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VA101-126/29-4

MONTANA RESOURCES
YANKEE DOODLE TAILINGS IMPOUNDMENT - 2023 ANNUAL INSPECTION REPORT

Rev	Description	Date
0	Issued in Final	January 26, 2024

EXECUTIVE SUMMARY

This 2023 Annual Inspection Report (AIR) for the Yankee Doodle Tailings Impoundment (YDTI) was prepared by Knight Piésold Ltd. (KP) and the Engineer of Record (EOR) and complies with MCA 82-4-381: Annual Inspections. The EOR for the YDTI is Mr. Daniel Fontaine, P.E. of KP. The annual inspection of the YDTI was completed by Mr. Fontaine from September 28-29, 2023. He was accompanied during the inspection by Mr. Mike Harvie (Manager of Engineering and Geology) of MR. The report provides an overview of the observations of the YDTI facilities and covers the YDTI, including the associated embankments, tailings distribution works, reclaim water systems, monitoring devices, stormwater diversions, and other ancillary structures associated with the operation, maintenance, and surveillance of the impoundment.

The YDTI continues to be developed and operated in a manner consistent with the designs, the Quantitative Performance Parameters (QPPs), and the operating protocols established for the facility. No piezometric trigger elevation exceedances were observed at QPP monitoring sites during 2023 and the facility was observed to be in good condition during the annual inspection. A status update is provided related to embankment performance for the year, including high-level piezometric and deformation trends. An annual data analysis report summarizing the instrumentation and monitoring records and trends for the YDTI will again be prepared in 2024 to present the complete YDTI instrumentation and monitoring records for the 2023 calendar year, when the necessary records are all available.

YDTI construction activities since the previous annual inspection included:

- substantial completion of construction of the elevation (EL.) 6,450 ft lift of the East-West and North-South embankments,
- ongoing construction of the Stage 1 Horseshoe Bend (HsB) Rock Disposal Site (RDS) Drainage System
- initial fill placement in the North RDS area for the future mine haul ramp and North-South Embankment slope flattening,
- realignment of the Reclaim Water Pipeline along the EL. 6,500 ft access road, and
- modifications to the tailing distribution system to enhance tailings beach development and management capabilities.

Embankment construction activities were routinely completed and monitored as outlined in the Construction Management Plan (CMP) for the impoundment, with supplemental monitoring and reporting during on-going construction of the EL. 6,450 ft lift of the embankment. Construction activities related to the Stage 1 drainage system in the HsB area continued throughout 2023 and were monitored as specified in the HsB RDS CMP. Construction progress was regularly reviewed by KP and the EOR.

Continuing construction and operation of the YDTI is informed by periodic risk assessments of the facility. The most recent risk assessment was conducted in 2022. The risk assessments were used to identify operating enhancements that could provide further opportunities for risk mitigation, and these enhancements continue to be progressively implemented at the YDTI, taking advantage of the best practicable technologies and techniques to enhance dam safety. A status update is provided on risk mitigations implemented or currently in-progress at the YDTI during the year.

The YDTI water inventory has continued to reduce since the Polishing Plant was commissioned in late-2019. An estimated supernatant pond volume of approximately 17,100 acre-ft was achieved as of mid-July

2023, which is within the estimated normal seasonal fluctuations of the recommended target level of approximately 15,000 acre-ft. Reaching this target level is recognized as a significant risk reduction achievement.

A Corrective Action Plan (CAP) was prepared and issued by MR in response to the 2022 AIR recommendations on January 20, 2023. The CAP identified the actions proposed or undertaken to address the 2022 recommendations. MR completed the proposed corrective actions for recommendations 1, 2, and 4, and partially completed the corrective actions related to recommendation 3 (which were expected to extend into 2024).

The EOR has identified the following recommendations for consideration in 2024 based on a review of the information collected and conditions observed in 2023:

1. **Manage freshwater use from the Silver Lake Water System and operation of the Polishing Plant to maintain the water inventory in the YDTI supernatant pond around the target volume of approximately 15,000 acre-ft (+/- 3,000 acre-ft). Assess if this normal operating target range (12,000 acre-ft to 18,000 acre-ft) can be maintained without adverse impacts to ongoing mine operations.**
2. **Continue regrading the upstream slope of the North-South Embankment during construction of the tailings pipeline corridor for the EL. 6,450 ft lift. Initial regrading activities were undertaken in 2023 as a result of the 2022 EOR AIR recommendations. Regrade the embankment upstream slope to cover and incorporate the tailings pipeline discharge corridor along the EL. 6,400 ft lift. Implement the alluvium facing layer between the crest of the tailings pipeline corridor along the EL. 6,450 ft lift and the upstream alluvial facing of the EL. 6,400 ft lift along the regraded upstream slope. The intent is to create a continuous layer of alluvium between the EL. 6,450 tailings pipeline corridor and the alluvium facing previously placed as part of EL. 6,400 ft lift construction. This recommendation applies to the remaining portion of the North-South Embankment between Section 28+00N and the abutment at Rampart Mountain. (continuation of 2022 recommendation).**
3. **Regrade the upstream slope of East-West Embankment between approximately Sections 33+00NW (Discharge 2-1) and 23+00NW from the tailing discharge corridor to the tailings beach surface to mitigate the differential settlement cracking currently observed along the tailings discharge corridor in this area. Tie in the regraded slope neatly with the upstream embankment slope east of Section 23+00NW. Reapply alluvium facing with a minimum nominal thickness of 3 ft to the regraded slope in this area to enhance continuity of the upstream alluvium facing layer along the center part of the dam.**

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ABBREVIATIONS

ACC ..... Anaconda Copper Company
AIR ..... Annual Inspection Report
AR ..... Atlantic Richfield Company
BMFOU ..... Butte Mine Flooding Operable Unit
BPPS ..... Berkeley Pit Pumping System
CAP ..... Corrective Action Plan
CMP ..... Construction Management Plan
CPP ..... Construction Performance Parameters
DAR ..... Data Analysis Report
DGPS ..... Differential Global Positioning System
DH ..... Drillhole
E ..... East
EAP ..... Emergency Action Plan
EL ..... Elevation
EOR ..... Engineer of Record
ft ..... feet
GNSS ..... Global Navigational Satellite System
HsB ..... Horseshoe Bend
HsBCS ..... Horseshoe Bend Capture System
HsB WTP ..... Horseshoe Bend Water Treatment Plant
InSAR ..... Interferometric Synthetic-Aperture Radar
IPI ..... In-place-inclinometer
IRP ..... Independent Review Panel
KP ..... Knight Piésold Ltd.
MBMG ..... Montana Bureau of Mines and Geology
MDEQ ..... Montana Department of Environmental Quality
MCA ..... Montana Code Annotated
MGPD ..... Million gallons per day
MR ..... Montana Resources, LLC
N ..... North
the Pilot Project ..... Berkeley Pit and Discharge Pilot Project
Q ..... Quarter
QPP ..... Quantitative Performance Parameter
RDS ..... Rock Disposal Site
RMS ..... Remote Monitoring System
S ..... South
SLWS ..... Silver Lake Water System
TAC ..... The Anaconda Company
TARP ..... Trigger-Action Response Plan
TOMS ..... Tailings Operations, Maintenance, and Surveillance
tpd ..... Short Tons per day
TSX ..... TerraSAR-X

UAV	Unmanned Aerial Vehicle
VWP	Vibrating Wire Piezometer
W	West
WED	West Embankment Drain
WET	Water and Environmental Technologies
YDTI	Yankee Doodle Tailings Impoundment

1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 GENERAL

Montana Resources, LLC (MR) operates an open pit copper and molybdenum mine in Butte, Montana. MR has owned and operated the mine site since the 1980's and is currently mining the Continental Pit with a nominal concentrator throughput rate of approximately 45,000 short tons per day (tpd). The property was acquired from Atlantic Richfield Company (AR) and the former Anaconda Copper Company (ACC) who had previously mined the Berkeley Pit since 1955. The key components of the MR facilities include the:

- Continental Pit
- Mill and processing facilities (the Concentrator)
- Yankee Doodle Tailings Impoundment (YDTI)
- Truck maintenance workshop and miscellaneous mine buildings located in the Horseshoe Bend (HsB) area
- Water management facilities, including the Precipitation Plant, HsB Water Treatment Plant (HsB WTP), HsB Capture System (HsBCS), and Berkeley Pit Pumping Systems (BPPS)

1.1.2 YANKEE DOODLE TAILINGS IMPOUNDMENT

Tailings produced from ore processing are stored in the YDTI. The YDTI was originally constructed in 1963 and the embankments have been constructed to elevation (EL.) 6,450 ft using rockfill from the Berkeley Pit (until 1982) and from the Continental Pit (beginning in 1986). The YDTI comprises a valley-fill style impoundment created by a continuous rockfill embankment that for descriptive purposes is divided into three embankment sections: the North-South Embankment, the East-West Embankment, and the West Embankment. The current maximum embankment height is approximately 800 ft along the southern end of the impoundment upstream of the HsB area. The project arrangement is shown on Figure 1.1.

The jurisdiction for the YDTI resides with the Montana Department of Environmental Quality (MDEQ). The YDTI is not subject to dam hazard potential classification within the State (Montana Code Annotated (MCA) 85-15-209) as the embankments for tailings impoundments and water reservoirs subject to permits issued by MDEQ are specifically exempt from provisions of the Montana Dam Safety Act (MCA 85-15-107). MR currently holds one MDEQ operating permit allowing for continued use of the YDTI facilitated by continued construction of the embankment to a crest elevation of 6,450 ft and operation of the West Embankment Drain (WED). Construction of the EL. 6,450 ft lift of the embankment reached substantial completion during 2023.

The MR facilities, mine operations, and YDTI operational procedures are described in additional detail in the MR report entitled *'Yankee Doodle Tailings Impoundment – Tailings Operations, Maintenance and Surveillance (TOMS) Manual'* (MR/KP, 2023). The best practices employed at the site continue to progressively evolve, taking advantage of the best practicable new technologies and techniques to enhance dam safety. The design, construction, operation, maintenance, and surveillance of the YDTI involves a multidisciplinary team of professionals. The team works closely together to achieve the fundamental objective of ongoing continuous improvement of the safety of the impoundment.

NOTES:

1. COORDINATE SYSTEM AND ELEVATIONS ARE BASED ON ANACONDA MINE GRID.
2. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC ON JULY 26, 2023.

SCALE A: 1500 0 1500 3000 4500 6000 7500 ft

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	26JAN'24	ISSUED WITH REPORT	DDF	RMM	JRG

MONTANA RESOURCES, LLC

MONTANA RESOURCES

YANKEE DOODLE TAILINGS IMPOUNDMENT PROJECT ARRANGEMENT

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF NO. 4

FIGURE 1.1

REV 0

1.1.3 HORSESHOE BEND AREA

The HsB area is shaped like an inverted 'U', bounded to both the east and west by historically leached mine rock and to the north by the East-West Embankment. The HsB area contains infrastructure related to YDTI seepage collection and miscellaneous mine buildings, including the truck maintenance workshop. The historical Precipitation Plant in this area was decommissioned and demolished in late 2023.

Sources contributing seepage from the YDTI facility to groundwater discharge in the HsB area include tailings slurry water that percolates into the tailings beach, meteoric recharge to the tailings surface, and seepage from the supernatant pond. Groundwater discharges downstream (south) of the facility in the following three areas:

- Number 10 Seep (Seep 10)
- HsB area seeps
- Historical Drain

The flows collected at Seep 10 are conveyed to the HsB area where they combine with seeps, flows from the historical drain, and local runoff. A new system to collect flows along the Seep 10 bench and convey these flows to the HsB Pond was implemented in 2023. The HsB area seeps include both groundwater discharge areas historically differentiated into "Leach" and "HsB" seeps in previous reports. The HsB Rock Disposal Site (RDS) Stage 1 Drainage System is currently under construction for long-term management of these flows. The previously referred to Leach seeps are collected by a series of aggregate drains constructed on the East side of the HsB area, and construction of similar aggregate drains to intercept the HsB seeps area is in progress on the West side of HsB. The collected flows are conveyed to the HsB Pond.

The HsB Pond is a long, narrow basin approximately 100 ft wide and 2,000 ft long. Flow rates in the HsB area have been measured regularly since 1996 using a weir established by the Montana Bureau of Mines and Geology (MBMG). Flow through the HsB Pond is continuously measured using two independent systems located upstream of the weir. One sensor is maintained by MBMG and the second sensor, which became operational in July 2023, is maintained by MR.

1.1.4 BERKELEY PIT AND DISCHARGE PILOT PROJECT

The Berkeley Pit and Discharge Pilot Project (the Pilot Project), commissioned in 2019 and associated with the Butte Mine Flooding Operable Unit (BMFOU) of Superfund, facilitated the treatment and release of up to 10 million gallons per day (MGPD) of water from the YDTI via a Polishing Plant operated by AR. One goal of the pilot project was to progressively reduce the YDTI supernatant pond volume to approximately 15,000 acre-ft over a period of several years.

As part of the Pilot Project, Berkeley Pit water was pumped using the BPPS, consisting of a floating barge system and land-based pump house to maintain a relatively constant water surface elevation in the pit. Approximately 3 MGPD of Berkeley Pit water can be treated and introduced into the site water management system when the BPPS is operating. Flow rates are typically measured by an in-line flowmeter on the BPPS.

Flow from the BPPS can be either pumped to the Horseshoe Bend Water Treatment Plant (HsB WTP) or the Horseshoe Bend Capture System (HsBCS). Similarly, flows collected within the HsB area can be directed to either the HsB WTP or HsBCS. The HsBCS flows are conveyed via two HsBCS pump houses and metered into the tailings (which have additional lime to facilitate treatment of this water) at a manifold after the No. 3 (Tailings) Booster Pump House. The combined flow is discharged into the YDTI, and the

supernatant pond provides residence time for water treatment objectives to be achieved. Flows directed to the HsB WTP are treated before being conveyed to the Concentrator for incorporation into the tailings circuit and additional treatment at the YDTI.

Discharge of water from the YDTI is facilitated by pumping supernatant pond water via the reclaim water system to the Polishing Plant for polishing treatment and off-site discharge.

1.2 SCOPE OF REPORT

This 2023 Annual Inspection Report (AIR) was prepared by Knight Piésold Ltd. (KP) and complies with MCA 82-4-381: Annual Inspections. The report provides an overview of the observations of the YDTI facilities and covers the YDTI, including the associated embankments, tailings distribution works, reclaim water systems, monitoring devices, stormwater diversions, and other ancillary structures associated with the operation, maintenance, and surveillance of the impoundment. This AIR presents information contained in historical and more recent reports and includes:

- observations made by the Engineer of Record (EOR) during visual inspections and review of the available monitoring data
- observations made based on videos collected using an Unmanned Aerial Vehicle (UAV)
- observations made by others from KP and MR during various visual inspections and field reviews of the impoundment
- summary of ongoing construction activities for the Stage 1 HsB RDS Drainage System
- discussion of information collected during the supplemental construction monitoring program associated with the EL. 6,450 ft lift
- discussion of the subsurface and surface deformation monitoring programs
- discussion of the Quantitative Performance Parameters (QPPs)
- discussion of recent important trends and additional future considerations
- identification of recommended actions required for ongoing operation and maintenance of the facility

KP has provided engineering services for the YDTI in support of on-going mining operations since 2015 and, in collaboration with the EOR, prepares the AIR. The structure of this report is generally consistent with the scope of the last several inspection reports. An annual Data Analysis Report (DAR) summarizing the instrumentation and monitoring records and trends for the YDTI has been prepared separately from the AIR since 2017. The 2023 DAR will again be prepared in 2024 to present the YDTI instrumentation and monitoring records for the 2023 calendar year, when the necessary records are available.

The EOR for the YDTI is currently Mr. Daniel Fontaine, P.E. of KP, who accepted the role of EOR on September 10, 2021. Mr. Ken Brouwer, P.E. of KP had previously held the role of EOR since September 2015. The former EOR, Mr. Brouwer, remains available to the KP and MR team as a Principal technical reviewer.

1.3 REFERENCE COORDINATE SYSTEM AND DATUM

Coordinates and elevations in this report are referenced to the site coordinate system known as the ‘Anaconda Mine Grid’ established by The Anaconda Company (TAC) in 1957. The Anaconda Mine Grid is based on the ACC Datum established in 1915. The MR Site Coordinate System is based on the Anaconda Mine Grid and utilizes International Feet. All elevations are stated in Anaconda Mine Grid coordinates with respect to the ACC Vertical Datum unless specifically indicated otherwise.

2.0 INSPECTIONS AND OBSERVATION METHODS

2.1 GENERAL

Various inspections, field reviews, and data reviews of the YDTI were completed throughout 2023 and were used to inform the observations and recommendations detailed in this AIR. The information compiled confirms the YDTI continues to be constructed and operated in a manner consistent with the designs, QPPs, and operating protocols established for the facility. Key inspections and monitoring methods of the YDTI discussed herein include the following:

- EOR Annual Site Inspection
- Four quarterly construction field reviews of the YDTI
- Piezometric and deformation monitoring instrumentation and techniques
- EL. 6,450 ft lift supplemental construction monitoring program (active through August 2023)

Other inspections of the YDTI completed during 2023 that generally inform the summary and conclusions presented herein also include the following:

- Weekly inspections of active YDTI construction areas performed by the MR Engineering Department. The inspections are summarized in weekly inspection reports provided to KP to document construction progress and used to track quantities of materials placed by the MR Operations Department.
- Inspections of active Stage 1 HsB RDS Drainage System construction activities performed by Water and Environment Technologies (WET). The inspections are summarized in weekly reports and provided to KP to document construction progress and quality management activities.
- The MR Engineering Department performs a detailed inspection of the facility at least monthly and documents the inspection using an inspection log template from the TOMS Manual (MR/KP, 2023). Copies of the associated records are provided to KP periodically.
- Monitoring of 2023 site investigation activities performed by Gwen James, P.Eng., Sean Yao, E.I.T., and Ricky Lawrence, E.I.T. of KP from mid-July through mid-December 2023.

MR and KP routinely monitor piezometric conditions, embankment deformation behavior, the supernatant pond elevation, tailings distribution system usage, beach elevation at tailings discharge locations, and flowrates at several water management locations. Near real-time piezometric records and flow rates at the Seep 10 Weir are available to MR and KP via the web-based Remote Monitoring System (RMS) through the Sensemetrics web and mobile applications. Surveillance data is comprehensively reviewed by KP on a quarterly and annual basis, and summary reports are provided by KP to MR, MDEQ, and the Independent Review Panel (IRP). The following surveillance reporting completed in 2023 was considered in conjunction with observations from the various inspections listed above to inform the discussion and conclusions contained in this report:

- The 2022 DAR (KP, 2023b), which summarized the monitoring and instrumentation data for the impoundment for the 2022 calendar year.
- Quarterly piezometric monitoring updates summarizing the piezometric data for QPP monitoring sites for Q1, Q2, and Q3 2023 (KP, 2023c; KP, 2023d; KP, 2023e).
- Quarterly summaries of water monitoring data, including the supernatant pond elevation, tailings beach development records, and flow records for Q1, Q2, and Q3 2023 (KP, 2023f; KP, 2023g; KP, 2023h).

2.2 MEANS OF OBSERVATION

2.2.1 UNMANNED AERIAL VEHICLES

Aerial videos of the YDTI were collected by WET using an UAV in May/June 2023. The flight paths were outlined by KP, and the video footage captured by the UAV was used to prepare a comprehensive series of site tour videos. The site tour videos were reviewed by the EOR, KP, MR, and the IRP, and provide valuable documentation of the construction progress and conditions as observed in early June 2023. Select images extracted from the site tour videos are included in Appendix A (Photos 1 to 28).

Aerial videos to document the progress of ongoing construction in the HsB area were also collected by WET using an UAV periodically in 2023. Aerial photographs/survey data or drone footage was provided to KP from flights completed by WET in January, March, May, July, November, and December 2023.

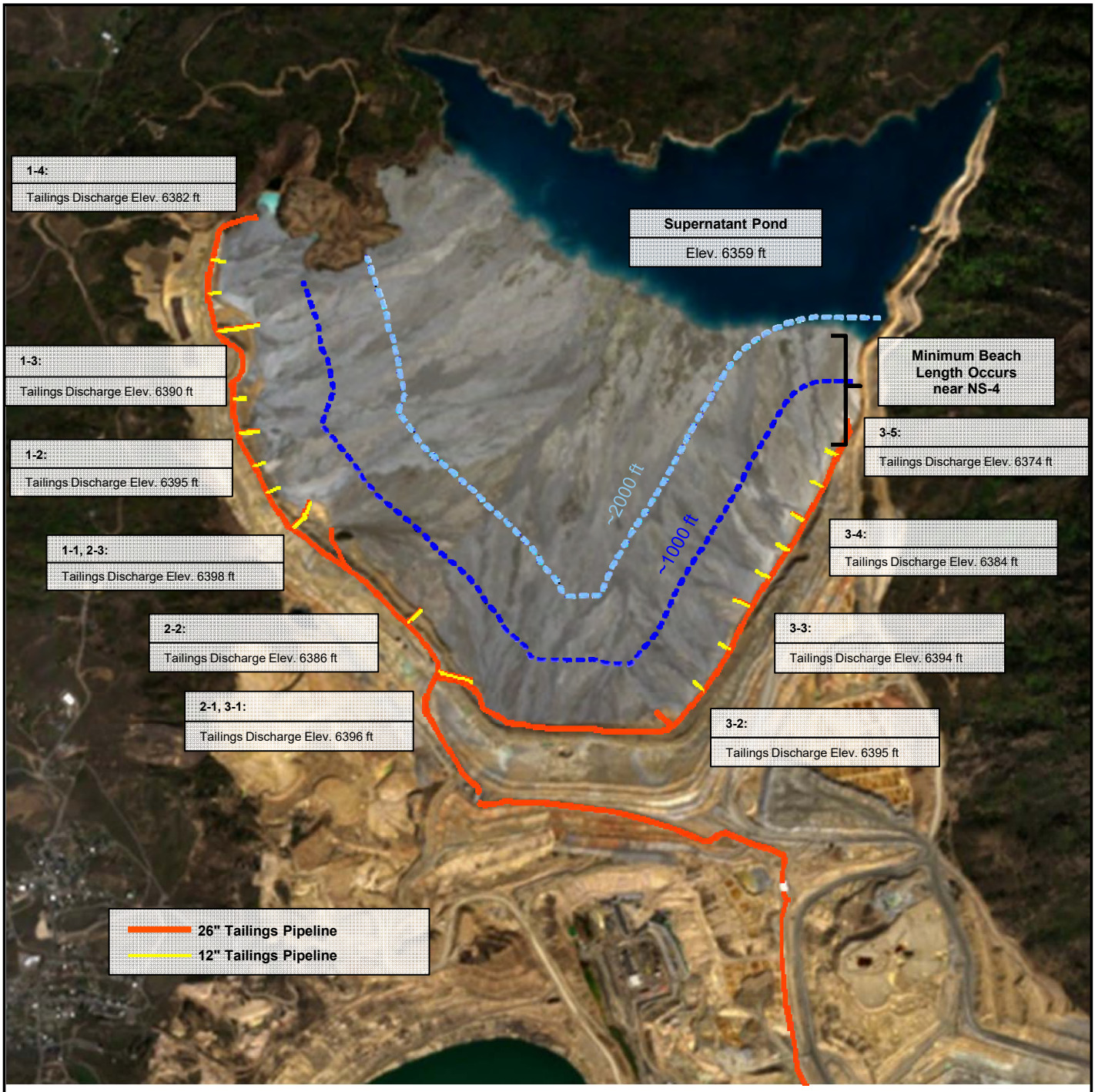
2.2.2 ANNUAL INSPECTION SITE VISIT

The annual inspection of the YDTI was completed by Mr. Daniel Fontaine, P.E., the EOR, on September 28 and 29, 2023. Mr. Fontaine was accompanied during the annual inspection by Mr. Mike Harvie (Manager of Engineering and Geology). The facility was observed to be in good condition, and active construction was ongoing along the North RDS and in the HsB area. Topsoil placement for progressive reclamation of the downstream embankment slope was also underway at the West Embankment during the inspection. Observations from the annual inspection are presented in Section 3. Select photographs from the annual inspection are included in Appendix A (Photos 29 to 80). An overview image of the facility observed from the Sentinel-2 satellite on September 25, 2023 is included on Figure 2.1.

2.2.3 2023 QUARTERLY CONSTRUCTION FIELD REVIEWS

Quarterly construction field reviews were performed during 2023 as per the requirements of the Construction Management Plan (CMP) (KP, 2018a). KP engineers completed the quarterly reviews as designates of the EOR and were accompanied during the inspections by a representative of MR. The quarterly field reviews were completed as follows:

- The Q1 field review was completed from March 1-2, 2023 by Mr. Jason Gillespie, P.Eng. and Mr. Steve Reekie, P.Eng. with observations and opinions summarized in a quarterly construction field review letter (KP, 2023i).
- The Q2 field review was completed on June 12, 2023 by Mr. Jason Gillespie, P.Eng., and observations and opinions were summarized in a letter (KP, 2023j).
- The Q3 field review was completed from August 29-31, 2023 by Mr. Steve Reekie, P.Eng., and observations and opinions were summarized in a letter (KP, 2023k). The Q3 2023 Construction and Field Review Summary letter is included as Appendix B.
- The Q4 field review was completed from November 28-29, 2023 by Mr. Jason Gillespie, P.Eng. The Q4 summary letter is in progress and will be completed by KP in early 2024.



NOTES:

1. TAILINGS DISCHARGE AND SUPERNATANT POND ELEVATIONS WERE SURVEYED BY DRONE FLYOVER ON OCTOBER 4, 2023. ALL ELEVATIONS ARE RELATIVE TO THE ANACONDA DATUM.
2. THE MINIMUM BEACH LENGTH AT THE NORTHERN EXTREMITY OF THE N-S EMBANKMENT IS MEASURED FROM THE TAILINGS BEACH AND UPSTREAM EMBANKMENT INTERFACE, AT THE APPROXIMATE INTERSECTION OF THE N-S EMBANKMENT AND NATURAL TOPOGRAPHY OF RAMPART MOUNTAIN, TO THE TAILINGS BEACH AND POND SURFACE INTERFACE.
3. SENTINEL-2 VISIBLE SATELLITE IMAGE TAKEN ON SEPTEMBER 25, 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	26JAN'24	ISSUED WITH REPORT	CNN	RSD

MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

SENTINEL-2 SATELLITE IMAGERY FACILITY OVERVIEW SEPTEMBER 25, 2023

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REF. NO. 4

FIGURE 2.1

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2.2.4 PIEZOMETRIC INSTRUMENTATION AND MONITORING

Pore pressures are monitored at 115 active instrumentation locations at the YDTI, the West Ridge and HsB areas. These sites include 39 standpipe piezometers/monitoring wells, 76 drillholes with active vibrating wire piezometers (VWPs) and two Elexon Geo4Sight installations (multi-node wireless deformation and pore water pressure monitoring instruments). Most standpipe piezometers and monitoring wells have been outfitted for continuous monitoring by suspending a VWP sensor within the PVC riser and connecting the sensor via radiotelemetry to the RMS. Piezometric data are accessible to KP via the RMS and data from QPP sites are reviewed weekly by KP and MR. Geo4Sight data are downloaded and reviewed approximately monthly.

2.2.5 DEFORMATION INSTRUMENTATION AND MONITORING

Surface and subsurface embankment deformations continued to be monitored using in-situ instrumentation and remote sensing techniques. Surface deformations were monitored using satellite-based interferometric synthetic aperture radar (inSAR), Differential Global Positioning System (DGPS) and Total Station survey-monitoring and using Global Navigational Satellite System (GNSS) instrumentation. Application of these techniques at the YDTI are further described below.

InSAR remote sensing provides comprehensive spatial assessment of satellite-based estimates of surface displacements throughout the YDTI embankments, with measurements collected every 11 days. Data were processed by TRE-Altamira in the following formats during 2023:

- Long-term inSAR evaluations (SqueeSAR) use 2-dimensional data from TerraSAR-X (TSX) satellite constellation to monitor high-precision (0.1-0.2 inches) vertical, east-west, and line-of-sight surface displacements. Data are typically processed and reported twice per year in July and November.
- Short-term inSAR evaluations (Bulletins) use 1-dimensional TSX data from an ascending orbit to monitor line-of-sight surface deformations over a 22-day observation period. Bulletin analyses were completed every 11-days from approximately May through October 2023, with results made available within about a week of acquiring the second inSAR dataset. Bulletin analyses can detect deformations occurring at between approximately 3 and 50 in/year.

Manual DGPS survey-monitoring of surface deformations in proximity to the active Central Pedestal Area embankment and surcharge construction was completed beginning in June 2021 at 15 monument locations. Six additional DGPS survey monitoring sites were added along the North-South Embankment in late 2022. Monitoring of survey prisms using a Total Station at similar locations as the manual DGPS surveys was initiated in 2023, and Total Station surveys gradually replaced DGPS as the predominant surface displacement survey technique. Both techniques monitor lateral and vertical deformations and have been useful for monitoring influence from nearby embankment construction. The data exhibit relatively high noise levels typical of this technique and are considered suitable for assessment of long-term deformation trends and to monitor for changes in deformation rates and/or behavior on a weekly or longer timestep.

GNSS instruments are installed on the embankment surface to monitor surface deformation at four locations (DH19-S3, DH19-S4, DH19-S5, and DH19-S7) within the East-West Embankment Central Pedestal Area. Surface deformation data (vertical and lateral deformation components) from GNSS instrumentation were available in near real-time via the RMS throughout the year. The GNSS data exhibit relatively high noise levels typical of this type of instrumentation and are considered suitable for assessment of long-term deformation trends and to monitor for changes in deformation rates and/or behavior on a

weekly or longer timestep. GNSS data provide valuable deformation data for comparison with inSAR and DGPS monitoring results and maintain coverage during the snow-season, while inSAR data collection is unavailable.

Subsurface deformations are measured within the embankments and foundation at four instrumented inclinometer sites (DH19-S3, DH19-S4, DH19-S5, and DH19-S7), which are co-located with the GNSS surface displacement instrumentation discussed above. The inclinometers are instrumented with in-place-inclinometer (IPI) sensors and monitor deformations oriented in two directions. KP typically analyzes IPI deformation data using monthly averaging applied to both the baseline and monitoring readings to remove noise and better monitor for long-term deformation trends. Two additional inclinometers were installed during 2021 to expand monitoring coverage. Regular manual monitoring of these sites occurred in 2023.

Elexon Geo4Sight instrumentation (multi-node wireless deformation monitoring instruments) is installed at two locations upstream of the embankment crest on Sections 8+00W (DH20-S2) and 0+00 (DH21-S4). This instrumentation monitors angular deformation within tailings, rockfill and foundation materials, similar to an inclinometer, and has been useful for monitoring sub-surface deformations associated with ongoing construction.

2.2.6 SUPPLEMENTAL CONSTRUCTION MONITORING PROGRAM

A supplemental construction monitoring program during construction of the EL. 6,450 ft lift, including construction within the Central Pedestal Area, was initiated in June 2021 and continued through August 2023. Construction progress and monitoring letters were generally produced by KP monthly to document and present trends identified during this construction period. The monitoring program included the following:

- On-site construction review by a KP field engineer and/or MR site representative with duties including regular visual inspection, construction progress monitoring, and QA/QC activities.
- Piezometric monitoring of select monitoring instruments beneath and downstream of the construction areas with piezometric elevations designated as Construction Performance Parameters (CPPs) using tiered-thresholds and an associated Trigger-Action Response Plans (TARPs).
- Analysis of surface and subsurface deformation monitoring data to characterize and track embankment deformations. Deformation monitoring was completed using manual-survey, in-situ instrumentation, and remote sensing techniques including review of:
  - inSAR bulletin analyses.
  - Laser (LiDAR) scans of the Central Pedestal Area.
  - Crack mapping and progression monitoring.
  - GNSS, DGPS, and total station survey-monument surface deformation data.
  - Inclinometer subsurface deformation data
  - Geo4Sight subsurface deformation data

The deactivation of the supplemental construction monitoring program occurred in September 2023 following substantial completion of construction, as described in a close-out letter for the program (KP, 2023l), which is included in Appendix C. KP considers the construction monitoring program to have been highly valuable for tracking embankment conditions and evaluating associated risks while large-scale construction loading was active (June 2021 to March 2023). The available monitoring data through August 2023 indicated constant or slightly decreasing pore water pressures and slowing deformation rates throughout the embankment, as expected in the absence of further large-scale loading.

3.0 OBSERVED CONDITIONS AND CHANGES

3.1 CONSTRUCTION PROGRESS AND CHANGES

YDTI construction continued since the previous annual inspection and throughout 2023, with the facility continuing to be observed in good condition throughout the year. Construction activities were routinely completed and monitored as outlined in the CMP (KP, 2018a) with supplemental monitoring and reporting associated with on-going construction of the EL. 6,450 ft lift in the Central Pedestal Area of the East-West Embankment and along the North-South Embankment as described in Section 2.2.6. Construction activities related to the Stage 1 HsB RDS Drainage System continued and were monitored as specified the HsB RDS CMP (KP, 2023m). Construction progress was regularly reviewed by KP and the EOR by means of weekly inspection reports, Monthly Quality Control progress reports completed by MR, periodic field reviews of construction activities in the HsB area, quarterly field reviews by KP representatives, and the Central Pedestal Area construction monitoring program weekly and monthly progress reports. Active construction areas during 2023 and facility changes noted below are illustrated on Figures 3.1 to 3.4. The main construction activities and notable changes at the YDTI since the 2022 Annual Inspection are described below.

West Embankment

- Final trimming and grading of the downstream slopes to 3H:1V was completed to allow progressive reclamation to be carried out.
- The municipal pipeline from Moulton Reservoir was relocated to allow final construction activities for the EL. 6,450 ft lift at the northern end of the embankment.
- Topsoil salvage was carried out North of the impoundment in areas that will be inundated by the rising supernatant pond surface.
- Topsoil placement occurred over the trimmed and graded downstream slopes between the crest and downstream toe.
- Organics and coarse woody debris were stockpiled along the crest for use during final slope reclamation and seeding.

East-West Embankment

- The upstream slope of the embankment between approximately Section 23+00NW and 0+00 was regraded and alluvium facing placed along the regraded slope as recommended in the 2022 AIR (KP, 2023a).
- The tailings discharge corridor along the EL. 6,450 ft lift was constructed between approximately Sections 23+00NW and 13+00N.
- Additional discharge locations, including several 12-inch discharges, were added along the embankment between discharge locations EW-1 and NS-1 as recommended in the 2022 AIR. The discharges were added along Line 3 instead of Line 2, but the changes satisfy the intent of the recommendation.

- Significant transverse cracking was observed along the embankment crest in the general vicinity of Section 0+00 in Q2 2023. Cracking was attributed to differential settlement of recently placed rockfill, and surface expression of the cracking was exacerbated by significant meltwater and precipitation-based ponding on the embankment crest in spring. Cracking was remediated and no re-expression was observed during the second half of 2023. Some additional details related to this event are included the letter in Appendix C.
- Final grading to eliminate low spots and bring the final embankment crest within grade tolerances was completed in Q4 2023 in the Central Pedestal Area.
- Cracking due to differential settlement is currently observed along the tailings discharge corridor between Station 23+00NW (previous eastern extent of upstream slope regrading recommendation from 2022) and approximately Section 33+00NW (near Discharge 2-1). Regrading of this area on the upstream side of the embankment will be included as a recommendation in this report.

North-South Embankment

- The remaining EL. 6,450 ft Zone U lift construction was completed at the corner of the embankment between Section 0+00 and Section 8+00N.
- Construction along the EL. 6,450 ft Zone U lift was completed between approximately Section 43+00N and 50+00N near the deferred fill placement area. Continued fill placement in the deferred fill placement area at the northern end of the embankment will be completed progressively in 10 ft lifts to maintain the minimum YDTI freeboard requirements (KP, 2023n; KP, 2023o).
- The upstream slope of the embankment between approximately 0+00 and 28+00N was regraded and alluvium facing placed along the regraded slope as recommended in the 2022 AIR. The remaining regrading and facing work is scheduled for early 2024 as per the 2022 Corrective Action Plan (CAP).
- Fill placement for the North RDS and associated Mega Ramp construction was initiated along the EL. 6,150 ft lift.

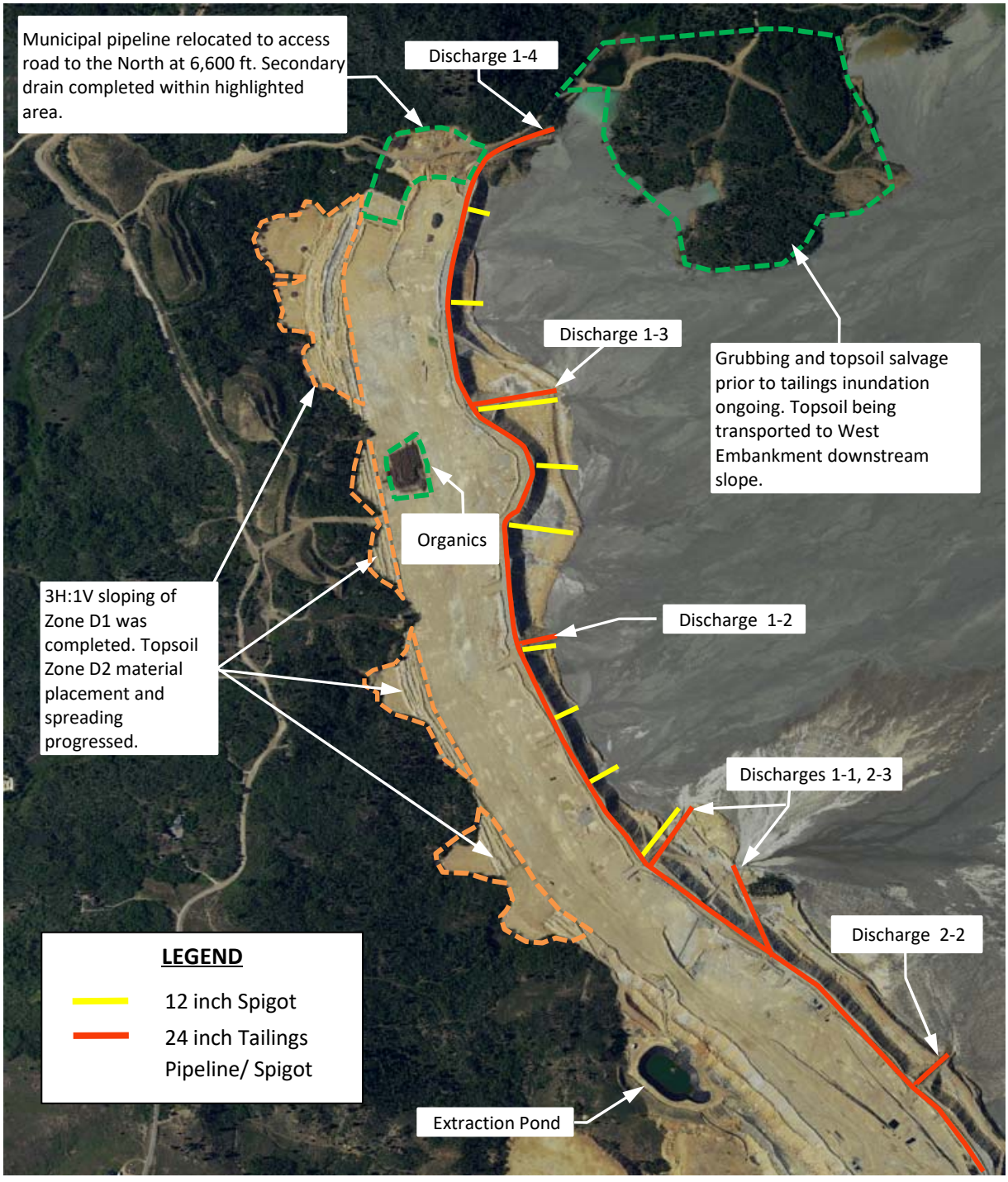
Horseshoe Bend Area

- Stockpiling of drainage system construction materials (Zone UF, Zone 2A, Zone 2B, and Zone 3A).
- Placement of UF material for the foundation layer grading occurred in the historical Surge Pond and along the alignments of rock drains D2, D3, and D4.
- Regrading and armouring of the eastern HsB area slope (historical Holding Pond embankment) were carried out.
- Rock drains D4, D5, D6, and D7 were constructed, and Zone UF capping was placed along D6.
- Excavation and lining of surface water ditch (SWD) #10 and Transition Pond along the Seep 10 bench.
- Construction of the pipe corridor and Pipeline 1 to convey flows from the Transition Pond to the HsB Pond.
- Excavation and installation of corrugated steel pipe sleeves for the haul road crossing for Pipeline 2.
- The demolition of the old Precipitation Plant and associated buildings, steel salvage, and removal of debris.

Other Construction Activities

- Continued construction of the new Precipitation Plant adjacent to the HsB WTP.
- Power relocation for the mine buildings in the HsB area.

- Completion of installation of the new reclaim pipeline along the EL. 6,500 ft reclaim road and commissioning of the new reclaim pipeline.
- Removal of the reclaim piping along the EL. 6,400 ft reclaim road.
- Construction activities associated with the On-Site Containment Project between the Pittsmont Dump and Continental Pit (see Section 4.4.3 for additional information).



NOTES:

1. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC IN AUGUST 2023.

2. CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	26JAN'24	ISSUED WITH REPORT	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 ANNUAL INSPECTION REPORT
WEST EMBANKMENT
AREAS OF INTEREST

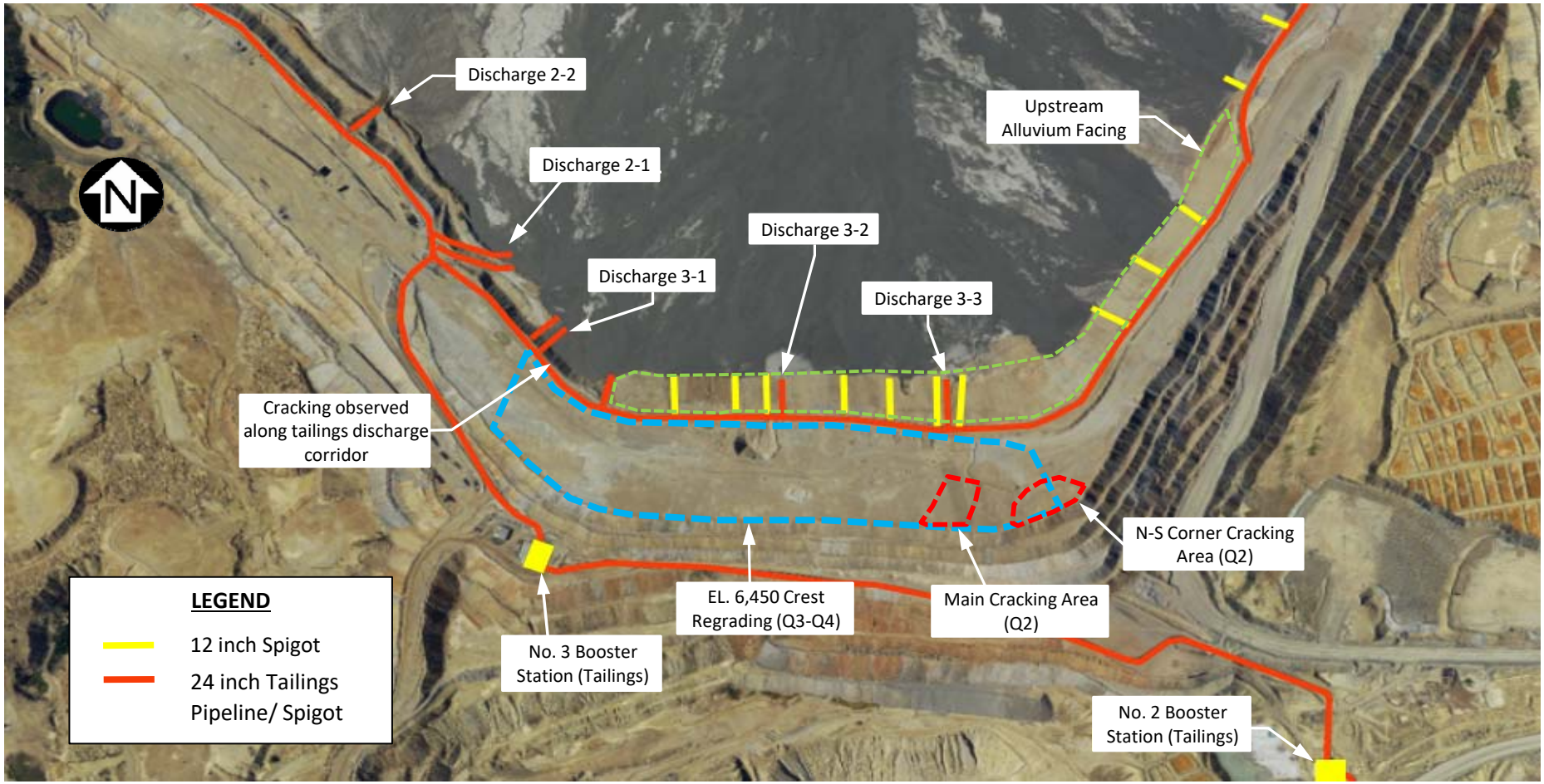
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. 4

FIGURE 3.1

REV 0



NOTES:

1. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC IN AUGUST 2023.
2. CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	26JAN'24	ISSUED WITH REPORT	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 ANNUAL INSPECTION REPORT
EAST-WEST EMBANKMENT
AREAS OF INTEREST

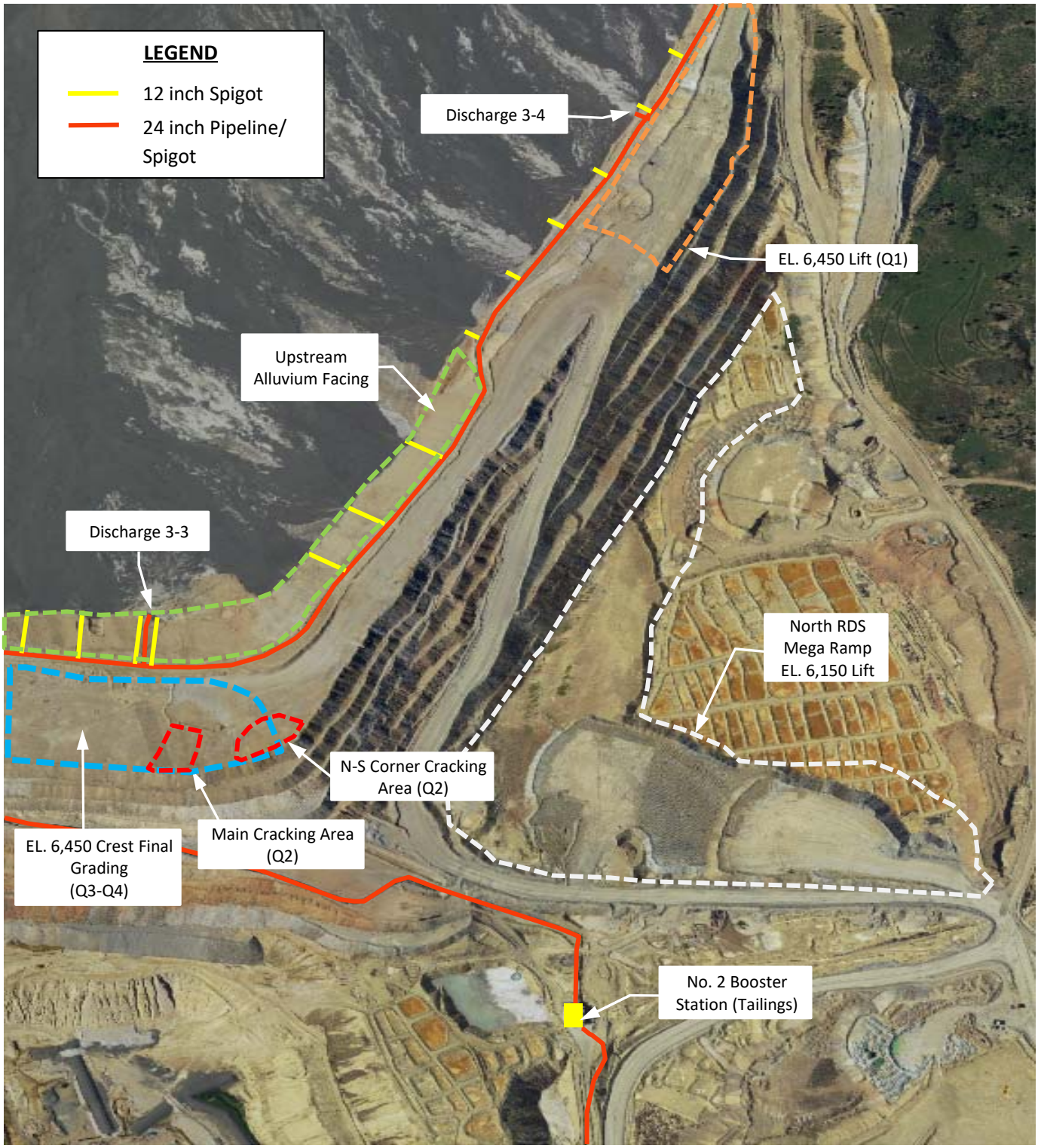
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. 4

FIGURE 3.2

REV 0



NOTES:

1. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC IN AUGUST 2023.
2. CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	26JAN'24	ISSUED WITH REPORT	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 ANNUAL INSPECTION REPORT
NORTH-SOUTH EMBANKMENT
AREAS OF INTEREST

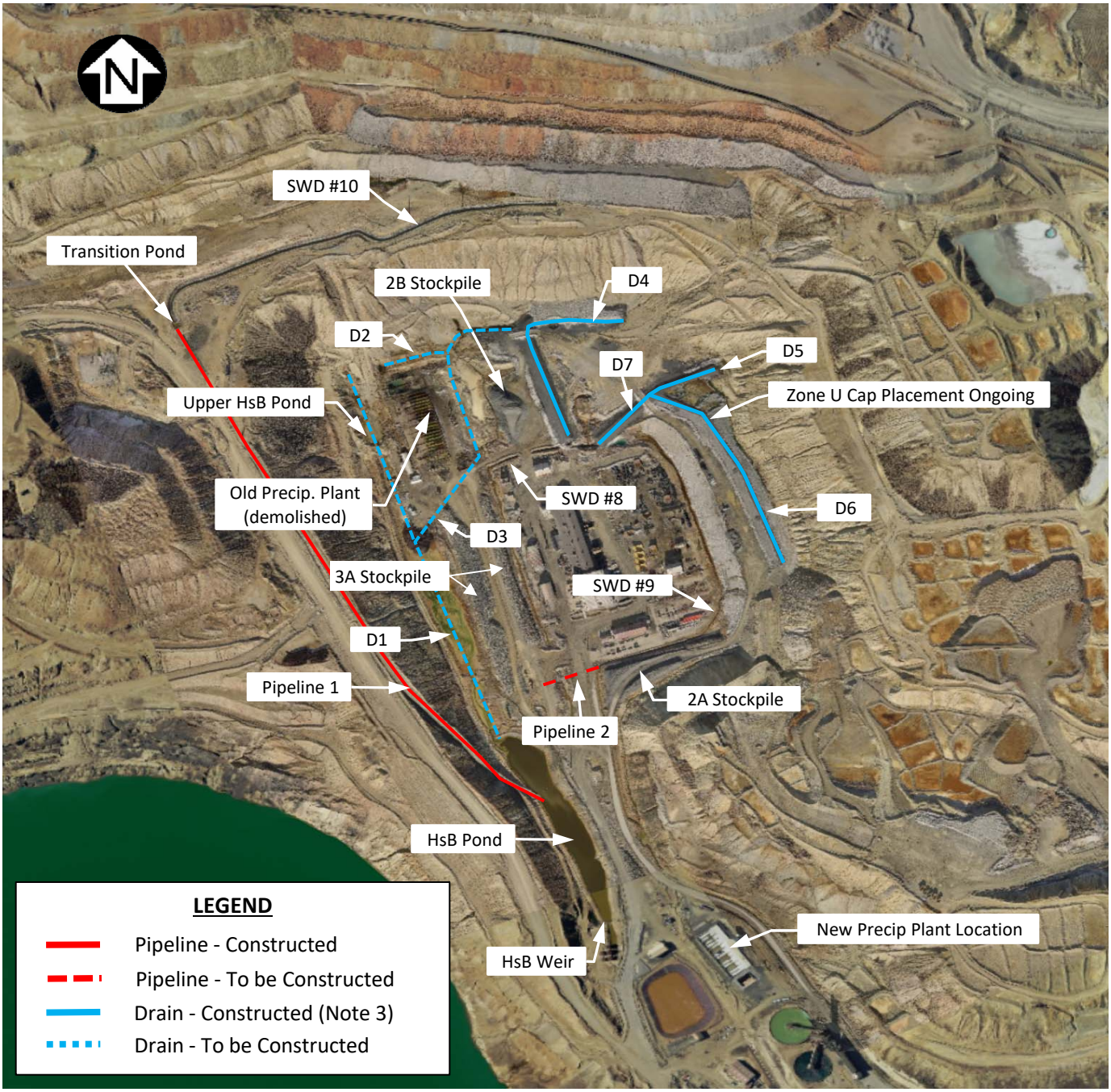
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. 4

FIGURE 3.3

REV 0



NOTES:

1. AERIAL IMAGERY PROVIDED BY WATER & ENVIRONMENTAL TECHNOLOGIES ON NOVEMBER 9, 2023.
2. CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR 2023.
3. CONSTRUCTED DRAINS ARE COMPLETED UP TO ZONE 2A CAPPING SURFACE. UF CAPPING MATERIAL PLACEMENT ONGOING.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	26JAN'24	ISSUED WITH REPORT	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 ANNUAL INSPECTION REPORT
HORSESHOE BEND
AREAS OF INTEREST

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. 4

FIGURE 3.4

REV 0

3.2 HORSESHOE BEND AREA FLOWS

The HsB area water management systems generally functioned as expected throughout the year. There were various changes made to flow routing and storage upstream of the HsB Weir to facilitate construction activities as described in Section 3.1. Quarterly summaries of water monitoring data helped inform the observations below for 2023. The Q4 water data summary will be completed in 2024 once data is available. Observations on flow conditions in the HsB area in 2023 are summarized as follows:

- Flowrates measurements at the Number 10 Seep (Seep 10) use an ultrasonic lookdown sensor to automatically measure the stilling pond level near the weir. The trend of the Seep 10 flows observed during 2023 was like the seasonal trends observed since installation of the lookdown sensor in April 2019. Lower flowrates were observed in the beginning of the year, with flows increasing during Q2 and reaching a peak throughout late Q2 and Q3 then gradually diminishing into Q4 as winter conditions set in.
- The average monthly flowrates measured at the HsB Weir through 2023 were approximately 10% lower than the average flowrates since recirculation of leach solution flows ceased in Q3 2021. The data indicate that the HsB Weir flowrates may be returning to a steady state since recirculation ceased; however, a longer period of record is required before this can be confirmed.

3.3 TAILINGS BEACH DEVELOPMENT

The tailings beach continued to be well managed in 2023 with the shortest beach length (of over 1,500 ft) typically observed at the northern end of the North-South Embankment, consistent with previous years. The tailings beach remains well drained and appears to be firm where tailings are not being actively discharged. The tailings distribution system now includes twelve full size (24 and 26-inch) discharge locations distributed along the three tailings distribution lines and numerous 12-inch discharge lines (from Lines 1 and 3) distributed along the YDTI embankments. The approximate tailings discharge locations are shown on Figures 3.1 to 3.3.

The smaller diameter discharge lines are typically operated in the snow-free season to enhance beach wetting (to help limit the potential for blowing tailings) with discharge occurring at several locations along the line concurrently. This discharge strategy provides additional flexibility to maintain beach wetting in broad areas without cycling discharge locations. Beach areas can also be left exposed longer, if desirable to improve trafficability for application of dust suppressants (e.g. magnesium chloride) using MR's track mounted Terramac units.

Field observations from the field reviews, annual inspection, instrumentation data, and remote sensing techniques continue to indicate that the tailings beaches are being developed in a manner consistent with the key performance objectives for the impoundment. The supernatant pond remains separated from the embankments by large tailings beaches, and the tailings beaches remain well drained adjacent to the embankments.

3.4 SUPERNATANT POND

The results of the annual bathymetric survey and assessment of the YDTI supernatant pond volume undertaken in 2023 are presented in Table 3.1 along with data from the last five years. The MR summary of the bathymetric survey (MR, 2023) is included in Appendix D. Results of the evaluation indicate an

estimated pond volume of approximately 17,100 acre-ft, which corresponds to a 4,300 acre-ft decrease in the pond volume compared to the previous bathymetric survey conducted in 2022. The annual survey also indicated a very minimal (~ 2 ft) increase in the supernatant pond elevation over the same period and a decrease in estimated pond area by approximately 36 acres.

Table 3.1 Bathymetry Survey Results

Attribute	Year 2023	Year 2022	Year 2021	Year 2020	Year 2019
Methodology	2023 June Composite	2022 June Composite	2021 June Composite	2020 June Composite	2019 June Composite
Pond Area	446 acres	482 acres	547 acres	613 acres	774 acres
Tailings Area	1,106 acres	1,043 acres	971 acres	918 acres	727 acres
Total Impoundment Area	1,552 acres	1,524 acres	1,518 acres	1,531 acres	1,501 acres
Pond Volume	17,121 acre-ft	21,444 acre-ft	27,163 acre-ft	32,084 acre-ft	34,392 acre-ft
Avg. Water Depth	35.4 ft	48.0 ft	68.6 ft	56.2 ft	41.1 ft
Max Water Depth	106.5 ft	92.3 ft	110.5 ft	112.7 ft	112.0 ft
Min Water Depth	1.3 ft	1.3 ft	9.0 ft	2.4 ft	2.8 ft
Measured Water Elevation	6,361.4 ft	6,359.5 ft	6,360.6 ft	6,360.3 ft	6,357.9 ft
Data Points Used	25,376	29,295	22,801	24,509	23,562

Note(s):

1. Bathymetry results and pond volume estimate provided by MR (MR, 2023).
2. Survey completed from July 10 to 12, 2023.

MR continues to monitor the supernatant pond elevation and manually measures the elevation monthly. The pond elevation at the time of the annual inspection site visit was approximately EL. 6,359.2 ft (KP, 2023h), which was a decrease of 2 ft since the annual bathymetric survey. The rate of change of the supernatant pond elevation year over year has been affected by the ongoing discharge of water off-site via the Polishing Plant. The Polishing Plant has been operated regularly since being commissioned in September 2019 and has resulted in gradual reduction in pond volume and a relatively steady pond elevation over the past four years.

3.5 QUANTITATIVE PERFORMANCE PARAMETERS

3.5.1 GENERAL

The ongoing development and operation of the YDTI considers continuously achieving four key performance objectives as fundamental requirements for maintaining consistency with the design of the facility. These objectives incorporate the following:

- The YDTI supernatant pond remains separated from the embankments by large tailings beaches.
- The embankments and adjacent tailings beaches remain well drained, and piezometric elevations within the embankments remain below prescribed levels.
- Sufficient freeboard is maintained at all times to manage risks associated with extreme floods and seismic events.

- The embankment geometry, including downstream slope angle and crest width, remains consistent with the design criteria.

QPPs were selected during development of the TOMS Manual (MR/KP, 2022; MR/KP, 2023) to enable a high-level comparative assessment with the performance objectives listed above. The QPPs from the TOMS Manual, included in Table 3.2 of this report for reference, are intended to be a good reference to quickly assess the performance of the YDTI. Several piezometric QPPs were discontinued during 2023 due to malfunctioning/damaged sensors (at DH15-S5, MW12-05, DH18-S1, and DH18-S2), which generally resulted from ongoing embankment construction. Determination of alternative sensors to assign QPPs and reinstallation of critical instrumentation (if alternatives are unavailable) will occur in 2024.

Table 3.2 Quantitative Performance Parameters

Location	QPP	Value
YDTI Supernatant Pond	Total Freeboard	> 22 ft
YDTI Tailings Beach	Minimum beach length	> 200 ft
YDTI Embankments	Downstream Overall Slope	No steeper than 2H:1V
	Minimum Crest Width	> 200 ft
East-West Embankment Piezometers	Water level: MW94-08	< 5,680 ft
	Water level: MW94-11	< 5,693 ft
	Water level: DH15-S3 VW1	< 5,690 ft
	Water level: DH15-S4 VW1	< 5,740 ft
	Water level: DH15-S4 VW2	< 5,800 ft
	~~Water level: DH15-S5 VW2~~	~~< 5,890 ft~~ (2)
	Water level: DH17-S1 VW2	< 5,741 ft
	Water level: DH18-S3 VW3	< 6,044 ft
	Water level: DH19-S7-VW1	< 5,770 ft
North-South Embankment Piezometers	Water level: MW12-01	< 5,940 ft
	~~Water level: MW12-05~~	~~< 6,200 ft~~ (3)
	~~Water level: DH18-S1 VW2~~	~~< 6,010 ft~~ (4)
	~~Water level: DH18-S2 VW2~~	~~< 6,029 ft~~ (4)
West Embankment Piezometers	Water level: VWP-DP1	< 6,374 ft
	Water level: VWP-DP2	< 6,366 ft
	Water level: DH15-12 VW1	< 6,372 ft
	Water level: DH15-12 VW2	< 6,372 ft
	Water level: DH15-12 VW3	< 6,372 ft

Note(s):

1. Table 3.2 above reproduced and updated from Table 5.1 of the Tailings Operations, Maintenance and Surveillance (TOMS) Manual (MR/KP, 2022).
2. Sensor DH15-S5 VW2 was activated as a QPP sensor on October 3, 2022, with a trigger elevation set at 5,890 ft to replace DH15-S5 VW1, which was damaged during a collar raise. Sensor DH15-S5 VW2 was determined to be damaged beyond repair in Q3 2023 and will be replaced with an alternative sensor (installed during the 2023 drilling program) in 2024 once baseline readings have stabilized.
3. The sensor installed at MW12-05 stopped recording data in August 2023 and was abandoned.
4. Sensors DH18-S1 VW2 and DH18-S2 VW2 were determined to be damaged beyond repair by embankment construction during 2023 and will be prioritized for replacement in the 2024 drilling program.

3.5.2 PIEZOMETRIC

No piezometric trigger elevation exceedances were observed at QPP monitoring sites during 2023. Monitoring findings for QPP and select non-QPP piezometric monitoring sites were reviewed weekly by KP and were formally documented in quarterly instrumentation letters during 2023. The Q4 quarterly piezometric and deformation monitoring summary will be completed in 2024 with additional analysis and discussion presented later in 2024 in the DAR. A discussion of key piezometric trends and conditions monitored during 2023 is provided in Section 4.2.

3.5.3 GEOMETRIC

The geometry of the YDTI embankments was reviewed during site visits and confirmed based on the survey information provided periodically by MR. The geometric properties related to the QPPs defined in Table 3.2 can be summarized as:

- **Total Freeboard**: Construction of the EL. 6,450 ft lift of the embankment was substantially completed in 2023. The lowest point on the embankment crest is currently located along the northern end of North-South Embankment between Section 50+00N and Rampart Mountain where fill placement has been deferred. Continued embankment construction in this deferred fill placement area will be completed progressively in 10 ft lifts to maintain the minimum YDTI freeboard requirements. The minimum freeboard observed during 2023 (approximately 35 ft, between the pond and deferred placement area) exceeds the required 22 ft, confirming that freeboard allowances were maintained throughout 2023.
- **Minimum Beach Length:** The shortest tailings beach length continues to be typically observed at the northern end of the North-South Embankment. The tailings beach length is reviewed on a semi-monthly basis and was consistently estimated to be approximately 1,500 ft at this location throughout 2023. This is more than the minimum beach length of 200 ft set out in the QPPs.
- **Downstream Overall Slope:** The downstream slope geometry has continued to be developed by incorporating 50 to 70 ft wide benches between successive 50 to 100 ft high angle of repose rockfill slopes along the embankment. This configuration has resulted in overall downstream slopes of approximately 2H:1V or flatter, consistent with the QPP for downstream overall slopes to be no steeper than 2H:1V.
- **Minimum Crest Width:** The minimum crest width is required at the embankment freeboard compliance elevation (EL. 6,385 ft for 2023), which is based on the maximum annual YDTI pond elevation (EL. 6,363 ft) plus the 22 ft of freeboard requirement. The crest width along the entirety of the YDTI embankment is more than the minimum crest width QPP of 200 ft.

4.0 DISCUSSION OF IMPORTANT TRENDS

4.1 GENERAL

The design, construction, operation, and maintenance of the YDTI involves a multidisciplinary team of professionals. The team works closely together to achieve the fundamental objective of ongoing continuous improvement of the safety of the impoundment. Continuing construction and operation of the YDTI is informed by periodic risk assessments of the facility (KP, 2018b; KP, 2023p). The risk assessments were used to identify operating enhancements that could provide further opportunities for risk mitigation, and these enhancements continue to be progressively implemented at the YDTI, taking advantage of the best practicable technologies and techniques to enhance dam safety. The following sections describe embankment performance for the year (high-level piezometric and deformation trends) and risk mitigations implemented or currently in-progress at the YDTI.

4.2 EMBANKMENT PERFORMANCE MONITORING

4.2.1 EMBANKMENT PIEZOMETRIC TRENDS

The conceptual hydrogeological model for the YDTI embankments presented in the Site Characterization Report (KP, 2017) suggests that a basal saturated zone exists within the bottom 50 to 200 ft of embankment rockfill and that isolated perched saturated zones are present within the overlying rockfill. Site investigation programs completed since 2016 and piezometric data collected continue to refine and corroborate this conceptual hydrogeological model. Pore water pressure trends associated with both tailings discharge and embankment construction continue to be observed by the monitoring instrumentation.

No piezometric trigger elevation exceedances were observed at QPP monitoring sites during 2023. Detailed analysis of pore water pressure trends from 2023 will be presented in a Data Analysis Report (DAR) to be issued in early 2024, and key trends have been discussed in the quarterly instrumentation letters as part of the dam safety monitoring programs. Key piezometric trends monitored during 2023 for the YDTI embankment and tailings mass are summarized below. The Q3 2023 Quarterly Piezometric and Deformation Monitoring Update (KP, 2023e) is included as Appendix E for additional details.

Piezometric conditions within the East-West Embankment have generally continued to decrease slightly or remained stable in 2023, continuing the long-term trends observed since late-2016. Influence from construction (fluctuating water levels) was observed at two sites in a perched saturated zone within or in proximity to the historical 1982 embankment lift. No significant increases were observed in the basal saturated zone following substantial completion of EL. 6,450 ft embankment construction.

Piezometric conditions within the North-South Embankment were relatively stable or increased slightly with some fluctuations observed throughout 2023. The behavior is interpreted to be associated with alluvial placement along the upstream slope of the North-South Embankment and/or related to local tailings discharge. Several pore pressure monitoring instruments along the North-South Embankment (at DH18-S1, DH18-S2, and MW12-05) were damaged by embankment construction in 2023, and available monitoring data is therefore limited for the second half of 2023. Two of these instruments will be prioritized for replacement in 2024.

Slightly increasing pore pressures were observed within the West Embankment and WED in 2023 that are attributed to active tailings discharge from the 12-inch lines in this area, which is inferred to result in more tailings slurry water infiltrating into the tailings beach and embankment than when the full-size tailings discharge points are operated. Pore water pressures remain well below their prescribed QPP trigger thresholds.

Pore water pressure instrumentation installed within the tailings mass monitored mixed piezometric responses during 2023 that were consistent with expectations. The piezometric responses were generally inferred to be associated with tailings deposition practices. Sensors located in proximity to active tailings discharges generally monitored increasing pore pressure conditions. Stable or decreasing pore pressure conditions were typically observed during periods of discharge inactivity.

4.2.2 EMBANKMENT DEFORMATION TRENDS

KP and MR monitored embankment surface and subsurface deformations throughout 2023 to characterize deformation conditions and monitor elevated deformations associated with ongoing embankment construction. Deformation monitoring relies on both in-situ instrumentation and remote sensing techniques as described in Section 2.2.5. Key deformation monitoring findings from 2023 include:

- Deformation rates throughout the East-West and North-South Embankment remain slightly elevated following construction of the EL. 6,450 ft lift but continued to slow with time and are approaching pre-construction (June 2021) rates.
- Findings do not indicate the development of unexpected deformations within the downstream embankment slope nor evidence of progressive (accelerating) deformations following construction.

Detailed analyses of deformation trends have been included in the 2023 quarterly instrumentation and monitoring letters and in construction monitoring data reviews. Details are available in the supplemental construction monitoring close-out letter (KP, 2023l) included as Appendix C and the Q3 2023 Quarterly Piezometric and Deformation Monitoring Update (KP, 2023e) included as Appendix E. Detailed analysis of 2023 trends and conditions will be included in the 2023 DAR when it is prepared in early 2024.

4.3 2018 RISK ASSESSMENT AND ASSOCIATED MITIGATIONS

4.3.1 GENERAL

A risk assessment (KP, 2018b) was undertaken during preparation of the design document associated with continued construction of the embankments to a crest elevation of 6,450 ft. Many risk mitigation measures were incorporated into the design and operating procedures of the YDTI between 2015 and 2022, and these measures were previously described in the 2022 AIR (KP, 2023a).

This risk assessment also identified opportunities to utilize the observational method during ongoing development of the facility, which was noted to be particularly relevant for the transitional period between implementing the modifications to the tailings distribution system and achieving a new steady-state condition associated with the revised discharge strategy. There was uncertainty identified due to the reliance on modelling predictions related to tailings beach development and water balance modelling, and foreseeable deviations were considered along with the planned observational monitoring related to several factors, including tailings beach development and water inventory changes. The trends related to these

factors are regularly discussed in the quarterly and annual surveillance reporting, and a status update related to each is provided briefly below.

4.3.2 TAILINGS BEACH DEVELOPMENT

Beach development continues to be reviewed frequently to inform design and operating enhancements that could provide further opportunities for risk mitigation. Adjustments to the tailings distribution system were recommended during the last several annual inspections and changes were progressively implemented by MR. The tailings distribution system now includes twelve full size (24 and 26-inch) discharge locations distributed along the three tailings distribution lines and numerous 12-inch discharge lines (from Lines 1 and 3) distributed along the YDTI embankments. The system provides appropriate flexibility and redundancy for tailings beach development and management.

The 2022 AIR included a recommendation (#2) to extend Line 2 to allow discharge at location NS-1 and NS-2 when the EL. 6,450 ft raise of the embankment is complete adjacent to these discharge locations. The addition of a new discharge point between EW-1 and NS-1 was also recommended when relocating the tailings delivery pipelines. MR added full size and 12-inch discharge lines along the Central Pedestal Area between EW-1 and NS-1 in 2023. The discharges were added along Line 3 instead of Line 2, but the changes satisfy the intent of the recommendation. There may still be value in extending Line 2 to allow discharge along the North-South Embankment to improve operational flexibility; however, this change can be deferred and considered in the future once operational flexibility of the recently altered system is better understood.

4.3.3 WATER INVENTORY MANAGEMENT

The YDTI supernatant pond provides a source of water to support continuous mill operations and the elevation of the pond surface typically rises as the volume of tailings in the facility increases. The 2018 risk assessment (KP, 2018b) identified that reducing the normal operating pond volume towards a target volume of approximately 15,000 acre-ft would reduce risks associated with facility performance following natural flooding. MR implemented changes to the Silver Lake Water Supply (SLWS) use practices in 2016 and 2017 as part of the goal of gradually reducing the operating pond volume and substantially reduced freshwater and make-up water demands for ore processing. MR and KP recognized that changing SLWS practices was an achievable way to influence the water inventory in the YDTI and that other opportunities existed to further reduce water stored within the facility.

Ongoing reduced use of the SLWS (as practicable) along with the commissioning of the Polishing Plant in 2019 has resulted in a notable impact on the supernatant pond volume in recent years. The Polishing Plant has been operated regularly since being commissioned in September 2019 and has resulted in gradual reduction in pond volume over the past several years. Annual bathymetric surveys in 2020, 2021, and 2022 confirmed the progressive reduction in YDTI pond volume. Results of the bathymetric evaluations in 2019 and 2023 indicate an estimated pond volume reduction of over 17,000 acre-ft between mid-2019 and mid-2023, resulting in an estimated pond volume of approximately 17,100 acre-ft in mid-2023 following the spring melt (corresponding to pond volume reduction of 50% since mid-2019). The supernatant pond elevation decreased by approximately 2 ft between the bathymetric survey in July 2023 and the annual inspection, which is equivalent to an estimated additional reduction in pond volume of 900 acre-ft over that period.

The supernatant pond elevation fluctuated within a range of approximately 6 ft during 2023, with a rising pond elevation during Q2 associated with meltwater and spring precipitation and decreasing pond elevation thereafter associated with warmer summer weather and operation of the Polishing Plant. An elevation change of 6 ft is equivalent to approximately 2,700 acre-ft (for a pond area of 450 acres), providing an estimate of the seasonal fluctuation of the pond volume observed in 2023. This indicates that the estimated pond volume in mid-2023 was within the normal seasonal fluctuations of the recommended target level of approximately 15,000 acre-ft. Reaching this target level is recognized as a significant risk reduction achievement.

The corrective actions related to this recommendation were therefore completed in 2023. A revised recommendation related to maintaining water inventory within a target range will be included in the 2023 AIR recommendations.

4.4 2022 RISK ASSESSMENT AND ASSOCIATED MITIGATIONS

4.4.1 GENERAL

An updated risk assessment was conducted in 2022 while focusing on near-term operating conditions with the embankments raised to a crest elevation of EL. 6,450 ft and considering continued operations through approximately 2031 (KP, 2023p). The results of the risk assessment indicated that current normal operating conditions have low risk. The main hazards of concern identified were extreme earthquakes and floods, which have a very low likelihood of occurring. However, these events also have the potential to result in severe consequences. The guiding risk management objective for the YDTI is to continuously expand understanding of the facility and continuously improve management of the facility to enhance safety to the MR workforce, community, and environment. The mitigation measures developed by the risk assessment team were focused on mitigating the likelihood and potential consequences of failure related to low-probability, major hazards such as severe earthquakes and flooding. These mitigation measures will also further enhance safety during normal operating conditions, which already have low risk. The recommendations included actions to enhance stability of the facility, to relocate infrastructure, review and update emergency planning, and to further investigation potential significant areas of uncertainty that could influence dam safety decision making in the future.

The following site-specific mitigation opportunities (and implementation status) for the YDTI were discussed and evaluated during the risk assessment:

- Continued pond inventory management (on-going)
- On-site Containment Project (completed)
- HsB RDS (buttress) (in progress; ongoing)
- North-South Embankment slope flattening and North RDS (in progress; ongoing)
- Truck shop relocation (planning phase; not yet implemented)
- Phase site investigation objectives, including:
    - On-going annual site investigation programs within 5-Year plan framework (2023 annual objectives completed)
    - Accelerated investigation of historical leach areas (planning phase; not yet implemented)

Details related to these mitigations are reported in the 2022 Risk Assessment Report (KP, 2023p). A summary of mitigations implemented or in-progress during 2023 is provided in the sections that follow.

4.4.2 CONTINUED POND INVENTORY MANAGEMENT

The previous risk assessment for the YDTI (KP, 2018b) identified that reducing the normal operating pond volume towards a target volume of approximately 15,000 acre-ft would substantially reduce risks associated with facility performance following natural flooding. The continued reduction in the normal operating pond volume was considered an important ongoing mitigation in the 2022 Risk Assessment. The approximate target volume was achieved in 2023 as described in Section 4.2.3. The water inventory in the YDTI supernatant pond should continue to be managed around the target volume of approximately 15,000 acre-ft (+/- 3,000 acre-ft for seasonal fluctuations). This will be included as a recommendation in this report, and performance against this objective will be evaluated throughout the coming year.

4.4.3 ON-SITE CONTAINMENT PROJECT

The On-Site Containment Project involved raising a haul road and haul truck parking lot as a deflection berm in a corridor of relatively low-lying infrastructure between the Pittsmont Dump and the Continental Pit and adjusting haul road grading towards the YDTI. These actions together result in topography that was suitable to direct hypothetical modelled breach flows toward the Continental and Berkeley Pits. The project was completed during 2023.

4.4.4 STAGE 1 HSB RDS (BUTTRESS)

The Stage 1 HsB RDS involves progressive placement of approximately 20 million tons of excess rockfill generating during mining of the Continental Pit to enhance embankment stability along the maximum section of the embankment over the next several years. Construction of the Stage 1 drainage system was in-progress throughout 2023. Most of the drainage infrastructure was completed on the eastern side of the HsB area in 2023, and construction is ongoing in the center and western sides. It is anticipated that bulk rockfill placement in the HsB RDS will commence in 2024.

4.4.5 NORTH-SOUTH EMBANKMENT SLOPE FLATTENING AND NORTH RDS

This mitigation involves incorporation of flatter overall slope angles and progressive development of the previously permitted North RDS downstream of the North-South Embankment as rockfill becomes available from mining. The North RDS is planned to be developed to progressively surcharge the historically leach materials in this area and ultimately infill the area downstream of the majority of the North-South Embankment between the embankment and the Rampart Mountain to a similar elevation as the embankment.

Initial development of the North RDS includes construction of a new mine haul ramp to the corner of the EL. 6,450 lift of the embankment and additional downstream buttressing along the North-South Embankment with overall slope angles of approximately 3H:1V. Development commenced in 2023 with placement of the EL. 6,150 ft lift as indicated previously on Figure 3.3.

4.4.6 PHASED SITE INVESTIGATION

The annual site investigation and instrumentation installation program was completed between July and December 2023. The program included completion of four drillholes totalling over 2400 ft of drilling. The drillholes were completed along Sections 8+00W and 0+00 (2 each) with the following objectives:

- Two drillholes (DH23-S1 and DH23-S4) were advanced from the embankment crest to the natural foundation materials to replace critical piezometric monitoring infrastructure damaged during construction of the EL. 6,450 ft lift of the embankment. Installation of 8 nested VWPs was completed at each drillhole in these locations.
- One drillhole (DH23-S3) was advanced along Section 8+00W from a bench above the Seep 10 bench to investigated geotechnical and hydrogeological conditions near the upstream toe of the historical downstream starter embankment. Installation of 7 nested VWPs was completed for monitoring of pore pressure conditions in this area of the embankment.
- One drillhole (DH23-S2) was advanced along Section 0+00 from a mid-slope EL. 6,150 ft bench. Thirteen (13) multi-point and nested VWPs were installed with a settlement-protected inclinometer for monitoring of pore pressure conditions and subsurface deformations in this area of the embankment.

5.0 RECOMMENDATIONS AND ACTIONS

5.1 2022 RECOMMENDATIONS AND ACTIONS

KP identified the recommendations below in the 2022 AIR for consideration in 2023. MR issued a Corrective Action Plan (CAP) in response to the 2022 AIR recommendations on January 20, 2023, which is included as Appendix F. The CAP identified the actions proposed or already in-progress to address the four recommendations. MR completed the proposed corrective actions for recommendations 1, 2, and 4, and partially completed the corrective actions related to recommendation 3 (which were expected to extend into 2024).

The MR actions completed in 2023 to address each of the 2022 recommendations were as follows:

1. *Maintain reductions in freshwater use from the Silver Lake Water System to the extent reasonably practicable and continue the Pilot Project to incrementally reduce the water inventory in the YDTI supernatant pond towards the target of approximately 15,000 acre-ft (continuation of 2021 recommendation).*

COMPLETED. MR continued to operate with reduced freshwater and make-up water from the SLWS. The Polishing Plant has continued to operate since being commissioned on September 30, 2019, and has resulted in a supernatant pond volume of approximately 17,100 acre-ft as of mid-July 2023, which is within the estimated normal seasonal fluctuations of the recommended target level of approximately 15,000 acre-ft. Reaching this target level is recognized as a significant risk reduction achievement. The corrective actions related to this recommendation were therefore completed in 2023. A revised recommendation related to maintaining water inventory within a target range will be included in the 2023 AIR recommendations.

2. *Modify the tailings distribution system by extending Line 2 to allow discharge at location Discharge 3-2 (NS-1) and add a discharge location between the current locations of Discharge 3-1 (EW-1) and Discharge 3-2 (NS-1) when the EL. 6,450 ft raise of the embankment is completed. Use of 12-inch discharge lines along the extension of Line 2 to location Discharge 3-2 (NS-1) would satisfy the recommendation (continuation of 2021 recommendation).*

COMPLETED. Additional discharge locations, including several 12-inch discharges, were added along the embankment between discharge locations EW-1 and NS-1 as recommended in the 2022 AIR. The discharges were added along Line 3 instead of Line 2, but the changes satisfy the intent of the recommendation.

3. *Regrade the upstream slope of the embankment during relocation of the tailings delivery pipelines (Lines 2 and 3) to the tailings pipeline corridor for the EL. 6,450 ft lift. Regrade the embankment upstream slope to cover and incorporate the tailings pipeline bench along the EL. 6,400 ft lift. Implement the alluvium facing layer between the crest of the pipeline corridor along the EL. 6,450 ft lift and the upstream alluvial facing of the EL. 6,400 ft lift along the regraded upstream slope prior to cutting off access with placement of the tailings pipelines. The intent is to create a continuous layer of alluvium between the EL. 6,450 pipeline corridor and the alluvium facing previously placed as part of the EL. 6,400 ft lift construction. This recommendation applies to the portion of the East-West Embankment in the Central Pedestal Area to the east of approximately Section 23+00NW (Discharge location EW-1) and the entire North-South Embankment.*

PARTIALLY COMPLETED/ONGOING. The upstream slope of the embankment between approximately Section 23+00NW and 28+00N was regraded and alluvium facing placed along the regraded slope Q1/Q2 2023. Regrading and alluvial facing work was paused in Q2 to reconnect the tailings distribution lines to control potential fugitive dust emissions, and the remaining work is scheduled to be completed in the first half of 2024.

4. *Develop and implement a new system to collect flows along the Seep 10 bench and convey these flows to the HsB Pond (continuation of 2021 recommendation).*

COMPLETED. MR completed construction of the Seep 10 drainage works in 2023. The new system is operational.

5.2 2023 RECOMMENDATIONS

The YDTI continues to be developed and operated in a manner consistent with the designs, the QPPs, and the operating protocols established for the facility. The EOR has identified the following recommendations for consideration in 2024 based on a review of the information collected and conditions observed in 2023:

1. **Manage freshwater use from the Silver Lake Water System and operation of the Polishing Plant to maintain the water inventory in the YDTI supernatant pond around the target volume of approximately 15,000 acre-ft (+/- 3,000 acre-ft). Assess if this normal operating target range (12,000 acre-ft to 18,000 acre-ft) can be maintained without adverse impacts to ongoing mine operations.**
2. **Continue regrading the upstream slope of the North-South Embankment during construction of the tailings pipeline corridor for the EL. 6,450 ft lift. Initial regrading activities were undertaken in 2023 as a result of the 2022 EOR AIR recommendations. Regrade the embankment upstream slope to cover and incorporate the tailings pipeline discharge corridor along the EL. 6,400 ft lift. Implement the alluvium facing layer between the crest of the tailings pipeline corridor along the EL. 6,450 ft lift and the upstream alluvial facing of the EL. 6,400 ft lift along the regraded upstream slope. The intent is to create a continuous layer of alluvium between the EL. 6,450 tailings pipeline corridor and the alluvium facing previously placed as part of EL. 6,400 ft lift construction. This recommendation applies to the remaining portion of the North-South Embankment between Section 28+00N and the abutment at Rampart Mountain. (continuation of 2022 recommendation).**
3. **Regrade the upstream slope of East-West Embankment between approximately Sections 33+00NW (Discharge 2-1) and 23+00NW from the tailing discharge corridor to the tailings beach surface to mitigate the differential settlement cracking currently observed along the tailings discharge corridor in this area. Tie in the regraded slope neatly with the upstream embankment slope east of Section 23+00NW. Reapply alluvium facing with a minimum nominal thickness of 3 ft to the regraded slope in this area to enhance continuity of the upstream alluvium facing layer along the center part of the dam.**

6.0 REFERENCES

Knight Piésold Ltd. (KP, 2017). Yankee Doodle Tailings Impoundment – Site Characterization Report (KP Reference No. VA101-126/14-2 Rev 2), dated August 11, 2011.

Knight Piésold Ltd. (KP, 2018a) Yankee Doodle Tailings Impoundment – Construction Management Plan (KP Reference No. VA101-126/12-5 Rev. 3), dated May 1, 2018.

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Knight Piésold Ltd. (KP, 2023c). Q1 2023 – YDTI Quarterly Piezometric and Deformation Monitoring Update (KP Reference No. VA23-00701), dated June 2, 2023.

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Knight Piésold Ltd. (KP, 2023f). Q1 2023 – YDTI Quarterly Water Data Summary (KP Reference No. VA23-00585), dated June 5, 2023.

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Knight Piésold Ltd. (KP, 2023k). Q3 2023 Construction and Field Review Summary (KP Reference No. VA23-01580), dated December 20, 2023.

Knight Piésold Ltd. (KP, 2023l). Completion of YDTI Construction Monitoring Program Following Construction of EL. 6,450 ft Lift (KP Reference No. VA23-00773), dated September 22, 2023.

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Knight Piésold Ltd. (KP, 2023n). Memorandum: YDTI EL. 6,450 ft Embankment Deferred Zone U (KP Reference No. VA22-02293), dated February 15, 2023.

Knight Piésold Ltd. (KP, 2023o). Memorandum: Response to RFI 027 (KP Reference No. VA23-00107), dated February 15, 2023.

Knight Piésold Ltd. (KP, 2023p) Yankee Doodle Tailings Impoundment – 2022 Risk Assessment Report (KP Reference No. VA101-126/27-1 Rev. 0), dated July 7, 2023.

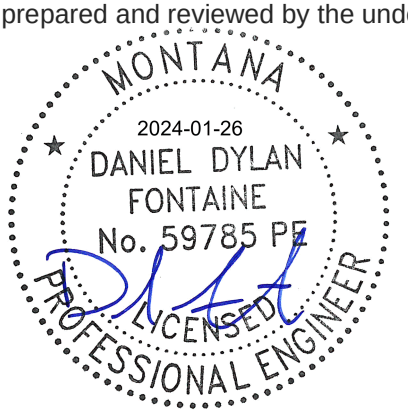
Montana Resources and Knight Piésold Ltd. (MR/KP, 2022). Yankee Doodle Tailings Impoundment – Tailings Operations, Maintenance and Surveillance (TOMS) Manual, Rev 5, January 12, 2022.

Montana Resources and Knight Piésold Ltd. (MR/KP, 2023). Yankee Doodle Tailings Impoundment – Tailings Operations, Maintenance and Surveillance (TOMS) Manual, Rev 6, December 4, 2023.

Montana Resources, LLC (MR, 2023). Bathymetric Survey - 2023, dated August 8, 2023.

7.0 CERTIFICATION

This report was prepared and reviewed by the undersigned.



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Reviewed:

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Approval that this document adheres to the Knight Piésold Quality System: DDF

APPENDIX A

Site Photos

(Pages A-1 to A-40)

2023 ANNUAL INSPECTION REPORT

AERIAL DRONE SURVEY (JUNE 2023)

PHOTO 1 – North-South Embankment downstream shell, facing north from southeast end of YDTI.

PHOTO 2 – Central Pedestal Area downstream shell, facing west.

PHOTO 3 – North RDS construction with initial haul ramp lifts, facing northeast

PHOTO 4 – North-South Embankment upstream regrading and alluvium facing completed up to approximately Section 28+00N, facing northeast.

PHOTO 5 – North-South Embankment upstream regrading remains to be completed beyond approximately Section 28+00N, facing east.

PHOTO 6 – North-South Embankment deferred fill placement area beyond approximately Section 50+00N, facing east.

PHOTO 7 – Older Reclaim Barge connected to reclaim pipeline along the EL. 6,500 ft road.

PHOTO 8 – Relocated reclaim water pipeline along the EL. 6,500 ft road.

PHOTO 9 – East-West Embankment upstream regrading and alluvium facing completed in Central Pedestal Area, facing south.

PHOTO 10 – East-West Embankment upstream side near limit of upstream regrading work at Section 23+00NW. Differential settlement cracking observed along tailings discharge corridor from Section 23+00NW to 33+00NW near the tailings discharge point (at top right corner).

PHOTO 11 – East-West Embankment downstream slope and Number 10 Seep bench area, facing north.

PHOTO 12 – Overview of Central Pedestal Area of the East-West Embankment, Seep 10 Bench, and HsB Area, facing north.

PHOTO 13 – Central Pedestal Area of the East-West Embankment, looking northeast.

PHOTO 14 – EL. 6,450 ft lift placement complete, No. 3 Booster Pump House, and East-West pipeline ramp in Central Pedestal Area of the East West Embankment, facing east.

PHOTO 15 – East-West Embankment downstream side along northwest trending limb with No. 3 Booster Pump House on right hand side, looking north.

PHOTO 16 – East-West Embankment pipeline ramp with EL. 6,450 ft lift and surcharge zone placement complete, facing northwest from east of No. 3 Booster Pump House.

PHOTO 17 – East-West Embankment upstream face at discharge location EW-1, facing south.

PHOTO 18 – East-West Embankment downstream slope along the northwest dumps area, facing northeast.

PHOTO 19 – East-West Embankment EL. 6,450 ft lift and surcharge zone, with view of adjacent tailings beach and Line 3, recently routed over the EL. 6,450 ft lift.

PHOTO 20 – East-West Embankment upstream side at discharge location EW-2, facing southwest.

PHOTO 21 –West Embankment upstream interface near Rocky Knob, with view of discharge location RK-1 and an adjacent 12-inch discharge, facing south.

PHOTO 22 – West Embankment upstream interface with view of 12-inch discharges between discharge locations RK-2 and RK-3, facing west.

PHOTO 23 – West Embankment upstream interface and discharge location RK-3, facing west.

PHOTO 24 – West Embankment with view of upstream interface and EL. 6,450 ft crest, facing south near discharge location RK-4.

PHOTO 25 – West Embankment crest and downstream shell before final grading and trimming at northern end of West Embankment, facing east.

PHOTO 26 – West Embankment downstream shell before final grading and trimming, northwest of Rocky Knob and Extraction Pond, looking northeast.

PHOTO 27 – West Embankment – organics stockpile on EL. 6,450 ft crest for use in downstream slope progressive reclamation.

PHOTO 28 – Overview of WED Extraction Pond.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 29 – Older (southern) Reclaim Barge and YDTI supernatant pond, facing west from the new reclaim water pipeline road.

PHOTO 30 – Newer (northern) Reclaim Barge, facing north

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 31 – Completed new reclaim pipeline road (left) and YDTI supernatant pond (right), facing south from northern reclaim barge.

PHOTO 32 – YDTI tailings beach and supernatant pond interface, facing west from the new reclaim pipeline road.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 33 – North-South Embankment and beach, looking west from the new reclaim water pipeline road.

PHOTO 34 – North-South Embankment northern abutment at deferred fill placement area, looking southwest from the new reclaim pipeline road.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 35 – North-South Embankment downstream slope with visible North RDS fill placement for the Mega Ramp, facing southwest.

PHOTO 36 – North-South Embankment upstream side along EL. 6,400 ft tailings discharge corridor and EL. 6,450 ft lift placement near Discharge 3-4, facing northeast.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 37 – North-South Embankment upstream side along EL. 6,400 ft tailings discharge corridor and EL. 6,450 ft lift placement near Discharge 3-4, facing southwest.

PHOTO 38 – North-South Embankment upstream side along EL. 6,450 ft tailings discharge corridor near Section 28+00N looking towards Central Pedestal Area, facing southwest.

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 39 – Central Pedestal Area final grading lift progress to the east of Section 0+00, facing south. Cross ripped area on right side of image was where transverse cracking was remediated. No crack re-expression observed.

PHOTO 40 – Central Pedestal Area final grading lift progress, looking towards Section 0+00, facing east.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 41 – East-West Embankment upstream regrading and alluvium facing completed in Central Pedestal Area, facing east from Section 23+00NW.

PHOTO 42 – East-West Embankment limit of upstream regrading and alluvium facing completed in Central Pedestal Area, facing northeast at Section 23+00NW.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 43 – East-West Embankment end of upstream regrading and alluvium facing completed in Central Pedestal Area, facing northwest at Section 23+00NW.

PHOTO 44 – East-West Embankment upstream side near limit of upstream regrading work at Section 23+00NW. Differential settlement cracking observed along tailings discharge corridor from Section 23+00NW to 33+00NW, facing southeast.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 45 – WED Extraction Pond, facing west.

PHOTO 46 – WED Extraction Pond, facing southeast.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 47 – Downstream side of West Embankment near Section 70+00W. Final grading and trimming to 3H:1V slope angle with topsoil placement completed, facing southwest.

PHOTO 48 – Downstream side of West Embankment near Section 83+00W. Final grading and trimming to 3H:1V slope angle with topsoil placement completed, facing north.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 49 –West Embankment EL. 6,450 ft lift crest near Section 95+00W, facing south.

PHOTO 50 – Downstream side of West Embankment near Section 105+00W. Final grading and trimming to 3H:1V slope angle completed with topsoil placement in progress, facing westnorth.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 51 – West Embankment upstream shell (right) and tailings beach (left) north of Rocky Knob, facing southeast from EL. 6,450 ft.

PHOTO 52 – West Embankment upstream shell (right) and tailings beach (left) by tailings discharge location RK-3, facing southeast from EL. 6,450 ft.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 53 – Northern end of West Embankment (left) and adjacent tailings beach (right) by tailings discharge location RK-4, facing northeast towards topsoil salvage area.

PHOTO 54 – Horseshoe Bend overview from East-West Embankment EL. 6,450 ft crest, facing south.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 55 – Zone UF construction progress, Holding Pond, and Surge Pond in the HsB Area, facing south from Number 10 Seep Bench.

PHOTO 56 – UF – Foundation Layer material placement adjacent to rock drain D6 in the HsB Area, facing southeast.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 57 – Rock drain D6 construction progress in the HsB Area, facing south.

PHOTO 58 – Zone 2B and UF stockpiles, Houligan Pond, Upper HsB Pond, and HsB Pond, facing southwest from Number 10 Seep Bench.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 59 – Rock drains D4 and D7 construction progress, facing south from Number 10 Seep Bench.

PHOTO 60 – Rock drain D4 construction progress in the HsB Area, facing south.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 61 – HsB area along downstream toe of East-West Embankment, facing west from recently construction rock drain D4

PHOTO 62 – Zone 2B stockpile (left) and dewatered Houligan Pond (center), facing south

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 63 – Decommissioned Precipitation Plant awaiting demolition, facing south

PHOTO 64 – Downstream embankment shell in the HsB area, facing west towards Section 8+00W prior to rock drain construction.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 65 – HsB area drainage system construction progress, facing northeast from 7% ramp.

PHOTO 66 – Upper HsB Pond prior to breaching and drain down, facing north.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 67 – HsB area below upper pond prior to demolition, salvage and pond breaching activities, facing south.

PHOTO 68 – Precipitation plant prior to demolition and salvage, facing northeast.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 69 – Horseshoe Bend Weir, facing south.

PHOTO 70 – HsB Pond with Pipeline 1 from the Seep 10 bench visible in background, facing northwest.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 71 – Pipeline 1 from the Seep 10 bench conveying flows to HsB Pond, facing southeast.

PHOTO 72 – Transition Pond, collection box, and the start of Pipeline 1 along Seep 10 bench, facing south.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 73 – Overview of Seep 10 bench surface water ditch (SWD #10), facing southwest.

PHOTO 74 – Transition Pond on Seep 10 bench at end of SWD #10, facing north.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 75 – Seep 10 bench SWD #10 conditions near Station 1+400, facing northeast.

PHOTO 76 – Seep 10 bench SWD #10 conditions near Station 0+700, facing northeast.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 77 – Seep 10 bench SWD #10 conditions near Station 0+300 at Seep 10 inflow, facing north.

PHOTO 78 – Seep 10 bench SWD #10 conditions from Station 0+000 to 0+300, facing southwest from the start of the ditch.

2023 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION PHOTOS (SEPTEMBER 28, 2023)

PHOTO 79 – Decommissioned historical Seep 10 pond, facing south.

PHOTO 80 – Scalper Road On-site Containment Project visible with Continental Pit in background, facing southeast.

APPENDIX B

Q3 2023 Construction Summary and Field Review

(Pages B-1 to B-39)

Knight Piésold CONSULTING

Management System Certified By: bsi ISO 9001 Quality Management Systems CERTIFIED FS 64925 ISO 14001 Environmental Management CERTIFIED EMS 550121 ISO 45001 Occupational Health and Safety Management CERTIFIED OHS 550122

December 20, 2023

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Dear Mark,

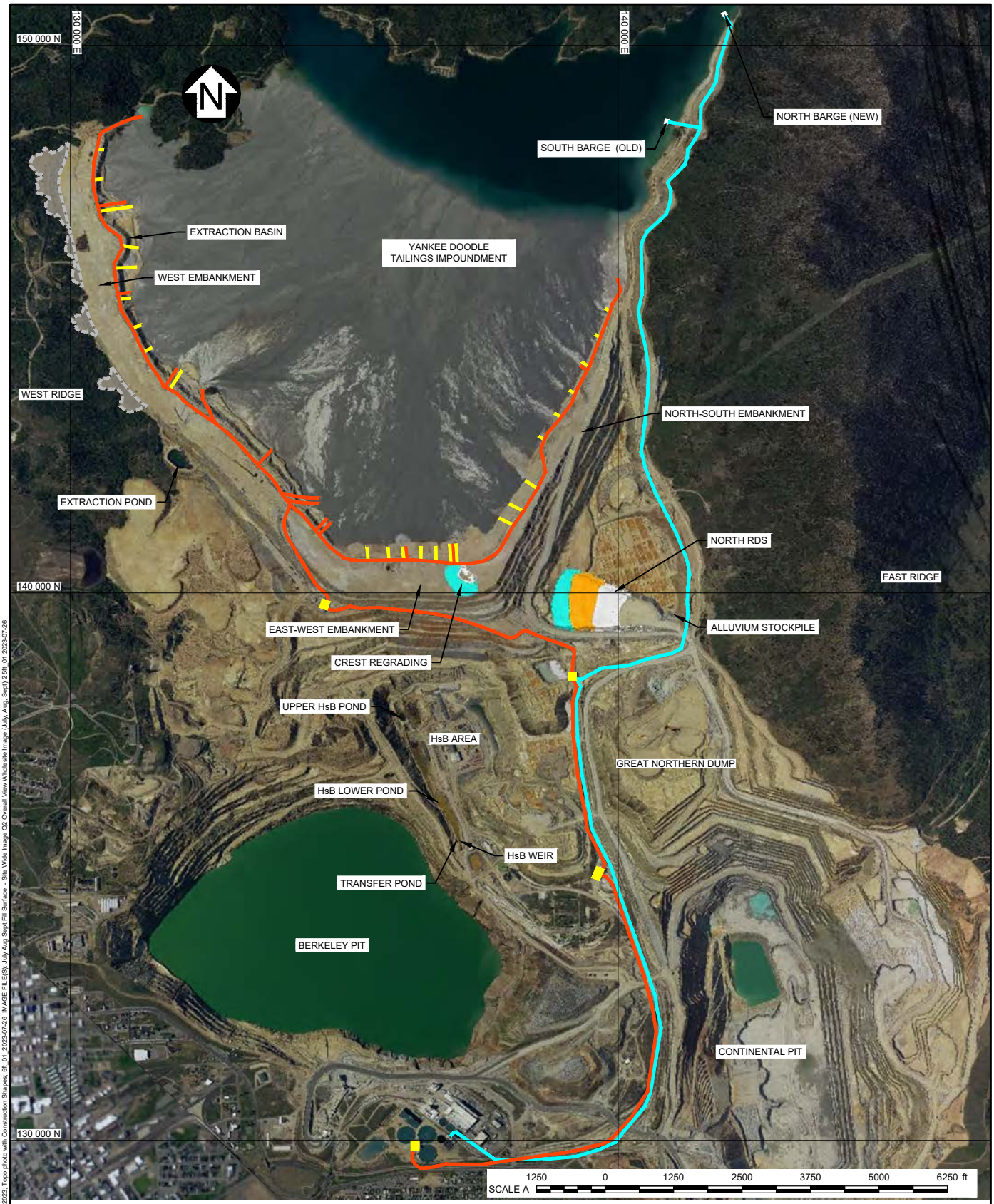
RE: Q3 2023 Construction and Field Review Summary

1.0 INTRODUCTION AND PURPOSE

This letter provides a summary of construction activities for the period of July through September 2023 (Q3) at Montana Resources and includes observations from the Q3 field review completed in August 2023. Construction activities during Q3 included the ongoing Yankee Doodle Tailings Impoundment (YDTI) embankment and North Rock Disposal Site (RDS) construction operations undertaken and supervised by Montana Resources, LLC (MR) and various foundation layer, drainage system, and water management activities in the Horseshoe Bend (HsB) area completed by Intermountain Construction Services (ICS). MR has contracted Water and Environmental Technologies (WET) to provide construction oversight and quality system management for construction of the Stage 1 HsB RDS drainage system.

The quarterly field review is intended to satisfy the Engineer's quarterly inspection frequency as outlined in the Earthworks Inspection and Test Plans in Table 3.4 of the Construction Management Plan (YDTI CMP) (KP, 2018) and Table 3.3 of the Horseshoe Bend RDS Construction Management Plan (HsB CMP) (KP, 2023a). The quarterly field review is intended to review construction progress, observe construction practices, and to provide recommendations for priority actions. The field review is a visual assessment and does not constitute supervision of construction.

Mr. Steve Reekie, P.Eng. of Knight Piésold Ltd (KP) completed the Q3 field review as a designate of the Engineer of Record (EOR) and was accompanied by Mr. Mike Harvie of the MR Mining Engineering Department. The field review was completed between August 29 and 31, 2023. A checklist providing a summary of the conditions, areas viewed, and relevant observations from the field review is included in Appendix A. A review of the tailings discharge pipeline arrangement was conducted as part of the field review and the operating conditions of each discharge location are summarized in Appendix B. The general arrangement of the YDTI outlining relevant locations discussed in this letter is presented on Figure 1.1. A photo log of site progress and conditions at the time of the Q3 field review is included in Appendix C.



NOTES:

1. COORDINATE SYSTEM AND ELEVATIONS ARE BASED ON ANACONDA MINE GRID.
2. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC ON AUGUST 2, 2023.
3. CONSTRUCTION SHAPES PROVIDED BY MONTANA RESOURCES, LLC.

LEGEND:

- JULY 2023
- AUGUST 2023
- SEPTEMBER 2023
- ZONE D2 DOWNSTREAM FACING
- 24 INCH TAILINGS PIPELINE / SPIGOTS
- RECLAIM PIPELINE
- 12 INCH SPIGOTS

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED
0	20DEC'23	ISSUED WITH LETTER	SJR	RMM	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION FIELD REVIEW GENERAL ARRANGEMENT

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-126/29	VA23-01580

FIGURE 1.1 REV 0

SAVED: M:\1\101\00126\29\A\Acad\FIGS\A08, 12/15/2023 10:57:23 AM, RMCLELLAN PRINTED: 12/20/2023 8:25:18 AM, FIG 1.1, RMCLELLAN
XREF FILE(S): Tailings Spigots and Reclaim Pipelines - September 2023; Topo photo with Construction Shapes; 5ft_01, 2023-07-26 IMAGE FILE(S): July Aug Sept Fill Surface - Site Wide Image Q2 Overall View Wholesite Image (July, Aug, Sept) 2 5ft_01 2023-07-26

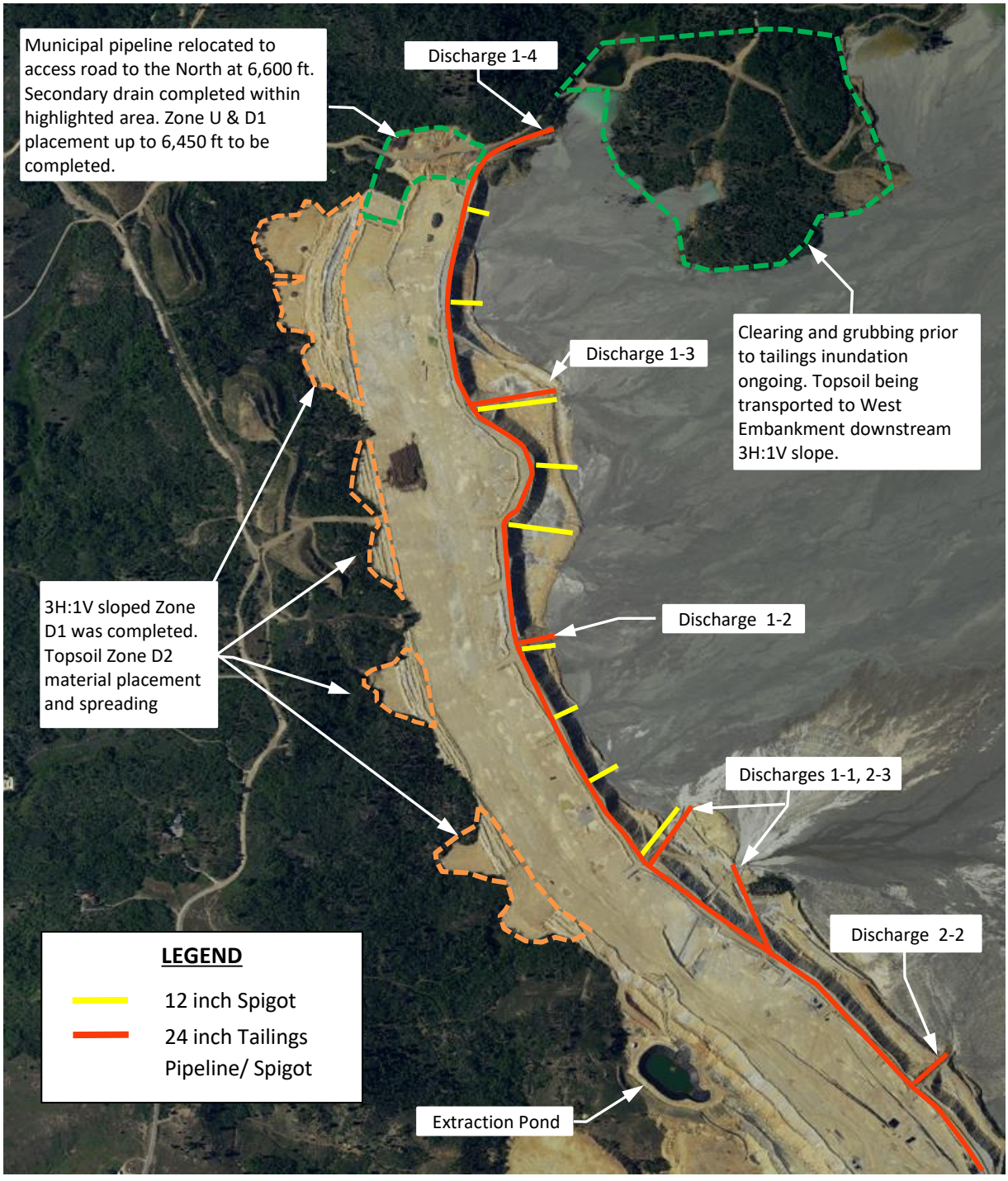
2.0 CONSTRUCTION PROGRESS AND FIELD REVIEW SUMMARY

2.1 GENERAL

The following sources were used to develop this summary:

- Information and photos collected during the Q3 field review
- YDTI weekly construction progress reports (completed by MR)
- YDTI monthly quality reports (completed by MR)
- YDTI survey and construction volume records (typically provided monthly by MR)
- Stage 1 HsB RDS drainage system quality documentation (provided by WET)
- Information and photos from additional field reviews completed during the quarter by Mr. Steve Reekie, P.Eng. and Mr. Daniel Fontaine, PE

Active construction areas and other locations of interest are shown on Figures 2.1 through 2.4 for the West Embankment, East-West Embankment, North-South Embankment, and HsB area, respectively.



NOTES:

1. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC IN AUGUST 2023.

2. CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR Q3 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	20DEC'23	ISSUED WITH LETTER	SJR	DDF

MONTANA RESOURCES, LLC

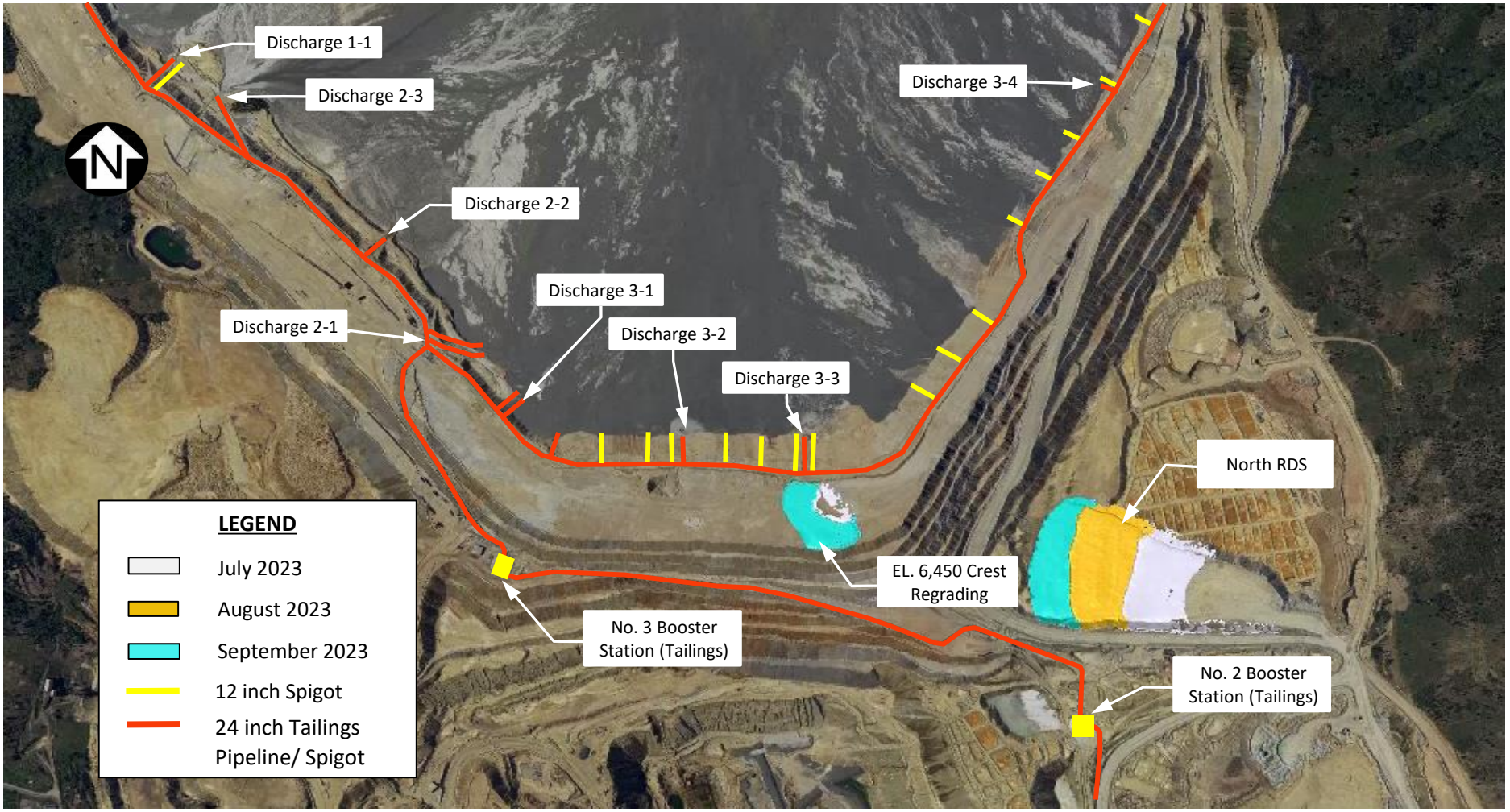
YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION SUMMARY
WEST EMBANKMENT
AREAS OF INTEREST

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-126/29	VA23-01580

FIGURE 2.1 REV 0



NOTES:

1. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC IN AUGUST 2023.

2. MONTHLY FILL SHAPES ARE PROVIDED BY MONTANA RESOURCES, LLC. OTHER CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR Q3 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	20DEC'23	ISSUED WITH LETTER	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION SUMMARY
EAST-WEST EMBANKMENT
AREAS OF INTEREST

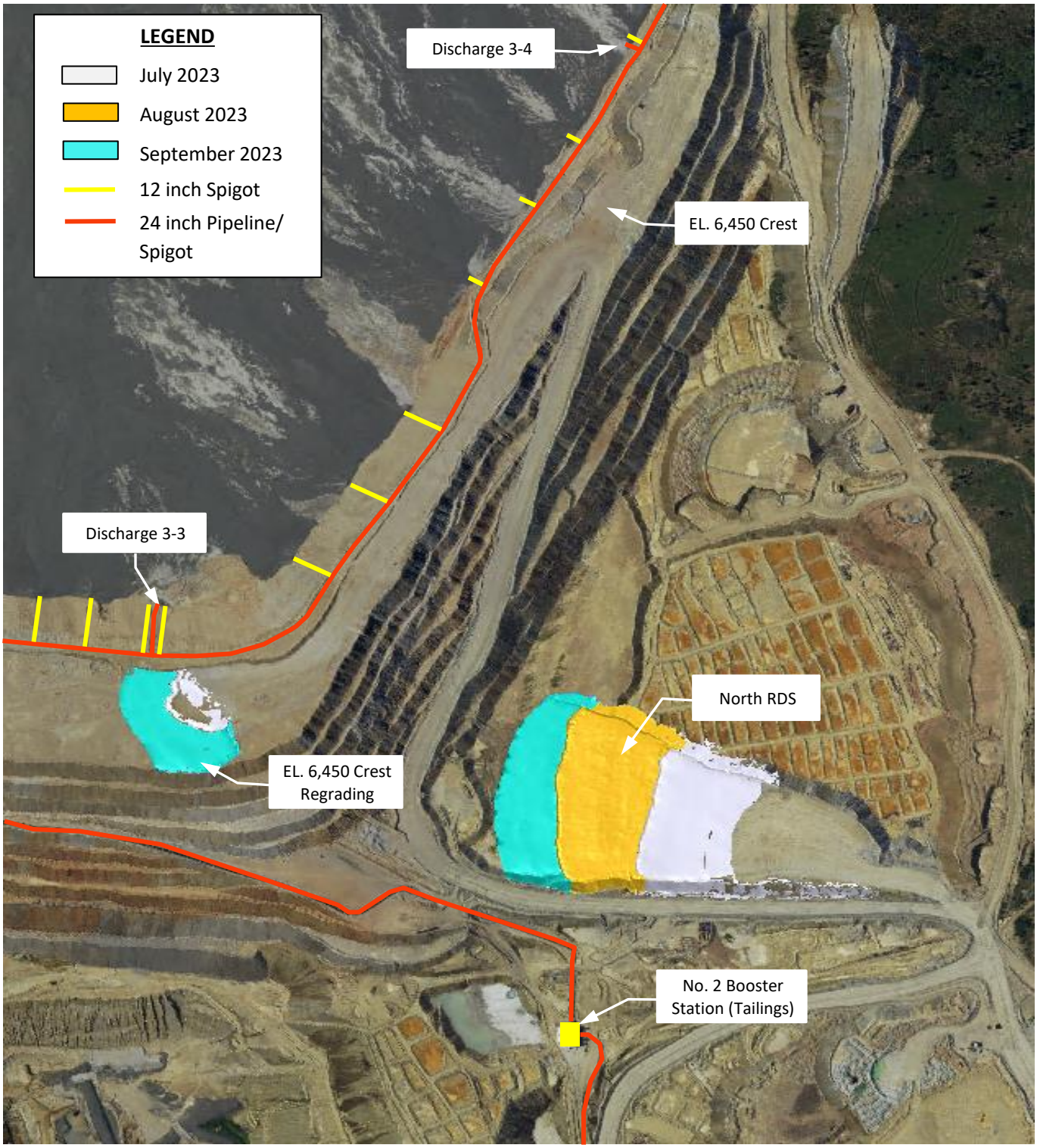
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01580

FIGURE 2.2

REV 0



NOTES:

1. AERIAL IMAGERY PROVIDED BY MONTANA RESOURCES, LLC IN AUGUST 2023.
2. MONTHLY FILL SHAPES ARE PROVIDED BY MONTANA RESOURCES, LLC. OTHER CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR Q3 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	20DEC'23	ISSUED WITH LETTER	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION SUMMARY
NORTH-SOUTH EMBANKMENT
AREAS OF INTEREST

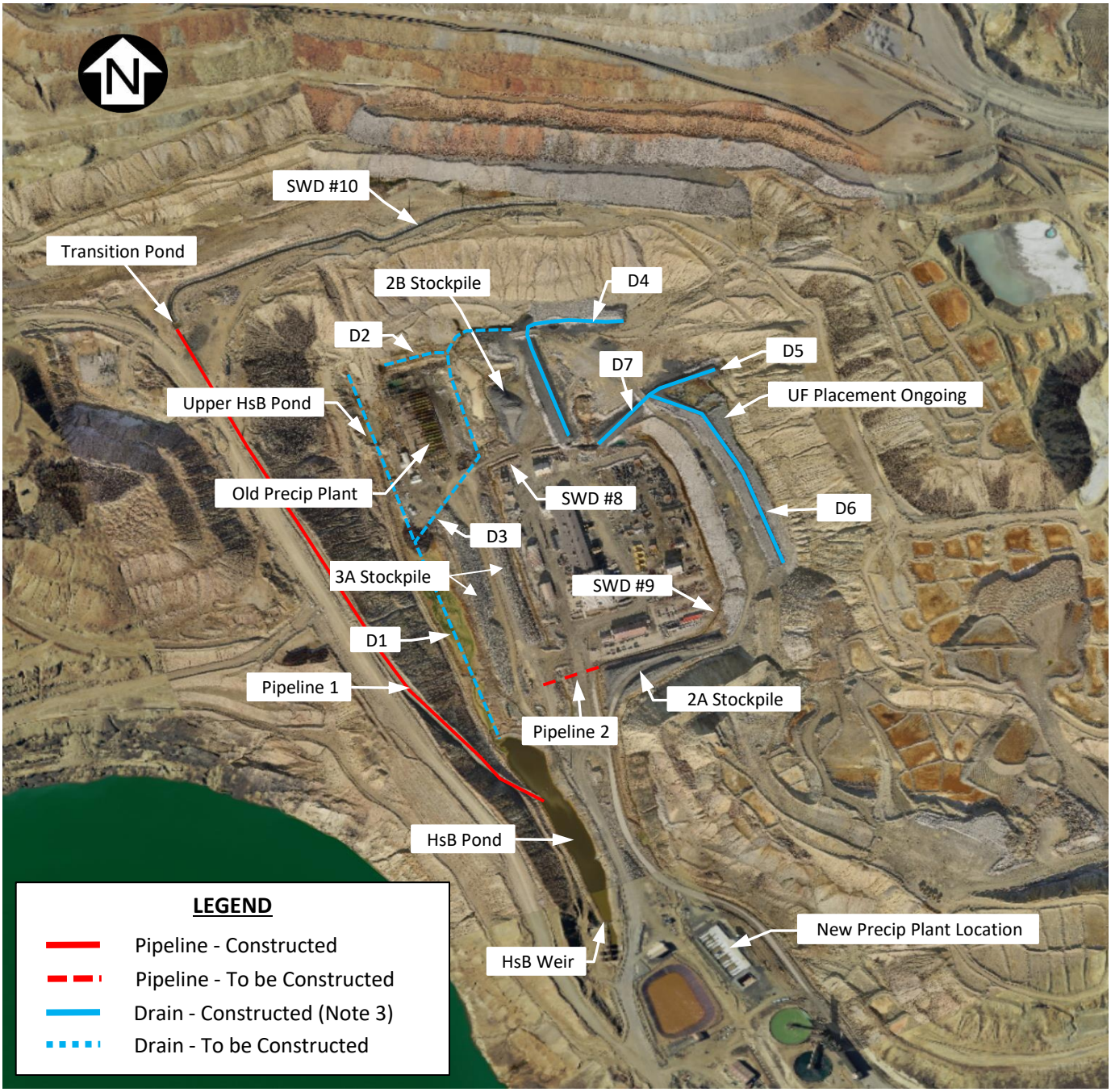
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01580

FIGURE 2.3

REV 0



NOTES:

1. AERIAL IMAGERY PROVIDED BY WATER & ENVIRONMENTAL TECHNOLOGIES ON NOVEMBER 9, 2023.
2. CONSTRUCTION AREAS ARE ESTIMATED TO REPRESENT AREAS OF INTEREST FOR Q3.
3. CONSTRUCTED DRAINS ARE COMPLETED UP TO ZONE 2A CAPPING SURFACE. UF CAPPING MATERIAL PLACEMENT ONGOING.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	20DEC'23	ISSUED WITH LETTER	SJR	DDF

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION SUMMARY
HORSESHOE BEND
AREAS OF INTEREST

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01580

FIGURE 2.4

REV 0

2.2 YDTI EMBANKMENT CONSTRUCTION

2.2.1 CONSTRUCTION SURVEY AND MATERIAL PLACEMENT

The 2023 construction survey (January through September) for the YDTI embankments and North RDS, provided monthly by MR, is presented on Figure 2.5. Tonnage estimates for active construction activities in Q3 are presented in Table 2.1. MR tracks material tonnages estimates using three methods: Pit Cards, Maptek laser scan as-built surveys and the MineStar dispatch system. The transition from CAT – MineStar Edge survey system to the MineStar dispatch system was implemented as of July 2023.

Regrading and topsoil placement activities along the downstream slope of the West Embankment, as described in subsequent Section 2.2.3, are not included in Figure 2.5 and Table 2.1.

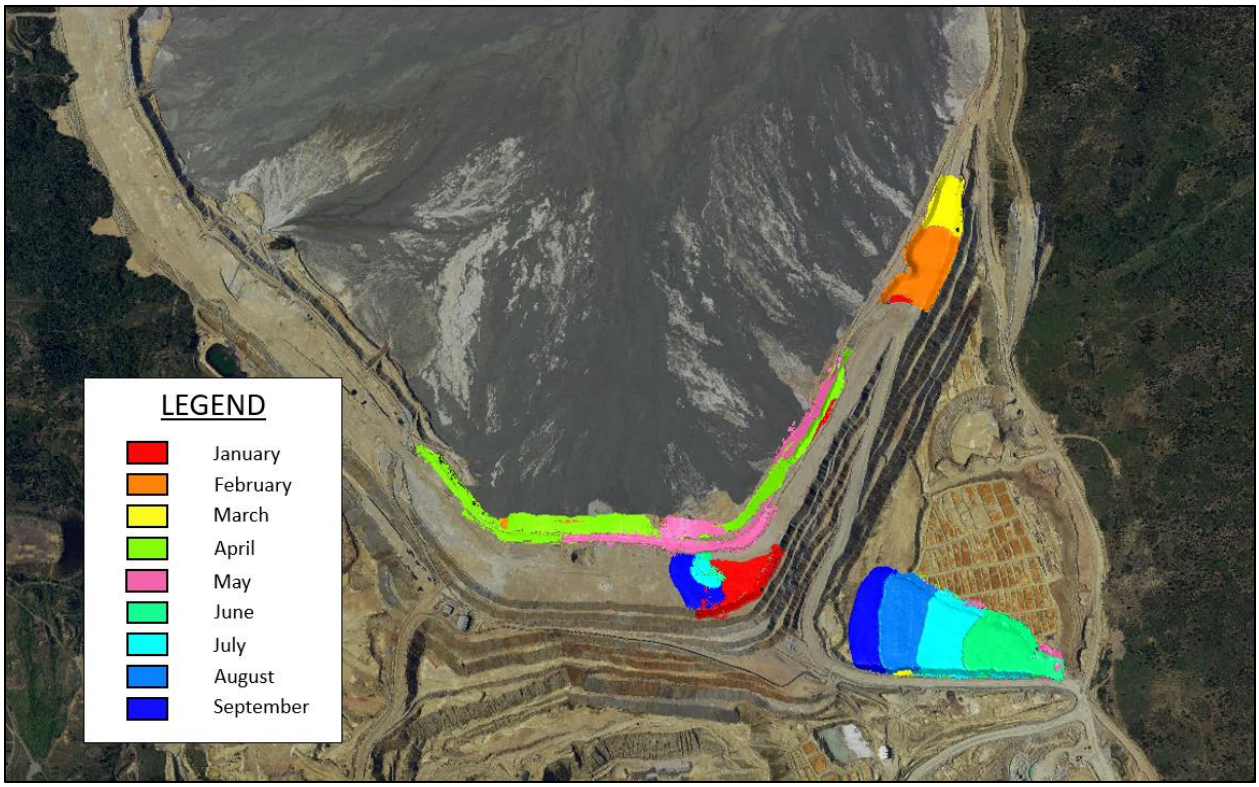


Figure 2.5 2023 YDTI and North RDS Construction Survey

Table 2.1 YDTI 2023 Q3 Construction Placement Summary

Location	Mass (Tons) – Survey As-Builts[1]			
	July	August	September	Total
Embankment Fill and Regrading EL. 6,450 ft - Zone U	7,590	14,720	42,085	64,395
North RDS EL. 6,150 ft lift	871,940	850,870	765,320	2,488,130
Horseshoe Bend Zone UF (Aplite)	34,525	5,980	0	40,505
Total	**914,055**	**871,570**	**807,405**	**2,593,030**

Note(s):

1. Monthly material tonnages provided by Montana Resources, LLC (Pit Cards).

2.2.2 EMBANKMENT LIFT SUBSTANTIAL COMPLETION AND REMAINING TASKS

The EL. 6,450 ft embankment lift of the YDTI was considered substantially complete as of March 31, 2023; however, select embankment construction activities related to the 6,450 ft lift are still outstanding. The 2023 Q1 Construction Summary (KP, 2023g) describes the outstanding activities at the time of substantial completion. The remaining construction activities include:

- The northern extents of the West Embankment. Zone U and D1 construction to EL. 6,450 ft following relocation of the municipal pipeline.
- The northern extents of the North-South Embankment where the deferred fill placement area is still to be completed. The fill area is to be completed once the reclaim pipeline and powerlines are removed from the EL. 6,400 ft reclaim road.
- Completion of the final grading, trimming and placement of alluvium ‘F’ material along the upstream slope of the North-South and East-West embankments.
- Completion of final grading along the crest of the embankment to meet the design tolerances.

2.2.3 WEST EMBANKMENT CONSTRUCTION

Topsoil placement (Zone D2) was ongoing along the regraded downstream face of the West Embankment at the time of the field review and is expected to continue into Q4. Extension of the secondary seepage collection drain, connecting to the West Embankment Drain, at the north abutment was active during the time of review. Topsoil placement and secondary seepage collection drain activities were undertaken by ICS. Construction along the crest and upstream face was inactive in Q3.

Slash piles and organics have been stockpiled on the EL. 6,450 ft crest from the clearing and grubbing activities east of the north abutment. This material will be prepared for use in reclamation activities.

Spigot, valve, and pipeline operating conditions were reviewed. Spigot pipe leaks were observed at various locations along tailings Pipeline 1, with an example shown on Photo 2.1. Appendix B further outlines the valve, spigot pipe and discharge condition of each spigot.

Photo 2.1 EL. 6,450 ft West Embankment Discharge Spigot 1-2B 12” Valve Leaking

2.2.4 EAST-WEST AND NORTH-SOUTH EMBANKMENT CONSTRUCTION

Construction continued along the East-West and North-South embankments during Q3 with infilling and regrading of the crest to the design elevation EL. 6,450 ft. Infilling and regrading activities are a result of a June 2023 meeting between MR and KP to discuss a plan to remediate the areas of cracking and crest depressions. MR began cross ripping existing ground and placing material for crest regrading in July 2023. The regrading began at approximately Section 0+00 and continued towards the West Embankment throughout Q3 as shown on Photo 2.2. MR will continue regrading activities along the East-West Embankment during Q4.

MR and KP continued to monitor crest depression and crack deformation rates during Q3. The deformation rates have remained constant or slowed as outlined in the Q3 2023 Piezometric and Deformation Monitoring Summary (KP, 2023e).

Upstream embankment facing and construction of the tailings discharge corridor between Sections 28+00 N and 16+00 W was completed in Q2. Upstream facing activities did not occur during Q3 and are expected to recommence along the North-South Embankment in Q4 2023 and Q1 2024 as per recommended action in the 2022 EOR Annual Inspection Report (AIR) (KP, 2023d) and the corresponding Corrective Action Plan (CAP) (MR, 2023) in response to the EOR recommendations.

Tailings Delivery Line 3 along the East-West and North-South embankments was reconnected in May 2023 and was discharging from the 12-inch spigots during the time of review. Spigot, valve, and pipeline operating conditions were reviewed and no obvious signs of leaks were observed; however, a few spigots discharge pipelines were buried within the tailings beach. Appendix B further outlines the valve, spigot pipe and discharge condition of each spigot.

Photo 2.2 EL. 6,450 ft East-West Embankment Ripping for Fill Placement and Regrading

Cracking was observed along the recently placed alluvium upstream of the East-West Embankment. Alluvium facing was placed between March and May 2023 and Photo 2.3 shows an example of cracking perpendicular to the slope. Settlement cracking is inferred to be due to differential settlement of the alluvium material placed above the tailings surface and freeze-thaw processes in this area.

Photo 2.3 EL. 6,450 ft East-West Embankment Upstream Alluvium Facing Slope Cracking

2.3 NORTH RDS CONSTRUCTION

MR initiated construction activities for the North RDS, located over the historical leach pad areas at the downstream toe of the North-South Embankment, in March 2023. MR continued to advance the EL. 6,150 ft lift of the RDS in the westward direction towards the North-South Embankment haul ramp throughout Q3, as shown on Figure 2.5. Construction progress at the time of the field review is shown on Photo 2.4. Lift subgrade preparation, material placement, and material testing in this area are being completed by MR as per the KP letter outlining the construction practices for the RDS (KP, 2023f).

Photo 2.4 EL. 6,150 ft North RDS and Future Haul Ramp Construction

2.4 STAGE 1 HSB RDS DRAINAGE SYSTEM CONSTRUCTION

2.4.1 GENERAL

Construction of the Stage 1 HsB RDS drainage system progressed in multiple areas during Q3. An overview of the construction at the approximate end of Q3 is provided on Figure 2.4. Construction activity for the quarter is described in detail below and summarized as:

- Continued construction of rock drains D4, D5, D6 and D7 with placement of UF capping material
- Ditch excavation and geosynthetics installation for Surface Water Ditch (SWD) #10
- Construction of the collection box within the Seep 10 Transition Pond
- Installation of Pipeline 1 from the Transition Pond to the HsB Pond
- Located all utilities within Pipeline 2 alignment and installed corrugated steel pipe sleeves
- Began decommissioning and salvaging precipitation plant infrastructure, and
- Continued construction of the new precipitation plant

ICS continues to manage surface water runoff and seepage within the HsB area to facilitate construction. This includes management of seeps that appear within the UF foundation west of D6 alignment. ICS also

continues to draw down water levels in the Houligan pond and upper HsB pond in preparation for construction of drains D1 and D3.

2.4.2 FOUNDATION LAYER AND ROCK DRAINS

Rock drain construction progress slowed in Q3 while ICS focused on SWD #10 and construction activities along the West Embankment; however, ICS began placing UF overtop and around drains D4, D5, D6 and D7, as shown on Photo 2.5. UF material placement is expected to continue in Q4 with available UF Aplite (sourced from the Continental Pit) and imported Pipestone material. Quarterly and total material volumes for each zone within the HsB area are summarized in Table 2.2.

Photo 2.5 Zone UF Placement along Drain D6

Table 2.2 Stage 1 HsB RDS Drainage System Material Placement Summary

Material Type	Volume Placed in Q3 2023 (yd³)	Volume Placement to Date (yd³)
Zone UF Pipestone	8,151	47,283
Zone UF Aplite[1]	28,533	81,548
Zone 2A	1,009	14,820
Zone 2B	0	14,703
Zone 3A	0	12,102

Note(s):

1. Does not include Aplite placed on 2:1 slope above SWD #9.
2. Volumes based on WET weekly progress report tables.

2.4.3 SWD #10 AND TRANSITION POND

Excavation and shaping of SWD #10 and the Transition Pond along the Seep 10 bench was completed and installation of geosynthetic materials was completed by Northwest Linings and Geotextile Products Inc. (Northwest) between August 29th to 31st, 2023. Installation was completed in general accordance with the requirements of the Drawings, HsB CMP and manufacturer requirements. The installation of the 80-mil geomembrane above the non-woven geotextile is shown on Photo 2.6. Additional photos from the installation are included in the Photo Log in Appendix C.

Photo 2.6 Seep 10 SWD #10 Geomembrane Install – Looking West

Installation of the collection box and weir within the Transition Pond was completed during Q3. Pipeline 1 has been connected to the collection box and discharges to the HsB pond; however, the installation of air relief valves and completion of the diffusion structure at the HsB pond is still to be completed. The current discharge of Pipeline 1 into the HsB Pond is shown on Photo 2.7.

Photo 2.7 Pipeline 1 Discharge into HsB Pond

2.5 OTHER GENERAL OBESERVATIONS

Additional general observations from the field review outlined below are based on visual observations in comparison with the conditions observed during previous field reviews. Conditions in the HsB area (outside of the active construction areas) are generally consistent with previous field reviews.

- The tailings beach since the addition of 12-inch spigots has created a more even beach and allowed for additional infilling between the 24-inch spigots. At the time of review a total of twenty 12-inch discharge spigots were operating.
- Various seeps and surface water runoff along the Seep 10 bench have caused erosion upstream of SWD #10 which has resulted in sediment discharge into the ditch. ICS has placed geotextile at select locations in an attempt to minimize erosion and sediment discharge at approximately SWD #10 Station 0+200 ft to 0+400 ft. An example of this measure is shown on Photo 2.8.
- Seepage locations and flows collecting within the upper HsB area appear generally consistent with conditions observed during previous field reviews.
- Seepage flows and locations along the toe of the embankment appear generally consistent with previous reviews. Construction of D4 has redirected some of the collected flows west, bypassing Houligan Pond.
- Seepage flows from the historical leach pads east of drain D6 continue to wash sediment across the placed UF rockfill adjacent to D6.-Various areas of ponding were present at the time of the field review.
- Various seeps to the south and west of drain D6 have appeared along the UF foundation layer. KP provided MR and WET with Field Instruction documentation (KFI-HSB-001) outlining field fit secondary drains in these areas.

Photo 2.8 Geotextile Added North of SWD#10 to Prevent Sediment Erosion into Ditch

3.0 QUALITY SYSTEM AND DOCUMENTATION

Construction quality documentation for the YDTI continues to be completed by MR as per the YDTI CMP. Travis Birkenbuel (MR) is responsible for completing Subgrade Inspection Records (SIR) relating to embankment crest regrading and construction of the North RDS. Weekly construction reports were completed by MR and submitted to KP in a timely manner throughout the quarter. Monthly quality reports for Q3 were provided by MR at the time of this letter. KP and MR continue to review and discuss short and long-term construction planning during regular meetings, and MR provides monthly survey and placement volumes in a timely manner.

WET continued to provide quality control documentation (SIRs, RFIs, etc.), weekly construction reports, and material testing results as outlined in the HsB CMP. HsB construction and quality documents are typically uploaded to Fulcrum in a timely manner. KP, ICS, MR and WET continued bi-weekly construction meetings to review and discuss ongoing and planned construction in this area.

4.0 SUMMARY AND RECOMMENDATIONS FOR CONSTRUCTION ACTIVITIES

The field observations and construction monitoring information collected throughout the quarter indicate that the construction activities generally conform with the procedures and specifications outlined in the CMP, HsB CMP and IFC design drawings. The construction information, descriptions and conclusions are based on an assessment of information provided and observations during field reviews. The construction summary and field review does not constitute supervision of construction and does not represent a guarantee that all deficient or non-conforming works have been identified.

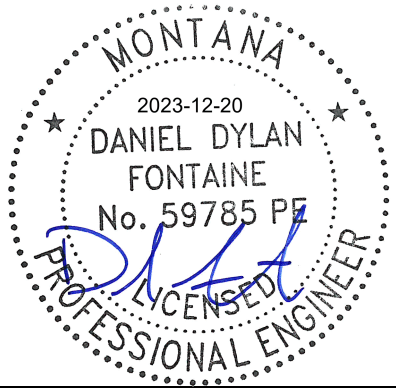
The list below provides an update on the status of the recommendations included in the 2023 Q2 Construction Field Review (KP, 2023b) in **bold**. Recommendations as a result of the Q3 field review are

shown in *italics*. All new recommendations and those still to be completed or in progress are to be considered for action by MR.

- MR is recommended to develop a naming convention and tracking method for the newly installed 12-inch discharge locations. *In Appendix B, KP has prepared the Tailings Spigot Discharge Tracking table to document discharge condition and label each spigot.* **Still to be reviewed with MR.**
- MR is recommended to continue grading and infilling of the EL. 6,450 ft embankment crest to reduce the potential for ponding water and promote surface runoff. Table 3.3 of the CMP outlines the allowable embankment crest grade tolerance to be +24 inches / -0 inches. Remedial actions should be considered to remain within this allowable tolerance. **Ongoing. MR has advanced regrading activities as described in Section 2.2.**
- *MR is to continue to monitor existing cracking along the upstream face of the East-West Embankment* and complete regular inspections for any additional cracking or progression in the recently placed Zone U of the East-West and North-South Embankments. **Complete/infilling ongoing.**
- Relocate slash piles currently situated along the West Embankment north abutment to locations suitable for burning when weather conditions allow. **Incomplete.**
- Establish temporary water management measures in the HsB area and along the YDTI embankments to control ponding and surface flows. **Complete/ongoing.**
- Develop construction schedule to complete outstanding items related to EL. 6,450 ft embankment construction (as outlined in Section 3.2). **Still to be completed; however, MR provides regular updates to KP weekly.**

We trust that this letter meets your needs at this time. Please do not hesitate to contact the undersigned with any questions.

Yours truly,
Knight Piésold Ltd.



Prepared:

Steve Reekie, P.Eng.
Project Engineer

Reviewed:

Daniel Fontaine, P.E.
Specialist Engineer | Associate
YDTI Engineer of Record

Approval that this document adheres to the Knight Piésold Quality System: DDF

Attachments:

Appendix A	2023 Q3 Field Review Checklist
Appendix B	Tailings Spigot Discharge Tracking
Appendix C	Photo Log

References:

Knight Piésold Ltd. (KP, 2018). Yankee Doodle Tailings Impoundment: Construction Management Plan (KP Reference No. VA101-126/12-5 Rev. 3), May 1, 2018.

Knight Piésold Ltd. (KP, 2023a). Horseshoe Bend Rock Disposal Site – Construction Management Plan (KP Reference No. VA101-126/25-8 Rev. 0), March 3, 2023.

Knight Piésold Ltd. (KP, 2023b). 2023 Q2 Field Review and Construction Summary (KP Reference No. VA23-01186), August 18, 2023.

Knight Piésold Ltd. (KP, 2023c). YDTI EL. 6,450 ft Embankment Deferred Fill Zone U (KP Reference No. VA22-02293), February 15, 2023.

Knight Piésold Ltd. (KP, 2023d). Yankee Doodle Tailings Impoundment: 2022 Annual Inspection Report (KP Reference No. VA101-126/27-2 Rev. 0), January 20, 2023.

Knight Piésold Ltd. (KP, 2023e). Q3 2023 Piezometric and Deformation Monitoring Summary (KP Reference No. VA23-01703), November 8, 2023.

Knight Piésold Ltd. (KP, 2023f). Construction Practices for the rock disposal site at the toe of the North-South Embankment (KP Reference No. VA23-00542), May 10, 2023.

Knight Piésold Ltd. (KP, 2023g). 2023 Q1 Field Review and Construction Summary (KP Reference No. VA23-00387), June 2, 2023.

/sjr

APPENDIX A

2023 Q3 Field Review Checklist

(Table A1)

TABLE A1

MONTANA RESOURCES, LLC
YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION FIELD REVIEW CHECKLIST

Date: August 29 to 31, 2023 **Time:** 8:00AM to 4:00PM Daily

Field Review By:

Name: Steve Reekie, P.Eng. Title: Staff Engineer, Knight Piésold Ltd. (KP) Signature: See Report Closure Page

Inspection Type: DAILY WEEKLY MONTHLY OTHER EVENT (Specify): (Q3 Field Review)

Weather Conditions: Precipitation (24 hr.): None Wind Speed (max): 15 mph

Temperature (°F): 52 - 62 Sky (circle): (Clear) Partly Cloudy Cloudy

Instrumentation Data Collected: Yes (No) **Details:**

Samples Collected: Yes (No) **Details:**

WEST EMBANKMENT

LOCATION	REVIEW COMPLETED	ITEM	ITEM PRESENT YES	ITEM PRESENT NO	PHOTO	COMMENTS
Crest of Dam	✓	Cracking, Subsidence, Depressions	X		X	Few areas of undulations/depressions observed along the crest. Intermittent ponding along crest.
		Erosion		X		
		Lateral Deformation		X		
Upstream Face	✓	Cracking, Subsidence, Depressions		X		
		Erosion	X		X	Tailings have eroded through the 12 inch spigot pipe at approx. EL. 6,410 ft. Tailings observed running down the 6,450 ft upstream face causing erosion to embankment Zone U.
		Pipeline Corridor	X			Intermittent cracking present along the loosely placed berm, consistent with past field reviews.
Downstream Face	✓	Cracking, Subsidence, Depressions		X		
		Seeps, Damp or Soft areas		X		
Extraction Pond	✓	General Review	X		X	Pump system was operating at the time of the field review. Seeps into the pond are as expected.
Active Embankment Construction	✓	Material Placement	X		X	Downstream slope trimming and regrading was completed. Placement and stockpiling of topsoil material ongoing during review.
		Drain Construction	X		X	Secondary collection drain construction ongoing at north extent of embankment.
		Surface Preparation		NA		
		Other	X			Organics stockpile for reclamation currently being stored on embankment crest.

EAST-WEST EMBANKMENT

LOCATION	REVIEW COMPLETED	ITEM	ITEM PRESENT YES	ITEM PRESENT NO	PHOTO	COMMENTS
Crest of Dam	✓	Cracking, Subsidence, Depressions	X		X	Level 1 cracking area identified in Q2 was ripped to allow placement of Zone U. The cracking area was at approx STA 0+00. Undulations/depressions visible along the embankment crest west of cracking area. Intermittent ponding observed.
		Erosion		X		
		Lateral Deformation		X		
Upstream Face	✓	Cracking, Subsidence, Depressions	X		X	Cracking along the upstream alluvium facing at approx. STA 3+00 W.
		Erosion		X		
		Pipeline Corridor	X		X	New pipeline corridor for 6,450 ft lift constructed. Tailings Delivery Pipeline 3 in operation.
Downstream Face	✓	Cracking, Subsidence, Depressions	X		X	Intermittent cracking present along the loosely placed berm, consistent with past field reviews.
		Erosion		X		
		Seeps, Damp or Soft areas		X		
Seep 10 Bench	✓	Overview of HsB Photo	X		X	
	✓	Seep 10 Stilling Basin	X		X	
	✓	Seep 10 V-Notch Weir	X		X	Working normally.
	✓	Seep 10 Inflows	X		X	Appear consistent with previous field reviews.
Active Embankment Construction	✓	Location and Elevation Reviewed	X		X	Ripping of the embankment for material placement and regrading was ongoing during the time of review.
		Surface Preparation		X		
		Survey Stake Locations for Expansion		NA		
Pipe Ramp	✓	Cracking, Subsidence, Depressions		X		
		Erosion		X		

NORTH-SOUTH EMBANKMENT

LOCATION	REVIEW COMPLETED	ITEM	ITEM PRESENT YES	ITEM PRESENT NO	PHOTO	COMMENTS
Crest of Dam	✓	Cracking, Subsidence, Depressions	X		X	Undulations/depressions visible along surface grade of the embankment crest due to settlement. Intermittent ponding along crest.
		Erosion		X		
		Lateral Deformation		X		
Upstream Face	✓	Cracking, Subsidence, Depressions		X		
		Erosion		X		
		Pipeline Corridor	X		X	Upstream Zone F facing completed up to approx. STA 28+00 N. Pipeline corridor for Tailings Delivery Pipeline 3 constructed.
Downstream Face	✓	Cracking, Subsidence, Depressions		X		Intermittent cracking present along the loosely placed berm, consistent with past field reviews.
		Erosion		X		
		Seeps, Damp or Soft areas		X		
Reclaim Pipeline Road	✓	Surface Preparation		NA		
		Other	X			Relocation of reclaim pipeline and powerline to allow for completion of EL. 6,350, 6,400 and 6,450 ft lifts still to be completed at northern abutment.

NORTH ROCK DISPOSAL SITE

LOCATION	REVIEW COMPLETED	ITEM	ITEM PRESENT YES	ITEM PRESENT NO	PHOTO	COMMENTS
Active Construction	✓	Location and Elevation Reviewed	X		X	Construction of EL. 6,150 ft lift ongoing.
		Surface Preparation	X		X	Dozer cross ripping ongoing of previous lift/surface completed. Documents in SIRs from MR.
		Survey Stake Locations for Expansion		NA		
		Other		NA		

Montana Resources

Knight Piésold CONSULTING

TABLE A1

MONTANA RESOURCES, LLC
YANKEE DOODLE TAILINGS IMPOUNDMENT

2023 Q3 CONSTRUCTION FIELD REVIEW CHECKLIST

YANKEE DOODLE TAILINGS IMPOUNDMENT						
LOCATION	REVIEW COMPLETED	ITEM	ITEM PRESENT		PHOTO	COMMENTS
			YES	NO		
General	✓	Pond Elevation and Location Reviewed	X		X	Pond Elevation - 6360.16 ft (Recorded September 6th 2023)
		Water pooling/ponding against Embankment		X		
		Lowest Crest Elevation Determined		X		
		Reclaim Pipeline	X		X	Reclaim pipeline now routes entirely on the upper reclaim road for the 6,450 ft lift. The two reclaim barge pipelines meet at a junction box and exit into two parallel pipelines.
Tailings Discharges	✓	Active Discharge Locations	X		X	20 total spigots operating at the time of review. All were 12 inch discharges in the effort to reduce dust off the tailings beach amid the summer heat.
		Pipeline/valve leakage	X		X	Few 12' discharge spigot pipes along Line 1 were leaking at the time of the review.
		Pipeline wear/damage	X		X	Several discharge pipelines were damaged or buried within the tailings beach at the time of the review.
HORSESHOE BEND DRAINAGE AND ROCK DISPOSAL SITE						
LOCATION	REVIEW COMPLETED	ITEM	ITEM PRESENT		PHOTO	COMMENTS
			YES	NO		
Drain Down Conditions		Houligan Pond	X		X	Houligan Pond is drained down but active seeps into the area persist.
		Precipitation Plant Area	X		X	Precip plant cells filled and operating at the time of the review.
Active Material Placement	✓	Foundation Layer	X		X	UF Foundation layer continued to advance since Q2.
		Material Stockpiles	X		X	ICS has continued to haul and stockpile 3A, 2A, 2B and UF materials.
		Drain Construction	X		X	Drain construction was on pause during the time of review to allow attention to the active Seep 10 SWD 10 construction.
		Drain Materials	X		X	
		Other	X			Discussions held on site with WET, ICS and MR on drain outlets to SWDs.
Seep 10 Bench Works	✓	Surface Water Ditch 10	X		X	SWD 10 excavation, surface preparation and geosynthetics installation was ongoing during the time of review. Northwest Linings completed the install of geomembrane and geotextile products within the SWD 10 and Transition Pond.
		Transition Pond	X		X	
HORSESHOE BEND - GENERAL						
LOCATION	REVIEW COMPLETED	ITEM	PHOTO		COMMENTS	
Horseshoe Bend and Precipitation Plant	✓	Upper HSB Pond	X		Water level appears consistent with previous reviews.	
	✓	Lower HsB Pond	X		Water level appears consistent with previous reviews.	
	✓	HsB Seepage to Upper Pond	X		HsB seeps appear consistent with previous reviews.	
	✓	HsB Seepage to Houligan Pond	X		Seeps entering Houligan Pond area now follow flow path further west, which is caused by the construction of D4.	
	✓	Precipitation Plant Overflow Box (Cell 5)				
	✓	Precipitation Plant Overflow	X			
	✓	HsB Weir	X			
		Muddler Pump Area and Overflow	NA			
		HsB WTP Influent Pump (P1-16) and Transfer Pond	NA			
		Leach Pump Head Tank (Weir)	NA			
		BMFOU Pilot Project Facilities	NA			

Additional Notes:

- Construction of the new Precipitation Plant (near the Water Treatment Plant) is ongoing. Old Precipitation Plant demolition is to progress in the following months.

M:\1\01\00126\29\A\Correspondence\VA23-01580 - Q3 2023 Construction Summary and Field Review\Appendix A 2023 Q3 Field Review Checklist\[TA.1 2023 Q3 Field Review Checklist.xlsx]TA.1 2023 Q3

NOTES:

1. CHECKLIST COMPLETED BY KP REPRESENTATIVE STEVE REEKIE AND IS TO BE REVIEWED IN CONJUNCTION WITH THE 2023 Q3 CONSTRUCTION SUMMARY LETTER.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	20DEC'23	ISSUED WITH LETTER VA23-01580	SJR	DDF

APPENDIX B

Tailings Spigot Discharge Tracking

(Table B.1)

Knight Piésold CONSULTING

TABLE B.1

MONTANA RESOURCES, LLC
YANKEE DOODLE TAILINGS IMPOUNDMENT

TAILINGS DISCHARGE TRACKING
OPERATING CONDITION REVIEW

Tailings Discharge Location			Date and Condition Review			
			30-Aug-23			
Delivery Pipeline ID	Discharge ID	Spigot Size (inch)	Operating (Y/N)	Valve/ Branch Condition	Spigot Pipe/ Discharge Condition	Notes
Line 1	1-1	24	N	Normal	Buried Discharge	
	1-1A	*12*	Y	Normal	Normal	Minimal tailings around the valve from original connection
	1-1B	*12*	Y	Valve/ Pipe Leak	Normal	Tailings have eroded through the 12 inch spigot pipe at appox. 6,410 ft EL. Tailings is running down the 6,450 ft upstream face and causing erosion. The spigot vent consists of a hole cut into the HDPE pipe near the connection to the valve. Tailings have backed up to here and spilled down the upstream face.
	1-2	24	N	Normal	Normal	Minimal tailings around the valve from original connection
	1-2A	*12*	Y	Normal	Normal	Minimal tailings around the valve from original connection
	1-2B	*12*	Y	Valve/ Pipe Leak	Normal	Tailings have eroded through the 12 inch spigot pipe at appox. 6,410 ft EL. Tailings is running down the 6,450 ft upstream face and causing erosion. There exists two 12 inch lines at this spigot however only one is running. Tailings remains are noticed around the connection to Line . Likely from inital connection of the spigot.
	1-2C	*12*	Y	Valve/ Pipe Leak	Normal	Tailings have eroded small amounts of the upstream face, evidence shows tailings could have been plugged downstream in the 12" spigot line and backing up to the vaccum break, which is open to atmosphere. As a result sprayed tailings down the face and onto the 6400 lift below.
	1-3	24	N	Normal	Buried Discharge	Tailings remains on ground around valve connection, likely due to spillage of tailings during initial connection. No eveidence of active leaks or wet tailings during inspection.
	1-3A	*12*	Y	Normal	Buried Discharge	Tailings remains on ground around valve connection, likely due to spillage of tailings during initial connection. No eveidence of active leaks or wet tailings during inspection.
	1-3B	*12*	Y	Normal	Normal	Tailings remains on ground around valve connection, likely due to spillage of tailings during initial connection. No eveidence of active leaks or wet tailings during inspection.
	1-3C	*12*	Y	Normal	Normal	Tailings remains on ground around valve connection, likely due to spillage of tailings during initial connection. No eveidence of active leaks or wet tailings during inspection.
	1-4	26	N	Normal	Normal	
Line 2	2-3	24	N	Normal	Normal	Routed over to the north of rocky knob
	2-2	24	N	Normal	Normal	
	2-1	24	N	Normal	Normal	
Line 3	3-1	24	N	Normal	Normal	
	3-1A	*12*	Y	Normal	Normal	Tailings on the upstream face around the vacuum break, small amount, likely due to a downstream plug in the 12" spigot line leading to temporary overflow at this point
	3-1B	*12*	Y	Normal	Normal	
	3-2	24	N	Normal	Buried Discharge	
	3-2A	*12*	Y	Normal	Buried Discharge	
	3-2B	*12*	N	Normal	Buried Discharge	
	3-2C	*12*	N	Normal	Normal	
	3-3	24	N	Normal	Normal	All three of these spigots exist at the same location
	3-3A	*12*	N	Normal	Normal	
	3-3B	*12*	N	Normal	Normal	
	3-3C	*12*	Y	Normal	Normal	
	3-3D	*12*	Y	Normal	Normal	
	3-3E	*12*	Y	Normal	Normal	
	3-3F	*12*	Y	Normal	Normal	
	3-3G	*12*	Y	Normal	Normal	
	3-3H	*12*	Y	Normal	Normal	
	3-4	24	N	Normal	Normal	
	3-4A	*12*	Y	Normal	Normal	
	3-4B	*12*	Y	Normal	Normal	
	3-4C	*12*	Y	Normal	Normal	
	3-5	24	N	Normal	Normal	

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NOTES:

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	20DEC'23	ISSUED WITH LETTER VA23-01580	SJR	JRG

APPENDIX C

Photo Log

(Pages C-1 to C-15)

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 1 – West Embankment – Crest of Dam well graded with minimal depressions

PHOTO 2 – West Embankment – Downstream face of dam receiving topsoil for reclaiming and revegetating surface

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 3 – West Embankment – EL. 6,450 ft lift crest – Organics stockpile

PHOTO 4 – West Embankment – Drain located at the north abutment

2023 Q3 CONSTRUCTION FIELD REVIEW
PHOTO LOG

PHOTO 5 – West Embankment – Clearing and grubbing of area east of the north abutment

PHOTO 6 – West Embankment – Upstream face discharge 1-2B causing erosion to the embankment due to eroded discharge pipe.

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 7 – Extraction Pond – Pumping system operating as normal

PHOTO 8 – East-West Embankment - Undulations/depressions visible along surface grade of the embankment crest due to settlement – Puddling formed after storm event

2023 Q3 CONSTRUCTION FIELD REVIEW
PHOTO LOG

PHOTO 9 – East-West Embankment – Settling cracks noticed within the upstream face with the Zone F facing

PHOTO 10 – East-West Embankment – Spigot 3-2 and 3-2A

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 11 – East-West Embankment – Settling cracks noticed within the upstream face with the Zone F facing

PHOTO 12 – East-West Embankment – Ripping of embankment crest for placement of material for regrading

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 13 – East-West Embankment - Undulations/depressions visible along crest

PHOTO 14 – North-South Embankment – Pipeline corridor – Tailings Pipeline 3

2023 Q3 CONSTRUCTION FIELD REVIEW
PHOTO LOG

PHOTO 15 – North RDS – Active 6,150 ft dumping operations ongoing

PHOTO 16 – North RDS – Ripping of existing ground for future expansion of RDS

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 17 – Tailings beach and pond interface – Looking West from reclaim road

PHOTO 18 – Reclaim Road - Looking South at 5 reclaim pipes coming from the two reclaim barges

2023 Q3 CONSTRUCTION FIELD REVIEW
PHOTO LOG

PHOTO 19 – Old reclaim barge – Outlet pipes now routed up to 6,450 ft reclaim road

PHOTO 20 – Stage 1 HsB RDS – Overlook – Looking East

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 21 – Stage 1 HsB RDS – Overlook – Looking South

PHOTO 22 – Stage 1 HsB RDS – Old Precip Plant Cell 10 Pump Area

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 23 – HsB Weir – Looking North

PHOTO 24 – Seep 10 – Pond inflows

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 25 – Seep 10 – Weir

PHOTO 26 – Stage 1 HsB RDS – D6 STA 0+600 ft looking south

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 27 – Seep 10 – SWD#10 STA 0+500 ft looking west – 3/8'' minus material placed along side slopes

PHOTO 28 – Seep 10 – SWD#10 geotextile install by Northwest Linings

2023 Q3 CONSTRUCTION FIELD REVIEW PHOTO LOG

PHOTO 29 – Seep 10 – SWD#10 geomembrane install by Northwest Linings

APPENDIX C

Completion of Supplemental YDTI Construction Monitoring Program

(Pages C-1 to C-50)

Knight Piésold CONSULTING

Management System Certified by: bsi ISO 9001 ISO 14001 ISO 45001 CERTIFIED

September 22, 2023

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Mr. Mike Harvie
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Montana Resources, LLC
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Dear Mike,

RE: Completion of YDTI Construction Monitoring Program Following Construction of EL. 6,450 ft Lift

1.0 INTRODUCTION

Montana Resources, LLC (MR) owns and operates an open pit copper-molybdenum mine adjacent to the city of Butte, Montana. Tailings produced from ore processing are stored within the Yankee Doodle Tailings Impoundment (YDTI), which is a valley-fill style impoundment contained within rockfill embankments. Knight Piésold Ltd. (KP) is the designer of the Elevation (EL.) 6,450 ft lift of the North-South (N-S), East-West (E-W), and West (W) Embankments and monitors construction activities performed by MR, as per the Construction Management Plan (CMP; KP, 2018). KP supports MR to routinely investigate and monitor embankment and foundation hydrogeological and geotechnical conditions as part of their operations and surveillance plan for the tailings storage facility, as described in the Tailings Operations, Maintenance and Surveillance (TOMS) Manual (MR/KP, 2022).

MR constructed the E-W and N-S Embankments of the YDTI to a crest elevation of EL. 6,450 ft between June 2021 and March 2023. Rockfill placement comprised construction of up to five 50 ft-thick embankment lifts (from EL. 6,200 ft to EL. 6,450 ft) from June 2021 through January 2023 within the Central Pedestal Area and one 50 ft-thick lift (to EL. 6450 ft from August 2022 through March 2023) along the N-S Embankment. Large-scale embankment construction is now substantially complete and only minor construction activities (including placement of alluvial facing and final grading of the crest) are ongoing.

KP and MR have utilized a supplemental construction monitoring program, outlined KP (2021e), that included monitoring of the piezometric and deformation responses within the newly placed and existing rockfill material during construction. The program generally comprised:

- Piezometric monitoring relative to predefined thresholds referred to as Construction Performance Parameters (CPPs), with associated Trigger-Action Response Plans (TARPs) to identify and respond to changing pore water pressures, when observed in response to construction.
- Deformation monitoring using a wide range of instrumentation (survey-monuments, inclinometers, and Geo4Sight) and remote sensing techniques (inSAR and laser scans) to monitor the onset of elevated deformations within and localized around areas of active construction, followed by subsequent slowing deformation rates with time following construction.

KP considers the construction monitoring program to have been highly valuable for tracking embankment conditions and evaluating associated risks, while large-scale construction loading was active (June 2021

through March 2023). Available monitoring data following completion of EL. 6,450 ft lift construction (April 2023+) generally continue to indicate constant or slightly decreasing pore water pressures and slowing deformation rates throughout the embankments, as expected in the absence of further loading. KP considers the existing dam safety monitoring programs to be sufficient for continued monitoring now that construction has been largely completed and will discontinue the focused construction monitoring program henceforth. KP will continue to closely monitor YDTI impoundment and embankment conditions as part of the existing dam safety monitoring programs. This letter summarizes observed piezometric conditions and deformation rates since completion of construction and provides formal notification of completion for the EL. 6,450 ft Construction Monitoring Program.

2.0 MONITORING FINDINGS FOLLOWING EL. 6,450 FT LIFT CONSTRUCTION

2.1 PIEZOMETRIC MONITORING

No piezometric CPP threshold exceedances have occurred, and all active CPP instruments remain within their Low-Risk TARP classifications (KP, 2021e). Most CPP sites have continue to monitor relatively constant or slightly decreasing pore water pressures since completion of EL. 6,450 ft lift construction. Key monitoring findings include:

- Pore pressures monitored within the E-W Embankment basal saturated zone on Sections 0+00 and 8+00W have generally continued to decrease slightly.
- Pore water pressures within known perched saturated zones on E-W Embankment Sections 0+00 and 8+00W generally indicate constant or slightly increasing pore water pressure trends. Key findings include:
    - Sensor DH19-S7 VW7 has monitored a series of pore water pressure fluctuations since February 2023 (comprising pore pressure increases of up to 30 ft, followed by subsequent dissipation. Monitored conditions remain approximately 20 ft below the CPP Moderate-Risk threshold and, although the cause of the fluctuations is uncertain, KP does not consider conditions to pose an elevated dam safety risk. Instruments within DH19-S7 will continue to be routinely monitored and reported, as part of ongoing embankment performance monitoring programs.
    - Sensor DH19-S7 VW5 has generally monitored constant or slightly decreasing pore water pressures since completion of EL. 6,450 ft lift construction. Pore water pressures remain approximately 30 ft below the CPP Moderate-Risk threshold.
- Pore water pressures measured by all active CPP sensors remained well below their Moderate-Risk thresholds. All active CPP instruments that have historically monitored unsaturated conditions prior to construction have remained unsaturated.

Non-CPP sensors installed within N-S Embankment basal saturated zone have monitored relatively constant or slightly decreasing pore water pressure trends since completion of EL. 6,450 ft lift construction. Pore water pressures at these sites (MW12-04, DH18-S1, DH18-S2) remain slightly elevated (between approximately 1 to 7 ft) above pre-construction levels; however, current conditions are interpreted not to constitute an elevated dam safety hazard. Conditions monitored by instruments DH18-S1 VW2 and DH18-S2 VW2, which have designated Quantitative Performance Parameters (QPPs) within the TOMS Manual (MR/KP, 2022), remain approximately 15 to 25 ft below their Level 1 piezometric threshold elevations.

2.2 DEFORMATION MONITORING

2.2.1 GENERAL

Deformations continue to be monitored using multiple instrumentation and remote sensing techniques and the utility of each monitoring technique was described previously in KP (2021e). Observations following completion of EL. 6,450 ft lift construction have generally continued to indicate slowing deformation rates throughout the E-W and N-S Embankments. A high-level summary of key deformation trends is provided below:

- **Central Pedestal Area:** Slightly elevated deformation rates (compared to pre-construction rates) continue to be monitored within and localized around the footprint of recently completed lifts of the E-W and N-S Embankments. Deformation rates have continued to slow following completion of construction within the Central Pedestal Area and throughout the majority N-S Embankment.
    - **Rockfill Surcharge:** Available inSAR, survey-monument, and Geo4Sight deformation data indicate that deformation rates throughout the rockfill surcharge continue to slow slightly following construction and remain low in comparison to those observed during active lift construction.
    - **Central Pedestal Area, E-W and N-S Embankment Crest:** Survey-monument and inSAR data indicate that deformation rates remain slightly elevated but continue to slow with time following construction. The highest rates observed are located east of Section 0+00, where construction was completed in January 2023 (most recent Central Pedestal Area construction) and where recently placed (June 2021 through January 2023) rockfill thickness are highest (up to 200 ft of rockfill placed in 5 lifts). Survey-monuments installed along the tailings pipeline ramp, located immediately downstream of the construction area, have also continued to monitor elevated but slowing deformation rates.
    - **Central Pedestal Area, Downstream Embankment Slope:** Survey-monuments situated downstream of the EL. 6,450 ft construction area on the EL. 6,150 ft and Seep 10 benches indicate that deformation rates are approaching their pre-construction rates and continue to slow with time. Inclinometers installed within the Seep 10 bench and foundation (DH19-S3 and DH19-S4 on Sections 0+00 and 8+00W, respectively) continue to monitor subsurface deformations that are relatively low and exhibit relatively constant or slowing rates.
- **N-S Embankment:** EL. 6,450 ft lift construction was completed in March 2023 and available survey-monument (NS-01) and inSAR data indicate that deformations remain elevated around the recent construction (approximately between Sections 43+00 and 53+00). Sequential inSAR bulletins and NS-01 survey-monument data (surveyed with a total station) indicate that deformation rates are slowing following construction, as expected. KP expects this trend to continue with time following construction.

Deformation monitoring completed since completion of embankment construction within the E-W and N-S Embankments continues to indicate slowing deformation rates and has not identified any progressive (accelerating) deformations following completion. Additional detailed monitoring findings are available within the data analysis presentation included as Appendix A.

3.0 DISCONTINUATION OF CONSTRUCTION MONITORING PROGRAM

3.1.1 GENERAL

The supplementary EL. 6,450 ft Construction Monitoring Program was developed and implemented to more-rigorously monitor E-W and N-S Embankment pore water pressures and deformations, while

large-scale construction loading was active and had potential to influence embankment performance. Observations since completion of EL. 6,450 ft lift construction have demonstrated, through continued slowing deformation trends and generally constant or decreasing pore water pressures, that construction influence has significantly diminished since completion of E-W and N-S Embankment construction in January and March 2023, respectively. KP is satisfied that YDTI conditions can be appropriately monitored within the existing dam safety/performance monitoring programs. As such, the supplementary construction monitoring program will be deactivated moving forward. KP will continue to closely monitor YDTI impoundment and embankment conditions.

KP anticipates that similar construction monitoring programs may be warranted, at the discretion of the Engineer-of-Record, at the YDTI during subsequent construction phases. In addition, it may be beneficial to consider incorporating aspects of the EL. 6,450 ft Construction Monitoring program into the dam safety monitoring programs and/or future updates to the TOMS Manual. The following sections provide some initial thoughts and recommendations regarding these initiatives.

3.1.2 INCORPORATION OF MONITORING TECHNIQUES

KP considers the EL. 6,450 ft construction monitoring program to have been highly valuable for tracking embankment conditions and evaluating associated risks during active construction. The monitoring techniques used and lessons learned during the program will be of value for ongoing dam safety and/or future YDTI construction monitoring programs. Opportunities include:

- **Expanded Embankment Deformation Monitoring Techniques:** The construction monitoring program implemented additional surface deformation monitoring techniques that proved to be valuable for tracking embankment deformation trends.
  - The expanded use of survey monuments (GNSS, DGPS, and total station surveyed) proved a valuable tool for tracking surface deformations year-round. The near real time data provided by GNSS survey-monuments via the remote monitoring system were especially valuable due to continuous online access to updated data and because the automated data collection eliminates the need for regular manual survey required by the DGPS and total station techniques. KP recommends that an expanded GNSS survey-monument network be considered to facilitate ongoing dam safety monitoring and future construction monitoring programs.
  - More regularly available inSAR (bulletins during construction) also provided valuable data to monitor the spatial distribution of surface deformations and screen for development of any unexpected elevated or accelerating deformations that were not captured by in-situ survey-monuments. It is recommended that continued use of inSAR bulletins, or more frequent inSAR SqueeSAR processing, be considered for ongoing dam safety monitoring and future construction monitoring programs.
- **Replacement of Damaged Piezometric Instrumentation:** Recent construction within the Central Pedestal E-W and N-S Embankments (from June 2021 through August 2023) resulted in damage to and abandonment of numerous piezometric instruments within four drillholes (DH17-S2, DH15-S5, DH19-S1, and DH19-S2). Damage is predominantly interpreted to be attributed to cable damage along horizontal extensions, resulting from poor bedding practices. It is recommended that abandoned instrumentation deemed ‘high priority’ be considered for replacement during upcoming annual site investigation programs and that updated VWP extension and bedding plans be developed to minimize potential for further instrument damage during future construction programs.

3.1.3 POTENTIAL TOMS QPO/TARP DEVELOPMENT

The construction monitoring program utilized additional monitoring and an updated performance monitoring structure to what is presently specified within the TOMS Manual. Considering the addition and/or further development of the following aspects within the TOMS Manual may be beneficial for ongoing dam safety/performance monitoring programs:

- **Piezometric CPPs and Tiered TARP:** The CPPs developed for the construction monitoring program expanded upon the existing TOMS QPPs by incorporating additional instruments (better plan view coverage and incorporation of instruments within known perched saturated zones) and utilizing a tiered risk-based TARP structure (i.e. Low-, Moderate-, and High-Risk classifications) based on sensitivity-cases run within 2-dimensional stability modelling. It may be beneficial to adopt a similar tiered-TARP structure within a subsequent TOMS Manual edition.
- **Surface Deformation QPPs and Tiered TARP:** The widespread collection of surface deformation monitoring data during the EL. 6,450 ft construction monitoring program provided significant observational information about how the YDTI embankments deform during and following active construction loading. No deformation CPPs were active during EL. 6,450 ft embankment construction and operational monitoring relied on a 'behavioral characterization approach' (i.e., tracking deformation magnitudes, identifying accelerating/decelerating trends, and screening unexpected progressive deformation trends following construction) to assess embankment performance. The data collected between June 2021 and present may allow for development of quantitative performance-based surface deformation QPPs for potential incorporation into subsequent TOMS editions and/or future construction monitoring programs.

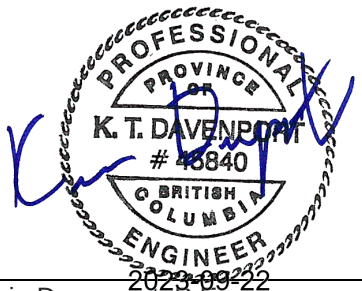
4.0 SUMMARY

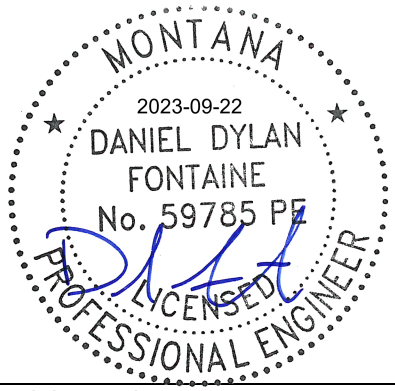
KP and MR have utilized a supplemental construction monitoring program to monitor for elevated piezometric conditions and/or deformation rates resulting from embankment lift and surcharge construction within the E-W and N-S Embankments. Large-scale construction of the EL. 6,450 ft embankment lift was completed in March 2023 and only minor construction activities (e.g., regrading and placement of alluvial facing and final embankment grading in select locations) are ongoing. Available monitoring data following completion of EL. 6,450 ft lift construction (April 2023 through August 2023) generally continue to indicate constant or slightly decreasing pore water pressures and slowing deformation rates throughout the embankments, as expected in the absence of further loading. KP is satisfied that YDTI conditions can be appropriately monitored within the existing dam safety/performance monitoring programs. As such, the supplementary construction monitoring program will be deactivated moving forward. KP will continue to closely monitor YDTI impoundment and embankment conditions.

KP considers the construction monitoring program to have been highly valuable for tracking embankment conditions and evaluating associated risks, while large-scale construction loading was active (June 2021 through March 2023). It is recommended that a subset of the expanded deformation monitoring techniques (e.g. expanded GNSS network, survey-monuments, and regularly available inSAR) be incorporated to ongoing dam safety monitoring programs. Replacement of key piezometric monitoring instruments damaged during construction is also recommended. Implementation of a tired TARP structure and development of quantitative surface deformation QPPs may also be of value to consider for future TOMS Manual editions.

Please feel free to contact the undersigned with any questions or comments.

Yours truly,
Knight Piésold Ltd.





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KNIGHT PIÉSOLD LTD.
PERMIT NUMBER
1001011
EGBC PERMIT TO PRACTICE

Approval that this document adheres to the Knight Piésold Quality System: DDF

Attachments:

Appendix A YDTI Embankment Monitoring Update following Substantial Completion of the EL. 6,450 ft Lift (April through August 2023)

References:

Knight Piésold Ltd. (KP, 2018). Construction Management Plan (KP Reference No. VA101-126/12-5 Rev 3), dated May 1, 2018.

Knight Piésold Ltd. (KP, 2021a). Memo – Approval to Commence EL. 6,250 ft Construction of the North-South Embankment (KP Reference No. VA21-01148), dated June 17, 2021.

Knight Piésold Ltd. (KP, 2021b). Memo – Approval to Commence EL. 6,300 ft Construction of the Central Pedestal Area (KP Reference No. VA21-01356), dated August 24, 2021.

Knight Piésold Ltd. (KP, 2021c). Memo – Approval to Commence EL. 6,350 ft Construction of the Central Pedestal Area (KP Reference No. VA21-01727), dated September 24, 2021.

Knight Piésold Ltd. (KP, 2021d). Memo – Approval to Commence EL. 6,400 ft Construction of the Central Pedestal Area (KP Reference No. VA21-01996), dated November 10, 2021.

Knight Piésold Ltd. (KP, 2021e). Letter – YDTI Construction Monitoring Letter – MP#1 (KP Reference No. VA21-01362), dated September 30, 2021.

Knight Piésold Ltd. (KP, 2022). Memo – Approval to Commence EL. 6,450 ft Construction of the Central Pedestal Area (KP Reference No. VA22-0031), dated March 11, 2022.

Montana Resources, LLP. and Knight Piésold Ltd. (MR/KP, 2022). 2021 Tailings Operations, Maintenance and Surveillance (TOMS) Manual (Reference No. VA101-126/25-5 Rev 5), dated January 12, 2022.

Copy To: Mark Thompson, Corey Warner, Johnathan Hoover, Travis Birkenbuel

/ktd

APPENDIX A

YDTI Embankment Monitoring Update following Substantial Completion of the EL.

(Pages A-1 to A-42)

YDTI Embankment Monitoring Update following Substantial Completion of the EL. 6,450 ft Lift (April through August 2023)

Agenda

Overview of Construction Status & Activities

Construction Monitoring Program & Findings

- Review of Piezometric CPP Monitoring Findings
- Review of Deformation Monitoring Findings

Completion of Construction Monitoring Program

Summary

Overview of Construction Status & Activities

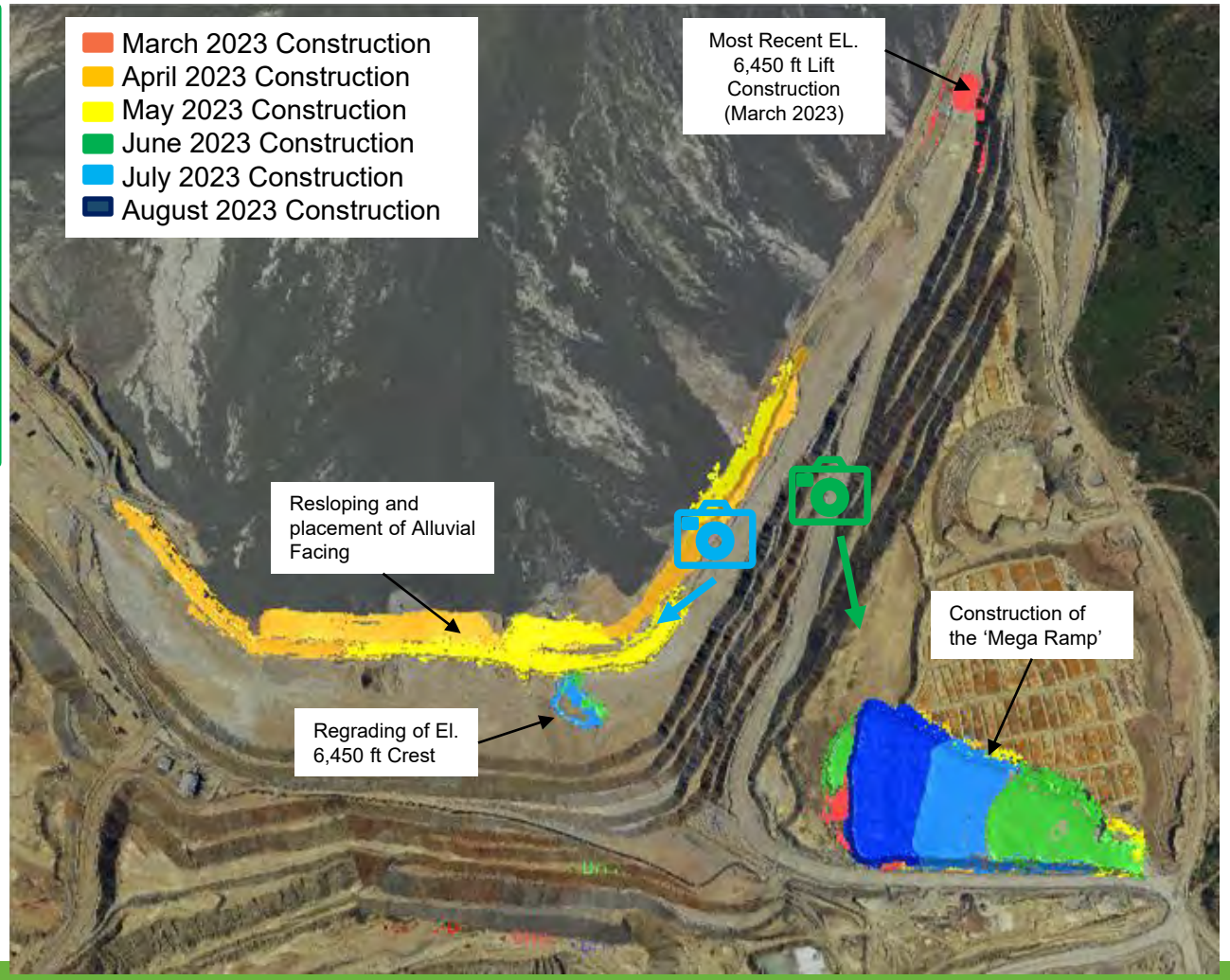
Overview of Construction Status & Activities

Summary

- Construction of the EL. 6,450 ft lift of the East-West and North-South Embankments of the YDTI were substantially completed in January and March 2023, respectively. Only relatively minor embankment construction activities have occurred since, including:
  - Regrading along the upstream slopes of the central East-West and North-South Embankments and placement of alluvial facing material (during April and May 2023).
  - Construction of a tailings pipeline bench along the upstream extent of the central East-West and North-South Embankments (during May 2023)
  - Minor El. 6,450 ft crest ripping, regrading, and infill within the Central Pedestal Area near Section 0+00 (during June, July, and August 2023)
  - Initial 'Mega Ramp' lift construction over the historical leach pads downstream of the North-South Embankment (from March through August 2023). Construction has not yet reached the downstream embankment extent.
- The above construction activities were not anticipated to significantly influence observed embankment conditions (pore water pressures or deformations)
- Construction following substantial EL. 6,450 ft lift completion are illustrated on the following slides

Overview of Construction Status & Activities

Construction Summary (April to August 2023)



Overview of Construction Status & Activities

Upstream Alluvial Facing (April & May 2023)

- Placement of the Upstream Alluvial Facing (Zone F) material continued during April and May
- Slopes of 3H:1V have been implemented, with a minimum alluvial material thickness of 3 ft per CMP (2018).

Overview of Construction Status & Activities

‘Mega Ramp’ Construction (March through August 2023)

- Construction of the ‘Mega Ramp,’ overlying historical leach pads, began in March 2023 and continued through August 2023. Construction has not yet reached the downstream embankment extent.

Overview of Construction Status & Activities

Central EL. 6,450 ft Lift Ripping and Regrading

- El. 6,450 ft Crest was cross-ripped and fill placement initiated for final grading up to El. 6,450 ft as per the EOR's request. MR began material placement in June 2023 and continued through August 2023
- Ripping and regarding is expected to continue within the Central Pedestal Area until the onset of winter conditions

Construction Monitoring Program & Findings

Construction Monitoring Program & Findings

Summary of Program Scope

- The EL. 6,450 ft Construction Monitoring Program has been active since June 2021 and includes:
  - Piezometric monitoring of select Construction Performance Parameters (CPPs) with TARP
  - Surface deformation monitoring, including:
    - Survey-monuments:
      - Manual DGPS survey monitoring (2x/wk) – lateral, vertical deformation
      - Total Station survey monitoring (2x/wk) – lateral, vertical deformation
      - GNSS monitoring (monthly analysis) – lateral, vertical deformation
    - InSAR Bulletins (22-day bulletins) – LoS surface deformation
      - 8 bulletins received since May 2023 (previously obscured by snow-coverage)
    - Crack mapping – screening for new cracks and changes in crack length, aperture, vertical offset.
  - Subsurface deformation monitoring, including:
    - Instrumented inclinometers (monthly analysis)
    - Geo4Sight (monthly analysis)

Construction Monitoring Program & Findings

Findings Following Substantial EL. 6,450 ft Completion

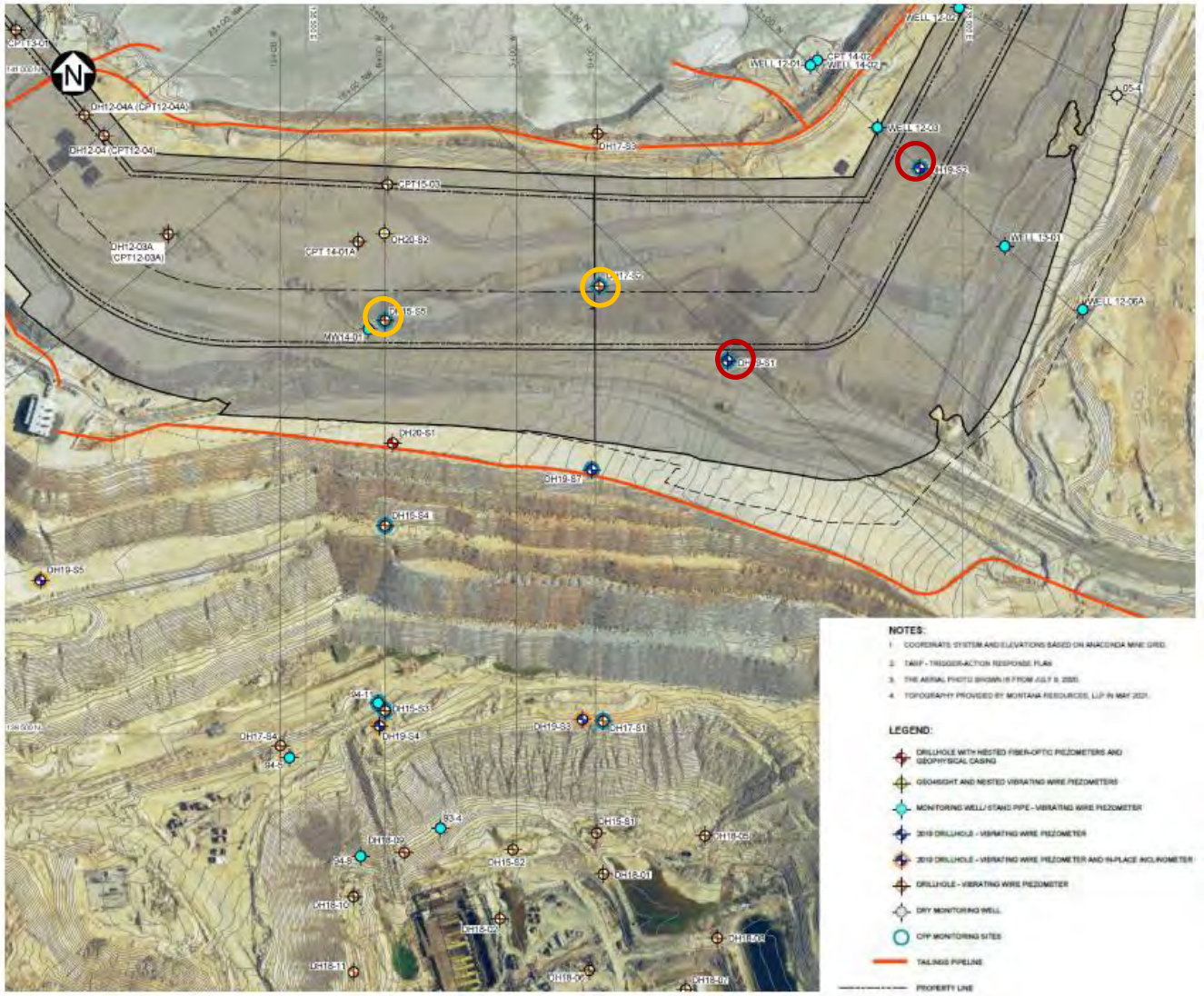
- Embankment pore water pressures have generally continued to decrease slightly following substantial EL. 6,450 ft lift construction and all active Piezometric CPPs remain within their 'Low-Risk' TARP classifications. Key findings include:
  - Pore pressures monitored within the East-West Embankment basal saturated zone on Sections 0+00 and 8+00W have generally continued to decrease slightly.
  - Pore water pressures within known perched saturated zones on East-West Embankment Sections 0+00 and 8+00W generally indicate constant or slightly increasing pore water pressure trends, except for DH19-S7 which has continued to monitor fluctuations that may be indicative of an instrumentation issue.
  - Non-CPP sensors installed within N-S Embankment in the basal saturated zone have monitored relatively constant or slightly decreasing pore water pressure trends since completion of EL. 6,450 ft lift construction.
- Elevated deformation rates continue to be observed localized around areas of recent East-West and North-South Embankment construction. Deformation rates have continued to slow following completion of construction within the Central Pedestal Area and throughout the majority N-S Embankment. Key findings include:
  - East-West and North-South Embankment Crests: Survey-monument and inSAR data indicate that deformation rates remain slightly elevated but continue to slow with time following construction.
  - Downstream Central Pedestal Area Embankment Slope: Survey-monuments situated downstream of the EL. 6,450 ft construction area on the EL. 6,150 ft and Seep 10 benches indicate that deformation rates are approaching their pre-construction rates and continue to slow with time.
  - Significant transverse cracking and depressions were observed along the EL. 6,450 ft crest near Section 0+00 on April 27, 2023, which triggered a Level 1 Unusual Occurrence. It is interpreted that differential settlement of recently placed rockfill resulted in initial cracking, which was exacerbated due to drainage from ponding on the embankment crest. KP and the EOR are satisfied that the cracking event does not pose an elevated dam safety concern but will continue to routinely monitor the area during 2023.

Piezometric CPP Monitoring Results

Piezometric CPP Monitoring Results

Summary

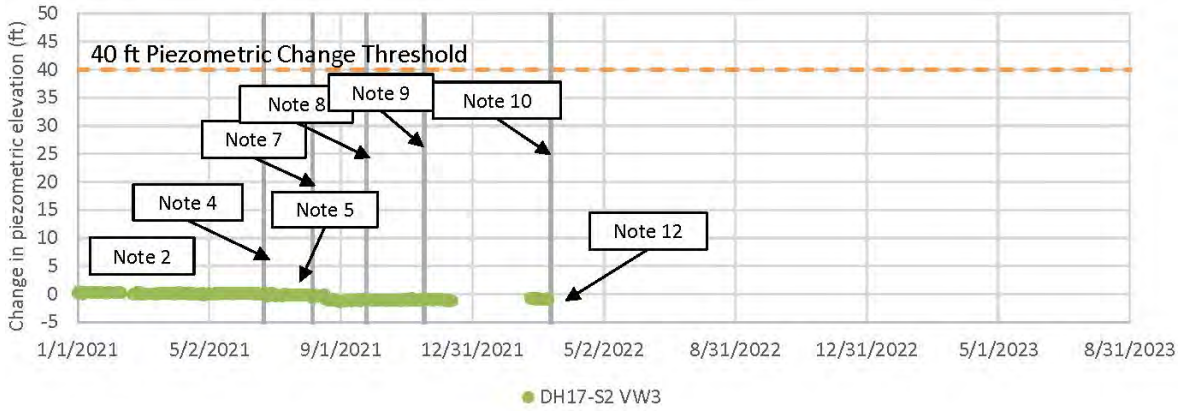
- All active piezometric CPP sites remain within their Low-Risk TARP Scenarios at the end of August 2023.
- Twelve (12) of 21 CPP sensors are presently online (as of April 2023)
- Abandoned sensors:
  - DH15-S5 VW1, VW3 and VW4 (damaged cables) - abandoned
  - DH17-S2 VW1, VW3, VW4, VW5, and VW6 (damaged sensors) - abandoned

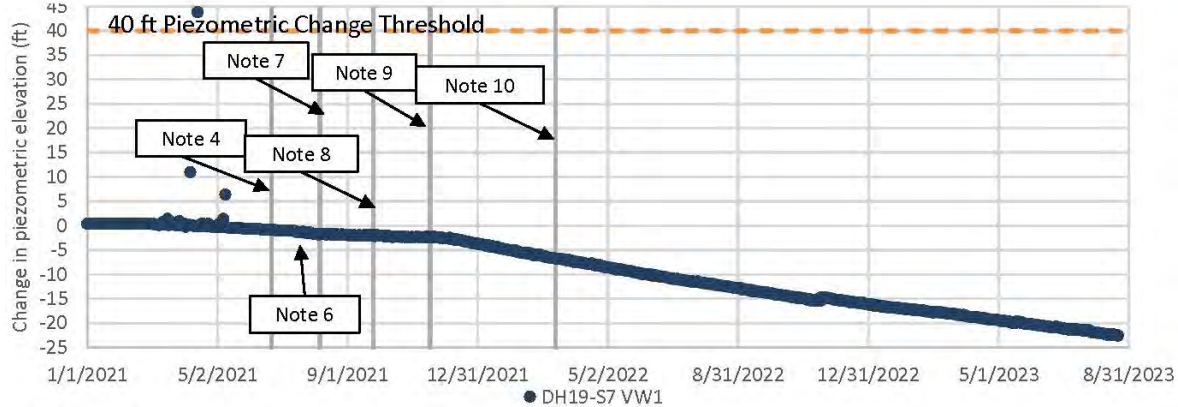


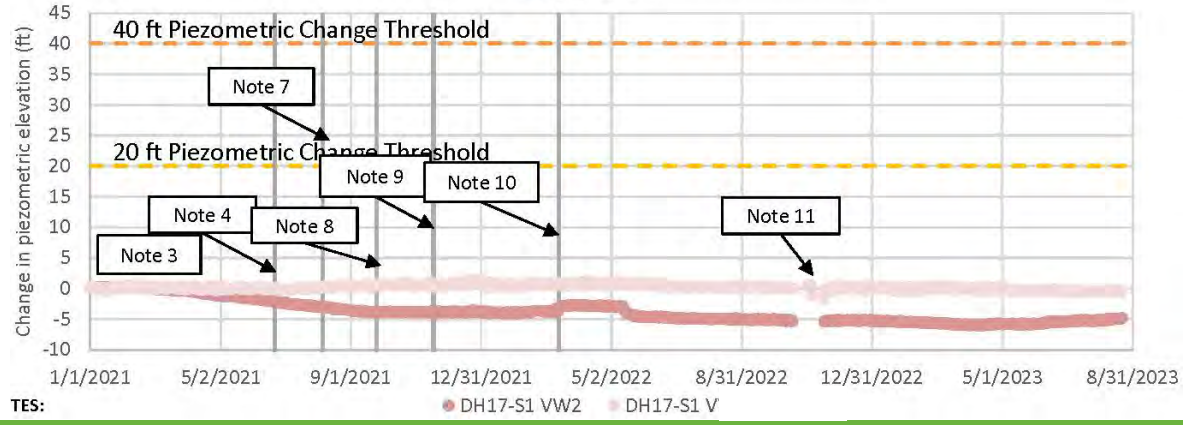
Piezometric CPP Monitoring

Review of Section 0+00 Piezometric Conditions – Basal System

- Conditions remain within the Low-Risk Scenario
- No pore water pressure increases have been monitored within Section 0+00 basal system in response to construction:
  - Pressures have continued to decrease during April 2023 (DH19-S7 VW1; ~59 ft below CPP Moderate Risk threshold)
  - Monitored conditions remain well below 20 ft and 40 ft CPP Moderate Risk thresholds for toe and upstream, respectively
- DH17-S2 sensors are to be replaced by DH23-S3 (downstream of DH17-S2 along Section 8+00W) as part of the 2023 SI program





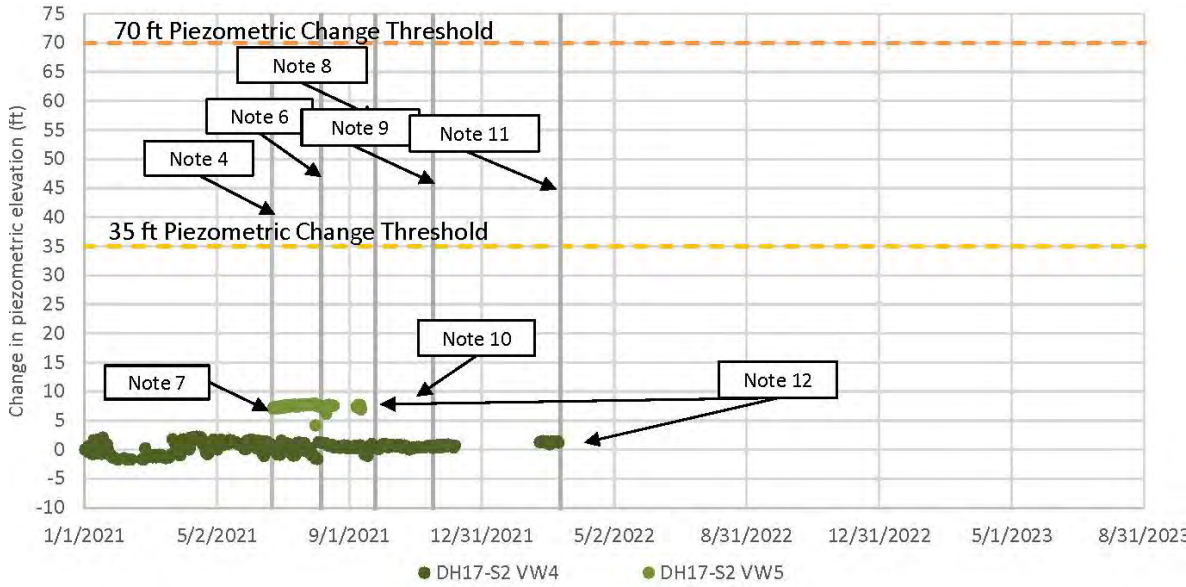


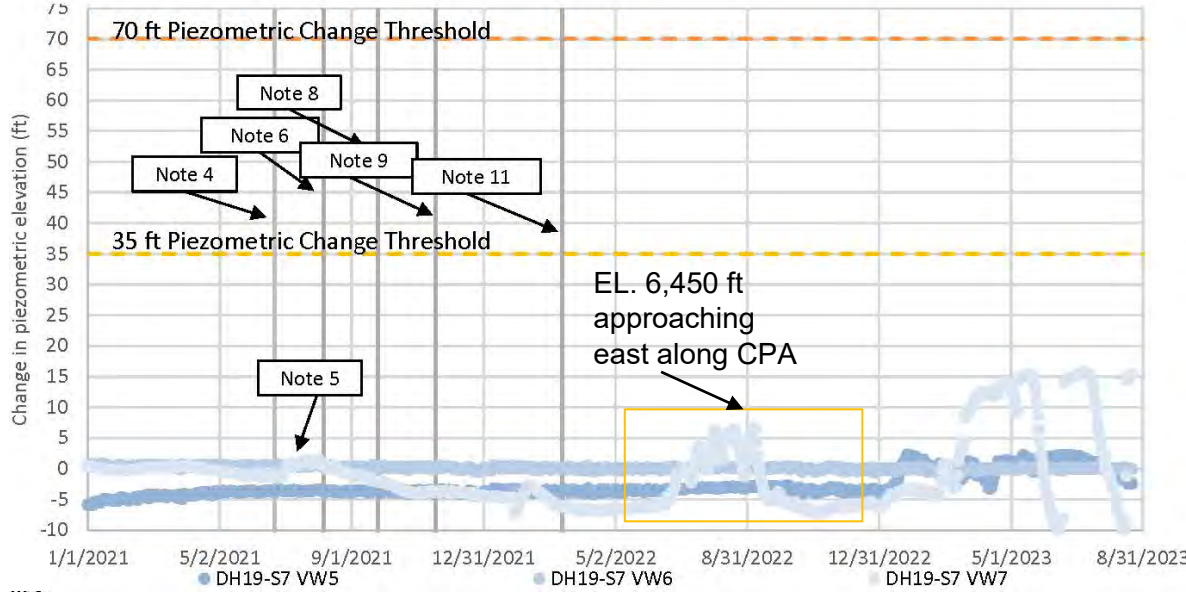
TES:

Piezometric CPP Monitoring

Review of Section 0+00 Piezometric Conditions – Perched System

- Conditions remain within the Low-Risk Scenario
- DH19-S7 VW7 monitored piezometric fluctuations coincident with alluvial facing placement along the Center Pedestal Area:
  - Monitored conditions at DH19-S7 VW7 are approximately 12 ft above the peak pore water pressure observed during active East-West EL. 6,450 ft lift construction (early-September 2022).
  - Pore pressure fluctuated starting in March and have continued through to August 2023.
  - Sensors installed deeper within the basal rockfill monitored stable pore water pressures during MP#22.
- Conditions monitored by active instruments remain approximately 20 to 35 ft below the Moderate Risk CPP thresholds
- DH17-S2 sensors are to be replaced by DH23-S3 (downstream of DH17-S2 along Section 8+00W) as part of the 2023 SI program

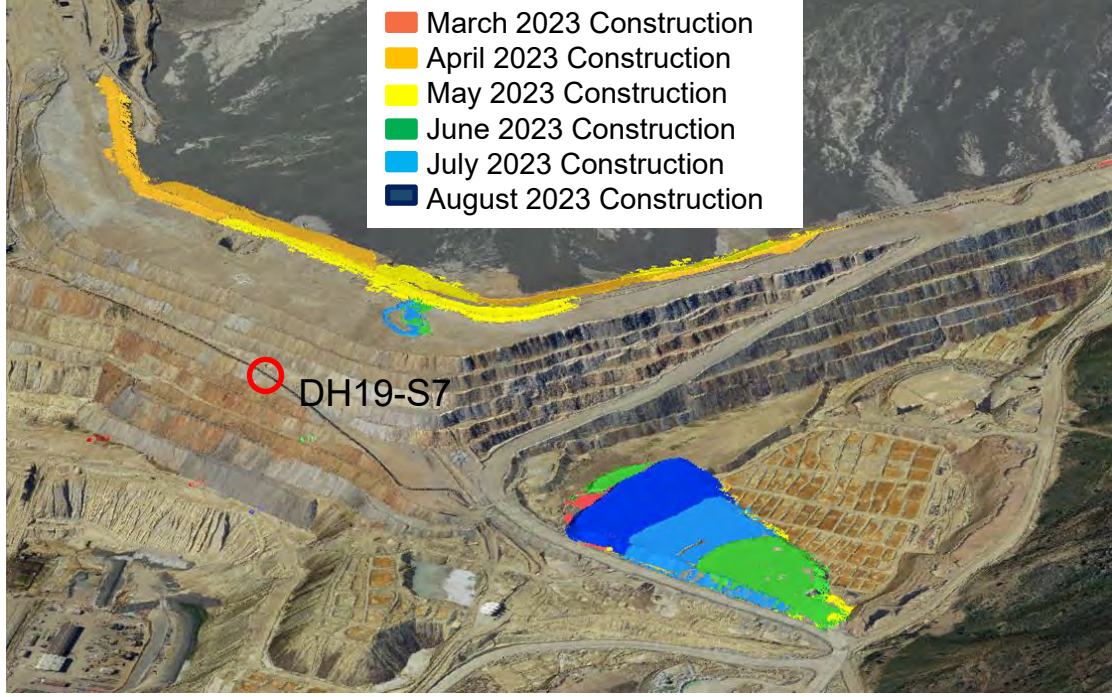


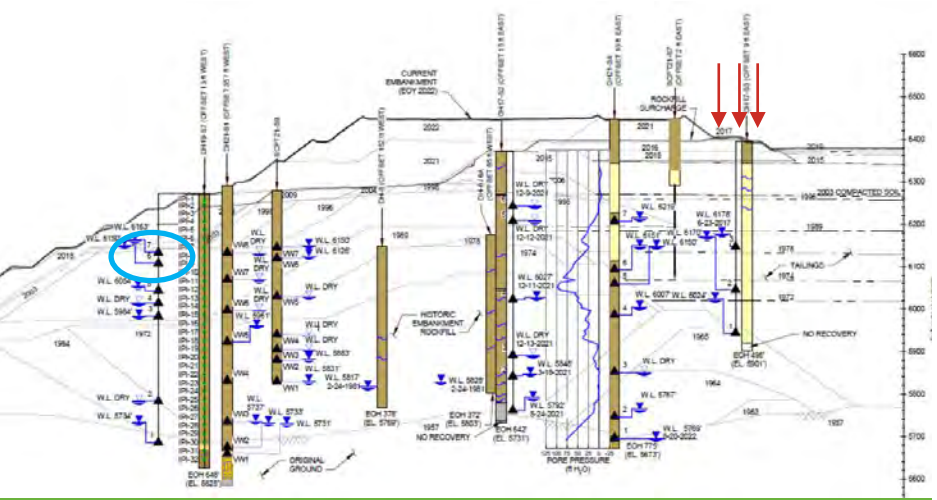


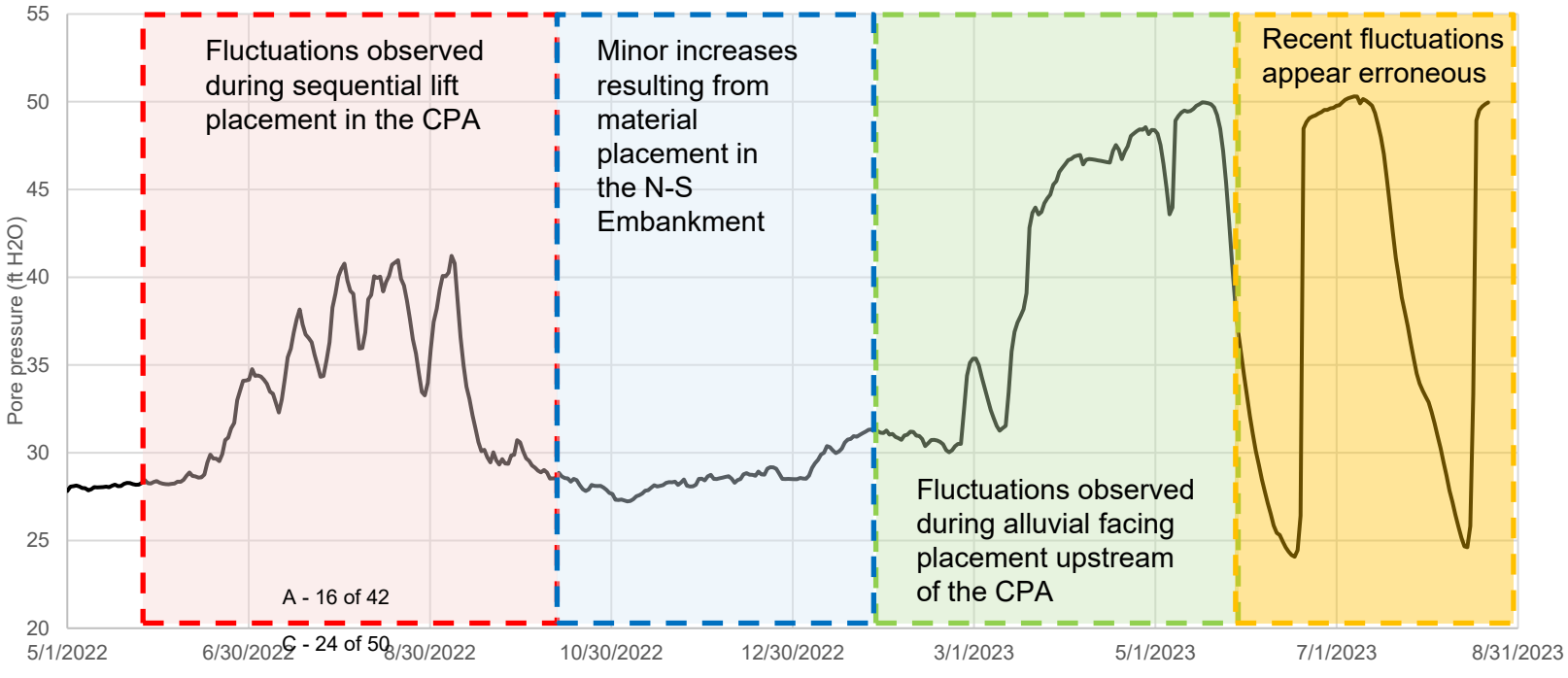
Piezometric CPP Monitoring

DH19-S7 VW7 Response

- DH19-S7 VW7 pore water pressures fluctuated from April through August 2023.
  - Long-term (monthly, quarterly average) changes appear to have stabilized
  - Pore pressure fluctuations were observed from April through August 2023 (20 – 25 ft) may not be representative of in-situ conditions and may be sensor performance issues. Continued monitoring is recommended.
- Conditions remain approximately 20 ft below the Moderate Risk threshold



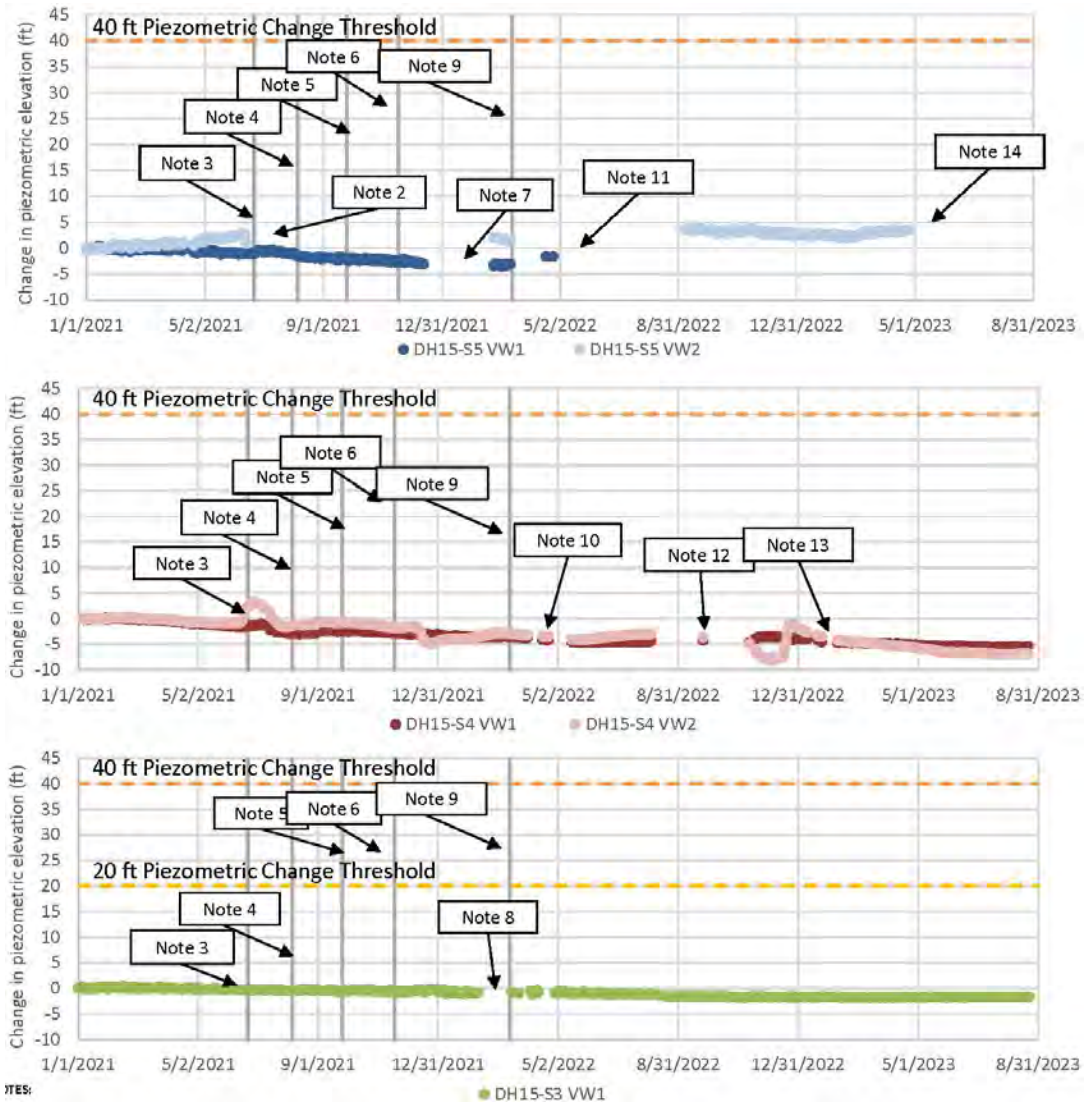




Piezometric CPP Monitoring

Review of Section 8+00W Piezometric Conditions – Basal System

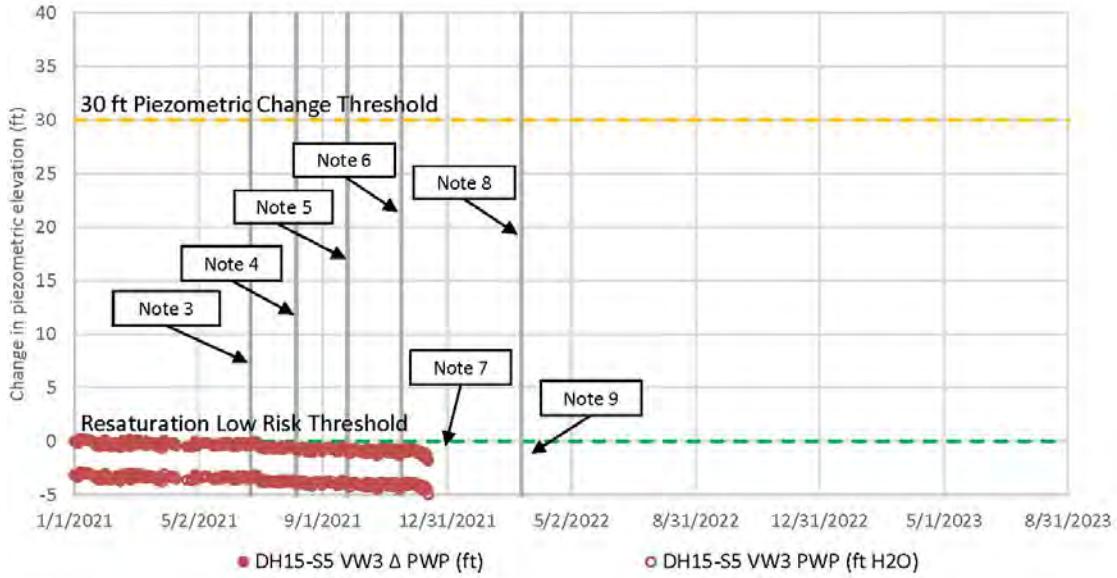
- Conditions remain within the Low-Risk Scenario
- Relatively stable or slightly decreasing pore water pressure trends were observed within the Section 8+00W basal system between April and August 2023.
- DH15-S5 sensors are to be replaced by DH23-S1 (downstream of DH15-S5 along Section 0+00) as part of the 2023 SI program

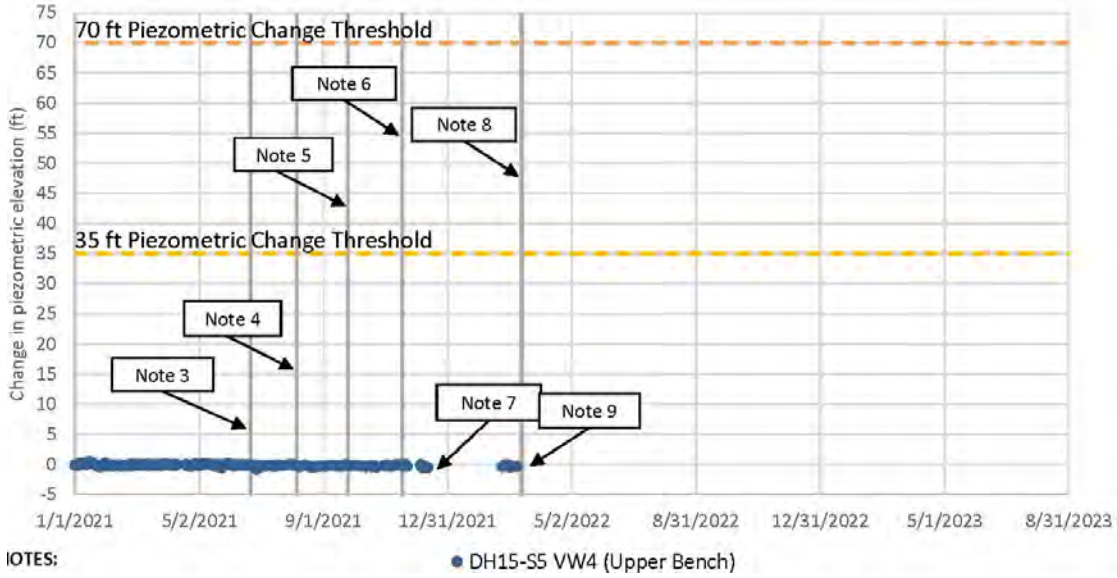


Piezometric CPP Monitoring

Review of Section 8+00W Piezometric Conditions – Perched System

- No new data available between April and August 2023
- DH15-S5 VW3 and VW4 were damaged during a collar raise and have been abandoned.
- DH15-S5 sensors are to be replaced by DH23-S1 (downstream of DH15-S5 along Section 0+00) as part of the 2023 SI program

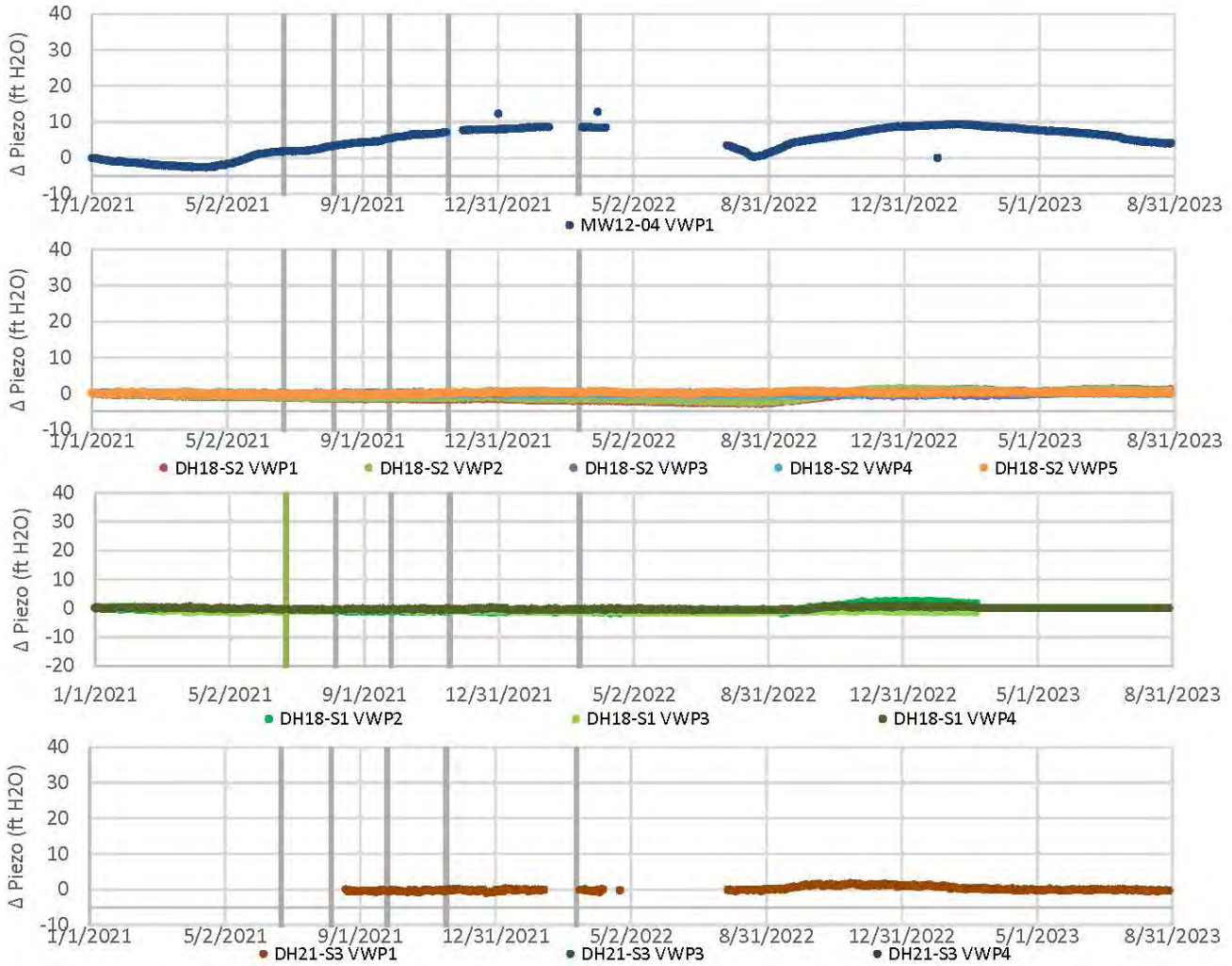




Piezometric CPP Monitoring

N-S Embankment

- Decreasing and stable pore water pressures continue to be monitored within the North-South Embankment since March 2023
  - Minor construction-related piezometric increases were previously monitored in the basal saturated zone, corresponding with EL. 6,450 ft lift construction (September through December 2022)
- No CPPs are active for North-South Embankment sensors; however:
  - All QPPs remain below their threshold locations, and
  - Monitored PWP increases relative to December 2021 are well below 20 and 40 ft, which have been used for the Central Pedestal Area CPP thresholds.



Crack Progression Monitoring

Crest Cracking Observed

Central Pedestal Area (near Section 0+00)

- Significant transverse cracking and depressions were observed along the EL. 6,450 ft crest near Section 0+00 on April 27, 2023, which triggered a Level 1 Unusual Occurrence response that comprised on-site inspections (completed by MR and KP), a targeted monitoring campaign (developed by KP and the YDTI Engineer of Record (EOR)), and remedial activities completed by MR operations (reported previously in VA23-01198)
  - A detailed summary of the observed cracking and monitoring analyses was reviewed with the Independent Review Panel (IRP) on June 13, 2023
  - The response comprised:
    - EOR notification by MR
    - Heightened monitoring of cracking and deformation in the area.
    - Investigation of the cause
    - Test trenching/pitting within main cracking area
    - Review with ITRB
    - Implementation of remedial activities
    - Follow-up inspection following remediation

Fig. 1 – Aerial Photograph with KP Crack Mapping

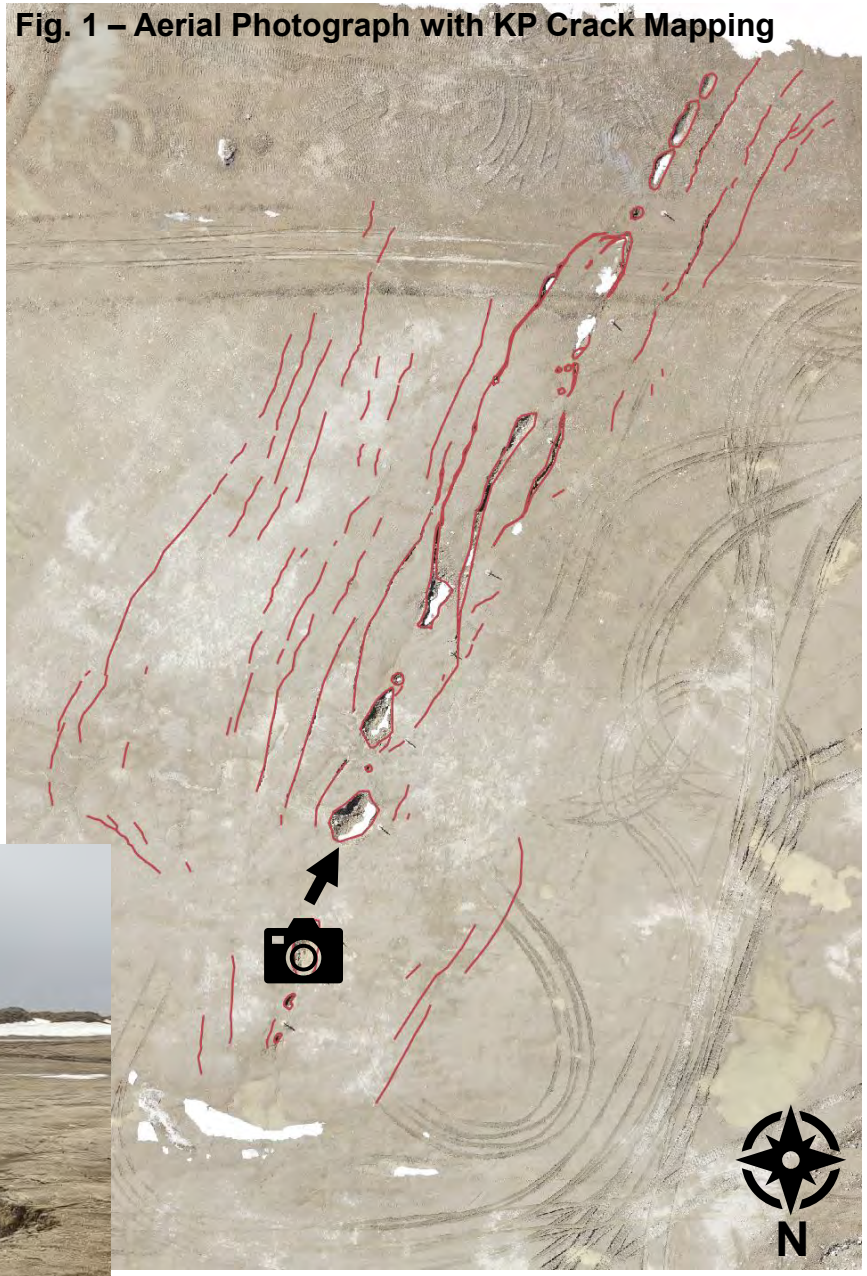
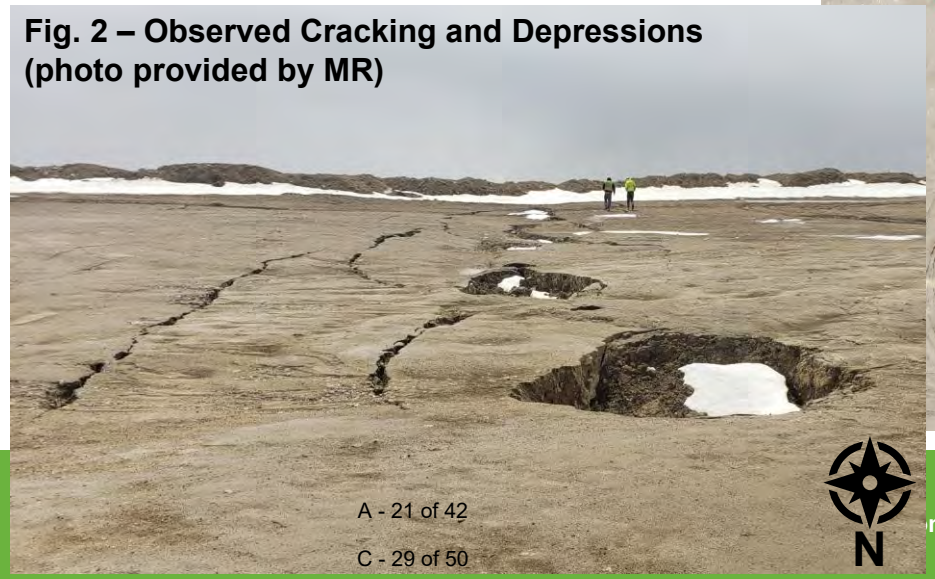


Fig. 2 – Observed Cracking and Depressions (photo provided by MR)

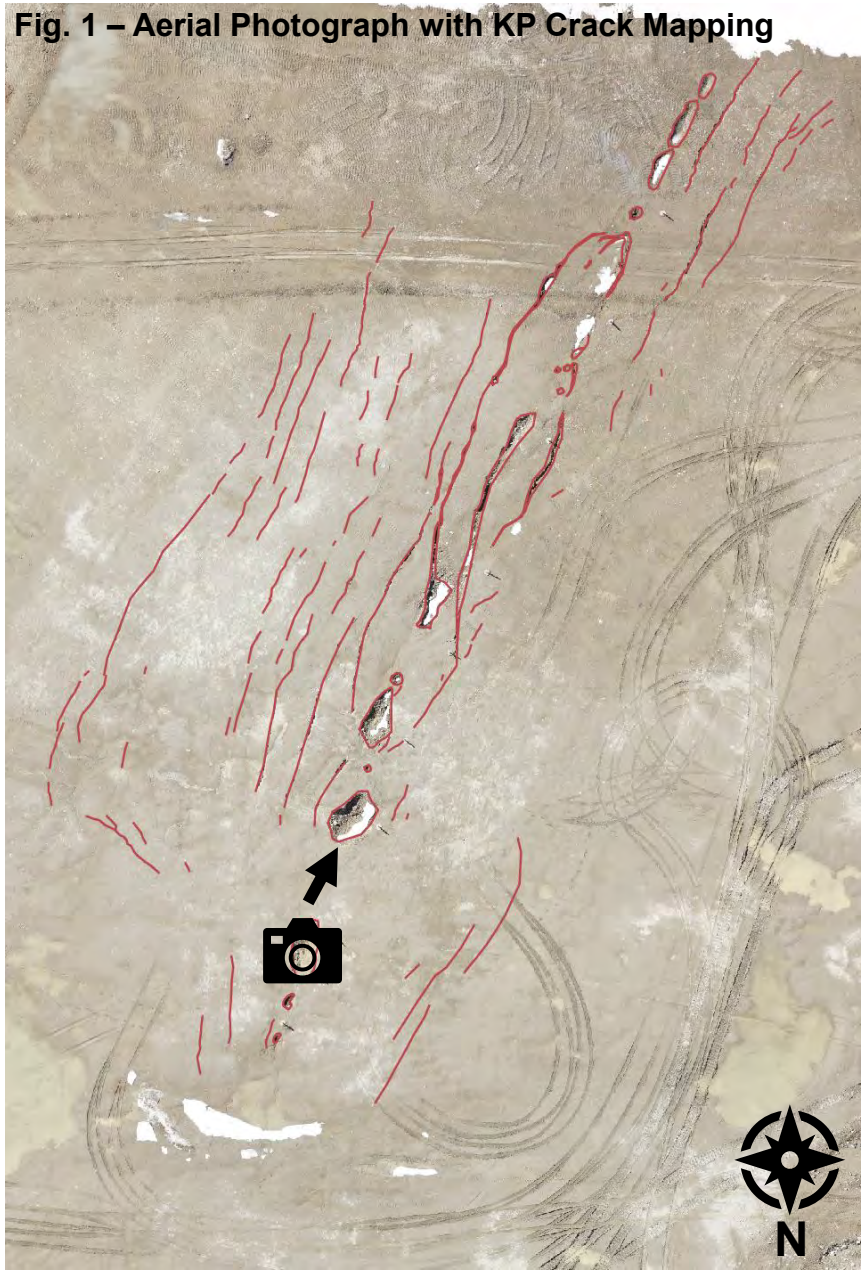


Crest Cracking Observed

Summary of Monitoring & Remediation

- KP and the EOR are satisfied that the cracking event does not pose an elevated dam safety concern but will continue to routinely monitor the area during 2023. A high-level summary is of the cracking event is presented below:
  - Differential settlement of recently placed rockfill of the El. 6,450 ft East-West Embankment crest is interpreted to have resulted in initial transverse cracking. Recharge from significant meltwater- and precipitation-based ponding present on the embankment crest is inferred to have flowed into the cracks, exacerbated the cracking and resulting in development of localized collapse features.
  - Monitoring data and inspections following identification of the cracks did not indicate progression of cracking (i.e., development of additional new cracks, lengthening of existing cracks, increasing vertical offsets) or accelerating deformation rates in the area.
  - Cracking was remediated in mid-June 2023 (approximately June 16th through 20th, 2023). Remedial activities comprised ripping and shallow excavation of the main cracking/depression area and initial leveling/infilling of the low area around the location to minimize potential for further ponding. Widespread final grading up to the design grade at El. 6,450 ft is underway throughout the Central Pedestal Area.
  - Additional inspection (by MR) and monitoring (by KP) following remediation was completed during Q2 2023 to screen for re-expression of cracking within the main cracking/depression area and monitor deformations in the area. No re-expression of cracking has been reported and deformation rates continue to slow following El. 6,450 ft lift construction (i.e., no evidence of accelerating deformations in proximity to the cracking area).

Fig. 1 – Aerial Photograph with KP Crack Mapping

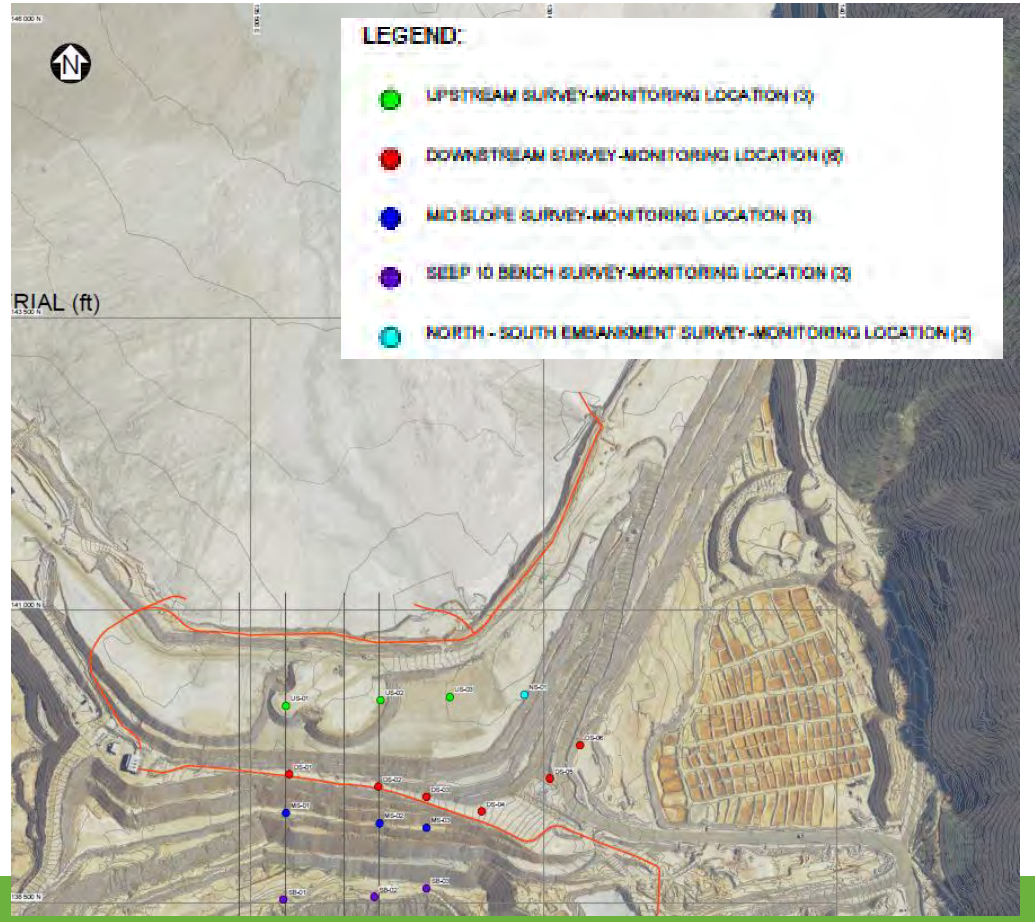


Surface Deformation Monitoring

Surface Deformation Monitoring

Manual Survey Monitoring

- Surface deformations are monitoring via manual and total station survey prisms, implemented in the following areas:
  - Seep 10 Bench
  - EL. 6,150 ft Bench
  - Tailings Pipeline Ramp
  - East-West EL. 6,450 Embankment crest
  - North-South Embankment
- 21 DGPS survey monuments provide vertical and lateral displacement monitoring. DGPS monument surveying was decommissioned in August 2023 and transitioned to Total Station prism surveys.
- 18 Total Station prisms, providing vertical and lateral displacement monitoring, have been surveyed since March 2023. Three (3) additional prisms in the NS embankment were commissioned in mid-August. A total of 21 survey prisms are being scanned 2x per week.

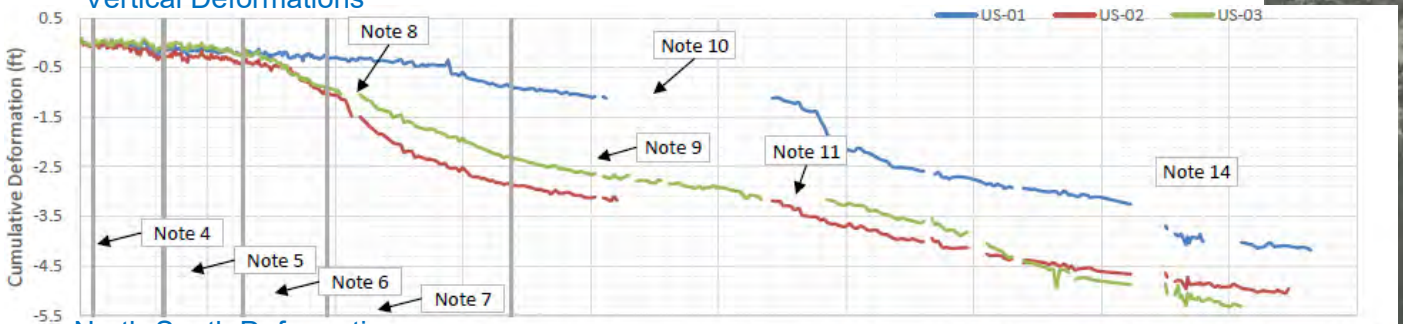


Surface Deformation Monitoring

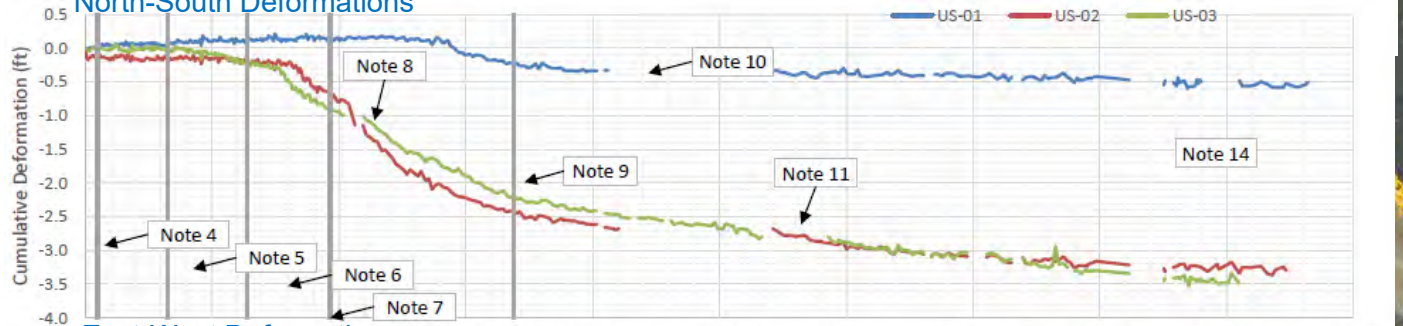
Manual DGPS Survey Monuments

- Deformations continue to slow following completion of the EL. 6,450 ft lift

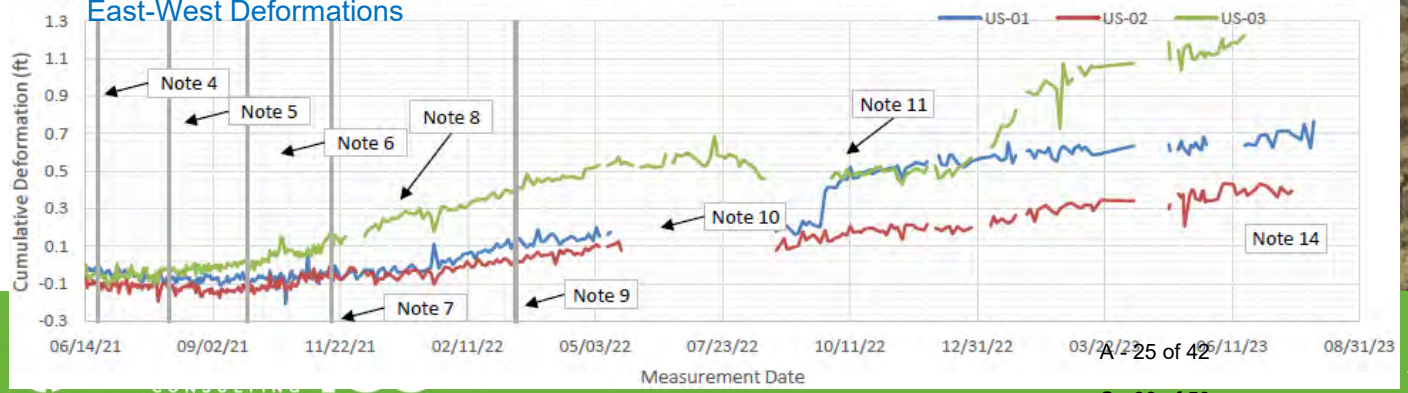
Vertical Deformations



North-South Deformations

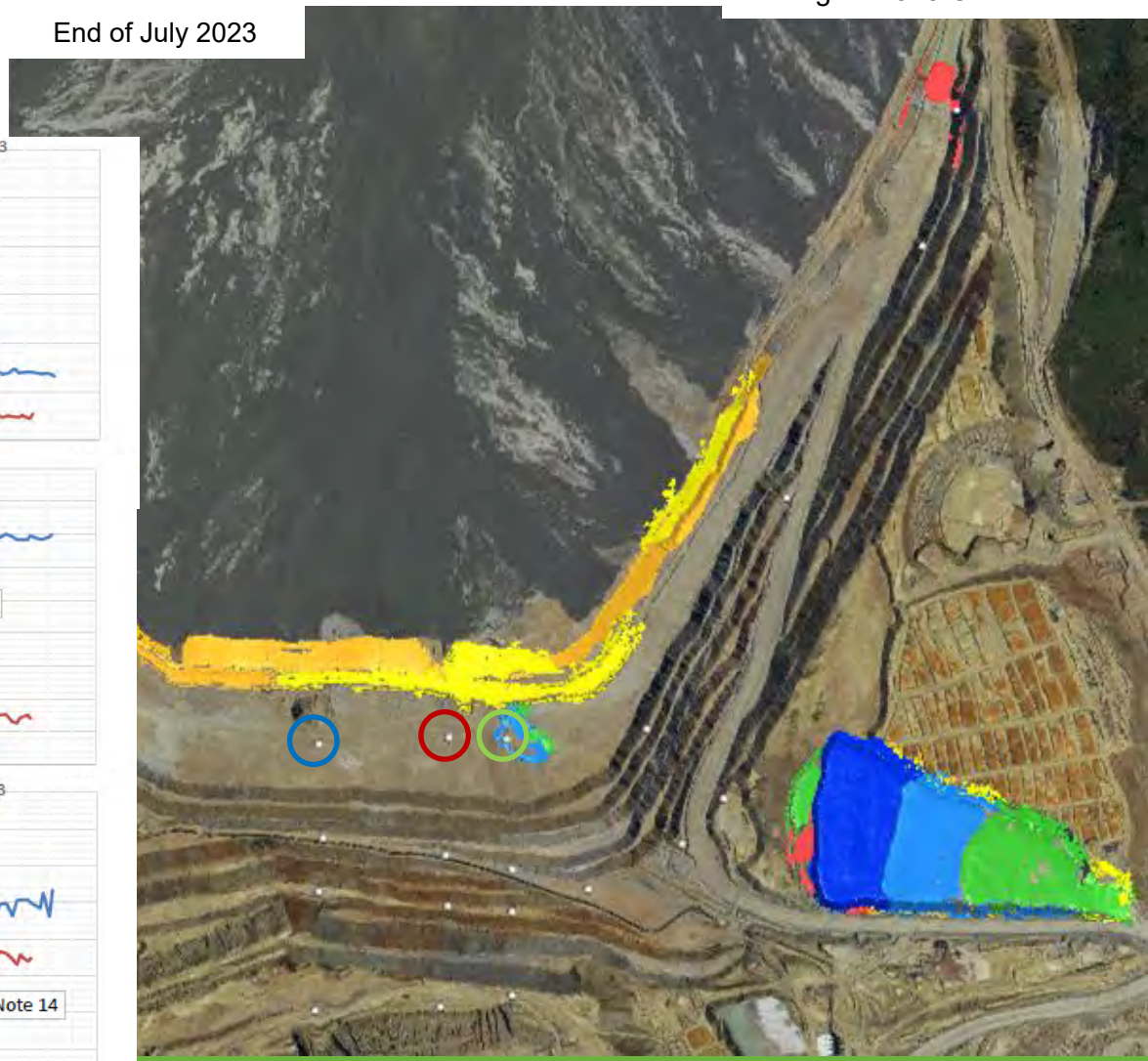


East-West Deformations



March 2023 Construction
April 2023 Construction
May 2023 Construction
June 2023 Construction
July 2023 Construction
August 2023 Construction

End of July 2023

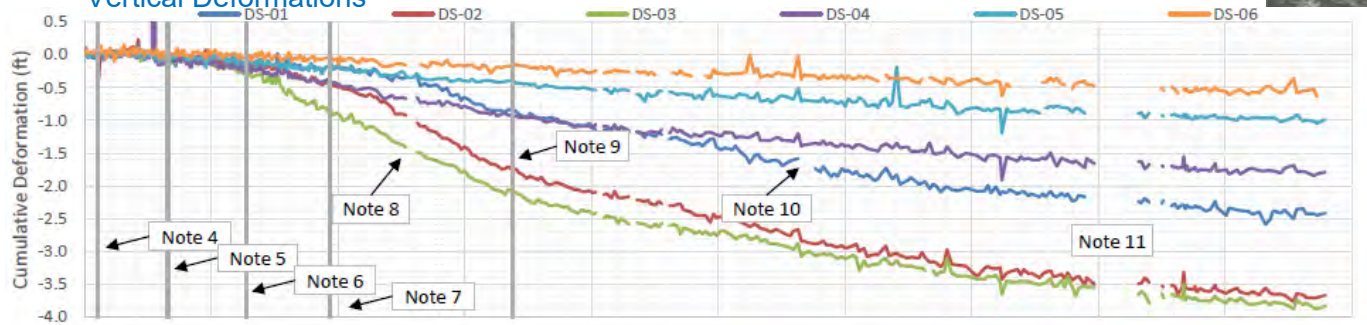


Surface Deformation Monitoring

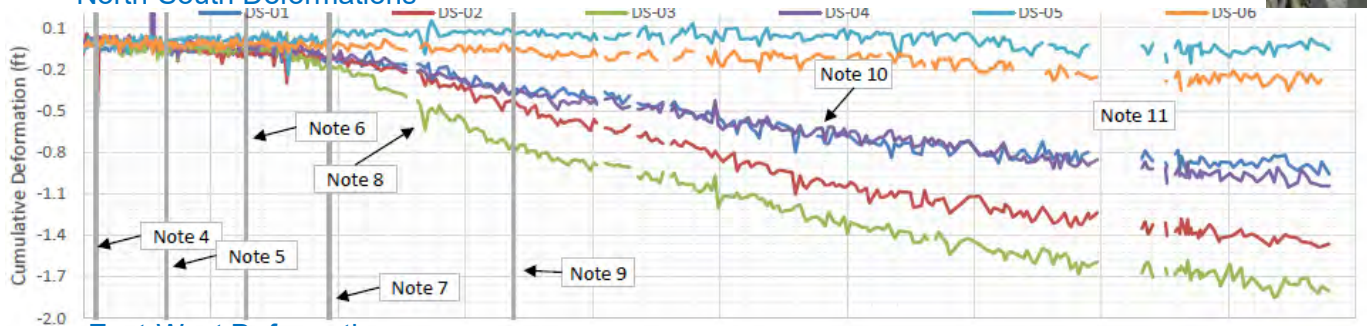
Manual DGPS Survey Monuments

- Deformations continue to slow following completion of the EL. 6,450 ft lift

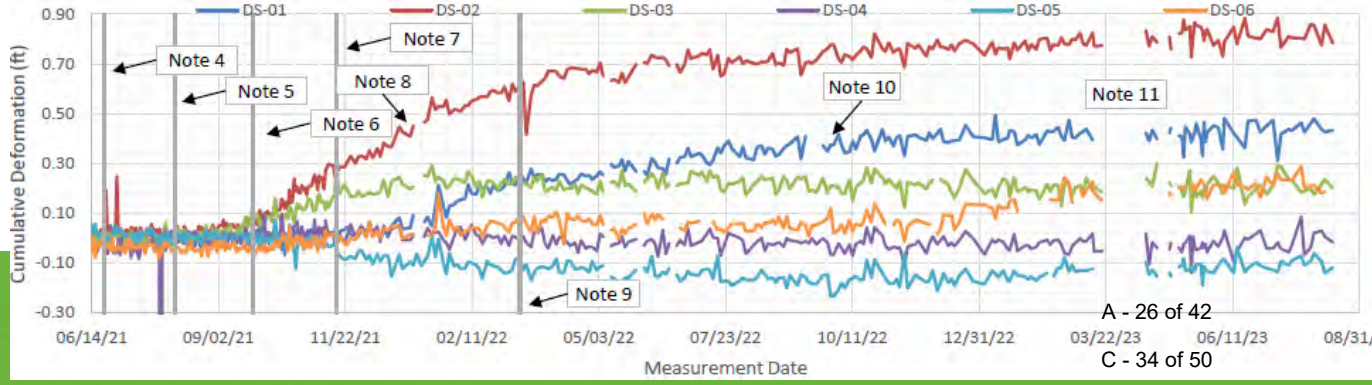
Vertical Deformations



North-South Deformations

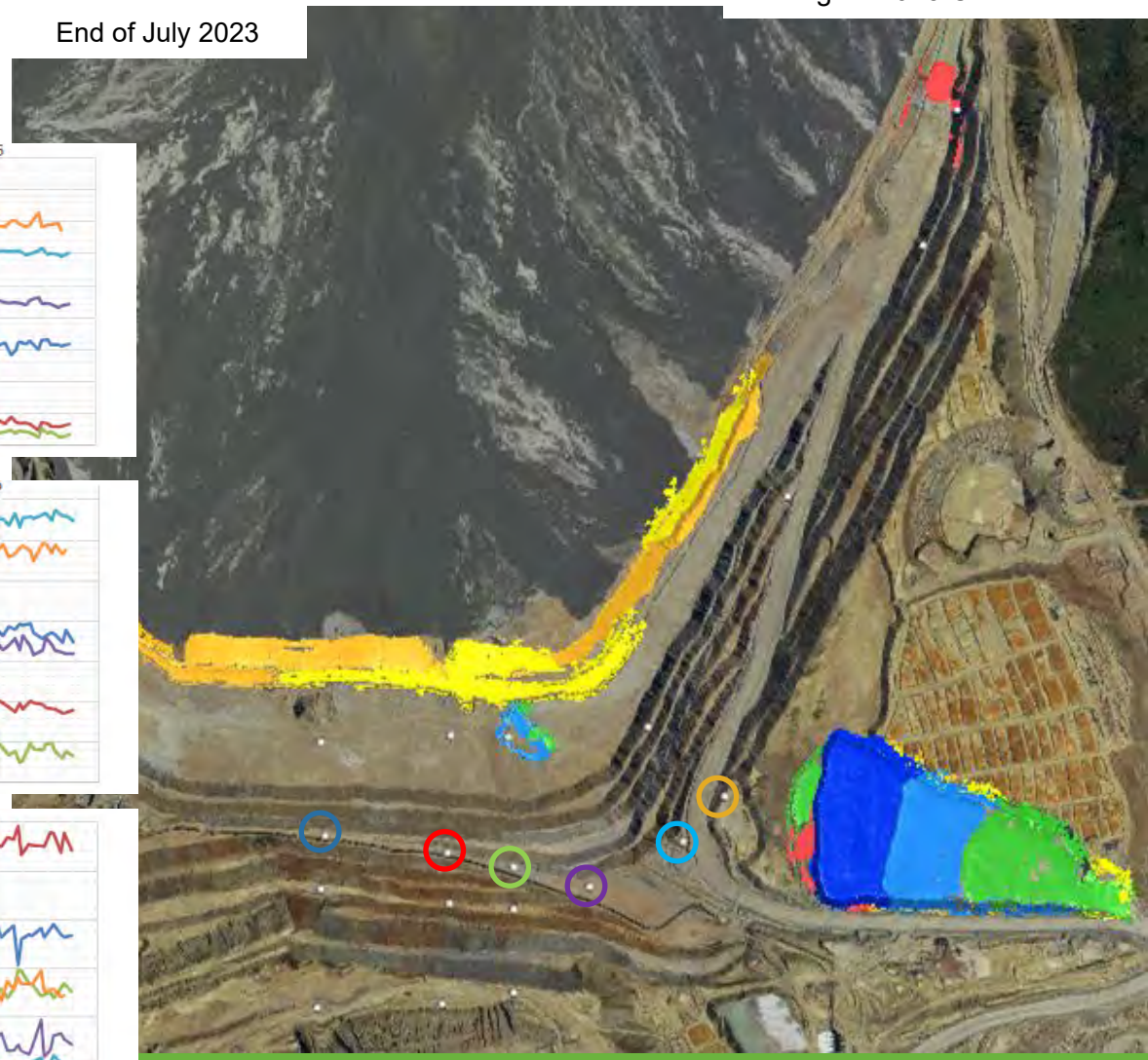


East-West Deformations



March 2023 Construction
April 2023 Construction
May 2023 Construction
June 2023 Construction
July 2023 Construction
August 2023 Construction

End of July 2023

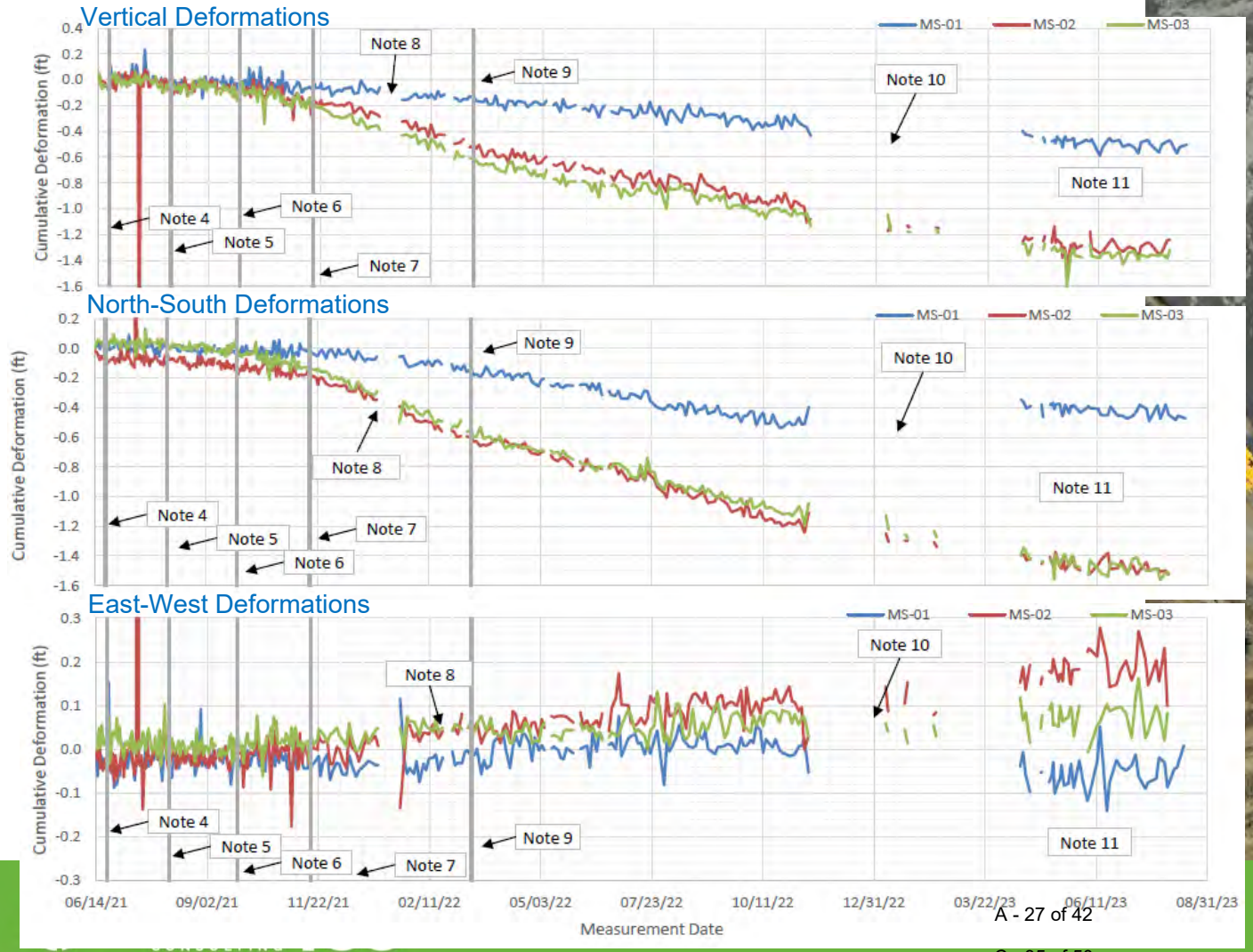


A - 26 of 42
C - 34 of 50

Surface Deformation Monitoring

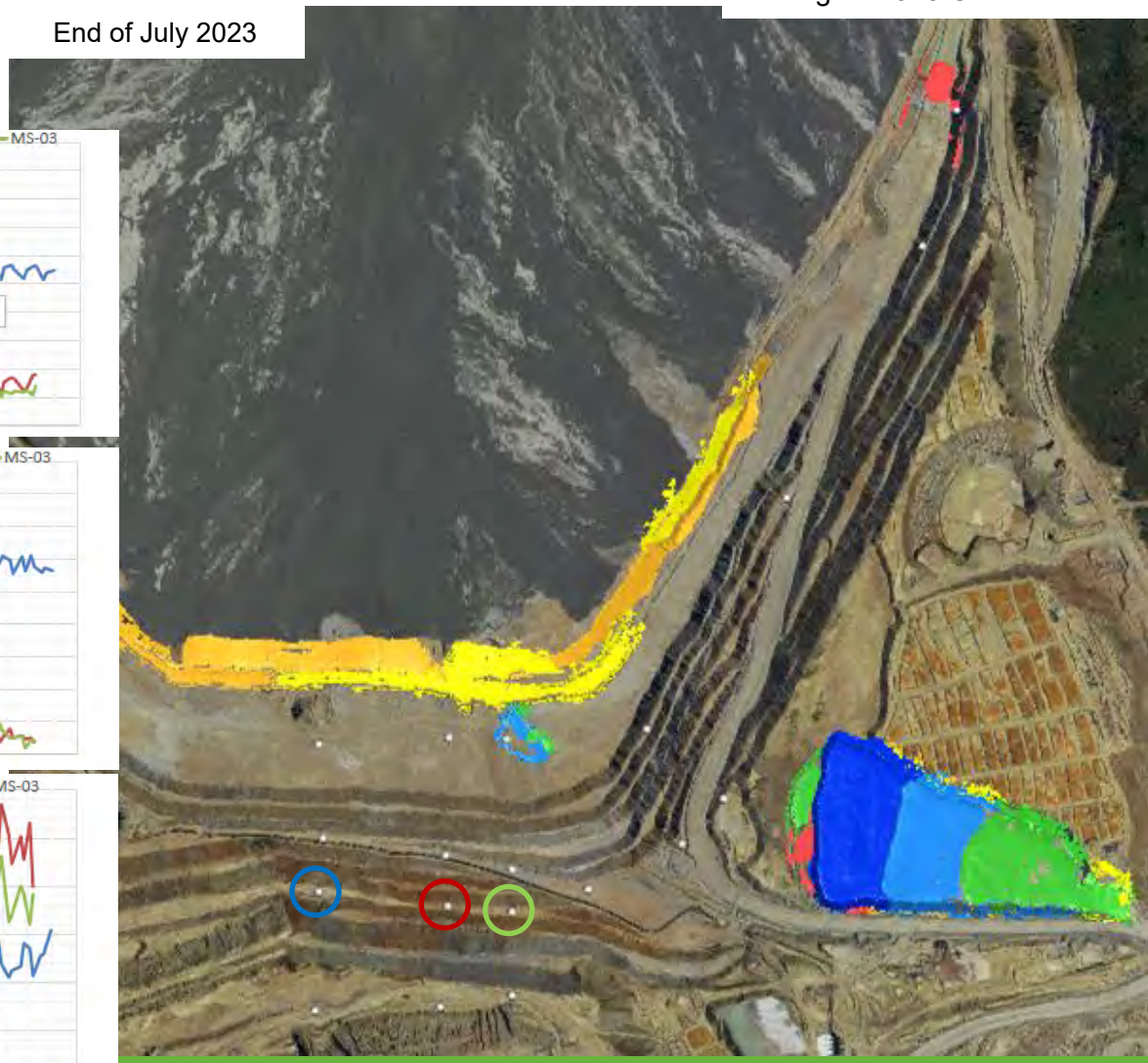
Manual DGPS Survey Monuments

- Deformations continue to slow following completion of the EL. 6,450 ft lift



March 2023 Construction
April 2023 Construction
May 2023 Construction
June 2023 Construction
July 2023 Construction
August 2023 Construction

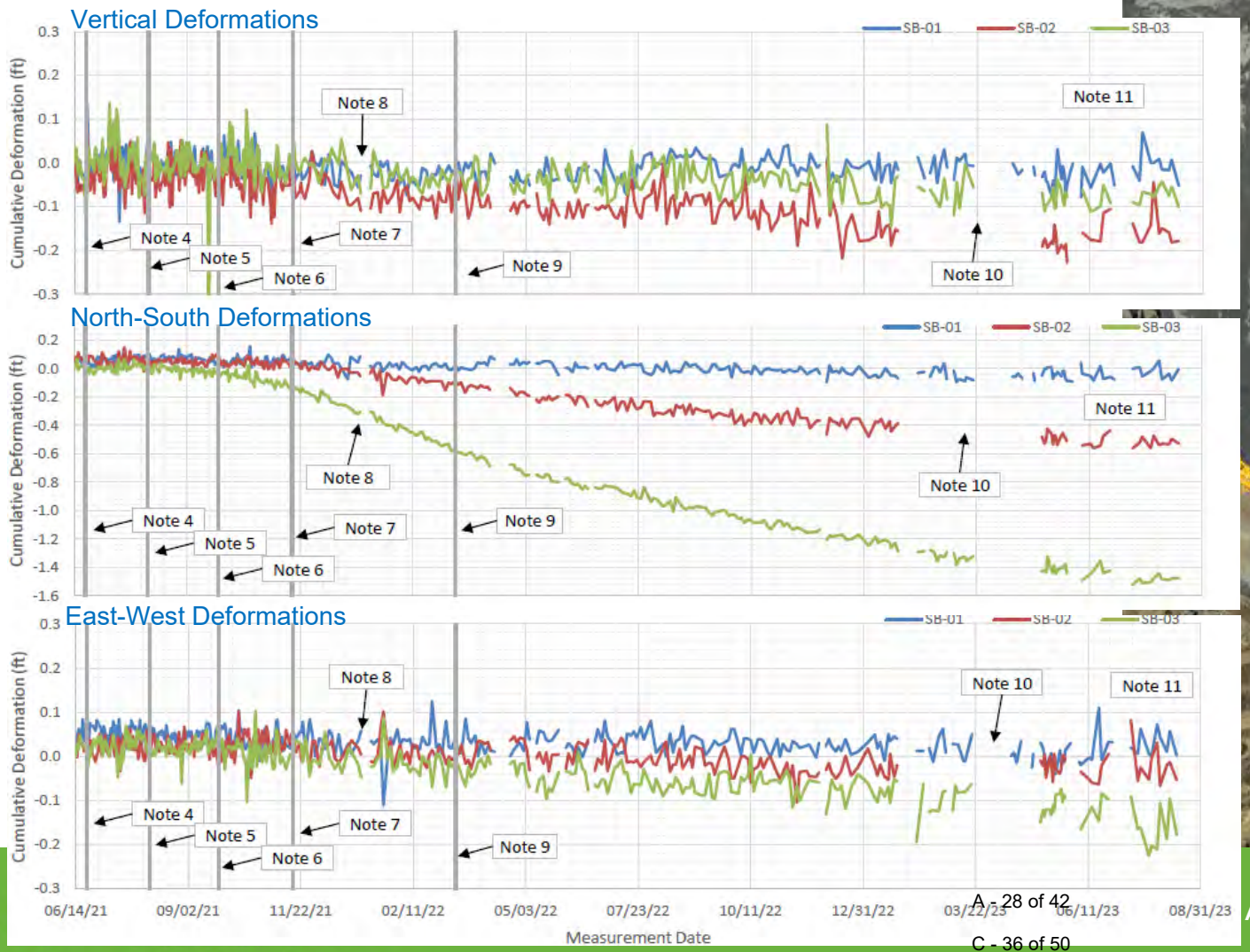
End of July 2023

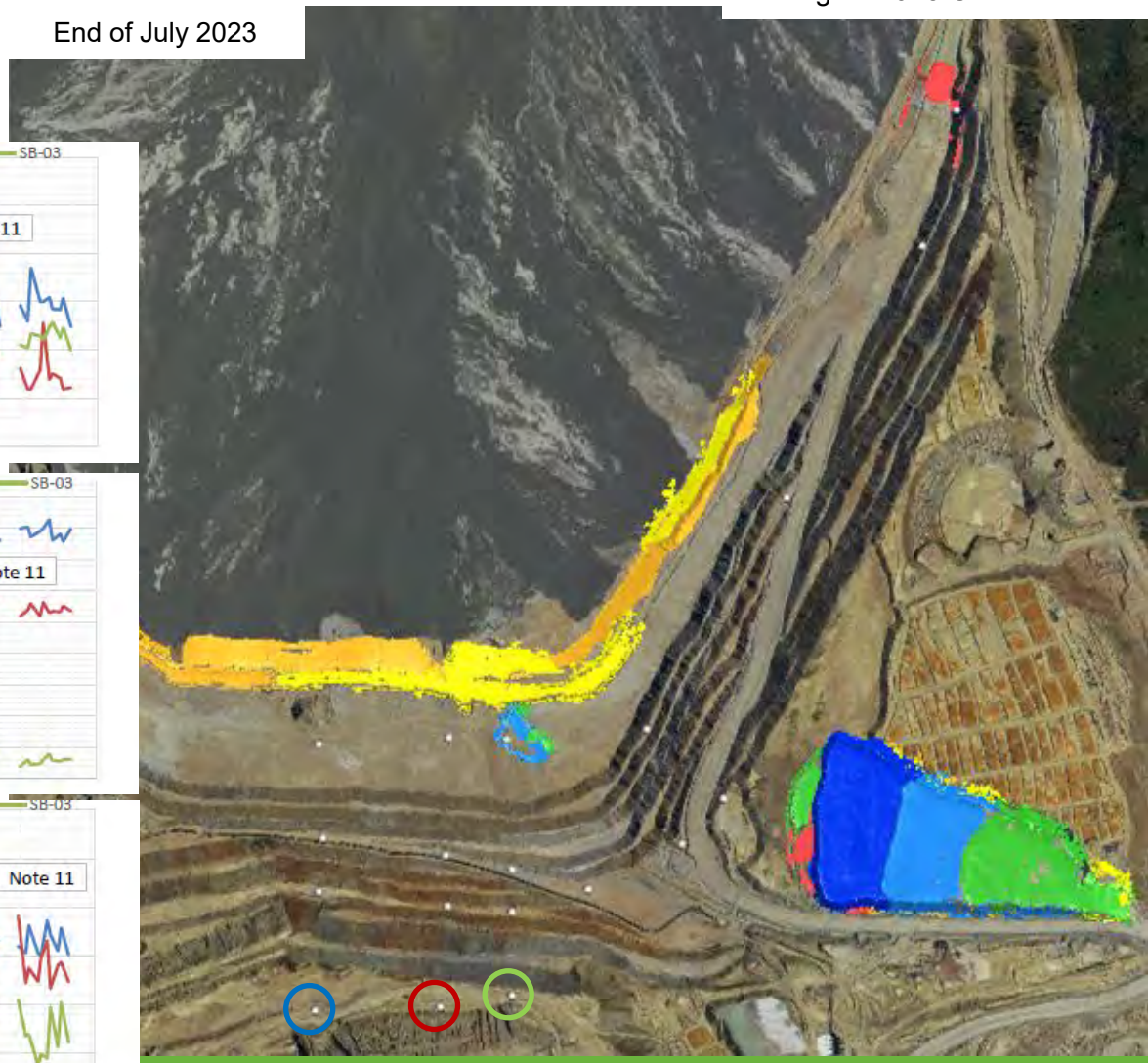


Surface Deformation Monitoring

Manual DGPS Survey Monuments

- Deformations continue to slow following completion of the EL. 6,450 ft lift

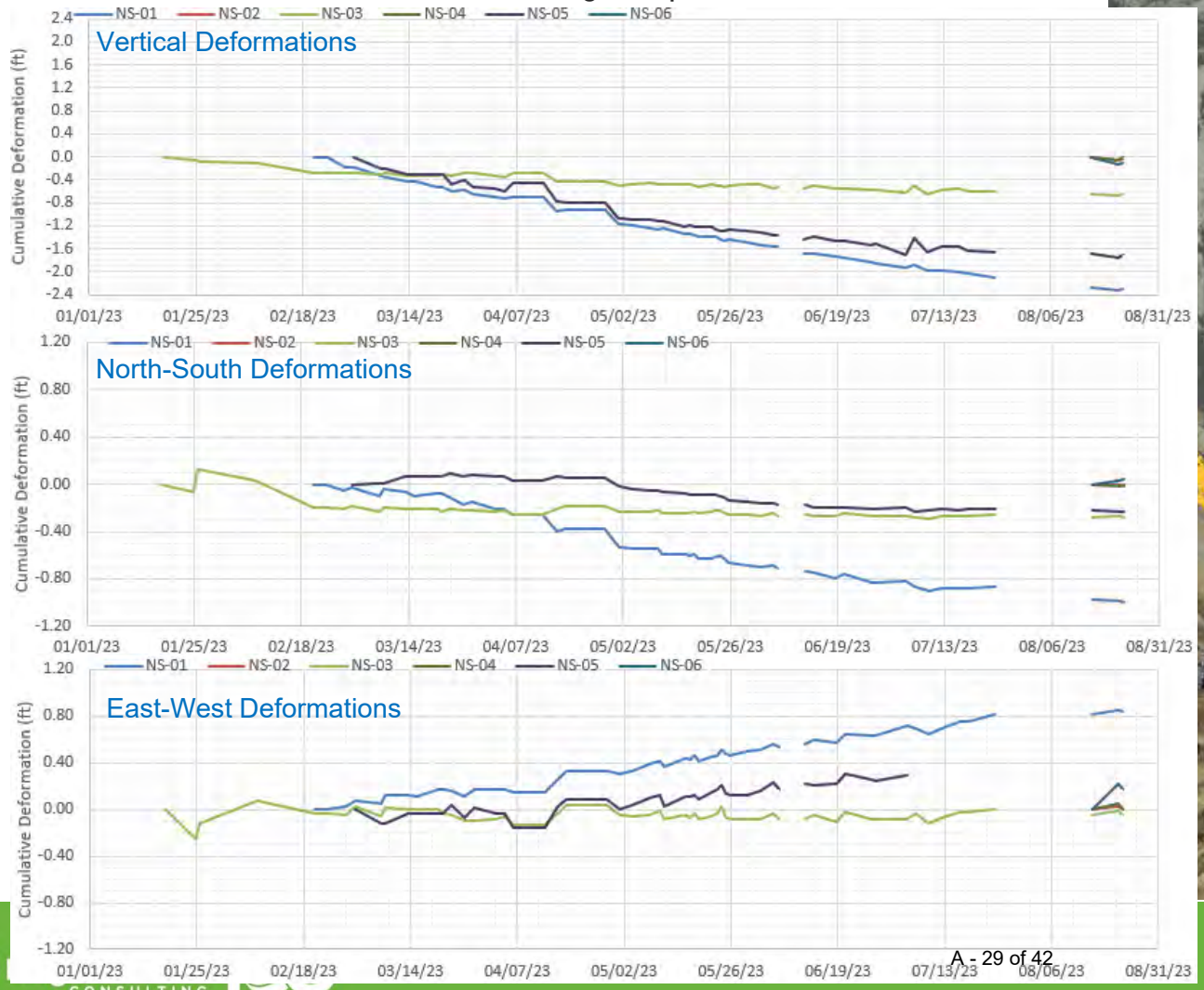


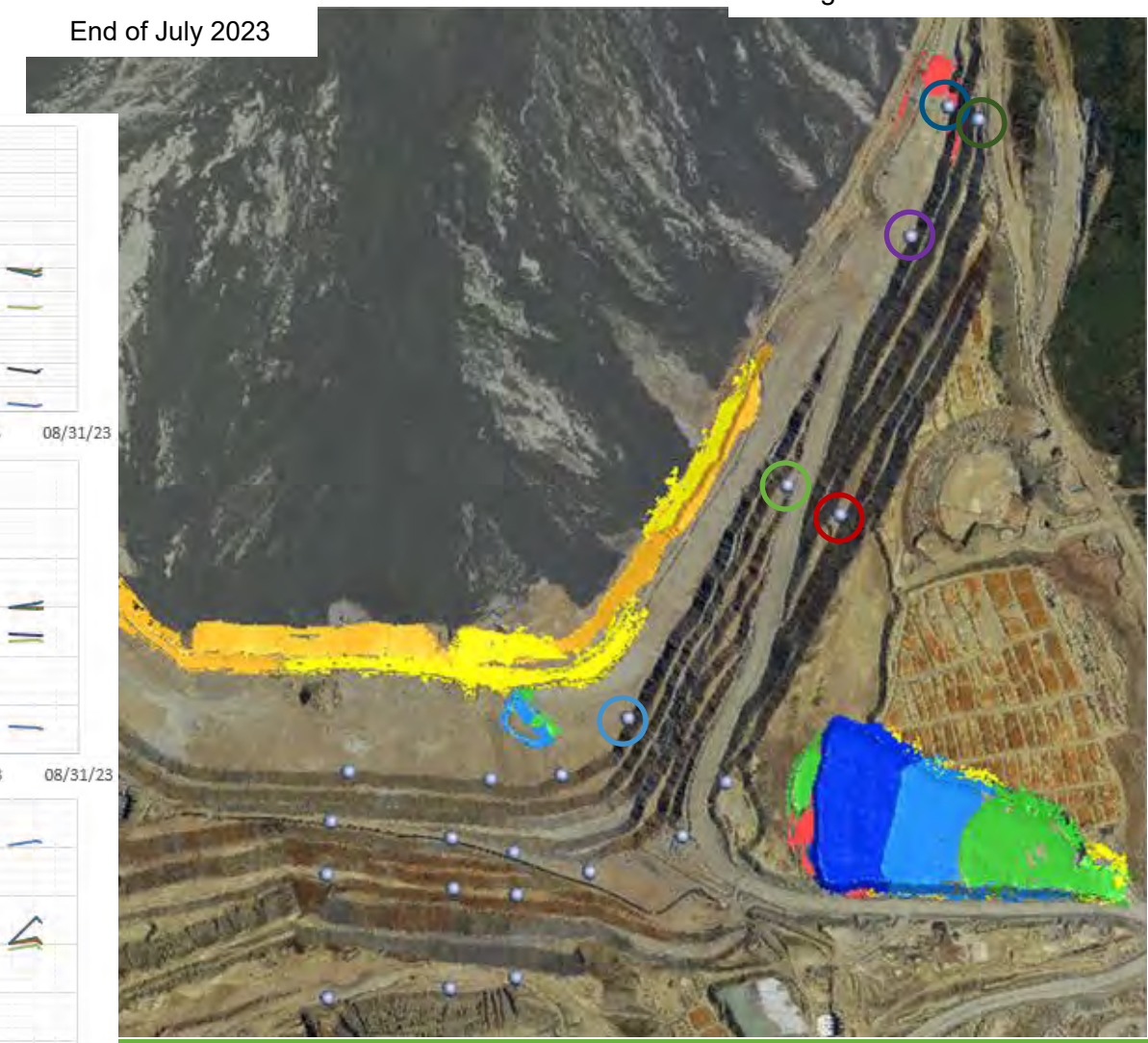


Surface Deformation Monitoring

Total Station

- Deformations continue to slow following completion of the EL. 6,450 ft lift

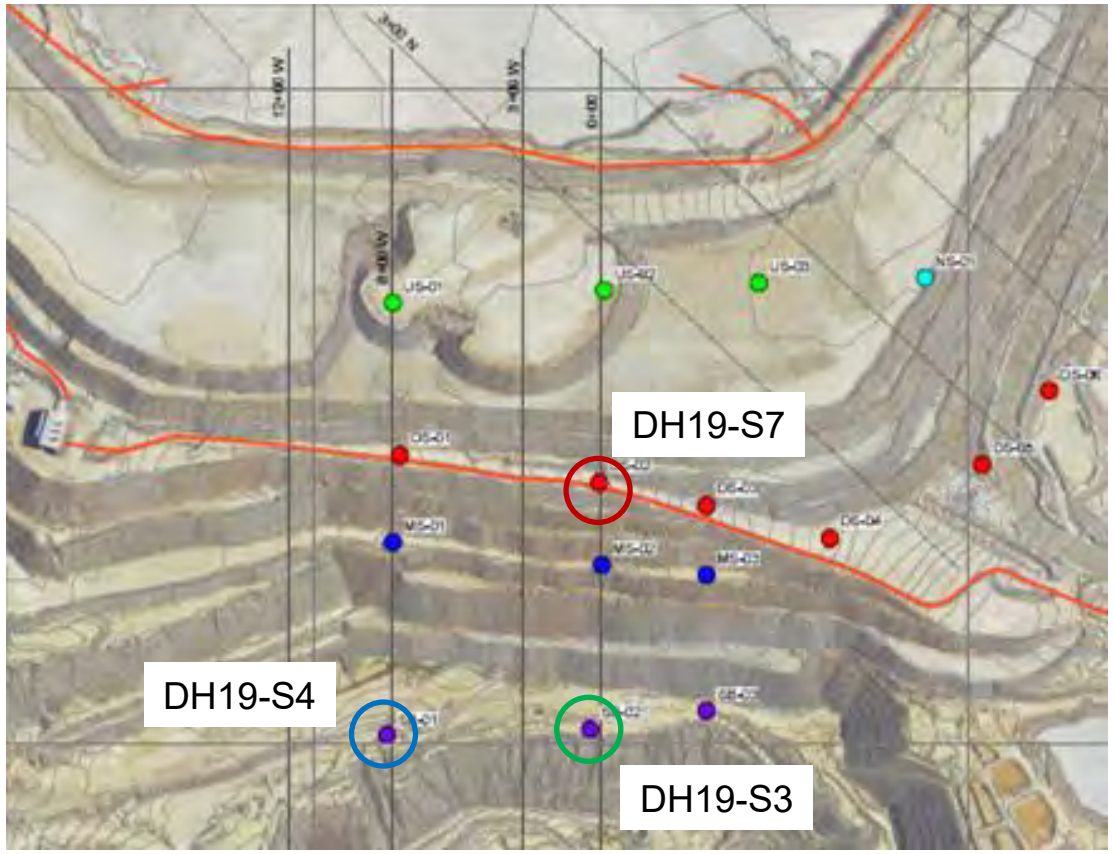




Surface Deformation Monitoring

GNSS Surface Deformation Monitoring

- GNSS monitoring is active at three monitoring locations downstream of El. 6,400 construction:
  - Seep 10:
    - DH19-S3
    - DH19-S4
  - Tailings Pipeline Ramp:
    - DH19-S7
- Findings are consistent with DGPS monitoring:
  - Deformations on the Pipeline Ramp and Seep 10 Bench exhibited slowing or constant deformation rates
  - No evidence of progressive (accelerating) deformations has been observed following construction

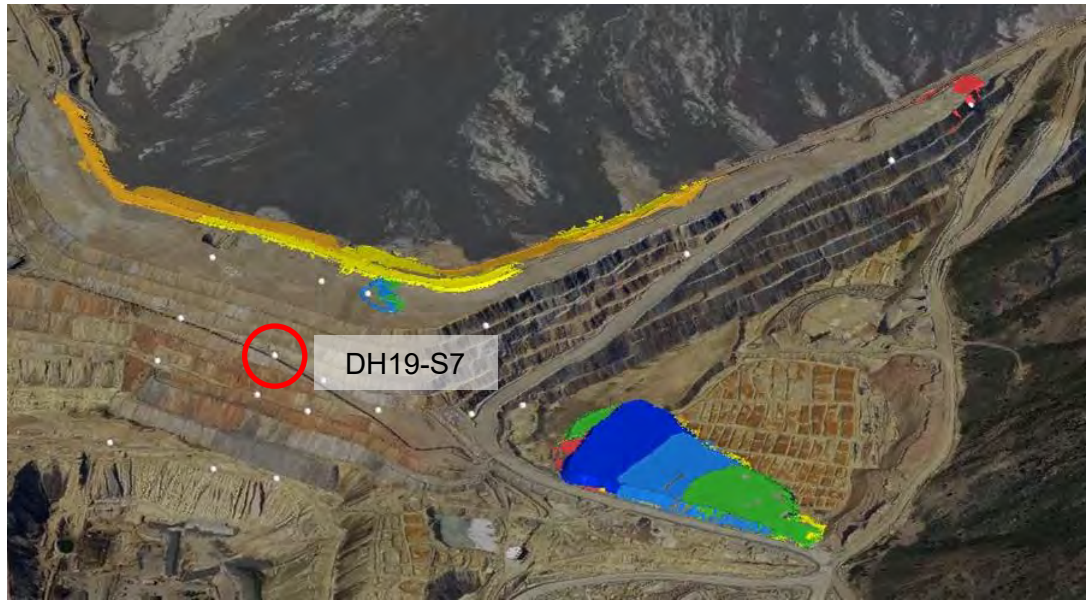


Surface Deformation Monitoring

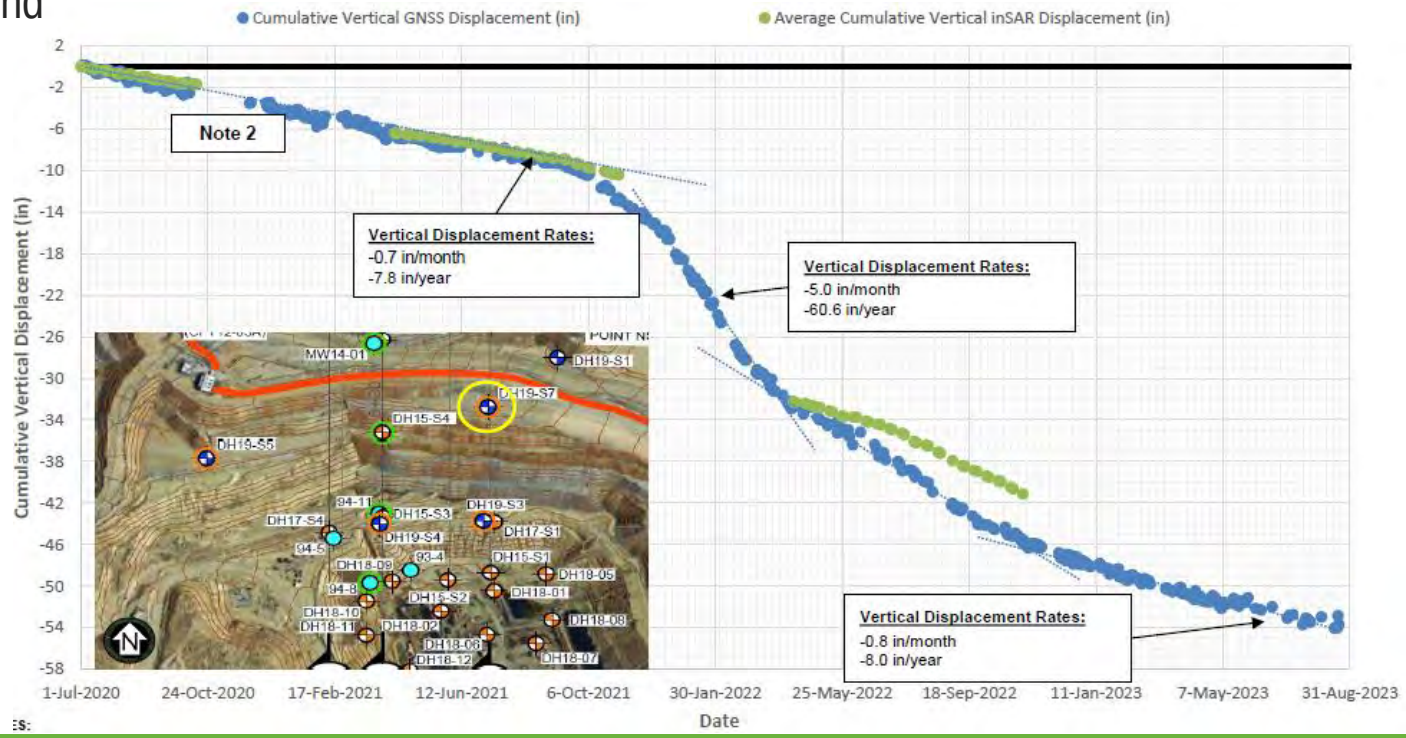
GNSS Surface Deformation Monitoring

Pipeline Ramp GNSS Surface Deformations (vertical shown)

- DH19-S7 (Pipeline Ramp) has continued to monitor slightly elevated, slowing deformation rates resulting from CPA construction.
- Recent deformation rates have continued slowing trend



DH19-S7

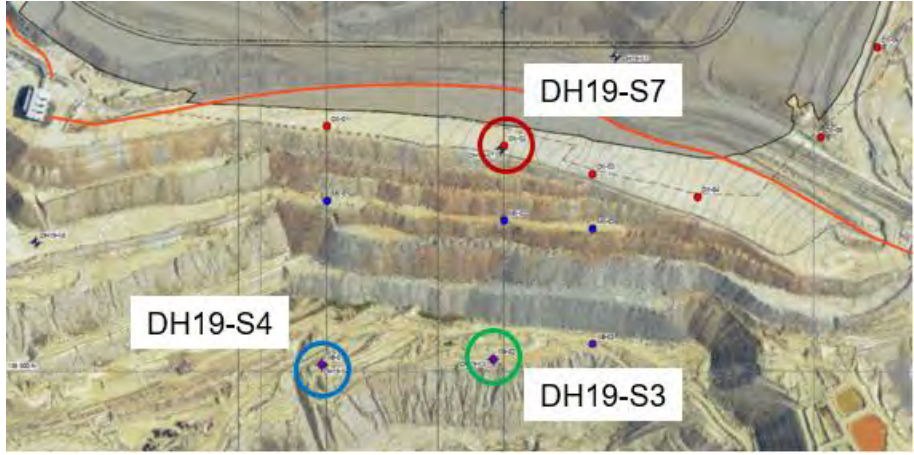


Surface Deformation Monitoring

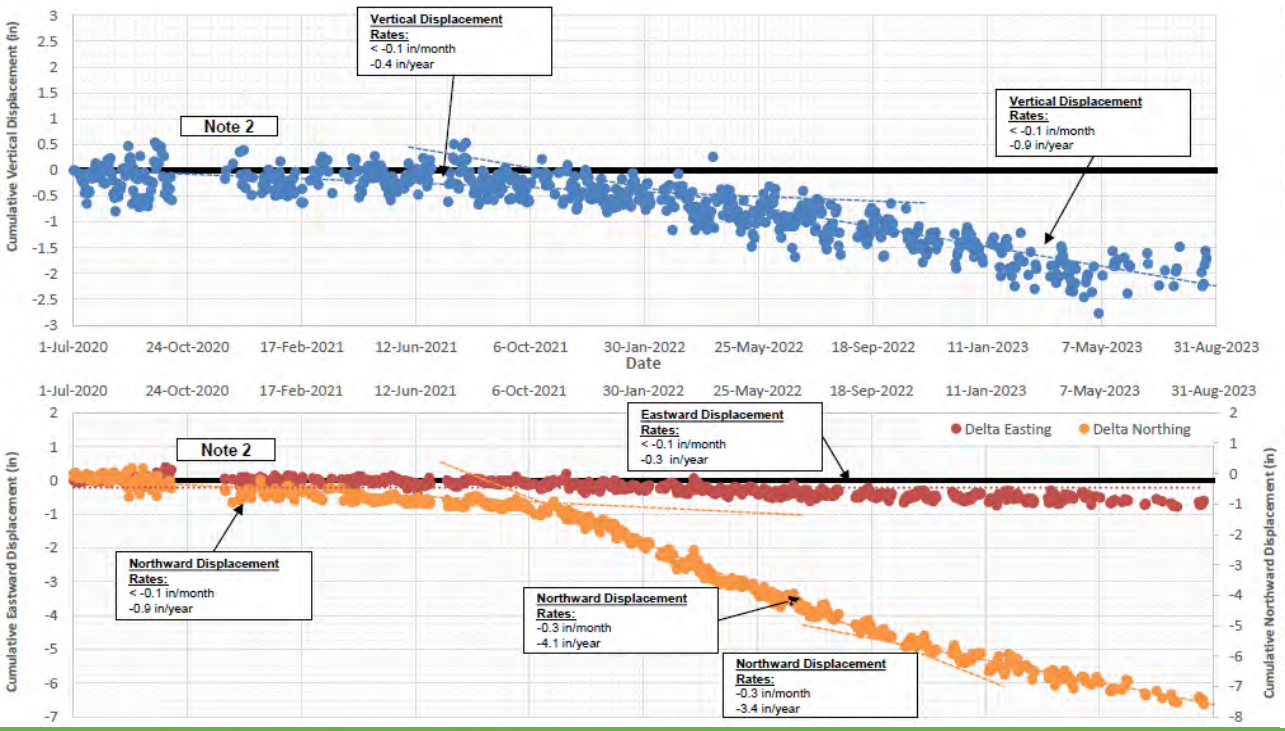
GNSS Surface Deformation Monitoring

Seep 10 Bench GNSS Surface Deformations

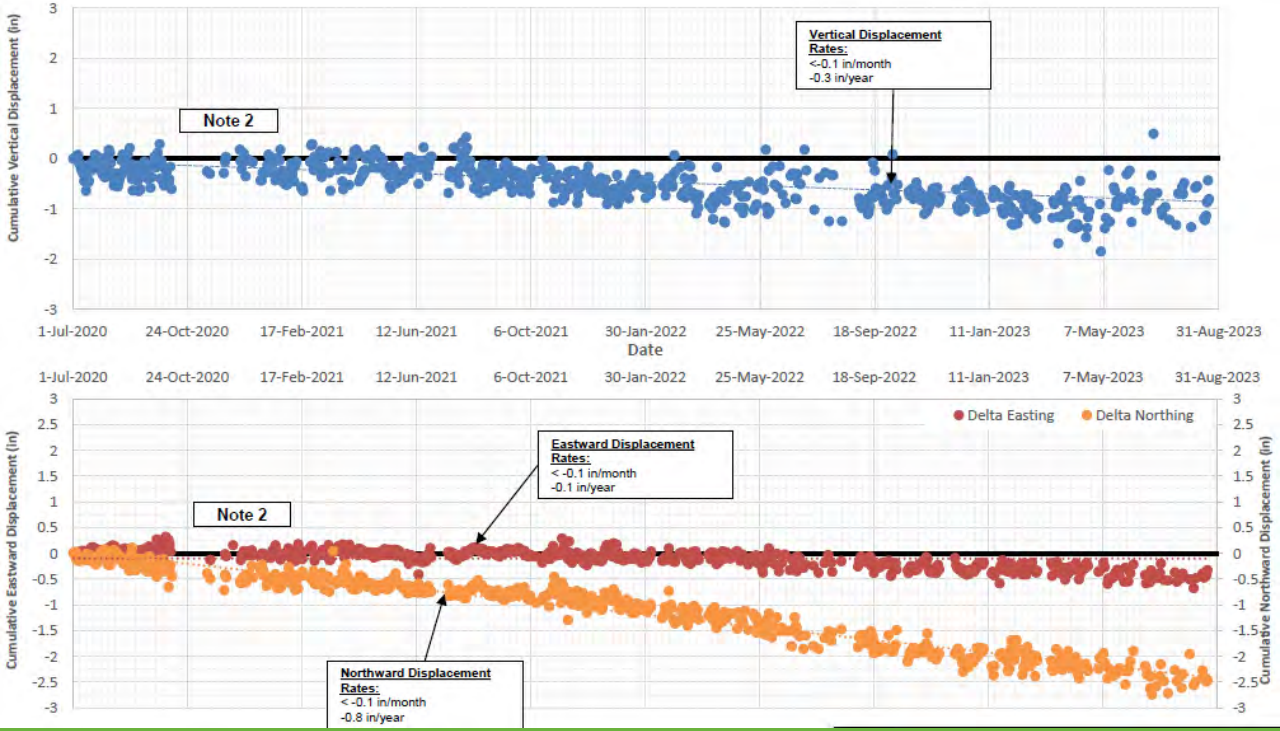
- Continued slowing deformation rates monitored along the Seep 10 Bench



DH19-S3



DH19-S4

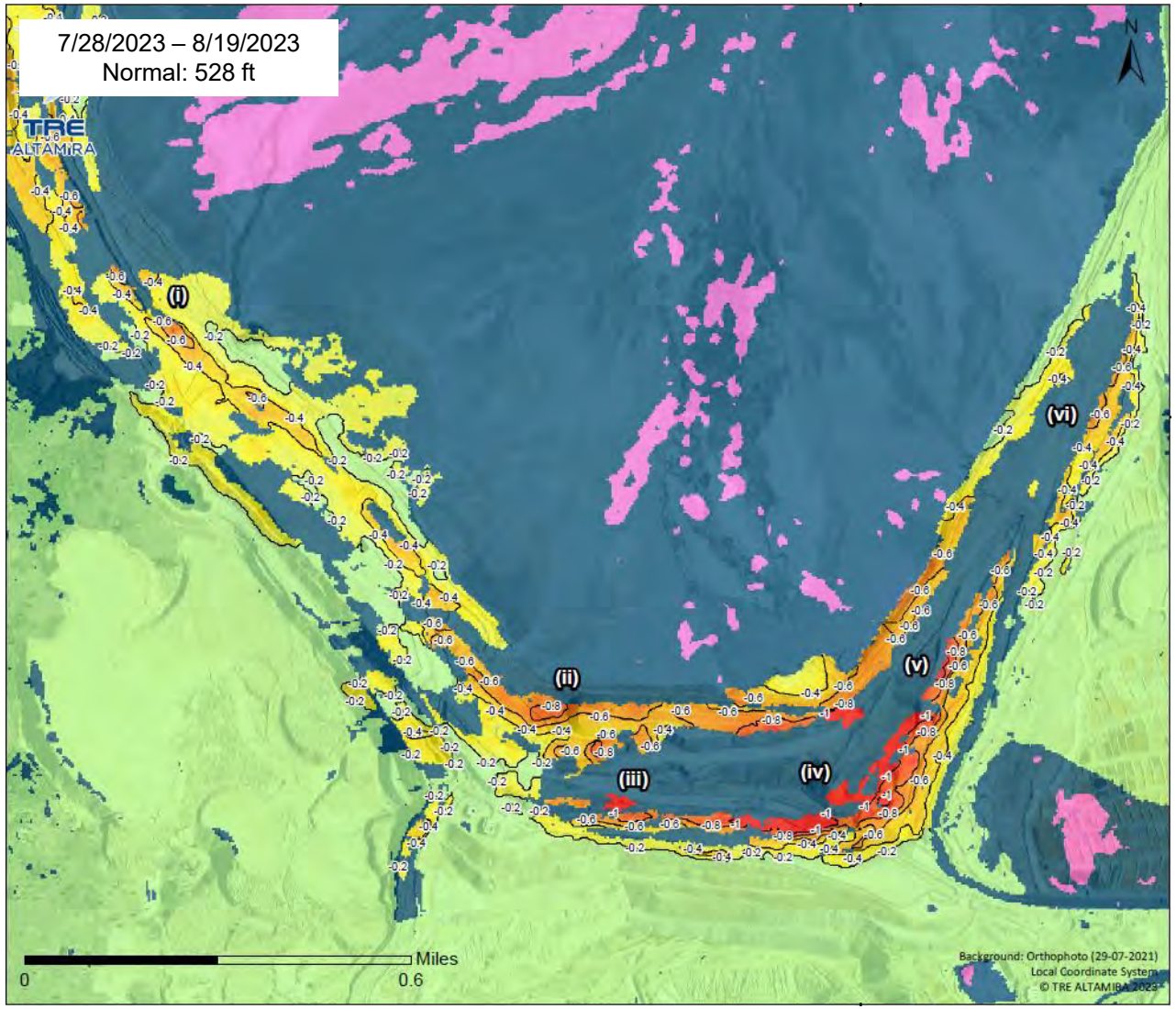


Remote Surface Deformation Monitoring

Surface Deformation Monitoring

InSAR

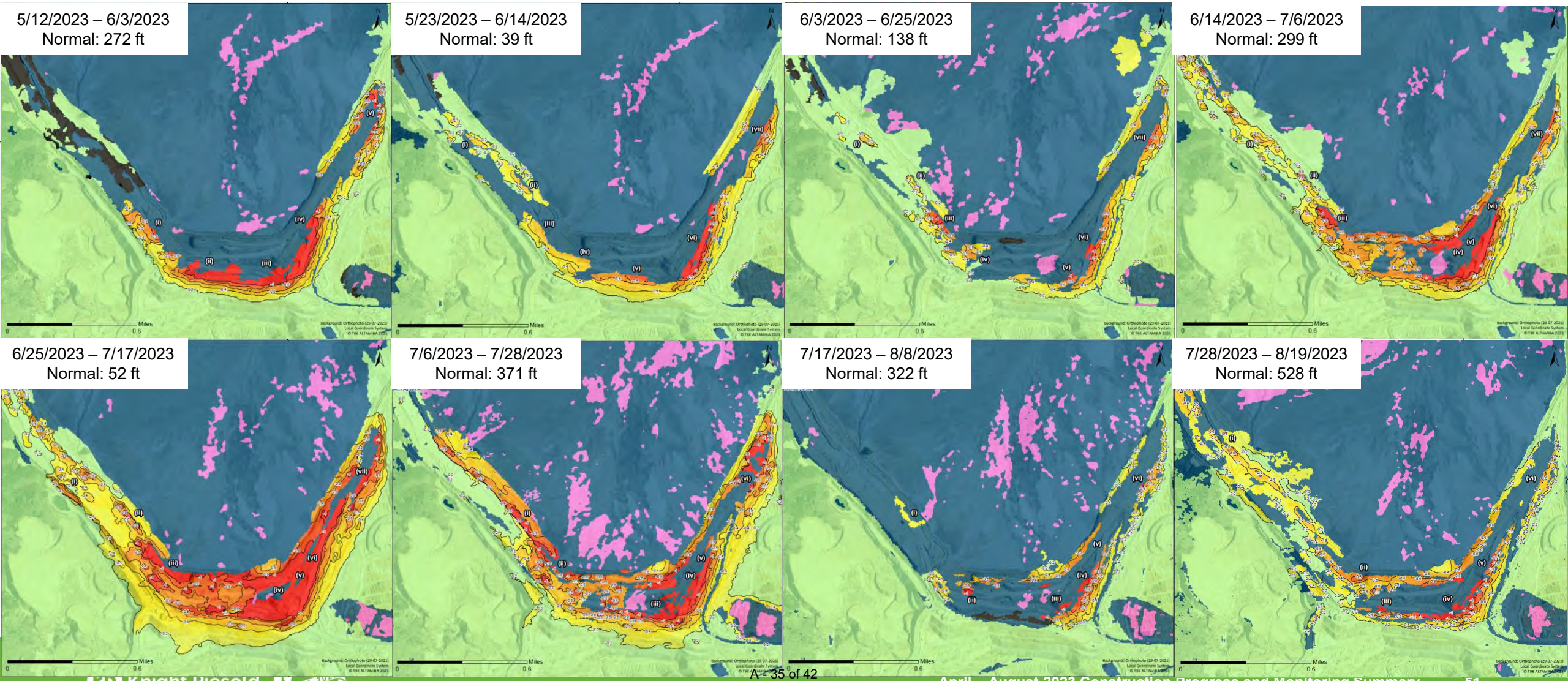
- The 2023 inSAR monitoring program restarted on May 12 and 8 scans have been received to date
  - 22-day bulletins are planned for the first part of the year as construction continues. MR/KP will reassess the necessity of the bulletins for the second portion of the year
  - 2 long-term SqueeSAR are planned with results expected in September and December
- Bulletins from May through August 2023 show slowing deformation rates following completion of EL. 6,450 ft lift construction with rates gradually returning to pre-construction conditions



Note: InSAR measures line-of-sight deformation

Surface Deformation Monitoring

InSAR – Bulletin Analyses – May through August 2023

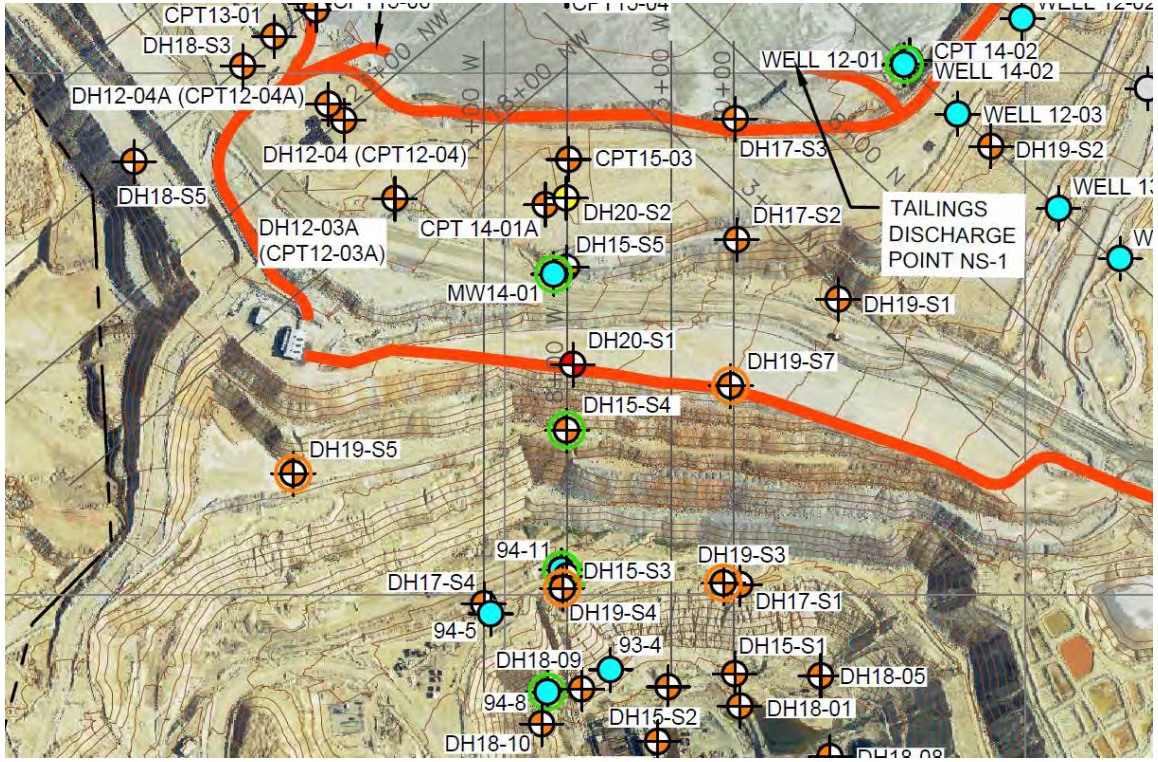


Subsurface Deformation Monitoring Results

Subsurface Deformation Monitoring

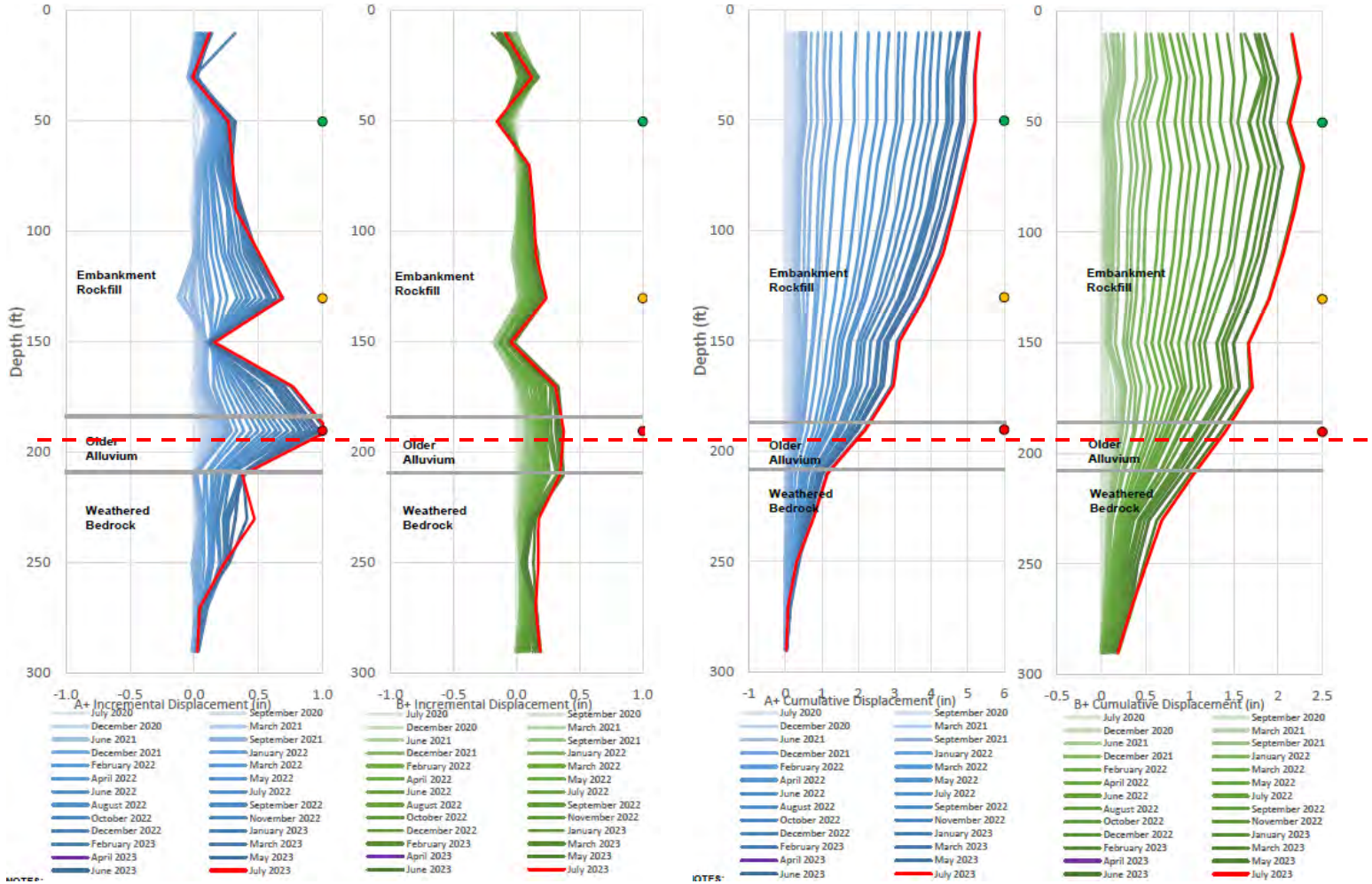
Inclinometers

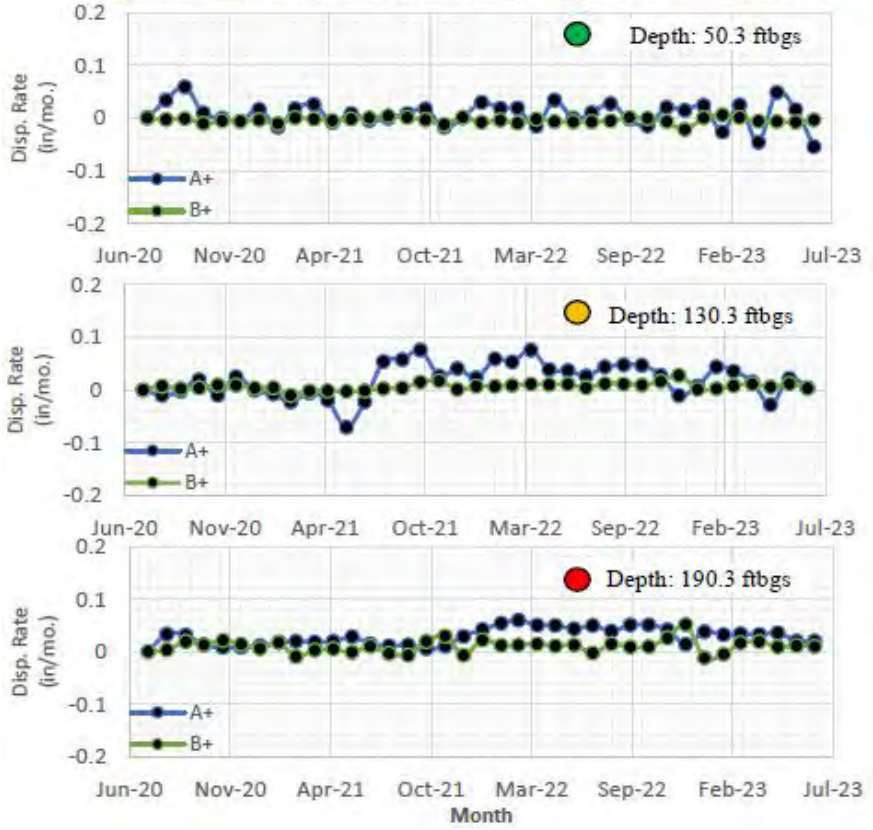
- Subsurface deformations are being monitored monthly at the four in-place-inclinometer installations. Three are downstream of El. 6,450 construction:
  - Seep 10: DH19-S3 and DH19-S4
  - Tailings Pipeline Ramp: DH19-S7
- Additional Geo4Sight deformation instrumentation is present beneath the EL. 6,450 ft rockfill surcharge
- Relatively constant or slowing deformation rates were observed between April and August 2023, consistent with surface monitoring findings.



Subsurface Deformation Monitoring

Inclinometer (DH19-S3)



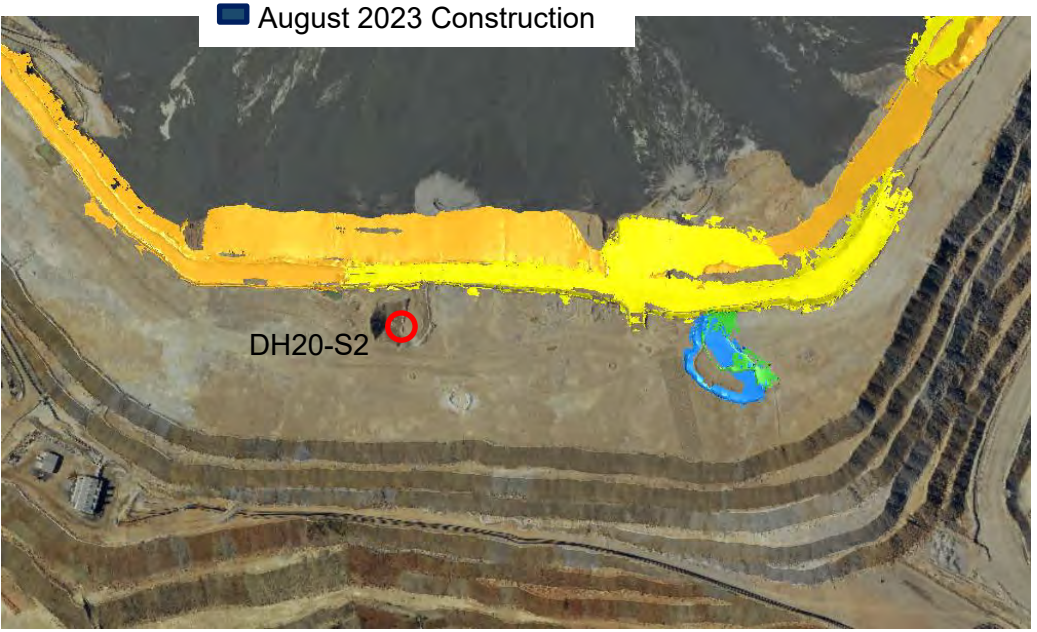


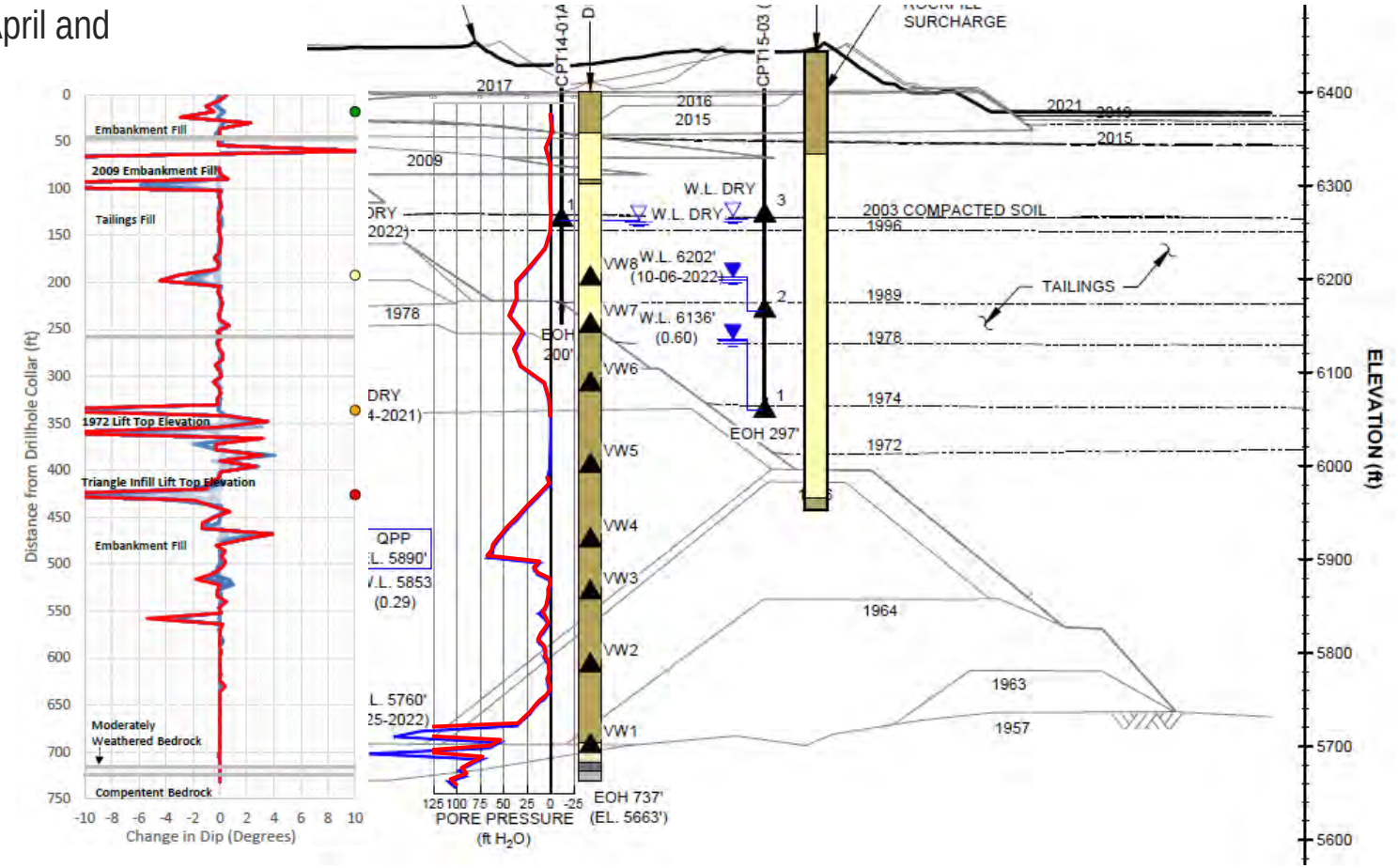
Subsurface Deformation Monitoring

Geo4Sight (DH20-S2)

- Geo4Sight instrumentation on Section 8+00W generally continued to monitor minimal deformation between April and August 2023

March 2023 Construction
April 2023 Construction
May 2023 Construction
June 2023 Construction
July 2023 Construction
August 2023 Construction

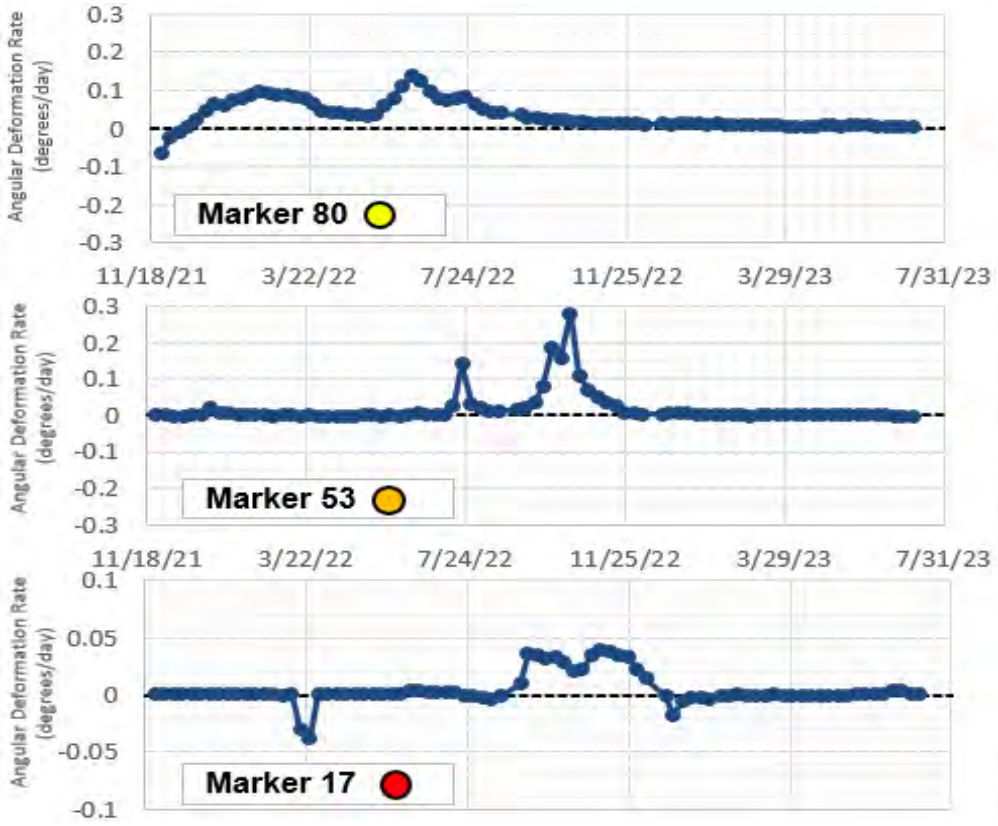


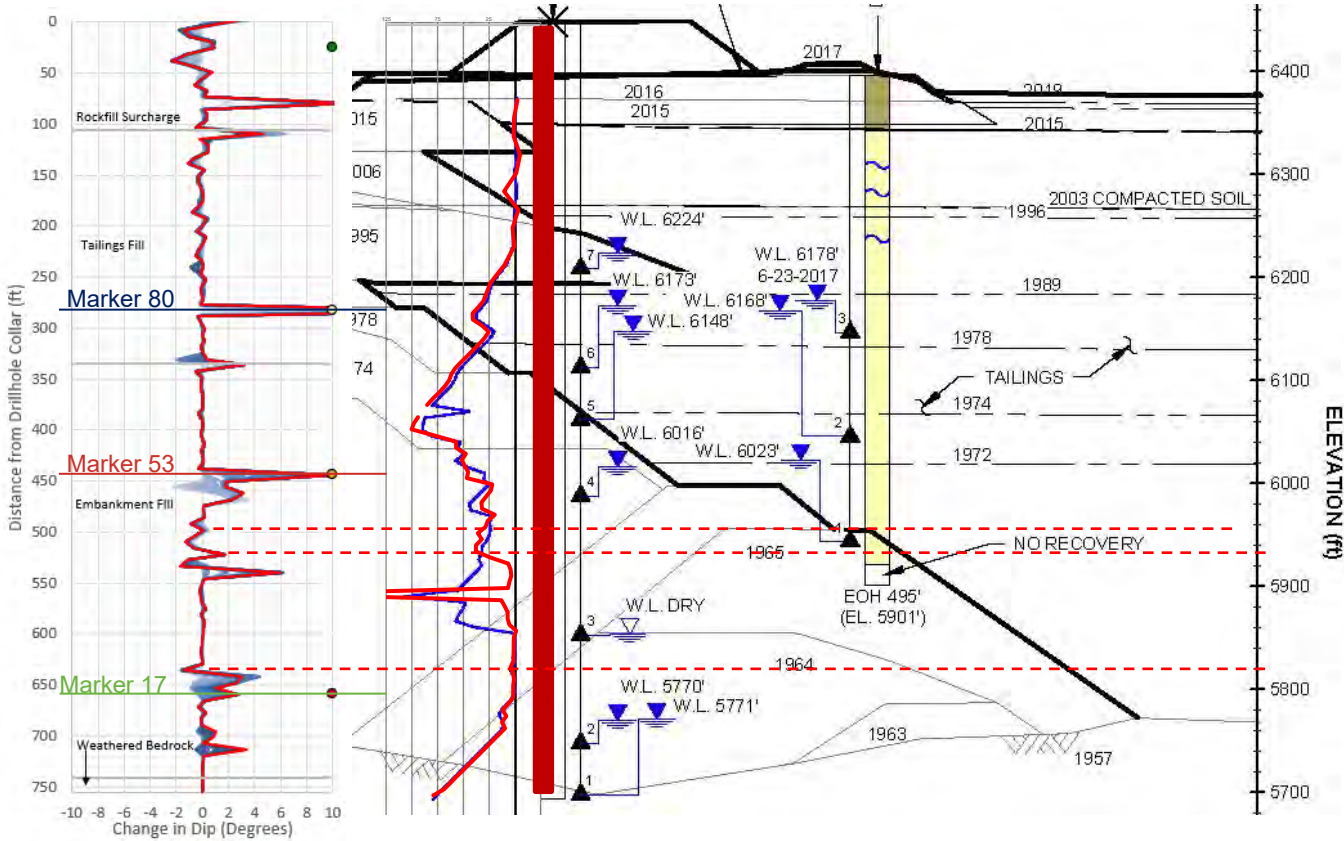


Subsurface Deformation Monitoring

Geo4Sight (DH21-S4)

- Geo4Sight instrumentation on Section 0+00 generally continued to monitor minimal deformation.





Summary

Summary of Monitoring Findings for April through August 2023

- Embankment pore water pressures have generally continued to decrease slightly following substantial EL. 6,450 ft lift construction and all active Piezometric CPPs remain within their 'Low-Risk' TARP classifications. Key findings include:
  - Pore pressures monitored within the East-West Embankment basal saturated zone on Sections 0+00 and 8+00W have generally continued to decrease slightly.
  - Pore water pressures within known perched saturated zones on East-West Embankment Sections 0+00 and 8+00W generally indicate constant or slightly increasing pore water pressure trends, except for DH19-S7 which has continued to monitor fluctuations that may be indicative on an instrumentation issue.
  - Non-CPP sensors installed within N-S Embankment the basal saturated zone have monitored relatively constant or slightly decreasing pore water pressure trends since completion of EL. 6,450 ft lift construction.
- Elevated deformation rates continue to be observed localized around areas of recent East-West and North-South Embankment construction. Deformation rates have continued to slow following completion construction within the Central Pedestal Area and throughout the majority N-S Embankment. Key findings include:
  - East-West and North-South Embankment Crests: Survey-monument and inSAR data indicate that deformation rates remain slightly elevated but continue to slow with time following construction.
  - Downstream Central Pedestal Area Embankment Slope: Survey-monuments situated downstream of the EL. 6,450 ft construction area on the EL. 6,150 ft and Seep 10 benches indicate that deformation rates are approaching their pre-construction rates and continue to slow with time.
  - Significant transverse cracking and depressions were observed along the EL. 6,450 ft crest near Section 0+00 on April 27, 2023, which triggered a Level 1 Unusual Occurrence. It is interpreted that differential settlement of recently placed rockfill resulted in initial cracking, which was exacerbated due to drainage from ponding on the embankment crest. KP and the EOR are satisfied that the cracking event does not pose an elevated dam safety concern but will continue to routinely monitor the area during 2023.

THANK YOU

Sean Yao
(604) 685-0543
syao@knightpiesold.com

APPENDIX D

2023 Bathymetric Survey Summary

(Pages D-1 to D-3)

Montana Resources
600 Shields Avenue Butte, Montana 59701 (406) 723-4081
(406)496-3200 FAX (406) 723-9542

MEMORANDUM

TO: DANIEL JANNEY

FROM: JOHNATHAN HOOVER

SUBJECT: BATHYMETRIC SURVEY – 2023

DATE: 8/8/2023

The Bathymetric survey of the tailings pond was conducted from July 10 through July 12, 2023.

The total number of points captured in this survey was 25,376. Additionally, Measurements were taken using the TSC7 and a rental Hydrolite system. Due to the processing power of the TSC7 survey had to slow down the data capturing to a point every 1 to 3 seconds based on how the fast we traveled (3 to 5 mph). This ensures that the data being captured has no latency and the position associated with the depth is accurate.

The bathymetric data collected during the survey was downloaded and converted to the local Montana Resources Coordinate System. MineSight was used to develop the sub-surface of the tailings pond which was then used to calculate the volume of water in the pond. The results are shown in Table 1.

Table 1: Tailings Pond Volume Calculation Results

Method	Volume
MineSight	17,121 Acre-ft

The 2023 volume is 17,121 acre-ft which is a decrease of 4,323 acre-ft from last years' volume of 21,444 acre-ft. Table 2 shows the calculated pond volumes for all of the bathymetric surveys conducted to date.

Table 2: Tailings Pond Volume History

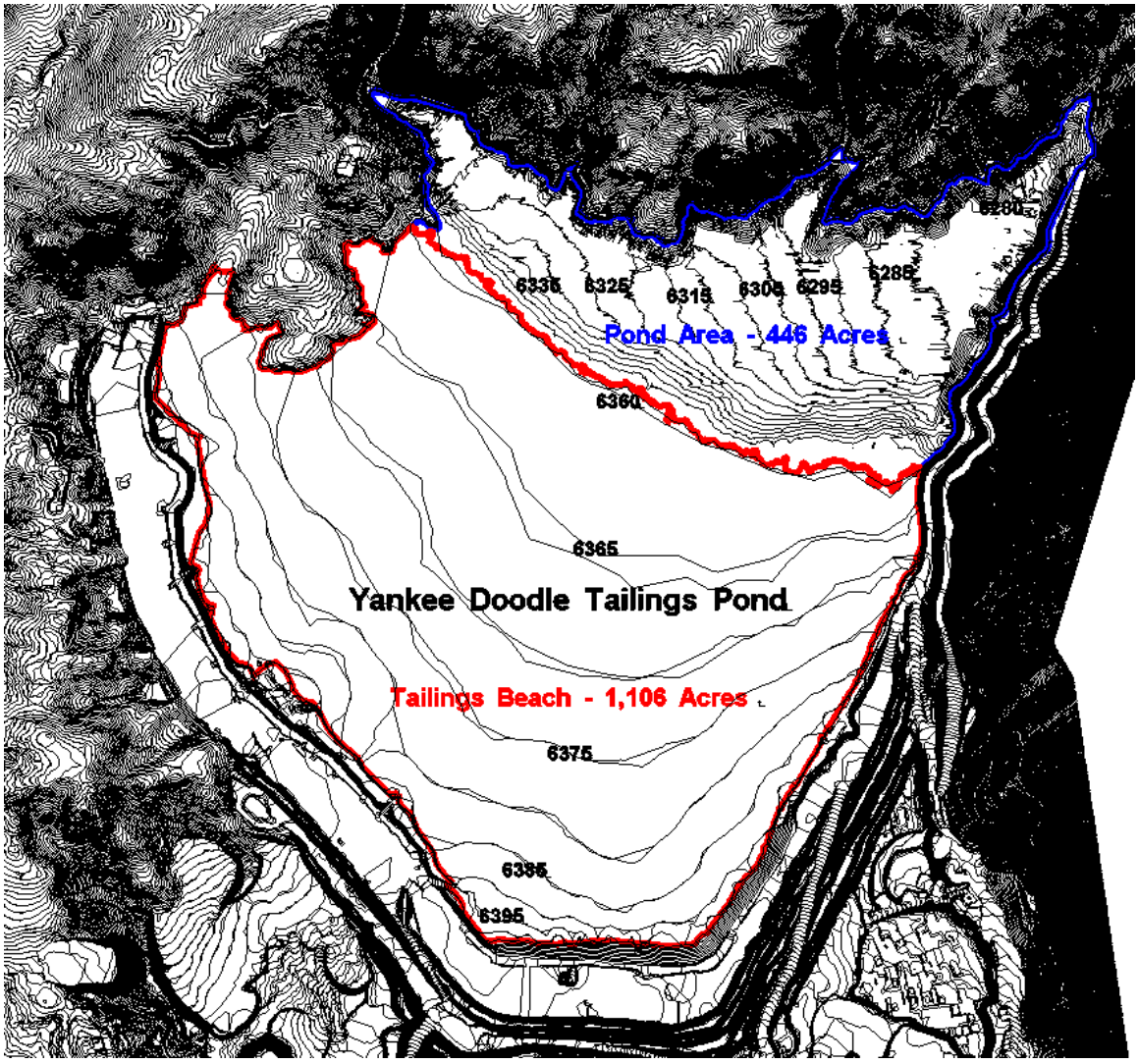
Year	Volume, Acre-Ft
2007	20,068
2009	16,008
2010	18,491
2011	22,145
2012	21,812
2013	21,474
2014	25,116
2015	29,113
2016	31,041
2017	31,264
2018	33,447
2019	34,392
2020	32,084
2021	27,163
2022	21,444
2023	17,121

Table 3: General Study Information

Attribute	Year 2023	Year 2022	Year 2021	Year 2020	Year 2019	Year 2018	Year 2017
Methodology	2023 June Composite	2022 June Composite	2021 June Composite	2020 June Composite	2019 June Composite	2018 June Composite	2017 June Composite
Pond Area	446 Acres	482 Acres	547 Acres	613 Acres	774 Acres	837 Acres	798 Acres
Tailings Area	1,106 Acres	1,043 Acres	971 Acres	918 acres	727 Acres	642 Acres	658 Acres
Total Impoundment Area	1,552 Acres	1,524 Acres	1,518 Acres	1,531 Acres	1,501 Acres	1,479 Acres	1,456 Acres
Pond Volume	17,121 Acre-Ft	21,444 Acre-Ft	27,163 Acre-Ft	32,084 Acre-ft	34,392 Acre-ft	33,447 Acre-ft	31,264 Acre-ft
Avg. Water Depth	35.37 ft	48.02 ft	68.62 ft	56.15 ft	41.09 ft	42.85 ft	45.9ft
Max Water Depth	106.49 ft	92.34 ft	110.49 ft	112.72 ft	112.03 ft	109.2 ft	109.1ft
Min Water Depth	1.28 ft	1.28 ft	9.02 ft	2.35 ft	2.795 ft	0.4 ft	2.7ft
Measured Water Elevation	6361.40 ft.	6359.48 ft.	6360.59 ft.	6360.30 ft.	6357.902 ft.	6351.67 ft.	6345.02 ft.
Data Points Used	25,376	29,295	22,801	24,509	23,562	100,707	55,787

Figure 1 is a contour map of the bottom of the tailings pond and beach generated from MineSight. The deepest areas of the pond are located nearest to the barge.

Figure 1: Contour Lines of Current Tailings Beach and Pond Bottom



APPENDIX E

Q3 2023 Piezometric and Deformation Monitoring Update

(Pages E-1 to E-72)

November 8, 2023

Mr. Mike Harvie
Manager of Engineering and Geology
Montana Resources, LLC
600 Shields Avenue
Butte, Montana
USA, 59701

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Dear Mike,

RE: Q3 2023 – YDTI Quarterly Piezometric and Deformation Monitoring Update

1.0 INTRODUCTION

1.1 GENERAL

Montana Resources, LLC (MR) operates an open pit copper and molybdenum mine in Butte, Montana. Tailings produced from ore processing are stored within the Yankee Doddle Tailings Impoundment (YDTI), which is a valley-fill style impoundment contained within rockfill embankments. Knight Piésold Ltd. (KP) supports MR to routinely monitor hydrogeological and geotechnical conditions as part of their operational surveillance plan for the tailings facility, as described in the Tailings Operations, Maintenance and Surveillance (TOMS) Manual (MR/KP, 2022). Monitoring data are comprehensively reviewed on a quarterly basis to evaluate the performance of the YDTI in conjunction with observations made during periodic inspections.

Piezometric conditions within the YDTI embankments, tailings mass, and surrounding areas are an important indicator of facility performance. Near real-time piezometric data from instrumentation at select monitoring sites have designated Quantitative Performance Parameters (QPPs) within the TOMS Manual and are regularly evaluated relative to piezometric 'trigger elevations' to pre-emptively identify and respond to changing conditions.

MR and KP commenced an embankment deformation monitoring program, with data collection beginning in 2020 to characterize and monitor surface and subsurface deformations using in-situ instrumentation and satellite-based remote sensing. Observed deformation rates, magnitudes and the spatial distribution thereof are an important indicators of embankment performance and are regularly reviewed by KP. The TOMS Manual does not yet include deformation based QPPs; however, these will be considered for future revisions. KP evaluated and presented available deformation data on a quarterly or more frequent basis throughout 2021 and 2022 to regularly monitor for changes in deformation behavior and evaluate incorporation of deformation instrumentation for QPP monitoring in the future; a practice that will continue through 2023.

This letter provides a quarterly summary of piezometric and deformation monitoring data collected during the third quarter (Q3) of 2023 for key monitoring sites.

1.2 SUMMARY OF ACTIVE CONSTRUCTION

MR substantially completed construction of the El. 6,450 ft crest raise of the YDTI embankments in March 2023. Only minor construction activities occurred during Q3 2023, including infilling and regrading areas along the EL. 6,450 ft crest. KP and MR operated a supplemental construction monitoring program from June 2021 through August 2023, that included focused weekly and monthly monitoring of construction related piezometric and deformation responses (KP, 2021) to North-South and East-West Embankment construction. Construction significantly influenced monitored surface deformations in areas within and localized around embankment construction, as expected. Only minor construction-related pore water pressure influence was observed. KP considers the construction monitoring program to have been highly valuable for tracking embankment conditions and evaluating associated risks, while large-scale construction loading was active (June 2021 through March 2023). The supplementary construction monitoring program was deactivated following substantial completion of construction, and KP is satisfied that YDTI conditions can be appropriately monitored within the existing dam safety/performance monitoring programs.

2.0 PIEZOMETRIC MONITORING

2.1 OVERVIEW OF PIEZOMETRIC MONITORING NETWORK

Piezometric data are available to KP via a Remote Monitoring System (RMS) and data from QPP sites are reviewed weekly by KP and MR. This letter presents trends and conditions based on data collection from the QPP sites during Q3 2023, with select additional data from non-QPP monitoring sites, when useful to support the key findings. Comprehensive analysis of data from the remaining non-QPP monitoring sites is completed annually and will next be presented in the 2023 Data Analysis Report. The active piezometric monitoring network and a summary of Q3 2023 piezometric conditions are presented in the following sections.

Pore pressures are monitored at 115 active instrumentation locations at the YDTI, the West Ridge, and Horseshoe Bend (HsB) areas. Locations of the piezometric monitoring sites are shown on Figure 1. These sites include 39 standpipe piezometers/monitoring wells, 76 drillholes with active vibrating wire piezometers (VWPs) and two active Elexon Geo4Sight (Geo4Sight) installations. Most existing standpipe piezometers and monitoring wells have been outfitted for continuous monitoring by suspending a VWP sensor within the PVC riser and connecting the sensor via radiotelemetry to the RMS.

Eighteen (18) standpipe piezometers and drillhole VWP sensors have designated QPPs within the TOMS Manual and are used to routinely assess the performance of the YDTI. The QPPs include a piezometric ‘trigger elevation’ at or above which the QPP is exceeded and a Level 1 Unusual Occurrence would be triggered, as specified in Table 5.1 of the TOMS Manual (MR/KP, 2022). Trigger elevations assigned to each QPP site are reviewed by KP on an annual basis. A summary of the piezometric QPPs that are currently in use at the YDTI is included in Table 1.

Piezometric data availability via the RMS has typically been highly reliable, except for minor outages including battery depletion, minor hardware problems, and temporary loss of communication with the local network. Minor outages have continued to be regularly identified during weekly monitoring reviews and corrective measures carried out, with minor issues typically remedied within one week of identification. Several notable QPP outages occurred during Q3 2023, as summarized below:

- **DH15-S5 VW2** has recorded erroneous readings since April 15, 2023 due to suspected VWP cable damage. This sensor will be abandoned and replacement QPPs will be adopted using sensors from drillhole DH23-S1, which was installed to replace DH15-S5 during the 2023 Site Investigation Program.
- **DH18-S1 VW2, VW3, and VW4** were disconnected during North-South EL. 6,450 ft Embankment lift construction (since March 8, 2023) but were damaged during construction and have been abandoned. KP plans to prioritize replacement of these sensors during the 2024 Site Investigation Program.
- **MW12-05** stopped recording on August 8, 2023 due to suspected cable or sensor damage. MW12-05 comprises a VWP sensor installed within a standpipe piezometer; however, the VWP can not be replaced since the standpipe collar is now buried within the embankment. KP may consider replacement of the instrumentation at MW12-05 as part of upcoming site investigation programs over the next several years.

2.2 SUMMARY OF Q3 2023 PIEOZOMETRIC CONDITIONS

2.2.1 GENERAL

No piezometric trigger elevation exceedances were observed at QPP monitoring sites during Q3 2023. A high-level summary of QPP piezometric data and instrumentation status is provided in Table 1. Piezometric data recorded at QPP sites within the East-West, North-South, and West Embankments are shown relative to the trigger elevations on Figures 2 through 6. Piezometric conditions and quarterly change in piezometric elevation for instruments installed along Section 8+00W of the East-West Embankment are presented graphically on Figure 7.

2.2.2 EAST-WEST EMBANKMENT

QPP sites within the East-West Embankment exhibited relatively constant piezometric elevations during Q3 2023. Notable piezometric trends observed within the East-West Embankment are summarized below.

QPP sensors installed within basal rockfill near the East-West Embankment toe on Section 0+00 and 8+00W observed relatively constant pore water pressures during Q3 2023. Supporting monitoring findings include:

- QPP monitoring site DH15-S3 observed relatively constant pore water pressure (approximately 0.1 ft decrease).
- QPP monitoring site DH17-S1 monitored a very minor pore water pressure increase (approximately 0.5 ft increase) during Q3 2023.
- QPP monitoring sites MW94-11 and MW94-08 observed slightly decreasing pore water pressures (approximately 0.3 ft at both sites).

Pore water pressures monitored by QPP and non-QPP sensors installed beneath East-West Embankment downstream slope, crest, and surcharge load generally decreased slightly during Q3 2023. Key findings include:

- QPP sensor DH19-S7 VW1 (Section 0+00) continued to monitor decreasing pore water pressures (approximately 3 ft) within the basal saturated zone.

- QPP sensor DH15-S4 VW2 (Section 8+00W) observed slightly increasing pore pressures (approximately 0.6 ft) during Q3 2023.
- Non-QPP Geo4Sight instrumentation within drillholes DH20-S2 and DH21-S1 (beneath the rockfill surcharge on Sections 8+00W and 0+00, respectively) monitored relatively stable pore pressures during Q3 2023.
- QPP sensor DH18-S3 VW3, installed beneath the East-West Embankment crest on Section 28+00NW monitored relative constant piezometric conditions during Q3 2023.
- No data are available from QPP (DH15-S5 VW1) and non-QPP (DH15-S5 and DH17-S2) sites beneath the East-West Embankment crest within the Central Pedestal Area, following damage resulting from construction. Installation of replacement instrument installations at these locations is presently underway as part of the 2023 Site Investigation program. Data from these sites will be incorporated into subsequent quarterly monitoring letters.

Two sensors installed within the East-West Embankment near Section 0+00, within or in proximity to the historical 1982 embankment lift continued to monitor fluctuating water levels during Q3 2023:

- Non-QPP sensor DH19-S7 VW7 observed a minor overall quarterly pore water pressure decrease (approximately 1 ft) during Q3 2023; however, a significant fluctuation was observed during the monitoring period between July 10th and August 17th, 2023 (approximately 27 ft) followed by a rapid return to conditions observed prior to the fluctuation. The cause of this trend is uncertain and additional monitoring is recommended to determine whether it may be an instrumentation issue. Slightly decreasing pore pressures were observed through the end of Q3 2023.
- Non-QPP sensor DH19-S7 VW5, installed within the 1989 lift, observed steadily decreasing pore water pressures (approximately 6.7 ft) during Q3 2023.

The relatively constant pore water pressure trends within the East-West Embankment during Q3 2023 are generally consistent with preceding monitoring periods and no significant increases have been observed following substantial completion of EL. 6,450 ft embankment construction.

2.2.3 NORTH-SOUTH EMBANKMENT

QPP sites within the rockfill of the North-South Embankment monitored relatively constant or slightly increasing pore water pressures during Q3 2023, interpreted to be associated with alluvial placement along the upstream North-South Embankment and/or related to local tailings discharge. Key findings include:

- QPP sensor DH18-S2 VW2, installed within the basal saturated zone, monitored relatively constant pore water pressure during Q3 2023. A minor decrease in pore water pressure was monitored between July 10th and September 27th, 2023 (approximately 0.5 ft) followed by a return in conditions observed prior to the fluctuation. This sensor previously observed increasing pore water pressures resulting from nearby EL. 6,450 ft lift construction during mid- to late- 2022, and conditions at the end of Q3 remained slightly elevated (approximately 5 ft) from pre-construction pore water pressures. It is anticipated that pore water pressures will begin to dissipate with time following completion of construction activities.

- Monitoring well MW12-01 did not record any data between June 6th and September 29th, 2023, due to a datalogger issue. Comparison of data collected on these dates indicate that pore water pressure increased slightly during Q3 2023 (approximately 2.5 ft). MW12-01 was previously inundated by the rising tailings beach (tailings flowed into the well riser in September 2022) and subsequent water levels appear to be increasing (by approximately 20 ft) due to influence of local tailings discharge. Nearby tailings discharge point NS-01 was inactive during Q3 2023; however, discharge from the 12-inch diameter lines were active and may have caused the increase in piezometric conditions observed at MW12-01. Current elevations remain approximately 9.5 ft below the QPP threshold elevation. The QPO threshold elevation should be revisited and adjusted, if warranted, to reflect the recent change in behavior.
- Monitoring well MW12-05 has historically been unsaturated and remained unsaturated through August 8, 2023, after which the sensor stopped recording due to suspected cable or sensor damage.
- No data are available from QPP instrument DH18-S1 VW2 during Q3 2023. This instrument was damaged during EL. 6,450 ft lift construction and has been abandoned (as discussed previously in Section 2.1).

2.2.4 WEST EMBANKMENT AND DRAIN

Slightly increasing pore pressures were observed within the West Embankment and West Embankment Drain (WED) during Q3 2023 (ranging from approximately 0.3 to 0.8 ft), that are attributed to active tailings discharge from the 12-inch lines throughout Q3 2023. Key findings include:

- QPP sensors in drillhole DH15-12 (VW1, VW2, and VW3), installed within the West Embankment foundation, monitored slightly increasing pore water pressures (approximately 0.2 to 0.5 ft). Sensors VW1, VW2, and VW3 remained approximately 20 ft below their QPP trigger thresholds.
- Pore water pressures monitored by QPP sensors installed in WED Drain Pods 1 and 2 (VWP-DP1 and VWP-DP2, respectively) indicate constant or slightly increasing pore pressures (decrease of 0.3 and increase 0.9 ft, respectively). The sensors remain approximately 30 ft below their respective QPP trigger thresholds.
- The piezometric elevation monitored by the non-QPP sensor in the WED Extraction Basin (VWP-EB1) monitored a minor pore water pressure increase (approximately 0.5 ft).

2.2.5 TAILINGS MASS

Pore water pressure instrumentation installed within the tailings mass upstream of the East-West Embankment Central Pedestal Area generally monitored increasing pore water pressures during Q3 2023. Key findings include:

- Pore pressures within the central tailings mass upstream of the rockfill surcharge at non-QPP sites SCPT15-04 VW2 and SCPT15-05 VW2 monitored minor increases in piezometric elevation (approximately 5 ft). Nearby tailings discharge from the 12-inch diameter lines is inferred to be the cause of the piezometric increase.
- Non-QPP sites DH17-S3 VW2 and SCPT15-03 VW1, installed beneath the central rockfill surcharge, monitored increasing piezometric elevations of approximately 2 and 3 ft, respectively.

- Non-QPP sensors SCPT21-S5 VW2 and VW3 were unsaturated throughout Q2 2023 but became saturated near the start of Q3 2023 and remained saturated throughout the quarter. Steady increases in piezometric elevation (approximately 3 ft and 9 ft, respectively) were observed, while nearby tailings discharge from the 12-inch diameter lines was active.

Instrumentation installed within the tailings beach adjacent to the North-South and East-West Embankments outside the Central Pedestal Area generally monitored mixed piezometric responses during Q3 2023. Key findings include:

- Non-QPP sensor SCPT15-06 VW2 monitored a pore water pressure increase of approximately 10 ft during Q3 2023. Non-QPP sensor SCPT15-06 VW1 has recorded erroneous data since June 16, 2023 and appears to have been damaged.
- Non-QPP sensor DH19-S6 VW6, installed upstream of the North-South Embankment near Section 56+00N, observed increasing pore water pressures (approximately 8 ft). The increase in Q3 2023 is inferred to result from the active discharge from the 12-inch diameter lines nearby.
- Non-QPP sensor SCPT21-S2 VW2 monitored a slight increase in pore water pressure (approximately 1 ft) during Q3 2023. This site is installed within the upper tailings mass and has previously monitored influence from the nearby discharge . This effect is inferred to have continued in Q3 2023.

There are presently no QPPs designated for pore water pressures within the tailings mass.

3.0 DEFORMATION MONITORING

3.1 OVERVIEW OF DEFORMATION MONITORING NETWORK

Surface and subsurface deformation data are regularly reviewed by KP. A summary of the deformation monitoring programs and key monitoring trends from Q3 2023 are provided in the following sections. Quarterly monitoring generally observed continued constant rate surface deformations within regions of historical rockfill outside of construction recent influence, with no observation of progressive (accelerating) deformation rates in these areas. Slightly elevated deformation rates continued to be observed within and localized around regions of recent construction (East-West and North-South Embankment El. 6,450 ft lift construction). Deformation rates have continued to slow with time following the substantial completion of rockfill placement in Q1 2023.

Surface and subsurface deformations of the YDTI embankments are actively monitored using in-situ instrumentation and remote sensing techniques. The instrumentation and remote sensing techniques incorporated into the monitoring program are summarized in the 2022 Data Analysis Report (KP, 2023), and within monthly construction monitoring and quarterly monitoring documents. A list of the available techniques is provided below:

- **Global Navigational Satellite System** (GNSS) **instrumented survey-Monuments** at four locations (DH19-S3, DH19-S4, DH19-S5, and DH19-S7) within the Central Pedestal Area of the East-West Embankment
- **Manual survey-monuments** at 15 locations along the East-West Embankment and four locations along the North-South Embankment, surveyed using Differential Global Positioning System (DGPS) and a manually operated total station.

- **Satellite-based interferometric Synthetic Aperture Radar** (inSAR) Bulletin and SqueeSAR analyses with coverage throughout the YDTI embankments. Data collection is active from approximately April through October annually, while snow-free conditions persist. Nine (9) short-term inSAR bulletins were available for review in Q3 2023. No SqueeSAR data are available.
- **In-Place-Inclinometer** (IPI) instruments co-located with the GNSS instrumentation in drillholes DH19-S3, DH19-S4, DH19-S5, and DH19-S7 within the Central Pedestal Area of the East-West Embankment.
- **Geo4Sight deformation instruments** within drillholes DH20-S2 (Section 8+00W) and DH21-S4 (Section 0+00), installed through the rockfill surcharge, tailings, and upstream slope of the East-West Embankment in the Central Pedestal Area.

Data from instrumentation sites were readily available via the RMS. Trends and conditions observed in the monitoring data during Q3 2023 using available instrumentation and remote sensing data are summarized in the following sections. More comprehensive analysis of available deformation data will be presented in the 2023 Data Analysis Report to be issued in 2024. No deformation related QPPs are presently active; however, KP is evaluating the data and are considering incorporation of deformation related QPPs for future revisions of the TOMS Manual.

3.2 OVERVIEW OF OBSERVED DEFORMATION TRENDS

3.2.1 GENERAL

Only minor embankment construction activities were active in Q3 2023, predominantly comprising regrading along the El. 6,450 ft crest. Increasing deformation rates were not anticipated or observed as a result of these activities. Deformation rates throughout the East-West and North-South Embankments remain slightly elevated following construction of the EL. 6,450 ft crest raise but continue to slow with time and are approaching pre-construction (June 2021) rates. Findings from Q3 2023 do not indicate development of unexpected deformations within the downstream embankment shell nor evidence of progressive (accelerating) deformation following construction. Key findings are discussed by embankment in the following sections.

3.2.2 EAST-WEST EMBANKMENT DEFORMATIONS

East-West Embankment construction along the EL. 6,450 ft lift was completed in August 2022 and deformation monitoring data collected since (including during Q3 2023) have monitored slowing surface and subsurface deformation rates. A high-level summary of monitored Q2 2023 deformations is provided below:

- InSAR bulletins continue to observe elevated deformation rates within and localized around areas of recent El. 6,450 ft lift construction, with rates slowing with time following rockfill placement. Monitoring during July, August, and September indicate that deformation rates remain slightly elevated within the Central Pedestal Area, predominantly in the area of most recent construction (January 2023), where the East-West and North-South Embankments join (around Section 0+00). Deformation rates in this area have remained constant or slowed in sequential Q3 2023 bulletins.

- GNSS and manual survey-monuments have continued to monitor relatively constant or slowing surface deformation rates within the East-West Embankment since completion of the El. 6,450 ft lift:
  - Survey-monuments (GNSS DH19-S7, DS-1, DS-2, DS-3, and DS-4) installed along the central Tailings Pipeline Ramp have monitored slowing vertical and lateral (predominantly southward) deformations since August 2022. Relatively constant or slightly slowing deformation rates were observed during Q3 2023.
  - Survey-monuments (MS-1, MS-2, and MS-3) installed along the El. 6,150 ft bench exhibited relatively minor influence from construction (compared to the tailings pipeline ramp) and displacement rates have generally slowed since completion of El. 6,450 ft lift construction. Relatively constant or slightly slowing deformation rates were observed during Q3 2023.
  - Survey-monuments (GNSS DH19-S3, GNSS DH19-S4, SB-1, SB-2, and SB-3) installed along the Seep 10 Bench have previously observed slightly elevated surface deformation rates interpreted as construction influence. Monitoring during Q3 2023 appear to continue to indicate stable or slowing deformation rates.
- Seep 10 Bench inclinometers DH19-S3 and DH19-S4 (Sections 0+00 and 8+00W, respectively) indicate that deformation rates have generally remained constant or have slowed slightly since mid-2022 with very minor rate and directional fluctuations interpreted to result from ongoing settlement.
- Geo4Sight instrumentation within drillholes DH20-S2 and DH21-S4, installed beneath the surcharge on Sections 8+00W and 0+00, respectively, has continued to monitor minimal deformation rates following completion of the surcharge and embankment lift construction. These sites previously monitored elevated subsurface deformation rates due to local central embankment lift construction in late-2021 and early-2022.

3.2.3 NORTH-SOUTH EMBANKMENT DEFORMATIONS

North-South Embankment El. 6,450 ft lift construction was substantially completed in March 2023 and deformation monitoring data collected since then (including during Q3 2023) have monitored slowing surface and subsurface deformation rates. A high-level summary of monitored Q3 2023 conditions is provided below:

- InSAR bulletins continue to observe elevated deformation rates within and localized around areas of recent EL. 6,450 ft lift construction along the North-South Embankment. Observed rates continue to slow with time following construction. Monitoring in Q3 2023 also indicates continued elevated deformation rates where the East-West and North-South Embankments join, as noted in Section 3.2.1.
- Manual survey-monuments (NS-01, NS-02, NS-03, NS-04, NS-05, and NS-06) are installed along the North-South Embankment and have monitored deformations during and following EL. 6,450 ft crest construction using a total station. Available data indicate slightly elevated, generally slowing deformation rates following the substantial conclusion of EL. 6,450 ft lift construction in Q1 2023. The highest deformation rates are observed near to where the East-West and North-South Embankment join (NS-01) in the region where construction was most relatively recently active (January 2023). It is anticipated that these rates will continue to slow in Q4 2023.

KP expects deformation rates will continue to slow and stabilize with time given no further large-scale embankment construction activities are upcoming. This expectation continues to be regularly demonstrated through available deformation monitoring data.

4.0 CONCLUSIONS

KP supports MR with routine monitoring of the hydrogeological and geotechnical conditions, as part of their operational surveillance plan for the tailings facility, as described in the TOMS Manual (MR/KP, 2022). Piezometric, surface deformation, and subsurface deformation data are available in near real-time using the RMS. Formal analysis and reporting of monitoring data are completed on a quarterly basis to evaluate the performance of the YDTI. The quarterly evaluations along with an assessment of conditions and trends at all piezometric monitoring sites will be included in a comprehensive annual Data Analysis Report, to be issued in 2024. Additional monthly piezometric and deformation data analyses for conditions associated with active embankment construction were completed during EL. 6,450 ft embankment lift construction (June 2021 through March 2023) for the East-West and North-South Embankments. Influence from construction (localized elevated pore water pressures and elevated surface/subsurface deformation rates) has continued to dissipate with time following completion of construction. The focused construction monitoring program was deactivated following substantial completion of construction, and KP is satisfied that YDTI conditions can be appropriately monitored within the existing dam safety/performance monitoring programs.

Piezometric conditions are monitored within the YDTI embankments, tailings mass, and surrounding areas and are an important indicator of facility performance. A subset of piezometric monitoring sites have designated QPPs within the TOMS Manual and are regularly evaluated relative to piezometric ‘trigger elevations’ to pre-emptively identify and respond to changing conditions. There were no piezometric QPP exceedances during Q3 2023. Minor, isolated elevated pore pressures associated with construction are anticipated to dissipate with time following substantial completion of EL. 6,450 ft lift placement within the North-South and East-West Embankments.

Slightly elevated surface and subsurface deformations continue to be observed within and localized around areas of recent North-South and East-West Embankment construction. Monitored deformation rates within the Central Pedestal Area continued to decrease during Q3 2023 and findings do not indicate development of unexpected or progressive deformations following construction. KP anticipates that elevated deformation rates resulting from construction will continue to slow and stabilize with time.

Please do not hesitate to contact the undersigned should you have any questions or if you would like any additional information.

Yours truly,
Knight Piésold Ltd.

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KNIGHT PIÉSOLD LTD.
PERMIT NUMBER
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EGBC PERMIT TO PRACTICE

Approval that this document adheres to the Knight Piésold Quality System: DDF

Attachments:

Table 1 Rev 0	Summary of Piezometric Quantitative Performance Parameter (QPP) Monitoring
Figure 1 Rev 0	Active Piezometric Instrumentation and Monitoring Site
Figure 2 Rev 0	Summary of Measured vs. QPP Trigger Piezometric Elevations East-West Embankment
Figure 3 Rev 0	Summary of Measured vs. QPP Trigger Piezometric Elevations East-West Embankment
Figure 4 Rev 0	Summary of Measured vs. QPP Trigger Piezometric Elevations North-South Embankment
Figure 5 Rev 0	Summary of Measured vs. QPP Trigger Piezometric Elevations West Embankment
Figure 6 Rev 0	Summary of Measured vs. QPP Trigger Piezometric Elevations West Embankment
Figure 7 Rev 0	Piezometric Conditions Along East-West Embankment Section 8+00W (Looking West)
Figure 8 Rev 0	Comparison of Cumulative Vertical GNSS Displacement Magnitudes
Appendix A	GNSS and DGPS Deformation Plots

Appendix B Inclinometer Deformation Plots
Appendix C Geo4Sight Deformation Plots
Appendix D InSAR Bulletins

References:

Knight Piésold Ltd. (KP, 2021). Monthly El. 6,450 Construction Progress and Monitoring Summary - MP#1 (Jun 22 to Jul 31, 2021) (KP Reference No. VA21-01362), dated September 30, 2021.

Knight Piésold Ltd. (KP, 2023). 2022 Data Analysis Report (KP Reference No. VA101-126/27-4 Rev 0), dated June 8, 2023.

Montana Resources and Knight Piésold (MR/KP, 2022). Yankee Doodle Tailings Impoundment – Tailings Operations, Maintenance and Surveillance (TOMS) Manual, Rev 4, dated January 2022.

Copy To: Mark Thompson, Amanda Griffith (Montana Resources)

/cnn

Knight Piésold CONSULTING

TABLE 1

MONTANA RESOURCES, LLC
YANKEE DOODLE TAILINGS IMPOUNDMENT

YDTI PIEZOMETRIC AND DEFORMATION MONITORING UPDATE (Q3 2023)
SUMMARY OF PIEZOMETRIC QUANTITATIVE PERFORMANCE PARAMETER (QPP) MONITORING

Print Nov/08/23 12:35:52

Monitoring Region	QPP Instrumentation Site	Monitoring Site Type [1]	Piezometric Trigger Elevation (ft)	Maxiumum Piezometric Elevation Recorded Q3 2023 (ft)	End of Q3 2023 Piezometric Elevation (ft)	Exceeded Trigger Elevation During Q3 2023 (Yes/No)	Pore Pressure Change Q3 2023 (ft)	Comments
East-West Embankment	MW94-08	VWP Sensor	5,680	5,668	5,668	No	-0.28	
	MW94-11	VWP Sensor	5,693	5,672	5,672	No	-0.27	
	DH15-S3 VW1	VWP Sensor	5,690	5,664	5,664	No	-0.06	
	DH15-S4 VW1	VWP Sensor	5,740	5,710	5,710	No	0.15	
	DH15-S4 VW2	VWP Sensor	5,800	5,767	5,767	No	0.56	
	DH15-S5 VW2	VWP Sensor	5,890	-	-	-	-	Damaged by construction on April 15, 2023 and subsequently abandoned. To be replaced with DH23-S1 QPP(s).
	DH17-S1 VW2	VWP Sensor	5,741	5,714	5,714	No	0.46	
	DH18-S3 VW3	VWP Sensor	6,044	6,022	6,022	No	0.13	
	DH19-S7 VW1	VWP Sensor	5,770	5,729	5,727	No	-2.72	
North-South Embankment	MW12-01	VWP Sensor	5,940	5,931	5,930	No	2.45	
	MW12-05	VWP Sensor	6,200	-	-	-	-	Damaged by construction on August 8, 2023 and subsequently abandoned.
	DH18-S1 VW2	VWP Sensor	6,010	-	-	-	-	Damaged by construction and subsequently abandoned. No data available after March 8, 2023.
	DH18-S2 VW2	VWP Sensor	6,029	6,011	6,011	No	0.11	
West Embankment	VWP-DP1	VWP Sensor	6,374	6,342	6,342	No	-0.20	
	VWP-DP2	VWP Sensor	6,366	6,339	6,339	No	0.90	
	DH15-12 VW1	VWP Sensor	6,372	6,351	6,351	No	0.54	
	DH15-12 VW2	VWP Sensor	6,372	6,353	6,352	No	0.20	
	DH15-12 VW3	VWP Sensor	6,372	6,352	6,352	No	0.21	

\\knightpiesold.local\VA-Prj$\1\01\00126\29\A\Correspondence\VA23-01703 - Q3 2023 Piezometric and Deformation Monitoring Summary\Tables\[QPP Compliance Figures and Table Q3.xlsm]Table 1 - QPP Evaluation

NOTES:
1. PIEZOMETRIC DATA FROM VWP SITES ARE COLLECTED HOURLY USING DATA LOGGERS AND A REMOTE MONITORING SYSTEM.
2. THE SPECIFIED QPP TRIGGER ELEVATION FOR MW12-05 WAS UPDATED FROM 6,195 ft. TO 6,200 ft. IN THE 2018 REVISION OF THE TOMS MANUAL (MR/KP, 2018).
3. THE PIEZOMETRIC QPP NETWORK WAS EXPANDED TO INCLUDE ADDITIONAL SENSORS DURING THE 2020 TOMS UPDATE (MR/KP, 2020).
4. DH17-S2 VW2 WAS DAMAGED ON MARCH 19, 2021 AND DATA THEREAFTER ARE INTERPRETED TO BE ERRONEOUS. THIS SENSOR WAS RETIRED FROM THE QPPS AND REPLACED WITH THE NEARBY DH19-S7 VW1.
5. SENSOR DH15-S5 VW2 WAS DAMAGED BY CONSTRUCTION ON APRIL 15, 2023 AND ABANDONED. REPLACEMENT QPP(S) WILL BE ADOPTED BASED ON SENSORS INSTALLED IN DH23-S1.

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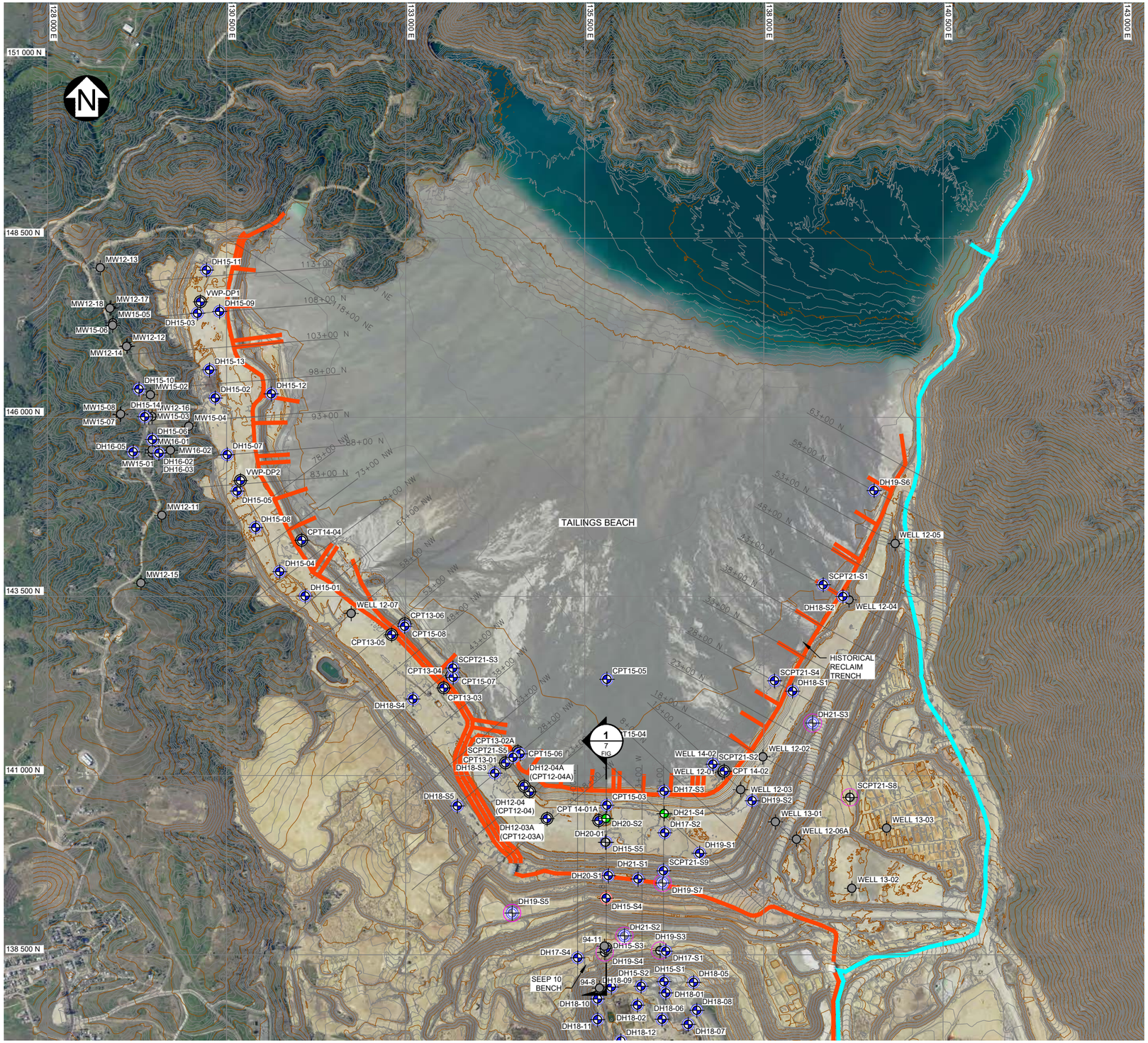

NOTES:

1. COORDINATE SYSTEM AND ELEVATIONS BASED ON ANACONDA MINE GRID.
2. QPP = QUANTITATIVE PERFORMANCE PARAMETER.
3. RK-3 TAILINGS DISCHARGE POINT WAS RELOCATED NORTH IN OCTOBER 2017.
4. THE AERIAL PHOTO SHOWN IS FROM JULY, 2023.
5. TOPOGRAPHY PROVIDED BY MONTANA RESOURCES, LLC IN SEPTEMBER, 2023.
6. NO PORE WATER PRESSURE DATA ARE AVAILABLE FROM DH20-S1 AS THE INSTRUMENTS ARE NOT FUNCTIONAL.

LEGEND:

- EXISTING DRILLHOLE WITH NESTED VIBRATING WIRE PIEZOMETERS AND GEO4SIGHT INSTRUMENTATION
- EXISTING GEOPHYSICAL CASING
- EXISTING INCLINOMETER
- EXISTING INCLINOMETER WITH NESTED VIBRATING WIRE PIEZOMETERS
- EXISTING NESTED VIBRATING WIRE PIEZOMETERS
- EXISTING SINGLE VIBRATING WIRE PIEZOMETER
- EXISTING THERMISTOR WITH VIBRATING WIRE PIEZOMETER
- EXISTING INSTRUMENTED MONITORING WELL OR STANDPIPE
- TAILINGS PIPELINE

SCALE A 500 0 500 1000 1500 2000 2500 ft

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MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

ACTIVE PIEZOMETRIC INSTRUMENTATION AND MONITORING SITE

Knight Piésold CONSULTING

P/A NO. VA101-126/29 | REF NO. VA23-01703

FIGURE 1 | REV 0

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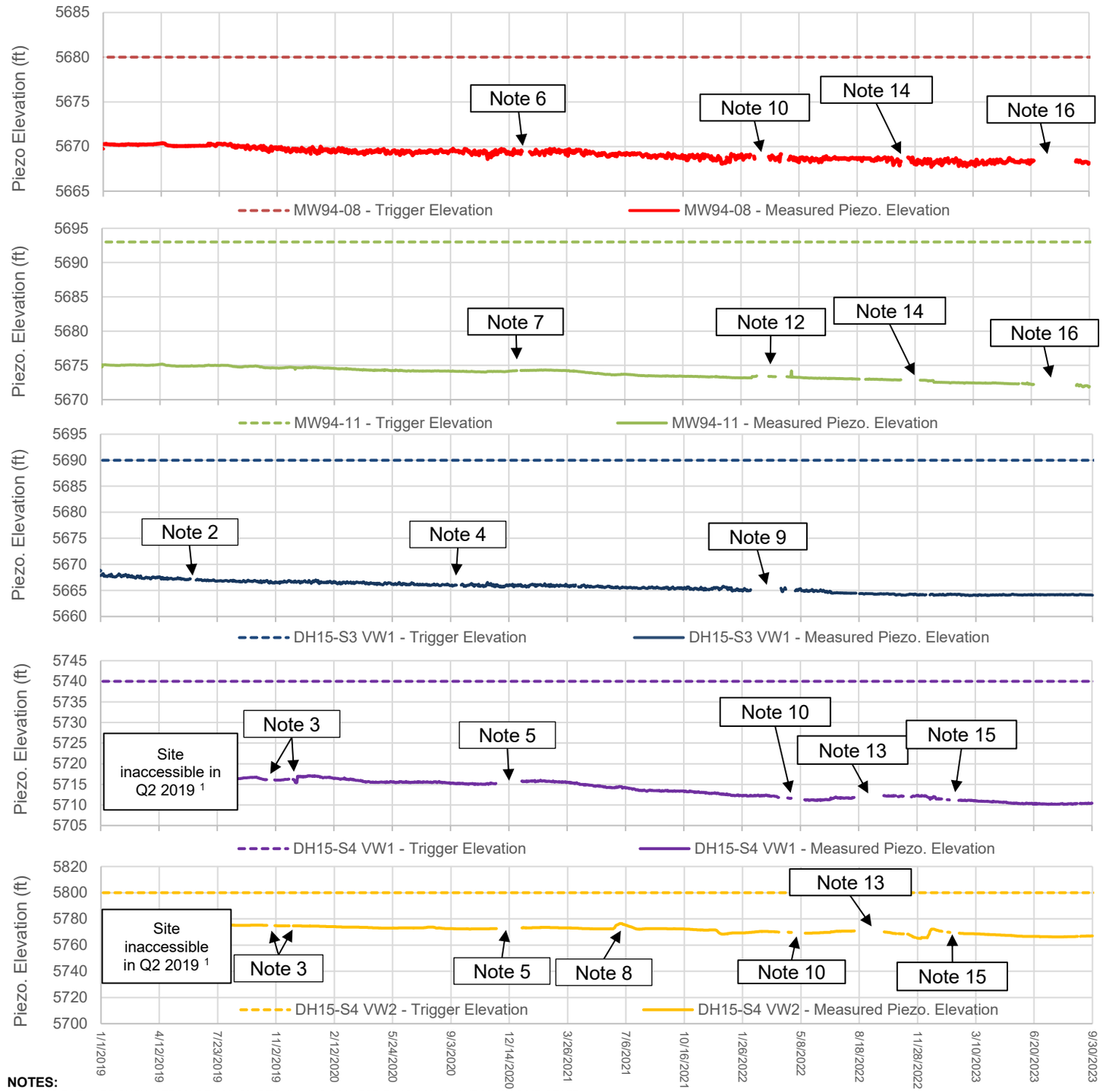
XREFILES\ TOPO - 0' - July 2022_dtl_01_2022-01-18, Tailings and Reclaim Pipelines, Tailings Spigots and Reclaim Pipelines - September 2023, TOPO - 0' - August 2023_dtl_01_2023-07-25, IMAGEFILES\ dtl_01_2023-07-26



NOTES:

1. NO DATA ARE SHOWN FROM DEC 20, 2017 TO JULY 25, 2019 FOR DH15-S4 VW1 AND VW2 AS MR STAFF WERE UNABLE TO CONNECT THE INSTRUMENTATION WITH THE REMOTE MONITORING SYSTEM DUE TO SITE INACCESSIBILITY.
2. NO DATA WERE COLLECTED BY DH15-S3 VW1 FROM JUNE 7, 2019 TO JUNE 16, 2019 DUE TO INSUFFICIENT BATTERY VOLTAGE
3. NO DATA WERE COLLECTED BY DH15-S4 VW1 AND VW2 DUE TO POWER SUPPLY ISSUES OCTOBER 19 TO 31 AND NOVEMBER 27, 2019 TO DECEMBER 3, 2019. SENSORS MOVED NEW LOGGER.
4. NO DATA WERE COLLECT BY DH15-S3 VW1 FROM SEPTEMBER 15 TO SEPTEMBER 21, 2020 DUE TO DEPLETED GEONET BATTERY WHICH WAS SUBSEQUENTLY REPLACED.
5. NO DATA WERE COLLECTED BY DH15-S4 VW1 AND VW2 DUE TO SUSPECTED LOGGER ISSUE FROM NOVEMBER 22, 2020. FUNCTIONALITY WAS RESTORED USING A REPLACEMENT LOGGER IN Q1 2021.
6. NO DATA WERE COLLECTED BY MW94-08 FROM JANUARY 7 TO 19, 2021 DUE TO A DEPLETED BATTERY WHICH WAS SUBSEQUENTLY REPLACED.
7. NO DATA WERE COLLECTED BY MW94-11 FROM DECEMBER 30, 2020 TO JANUARY 4, 2021 DUE TO A DEPLETED BATTERY WHICH WAS SUBSEQUENTLY REPLACED.
8. PIEZOMETRIC ELEVATION INCREASED IN RESPONSE TO OBSERVED INFILTRATION OF TAILINGS SLURRY WATER INTO THE CENTRAL ROCKFILL SURCHARGE FROM JUNE 14 TO JUNE 28, 2021 AS DESCRIBED IN VA21-01320.
9. SENSOR DH15-S3 VW1 WENT OFFLINE ON FEBRUARY 9, 2022 DUE TO A SUSPECTED RMS CONNECTIVITY ISSUE. CONNECTIVITY WAS RE-ESTABLISHED ON APRIL 20, 2022.
10. SENSORS DH15-S4 VW1 AND VW2 WERE TEMPORARILY DISCONNECTED BETWEEN APRIL 1 AND MAY 17, 2022 DUE TO A SUSPECTED RMS CONNECTIVITY ISSUE.
11. SENSOR MW94-8 WAS TEMPORARILY DISCONNECTED BETWEEN FEBRUARY 19 AND APRIL 21, 2022 DUE TO A SUSPECTED LOGGER VOLTAGE ISSUE.
12. SENSOR MW94-11 WAS TEMPORARILY DISCONNECTED BETWEEN MARCH 6 AND APRIL 18, 2022 DUE TO A SUSPECTED RMS CONNECTIVITY ISSUE.
13. SENSORS DH15-S4 VW1 AND VW2 COLLECTED ERRONEOUS READINGS STARTING ON AUGUST 9, 2022 DUE TO SUSPECTED LOGGER ISSUE. VALUES HAVE BEEN OMITTED FOR CLARITY. TROUBLESHOOTING IS CURRENTLY IN PROGRESS.
14. SENSORS 94-8 AND 94-11 WERE TEMPORARILY DISCONNECTED BETWEEN NOVEMBER 3 AND DECEMBER 9, 2022 DUE TO A SUSPECTED LOGGER VOLTAGE ISSUE.
15. SENSORS DH15-S4 VW1 AND VW2 COLLECTED MINIMAL DATA BETWEEN JANUARY 11 AND FEBRUARY 8, 2023 DUE TO A SUSPECTED DATA LOGGER ISSUE.
16. SENSORS 94-8 AND 94-11 STOPPED RECORDING BETWEEN JUNE 30 AND SEPTEMBER 7, 2023 DUE TO A DATALOGGER HARDWARE ISSUE.

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MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS EAST-WEST EMBANKMENT

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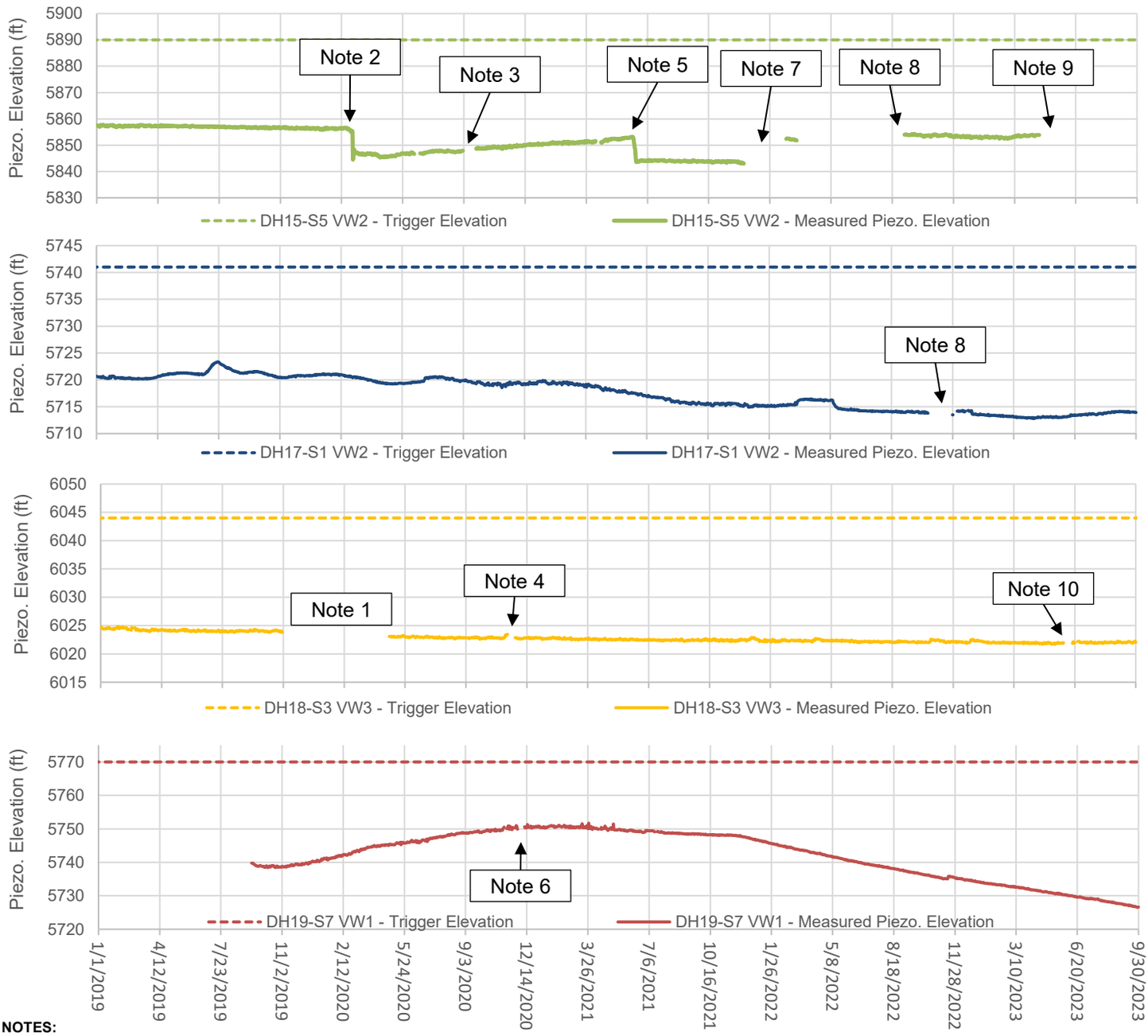
P/A NO.	REF. NO.
VA101-126/29	VA23-01703

FIGURE 2 REV 0



NOTES:

1. NO DATA WERE COLLECTED BY DH18-S3 VW1 FROM NOVEMBER 1, 2019 TO FEBRUARY 3, 2020 AND FEBRUARY 4 TO APRIL 30, 2020 DUE TO SUSPECTED HARDWARE DAMAGE.
2. NO DATA WERE COLLECTED BY DH15-S5 VW2 DUE TO LOGGER POWER SUPPLY ISSUES FROM JUNE 13 TO 23, 2020.
3. NO DATA WERE COLLECTED BY DH15-S5 VW2 DUE TO WATER DAMAGED LOGGER FROM SEPTEMBER 2 TO 24, 2020. THE LOGGER WAS SUBSEQUENTLY REPLACED.
4. NO DATA WERE COLLECTED BY DH18-S3 DUE TO A DEPLETED DATA LOGGER BATTERY FROM NOVEMBER 12 TO 25, 2020.
5. NO DATA WERE COLLECTED BY DH15-S5 VW2 FROM APRIL 11 TO APRIL 20, 2021 DUE TO A DEPLETED DATA LOGGER BATTERY.
6. NO DATA WERE COLLECTED BY DH19-S7 VW1 FROM NOVEMBER 30 TO DECEMBER 10, 2020 DUE TO AN UNKNOWN HARDWARE ISSUE.
7. SENSORS IN DH15-S5 WERE TEMPORARILY DISCONNECTED BETWEEN DECEMBER 14, 2021 AND FEBRUARY 24, 2022 TO FACILITATE A COLLAR RAISE IN ADVANCE OF THE EL. 6,450 ft CREST CONSTRUCTION. SENSOR WAS TEMPORARILY RECONNECTED AND BECAME DISCONNECTED ON MARCH 12, 2022 DUE TO A SUSPECTED RMS CONNECTIVITY ISSUE. SENSOR BECAME RECONNECTED AND REMAINED OFFLINE UNTIL SEPTEMBER 8, 2022 TO FACILITATE THE PLANNED COLLAR RAISE.
8. THE DATA LOGGER AT DH17-S1 WAS DAMAGED AND NO DATA WERE RECORDED BETWEEN OCTOBER 18, 2022 AND DECEMBER 9, 2022. FUNCTIONALITY HAS SUBSEQUENTLY BEEN RESTORED.
9. SENSOR DH15-S5 VW2 HAS COLLECTED ERRONEOUS DATA SINCE APRIL 15, 2023 DUE TO SUSPECTED CABLE DAMAGE. THESE VALUES HAVE BEEN OMITTED FOR CLARITY AND THE SENSOR WAS SUBSEQUENTLY ABANDONED.
10. SENSOR DH18-S3 VW3 COLLECTED ERROENOUS DATA BETWEEN JUNE 21 AND 24, 2023. THESE VALUES HAVE BEEN OMITTED FOR CLARITY.

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MONTANA RESOURCES, LLC

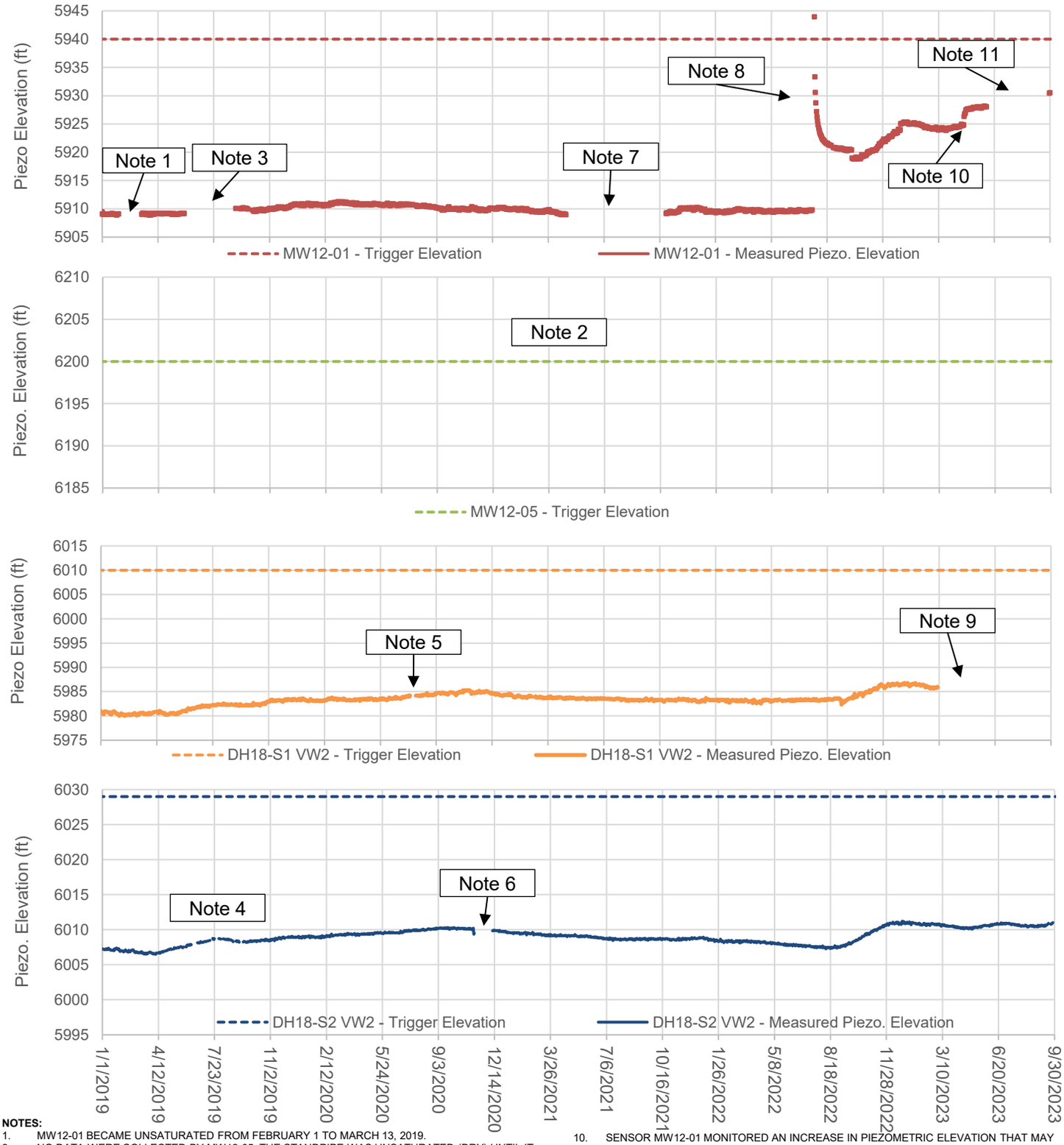
YANKEE DOODLE TAILINGS IMPOUNDMENT

SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS EAST-WEST EMBANKMENT

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-126/29	VA23-01703

FIGURE 3 REV 0



NOTES:

1. MW12-01 BECAME UNSATURATED FROM FEBRUARY 1 TO MARCH 13, 2019.
2. NO DATA WERE COLLECTED BY MW12-05. THE STANDPIPE WAS UNSATURATED (DRY) UNTIL IT BECAME DAMAGED ON MARCH 8, 2023 BY CONSTRUCTION.
3. NO DATA WERE COLLECTED BY MW12-01 FROM MAY 31 TO SEPTEMBER 11, 2019 DUE TO DATA LOGGER FAILURE.
4. ERRONEOUS NOISE WAS RECORDED IN THE DATA BY DH18-S2 VW2. THESE DATA HAVE BEEN OMITTED FOR CLARITY.
5. NO DATA WERE COLLECTED BY DH18-S1 VW2 FROM JULY 27 TO 29, 2020 DUE TO UNKNOWN SENSOR ISSUE.
6. NO DATA WERE COLLECTED BY DH18-S2 VW2 FROM NOVEMBER 8 TO DECEMBER 12, 2020 WHILE THE SENSORS WERE REROUTED TO A NEW MONITORING HUB LOCATION.
7. SENSOR MW12-01 VW1 WAS UNSATURATED BETWEEN APRIL 28 AND OCTOBER 28, 2021. DATA HAVE BEEN OMITTED FROM PLOT FOR CLARITY. THE SENSOR RESATURATED ON OCTOBER 18, 2021 AND REMAINED SATURATED THEREAFTER.
8. THE MW12-01 STANDPIPE WAS INUNDATED BY THE RISING TAILINGS BEACH ON JULY 22, 2022 AND HAS SUBSEQUENTLY RECORDED HIGHER PIEZOMETRIC ELEVATIONS. RECENT READINGS MAY BE INFLUENCED BY LOCAL TAILINGS DISCHARGE.
9. SENSOR DH18-S1 VW2 WAS DISCONNECTED IN PREPARATION FOR EL. 6,450 FT LIFT CONSTRUCTION (ON MARCH 8, 2023) BUT WAS SUBSEQUENTLY DAMAGED AND HAS BEEN ABANDONED.
10. SENSOR MW12-01 MONITORED AN INCREASE IN PIEZOMETRIC ELEVATION THAT MAY HAVE RESULTED FROM RISING TAILINGS LEVEL OR ALLUVIAL FACING.
11. SENSOR MW12-01 STOPPED COLLECTING DATA BETWEEN JUNE 6 AND SEPTEMBER 29, 2023 DUE TO HARDWARE CONNECTION ISSUE.

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MONTANA RESOURCES, LLC

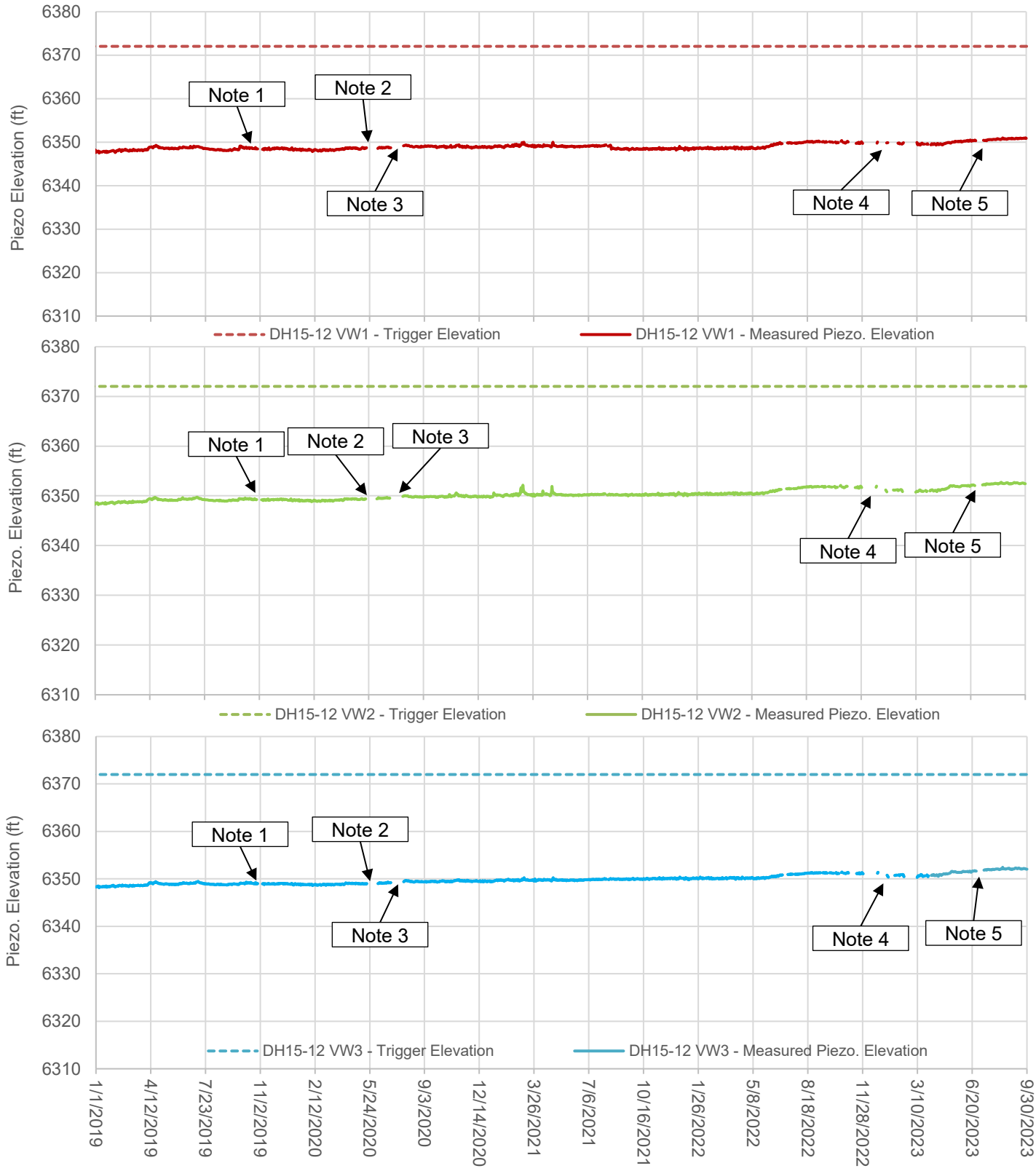
YANKEE DOODLE TAILINGS IMPOUNDMENT

SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS NORTH-SOUTH EMBANKMENT

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-126/29	VA23-01703

FIGURE 4 REV 0



NOTES:

1. NO DATA WERE COLLECTED BY DH15-12 VW1, VW2, AND VW3 FROM OCTOBER 30, 2019 TO NOVEMBER 6, 2019 DUE TO A CONNECTIVITY ISSUE.
2. NO DATA WERE COLLECTED BY DH15-12 VW1, VW2, AND VW3 FROM MAY 19 TO JUNE 9, 2020 DUE TO A SUSPECTED LOGGER CONNECTIVITY ISSUE.
3. NO DATA WERE COLLECTED BY DH15-12 VW1, VW2, AND VW3 FROM JULY 3 TO JULY 26, 2020 DUE TO A CONNECTIVITY ISSUE.
4. ALL SENSORS IN DRILLHOLE DH15-12 EXPERIENCED INTERMITTENT OUTAGES BETWEEN NOVEMBER 2, 2022 AND APRIL 15, 2023.
5. NO DATA WERE COLLECTED BY DH15-12 VW1, VW2 AND VW3 FROM JUNE 29 TO JULY 12, 2023 DUE TO A CONNECTIVITY ISSUE.

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MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS WEST EMBANKMENT

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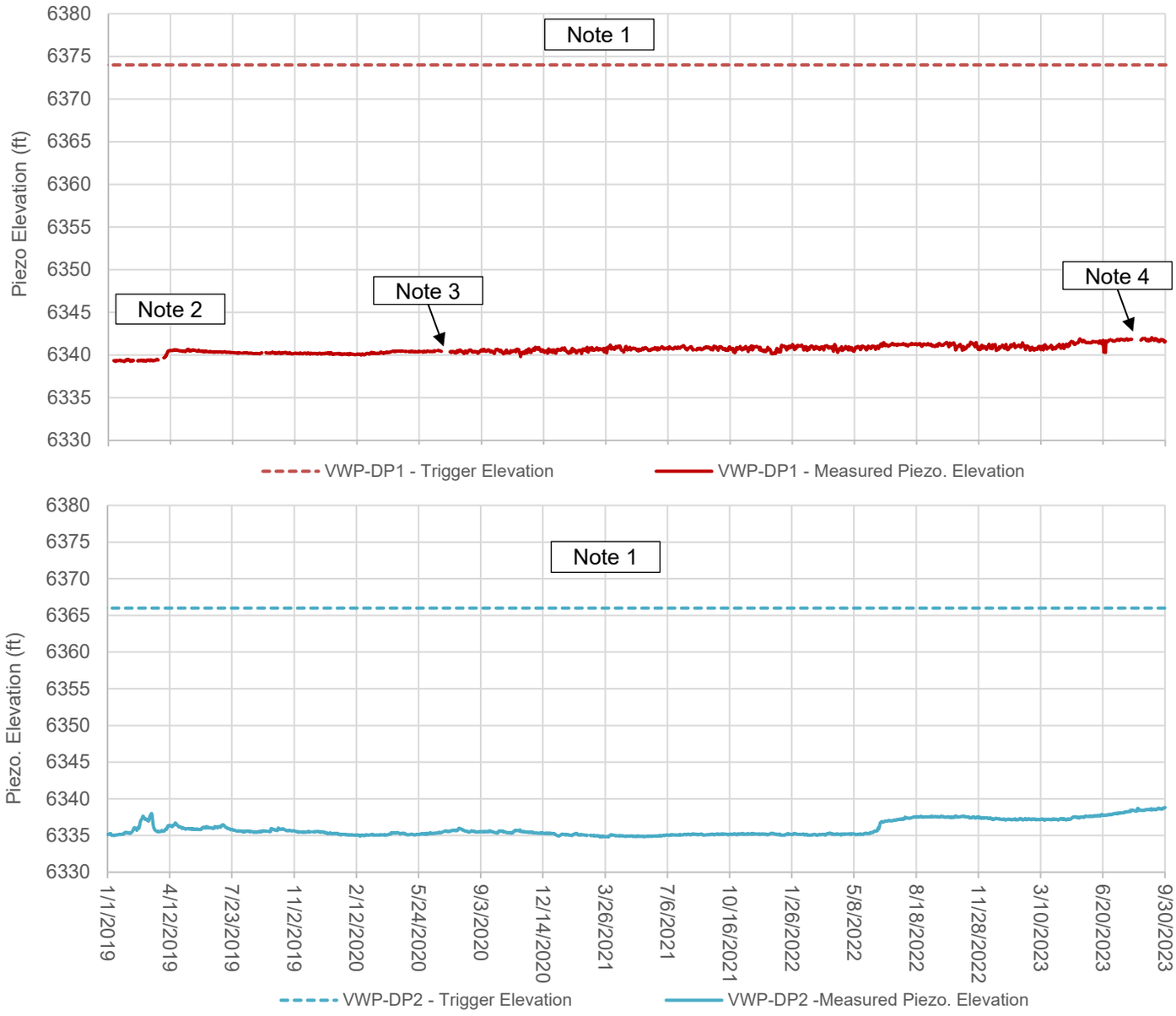
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE 5

REV 0



NOTES:

1. TRIGGER ELEVATIONS FOR SENSORS INSTALLED IN THE DRAIN PODS HAVE BEEN SPECIFIED AT THE ALLOWABLE HYDRAULIC GRADE LINE.
2. PERIODIC OUTAGES OCCURED AT VWP-DP1 DUE TO INTERMITTENT BATTERY VOLTAGE ISSUES.
3. NO DATA WERE RECORDED BY VWP-DP1 FROM JULY 1 TO 14, 2020 DUE TO A DATALOGGER ISSUE. A REPLACEMENT DATALOGGER WAS SUBSEQUENTLY INSTALLED TO RESOLVE THE ISSUE.
4. NO DATA WERE RECORDED BY VWP-DP1 FROM AUGUST 7 TO 20, 2023 DUE TO A CONNECTIVITY ISSUE.

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0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS WEST EMBANKMENT

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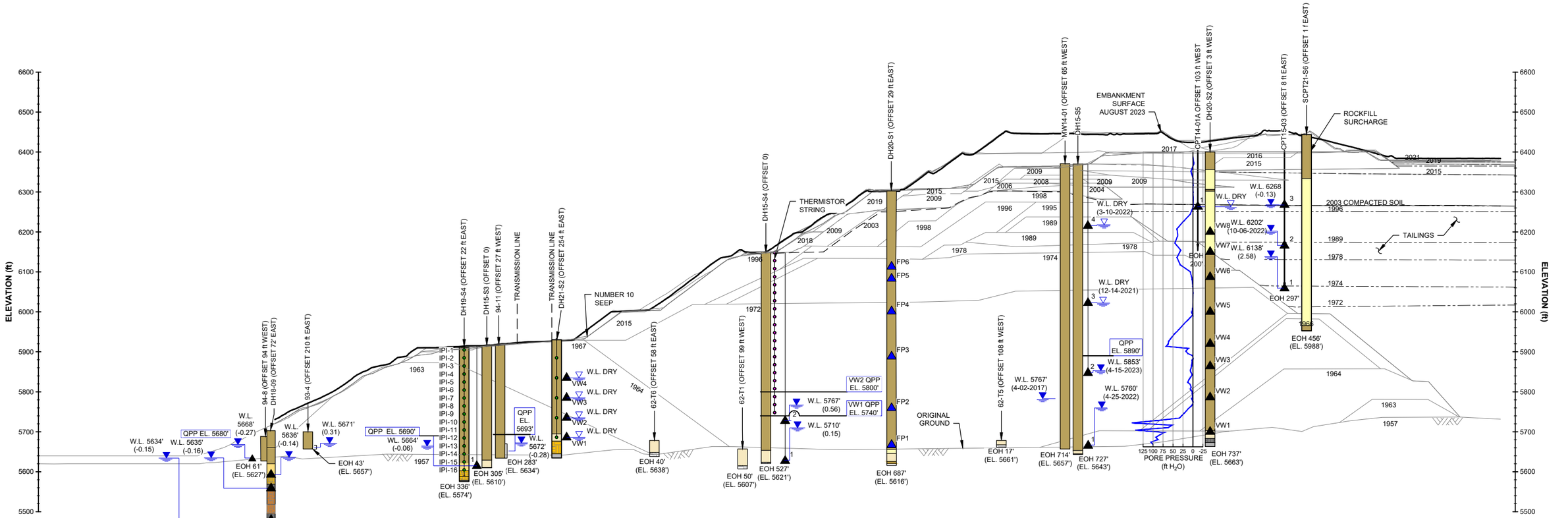
P/A NO. VA101-126/29 | REF. NO. VA23-01703

FIGURE 6 | REV 0



SECTION
STATION 8+00 W
SCALE A

NOTES:

1. COORDINATE SYSTEM IS ANACONDA MINE GRID.
2. DIMENSIONS AND ELEVATIONS ARE IN FEET, UNLESS NOTED OTHERWISE.
3. PIEZOMETRIC LEVELS (W.L.) SHOWN USING END OF Q3 2023 READINGS (SEPTEMBER 30, 2023), UNLESS OTHERWISE INDICATED.
4. CHANGE IN WATER LEVEL FOR QPP SITES IS RELATIVE TO END OF Q2 2023.
5. MONITORING WELL MW14-01 ABANDONED DUE TO RISER BLOCKAGE DURING Q4 2019, RESULTING IN ERRONEOUS DATA. DATA OMITTED FOR CLARITY.
6. QPP STANDS FOR QUANTITIVE PERFORMANCE PARAMETER.
7. NO PORE WATER PRESSURE DATA ARE AVAILABLE FROM DH20-S1 AS THE INSTRUMENTATION IS NOT FUNCTIONAL.
8. SENSORS DH15-S5 VWP1, VWP2, VWP3, AND VWP4 WERE DAMAGED DURING COLLAR RAISE AND HAVE BEEN ABANDONED. REPLACEMENT QPP(S) WILL BE ADOPTED BASED ON SENSORS INSTALLED IN DH23-S1.

LEGEND:

- TAILINGS
- EMBANKMENT FILL
- ALLUVIUM
- RECENT ALLUVIUM
- HIGHLY ALTERED BEDROCK
- HIGHLY WEATHERED BEDROCK
- MODERATELY WEATHERED BEDROCK
- BEDROCK

- W.L. XXX — QUARTERLY PIEZOMETRIC ELEVATION CHANGE (±X.X feet) SINCE LAST QUARTER
- VIBRATING WIRE PIEZOMETER
- THERMISTOR
- IN-PLACE INCLINOMETER SENSOR
- SOL — SETTING OUT LINE
- 1972 — HISTORICAL TAILINGS SURFACE
- 1972 — DATE OF EMBANKMENT RAISE

SCALE A: 125 0 125 250 375 500 625 ft

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0	08NOV'23	ISSUED WITH LETTER	SY3	RMM	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

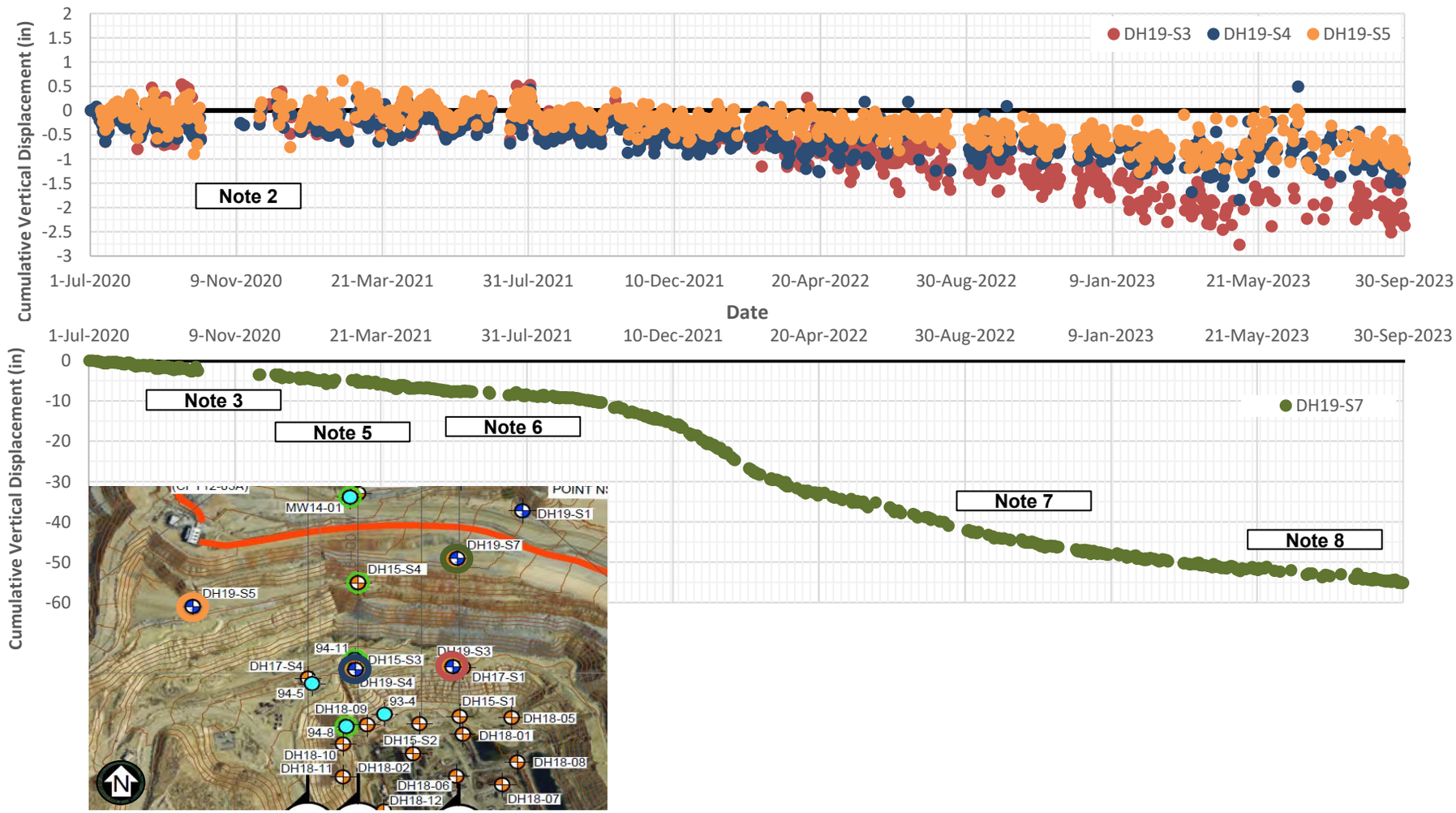
PIEZOMETRIC CONDITIONS ALONG EAST-WEST EMBANKMENT SECTION 8+00W (LOOKING WEST)

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-126/29	VA23-01703

FIGURE 7 REV 0

SAVED: \\KPLVA-Prj\$\101\101126\29\A\Acad\FIGS\B35, 10/30/2023 10:41:46 AM , RMCLELLAN PRINTED: 11/8/2023 2:04:47 PM, FIG 7, NDHALIWAL
XREF FILES: Sections IMAGE FILES:



NOTES:

1. CUMULATIVE VERTICAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTEDFROM DH19-S2 AND DH19-S5 BETWEEN OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NO DATA WERE COLLECTED FROM DH19-S3 AND DH19-S7 BETWEEN OCTOBER 7 TO NOVEMBER 13, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
4. NEGATIVE VERTICAL DISPLAEMENTS INDICATE DOWNWARD DISPLACEMENT.
5. NO DATA WERE COLLECTED FROM FEBRUARY 9 TO 21, 2021 DUE TO A DEPLETED DATA LOGGER BATTERY.
6. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
7. NO DATA WERE COLLECTED FROM AUGUST 16 TO SEPTEMBER 2, 2022, NOVEMBER 23 TO DECEMBER 10, 2022, AND MARCH 2 TO 16, 2023 DUE TO A HARDWARE ISSUE.
8. LIMITED DATA WERE COLLECTED FROM MAY 31 TO AUGUST 17, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

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0	03OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

COMPARISON OF CUMULATIVE VERTICAL GNSS DISPLACEMENT MAGNITUDES (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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P/A NO. VA101-00126/29

REF. NO. VA23-01703

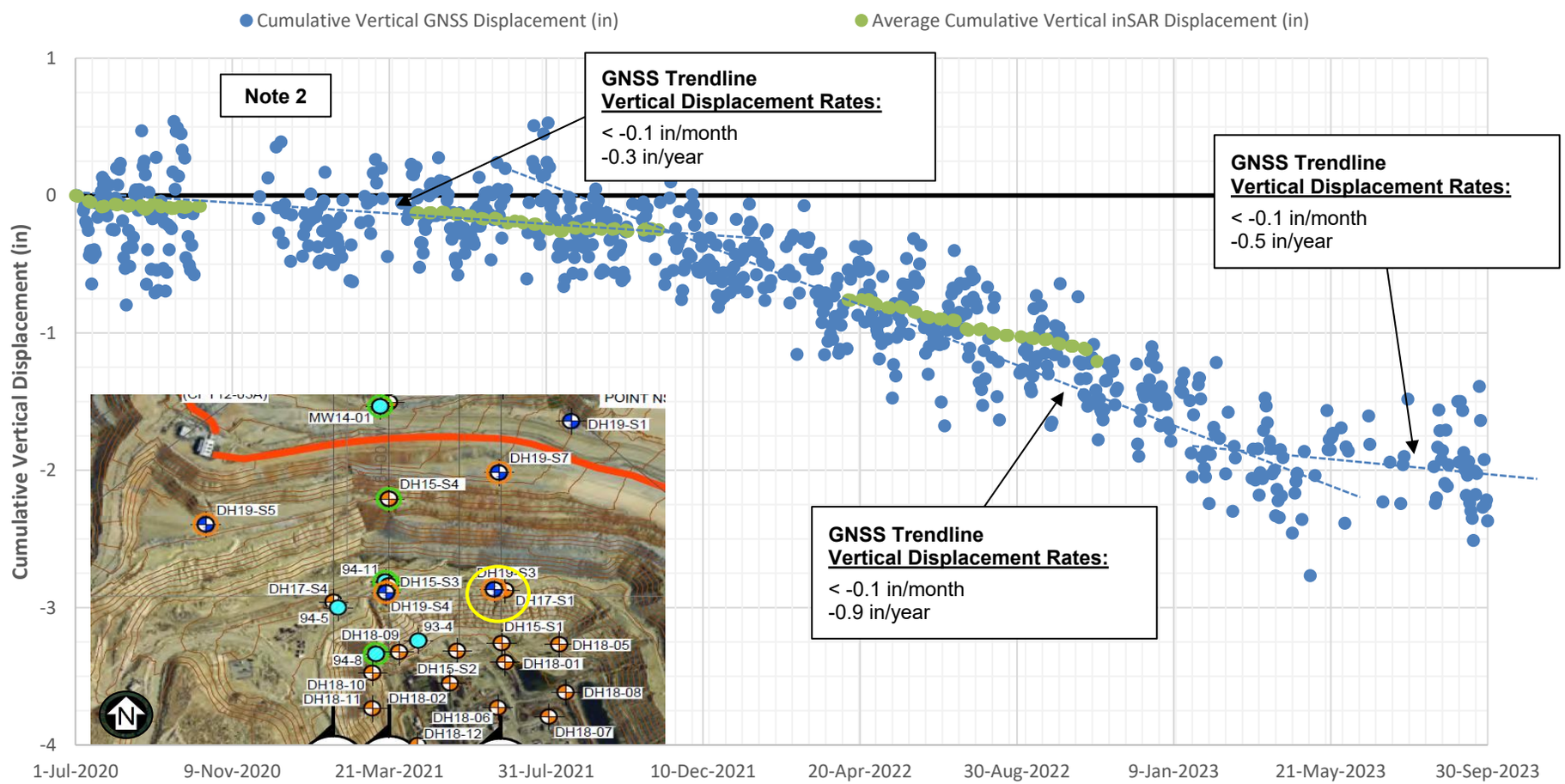
FIGURE 8

REV 0

APPENDIX A

GNSS and DGPS Deformation Plots

(Figures A.1 to A.23)



NOTES:

1. CUMULATIVE VERTICAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. THE AVERAGE CUMULATIVE VERTICAL INSAR DISPLACEMENT IS CALCULATED BY AVERAGING TIME-SERIES DISPLACEMENTS FROM NINE INSAR DATA POINTS LOCATED ADJACENT TO DH19-S3.
5. NO LONG-TERM (SQUEESAR) INSAR DATA ARE AVAILABLE FROM OCTOBER 2, 2020 TO APRIL 13, 2021, NOVEMBER 3, 2021 TO APRIL 13, 2022, AND NOVEMBER 6 TO MARCH 31, 2023 DUE TO THE ONSET OF WINTER CONDITIONS.
6. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
7. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
8. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE A PROCESSING SERVER ISSUE.
9. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
10. NO DATA WERE COLLECTED FROM JUNE 5 TO JUNE 23, 2023 DUE TO A HARDWARE ISSUE.
11. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
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YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S3 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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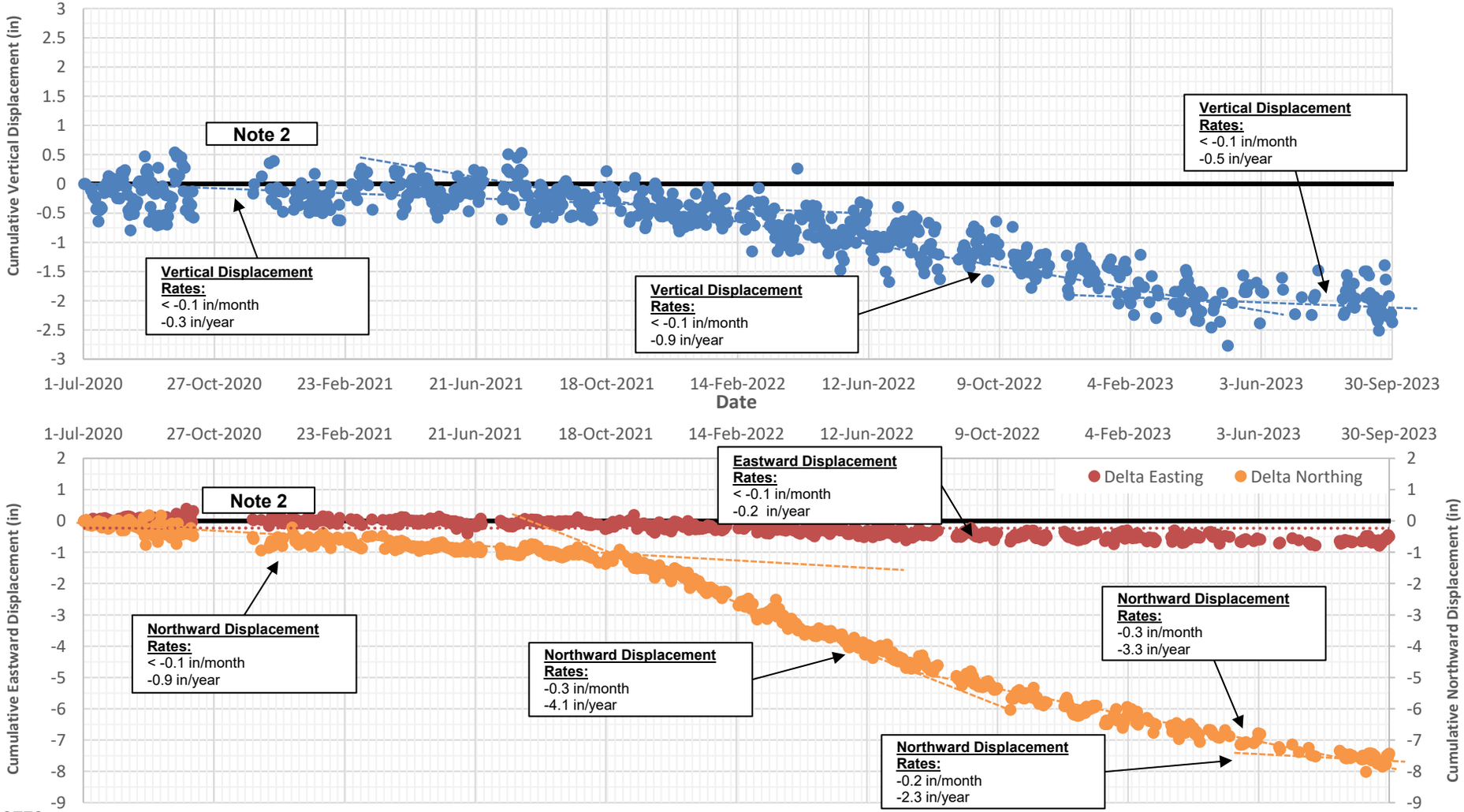
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.1

REV 0



NOTES:

1. CUMULATIVE VERTICAL AND LATERAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
5. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
6. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE A PROCESSING SERVER ISSUE.
7. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
8. NO DATA WERE COLLECTED FROM JUNE 5 TO JUNE 23, 2023 DUE TO A HARDWARE ISSUE.
9. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

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MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S3 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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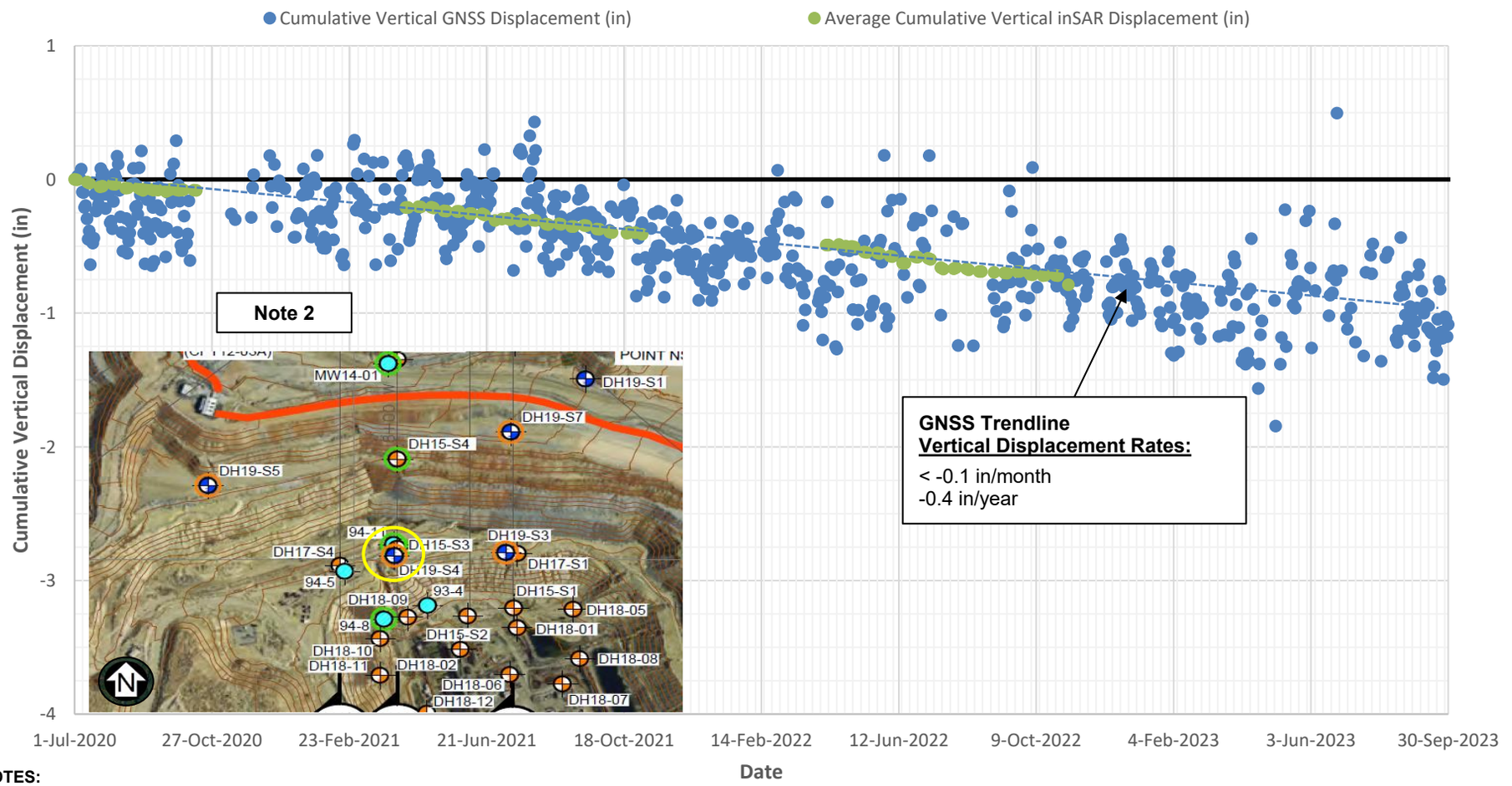
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.2

REV 0



NOTES:

1. CUMULATIVE VERTICAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. THE AVERAGE CUMULATIVE VERTICAL INSAR DISPLACEMENT IS CALCULATED BY AVERAGING TIME-SERIES DISPLACEMENTS FROM NINE INSAR DATA POINTS LOCATED ADJACENT TO DH19-S4.
5. NO LONG-TERM (SQUEESAR) INSAR DATA ARE AVAILABLE FROM OCTOBER 2, 2020 TO APRIL 13, 2021, NOVEMBER 3, 2021 TO APRIL 13, 2022, AND NOVEMBER 6 TO MARCH 31, 2023 DUE TO THE ONSET OF WINTER CONDITIONS.
6. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
7. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
8. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE TO A PROCESSING SERVER ISSUE.
9. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
10. NO DATA WERE COLLECTED FROM JUNE 7 TO JUNE 19, 2023 DUE TO A HARDWARE ISSUE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	03OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S4 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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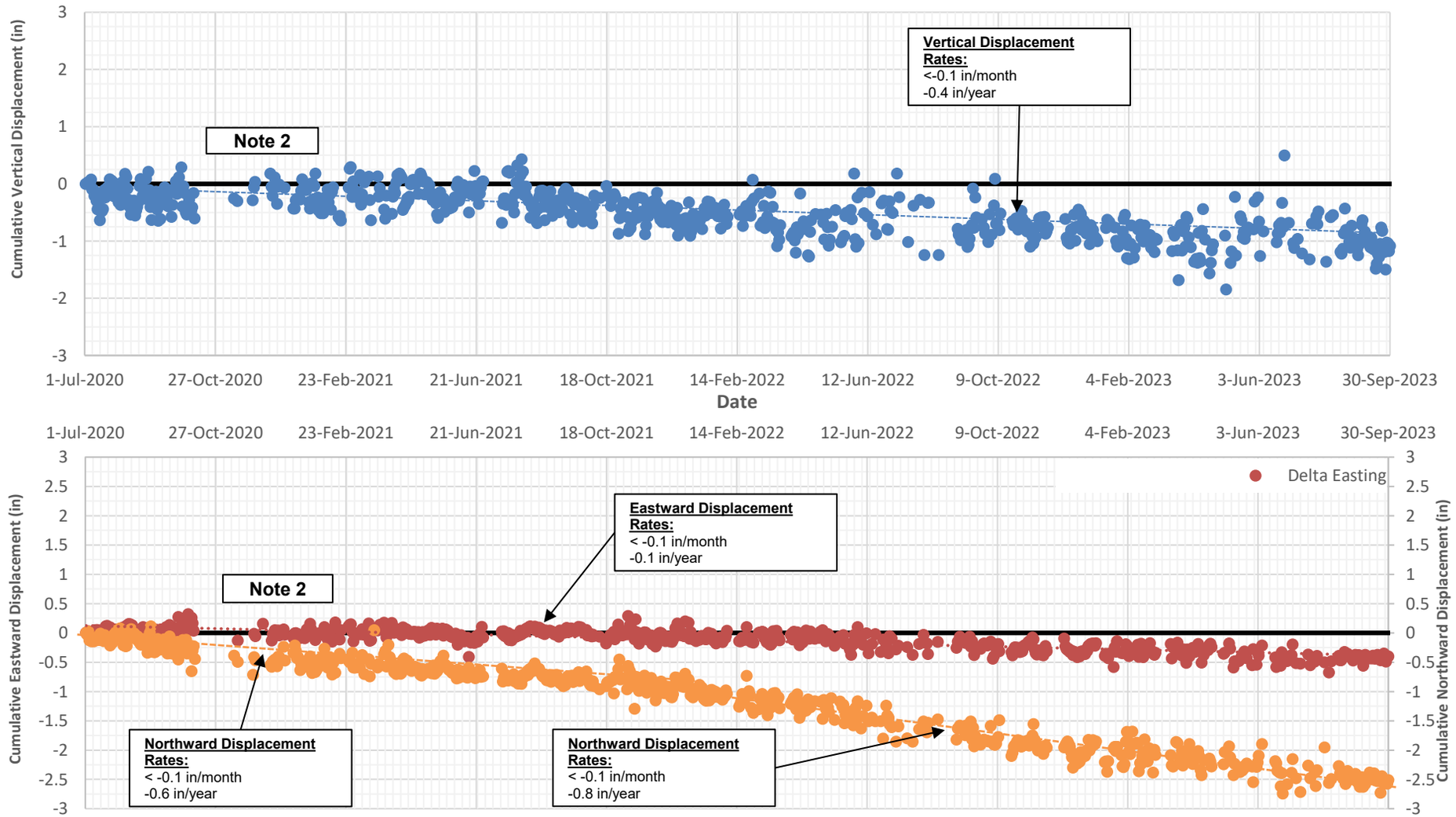
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.3

REV 0



NOTES:

1. CUMULATIVE VERTICAL AND LATERAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
5. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
6. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE TO A PROCESSING SERVER ISSUE.
7. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
8. NO DATA WERE COLLECTED FROM JUNE 7 TO JUNE 19, 2023 DUE TO A HARDWARE ISSUE.
9. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	03OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S4 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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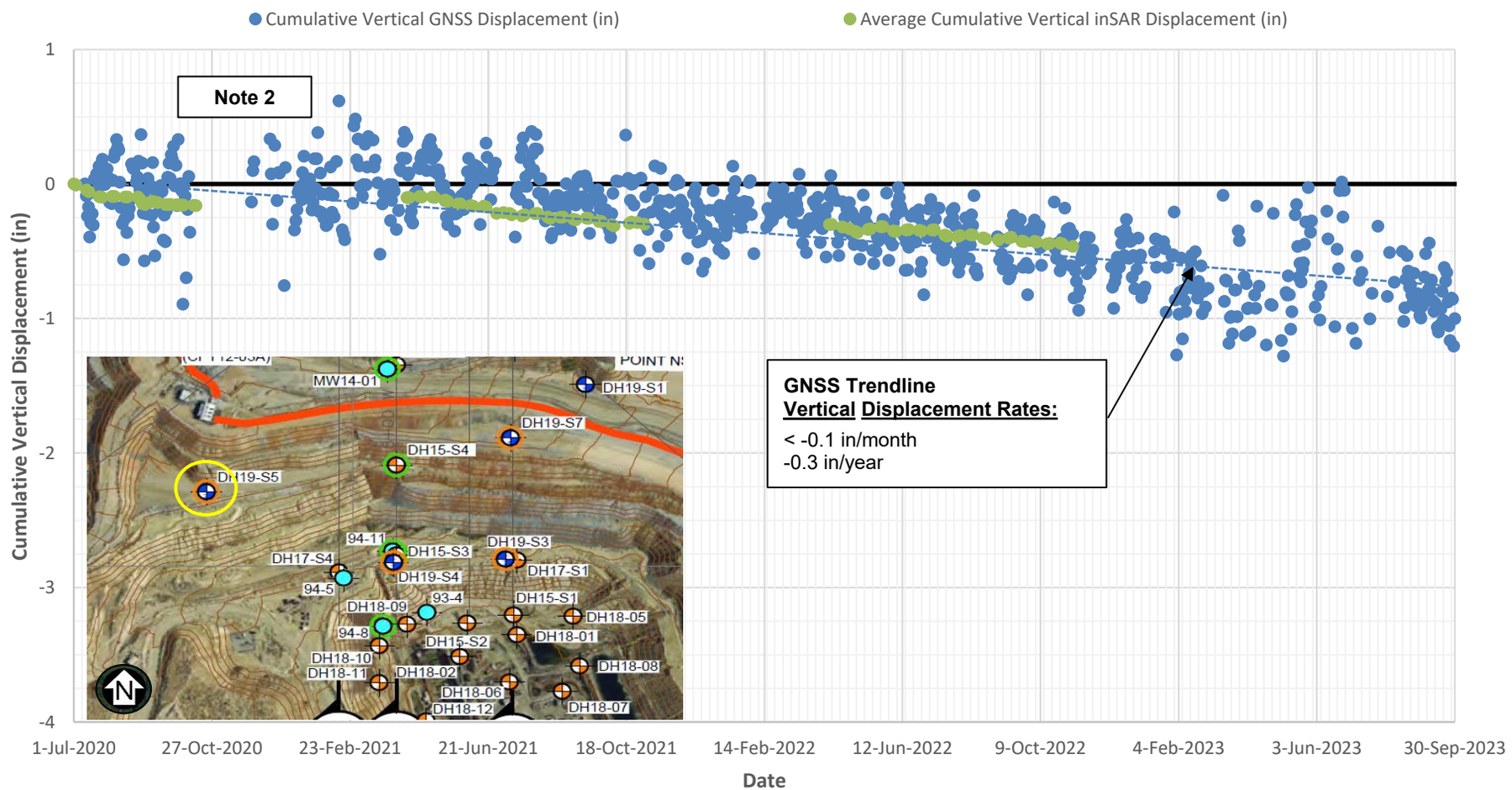
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.4

REV 0



NOTES:

1. CUMULATIVE VERTICAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. THE AVERAGE CUMULATIVE VERTICAL INSAR DISPLACEMENT IS CALCULATED BY AVERAGING TIME-SERIES DISPLACEMENTS FROM NINE INSAR DATA POINTS LOCATED ADJACENT TO DH19-S5.
5. NO LONG-TERM (SQUEESAR) INSAR DATA ARE AVAILABLE FROM OCTOBER 2, 2020 TO APRIL 13, 2021, NOVEMBER 3, 2021 TO APRIL 13, 2022, AND NOVEMBER 6 TO MARCH 31, 2023 DUE TO THE ONSET OF WINTER CONDITIONS.
6. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
7. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
8. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8 DUE A PROCESSING SERVER ISSUE.
9. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
10. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
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MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S5 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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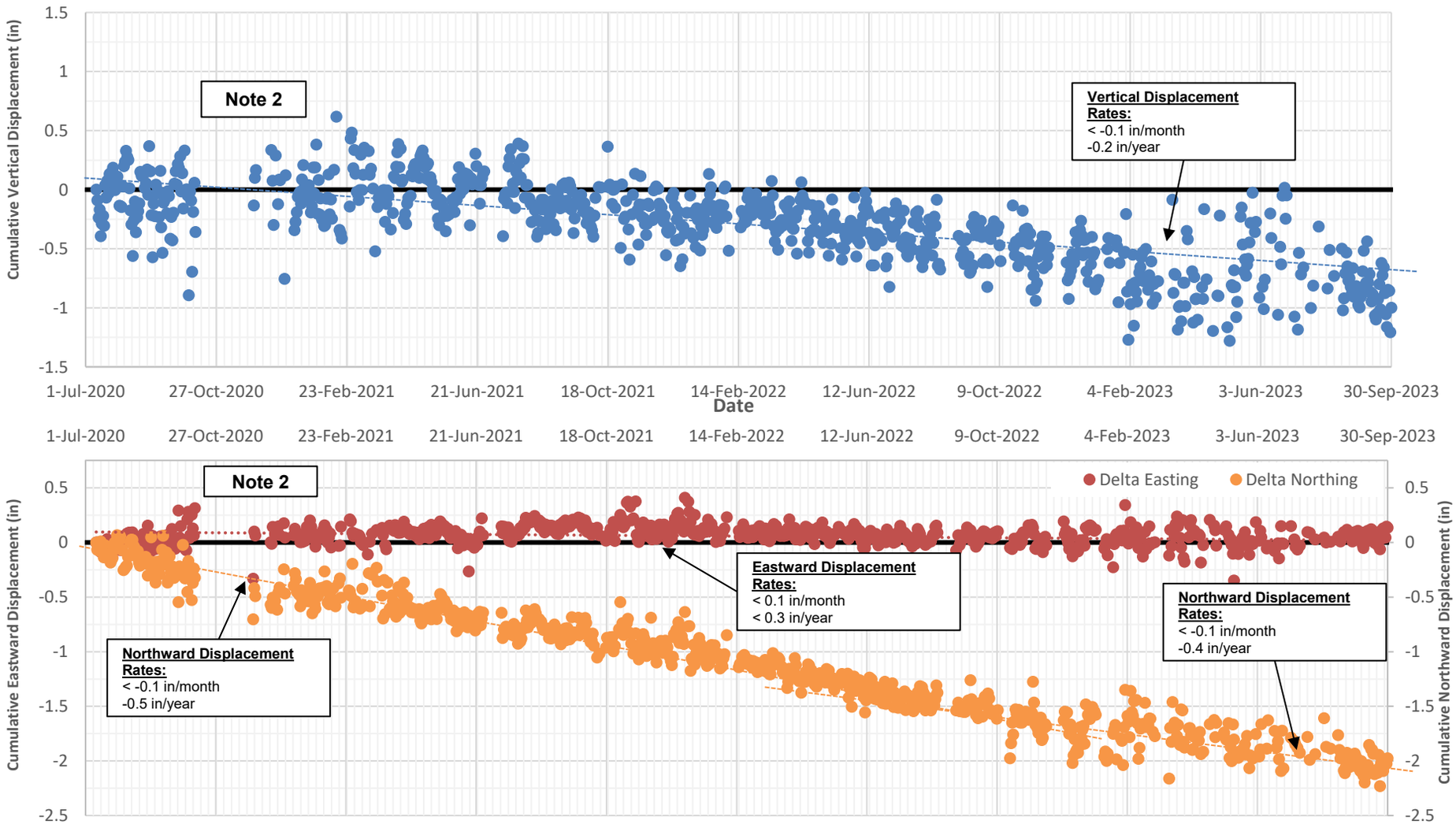
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.5

REV 0



NOTES:

1. CUMULATIVE VERTICAL AND LATERAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
5. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
6. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE TO A PROCESSING SERVE ISSUE.
7. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE
8. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	03OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S5 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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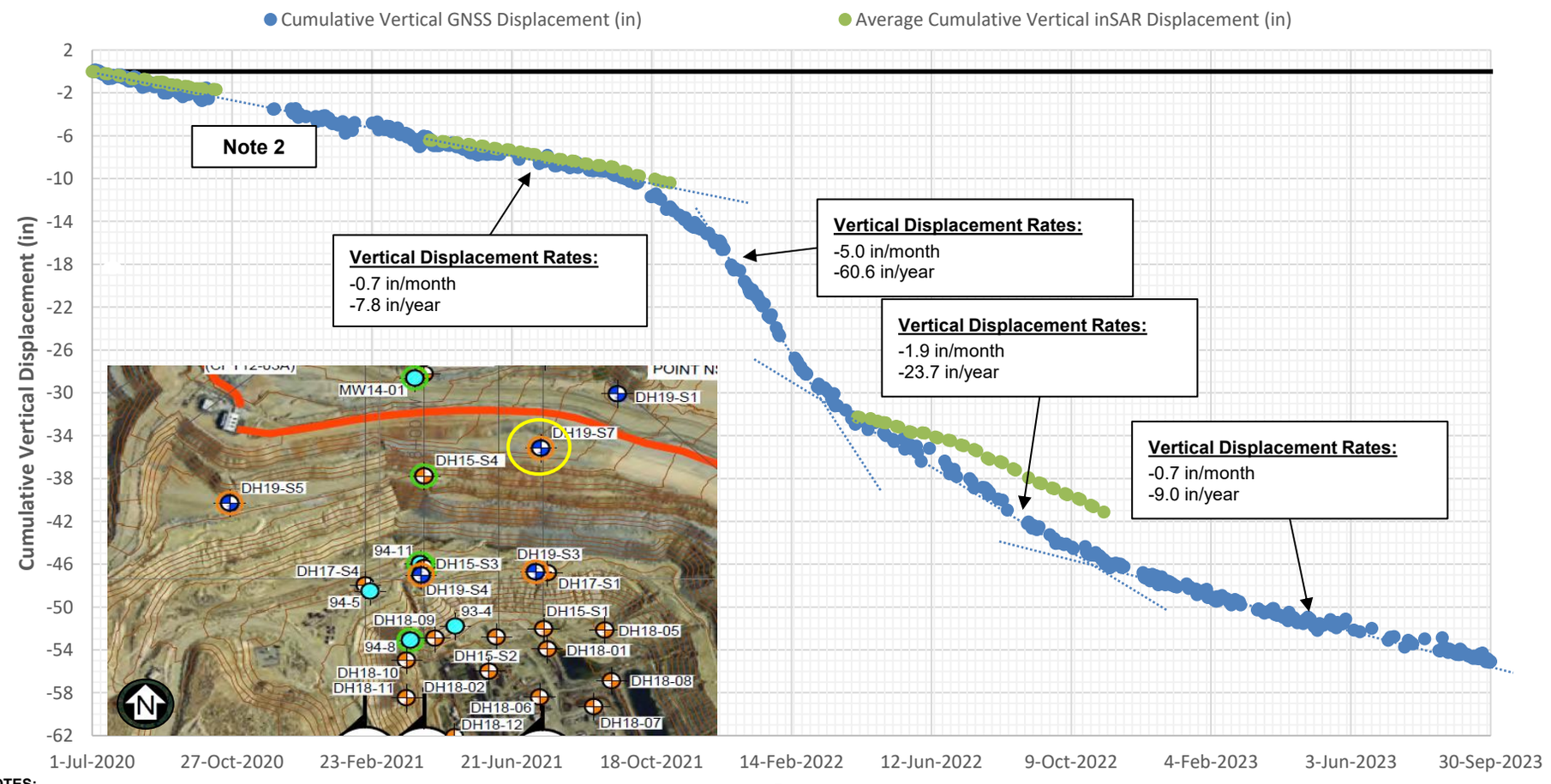
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.6

REV 0



NOTES:

1. CUMULATIVE VERTICAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. THE AVERAGE CUMULATIVE VERTICAL INSAR DISPLACEMENT IS CALCULATED BY AVERAGING TIME-SERIES DISPLACEMENTS FROM NINE INSAR DATA POINTS LOCATED ADJACENT TO DH19-S7.
5. NO LONG-TERM (SQUEESAR) INSAR DATA ARE AVAILABLE FROM OCTOBER 2, 2020 TO APRIL 13, 2021, NOVEMBER 3, 2021 TO APRIL 13, 2022, AND NOVEMBER 6 TO MARCH 31, 2023 DUE TO THE ONSET OF WINTER CONDITIONS.
6. NO DATA WERE COLLECTED FROM FEBRUARY 9 TO 21, 2021 DUE TO A DEPLETED DATA LOGGER BATTERY.
7. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
8. THE -1 STD. DEV. SERIES IS THE AVERAGE INSAR DEFORMATION RATE MINUS THE STANDARD DEVIATION OF DATA POINTS LOCAL TO THE INSTRUMENTATION SITE.
9. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
10. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE TO A PROCESSING SERVER ISSUE.
11. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
12. LIMITED DATA WERE COLLECTED FROM JUNE 6 TO JUNE 30, 2023 DUE TO A HARDWARE ISSUE.
13. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	03OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S7 (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

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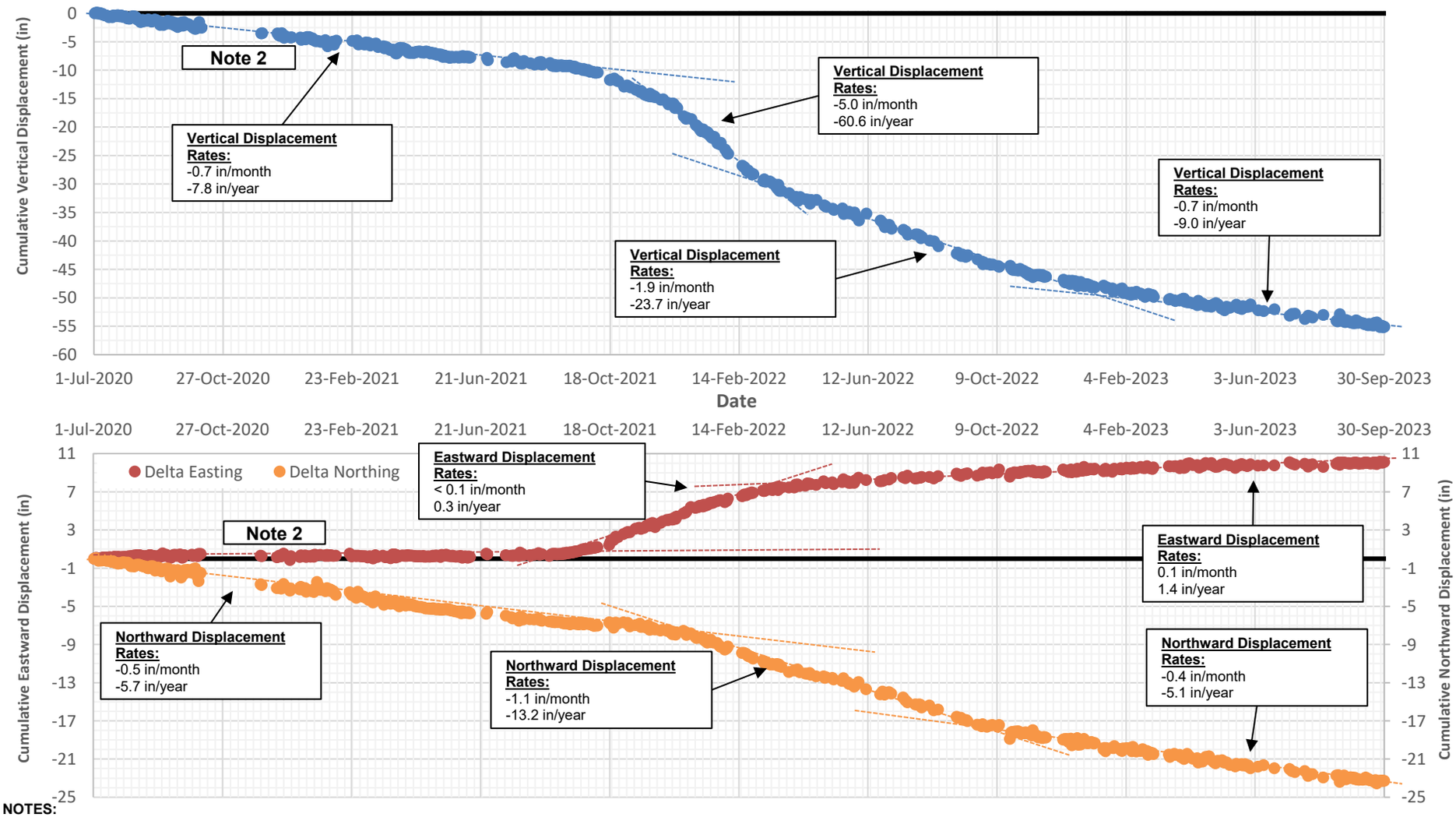
P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.7

REV 0



NOTES:

1. CUMULATIVE VERTICAL AND LATERAL DISPLACEMENTS ARE CALCULATED RELATIVE TO JULY 1, 2020.
2. NO DATA WERE COLLECTED FROM OCTOBER 7 TO DECEMBER 2, 2020 DUE TO A POWER MANAGEMENT SCHEDULE ISSUE AT THE GNSS REFERENCE STATION (DH16-04).
3. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
4. NO DATA WERE COLLECTED FROM FEBRUARY 9 TO 21, 2021 DUE TO A DEPLETED DATA LOGGER BATTERY.
5. NO DATA WERE COLLECTED FROM JUNE 12 TO JULY 15, 2021 DUE TO A TELEMETRY HARDWARE OUTAGE.
6. NO DATA WERE COLLECTED FROM AUGUST 17 TO SEPTEMBER 2, 2022 DUE TO A SATELLITE UPDATE REQUIRING THE SENSORS TO HARD RESET.
7. NO DATA WERE COLLECTED FROM NOVEMBER 24 TO DECEMBER 8, 2022 DUE TO A PROCESSING SERVER ISSUE.
8. NO DATA WERE COLLECTED FROM MARCH 3 TO MARCH 15, 2023 DUE TO A HARDWARE ISSUE.
9. LIMITED DATA WERE COLLECTED FROM JUNE 6 TO JUNE 30, 2023 DUE TO A HARDWARE ISSUE.
10. LIMITED DATA WERE COLLECTED FROM JUNE 23 TO AUGUST 16, 2023 DUE TO A HARDWARE CONNECTION ISSUE.

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MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S7 (JULY 1, 2020 SEPTEMBER 30, 2023)

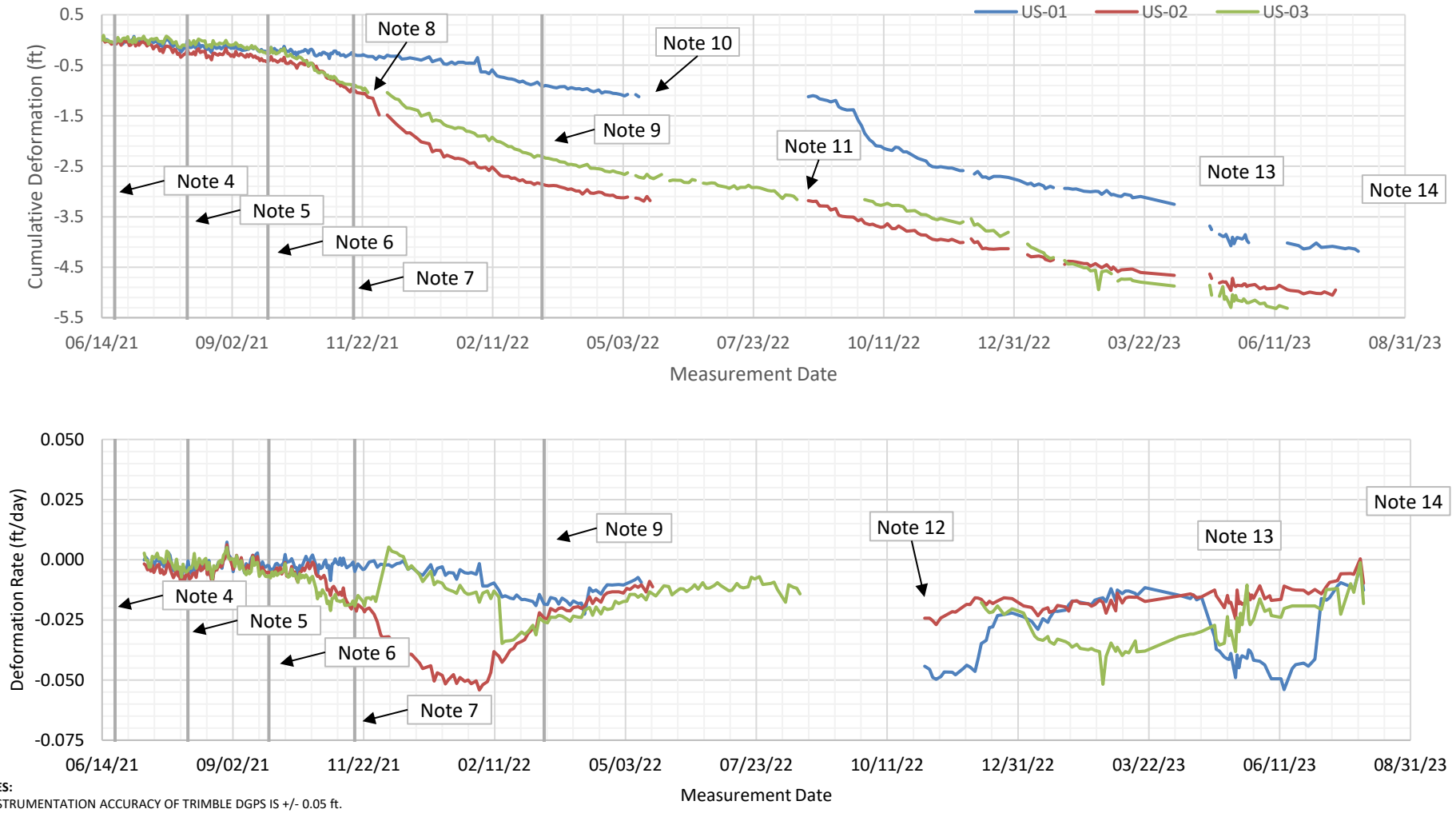
Knight Piésold CONSULTING

P/A NO. VA101-00126/29

REF. NO. VA23-01703

FIGURE A.8

REV 0



NOTES:

1. INSTRUMENTATION ACCURACY OF TRIMBLE DGPS IS +/- 0.05 ft.
2. DATA GAPS PRESENT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE.
3. DGPS READINGS WERE COLLECTED DAILY FROM JUNE 14, 2021 TO NOVEMBER 24, 2021 AND THREE TIMES PER WEEK (MONDAY, WEDNESDAY, AND FRIDAY) THEREAFTER.
4. CONSTRUCTION OF EL. 6,250 ft LIFT BEGAN ON JUNE 22, 2021.
5. CONSTRUCTION OF EL. 6,300 ft LIFT BEGAN ON AUGUST 6, 2021.
6. CONSTRUCTION OF EL. 6,350 ft LIFT BEGAN ON SEPTEMBER 25, 2021.
7. CONSTRUCTION OF EL. 6,400 ft LIFT BEGAN ON NOVEMBER 17, 2021.
8. MONUMENT WAS RELOCATED DUE TO ONGOING CONSTRUCTION.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. MONUMENTS US-01 AND US-02 WERE REMOVED BETWEEN MAY 20 TO AUGUST 26, 2022 TO AVOID CONSTRUCTION DISTURBANCE.
11. MONUMENT US-03 WAS REMOVED BETWEEN AUGUST 17 TO SEPTEMBER 28, 2022 TO AVOID CONSTRUCTION DISTURBANCE.
12. ELEVATED VERTICAL DEFORMATION RATES FOLLOW REINSTALLATION OF MONUMENTS ON RECENTLY PLACED EL. 6,450 FT LIFT AND REPRESENT SETTLEMENT OF NEWLY PLACED ROCKFILL.
13. MINIMAL SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 30, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
14. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

UPSTREAM SURVEY MONUMENTS VERTICAL DEFORMATION

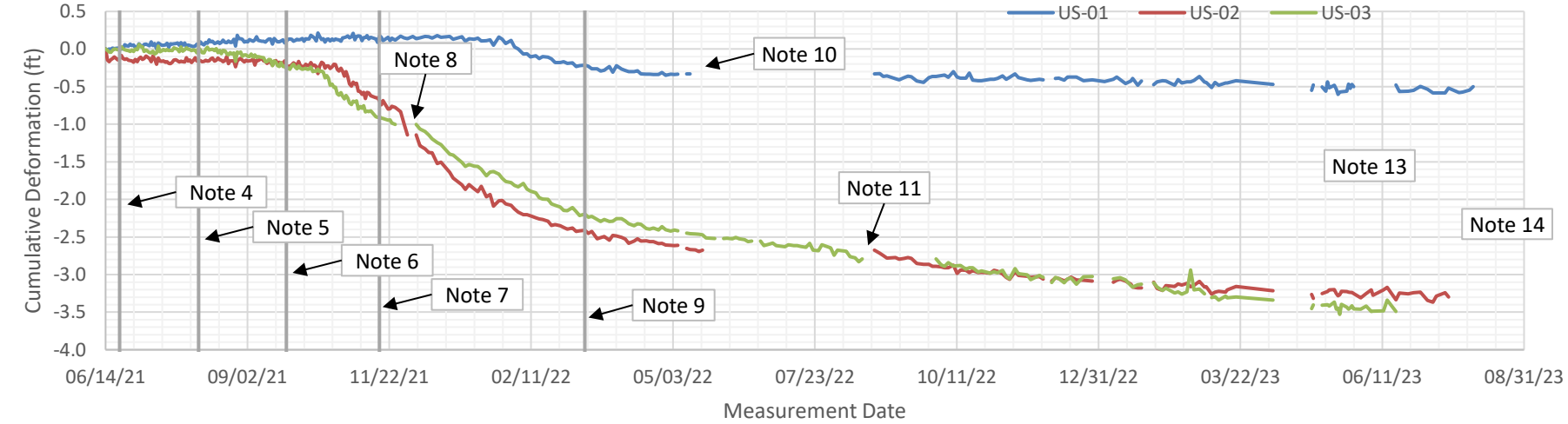
Knight Piésold CONSULTING

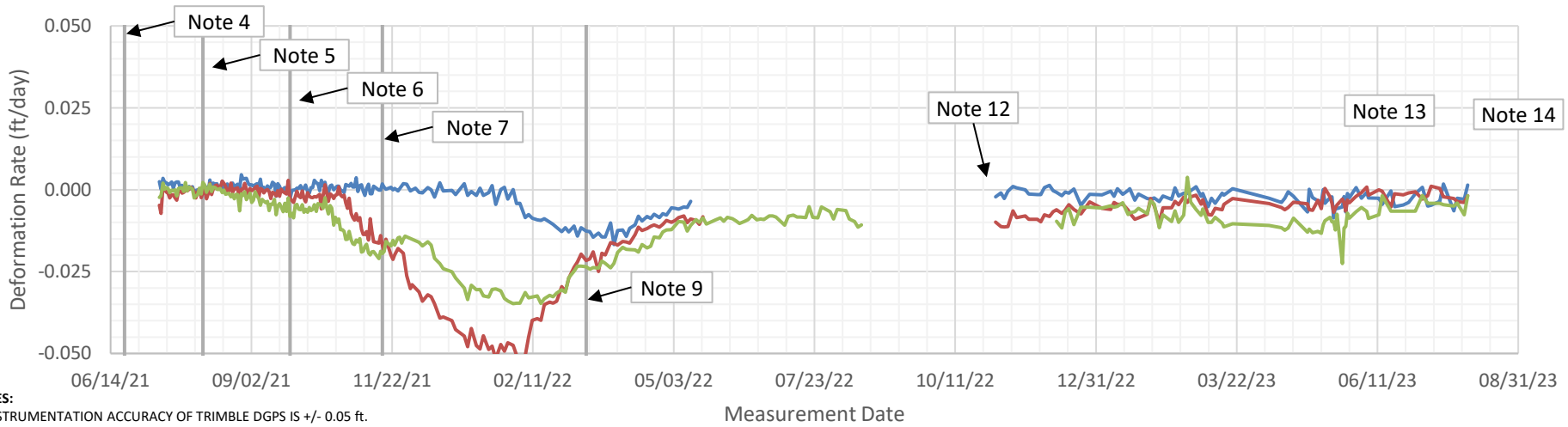
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.9

REV 0





NOTES:

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13. MINIMAL SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 30, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
14. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

UPSTREAM SURVEY MONUMENTS NORTH-SOUTH DEFORMATION

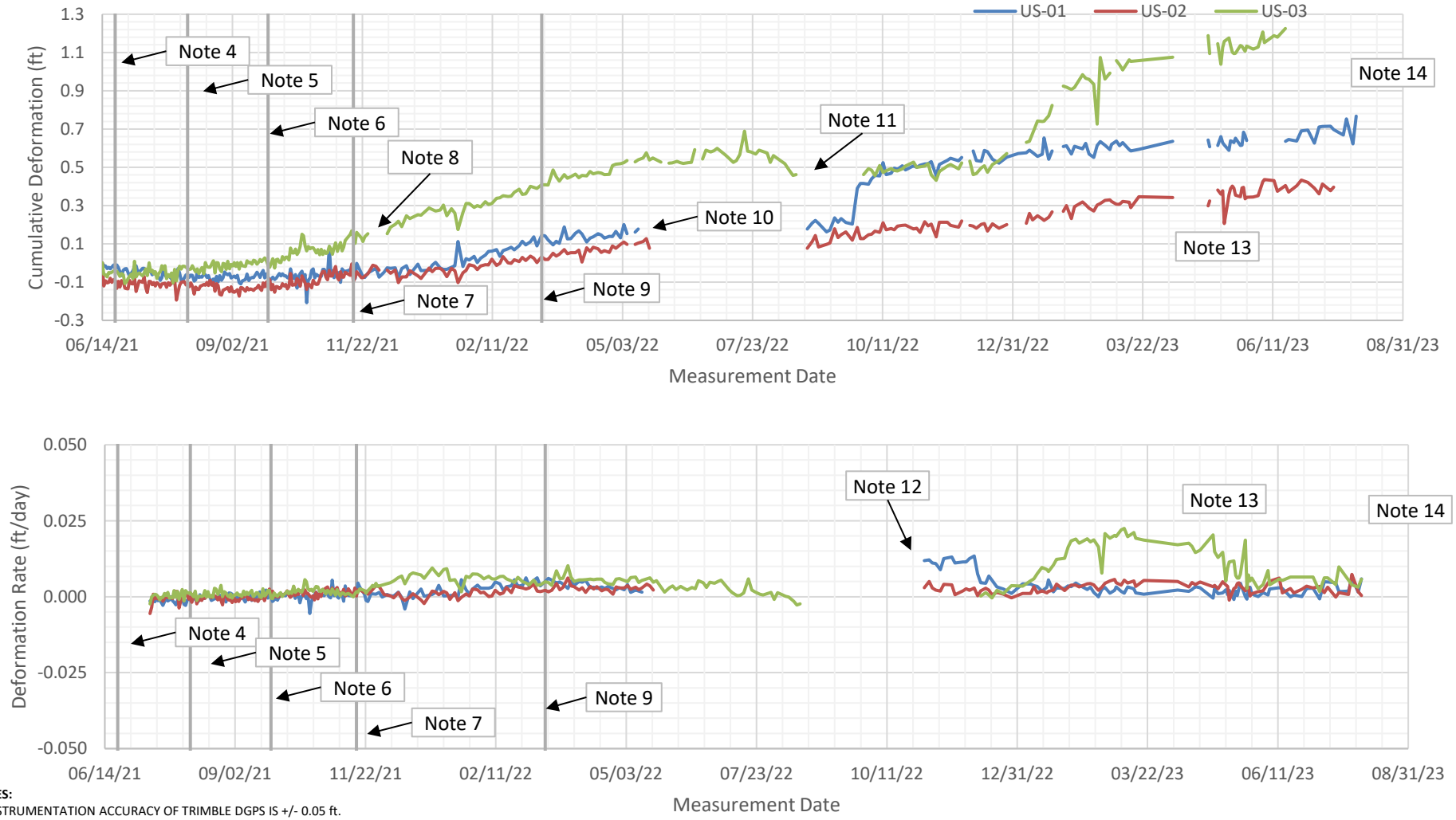
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.10

REV 0



NOTES:

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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

UPSTREAM SURVEY MONUMENTS EAST-WEST DEFORMATION

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.11

REV 0

NOTES:

1. INSTRUMENTATION ACCURACY OF TRIMBLE DGPS IS +/- 0.05 ft.
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6. CONSTRUCTION OF EL. 6,350 ft LIFT BEGAN ON SEPTEMBER 25, 2021.
7. CONSTRUCTION OF EL. 6,400 ft LIFT BEGAN ON NOVEMBER 17, 2021.
8. NO SURVEY DATA RECORDED BETWEEN JANUARY 7 TO 10, 2022 DUE TO LACK OF ACCESSIBLITY OF MONUMENT SITES DUE TO SNOW COVERAGE.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. MONUMENT DS-01 WAS INACCESSIBLE BETWEEN SEPTEMBER 12 TO 26, 2022 DUE TO OBSTRUCTION FROM NEARBY DRILLING.
11. NO SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 17, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
12. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

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YANKEE DOODLE TAILINGS IMPOUNDMENT

DOWNSTREAM SURVEY MONUMENTS VERTICAL DEFORMATION

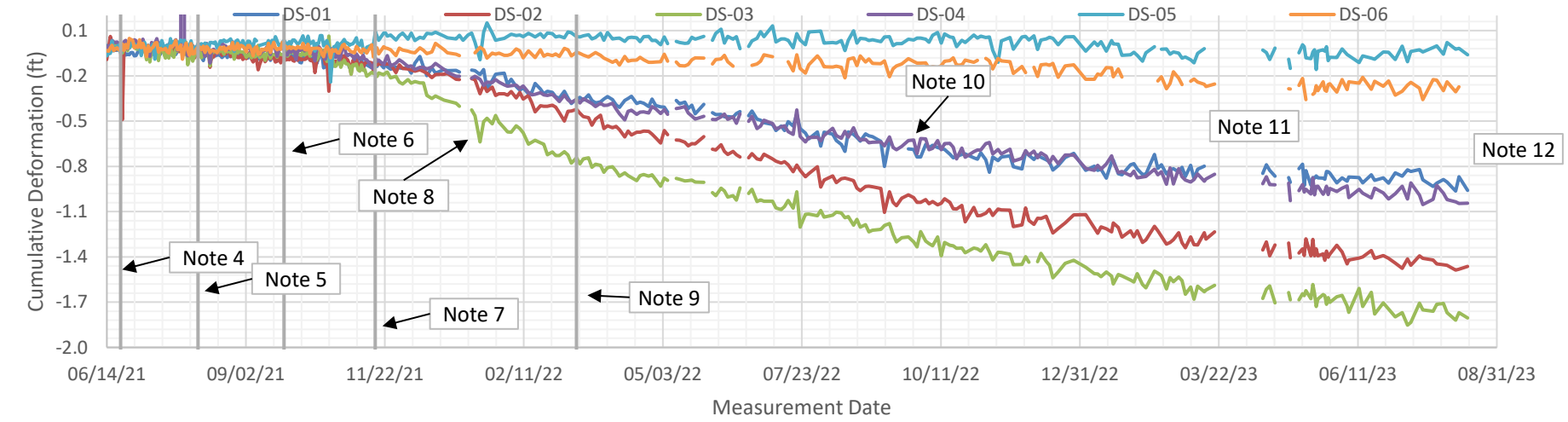
Knight Piésold CONSULTING

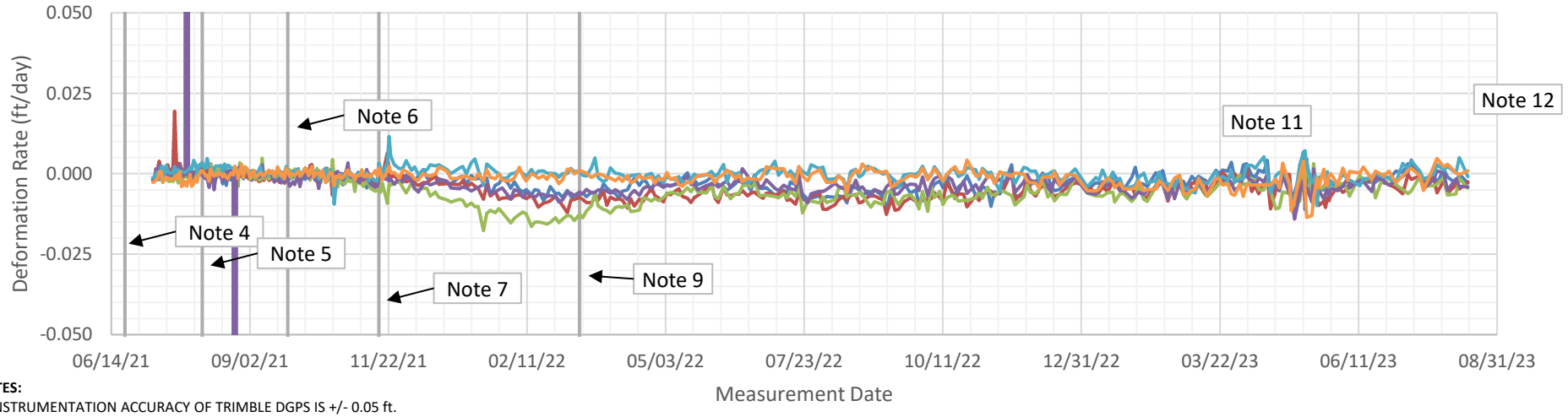
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.12

REV 0





NOTES:

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9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. MONUMENT DS-01 WAS INACCESSIBLE BETWEEN SEPTEMBER 12 TO 26, 2022 DUE TO OBSTRUCTION FROM NEARBY DRILLING.
11. NO SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 17, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
12. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

DOWNSTREAM SURVEY MONUMENTS NORTH-SOUTH DEFORMATION

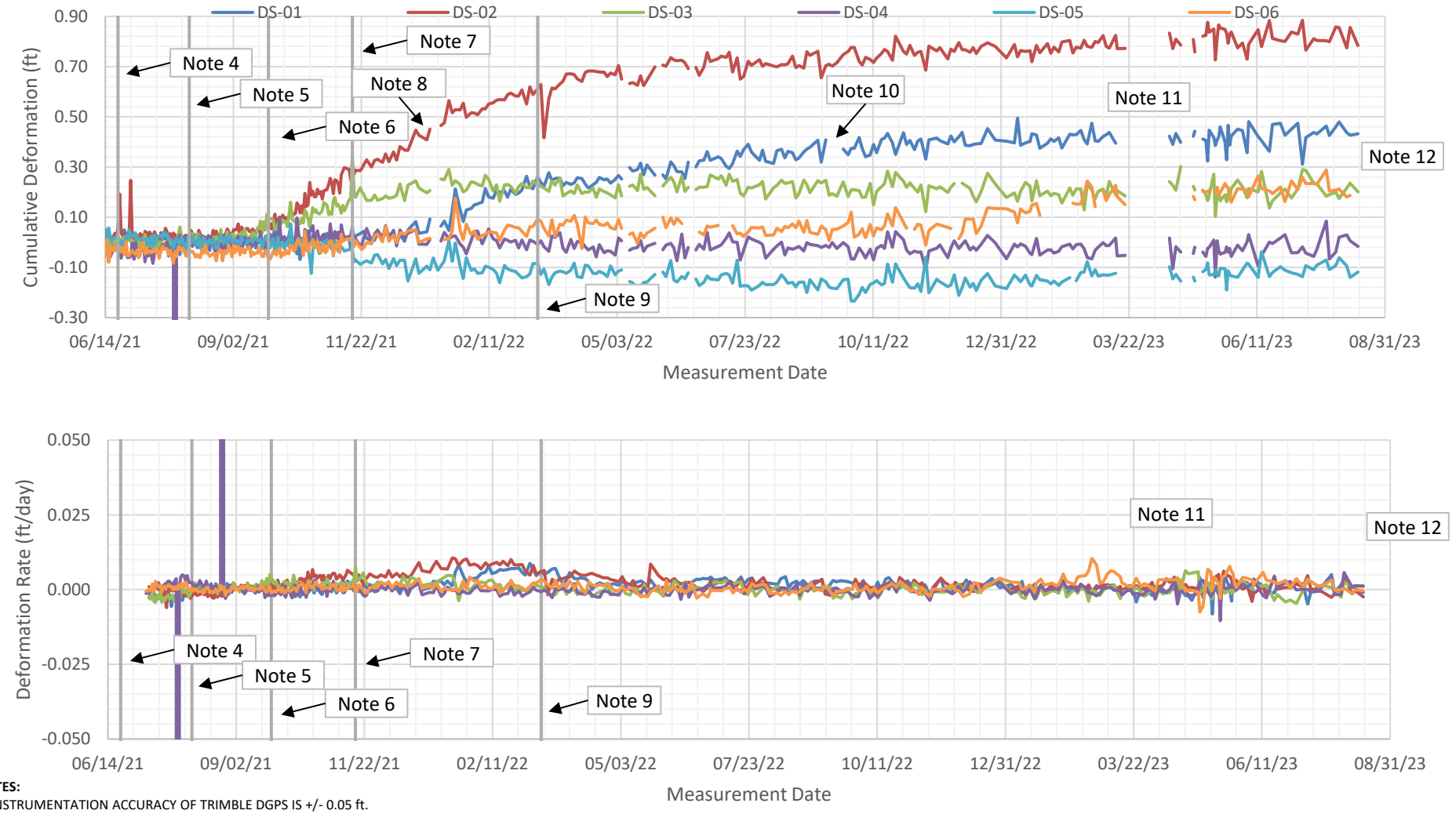
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.13

REV 0



NOTES:

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7. CONSTRUCTION OF EL. 6,400 ft LIFT BEGAN ON NOVEMBER 17, 2021.
8. NO SURVEY DATA RECORDED BETWEEN JANUARY 7 TO 10, 2022 DUE TO LACK OF ACCESSIBLITY OF MONUMENT SITES DUE TO SNOW COVERAGE.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. MONUMENT DS-01 WAS INACCESSIBLE BETWEEN SEPTEMBER 12 TO 26, 2022 DUE TO OBSTRUCTION FROM NEARBY DRILLING.
11. NO SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 17, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
12. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

DOWNSTREAM SURVEY MONUMENTS EAST-WEST DEFORMATION

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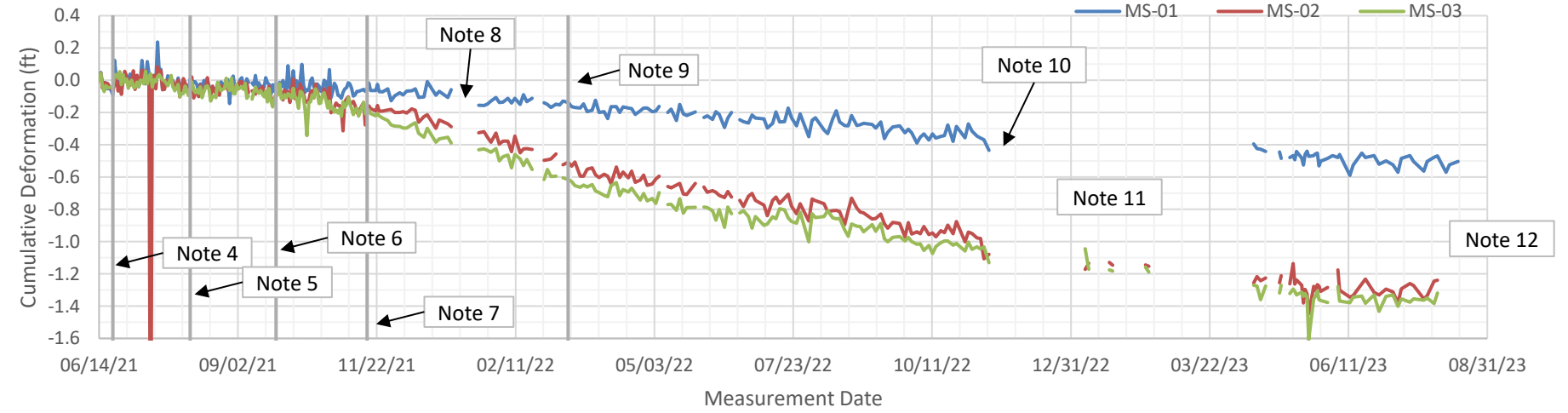
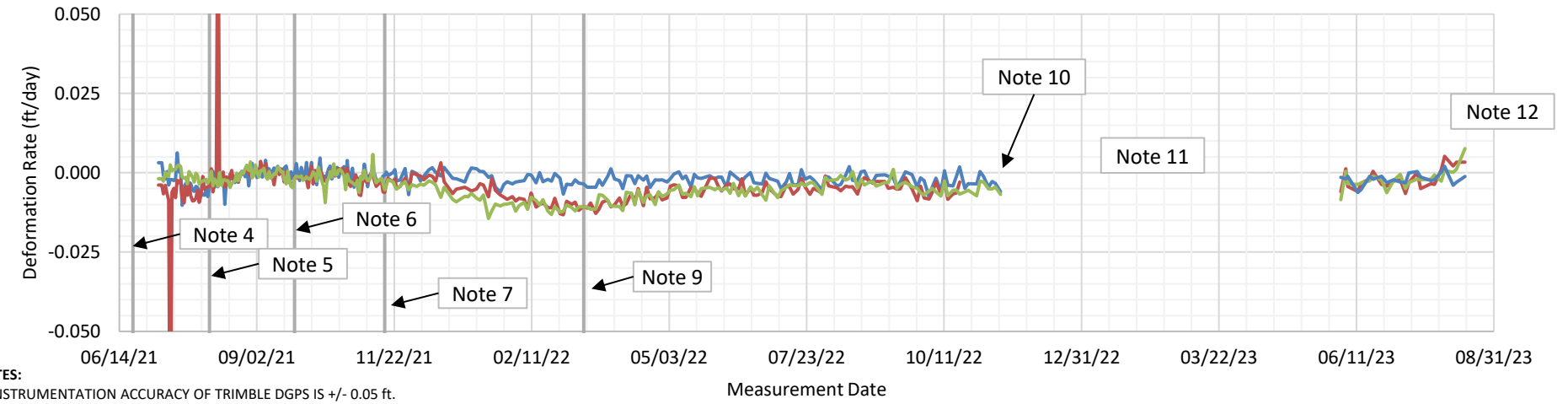
REF. NO. VA23-01703

FIGURE A.14

REV 0





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7. CONSTRUCTION OF EL. 6,400 ft LIFT BEGAN ON NOVEMBER 17, 2021.
8. NO SURVEY DATA RECORDED BETWEEN JANUARY 7 TO 14, 2022 AND JANUARY 19 TO 21, 2022 DUE TO LACK OF ACCESSIBLITY OF MONUMENT SITES DUE TO SNOW COVERAGE.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. NO SURVEY DATA RECORDED BETWEEN NOVEMBER 14, 2022 AND JANUARY 8, 2023 WHILE THE MONUMENTS WERE INACCESSIBLE DUE TO SNOW COVERAGE.
11. LIMITED TO NO SURVEY DATA RECORDED BETWEEN JANUARY 9 AND APRIL 10, 2023 FROM ALL MONUMENTS DUE TO LACK OF ACCESSIBILITY OF AND STAFF.
12. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

EL 6,150 FT BENCH SURVEY MONUMENTS VERTICAL DEFORMATION

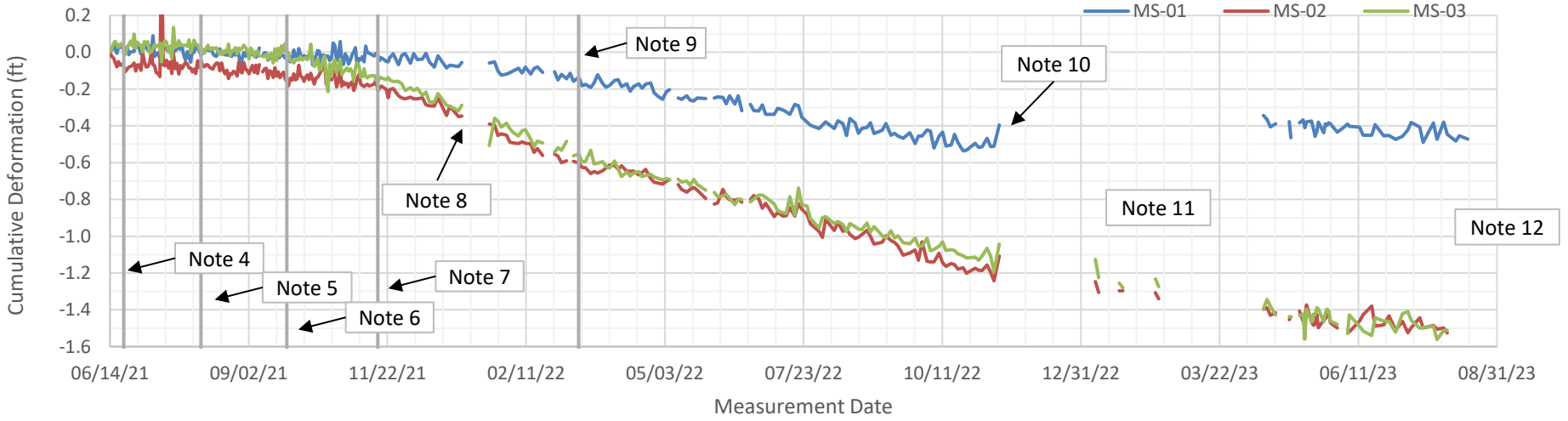
Knight Piésold CONSULTING

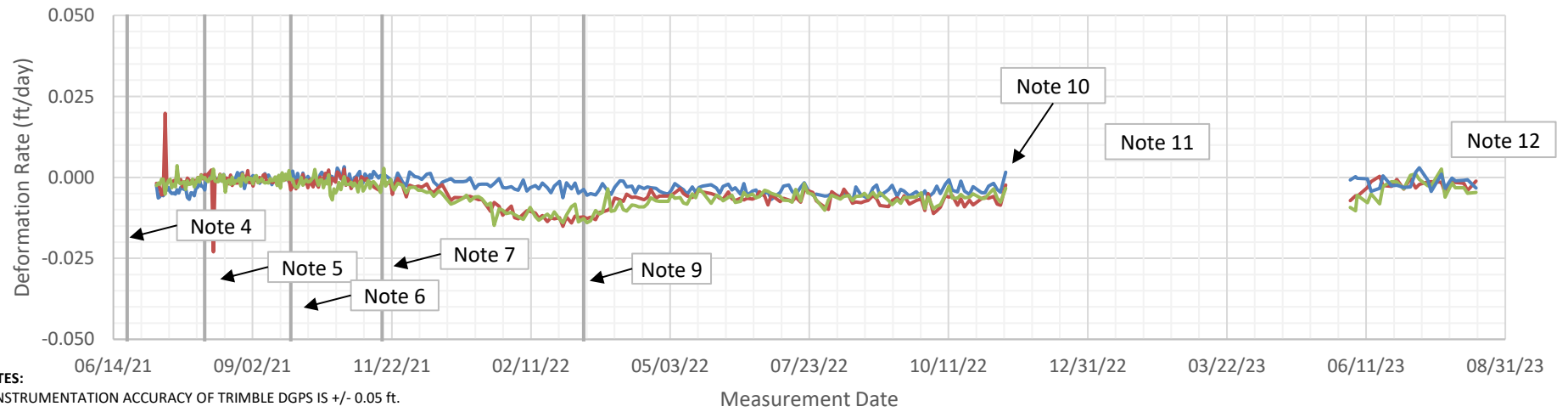
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.15

REV 0





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8. NO SURVEY DATA RECORDED BETWEEN JANUARY 7 TO 14, 2022 AND JANUARY 19 TO 21, 2022 DUE TO LACK OF ACCESSIBLITY OF MONUMENT SITES DUE TO SNOW COVERAGE.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
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11. LIMITED TO NO SURVEY DATA RECORDED BETWEEN JANUARY 9 AND APRIL 10, 2023 FROM ALL MONUMENTS DUE TO LACK OF ACCESSIBILITY OF AND STAFF.
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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

EL 6,150 FT BENCH SURVEY MONUMENTS NORTH-SOUTH DEFORMATION

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.16

REV 0

NOTES:

1. INSTRUMENTATION ACCURACY OF TRIMBLE DGPS IS +/- 0.05 ft.
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MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

EL 6,150 FT BENCH SURVEY MONUMENTS EAST-WEST DEFORMATION

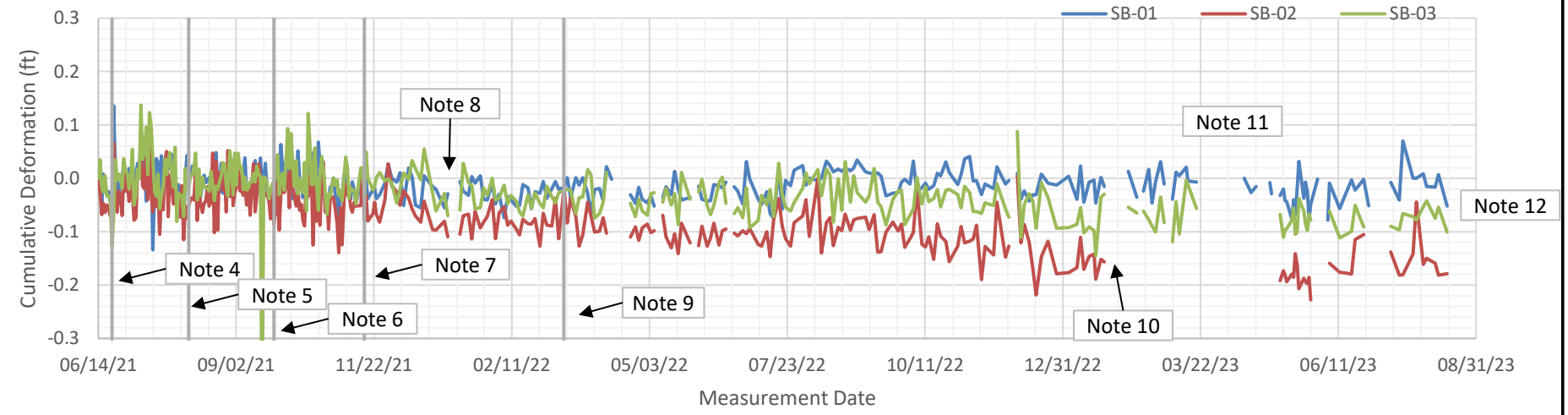
Knight Piésold CONSULTING

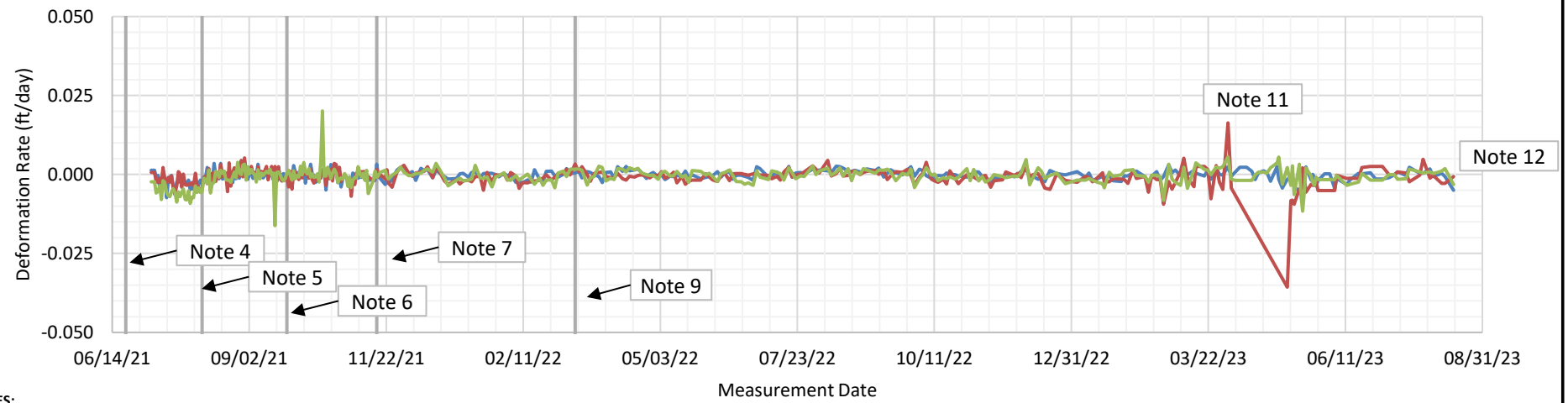
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.17

REV 0





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9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. NO SURVEY DATA WERE COLLECTED AT SB-02 FROM JANUARY 20, 2023 TO MAY 8, 2023.
11. NO SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 10, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
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MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

SEEP 10 BENCH SURVEY MONUMENTS VERTICAL DEFORMATION

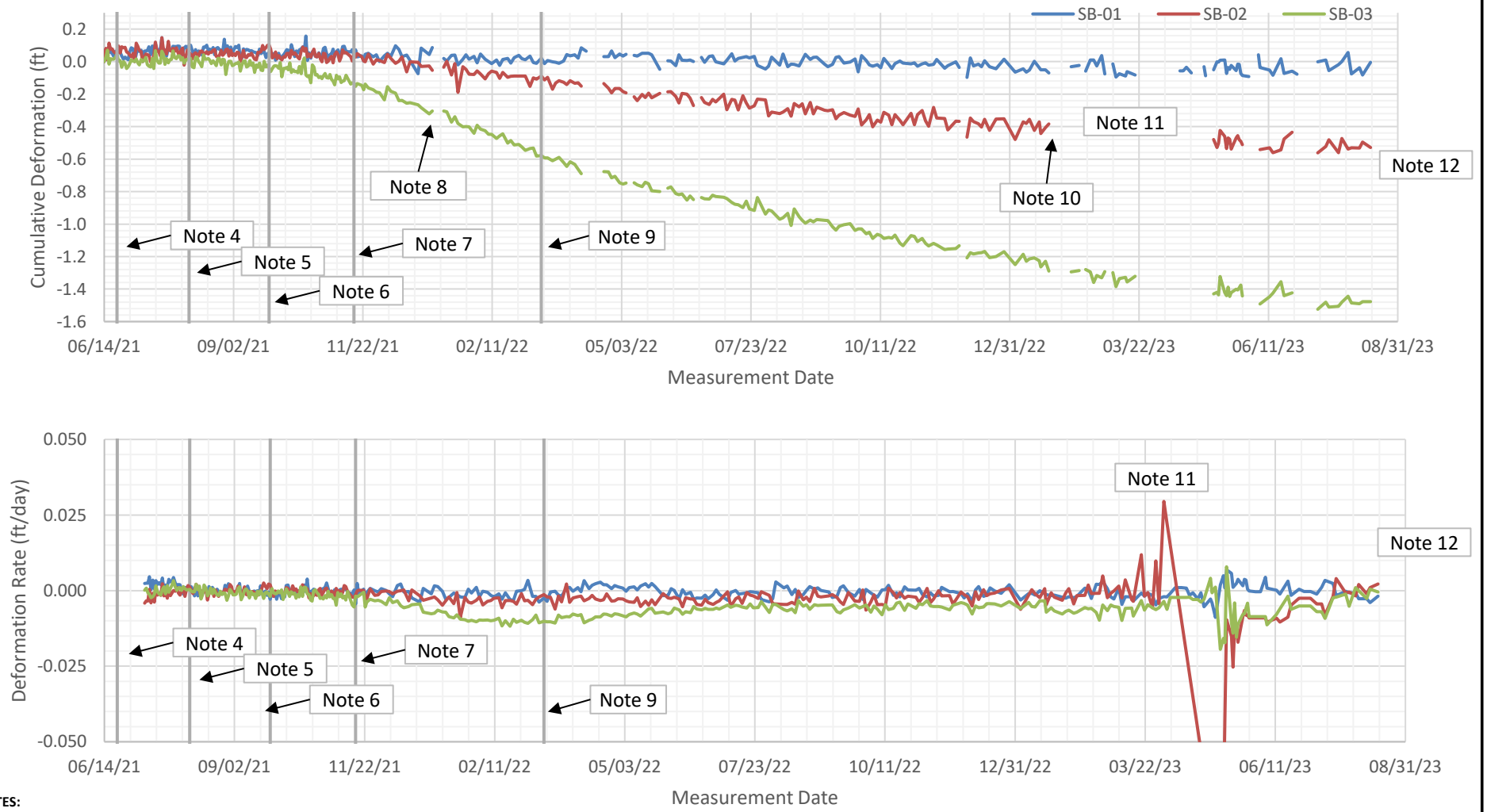
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.18

REV 0



NOTES:

1. INSTRUMENTATION ACCURACY OF TRIMBLE DGPS IS +/- 0.05 ft.
2. DATA GAPS PRESENT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE.
3. DGPS READINGS WERE COLLECTED DAILY FROM JUNE 14, 2021 TO NOVEMBER 24, 2021 AND THREE TIMES PER WEEK (MONDAY, WEDNESDAY, AND FRIDAY) THEREAFTER.
4. CONSTRUCTION OF EL. 6,250 ft LIFT BEGAN ON JUNE 22, 2021.
5. CONSTRUCTION OF EL. 6,300 ft LIFT BEGAN ON AUGUST 6, 2021.
6. CONSTRUCTION OF EL. 6,350 ft LIFT BEGAN ON SEPTEMBER 25, 2021.
7. CONSTRUCTION OF EL. 6,400 ft LIFT BEGAN ON NOVEMBER 17, 2021.
8. NO SURVEY DATA RECORDED BETWEEN JANUARY 7 TO 10, 2022 DUE TO LACK OF ACCESSIBLITY OF MONUMENT SITES DUE TO SNOW COVERAGE.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. NO SURVEY DATA WERE COLLECTED AT SB-02 FROM JANUARY 20, 2023 TO MAY 8, 2023.
11. NO SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 10, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
12. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

SEEP 10 BENCH SURVEY MONUMENTS NORTH-SOUTH DEFORMATION

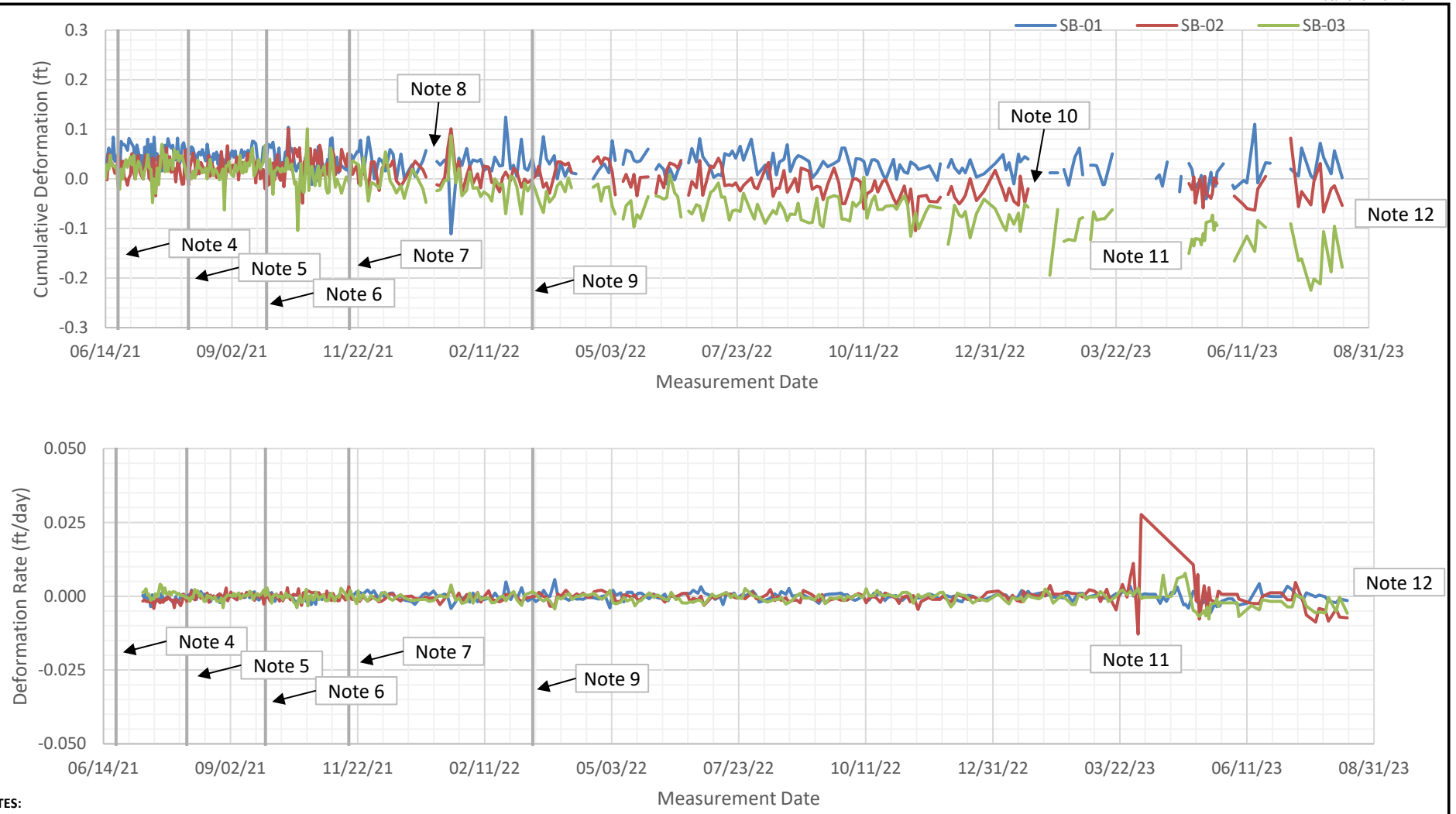
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.19

REV 0



NOTES:

1. INSTRUMENTATION ACCURACY OF TRIMBLE DGPS IS +/- 0.05 ft.
2. DATA GAPS PRESENT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE.
3. DGPS READINGS WERE COLLECTED DAILY FROM JUNE 14, 2021 TO NOVEMBER 24, 2021 AND THREE TIMES PER WEEK (MONDAY, WEDNESDAY, AND FRIDAY) THEREAFTER.
4. CONSTRUCTION OF EL. 6,250 ft LIFT BEGAN ON JUNE 22, 2021.
5. CONSTRUCTION OF EL. 6,300 ft LIFT BEGAN ON AUGUST 6, 2021.
6. CONSTRUCTION OF EL. 6,350 ft LIFT BEGAN ON SEPTEMBER 25, 2021.
7. CONSTRUCTION OF EL. 6,400 ft LIFT BEGAN ON NOVEMBER 17, 2021.
8. NO SURVEY DATA RECORDED BETWEEN JANUARY 7 TO 10, 2022 DUE TO LACK OF ACCESSIBLITY OF MONUMENT SITES DUE TO SNOW COVERAGE.
9. CONSTRUCTION OF EL. 6,450 ft CENTRAL EMBANKMENT LIFT BEGAN ON MARCH 14, 2022.
10. NO SURVEY DATA WERE COLLECTED AT SB-02 FROM JANUARY 20, 2023 TO MAY 8, 2023.
11. NO SURVEY DATA RECORDED BETWEEN MARCH 20 TO APRIL 10, 2023 DUE TO LACK OF ACCESSIBILITY AND STAFF.
12. DGPS SURVEY ENDED ON AUGUST 14, 2023, AND TRANSITIONED TO USING TOTAL STATION SURVEY. TOTAL STATION DATA TO BE PRESENTED IN Q4.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

SEEP 10 BENCH SURVEY MONUMENTS EAST-WEST DEFORMATION

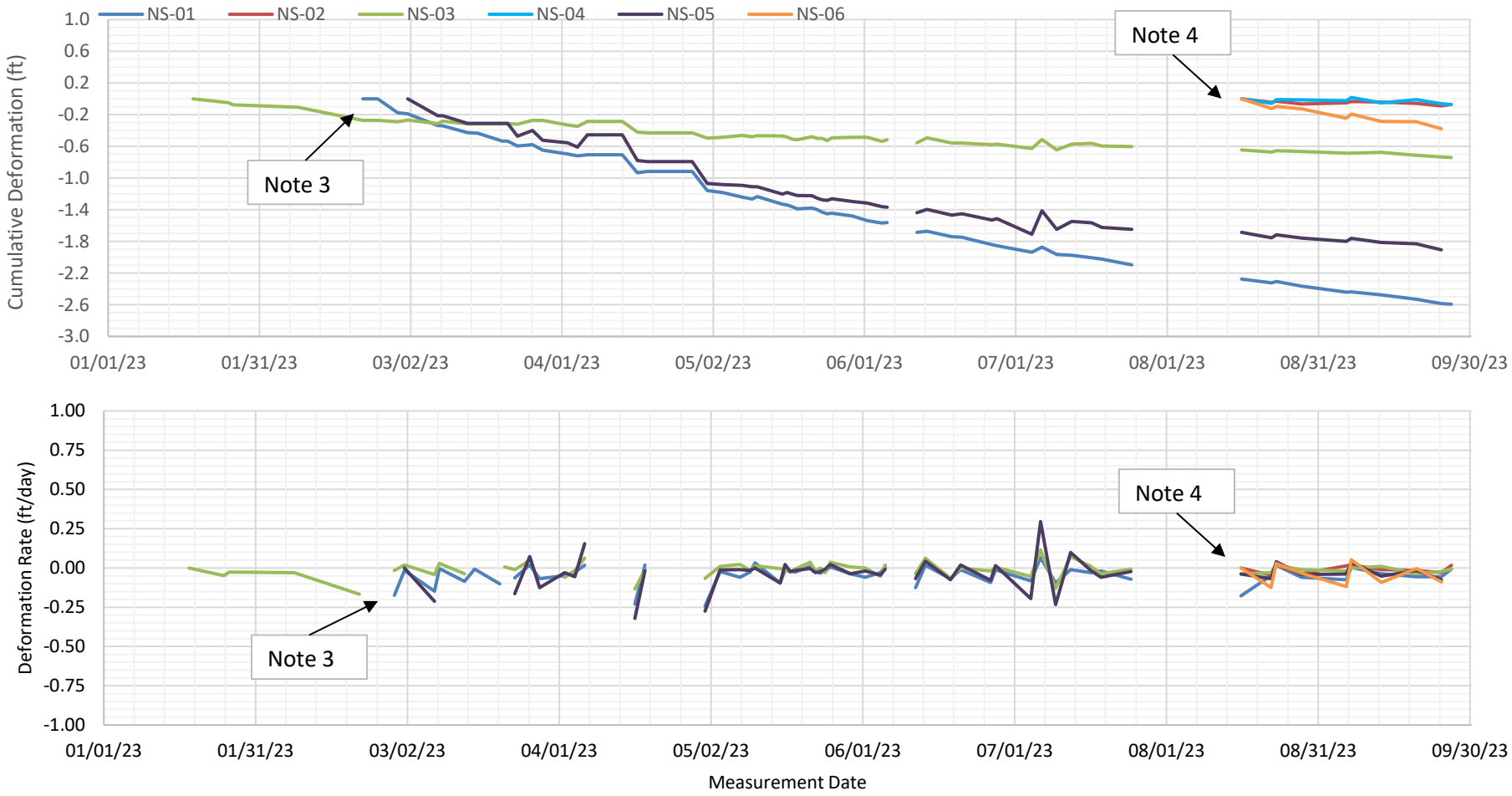
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.20

REV 0



NOTES:

1. DATA COLLECTED USING A TOTAL STATION AND SURVEY PRISMS.
2. DATA GAPS PRESENT DUE TO SITE ACCESSIBILITY ISSUES.
3. NS-01, AND NS-05 MONUMENTS ACTIVATED ON FEBRUARY 21 AND MARCH 2, 2023, RESPECTIVELY.
4. NS-02, NS-04, AND NS-06 MONUMENTS ACTIVATED ON AUGUST 16, 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

NS EMBANKMENT SURVEY MONUMENTS VERTICAL DEFORMATION

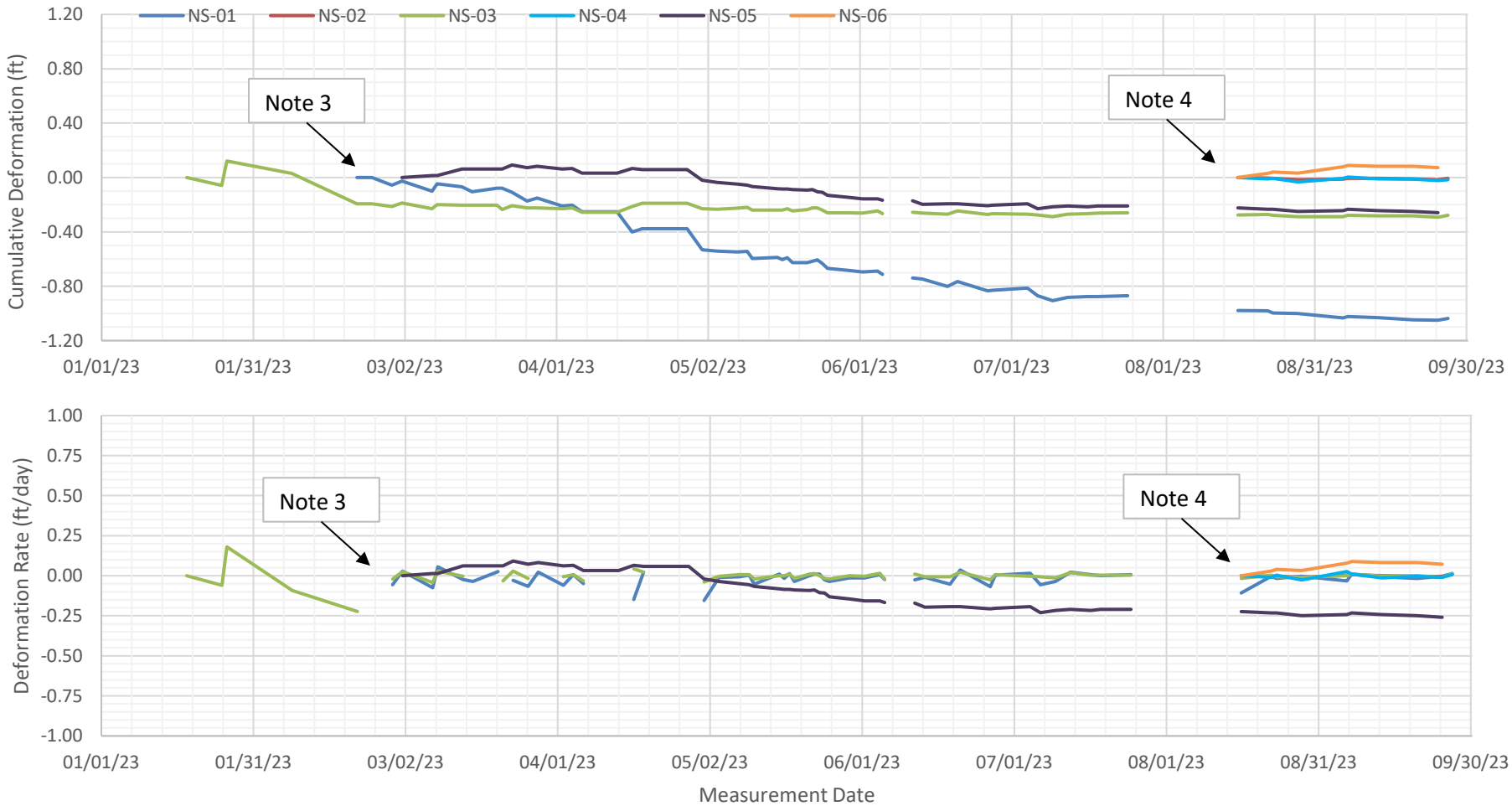
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.21

REV 0



NOTES:

1. DATA COLLECTED USING A TOTAL STATION AND SURVEY PRISMS.
2. DATA GAPS PRESENT DUE TO SITE ACCESSIBILITY ISSUES.
3. NS-01, AND NS-05 MONUMENTS ACTIVATED ON FEBRUARY 21 AND MARCH 2, 2023, RESPECTIVELY.
4. NS-02, NS-04, AND NS-06 MONUMENTS ACTIVATED ON AUGUST 16, 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

NS EMBANKMENT SURVEY MONUMENTS NORTH-SOUTH DEFORMATION

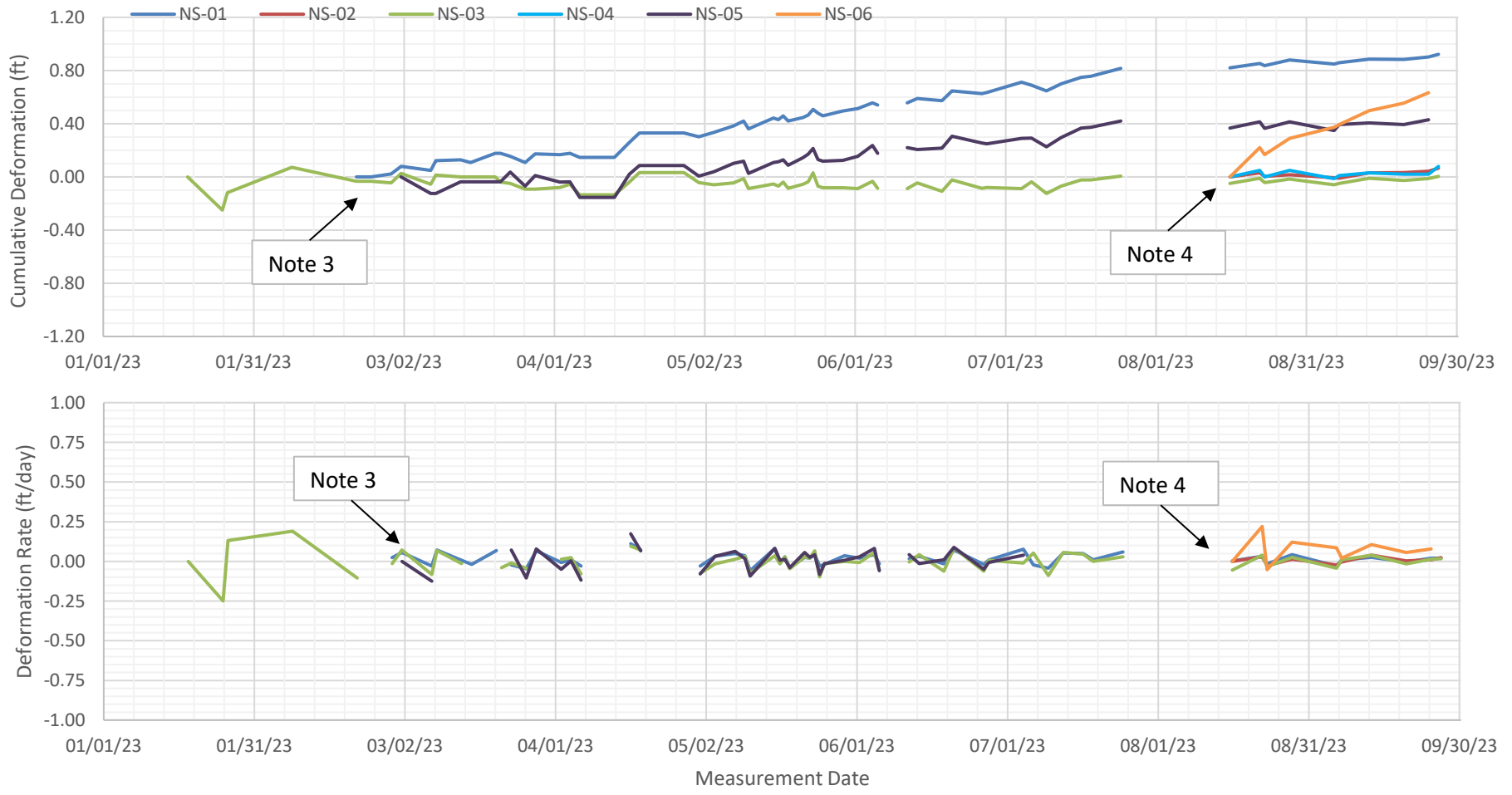
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE A.22

REV 0



NOTES:

1. DATA COLLECTED USING A TOTAL STATION AND SURVEY PRISMS.
2. DATA GAPS PRESENT DUE TO SITE ACCESSIBILITY ISSUES.
3. NS-01, AND NS-05 MONUMENTS ACTIVATED ON FEBRUARY 21 AND MARCH 2, 2023, RESPECTIVELY.
4. NS-02, NS-04, AND NS-06 MONUMENTS ACTIVATED ON AUGUST 16, 2023.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

NS EMBANKMENT SURVEY MONUMENTS EAST-WEST DEFORMATION

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

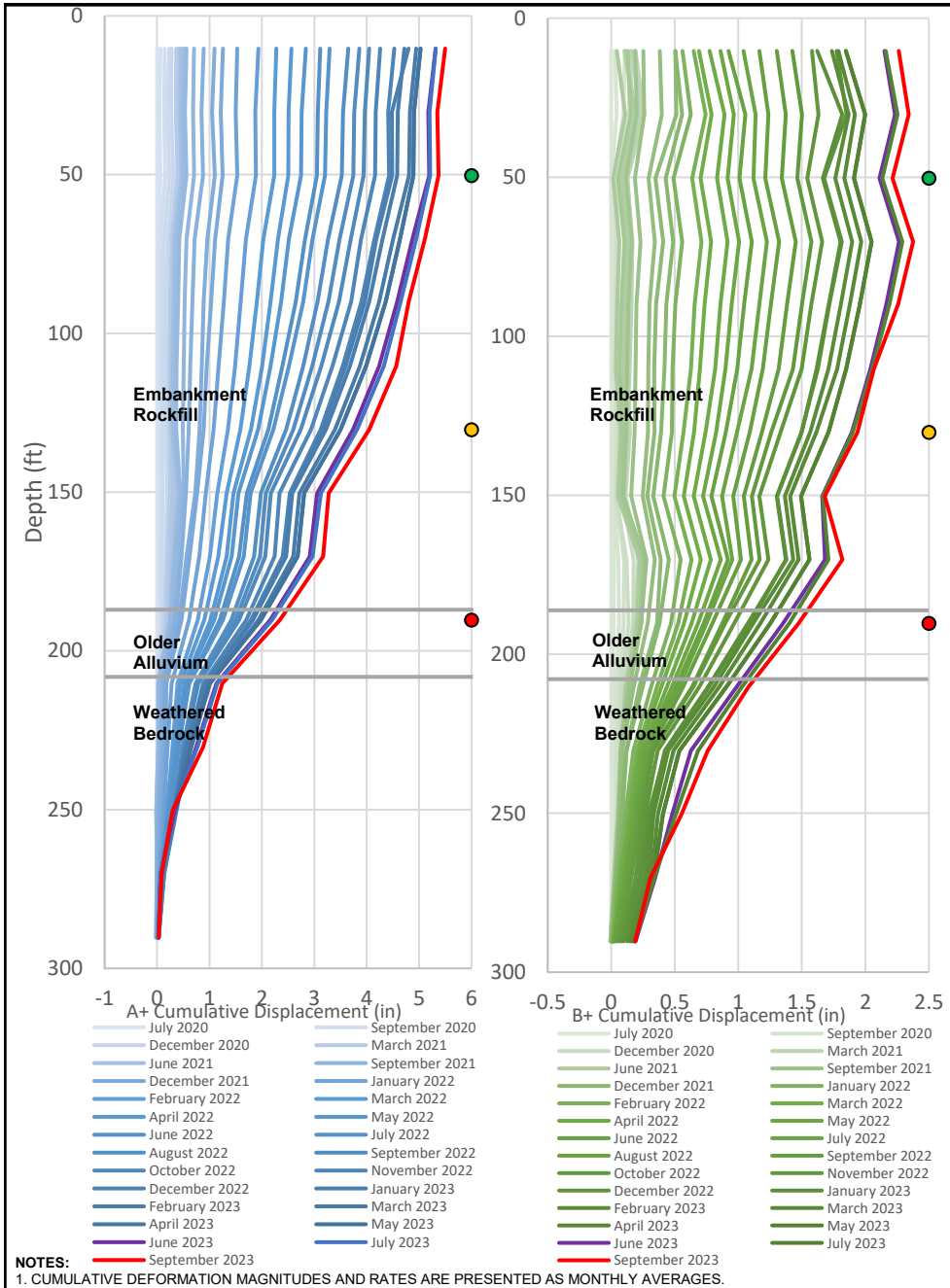
FIGURE A.23

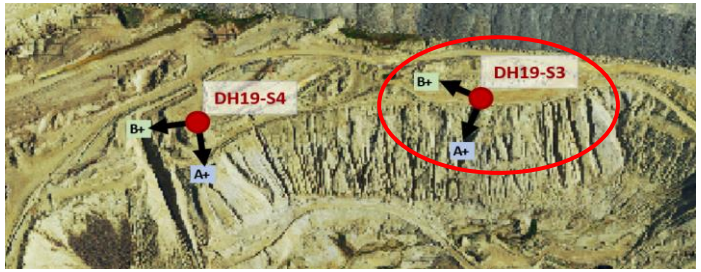
REV 0

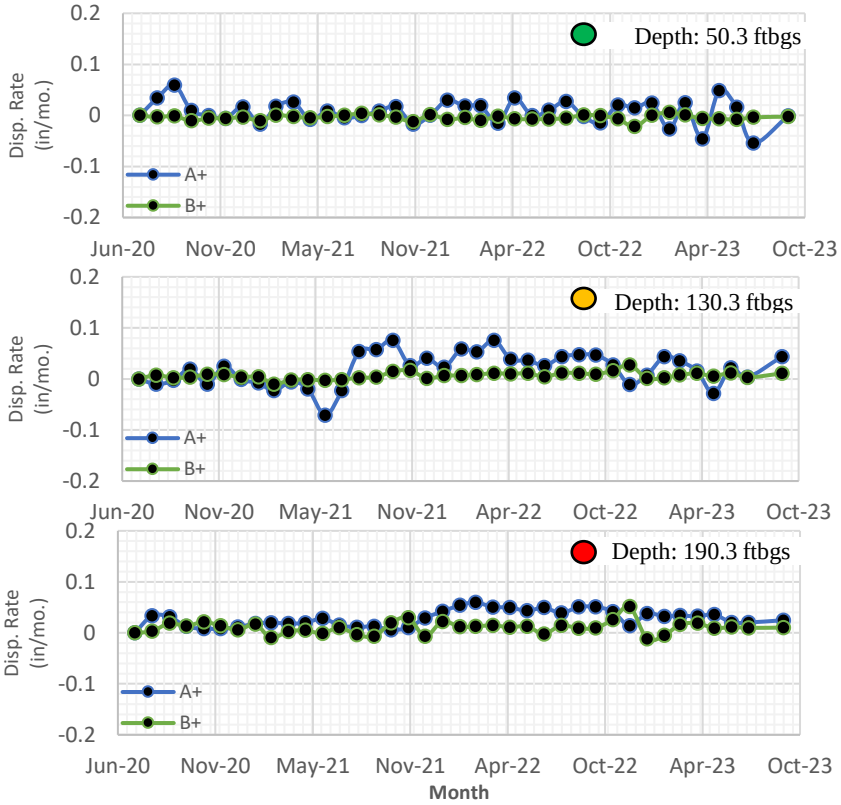
APPENDIX B

Inclinometer Deformation Plots

(Figures B.1 to B.14)







NOTES:
1. CUMULATIVE DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

MONTHLY AVERAGE CUMULATIVE SUBSURFACE DEFORMATION DRILLHOLE DH19-S3 (JULY 2020 THROUGH SEPTEMBER 2023)

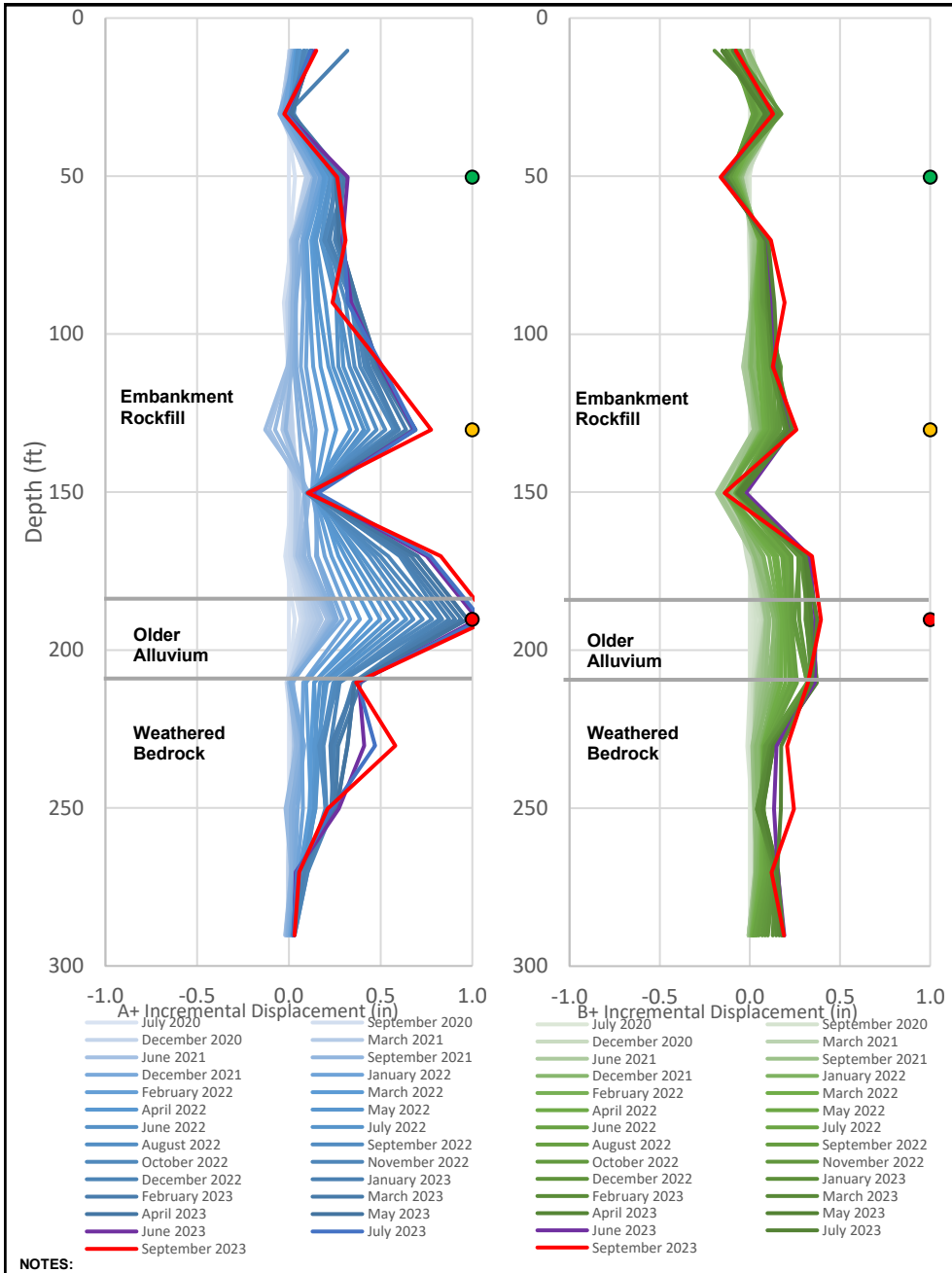
Knight Piésold CONSULTING

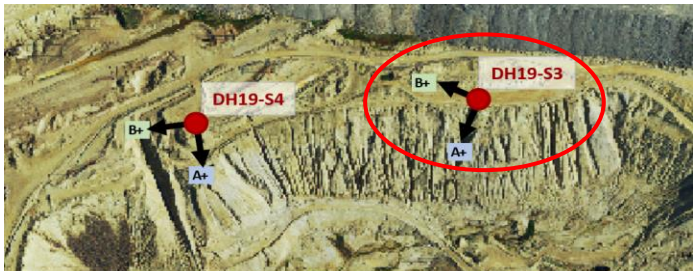
P/A NO. VA101-126/29

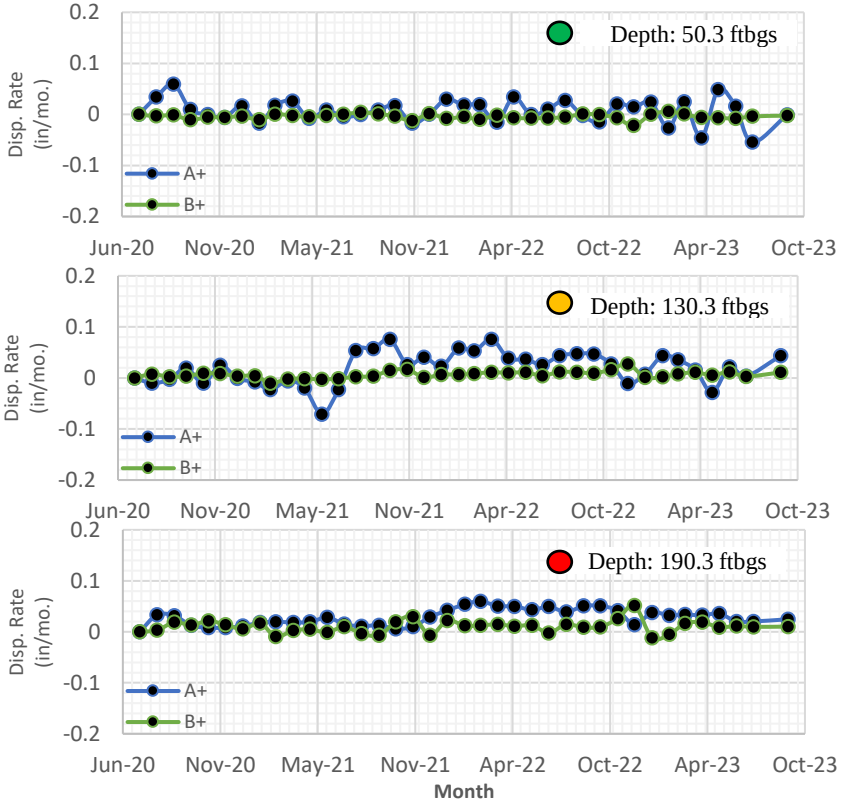
REF. NO. VA23-01703

FIGURE B.1

REV 0







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

MONTHLY AVERAGE INCREMENTAL SUBSURFACE DEFORMATION DRILLHOLE DH19-S3 (JULY 2020 THROUGH SEPTEMBER 2023)

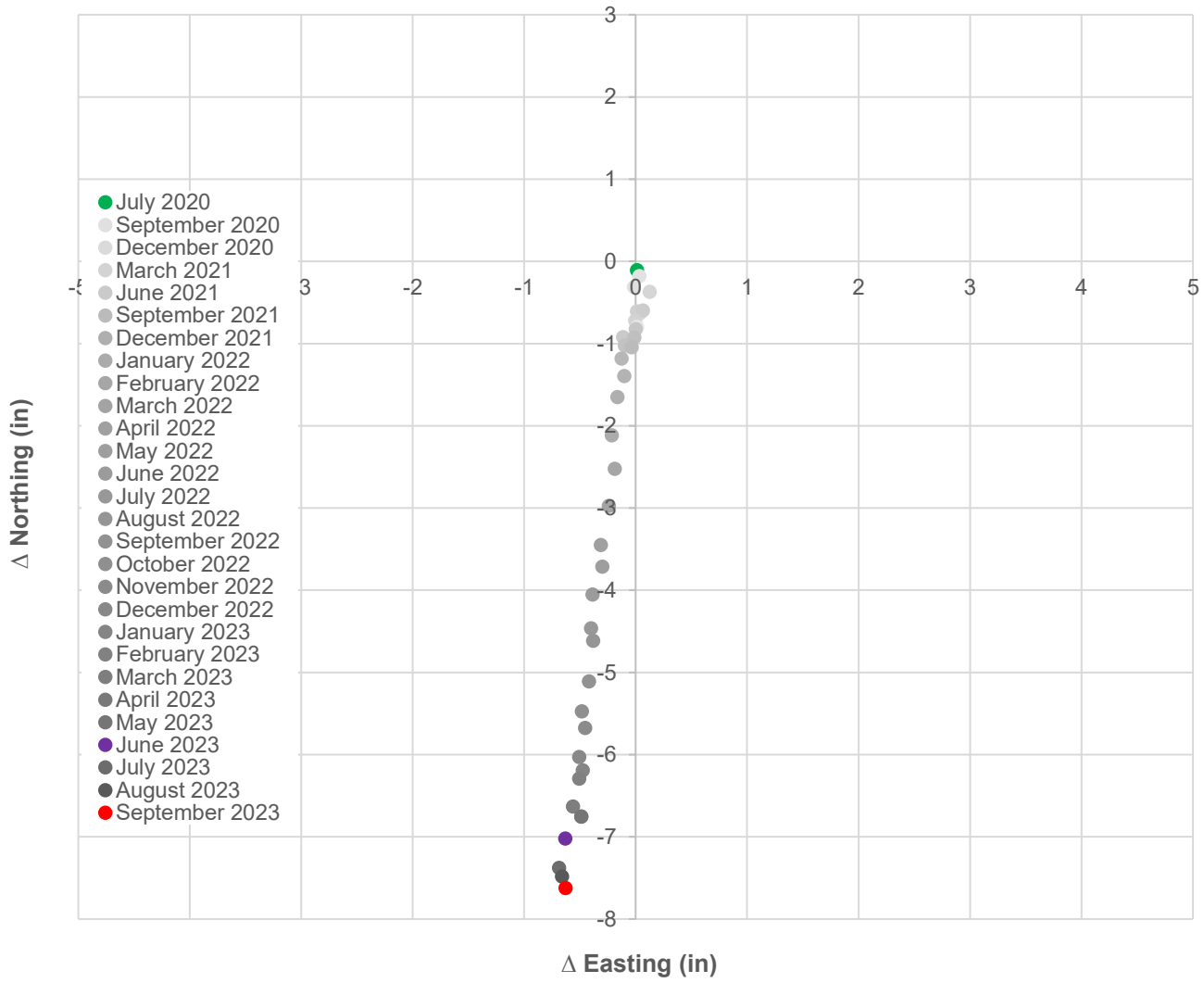
Knight Piésold CONSULTING

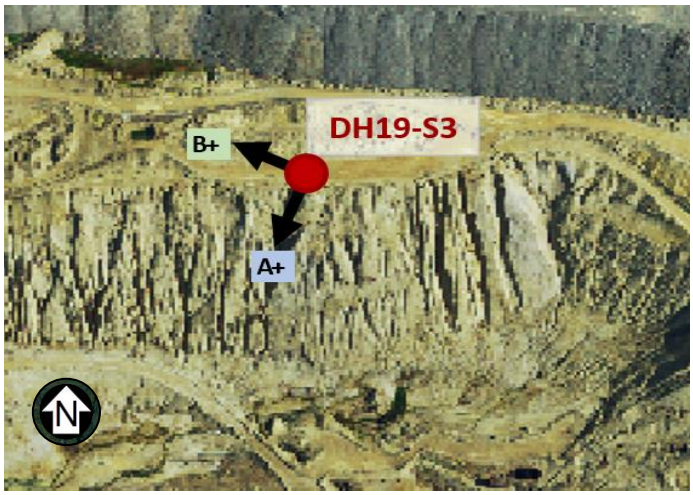
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE B.2

REV 0





NOTES:
1. COLLAR WANDER IS MONITORED USING GNSS INSTRUMENTATION INSTALLED AT THE INCLINOMETER COLLAR LOCATION.
2. THE PLOT ABOVE PRESENTS COLLAR POSITION BASED ON NORTH AND EAST CHANGE RELATIVE TO A JULY 1, 2020 BASELINE GNSS SURVEY.
3. NO DATA ARE AVAILABLE FOR NOVEMBER, 2020 WHILE THE INSTRUMENTATION WAS OFFLINE DUE TO A POWER MANAGEMENT ISSUE.

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

DH19-S3 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2021 THROUGH SEPTEMBER 30, 2023)

Knight Piésold CONSULTING

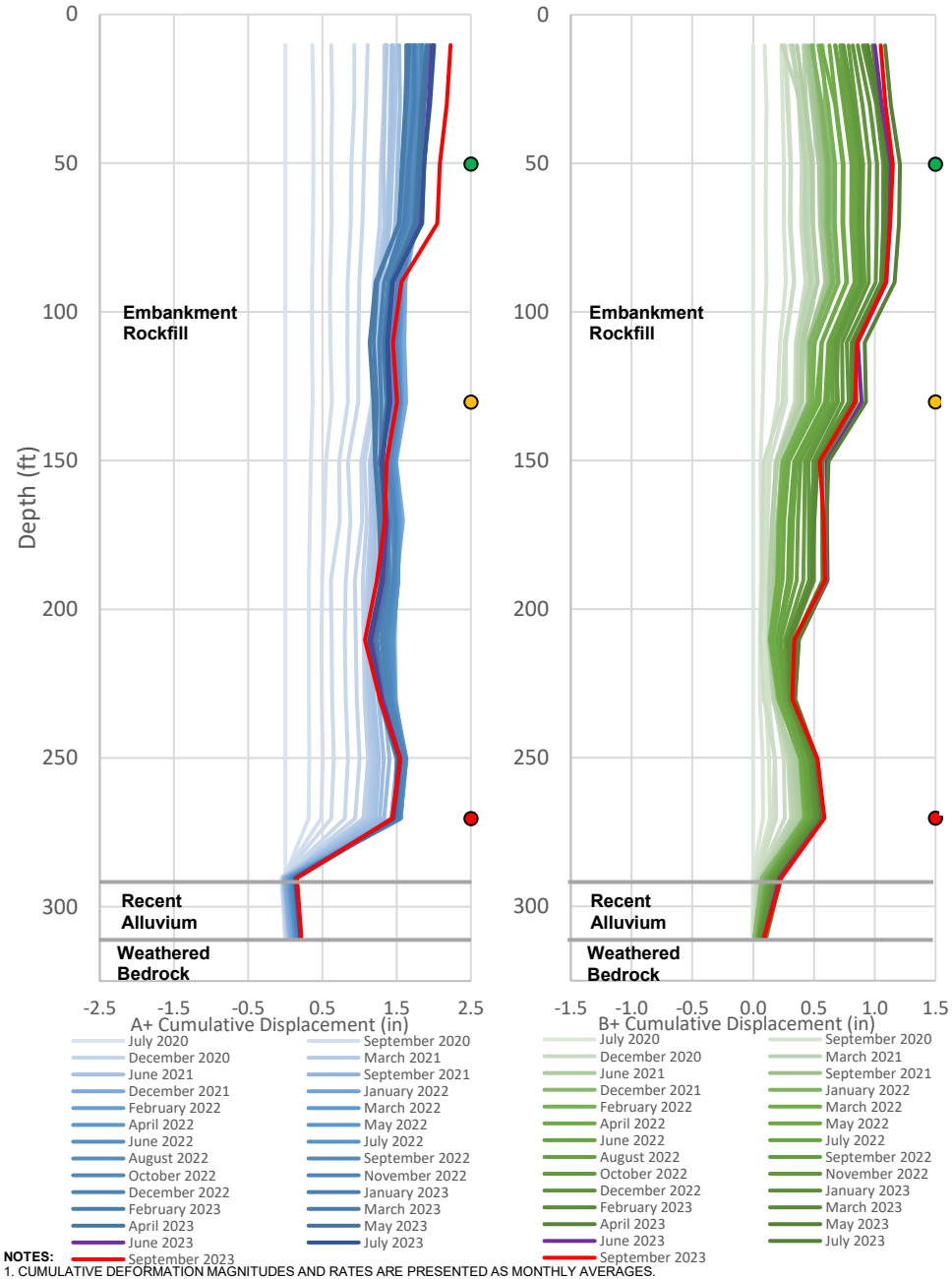
P/A NO. VA101-126/29

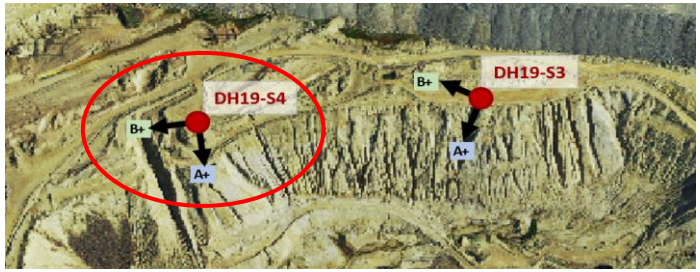
REF. NO. VA23-01703

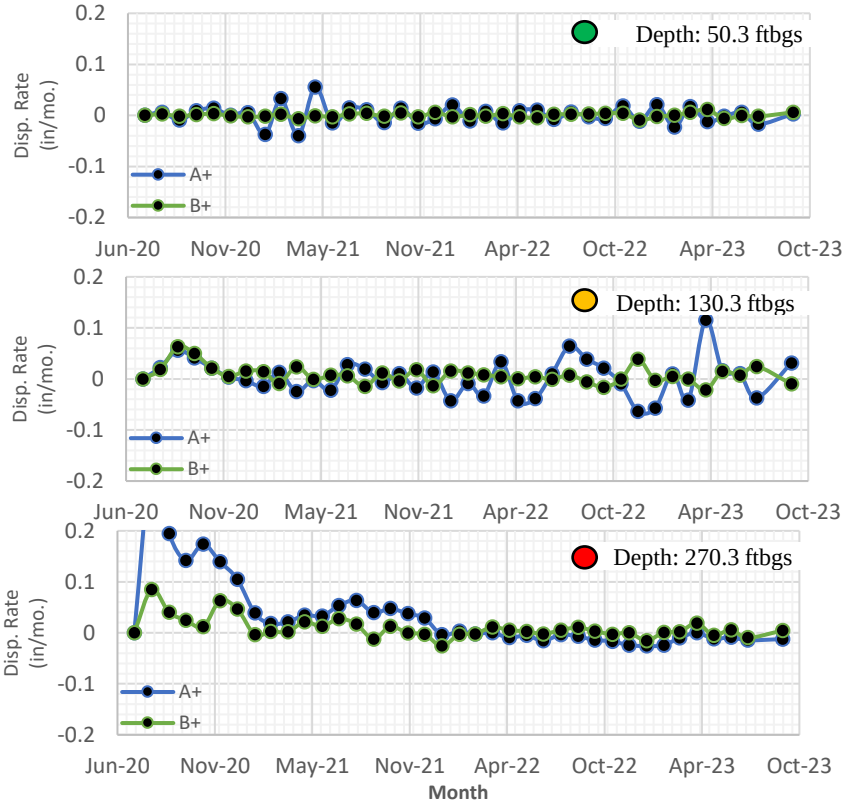
FIGURE B.3

REV 0

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD







NOTES:
1. CUMULATIVE DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION MAGNITUDE BETWEEN 290 FTBG AND 310 FTBG IS INTEPRETED TO BE AN OVERESTIMATE DUE TO IPI CONNECTING ROD FLEXION.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

MONTHLY AVERAGE CUMULATIVE SUBSURFACE DEFORMATION DRILLHOLE DH19-S4 (JULY 2020 THROUGH SEPTEMBER 2023)

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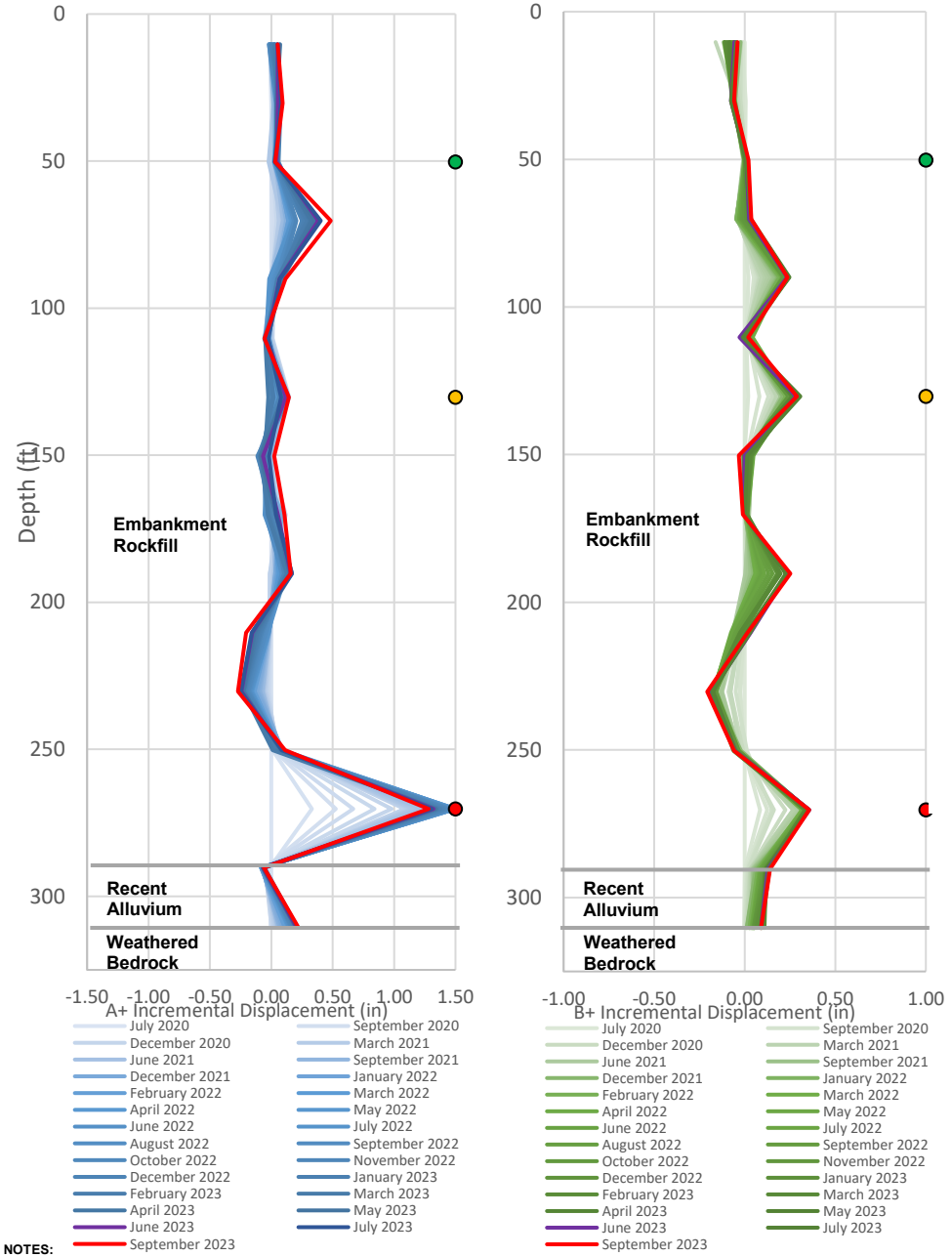
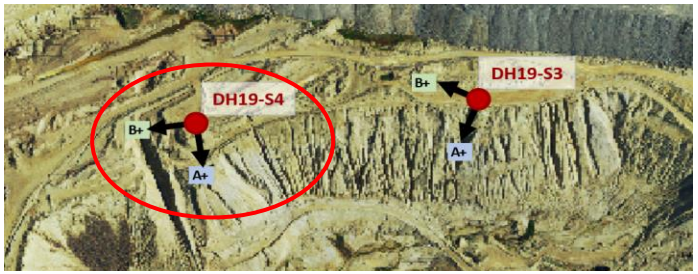
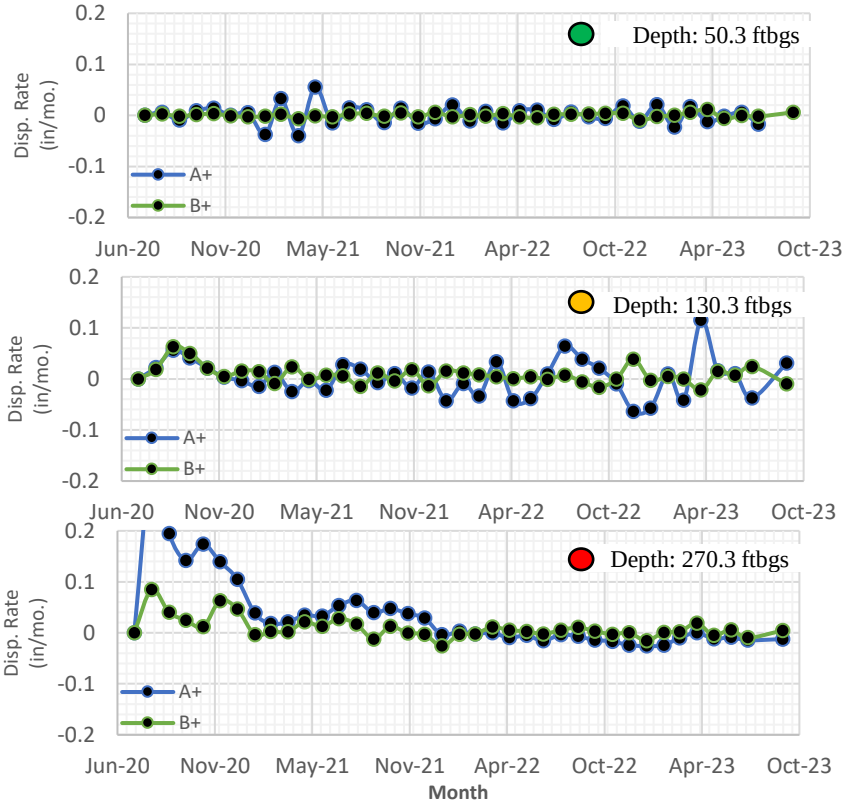
P/A NO.	REF. NO.
VA101-126/29	VA23-01703

FIGURE B.4 REV 0







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION MAGNITUDE BETWEEN 250 FTBG TO 290 FTBG IS INTERPRETED TO BE AN OVERESTIMATE DUE TO IPI CONNECTING ROD FLEXION.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

MONTHLY AVERAGE INCREMENTAL SUBSURFACE DEFORMATION DRILLHOLE DH19-S4 (JULY 2020 THROUGH SEPTEMBER 2023)

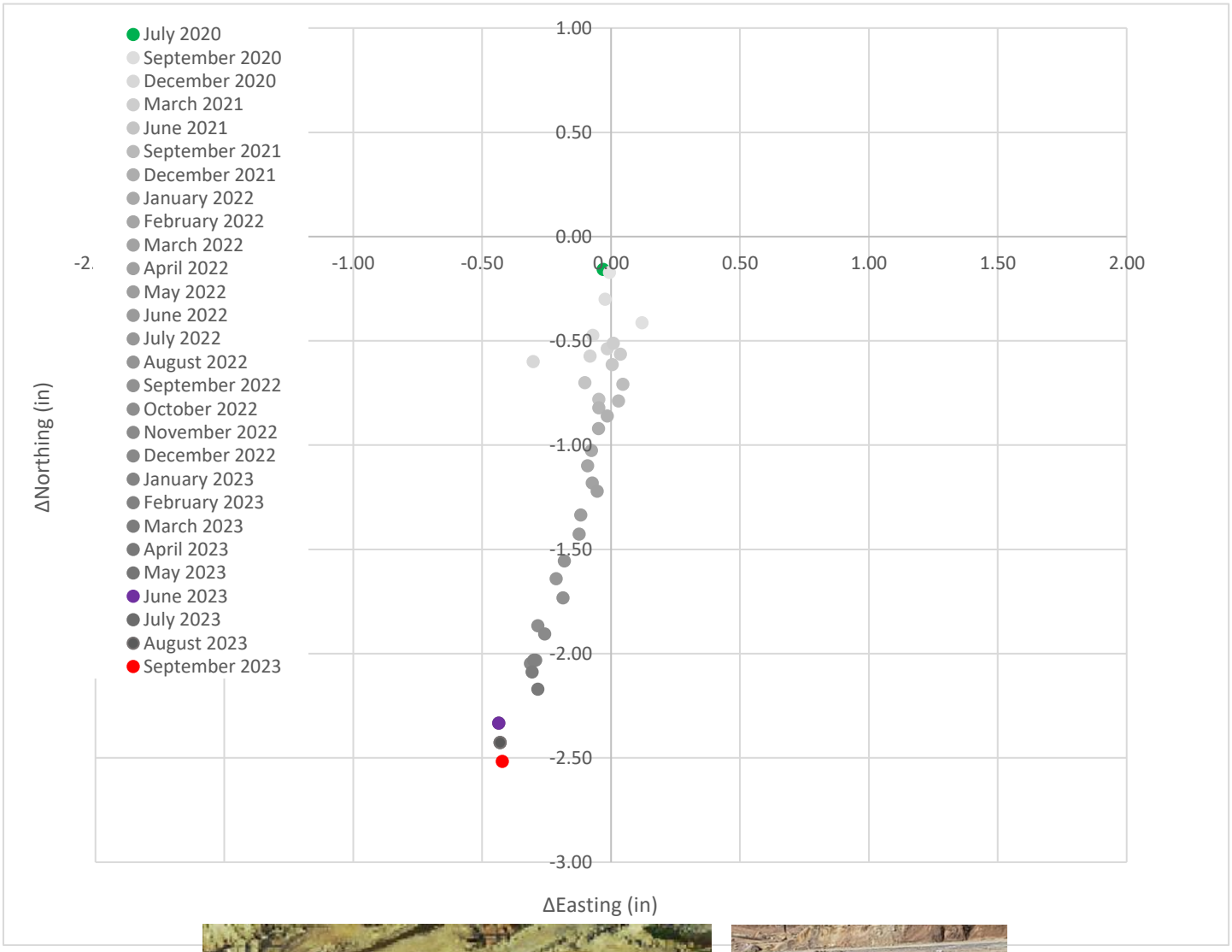
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE B.5

REV 0



NOTES:
1. COLLAR WANDER IS MONITORED USING GNSS INSTRUMENTATION INSTALLED AT THE INCLINOMETER COLLAR LOCATION.
2. THE PLOT ABOVE PRESENTS COLLAR POSITION BASED ON NORTH AND EAST CHANGE RELATIVE TO A JULY 1, 2020 BASELINE GNSS SURVEY.
3. NO DATA ARE AVAILABLE FOR NOVEMBER, 2020 WHILE THE INSTRUMENTATION WAS OFFLINE DUE TO A POWER MANAGEMENT ISSUE.

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

DH19-S4 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

Knight Piésold CONSULTING

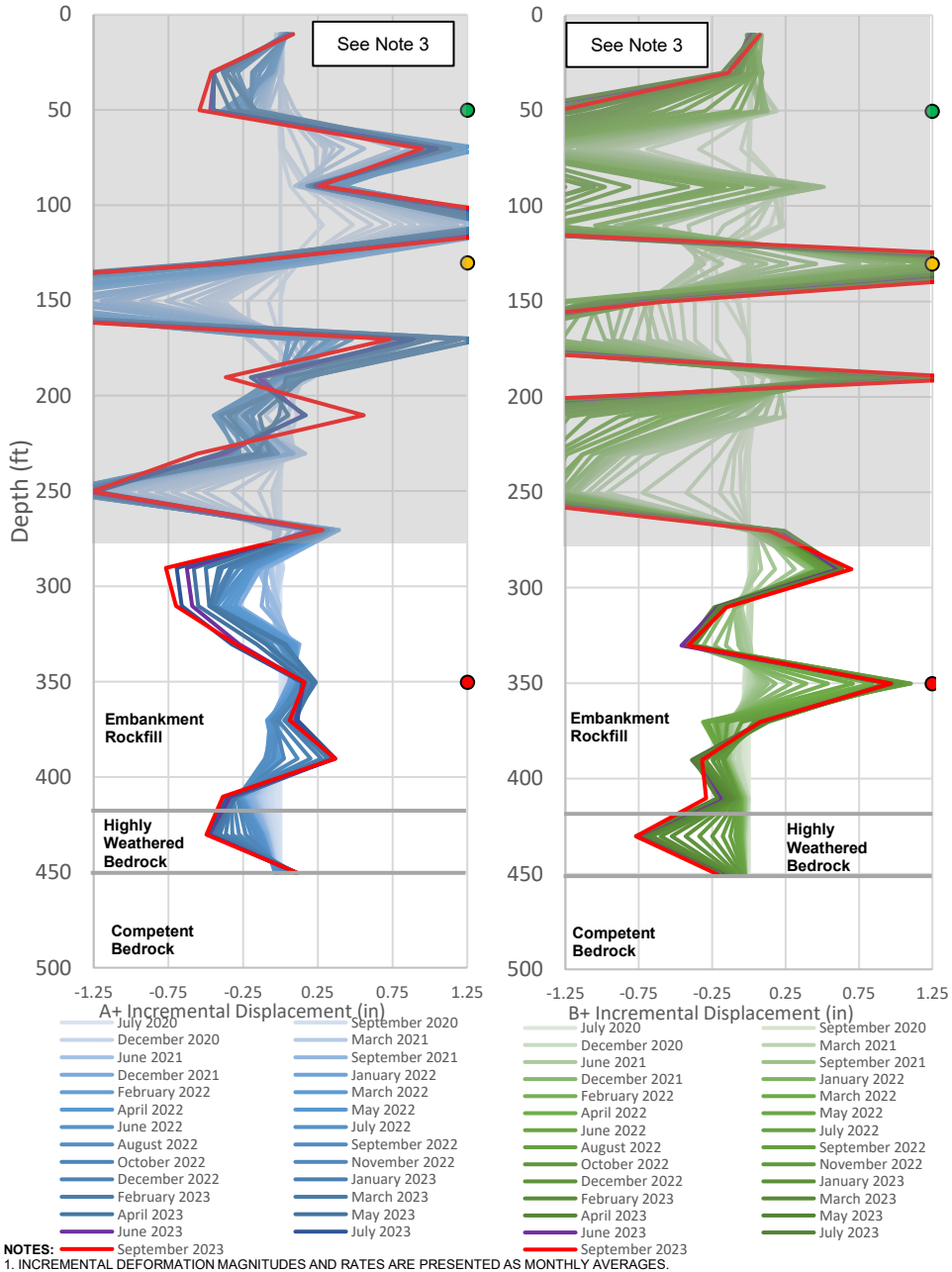
P/A NO. VA101-126/29

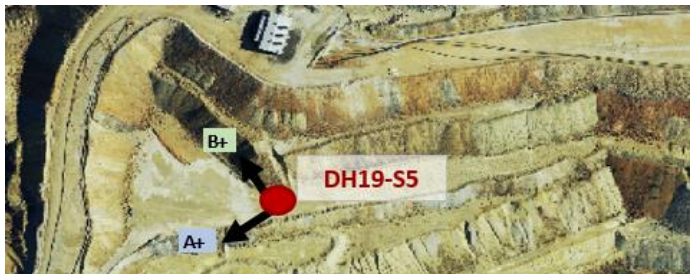
REF. NO. VA23-01703

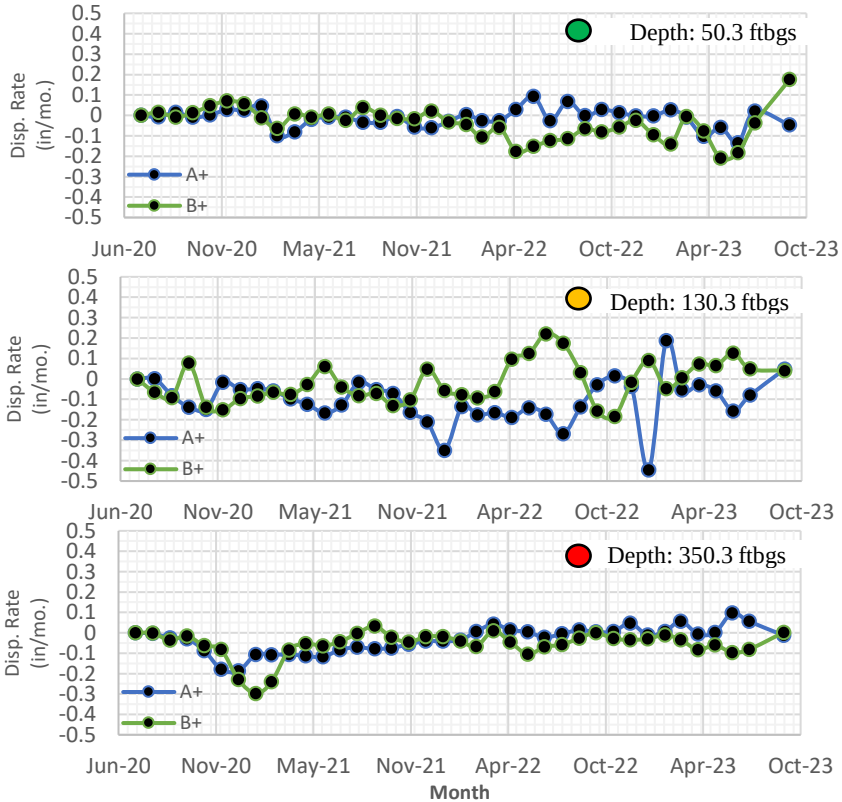
FIGURE B.6

REV 0

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION DATA WITHIN THE UPPER 275 FTBG ARE INTERPRETED TO RESULT PREDOMINANTLY FROM SETTLEMENT-DERIVED CASING DISTORTION WITHIN HISTORICALLY LEACHED ROCKFILL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

MONTHLY AVERAGE INCREMENTAL SUBSURFACE DEFORMATION DRILLHOLE DH19-S5 (JULY 2020 THROUGH SEPTEMBER 2023)

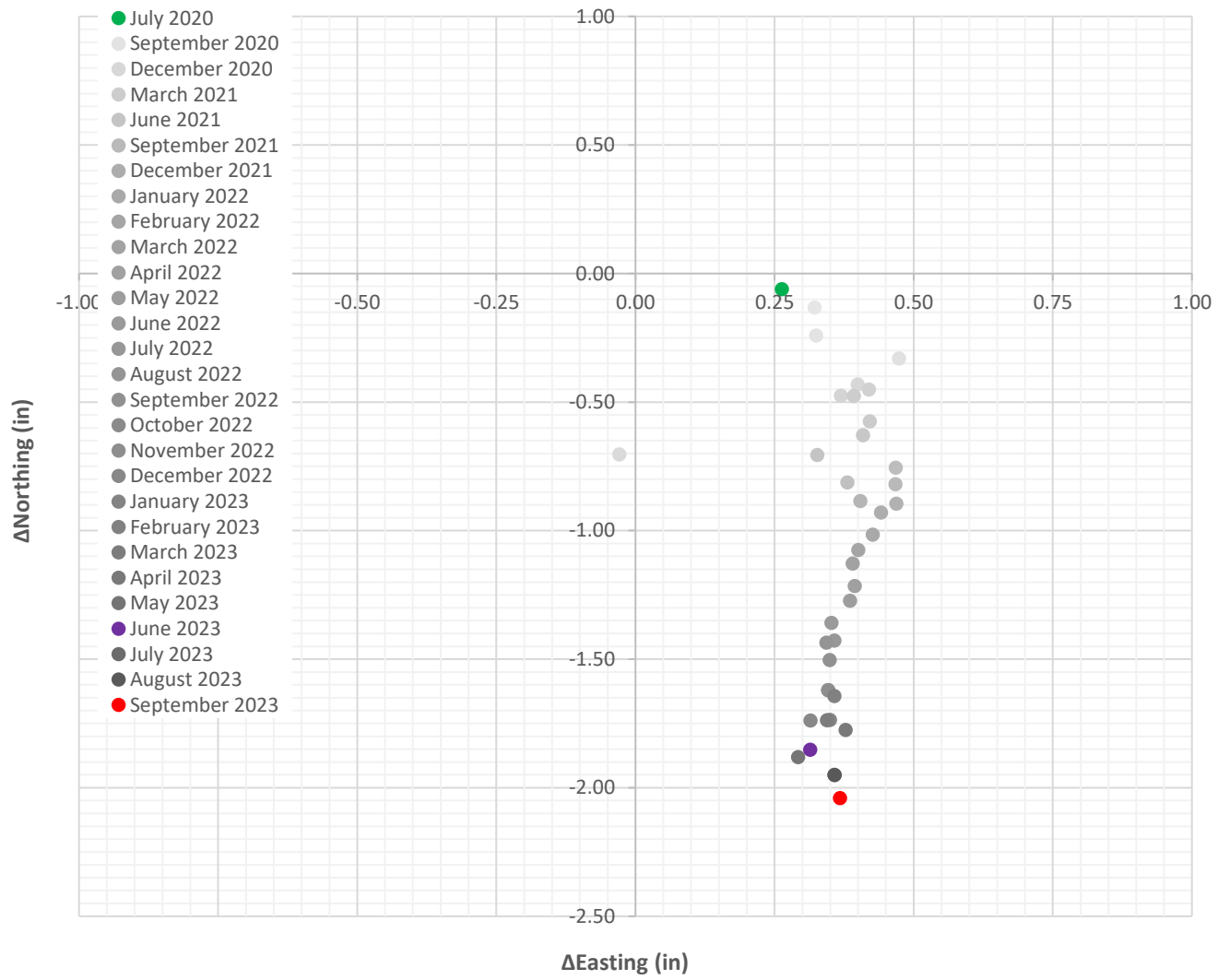
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE B.7

REV 0



NOTES:
1. COLLAR WANDER IS MONITORED USING GNSS INSTRUMENTATION INSTALLED AT THE INCLINOMETER COLLAR LOCATION.
2. THE PLOT ABOVE PRESENTS COLLAR POSITION BASED ON NORTH AND EAST CHANGE RELATIVE TO A JULY 1, 2020 BASELINE GNSS SURVEY.
3. NO DATA ARE AVAILABLE FOR NOVEMBER, 2020 WHILE THE INSTRUMENTATION WAS OFFLINE DUE TO A POWER

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

DH19-S5 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2020 THROUGH SEPTEMBER 30, 2022)

Knight Piésold CONSULTING

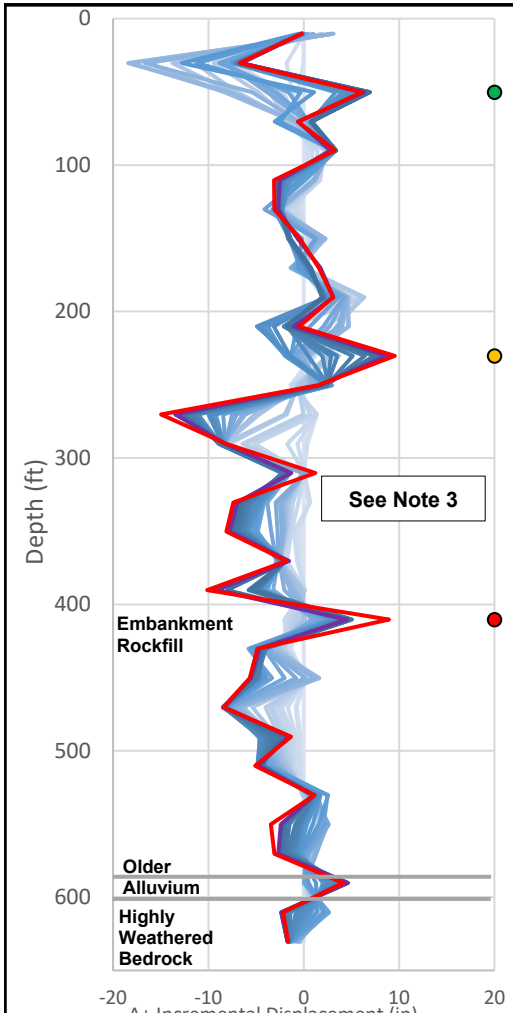
P/A NO. VA101-126/29

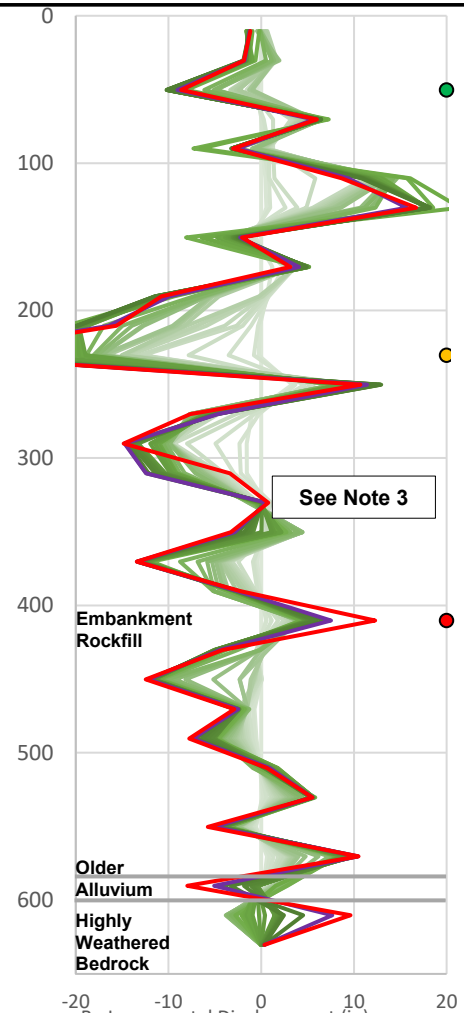
REF. NO. VA23-01703

FIGURE B.8

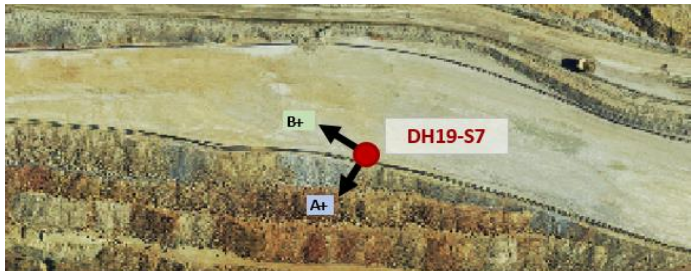
REV 0

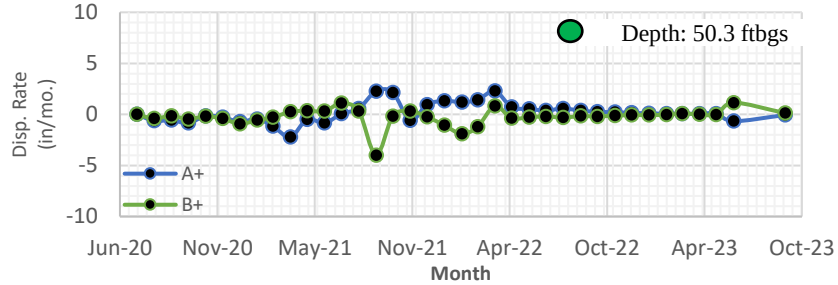
REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

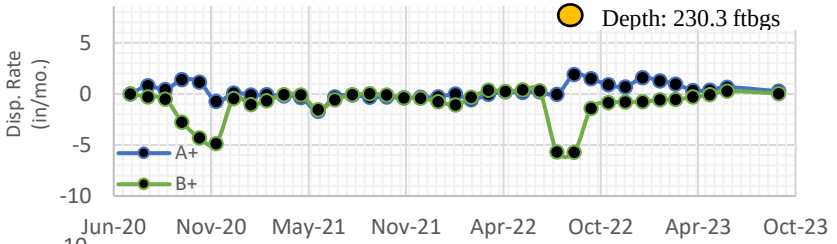


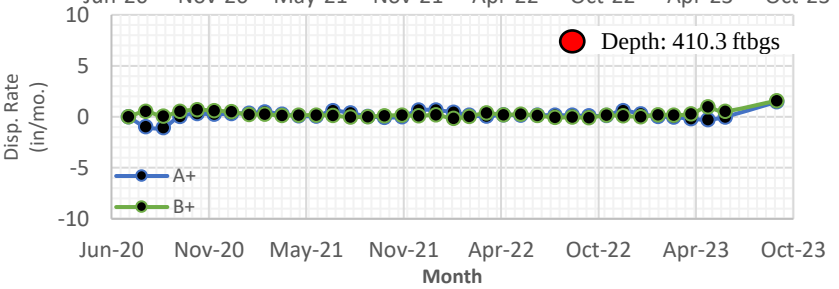


July 2020
September 2020
December 2020
March 2021
June 2021
September 2021
December 2021
January 2022
February 2022
March 2022
April 2022
May 2022
June 2022
July 2022
August 2022
September 2022
October 2022
November 2022
December 2022
January 2023
February 2023
March 2023
April 2023
May 2023
June 2023
September 2023









NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION DATA THROUGHOUT THE EMBANKMENT ROCKFILL ARE INTTERPRETED TO RESULT PREDOMINANTLY FROM SETTLEMENT-DERIVED CASING DISTORTION WITHIN THE ROCKFILL AND ARE NOT REPRESENTATIVE OF IN-SITU LATERAL DISPLACEMENT.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

MONTHLY AVERAGE INCREMENTAL SUBSURFACE DEFORMATION DRILLHOLE DH19-S7 (JULY 2020 THROUGH SEPTEMBER 2023)

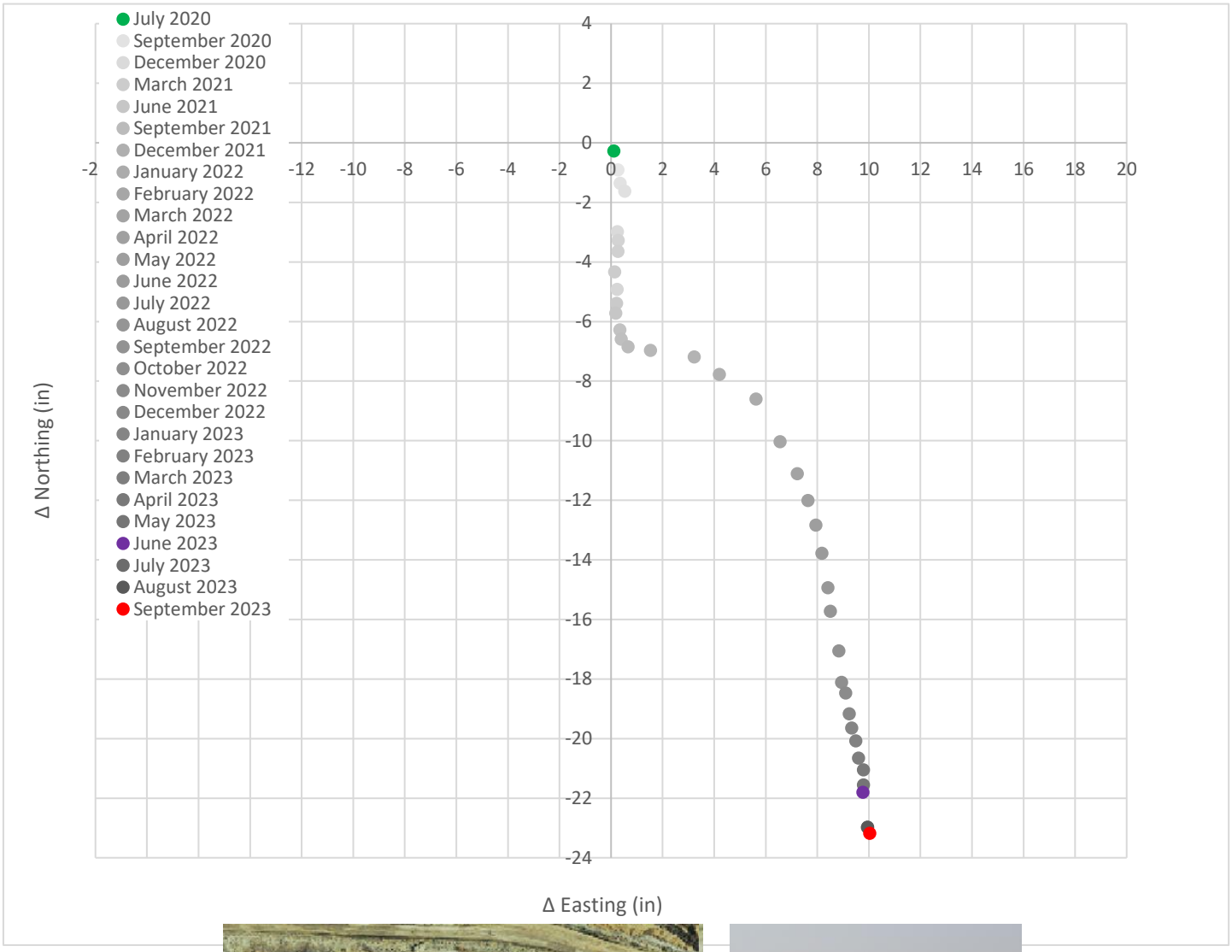
Knight Piésold CONSULTING

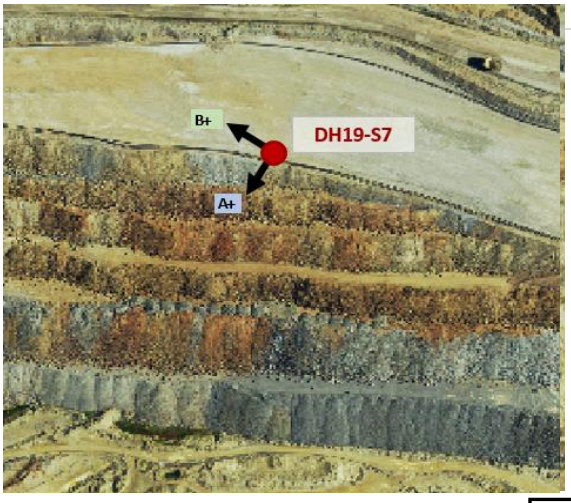
P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE B.9

REV 0





NOTES:
1. COLLAR WANDER IS MONITORED USING GNSS INSTRUMENTATION INSTALLED AT THE INCLINOMETER COLLAR LOCATION.
2. THE PLOT ABOVE PRESENTS COLLAR POSITION BASED ON NORTH AND EAST CHANGE RELATIVE TO A JULY 1, 2020 BASELINE GNSS SURVEY.
3. NO DATA ARE AVAILABLE FOR NOVEMBER, 2020 WHILE THE INSTRUMENTATION WAS OFFLINE DUE TO A POWER MANAGEMENT ISSUE.

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

DH19-S7 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2020 THROUGH SEPTEMBER 30, 2023)

Knight Piésold CONSULTING

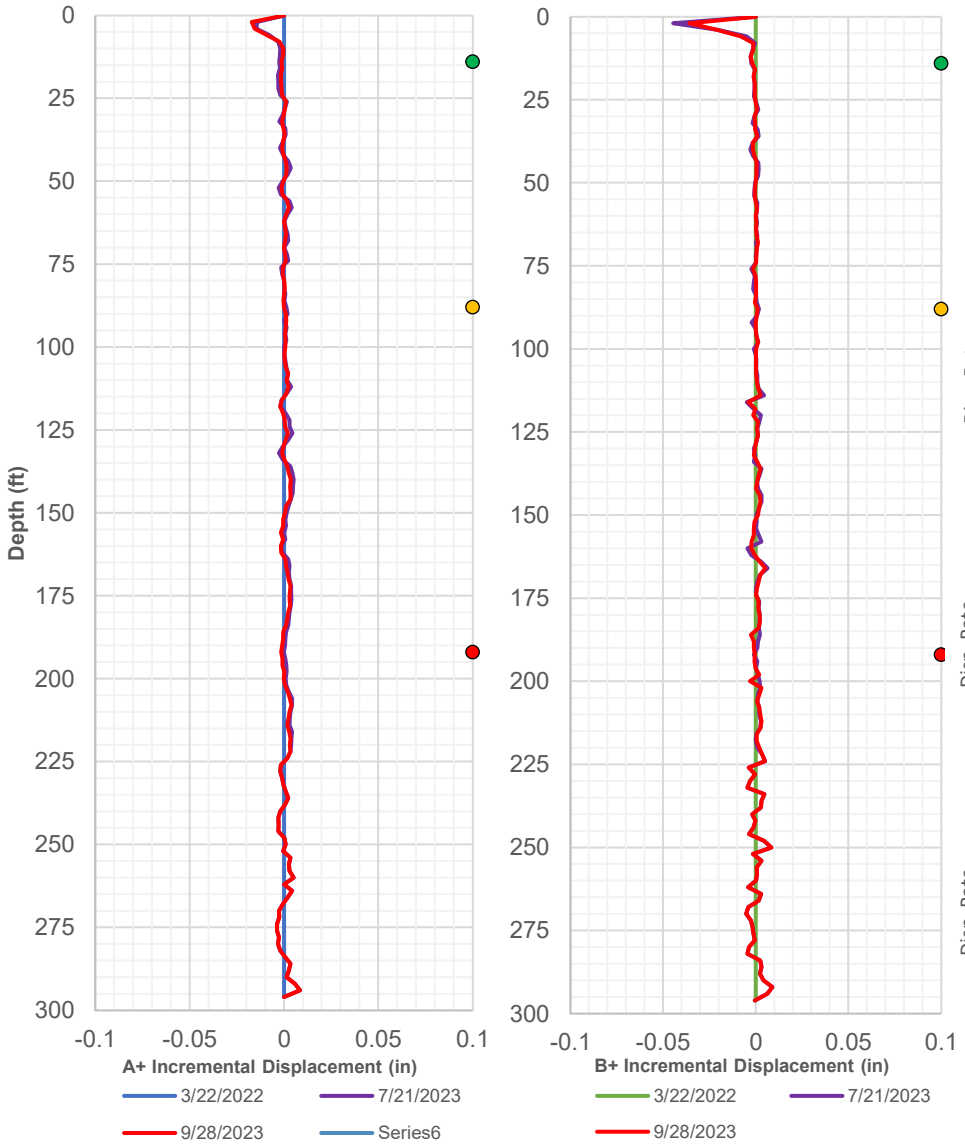
P/A NO. VA101-126/29

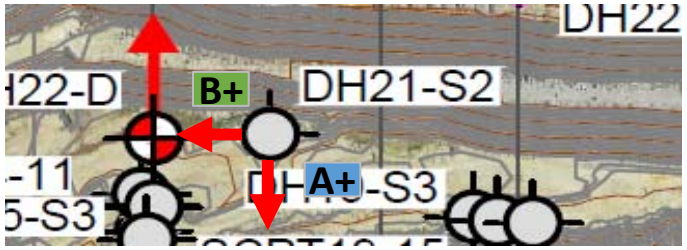
REF. NO. VA23-01703

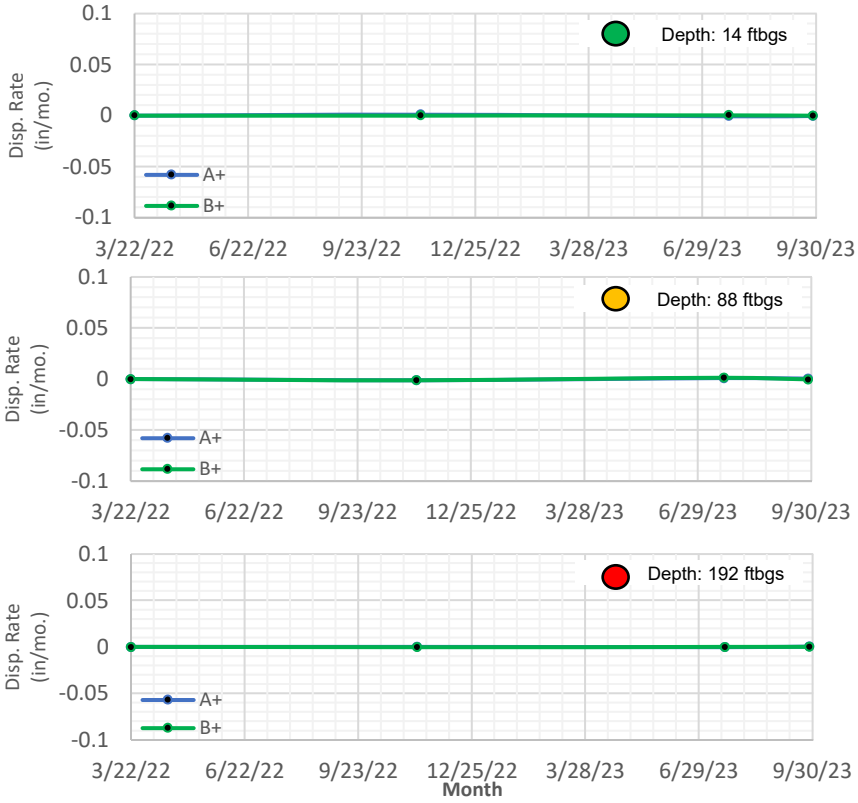
FIGURE B.10

REV 0

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	04OCT'23	ISSUED WITH LETTER	CNN	KTD







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION DATA WITHIN THE UPPER 275 FTBG ARE INTERPRETED TO RESULT PREDOMINANTLY FROM SETTLEMENT-DERIVED CASING DISTORTION WITHIN HISTORICALLY LEACHED ROCKFILL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

INCREMENTAL SUBSURFACE DEFORMATION DRILLHOLE DH21-S2 (MARCH 2022 THROUGH SEPTEMBER 2023)

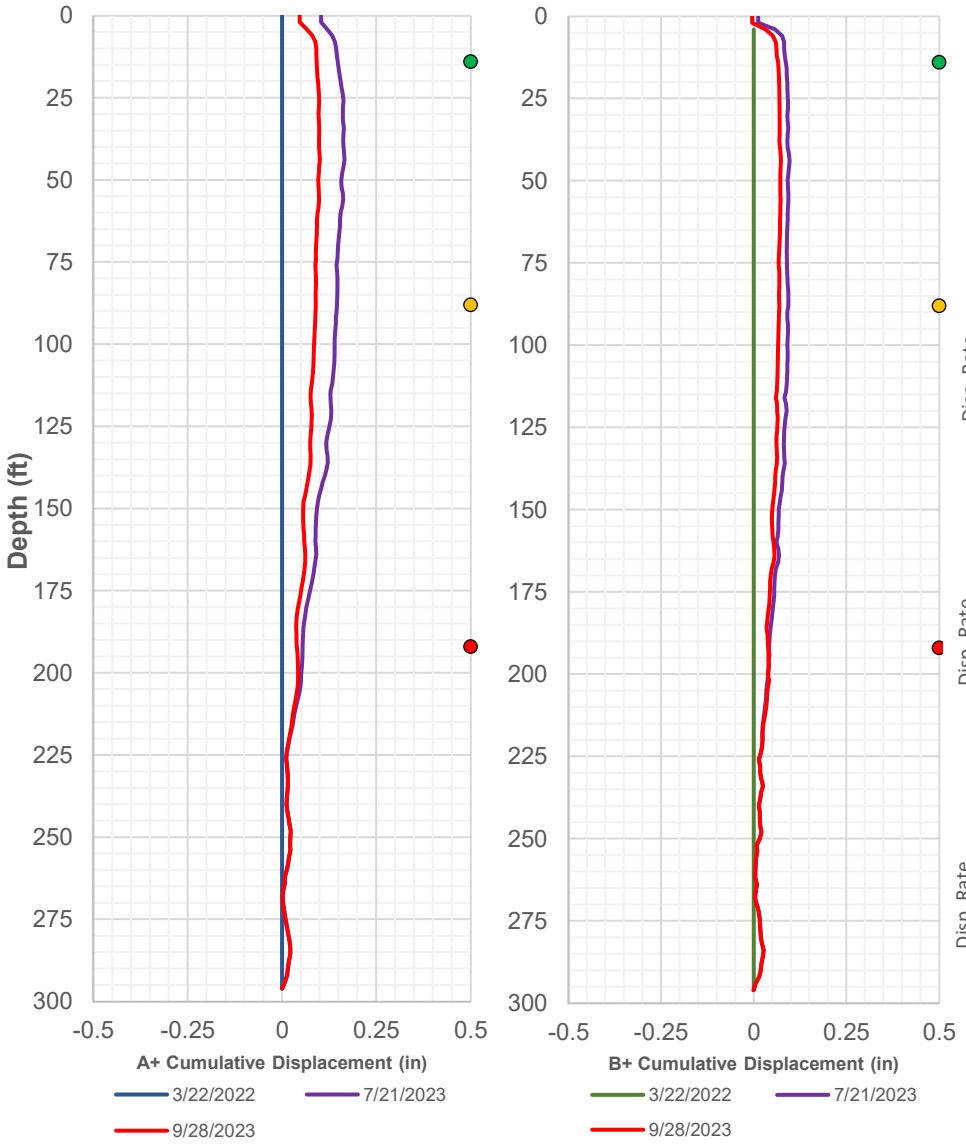
Knight Piésold CONSULTING

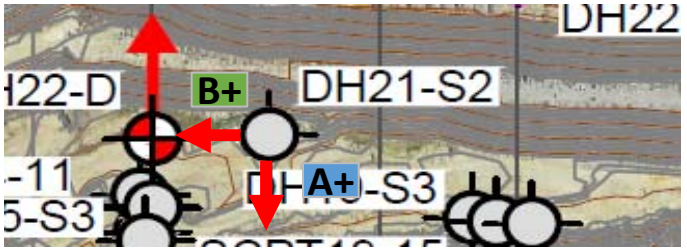
P/A NO. VA101-126/29

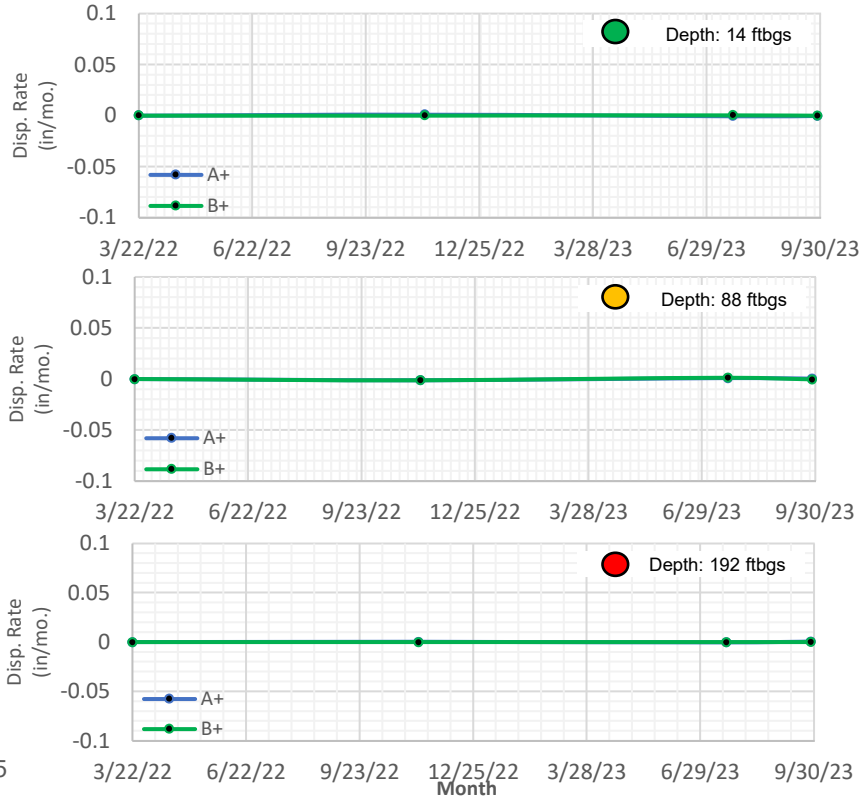
REF. NO. VA23-01703

FIGURE B.11

REV 0







NOTES:
1. CUMULATIVE DEFORMATION MAGNITUDES AND RATES ARE PRESENTED.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION DATA WITHIN THE UPPER 275 FTBG ARE INTERPRETED TO RESULT PREDOMINANTLY FROM SETTLEMENT-DERIVED CASING DISTORTION WITHIN HISTORICALLY LEACHED ROCKFILL.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE SUBSURFACE DEFORMATION DRILLHOLE DH21-S2 (MARCH 2022 THROUGH SEPTEMBER 2023)

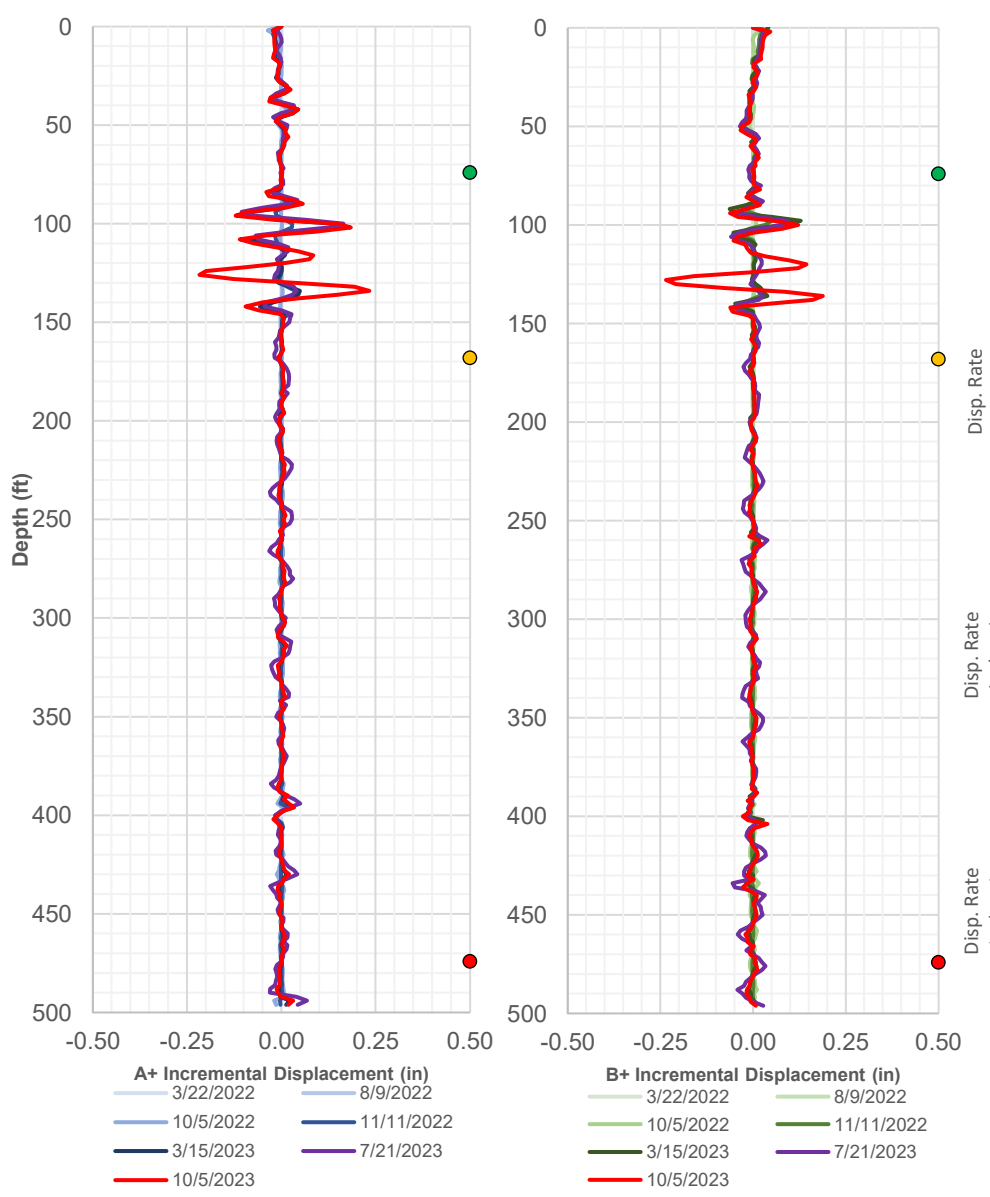
Knight Piésold CONSULTING

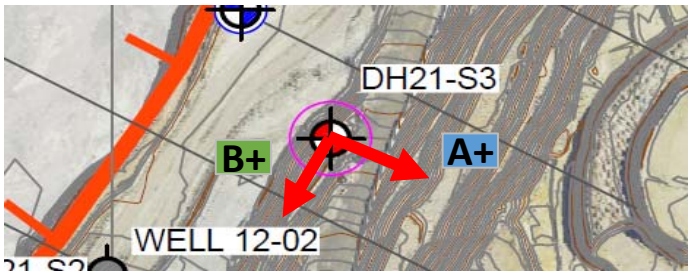
P/A NO. VA101-126/29

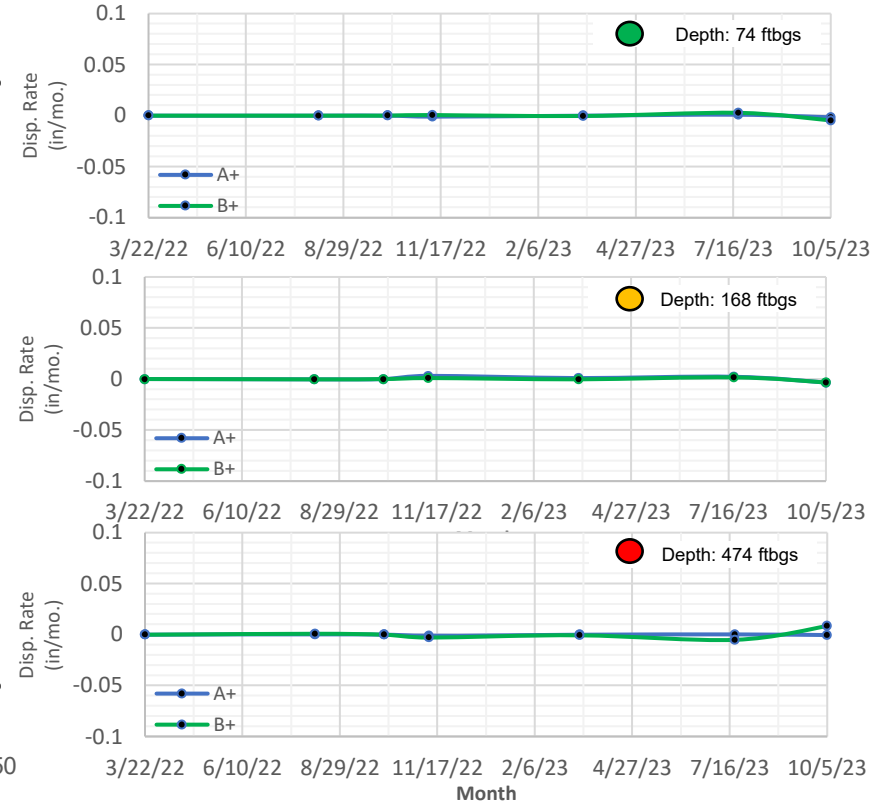
REF. NO. VA23-01703

FIGURE B.12

REV 0







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHEASTWARD AND SOUTHWESTWARD DISPLACEMENTS, RESPECTIVELY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

INCREMENTAL SUBSURFACE DEFORMATION DRILLHOLE DH21-S3 (MARCH 2022 THROUGH SEPTEMBER 2023)

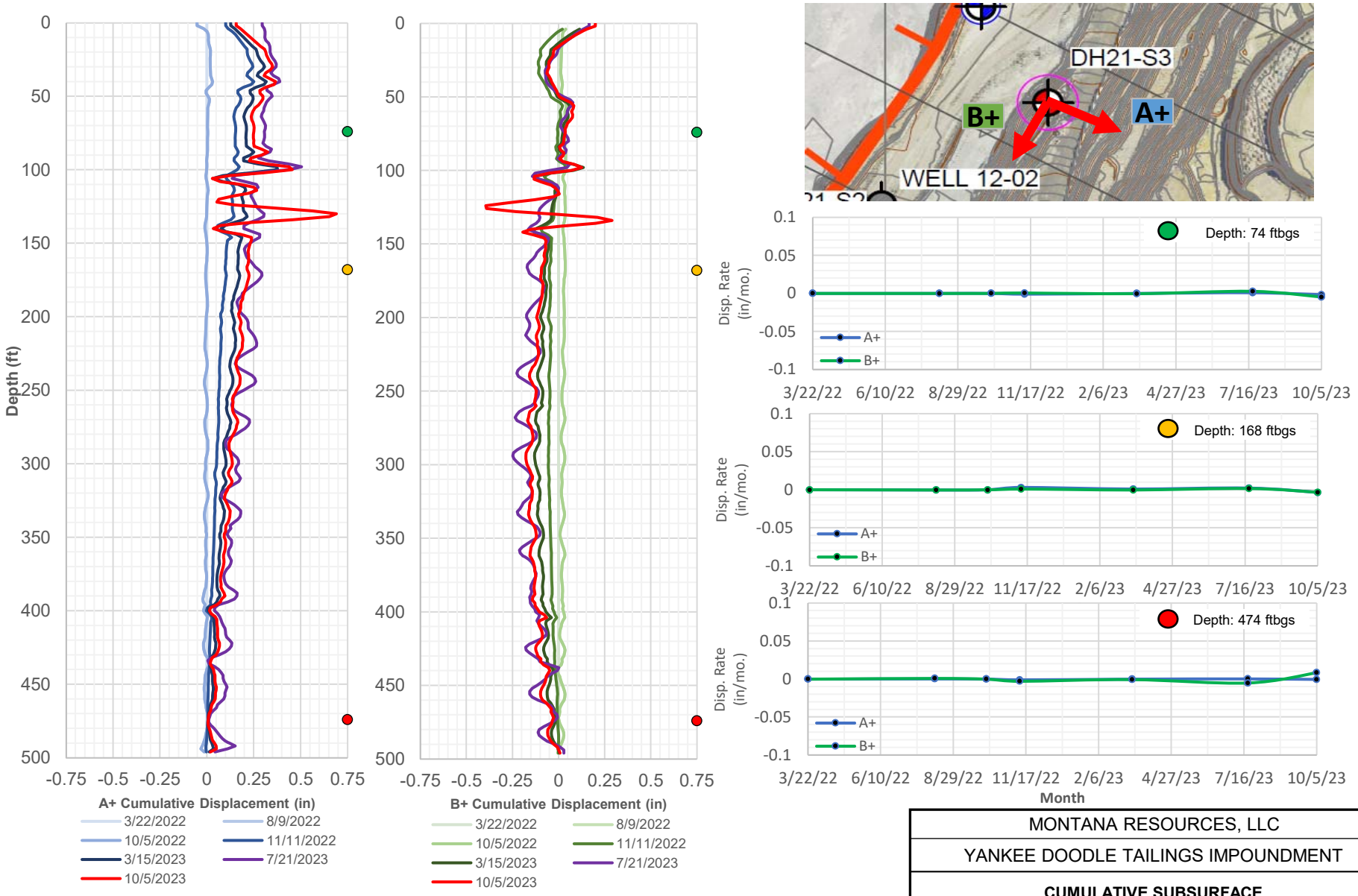
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE B.13

REV 0



NOTES:
1. CUMULATIVE DEFORMATION MAGNITUDES AND RATES ARE PRESENTED.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHEASTWARD AND SOUTHWESTWARD DISPLACEMENTS, RESPECTIVELY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	06NOV'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

CUMULATIVE SUBSURFACE DEFORMATION DRILLHOLE DH21-S3 (MARCH 2022 THROUGH SEPTEMBER 2023)

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

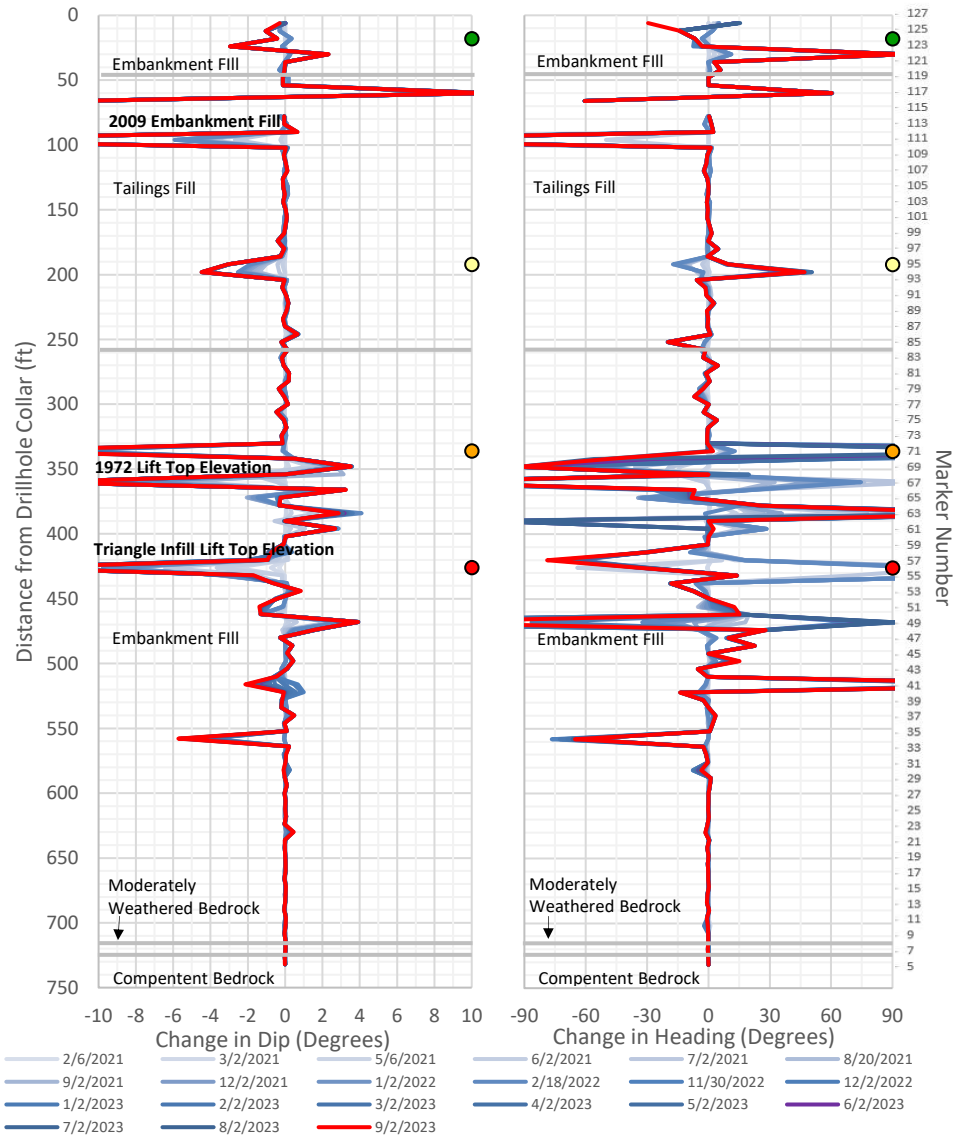
FIGURE B.14

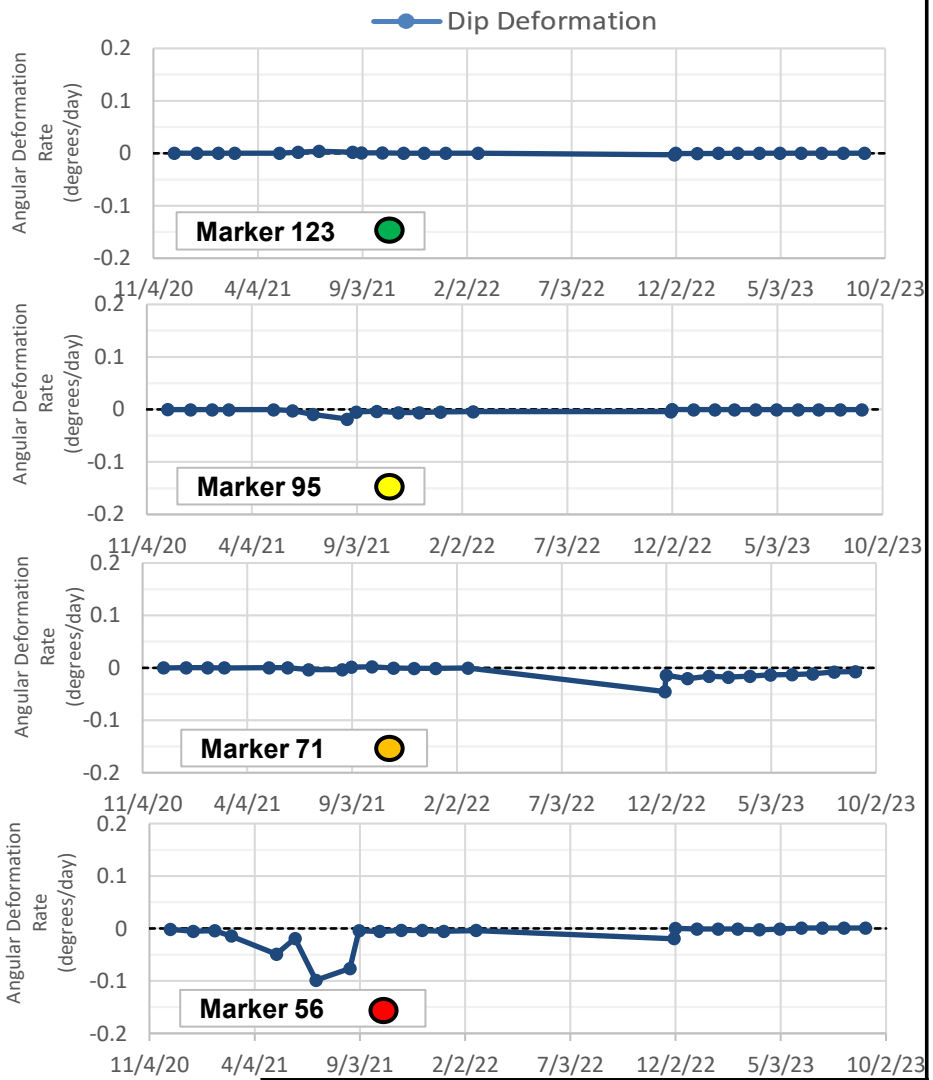
REV 0

APPENDIX C

Geo4Sight Deformation Plots

(Figures C.1 to C.2)





NOTES:

1. MONTHLY AVERAGE DEFORMATIONS ARE PRESENTED AND ARE RELATIVE TO A MONTHLY AVERAGE BASELINE FROM NOVEMBER 24, 2020 TO SEPTEMBER 26, 2023.
2. DIP IS MEASURED FROM THE HORIZONTAL GROUND SURFACE TO THE SENSOR'S Y-AXIS. NEGATIVE CHANGE-IN-DIP INDICATES A STEEPENING SENSOR ORIENTATION.
3. HEADING IS MEASURED CLOCKWISE (CW) FROM THE MAGNETIC NORTHING. POSITIVE CHANGE-IN-HEADING INDICATES CW ANG. DEFORMATION.
4. GEO4SIGHT INSTRUMENTATION IN DH20-S2 WAS OFFLINE BETWEEN MARCH 3 AND NOVEMBER 30, 2022 DUE TO A WATER DAMAGED DATALOGGER.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	27OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

YANKEE DOODLE TAILINGS IMPOUNDMENT

DH20-S2 GEO4SIGHT DIP AND HEADING ANGULAR DEFORMATION MAGNITUDES AND RATES (NOVEMBER 2020 TO SEPTEMBER 2023)

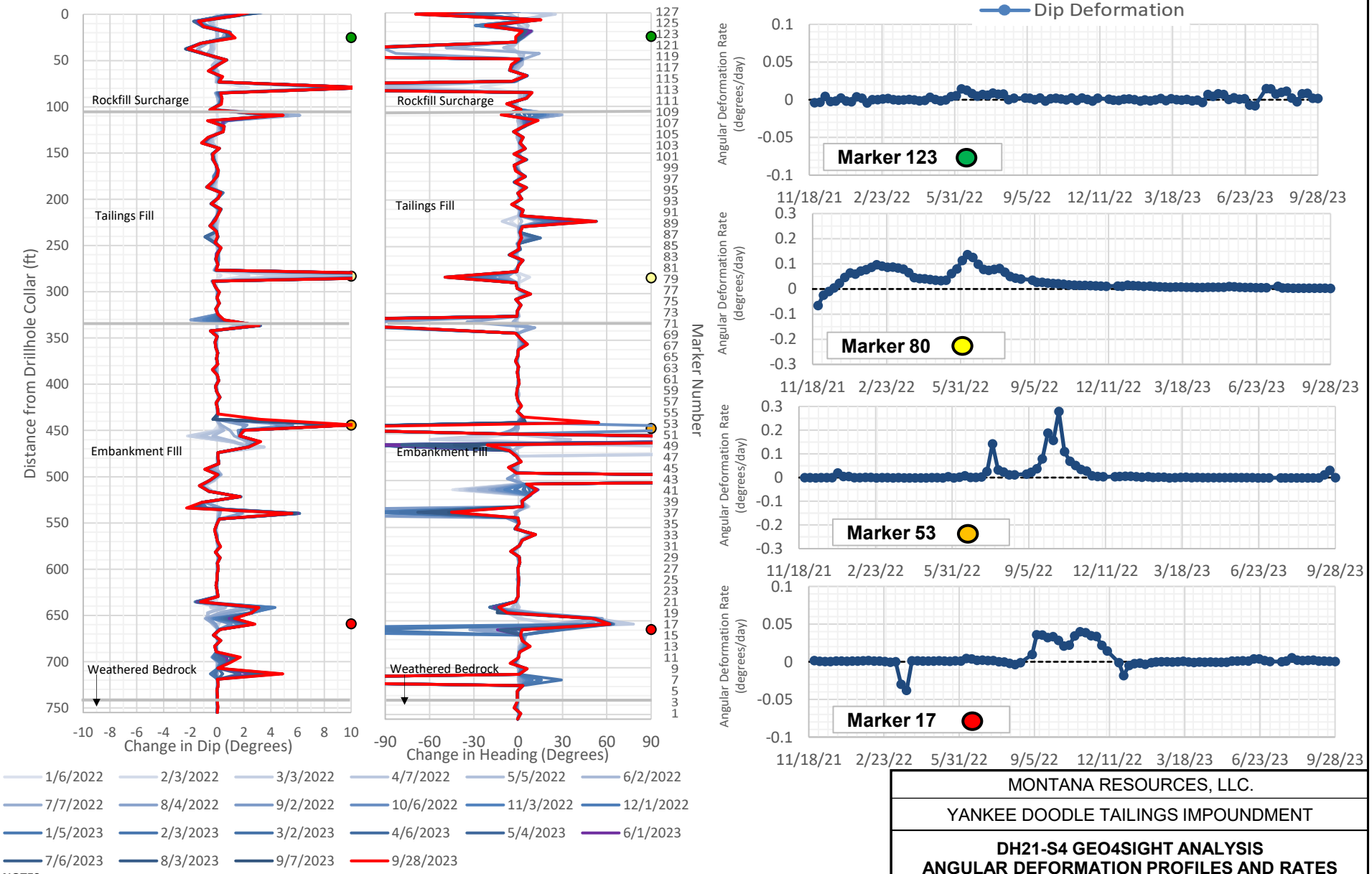
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

FIGURE C.1

REV 0



NOTES:

1. MONTHLY AVERAGE DEFORMATIONS ARE PRESENTED AND ARE RELATIVE TO A WEEKLY AVERAGE BASELINE FROM NOVEMBER 18, 2021 TO SEPTEMBER 28, 2023.
2. DIP IS MEASURED FROM THE HORIZONTAL GROUND SURFACE TO THE SENSOR'S X-AXIS. NEGATIVE CHANGE-IN-DIP INDICATES A STEEPENING SENSOR ORIENTATION.
3. HEADING IS MEASURED CLOCKWISE (CW) FROM THE MAGNETIC NORTHING. POSITIVE CHANGE-IN-HEADING INDICATES CW ANG. DEFORMATION.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	27OCT'23	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC.

YANKEE DOODLE TAILINGS IMPOUNDMENT

DH21-S4 GEO4SIGHT ANALYSIS
ANGULAR DEFORMATION PROFILES AND RATES
(NOVEMBER 2021 TO SEPTEMBER 2023)

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA23-01703

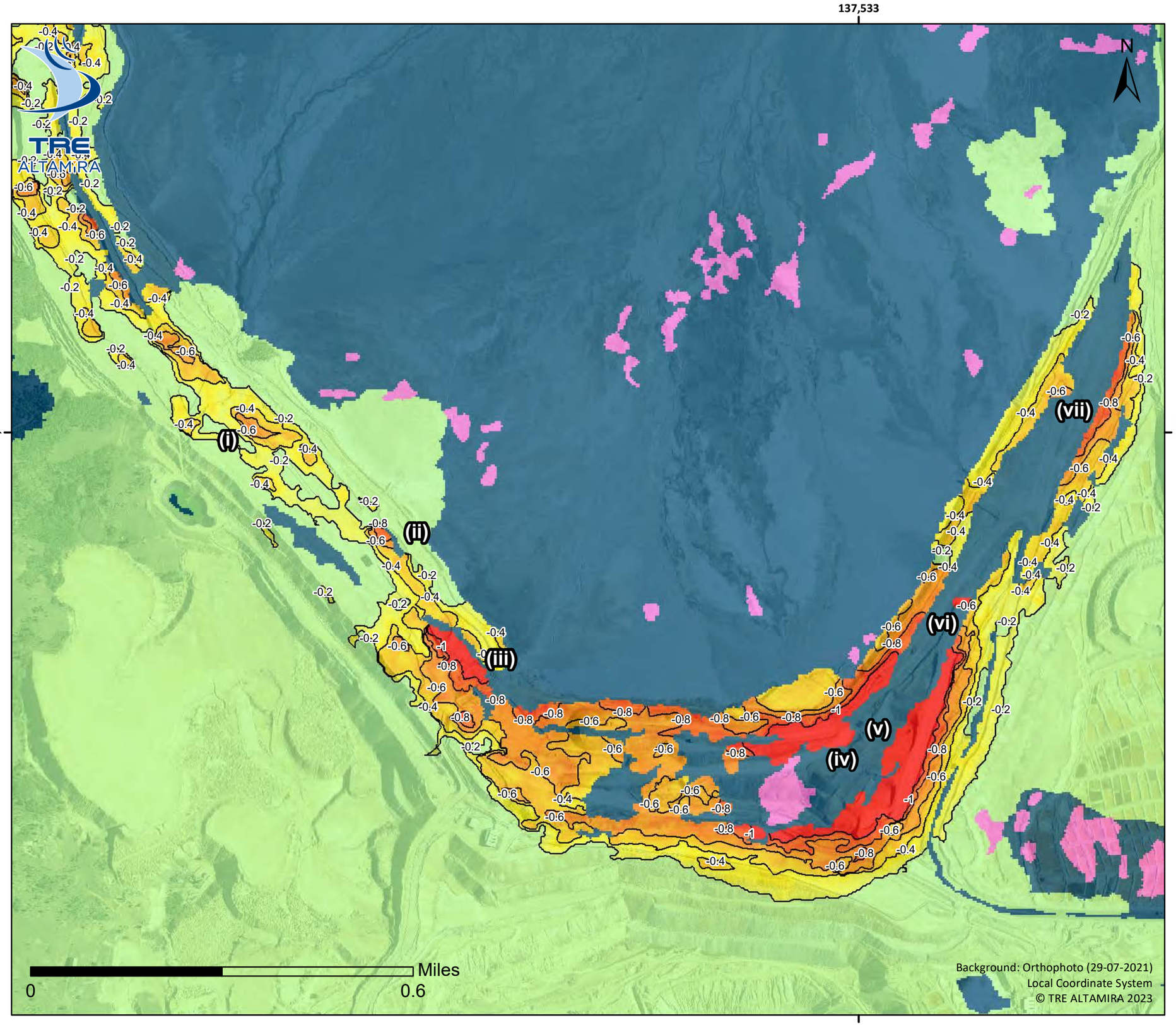
FIGURE C.2

REV 0

APPENDIX D

InSAR Bulletins

(Pages D-1 to D-9)



InSAR Bulletin

Yankee Doodle Tailings Impoundment

14 Jun 2023 - 06 Jul 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.8 inches, **(ii)** -1.0 inches, and **(iii)** -1.5 inches

East-West Embankment Up to **(iv)** -2.2 inches and **(v)** -2.0 inches in the eastern region

East Embankment Up to **(vi)** -1.6 inches in the southern region and **(vii)** up to -1.0 inches in the northern region

PROCESSING DATA

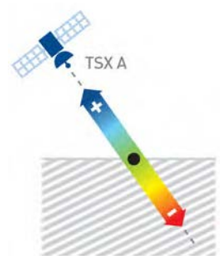
Date range (UTC)	14 Jun 2023 - 06 Jul 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	299 [ft]

LEGEND

LOS Displacement [in]

≤ -1 | -0.5 | 0 | +0.5 | ≥ +1

Displacement contour lines



Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in

137,533

143,058

N

(i)

(ii)

(iii)

(iv)

(v)

(vi)

(vii)

Miles

0

0.6

Background: Orthophoto (29-07-2021)
Local Coordinate System

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

25 Jun 2023 - 17 Jul 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -1.0 inches, **(ii)** -1.0 inches, and **(iii)** -1.6 inches

East-West Embankment Up to **(iv)** -3.5 inches and **(v)** -2.0 inches in the eastern region

East Embankment Up to **(vi)** -2.3 inches in the southern region and **(vii)** up to -1.9 inches in the northern region

PROCESSING DATA

Date range (UTC)	25 Jun 2023 - 17 Jul 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	52 [ft]

LEGEND

LOS Displacement [in]

≤ -1 | -0.5 | 0 | +0.5 | ≥ +1

Displacement contour lines

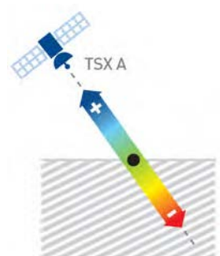
Visibility

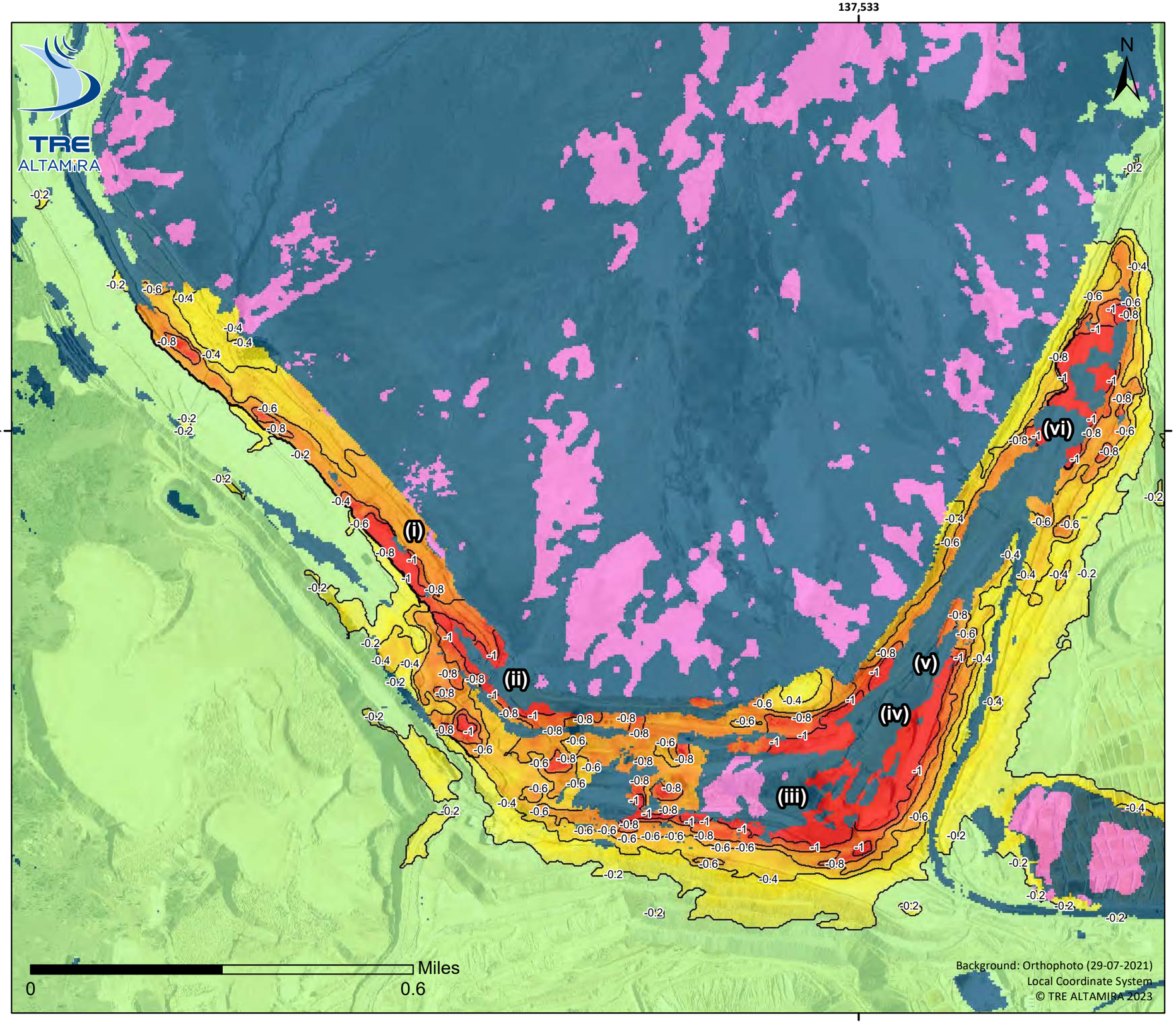
Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in





InSAR Bulletin

Yankee Doodle Tailings Impoundment

06 Jul 2023 - 28 Jul 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -1.0 inches and **(ii)** -1.6 inches

East-West Embankment Up to **(iii)** -2.1 inches and **(iv)** -1.6 inches in the eastern region

East Embankment Up to **(v)** -1.2 inches in the southern region and **(vi)** up to -2.2 inches in the northern region

PROCESSING DATA

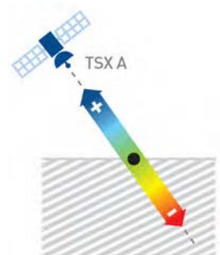
Date range (UTC)	06 Jul 2023 - 28 Jul 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	371 [ft]

LEGEND

LOS Displacement [in]

≤ -1 | -0.5 | 0 | +0.5 | ≥ +1

Displacement contour lines



Visibility

- Surface variation
- No Information
- Possible motion

Movement Detection Threshold: ±0.2 in

137,533

143,058

N

(i) (ii) (iii) (iv) (v) (vi)

0 Miles 0.6

Background: Orthophoto (29-07-2021)
Local Coordinate System

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

17 Jul 2023 - 08 Aug 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.3 inches

East-West Embankment Up to **(ii)** -1.3 inches and **(iii)** -1.7 inches

East Embankment Up to **(iv)** -2.0 inches, **(v)** -0.8 inches in the southern region and **(vi)** up to -1.6 inches in the northern region

PROCESSING DATA

Date range (UTC)	17 Jul 2023 - 08 Aug 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	322 [ft]

LEGEND

LOS Displacement [in]

≤ -1 -0.5 0 +0.5 ≥ +1

Displacement contour lines

TSX A

Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in

137,533

143,058

(i) (ii) (iii) (iv) (v) (vi)

N

TRE ALTAMIRA

0 0.6 Miles

Background: Orthophoto (29-07-2021)
Local Coordinate System

InSAR Bulletin

Yankee Doodle Tailings Impoundment

28 Jul 2023 - 19 Aug 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.8 inches

East-West Embankment Up to **(ii)** -0.9 inches, **(iii)** -1.7 inches, and **(iv)** -1.5 inches

East Embankment Up to **(v)** -1.4 inches in the southern region and **(vi)** up to -0.7 inches in the northern region

PROCESSING DATA

Date range (UTC)	28 Jul 2023 - 19 Aug 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	528 [ft]

LEGEND

LOS Displacement [in]

≤ -1 -0.5 0 +0.5 ≥ +1

Displacement contour lines

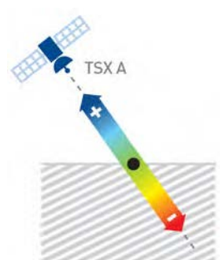
Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in



137,533

143,058

N

(i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix)

Miles
0 0.6

Background: Orthophoto (29-07-2021)
Local Coordinate System

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

08 Aug 2023 - 30 Aug 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.8 inches, **(ii)** -0.9 inches, and **(iii)** -1.2 inches

East-West Embankment Up to **(iv)** -1.3 inches, **(v)** -1.3 inches, and **(vi)** -1.6 inches

East Embankment Up to **(vii)** -1.7 inches in the southern region, **(viii)** up to -1.2 inches and **(ix)** up to -1.6 inches in the northern region

PROCESSING DATA

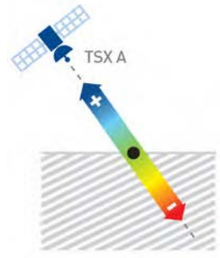
Date range (UTC)	08 Aug 2023 - 30 Aug 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	52 [ft]

LEGEND

LOS Displacement [in]

≤ -1 | -0.5 | 0 | +0.5 | ≥ +1

Displacement contour lines



Visibility

- Surface variation
- No Information
- Possible motion

Movement Detection Threshold: ±0.2 in

137,533

143,058

N

(i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix)

Miles
0 0.6

Background: Orthophoto (29-07-2021)
Local Coordinate System

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

19 Aug 2023 - 10 Sep 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.7 inches, **(ii)** -0.7 inches, and **(iii)** -0.7 inches

East-West Embankment Up to **(iv)** -1.3 inches, **(v)** -1.3 inches, and **(vi)** -1.1 inches

East Embankment Up to **(vii)** -1.4 inches in the southern region, and **(viii)** up to -1.2 inches, and **(ix)** up to -2.3 inches in the northern region

PROCESSING DATA

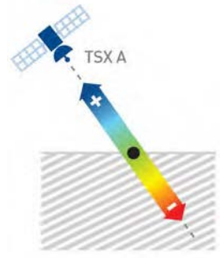
Date range (UTC)	19 Aug 2023 - 10 Sep 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	-558 [ft]

LEGEND

LOS Displacement [in]

≤ -1 -0.5 0 +0.5 ≥ +1

Displacement contour lines



Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in

137,533

143,058

N

(i) (ii) (iii) (iv) (v) (vi) (vii) (viii)

Miles

0 0.6

Background: Orthophoto (29-07-2021)
Local Coordinate System
© TRE ALTAMIRA 2023

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

10 Sep 2023 - 02 Oct 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.5 inches, **(ii)** -1.3 inches, and **(iii)** -0.8 inches

East-West Embankment Up to **(iv)** -0.9 inches, **(v)** -1.0 inch, and **(vi)** -1.7 inches

East Embankment Up to **(vii)** -1.3 inches in the southern region, and **(viii)** up to -1.7 inches in the northern region

PROCESSING DATA

Date range (UTC)	10 Sep 2023 - 02 Oct 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	39 [ft]

LEGEND

LOS Displacement [in]

≤ -1 -0.5 0 +0.5 ≥ +1

Displacement contour lines

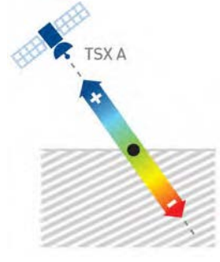
Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in



137,533

143,058

N

(i) (ii) (iii) (iv) (v) (vi) (vii) (viii) (ix) (x)

Miles

0 0.6

Background: Orthophoto (29-07-2021)
Local Coordinate System
© TRE ALTAMIRA 2023

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

21 Sep 2023 - 13 Oct 2023

COMMENTS

Main areas of movement detected during the current 22-day period:

West Embankment Up to **(i)** -0.5 inches, and **(ii)** -1.3 inches

East-West Embankment Up to **(iii)** -1.1 inches, **(iv)** -1.5 inches, **(v)** -1.3 inches, and **(vi)** -1.8 inches

East Embankment Up to **(vii)** -2.4 inches in the southern region, **(viii)** -1.3 inches, **(ix)** -1.7 inches, and **(x)** up to -1.4 inches in the northern region

Further possible motion observed

PROCESSING DATA

Date range (UTC)	21 Sep 2023 - 13 Oct 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	-256 [ft]

LEGEND

LOS Displacement [in]

≤ -1 -0.5 0 +0.5 ≥ +1

Displacement contour lines

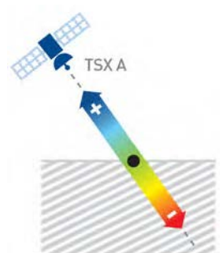
Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in



APPENDIX F

2022 Corrective Action Plan

(Pages F-1 to F-6)

Montana Resources

600 Shields Ave.
Butte, Montana 59701

January 20, 2023

Montana Department of Environmental Quality
Hard Rock Mining Bureau
Attn: Garrett Smith
P.O. Box 200901
Helena, MT 59620

Re: 2022 Annual Inspection Report for Yankee Doodle Tailings Impoundment and Corrective Action Plan for Recommendations

Dear Mr. Smith:

The Engineer of Record (EOR) annual inspection of the Montana Resources, LLC (MR) Yankee Doodle Tailings Impoundment (YDTI) was conducted on September 28, 2022, by Mr. Daniel Fontaine, P.E., the Engineer of Record (EOR). Mr. Fontaine was accompanied during the site inspection by Mr. Mike Harvie (Manager of Engineering and Geology) and Mr. Travis Birkenbuel (Mine Engineer) of MR.

The EOR annual inspection is required under Section 82-4-381 of the Montana Code Annotated (MCA), which also requires the mine operator to prepare a Corrective Action Plan (CAP) summarizing the recommendations of the EOR and an implementation schedule for the corrective actions. KP prepared the 'Yankee Doodle Tailings Impoundment – 2022 Annual Inspection Report (AIR) (KP, 2023), following the inspection.

This letter documents MR's CAP in response to the four recommendations presented by the EOR:

1. Maintain reductions in freshwater use from the Silver Lake Water System to the extent reasonably practicable and continue the Pilot Project to incrementally reduce the water inventory in the YDTI supernatant pond towards the target of approximately 15,000 acre-ft (continuation of 2021 recommendation).

2. Modify the tailings distribution system by extending Line 2 to allow discharge at location Discharge 3-2 (NS-1) and add a discharge location between the current locations of Discharge 3-1 (EW-1) and Discharge 3-2 (NS-1) when the EL. 6,450 ft raise of the embankment is completed. Use of 12-inch discharge lines along the extension of Line 2 to location Discharge 3-2 (NS-1) would satisfy the recommendation (modification of 2021 recommendation).

3. Regrade the upstream slope of the embankment during relocation of the tailings delivery pipelines (Lines 2 and 3) to the tailings pipeline corridor for EL. 6,450 ft lift. Regrade the embankment upstream slope to cover and incorporate the tailings pipeline bench along the EL. 6,400 ft lift. Implement the alluvium facing layer between the crest of the pipeline corridor along the EL. 6,450 ft lift and the upstream alluvial facing of the EL. 6,400 ft lift along the regraded upstream slope prior to cutting off access with placement of the tailings pipelines. The intent is to create a continuous layer of alluvium between the EL. 6,450 pipeline corridor and the alluvium facing previously placed as part of the EL. 6,400 ft lift construction. This recommendation

applies to the portion of the East-West Embankment in the Central Pedestal Area to the east of approximately Section 23+00NW (Discharge location EW-1) and the entire North South Embankment.

4. Develop and implement a new system to collect flows along the Seep 10 bench and convey these flows to the HsB Pond (continuation of 2021 recommendation).

MR has developed the following CAP that is expected to effectively address the recommendations contained in the AIR.

1. **Maintain reductions in freshwater use from the Silver Lake Water System to the extent reasonably practicable and continue the Pilot Project to incrementally reduce the water inventory in the YDTI supernatant pond towards the target of approximately 15,000 acre-ft (continuation of 2021 recommendation).**

MR continued to operate with reduced freshwater use in 2022 (in comparison to pre-2017 years), with an average SLWS flowrate for MR mine operations of approximately 1.2 MGPD (January through December inclusive). This is comparable with the average flowrate since mid-2017. MR anticipates comparable average use of freshwater in 2023.

Since commissioning the Pilot Project in September 2019, the net YDTI water deficit is approximately 2,730 million gallons (8,390 ac-ft), through 2022. MR is optimistic that the YDTI supernatant pond target inventory of approximately 15,000 acre-ft can be achieved over the next two years through a combination of the discharging water from the YDTI using the Pilot Project and continuing to operate with reduced SLWS freshwater use. The Pilot Project is not entirely within MR's control and due to these external factors and Polishing Plant interruptions, it is possible that the timeline could be impacted.

2. **Modify the tailings distribution system by extending Line 2 to allow discharge at location Discharge 3-2 (NS 1) and add a discharge location between the current locations of Discharge 3-1 (EW-1) and Discharge 3-2 (NS-1) when the EL. 6,450 ft raise of the embankment is completed. Use of 12-inch discharge lines along the extension of Line 2 to location Discharge 3-2 (NS-1) would satisfy the recommendation (modification of 2021 recommendation).**

In December 2022 MR issued a 2021 CAP deferral letter (MR, 2022) to request the recommended extension of Line 2 to occur once the EL. 6,450 ft lift construction is completed. Construction of the EL. 6,450 ft lift is still in progress and MR will extend Line 2 shortly after completion of the lift (including implementation of Recommendation 3 below). MR anticipates EL. 6,450 ft lift construction will be completed in 2023 or early in 2024 (see Recommendation 3 CAP below).

MR installed 18 new discharge locations around the YDTI consisting of single or twinned 12-inch pipelines from Q2 through Q3 2022. The addition of the 12-inch discharge pipelines has provided additional coverage around the YDTI; however, the existing Line 2 was not fitted with additional 12-inch discharge locations in 2022. As part of the extension of Tailings Delivery Line 2, MR will consider the addition of 12-inch discharge locations on

Line 2 to provide additional tailings deposition coverage in the area between Discharge 3-1 (EW-1) and Discharge 3-2 (NS-1).

3. **Regrade the upstream slope of the embankment during relocation of the tailings delivery pipelines (Lines 2 and 3) to the tailings pipeline corridor for EL. 6,450 ft lift. Regrade the embankment upstream slope to cover and incorporate the tailings pipeline bench along the EL. 6,400 ft lift. Implement the alluvium facing layer between the crest of the pipeline corridor along the EL. 6,450 ft lift and the upstream alluvial facing of the EL. 6,400 ft lift along the regraded upstream slope prior to cutting off access with placement of the tailings pipelines. The intent is to create a continuous layer of alluvium between the EL. 6,450 pipeline corridor and the alluvium facing previously placed as part of the EL. 6,400 ft lift construction. This recommendation applies to the portion of the East-West Embankment in the Central Pedestal Area to the east of approximately Section 23+00NW (Discharge location EW-1) and the entire North South Embankment.**

MR and KP discussed the methodology for placement of alluvium materials (Zone F) along the upstream slope of the embankment during the EOR annual inspection. The EL. 6,450 ft Issued for Construction (IFC) drawings indicate that the upstream slope of the Zone U and Zone F placement are to be field fit to maintain separation between the future tailings mass and the embankment rockfill zone, with a minimum nominal thickness of 3 ft alluvium.

The process of regrading the upstream slope and placing the alluvium by dozer (instead of dumping) is expected to enhance performance of this layer, particularly along the interface between the EL. 6,400 ft crest and base of the EL. 6,450 ft lift where segregated coarse rockfill is typically present due to the method of construction. Following construction of the EL. 6,450 ft embankment and tailings discharge corridor, MR will systematically relocate the tailings delivery pipelines from EL. 6,400 to EL. 6,450 ft allowing for additional U (rockfill) or F (alluvium) materials to be placed along the upstream face of the embankment. Figure 1 below outlines the proposed placement of materials, maintaining a minimum nominal thickness of 3 ft of alluvium along the entire upstream face.

MR will initiate sloping and placement of Zone F in Q1 of 2023, across the Central Pedestal Area east of Discharge 3-1. This will result in Discharge 3-1 temporarily being the furthest east discharge location. Upon completion of facing material along the Central Pedestal Area, MR in consultation with the EOR will determine if sloping and Zone F placement can be continued without snow cover on the tailings beach to control fugitive dust emissions, or if Line 3 is reconnected and the discharge line continues to be operated along the North-South Embankment on the EL. 6,400 pipe bench until site conditions are suitable to continue construction.

Montana Resources

600 Shields Ave.
Butte, Montana 59701

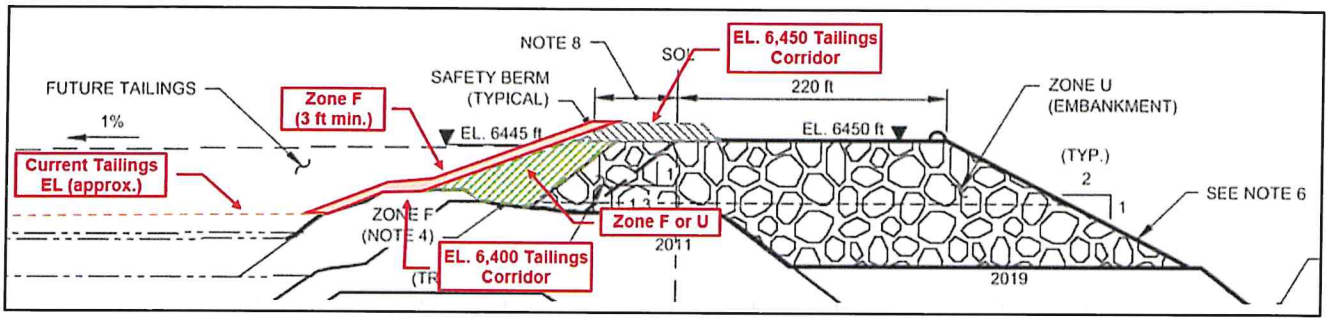


Figure 1 Proposed Alluvium Facing

4. **Develop and implement a new system to collect flows along the Seep 10 bench and convey these flows to the HsB Pond (continuation of 2021 recommendation).**

MR has prepared the area along the Seep 10 bench (EL. 5,900 ft) in advance of construction of the new Seep 10 drainage system proposed as part of the HsB Rock Disposal Site Stage 1 Drainage System (KP, 2021), as outlined in the 2021 CAP Deferral letter (MR, 2022). The Seep 10 drainage design concepts include the relocation of the Seep 10 pond and weir to the west, and a drainage pipeline to HsB Pond along the 7 percent Ramp.

MR will initiate construction of the Seep 10 drainage works shortly after the Issued-for-Construction (IFC) design drawings and associated technical specifications are developed by KP. The duration of construction will be dependent on the detailed design and the availability of materials (supply chain) specified in the design.

If there are any questions or concerns regarding the CAP and schedule please contact me at (406) 496-3211.

Sincerely,

Mark Thompson

Vice President of Environmental Affairs
Montana Resources, LLC

Montana Resources

600 Shields Ave.
Butte, Montana 59701

Attachments:

A. Engineer of Record – Verification

References:

Knight Piésold Ltd. (KP) 2021, Horseshoe Bend Rock Disposal Site – Stage 1 Drainage System Report, KP Ref . No. VA101-126/25-3 Rev. 0, December 6, 2021.

Knight Piésold Ltd. (KP) 2023, Yankee Doodle Tailings Impoundment 2022 Annual Inspection Report, KP Ref. No. VA101-126/27-2 Rev. 0, January 20, 2023.

Montana Resources, LLP. (MR) 2022. 2021 Yankee Doodle Tailings Impoundment Corrective Action Pan – Corrective Action Deferral Notification, December 16, 2022

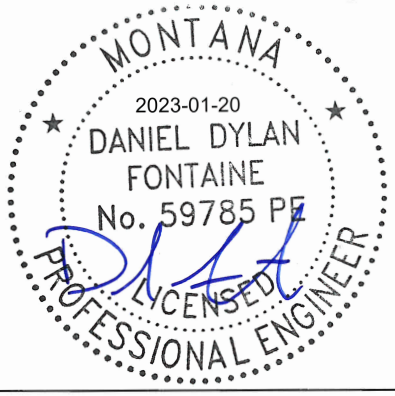
Montana Resources

600 Shields Ave.
Butte, Montana 59701

ATTACHMENT A:

Engineer of Record (EOR) Verification

I have reviewed and verify that the corrective actions proposed by MR should reasonably be expected to effectively address the recommendations contained in the 2022 Annual Inspection Report.



Reviewed: _____

Daniel Fontaine, P.E.
Specialist Engineer | Associate
Knight Piésold Ltd.
YDTI Engineer of Record