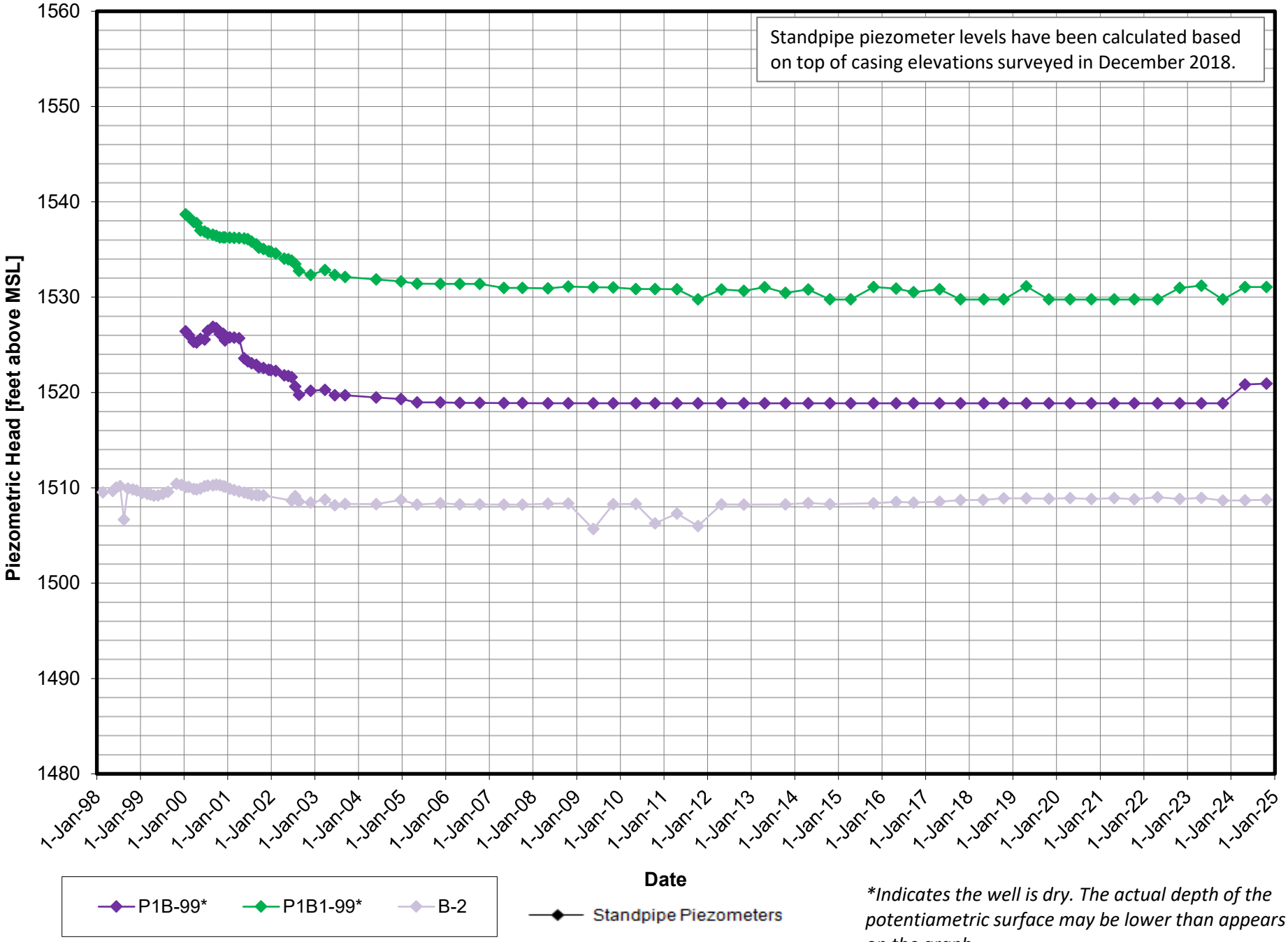

*Indicates the well is dry. The actual depth of the potentiametric surface may be lower than appears

# Appendix A: Pond Elevations NorthMet



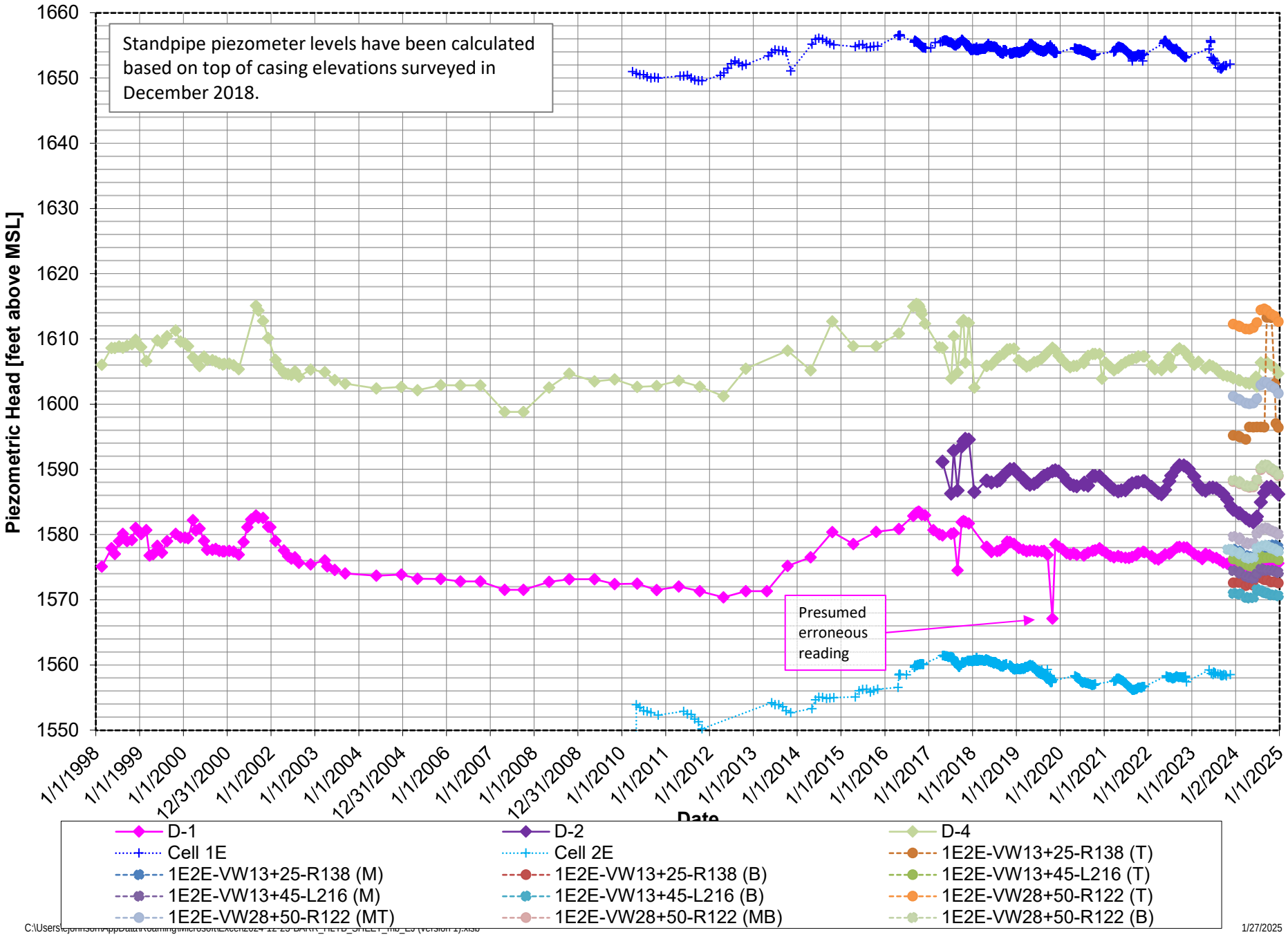

Sources: Pre-2017 data for Cell 1E and Cell 2E ponds from manual surveys. 2017-2019 data for Cell 1E and Cell 2E data from Barr VDV website. Data for Emergency Basin from NTS annual report. Ponds froze in 2020 on October 16 and pond level reporting was halted on October 20.

# Appendix A: Piezometers at Cross-Section B (Cell 2W)

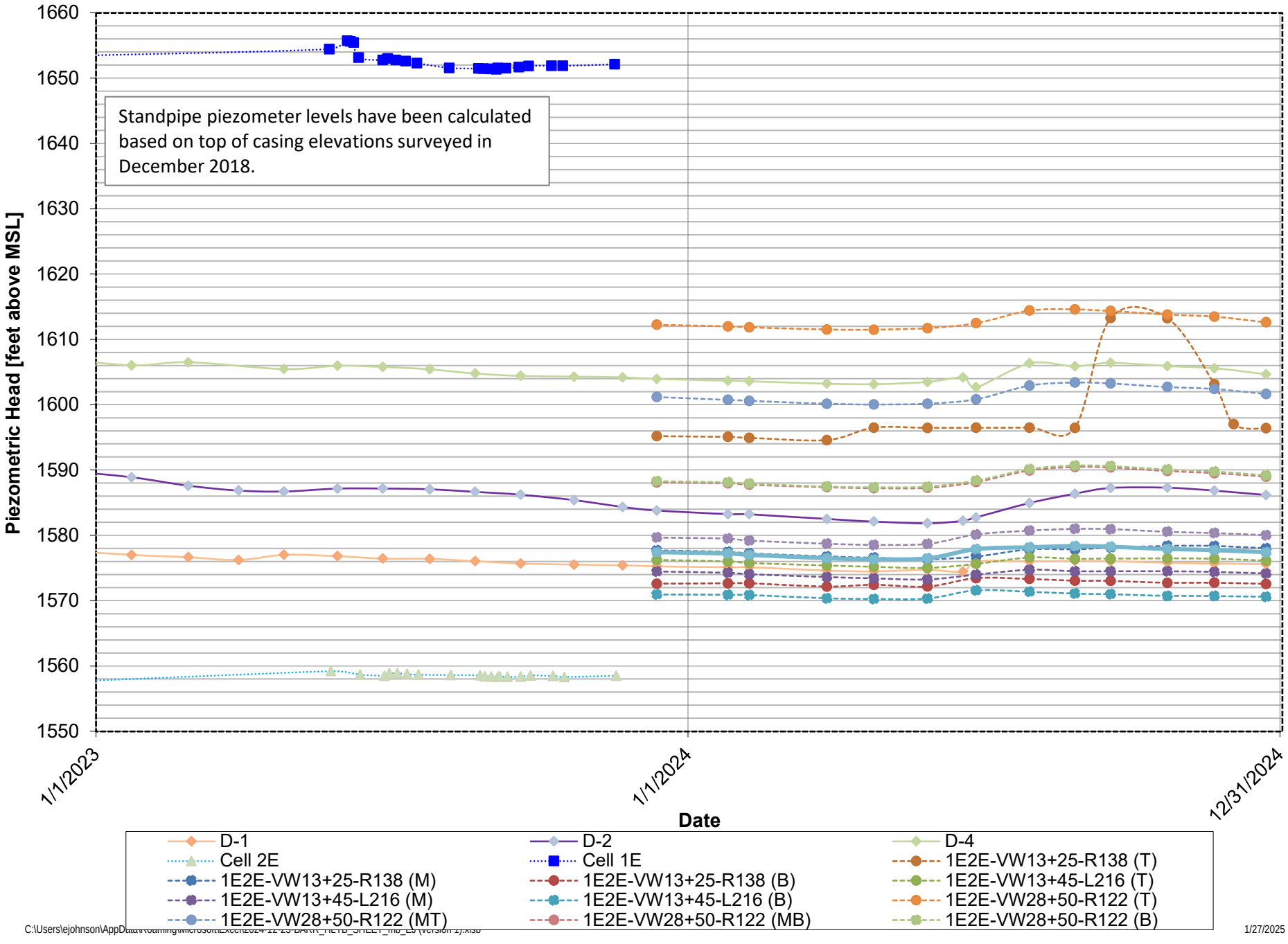



**Indicates the well is dry. The actual depth of the potentiametric surface may be lower than appears on the graph.*

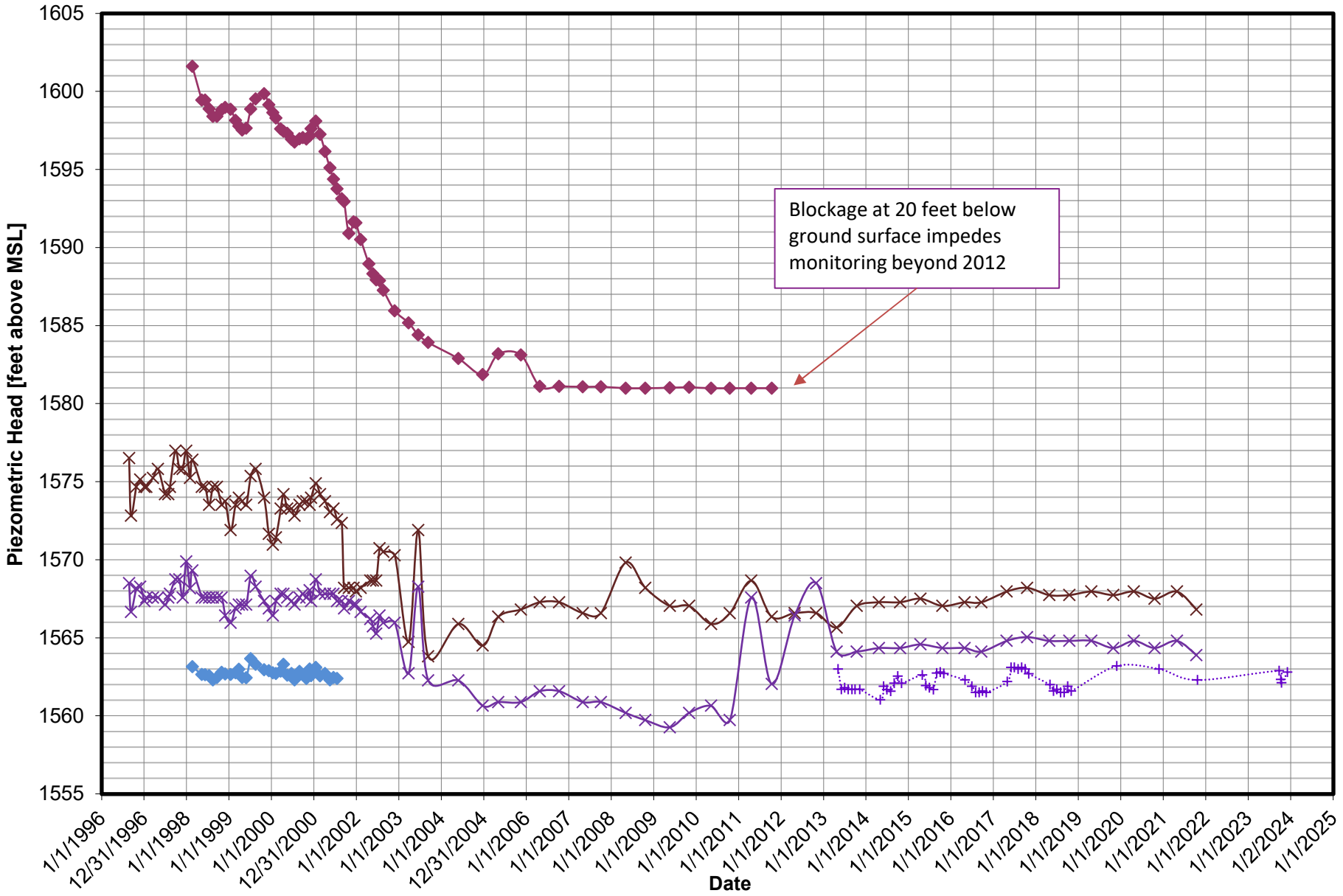
# Appendix A: Piezometers at Cross-Section D (Cell 1E/2E Splitter Dam)



# Appendix A: Piezometers at Cross-Section D (Cell 1E/2E Splitter Dam)

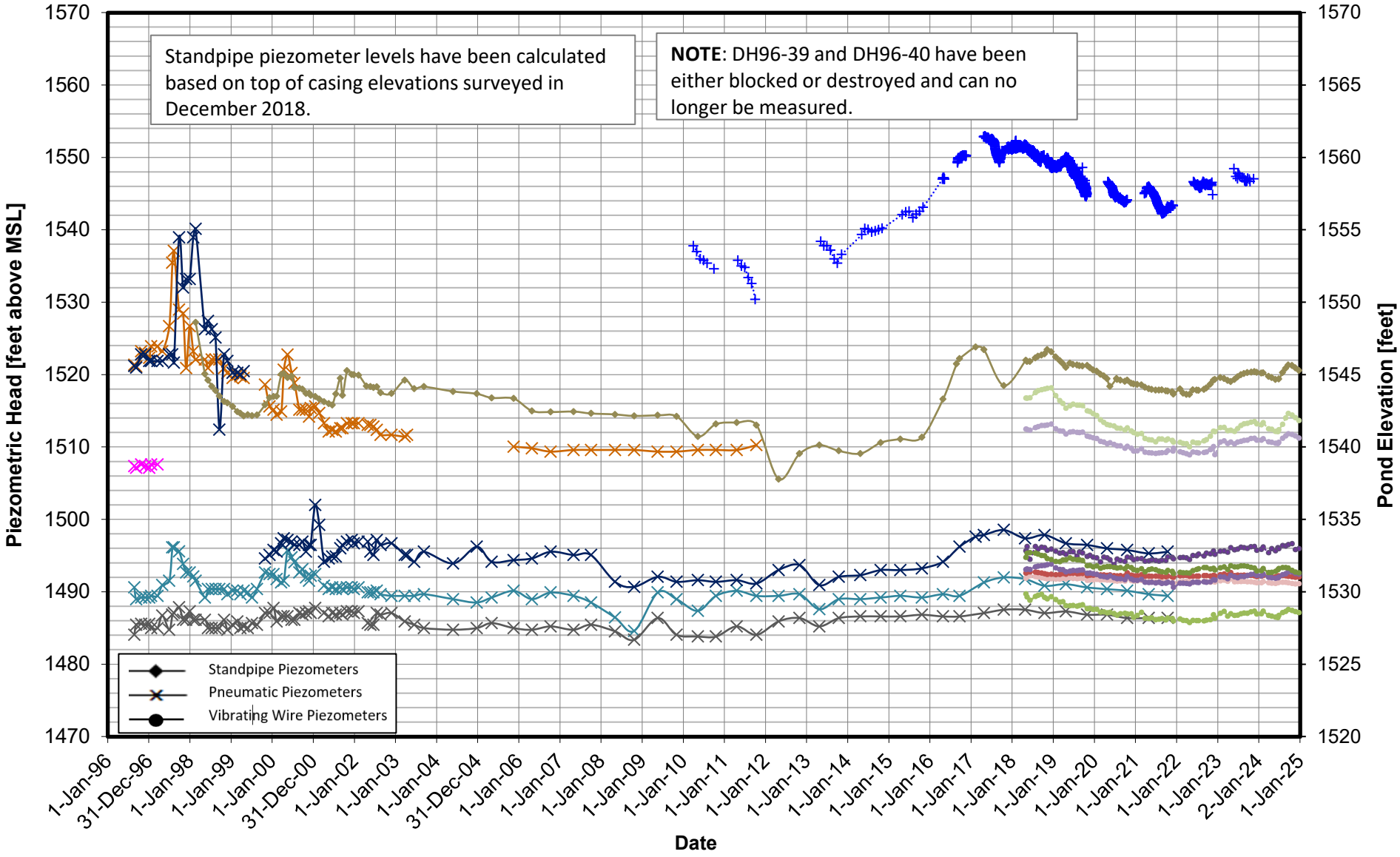


# Appendix A: Piezometers at Cross-Section E (Cell 2W)



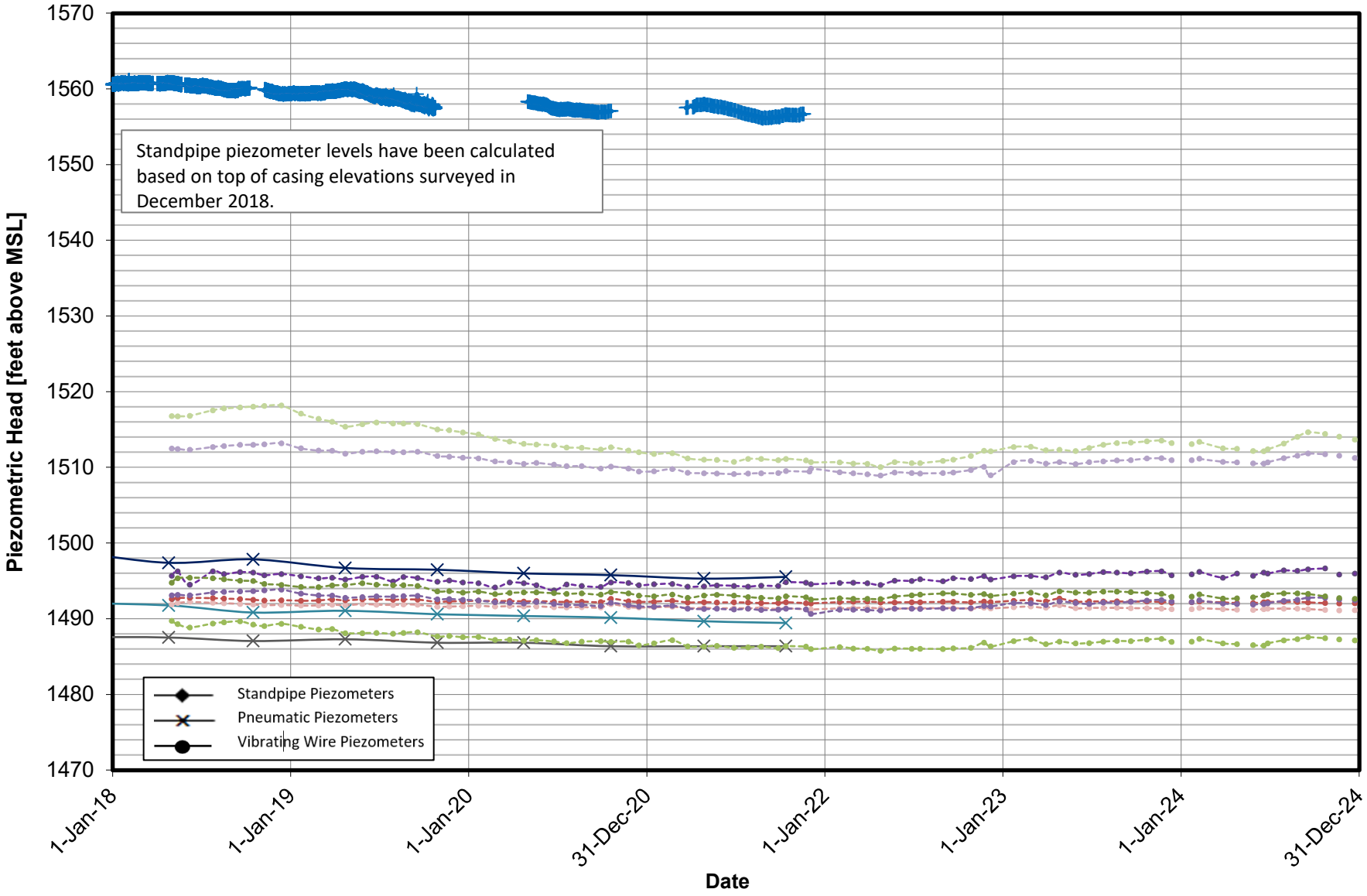

**NOTE**: E-1 and E-5 have blockages and can no longer be measured.

# Appendix A: Piezometers at Cross-Sections F and J (Cell 2E)



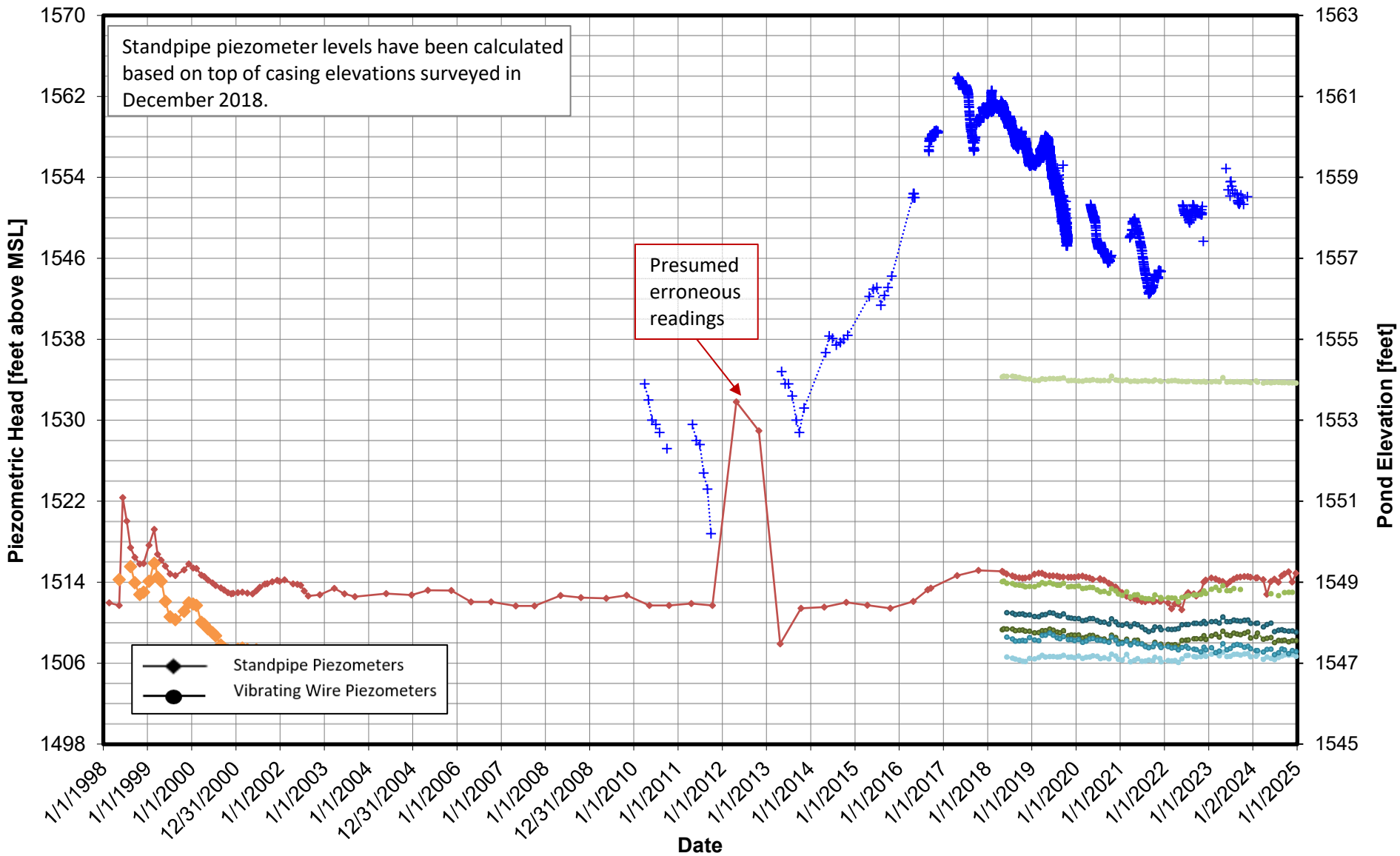

DH96-37A
DH96-37
DH96-39
(DH96-40) PN1J-99
(DH96-49) PN1F-99
F-2
2E_2018_PZ_F1_VW (Peat_40')
2E_2018_PZ_F1_VW (Till_46')
2E_2018_PZ_F3_offset_VW (FT_66')
2E_2018_PZ_F3_offset_VW (FT_85')
2E_2018_PZ_F3_offset_VW (Peat_100')
2E_2018_PZ_F4_VW (FT_75')
2E_2018_PZ_F4_VW (Peat_111')
2E_2018_PZ_F4_VW (Till_124')
Cell 2E

# Appendix A: Piezometers at Cross-Sections F and J (Cell 2E)




Cell 2E
DH96-37A
DH96-37
DH96-39
(DH96-40) PN1J-99
(DH96-49) PN1F-99
F-2
2E_2018_PZ_F1_VW (Peat_40')
2E_2018_PZ_F1_VW (Till_46')
2E_2018_PZ_F3_offset_VW (FT_66')
2E_2018_PZ_F3_offset_VW (FT_85')
2E_2018_PZ_F3_offset_VW (Peat_100')
2E_2018_PZ_F4_VW (FT_75')
2E_2018_PZ_F4_VW (Peat_111')
2E_2018_PZ_F4_VW (Till_124')

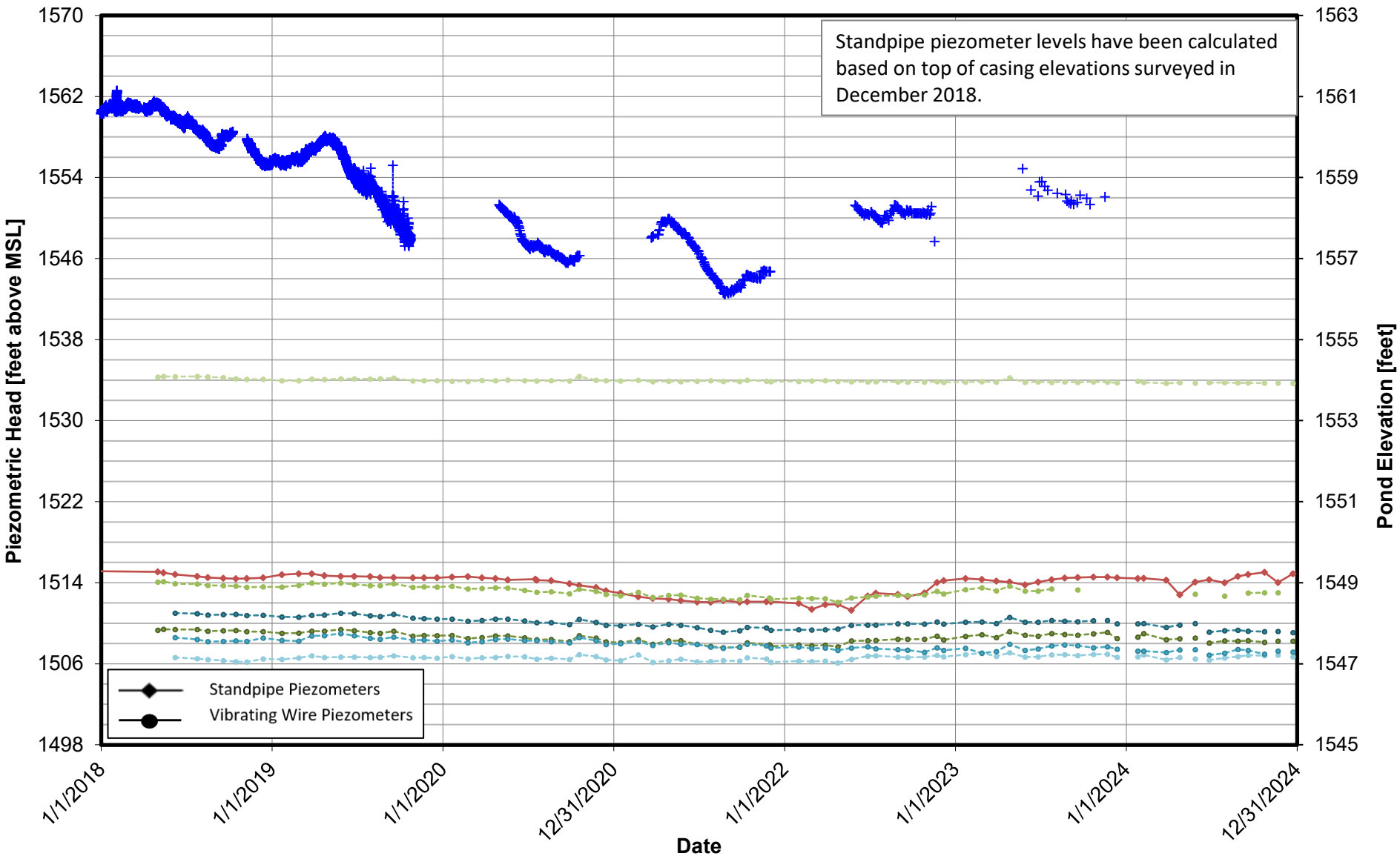
# Appendix A: Piezometers at Cross-Section G (Cell 2E)




G-2
G-3
2E_2018_PZ_G4_VW (50')
2E_2018_PZ_G4_VW (70')
2E_2018_PZ_G4_VW (75')
2E_2018_PZ_G1_VW (48')
2E_2018_PZ_G1_VW (52')
2E_2018_PZ_G1_VW (58')
Cell 2E
2E-VW356+50-R366 (T)
2E-VW356+50-R366 (B)

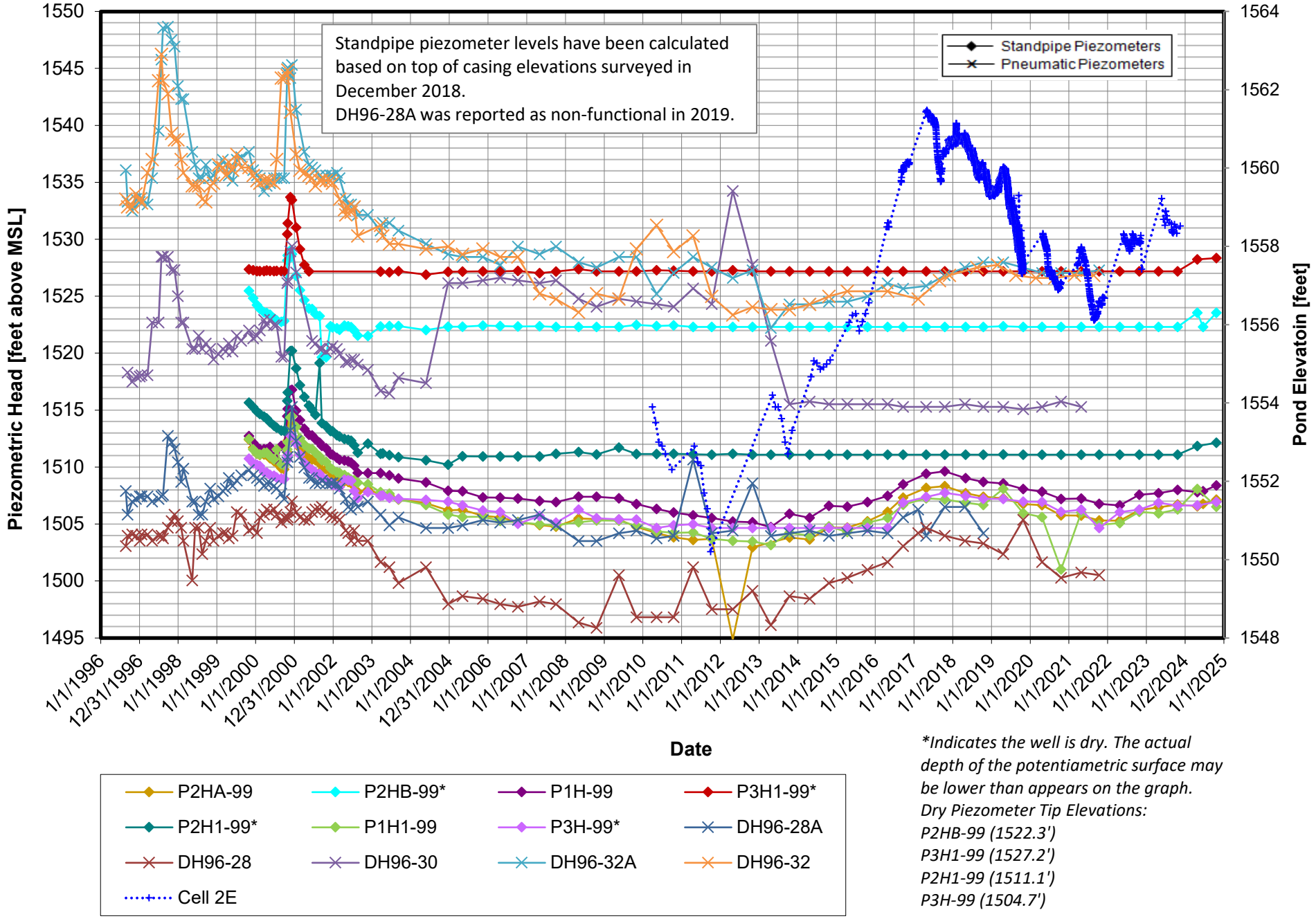
**NOTE**: G-3 appears to have been either destroyed or blocked and has not been measured since 2001.

# Appendix A: Piezometers at Cross-Section G (Cell 2E)



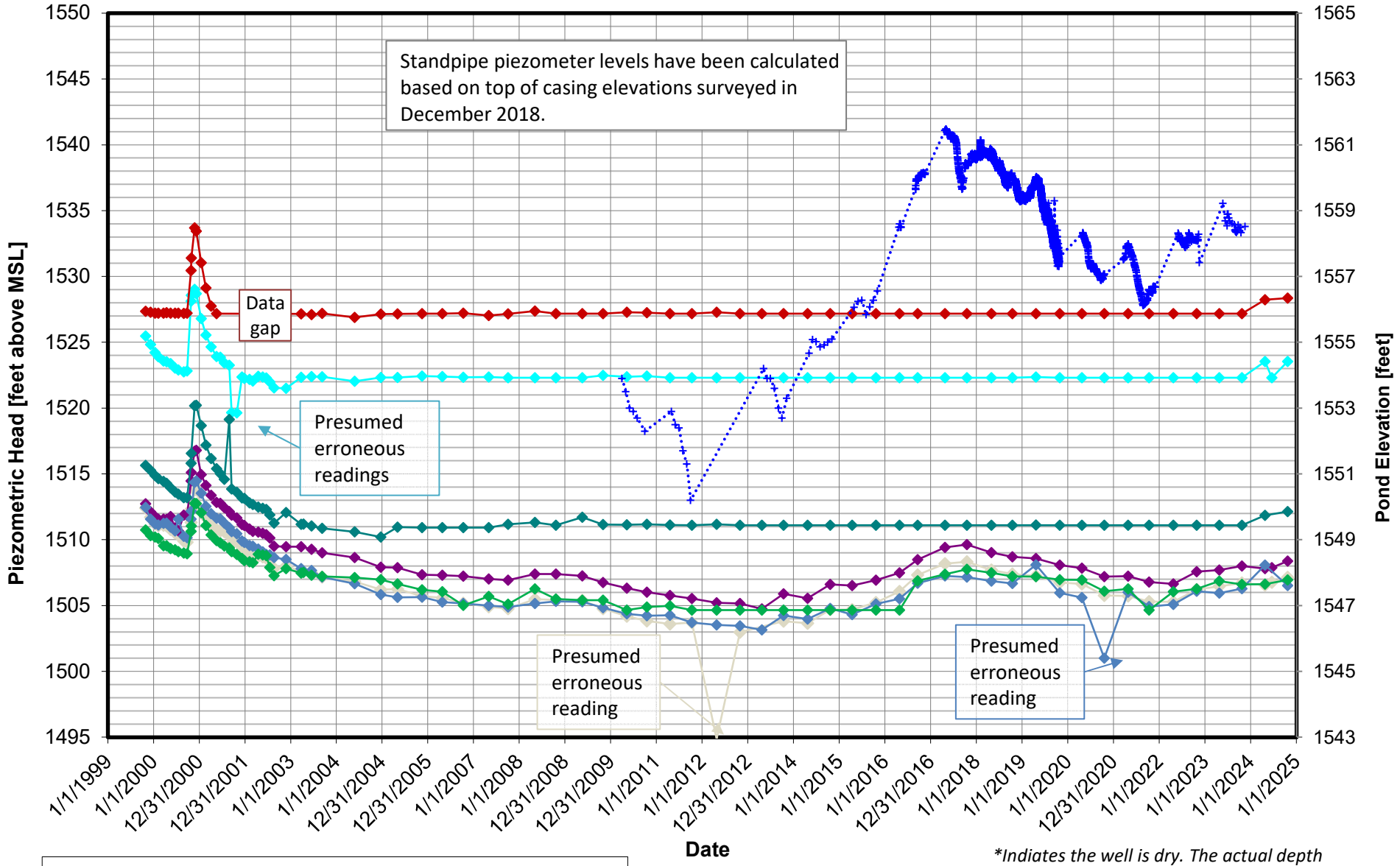

**NOTE**: G-3 appears to have been either destroyed or blocked and has not been measured since 2001.

# Appendix A: Piezometers at Cross-Section H (Cell 2W)




**Indicates the well is dry. The actual depth of the potentiametric surface may be lower than appears on the graph.*
*Dry Piezometer Tip Elevations:*
*P2HB-99 (1522.3')*
*P3H1-99 (1527.2')*
*P2H1-99 (1511.1')*
*P3H-99 (1504.7')*

# Appendix A: StandpipePiezometers at Cross-Section H (Cell 2W)



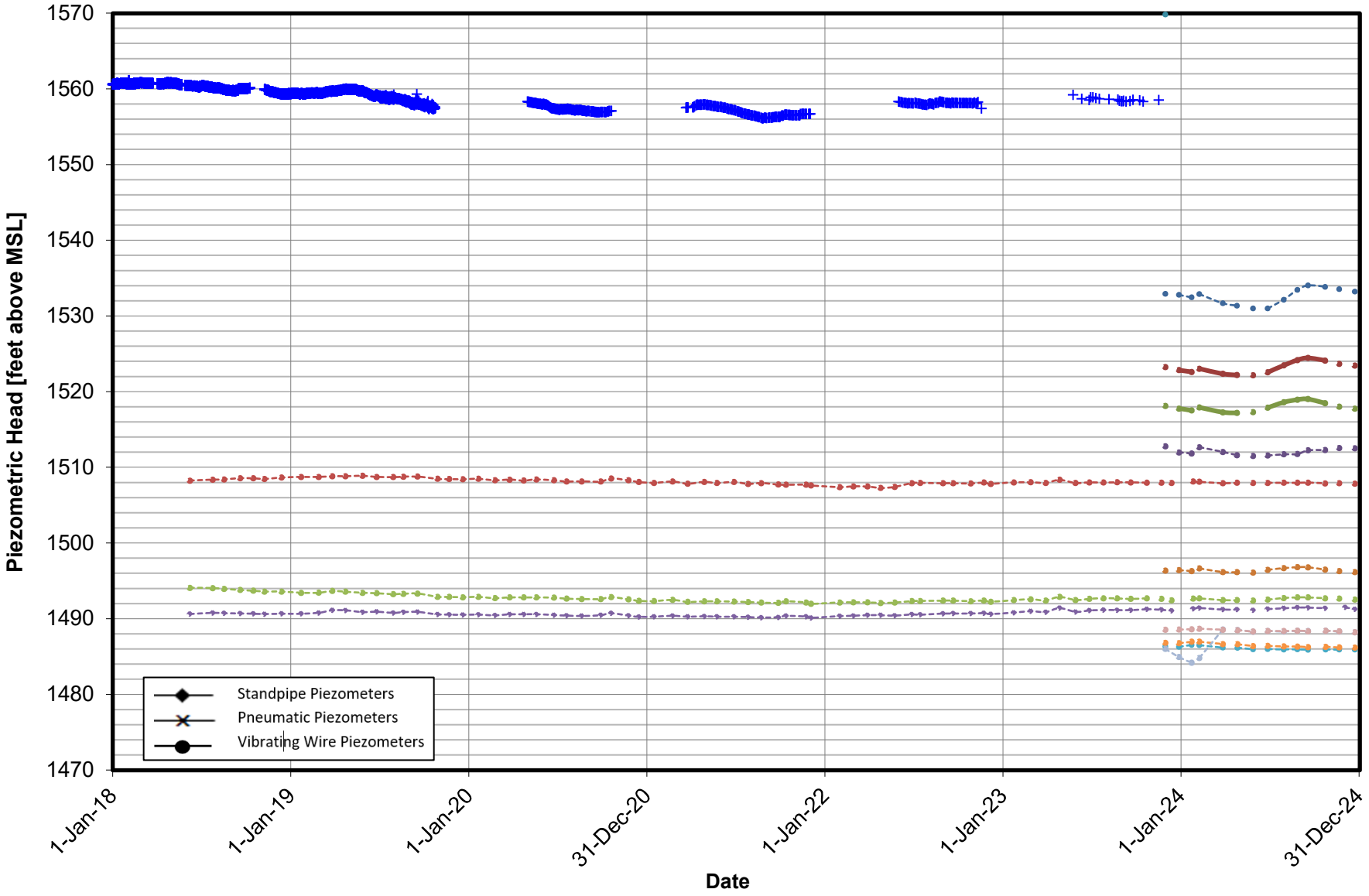

**Indiates the well is dry. The actual depth of the potentiametric surface may be lower than appears on the graph.*

*Dry Piezometer Tip Elevations:*

*P2HB-99 (1522.3')  P2H1-99 (1511.1')*

*P3H1-99 (1527.2')  P3H-99 (1504.7')*

# Appendix A: Piezometers at Cross-Sections F and J (Cell 2E)




1/27/2025

# Appendix A: Piezometers at Cross-Section K (Cell 1E/2E Splitter Dam) NorthMet Dam Safety Inspection Report

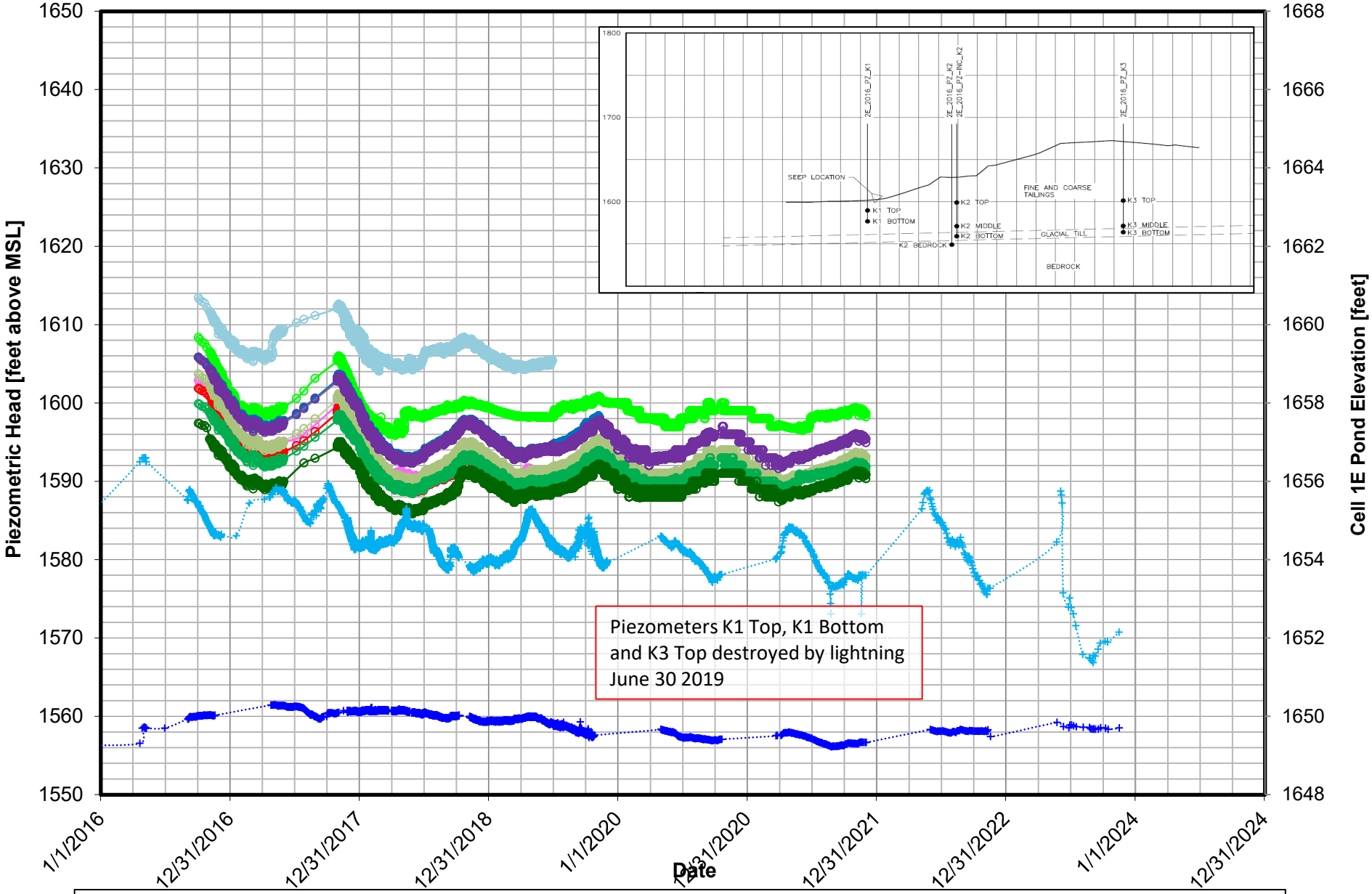
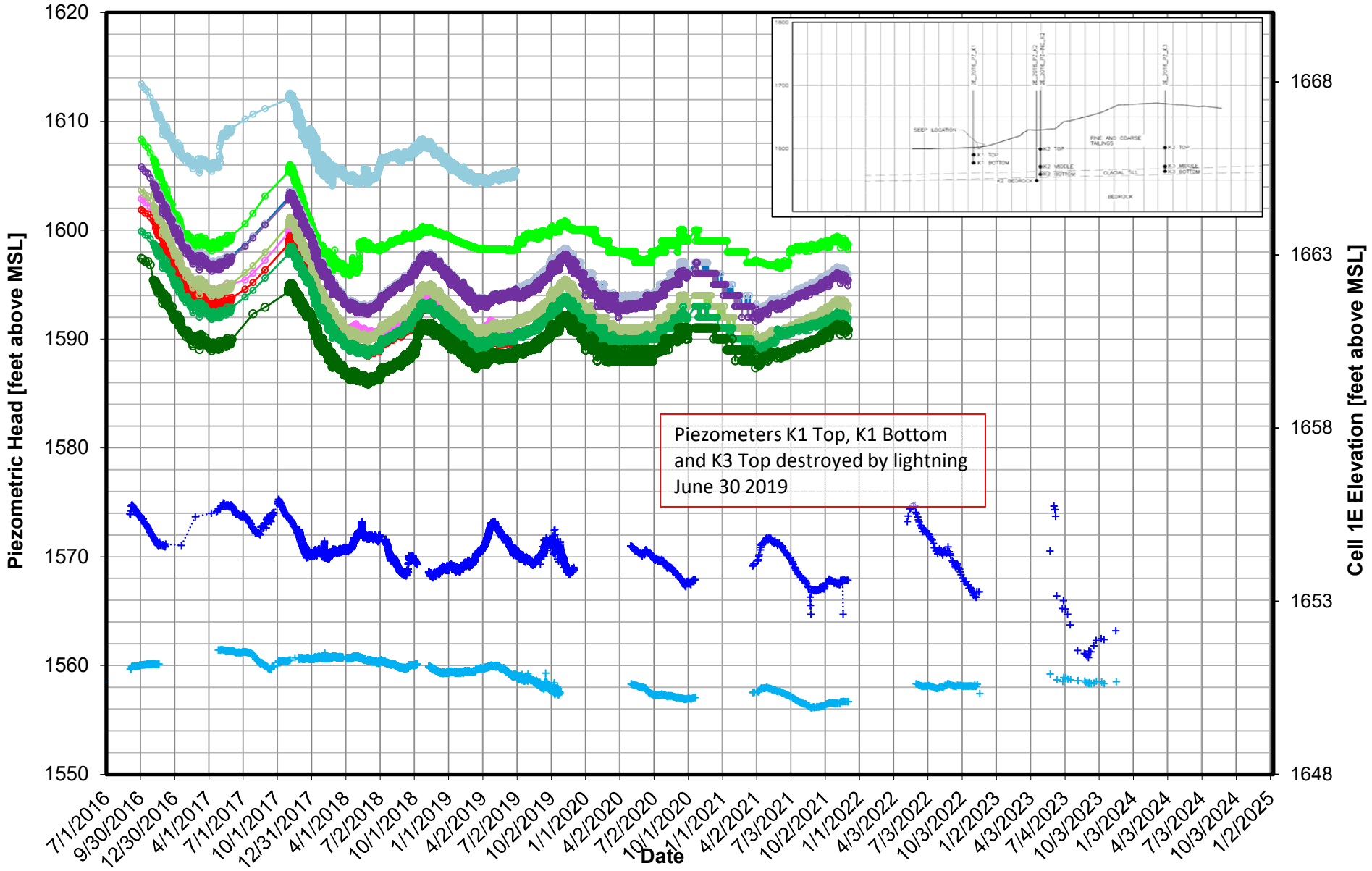
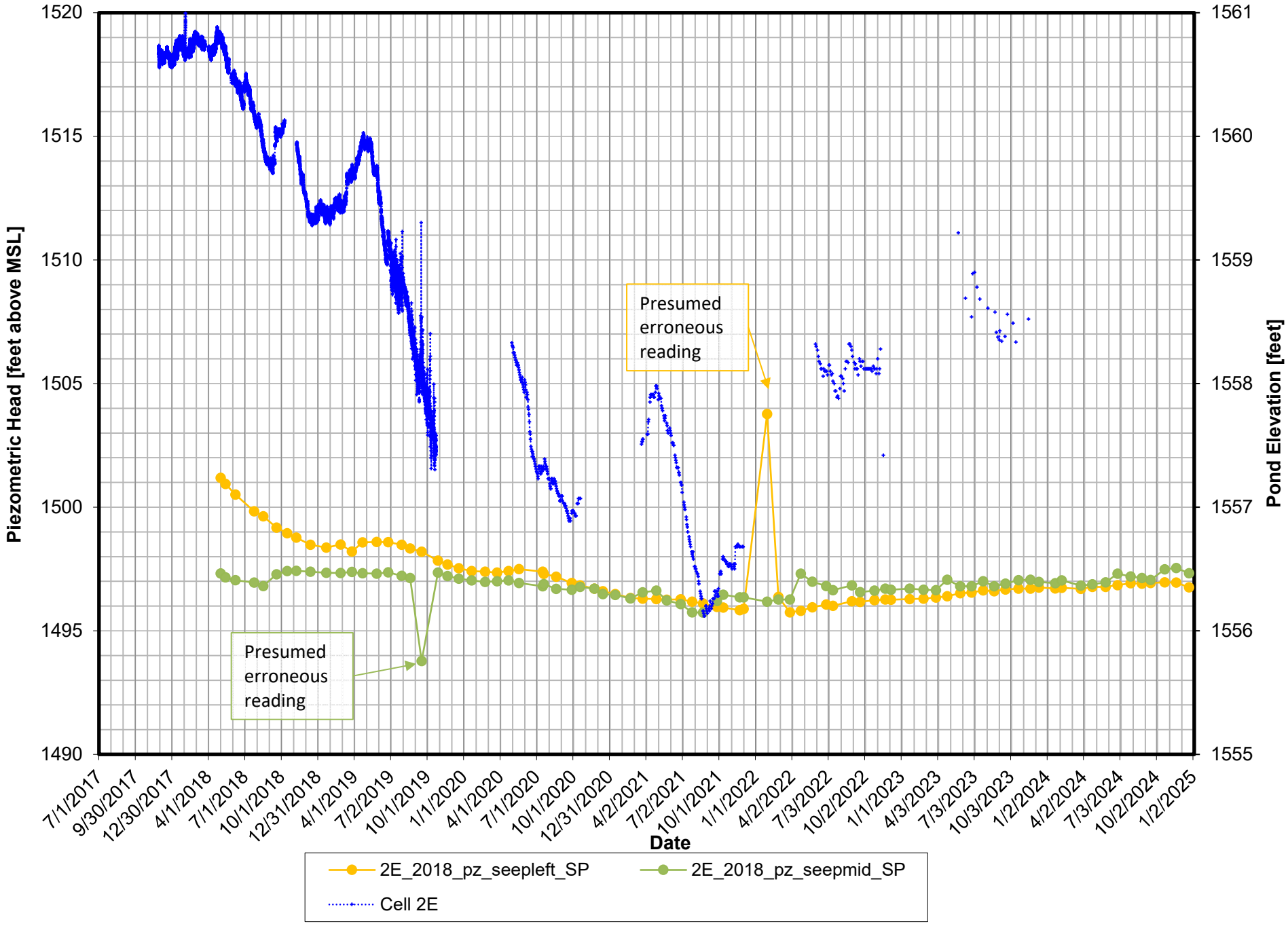


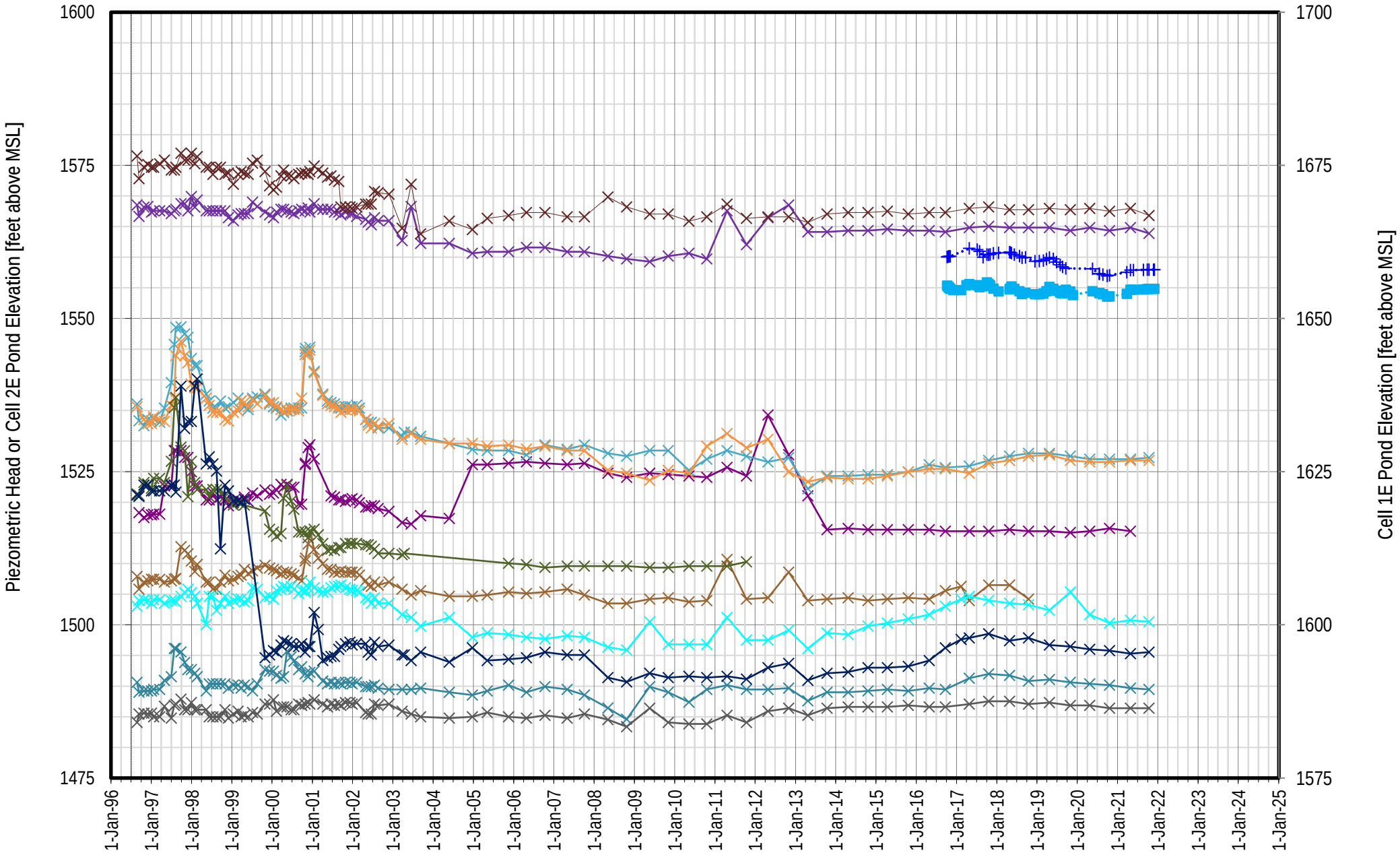
**Figure J-8a: Piezometers at Cross-Section K (Cell 1E/2E Splitter Dam)**
**NorthMet Dam Safety Inspection Report**



# Appendix A: Cell 2E North Dam Seeps



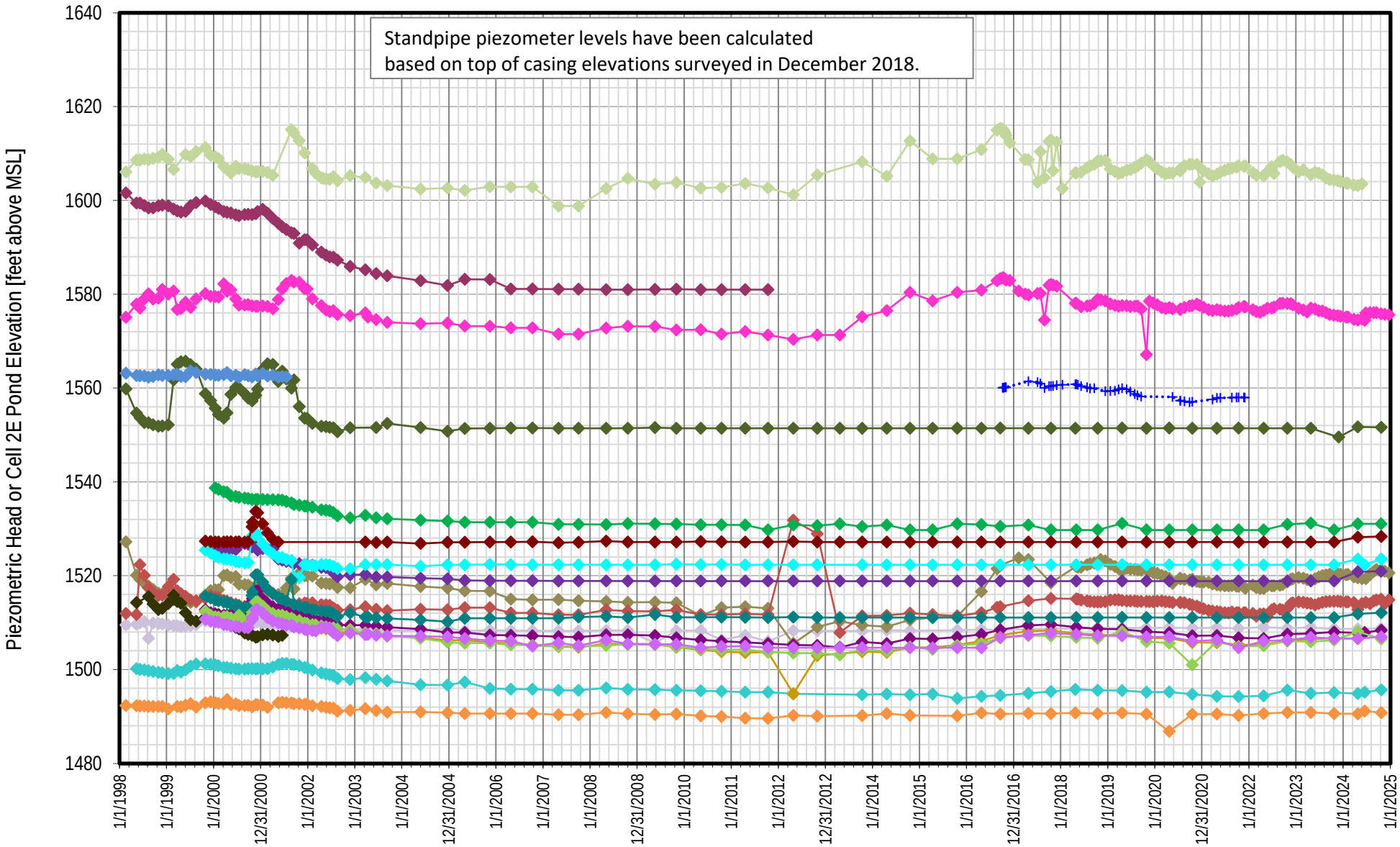
# Appendix A: Tailings Basin Pneumatic Piezometers




DH96-10 DH96-11 DH96-28A DH96-28
DH96-30 DH96-32A DH96-32 DH96-37A
DH96-37 (DH96-40) PN1J-99 (DH96-49) PN1F-99 Cell 2E
Cell 1E

**NOTE**: DH96-40 has been destroyed and can no longer be measured. DH96-28A was reported as non-functional in 2019.

# Appendix A: Tailings Basin Standpipe




A-1 A-3 A-9* B-2 D-1 D-4
E-1 E-5 F-2 G-2 G-3 P1B-99
P1B1-99 P2HA-99 P2HB-99* P1H-99 P3H1-99* P2H1-99*
P1H1-99 P3H-99 Cell 2E Cell 1E

**Indicates the well is dry. The actual depth of the potentiametric surface may be lower than appears on the graph.*

**NOTE**: E-1, E-5, and G-3 have been either destroyed or blocked and can no longer be measured.

1/27/2025

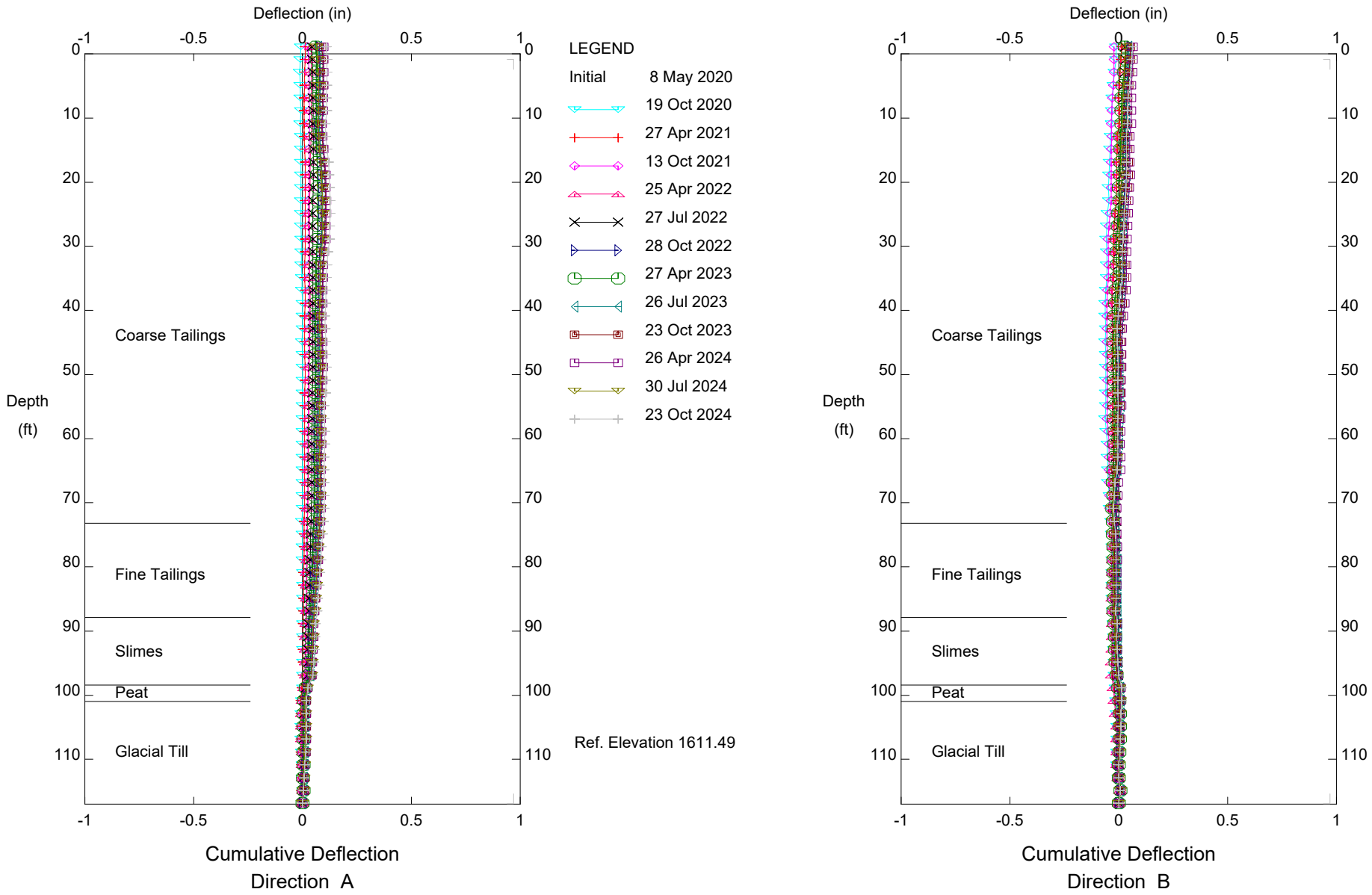
# Appendix B
# Inclinometer Status Table

Appendix B: Inclinometer Status Table

| Installation | Date Installed | Ground Elevation at Casing (ft MSL) (from boring logs) | Ground Elevation at Casing (ft MSL) (from 2018 Survey) | Top of Casing Elevation (ft MSL) (from 2018 Survey) | Stickup | Total Original Depth | Depth to Native Surface | Native Surface Elevation | Depth to Assumed Competent Layer | Assumed Competent Layer | Current Depth | Survey Used as Base | 2024 Inclinometer Survey Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DH96-10 | 12-Jul-96 | 1610.3 | 1611.49 | 1613.62 | 2.13 | 120 | 98 | 1512.3 | 100.5 | Sand, clayey and silty, some gravel, very dense (TILL) | 118 | 8-May-20 | April 2020 was last measurement with historic probe. New baseline collected on May 8, 2020 with new inclinometer probe. Historic and new datasets are typical. The total depth changed from 120 to 118 with new probe due to the new probe being offset down 1 foot from historic probe. |
| DH96-18 | Unknown, No Boring Log | 1567 | 1569.54 | 1572.48 | 2.94 | 106 | | | | | 104 | 8-May-20 | April 2020 was last measurement with historic probe. New baseline collected on May 8, 2020 with new inclinometer probe. Historic and new datasets are typical. The total depth changed from 106 to 104 due to the new probe being offset 1 foot down compared to the historic probe. |
| DH96-28 | 20-Jun-96 | 1553.5 | 1553.97 | 1555.6 | 1.63 | 66 | 59 | 1494.5 | 59 | Sand, coarse to fine, clayey, very dense (TILL) | 66 | 8-May-20 | April 2020 was last measurement with historic probe. New baseline collected on May 8, 2020 with new inclinometer probe. Historic and new datasets are typical. |
| K-2 | Sept, 2016 | | 1629.73 | 1632.48 | 2.75 | 86 | | | | | 86 | 18-Oct-16 | Removed in-place, automated inclinometer probe on May 24, 2021. Collected manual reading of installation. Began monitoring at a frequency of 3 times per year in 2022. Plan to monitor April, July, October annually. Dead mice floating in water column preventing a successful survey in October 2023. Mice were flushed out in November 2024. April, July, and October 2024 readings were able to be completed despite the 'blocakge', but it was gross... |
| F-1 | Nov, 2018 | | 1511.59 | 1514.71 | 3.12 | 66 | 35 | 1476.6 | 50 | 1461.6 | 66 | 7-Dec-18 | Location unchanged from installation |
| F-3 | Nov, 2018 | | 1552.08 | 1554.54 | 2.46 | 102 | 76 | 1476.1 | 87 | 1465.1 | 102 | 7-Dec-18 | Location unchanged from installation. Variation observed in baseline readings at bottom 4 readings and top 5 readings. Top 5 readings likely caused by grout settling out and leaving the top 10 feet 'floating' in the borehole. Should be re-grouted to secure top section. Top 10 feet braced in 2023 to prevent movement. |
| F-4 | Nov, 2018 | | 1583.13 | 1585.88 | 2.75 | 118 | 102 | 1481.1 | 117 | 1466.1 | 118 | 7-Dec-18 | Location unchanged from installation |

# Appendix C
# Inclinometer Plot and Data

Northeast Technical Services, Inc.



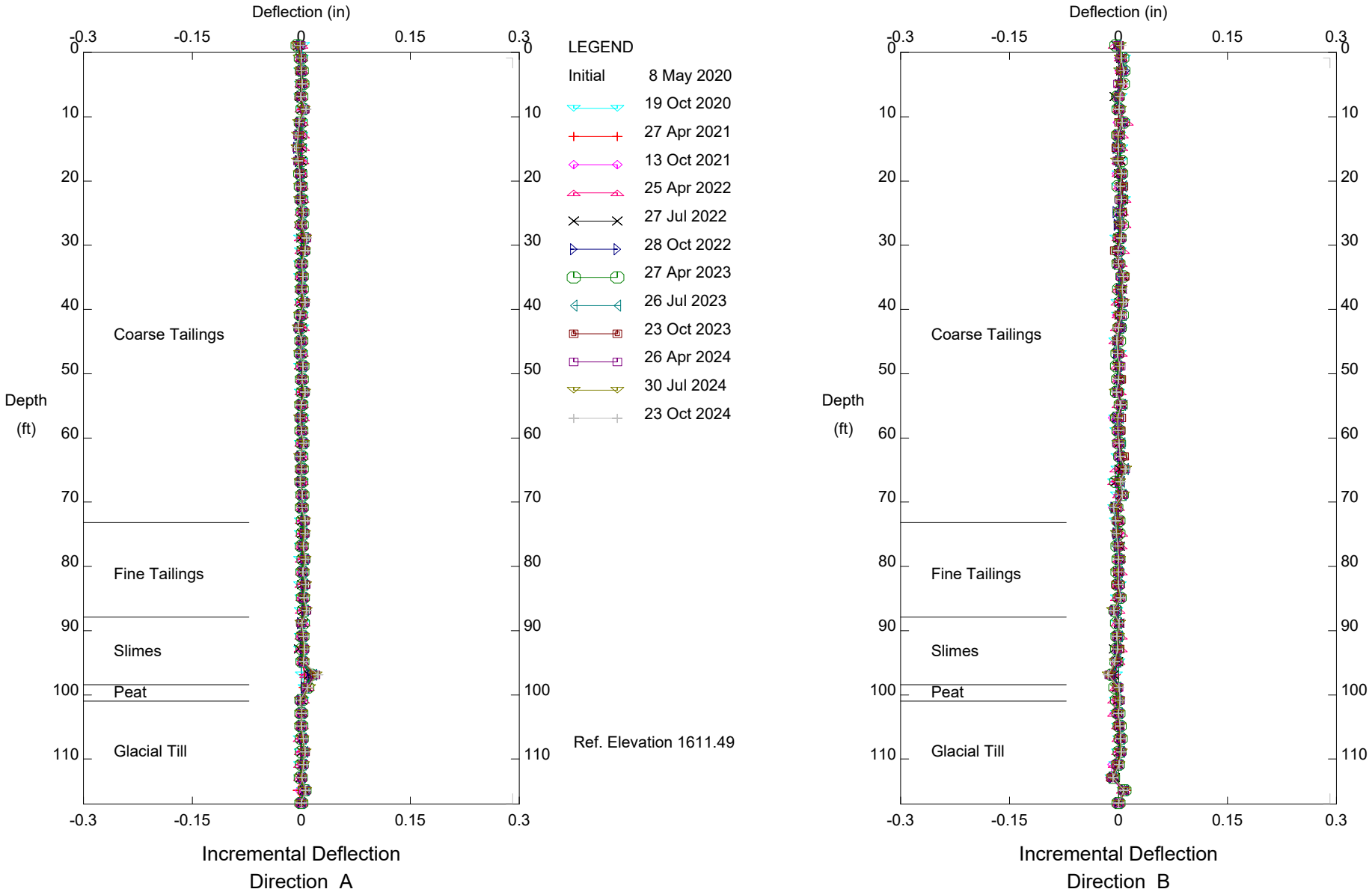

Inclinometer DH96-10

SW corner of Cell 2W, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-10.gtl

Northeast Technical Services, Inc.



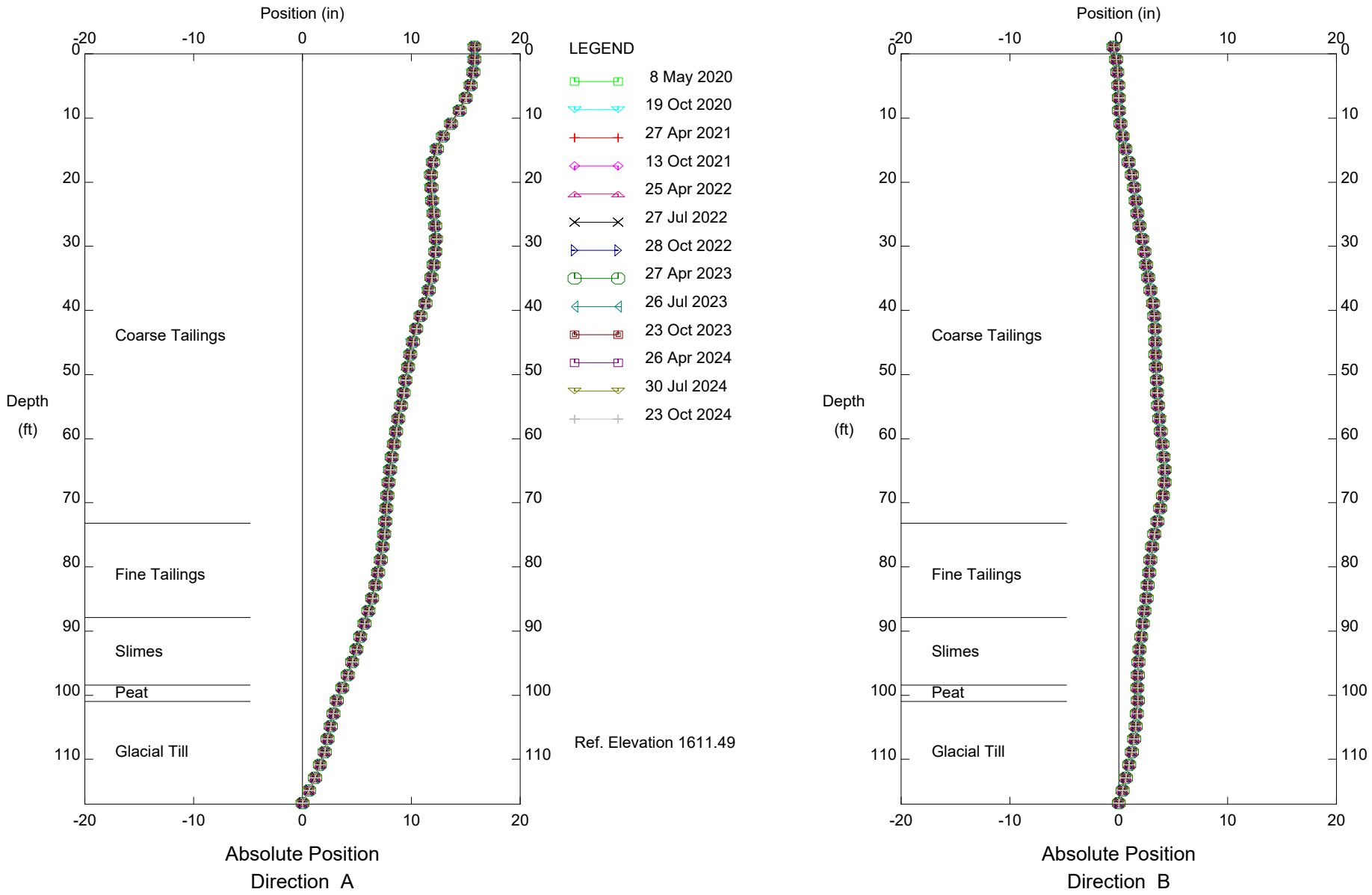

Inclinometer DH96-10

SW corner of Cell 2W, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-10.gtl

Northeast Technical Services, Inc.




Inclinometer DH96-10

SW corner of Cell 2W, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-10.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 14:54:49  Inclinometer DH96-10
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-10.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  SW corner of Cell 2W, Midslope
Project
Location  LTVSMC Tailings Basin
Stickup  2.13 ft

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 05082020 | 1256 | | | 1639179 | | | | |
| 10192020 | 0929 | | | 1639179 | | | | |
| 04272021 | 1158 | | | 1639179 | | | | |
| 10132021 | 0918 | | | 1639179 | | | | |
| 04252022 | 0106 | | | 1639179 | | | | |
| 07272022 | 1203 | | | 1639179 | | | | |
| 10282022 | 1231 | | | 1639179 | | | | |
| 04272023 | 1128 | | | 1639179 | | | | |
| 07262023 | 1149 | | | 1639179 | | | | |
| 10232023 | 1306 | | | 1639179 | | | | |
| 04262024 | 0855 | | | 1639179 | | | | |
| 07302024 | 1352 | | | 1639179 | | | | |
| 10232024 | 1359 | | | 1639179 | | | | |

DH96-10 set 1, read 8 May 2020:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 77 | -121 | -1067 | 1039 | -44 | -28 |
| 4.0 | 428 | -484 | -559 | 487 | -56 | -72 |
| 6.0 | 981 | -1037 | -378 | 307 | -56 | -71 |
| 8.0 | 1745 | -1809 | -196 | 161 | -64 | -35 |
| 10.0 | 2381 | -2436 | -195 | 151 | -55 | -44 |
| 12.0 | 3227 | -3289 | -541 | 525 | -62 | -16 |
| 14.0 | 2980 | -3048 | -899 | 879 | -68 | -20 |
| 16.0 | 2419 | -2480 | -1096 | 1012 | -61 | -84 |
| 18.0 | 1477 | -1536 | -1247 | 1174 | -59 | -73 |
| 20.0 | 648 | -700 | -1250 | 1160 | -52 | -90 |
| 22.0 | -108 | 50 | -842 | 796 | -58 | -46 |
| 24.0 | -378 | 307 | -742 | 660 | -71 | -82 |
| 26.0 | -570 | 509 | -715 | 671 | -61 | -44 |
| 28.0 | -587 | 524 | -835 | 783 | -63 | -52 |
| 30.0 | -416 | 350 | -994 | 954 | -66 | -40 |
| 32.0 | 199 | -256 | -878 | 826 | -57 | -52 |
| 34.0 | 613 | -671 | -713 | 639 | -58 | -74 |
| 36.0 | 874 | -935 | -844 | 768 | -61 | -76 |
| 38.0 | 1055 | -1116 | -991 | 942 | -61 | -49 |
| 40.0 | 1196 | -1246 | -920 | 854 | -50 | -66 |
| 42.0 | 1801 | -1868 | -550 | 518 | -67 | -32 |
| 44.0 | 1662 | -1726 | -293 | 216 | -64 | -77 |
| 46.0 | 1243 | -1305 | -172 | 102 | -62 | -70 |
| 48.0 | 960 | -1019 | -105 | 46 | -59 | -59 |
| 50.0 | 806 | -858 | -233 | 147 | -52 | -86 |
| 52.0 | 896 | -959 | -318 | 261 | -63 | -57 |
| 54.0 | 755 | -828 | -177 | 91 | -73 | -86 |
| 56.0 | 925 | -987 | -430 | 353 | -62 | -77 |
| 58.0 | 1055 | -1110 | -494 | 462 | -55 | -32 |
| 60.0 | 833 | -891 | -537 | 464 | -58 | -73 |
| 62.0 | 757 | -813 | -654 | 590 | -56 | -64 |
| 64.0 | 722 | -790 | -592 | 505 | -68 | -87 |
| 66.0 | 638 | -692 | -453 | 364 | -54 | -89 |
| 68.0 | 528 | -589 | 8 | -43 | -61 | -35 |
| 70.0 | 446 | -512 | 580 | -624 | -66 | -44 |
| 72.0 | 403 | -460 | 1092 | -1124 | -57 | -32 |
| 74.0 | 339 | -407 | 1119 | -1164 | -68 | -45 |
| 76.0 | 404 | -459 | 1030 | -1093 | -55 | -63 |
| 78.0 | 559 | -615 | 853 | -927 | -56 | -74 |
| 80.0 | 683 | -749 | 658 | -734 | -66 | -76 |
| 82.0 | 1035 | -1098 | 448 | -517 | -63 | -69 |
| 84.0 | 907 | -974 | 527 | -595 | -67 | -68 |
| 86.0 | 1203 | -1261 | 443 | -519 | -58 | -76 |
| 88.0 | 1371 | -1429 | 653 | -713 | -58 | -60 |
| 90.0 | 1527 | -1591 | 703 | -759 | -64 | -56 |
| 92.0 | 1522 | -1577 | 492 | -534 | -55 | -42 |
| 94.0 | 1413 | -1469 | 638 | -701 | -56 | -63 |
| 96.0 | 1588 | -1654 | 421 | -483 | -66 | -62 |
| 98.0 | 1678 | -1737 | 305 | -375 | -59 | -70 |
| 100.0 | 2074 | -2154 | 62 | -116 | -80 | -54 |
| 102.0 | 1991 | -2016 | -160 | 107 | -25 | -53 |
| 104.0 | 1242 | -1308 | 319 | -369 | -66 | -50 |
| 106.0 | 1092 | -1142 | 461 | -524 | -50 | -63 |
| 108.0 | 1085 | -1141 | 562 | -612 | -56 | -50 |
| 110.0 | 1131 | -1207 | 905 | -945 | -76 | -40 |
| 112.0 | 1686 | -1735 | 959 | -992 | -49 | -33 |
| 114.0 | 1954 | -2008 | 1229 | -1274 | -54 | -45 |
| 116.0 | 2235 | -2315 | 1379 | -1397 | -80 | -18 |
| 118.0 | 2468 | -2483 | 1319 | -1336 | -15 | -17 |

DH96-10 set 11, read 26 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 90 | -103 | -1060 | 1050 | -13 | -10 |
| 4.0 | 442 | -470 | -532 | 489 | -28 | -43 |
| 6.0 | 996 | -1030 | -338 | 303 | -34 | -35 |
| 8.0 | 1760 | -1802 | -186 | 178 | -42 | -8 |
| 10.0 | 2388 | -2432 | -199 | 149 | -44 | -50 |
| 12.0 | 3264 | -3287 | -524 | 535 | -23 | 11 |
| 14.0 | 2990 | -3025 | -883 | 839 | -35 | -44 |
| 16.0 | 2414 | -2447 | -1081 | 1027 | -33 | -54 |
| 18.0 | 1469 | -1503 | -1228 | 1191 | -34 | -37 |
| 20.0 | 630 | -680 | -1236 | 1188 | -50 | -48 |
| 22.0 | -90 | 81 | -801 | 802 | -9 | 1 |
| 24.0 | -368 | 326 | -712 | 665 | -42 | -47 |
| 26.0 | -560 | 533 | -703 | 672 | -27 | -31 |
| 28.0 | -559 | 528 | -799 | 804 | -31 | 5 |
| 30.0 | -407 | 351 | -988 | 940 | -56 | -48 |
| 32.0 | 250 | -260 | -838 | 833 | -10 | -5 |
| 34.0 | 646 | -679 | -691 | 657 | -33 | -34 |
| 36.0 | 889 | -925 | -830 | 785 | -36 | -45 |
| 38.0 | 1076 | -1108 | -960 | 948 | -32 | -12 |
| 40.0 | 1200 | -1246 | -885 | 849 | -46 | -36 |
| 42.0 | 1847 | -1860 | -511 | 500 | -13 | -11 |
| 44.0 | 1671 | -1708 | -259 | 214 | -37 | -45 |
| 46.0 | 1240 | -1279 | -146 | 105 | -39 | -41 |
| 48.0 | 973 | -1009 | -90 | 61 | -36 | -29 |
| 50.0 | 803 | -850 | -206 | 175 | -47 | -31 |
| 52.0 | 928 | -948 | -288 | 268 | -20 | -20 |
| 54.0 | 776 | -815 | -157 | 106 | -39 | -51 |
| 56.0 | 957 | -993 | -417 | 381 | -36 | -36 |
| 58.0 | 1068 | -1097 | -478 | 448 | -29 | -30 |
| 60.0 | 833 | -879 | -512 | 484 | -46 | -28 |
| 62.0 | 774 | -801 | -624 | 611 | -27 | -13 |
| 64.0 | 746 | -789 | -559 | 550 | -43 | -9 |
| 66.0 | 645 | -672 | -417 | 391 | -27 | -26 |
| 68.0 | 545 | -577 | 57 | -67 | -32 | -10 |
| 70.0 | 452 | -498 | 586 | -633 | -46 | -47 |
| 72.0 | 430 | -448 | 1137 | -1138 | -18 | -1 |
| 74.0 | 358 | -400 | 1124 | -1146 | -42 | -22 |
| 76.0 | 434 | -467 | 1047 | -1076 | -33 | -29 |
| 78.0 | 590 | -620 | 862 | -901 | -30 | -39 |
| 80.0 | 699 | -748 | 681 | -715 | -49 | -34 |
| 82.0 | 1073 | -1101 | 482 | -497 | -28 | -15 |
| 84.0 | 933 | -967 | 551 | -575 | -34 | -24 |
| 86.0 | 1239 | -1272 | 473 | -502 | -33 | -29 |
| 88.0 | 1396 | -1430 | 681 | -710 | -34 | -29 |
| 90.0 | 1561 | -1613 | 688 | -723 | -52 | -35 |
| 92.0 | 1540 | -1558 | 521 | -520 | -18 | 1 |
| 94.0 | 1429 | -1465 | 644 | -680 | -36 | -36 |
| 96.0 | 1619 | -1654 | 431 | -461 | -35 | -30 |
| 98.0 | 1704 | -1732 | 299 | -347 | -28 | -48 |
| 100.0 | 2183 | -2208 | 23 | -51 | -25 | -28 |
| 102.0 | 2012 | -2049 | -130 | 136 | -37 | 6 |
| 104.0 | 1249 | -1291 | 346 | -358 | -42 | -12 |
| 106.0 | 1105 | -1134 | 481 | -503 | -29 | -22 |
| 108.0 | 1100 | -1125 | 587 | -601 | -25 | -14 |
| 110.0 | 1157 | -1198 | 921 | -953 | -41 | -32 |
| 112.0 | 1717 | -1743 | 999 | -984 | -26 | 15 |
| 114.0 | 1979 | -2011 | 1239 | -1262 | -32 | -23 |
| 116.0 | 2253 | -2301 | 1341 | -1368 | -48 | -27 |
| 118.0 | 2484 | -2515 | 1340 | -1376 | -31 | -36 |

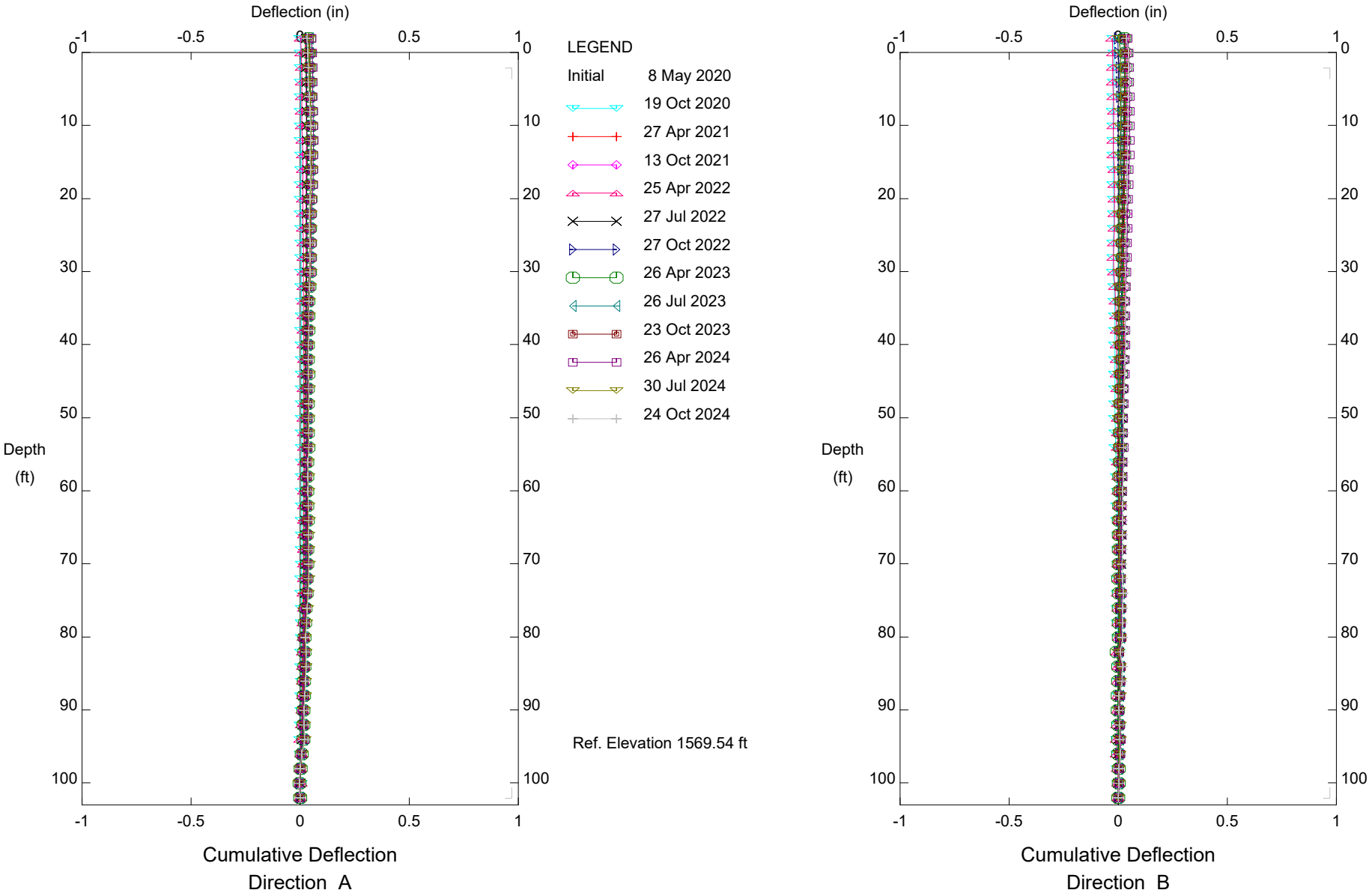
DH96-10 set 12, read 30 Jul 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 83 | -73 | -1064 | 1032 | 10 | -32 |
| 4.0 | 441 | -451 | -537 | 481 | -10 | -56 |
| 6.0 | 1000 | -1011 | -357 | 310 | -11 | -47 |
| 8.0 | 1768 | -1789 | -194 | 130 | -21 | -64 |
| 10.0 | 2400 | -2410 | -204 | 136 | -10 | -68 |
| 12.0 | 3270 | -3273 | -523 | 530 | -3 | 7 |
| 14.0 | 2996 | -3010 | -899 | 845 | -14 | -54 |
| 16.0 | 2425 | -2438 | -1077 | 1028 | -13 | -49 |
| 18.0 | 1476 | -1491 | -1230 | 1187 | -15 | -43 |
| 20.0 | 643 | -668 | -1239 | 1187 | -25 | -52 |
| 22.0 | -85 | 91 | -815 | 799 | 6 | -16 |
| 24.0 | -358 | 338 | -717 | 658 | -20 | -59 |
| 26.0 | -551 | 539 | -700 | 649 | -12 | -51 |
| 28.0 | -555 | 543 | -817 | 789 | -12 | -28 |
| 30.0 | -405 | 365 | -985 | 944 | -40 | -41 |
| 32.0 | 254 | -246 | -852 | 838 | 8 | -14 |
| 34.0 | 652 | -666 | -702 | 658 | -14 | -44 |
| 36.0 | 897 | -915 | -834 | 784 | -18 | -50 |
| 38.0 | 1081 | -1096 | -974 | 909 | -15 | -65 |
| 40.0 | 1207 | -1237 | -903 | 846 | -30 | -57 |
| 42.0 | 1850 | -1845 | -514 | 504 | 5 | -10 |
| 44.0 | 1678 | -1695 | -271 | 228 | -17 | -43 |
| 46.0 | 1250 | -1269 | -155 | 113 | -19 | -42 |
| 48.0 | 982 | -997 | -97 | 61 | -15 | -36 |
| 50.0 | 815 | -834 | -212 | 176 | -19 | -36 |
| 52.0 | 933 | -938 | -308 | 271 | -5 | -37 |
| 54.0 | 784 | -804 | -160 | 102 | -20 | -58 |
| 56.0 | 963 | -982 | -429 | 387 | -19 | -42 |
| 58.0 | 1075 | -1086 | -484 | 448 | -11 | -36 |
| 60.0 | 846 | -868 | -530 | 491 | -22 | -39 |
| 62.0 | 780 | -792 | -641 | 610 | -12 | -31 |
| 64.0 | 755 | -778 | -569 | 526 | -23 | -43 |
| 66.0 | 656 | -661 | -423 | 368 | -5 | -55 |
| 68.0 | 552 | -565 | 51 | -77 | -13 | -26 |
| 70.0 | 464 | -487 | 587 | -625 | -23 | -38 |
| 72.0 | 432 | -438 | 1127 | -1137 | -6 | -10 |
| 74.0 | 366 | -388 | 1106 | -1147 | -22 | -41 |
| 76.0 | 442 | -454 | 1034 | -1081 | -12 | -47 |
| 78.0 | 600 | -608 | 865 | -898 | -8 | -33 |
| 80.0 | 714 | -732 | 669 | -716 | -18 | -47 |
| 82.0 | 1077 | -1092 | 468 | -504 | -15 | -36 |
| 84.0 | 942 | -956 | 534 | -571 | -14 | -37 |
| 86.0 | 1245 | -1260 | 461 | -496 | -15 | -35 |
| 88.0 | 1406 | -1422 | 673 | -707 | -16 | -34 |
| 90.0 | 1573 | -1598 | 684 | -718 | -25 | -34 |
| 92.0 | 1550 | -1552 | 509 | -522 | -2 | -13 |
| 94.0 | 1444 | -1455 | 647 | -685 | -11 | -38 |
| 96.0 | 1623 | -1643 | 428 | -465 | -20 | -37 |
| 98.0 | 1713 | -1719 | 300 | -347 | -6 | -47 |
| 100.0 | 2186 | -2204 | 18 | -48 | -18 | -30 |
| 102.0 | 2047 | -2046 | -143 | 142 | 1 | -1 |
| 104.0 | 1261 | -1280 | 331 | -356 | -19 | -25 |
| 106.0 | 1112 | -1120 | 473 | -503 | -8 | -30 |
| 108.0 | 1108 | -1112 | 571 | -617 | -4 | -46 |
| 110.0 | 1163 | -1186 | 914 | -955 | -23 | -41 |
| 112.0 | 1723 | -1734 | 991 | -986 | -11 | 5 |
| 114.0 | 1982 | -1996 | 1239 | -1261 | -14 | -22 |
| 116.0 | 2259 | -2287 | 1340 | -1366 | -28 | -26 |
| 118.0 | 2491 | -2504 | 1339 | -1379 | -13 | -40 |

DH96-10 set 13, read 23 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 84 | -102 | -1064 | 1011 | -18 | -53 |
| 4.0 | 438 | -472 | -542 | 471 | -34 | -71 |
| 6.0 | 989 | -1027 | -355 | 275 | -38 | -80 |
| 8.0 | 1765 | -1803 | -182 | 118 | -38 | -64 |
| 10.0 | 2385 | -2424 | -205 | 125 | -39 | -80 |
| 12.0 | 3276 | -3294 | -531 | 529 | -18 | -2 |
| 14.0 | 2984 | -3022 | -902 | 835 | -38 | -67 |
| 16.0 | 2414 | -2446 | -1093 | 1021 | -32 | -72 |
| 18.0 | 1458 | -1498 | -1245 | 1173 | -40 | -72 |
| 20.0 | 629 | -681 | -1243 | 1176 | -52 | -67 |
| 22.0 | -90 | 88 | -819 | 783 | -2 | -36 |
| 24.0 | -369 | 325 | -732 | 649 | -44 | -83 |
| 26.0 | -561 | 530 | -721 | 635 | -31 | -86 |
| 28.0 | -559 | 524 | -816 | 783 | -35 | -33 |
| 30.0 | -407 | 350 | -981 | 931 | -57 | -50 |
| 32.0 | 251 | -264 | -857 | 815 | -13 | -42 |
| 34.0 | 648 | -680 | -715 | 643 | -32 | -72 |
| 36.0 | 890 | -927 | -836 | 774 | -37 | -62 |
| 38.0 | 1077 | -1111 | -978 | 897 | -34 | -81 |
| 40.0 | 1204 | -1246 | -892 | 836 | -42 | -56 |
| 42.0 | 1844 | -1867 | -522 | 490 | -23 | -32 |
| 44.0 | 1669 | -1705 | -281 | 198 | -36 | -83 |
| 46.0 | 1239 | -1274 | -173 | 99 | -35 | -74 |
| 48.0 | 973 | -1007 | -116 | 53 | -34 | -63 |
| 50.0 | 803 | -852 | -225 | 170 | -49 | -55 |
| 52.0 | 928 | -944 | -312 | 253 | -16 | -59 |
| 54.0 | 776 | -816 | -171 | 94 | -40 | -77 |
| 56.0 | 957 | -998 | -436 | 370 | -41 | -66 |
| 58.0 | 1068 | -1098 | -502 | 427 | -30 | -75 |
| 60.0 | 828 | -881 | -538 | 467 | -53 | -71 |
| 62.0 | 774 | -799 | -660 | 591 | -25 | -69 |
| 64.0 | 749 | -792 | -579 | 512 | -43 | -67 |
| 66.0 | 645 | -675 | -439 | 358 | -30 | -81 |
| 68.0 | 544 | -577 | 37 | -93 | -33 | -56 |
| 70.0 | 447 | -501 | 577 | -652 | -54 | -75 |
| 72.0 | 429 | -448 | 1121 | -1139 | -19 | -18 |
| 74.0 | 360 | -394 | 1096 | -1132 | -34 | -36 |
| 76.0 | 437 | -469 | 1020 | -1072 | -32 | -52 |
| 78.0 | 596 | -624 | 845 | -912 | -28 | -67 |
| 80.0 | 701 | -756 | 659 | -725 | -55 | -66 |
| 82.0 | 1077 | -1104 | 456 | -510 | -27 | -54 |
| 84.0 | 933 | -967 | 529 | -593 | -34 | -64 |
| 86.0 | 1239 | -1273 | 445 | -519 | -34 | -74 |
| 88.0 | 1400 | -1433 | 659 | -734 | -33 | -75 |
| 90.0 | 1562 | -1617 | 667 | -736 | -55 | -69 |
| 92.0 | 1548 | -1558 | 496 | -536 | -10 | -40 |
| 94.0 | 1434 | -1470 | 628 | -695 | -36 | -67 |
| 96.0 | 1619 | -1662 | 412 | -480 | -43 | -68 |
| 98.0 | 1705 | -1735 | 276 | -362 | -30 | -86 |
| 100.0 | 2199 | -2221 | -7 | -68 | -22 | -75 |
| 102.0 | 2020 | -2055 | -150 | 109 | -35 | -41 |
| 104.0 | 1248 | -1290 | 329 | -376 | -42 | -47 |
| 106.0 | 1105 | -1135 | 460 | -526 | -30 | -66 |
| 108.0 | 1098 | -1128 | 560 | -635 | -30 | -75 |
| 110.0 | 1159 | -1203 | 906 | -971 | -44 | -65 |
| 112.0 | 1715 | -1747 | 979 | -1006 | -32 | -27 |
| 114.0 | 1978 | -2010 | 1217 | -1290 | -32 | -73 |
| 116.0 | 2252 | -2304 | 1330 | -1384 | -52 | -54 |
| 118.0 | 2484 | -2519 | 1334 | -1385 | -35 | -51 |

Northeast Technical Services, Inc.



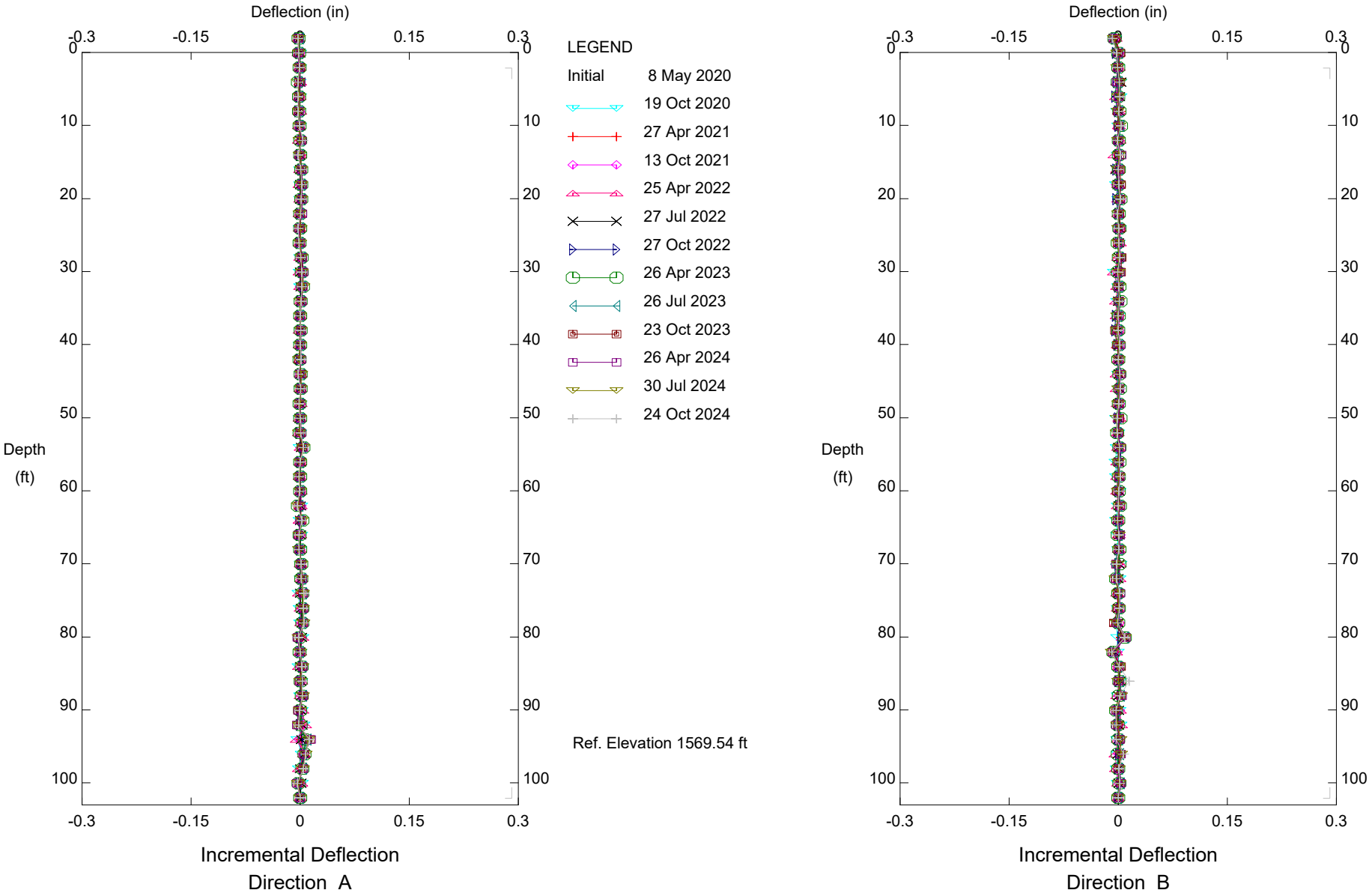

Inclinometer DH96-18

NW corner of Cell 2W, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-18.gtl

Northeast Technical Services, Inc.



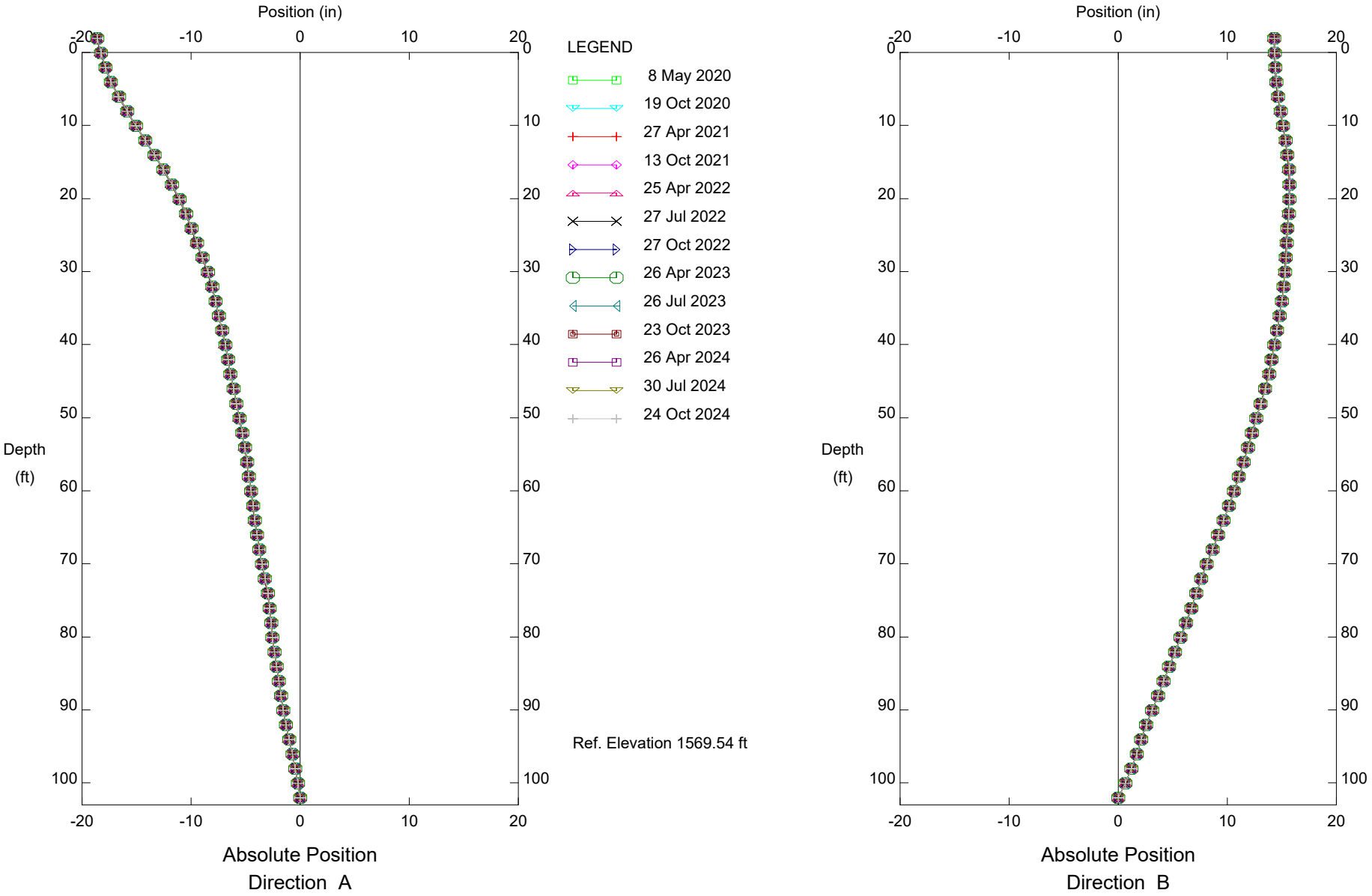

Inclinometer DH96-18

NW corner of Cell 2W, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-18.gtl

Northeast Technical Services, Inc.




Inclinometer DH96-18

NW corner of Cell 2W, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-18.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 14:55:43  Inclinometer DH96-18
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-18.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  NW corner of Cell 2W, Midslope
Project
Location  LTVSMC Tailings Basin
Stickup  2.94

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 05082020 | 1217 | | 0 | 1639179 | | | | |
| 10192020 | 1033 | | 0 | 1639179 | | | | |
| 04272021 | 1258 | | | 1639179 | | | | |
| 10132021 | 1017 | | | 1639179 | | | | |
| 04252022 | 1225 | | | 1639179 | | | | |
| 07272022 | 1122 | | | 1639179 | | | | |
| 10272022 | 0117 | | | 1639179 | | | | |
| 04262023 | 1358 | | | 1639179 | | | | |
| 07262023 | 1121 | | | 1639179 | | | | |
| 10232023 | 1226 | | | 1639179 | | | | |
| 04262024 | 0946 | | | 1639179 | | | | |
| 07302024 | 1325 | | | 1639179 | | | | |
| 10242024 | 1046 | | | 1639179 | | | | |

DH96-18 set 1, read 8 May 2020:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -1464 | 1393 | -164 | 102 | -71 | -62 |
| 4.0 | -1807 | 1750 | -276 | 194 | -57 | -82 |
| 6.0 | -2134 | 2043 | -401 | 369 | -91 | -32 |
| 8.0 | -2977 | 2946 | -740 | 656 | -31 | -84 |
| 10.0 | -3164 | 3100 | -960 | 879 | -64 | -81 |
| 12.0 | -3453 | 3393 | -1023 | 953 | -60 | -70 |
| 14.0 | -3642 | 3587 | -914 | 844 | -55 | -70 |
| 16.0 | -3545 | 3490 | -795 | 805 | -55 | 10 |
| 18.0 | -3401 | 3342 | -659 | 531 | -59 | -128 |
| 20.0 | -3219 | 3158 | -224 | 146 | -61 | -78 |
| 22.0 | -2911 | 2849 | 19 | -85 | -62 | -66 |
| 24.0 | -2532 | 2469 | 176 | -249 | -63 | -73 |
| 26.0 | -2142 | 2084 | 515 | -509 | -58 | 6 |
| 28.0 | -2075 | 2027 | 308 | -423 | -48 | -115 |
| 30.0 | -2180 | 2120 | 226 | -313 | -60 | -87 |
| 32.0 | -2081 | 2021 | 289 | -362 | -60 | -73 |
| 34.0 | -1721 | 1656 | 439 | -518 | -65 | -79 |
| 36.0 | -1388 | 1327 | 648 | -680 | -61 | -32 |
| 38.0 | -1330 | 1267 | 845 | -937 | -63 | -92 |
| 40.0 | -1246 | 1189 | 939 | -1019 | -57 | -80 |
| 42.0 | -1215 | 1155 | 980 | -1046 | -60 | -66 |
| 44.0 | -1103 | 1037 | 993 | -1059 | -66 | -66 |
| 46.0 | -948 | 879 | 999 | -1000 | -69 | -1 |
| 48.0 | -1213 | 1162 | 1438 | -1546 | -51 | -108 |
| 50.0 | -1108 | 1049 | 1648 | -1712 | -59 | -64 |
| 52.0 | -1170 | 1107 | 1672 | -1734 | -63 | -62 |
| 54.0 | -1135 | 1082 | 1558 | -1640 | -53 | -82 |
| 56.0 | -1014 | 972 | 1493 | -1503 | -42 | -10 |
| 58.0 | -855 | 778 | 1598 | -1721 | -77 | -123 |
| 60.0 | -782 | 711 | 1769 | -1838 | -71 | -69 |
| 62.0 | -832 | 773 | 1876 | -1944 | -59 | -68 |
| 64.0 | -781 | 720 | 1916 | -1980 | -61 | -64 |
| 66.0 | -670 | 611 | 2026 | -2062 | -59 | -36 |
| 68.0 | -898 | 838 | 1969 | -2064 | -60 | -95 |
| 70.0 | -932 | 869 | 2104 | -2178 | -63 | -74 |
| 72.0 | -1062 | 997 | 2220 | -2282 | -65 | -62 |
| 74.0 | -1107 | 1050 | 2142 | -2200 | -57 | -58 |
| 76.0 | -1125 | 1062 | 1887 | -1887 | -63 | 0 |
| 78.0 | -819 | 769 | 1737 | -1840 | -50 | -103 |
| 80.0 | -607 | 535 | 2002 | -2077 | -72 | -75 |
| 82.0 | -535 | 478 | 2062 | -2123 | -57 | -61 |
| 84.0 | -779 | 723 | 2105 | -2167 | -56 | -62 |
| 86.0 | -927 | 869 | 2212 | -2224 | -58 | -12 |
| 88.0 | -781 | 721 | 2181 | -2281 | -60 | -100 |
| 90.0 | -804 | 742 | 2101 | -2155 | -62 | -54 |
| 92.0 | -922 | 866 | 2135 | -2191 | -56 | -56 |
| 94.0 | -1071 | 1010 | 2211 | -2259 | -61 | -48 |
| 96.0 | -1261 | 1206 | 1950 | -1949 | -55 | 1 |
| 98.0 | -1389 | 1323 | 1587 | -1671 | -66 | -84 |
| 100.0 | -1111 | 1054 | 2087 | -2145 | -57 | -58 |
| 102.0 | -991 | 910 | 2355 | -2427 | -81 | -72 |
| 104.0 | -924 | 872 | 2607 | -2662 | -52 | -55 |

DH96-18 set 11, read 26 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -1453 | 1422 | -185 | 138 | -31 | -47 |
| 4.0 | -1798 | 1782 | -263 | 213 | -16 | -50 |
| 6.0 | -2117 | 2071 | -393 | 385 | -46 | -8 |
| 8.0 | -2966 | 2952 | -731 | 684 | -14 | -47 |
| 10.0 | -3159 | 3122 | -940 | 895 | -37 | -45 |
| 12.0 | -3446 | 3414 | -1013 | 961 | -32 | -52 |
| 14.0 | -3623 | 3611 | -893 | 862 | -12 | -31 |
| 16.0 | -3517 | 3499 | -791 | 814 | -18 | 23 |
| 18.0 | -3385 | 3371 | -613 | 541 | -14 | -72 |
| 20.0 | -3194 | 3166 | -200 | 163 | -28 | -37 |
| 22.0 | -2882 | 2853 | 41 | -74 | -29 | -33 |
| 24.0 | -2503 | 2477 | 204 | -247 | -26 | -43 |
| 26.0 | -2113 | 2090 | 517 | -516 | -23 | 1 |
| 28.0 | -2064 | 2049 | 325 | -409 | -15 | -84 |
| 30.0 | -2160 | 2141 | 251 | -299 | -19 | -48 |
| 32.0 | -2049 | 2029 | 317 | -357 | -20 | -40 |
| 34.0 | -1685 | 1657 | 469 | -509 | -28 | -40 |
| 36.0 | -1354 | 1328 | 660 | -676 | -26 | -16 |
| 38.0 | -1299 | 1280 | 872 | -923 | -19 | -51 |
| 40.0 | -1224 | 1208 | 962 | -1002 | -16 | -40 |
| 42.0 | -1190 | 1165 | 983 | -1037 | -25 | -54 |
| 44.0 | -1080 | 1056 | 1017 | -1057 | -24 | -40 |
| 46.0 | -914 | 903 | 1004 | -997 | -11 | 7 |
| 48.0 | -1207 | 1177 | 1480 | -1535 | -30 | -55 |
| 50.0 | -1085 | 1060 | 1673 | -1700 | -25 | -27 |
| 52.0 | -1157 | 1126 | 1691 | -1726 | -31 | -35 |
| 54.0 | -1109 | 1100 | 1572 | -1623 | -9 | -51 |
| 56.0 | -993 | 983 | 1492 | -1497 | -10 | -5 |
| 58.0 | -809 | 787 | 1648 | -1702 | -22 | -54 |
| 60.0 | -766 | 731 | 1792 | -1822 | -35 | -30 |
| 62.0 | -816 | 791 | 1908 | -1930 | -25 | -22 |
| 64.0 | -760 | 742 | 1935 | -1969 | -18 | -34 |
| 66.0 | -658 | 620 | 2042 | -2068 | -38 | -26 |
| 68.0 | -874 | 865 | 1993 | -2034 | -9 | -41 |
| 70.0 | -918 | 903 | 2137 | -2166 | -15 | -29 |
| 72.0 | -1047 | 1021 | 2248 | -2266 | -26 | -18 |
| 74.0 | -1087 | 1062 | 2158 | -2162 | -25 | -4 |
| 76.0 | -1105 | 1059 | 1886 | -1854 | -46 | 32 |
| 78.0 | -769 | 782 | 1774 | -1827 | 13 | -53 |
| 80.0 | -569 | 536 | 2033 | -2065 | -33 | -32 |
| 82.0 | -494 | 480 | 2072 | -2099 | -14 | -27 |
| 84.0 | -778 | 758 | 2170 | -2190 | -20 | -20 |
| 86.0 | -917 | 888 | 2196 | -2178 | -29 | 18 |
| 88.0 | -740 | 728 | 2212 | -2256 | -12 | -44 |
| 90.0 | -787 | 764 | 2116 | -2140 | -23 | -24 |
| 92.0 | -888 | 867 | 2173 | -2194 | -21 | -21 |
| 94.0 | -1063 | 1036 | 2207 | -2231 | -27 | -24 |
| 96.0 | -1268 | 1239 | 1962 | -1912 | -29 | 50 |
| 98.0 | -1299 | 1289 | 1603 | -1674 | -10 | -71 |
| 100.0 | -1075 | 1048 | 2118 | -2144 | -27 | -26 |
| 102.0 | -950 | 911 | 2379 | -2417 | -39 | -38 |
| 104.0 | -925 | 907 | 2634 | -2668 | -18 | -34 |

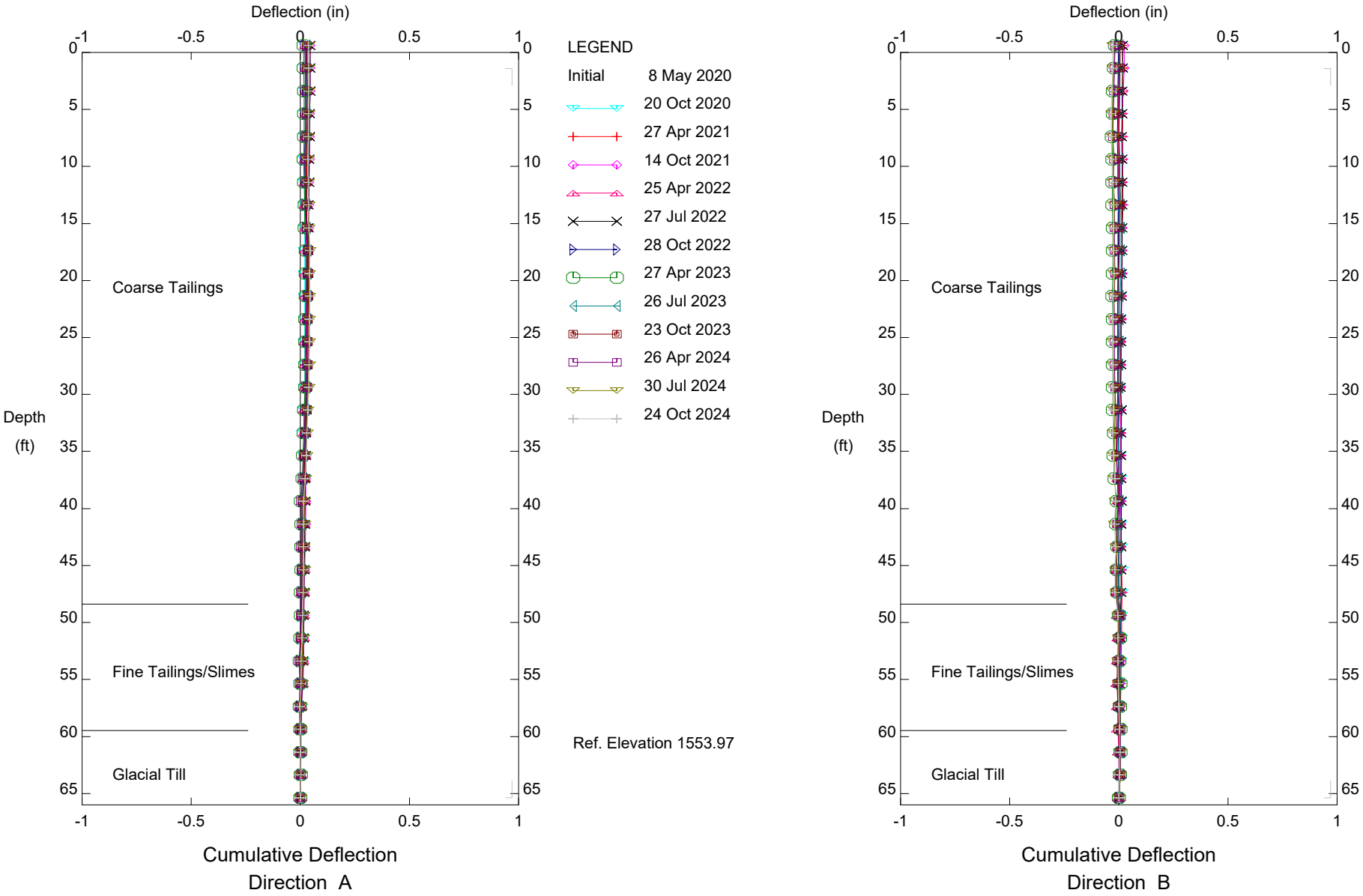
DH96-18 set 12, read 30 Jul 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -1447 | 1420 | -191 | 122 | -27 | -69 |
| 4.0 | -1790 | 1778 | -266 | 215 | -12 | -51 |
| 6.0 | -2115 | 2070 | -406 | 375 | -45 | -31 |
| 8.0 | -2968 | 2981 | -722 | 653 | 13 | -69 |
| 10.0 | -3144 | 3126 | -943 | 898 | -18 | -45 |
| 12.0 | -3444 | 3416 | -1018 | 967 | -28 | -51 |
| 14.0 | -3625 | 3613 | -896 | 848 | -12 | -48 |
| 16.0 | -3533 | 3508 | -791 | 811 | -25 | 20 |
| 18.0 | -3366 | 3383 | -649 | 532 | 17 | -117 |
| 20.0 | -3190 | 3172 | -213 | 160 | -18 | -53 |
| 22.0 | -2883 | 2864 | 20 | -83 | -19 | -63 |
| 24.0 | -2506 | 2483 | 193 | -250 | -23 | -57 |
| 26.0 | -2134 | 2096 | 518 | -503 | -38 | 15 |
| 28.0 | -2041 | 2057 | 320 | -409 | 16 | -89 |
| 30.0 | -2159 | 2144 | 243 | -296 | -15 | -53 |
| 32.0 | -2048 | 2040 | 304 | -355 | -8 | -51 |
| 34.0 | -1689 | 1669 | 454 | -512 | -20 | -58 |
| 36.0 | -1359 | 1320 | 658 | -681 | -39 | -23 |
| 38.0 | -1296 | 1300 | 855 | -934 | 4 | -79 |
| 40.0 | -1224 | 1208 | 949 | -999 | -16 | -50 |
| 42.0 | -1192 | 1172 | 979 | -1032 | -20 | -53 |
| 44.0 | -1077 | 1063 | 1004 | -1052 | -14 | -48 |
| 46.0 | -942 | 900 | 1006 | -997 | -42 | 9 |
| 48.0 | -1176 | 1189 | 1453 | -1545 | 13 | -92 |
| 50.0 | -1084 | 1066 | 1662 | -1699 | -18 | -37 |
| 52.0 | -1152 | 1127 | 1683 | -1725 | -25 | -42 |
| 54.0 | -1111 | 1105 | 1564 | -1618 | -6 | -54 |
| 56.0 | -1010 | 991 | 1490 | -1490 | -19 | 0 |
| 58.0 | -801 | 796 | 1623 | -1707 | -5 | -84 |
| 60.0 | -760 | 736 | 1783 | -1826 | -24 | -43 |
| 62.0 | -815 | 796 | 1892 | -1932 | -19 | -40 |
| 64.0 | -757 | 744 | 1928 | -1964 | -13 | -36 |
| 66.0 | -672 | 632 | 2040 | -2058 | -40 | -18 |
| 68.0 | -855 | 860 | 1979 | -2040 | 5 | -61 |
| 70.0 | -910 | 900 | 2123 | -2167 | -10 | -44 |
| 72.0 | -1043 | 1027 | 2236 | -2274 | -16 | -38 |
| 74.0 | -1079 | 1065 | 2155 | -2181 | -14 | -26 |
| 76.0 | -1099 | 1070 | 1889 | -1855 | -29 | 34 |
| 78.0 | -778 | 777 | 1755 | -1823 | -1 | -68 |
| 80.0 | -572 | 540 | 2020 | -2068 | -32 | -48 |
| 82.0 | -493 | 480 | 2057 | -2110 | -13 | -53 |
| 84.0 | -764 | 754 | 2159 | -2190 | -10 | -31 |
| 86.0 | -904 | 891 | 2192 | -2172 | -13 | 20 |
| 88.0 | -746 | 733 | 2196 | -2272 | -13 | -76 |
| 90.0 | -781 | 763 | 2111 | -2148 | -18 | -37 |
| 92.0 | -885 | 870 | 2158 | -2197 | -15 | -39 |
| 94.0 | -1050 | 1032 | 2210 | -2234 | -18 | -24 |
| 96.0 | -1241 | 1236 | 1957 | -1927 | -5 | 30 |
| 98.0 | -1322 | 1295 | 1598 | -1682 | -27 | -84 |
| 100.0 | -1059 | 1045 | 2112 | -2149 | -14 | -37 |
| 102.0 | -950 | 917 | 2375 | -2412 | -33 | -37 |
| 104.0 | -914 | 907 | 2616 | -2667 | -7 | -51 |

DH96-18 set 13, read 24 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -1465 | 1419 | -208 | 126 | -46 | -82 |
| 4.0 | -1805 | 1770 | -280 | 206 | -35 | -74 |
| 6.0 | -2124 | 2061 | -415 | 362 | -63 | -53 |
| 8.0 | -2984 | 2965 | -740 | 643 | -19 | -97 |
| 10.0 | -3163 | 3123 | -952 | 869 | -40 | -83 |
| 12.0 | -3456 | 3414 | -1033 | 938 | -42 | -95 |
| 14.0 | -3634 | 3604 | -892 | 834 | -30 | -58 |
| 16.0 | -3528 | 3476 | -814 | 801 | -52 | -13 |
| 18.0 | -3394 | 3372 | -637 | 530 | -22 | -107 |
| 20.0 | -3203 | 3165 | -224 | 145 | -38 | -79 |
| 22.0 | -2892 | 2850 | 15 | -96 | -42 | -81 |
| 24.0 | -2513 | 2476 | 180 | -272 | -37 | -92 |
| 26.0 | -2135 | 2082 | 490 | -524 | -53 | -34 |
| 28.0 | -2074 | 2053 | 309 | -431 | -21 | -122 |
| 30.0 | -2176 | 2137 | 237 | -306 | -39 | -69 |
| 32.0 | -2064 | 2030 | 297 | -371 | -34 | -74 |
| 34.0 | -1700 | 1659 | 475 | -478 | -41 | -3 |
| 36.0 | -1370 | 1325 | 642 | -695 | -45 | -53 |
| 38.0 | -1305 | 1280 | 852 | -943 | -25 | -91 |
| 40.0 | -1234 | 1201 | 936 | -1021 | -33 | -85 |
| 42.0 | -1202 | 1161 | 979 | -1050 | -41 | -71 |
| 44.0 | -1090 | 1049 | 990 | -1080 | -41 | -90 |
| 46.0 | -932 | 883 | 987 | -1013 | -49 | -26 |
| 48.0 | -1214 | 1187 | 1451 | -1549 | -27 | -98 |
| 50.0 | -1094 | 1055 | 1651 | -1734 | -39 | -83 |
| 52.0 | -1166 | 1123 | 1665 | -1748 | -43 | -83 |
| 54.0 | -1122 | 1094 | 1549 | -1636 | -28 | -87 |
| 56.0 | -1016 | 963 | 1474 | -1512 | -53 | -38 |
| 58.0 | -810 | 783 | 1611 | -1720 | -27 | -109 |
| 60.0 | -774 | 722 | 1770 | -1852 | -52 | -82 |
| 62.0 | -828 | 787 | 1882 | -1961 | -41 | -79 |
| 64.0 | -769 | 737 | 1909 | -1994 | -32 | -85 |
| 66.0 | -682 | 629 | 2022 | -2066 | -53 | -44 |
| 68.0 | -865 | 850 | 1966 | -2061 | -15 | -95 |
| 70.0 | -922 | 891 | 2108 | -2181 | -31 | -73 |
| 72.0 | -1057 | 1017 | 2221 | -2289 | -40 | -68 |
| 74.0 | -1092 | 1055 | 2133 | -2192 | -37 | -59 |
| 76.0 | -1113 | 1059 | 1872 | -1883 | -54 | -11 |
| 78.0 | -779 | 767 | 1744 | -1849 | -12 | -105 |
| 80.0 | -576 | 531 | 2005 | -2087 | -45 | -82 |
| 82.0 | -502 | 469 | 2048 | -2129 | -33 | -81 |
| 84.0 | -776 | 746 | 2142 | -2208 | -30 | -66 |
| 86.0 | -918 | 881 | 2176 | -2185 | -37 | -9 |
| 88.0 | -754 | 728 | 2188 | -2284 | -26 | -96 |
| 90.0 | -793 | 726 | 2095 | -2285 | -67 | -190 |
| 92.0 | -897 | 863 | 2142 | -2201 | -34 | -59 |
| 94.0 | -1066 | 1020 | 2182 | -2261 | -46 | -79 |
| 96.0 | -1266 | 1222 | 1936 | -1938 | -44 | -2 |
| 98.0 | -1322 | 1284 | 1572 | -1663 | -38 | -91 |
| 100.0 | -1073 | 1030 | 2122 | -2173 | -43 | -51 |
| 102.0 | -959 | 907 | 2350 | -2436 | -52 | -86 |
| 104.0 | -928 | 898 | 2609 | -2680 | -30 | -71 |

Northeast Technical Services, Inc.



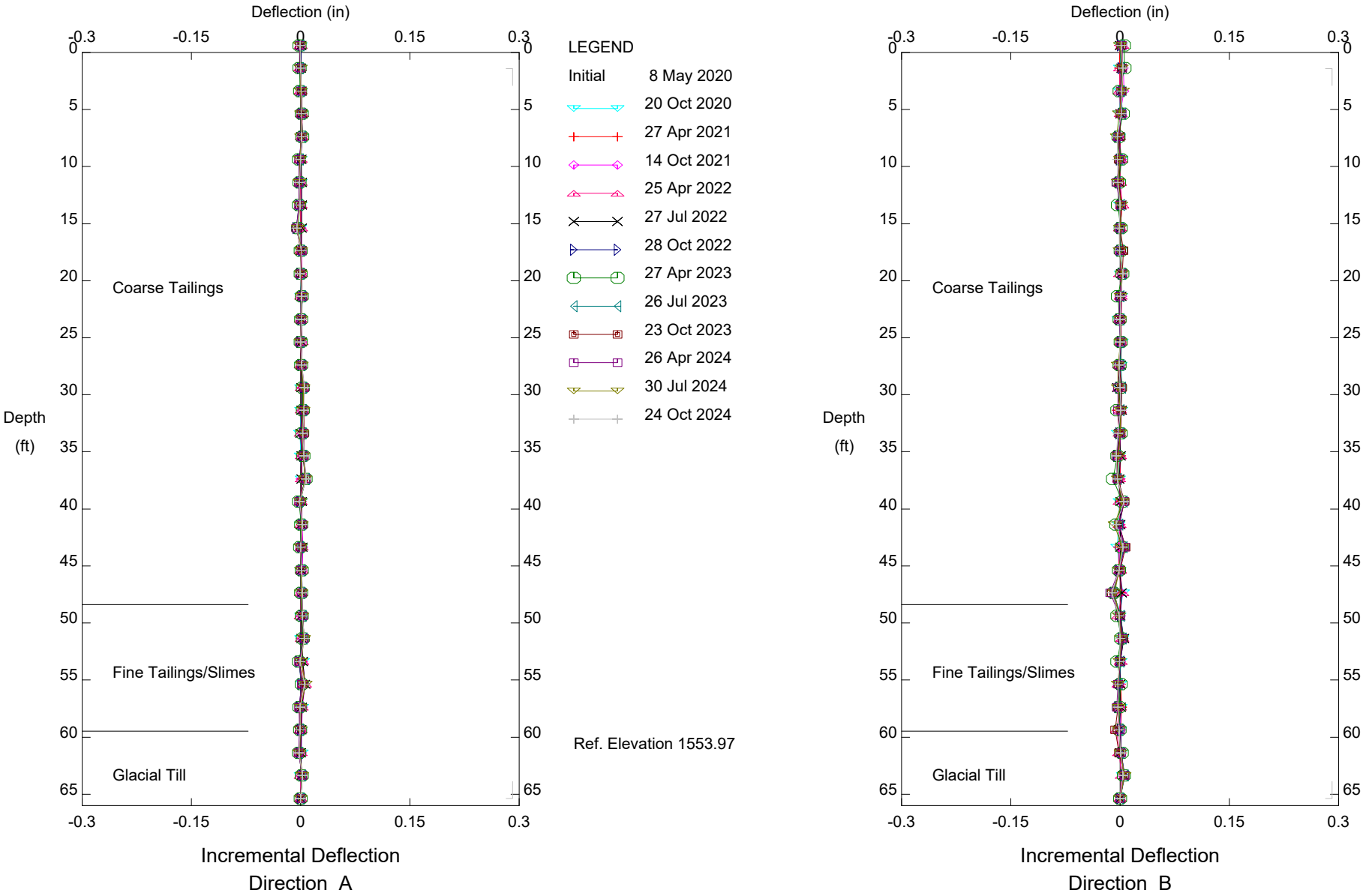

Inclinometer DH96-28

NE corner of Cell 2W, Toe

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-28.gtl

Northeast Technical Services, Inc.



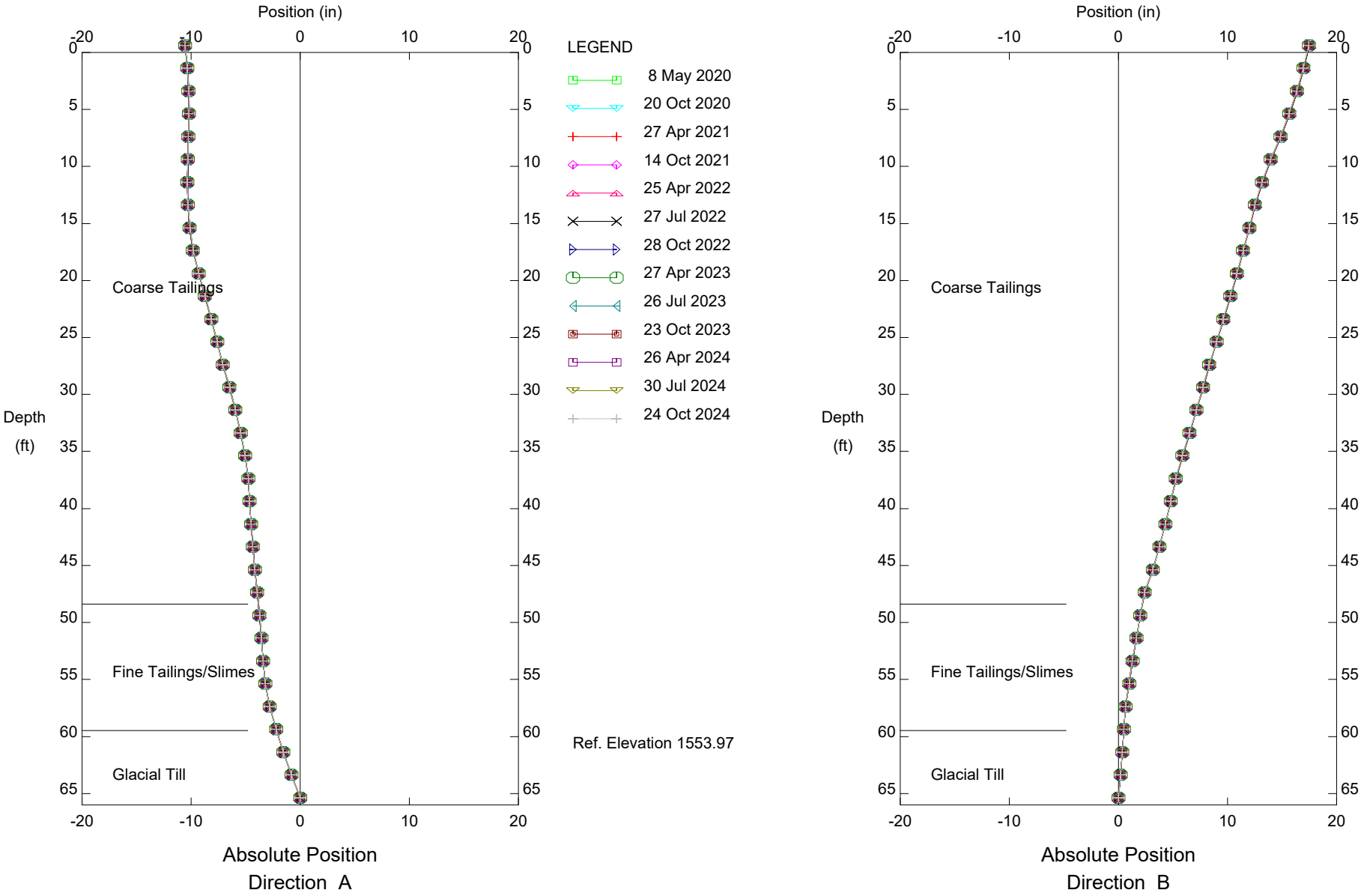

Inclinometer DH96-28

NE corner of Cell 2W, Toe

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-28.gtl

Northeast Technical Services, Inc.




Inclinometer DH96-28

NE corner of Cell 2W, Toe

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-28.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 14:56:27  Inclinometer DH96-28
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_DH96-28.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  NE corner of Cell 2W, Toe
Project
Location  LTVSMC Tailings Basin
Stickup  1.63 ft

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 05082020 | 1121 | | 0 | 1639179 | | | | |
| 10202020 | 1138 | | 0 | 1639179 | | | | |
| 04272021 | 0203 | | | 1639179 | | | | |
| 10142021 | 1054 | | | 1639179 | | | | |
| 04252022 | 1158 | | | 1639179 | | | | |
| 07272022 | 1036 | | | 1639179 | | | | |
| 10282022 | 1037 | | | 1639179 | | | | |
| 04272023 | 0952 | | | 1639179 | | | | |
| 07262023 | 1053 | | | 1639179 | | | | |
| 10232023 | 1146 | | | 1639179 | | | | |
| 04262024 | 1012 | | | 1639179 | | | | |
| 07302024 | 1259 | | | 1639179 | | | | |
| 10242024 | 0957 | | | 1639179 | | | | |

DH96-28 set 1, read 8 May 2020:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -901 | 843 | 1986 | -2076 | -58 | -90 |
| 4.0 | -533 | 471 | 2454 | -2522 | -62 | -68 |
| 6.0 | -161 | 95 | 2890 | -2959 | -66 | -69 |
| 8.0 | 188 | -248 | 3359 | -3360 | -60 | -1 |
| 10.0 | 145 | -201 | 3657 | -3781 | -56 | -124 |
| 12.0 | 185 | -237 | 3290 | -3357 | -52 | -67 |
| 14.0 | -189 | 124 | 2674 | -2738 | -65 | -64 |
| 16.0 | -720 | 672 | 2193 | -2271 | -48 | -78 |
| 18.0 | -1288 | 1225 | 2304 | -2348 | -63 | -44 |
| 20.0 | -2261 | 2216 | 2289 | -2380 | -45 | -91 |
| 22.0 | -2369 | 2304 | 2508 | -2584 | -65 | -76 |
| 24.0 | -2406 | 2341 | 2596 | -2678 | -65 | -82 |
| 26.0 | -2312 | 2260 | 2607 | -2692 | -52 | -85 |
| 28.0 | -2208 | 2152 | 2737 | -2748 | -56 | -11 |
| 30.0 | -2589 | 2547 | 2362 | -2483 | -42 | -121 |
| 32.0 | -2276 | 2215 | 2500 | -2591 | -61 | -91 |
| 34.0 | -2040 | 1991 | 2578 | -2662 | -49 | -84 |
| 36.0 | -1703 | 1648 | 2588 | -2686 | -55 | -98 |
| 38.0 | -1305 | 1252 | 2581 | -2645 | -53 | -64 |
| 40.0 | -494 | 431 | 1898 | -2000 | -63 | -102 |
| 42.0 | -626 | 557 | 2023 | -2099 | -69 | -76 |
| 44.0 | -736 | 696 | 2232 | -2324 | -40 | -92 |
| 46.0 | -857 | 798 | 2482 | -2535 | -59 | -53 |
| 48.0 | -889 | 831 | 3120 | -3111 | -58 | 9 |
| 50.0 | -874 | 841 | 1627 | -1705 | -33 | -78 |
| 52.0 | -779 | 722 | 1470 | -1561 | -57 | -91 |
| 54.0 | -676 | 634 | 1545 | -1594 | -42 | -49 |
| 56.0 | -870 | 822 | 1184 | -1255 | -48 | -71 |
| 58.0 | -1600 | 1531 | 1425 | -1466 | -69 | -41 |
| 60.0 | -2571 | 2526 | 582 | -674 | -45 | -92 |
| 62.0 | -2835 | 2775 | 541 | -624 | -60 | -83 |
| 64.0 | -3165 | 3118 | 631 | -709 | -47 | -78 |
| 66.0 | -3271 | 3215 | 719 | -793 | -56 | -74 |

DH96-28 set 11, read 26 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -896 | 863 | 2055 | -2032 | -33 | 23 |
| 4.0 | -521 | 488 | 2498 | -2505 | -33 | -7 |
| 6.0 | -144 | 110 | 2905 | -2950 | -34 | -45 |
| 8.0 | 206 | -236 | 3384 | -3356 | -30 | 28 |
| 10.0 | 160 | -198 | 3674 | -3737 | -38 | -63 |
| 12.0 | 183 | -222 | 3322 | -3329 | -39 | -7 |
| 14.0 | -185 | 144 | 2672 | -2698 | -41 | -26 |
| 16.0 | -719 | 694 | 2216 | -2249 | -25 | -33 |
| 18.0 | -1301 | 1263 | 2323 | -2330 | -38 | -7 |
| 20.0 | -2244 | 2223 | 2307 | -2357 | -21 | -50 |
| 22.0 | -2359 | 2323 | 2537 | -2579 | -36 | -42 |
| 24.0 | -2379 | 2350 | 2617 | -2650 | -29 | -33 |
| 26.0 | -2293 | 2271 | 2633 | -2655 | -22 | -22 |
| 28.0 | -2203 | 2162 | 2759 | -2731 | -41 | 28 |
| 30.0 | -2563 | 2559 | 2375 | -2457 | -4 | -82 |
| 32.0 | -2240 | 2205 | 2504 | -2565 | -35 | -61 |
| 34.0 | -2009 | 1989 | 2593 | -2622 | -20 | -29 |
| 36.0 | -1675 | 1644 | 2603 | -2660 | -31 | -57 |
| 38.0 | -1275 | 1244 | 2578 | -2606 | -31 | -28 |
| 40.0 | -450 | 413 | 1900 | -1966 | -37 | -66 |
| 42.0 | -617 | 583 | 2066 | -2099 | -34 | -33 |
| 44.0 | -715 | 699 | 2248 | -2296 | -16 | -48 |
| 46.0 | -845 | 819 | 2522 | -2549 | -26 | -27 |
| 48.0 | -880 | 835 | 3131 | -3090 | -45 | 41 |
| 50.0 | -851 | 851 | 1579 | -1639 | 0 | -60 |
| 52.0 | -757 | 721 | 1489 | -1538 | -36 | -49 |
| 54.0 | -648 | 622 | 1557 | -1606 | -26 | -49 |
| 56.0 | -869 | 843 | 1199 | -1237 | -26 | -38 |
| 58.0 | -1582 | 1539 | 1437 | -1431 | -43 | 6 |
| 60.0 | -2567 | 2550 | 577 | -644 | -17 | -67 |
| 62.0 | -2825 | 2795 | 563 | -601 | -30 | -38 |
| 64.0 | -3165 | 3144 | 654 | -697 | -21 | -43 |
| 66.0 | -3253 | 3213 | 746 | -814 | -40 | -68 |

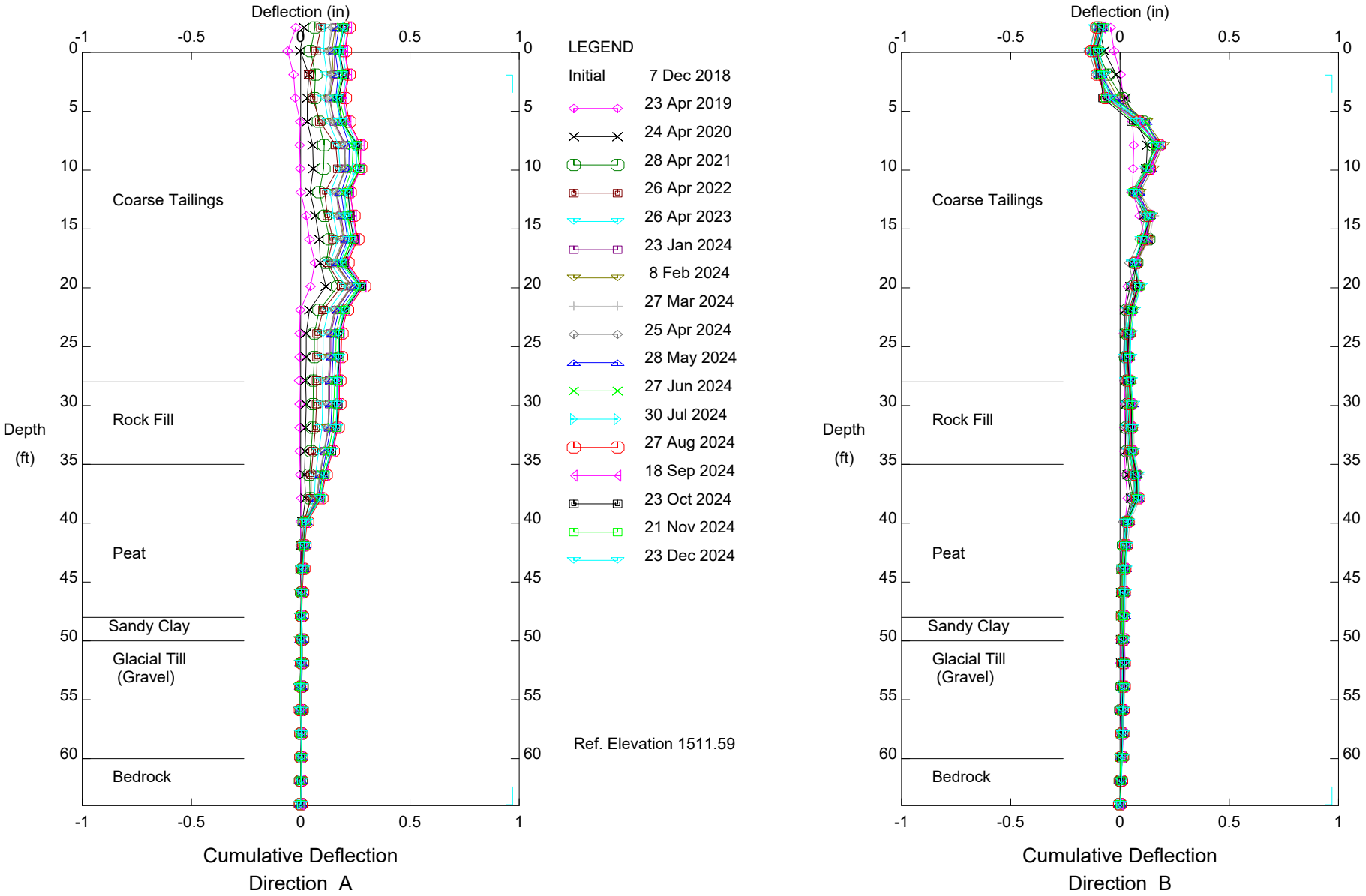
DH96-28 set 12, read 30 Jul 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -880 | 869 | 2004 | -2055 | -11 | -51 |
| 4.0 | -511 | 496 | 2481 | -2513 | -15 | -32 |
| 6.0 | -140 | 117 | 2927 | -2955 | -23 | -28 |
| 8.0 | 219 | -224 | 3367 | -3337 | -5 | 30 |
| 10.0 | 170 | -185 | 3666 | -3736 | -15 | -70 |
| 12.0 | 201 | -212 | 3302 | -3345 | -11 | -43 |
| 14.0 | -174 | 151 | 2675 | -2713 | -23 | -38 |
| 16.0 | -702 | 694 | 2218 | -2257 | -8 | -39 |
| 18.0 | -1281 | 1261 | 2326 | -2324 | -20 | 2 |
| 20.0 | -2240 | 2233 | 2302 | -2358 | -7 | -56 |
| 22.0 | -2346 | 2327 | 2528 | -2581 | -19 | -53 |
| 24.0 | -2373 | 2362 | 2614 | -2664 | -11 | -50 |
| 26.0 | -2286 | 2279 | 2631 | -2671 | -7 | -40 |
| 28.0 | -2187 | 2174 | 2753 | -2736 | -13 | 17 |
| 30.0 | -2563 | 2560 | 2375 | -2445 | -3 | -70 |
| 32.0 | -2240 | 2218 | 2524 | -2544 | -22 | -20 |
| 34.0 | -2007 | 1994 | 2605 | -2643 | -13 | -38 |
| 36.0 | -1670 | 1660 | 2614 | -2657 | -10 | -43 |
| 38.0 | -1262 | 1264 | 2590 | -2616 | 2 | -26 |
| 40.0 | -450 | 423 | 1902 | -1969 | -27 | -67 |
| 42.0 | -602 | 584 | 2054 | -2093 | -18 | -39 |
| 44.0 | -707 | 712 | 2246 | -2247 | 5 | -1 |
| 46.0 | -831 | 826 | 2506 | -2527 | -5 | -21 |
| 48.0 | -866 | 845 | 3124 | -3094 | -21 | 30 |
| 50.0 | -844 | 862 | 1606 | -1662 | 18 | -56 |
| 52.0 | -749 | 734 | 1487 | -1532 | -15 | -45 |
| 54.0 | -640 | 635 | 1558 | -1593 | -5 | -35 |
| 56.0 | -847 | 839 | 1197 | -1233 | -8 | -36 |
| 58.0 | -1547 | 1527 | 1431 | -1434 | -20 | -3 |
| 60.0 | -2549 | 2548 | 588 | -649 | -1 | -61 |
| 62.0 | -2812 | 2799 | 555 | -596 | -13 | -41 |
| 64.0 | -3147 | 3149 | 649 | -696 | 2 | -47 |
| 66.0 | -3244 | 3225 | 747 | -812 | -19 | -65 |

DH96-28 set 13, read 24 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -888 | 862 | 1998 | -2076 | -26 | -78 |
| 4.0 | -517 | 490 | 2474 | -2532 | -27 | -58 |
| 6.0 | -140 | 112 | 2889 | -2979 | -28 | -90 |
| 8.0 | 212 | -231 | 3364 | -3366 | -19 | -2 |
| 10.0 | 166 | -190 | 3660 | -3746 | -24 | -86 |
| 12.0 | 201 | -218 | 3276 | -3341 | -17 | -65 |
| 14.0 | -177 | 149 | 2665 | -2720 | -28 | -55 |
| 16.0 | -706 | 695 | 2202 | -2264 | -11 | -62 |
| 18.0 | -1290 | 1265 | 2309 | -2333 | -25 | -24 |
| 20.0 | -2244 | 2229 | 2293 | -2368 | -15 | -75 |
| 22.0 | -2353 | 2325 | 2522 | -2599 | -28 | -77 |
| 24.0 | -2376 | 2356 | 2605 | -2676 | -20 | -71 |
| 26.0 | -2291 | 2272 | 2615 | -2684 | -19 | -69 |
| 28.0 | -2193 | 2165 | 2741 | -2747 | -28 | -6 |
| 30.0 | -2568 | 2557 | 2367 | -2467 | -11 | -100 |
| 32.0 | -2241 | 2207 | 2513 | -2575 | -34 | -62 |
| 34.0 | -2008 | 1985 | 2588 | -2657 | -23 | -69 |
| 36.0 | -1673 | 1651 | 2593 | -2659 | -22 | -66 |
| 38.0 | -1273 | 1245 | 2557 | -2623 | -28 | -66 |
| 40.0 | -448 | 413 | 1884 | -1981 | -35 | -97 |
| 42.0 | -611 | 584 | 2052 | -2115 | -27 | -63 |
| 44.0 | -711 | 704 | 2234 | -2279 | -7 | -45 |
| 46.0 | -840 | 814 | 2502 | -2548 | -26 | -46 |
| 48.0 | -873 | 836 | 3111 | -3105 | -37 | 6 |
| 50.0 | -847 | 850 | 1575 | -1665 | 3 | -90 |
| 52.0 | -752 | 728 | 1476 | -1543 | -24 | -67 |
| 54.0 | -643 | 622 | 1533 | -1609 | -21 | -76 |
| 56.0 | -861 | 838 | 1183 | -1248 | -23 | -65 |
| 58.0 | -1563 | 1525 | 1422 | -1443 | -38 | -21 |
| 60.0 | -2564 | 2542 | 571 | -658 | -22 | -87 |
| 62.0 | -2821 | 2796 | 542 | -610 | -25 | -68 |
| 64.0 | -3158 | 3143 | 640 | -705 | -15 | -65 |
| 66.0 | -3249 | 3219 | 734 | -808 | -30 | -74 |

Northeast Technical Services, Inc.



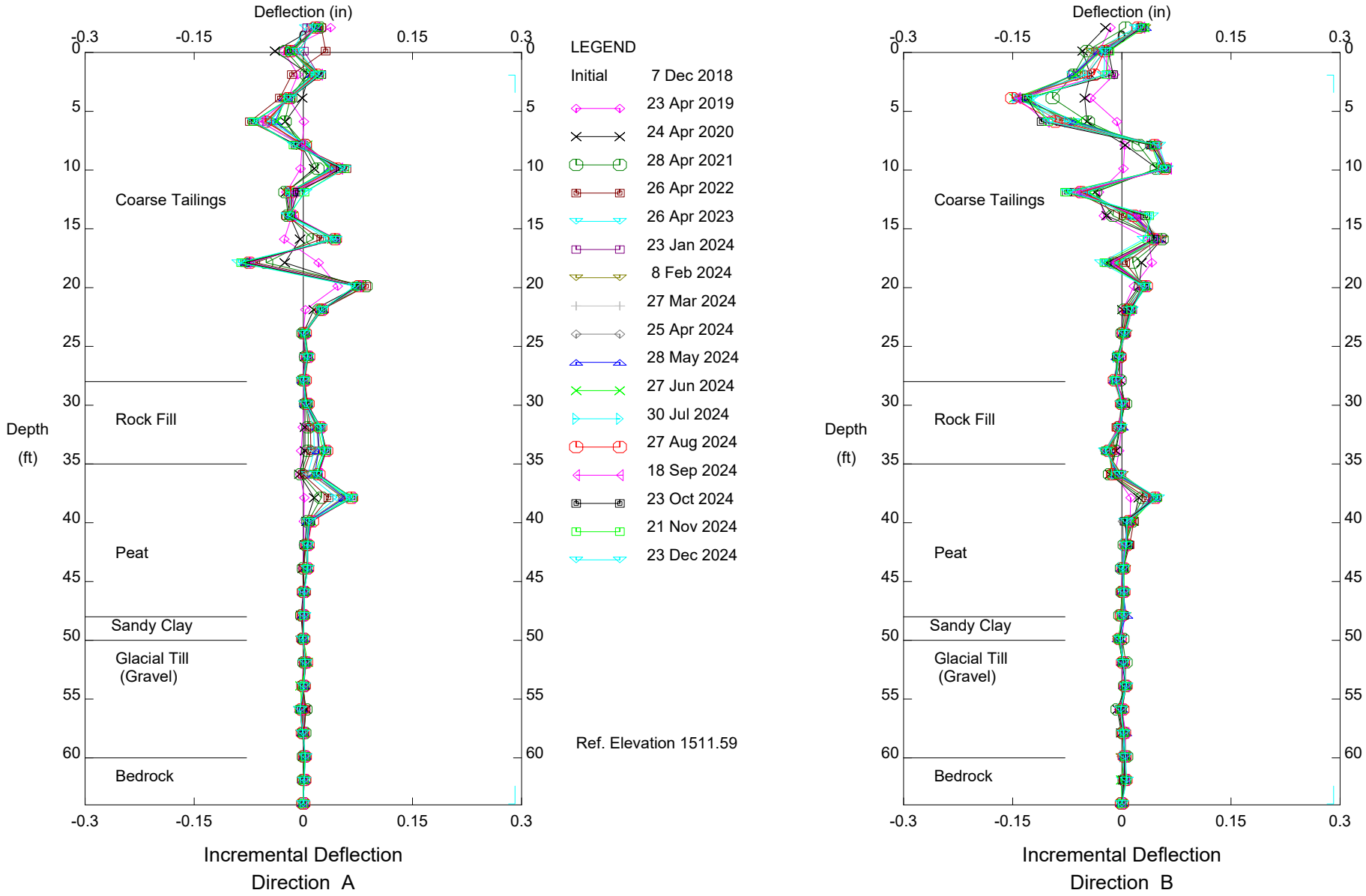

Inclinometer F-1

North Side of Cell 2E, Toe

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-1.gtl

Northeast Technical Services, Inc.



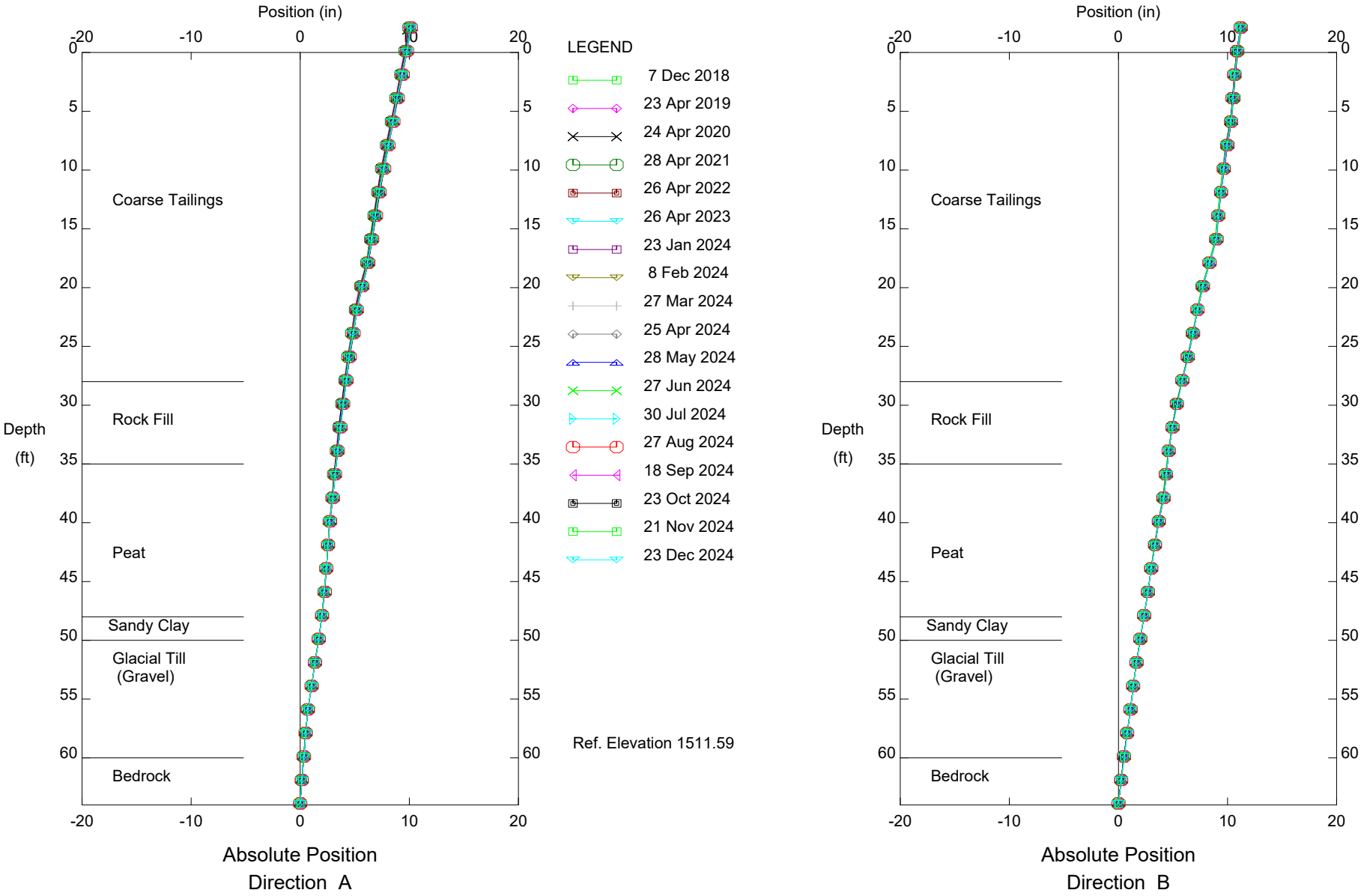

Inclinometer F-1

North Side of Cell 2E, Toe

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-1.gtl

Northeast Technical Services, Inc.




Inclinometer F-1

North Side of Cell 2E, Toe

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-1.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 14:57:16  Inclinometer F-1
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-1.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  North Side of Cell 2E, Toe
Project
Location  LTVSMC Tailings Basin
Stickup  3.12 ft

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 12072018 | 1417 | | 0 | 1639179 | | | | |
| 04232019 | 1238 | | 0 | 1639179 | | | | |
| 04242020 | 0948 | | 0 | 1639179 | | | | |
| 04282021 | 1054 | | | 1639179 | | | | |
| 04262022 | 0227 | | | 1639179 | | | | |
| 04262023 | 1320 | | | 1639179 | | | | |
| 01232024 | 1209 | | | 1639179 | | | | |
| 02082024 | 1127 | | | 1639179 | | | | |
| 03272024 | 1059 | | | 1639179 | | | | |
| 04252024 | 1041 | | | 1639179 | | | | |
| 05282024 | 1158 | | | 1639179 | | | | |
| 06272024 | 0926 | | | 1639179 | | | | |
| 07302024 | 1142 | | | 1639179 | | | | |
| 08272024 | 0907 | | | 1639179 | | | | |
| 09182024 | 1121 | | | 1639179 | | | | |
| 10232024 | 1304 | | | 1639179 | | | | |
| 11212024 | 1148 | | | 1639179 | | | | |
| 12232024 | 1153 | | | 1639179 | | | | |

F-1 set 1, read 7 Dec 2018:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1312 | -1373 | 1256 | -1326 | -61 | -70 |
| 4.0 | 1798 | -1837 | 1059 | -1137 | -39 | -78 |
| 6.0 | 1735 | -1769 | 686 | -792 | -34 | -106 |
| 8.0 | 1831 | -1875 | 1350 | -1368 | -44 | -18 |
| 10.0 | 1918 | -1964 | 1692 | -1772 | -46 | -80 |
| 12.0 | 1806 | -1846 | 1037 | -1109 | -40 | -72 |
| 14.0 | 1430 | -1478 | 864 | -963 | -48 | -99 |
| 16.0 | 1453 | -1489 | 1164 | -1256 | -36 | -92 |
| 18.0 | 1470 | -1517 | 724 | -807 | -47 | -83 |
| 20.0 | 1286 | -1336 | 2258 | -2317 | -50 | -59 |
| 22.0 | 2477 | -2539 | 2634 | -2725 | -62 | -91 |
| 24.0 | 1735 | -1769 | 1823 | -1889 | -34 | -66 |
| 26.0 | 1275 | -1303 | 1692 | -1756 | -28 | -64 |
| 28.0 | 1431 | -1474 | 1871 | -1936 | -43 | -65 |
| 30.0 | 1157 | -1202 | 2204 | -2265 | -45 | -61 |
| 32.0 | 1177 | -1215 | 1967 | -2056 | -38 | -89 |
| 34.0 | 1029 | -1089 | 1717 | -1781 | -60 | -64 |
| 36.0 | 902 | -939 | 1394 | -1476 | -37 | -82 |
| 38.0 | 910 | -963 | 1037 | -1071 | -53 | -34 |
| 40.0 | 712 | -738 | 1015 | -1068 | -26 | -53 |
| 42.0 | 857 | -902 | 1638 | -1724 | -45 | -86 |
| 44.0 | 676 | -733 | 1400 | -1442 | -57 | -42 |
| 46.0 | 559 | -598 | 1255 | -1350 | -39 | -95 |
| 48.0 | 678 | -739 | 1215 | -1291 | -61 | -76 |
| 50.0 | 915 | -949 | 1475 | -1536 | -34 | -61 |
| 52.0 | 1250 | -1288 | 1436 | -1525 | -38 | -89 |
| 54.0 | 1327 | -1377 | 1336 | -1415 | -50 | -79 |
| 56.0 | 1367 | -1406 | 1213 | -1294 | -39 | -81 |
| 58.0 | 1376 | -1398 | 1036 | -1139 | -22 | -103 |
| 60.0 | 881 | -955 | 1201 | -1244 | -74 | -43 |
| 62.0 | 635 | -678 | 1110 | -1199 | -43 | -89 |
| 64.0 | 607 | -663 | 1093 | -1186 | -56 | -93 |
| 66.0 | 692 | -726 | 966 | -1051 | -34 | -85 |

F-1 set 31, read 23 Jan 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1357 | -1371 | 1347 | -1466 | -14 | -119 |
| 4.0 | 1800 | -1843 | 922 | -998 | -43 | -76 |
| 6.0 | 1830 | -1850 | 409 | -513 | -20 | -104 |
| 8.0 | 1750 | -1781 | 784 | -819 | -31 | -35 |
| 10.0 | 1718 | -1747 | 1387 | -1454 | -29 | -67 |
| 12.0 | 1813 | -1837 | 1230 | -1315 | -24 | -85 |
| 14.0 | 1598 | -1637 | 1123 | -1194 | -39 | -71 |
| 16.0 | 1377 | -1397 | 955 | -1000 | -20 | -45 |
| 18.0 | 1409 | -1433 | 800 | -859 | -24 | -59 |
| 20.0 | 1457 | -1510 | 2491 | -2536 | -53 | -45 |
| 22.0 | 2184 | -2213 | 2595 | -2678 | -29 | -83 |
| 24.0 | 2042 | -2077 | 1935 | -2005 | -35 | -70 |
| 26.0 | 1381 | -1396 | 1737 | -1827 | -15 | -90 |
| 28.0 | 1433 | -1482 | 1892 | -1957 | -49 | -65 |
| 30.0 | 1194 | -1207 | 2184 | -2242 | -13 | -58 |
| 32.0 | 1183 | -1208 | 1934 | -2006 | -25 | -72 |
| 34.0 | 1049 | -1096 | 1707 | -1780 | -47 | -73 |
| 36.0 | 990 | -1011 | 1391 | -1474 | -21 | -83 |
| 38.0 | 1027 | -1028 | 920 | -1005 | -1 | -85 |
| 40.0 | 741 | -805 | 1034 | -1044 | -64 | -10 |
| 42.0 | 1095 | -1122 | 1827 | -1902 | -27 | -75 |
| 44.0 | 714 | -752 | 1412 | -1481 | -38 | -69 |
| 46.0 | 593 | -615 | 1266 | -1384 | -22 | -118 |
| 48.0 | 726 | -740 | 1213 | -1300 | -14 | -87 |
| 50.0 | 910 | -964 | 1508 | -1519 | -54 | -11 |
| 52.0 | 1263 | -1283 | 1446 | -1522 | -20 | -76 |
| 54.0 | 1331 | -1366 | 1325 | -1392 | -35 | -67 |
| 56.0 | 1384 | -1412 | 1207 | -1309 | -28 | -102 |
| 58.0 | 1382 | -1396 | 1069 | -1153 | -14 | -84 |
| 60.0 | 873 | -927 | 1196 | -1236 | -54 | -40 |
| 62.0 | 642 | -663 | 1126 | -1205 | -21 | -79 |
| 64.0 | 624 | -663 | 1099 | -1203 | -39 | -104 |
| 66.0 | 701 | -722 | 979 | -1079 | -21 | -100 |

F-1 set 32, read 8 Feb 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1404 | -1418 | 1376 | -1465 | -14 | -89 |
| 4.0 | 1771 | -1799 | 885 | -965 | -28 | -80 |
| 6.0 | 1822 | -1829 | 457 | -544 | -7 | -87 |
| 8.0 | 1764 | -1784 | 800 | -829 | -20 | -29 |
| 10.0 | 1721 | -1733 | 1393 | -1425 | -12 | -32 |
| 12.0 | 1816 | -1829 | 1239 | -1302 | -13 | -63 |
| 14.0 | 1618 | -1636 | 1135 | -1200 | -18 | -65 |
| 16.0 | 1389 | -1393 | 960 | -1004 | -4 | -44 |
| 18.0 | 1412 | -1425 | 820 | -855 | -13 | -35 |
| 20.0 | 1466 | -1505 | 2495 | -2531 | -39 | -36 |
| 22.0 | 2185 | -2209 | 2605 | -2666 | -24 | -61 |
| 24.0 | 2048 | -2075 | 1950 | -1993 | -27 | -43 |
| 26.0 | 1389 | -1393 | 1730 | -1823 | -4 | -93 |
| 28.0 | 1439 | -1468 | 1906 | -1947 | -29 | -41 |
| 30.0 | 1202 | -1199 | 2201 | -2231 | 3 | -30 |
| 32.0 | 1188 | -1199 | 1943 | -2006 | -11 | -63 |
| 34.0 | 1053 | -1089 | 1719 | -1771 | -36 | -52 |
| 36.0 | 994 | -1003 | 1392 | -1453 | -9 | -61 |
| 38.0 | 1036 | -1022 | 925 | -993 | 14 | -68 |
| 40.0 | 750 | -794 | 1041 | -1039 | -44 | 2 |
| 42.0 | 1102 | -1116 | 1831 | -1905 | -14 | -74 |
| 44.0 | 718 | -743 | 1419 | -1472 | -25 | -53 |
| 46.0 | 595 | -609 | 1285 | -1375 | -14 | -90 |
| 48.0 | 732 | -732 | 1228 | -1302 | 0 | -74 |
| 50.0 | 913 | -959 | 1514 | -1518 | -46 | -4 |
| 52.0 | 1267 | -1280 | 1458 | -1536 | -13 | -78 |
| 54.0 | 1340 | -1354 | 1326 | -1395 | -14 | -69 |
| 56.0 | 1389 | -1404 | 1218 | -1305 | -15 | -87 |
| 58.0 | 1387 | -1387 | 1073 | -1150 | 0 | -77 |
| 60.0 | 879 | -917 | 1213 | -1233 | -38 | -20 |
| 62.0 | 646 | -656 | 1130 | -1193 | -10 | -63 |
| 64.0 | 632 | -659 | 1101 | -1183 | -27 | -82 |
| 66.0 | 709 | -715 | 981 | -1070 | -6 | -89 |

F-1 set 33, read 27 Mar 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1370 | -1398 | 1397 | -1415 | -28 | -18 |
| 4.0 | 1748 | -1796 | 958 | -988 | -48 | -30 |
| 6.0 | 1811 | -1838 | 533 | -535 | -27 | -2 |
| 8.0 | 1751 | -1784 | 792 | -803 | -33 | -11 |
| 10.0 | 1680 | -1702 | 1358 | -1376 | -22 | -18 |
| 12.0 | 1797 | -1815 | 1264 | -1269 | -18 | -5 |
| 14.0 | 1626 | -1662 | 1148 | -1163 | -36 | -15 |
| 16.0 | 1396 | -1416 | 954 | -923 | -20 | 31 |
| 18.0 | 1403 | -1426 | 860 | -865 | -23 | -5 |
| 20.0 | 1469 | -1520 | 2524 | -2498 | -51 | 26 |
| 22.0 | 2170 | -2200 | 2600 | -2640 | -30 | -40 |
| 24.0 | 2041 | -2076 | 1966 | -1984 | -35 | -18 |
| 26.0 | 1383 | -1397 | 1760 | -1806 | -14 | -46 |
| 28.0 | 1425 | -1474 | 1920 | -1938 | -49 | -18 |
| 30.0 | 1194 | -1218 | 2203 | -2229 | -24 | -26 |
| 32.0 | 1184 | -1202 | 1946 | -1977 | -18 | -31 |
| 34.0 | 1046 | -1092 | 1723 | -1767 | -46 | -44 |
| 36.0 | 988 | -1006 | 1392 | -1441 | -18 | -49 |
| 38.0 | 1024 | -1024 | 938 | -983 | 0 | -45 |
| 40.0 | 742 | -801 | 1044 | -1015 | -59 | 29 |
| 42.0 | 1098 | -1127 | 1849 | -1898 | -29 | -49 |
| 44.0 | 711 | -751 | 1452 | -1466 | -40 | -14 |
| 46.0 | 590 | -614 | 1311 | -1361 | -24 | -50 |
| 48.0 | 728 | -735 | 1227 | -1288 | -7 | -61 |
| 50.0 | 912 | -966 | 1522 | -1515 | -54 | 7 |
| 52.0 | 1261 | -1287 | 1458 | -1531 | -26 | -73 |
| 54.0 | 1331 | -1368 | 1332 | -1378 | -37 | -46 |
| 56.0 | 1382 | -1411 | 1243 | -1288 | -29 | -45 |
| 58.0 | 1376 | -1391 | 1085 | -1139 | -15 | -54 |
| 60.0 | 872 | -925 | 1225 | -1223 | -53 | 2 |
| 62.0 | 641 | -662 | 1152 | -1200 | -21 | -48 |
| 64.0 | 623 | -664 | 1144 | -1182 | -41 | -38 |
| 66.0 | 700 | -721 | 1004 | -1058 | -21 | -54 |

F-1 set 34, read 25 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1393 | -1435 | 1399 | -1439 | -42 | -40 |
| 4.0 | 1732 | -1789 | 930 | -1002 | -57 | -72 |
| 6.0 | 1794 | -1822 | 437 | -507 | -28 | -70 |
| 8.0 | 1736 | -1769 | 774 | -790 | -33 | -16 |
| 10.0 | 1728 | -1764 | 1423 | -1459 | -36 | -36 |
| 12.0 | 1793 | -1826 | 1237 | -1307 | -33 | -70 |
| 14.0 | 1601 | -1652 | 1152 | -1181 | -51 | -29 |
| 16.0 | 1406 | -1433 | 932 | -967 | -27 | -35 |
| 18.0 | 1398 | -1428 | 853 | -888 | -30 | -35 |
| 20.0 | 1464 | -1524 | 2476 | -2502 | -60 | -26 |
| 22.0 | 2158 | -2193 | 2570 | -2633 | -35 | -63 |
| 24.0 | 2038 | -2084 | 1956 | -1997 | -46 | -41 |
| 26.0 | 1379 | -1402 | 1738 | -1814 | -23 | -76 |
| 28.0 | 1425 | -1478 | 1907 | -1938 | -53 | -31 |
| 30.0 | 1185 | -1207 | 2199 | -2231 | -22 | -32 |
| 32.0 | 1177 | -1207 | 1942 | -1994 | -30 | -52 |
| 34.0 | 1043 | -1097 | 1722 | -1774 | -54 | -52 |
| 36.0 | 986 | -1010 | 1393 | -1431 | -24 | -38 |
| 38.0 | 1020 | -1029 | 924 | -989 | -9 | -65 |
| 40.0 | 734 | -808 | 1046 | -1016 | -74 | 30 |
| 42.0 | 1093 | -1132 | 1844 | -1898 | -39 | -54 |
| 44.0 | 704 | -752 | 1421 | -1433 | -48 | -12 |
| 46.0 | 587 | -613 | 1277 | -1346 | -26 | -69 |
| 48.0 | 722 | -737 | 1222 | -1294 | -15 | -72 |
| 50.0 | 907 | -969 | 1517 | -1517 | -62 | 0 |
| 52.0 | 1258 | -1293 | 1458 | -1531 | -35 | -73 |
| 54.0 | 1329 | -1373 | 1323 | -1379 | -44 | -56 |
| 56.0 | 1381 | -1413 | 1231 | -1293 | -32 | -62 |
| 58.0 | 1378 | -1400 | 1076 | -1139 | -22 | -63 |
| 60.0 | 868 | -928 | 1211 | -1222 | -60 | -11 |
| 62.0 | 637 | -667 | 1146 | -1188 | -30 | -42 |
| 64.0 | 620 | -673 | 1103 | -1179 | -53 | -76 |
| 66.0 | 698 | -727 | 977 | -1058 | -29 | -81 |

F-1 set 35, read 28 May 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1400 | -1425 | 1376 | -1469 | -25 | -93 |
| 4.0 | 1735 | -1776 | 936 | -1011 | -41 | -75 |
| 6.0 | 1794 | -1815 | 407 | -523 | -21 | -116 |
| 8.0 | 1736 | -1766 | 752 | -791 | -30 | -39 |
| 10.0 | 1766 | -1792 | 1435 | -1497 | -26 | -62 |
| 12.0 | 1821 | -1847 | 1201 | -1294 | -26 | -93 |
| 14.0 | 1588 | -1630 | 1107 | -1181 | -42 | -74 |
| 16.0 | 1406 | -1402 | 977 | -1024 | 4 | -47 |
| 18.0 | 1416 | -1435 | 800 | -866 | -19 | -66 |
| 20.0 | 1467 | -1519 | 2464 | -2513 | -52 | -49 |
| 22.0 | 2172 | -2199 | 2577 | -2663 | -27 | -86 |
| 24.0 | 2051 | -2079 | 1951 | -2023 | -28 | -72 |
| 26.0 | 1388 | -1401 | 1722 | -1813 | -13 | -91 |
| 28.0 | 1445 | -1477 | 1885 | -1947 | -32 | -62 |
| 30.0 | 1193 | -1214 | 2178 | -2240 | -21 | -62 |
| 32.0 | 1187 | -1205 | 1928 | -2016 | -18 | -88 |
| 34.0 | 1056 | -1096 | 1716 | -1788 | -40 | -72 |
| 36.0 | 994 | -1015 | 1398 | -1470 | -21 | -72 |
| 38.0 | 1016 | -1032 | 939 | -1006 | -16 | -67 |
| 40.0 | 768 | -811 | 1004 | -1014 | -43 | -10 |
| 42.0 | 1106 | -1137 | 1822 | -1910 | -31 | -88 |
| 44.0 | 719 | -755 | 1416 | -1499 | -36 | -83 |
| 46.0 | 593 | -611 | 1273 | -1386 | -18 | -113 |
| 48.0 | 728 | -735 | 1209 | -1306 | -7 | -97 |
| 50.0 | 907 | -964 | 1502 | -1521 | -57 | -19 |
| 52.0 | 1259 | -1282 | 1469 | -1545 | -23 | -76 |
| 54.0 | 1336 | -1367 | 1319 | -1396 | -31 | -77 |
| 56.0 | 1386 | -1413 | 1199 | -1318 | -27 | -119 |
| 58.0 | 1387 | -1390 | 1061 | -1152 | -3 | -91 |
| 60.0 | 880 | -929 | 1198 | -1240 | -49 | -42 |
| 62.0 | 645 | -661 | 1136 | -1212 | -16 | -76 |
| 64.0 | 627 | -664 | 1101 | -1208 | -37 | -107 |
| 66.0 | 704 | -722 | 968 | -1080 | -18 | -112 |

F-1 set 36, read 27 Jun 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1397 | -1422 | 1372 | -1467 | -25 | -95 |
| 4.0 | 1733 | -1773 | 943 | -1018 | -40 | -75 |
| 6.0 | 1796 | -1816 | 427 | -529 | -20 | -102 |
| 8.0 | 1739 | -1763 | 731 | -757 | -24 | -26 |
| 10.0 | 1777 | -1797 | 1466 | -1496 | -20 | -30 |
| 12.0 | 1838 | -1857 | 1200 | -1285 | -19 | -85 |
| 14.0 | 1589 | -1623 | 1088 | -1177 | -34 | -89 |
| 16.0 | 1380 | -1394 | 1008 | -1038 | -14 | -30 |
| 18.0 | 1424 | -1442 | 775 | -828 | -18 | -53 |
| 20.0 | 1452 | -1500 | 2467 | -2499 | -48 | -32 |
| 22.0 | 2188 | -2216 | 2606 | -2684 | -28 | -78 |
| 24.0 | 2064 | -2091 | 1976 | -2017 | -27 | -41 |
| 26.0 | 1388 | -1403 | 1733 | -1809 | -15 | -76 |
| 28.0 | 1448 | -1467 | 1897 | -1944 | -19 | -47 |
| 30.0 | 1194 | -1218 | 2182 | -2245 | -24 | -63 |
| 32.0 | 1189 | -1211 | 1932 | -2016 | -22 | -84 |
| 34.0 | 1064 | -1100 | 1726 | -1783 | -36 | -57 |
| 36.0 | 999 | -1013 | 1396 | -1460 | -14 | -64 |
| 38.0 | 1029 | -1070 | 957 | -1003 | -41 | -46 |
| 40.0 | 792 | -791 | 966 | -1005 | 1 | -39 |
| 42.0 | 1125 | -1144 | 1831 | -1906 | -19 | -75 |
| 44.0 | 732 | -768 | 1459 | -1503 | -36 | -44 |
| 46.0 | 592 | -610 | 1275 | -1375 | -18 | -100 |
| 48.0 | 730 | -729 | 1216 | -1302 | 1 | -86 |
| 50.0 | 905 | -963 | 1505 | -1512 | -58 | -7 |
| 52.0 | 1259 | -1278 | 1437 | -1519 | -19 | -82 |
| 54.0 | 1337 | -1366 | 1330 | -1393 | -29 | -63 |
| 56.0 | 1387 | -1436 | 1217 | -1317 | -49 | -100 |
| 58.0 | 1390 | -1350 | 1066 | -1139 | 40 | -73 |
| 60.0 | 883 | -936 | 1206 | -1233 | -53 | -27 |
| 62.0 | 647 | -665 | 1120 | -1214 | -18 | -94 |
| 64.0 | 624 | -661 | 1104 | -1208 | -37 | -104 |
| 66.0 | 705 | -714 | 982 | -1027 | -9 | -45 |

F-1 set 37, read 30 Jul 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1409 | -1416 | 1386 | -1453 | -7 | -67 |
| 4.0 | 1732 | -1762 | 967 | -1030 | -30 | -63 |
| 6.0 | 1811 | -1820 | 504 | -567 | -9 | -63 |
| 8.0 | 1758 | -1771 | 764 | -733 | -13 | 31 |
| 10.0 | 1749 | -1759 | 1413 | -1432 | -10 | -19 |
| 12.0 | 1845 | -1852 | 1213 | -1290 | -7 | -77 |
| 14.0 | 1610 | -1633 | 1116 | -1158 | -23 | -42 |
| 16.0 | 1386 | -1391 | 997 | -1011 | -5 | -14 |
| 18.0 | 1425 | -1432 | 805 | -833 | -7 | -28 |
| 20.0 | 1468 | -1507 | 2473 | -2487 | -39 | -14 |
| 22.0 | 2194 | -2207 | 2604 | -2666 | -13 | -62 |
| 24.0 | 2072 | -2083 | 1989 | -2010 | -11 | -21 |
| 26.0 | 1398 | -1395 | 1744 | -1796 | 3 | -52 |
| 28.0 | 1455 | -1464 | 1907 | -1938 | -9 | -31 |
| 30.0 | 1197 | -1215 | 2182 | -2225 | -18 | -43 |
| 32.0 | 1197 | -1205 | 1948 | -2006 | -8 | -58 |
| 34.0 | 1070 | -1096 | 1730 | -1776 | -26 | -46 |
| 36.0 | 1011 | -1016 | 1404 | -1438 | -5 | -34 |
| 38.0 | 1046 | -1079 | 964 | -996 | -33 | -32 |
| 40.0 | 805 | -800 | 993 | -1006 | 5 | -13 |
| 42.0 | 1140 | -1152 | 1847 | -1902 | -12 | -55 |
| 44.0 | 737 | -764 | 1440 | -1484 | -27 | -44 |
| 46.0 | 599 | -604 | 1284 | -1347 | -5 | -63 |
| 48.0 | 734 | -719 | 1218 | -1288 | 15 | -70 |
| 50.0 | 912 | -955 | 1522 | -1516 | -43 | 6 |
| 52.0 | 1264 | -1275 | 1450 | -1515 | -11 | -65 |
| 54.0 | 1341 | -1360 | 1341 | -1388 | -19 | -47 |
| 56.0 | 1393 | -1404 | 1225 | -1304 | -11 | -79 |
| 58.0 | 1395 | -1387 | 1079 | -1132 | 8 | -53 |
| 60.0 | 889 | -928 | 1214 | -1218 | -39 | -4 |
| 62.0 | 657 | -659 | 1135 | -1199 | -2 | -64 |
| 64.0 | 632 | -657 | 1112 | -1177 | -25 | -65 |
| 66.0 | 708 | -715 | 986 | -1065 | -7 | -79 |

F-1 set 38, read 27 Aug 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1400 | -1425 | 1344 | -1424 | -25 | -80 |
| 4.0 | 1724 | -1769 | 957 | -1041 | -45 | -84 |
| 6.0 | 1815 | -1839 | 542 | -619 | -24 | -77 |
| 8.0 | 1753 | -1787 | 711 | -749 | -34 | -38 |
| 10.0 | 1709 | -1735 | 1325 | -1377 | -26 | -52 |
| 12.0 | 1823 | -1847 | 1215 | -1307 | -24 | -92 |
| 14.0 | 1625 | -1662 | 1125 | -1193 | -37 | -68 |
| 16.0 | 1389 | -1411 | 950 | -1004 | -22 | -54 |
| 18.0 | 1419 | -1438 | 812 | -851 | -19 | -39 |
| 20.0 | 1466 | -1516 | 2457 | -2484 | -50 | -27 |
| 22.0 | 2185 | -2212 | 2594 | -2668 | -27 | -74 |
| 24.0 | 2056 | -2087 | 1974 | -2016 | -31 | -42 |
| 26.0 | 1391 | -1400 | 1720 | -1803 | -9 | -83 |
| 28.0 | 1447 | -1477 | 1888 | -1942 | -30 | -54 |
| 30.0 | 1195 | -1221 | 2203 | -2242 | -26 | -39 |
| 32.0 | 1191 | -1217 | 1931 | -2011 | -26 | -80 |
| 34.0 | 1062 | -1105 | 1714 | -1781 | -43 | -67 |
| 36.0 | 1009 | -1026 | 1387 | -1453 | -17 | -66 |
| 38.0 | 1043 | -1092 | 957 | -1004 | -49 | -47 |
| 40.0 | 807 | -815 | 971 | -1013 | -8 | -42 |
| 42.0 | 1141 | -1170 | 1840 | -1906 | -29 | -66 |
| 44.0 | 735 | -772 | 1425 | -1496 | -37 | -71 |
| 46.0 | 591 | -614 | 1283 | -1380 | -23 | -97 |
| 48.0 | 729 | -732 | 1219 | -1306 | -3 | -87 |
| 50.0 | 906 | -963 | 1509 | -1523 | -57 | -14 |
| 52.0 | 1261 | -1280 | 1444 | -1515 | -19 | -71 |
| 54.0 | 1336 | -1371 | 1327 | -1400 | -35 | -73 |
| 56.0 | 1386 | -1417 | 1219 | -1300 | -31 | -81 |
| 58.0 | 1387 | -1393 | 1068 | -1149 | -6 | -81 |
| 60.0 | 883 | -934 | 1208 | -1241 | -51 | -33 |
| 62.0 | 645 | -663 | 1123 | -1208 | -18 | -85 |
| 64.0 | 624 | -664 | 1104 | -1204 | -40 | -100 |
| 66.0 | 706 | -724 | 986 | -1072 | -18 | -86 |

F-1 set 39, read 18 Sep 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1402 | -1427 | 1357 | -1451 | -25 | -94 |
| 4.0 | 1726 | -1767 | 977 | -1051 | -41 | -74 |
| 6.0 | 1830 | -1854 | 602 | -695 | -24 | -93 |
| 8.0 | 1758 | -1788 | 742 | -773 | -30 | -31 |
| 10.0 | 1687 | -1701 | 1275 | -1318 | -14 | -43 |
| 12.0 | 1812 | -1829 | 1212 | -1315 | -17 | -103 |
| 14.0 | 1643 | -1678 | 1146 | -1215 | -35 | -69 |
| 16.0 | 1411 | -1422 | 929 | -968 | -11 | -39 |
| 18.0 | 1420 | -1441 | 834 | -869 | -21 | -35 |
| 20.0 | 1477 | -1526 | 2456 | -2490 | -49 | -34 |
| 22.0 | 2178 | -2199 | 2586 | -2642 | -21 | -56 |
| 24.0 | 2059 | -2079 | 1973 | -2002 | -20 | -29 |
| 26.0 | 1389 | -1401 | 1734 | -1815 | -12 | -81 |
| 28.0 | 1447 | -1481 | 1900 | -1940 | -34 | -40 |
| 30.0 | 1198 | -1220 | 2176 | -2228 | -22 | -52 |
| 32.0 | 1194 | -1211 | 1943 | -2024 | -17 | -81 |
| 34.0 | 1061 | -1098 | 1729 | -1781 | -37 | -52 |
| 36.0 | 1013 | -1025 | 1391 | -1439 | -12 | -48 |
| 38.0 | 1068 | -1066 | 938 | -996 | 2 | -58 |
| 40.0 | 792 | -840 | 1019 | -1019 | -48 | 0 |
| 42.0 | 1147 | -1168 | 1849 | -1899 | -21 | -50 |
| 44.0 | 731 | -766 | 1428 | -1484 | -35 | -56 |
| 46.0 | 594 | -613 | 1269 | -1376 | -19 | -107 |
| 48.0 | 730 | -730 | 1222 | -1296 | 0 | -74 |
| 50.0 | 907 | -960 | 1513 | -1516 | -53 | -3 |
| 52.0 | 1262 | -1279 | 1449 | -1509 | -17 | -60 |
| 54.0 | 1338 | -1362 | 1333 | -1389 | -24 | -56 |
| 56.0 | 1387 | -1410 | 1224 | -1302 | -23 | -78 |
| 58.0 | 1385 | -1397 | 1076 | -1151 | -12 | -75 |
| 60.0 | 880 | -923 | 1215 | -1230 | -43 | -15 |
| 62.0 | 644 | -661 | 1153 | -1199 | -17 | -46 |
| 64.0 | 625 | -662 | 1112 | -1195 | -37 | -83 |
| 66.0 | 706 | -723 | 1003 | -1062 | -17 | -59 |

F-1 set 40, read 23 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1409 | -1445 | 1345 | -1461 | -36 | -116 |
| 4.0 | 1713 | -1764 | 975 | -1066 | -51 | -91 |
| 6.0 | 1841 | -1868 | 633 | -743 | -27 | -110 |
| 8.0 | 1757 | -1798 | 784 | -846 | -41 | -62 |
| 10.0 | 1644 | -1669 | 1235 | -1308 | -25 | -73 |
| 12.0 | 1766 | -1796 | 1185 | -1296 | -30 | -111 |
| 14.0 | 1648 | -1693 | 1133 | -1198 | -45 | -65 |
| 16.0 | 1428 | -1450 | 853 | -936 | -22 | -83 |
| 18.0 | 1405 | -1433 | 870 | -927 | -28 | -57 |
| 20.0 | 1471 | -1527 | 2440 | -2502 | -56 | -62 |
| 22.0 | 2156 | -2192 | 2544 | -2638 | -36 | -94 |
| 24.0 | 2037 | -2081 | 1959 | -2023 | -44 | -64 |
| 26.0 | 1384 | -1413 | 1712 | -1830 | -29 | -118 |
| 28.0 | 1437 | -1483 | 1882 | -1958 | -46 | -76 |
| 30.0 | 1194 | -1219 | 2165 | -2245 | -25 | -80 |
| 32.0 | 1187 | -1213 | 1922 | -2030 | -26 | -108 |
| 34.0 | 1055 | -1105 | 1699 | -1791 | -50 | -92 |
| 36.0 | 1008 | -1031 | 1386 | -1474 | -23 | -88 |
| 38.0 | 1066 | -1071 | 923 | -1005 | -5 | -82 |
| 40.0 | 771 | -844 | 1013 | -1032 | -73 | -19 |
| 42.0 | 1142 | -1179 | 1830 | -1931 | -37 | -101 |
| 44.0 | 721 | -764 | 1406 | -1468 | -43 | -62 |
| 46.0 | 587 | -617 | 1282 | -1397 | -30 | -115 |
| 48.0 | 726 | -736 | 1208 | -1313 | -10 | -105 |
| 50.0 | 904 | -968 | 1497 | -1536 | -64 | -39 |
| 52.0 | 1255 | -1289 | 1433 | -1552 | -34 | -119 |
| 54.0 | 1328 | -1369 | 1315 | -1404 | -41 | -89 |
| 56.0 | 1382 | -1413 | 1197 | -1316 | -31 | -119 |
| 58.0 | 1382 | -1397 | 1053 | -1163 | -15 | -110 |
| 60.0 | 873 | -929 | 1192 | -1252 | -56 | -60 |
| 62.0 | 640 | -663 | 1110 | -1224 | -23 | -114 |
| 64.0 | 618 | -669 | 1097 | -1215 | -51 | -118 |
| 66.0 | 699 | -725 | 968 | -1077 | -26 | -109 |

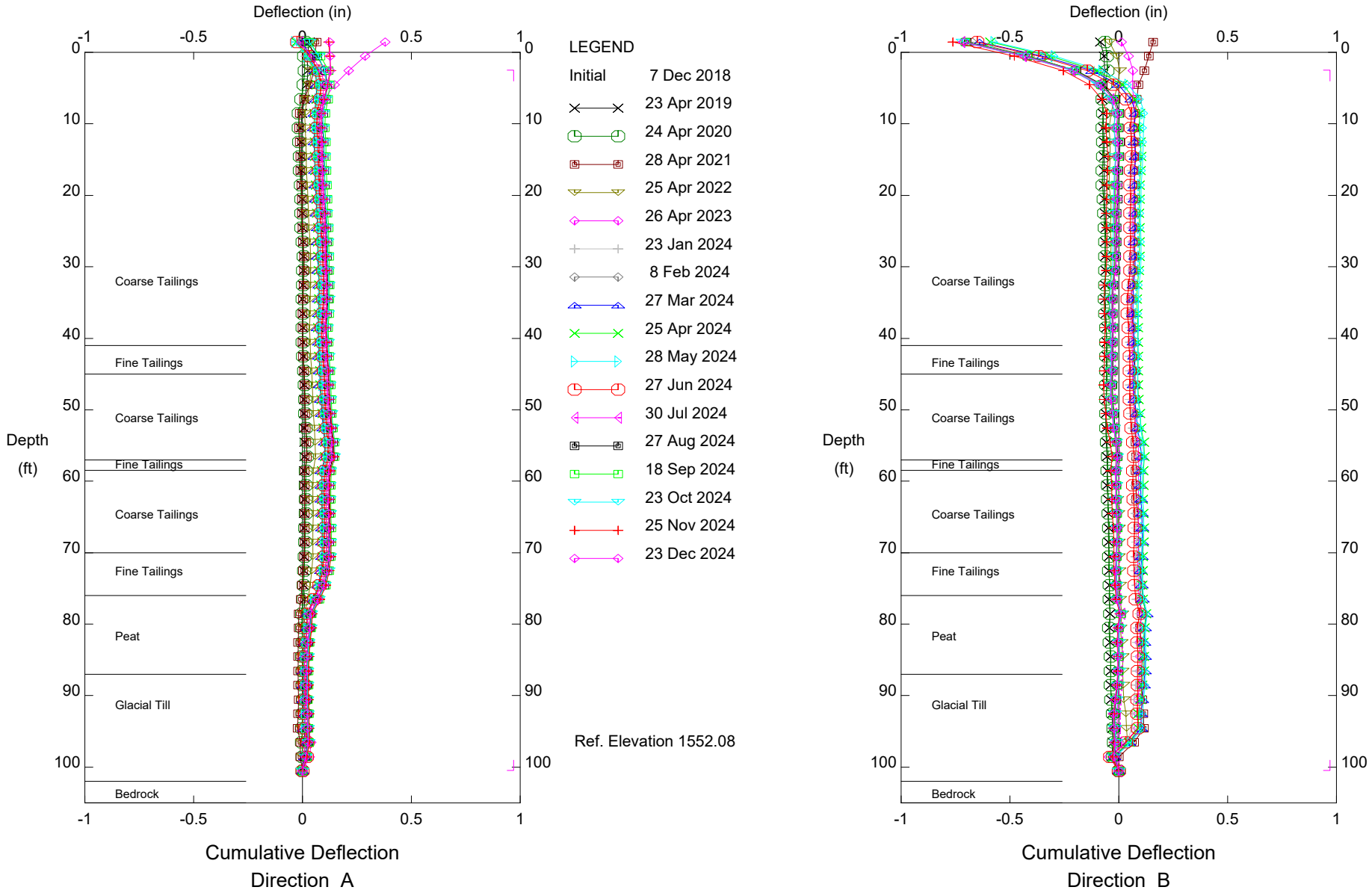
F-1 set 41, read 21 Nov 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1409 | -1454 | 1365 | -1473 | -45 | -108 |
| 4.0 | 1713 | -1772 | 976 | -1076 | -59 | -100 |
| 6.0 | 1823 | -1865 | 618 | -687 | -42 | -69 |
| 8.0 | 1748 | -1800 | 798 | -840 | -52 | -42 |
| 10.0 | 1633 | -1677 | 1272 | -1351 | -44 | -79 |
| 12.0 | 1747 | -1792 | 1212 | -1315 | -45 | -103 |
| 14.0 | 1658 | -1719 | 1120 | -1205 | -61 | -85 |
| 16.0 | 1464 | -1489 | 840 | -930 | -25 | -90 |
| 18.0 | 1388 | -1434 | 900 | -944 | -46 | -44 |
| 20.0 | 1463 | -1531 | 2410 | -2459 | -68 | -49 |
| 22.0 | 2126 | -2177 | 2548 | -2614 | -51 | -66 |
| 24.0 | 2026 | -2081 | 1973 | -2010 | -55 | -37 |
| 26.0 | 1375 | -1415 | 1724 | -1829 | -40 | -105 |
| 28.0 | 1434 | -1487 | 1890 | -1943 | -53 | -53 |
| 30.0 | 1187 | -1227 | 2178 | -2239 | -40 | -61 |
| 32.0 | 1177 | -1219 | 1944 | -2012 | -42 | -68 |
| 34.0 | 1045 | -1108 | 1708 | -1783 | -63 | -75 |
| 36.0 | 998 | -1035 | 1390 | -1469 | -37 | -79 |
| 38.0 | 1057 | -1073 | 925 | -1002 | -16 | -77 |
| 40.0 | 763 | -843 | 1017 | -1035 | -80 | -18 |
| 42.0 | 1137 | -1182 | 1841 | -1919 | -45 | -78 |
| 44.0 | 714 | -760 | 1413 | -1492 | -46 | -79 |
| 46.0 | 583 | -627 | 1270 | -1389 | -44 | -119 |
| 48.0 | 719 | -744 | 1221 | -1307 | -25 | -86 |
| 50.0 | 898 | -974 | 1509 | -1529 | -76 | -20 |
| 52.0 | 1251 | -1292 | 1439 | -1519 | -41 | -80 |
| 54.0 | 1326 | -1376 | 1316 | -1398 | -50 | -82 |
| 56.0 | 1375 | -1419 | 1217 | -1305 | -44 | -88 |
| 58.0 | 1372 | -1404 | 1072 | -1151 | -32 | -79 |
| 60.0 | 866 | -935 | 1199 | -1239 | -69 | -40 |
| 62.0 | 633 | -674 | 1117 | -1218 | -41 | -101 |
| 64.0 | 615 | -673 | 1100 | -1217 | -58 | -117 |
| 66.0 | 692 | -734 | 995 | -1071 | -42 | -76 |

F-1 set 42, read 23 Dec 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1444 | -1380 | 1339 | -1423 | 64 | -84 |
| 4.0 | 1766 | -1811 | 968 | -1037 | -45 | -69 |
| 6.0 | 1833 | -1853 | 599 | -670 | -20 | -71 |
| 8.0 | 1758 | -1798 | 839 | -852 | -40 | -13 |
| 10.0 | 1647 | -1670 | 1303 | -1325 | -23 | -22 |
| 12.0 | 1755 | -1788 | 1241 | -1327 | -33 | -86 |
| 14.0 | 1670 | -1712 | 1143 | -1199 | -42 | -56 |
| 16.0 | 1472 | -1493 | 873 | -926 | -21 | -53 |
| 18.0 | 1391 | -1417 | 925 | -948 | -26 | -23 |
| 20.0 | 1468 | -1521 | 2404 | -2424 | -53 | -20 |
| 22.0 | 2119 | -2155 | 2533 | -2588 | -36 | -55 |
| 24.0 | 2025 | -2066 | 1969 | -1997 | -41 | -28 |
| 26.0 | 1386 | -1406 | 1744 | -1818 | -20 | -74 |
| 28.0 | 1437 | -1473 | 1904 | -1935 | -36 | -31 |
| 30.0 | 1199 | -1209 | 2195 | -2240 | -10 | -45 |
| 32.0 | 1185 | -1205 | 1946 | -2011 | -20 | -65 |
| 34.0 | 1053 | -1097 | 1720 | -1781 | -44 | -61 |
| 36.0 | 1007 | -1032 | 1400 | -1459 | -25 | -59 |
| 38.0 | 1057 | -1061 | 930 | -982 | -4 | -52 |
| 40.0 | 768 | -830 | 1037 | -1023 | -62 | 14 |
| 42.0 | 1140 | -1169 | 1856 | -1918 | -29 | -62 |
| 44.0 | 722 | -757 | 1427 | -1471 | -35 | -44 |
| 46.0 | 593 | -617 | 1285 | -1371 | -24 | -86 |
| 48.0 | 729 | -736 | 1226 | -1292 | -7 | -66 |
| 50.0 | 911 | -966 | 1522 | -1511 | -55 | 11 |
| 52.0 | 1262 | -1288 | 1452 | -1533 | -26 | -81 |
| 54.0 | 1332 | -1365 | 1337 | -1394 | -33 | -57 |
| 56.0 | 1384 | -1411 | 1220 | -1299 | -27 | -79 |
| 58.0 | 1386 | -1393 | 1079 | -1148 | -7 | -69 |
| 60.0 | 874 | -927 | 1218 | -1214 | -53 | 4 |
| 62.0 | 642 | -664 | 1131 | -1196 | -22 | -65 |
| 64.0 | 625 | -667 | 1124 | -1192 | -42 | -68 |
| 66.0 | 703 | -727 | 1020 | -1051 | -24 | -31 |

Northeast Technical Services, Inc.



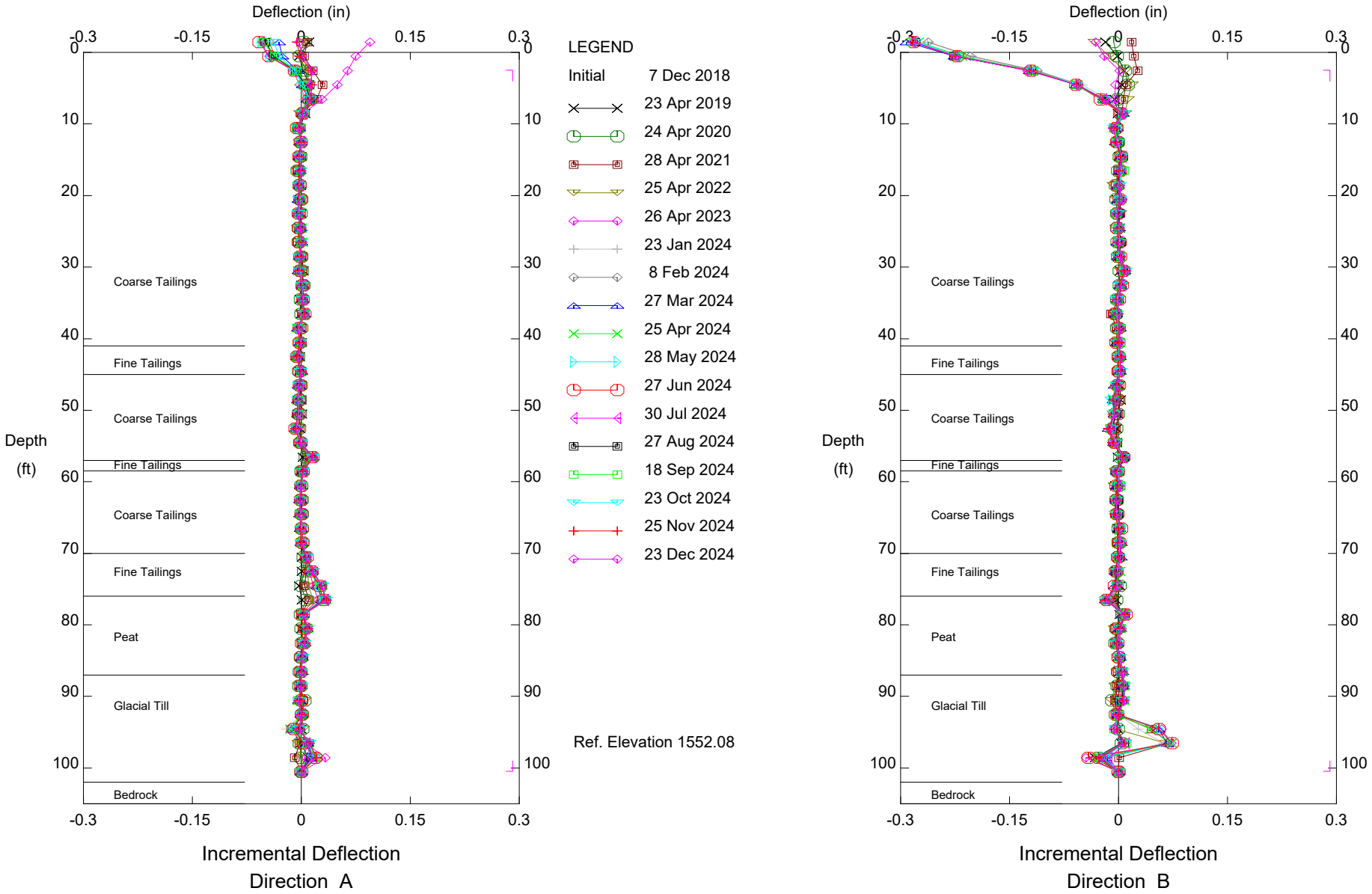

Inclinometer F-3

North Side of Cell 2E, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-3.gtl

Northeast Technical Services, Inc.



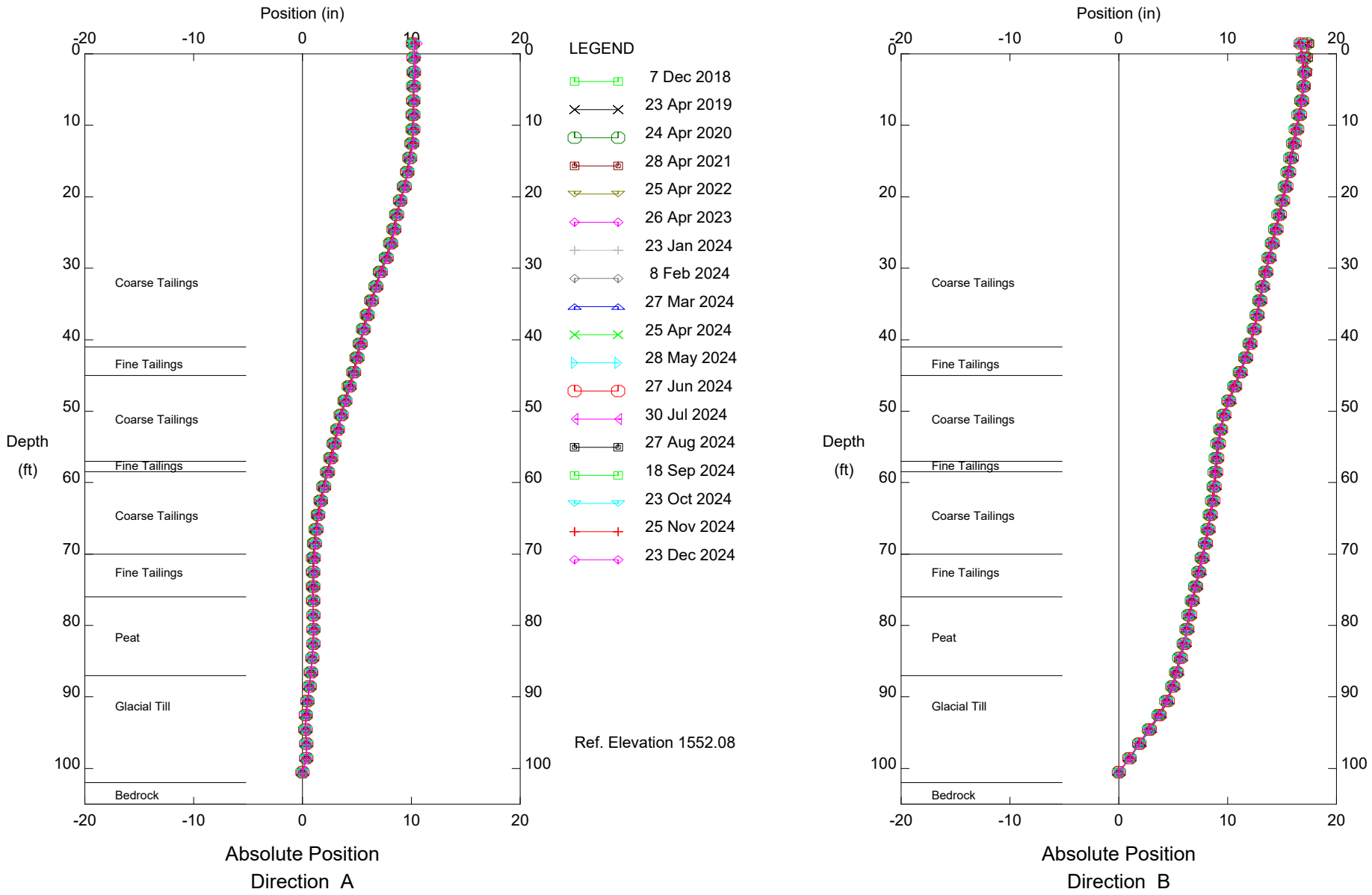

Inclinometer F-3

North Side of Cell 2E, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-3.gtl

Northeast Technical Services, Inc.




Inclinometer F-3

North Side of Cell 2E, Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-3.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 14:58:02  Inclinometer F-3
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-3.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  North Side of Cell 2E, Midslope
Project
Location  LTVSMC Tailings Basin
Stickup  2.46 ft

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 12072018 | 1552 | | 0 | 1639179 | | | | |
| 04232019 | 1220 | | 0 | 1639179 | | | | |
| 04242020 | 0934 | | 0 | 1639179 | | | | |
| 04282021 | 0950 | | | 1639179 | | | | |
| 04252022 | 1104 | | | 1639179 | | | | |
| 04262023 | 1233 | | | 1639179 | | | | |
| 01232024 | 1344 | | | 1639179 | | | | |
| 02082024 | 1259 | | | 1639179 | | | | |
| 03272024 | 0955 | | | 1639179 | | | | |
| 04252024 | 0944 | | | 1639179 | | | | |
| 05282024 | 1107 | | | 1639179 | | | | |
| 06272024 | 1116 | | | 1639179 | | | | |
| 07302024 | 1107 | | | 1639179 | | | | |
| 08272024 | 1058 | | | 1639179 | | | | |
| 09182024 | 1032 | | | 1639179 | | | | |
| 10232024 | 1208 | | | 1639179 | | | | |
| 11252024 | 0941 | | | 1639179 | | | | |
| 12232024 | 1057 | | | 1639179 | | | | |

F-3 set 1, read 7 Dec 2018:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -60 | 53 | 369 | -445 | -7 | -76 |
| 4.0 | -20 | -82 | 360 | -374 | -102 | -14 |
| 6.0 | 61 | -110 | 664 | -718 | -49 | -54 |
| 8.0 | -14 | -70 | 794 | -827 | -84 | -33 |
| 10.0 | -25 | -24 | 916 | -994 | -49 | -78 |
| 12.0 | 104 | -134 | 1019 | -1085 | -30 | -66 |
| 14.0 | 290 | -329 | 1056 | -1127 | -39 | -71 |
| 16.0 | 845 | -894 | 976 | -1069 | -49 | -93 |
| 18.0 | 955 | -982 | 898 | -987 | -27 | -89 |
| 20.0 | 1213 | -1271 | 1044 | -1119 | -58 | -75 |
| 22.0 | 1500 | -1521 | 1219 | -1273 | -21 | -54 |
| 24.0 | 1367 | -1400 | 1212 | -1291 | -33 | -79 |
| 26.0 | 954 | -1000 | 1276 | -1348 | -46 | -72 |
| 28.0 | 1218 | -1257 | 1265 | -1345 | -39 | -80 |
| 30.0 | 1753 | -1813 | 1161 | -1264 | -60 | -103 |
| 32.0 | 2172 | -2204 | 1270 | -1341 | -32 | -71 |
| 34.0 | 1760 | -1788 | 1173 | -1271 | -28 | -98 |
| 36.0 | 1566 | -1614 | 1065 | -1172 | -48 | -107 |
| 38.0 | 1632 | -1678 | 959 | -1011 | -46 | -52 |
| 40.0 | 1500 | -1545 | 1104 | -1175 | -45 | -71 |
| 42.0 | 1286 | -1311 | 1539 | -1589 | -25 | -50 |
| 44.0 | 1119 | -1155 | 1684 | -1750 | -36 | -66 |
| 46.0 | 1296 | -1337 | 1964 | -2055 | -41 | -91 |
| 48.0 | 1597 | -1630 | 2135 | -2215 | -33 | -80 |
| 50.0 | 1662 | -1712 | 2121 | -2209 | -50 | -88 |
| 52.0 | 1596 | -1632 | 1846 | -1941 | -36 | -95 |
| 54.0 | 1262 | -1300 | 1352 | -1413 | -38 | -61 |
| 56.0 | 1286 | -1337 | 859 | -945 | -51 | -86 |
| 58.0 | 1278 | -1309 | 611 | -694 | -31 | -83 |
| 60.0 | 1274 | -1321 | 354 | -468 | -47 | -114 |
| 62.0 | 1361 | -1392 | 452 | -513 | -31 | -61 |
| 64.0 | 1174 | -1203 | 562 | -621 | -29 | -59 |
| 66.0 | 1003 | -1051 | 834 | -901 | -48 | -67 |
| 68.0 | 778 | -809 | 908 | -971 | -31 | -63 |
| 70.0 | 453 | -497 | 1011 | -1087 | -44 | -76 |
| 72.0 | 383 | -416 | 1120 | -1198 | -33 | -78 |
| 74.0 | 124 | -160 | 1237 | -1299 | -36 | -62 |
| 76.0 | 1 | -51 | 1269 | -1344 | -50 | -75 |
| 78.0 | -80 | 50 | 1235 | -1302 | -30 | -67 |
| 80.0 | -184 | 135 | 1149 | -1241 | -49 | -92 |
| 82.0 | -109 | 73 | 832 | -923 | -36 | -91 |
| 84.0 | 26 | -57 | 1023 | -1019 | -31 | 4 |
| 86.0 | 430 | -466 | 1507 | -1568 | -36 | -61 |
| 88.0 | 450 | -485 | 1362 | -1443 | -35 | -81 |
| 90.0 | 535 | -578 | 1462 | -1522 | -43 | -60 |
| 92.0 | 747 | -770 | 2147 | -2166 | -23 | -19 |
| 94.0 | 599 | -626 | 2989 | -2987 | -27 | 2 |
| 96.0 | 122 | -164 | 3752 | -3819 | -42 | -67 |
| 98.0 | -287 | 258 | 3658 | -3705 | -29 | -47 |
| 100.0 | -43 | 7 | 3647 | -3726 | -36 | -79 |
| 102.0 | 1319 | -1546 | 4133 | -4240 | -227 | -107 |

F-3 set 33, read 23 Jan 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -247 | 225 | -726 | 656 | -22 | -70 |
| 4.0 | -133 | 118 | -495 | 454 | -15 | -41 |
| 6.0 | 25 | -52 | 193 | -248 | -27 | -55 |
| 8.0 | 15 | -14 | 594 | -609 | 1 | -15 |
| 10.0 | 7 | -30 | 883 | -900 | -23 | -17 |
| 12.0 | 116 | -131 | 1055 | -1101 | -15 | -46 |
| 14.0 | 300 | -302 | 1044 | -1097 | -2 | -53 |
| 16.0 | 852 | -885 | 988 | -1059 | -33 | -71 |
| 18.0 | 955 | -965 | 915 | -997 | -10 | -82 |
| 20.0 | 1223 | -1254 | 1058 | -1115 | -31 | -57 |
| 22.0 | 1495 | -1495 | 1226 | -1271 | 0 | -45 |
| 24.0 | 1364 | -1371 | 1233 | -1273 | -7 | -40 |
| 26.0 | 950 | -968 | 1264 | -1337 | -18 | -73 |
| 28.0 | 1230 | -1245 | 1261 | -1327 | -15 | -66 |
| 30.0 | 1776 | -1804 | 1171 | -1239 | -28 | -68 |
| 32.0 | 2174 | -2180 | 1289 | -1323 | -6 | -34 |
| 34.0 | 1751 | -1765 | 1219 | -1286 | -14 | -67 |
| 36.0 | 1588 | -1608 | 1086 | -1181 | -20 | -95 |
| 38.0 | 1657 | -1670 | 952 | -1030 | -13 | -78 |
| 40.0 | 1522 | -1549 | 1104 | -1160 | -27 | -56 |
| 42.0 | 1274 | -1283 | 1549 | -1599 | -9 | -50 |
| 44.0 | 1129 | -1143 | 1704 | -1739 | -14 | -35 |
| 46.0 | 1291 | -1306 | 1974 | -2024 | -15 | -50 |
| 48.0 | 1612 | -1621 | 2150 | -2217 | -9 | -67 |
| 50.0 | 1663 | -1688 | 2107 | -2209 | -25 | -102 |
| 52.0 | 1585 | -1602 | 1839 | -1921 | -17 | -82 |
| 54.0 | 1256 | -1264 | 1320 | -1371 | -8 | -51 |
| 56.0 | 1267 | -1300 | 826 | -893 | -33 | -67 |
| 58.0 | 1287 | -1297 | 600 | -653 | -10 | -53 |
| 60.0 | 1347 | -1369 | 389 | -482 | -22 | -93 |
| 62.0 | 1379 | -1391 | 446 | -522 | -12 | -76 |
| 64.0 | 1179 | -1187 | 571 | -621 | -8 | -50 |
| 66.0 | 1003 | -1033 | 816 | -895 | -30 | -79 |
| 68.0 | 778 | -793 | 897 | -967 | -15 | -70 |
| 70.0 | 463 | -477 | 1014 | -1065 | -14 | -51 |
| 72.0 | 395 | -404 | 1146 | -1198 | -9 | -52 |
| 74.0 | 158 | -175 | 1227 | -1307 | -17 | -80 |
| 76.0 | 73 | -92 | 1261 | -1325 | -19 | -64 |
| 78.0 | 23 | -32 | 1227 | -1302 | -9 | -75 |
| 80.0 | -57 | 30 | 1090 | -1179 | -27 | -89 |
| 82.0 | -91 | 73 | 866 | -962 | -18 | -96 |
| 84.0 | 73 | -90 | 1032 | -1041 | -17 | -9 |
| 86.0 | 463 | -477 | 1497 | -1563 | -14 | -66 |
| 88.0 | 466 | -482 | 1372 | -1451 | -16 | -79 |
| 90.0 | 552 | -565 | 1485 | -1547 | -13 | -62 |
| 92.0 | 752 | -768 | 2183 | -2207 | -16 | -24 |
| 94.0 | 589 | -596 | 3016 | -3021 | -7 | -5 |
| 96.0 | 129 | -155 | 3755 | -3823 | -26 | -68 |
| 98.0 | -434 | 277 | 3912 | -3678 | -157 | 234 |
| 100.0 | -13 | -36 | 4154 | -3737 | -49 | 417 |
| 102.0 | 1416 | -1636 | 4016 | -4122 | -220 | -106 |

F-3 set 34, read 8 Feb 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -250 | 229 | -696 | 669 | -21 | -27 |
| 4.0 | -130 | 114 | -499 | 468 | -16 | -31 |
| 6.0 | 25 | -53 | 193 | -257 | -28 | -64 |
| 8.0 | 10 | -27 | 542 | -616 | -17 | -74 |
| 10.0 | 8 | -40 | 825 | -908 | -32 | -83 |
| 12.0 | 125 | -134 | 1036 | -1109 | -9 | -73 |
| 14.0 | 296 | -302 | 1042 | -1079 | -6 | -37 |
| 16.0 | 856 | -883 | 967 | -1061 | -27 | -94 |
| 18.0 | 957 | -962 | 917 | -996 | -5 | -79 |
| 20.0 | 1221 | -1250 | 1057 | -1133 | -29 | -76 |
| 22.0 | 1496 | -1498 | 1222 | -1273 | -2 | -51 |
| 24.0 | 1363 | -1370 | 1225 | -1287 | -7 | -62 |
| 26.0 | 949 | -964 | 1264 | -1341 | -15 | -77 |
| 28.0 | 1233 | -1244 | 1261 | -1342 | -11 | -81 |
| 30.0 | 1775 | -1799 | 1174 | -1258 | -24 | -84 |
| 32.0 | 2176 | -2182 | 1285 | -1348 | -6 | -63 |
| 34.0 | 1754 | -1763 | 1214 | -1276 | -9 | -62 |
| 36.0 | 1586 | -1607 | 1087 | -1172 | -21 | -85 |
| 38.0 | 1658 | -1671 | 948 | -1028 | -13 | -80 |
| 40.0 | 1523 | -1548 | 1108 | -1170 | -25 | -62 |
| 42.0 | 1272 | -1279 | 1539 | -1605 | -7 | -66 |
| 44.0 | 1129 | -1139 | 1708 | -1731 | -10 | -23 |
| 46.0 | 1288 | -1304 | 1983 | -2058 | -16 | -75 |
| 48.0 | 1611 | -1618 | 2153 | -2218 | -7 | -65 |
| 50.0 | 1664 | -1685 | 2108 | -2187 | -21 | -79 |
| 52.0 | 1586 | -1600 | 1837 | -1885 | -14 | -48 |
| 54.0 | 1259 | -1263 | 1318 | -1388 | -4 | -70 |
| 56.0 | 1268 | -1297 | 822 | -892 | -29 | -70 |
| 58.0 | 1286 | -1298 | 593 | -675 | -12 | -82 |
| 60.0 | 1347 | -1370 | 389 | -477 | -23 | -88 |
| 62.0 | 1377 | -1394 | 453 | -522 | -17 | -69 |
| 64.0 | 1180 | -1186 | 572 | -616 | -6 | -44 |
| 66.0 | 1005 | -1032 | 821 | -903 | -27 | -82 |
| 68.0 | 777 | -793 | 898 | -966 | -16 | -68 |
| 70.0 | 466 | -477 | 1015 | -1096 | -11 | -81 |
| 72.0 | 395 | -402 | 1148 | -1198 | -7 | -50 |
| 74.0 | 160 | -174 | 1238 | -1313 | -14 | -75 |
| 76.0 | 74 | -94 | 1267 | -1338 | -20 | -71 |
| 78.0 | 23 | -36 | 1213 | -1293 | -13 | -80 |
| 80.0 | -53 | 30 | 1088 | -1175 | -23 | -87 |
| 82.0 | -90 | 75 | 860 | -925 | -15 | -65 |
| 84.0 | 76 | -83 | 1034 | -1043 | -7 | -9 |
| 86.0 | 460 | -472 | 1503 | -1572 | -12 | -69 |
| 88.0 | 465 | -480 | 1374 | -1438 | -15 | -64 |
| 90.0 | 550 | -564 | 1495 | -1541 | -14 | -46 |
| 92.0 | 753 | -765 | 2182 | -2199 | -12 | -17 |
| 94.0 | 592 | -594 | 3021 | -3024 | -2 | -3 |
| 96.0 | 135 | -154 | 3760 | -3811 | -19 | -51 |
| 98.0 | -291 | 280 | 3644 | -3682 | -11 | -38 |
| 100.0 | 18 | -28 | 3674 | -3740 | -10 | -66 |
| 102.0 | 1411 | -1629 | 4023 | -4127 | -218 | -104 |

F-3 set 35, read 27 Mar 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -209 | 163 | -815 | 801 | -46 | -14 |
| 4.0 | -101 | 58 | -587 | 558 | -43 | -29 |
| 6.0 | 44 | -86 | 171 | -191 | -42 | -20 |
| 8.0 | 28 | -49 | 545 | -595 | -21 | -50 |
| 10.0 | 13 | -56 | 847 | -894 | -43 | -47 |
| 12.0 | 116 | -143 | 1051 | -1103 | -27 | -52 |
| 14.0 | 283 | -311 | 1050 | -1114 | -28 | -64 |
| 16.0 | 840 | -886 | 996 | -1017 | -46 | -21 |
| 18.0 | 944 | -977 | 929 | -983 | -33 | -54 |
| 20.0 | 1206 | -1262 | 1067 | -1109 | -56 | -42 |
| 22.0 | 1489 | -1511 | 1232 | -1251 | -22 | -19 |
| 24.0 | 1354 | -1381 | 1244 | -1250 | -27 | -6 |
| 26.0 | 945 | -980 | 1293 | -1333 | -35 | -40 |
| 28.0 | 1212 | -1254 | 1294 | -1323 | -42 | -29 |
| 30.0 | 1756 | -1809 | 1189 | -1226 | -53 | -37 |
| 32.0 | 2165 | -2190 | 1307 | -1296 | -25 | 11 |
| 34.0 | 1743 | -1774 | 1250 | -1261 | -31 | -11 |
| 36.0 | 1576 | -1618 | 1099 | -1159 | -42 | -60 |
| 38.0 | 1645 | -1677 | 966 | -992 | -32 | -26 |
| 40.0 | 1517 | -1559 | 1107 | -1140 | -42 | -33 |
| 42.0 | 1265 | -1295 | 1555 | -1587 | -30 | -32 |
| 44.0 | 1114 | -1150 | 1704 | -1714 | -36 | -10 |
| 46.0 | 1275 | -1313 | 1999 | -2030 | -38 | -31 |
| 48.0 | 1600 | -1628 | 2162 | -2198 | -28 | -36 |
| 50.0 | 1644 | -1696 | 2132 | -2154 | -52 | -22 |
| 52.0 | 1577 | -1612 | 1825 | -1904 | -35 | -79 |
| 54.0 | 1249 | -1276 | 1339 | -1381 | -27 | -42 |
| 56.0 | 1255 | -1304 | 838 | -856 | -49 | -18 |
| 58.0 | 1270 | -1311 | 591 | -665 | -41 | -74 |
| 60.0 | 1339 | -1380 | 402 | -467 | -41 | -65 |
| 62.0 | 1366 | -1400 | 452 | -497 | -34 | -45 |
| 64.0 | 1174 | -1195 | 575 | -592 | -21 | -17 |
| 66.0 | 998 | -1043 | 826 | -886 | -45 | -60 |
| 68.0 | 770 | -804 | 911 | -952 | -34 | -41 |
| 70.0 | 455 | -491 | 1028 | -1074 | -36 | -46 |
| 72.0 | 384 | -416 | 1154 | -1189 | -32 | -35 |
| 74.0 | 146 | -183 | 1254 | -1306 | -37 | -52 |
| 76.0 | 64 | -104 | 1268 | -1315 | -40 | -47 |
| 78.0 | 12 | -41 | 1214 | -1280 | -29 | -66 |
| 80.0 | -62 | 20 | 1096 | -1149 | -42 | -53 |
| 82.0 | -103 | 62 | 873 | -935 | -41 | -62 |
| 84.0 | 60 | -87 | 1037 | -1023 | -27 | 14 |
| 86.0 | 450 | -483 | 1511 | -1552 | -33 | -41 |
| 88.0 | 456 | -487 | 1392 | -1423 | -31 | -31 |
| 90.0 | 541 | -577 | 1490 | -1536 | -36 | -46 |
| 92.0 | 743 | -770 | 2178 | -2183 | -27 | -5 |
| 94.0 | 587 | -612 | 3020 | -2998 | -25 | 22 |
| 96.0 | 124 | -164 | 3767 | -3805 | -40 | -38 |
| 98.0 | -380 | 262 | 4141 | -3678 | -118 | 463 |
| 100.0 | -21 | -33 | 4213 | -3721 | -54 | 492 |
| 102.0 | 1391 | -1581 | 4057 | -4157 | -190 | -100 |

F-3 set 36, read 25 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -290 | 230 | -750 | 728 | -60 | -22 |
| 4.0 | -145 | 105 | -543 | 515 | -40 | -28 |
| 6.0 | 20 | -76 | 180 | -220 | -56 | -40 |
| 8.0 | 25 | -53 | 550 | -596 | -28 | -46 |
| 10.0 | 11 | -61 | 843 | -891 | -50 | -48 |
| 12.0 | 116 | -135 | 1053 | -1080 | -19 | -27 |
| 14.0 | 291 | -308 | 1044 | -1089 | -17 | -45 |
| 16.0 | 845 | -886 | 977 | -1045 | -41 | -68 |
| 18.0 | 949 | -975 | 929 | -983 | -26 | -54 |
| 20.0 | 1212 | -1256 | 1071 | -1124 | -44 | -53 |
| 22.0 | 1490 | -1506 | 1233 | -1266 | -16 | -33 |
| 24.0 | 1357 | -1377 | 1241 | -1275 | -20 | -34 |
| 26.0 | 944 | -972 | 1277 | -1330 | -28 | -53 |
| 28.0 | 1221 | -1252 | 1287 | -1327 | -31 | -40 |
| 30.0 | 1768 | -1812 | 1184 | -1243 | -44 | -59 |
| 32.0 | 2167 | -2189 | 1302 | -1328 | -22 | -26 |
| 34.0 | 1744 | -1768 | 1229 | -1280 | -24 | -51 |
| 36.0 | 1580 | -1614 | 1092 | -1156 | -34 | -64 |
| 38.0 | 1653 | -1671 | 957 | -983 | -18 | -26 |
| 40.0 | 1520 | -1554 | 1107 | -1152 | -34 | -45 |
| 42.0 | 1268 | -1286 | 1546 | -1585 | -18 | -39 |
| 44.0 | 1122 | -1146 | 1719 | -1725 | -24 | -6 |
| 46.0 | 1277 | -1310 | 1986 | -2025 | -33 | -39 |
| 48.0 | 1603 | -1624 | 2163 | -2195 | -21 | -32 |
| 50.0 | 1653 | -1690 | 2126 | -2185 | -37 | -59 |
| 52.0 | 1577 | -1606 | 1830 | -1896 | -29 | -66 |
| 54.0 | 1251 | -1270 | 1328 | -1383 | -19 | -55 |
| 56.0 | 1258 | -1303 | 834 | -878 | -45 | -44 |
| 58.0 | 1282 | -1305 | 610 | -661 | -23 | -51 |
| 60.0 | 1341 | -1375 | 397 | -467 | -34 | -70 |
| 62.0 | 1370 | -1397 | 459 | -503 | -27 | -44 |
| 64.0 | 1175 | -1195 | 591 | -611 | -20 | -20 |
| 66.0 | 1002 | -1039 | 829 | -897 | -37 | -68 |
| 68.0 | 773 | -798 | 910 | -956 | -25 | -46 |
| 70.0 | 459 | -487 | 1028 | -1080 | -28 | -52 |
| 72.0 | 384 | -411 | 1154 | -1184 | -27 | -30 |
| 74.0 | 154 | -180 | 1247 | -1297 | -26 | -50 |
| 76.0 | 66 | -99 | 1291 | -1339 | -33 | -48 |
| 78.0 | 20 | -39 | 1232 | -1286 | -19 | -54 |
| 80.0 | -58 | 19 | 1098 | -1160 | -39 | -62 |
| 82.0 | -97 | 69 | 877 | -950 | -28 | -73 |
| 84.0 | 64 | -90 | 1038 | -1032 | -26 | 6 |
| 86.0 | 455 | -480 | 1508 | -1560 | -25 | -52 |
| 88.0 | 458 | -484 | 1381 | -1426 | -26 | -45 |
| 90.0 | 540 | -569 | 1504 | -1533 | -29 | -29 |
| 92.0 | 744 | -769 | 2196 | -2187 | -25 | 9 |
| 94.0 | 584 | -604 | 3030 | -3015 | -20 | 15 |
| 96.0 | 123 | -162 | 3762 | -3808 | -39 | -46 |
| 98.0 | -403 | 270 | 4067 | -3661 | -133 | 406 |
| 100.0 | -24 | -35 | 4254 | -3726 | -59 | 528 |
| 102.0 | 1399 | -1630 | 4040 | -4119 | -231 | -79 |

F-3 set 37, read 28 May 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -306 | 273 | -753 | 745 | -33 | -8 |
| 4.0 | -171 | 138 | -560 | 523 | -33 | -37 |
| 6.0 | 14 | -64 | 159 | -230 | -50 | -71 |
| 8.0 | 25 | -54 | 559 | -609 | -29 | -50 |
| 10.0 | 15 | -71 | 825 | -914 | -56 | -89 |
| 12.0 | 119 | -138 | 1036 | -1111 | -19 | -75 |
| 14.0 | 277 | -300 | 1031 | -1144 | -23 | -113 |
| 16.0 | 846 | -888 | 1008 | -1058 | -42 | -50 |
| 18.0 | 948 | -968 | 924 | -992 | -20 | -68 |
| 20.0 | 1209 | -1257 | 1052 | -1140 | -48 | -88 |
| 22.0 | 1491 | -1506 | 1216 | -1280 | -15 | -64 |
| 24.0 | 1359 | -1383 | 1218 | -1301 | -24 | -83 |
| 26.0 | 948 | -978 | 1279 | -1354 | -30 | -75 |
| 28.0 | 1217 | -1247 | 1263 | -1333 | -30 | -70 |
| 30.0 | 1760 | -1801 | 1168 | -1252 | -41 | -84 |
| 32.0 | 2171 | -2190 | 1287 | -1351 | -19 | -64 |
| 34.0 | 1749 | -1771 | 1215 | -1278 | -22 | -63 |
| 36.0 | 1579 | -1617 | 1088 | -1180 | -38 | -92 |
| 38.0 | 1651 | -1676 | 941 | -1018 | -25 | -77 |
| 40.0 | 1523 | -1560 | 1134 | -1159 | -37 | -25 |
| 42.0 | 1275 | -1293 | 1532 | -1605 | -18 | -73 |
| 44.0 | 1118 | -1142 | 1689 | -1724 | -24 | -35 |
| 46.0 | 1278 | -1308 | 1979 | -2061 | -30 | -82 |
| 48.0 | 1598 | -1622 | 2153 | -2214 | -24 | -61 |
| 50.0 | 1647 | -1694 | 2116 | -2202 | -47 | -86 |
| 52.0 | 1582 | -1608 | 1811 | -1897 | -26 | -86 |
| 54.0 | 1252 | -1270 | 1330 | -1403 | -18 | -73 |
| 56.0 | 1258 | -1301 | 822 | -904 | -43 | -82 |
| 58.0 | 1279 | -1304 | 580 | -679 | -25 | -99 |
| 60.0 | 1342 | -1376 | 384 | -486 | -34 | -102 |
| 62.0 | 1373 | -1398 | 441 | -535 | -25 | -94 |
| 64.0 | 1176 | -1193 | 550 | -624 | -17 | -74 |
| 66.0 | 1003 | -1040 | 812 | -897 | -37 | -85 |
| 68.0 | 778 | -802 | 889 | -979 | -24 | -90 |
| 70.0 | 459 | -490 | 1032 | -1097 | -31 | -65 |
| 72.0 | 391 | -412 | 1129 | -1208 | -21 | -79 |
| 74.0 | 154 | -182 | 1226 | -1313 | -28 | -87 |
| 76.0 | 72 | -105 | 1253 | -1337 | -33 | -84 |
| 78.0 | 22 | -46 | 1199 | -1309 | -24 | -110 |
| 80.0 | -56 | 12 | 1070 | -1185 | -44 | -115 |
| 82.0 | -94 | 68 | 850 | -964 | -26 | -114 |
| 84.0 | 61 | -84 | 1002 | -1045 | -23 | -43 |
| 86.0 | 455 | -481 | 1488 | -1562 | -26 | -74 |
| 88.0 | 461 | -485 | 1373 | -1449 | -24 | -76 |
| 90.0 | 540 | -568 | 1470 | -1530 | -28 | -60 |
| 92.0 | 745 | -770 | 2182 | -2202 | -25 | -20 |
| 94.0 | 598 | -609 | 2988 | -3009 | -11 | -21 |
| 96.0 | 128 | -161 | 3738 | -3825 | -33 | -87 |
| 98.0 | -373 | 267 | 4134 | -3701 | -106 | 433 |
| 100.0 | -22 | -34 | 4223 | -3750 | -56 | 473 |
| 102.0 | 1383 | -1594 | 4073 | -4155 | -211 | -82 |

F-3 set 38, read 27 Jun 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -313 | 281 | -802 | 731 | -32 | -71 |
| 4.0 | -172 | 134 | -572 | 543 | -38 | -29 |
| 6.0 | 17 | -77 | 155 | -222 | -60 | -67 |
| 8.0 | 32 | -73 | 530 | -601 | -41 | -71 |
| 10.0 | 18 | -73 | 827 | -879 | -55 | -52 |
| 12.0 | 119 | -139 | 1030 | -1105 | -20 | -75 |
| 14.0 | 271 | -300 | 1046 | -1115 | -29 | -69 |
| 16.0 | 845 | -888 | 968 | -1059 | -43 | -91 |
| 18.0 | 944 | -969 | 927 | -989 | -25 | -62 |
| 20.0 | 1203 | -1257 | 1063 | -1121 | -54 | -58 |
| 22.0 | 1491 | -1509 | 1206 | -1273 | -18 | -67 |
| 24.0 | 1359 | -1394 | 1218 | -1298 | -35 | -80 |
| 26.0 | 946 | -979 | 1276 | -1343 | -33 | -67 |
| 28.0 | 1208 | -1239 | 1265 | -1331 | -31 | -66 |
| 30.0 | 1748 | -1790 | 1208 | -1227 | -42 | -19 |
| 32.0 | 2171 | -2195 | 1279 | -1348 | -24 | -69 |
| 34.0 | 1754 | -1779 | 1218 | -1282 | -25 | -64 |
| 36.0 | 1575 | -1618 | 1095 | -1178 | -43 | -83 |
| 38.0 | 1650 | -1678 | 945 | -1029 | -28 | -84 |
| 40.0 | 1524 | -1561 | 1082 | -1151 | -37 | -69 |
| 42.0 | 1278 | -1299 | 1528 | -1601 | -21 | -73 |
| 44.0 | 1113 | -1144 | 1688 | -1719 | -31 | -31 |
| 46.0 | 1276 | -1307 | 1967 | -2050 | -31 | -83 |
| 48.0 | 1592 | -1617 | 2138 | -2211 | -25 | -73 |
| 50.0 | 1653 | -1701 | 2111 | -2206 | -48 | -95 |
| 52.0 | 1586 | -1615 | 1837 | -1936 | -29 | -99 |
| 54.0 | 1254 | -1277 | 1340 | -1386 | -23 | -46 |
| 56.0 | 1256 | -1299 | 830 | -907 | -43 | -77 |
| 58.0 | 1276 | -1303 | 586 | -673 | -27 | -87 |
| 60.0 | 1345 | -1381 | 396 | -480 | -36 | -84 |
| 62.0 | 1374 | -1399 | 440 | -516 | -25 | -76 |
| 64.0 | 1177 | -1200 | 551 | -604 | -23 | -53 |
| 66.0 | 1005 | -1040 | 836 | -873 | -35 | -37 |
| 68.0 | 780 | -805 | 898 | -967 | -25 | -69 |
| 70.0 | 460 | -495 | 1043 | -1084 | -35 | -41 |
| 72.0 | 394 | -417 | 1134 | -1197 | -23 | -63 |
| 74.0 | 158 | -188 | 1224 | -1306 | -30 | -82 |
| 76.0 | 69 | -101 | 1261 | -1319 | -32 | -58 |
| 78.0 | 23 | -53 | 1212 | -1283 | -30 | -71 |
| 80.0 | -54 | 9 | 1078 | -1173 | -45 | -95 |
| 82.0 | -97 | 65 | 867 | -972 | -32 | -105 |
| 84.0 | 53 | -78 | 998 | -1032 | -25 | -34 |
| 86.0 | 446 | -477 | 1503 | -1558 | -31 | -55 |
| 88.0 | 454 | -484 | 1363 | -1445 | -30 | -82 |
| 90.0 | 537 | -568 | 1460 | -1527 | -31 | -67 |
| 92.0 | 745 | -764 | 2152 | -2185 | -19 | -33 |
| 94.0 | 602 | -622 | 2974 | -2987 | -20 | -13 |
| 96.0 | 128 | -163 | 3738 | -3819 | -35 | -81 |
| 98.0 | -373 | 259 | 4134 | -3693 | -114 | 441 |
| 100.0 | -50 | -23 | 4210 | -3773 | -73 | 437 |
| 102.0 | 1329 | -1701 | 4116 | -3914 | -372 | 202 |

F-3 set 39, read 30 Jul 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -294 | 280 | -792 | 759 | -14 | -33 |
| 4.0 | -165 | 152 | -581 | 550 | -13 | -31 |
| 6.0 | 27 | -56 | 165 | -224 | -29 | -59 |
| 8.0 | 46 | -58 | 532 | -604 | -12 | -72 |
| 10.0 | 33 | -71 | 831 | -902 | -38 | -71 |
| 12.0 | 129 | -131 | 1042 | -1095 | -2 | -53 |
| 14.0 | 279 | -290 | 1045 | -1087 | -11 | -42 |
| 16.0 | 862 | -879 | 987 | -1035 | -17 | -48 |
| 18.0 | 949 | -960 | 949 | -987 | -11 | -38 |
| 20.0 | 1216 | -1253 | 1065 | -1121 | -37 | -56 |
| 22.0 | 1498 | -1500 | 1225 | -1260 | -2 | -35 |
| 24.0 | 1369 | -1377 | 1223 | -1281 | -8 | -58 |
| 26.0 | 959 | -973 | 1272 | -1350 | -14 | -78 |
| 28.0 | 1214 | -1233 | 1268 | -1341 | -19 | -73 |
| 30.0 | 1762 | -1790 | 1179 | -1255 | -28 | -76 |
| 32.0 | 2180 | -2186 | 1288 | -1338 | -6 | -50 |
| 34.0 | 1764 | -1772 | 1224 | -1281 | -8 | -57 |
| 36.0 | 1585 | -1615 | 1094 | -1172 | -30 | -78 |
| 38.0 | 1659 | -1668 | 952 | -1018 | -9 | -66 |
| 40.0 | 1532 | -1551 | 1096 | -1155 | -19 | -59 |
| 42.0 | 1282 | -1285 | 1537 | -1593 | -3 | -56 |
| 44.0 | 1118 | -1134 | 1702 | -1719 | -16 | -17 |
| 46.0 | 1282 | -1299 | 1984 | -2049 | -17 | -65 |
| 48.0 | 1602 | -1609 | 2158 | -2205 | -7 | -47 |
| 50.0 | 1661 | -1687 | 2123 | -2188 | -26 | -65 |
| 52.0 | 1594 | -1604 | 1831 | -1915 | -10 | -84 |
| 54.0 | 1262 | -1264 | 1344 | -1400 | -2 | -56 |
| 56.0 | 1263 | -1291 | 840 | -889 | -28 | -49 |
| 58.0 | 1283 | -1295 | 603 | -667 | -12 | -64 |
| 60.0 | 1351 | -1373 | 399 | -471 | -22 | -72 |
| 62.0 | 1384 | -1393 | 453 | -507 | -9 | -54 |
| 64.0 | 1188 | -1194 | 573 | -599 | -6 | -26 |
| 66.0 | 1015 | -1035 | 822 | -893 | -20 | -71 |
| 68.0 | 789 | -797 | 902 | -958 | -8 | -56 |
| 70.0 | 469 | -483 | 1022 | -1095 | -14 | -73 |
| 72.0 | 400 | -408 | 1130 | -1189 | -8 | -59 |
| 74.0 | 169 | -180 | 1242 | -1297 | -11 | -55 |
| 76.0 | 83 | -99 | 1262 | -1310 | -16 | -48 |
| 78.0 | 50 | -55 | 1240 | -1284 | -5 | -44 |
| 80.0 | -31 | 10 | 1092 | -1159 | -21 | -67 |
| 82.0 | -82 | 75 | 876 | -953 | -7 | -77 |
| 84.0 | 64 | -74 | 1019 | -1024 | -10 | -5 |
| 86.0 | 459 | -474 | 1504 | -1555 | -15 | -51 |
| 88.0 | 463 | -478 | 1381 | -1442 | -15 | -61 |
| 90.0 | 546 | -565 | 1486 | -1530 | -19 | -44 |
| 92.0 | 752 | -758 | 2170 | -2180 | -6 | -10 |
| 94.0 | 608 | -607 | 3003 | -2997 | 1 | 6 |
| 96.0 | 137 | -156 | 3752 | -3808 | -19 | -56 |
| 98.0 | -279 | 272 | 3650 | -3679 | -7 | -29 |
| 100.0 | -11 | -21 | 3714 | -3744 | -32 | -30 |
| 102.0 | 1354 | -1551 | 4086 | -4176 | -197 | -90 |

F-3 set 40, read 27 Aug 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -277 | 248 | -775 | 740 | -29 | -35 |
| 4.0 | -148 | 109 | -598 | 558 | -39 | -40 |
| 6.0 | 24 | -84 | 154 | -226 | -60 | -72 |
| 8.0 | 38 | -71 | 534 | -599 | -33 | -65 |
| 10.0 | 25 | -77 | 851 | -901 | -52 | -50 |
| 12.0 | 116 | -144 | 1034 | -1105 | -28 | -71 |
| 14.0 | 277 | -297 | 1037 | -1106 | -20 | -69 |
| 16.0 | 848 | -892 | 995 | -1058 | -44 | -63 |
| 18.0 | 944 | -971 | 939 | -997 | -27 | -58 |
| 20.0 | 1209 | -1262 | 1053 | -1135 | -53 | -82 |
| 22.0 | 1485 | -1513 | 1209 | -1278 | -28 | -69 |
| 24.0 | 1361 | -1388 | 1219 | -1314 | -27 | -95 |
| 26.0 | 945 | -978 | 1280 | -1350 | -33 | -70 |
| 28.0 | 1213 | -1248 | 1266 | -1344 | -35 | -78 |
| 30.0 | 1755 | -1802 | 1199 | -1259 | -47 | -60 |
| 32.0 | 2161 | -2194 | 1280 | -1346 | -33 | -66 |
| 34.0 | 1752 | -1778 | 1220 | -1303 | -26 | -83 |
| 36.0 | 1577 | -1616 | 1086 | -1176 | -39 | -90 |
| 38.0 | 1654 | -1679 | 933 | -1032 | -25 | -99 |
| 40.0 | 1523 | -1560 | 1087 | -1173 | -37 | -86 |
| 42.0 | 1266 | -1297 | 1546 | -1609 | -31 | -63 |
| 44.0 | 1117 | -1152 | 1689 | -1734 | -35 | -45 |
| 46.0 | 1278 | -1312 | 1978 | -2053 | -34 | -75 |
| 48.0 | 1601 | -1623 | 2147 | -2219 | -22 | -72 |
| 50.0 | 1653 | -1695 | 2107 | -2204 | -42 | -97 |
| 52.0 | 1580 | -1611 | 1820 | -1919 | -31 | -99 |
| 54.0 | 1249 | -1271 | 1332 | -1402 | -22 | -70 |
| 56.0 | 1256 | -1304 | 831 | -897 | -48 | -66 |
| 58.0 | 1275 | -1307 | 593 | -672 | -32 | -79 |
| 60.0 | 1342 | -1384 | 401 | -489 | -42 | -88 |
| 62.0 | 1373 | -1400 | 439 | -518 | -27 | -79 |
| 64.0 | 1178 | -1199 | 564 | -612 | -21 | -48 |
| 66.0 | 1004 | -1044 | 824 | -902 | -40 | -78 |
| 68.0 | 777 | -805 | 899 | -972 | -28 | -73 |
| 70.0 | 459 | -492 | 1011 | -1084 | -33 | -73 |
| 72.0 | 387 | -416 | 1140 | -1198 | -29 | -58 |
| 74.0 | 155 | -187 | 1232 | -1314 | -32 | -82 |
| 76.0 | 75 | -112 | 1257 | -1333 | -37 | -76 |
| 78.0 | 44 | -65 | 1212 | -1305 | -21 | -93 |
| 80.0 | -40 | -3 | 1074 | -1176 | -43 | -102 |
| 82.0 | -98 | 63 | 864 | -969 | -35 | -105 |
| 84.0 | 61 | -89 | 1023 | -1037 | -28 | -14 |
| 86.0 | 452 | -476 | 1499 | -1557 | -24 | -58 |
| 88.0 | 460 | -489 | 1379 | -1445 | -29 | -66 |
| 90.0 | 542 | -574 | 1477 | -1551 | -32 | -74 |
| 92.0 | 745 | -768 | 2170 | -2198 | -23 | -28 |
| 94.0 | 593 | -610 | 3002 | -3013 | -17 | -11 |
| 96.0 | 126 | -166 | 3747 | -3820 | -40 | -73 |
| 98.0 | -292 | 265 | 3645 | -3684 | -27 | -39 |
| 100.0 | 1 | -39 | 3669 | -3765 | -38 | -96 |
| 102.0 | 1381 | -1596 | 4045 | -4153 | -215 | -108 |

F-3 set 41, read 18 Sep 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -293 | 257 | -799 | 760 | -36 | -39 |
| 4.0 | -146 | 101 | -568 | 536 | -45 | -32 |
| 6.0 | 35 | -78 | 161 | -236 | -43 | -75 |
| 8.0 | 43 | -76 | 534 | -595 | -33 | -61 |
| 10.0 | 34 | -80 | 827 | -902 | -46 | -75 |
| 12.0 | 117 | -143 | 1049 | -1101 | -26 | -52 |
| 14.0 | 270 | -301 | 1048 | -1094 | -31 | -46 |
| 16.0 | 848 | -890 | 985 | -1063 | -42 | -78 |
| 18.0 | 948 | -969 | 927 | -997 | -21 | -70 |
| 20.0 | 1214 | -1261 | 1083 | -1142 | -47 | -59 |
| 22.0 | 1495 | -1506 | 1217 | -1270 | -11 | -53 |
| 24.0 | 1363 | -1396 | 1232 | -1304 | -33 | -72 |
| 26.0 | 946 | -974 | 1273 | -1334 | -28 | -61 |
| 28.0 | 1215 | -1244 | 1272 | -1335 | -29 | -63 |
| 30.0 | 1757 | -1800 | 1177 | -1256 | -43 | -79 |
| 32.0 | 2172 | -2188 | 1295 | -1342 | -16 | -47 |
| 34.0 | 1754 | -1781 | 1225 | -1297 | -27 | -72 |
| 36.0 | 1579 | -1615 | 1089 | -1174 | -36 | -85 |
| 38.0 | 1651 | -1678 | 947 | -1017 | -27 | -70 |
| 40.0 | 1522 | -1559 | 1093 | -1164 | -37 | -71 |
| 42.0 | 1272 | -1292 | 1550 | -1598 | -20 | -48 |
| 44.0 | 1120 | -1145 | 1700 | -1728 | -25 | -28 |
| 46.0 | 1278 | -1306 | 1975 | -2059 | -28 | -84 |
| 48.0 | 1602 | -1618 | 2151 | -2211 | -16 | -60 |
| 50.0 | 1659 | -1693 | 2110 | -2198 | -34 | -88 |
| 52.0 | 1584 | -1615 | 1837 | -1907 | -31 | -70 |
| 54.0 | 1256 | -1272 | 1332 | -1391 | -16 | -59 |
| 56.0 | 1256 | -1300 | 835 | -887 | -44 | -52 |
| 58.0 | 1279 | -1301 | 600 | -673 | -22 | -73 |
| 60.0 | 1347 | -1378 | 389 | -473 | -31 | -84 |
| 62.0 | 1377 | -1400 | 436 | -524 | -23 | -88 |
| 64.0 | 1180 | -1201 | 568 | -613 | -21 | -45 |
| 66.0 | 1004 | -1039 | 821 | -888 | -35 | -67 |
| 68.0 | 775 | -803 | 901 | -960 | -28 | -59 |
| 70.0 | 460 | -488 | 1018 | -1099 | -28 | -81 |
| 72.0 | 391 | -413 | 1146 | -1193 | -22 | -47 |
| 74.0 | 158 | -190 | 1235 | -1304 | -32 | -69 |
| 76.0 | 77 | -107 | 1261 | -1341 | -30 | -80 |
| 78.0 | 46 | -69 | 1221 | -1290 | -23 | -69 |
| 80.0 | -33 | -4 | 1084 | -1167 | -37 | -83 |
| 82.0 | -94 | 62 | 874 | -962 | -32 | -88 |
| 84.0 | 66 | -88 | 1025 | -1041 | -22 | -16 |
| 86.0 | 451 | -478 | 1495 | -1562 | -27 | -67 |
| 88.0 | 459 | -485 | 1370 | -1440 | -26 | -70 |
| 90.0 | 541 | -571 | 1486 | -1551 | -30 | -65 |
| 92.0 | 753 | -770 | 2183 | -2197 | -17 | -14 |
| 94.0 | 589 | -607 | 3016 | -3017 | -18 | -1 |
| 96.0 | 129 | -163 | 3757 | -3811 | -34 | -54 |
| 98.0 | -291 | 271 | 3635 | -3681 | -20 | -46 |
| 100.0 | 8 | -34 | 3675 | -3794 | -26 | -119 |
| 102.0 | 1415 | -1614 | 4005 | -4139 | -199 | -134 |

F-3 set 42, read 23 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -230 | 202 | -767 | 742 | -28 | -25 |
| 4.0 | -109 | 81 | -584 | 554 | -28 | -30 |
| 6.0 | 25 | -70 | 178 | -216 | -45 | -38 |
| 8.0 | 27 | -53 | 529 | -607 | -26 | -78 |
| 10.0 | 29 | -70 | 817 | -912 | -41 | -95 |
| 12.0 | 119 | -131 | 1057 | -1109 | -12 | -52 |
| 14.0 | 284 | -292 | 1032 | -1102 | -8 | -70 |
| 16.0 | 850 | -887 | 980 | -1060 | -37 | -80 |
| 18.0 | 950 | -966 | 924 | -992 | -16 | -68 |
| 20.0 | 1217 | -1259 | 1060 | -1134 | -42 | -74 |
| 22.0 | 1496 | -1501 | 1230 | -1275 | -5 | -45 |
| 24.0 | 1361 | -1378 | 1230 | -1289 | -17 | -59 |
| 26.0 | 950 | -972 | 1270 | -1345 | -22 | -75 |
| 28.0 | 1221 | -1244 | 1270 | -1343 | -23 | -73 |
| 30.0 | 1763 | -1800 | 1188 | -1255 | -37 | -67 |
| 32.0 | 2170 | -2181 | 1274 | -1340 | -11 | -66 |
| 34.0 | 1752 | -1775 | 1230 | -1296 | -23 | -66 |
| 36.0 | 1576 | -1608 | 1085 | -1180 | -32 | -95 |
| 38.0 | 1654 | -1674 | 938 | -1012 | -20 | -74 |
| 40.0 | 1525 | -1556 | 1088 | -1172 | -31 | -84 |
| 42.0 | 1273 | -1291 | 1533 | -1598 | -18 | -65 |
| 44.0 | 1121 | -1142 | 1697 | -1730 | -21 | -33 |
| 46.0 | 1281 | -1303 | 1970 | -2058 | -22 | -88 |
| 48.0 | 1603 | -1618 | 2157 | -2215 | -15 | -58 |
| 50.0 | 1660 | -1690 | 2109 | -2195 | -30 | -86 |
| 52.0 | 1585 | -1604 | 1819 | -1886 | -19 | -67 |
| 54.0 | 1258 | -1271 | 1324 | -1394 | -13 | -70 |
| 56.0 | 1261 | -1303 | 823 | -898 | -42 | -75 |
| 58.0 | 1283 | -1301 | 597 | -668 | -18 | -71 |
| 60.0 | 1352 | -1376 | 384 | -490 | -24 | -106 |
| 62.0 | 1374 | -1399 | 442 | -519 | -25 | -77 |
| 64.0 | 1184 | -1196 | 564 | -613 | -12 | -49 |
| 66.0 | 1007 | -1035 | 811 | -898 | -28 | -87 |
| 68.0 | 782 | -801 | 892 | -965 | -19 | -73 |
| 70.0 | 463 | -492 | 1010 | -1100 | -29 | -90 |
| 72.0 | 392 | -412 | 1135 | -1203 | -20 | -68 |
| 74.0 | 161 | -184 | 1229 | -1307 | -23 | -78 |
| 76.0 | 80 | -108 | 1255 | -1346 | -28 | -91 |
| 78.0 | 48 | -63 | 1218 | -1306 | -15 | -88 |
| 80.0 | -37 | 1 | 1067 | -1175 | -36 | -108 |
| 82.0 | -90 | 68 | 865 | -966 | -22 | -101 |
| 84.0 | 69 | -86 | 1018 | -1040 | -17 | -22 |
| 86.0 | 457 | -477 | 1489 | -1553 | -20 | -64 |
| 88.0 | 462 | -483 | 1365 | -1451 | -21 | -86 |
| 90.0 | 545 | -567 | 1484 | -1545 | -22 | -61 |
| 92.0 | 748 | -771 | 2171 | -2202 | -23 | -31 |
| 94.0 | 592 | -610 | 3014 | -3016 | -18 | -2 |
| 96.0 | 129 | -161 | 3743 | -3823 | -32 | -80 |
| 98.0 | -291 | 274 | 3633 | -3699 | -17 | -66 |
| 100.0 | 9 | -34 | 3665 | -3780 | -25 | -115 |
| 102.0 | 1406 | -1594 | 4038 | -4157 | -188 | -119 |

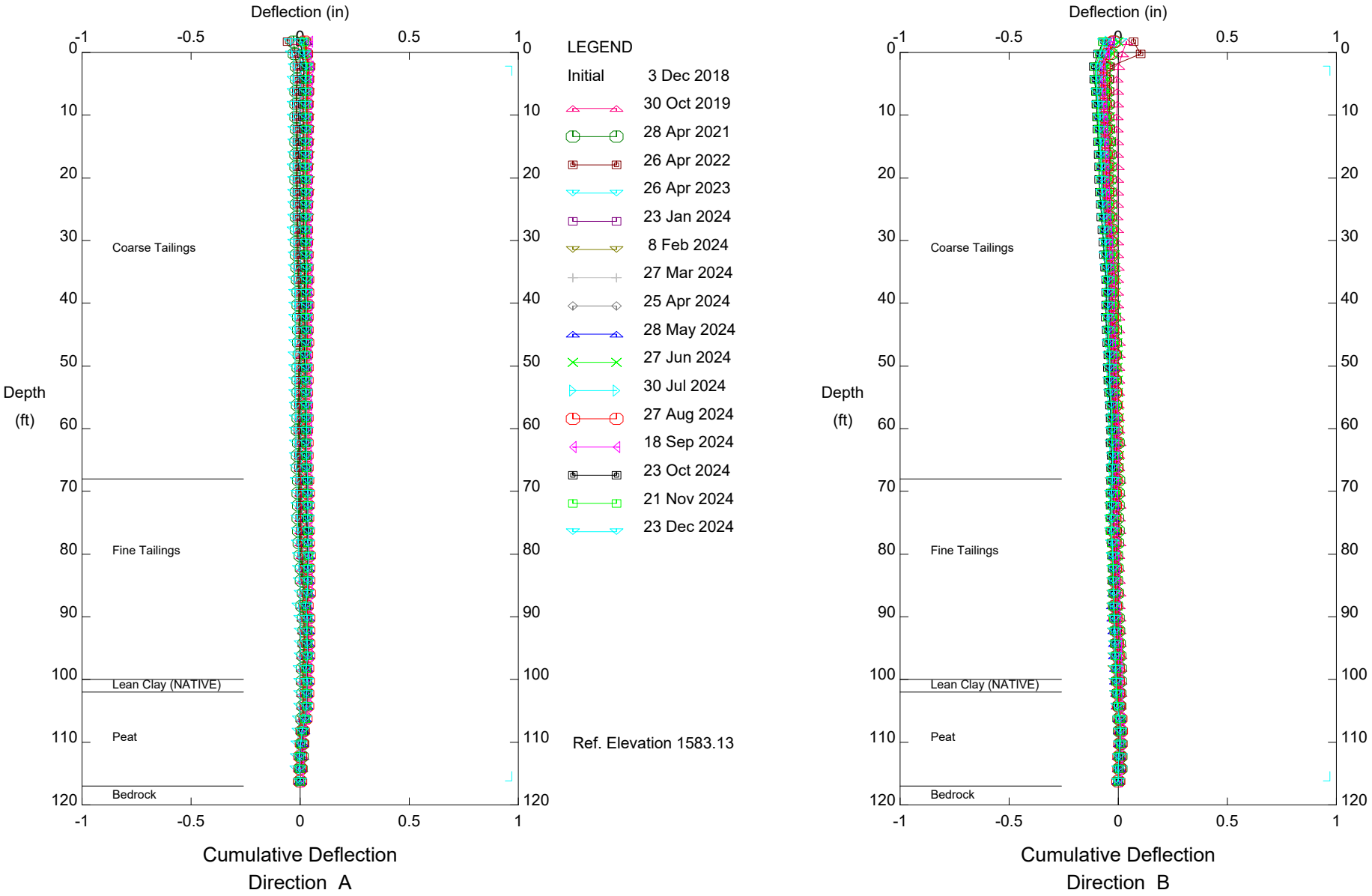
F-3 set 43, read 25 Nov 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -103 | 59 | -791 | 755 | -44 | -36 |
| 4.0 | -4 | -45 | -581 | 558 | -49 | -23 |
| 6.0 | 110 | -175 | 151 | -228 | -65 | -77 |
| 8.0 | 66 | -108 | 552 | -590 | -42 | -38 |
| 10.0 | 24 | -87 | 832 | -898 | -63 | -66 |
| 12.0 | 102 | -148 | 1043 | -1102 | -46 | -59 |
| 14.0 | 275 | -308 | 1043 | -1090 | -33 | -47 |
| 16.0 | 838 | -898 | 975 | -1036 | -60 | -61 |
| 18.0 | 939 | -976 | 927 | -980 | -37 | -53 |
| 20.0 | 1207 | -1266 | 1055 | -1116 | -59 | -61 |
| 22.0 | 1481 | -1511 | 1232 | -1271 | -30 | -39 |
| 24.0 | 1349 | -1389 | 1229 | -1284 | -40 | -55 |
| 26.0 | 937 | -980 | 1275 | -1341 | -43 | -66 |
| 28.0 | 1207 | -1258 | 1272 | -1333 | -51 | -61 |
| 30.0 | 1755 | -1810 | 1200 | -1219 | -55 | -19 |
| 32.0 | 2159 | -2196 | 1299 | -1339 | -37 | -40 |
| 34.0 | 1741 | -1785 | 1229 | -1283 | -44 | -54 |
| 36.0 | 1566 | -1617 | 1089 | -1163 | -51 | -74 |
| 38.0 | 1641 | -1683 | 930 | -1008 | -42 | -78 |
| 40.0 | 1516 | -1564 | 1110 | -1163 | -48 | -53 |
| 42.0 | 1255 | -1300 | 1535 | -1597 | -45 | -62 |
| 44.0 | 1103 | -1151 | 1706 | -1728 | -48 | -22 |
| 46.0 | 1265 | -1318 | 2009 | -2034 | -53 | -25 |
| 48.0 | 1580 | -1632 | 2171 | -2205 | -52 | -34 |
| 50.0 | 1645 | -1702 | 2117 | -2189 | -57 | -72 |
| 52.0 | 1570 | -1616 | 1825 | -1901 | -46 | -76 |
| 54.0 | 1241 | -1281 | 1330 | -1382 | -40 | -52 |
| 56.0 | 1248 | -1309 | 819 | -864 | -61 | -45 |
| 58.0 | 1267 | -1310 | 569 | -668 | -43 | -99 |
| 60.0 | 1340 | -1387 | 397 | -477 | -47 | -80 |
| 62.0 | 1364 | -1408 | 424 | -508 | -44 | -84 |
| 64.0 | 1171 | -1205 | 569 | -609 | -34 | -40 |
| 66.0 | 994 | -1048 | 813 | -897 | -54 | -84 |
| 68.0 | 766 | -810 | 874 | -960 | -44 | -86 |
| 70.0 | 449 | -495 | 1006 | -1089 | -46 | -83 |
| 72.0 | 374 | -420 | 1115 | -1191 | -46 | -76 |
| 74.0 | 144 | -193 | 1234 | -1299 | -49 | -65 |
| 76.0 | 66 | -118 | 1261 | -1315 | -52 | -54 |
| 78.0 | 32 | -71 | 1208 | -1297 | -39 | -89 |
| 80.0 | -45 | -11 | 1072 | -1165 | -56 | -93 |
| 82.0 | -102 | 56 | 872 | -960 | -46 | -88 |
| 84.0 | 57 | -99 | 1019 | -1040 | -42 | -21 |
| 86.0 | 445 | -489 | 1494 | -1560 | -44 | -66 |
| 88.0 | 447 | -496 | 1360 | -1437 | -49 | -77 |
| 90.0 | 535 | -578 | 1480 | -1543 | -43 | -63 |
| 92.0 | 740 | -780 | 2175 | -2201 | -40 | -26 |
| 94.0 | 585 | -620 | 3000 | -3027 | -35 | -27 |
| 96.0 | 121 | -172 | 3750 | -3822 | -51 | -72 |
| 98.0 | -302 | 265 | 3632 | -3710 | -37 | -78 |
| 100.0 | -3 | -47 | 3712 | -3728 | -50 | -16 |
| 102.0 | 1399 | -1640 | 4020 | -4129 | -241 | -109 |

F-3 set 44, read 23 Dec 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | -90 | 47 | -794 | 741 | -43 | -53 |
| 4.0 | 10 | -58 | -580 | 549 | -48 | -31 |
| 6.0 | 116 | -182 | 139 | -201 | -66 | -62 |
| 8.0 | 56 | -106 | 539 | -605 | -50 | -66 |
| 10.0 | 17 | -78 | 841 | -914 | -61 | -73 |
| 12.0 | 103 | -145 | 1054 | -1099 | -42 | -45 |
| 14.0 | 275 | -313 | 1043 | -1077 | -38 | -34 |
| 16.0 | 841 | -899 | 970 | -1056 | -58 | -86 |
| 18.0 | 936 | -976 | 930 | -995 | -40 | -65 |
| 20.0 | 1204 | -1271 | 1050 | -1126 | -67 | -76 |
| 22.0 | 1481 | -1516 | 1231 | -1266 | -35 | -35 |
| 24.0 | 1351 | -1394 | 1240 | -1305 | -43 | -65 |
| 26.0 | 935 | -974 | 1268 | -1333 | -39 | -65 |
| 28.0 | 1213 | -1258 | 1283 | -1341 | -45 | -58 |
| 30.0 | 1757 | -1813 | 1176 | -1252 | -56 | -76 |
| 32.0 | 2158 | -2199 | 1292 | -1344 | -41 | -52 |
| 34.0 | 1741 | -1783 | 1230 | -1300 | -42 | -70 |
| 36.0 | 1567 | -1619 | 1091 | -1173 | -52 | -82 |
| 38.0 | 1643 | -1682 | 952 | -1011 | -39 | -59 |
| 40.0 | 1513 | -1565 | 1103 | -1172 | -52 | -69 |
| 42.0 | 1260 | -1297 | 1548 | -1598 | -37 | -50 |
| 44.0 | 1114 | -1155 | 1717 | -1728 | -41 | -11 |
| 46.0 | 1272 | -1318 | 1976 | -2058 | -46 | -82 |
| 48.0 | 1594 | -1632 | 2155 | -2220 | -38 | -65 |
| 50.0 | 1645 | -1697 | 2115 | -2199 | -52 | -84 |
| 52.0 | 1570 | -1617 | 1844 | -1906 | -47 | -62 |
| 54.0 | 1245 | -1277 | 1325 | -1389 | -32 | -64 |
| 56.0 | 1251 | -1310 | 826 | -886 | -59 | -60 |
| 58.0 | 1270 | -1310 | 603 | -663 | -40 | -60 |
| 60.0 | 1341 | -1390 | 396 | -486 | -49 | -90 |
| 62.0 | 1367 | -1409 | 443 | -504 | -42 | -61 |
| 64.0 | 1168 | -1203 | 581 | -612 | -35 | -31 |
| 66.0 | 990 | -1049 | 822 | -885 | -59 | -63 |
| 68.0 | 766 | -808 | 901 | -958 | -42 | -57 |
| 70.0 | 452 | -495 | 1017 | -1096 | -43 | -79 |
| 72.0 | 381 | -422 | 1141 | -1193 | -41 | -52 |
| 74.0 | 151 | -194 | 1243 | -1314 | -43 | -71 |
| 76.0 | 69 | -115 | 1262 | -1336 | -46 | -74 |
| 78.0 | 32 | -73 | 1225 | -1294 | -41 | -69 |
| 80.0 | -45 | -7 | 1085 | -1161 | -52 | -76 |
| 82.0 | -102 | 56 | 884 | -951 | -46 | -67 |
| 84.0 | 59 | -99 | 1027 | -1035 | -40 | -8 |
| 86.0 | 448 | -487 | 1497 | -1564 | -39 | -67 |
| 88.0 | 449 | -494 | 1383 | -1433 | -45 | -50 |
| 90.0 | 535 | -576 | 1482 | -1547 | -41 | -65 |
| 92.0 | 738 | -775 | 2181 | -2192 | -37 | -11 |
| 94.0 | 578 | -616 | 3025 | -3017 | -38 | 8 |
| 96.0 | 117 | -164 | 3750 | -3801 | -47 | -51 |
| 98.0 | -302 | 261 | 3637 | -3677 | -41 | -40 |
| 100.0 | -6 | -39 | 3672 | -3748 | -45 | -76 |
| 102.0 | 1385 | -1607 | 4025 | -4155 | -222 | -130 |

Northeast Technical Services, Inc.



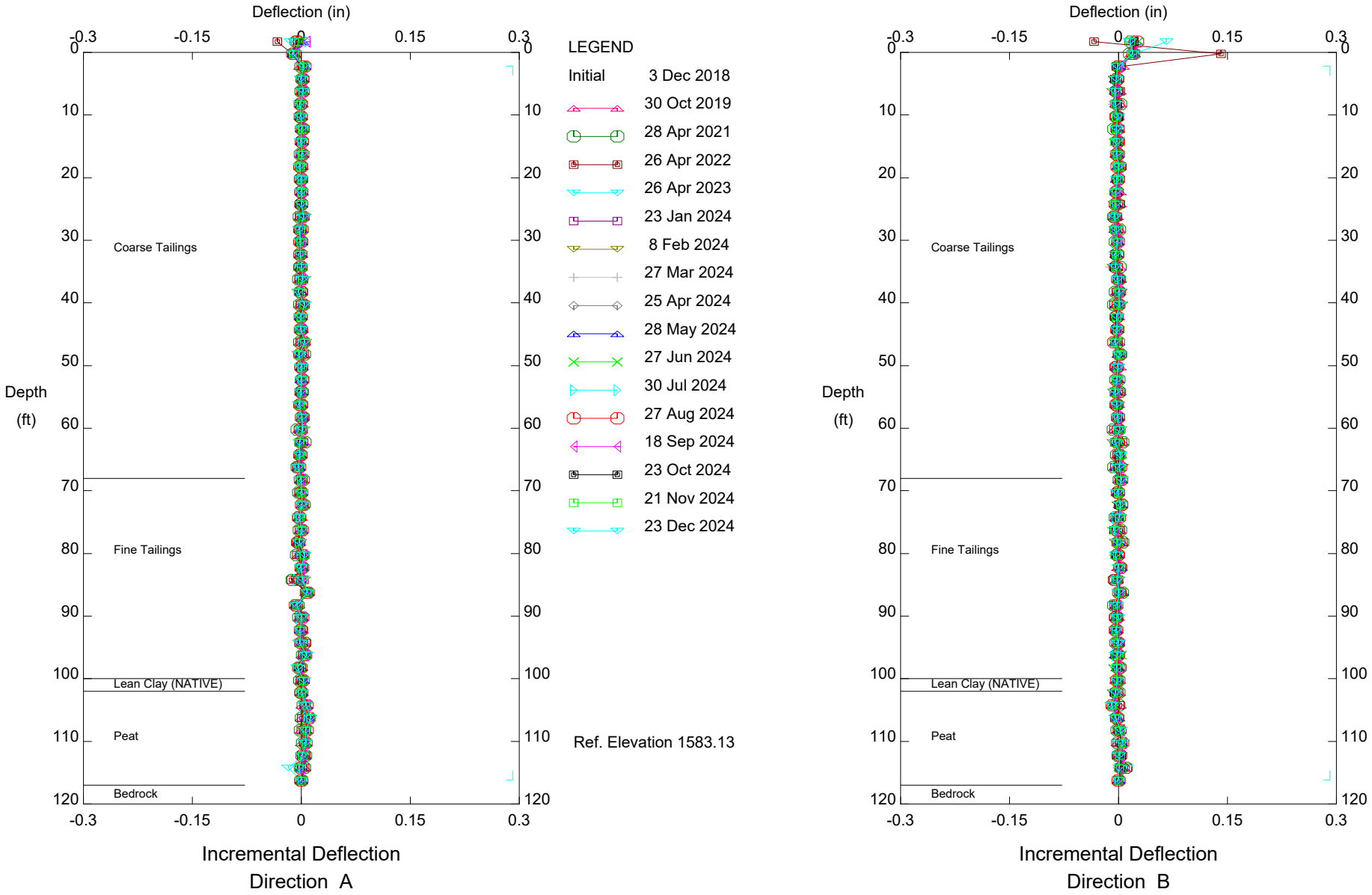

Inclinometer F-4

North Side of Cell 2E, Crest

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-4.gtl

Northeast Technical Services, Inc.



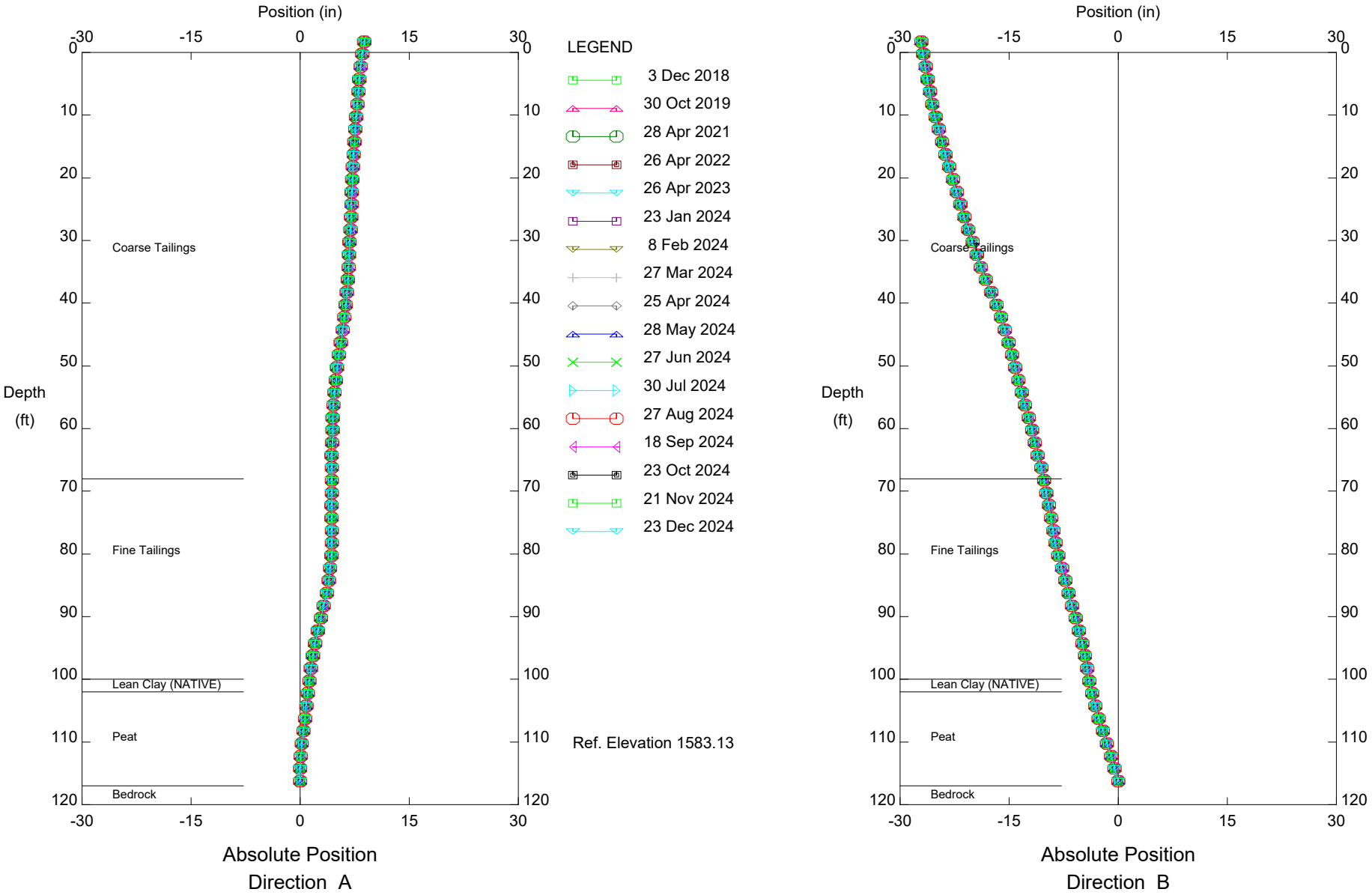

Inclinometer F-4

North Side of Cell 2E, Crest

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-4.gtl

Northeast Technical Services, Inc.




Inclinometer F-4

North Side of Cell 2E, Crest

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-4.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 14:58:35  Inclinometer F-4
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_F-4.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  North Side of Cell 2E, Crest
Project
Location  LTVSMC Tailings Basin
Stickup  2.75 ft

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 12032018 | 1612 | | 0 | 1639179 | | | | |
| 10302019 | 0929 | | 0 | 1639179 | | | | |
| 04282021 | 0926 | | | 1639179 | | | | |
| 04262022 | 0258 | | | 1639179 | | | | |
| 04262023 | 1159 | | | 1639179 | | | | |
| 01232024 | 1330 | | | 1639179 | | | | |
| 02082024 | 1244 | | | 1639179 | | | | |
| 03272024 | 0930 | | | 1639179 | | | | |
| 04252024 | 0929 | | | 1639179 | | | | |
| 05282024 | 1045 | | | 1639179 | | | | |
| 06272024 | 1047 | | | 1639179 | | | | |
| 07302024 | 1048 | | | 1639179 | | | | |
| 08272024 | 1024 | | | 1639179 | | | | |
| 09182024 | 0957 | | | 1639179 | | | | |
| 10232024 | 1150 | | | 1639179 | | | | |
| 11212024 | 1027 | | | 1639179 | | | | |
| 12232024 | 1036 | | | 1639179 | | | | |

F-4 set 1, read 3 Dec 2018:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1103 | -1144 | -1370 | 1291 | -41 | -79 |
| 4.0 | 930 | -974 | -1435 | 1370 | -44 | -65 |
| 6.0 | 703 | -751 | -1217 | 1146 | -48 | -71 |
| 8.0 | 580 | -614 | -1337 | 1256 | -34 | -81 |
| 10.0 | 604 | -648 | -1368 | 1284 | -44 | -84 |
| 12.0 | 628 | -670 | -1845 | 1802 | -42 | -43 |
| 14.0 | 568 | -613 | -2006 | 1938 | -45 | -68 |
| 16.0 | 466 | -514 | -1866 | 1768 | -48 | -98 |
| 18.0 | 362 | -395 | -1994 | 1938 | -33 | -56 |
| 20.0 | 452 | -496 | -2019 | 1941 | -44 | -78 |
| 22.0 | 310 | -350 | -2201 | 2149 | -40 | -52 |
| 24.0 | 207 | -258 | -2266 | 2208 | -51 | -58 |
| 26.0 | 147 | -198 | -2132 | 2042 | -51 | -90 |
| 28.0 | 126 | -159 | -2246 | 2164 | -33 | -82 |
| 30.0 | 440 | -478 | -2261 | 2215 | -38 | -46 |
| 32.0 | 476 | -512 | -2489 | 2404 | -36 | -85 |
| 34.0 | 285 | -334 | -2462 | 2405 | -49 | -57 |
| 36.0 | 262 | -311 | -2372 | 2291 | -49 | -81 |
| 38.0 | 434 | -471 | -2780 | 2723 | -37 | -57 |
| 40.0 | 583 | -637 | -3129 | 3067 | -54 | -62 |
| 42.0 | 529 | -565 | -3190 | 3108 | -36 | -82 |
| 44.0 | 839 | -886 | -2609 | 2555 | -47 | -54 |
| 46.0 | 986 | -1033 | -2204 | 2124 | -47 | -80 |
| 48.0 | 961 | -994 | -2096 | 1998 | -33 | -98 |
| 50.0 | 1126 | -1174 | -1973 | 1904 | -48 | -69 |
| 52.0 | 1021 | -1052 | -2088 | 1994 | -31 | -94 |
| 54.0 | 678 | -736 | -1816 | 1751 | -58 | -65 |
| 56.0 | 689 | -734 | -1811 | 1721 | -45 | -90 |
| 58.0 | 577 | -619 | -1980 | 1887 | -42 | -93 |
| 60.0 | 422 | -469 | -2136 | 2066 | -47 | -70 |
| 62.0 | -2 | -30 | -1946 | 1875 | -32 | -71 |
| 64.0 | 399 | -446 | -1599 | 1551 | -47 | -48 |
| 66.0 | 149 | -207 | -1641 | 1603 | -58 | -38 |
| 68.0 | -93 | 70 | -2209 | 2123 | -23 | -86 |
| 70.0 | 15 | -74 | -1607 | 1540 | -59 | -67 |
| 72.0 | -9 | -20 | -1370 | 1269 | -29 | -101 |
| 74.0 | 27 | -96 | -1379 | 1323 | -69 | -56 |
| 76.0 | -22 | -32 | -1410 | 1332 | -54 | -78 |
| 78.0 | -82 | 54 | -1163 | 1102 | -28 | -61 |
| 80.0 | -51 | -2 | -1253 | 1185 | -53 | -68 |
| 82.0 | 127 | -163 | -1633 | 1585 | -36 | -48 |
| 84.0 | 877 | -917 | -2157 | 2115 | -40 | -42 |
| 86.0 | 648 | -736 | -2040 | 1954 | -88 | -86 |
| 88.0 | 1153 | -1170 | -2010 | 1947 | -17 | -63 |
| 90.0 | 1864 | -1915 | -1920 | 1849 | -51 | -71 |
| 92.0 | 1519 | -1554 | -2220 | 2143 | -35 | -77 |
| 94.0 | 1637 | -1693 | -1883 | 1814 | -56 | -69 |
| 96.0 | 1608 | -1657 | -1787 | 1703 | -49 | -84 |
| 98.0 | 1196 | -1226 | -1591 | 1524 | -30 | -67 |
| 100.0 | 1196 | -1239 | -1289 | 1218 | -43 | -71 |
| 102.0 | 856 | -891 | -1337 | 1258 | -35 | -79 |
| 104.0 | 891 | -954 | -1609 | 1546 | -63 | -63 |
| 106.0 | 725 | -769 | -1723 | 1654 | -44 | -69 |
| 108.0 | 679 | -717 | -2092 | 2026 | -38 | -66 |
| 110.0 | 944 | -999 | -2327 | 2271 | -55 | -56 |
| 112.0 | 786 | -822 | -2442 | 2351 | -36 | -91 |
| 114.0 | 648 | -699 | -2328 | 2269 | -51 | -59 |
| 116.0 | 422 | -471 | -2102 | 2015 | -49 | -87 |
| 118.0 | -140 | 111 | -2176 | 2122 | -29 | -54 |

F-4 set 31, read 23 Jan 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1089 | -1123 | -1289 | 1198 | -34 | -91 |
| 4.0 | 902 | -919 | -1349 | 1284 | -17 | -65 |
| 6.0 | 727 | -754 | -1221 | 1150 | -27 | -71 |
| 8.0 | 587 | -608 | -1355 | 1273 | -21 | -82 |
| 10.0 | 625 | -650 | -1395 | 1295 | -25 | -100 |
| 12.0 | 636 | -651 | -1874 | 1808 | -15 | -66 |
| 14.0 | 574 | -599 | -1999 | 1939 | -25 | -60 |
| 16.0 | 479 | -516 | -1868 | 1784 | -37 | -84 |
| 18.0 | 371 | -390 | -2022 | 1940 | -19 | -82 |
| 20.0 | 471 | -493 | -2026 | 1953 | -22 | -73 |
| 22.0 | 313 | -326 | -2212 | 2137 | -13 | -75 |
| 24.0 | 217 | -245 | -2265 | 2209 | -28 | -56 |
| 26.0 | 161 | -192 | -2134 | 2061 | -31 | -73 |
| 28.0 | 139 | -149 | -2274 | 2180 | -10 | -94 |
| 30.0 | 467 | -490 | -2291 | 2228 | -23 | -63 |
| 32.0 | 477 | -488 | -2499 | 2437 | -11 | -62 |
| 34.0 | 292 | -322 | -2462 | 2407 | -30 | -55 |
| 36.0 | 271 | -292 | -2385 | 2309 | -21 | -76 |
| 38.0 | 447 | -455 | -2814 | 2738 | -8 | -76 |
| 40.0 | 607 | -639 | -3130 | 3072 | -32 | -58 |
| 42.0 | 527 | -539 | -3178 | 3100 | -12 | -78 |
| 44.0 | 870 | -898 | -2596 | 2547 | -28 | -49 |
| 46.0 | 995 | -1023 | -2206 | 2133 | -28 | -73 |
| 48.0 | 972 | -985 | -2092 | 2012 | -13 | -80 |
| 50.0 | 1154 | -1187 | -1983 | 1912 | -33 | -71 |
| 52.0 | 1018 | -1025 | -2083 | 1980 | -7 | -103 |
| 54.0 | 698 | -724 | -1814 | 1754 | -26 | -60 |
| 56.0 | 704 | -728 | -1814 | 1744 | -24 | -70 |
| 58.0 | 592 | -600 | -2001 | 1918 | -8 | -83 |
| 60.0 | 422 | -447 | -2137 | 2083 | -25 | -54 |
| 62.0 | 13 | -26 | -1951 | 1889 | -13 | -62 |
| 64.0 | 420 | -443 | -1580 | 1557 | -23 | -23 |
| 66.0 | 151 | -180 | -1672 | 1617 | -29 | -55 |
| 68.0 | -88 | 90 | -2200 | 2117 | 2 | -83 |
| 70.0 | 10 | -52 | -1591 | 1528 | -42 | -63 |
| 72.0 | 5 | -8 | -1349 | 1270 | -3 | -79 |
| 74.0 | 47 | -85 | -1382 | 1326 | -38 | -56 |
| 76.0 | -8 | -25 | -1392 | 1350 | -33 | -42 |
| 78.0 | -81 | 77 | -1154 | 1096 | -4 | -58 |
| 80.0 | -32 | 5 | -1283 | 1203 | -27 | -80 |
| 82.0 | 138 | -138 | -1655 | 1585 | 0 | -70 |
| 84.0 | 909 | -924 | -2171 | 2131 | -15 | -40 |
| 86.0 | 655 | -721 | -2044 | 1952 | -66 | -92 |
| 88.0 | 1183 | -1170 | -2008 | 1952 | 13 | -56 |
| 90.0 | 1905 | -1937 | -1915 | 1849 | -32 | -66 |
| 92.0 | 1500 | -1513 | -2217 | 2156 | -13 | -61 |
| 94.0 | 1661 | -1686 | -1880 | 1819 | -25 | -61 |
| 96.0 | 1615 | -1637 | -1791 | 1725 | -22 | -66 |
| 98.0 | 1196 | -1202 | -1581 | 1524 | -6 | -57 |
| 100.0 | 1238 | -1262 | -1283 | 1225 | -24 | -58 |
| 102.0 | 843 | -860 | -1337 | 1279 | -17 | -58 |
| 104.0 | 921 | -951 | -1608 | 1552 | -30 | -56 |
| 106.0 | 742 | -754 | -1744 | 1674 | -12 | -70 |
| 108.0 | 714 | -731 | -2117 | 2076 | -17 | -41 |
| 110.0 | 1002 | -1032 | -2344 | 2290 | -30 | -54 |
| 112.0 | 814 | -822 | -2415 | 2363 | -8 | -52 |
| 114.0 | 688 | -709 | -2299 | 2240 | -21 | -59 |
| 116.0 | 438 | -465 | -2070 | 2018 | -27 | -52 |
| 118.0 | -139 | 129 | -2173 | 2116 | -10 | -57 |

F-4 set 32, read 8 Feb 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1076 | -1099 | -1291 | 1240 | -23 | -51 |
| 4.0 | 895 | -913 | -1342 | 1295 | -18 | -47 |
| 6.0 | 730 | -753 | -1209 | 1161 | -23 | -48 |
| 8.0 | 592 | -603 | -1348 | 1287 | -11 | -61 |
| 10.0 | 628 | -643 | -1397 | 1319 | -15 | -78 |
| 12.0 | 642 | -650 | -1858 | 1818 | -8 | -40 |
| 14.0 | 579 | -594 | -2001 | 1951 | -15 | -50 |
| 16.0 | 485 | -503 | -1861 | 1796 | -18 | -65 |
| 18.0 | 375 | -382 | -2015 | 1946 | -7 | -69 |
| 20.0 | 478 | -487 | -2020 | 1961 | -9 | -59 |
| 22.0 | 317 | -324 | -2210 | 2149 | -7 | -61 |
| 24.0 | 223 | -244 | -2262 | 2221 | -21 | -41 |
| 26.0 | 165 | -187 | -2128 | 2065 | -22 | -63 |
| 28.0 | 142 | -144 | -2258 | 2194 | -2 | -64 |
| 30.0 | 470 | -486 | -2282 | 2234 | -16 | -48 |
| 32.0 | 481 | -480 | -2494 | 2436 | 1 | -58 |
| 34.0 | 296 | -319 | -2456 | 2416 | -23 | -40 |
| 36.0 | 275 | -293 | -2380 | 2322 | -18 | -58 |
| 38.0 | 450 | -452 | -2807 | 2752 | -2 | -55 |
| 40.0 | 612 | -637 | -3118 | 3083 | -25 | -35 |
| 42.0 | 532 | -533 | -3165 | 3106 | -1 | -59 |
| 44.0 | 871 | -891 | -2579 | 2552 | -20 | -27 |
| 46.0 | 997 | -1015 | -2198 | 2142 | -18 | -56 |
| 48.0 | 976 | -975 | -2085 | 2016 | 1 | -69 |
| 50.0 | 1160 | -1182 | -1979 | 1929 | -22 | -50 |
| 52.0 | 1020 | -1022 | -2080 | 1993 | -2 | -87 |
| 54.0 | 704 | -718 | -1804 | 1769 | -14 | -35 |
| 56.0 | 707 | -723 | -1805 | 1746 | -16 | -59 |
| 58.0 | 595 | -593 | -1992 | 1925 | 2 | -67 |
| 60.0 | 425 | -440 | -2122 | 2089 | -15 | -33 |
| 62.0 | 19 | -18 | -1941 | 1888 | 1 | -53 |
| 64.0 | 426 | -442 | -1572 | 1558 | -16 | -14 |
| 66.0 | 159 | -179 | -1666 | 1637 | -20 | -29 |
| 68.0 | -83 | 93 | -2188 | 2134 | 10 | -54 |
| 70.0 | 14 | -50 | -1580 | 1531 | -36 | -49 |
| 72.0 | 10 | -3 | -1337 | 1282 | 7 | -55 |
| 74.0 | 53 | -79 | -1371 | 1335 | -26 | -36 |
| 76.0 | -2 | -19 | -1398 | 1343 | -21 | -55 |
| 78.0 | -76 | 80 | -1143 | 1105 | 4 | -38 |
| 80.0 | -27 | 8 | -1272 | 1217 | -19 | -55 |
| 82.0 | 141 | -136 | -1647 | 1600 | 5 | -47 |
| 84.0 | 915 | -919 | -2157 | 2134 | -4 | -23 |
| 86.0 | 663 | -712 | -2023 | 1963 | -49 | -60 |
| 88.0 | 1187 | -1166 | -2002 | 1958 | 21 | -44 |
| 90.0 | 1909 | -1930 | -1906 | 1861 | -21 | -45 |
| 92.0 | 1504 | -1508 | -2216 | 2172 | -4 | -44 |
| 94.0 | 1666 | -1681 | -1866 | 1835 | -15 | -31 |
| 96.0 | 1620 | -1636 | -1781 | 1737 | -16 | -44 |
| 98.0 | 1201 | -1197 | -1570 | 1536 | 4 | -34 |
| 100.0 | 1238 | -1252 | -1271 | 1231 | -14 | -40 |
| 102.0 | 849 | -854 | -1336 | 1295 | -5 | -41 |
| 104.0 | 924 | -949 | -1597 | 1584 | -25 | -13 |
| 106.0 | 748 | -752 | -1727 | 1704 | -4 | -23 |
| 108.0 | 718 | -726 | -2118 | 2082 | -8 | -36 |
| 110.0 | 1007 | -1028 | -2337 | 2301 | -21 | -36 |
| 112.0 | 817 | -816 | -2413 | 2371 | 1 | -42 |
| 114.0 | 694 | -697 | -2293 | 2252 | -3 | -41 |
| 116.0 | 441 | -457 | -2071 | 2023 | -16 | -48 |
| 118.0 | -136 | 133 | -2157 | 2131 | -3 | -26 |

F-4 set 33, read 27 Mar 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1077 | -1091 | -1282 | 1234 | -14 | -48 |
| 4.0 | 906 | -924 | -1338 | 1297 | -18 | -41 |
| 6.0 | 731 | -754 | -1202 | 1163 | -23 | -39 |
| 8.0 | 591 | -605 | -1344 | 1284 | -14 | -60 |
| 10.0 | 627 | -646 | -1377 | 1300 | -19 | -77 |
| 12.0 | 638 | -650 | -1862 | 1839 | -12 | -23 |
| 14.0 | 574 | -596 | -2000 | 1961 | -22 | -39 |
| 16.0 | 487 | -508 | -1848 | 1799 | -21 | -49 |
| 18.0 | 371 | -385 | -2011 | 1943 | -14 | -68 |
| 20.0 | 474 | -491 | -2022 | 1962 | -17 | -60 |
| 22.0 | 319 | -326 | -2204 | 2147 | -7 | -57 |
| 24.0 | 223 | -245 | -2252 | 2219 | -22 | -33 |
| 26.0 | 162 | -190 | -2126 | 2068 | -28 | -58 |
| 28.0 | 140 | -146 | -2256 | 2193 | -6 | -63 |
| 30.0 | 466 | -487 | -2288 | 2237 | -21 | -51 |
| 32.0 | 482 | -485 | -2501 | 2442 | -3 | -59 |
| 34.0 | 294 | -320 | -2459 | 2424 | -26 | -35 |
| 36.0 | 276 | -294 | -2379 | 2325 | -18 | -54 |
| 38.0 | 444 | -460 | -2807 | 2789 | -16 | -18 |
| 40.0 | 608 | -633 | -3125 | 3079 | -25 | -46 |
| 42.0 | 527 | -541 | -3178 | 3120 | -14 | -58 |
| 44.0 | 866 | -892 | -2597 | 2560 | -26 | -37 |
| 46.0 | 997 | -1015 | -2205 | 2144 | -18 | -61 |
| 48.0 | 976 | -980 | -2088 | 2016 | -4 | -72 |
| 50.0 | 1158 | -1184 | -1989 | 1919 | -26 | -70 |
| 52.0 | 1022 | -1023 | -2046 | 2006 | -1 | -40 |
| 54.0 | 696 | -722 | -1809 | 1763 | -26 | -46 |
| 56.0 | 706 | -724 | -1803 | 1751 | -18 | -52 |
| 58.0 | 592 | -591 | -1983 | 1928 | 1 | -55 |
| 60.0 | 427 | -444 | -2127 | 2080 | -17 | -47 |
| 62.0 | 20 | -19 | -1932 | 1886 | 1 | -46 |
| 64.0 | 421 | -438 | -1584 | 1550 | -17 | -34 |
| 66.0 | 157 | -179 | -1651 | 1625 | -22 | -26 |
| 68.0 | -87 | 91 | -2191 | 2125 | 4 | -66 |
| 70.0 | 9 | -51 | -1600 | 1544 | -42 | -56 |
| 72.0 | 8 | -7 | -1334 | 1273 | 1 | -61 |
| 74.0 | 47 | -78 | -1377 | 1333 | -31 | -44 |
| 76.0 | -3 | -20 | -1394 | 1330 | -23 | -64 |
| 78.0 | -77 | 81 | -1155 | 1102 | 4 | -53 |
| 80.0 | -34 | 9 | -1267 | 1209 | -25 | -58 |
| 82.0 | 131 | -135 | -1639 | 1595 | -4 | -44 |
| 84.0 | 908 | -920 | -2169 | 2157 | -12 | -12 |
| 86.0 | 659 | -716 | -2025 | 1963 | -57 | -62 |
| 88.0 | 1179 | -1163 | -2015 | 1958 | 16 | -57 |
| 90.0 | 1906 | -1931 | -1912 | 1855 | -25 | -57 |
| 92.0 | 1508 | -1516 | -2222 | 2172 | -8 | -50 |
| 94.0 | 1657 | -1675 | -1863 | 1830 | -18 | -33 |
| 96.0 | 1615 | -1635 | -1784 | 1733 | -20 | -51 |
| 98.0 | 1202 | -1203 | -1582 | 1532 | -1 | -50 |
| 100.0 | 1239 | -1256 | -1255 | 1224 | -17 | -31 |
| 102.0 | 854 | -856 | -1323 | 1285 | -2 | -38 |
| 104.0 | 918 | -946 | -1612 | 1560 | -28 | -52 |
| 106.0 | 745 | -751 | -1725 | 1696 | -6 | -29 |
| 108.0 | 714 | -726 | -2119 | 2069 | -12 | -50 |
| 110.0 | 999 | -1028 | -2343 | 2296 | -29 | -47 |
| 112.0 | 813 | -818 | -2424 | 2366 | -5 | -58 |
| 114.0 | 690 | -699 | -2303 | 2258 | -9 | -45 |
| 116.0 | 441 | -459 | -2077 | 2016 | -18 | -61 |
| 118.0 | -135 | 133 | -2180 | 2125 | -2 | -55 |

F-4 set 34, read 25 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1087 | -1112 | -1270 | 1228 | -25 | -42 |
| 4.0 | 890 | -918 | -1337 | 1300 | -28 | -37 |
| 6.0 | 721 | -764 | -1210 | 1166 | -43 | -44 |
| 8.0 | 585 | -613 | -1339 | 1292 | -28 | -47 |
| 10.0 | 617 | -650 | -1373 | 1313 | -33 | -60 |
| 12.0 | 636 | -656 | -1845 | 1819 | -20 | -26 |
| 14.0 | 572 | -597 | -1996 | 1959 | -25 | -37 |
| 16.0 | 477 | -501 | -1856 | 1806 | -24 | -50 |
| 18.0 | 367 | -389 | -1999 | 1953 | -22 | -46 |
| 20.0 | 468 | -495 | -2011 | 1973 | -27 | -38 |
| 22.0 | 309 | -332 | -2188 | 2157 | -23 | -31 |
| 24.0 | 217 | -251 | -2253 | 2230 | -34 | -23 |
| 26.0 | 156 | -193 | -2125 | 2079 | -37 | -46 |
| 28.0 | 134 | -150 | -2249 | 2198 | -16 | -51 |
| 30.0 | 459 | -485 | -2277 | 2243 | -26 | -34 |
| 32.0 | 474 | -490 | -2488 | 2443 | -16 | -45 |
| 34.0 | 288 | -325 | -2443 | 2428 | -37 | -15 |
| 36.0 | 260 | -300 | -2369 | 2329 | -40 | -40 |
| 38.0 | 443 | -460 | -2799 | 2754 | -17 | -45 |
| 40.0 | 605 | -638 | -3121 | 3089 | -33 | -32 |
| 42.0 | 527 | -544 | -3170 | 3118 | -17 | -52 |
| 44.0 | 861 | -895 | -2583 | 2567 | -34 | -16 |
| 46.0 | 984 | -1022 | -2191 | 2153 | -38 | -38 |
| 48.0 | 966 | -985 | -2077 | 2029 | -19 | -48 |
| 50.0 | 1149 | -1187 | -1972 | 1927 | -38 | -45 |
| 52.0 | 1017 | -1029 | -2060 | 1998 | -12 | -62 |
| 54.0 | 692 | -732 | -1797 | 1773 | -40 | -24 |
| 56.0 | 698 | -729 | -1790 | 1761 | -31 | -29 |
| 58.0 | 586 | -602 | -1980 | 1931 | -16 | -49 |
| 60.0 | 418 | -449 | -2115 | 2095 | -31 | -20 |
| 62.0 | 12 | -20 | -1930 | 1896 | -8 | -34 |
| 64.0 | 408 | -446 | -1565 | 1564 | -38 | -1 |
| 66.0 | 154 | -191 | -1652 | 1639 | -37 | -13 |
| 68.0 | -92 | 84 | -2182 | 2139 | -8 | -43 |
| 70.0 | 7 | -55 | -1576 | 1550 | -48 | -26 |
| 72.0 | -1 | -12 | -1327 | 1287 | -13 | -40 |
| 74.0 | 40 | -85 | -1360 | 1345 | -45 | -15 |
| 76.0 | -13 | -26 | -1389 | 1343 | -39 | -46 |
| 78.0 | -85 | 74 | -1146 | 1114 | -11 | -32 |
| 80.0 | -38 | 3 | -1265 | 1226 | -35 | -39 |
| 82.0 | 129 | -138 | -1642 | 1599 | -9 | -43 |
| 84.0 | 903 | -920 | -2150 | 2142 | -17 | -8 |
| 86.0 | 650 | -725 | -2025 | 1971 | -75 | -54 |
| 88.0 | 1166 | -1164 | -2001 | 1977 | 2 | -24 |
| 90.0 | 1901 | -1938 | -1901 | 1868 | -37 | -33 |
| 92.0 | 1502 | -1518 | -2213 | 2184 | -16 | -29 |
| 94.0 | 1654 | -1685 | -1867 | 1845 | -31 | -22 |
| 96.0 | 1610 | -1643 | -1780 | 1738 | -33 | -42 |
| 98.0 | 1199 | -1210 | -1578 | 1544 | -11 | -34 |
| 100.0 | 1227 | -1258 | -1272 | 1239 | -31 | -33 |
| 102.0 | 844 | -867 | -1331 | 1293 | -23 | -38 |
| 104.0 | 910 | -951 | -1600 | 1570 | -41 | -30 |
| 106.0 | 741 | -759 | -1724 | 1701 | -18 | -23 |
| 108.0 | 709 | -734 | -2116 | 2084 | -25 | -32 |
| 110.0 | 997 | -1034 | -2328 | 2308 | -37 | -20 |
| 112.0 | 810 | -828 | -2397 | 2381 | -18 | -16 |
| 114.0 | 680 | -704 | -2285 | 2261 | -24 | -24 |
| 116.0 | 431 | -464 | -2062 | 2021 | -33 | -41 |
| 118.0 | -147 | 127 | -2160 | 2133 | -20 | -27 |

F-4 set 35, read 28 May 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1111 | -1150 | -1267 | 1193 | -39 | -74 |
| 4.0 | 897 | -923 | -1340 | 1288 | -26 | -52 |
| 6.0 | 727 | -763 | -1204 | 1158 | -36 | -46 |
| 8.0 | 593 | -616 | -1346 | 1278 | -23 | -68 |
| 10.0 | 619 | -647 | -1387 | 1298 | -28 | -89 |
| 12.0 | 637 | -659 | -1860 | 1811 | -22 | -49 |
| 14.0 | 573 | -599 | -2010 | 1951 | -26 | -59 |
| 16.0 | 477 | -509 | -1857 | 1788 | -32 | -69 |
| 18.0 | 373 | -389 | -2015 | 1937 | -16 | -78 |
| 20.0 | 466 | -495 | -2023 | 1952 | -29 | -71 |
| 22.0 | 315 | -337 | -2208 | 2151 | -22 | -57 |
| 24.0 | 217 | -249 | -2275 | 2215 | -32 | -60 |
| 26.0 | 157 | -192 | -2137 | 2065 | -35 | -72 |
| 28.0 | 136 | -150 | -2265 | 2179 | -14 | -86 |
| 30.0 | 455 | -479 | -2293 | 2226 | -24 | -67 |
| 32.0 | 479 | -497 | -2498 | 2433 | -18 | -65 |
| 34.0 | 292 | -324 | -2465 | 2413 | -32 | -52 |
| 36.0 | 265 | -301 | -2381 | 2310 | -36 | -71 |
| 38.0 | 444 | -455 | -2805 | 2729 | -11 | -76 |
| 40.0 | 594 | -624 | -3133 | 3066 | -30 | -67 |
| 42.0 | 539 | -546 | -3190 | 3106 | -7 | -84 |
| 44.0 | 857 | -886 | -2613 | 2578 | -29 | -35 |
| 46.0 | 991 | -1021 | -2201 | 2144 | -30 | -57 |
| 48.0 | 973 | -986 | -2093 | 2019 | -13 | -74 |
| 50.0 | 1149 | -1182 | -1994 | 1915 | -33 | -79 |
| 52.0 | 1026 | -1040 | -2076 | 2003 | -14 | -73 |
| 54.0 | 699 | -719 | -1821 | 1771 | -20 | -50 |
| 56.0 | 701 | -728 | -1803 | 1742 | -27 | -61 |
| 58.0 | 590 | -604 | -1984 | 1911 | -14 | -73 |
| 60.0 | 430 | -453 | -2144 | 2082 | -23 | -62 |
| 62.0 | 12 | -26 | -1948 | 1877 | -14 | -71 |
| 64.0 | 407 | -433 | -1597 | 1562 | -26 | -35 |
| 66.0 | 161 | -192 | -1638 | 1603 | -31 | -35 |
| 68.0 | -87 | 90 | -2204 | 2109 | 3 | -95 |
| 70.0 | 9 | -50 | -1620 | 1548 | -41 | -72 |
| 72.0 | -5 | -8 | -1340 | 1267 | -13 | -73 |
| 74.0 | 38 | -85 | -1378 | 1329 | -47 | -49 |
| 76.0 | -7 | -30 | -1392 | 1324 | -37 | -68 |
| 78.0 | -80 | 75 | -1168 | 1105 | -5 | -63 |
| 80.0 | -39 | 10 | -1269 | 1199 | -29 | -70 |
| 82.0 | 123 | -132 | -1639 | 1576 | -9 | -63 |
| 84.0 | 896 | -907 | -2172 | 2121 | -11 | -51 |
| 86.0 | 657 | -726 | -2016 | 1951 | -69 | -65 |
| 88.0 | 1151 | -1148 | -2016 | 1958 | 3 | -58 |
| 90.0 | 1914 | -1943 | -1884 | 1841 | -29 | -43 |
| 92.0 | 1503 | -1509 | -2228 | 2158 | -6 | -70 |
| 94.0 | 1653 | -1686 | -1894 | 1826 | -33 | -68 |
| 96.0 | 1614 | -1643 | -1797 | 1726 | -29 | -71 |
| 98.0 | 1212 | -1216 | -1589 | 1527 | -4 | -62 |
| 100.0 | 1223 | -1251 | -1312 | 1227 | -28 | -85 |
| 102.0 | 859 | -873 | -1332 | 1274 | -14 | -58 |
| 104.0 | 910 | -951 | -1616 | 1567 | -41 | -49 |
| 106.0 | 744 | -758 | -1721 | 1681 | -14 | -40 |
| 108.0 | 719 | -734 | -2117 | 2070 | -15 | -47 |
| 110.0 | 988 | -1021 | -2338 | 2278 | -33 | -60 |
| 112.0 | 824 | -832 | -2427 | 2362 | -8 | -65 |
| 114.0 | 683 | -711 | -2316 | 2252 | -28 | -64 |
| 116.0 | 444 | -474 | -2092 | 2021 | -30 | -71 |
| 118.0 | -126 | 119 | -2167 | 2107 | -7 | -60 |

F-4 set 36, read 27 Jun 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1097 | -1144 | -1242 | 1191 | -47 | -51 |
| 4.0 | 893 | -918 | -1332 | 1287 | -25 | -45 |
| 6.0 | 728 | -764 | -1211 | 1152 | -36 | -59 |
| 8.0 | 596 | -614 | -1340 | 1278 | -18 | -62 |
| 10.0 | 619 | -645 | -1376 | 1305 | -26 | -71 |
| 12.0 | 638 | -663 | -1852 | 1824 | -25 | -28 |
| 14.0 | 574 | -605 | -2006 | 1971 | -31 | -35 |
| 16.0 | 477 | -512 | -1852 | 1802 | -35 | -50 |
| 18.0 | 375 | -392 | -1987 | 1933 | -17 | -54 |
| 20.0 | 466 | -489 | -2021 | 1957 | -23 | -64 |
| 22.0 | 315 | -335 | -2199 | 2139 | -20 | -60 |
| 24.0 | 217 | -246 | -2266 | 2219 | -29 | -47 |
| 26.0 | 153 | -195 | -2124 | 2075 | -42 | -49 |
| 28.0 | 135 | -150 | -2252 | 2185 | -15 | -67 |
| 30.0 | 450 | -471 | -2286 | 2230 | -21 | -56 |
| 32.0 | 486 | -496 | -2485 | 2428 | -10 | -57 |
| 34.0 | 289 | -320 | -2463 | 2417 | -31 | -46 |
| 36.0 | 266 | -298 | -2369 | 2316 | -32 | -53 |
| 38.0 | 439 | -456 | -2792 | 2732 | -17 | -60 |
| 40.0 | 590 | -623 | -3121 | 3072 | -33 | -49 |
| 42.0 | 538 | -551 | -3184 | 3117 | -13 | -67 |
| 44.0 | 853 | -883 | -2611 | 2575 | -30 | -36 |
| 46.0 | 992 | -1020 | -2197 | 2152 | -28 | -45 |
| 48.0 | 969 | -987 | -2093 | 2017 | -18 | -76 |
| 50.0 | 1140 | -1171 | -1979 | 1921 | -31 | -58 |
| 52.0 | 1033 | -1045 | -2062 | 2006 | -12 | -56 |
| 54.0 | 695 | -728 | -1813 | 1768 | -33 | -45 |
| 56.0 | 700 | -727 | -1796 | 1749 | -27 | -47 |
| 58.0 | 593 | -607 | -1978 | 1912 | -14 | -66 |
| 60.0 | 435 | -456 | -2121 | 2095 | -21 | -26 |
| 62.0 | 12 | -24 | -1940 | 1881 | -12 | -59 |
| 64.0 | 405 | -431 | -1592 | 1561 | -26 | -31 |
| 66.0 | 163 | -201 | -1630 | 1603 | -38 | -27 |
| 68.0 | -87 | 85 | -2194 | 2120 | -2 | -74 |
| 70.0 | 10 | -51 | -1613 | 1556 | -41 | -57 |
| 72.0 | 0 | -12 | -1336 | 1277 | -12 | -59 |
| 74.0 | 39 | -77 | -1375 | 1334 | -38 | -41 |
| 76.0 | 1 | -31 | -1381 | 1328 | -30 | -53 |
| 78.0 | -80 | 74 | -1159 | 1110 | -6 | -49 |
| 80.0 | -38 | 11 | -1256 | 1197 | -27 | -59 |
| 82.0 | 122 | -136 | -1623 | 1584 | -14 | -39 |
| 84.0 | 893 | -900 | -2160 | 2126 | -7 | -34 |
| 86.0 | 660 | -728 | -2009 | 1960 | -68 | -49 |
| 88.0 | 1147 | -1139 | -2023 | 1964 | 8 | -59 |
| 90.0 | 1916 | -1944 | -1896 | 1839 | -28 | -57 |
| 92.0 | 1501 | -1516 | -2227 | 2169 | -15 | -58 |
| 94.0 | 1650 | -1676 | -1882 | 1839 | -26 | -43 |
| 96.0 | 1616 | -1648 | -1789 | 1735 | -32 | -54 |
| 98.0 | 1214 | -1224 | -1587 | 1540 | -10 | -47 |
| 100.0 | 1230 | -1250 | -1241 | 1232 | -20 | -9 |
| 102.0 | 862 | -878 | -1318 | 1275 | -16 | -43 |
| 104.0 | 909 | -945 | -1603 | 1551 | -36 | -52 |
| 106.0 | 743 | -759 | -1709 | 1674 | -16 | -35 |
| 108.0 | 721 | -735 | -2105 | 2060 | -14 | -45 |
| 110.0 | 990 | -1024 | -2327 | 2283 | -34 | -44 |
| 112.0 | 829 | -841 | -2412 | 2374 | -12 | -38 |
| 114.0 | 685 | -711 | -2303 | 2254 | -26 | -49 |
| 116.0 | 442 | -473 | -2079 | 2037 | -31 | -42 |
| 118.0 | -128 | 121 | -2146 | 2110 | -7 | -36 |

F-4 set 37, read 30 Jul 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1169 | -1151 | -1255 | 1228 | 18 | -27 |
| 4.0 | 907 | -906 | -1336 | 1299 | 1 | -37 |
| 6.0 | 734 | -754 | -1183 | 1161 | -20 | -22 |
| 8.0 | 602 | -608 | -1328 | 1290 | -6 | -38 |
| 10.0 | 627 | -635 | -1376 | 1309 | -8 | -67 |
| 12.0 | 645 | -649 | -1856 | 1807 | -4 | -49 |
| 14.0 | 581 | -593 | -1992 | 1975 | -12 | -17 |
| 16.0 | 487 | -504 | -1844 | 1799 | -17 | -45 |
| 18.0 | 377 | -382 | -2001 | 1959 | -5 | -42 |
| 20.0 | 474 | -480 | -2013 | 1961 | -6 | -52 |
| 22.0 | 324 | -326 | -2203 | 2145 | -2 | -58 |
| 24.0 | 226 | -237 | -2262 | 2226 | -11 | -36 |
| 26.0 | 164 | -185 | -2122 | 2082 | -21 | -40 |
| 28.0 | 142 | -139 | -2253 | 2190 | 3 | -63 |
| 30.0 | 456 | -463 | -2280 | 2234 | -7 | -46 |
| 32.0 | 486 | -488 | -2488 | 2435 | -2 | -53 |
| 34.0 | 300 | -312 | -2464 | 2422 | -12 | -42 |
| 36.0 | 274 | -291 | -2370 | 2330 | -17 | -40 |
| 38.0 | 448 | -447 | -2792 | 2740 | 1 | -52 |
| 40.0 | 596 | -609 | -3117 | 3083 | -13 | -34 |
| 42.0 | 542 | -542 | -3179 | 3118 | 0 | -61 |
| 44.0 | 859 | -871 | -2600 | 2576 | -12 | -24 |
| 46.0 | 1002 | -1010 | -2172 | 2148 | -8 | -24 |
| 48.0 | 981 | -979 | -2082 | 2023 | 2 | -59 |
| 50.0 | 1143 | -1162 | -1986 | 1924 | -19 | -62 |
| 52.0 | 1042 | -1035 | -2077 | 2012 | 7 | -65 |
| 54.0 | 701 | -719 | -1798 | 1776 | -18 | -22 |
| 56.0 | 705 | -718 | -1794 | 1755 | -13 | -39 |
| 58.0 | 598 | -596 | -1973 | 1916 | 2 | -57 |
| 60.0 | 437 | -446 | -2135 | 2092 | -9 | -43 |
| 62.0 | 25 | -14 | -1941 | 1890 | 11 | -51 |
| 64.0 | 410 | -424 | -1597 | 1571 | -14 | -26 |
| 66.0 | 172 | -190 | -1631 | 1613 | -18 | -18 |
| 68.0 | -82 | 94 | -2192 | 2127 | 12 | -65 |
| 70.0 | 13 | -43 | -1608 | 1564 | -30 | -44 |
| 72.0 | 3 | -2 | -1336 | 1282 | 1 | -54 |
| 74.0 | 44 | -67 | -1375 | 1339 | -23 | -36 |
| 76.0 | 7 | -22 | -1386 | 1333 | -15 | -53 |
| 78.0 | -72 | 80 | -1165 | 1135 | 8 | -30 |
| 80.0 | -35 | 20 | -1254 | 1206 | -15 | -48 |
| 82.0 | 125 | -125 | -1623 | 1583 | 0 | -40 |
| 84.0 | 892 | -888 | -2161 | 2130 | 4 | -31 |
| 86.0 | 665 | -718 | -2015 | 1967 | -53 | -48 |
| 88.0 | 1147 | -1129 | -2025 | 1974 | 18 | -51 |
| 90.0 | 1927 | -1936 | -1886 | 1845 | -9 | -41 |
| 92.0 | 1505 | -1506 | -2228 | 2178 | -1 | -50 |
| 94.0 | 1656 | -1664 | -1876 | 1841 | -8 | -35 |
| 96.0 | 1621 | -1634 | -1786 | 1740 | -13 | -46 |
| 98.0 | 1222 | -1215 | -1584 | 1549 | 7 | -35 |
| 100.0 | 1232 | -1241 | -1302 | 1241 | -9 | -61 |
| 102.0 | 870 | -870 | -1319 | 1288 | 0 | -31 |
| 104.0 | 914 | -934 | -1601 | 1561 | -20 | -40 |
| 106.0 | 751 | -748 | -1710 | 1682 | 3 | -28 |
| 108.0 | 730 | -727 | -2103 | 2066 | 3 | -37 |
| 110.0 | 994 | -1015 | -2322 | 2286 | -21 | -36 |
| 112.0 | 838 | -829 | -2408 | 2375 | 9 | -33 |
| 114.0 | 693 | -707 | -2303 | 2267 | -14 | -36 |
| 116.0 | 455 | -465 | -2085 | 2025 | -10 | -60 |
| 118.0 | -119 | 126 | -2154 | 2117 | 7 | -37 |

F-4 set 38, read 27 Aug 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1083 | -1109 | -1251 | 1198 | -26 | -53 |
| 4.0 | 889 | -919 | -1347 | 1289 | -30 | -58 |
| 6.0 | 723 | -768 | -1215 | 1149 | -45 | -66 |
| 8.0 | 593 | -616 | -1340 | 1270 | -23 | -70 |
| 10.0 | 619 | -649 | -1367 | 1302 | -30 | -65 |
| 12.0 | 635 | -657 | -1852 | 1805 | -22 | -47 |
| 14.0 | 571 | -606 | -2008 | 1955 | -35 | -53 |
| 16.0 | 475 | -521 | -1852 | 1795 | -46 | -57 |
| 18.0 | 371 | -392 | -2008 | 1936 | -21 | -72 |
| 20.0 | 464 | -495 | -2023 | 1958 | -31 | -65 |
| 22.0 | 310 | -339 | -2201 | 2159 | -29 | -42 |
| 24.0 | 214 | -248 | -2266 | 2215 | -34 | -51 |
| 26.0 | 151 | -196 | -2132 | 2070 | -45 | -62 |
| 28.0 | 133 | -154 | -2258 | 2184 | -21 | -74 |
| 30.0 | 451 | -481 | -2292 | 2228 | -30 | -64 |
| 32.0 | 477 | -497 | -2493 | 2426 | -20 | -67 |
| 34.0 | 284 | -324 | -2461 | 2411 | -40 | -50 |
| 36.0 | 263 | -300 | -2372 | 2312 | -37 | -60 |
| 38.0 | 436 | -460 | -2800 | 2734 | -24 | -66 |
| 40.0 | 592 | -630 | -3131 | 3074 | -38 | -57 |
| 42.0 | 532 | -554 | -3184 | 3109 | -22 | -75 |
| 44.0 | 854 | -892 | -2605 | 2561 | -38 | -44 |
| 46.0 | 988 | -1024 | -2199 | 2146 | -36 | -53 |
| 48.0 | 963 | -988 | -2095 | 2017 | -25 | -78 |
| 50.0 | 1143 | -1185 | -1989 | 1935 | -42 | -54 |
| 52.0 | 1017 | -1046 | -2068 | 2003 | -29 | -65 |
| 54.0 | 691 | -726 | -1819 | 1767 | -35 | -52 |
| 56.0 | 699 | -734 | -1806 | 1752 | -35 | -54 |
| 58.0 | 584 | -609 | -1979 | 1912 | -25 | -67 |
| 60.0 | 423 | -458 | -2138 | 2085 | -35 | -53 |
| 62.0 | 6 | -29 | -1942 | 1884 | -23 | -58 |
| 64.0 | 403 | -438 | -1592 | 1558 | -35 | -34 |
| 66.0 | 157 | -197 | -1643 | 1612 | -40 | -31 |
| 68.0 | -94 | 79 | -2201 | 2127 | -15 | -74 |
| 70.0 | 12 | -51 | -1591 | 1539 | -39 | -52 |
| 72.0 | -7 | -13 | -1333 | 1273 | -20 | -60 |
| 74.0 | 35 | -88 | -1376 | 1331 | -53 | -45 |
| 76.0 | -12 | -29 | -1386 | 1322 | -41 | -64 |
| 78.0 | -89 | 71 | -1154 | 1106 | -18 | -48 |
| 80.0 | -41 | 4 | -1251 | 1203 | -37 | -48 |
| 82.0 | 120 | -140 | -1635 | 1586 | -20 | -49 |
| 84.0 | 895 | -914 | -2157 | 2128 | -19 | -29 |
| 86.0 | 655 | -729 | -2019 | 1958 | -74 | -61 |
| 88.0 | 1153 | -1156 | -2019 | 1972 | -3 | -47 |
| 90.0 | 1906 | -1945 | -1913 | 1847 | -39 | -66 |
| 92.0 | 1500 | -1510 | -2221 | 2167 | -10 | -54 |
| 94.0 | 1648 | -1694 | -1884 | 1844 | -46 | -40 |
| 96.0 | 1610 | -1650 | -1787 | 1732 | -40 | -55 |
| 98.0 | 1204 | -1220 | -1588 | 1535 | -16 | -53 |
| 100.0 | 1223 | -1257 | -1291 | 1220 | -34 | -71 |
| 102.0 | 851 | -873 | -1323 | 1269 | -22 | -54 |
| 104.0 | 909 | -957 | -1609 | 1564 | -48 | -45 |
| 106.0 | 736 | -761 | -1725 | 1679 | -25 | -46 |
| 108.0 | 714 | -742 | -2121 | 2064 | -28 | -57 |
| 110.0 | 993 | -1038 | -2337 | 2279 | -45 | -58 |
| 112.0 | 826 | -843 | -2416 | 2365 | -17 | -51 |
| 114.0 | 680 | -715 | -2306 | 2248 | -35 | -58 |
| 116.0 | 435 | -471 | -2080 | 2021 | -36 | -59 |
| 118.0 | -140 | 119 | -2152 | 2114 | -21 | -38 |

F-4 set 39, read 18 Sep 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1132 | -1177 | -1263 | 1213 | -45 | -50 |
| 4.0 | 897 | -921 | -1343 | 1293 | -24 | -50 |
| 6.0 | 724 | -761 | -1201 | 1157 | -37 | -44 |
| 8.0 | 591 | -616 | -1342 | 1281 | -25 | -61 |
| 10.0 | 620 | -650 | -1388 | 1306 | -30 | -82 |
| 12.0 | 640 | -656 | -1853 | 1813 | -16 | -40 |
| 14.0 | 575 | -603 | -2002 | 1953 | -28 | -49 |
| 16.0 | 475 | -513 | -1862 | 1800 | -38 | -62 |
| 18.0 | 370 | -390 | -2009 | 1941 | -20 | -68 |
| 20.0 | 467 | -492 | -2019 | 1956 | -25 | -63 |
| 22.0 | 315 | -332 | -2199 | 2145 | -17 | -54 |
| 24.0 | 215 | -251 | -2260 | 2224 | -36 | -36 |
| 26.0 | 157 | -196 | -2130 | 2070 | -39 | -60 |
| 28.0 | 134 | -153 | -2252 | 2191 | -19 | -61 |
| 30.0 | 453 | -479 | -2283 | 2228 | -26 | -55 |
| 32.0 | 480 | -492 | -2494 | 2435 | -12 | -59 |
| 34.0 | 289 | -324 | -2459 | 2417 | -35 | -42 |
| 36.0 | 261 | -299 | -2381 | 2316 | -38 | -65 |
| 38.0 | 446 | -458 | -2790 | 2742 | -12 | -48 |
| 40.0 | 597 | -633 | -3120 | 3080 | -36 | -40 |
| 42.0 | 533 | -543 | -3176 | 3109 | -10 | -67 |
| 44.0 | 856 | -891 | -2597 | 2558 | -35 | -39 |
| 46.0 | 988 | -1020 | -2208 | 2151 | -32 | -57 |
| 48.0 | 972 | -987 | -2093 | 2027 | -15 | -66 |
| 50.0 | 1148 | -1184 | -1983 | 1933 | -36 | -50 |
| 52.0 | 1019 | -1031 | -2071 | 1996 | -12 | -75 |
| 54.0 | 693 | -727 | -1812 | 1765 | -34 | -47 |
| 56.0 | 700 | -729 | -1799 | 1751 | -29 | -48 |
| 58.0 | 585 | -603 | -1983 | 1916 | -18 | -67 |
| 60.0 | 427 | -451 | -2134 | 2094 | -24 | -40 |
| 62.0 | 13 | -20 | -1941 | 1887 | -7 | -54 |
| 64.0 | 409 | -446 | -1589 | 1559 | -37 | -30 |
| 66.0 | 162 | -193 | -1640 | 1622 | -31 | -18 |
| 68.0 | -91 | 84 | -2190 | 2126 | -7 | -64 |
| 70.0 | 14 | -54 | -1595 | 1539 | -40 | -56 |
| 72.0 | -4 | -11 | -1334 | 1283 | -15 | -51 |
| 74.0 | 38 | -87 | -1376 | 1336 | -49 | -40 |
| 76.0 | -7 | -27 | -1387 | 1339 | -34 | -48 |
| 78.0 | -79 | 72 | -1167 | 1106 | -7 | -61 |
| 80.0 | -39 | 2 | -1264 | 1216 | -37 | -48 |
| 82.0 | 125 | -138 | -1634 | 1587 | -13 | -47 |
| 84.0 | 897 | -920 | -2161 | 2132 | -23 | -29 |
| 86.0 | 651 | -726 | -2029 | 1960 | -75 | -69 |
| 88.0 | 1159 | -1157 | -2015 | 1963 | 2 | -52 |
| 90.0 | 1908 | -1941 | -1907 | 1853 | -33 | -54 |
| 92.0 | 1502 | -1512 | -2216 | 2174 | -10 | -42 |
| 94.0 | 1650 | -1687 | -1873 | 1831 | -37 | -42 |
| 96.0 | 1612 | -1645 | -1788 | 1729 | -33 | -59 |
| 98.0 | 1205 | -1214 | -1586 | 1528 | -9 | -58 |
| 100.0 | 1223 | -1255 | -1298 | 1237 | -32 | -61 |
| 102.0 | 855 | -873 | -1321 | 1287 | -18 | -34 |
| 104.0 | 913 | -952 | -1598 | 1558 | -39 | -40 |
| 106.0 | 744 | -760 | -1713 | 1684 | -16 | -29 |
| 108.0 | 720 | -739 | -2108 | 2071 | -19 | -37 |
| 110.0 | 1002 | -1043 | -2327 | 2288 | -41 | -39 |
| 112.0 | 831 | -842 | -2400 | 2361 | -11 | -39 |
| 114.0 | 686 | -712 | -2293 | 2252 | -26 | -41 |
| 116.0 | 446 | -467 | -2061 | 2025 | -21 | -36 |
| 118.0 | -135 | 125 | -2160 | 2123 | -10 | -37 |

F-4 set 40, read 23 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1087 | -1121 | -1280 | 1205 | -34 | -75 |
| 4.0 | 886 | -927 | -1353 | 1283 | -41 | -70 |
| 6.0 | 717 | -764 | -1232 | 1158 | -47 | -74 |
| 8.0 | 584 | -616 | -1367 | 1271 | -32 | -96 |
| 10.0 | 613 | -652 | -1399 | 1291 | -39 | -108 |
| 12.0 | 628 | -660 | -1867 | 1800 | -32 | -67 |
| 14.0 | 565 | -606 | -2011 | 1938 | -41 | -73 |
| 16.0 | 473 | -520 | -1878 | 1787 | -47 | -91 |
| 18.0 | 361 | -395 | -2025 | 1933 | -34 | -92 |
| 20.0 | 461 | -497 | -2035 | 1944 | -36 | -91 |
| 22.0 | 305 | -334 | -2222 | 2133 | -29 | -89 |
| 24.0 | 209 | -253 | -2278 | 2208 | -44 | -70 |
| 26.0 | 150 | -195 | -2148 | 2059 | -45 | -89 |
| 28.0 | 121 | -153 | -2268 | 2174 | -32 | -94 |
| 30.0 | 448 | -487 | -2301 | 2223 | -39 | -78 |
| 32.0 | 470 | -495 | -2512 | 2420 | -25 | -92 |
| 34.0 | 282 | -326 | -2477 | 2402 | -44 | -75 |
| 36.0 | 256 | -298 | -2397 | 2303 | -42 | -94 |
| 38.0 | 437 | -461 | -2817 | 2731 | -24 | -86 |
| 40.0 | 590 | -639 | -3135 | 3066 | -49 | -69 |
| 42.0 | 523 | -548 | -3189 | 3101 | -25 | -88 |
| 44.0 | 849 | -899 | -2613 | 2545 | -50 | -68 |
| 46.0 | 981 | -1024 | -2223 | 2140 | -43 | -83 |
| 48.0 | 962 | -989 | -2106 | 2010 | -27 | -96 |
| 50.0 | 1142 | -1188 | -2005 | 1914 | -46 | -91 |
| 52.0 | 1010 | -1032 | -2081 | 1980 | -22 | -101 |
| 54.0 | 683 | -731 | -1826 | 1755 | -48 | -71 |
| 56.0 | 693 | -734 | -1820 | 1737 | -41 | -83 |
| 58.0 | 579 | -610 | -2006 | 1909 | -31 | -97 |
| 60.0 | 418 | -457 | -2144 | 2073 | -39 | -71 |
| 62.0 | 6 | -29 | -1956 | 1874 | -23 | -82 |
| 64.0 | 401 | -448 | -1601 | 1544 | -47 | -57 |
| 66.0 | 149 | -196 | -1664 | 1609 | -47 | -55 |
| 68.0 | -101 | 79 | -2210 | 2115 | -22 | -95 |
| 70.0 | -3 | -58 | -1612 | 1532 | -61 | -80 |
| 72.0 | -11 | -15 | -1353 | 1265 | -26 | -88 |
| 74.0 | 35 | -88 | -1386 | 1322 | -53 | -64 |
| 76.0 | -15 | -31 | -1408 | 1322 | -46 | -86 |
| 78.0 | -87 | 69 | -1170 | 1093 | -18 | -77 |
| 80.0 | -45 | -1 | -1280 | 1206 | -46 | -74 |
| 82.0 | 115 | -143 | -1657 | 1579 | -28 | -78 |
| 84.0 | 892 | -925 | -2177 | 2120 | -33 | -57 |
| 86.0 | 647 | -729 | -2047 | 1949 | -82 | -98 |
| 88.0 | 1156 | -1166 | -2026 | 1949 | -10 | -77 |
| 90.0 | 1899 | -1947 | -1925 | 1838 | -48 | -87 |
| 92.0 | 1494 | -1523 | -2231 | 2158 | -29 | -73 |
| 94.0 | 1648 | -1688 | -1887 | 1822 | -40 | -65 |
| 96.0 | 1602 | -1649 | -1804 | 1720 | -47 | -84 |
| 98.0 | 1195 | -1217 | -1602 | 1524 | -22 | -78 |
| 100.0 | 1220 | -1262 | -1300 | 1226 | -42 | -74 |
| 102.0 | 845 | -874 | -1343 | 1265 | -29 | -78 |
| 104.0 | 904 | -954 | -1615 | 1550 | -50 | -65 |
| 106.0 | 730 | -772 | -1741 | 1678 | -42 | -63 |
| 108.0 | 708 | -747 | -2136 | 2059 | -39 | -77 |
| 110.0 | 996 | -1049 | -2351 | 2282 | -53 | -69 |
| 112.0 | 816 | -846 | -2429 | 2359 | -30 | -70 |
| 114.0 | 682 | -714 | -2312 | 2249 | -32 | -63 |
| 116.0 | 431 | -471 | -2085 | 2001 | -40 | -84 |
| 118.0 | -147 | 121 | -2175 | 2107 | -26 | -68 |

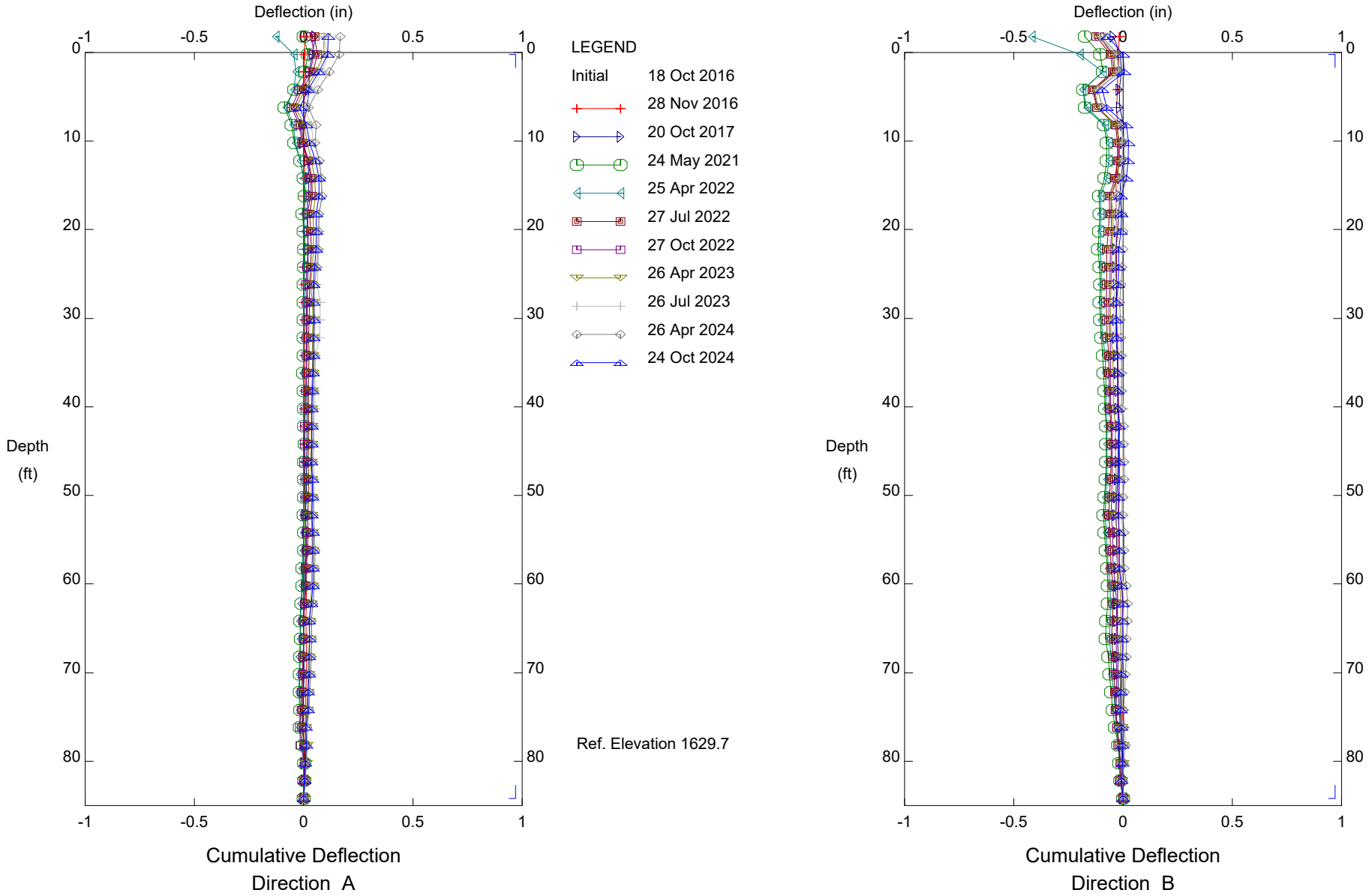
F-4 set 41, read 21 Nov 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1088 | -1127 | -1300 | 1232 | -39 | -68 |
| 4.0 | 887 | -927 | -1352 | 1291 | -40 | -61 |
| 6.0 | 717 | -767 | -1222 | 1154 | -50 | -68 |
| 8.0 | 581 | -614 | -1344 | 1283 | -33 | -61 |
| 10.0 | 614 | -657 | -1375 | 1308 | -43 | -67 |
| 12.0 | 629 | -664 | -1871 | 1807 | -35 | -64 |
| 14.0 | 563 | -609 | -2008 | 1961 | -46 | -47 |
| 16.0 | 475 | -520 | -1856 | 1800 | -45 | -56 |
| 18.0 | 362 | -402 | -2017 | 1959 | -40 | -58 |
| 20.0 | 460 | -500 | -2027 | 1954 | -40 | -73 |
| 22.0 | 303 | -337 | -2207 | 2148 | -34 | -59 |
| 24.0 | 209 | -254 | -2270 | 2212 | -45 | -58 |
| 26.0 | 146 | -203 | -2137 | 2071 | -57 | -66 |
| 28.0 | 129 | -158 | -2261 | 2192 | -29 | -69 |
| 30.0 | 451 | -492 | -2296 | 2229 | -41 | -67 |
| 32.0 | 471 | -498 | -2504 | 2433 | -27 | -71 |
| 34.0 | 281 | -329 | -2466 | 2415 | -48 | -51 |
| 36.0 | 256 | -304 | -2381 | 2309 | -48 | -72 |
| 38.0 | 438 | -464 | -2802 | 2735 | -26 | -67 |
| 40.0 | 590 | -642 | -3134 | 3073 | -52 | -61 |
| 42.0 | 517 | -548 | -3183 | 3109 | -31 | -74 |
| 44.0 | 853 | -904 | -2605 | 2559 | -51 | -46 |
| 46.0 | 982 | -1028 | -2208 | 2148 | -46 | -60 |
| 48.0 | 960 | -991 | -2089 | 2019 | -31 | -70 |
| 50.0 | 1141 | -1195 | -1983 | 1929 | -54 | -54 |
| 52.0 | 1009 | -1034 | -2063 | 1997 | -25 | -66 |
| 54.0 | 683 | -736 | -1819 | 1762 | -53 | -57 |
| 56.0 | 693 | -738 | -1807 | 1753 | -45 | -54 |
| 58.0 | 582 | -612 | -1994 | 1923 | -30 | -71 |
| 60.0 | 415 | -456 | -2140 | 2078 | -41 | -62 |
| 62.0 | 4 | -28 | -1948 | 1883 | -24 | -65 |
| 64.0 | 400 | -453 | -1591 | 1547 | -53 | -44 |
| 66.0 | 145 | -193 | -1656 | 1625 | -48 | -31 |
| 68.0 | -101 | 79 | -2189 | 2114 | -22 | -75 |
| 70.0 | -5 | -60 | -1599 | 1533 | -65 | -66 |
| 72.0 | -11 | -21 | -1334 | 1280 | -32 | -54 |
| 74.0 | 34 | -89 | -1369 | 1331 | -55 | -38 |
| 76.0 | -18 | -34 | -1389 | 1330 | -52 | -59 |
| 78.0 | -92 | 65 | -1155 | 1099 | -27 | -56 |
| 80.0 | -46 | -4 | -1274 | 1210 | -50 | -64 |
| 82.0 | 117 | -149 | -1643 | 1592 | -32 | -51 |
| 84.0 | 895 | -932 | -2172 | 2138 | -37 | -34 |
| 86.0 | 646 | -731 | -2036 | 1959 | -85 | -77 |
| 88.0 | 1158 | -1174 | -2019 | 1959 | -16 | -60 |
| 90.0 | 1897 | -1951 | -1908 | 1856 | -54 | -52 |
| 92.0 | 1492 | -1528 | -2218 | 2159 | -36 | -59 |
| 94.0 | 1647 | -1690 | -1887 | 1829 | -43 | -58 |
| 96.0 | 1605 | -1649 | -1789 | 1733 | -44 | -56 |
| 98.0 | 1192 | -1220 | -1592 | 1534 | -28 | -58 |
| 100.0 | 1222 | -1269 | -1300 | 1231 | -47 | -69 |
| 102.0 | 836 | -869 | -1330 | 1291 | -33 | -39 |
| 104.0 | 906 | -962 | -1612 | 1559 | -56 | -53 |
| 106.0 | 731 | -766 | -1729 | 1681 | -35 | -48 |
| 108.0 | 707 | -747 | -2122 | 2068 | -40 | -54 |
| 110.0 | 1000 | -1051 | -2338 | 2293 | -51 | -45 |
| 112.0 | 815 | -842 | -2414 | 2364 | -27 | -50 |
| 114.0 | 678 | -716 | -2297 | 2243 | -38 | -54 |
| 116.0 | 428 | -475 | -2076 | 2021 | -47 | -55 |
| 118.0 | -157 | 122 | -2171 | 2122 | -35 | -49 |

F-4 set 42, read 23 Dec 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 1044 | -1081 | -1290 | 1241 | -37 | -49 |
| 4.0 | 894 | -918 | -1339 | 1302 | -24 | -37 |
| 6.0 | 720 | -759 | -1202 | 1172 | -39 | -30 |
| 8.0 | 584 | -606 | -1333 | 1286 | -22 | -47 |
| 10.0 | 618 | -652 | -1364 | 1333 | -34 | -31 |
| 12.0 | 631 | -651 | -1857 | 1830 | -20 | -27 |
| 14.0 | 571 | -601 | -1994 | 1959 | -30 | -35 |
| 16.0 | 476 | -511 | -1848 | 1809 | -35 | -39 |
| 18.0 | 365 | -388 | -2001 | 1952 | -23 | -49 |
| 20.0 | 469 | -494 | -2017 | 1968 | -25 | -49 |
| 22.0 | 310 | -331 | -2194 | 2150 | -21 | -44 |
| 24.0 | 213 | -250 | -2261 | 2230 | -37 | -31 |
| 26.0 | 153 | -194 | -2124 | 2081 | -41 | -43 |
| 28.0 | 133 | -149 | -2248 | 2195 | -16 | -53 |
| 30.0 | 455 | -487 | -2280 | 2239 | -32 | -41 |
| 32.0 | 479 | -486 | -2475 | 2442 | -7 | -33 |
| 34.0 | 287 | -322 | -2455 | 2422 | -35 | -33 |
| 36.0 | 262 | -299 | -2373 | 2328 | -37 | -45 |
| 38.0 | 447 | -459 | -2791 | 2752 | -12 | -39 |
| 40.0 | 602 | -638 | -3120 | 3087 | -36 | -33 |
| 42.0 | 521 | -538 | -3177 | 3117 | -17 | -60 |
| 44.0 | 860 | -901 | -2588 | 2566 | -41 | -22 |
| 46.0 | 991 | -1023 | -2190 | 2157 | -32 | -33 |
| 48.0 | 963 | -987 | -2083 | 2036 | -24 | -47 |
| 50.0 | 1147 | -1191 | -1978 | 1944 | -44 | -34 |
| 52.0 | 1014 | -1031 | -2062 | 2011 | -17 | -51 |
| 54.0 | 688 | -724 | -1805 | 1771 | -36 | -34 |
| 56.0 | 695 | -730 | -1791 | 1759 | -35 | -32 |
| 58.0 | 585 | -602 | -1980 | 1925 | -17 | -55 |
| 60.0 | 420 | -449 | -2124 | 2099 | -29 | -25 |
| 62.0 | 10 | -26 | -1938 | 1893 | -16 | -45 |
| 64.0 | 417 | -449 | -1573 | 1562 | -32 | -11 |
| 66.0 | 153 | -185 | -1647 | 1638 | -32 | -9 |
| 68.0 | -96 | 84 | -2180 | 2136 | -12 | -44 |
| 70.0 | 3 | -53 | -1592 | 1547 | -50 | -45 |
| 72.0 | -8 | -10 | -1319 | 1289 | -18 | -30 |
| 74.0 | 41 | -89 | -1372 | 1341 | -48 | -31 |
| 76.0 | -13 | -28 | -1384 | 1340 | -41 | -44 |
| 78.0 | -87 | 71 | -1147 | 1113 | -16 | -34 |
| 80.0 | -38 | 2 | -1263 | 1230 | -36 | -33 |
| 82.0 | 126 | -140 | -1632 | 1595 | -14 | -37 |
| 84.0 | 903 | -928 | -2161 | 2141 | -25 | -20 |
| 86.0 | 652 | -723 | -2027 | 1970 | -71 | -57 |
| 88.0 | 1173 | -1170 | -2007 | 1963 | 3 | -44 |
| 90.0 | 1907 | -1941 | -1891 | 1875 | -34 | -16 |
| 92.0 | 1499 | -1517 | -2210 | 2174 | -18 | -36 |
| 94.0 | 1652 | -1684 | -1866 | 1840 | -32 | -26 |
| 96.0 | 1612 | -1643 | -1776 | 1740 | -31 | -36 |
| 98.0 | 1195 | -1208 | -1574 | 1538 | -13 | -36 |
| 100.0 | 1231 | -1264 | -1279 | 1239 | -33 | -40 |
| 102.0 | 844 | -859 | -1322 | 1292 | -15 | -30 |
| 104.0 | 917 | -957 | -1597 | 1571 | -40 | -26 |
| 106.0 | 738 | -760 | -1724 | 1692 | -22 | -32 |
| 108.0 | 713 | -739 | -2116 | 2084 | -26 | -32 |
| 110.0 | 1004 | -1045 | -2336 | 2299 | -41 | -37 |
| 112.0 | 817 | -838 | -2398 | 2371 | -21 | -27 |
| 114.0 | 689 | -711 | -2295 | 2259 | -22 | -36 |
| 116.0 | 433 | -465 | -2071 | 2040 | -32 | -31 |
| 118.0 | -151 | 127 | -2155 | 2136 | -24 | -19 |

Northeast Technical Services, Inc.



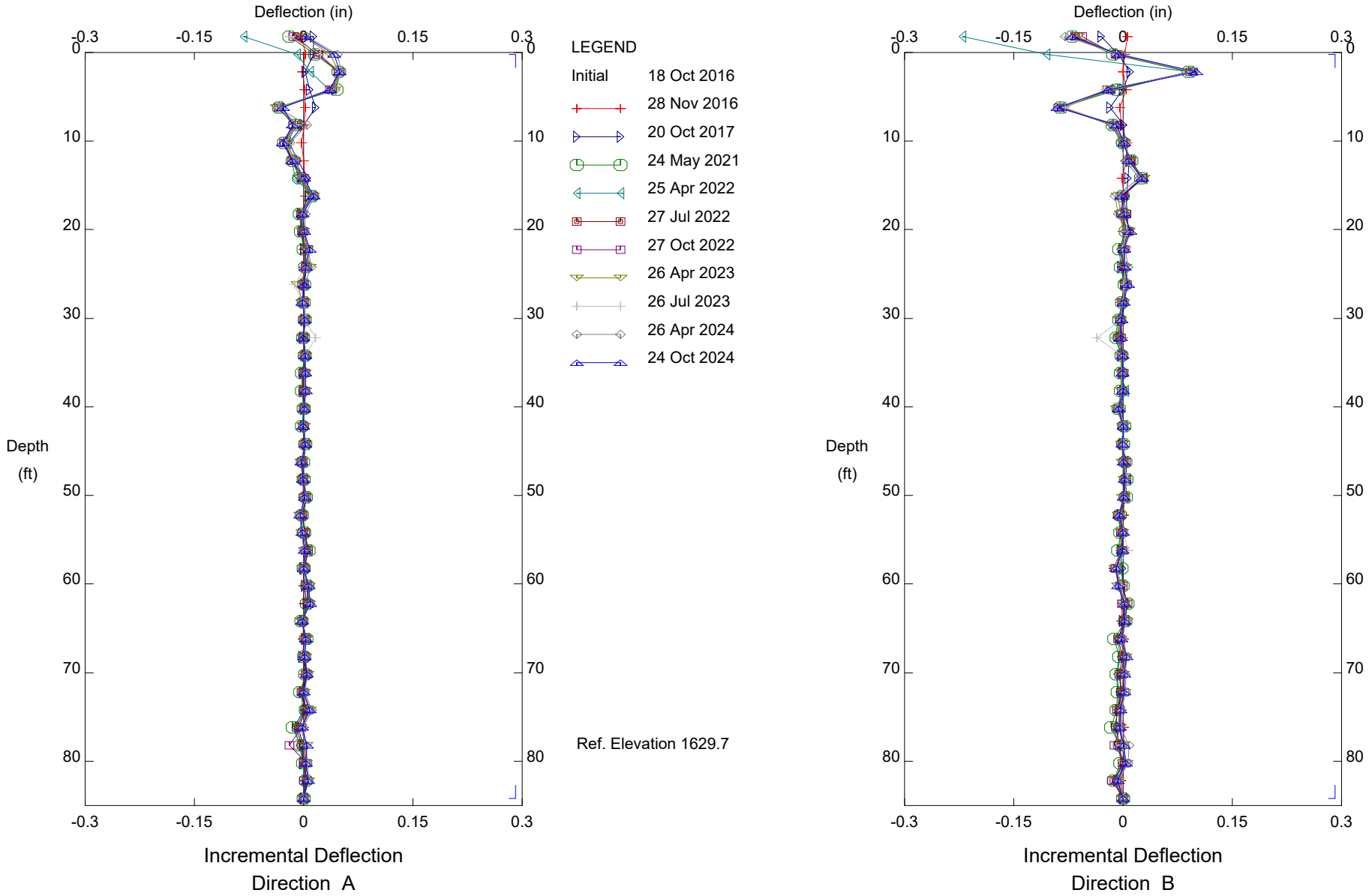

Inclinometer K-2

Splitter Dike - North - Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_K-2.gtl

Northeast Technical Services, Inc.



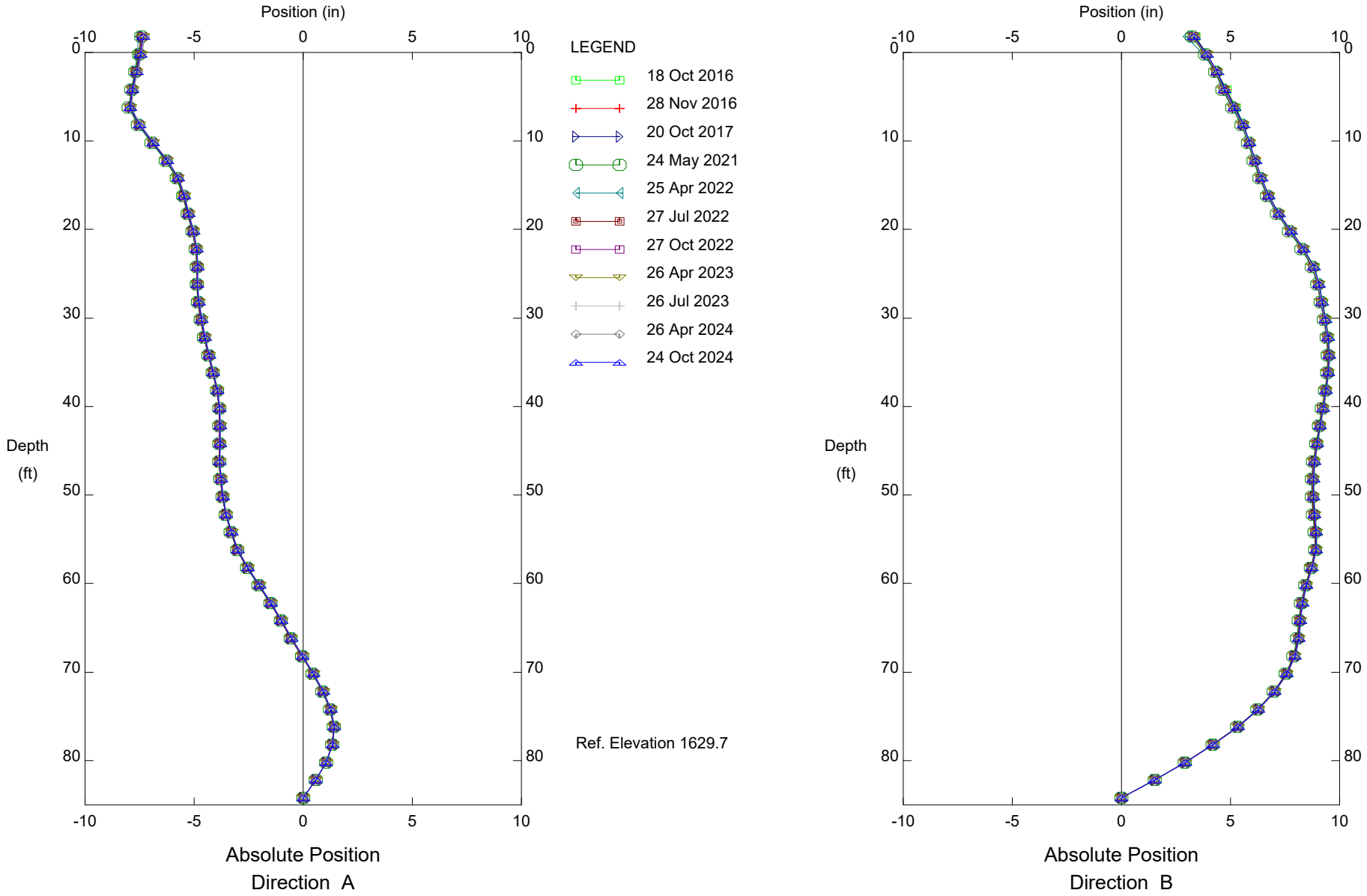

Inclinometer K-2

Splitter Dike - North - Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_K-2.gtl

Northeast Technical Services, Inc.




Inclinometer K-2

Splitter Dike - North - Midslope

LTVSMC Tailings Basin

P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_K-2.gtl

Mitre GTILT PLUS output dated 01-27-2025 at 15:00:57  Inclinometer K-2
File P:\SOFTWARE\DigiPro_GTILT\7157B_PolymetTB\GTILT Files_LTVSMC_K-2.gtl

Northeast Technical Services, Inc.  License 4P1842W
Client  Splitter Dike - North - Midslope
Project
Location  LTVSMC Tailings Basin
Stickup  2.8

Summary of Flagged Readings:-

| Date | Start Time | End Time | Water Level | Probe No. | Cable No. | Reader No. | Start Volts | End Volts |
|---|---|---|---|---|---|---|---|---|
| 10182016 | 1301 | | 0 | 1639179 | | | | |
| 11282016 | 1022 | | 0 | 1639179 | | | | |
| 10202017 | 1217 | | 0 | 1639179 | | | | |
| 05242021 | 0202 | | | 1639179 | | | | |
| 04252022 | 0145 | | | 1639179 | | | | |
| 07272022 | 1230 | | | 1639179 | | | | |
| 10272022 | 1001 | | | 1639179 | | | | |
| 04262023 | 0934 | | | 1639179 | | | | |
| 07262023 | 1235 | | | 1639179 | | | | |
| 04262024 | 1152 | | | 1639179 | | | | |
| 07302024 | 1421 | | | 1639179 | | | | |
| 10242024 | 1118 | | | 1639179 | | | | |
| 11252024 | 1027 | | | 1639179 | | | | |

K-2 set 1, read 18 Oct 2016:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 512 | -549 | -2266 | 2206 | -37 | -60 |
| 4.0 | 578 | -623 | -1880 | 1868 | -45 | -12 |
| 6.0 | 557 | -592 | -1787 | 1786 | -35 | -1 |
| 8.0 | 247 | -280 | -1853 | 1710 | -33 | -143 |
| 10.0 | -1612 | 1588 | -1435 | 1464 | -24 | 29 |
| 12.0 | -2594 | 2567 | -1166 | 1115 | -27 | -51 |
| 14.0 | -2589 | 2543 | -1097 | 1050 | -46 | -47 |
| 16.0 | -2070 | 2037 | -1267 | 1202 | -33 | -65 |
| 18.0 | -1157 | 1121 | -1539 | 1418 | -36 | -121 |
| 20.0 | -899 | 871 | -1938 | 1916 | -28 | -22 |
| 22.0 | -922 | 889 | -2329 | 2330 | -33 | 1 |
| 24.0 | -651 | 598 | -2428 | 2387 | -53 | -41 |
| 26.0 | -252 | 211 | -1968 | 1934 | -41 | -34 |
| 28.0 | 13 | -54 | -1048 | 920 | -41 | -128 |
| 30.0 | -297 | 269 | -608 | 623 | -28 | 15 |
| 32.0 | -513 | 480 | -646 | 592 | -33 | -54 |
| 34.0 | -668 | 628 | -515 | 493 | -40 | -22 |
| 36.0 | -804 | 764 | -264 | 204 | -40 | -60 |
| 38.0 | -856 | 804 | 114 | -239 | -52 | -125 |
| 40.0 | -849 | 828 | 428 | -433 | -21 | -5 |
| 42.0 | -429 | 398 | 557 | -569 | -31 | -12 |
| 44.0 | -72 | 28 | 596 | -646 | -44 | -50 |
| 46.0 | -5 | -33 | 528 | -532 | -38 | -4 |
| 48.0 | 32 | -65 | 475 | -622 | -33 | -147 |
| 50.0 | -267 | 230 | 240 | -191 | -37 | 49 |
| 52.0 | -421 | 393 | -59 | 15 | -28 | -44 |
| 54.0 | -629 | 586 | -264 | 207 | -43 | -57 |
| 56.0 | -1027 | 988 | -301 | 277 | -39 | -24 |
| 58.0 | -1191 | 1166 | -61 | -23 | -25 | -84 |
| 60.0 | -1952 | 1903 | 863 | -898 | -49 | -35 |
| 62.0 | -2229 | 2198 | 999 | -1037 | -31 | -38 |
| 64.0 | -2269 | 2215 | 809 | -874 | -54 | -65 |
| 66.0 | -2045 | 2002 | 357 | -386 | -43 | -29 |
| 68.0 | -1900 | 1859 | 213 | -289 | -41 | -76 |
| 70.0 | -2201 | 2155 | 773 | -810 | -46 | -37 |
| 72.0 | -2075 | 2051 | 1470 | -1516 | -24 | -46 |
| 74.0 | -1882 | 1833 | 2313 | -2347 | -49 | -34 |
| 76.0 | -1485 | 1441 | 3111 | -3146 | -44 | -35 |
| 78.0 | -716 | 661 | 3869 | -3919 | -55 | -50 |
| 80.0 | 311 | -381 | 4795 | -4821 | -70 | -26 |
| 82.0 | 1209 | -1238 | 5272 | -5329 | -29 | -57 |
| 84.0 | 1901 | -1941 | 5770 | -5817 | -40 | -47 |
| 86.0 | 2395 | -2425 | 6368 | -6400 | -30 | -32 |

K-2 set 14, read 26 Apr 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 535 | -561 | -2595 | 2540 | -26 | -55 |
| 4.0 | 778 | -809 | -1892 | 1874 | -31 | -18 |
| 6.0 | 778 | -802 | -1402 | 1351 | -24 | -51 |
| 8.0 | 425 | -463 | -1931 | 1796 | -38 | -135 |
| 10.0 | -1753 | 1746 | -1816 | 1802 | -7 | -14 |
| 12.0 | -2510 | 2613 | -1226 | 1171 | 103 | -55 |
| 14.0 | -2646 | 2640 | -1139 | 1042 | -6 | -97 |
| 16.0 | -2089 | 2091 | -1260 | 1183 | 2 | -77 |
| 18.0 | -1176 | 1135 | -1446 | 1321 | -41 | -125 |
| 20.0 | -829 | 815 | -1989 | 1961 | -14 | -28 |
| 22.0 | -889 | 901 | -2400 | 2316 | 12 | -84 |
| 24.0 | -639 | 597 | -2425 | 2374 | -42 | -51 |
| 26.0 | -222 | 193 | -1940 | 1937 | -29 | -3 |
| 28.0 | 70 | -82 | -1005 | 905 | -12 | -100 |
| 30.0 | -311 | 251 | -561 | 641 | -60 | 80 |
| 32.0 | -518 | 485 | -647 | 601 | -33 | -46 |
| 34.0 | -661 | 623 | -547 | 484 | -38 | -63 |
| 36.0 | -804 | 768 | -268 | 222 | -36 | -46 |
| 38.0 | -852 | 794 | 115 | -236 | -58 | -121 |
| 40.0 | -833 | 823 | 420 | -435 | -10 | -15 |
| 42.0 | -415 | 391 | 539 | -582 | -24 | -43 |
| 44.0 | -69 | 24 | 570 | -600 | -45 | -30 |
| 46.0 | -7 | -30 | 505 | -554 | -37 | -49 |
| 48.0 | 32 | -84 | 475 | -608 | -52 | -133 |
| 50.0 | -276 | 252 | 230 | -202 | -24 | 28 |
| 52.0 | -427 | 400 | -48 | -2 | -27 | -50 |
| 54.0 | -621 | 583 | -258 | 211 | -38 | -47 |
| 56.0 | -1045 | 1011 | -323 | 287 | -34 | -36 |
| 58.0 | -1208 | 1172 | -62 | -24 | -36 | -86 |
| 60.0 | -1939 | 1907 | 869 | -885 | -32 | -16 |
| 62.0 | -2228 | 2198 | 958 | -994 | -30 | -36 |
| 64.0 | -2237 | 2189 | 783 | -854 | -48 | -71 |
| 66.0 | -2000 | 1974 | 364 | -391 | -26 | -27 |
| 68.0 | -1913 | 1867 | 235 | -301 | -46 | -66 |
| 70.0 | -2180 | 2153 | 788 | -786 | -27 | 2 |
| 72.0 | -2067 | 2044 | 1511 | -1521 | -23 | -10 |
| 74.0 | -1861 | 1810 | 2337 | -2348 | -51 | -11 |
| 76.0 | -1477 | 1436 | 3135 | -3156 | -41 | -21 |
| 78.0 | -666 | 619 | 3851 | -3916 | -47 | -65 |
| 80.0 | 318 | -369 | 4794 | -4791 | -51 | 3 |
| 82.0 | 1221 | -1258 | 5344 | -5326 | -37 | 18 |
| 84.0 | 1918 | -1959 | 5806 | -5840 | -41 | -34 |
| 86.0 | 2424 | -2455 | 6340 | -6381 | -31 | -41 |

K-2 set 15, read 30 Jul 2024:-

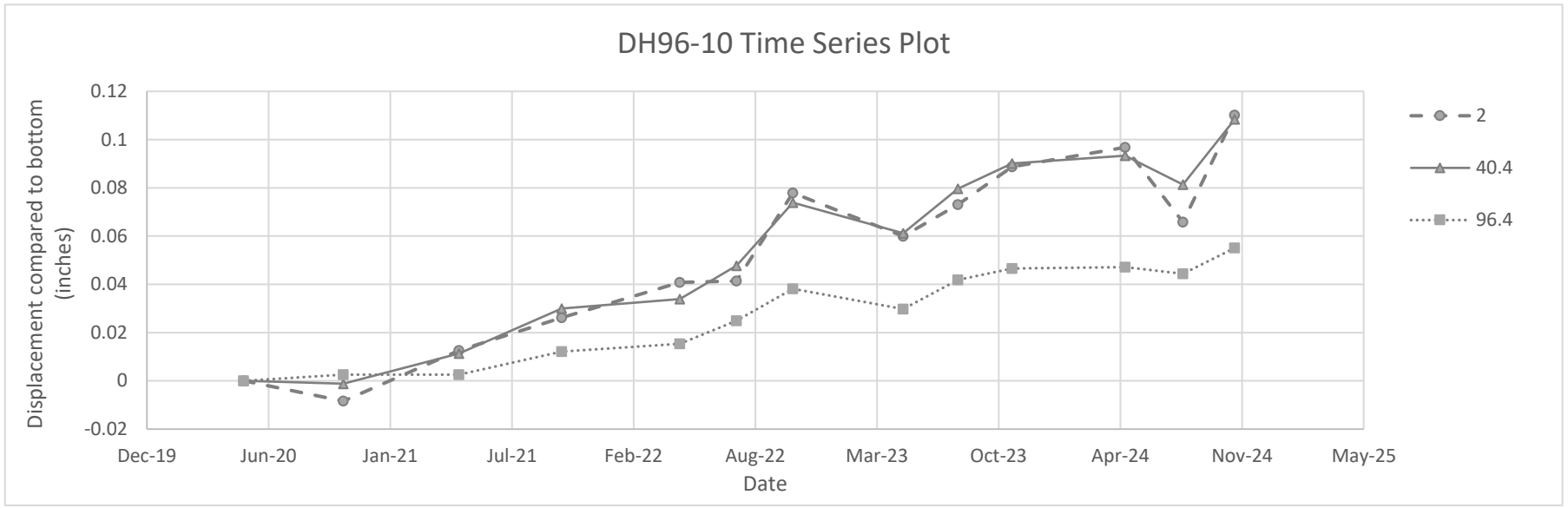
| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 529 | -531 | -2602 | 2546 | -2 | -56 |
| 4.0 | 767 | -767 | -1912 | 1892 | 0 | -20 |
| 6.0 | 783 | -782 | -1409 | 1347 | 1 | -62 |
| 8.0 | 410 | -433 | -1931 | 1832 | -23 | -99 |
| 10.0 | -1731 | 1725 | -1792 | 1818 | -6 | 26 |
| 12.0 | -2624 | 2630 | -1218 | 1160 | 6 | -58 |
| 14.0 | -2678 | 2668 | -1086 | 1026 | -10 | -60 |
| 16.0 | -2110 | 2110 | -1229 | 1170 | 0 | -59 |
| 18.0 | -1142 | 1128 | -1423 | 1316 | -14 | -107 |
| 20.0 | -828 | 828 | -1942 | 1939 | 0 | -3 |
| 22.0 | -914 | 915 | -2343 | 2284 | 1 | -59 |
| 24.0 | -631 | 617 | -2387 | 2345 | -14 | -42 |
| 26.0 | -200 | 187 | -1941 | 1957 | -13 | 16 |
| 28.0 | 33 | -51 | -1037 | 930 | -18 | -107 |
| 30.0 | -277 | 283 | -608 | 626 | 6 | 18 |
| 32.0 | -500 | 498 | -660 | 607 | -2 | -53 |
| 34.0 | -647 | 636 | -545 | 480 | -11 | -65 |
| 36.0 | -790 | 780 | -271 | 221 | -10 | -50 |
| 38.0 | -840 | 804 | 107 | -237 | -36 | -130 |
| 40.0 | -821 | 839 | 422 | -437 | 18 | -15 |
| 42.0 | -404 | 407 | 528 | -591 | 3 | -63 |
| 44.0 | -52 | 36 | 563 | -635 | -16 | -72 |
| 46.0 | 7 | -16 | 505 | -559 | -9 | -54 |
| 48.0 | 48 | -71 | 474 | -619 | -23 | -145 |
| 50.0 | -260 | 258 | 229 | -215 | -2 | 14 |
| 52.0 | -409 | 409 | -46 | -7 | 0 | -53 |
| 54.0 | -606 | 592 | -269 | 192 | -14 | -77 |
| 56.0 | -1027 | 1018 | -334 | 286 | -9 | -48 |
| 58.0 | -1190 | 1177 | -62 | -22 | -13 | -84 |
| 60.0 | -1921 | 1911 | 869 | -884 | -10 | -15 |
| 62.0 | -2213 | 2209 | 949 | -1017 | -4 | -68 |
| 64.0 | -2223 | 2204 | 782 | -853 | -19 | -71 |
| 66.0 | -1987 | 1991 | 365 | -400 | 4 | -35 |
| 68.0 | -1897 | 1879 | 233 | -299 | -18 | -66 |
| 70.0 | -2167 | 2164 | 777 | -779 | -3 | -2 |
| 72.0 | -2051 | 2059 | 1504 | -1519 | 8 | -15 |
| 74.0 | -1847 | 1823 | 2328 | -2336 | -24 | -8 |
| 76.0 | -1466 | 1454 | 3131 | -3146 | -12 | -15 |
| 78.0 | -660 | 646 | 3847 | -3909 | -14 | -62 |
| 80.0 | 322 | -346 | 4792 | -4789 | -24 | 3 |
| 82.0 | 1238 | -1234 | 5282 | -5316 | 4 | -34 |
| 84.0 | 1931 | -1950 | 5795 | -5826 | -19 | -31 |
| 86.0 | 2439 | -2438 | 6332 | -6373 | 1 | -41 |

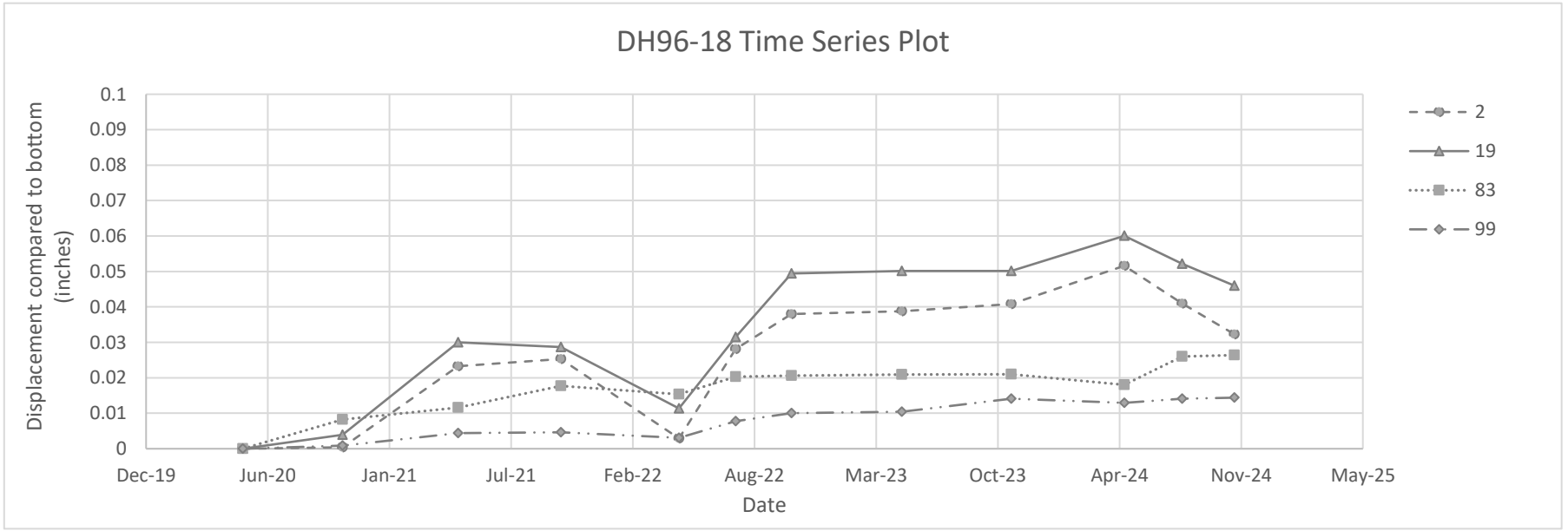
K-2 set 16, read 24 Oct 2024:-

| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 529 | -550 | -2569 | 2482 | -21 | -87 |
| 4.0 | 760 | -788 | -1923 | 1878 | -28 | -45 |
| 6.0 | 768 | -792 | -1406 | 1331 | -24 | -75 |
| 8.0 | 390 | -437 | -1926 | 1806 | -47 | -120 |
| 10.0 | -1731 | 1708 | -1837 | 1811 | -23 | -26 |
| 12.0 | -2652 | 2631 | -1219 | 1134 | -21 | -85 |
| 14.0 | -2701 | 2666 | -1114 | 1023 | -35 | -91 |
| 16.0 | -2151 | 2089 | -1232 | 1175 | -62 | -57 |
| 18.0 | -1154 | 1115 | -1438 | 1301 | -39 | -137 |
| 20.0 | -841 | 817 | -1950 | 1924 | -24 | -26 |
| 22.0 | -925 | 900 | -2359 | 2285 | -25 | -74 |
| 24.0 | -637 | 604 | -2419 | 2317 | -33 | -102 |
| 26.0 | -211 | 184 | -1966 | 1925 | -27 | -41 |
| 28.0 | 15 | -80 | -1058 | 891 | -65 | -167 |
| 30.0 | -291 | 271 | -582 | 592 | -20 | 10 |
| 32.0 | -516 | 487 | -668 | 564 | -29 | -104 |
| 34.0 | -657 | 626 | -563 | 462 | -31 | -101 |
| 36.0 | -801 | 771 | -286 | 208 | -30 | -78 |
| 38.0 | -848 | 794 | 92 | -252 | -54 | -160 |
| 40.0 | -831 | 826 | 407 | -450 | -5 | -43 |
| 42.0 | -414 | 390 | 525 | -604 | -24 | -79 |
| 44.0 | -66 | 26 | 542 | -652 | -40 | -110 |
| 46.0 | -6 | -26 | 492 | -577 | -32 | -85 |
| 48.0 | 33 | -81 | 471 | -621 | -48 | -150 |
| 50.0 | -272 | 249 | 215 | -225 | -23 | -10 |
| 52.0 | -423 | 398 | -65 | -9 | -25 | -74 |
| 54.0 | -618 | 582 | -284 | 179 | -36 | -105 |
| 56.0 | -1041 | 1009 | -350 | 274 | -32 | -76 |
| 58.0 | -1206 | 1165 | -78 | -41 | -41 | -119 |
| 60.0 | -1936 | 1905 | 851 | -904 | -31 | -53 |
| 62.0 | -2226 | 2200 | 930 | -1024 | -26 | -94 |
| 64.0 | -2233 | 2194 | 766 | -861 | -39 | -95 |
| 66.0 | -1997 | 1976 | 349 | -412 | -21 | -63 |
| 68.0 | -1909 | 1867 | 211 | -310 | -42 | -99 |
| 70.0 | -2179 | 2152 | 766 | -799 | -27 | -33 |
| 72.0 | -2066 | 2049 | 1485 | -1537 | -17 | -52 |
| 74.0 | -1863 | 1813 | 2313 | -2358 | -50 | -45 |
| 76.0 | -1477 | 1446 | 3111 | -3160 | -31 | -49 |
| 78.0 | -670 | 637 | 3833 | -3926 | -33 | -93 |
| 80.0 | 314 | -360 | 4777 | -4803 | -46 | -26 |
| 82.0 | 1230 | -1252 | 5267 | -5342 | -22 | -75 |
| 84.0 | 1919 | -1945 | 5774 | -5842 | -26 | -68 |
| 86.0 | 2425 | -2443 | 6320 | -6388 | -18 | -68 |

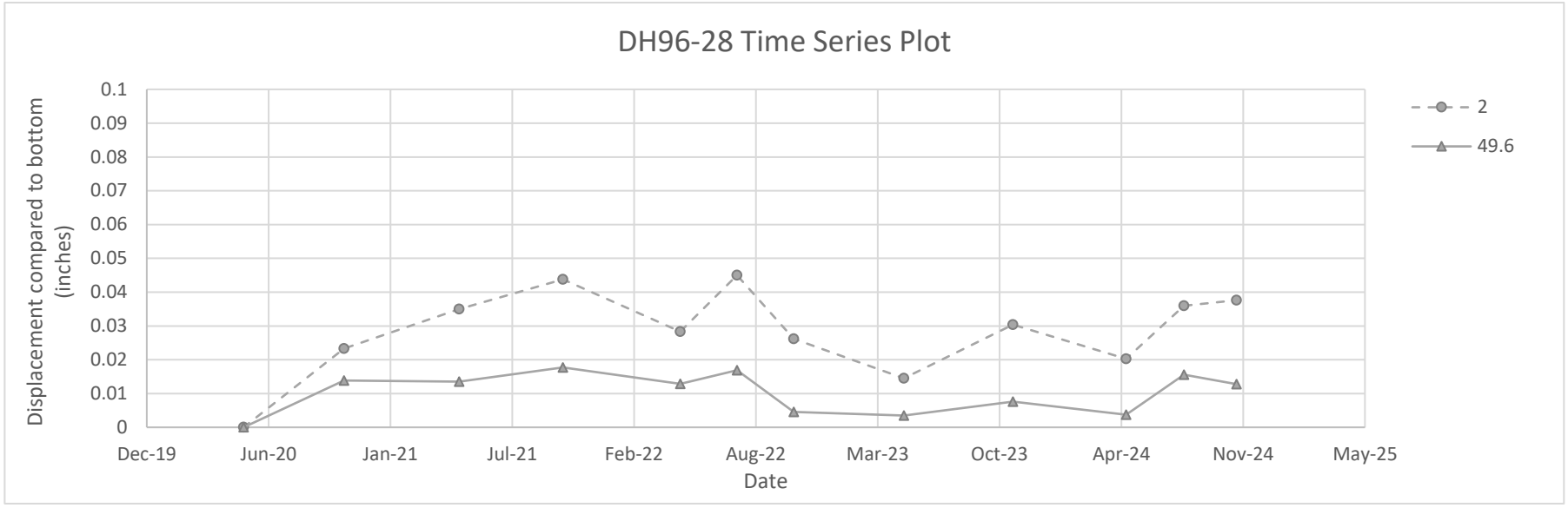
K-2 set 17, read 25 Nov 2024:-

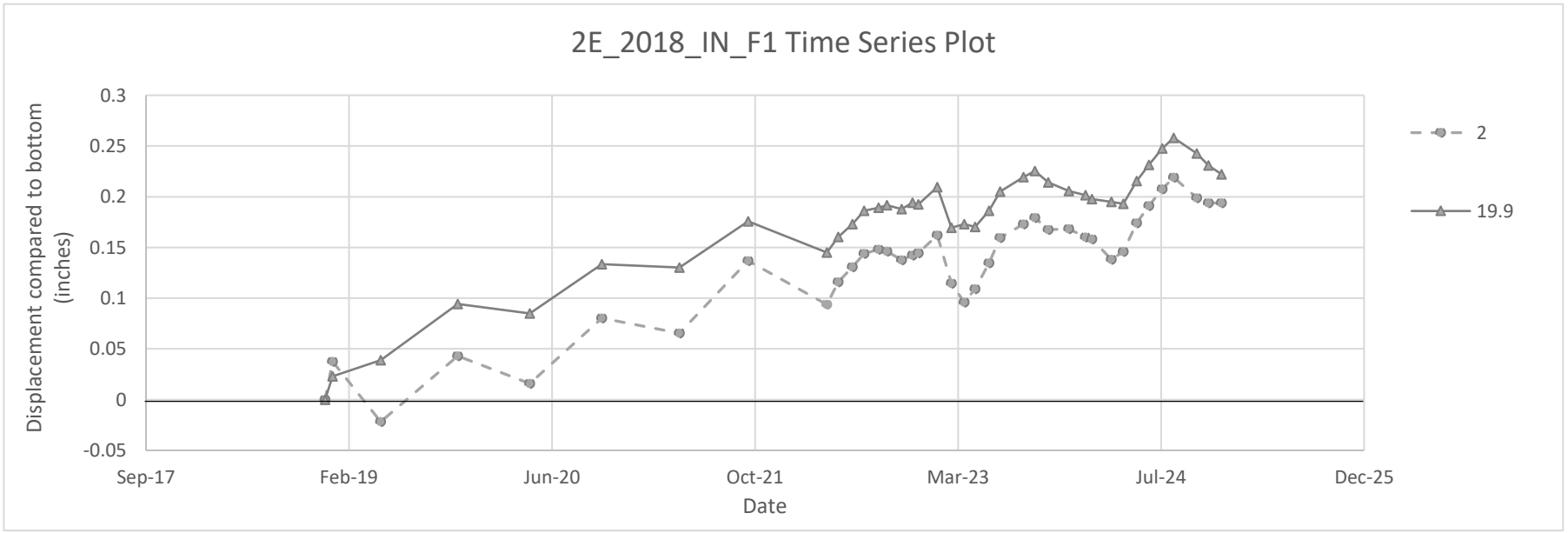
| Depth | A0 | A180 | B0 | B180 | Sum A | Sum B |
|---|---|---|---|---|---|---|
| 2.0 | 711 | -759 | -2597 | 2549 | -48 | -48 |
| 4.0 | 762 | -811 | -1937 | 1904 | -49 | -33 |
| 6.0 | 770 | -804 | -1400 | 1339 | -34 | -61 |
| 8.0 | 398 | -457 | -1933 | 1807 | -59 | -126 |
| 10.0 | -1748 | 1700 | -1820 | 1809 | -48 | -11 |
| 12.0 | -2666 | 2628 | -1218 | 1136 | -38 | -82 |
| 14.0 | -2703 | 2653 | -1114 | 1013 | -50 | -101 |
| 16.0 | -2123 | 2084 | -1240 | 1187 | -39 | -53 |
| 18.0 | -1163 | 1107 | -1434 | 1313 | -56 | -121 |
| 20.0 | -850 | 809 | -1958 | 1929 | -41 | -29 |
| 22.0 | -935 | 896 | -2364 | 2280 | -39 | -84 |
| 24.0 | -646 | 595 | -2419 | 2318 | -51 | -101 |
| 26.0 | -217 | 177 | -1960 | 1923 | -40 | -37 |
| 28.0 | 22 | -80 | -1065 | 906 | -58 | -159 |
| 30.0 | -300 | 267 | -615 | 584 | -33 | -31 |
| 32.0 | -528 | 482 | -647 | 568 | -46 | -79 |
| 34.0 | -665 | 617 | -560 | 463 | -48 | -97 |
| 36.0 | -810 | 763 | -281 | 220 | -47 | -61 |
| 38.0 | -854 | 785 | 96 | -240 | -69 | -144 |
| 40.0 | -835 | 816 | 406 | -446 | -19 | -40 |
| 42.0 | -423 | 383 | 528 | -601 | -40 | -73 |
| 44.0 | -73 | 17 | 554 | -649 | -56 | -95 |
| 46.0 | -17 | -34 | 499 | -576 | -51 | -77 |
| 48.0 | 26 | -92 | 476 | -627 | -66 | -151 |
| 50.0 | -279 | 242 | 221 | -222 | -37 | -1 |
| 52.0 | -429 | 386 | -62 | 1 | -43 | -61 |
| 54.0 | -626 | 575 | -284 | 185 | -51 | -99 |
| 56.0 | -1051 | 1004 | -347 | 274 | -47 | -73 |
| 58.0 | -1214 | 1161 | -78 | -31 | -53 | -109 |
| 60.0 | -1945 | 1899 | 860 | -897 | -46 | -37 |
| 62.0 | -2235 | 2188 | 936 | -1019 | -47 | -83 |
| 64.0 | -2238 | 2185 | 768 | -857 | -53 | -89 |
| 66.0 | -2003 | 1968 | 353 | -409 | -35 | -56 |
| 68.0 | -1919 | 1859 | 217 | -312 | -60 | -95 |
| 70.0 | -2185 | 2146 | 764 | -800 | -39 | -36 |
| 72.0 | -2073 | 2041 | 1493 | -1529 | -32 | -36 |
| 74.0 | -1866 | 1802 | 2318 | -2356 | -64 | -38 |
| 76.0 | -1479 | 1437 | 3115 | -3155 | -42 | -40 |
| 78.0 | -676 | 623 | 3840 | -3917 | -53 | -77 |
| 80.0 | 319 | -372 | 4778 | -4798 | -53 | -20 |
| 82.0 | 1225 | -1263 | 5280 | -5344 | -38 | -64 |
| 84.0 | 1913 | -1966 | 5791 | -5837 | -53 | -46 |
| 86.0 | 2421 | -2451 | 6325 | -6382 | -30 | -57 |



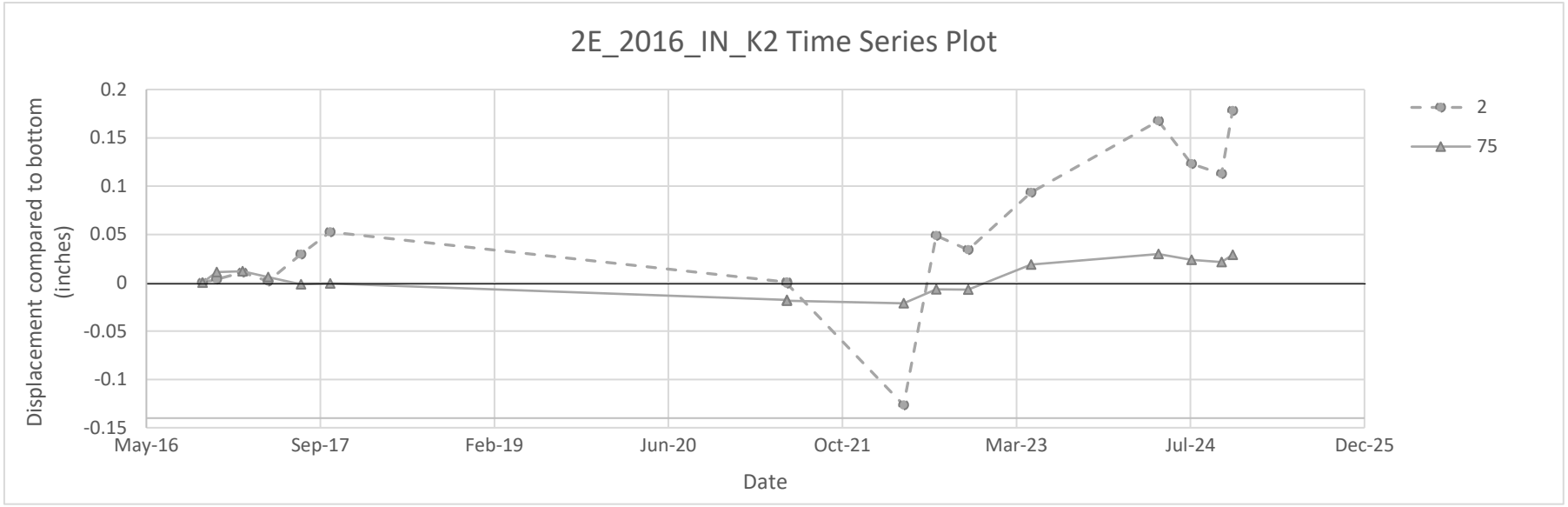




Note:
-Legend entries refer to the depth in feet of the installation.
-Displacement provided in the A-axis for each installation.
-Positive displacement readings would indicate 'downhill' movement.




Note:
-Legend entries refer to the depth in feet of the installation.
-Displacement provided in the A-axis for each installation.
-Positive displacement readings would indicate 'downhill' movement.




Note:
-Legend entries refer to the depth in feet of the installation.
-Displacement provided in the A-axis for each installation.
-Positive displacement readings would indicate 'downhill' movement.

# Appendix D
# Installation Boring Logs

# SITKA CORP

*Test Hole No. DH96-10*

*Test Hole Log*

*Page 1 of 4*

| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1610.3 |
| Date drilled: | July 12,1996 | Coords (ft): | 405,676N, 2,234,927E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SP), fine to coarse, trace to some silt, compact to dense, angular, brownish gray, damp, (COARSE TAILINGS) | |
| 5 | 16 | 1 | SPT | | |
| 10 | 20 | 2 | SPT | | |
| | | | | As above, medium to coarse, dense, wet | |
| 15 | 28 | 3 | SPT | | |
| 20 | 14 | 4 | SPT | | |
| 25 | 29 | 5 | SPT | | |
| 30 | 27 | 6 | SPT | | |
| 35 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-10*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1610.3 |
| Date drilled: | July 12,1996 | Coords (ft): | 405,676N, 2,234,927E |

◆ % Passing #200: 10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×: 20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 32 | 7 | SPT | | |
| 40 | 36 | 8 | SPT | | |
| 45 | 26 | 9 | SPT | SAND (SP), medium to coarse, trace to some silt, compact to dense, angular, brownish gray, damp, (COARSE TAILINGS) | ▽ |
| 50 | 25 | 10 | SPT | | |
| 55 | 38 | 11 | SPT | | |
| 60 | 36 | 12 | SPT | | |
| 65 | 36 | 13 | SPT | | |
| 70 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-10*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1610.3 |
| Date drilled: | July 12,1996 | Coords (ft): | 405,676N, 2,234,927E |

◆ % Passing #200
10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×
20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 40 | 14 | SPT | | |
| 75 | | | | SAND (SP-SM), fine to medium, silty, compact, angular, gray, moist, (FINE TAILINGS) | |
| | 25 | 15 | SPT | | |
| 80 | 27 | 16A | SPT | | |
| | | 16B | | As above, fine sandy silt | |
| 85 | 29 | 17 | SPT | | |
| | | | | SILT (ML), trace fine sand, very stiff, angular, gray to dark gray, wet, (SLIMES) | |
| 90 | 29 | 18 | SPT | | |
| 95 | 27 | 19 | SPT | | |
| | | | | ORGANIC SILT & PEAT (OL/PT), organic, dense, dark brown & dark black, moist (PEAT) | |
| 100 | 42 | 20A | SPT | | |
| | | 20B | | SAND (SC/SC-SM), clayey & silty, some gravel, very dense, angular & rounded, brownish gray, moist, (TILL) | |
| 105 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-10*

*Test Hole Log*

*Page 4 of 4*

| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1610.3 |
| Date drilled: | July 12,1996 | Coords (ft): | 405,676N, 2,234,927E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 72 | 21 | SPT | | |
| 110 | 74 | 22 | SPT | | |
| 115 | 29 | 23 | SPT | | |
| 120 | | | | End of hole at 119.5 feet.<br>Inclinometer installed at 119.5 feet, 2.6 foot stick up.<br>Pneumatic piezometer installed in adjacent hole drilled with hollow-stem auger.<br>Water Level @ 43.7 feet on 9/10/96. | |
| 125 | | | | | |
| 130 | | | | | |
| 135 | | | | | |
| 140 | | | | | |

# SITKA CORP

*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SM/SP-SM), fine to coarse, some silt, compact, angular, brownish gray, damp, (COARSE TAILINGS) | |
| 5 | 11 | 1 | SPT | | |
| 10 | 15 | 2 | SPT | | |
| | | | | As above, medium to coarse | |
| 15 | 14 | 3 | SPT | | |
| 20 | 25 | 4 | SPT | | |
| 25 | 27 | 5 | SPT | | |
| 30 | 26 | 6 | SPT | | |
| 35 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 63 | 7 | SPT | As above, very dense | |
| 40 | 31 | 8 | SPT | As above, dense | |
| 45 | 48 | 9 | SPT | | |
| 50 | 30 | 10 | SPT | SAND (SM), fine, silty, dense, angular, gray, moist, (FINE TAILINGS) | |
| 55 | 46 | 11 | SPT | As above, brown slime layers | |
| 60 | 41 | 12 | SPT | SAND (SM/SP-SM), fine to medium, some silt, dense to very dense, angular, gray, (COARSE TAILINGS) | |
| 65 | 85 | 13 | SPT | | |
| 70 | | | | | |

(Continued)

# SITKA CORP

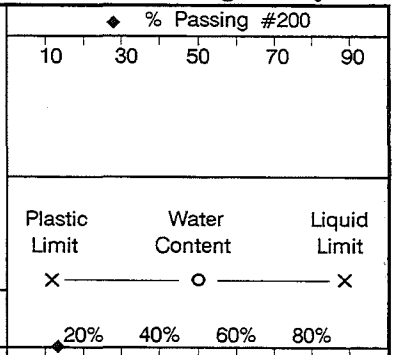
*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 44 | 14 | SPT | | |
| 75 | 40 | 15 | SPT | SAND (SM), fine to medium, silty, dense, angular, gray, moist, (FINE TAILINGS) | |
| 80 | 33 | 16 | SPT | SAND (SM/SP-SM), fine to medium, some silt to silty, dense, angular, gray, wet, (COARSE TAILINGS) | |
| 85 | 32 | 17 | SPT | | |
| 90 | 42 | 18 | SPT | SAND (SM), fine to medium, silty, dense, angular, gray, wet, (FINE TAILINGS) | |
| 95 | 42 | 19 | SPT | SAND (SM), fine to medium, some silt, dense, angular, gray, wet, (COARSE TAILINGS) | |
| 100 | 36 | 20 | SPT | SAND (SM), fine to medium, some silt, dense, angular, gray, wet, (FINE TAILINGS) | |
| 105 | | | | | |




(Continued)

# SITKA CORP

*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content o — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 42 | 21 | SPT | As above, silt, some fine sand | |
| 110 | 17 | 22A | SPT | | |
| | | 22B | | SILT (ML), trace fine sand, very stiff, angular, gray, wet, (SLIMES) | |
| 115 | 60 | 23 | SPT | SAND (SM/SP-SM), fine to medium, some silt, dense to very dense, angular, gray, wet, (COARSE TAILINGS) | |
| 120 | 47 | 24 | SPT | As above, medium to coarse | |
| 125 | 51 | 25 | SPT | | |
| 130 | 34 | 26 | SPT | As above, layers fine tailings | |
| 135 | 47 | 27 | SPT | SAND (SM), fine, silty, dense, angular, gray, wet, 1.5 inch slime layer, (FINE TAILINGS) | |
| 140 | | | | SAND (SM), fine, some silt, dense, angular, gray, | |

(Continued)

# SITKA CORP

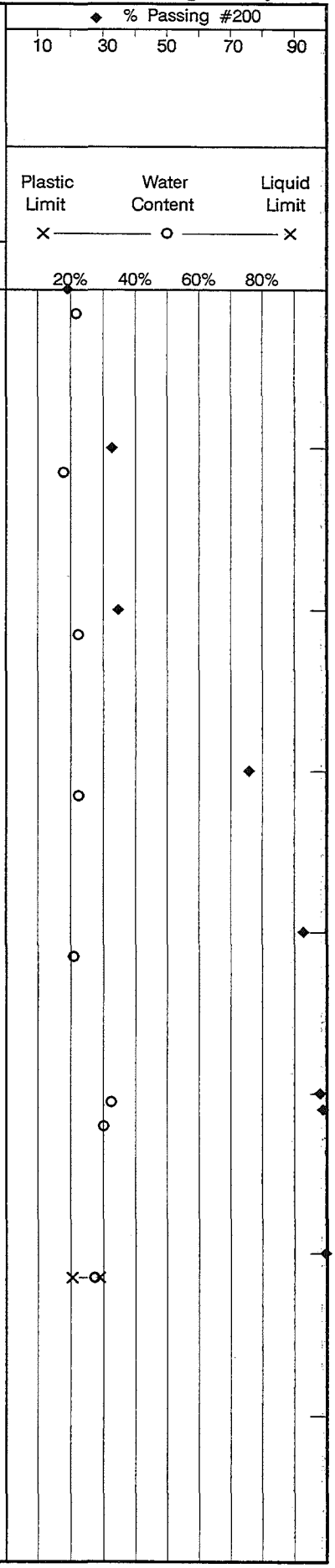
*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 41 | 28 | SPT | wet, (COARSE TAILINGS) | |
| 145 | 41 | 29 | SPT | SAND (SM), fine, silty, dense, angular, brownish gray, wet, (FINE TAILINGS) | |
| 150 | 37 | 30 | SPT | | |
| 155 | 38 | 31 | SPT | As above, fine sandy silt | |
| 160 | 19 | 32 | SPT | CLAY & SILT (CL/CL-ML), trace fine sand, low plasticity, firm to very stiff, angular, gray to brownish gray, wet, (SLIMES) | |
| 165 | 17 | 33A<br>33B | SPT | | |
| 170 | 7 | 34 | SPT | | |
| 175 | | | | | |




(Continued)

# SITKA CORP

*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 51 | 35A | SPT | | |
| | | 35B | | SILT & SAND (ML/SM), fine to medium, dense to very dense, angular, gray, wet, (FINE TAILINGS) | |
| | | | | As above, silt, some sand | |
| 180 | | | | | |
| | 47 | 36 | SPT | | |
| 185 | | | | | |
| | 50 | 37 | SPT | As above, silt and sand | |
| 190 | | | | | |
| | 53 | 38 | SPT | As above, silt, some sand | |
| | | | | SILT (ML), trace fine sand, low plasticity, hard, angular, dark gray, wet, (SLIMES) | |
| 195 | | | | | |
| | 74 | 39 | SPT | | |
| 200 | 42 | 40A | SPT | | |
| | | 40B | | PEAT (PT/OH/OL), dense, dark brown & black, moist, organic | |
| 205 | | | | | |
| | 17 | 41 | SPT | | |
| | | | | SAND (SM/SC-SM), silty, clayey, trace gravels, very dense, angular & rounded, brown, gray & red, moist (TILL) | |
| 210 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-12*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1712.4 |
| Date drilled: | August 10 - 12, 1996 | Coords (ft): | 406,082N, 2,235,010E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 54/ 0.3' | ~~42~~ | SPT | | |
| 215 | | | | | |
| | | | | End of hole at 218.0 feet<br>Inclinometer installed at 218.0 feet, 1.8 foot stick up | |
| 220 | | | | | |
| 225 | | | | | |
| 230 | | | | | |
| 235 | | | | | |
| 240 | | | | | |
| 245 | | | | | |

# SITKA CORP

*Test Hole No. DH96-19*

*Test Hole Log*

*Page 1 of 7*

| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SM), fine to coarse, silty, loose to very dense, angular, gray, damp (COARSE TAILINGS) | |
| 5 | 11 | 1 | SPT | | |
| 10 | 6 | 2 | SPT | | |
| 15 | 6 | 3 | SPT | | |
| 20 | 68 | 4 | SPT | | |
| 25 | 40 | 5 | SPT | | |
| 30 | 38 | 6 | SPT | | |
| 35 | | | | | |

(Continued)

# SITKA CORP

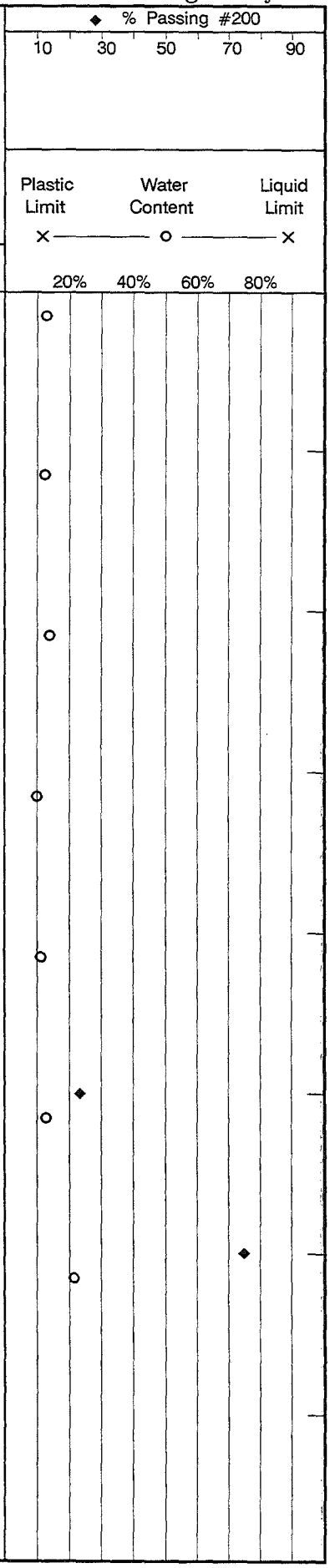
*Test Hole No. DH96-19*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 33 | 7 | SPT | | |
| 40 | 34 | 8 | SPT | | |
| 45 | 39 | 9 | SPT | As above, moist | |
| 50 | 60 | 10 | SPT | | |
| 55 | 61 | 11 | SPT | | |
| 60 | 47 | 12 | SPT | SAND (SM), fine to medium, silty, compact to very dense, angular, gray, moist, (FINE TAILINGS) | |
| 65 | 26 | 13 | SPT | As above, fine sandy silt | |
| 70 | | | | | |

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# SITKA CORP

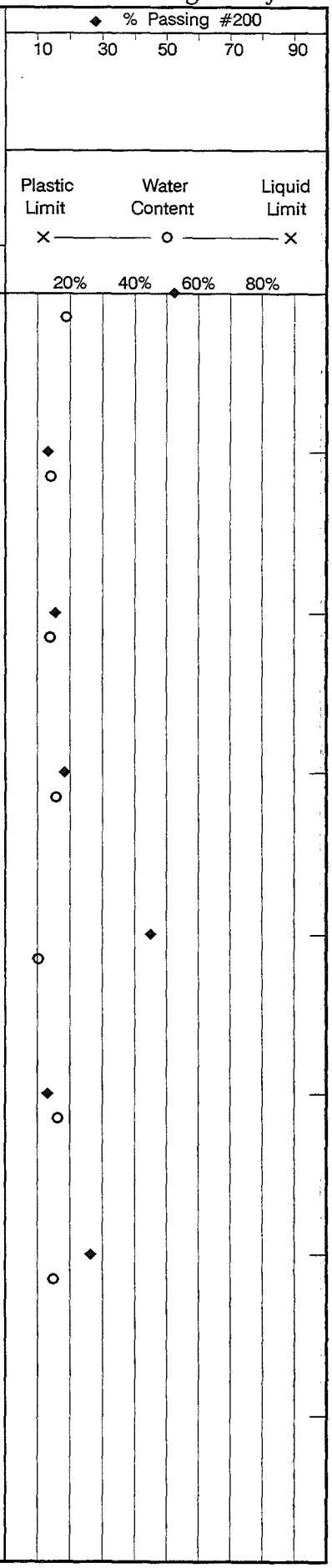
*Test Hole No. DH96-19*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 32 | 14 | SPT | As above, silty sand (SM) | |
| 75 | 49 | 15 | SPT | SAND (SM/SP-SM), medium to coarse, some silt, dense to very dense, angular, brownish gray, wet, (COARSE TAILINGS) | |
| 80 | 56 | 16 | SPT | | |
| 85 | 37 | 17 | SPT | | |
| 90 | 66 | 18 | SPT | SAND & SILT (SM/ML), medium to coarse, very dense, angular, brownish gray, wet, (FINE TAILINGS) | |
| 95 | 38 | 19 | SPT | SAND (SM/SP-SM), medium to coarse, some silt, dense, angular, brownish gray, wet (COARSE TAILINGS) | |
| 100 | 41 | 20 | SPT | SAND (SM), fine to coarse, silty, dense to very dense, angular, brownish gray, wet, (FINE TAILINGS) | |
| 105 | | | | | |




(Continued)

# SITKA CORP

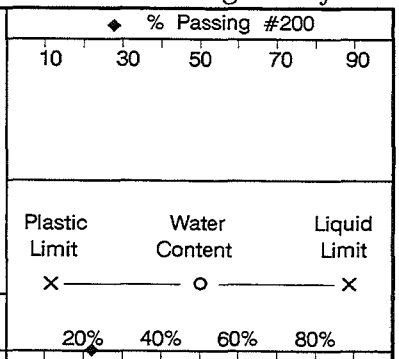
*Test Hole No. DH96-19*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 49 | 21 | SPT | | |
| 110 | 31 | 22 | SPT | As above, silty fine sand to sandy silt (SM/ML) | |
| 115 | 46 | 23 | SPT | | |
| 120 | 37 | 24 | SPT | As above, fine to medium silty sand (SM) | |
| 125 | 36 | 25 | SPT | | |
| 130 | 62 | 26 | SPT | | |
| 135 | 43 | 27 | SPT | SAND (SM), fine to medium, silty, dense, angular, brownish gray, wet, (COARSE TAILINGS) | |
| 140 | | | | SILT & CLAY (ML & CL-ML), trace fine sand, hard, angular, brownish gray, wet, (SLIMES) | |

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# SITKA CORP

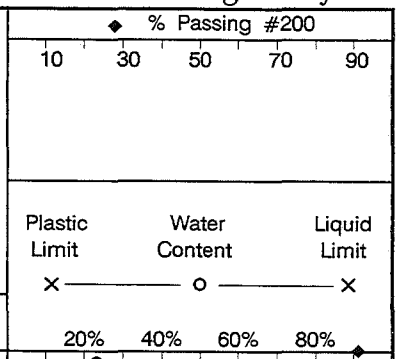
*Test Hole No. DH96-19*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 51 | 28A | SPT | | |
| | | 28B | | SAND (SM), fine, silty, dense, angular, gray, moist, some slime layers, (FINE TAILINGS) | |
| 145 | 38 | 29 | SPT | | |
| 150 | 43 | 30 | SPT | | |
| 155 | 45 | 31 | SPT | SILT & SAND (ML), dense, angular, brownish gray, wet, some slime layers, (FINE TAILINGS) | |
| 160 | 41 | 32 | SPT | As above, sand and silt (SM/ML) | |
| 165 | 35 | 33 | SPT | As above, silt, some sand to sandy silt | |
| 170 | 43 | 34 | SPT | | |
| 175 | | | | | |




(Continued)

# SITKA CORP

*Test Hole No. DH96-19*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

◆ % Passing #200
10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×
20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 34 | 35 | SPT | | |
| 180 | 49 | 36 | SPT | | |
| 185 | 39 | 37 | SPT | | |
| 190 | 20 | 38 | SPT | As above, silt, some sand, compact | |
| 195 | 52 | 39 | SPT | As above, silty sand, very dense | |
| | | | | As above, silt, some fine sand, dense | |
| 200 | 36 | 40A | SPT | | |
| | | 40B | | SILT (ML), trace fine sand, very stiff to hard, angular, brownish gray, wet, (SLIMES) | |
| 205 | 27 | 41 | SPT | | |
| 210 | | | | SILT (ML), some fine sand, dense, angular, brownish | |

(Continued)

# SITKA CORP

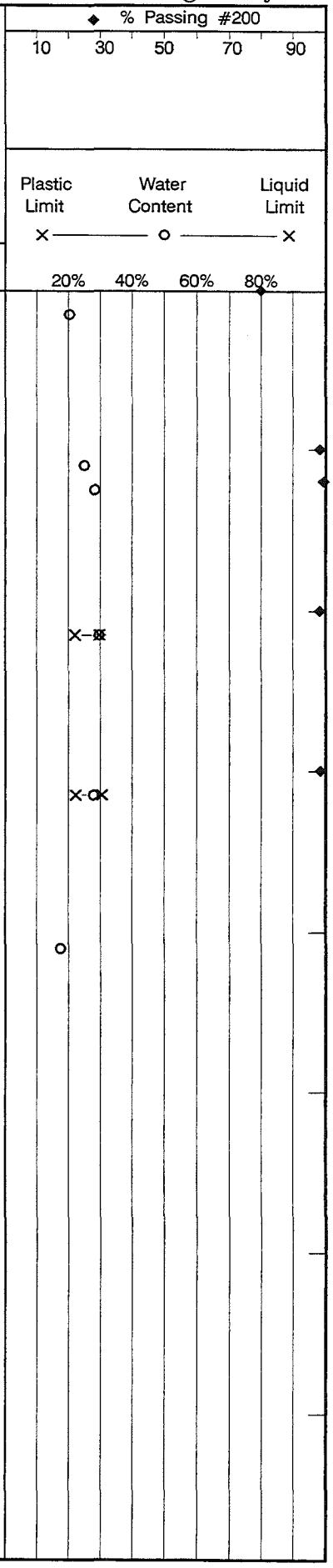
*Test Hole No. DH96-19*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1707.2 |
| Date drilled: | July 26 - 28, 1996 | Coords (ft): | 413,216N, 2,234,200E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 44 | 42 | SPT | gray, wet, (FINE TAILINGS) | |
| 215 | 36 | 43A | SPT | CLAY & SILT (CL-ML), very soft to hard, brownish gray, wet (SLIMES) | |
| | | 43B | | | |
| 220 | 3 | 44 | SPT | | |
| 225 | 0 | 45 | SPT | As above, with organic lenses | |
| 230 | 70/ 0.5' | 46 | SPT | SAND (SM), silty, clayey, very dense, light gray, moist, (TILL) | |
| 235 | | | | End of hole at 235.0 feet. Inclinometer installed at 235.0 feet, 3.0 foot stick up. | |
| 240 | | | | | |
| 245 | | | | | |



# SITKA CORP

*Test Hole No. DH96-28*

*Test Hole Log*

*Page 1 of 2*

| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1553.5 |
| Date drilled: | June 20, 1996 | Coords (ft): | 414,809N, 2,238,790E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit — Water Content — Liquid Limit

× —— o —— ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SP), medium to coarse, trace to some silt, compact to very dense, angular, dark brown, damp, (COARSE TAILINGS) | |
| 5 | 37 | 1 | SPT | | |
| 10 | 18 | 2 | NS | | |
| 15 | 33 | 3 | NS | | |
| 20 | 33 | 4 | SPT | | |
| 25 | 33 | 5 | SPT | As above, fine to coarse, brownish gray | |
| 30 | 43 | 6 | SPT | | |
| 35 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-28*

*Test Hole Log*

*Page 2 of 2*

| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1553.5 |
| Date drilled: | June 20, 1996 | Coords (ft): | 414,809N, 2,238,790E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 50 | 7 | SPT | As above, moist | |
| 40 | 39 | 8 | SPT | | |
| 45 | 37 | 9 | SPT | As above, wet | |
| | | | | SAND (SM), fine, silty, compact, brownish gray, moist (FINE TAILINGS) | |
| 50 | 26 | 10 | SPT | | |
| | | | | SILT (ML), trace fine sand, stiff, angular, gray, wet, (SLIMES) | |
| 55 | 8 | 11 | SPT | | |
| | | | | SAND (SC), coarse to fine, clayey, very dense, angular & rounded, gray, red & brown, moist (TILL) | |
| 60 | 51 | 12 | SPT | | |
| 65 | | | | End of hole at 68.0 feet. Inclinometer installed at 68.0 feet, 1.4 foot stick up. Pneumatic piezometer installed in adjacent hole drilled with hollow-stem auger. Water Level @ 48.6 feet on 9/10/96. | |
| 70 | | | | | |

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SP-SM/SM), fine to coarse, some silt, loose to dense, angular, gray, damp, (COARSE TAILINGS) | |
| 5 | 8 | 1 | SPT | | |
| 10 | 12 | 2 | SPT | | |
| 15 | 15 | 3 | SPT | As above, medium to coarse sand | |
| 20 | 36 | 4 | SPT | | |
| 25 | 37 | 5 | SPT | As above, silty, dense to very dense | |
| 30 | 54 | 6 | SPT | | |
| 35 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 120/ 0.9' | 7 | SPT | | |
| 40 | 86 | 8 | SPT | | |
| 45 | 72 | 9 | SPT | As above, fine to medium, brownish gray, moist | |
| 50 | 46 | 10 | SPT | | |
| 55 | 81 | 11 | SPT | | |
| 60 | 87 | 12 | SPT | | |
| 65 | 67 | 13 | SPT | | |
| 70 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

◆ % Passing #200: 10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×: 20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 76 | 14 | SPT | | |
| 75 | 50/ 0.5' | 15 | SPT | | |
| 80 | 58 | 16 | SPT | | |
| 85 | 14 | 17 | SPT | SILT (ML), trace fine sand, stiff, angular, brownish gray, wet, some fine tailings layers (SLIMES) | |
| 90 | 50 | 18 | SPT | SAND (SM), fine to coarse, some silt, very dense, angular, gray, wet, (COARSE TAILINGS) | |
| 95 | 70 | 19 | SPT | SAND (SM), fine to coarse, silty, very dense, angular, gray, wet, (FINE TAILINGS) | |
| 100 | 50 | 20A | SPT | As above, SILT & SAND (ML/SM), fine | |
| | | 20B | | As above, SAND (SM), fine to medium, silty | |
| 105 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 64 | 21 | SPT | | |
| 110 | 52 | 22 | SPT | | |
| | | | | As above, SILT (ML), fine sandy, compact | |
| 115 | 14 | 23 | SPT | | |
| 120 | 21 | 24 | SPT | As above, some sand | |
| | | | | As above, SAND (SM), fine to medium, silty, compact to very dense | |
| 125 | 24 | 25 | SPT | | |
| 130 | 79 | 26 | SPT | | |
| 135 | 53 | 27 | SPT | | |
| 140 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 66 | 28 | SPT | As above, sand and silt, moist | |
| 145 | 50 | 29 | SPT | As above, sand, silty | |
| 150 | 61 | 30 | SPT | | |
| 155 | 48 | 31 | SPT | As above, SILT & SAND (ML/SM), fine, dense to very dense, wet | |
| 160 | 61 | 32 | SPT | | |
| 165 | 42 | 33 | SPT | As above, silt and fine sand, dense | |
| 170 | 36 | 34 | SPT | | |
| 175 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 38 | 35 | SPT | | |
| 180 | 51 | 36 | SPT | | |
| 185 | 46 | 37 | SPT | | |
| | | | | As above, silt and sand | |
| 190 | 42 | 38 | SPT | | |
| | | | | CLAY & SILT (CL-ML), low plasticity, soft to very stiff, angular, brown, wet (SLIMES) | |
| 195 | 2 | 39 | SPT | | |
| 200 | 28 | 40A | SPT | | |
| | | 40B | | | |
| | | | | SAND (SC/SC-SM), clayey, silty, trace gravels, very dense, angular, & rounded, brown, tan & dark red, moist (TILL) | |
| 205 | 85/ 0.5' | 41 | SPT | | |
| 210 | | | | | |

◆ % Passing #200

10 30 50 70 90

Plastic Limit — Water Content — Liquid Limit

20% 40% 60% 80%

(Continued)

# SITKA CORP

*Test Hole No. DH96-32*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1711.0 |
| Date drilled: | July 29 - August 1, 1996 | Coords (ft): | 414,271N, 2,238,795E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 50/ 0.3' | ~~42~~ | SPT | | |
| 215 | | | | | |
| | | | | End of hole at 218.0 feet.<br>Inclinometer installed at 218.0 feet, 3.5 foot stick up.<br>Water Level @ 178.2 feet on 9/10/96. | |
| 220 | | | | | |
| 225 | | | | | |
| 230 | | | | | |
| 235 | | | | | |
| 240 | | | | | |
| 245 | | | | | |

# SITKA CORP

*Test Hole No. DH96-37*

*Test Hole Log*

*Page 1 of 2*

| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1529.6 |
| Date drilled: | June 19, 1996 | Coords (ft): | 414,884N, 2,240,513E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SP), medium to coarse, trace silt, compact to dense, angular, brownish gray, damp, (COARSE TAILINGS) | |
| 5 | 37 | 1 | SPT | | |
| 10 | 18 | 2 | SPT | | |
| 15 | 33 | 3 | SPT | | |
| 20 | 33 | 4 | SPT | | |
| 25 | 33 | 5 | SPT | | |
| | | | | As above, fine sand, some silt, gray | |
| 30 | 43 | 6 | SPT | | |
| | | | | SAND (SM), fine, silty, dense, angular, moist to | |
| 35 | | | | | |

(Continued)

# SITKA CORP

*Test Hole No. DH96-37*

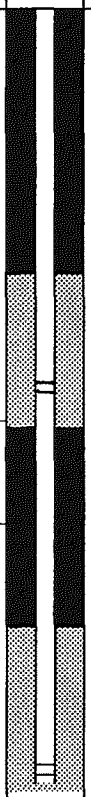
*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1529.6 |
| Date drilled: | June 19, 1996 | Coords (ft): | 414,884N, 2,240,513E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description |
|---|---|---|---|---|
| | 50 | 7 | SPT | wet, gray, (FINE TAILINGS) |
| 40 | 49 | 8 | SPT | |
| 45 | 17 | 9A | SPT | As above, SILT (ML), fine sandy, compact to dense, angular, gray, moist to wet, (FINE TAILINGS) |
| | | 9B | | SILT & CLAY (ML-CL), trace fine sand, stiff, angular, moist, gray & red-brown, with organic material, (SLIMES) |
| 50 | 12 | 10 | SPT | CLAY & SILT (CL-ML), compact, angular, brown & blue-gray, moist (TILL) |
| 55 | | | | |
| 60 | | | | End of hole at 58.5 feet.<br>Inclinometer installed at 58.5 feet, 3.2 foot stick up.<br>Pneumatic piezometer installed in adjacent hole drilled with hollow-stem auger.<br>Water Level @ 42.4 feet on 9/10/96. |
| 65 | | | | |
| 70 | | | | |

Piezo Detail

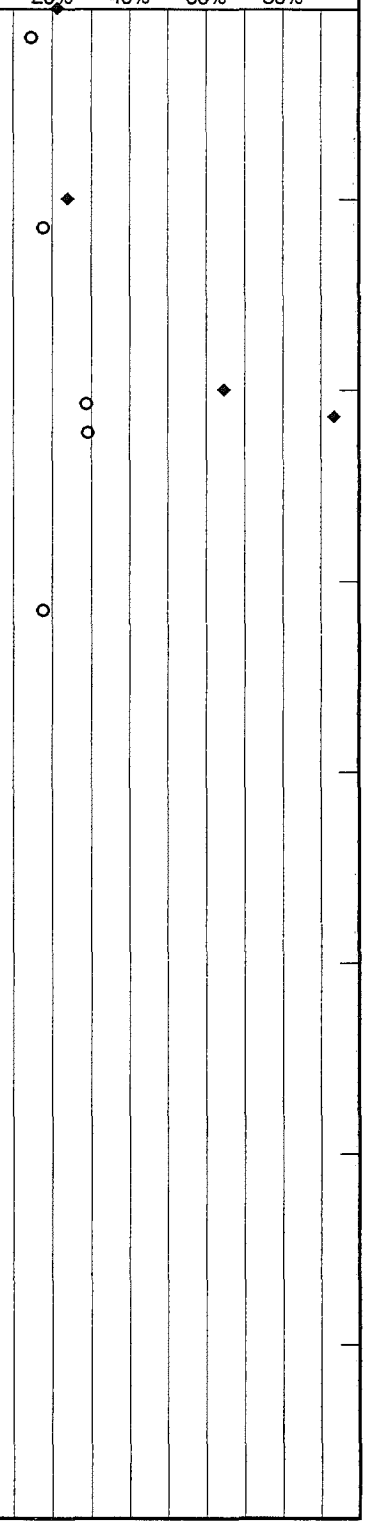


◆ % Passing #200

10 30 50 70 90

Plastic Limit — Water Content — Liquid Limit

20% 40% 60% 80%



# SITKA CORP

*Test Hole No. DH96-46*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1530.4 |
| Date drilled: | June 18, 1996 | Coords (ft): | 414,886N, 2,241,737E |

◆ % Passing #200

10 30 50 70 90

Plastic Limit × — Water Content ○ — Liquid Limit ×

20% 40% 60% 80%

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | | | | SAND (SM), fine to medium, silty, loose to compact, angular, dry, gray (COARSE TAILINGS) | |
| 5 | 8 | 1 | SPT | | |
| 10 | 10 | 2 | SPT | | |
| 15 | 14 | 3 | SPT | As above, moist | |
| 20 | 22 | 4 | SPT | SAND (SM), fine to medium, silty, compact, angular, gray, moist, 1/2 inch slime layer (FINE TAILINGS) | |
| 25 | 24 | 5 | SPT | | |
| 30 | 18 | 6 | SPT | SAND (SP-SM/SM), medium to coarse, some silt, compact to dense, angular, gray, moist to wet, (COARSE TAILINGS) | |
| 35 | | | | | |

(Continued)

# SITKA CORP

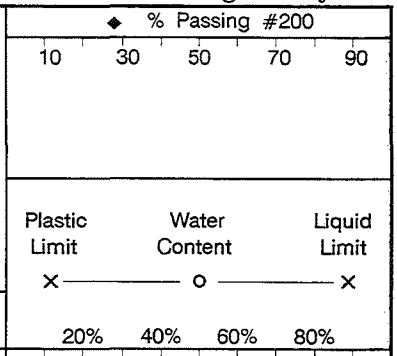
*Test Hole No. DH96-46*

*Test Hole Log*



| | | | |
|---|---|---|---|
| Project: | LTV Tailings Assessment | Equipment: | CME 750 mud rotary |
| Project No: | L78.5.7 | | |
| Location: | Hoyt Lakes, MN | Ground El (ft): | 1530.4 |
| Date drilled: | June 18, 1996 | Coords (ft): | 414,886N, 2,241,737E |

| Depth (ft) | Blow Count | Sample No | Sample Type | Material Description | Piezo Detail |
|---|---|---|---|---|---|
| | 37 | 7 | SPT | | |
| 40 | 28 | 8 | SPT | As above, fine to coarse sand | |
| 45 | 34 | 9A | SPT | SILT & SAND (ML&SM), dense, angular, gray, moist, (FINE TAILINGS) | |
| | | 9B | | SILT & CLAY (ML/CL-ML), hard, angular, grayish brown, moist, 3 inch coarse tailings layer (SLIMES) | |
| 50 | 28 | 10 | SPT | SAND (SM), medium to coarse, some silt, compact, angular, gray, wet (COARSE TAILINGS) | |
| 55 | 28 | 11 | SPT | PEAT & ORGANIC (PT/OH), silty, hard, dark brown & red, wet | |
| 60 | | | | Very rough drilling, (TILL?) | |
| 65 | | | | | |
| 70 | | | | End of hole at 68.0 feet.<br>Inclinometer installed at 68.0 feet, 3.0 foot stick up. | |



BARR

4700 W 77th Street
Minneapolis, MN 55435

# LOG OF BORING I1H-99

Sheet 1 of 4

Project: Instrumentation Installation | Location: Hoyt Lakes, MN | Client: LTV Steel Mining Company

Barr Project Number: 23/69-528PBS

Surface Elev.: 1598.2

| Elevation, feet | Depth, feet | MATERIAL DESCRIPTION (ASTM D2488) | Graphic Log | Sample Type & Rec. | SPT, N value or RQD % |
|---|---|---|---|---|---|
| 1595 | 0 | Medium to Coarse Sand (SP) Trace Silt and Fine Sand - Trace Gravel - Occasional Silt Seams and Layers - Grey - Moist to Wet | | | |
| | | (Coarse Tailings) | | | |
| 1590 | 5 | | | | 26 |
| | 10 | | | | 13 |
| 1585 | | | | | |
| | 15 | | | | 23 |
| 1580 | | | | | |
| | 20 | | | | 12 |
| 1575 | | | | | |
| | 25 | | | | 94 |
| 1570 | | | | | |
| | 30 | | | | 39 |

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
10 20 30 40

SHEAR STRENGTH, ksf
$Q_P$ × UC ▲ TV ✳
1 2 3 4

NATURAL DRY DENSITY (pcf) ★
105 115 125

Water Content, %
$W_P$ $W_N$ $W_L$
10 20 30

*Continued Next Page*

| | |
|---|---|
| Completion Depth: | 111.7 |
| Date Boring Started: | 9/27/99 |
| Date Boring Completed: | 10/4/99 |
| Logged By: | BARR |
| Drilling Contractor: | AET |
| Drilling Method: | HSA |

Remarks: Inclinometer installed at 111.7 feet. Tried to maintain a head of water or mud in the borehole during sampling.

SAMPLE TYPES

Auger Cutting | Shelby Tube
Split Spoon | Rock Core

WATER LEVELS

| | |
|---|---|
| While Drilling: | 60 |
| End of Drilling: | N/A |
| N/A hrs After Drilling: | N/A |

The stratification lines represent approximate boundaries. The transition may be gradual.

LOG_OF_BORING 2369528.GPJ BARRLOG.GDT 1/10/00

BARR

4700 W 77th Street
Minneapolis, MN 55435

# LOG OF BORING I1H-99



Project: Instrumentation Installation | Location: Hoyt Lakes, MN | Client: LTV Steel Mining Company

Barr Project Number: 23/69-528PBS

| Elevation, feet | Depth, feet | MATERIAL DESCRIPTION (ASTM D2488) | Graphic Log | Sample Type & Rec. | SPT, N value or RQD % |
|---|---|---|---|---|---|
| 1565 | 35 | Medium to Coarse Sand (SP) Trace Silt and Fine Sand - Trace Gravel - Occasional Silt Seams and Layers - Grey - Moist to Wet<br>(Coarse Tailings) | | | 26 |
| 1560 | 40 | | | | 23 |
| 1555 | 45 | | | | 37 |
| 1550 | 50 | | | | 12 |
| 1545 | 55 | | | | 13 |
| 1540 | 60 | | | | 16 |
| | | | | | 25 |
| | | 1539.2 | | | |
| | | Fine to Coarse Sand - Trace Silt - Grey - Moist to Wet 59.0 | | | |
| | | (Coarse Tailings) 1537.2 | | | 21 |
| | | Silty Fine Sand (SM) Some Clay - Grey Wet 61.0 | | | |
| | | 1536.2 | | | |
| 1535 | 65 | (Fine Tailings) 62.0<br>Sandy Silt (ML) Trace to Some Clay - 6 inch slime layer at 65 feet - Grey - Wet | | | 33 |

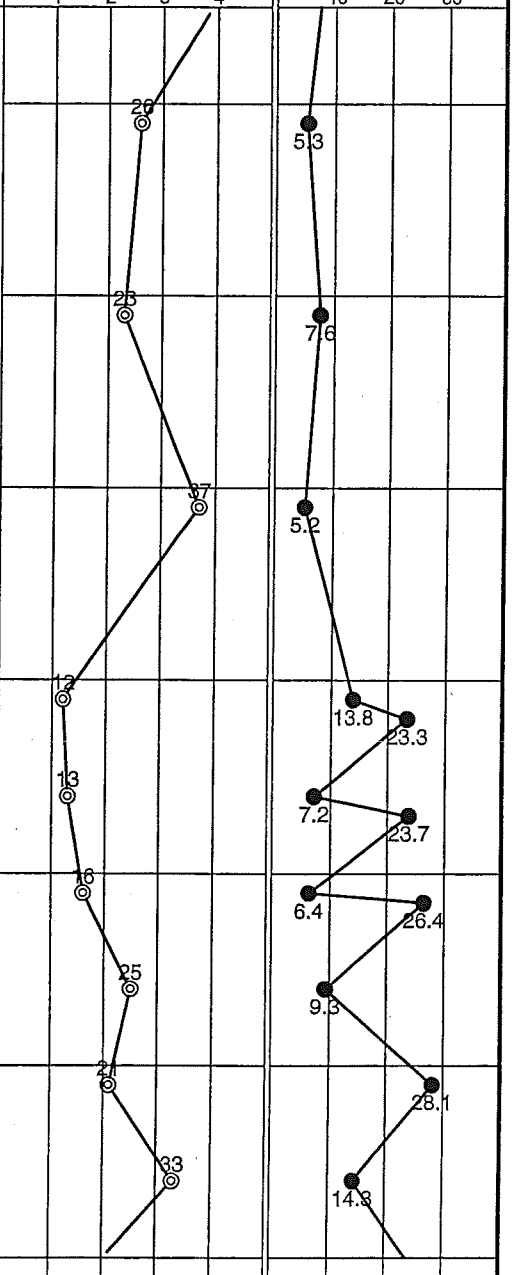
*Continued Next Page*

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
10 20 30 40

SHEAR STRENGTH, ksf
$Q_p$ × UC ▲ TV ✳
1 2 3 4

NATURAL DRY DENSITY (pcf) ★
105 115 125

Water Content, %
$W_P$ $W_N$ $W_L$
10 20 30




| | |
|---|---|
| Completion Depth: | 111.7 |
| Date Boring Started: | 9/27/99 |
| Date Boring Completed: | 10/4/99 |
| Logged By: | BARR |
| Drilling Contractor: | AET |
| Drilling Method: | HSA |

Remarks: Inclinometer installed at 111.7 feet. Tried to maintain a head of water or mud in the borehole during sampling.

SAMPLE TYPES

Auger Cutting | Shelby Tube | Split Spoon | Rock Core

WATER LEVELS

| | |
|---|---|
| While Drilling: | 60 |
| End of Drilling: | N/A |
| N/A hrs After Drilling: | N/A |

The stratification lines represent approximate boundaries. The transition may be gradual.

LOG_OF_BORING 2369528.GPJ BARRLOG.GDT 1/10/00

BARR

4700 W 77th Street
Minneapolis, MN 55435

# LOG OF BORING I1H-99

Sheet 3 of 4

Project: Instrumentation Installation | Location: Hoyt Lakes, MN | Client: LTV Steel Mining Company

Barr Project Number: 23/69-528PBS

| Elevation, feet | Depth, feet | MATERIAL DESCRIPTION (ASTM D2488) | | Graphic Log | Sample Type & Rec. | SPT, N value or RQD % |
|---|---|---|---|---|---|---|
| | 65 | (Fine Tailings to Slimes) Sandy Silt (ML) Trace to Some Clay - 6 inch slime layer at 65 feet - Grey - Wet | | | | 17 |
| | | (Fine Tailings to Slimes) | | | | 23 |
| 1530 | | | 1529.2 | | | |
| | 70 | Fine Sand (SP) Some Silt - Grey - Wet | 69.0 | | | 8 |
| | | (Fine Tailings) | | | | |
| | | | 1525.2 | | | 5 |
| 1525 | | Silt (ML) Trace to Some Clay - Grey - Wet | 73.0 | | | |
| | 75 | (Slimes) | | | | 3 |
| | | | 1520.2 | | | |
| 1520 | | Fine to Coarse Sand (SP) Trace Silt - Grey - Wet | 78.0 | | | 20 |
| | 80 | (Coarse Tailings) | | | | |
| | | | 1516.9 | | | 6 |
| | | Fine Sand (SP) Some Silt - Grey - Wet | 81.3 | | | |
| 1515 | | (Coarse Tailings) | | | | 8 |
| | 85 | | | | | |
| | | | 1509.7 | | | 6 |
| 1510 | | Silt (ML) Some Clay - Wood Piece at 90.7 feet - Grey - Moist | 88.5 | | | |
| | 90 | (Slimes??) | | | | |
| | | | 1507.0 | | | |
| | | Fine Sand (SP) Trace Silt - Grey to Black - Wet | 1506.2 | | | 47 |
| | | (Natural Soils) | 1505.8 | | | |
| 1505 | | Gravel (GP) Trace Coarse Sand - Grey and Brown - Wet | 92.3 | | | |
| | 95 | (Natural Soils) Clayey Fine to Medium Sand (SC) to Sandy Clay (CL) Trace to Some Gravel - Frequent Cobbles and Boulders - Brown - Moist | | | | 23 |

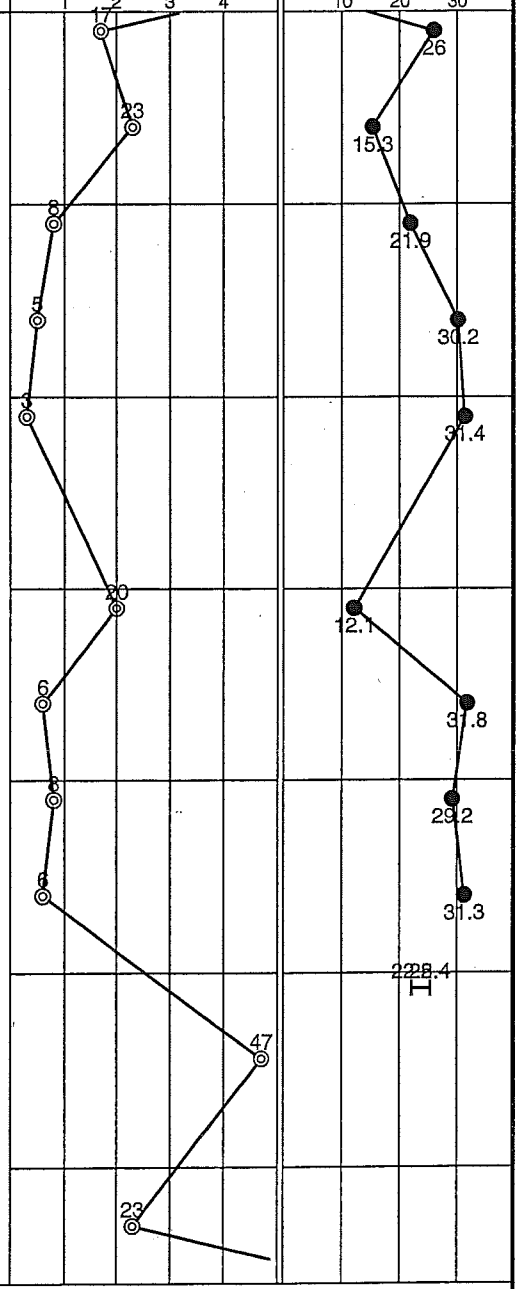
*Continued Next Page*

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
10 20 30 40

SHEAR STRENGTH, ksf
$Q_P$ × UC ▲ TV ✳
1 2 3 4

NATURAL DRY DENSITY (pcf) ★
105 115 125

Water Content, %
$W_P$ $W_N$ $W_L$
10 20 30




| | |
|---|---|
| Completion Depth: | 111.7 |
| Date Boring Started: | 9/27/99 |
| Date Boring Completed: | 10/4/99 |
| Logged By: | BARR |
| Drilling Contractor: | AET |
| Drilling Method: | HSA |

Remarks: Inclinometer installed at 111.7 feet. Tried to maintain a head of water or mud in the borehole during sampling.

SAMPLE TYPES

- Auger Cutting
- Split Spoon
- Shelby Tube
- Rock Core

WATER LEVELS

| | |
|---|---|
| While Drilling: | 60 |
| End of Drilling: | N/A |
| N/A hrs After Drilling: | N/A |

LOG_OF_BORING 2369528.GPJ BARRLOG.GDT 1/10/00

The stratification lines represent approximate boundaries. The transition may be gradual.

BARR
4700 W 77th Street
Minneapolis, MN 55435

# LOG OF BORING I1H-99



Project: Instrumentation Installation | Location: Hoyt Lakes, MN | Client: LTV Steel Mining Company

Barr Project Number: 23/69-528PBS

| Elevation, feet | Depth, feet | MATERIAL DESCRIPTION (ASTM D2488) | Graphic Log | Sample Type & Rec. | SPT, N value or RQD % |
|---|---|---|---|---|---|
| 1500 | 100 | (Natural Soils) Clayey Fine to Medium Sand (SC) to Sandy Clay (CL) Trace to Some Gravel - Frequent Cobbles and Boulders - Brown - Moist | | | 97 |
| | | (Natural Soils) | | | |
| 1495 | 105 | | | | |
| 1490 | | 1489.2 | | | |
| | 110 | Assumed Bedrock - No sample retrieved 109.0 | | | 50/ 0.3' |
| | | 1486.5 | | | |
| 1485 | | End of Boring - 111.7 feet 111.7 | | | |
| | 115 | | | | |
| 1480 | 120 | | | | |
| 1475 | 125 | | | | |
| 1470 | 130 | | | | |

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
10 20 30 40

SHEAR STRENGTH, ksf
$Q_P$ × UC ▲ TV ✳
1 2 3 4

NATURAL DRY DENSITY (pcf) ★
105 115 125

Water Content, %
$W_P$ $W_N$ $W_L$
10 20 30

97 >◎

50/0.3' >◎

| | |
|---|---|
| Completion Depth: | 111.7 |
| Date Boring Started: | 9/27/99 |
| Date Boring Completed: | 10/4/99 |
| Logged By: | BARR |
| Drilling Contractor: | AET |
| Drilling Method: | HSA |

Remarks: Inclinometer installed at 111.7 feet. Tried to maintain a head of water or mud in the borehole during sampling.

| SAMPLE TYPES | | WATER LEVELS | |
|---|---|---|---|
| Auger Cutting | Shelby Tube | While Drilling: | 60 |
| Split Spoon | Rock Core | End of Drilling: | N/A |
| | | N/A hrs After Drilling: | N/A |

The stratification lines represent approximate boundaries. The transition may be gradual.

LOG_OF_BORING 2369528.GPJ BARRLOG.GDT 1/10/00

Barr Engineering Company
4300 MarketPointe Drive Suite 200
Minneapolis, MN 55435
Telephone: 952-832-2600

# LOG OF BORING 2E_2018_IN_F1_INC



| | | |
|---|---|---|
| Project: 2018 Polymet Geotechnical Investigation | Location: Hoyt Lakes, MN | Client: Polymet |
| Barr Project Number: 23690862 | Surface Elevation: 1511.6 ft | Top of Casing Elevation: 1514.7 |

| STRATA DESCRIPTION | DEPTH, ft | SYMBOL | PIEZOMETER DETAILS | DEPTH, ft | | ELEVATION, ft |
|---|---|---|---|---|---|---|
| | | | | -3.2 | TPC | 1514.8 |
| | | | | -3.1 | TRC | 1514.7 |
| | | | | 0.0 | GS | 1511.6 |
| COARSE TAILINGS (SM): Fill; fine to medium grained; brown; moist. | 0 | | | | | |
| | 5 | | | | | |
| | 10 | | | | | |
| | 15 | | | | | |
| | 20 | | | | | |
| | 25 | | | | | |
| 1483.6 ft<br>SANDY LEAN CLAY (CL): Fill; dark gray; moist. | 30 | | | | | |
| 1483.4 ft<br>WELL GRADED GRAVEL WITH COBBLES (GW): Mine Rock Fill; coarse grained; dark gray to black; wet. | 35 | | | | | |
| | 40 | | | | | |
| 1476.6 ft<br>FIBRIC PEAT (PT): dark brown; moist to wet. | 45 | | | | | |
| 1463.6 ft<br>SANDY CLAY (CL): gray; moist. | 50 | | | | | |
| 1461.6 ft<br>WELL GRADED GRAVEL WITH COBBLES (GW): medium to coarse grained; brownish gray; moist; a little fine grained sand. | 55 | | | | | |
| | 60 | | | | | |
| 1451.6 ft<br>GRANITE; strong; gray to pinkish gray; slightly weathered; phaneritic; massive; | 65 | | | 66.4 | | 1445.2 |
| | | | | 68.0 | TD | 1443.6 |

## PIEZOMETER CONSTRUCTION DETAILS FOR INCLINOMETER WITH VIBRATING-WIRE PIEZOMETER

PROTECTIVE CASING
Diameter: **6 inches**
Type: **Steel**
Interval: **-3.2 to 3.8 ft**

RISER CASING
Diameter: **3.34 inches**
Type: **ABS Plastic**
Interval: **-3.1 ft to 66.4 ft**

GROUT
Type: **Cement grout**
Interval: **0 ft to 68 ft**

Vibrating Wire Tip
Diameter: **n/a**
Type: **n/a**
Serial No.: **n/a**

Remarks:

| | |
|---|---|
| Completion Depth: | 68.0 ft |
| Date Started: | 11/2/18 |
| Date Completed: | 11/5/18 |
| Logged By: | EBO |
| Drilling Contractor: | IDEA |
| Drilling Method: | Rotosonic |
| Datum: | NAD 83 Minnesota State Plane |
| Coordinates: | N 414,951.4 ft E 2,241,778.9 ft |

LEGEND

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS / BACKFILL

| | |
|---|---|
| TPC | TOP OF PROTECTIVE CASING |
| TRC | TOP OF RISER CASING |
| BPC | BASE PROTECTIVE CASING |
| GS | GROUND SURFACE |
| TVT | TOP VIBRATING-WIRE TIP |
| BVT | BOTTOM VIBRATING-WIRE TIP |
| TD | TOTAL DEPTH |

**WATER LEVELS(ft)**

At Time of Drilling
Dry

The stratification lines represent approximate boundaries. The transition may be gradual.

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Barr Engineering Company
4300 MarketPointe Drive Suite 200
Minneapolis, MN 55435
Telephone: 952-832-2600

# LOG OF BORING 2E_2018_IN_F1_INC



| Project: 2018 Polymet Geotechnical Investigation | Location: Hoyt Lakes, MN | Client: Polymet |
|---|---|---|
| Barr Project Number: 23690862 | Surface Elevation: 1511.6 ft | Top of Casing Elevation: 1514.7 |

| STRATA DESCRIPTION | DEPTH, ft | SYMBOL | PIEZOMETER DETAILS | DEPTH, ft | | ELEVATION, ft |
|---|---|---|---|---|---|---|
| very close to close fracture spacing.<br>1448.6 ft<br>GRANITE; strong to very strong; pink to whitish gray; fresh; phaneritic; massive; close to medium fracture spacing.<br>1443.6 ft<br>Bottom of Boring at 68.0 feet | | | | | | |

## PIEZOMETER CONSTRUCTION DETAILS FOR INCLINOMETER WITH VIBRATING-WIRE PIEZOMETER

PROTECTIVE CASING
Diameter: **6 inches**
Type: **Steel**
Interval: **-3.2 to 3.8 ft**

RISER CASING
Diameter: **3.34 inches**
Type: **ABS Plastic**
Interval: **-3.1 ft to 66.4 ft**

GROUT
Type: **Cement grout**
Interval: **0 ft to 68 ft**

Vibrating Wire Tip
Diameter: **n/a**
Type: **n/a**
Serial No.: **n/a**

Remarks:

| | |
|---|---|
| Completion Depth: | 68.0 ft |
| Date Started: | 11/2/18 |
| Date Completed: | 11/5/18 |
| Logged By: | EBO |
| Drilling Contractor: | IDEA |
| Drilling Method: | Rotosonic |
| Datum: | NAD 83 Minnesota State Plane |
| Coordinates: | N 414,951.4 ft E 2,241,778.9 ft |

LEGEND

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS / BACKFILL

| | |
|---|---|
| TPC | TOP OF PROTECTIVE CASING |
| TRC | TOP OF RISER CASING |
| BPC | BASE PROTECTIVE CASING |
| GS | GROUND SURFACE |
| TVT | TOP VIBRATING-WIRE TIP |
| BVT | BOTTOM VIBRATING-WIRE TIP |
| TD | TOTAL DEPTH |

**WATER LEVELS(ft)**

At Time of Drilling
Dry

The stratification lines represent approximate boundaries. The transition may be gradual.

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4300 MarketPointe Drive Suite 200
Minneapolis, MN 55435
Telephone: 952-832-2600

# LOG OF BORING 2E_2018_IN_F3_INC



| Project: 2018 Polymet Geotechnical Investigation | Location: Hoyt Lakes, MN | Client: Polymet |
|---|---|---|
| Barr Project Number: 23690862 | Surface Elevation: 1552.1 ft | Top of Casing Elevation: 1554.6 |

| STRATA DESCRIPTION | DEPTH, ft | SYMBOL | PIEZOMETER DETAILS | DEPTH, ft | | ELEVATION, ft |
|---|---|---|---|---|---|---|
| | | | | -2.7 | TPC | 1554.8 |
| | | | | -2.5 | TRC | 1554.6 |
| | | | | 0.0 | GS | 1552.1 |
| COARSE TAILINGS (SM): medium grained; gray; moist to wet. | 0 | | | | | |
| | 5 | | | | | |
| | 10 | | | | | |
| | 15 | | | | | |
| | 20 | | | | | |
| | 25 | | | | | |
| | 30 | | | | | |
| | 35 | | | | | |
| 1511.1 ft | 40 | | | | | |
| FINE TAILINGS (CH): gray; moist to wet; with silt. 1507.1 ft | 45 | | | | | |
| COARSE TAILINGS (SM): medium grained; gray; moist. | 50 | | | | | |
| 1495.1 ft | 55 | | | | | |
| FINE TAILINGS (ML): gray; moist to wet; trace clay. 1493.6 ft | 60 | | | | | |
| COARSE TAILINGS (SM): medium grained; gray; moist. 1482.1 ft | 65 | | | | | |
| | 70 | | | | | |

## PIEZOMETER CONSTRUCTION DETAILS FOR INCLINOMETER WITH VIBRATING-WIRE PIEZOMETER

PROTECTIVE CASING
Diameter: **6 inches**
Type: **Steel**
Interval: **-2.7 ft to 4.3 ft**

RISER CASING
Diameter: **3.34 inches**
Type: **ABS Plastic**
Interval: **-2.5 ft to 102.7 ft**

GROUT
Type: **Cement grout**
Interval: **0 ft to 104.3 ft**

Vibrating Wire Tip
Diameter: **n/a**
Type: **n/a**
Serial No.: **n/a**

Remarks:

| | |
|---|---|
| Completion Depth: | 105.5 ft |
| Date Started: | 10/31/18 |
| Date Completed: | 11/1/18 |
| Logged By: | EBO |
| Drilling Contractor: | IDEA |
| Drilling Method: | Rotosonic |
| Datum: | NAD 83 Minnesota State Plane |
| Coordinates: | N 414,816.2 ft E 2,241,770.3 ft |

LEGEND

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS / BACKFILL

| | |
|---|---|
| TPC | TOP OF PROTECTIVE CASING |
| TRC | TOP OF RISER CASING |
| BPC | BASE PROTECTIVE CASING |
| GS | GROUND SURFACE |
| TVT | TOP VIBRATING-WIRE TIP |
| BVT | BOTTOM VIBRATING-WIRE TIP |
| TD | TOTAL DEPTH |

**WATER LEVELS(ft)**

At Time of Drilling
Dry

The stratification lines represent approximate boundaries. The transition may be gradual.

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4300 MarketPointe Drive Suite 200
Minneapolis, MN 55435
Telephone: 952-832-2600

# LOG OF BORING 2E_2018_IN_F3_INC



| | | |
|---|---|---|
| Project: 2018 Polymet Geotechnical Investigation | Location: Hoyt Lakes, MN | Client: Polymet |
| Barr Project Number: 23690862 | Surface Elevation: 1552.1 ft | Top of Casing Elevation: 1554.6 |

| STRATA DESCRIPTION | DEPTH, ft | SYMBOL | PIEZOMETER DETAILS | DEPTH, ft | | ELEVATION, ft |
|---|---|---|---|---|---|---|
| 1476.1 ft<br>FINE TAILINGS (ML): gray; moist to wet; a little clay; pockets of fat clay. *(Continued)* | 75 | | | | | |
| | 80 | | | | | |
| HEMIC PEAT (PT): dark brown; moist; organics; wood fragments.<br>1465.1 ft | 85 | | | | | |
| WELL GRADED GRAVEL WITH COBBLES (GW): medium to coarse grained; gray to pinkish gray; moist.<br>1450.1 ft | 90 | | | | | |
| | 95 | | | | | |
| GRANITE; strong to very strong; pinkish gray; fresh; phaneritic; massive; close fracture spacing.<br>1446.6 ft | 100 | | | 102.7 | | 1449.4 |
| | | | | 104.3 | | 1447.8 |
| | 105 | | | 105.5 | TD | 1446.6 |
| Bottom of Boring at 105.5 feet | | | | | | |

## PIEZOMETER CONSTRUCTION DETAILS FOR INCLINOMETER WITH VIBRATING-WIRE PIEZOMETER

PROTECTIVE CASING
Diameter: **6 inches**
Type: **Steel**
Interval: **-2.7 ft to 4.3 ft**

RISER CASING
Diameter: **3.34 inches**
Type: **ABS Plastic**
Interval: **-2.5 ft to 102.7 ft**

GROUT
Type: **Cement grout**
Interval: **0 ft to 104.3 ft**

Vibrating Wire Tip
Diameter: **n/a**
Type: **n/a**
Serial No.: **n/a**

Remarks:

| | |
|---|---|
| Completion Depth: | 105.5 ft |
| Date Started: | 10/31/18 |
| Date Completed: | 11/1/18 |
| Logged By: | EBO |
| Drilling Contractor: | IDEA |
| Drilling Method: | Rotosonic |
| Datum: | NAD 83 Minnesota State Plane |
| Coordinates: | N 414,816.2 ft E 2,241,770.3 ft |

LEGEND

FILTER PACK
BENTONITE
CEMENT GROUT
CUTTINGS / BACKFILL

| | |
|---|---|
| TPC | TOP OF PROTECTIVE CASING |
| TRC | TOP OF RISER CASING |
| BPC | BASE PROTECTIVE CASING |
| GS | GROUND SURFACE |
| TVT | TOP VIBRATING-WIRE TIP |
| BVT | BOTTOM VIBRATING-WIRE TIP |
| TD | TOTAL DEPTH |

**WATER LEVELS(ft)**

At Time of Drilling
Dry

The stratification lines represent approximate boundaries. The transition may be gradual.

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Barr Engineering Company
4300 MarketPointe Drive Suite 200
Minneapolis, MN 55435
Telephone: 952-832-2600

# LOG OF BORING 2E_2018_IN_F4_INC



| Project: 2018 Polymet Geotechnical Investigation | Location: Hoyt Lakes, MN | Client: Polymet |
|---|---|---|
| Barr Project Number: 23690862 | Surface Elevation: 1583.1 ft | Top of Casing Elevation: 1585.9 |

| STRATA DESCRIPTION | DEPTH, ft | SYMBOL | PIEZOMETER DETAILS | DEPTH, ft | | ELEVATION, ft |
|---|---|---|---|---|---|---|
| | | | | -3.0 | TPC | 1586.1 |
| | | | | -2.8 | TRC | 1585.9 |
| | | | | 0.0 | GS | 1583.1 |
| COARSE TAILINGS (SM): medium grained; gray to dark gray; moist. | 0 | | | | | |
| | 5 | | | | | |
| | 10 | | | | | |
| | 15 | | | | | |
| | 20 | | | | | |
| | 25 | | | | | |
| | 30 | | | | | |
| | 35 | | | | | |
| | 40 | | | | | |
| | 45 | | | | | |
| | 50 | | | | | |
| | 55 | | | | | |
| | 60 | | | | | |
| | 65 | | | | | |
| 1515.1 ft | | | | | | |
| FINE TAILINGS (ML): gray; moist to wet; trave very fine grained sand. | 70 | | | | | |

## PIEZOMETER CONSTRUCTION DETAILS FOR INCLINOMETER WITH VIBRATING-WIRE PIEZOMETER

PROTECTIVE CASING
Diameter: **6 inches**
Type: **Steel**
Interval: **-3.0 ft to 4.0 ft**

RISER CASING
Diameter: **3.34 inches**
Type: **ABS Plastic**
Interval: **-2.8 ft to 118.6 ft**

GROUT
Type: **Cement grout**
Interval: **0 ft to 120 ft**

Vibrating Wire Tip
Diameter: **n/a**
Type: **n/a**
Serial No.: **n/a**

Remarks:

| | |
|---|---|
| Completion Depth: | 120.0 ft |
| Date Started: | 10/25/18 |
| Date Completed: | 10/30/18 |
| Logged By: | EBO |
| Drilling Contractor: | IDEA |
| Drilling Method: | Rotosonic |
| Datum: | NAD 83 Minnesota State Plane |
| Coordinates: | N 414,628.1 ft E 2,241,775.6 ft |

LEGEND

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS / BACKFILL

| | |
|---|---|
| TPC | TOP OF PROTECTIVE CASING |
| TRC | TOP OF RISER CASING |
| BPC | BASE PROTECTIVE CASING |
| GS | GROUND SURFACE |
| TVT | TOP VIBRATING-WIRE TIP |
| BVT | BOTTOM VIBRATING-WIRE TIP |
| TD | TOTAL DEPTH |

**WATER LEVELS(ft)**

At Time of Drilling
unable to estimate while drillingDry

The stratification lines represent approximate boundaries. The transition may be gradual.

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Barr Engineering Company
4300 MarketPointe Drive Suite 200
Minneapolis, MN 55435
Telephone: 952-832-2600

# LOG OF BORING 2E_2018_IN_F4_INC



| | | |
|---|---|---|
| Project: 2018 Polymet Geotechnical Investigation | Location: Hoyt Lakes, MN | Client: Polymet |
| Barr Project Number: 23690862 | Surface Elevation: 1583.1 ft | Top of Casing Elevation: 1585.9 |

| STRATA DESCRIPTION | DEPTH, ft | SYMBOL | PIEZOMETER DETAILS | DEPTH, ft | | ELEVATION, ft |
|---|---|---|---|---|---|---|
| 1505.1 ft | 75 | | | | | |
| FINE TAILINGS (CH): gray to brownish gray; moist to wet; trace silt. | 80 | | | | | |
| 1496.6 ft | 85 | | | | | |
| FINE TAILINGS (ML): gray; moist. | 90 | | | | | |
| | 95 | | | | | |
| 1483.1 ft | 100 | | | | | |
| LEAN CLAY WITH SILT (CL): gray; moist to wet; wood fragments. 1481.1 ft | 105 | | | | | |
| HEMIC PEAT (PT): dark brownish gray; moist; organics; wood fragments. | 110 | | | | | |
| 1466.1 ft | 115 | | | | | |
| GRANITE; strong to very strong; pinkish gray; fresh; phaneritic; massive; medium fracture spacing. 1463.1 ft | 120 | | | 118.4 | | 1464.7 |
| | | | | 120.0 | TD | 1463.1 |
| Bottom of Boring at 120.0 feet | | | | | | |

## PIEZOMETER CONSTRUCTION DETAILS FOR INCLINOMETER WITH VIBRATING-WIRE PIEZOMETER

PROTECTIVE CASING
Diameter: **6 inches**
Type: **Steel**
Interval: **-3.0 ft to 4.0 ft**

RISER CASING
Diameter: **3.34 inches**
Type: **ABS Plastic**
Interval: **-2.8 ft to 118.6 ft**

GROUT
Type: **Cement grout**
Interval: **0 ft to 120 ft**

Vibrating Wire Tip
Diameter: **n/a**
Type: **n/a**
Serial No.: **n/a**

Remarks:

| | |
|---|---|
| Completion Depth: | 120.0 ft |
| Date Started: | 10/25/18 |
| Date Completed: | 10/30/18 |
| Logged By: | EBO |
| Drilling Contractor: | IDEA |
| Drilling Method: | Rotosonic |
| Datum: | NAD 83 Minnesota State Plane |
| Coordinates: | N 414,628.1 ft E 2,241,775.6 ft |

LEGEND

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS / BACKFILL

| | |
|---|---|
| TPC | TOP OF PROTECTIVE CASING |
| TRC | TOP OF RISER CASING |
| BPC | BASE PROTECTIVE CASING |
| GS | GROUND SURFACE |
| TVT | TOP VIBRATING-WIRE TIP |
| BVT | BOTTOM VIBRATING-WIRE TIP |
| TD | TOTAL DEPTH |

**WATER LEVELS(ft)**

At Time of Drilling
unable to estimate while drillingDry

The stratification lines represent approximate boundaries. The transition may be gradual.

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# Appendix E
# 2023 Vibrating Wire Installation Data

# Appendix E: 2023 Vibrating Wire Installation Data

| Associated Borehole | Final Instrument Name | Horizontal Coordinate System | Vertical Coordinate System | MN State Plane Northing, NAD83, US Survey Feet | MN State Plane Easting, NAD83, US Survey Feet | GSE (Report) | TOC (Report) | Stick-Up | Instrument Type | Tip Depth BTOC | Tip Depth BGSE | Tip Elevation | VW Serial Number | Vibrating Wire Type | Installation Date | GeoUnit | Comment | Constant4_A (kPa/digit$^2$) | Constant4_B (kPa/digit) | Constant4_C (kPa) | Constant4_K (kPa/$^\circ$C) | Constant4_To ($^\circ$C) | Field Calibration Zero-Pressure (digit) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH-24-23 | 2E-VW308+05-R702 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,334.25 | 2,864,920.97 | 1564.80 | 1566.10 | 1.30 | VW | 40.68 | 39.38 | 1525.42 | VW2260746 | Geokon (Model Number: 4500S-700 kPa) | 6/19/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/18/2023 9:00M 9192.3 B-Units, 19.4C | -3.6310E-07 | -0.1602 | 1503.3 | -0.1254 | 19.40 | 9192.3 |
| BH-24-23 | 2E-VW308+05-R702 (M) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,334.25 | 2,864,920.97 | 1564.80 | 1566.10 | 1.30 | VW | 59.82 | 58.52 | 1506.28 | VW2260749 | Geokon (Model Number: 4500S-700 kPa) | 6/19/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/18/2023 9:15AM 9112.8 B-Units, 19.3C | -1.1240E-07 | -0.1611 | 1477.4 | -0.08892 | 19.30 | 9112.8 |
| BH-24-23 | 2E-VW308+05-R702 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,334.25 | 2,864,920.97 | 1564.80 | 1566.10 | 1.30 | VW | 69.79 | 68.49 | 1496.31 | VW2260750 | Geokon (Model Number: 4500S-700 kPa) | 6/19/2023 | Glacial Till | Zero Pressure Calibration 6/18/2023 8:50AM 9290.1 B-Units, 18.8C | -2.4560E-07 | -0.1641 | 1545.7 | -0.1032 | 18.80 | 9290.1 |
| BH-25-23 | 2E-VW308+30-R356 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,680.09 | 2,864,950.10 | 1580.60 | 1583.20 | 2.60 | VW | 73.46 | 70.86 | 1509.74 | VW2260732 | Geokon (Model Number: 4500S-700 kPa) | 6/13/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/13/2023 8:45AM 8794.7 B-Units, 20.0C | -2.9000E-07 | -0.1556 | 1390.9 | -0.1227 | 20.00 | 8794.7 |
| BH-25-23 | 2E-VW308+30-R356 (M) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,680.09 | 2,864,950.10 | 1580.60 | 1583.20 | 2.60 | VW | 83.33 | 80.73 | 1499.87 | VW2260731 | Geokon (Model Number: 4500S-700 kPa) | 6/13/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/12/2023 1:30PM 8744.6 B-Units, 20.2C | -2.1480E-07 | -0.1653 | 1461.9 | -0.06625 | 20.20 | 8744.6 |
| BH-25-23 | 2E-VW308+30-R356 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,680.09 | 2,864,950.10 | 1580.60 | 1583.20 | 2.60 | VW | 94.30 | 91.70 | 1488.90 | VW2255407 | Geokon (Model Number: 4500S-700 kPa) | 6/13/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/12/2023 2:30PM 9227.0 B-Units, 22.9C | -2.7870E-07 | -0.1613 | 1512.0 | 0.1649 | 22.90 | 9227.0 |
| FVT-27-23 | 2E-VW311+50-L170 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,202.60 | 2,865,273.04 | 1485.60 | 1488.30 | 2.70 | VW | 12.00 | 9.30 | 1476.30 | VW2260739 | Geokon (Model Number: 4500S-700 kPa) | 8/3/2023 | Peat | Zero Pressure Calibration 8/3/2023 9:05AM 9025.6 B-Units, 18.7C | -2.7060E-07 | -0.1629 | 1492.3 | -0.09342 | 18.70 | 9025.6 |
| FVT-27-23 | 2E-VW311+50-L170 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,202.60 | 2,865,273.04 | 1485.60 | 1488.30 | 2.70 | VW | 19.90 | 17.20 | 1468.40 | VW2260748 | Geokon (Model Number: 4500S-700 kPa) | 8/3/2023 | Native Silt | Zero Pressure Calibration 8/3/2023 9:05AM 8996.5 B-Units, 18.5C | -2.0630E-07 | -0.1598 | 1454.3 | -0.1159 | 18.50 | 8996.5 |
| BH-28-23 | 2E-VW318+30-R677 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,347.82 | 2,865,946.30 | 1561.60 | 1563.90 | 2.30 | VW | 46.78 | 44.48 | 1517.12 | VW2260741 | Geokon (Model Number: 4500S-700 kPa) | 6/21/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/21/2023 3:00PM 9166.7 B-Units, 32.4C | -3.3150E-07 | -0.1547 | 1445.9 | -0.1029 | 32.40 | 9166.7 |
| BH-28-23 | 2E-VW318+30-R677 (M) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,347.82 | 2,865,946.30 | 1561.60 | 1563.90 | 2.30 | VW | 62.72 | 60.42 | 1501.18 | VW2255411 | Geokon (Model Number: 4500S-700 kPa) | 6/21/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/21/2023 3:00PM 9170.7 B-Units, 29.2C | -5.9840E-08 | -0.1652 | 1520.0 | -0.01167 | 29.20 | 9170.7 |
| BH-28-23 | 2E-VW318+30-R677 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,347.82 | 2,865,946.30 | 1561.60 | 1563.90 | 2.30 | VW | 92.63 | 90.33 | 1471.27 | VW2260725 | Geokon (Model Number: 4500S-700 kPa) | 6/21/2023 | Glacial Till | Zero Pressure Calibration 6/21/2023 3:00PM 8641.6 B-Units, 28.1C | -3.8800E-07 | -0.1619 | 1428.0 | -0.07999 | 28.10 | 8641.6 |
| BH-29-23 | 2E-VW318+25-R341 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,683.88 | 2,865,945.66 | 1580.40 | 1582.20 | 1.80 | VW | 71.87 | 70.07 | 1510.33 | VW2260737 | Geokon (Model Number: 4500S-700 kPa) | 7/10/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 7/09/2023 2:35PM 9174.9 B-Units, 24.9C | -1.7320E-07 | -0.1621 | 1501.8 | -0.05214 | 24.90 | 9174.9 |
| BH-29-23 | 2E-VW318+25-R341 (MT) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,683.88 | 2,865,945.66 | 1580.40 | 1582.20 | 1.80 | VW | 91.83 | 90.03 | 1490.37 | VW2260721 | Geokon (Model Number: 4500S-700 kPa) | 7/10/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 7/10/2023 11:25AM 9070.5 B-Units, 16.5C | -1.2080E-08 | -0.1642 | 1490.4 | -0.1007 | 16.50 | 9070.5 |
| BH-29-23 | 2E-VW318+25-R341 (MB) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,683.88 | 2,865,945.66 | 1580.40 | 1582.20 | 1.80 | VW | 103.82 | 102.02 | 1478.38 | VW2260728 | Geokon (Model Number: 4500S-700 kPa) | 7/10/2023 | Peat | Zero Pressure Calibration 7/09/2023 2:55PM 8785.4 B-Units, 25.3C | -4.2330E-07 | -0.1566 | 1408.5 | -0.07468 | 25.30 | 8785.4 |
| BH-29-23 | 2E-VW318+25-R341 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,683.88 | 2,865,945.66 | 1580.40 | 1582.20 | 1.80 | VW | 116.81 | 115.01 | 1465.39 | VW2260729 | Geokon (Model Number: 4500S-700 kPa) | 7/10/2023 | Glacial Till | Zero Pressure Calibration 7/09/2023 4:30PM 8912.4 B-Units, 26.9C | -2.6440E-07 | -0.1632 | 1475.5 | -0.115 | 26.90 | 8912.4 |
| BH-31A-23 | 2E-VW320+65-L148 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,169.96 | 2,866,194.73 | 1486.10 | 1489.80 | 3.70 | VW | 18.19 | 14.49 | 1471.61 | VW2260743 | Geokon (Model Number: 4500S-700 kPa) | 8/10/2023 | Peat | Zero Pressure Calibration 8/09/2023 1:00PM 9222.5 B-Units, 23.9C | -3.3450E-07 | -0.1609 | 1512.4 | -0.05563 | 23.90 | 9222.5 |
| BH-31A-23 | 2E-VW320+65-L148 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,169.96 | 2,866,194.73 | 1486.10 | 1489.80 | 3.70 | VW | 28.91 | 25.21 | 1460.89 | VW2260753 | Geokon (Model Number: 4500S-700 kPa) | 8/10/2023 | Glacial Till | Zero Pressure Calibration 8/09/2023 1:00PM 9400.8 B-Units, 23.9C | -1.5570E-07 | -0.1579 | 1498.1 | -0.102 | 23.90 | 9400.8 |
| BH-40-23 | 2E-VW356+50-R366 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,625.26 | 2,869,775.96 | 1576.60 | 1580.00 | 3.40 | VW | 73.80 | 70.40 | 1506.20 | VW2260747 | Geokon (Model Number: 4500S-700 kPa) | 7/6/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 7/06/2023 9:50AM 8947.5 B-Units, 15.1C | -1.4680E-07 | -0.1632 | 1472.0 | -0.1436 | 15.10 | 8947.5 |
| BH-40-23 | 2E-VW356+50-R366 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 742,625.26 | 2,869,775.96 | 1576.60 | 1580.00 | 3.40 | VW | 85.30 | 81.90 | 1494.70 | VW2260727 | Geokon (Model Number: 4500S-700 kPa) | 7/6/2023 | Glacial Till | Zero Pressure Calibration 7/06/2023 10:55AM 8712.5 B-Units, 16.1C | -1.1600E-07 | -0.167 | 1463.8 | -0.08688 | 16.10 | 8712.5 |
| BH-43-23 | 1E2E-VW13+25-R138 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.20 | 2,865,912.63 | 1667.90 | 1670.00 | 2.10 | VW | 73.56 | 71.46 | 1596.44 | VW2260733 | Geokon (Model Number: 4500S-700 kPa) | 6/7/2023 | Coarse Tailings | Zero Pressure Calibration 6/07/2023 3:40PM 9117.2 B-Units, 23.0C | -3.3060E-07 | -0.1582 | 1469.8 | -0.0813 | 23.00 | 9117.2 |
| BH-43-23 | 1E2E-VW13+25-R138 (M) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.20 | 2,865,912.63 | 1667.90 | 1670.00 | 2.10 | VW | 115.42 | 113.32 | 1554.58 | VW2254464 | Geokon (Model Number: 4500S-700 kPa) | 6/7/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/07/2023 1:00PM 9081.1 B-Units, 23.5C | -4.3420E-07 | -0.1651 | 1535.1 | 0.2043 | 23.50 | 9081.1 |
| BH-43-23 | 1E2E-VW13+25-R138 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.20 | 2,865,912.63 | 1667.90 | 1670.00 | 2.10 | VW | 131.39 | 129.29 | 1538.61 | VW2273675 | Geokon (Model Number: 4500S-1 MPa) | 6/7/2023 | Glacial Till | Zero Pressure Calibration 6/07/2023 3:20PM 8034.0 B-Units, 24.0C | -1.2840E-06 | -0.2729 | 2275.4 | 0.04007 | 24.00 | 8034.0 |
| BH-44-23 | 1E2E-VW13+45-L216 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,873.15 | 2,865,935.90 | 1613.90 | 1616.40 | 2.50 | VW | 57.82 | 55.32 | 1558.58 | VW2255410 | Geokon (Model Number: 4500S-700 kPa) | 5/24/2023 | Coarse Tailings | Zero Pressure Calibration 5/23/2023 12:50PM 8322.2 B-Units, 19.5C | -4.8040E-07 | -0.1579 | 1347.3 | 0.131 | 19.50 | 8322.2 |
| BH-44-23 | 1E2E-VW13+45-L216 (M) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,873.15 | 2,865,935.90 | 1613.90 | 1616.40 | 2.50 | VW | 77.76 | 75.26 | 1538.64 | VW2255412 | Geokon (Model Number: 4500S-700 kPa) | 5/24/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 5/23/2023 12:50PM 9098.2 B-Units, 18.7C | -4.5160E-07 | -0.161 | 1502.2 | 0.1102 | 18.70 | 9098.2 |
| BH-44-23 | 1E2E-VW13+45-L216 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,873.15 | 2,865,935.90 | 1613.90 | 1616.40 | 2.50 | VW | 85.76 | 83.26 | 1530.64 | VW2255397 | Geokon (Model Number: 4500S-700 kPa) | 5/24/2023 | Glacial Till | Zero Pressure Calibration 5/23/2023 12:30PM 8779.8 B-Units, 17.9C | -4.4820E-07 | -0.162 | 1456.9 | 0.04929 | 17.90 | 8779.8 |
| BH-47-23 | 1E2E-VW28+50-R122 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.82 | 2,867,436.87 | 1666.80 | 1669.80 | 3.00 | VW | 57.18 | 54.18 | 1612.62 | VW2260734 | Geokon (Model Number: 4500S-700 kPa) | 6/4/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/04/2023 9:10AM 9093.8 B-Units, 24.2C | -1.4690E-07 | -0.1663 | 1524.4 | -0.1247 | 24.20 | 9093.8 |
| BH-47-23 | 1E2E-VW28+50-R122 (MT) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.82 | 2,867,436.87 | 1666.80 | 1669.80 | 3.00 | VW | 75.08 | 72.08 | 1594.72 | VW2260735 | Geokon (Model Number: 4500S-700 kPa) | 6/4/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/04/2023 9:20AM 9233.3 B-Units, 24.3C | 3.2750E-08 | -0.1672 | 1541.0 | -0.1101 | 24.30 | 9233.3 |
| BH-47-23 | 1E2E-VW28+50-R122 (MB) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.82 | 2,867,436.87 | 1666.80 | 1669.80 | 3.00 | VW | 88.05 | 85.05 | 1581.75 | VW2255405 | Geokon (Model Number: 4500S-700 kPa) | 6/4/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/04/2023 9:30AM 9086.2 B-Units, 24.7C | -3.9170E-07 | -0.1603 | 1488.9 | 0.09523 | 24.70 | 9086.2 |
| BH-47-23 | 1E2E-VW28+50-R122 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,519.82 | 2,867,436.87 | 1666.80 | 1669.80 | 3.00 | VW | 100.98 | 97.98 | 1568.82 | VW2255406 | Geokon (Model Number: 4500S-700 kPa) | 6/4/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 6/04/2023 9:40AM 9145.8 B-Units, 25.3C | -3.7350E-07 | -0.1668 | 1556.8 | 0.005672 | 25.30 | 9145.8 |
| BH-48-23 | 1E2E-VW28+20-L210 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,852.23 | 2,867,411.58 | 1611.00 | 1613.40 | 2.40 | VW | 48.85 | 46.45 | 1564.55 | VW2255413 | Geokon (Model Number: 4500S-700 kPa) | 5/20/2023 | Fine Tailings / Slimes | Zero Pressure Calibration 5/20/2023 9:20AM 9072.2 B-Units, 11.8C | -4.3930E-07 | -0.164 | 1524.0 | 0.1273 | 11.80 | 9072.2 |
| BH-48-23 | 1E2E-VW28+20-L210 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 737,852.23 | 2,867,411.58 | 1611.00 | 1613.40 | 2.40 | VW | 56.85 | 54.45 | 1556.55 | VW2255414 | Geokon (Model Number: 4500S-700 kPa) | 5/20/2023 | Glacial Till | Zero Pressure Calibration 5/20/2023 9:30AM 9000.2 B-Units, 12.1C | -3.7590E-07 | -0.1613 | 1482.2 | 0.1521 | 12.10 | 9000.2 |
| BH-102-23 | 2E-VW311+45-L472 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,504.26 | 2,865,276.75 | 1485.00 | 1488.90 | 3.90 | VW | 22.71 | 18.81 | 1466.19 | VW2260738 | Geokon (Model Number: 4500S-700 kPa) | 7/23/2023 | Glacial Till | Zero Pressure Calibration 7/23/2023 9:00AM 9159.6 B-Units, 16.9C | -3.4440E-07 | -0.1598 | 1492.6 | -0.1031 | 16.90 | 9159.6 |
| BH-102-23 | 2E-VW311+45-L472 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,504.26 | 2,865,276.75 | 1485.00 | 1488.90 | 3.90 | VW | 30.68 | 26.78 | 1458.22 | VW2260740 | Geokon (Model Number: 4500S-700 kPa) | 7/23/2023 | Bedrock | Zero Pressure Calibration 7/23/2023 9:00AM 8771.1 B-Units, 16.9C | -3.2520E-07 | -0.1529 | 1366.1 | -0.06506 | 16.90 | 8771.1 |
| BH-103-23 | 2E-VW320+60-L444 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,466.22 | 2,866,191.11 | 1484.90 | 1488.80 | 3.90 | VW | 33.43 | 29.53 | 1455.37 | VW2260742 | Geokon (Model Number: 4500S-700 kPa) | 8/8/2023 | Glacial Till | Zero Pressure Calibration 8/8/2023 9:00AM 9231.9 B-Units, 21.4C | 1.8160E-07 | -0.1664 | 1520.7 | -0.1008 | 21.40 | 9231.9 |
| BH-103-23 | 2E-VW320+60-L444 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,466.22 | 2,866,191.11 | 1484.90 | 1488.80 | 3.90 | VW | 48.40 | 44.50 | 1440.40 | VW2260752 | Geokon (Model Number: 4500S-700 kPa) | 8/8/2023 | Bedrock | Zero Pressure Calibration 8/8/2023 9:00AM 9027.0 B-Units, 20.8C | -1.8350E-07 | -0.1651 | 1505.3 | -0.07834 | 20.80 | 9027.0 |
| BH-104-23 | 2E-VW332+20-L180 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,188.89 | 2,867,350.41 | 1494.00 | 1497.60 | 3.60 | VW | 18.59 | 14.99 | 1479.01 | VW2260730 | Geokon (Model Number: 4500S-700 kPa) | 9/2/2023 | Bedrock | Zero Pressure Calibration 9/2/2023 8:55AM 9288.8 B-Units, 18.3C | -3.0560E-07 | -0.16 | 1512.6 | -0.127 | 18.30 | 9288.8 |
| BH-104-23 | 2E-VW332+20-L180 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,188.89 | 2,867,350.41 | 1494.00 | 1497.60 | 3.60 | VW | 25.00 | 21.40 | 1472.60 | VW2260745 | Geokon (Model Number: 4500S-700 kPa) | 9/2/2023 | Bedrock | Zero Pressure Calibration 9/2/2023 8:30AM 9125.4 B-Units, 18.3C | -3.3420E-07 | -0.1587 | 1476.0 | -0.1018 | 18.30 | 9125.4 |
| BH-105-23 | 2E-VW347+70-L134 (T) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,128.68 | 2,868,898.15 | 1517.80 | 1520.80 | 3.00 | VW | 9.87 | 6.87 | 1510.93 | VW2260744 | Geokon (Model Number: 4500S-700 kPa) | 8/14/2023 | Glacial Till | Zero Pressure Calibration 8/14/2023 2:00PM 9192.8 B-Units, 24.9C | -4.0550E-07 | -0.1592 | 1497.8 | -0.1152 | 24.90 | 9192.8 |
| BH-105-23 | 2E-VW347+70-L134 (B) | MN SP North (NAD83, US Survey Feet) | NAVD88, GeoID12A, US Survey Feet | 743,128.68 | 2,868,898.15 | 1517.80 | 1520.80 | 3.00 | VW | 25.84 | 22.84 | 1494.96 | VW2260756 | Geokon (Model Number: 4500S-700 kPa) | 8/14/2023 | Bedrock | Zero Pressure Calibration 8/14/2023 2:00PM 8340.4 B-Units, 24.9C | -3.2610E-07 | -0.1681 | 1424.7 | -0.04363 | 24.90 | 8340.4 |

# Appendix F
# BARR 2022 Monitoring Recommendation Letter

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BARR

# Memorandum

**To:** Christie Kearney
**From:** Bethany Kelly, PE, Tom Radue, PE, and Kurt Schimpke, PE
**Subject:** 2022 Instrumentation Monitoring Recommendations
**Date:** April 19, 2022
**Project:** NorthMet Tailings Basin - 2022 Dam Safety and Instrumentation Monitoring Program
**c:** Northeast Technical Services, Inc.

This memorandum summarizes Barr Engineering Co.'s (Barr's) instrumentation monitoring recommendations for the NorthMet Tailings Basin 2022 monitoring program. We anticipate that this memorandum will be shared with Poly Met Mining, Inc.'s (PolyMet's) instrumentation monitoring consultant, Northeast Technical Services, Inc. (NTS). Recommendations include instrumentation monitoring frequency and data collection practices for 2022. Additional recommendations would apply if dam construction is anticipated in 2023.

## 1 Background

During operations, LTVSMC monitored inclinometers, piezometers, settlement plates, and weirs on to observe changes in piezometric head conditions and potential movement of the tailings basin dams. Presently, the instrumentation is being read by Northeast Technical Services, Inc. (NTS) of Virginia, Minnesota. At a minimum, the piezometers and inclinometers are read twice annually (typically in the spring and fall), though select instruments are read more frequently. The monitored instrumentation currently includes 21 standpipe piezometers, 10 pneumatic piezometers, 26 vibrating wire piezometer tips, and 11 inclinometers.

Monitoring locations are shown on Figure 1. A summary of the active instrumentation from the 2021 annual report is provided in Attachment 1. The instruments have generally been named to reflect both the year of installation and the cross-section along which they are located. More recently installed instrumentation also includes the cell identification and a designation of instrumentation type (i.e., inclinometer, stand-pipe piezometer, or vibrating wire piezometer).

## 2 2022 Recommendations

Barr currently reviews instrumentation data provided by NTS for PolyMet as part of the annual dam safety and instrumentation monitoring program. Several recommendations in this memorandum will help improve data quality, while others are best practices to help improve the efficiency and/or ease of reviewing instrumentation monitoring data. These recommendations are summarized in Table 1, and

recommendations for inclinometers and piezometers monitoring frequencies are in Table 2 and Table 3, respectively.

Additionally, we recommend monthly data collection from all active piezometers, beginning at least one year prior to changing site conditions (i.e., construction or operations), if possible, to develop a thorough baseline. Instruments providing suspect data, as discussed in the annual report, no longer need to be monitored.

**Table 1 2022 Instrumentation and Monitoring Recommendations for NTS**

| No. | Category | Details | Goal | Affected Instrument(s) | Timing | Reporting |
|---|---|---|---|---|---|---|
| 1 | Inclinometer Maintenance | Insulate around the inclinometer protective casing to moderate temperature fluctuations. This could be done using reflective radiant insulation, such as the product linked below. If the insulation works well and data quality is improved, consideration can be given to future use of a more permanent solution, such as mounding coarse tailings around the protective casing.<br>https://www.acehardware.com/departments/building-supplies/insulation-and-house-wrap/insulation/54181?store=07754&gclid=EAIaIQobChMIkPeDscTw9gIVTW1vBB0tBA7DEAQYBSABEgJPGvD_BwE&gclsrc=aw.ds | Improve data quality | Inclinometer K-2 | Spring of 2022 | Before and after photographs for annual dam safety report |
| 2 | Inclinometer Maintenance | The orientation of inclinometer should be reviewed to confirm current understanding.<br>The A-axis is typically the slots aligned in cross-section on the dam to review for dam displacement in the primary direction where movement would be expected, while the B-axis is typically reviewed with slots aligned parallel to the dam crest, to review for secondary movement.<br>Confirmation of the A- and B-axes orientation will improve our understanding of the instruments and review of their data. This can be accomplished with approximate (low-resolution) measurements using a manual or digital compass, such as a cell phone app. | Validate data analysis, improve data interpretation | All inclinometers | Spring of 2022 | Documentation in NTS's annual data report |
| 3 | Data Alignment | Instrument names in NTS's database should be updated to align with names in the Barr-supplied data spreadsheet. Additionally, the NTS instrumentation map should be reviewed to verify that only active instruments are shown and updated as needed on Figure 1 and in Attachment 1, working with Barr to align the proper naming, as needed. | Improve data quality | All instruments | This is currently being addressed while NTS and Barr test the new spreadsheet for improved data sharing. | Documentation in NTS's measurement spreadsheet and annual data report |
| 4 | Data Review | Inclinometer data should be plotted as time-displacement series at select depths in inclinometers to review the rate of movement in select inclinometers at specific depths, as described below:<br>**Inclinometer / Depth (ft) / Elevation (ft)**<br>DH96-18: 19.00 / 1548.0; 83.00 / 1484.0; 99.00 / 1468.0<br>DH96-10: 40.40 / 1569.9; 96.40 / 1513.9<br>2E_18_IN_F1: 19.90 / 1491.7; 37.90 / 1473.7<br>DH96-28: 49.60 / 1503.9<br>2E_2016_IN_K2: 75.00 / 1555.0 | Improve data interpretation | All inclinometers | Q2 2022 | Documentation in NTS's annual data report |
| 5 | Site Data | Update the monitoring frequency of inclinometers (see Table 2) and piezometers (see Table 3). | Update monitoring frequency – to confirm pre-construction baseline conditions | All active instruments, see the following tables | April 2022 | Readings spreadsheet and documentation in NTS's annual data report |
| 6 | Vibrating Wires Maintenance | Currently, cables to the vibrating wires (VW) are coiled up and lay on the ground or are hung up on a nail on a post, where they are exposed to the elements and wildlife. While cables can be easily cut down to expose fresh wire, the cables could be better protected if boxes to store the cables were purchased or fabricated and mounted on posts. | Limit future maintenance on VW cables | All manually read VW piezometers | 2022 | None needed |

## Table 2 Inclinometer Monitoring Frequency for 2022

| Inclinometer | Section | Recommended Frequency |
|---|---|---|
| DH96-18 | A | 2x per year during non-freezing conditions |
| DH96-10 | E | 3x per year during non-freezing conditions |
| DH96-28 | H | |
| K-2 | K | |
| 2E_18_IN_F-1 | F | Monthly when access is safe |
| 2E_18_IN_F-3 | F | |
| 2E_18_IN_F-4 | F | |

### Table 3 Standpipe and VW Piezometer Monitoring Frequency for 2022

| Piezometer | Section | Recommended Frequency[1] |
|---|---|---|
| D-1 | D | Monthly when access is safe |
| D-2 | D | |
| D-4 | D | |
| F-2 | F | |
| G-2 | G | |
| 2E_2018_PZ_SeepMid | F/G | |
| 2E_2018_PZ_SeepLeft | J/H | |
| Vibrating wire piezometers (manual-read, 17 total) | F, G | |
| A-1 | A | 2x per year during non-freezing conditions |
| A-3 | A | |
| A-9 | A | |
| B-2 | B | |
| P1B1-99 | B | |
| P1B-99 | B | |
| P2HA-99 | H | |
| P2HB-99 | H | |
| P1H-99 | H | |
| P3H1-99 | H | |
| P2H1-99 | H | |
| P1H1-99 | H | |
| P3H-99 | H | |
| Vibrating wire piezometers (automated, 9 total) | K | Not applicable – remotely documented daily |

## 3 Certification

I hereby certify that this 2022 Dam Safety and Instrumentation Monitoring Program memorandum was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Bethany Kelly

Bethany Kelly
PE #: 48292

4/19/2022
Date

## 4 References

Barr, 2022. Tailings Basin Annual Report and Dam Safety Inspection and Instrumentation Monitoring Findings for Year 2021, Prepared for Poly Met Mining, Inc., January, 2022.

NTS, 2021. 2021 Inclinometer and Piezometer Data and Instrumentation Review, Prepared for Poly Met Mining, Inc. NTS Project 7157B. December, 2021.

Image Source: St. Louis County (2016)

Barr Foster; ArcGIS 10.8.1; 2022-01-26 15:26; File: I:\Client\PolyMet_Mining\Work_Orders\Mine_Engineering_Assistance\Maps\Reports\Dam_Safety_Inspections\20211202\20220112_AnnualReport\Figure 6 Active Instrumentation Locations.mxd User: amr2

- Groundwater Monitoring Wells
- Inclinometer
- Pneumatic Piezometer
- Standpipe Piezometer
- Vibrating Wire Piezometer

0 1,500 3,000
Feet

FIGURE 1
2022 ACTIVE INSTRUMENTATION LOCATIONS
NorthMet Project
Poly Met Mining, Inc.
Hoyt Lakes, Minnesota

# Attachment 1

## 2021 Active Instrumentation Summary

## (Barr, 2022)

## Attachment 1 - 2022 Active Instrumentation Summary

| Instrument ID | Dam | Cross-Section | Location | Type[1] | VW Identifier | Condition / Recommendation | Ground Surface Elevation (feet) | Top of Casing Elevation (feet) | Boring Total Depth (feet) | Tip Depth (ft) | Tip Elevation (feet) | Lithology at Tip | Reading Frequency[2] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D-1 | Splitter | D | Toe | SP | - | Suspect[4] | 1612.0 | 1613.3 | 83.3 | NR | NR | Fine to Medium Sand | Monthly |
| D-2 | Splitter | D | Crest | SP | - | Functional[4] | 1674.2 | 1677.0 | NR | NR | NR | NR | Monthly |
| D-4 | Splitter | D | Beach | SP | - | Functional[4] | 1656.0 | 1657.7 | 93.5 | 93.5 | 1562.5 | Fine to Coarse Sand | Monthly |
| 2E_2016_PZ_K1 (K1) | Splitter | K | Toe | VW | Top | Non-Functional | 1602.6 | - | 29.5 | 12.4 | 1590.2 | Coarse Tailings | Automated |
| | | | | VW | Bottom | Non-Functional | | - | | 25.4 | 1577.2 | Rock Starter Dam | Automated |
| 2E_2016_PZ_K2 (K2) | Splitter | K | Mid-slope | VW | Top | Functional | 1629.7 | - | 97.0 | 30.9 | 1598.8 | Coarse Tailings | Automated |
| | | | | VW | Middle | Functional | | - | | 58.9 | 1570.8 | Coarse Tailings | Automated |
| | | | | VW | Bottom | Functional | | - | | 70.9 | 1558.8 | Native Glacial Till | Automated |
| | | | | VW | Bedrock | Functional | 1629.4 | - | | 80.6 | 1548.8 | Granite | Automated |
| 2E_2016_IN_K2 (K2) | Splitter | K | Mid-slope | INC | - | Functional | 1629.7 | 1632.5 | NR | NR | NR | NR | 3x per year |
| 2E_2016_PZ_K3 (K3) | Splitter | K | Crest | VW | Top | Non-Functional | 1675.2 | - | 112.5 | 69.9 | 1605.3 | Slimes | Automated |
| | | | | VW | Middle | Functional | | - | | 99.9 | 1575.3 | Coarse Tailings | Automated |
| | | | | VW | Bottom | Functional | | - | | 107.4 | 1567.8 | Slimes with Sand | Automated |
| G-2 | Cell 2E | G | Crest | SP | - | Functional[4] | 1574.6 | 1578.8 | NR | NR | NR | NR | Monthly |
| 2E_2018_PZ_G1 (G1) | Cell 2E | G | Mid-slope | VW | 48' | Functional | 1553.0 | - | 60.0 | 48.0 | 1505.0 | Silt | Monthly |
| | | | | VW | 52' | Functional | | - | | 52.0 | 1501.0 | Silt | Monthly |
| | | | | VW | 58' | Functional | | - | | 58.0 | 1495.0 | Silty Sand with Gravel | Monthly |
| 2E_2018_PZ_G4 (G4) | Cell 2E | G | Beach | VW | 50' | Functional | 1583.6 | - | 81.0 | 50.0 | 1533.6 | Fine Tailings | Monthly |
| | | | | VW | 70' | Functional | | - | | 70.0 | 1513.6 | Sapric Peat | Monthly |
| | | | | VW | 75' | Functional | | - | | 75.0 | 1508.6 | Sapric Peat with Boulder | Monthly |
| 2E_2018_PZ_SeepMid | Cell 2E | F/G | Toe | SP | - | Functional | 1513.0 | 1515.6 | 34.6 | 34.5 | 1478.5 | Poorly Graded Gravel with Sand | Monthly |
| F-2 | Cell 2E | F | Toe | SP | - | Functional[4] | 1571.3 | 1573.8 | NR | NR | NR | NR | Monthly |
| PN1F-99 (DH-96-49) | Cell 2E | F | Mid-slope | PN | - | Decommission | 1583.8 | - | 91.0 | 96.8 | 1487.0 | Clayey Silt | Bi-annually |
| 2E_2018_PZ_F1 (F1) | Cell 2E | F | Near toe | VW | 40'(Peat) | Functional | 1511.3 | - | 49.5 | 40.0 | 1471.3 | Hemic Peat | Monthly |
| | | | | VW | 46'(Till) | Functional | | - | | 46.0 | 1465.3 | Poorly Graded Sand with Silt and Gravel | Monthly |
| 2E_2018_IN_F1 (F1) | Cell 2E | F | Near toe | INC | - | Functional | 1511.6 | 1514.7 | 68.0 | 66.4 | 1445.2 | Granite | Monthly |
| 2E_2018_PZ_F3 (F3) | Cell 2E | F | Mid-slope | VW | 66'(FT) | Functional | 1571.3 | - | 118.1 | 66.0 | 1505.3 | Slimes | Monthly |
| | | | | VW | 86'(FT) | Functional | | - | | 85.0 | 1486.3 | Slimes | Monthly |
| | | | | VW | 100'(Peat) | Functional | | - | | 100.0 | 1471.3 | Hemic Peat | Monthly |
| 2E_2018_IN_F3 (F3) | Cell 2E | F | Mid-slope | INC | - | Functional | 1552.1 | 1554.5 | 105.5 | 102.7 | 1449.4 | Granite | Monthly |
| 2E_2018_PZ_F4 (F4) | Cell 2E | F | Crest | VW | 75'(FT) | Functional | 1582.9 | - | 129.7 | 75.0 | 1507.9 | Slimes | Monthly |
| | | | | VW | 111'(Peat) | Functional | | - | | 111.0 | 1471.9 | Hemic Peat | Monthly |
| | | | | VW | 124'(Till) | Functional | | - | | 124.0 | 1458.9 | Silty Sand | Monthly |
| 2E_2018_IN_F4 (F4) | Cell 2E | F | Crest | INC | - | Functional | 1583.1 | 1585.9 | 120.0 | 118.4 | 1464.7 | Granite | Monthly |
| DH-96-37 | Cell 2E | J | Toe | PN | - | Decommission | 1530.7 | - | 58.5 | 56.1 | 1474.6 | Till | Monthly |
| DH-96-37A | Cell 2E | J | Toe | PN | - | Decommission | 1530.7 | - | NR | NR | 1484.6 | NR | Monthly |
| 2E_2018_PZ_J1 | Cell 2E | J | Mid-slope | VW | 42' | Functional | 1550.7 | - | 79.9 | 42.0 | 1508.7 | Slimes | Monthly |
| | | | | VW | 67' | Functional | | - | | 67.0 | 1483.7 | Silty Sand | Monthly |
| | | | | VW | 75' | Functional | | - | | 75.0 | 1475.7 | Clayey Sand | Monthly |
| 2E_2018_PZ_SeepLeft | Cell 2E | J/H | Toe | SP | - | Functional | 1511.4 | 1514.2 | 32.1 | 31.9 | 1479.5 | Sandy Lean Clay | Monthly |
| P3H-99 | Cell 2W | H | Mid-slope | SP | - | Functional[3] | 1532.0 | 1534.1 | NR | 27.0 | 1505.0 | NR | Bi-annually |
| P2HA-99 | Cell 2W | H | Mid-slope | SP | - | Functional[3] | 1571.0 | 1573.8 | 71.6 | 70.9 | 1500.1 | Slimes | Bi-annually |
| P2HB-99 | Cell 2W | H | Mid-slope | SP | - | Functional[3] | 1571.0 | 1573.6 | 49.5 | 48.3 | 1522.7 | Fine to Medium Sand | Bi-annually |
| P1H-99 | Cell 2W | H | Mid-slope | SP | - | Functional[3] | 1593.4 | 1595.8 | 92.5 | 92.5 | 1500.9 | Clayey Sand to Sandy Clay | Bi-annually |
| I1H-99 (DH-99-1) | Cell 2W | H | Mid-slope | INC | - | Suspect | 1593.1 | 1595.6 | 111.7 | 111.7 | 1481.4 | Bedrock | 2x per year |
| DH-96-30 | Cell 2W | H | Mid-slope | PN | - | Decommission | 1635.5 | - | 133.0 | 120.9 | 1514.6 | Clay and Silt | Bi-annually |
| DH-96-32 | Cell 2W | H | Mid-slope | PN | - | Decommission | 1712.1 | - | 218.0 | 195.9 | 1516.2 | Slimes | Bi-annually |
| DH96-32 | Cell 2W | H | Mid-slope | INC | - | Decommission | 1712.0 | NR | NR | NR | NR | NR | NR |
| DH-96-32A | Cell 2W | H | Mid-slope | PN | - | Decommission | NR | - | NR | NR | 1519.2 | NR | Bi-annually |
| DH-96-28 | Cell 2W | H | Mid-slope | INC | - | Functional | 1554.0 | 1555.6 | 68.0 | 68.0 | 1486.0 | Till | 3x per year |
| DH-96-28 | Cell 2W | H | Mid-slope | PN | - | Decommission | 1554.5 | - | 68.0 | 66.0 | 1488.5 | Till | Bi-annually |
| DH-96-28A | Cell 2W | H | Mid-slope | PN | - | Decommission | NR | - | NR | NR | 1503.5 | Fine Tailings | Bi-annually |
| P1H1-99 | Cell 2W | West of H | Mid-slope | SP | - | Functional[3] | 1591.0 | 1593.8 | 96.0 | 94.0 | 1497.0 | Cobbles | Bi-annually |
| P2H1-99 | Cell 2W | West of H | Mid-slope | SP | - | Functional[3] | 1591.2 | 1593.8 | 80.0 | 80.0 | 1511.2 | Fine Sand | Bi-annually |
| P3H1-99 | Cell 2W | West of H | Mid-slope | SP | - | Functional[3] | 1591.2 | 1593.9 | 66.5 | 64.0 | 1527.2 | Medium to Coarse Sand | Bi-annually |
| A-1 | Cell 2W | A | Toe | SP | - | Functional[3] | 1513.5 | 1515.5 | 39.0 | NR | NR | Sand and Gravel | Bi-annually |
| A-3 | Cell 2W | A | Mid-slope | SP | - | Functional[3] | 1569.4 | 1572.3 | 100.0 | 100.0 | 1469.4 | Silty Sand | Bi-annually |
| A-9 | Cell 2W | A | Crest | SP | - | Functional[3] | 1710.7 | 1715.6 | NR | NR | NR | NR | Bi-annually |
| DH-96-18 | Cell 2W | A | Mid-slope | INC | - | Functional | 1569.5 | 1572.5 | NR | NR | NR | NR | 3x per year |
| DH-96-19 | Cell 2W | A | Crest | INC | - | Decommission | 1709.1 | 1710.8 | 235.0 | 235.0 | 1474.1 | Till | 2x per year |
| B-2 | Cell 2W | B | Toe | SP | - | Functional[3] | 1530.0 | 1530.5 | 40.0 | 40.0 | 1490.0 | Sand and Gravel | Bi-annually |
| P1B-99 | Cell 2W | B | Mid-slope | SP | - | Functional[3] | 1572.1 | 1574.6 | 52.0 | 52.0 | 1520.1 | Tailings | Bi-annually |
| P1B1-99 | Cell 2W | South of B | Toe | SP | - | Functional[3] | 1572.1 | 1574.4 | 42.0 | 42.0 | 1530.1 | Tailings | Bi-annually |
| DH-96-10 | Cell 2W | E | Mid-slope | PN | - | Decommission | 1611.4 | - | 119.5 | 98.1 | 1513.3 | Silt | Bi-annually |
| DH-96-10 | Cell 2W | E | Mid-slope | INC | - | Functional | 1611.5 | 1613.6 | 119.5 | 119.5 | 1492.0 | Sand | 3x per year |
| DH-96-11 | Cell 2W | E | Mid-slope | PN | - | Decommission | 1650.5 | - | 142.0 | 138.2 | 1512.3 | Clayey Silt | Bi-annually |
| DH-96-12 | Cell 2W | E | Crest | INC | - | Suspect | 1716.4 | 1719.2 | 218.0 | 218.0 | 1498.4 | Till | 2x per year |
| E-5 | Cell 2W | E | Crest | SP | - | Decommission | 1715.7 | 1718.1 | NR | NR | NR | NR | Bi-annually |

Notes:
NR = Not reported
(1) SP = Standpipe piezometer, PN = pneumatic piezometer, VW = vibrating wire piezometer, INC = inclinometer
(2) Monthly = read manually once a month, Bi-annually = read manually at least twice a year, Automated = connected to a remote datalogging system
(3) Indicates a maintenance recommendation, i.e. redeveloping the piezometer.
(4) Indicates a maintenance and testing recommendation, i.e. redeveloping the piezometer and performing a slug test to review the piezometric response.

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