Knight Piésold CONSULTING

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April 29, 2024

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Dear Mike,

RE: Q4 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 Doodle 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, 2023). 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.

An embankment deformation monitoring program is active, 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 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 during 2023 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 2024.

This letter provides a quarterly summary of piezometric, and deformation monitoring data collected during the fourth quarter (Q4) 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 embankment construction activities occurred during Q4 2023, including infilling and

regrading areas along the EL. 6,450 ft Central Pedestal Area 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. 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. 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).

2.0 PIEZOMETRIC MONITORING

2.1 GENERAL

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 Q4 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 (to be issued 2024). The active piezometric monitoring network and a summary of Q4 2023 piezometric conditions are presented in the following sections.

2.2 OVERVIEW OF PIEZOMETRIC MONITORING NETWORK

Pore pressures are monitored at 117 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, 2023). 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 Q4 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 installed at drillhole DH23-S1, which was completed to replace DH15-S5 during the 2023 Site Investigation Program.
- **DH18-S1 VW2, VW3, and VW4** were deactivated on March 8th, 2023 to facilitate North-South Embankment EL. 6,450 ft lift construction, but were subsequently damaged and abandoned. KP plans to replace these sensors during the 2024 Site Investigation Program.
- **DH18-S2 VW2** was damaged on October 10, 2023, and has been abandoned. KP plans to replace this sensor during the 2024 Site Investigation program.
- **MW12-05** was damaged on August 8, 2023 and has been abandoned. 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 instrumentation at this site as part of upcoming site investigation programs over the next several years.

2.3 SUMMARY OF Q4 2023 PIEZOMETRIC CONDITIONS

2.3.1 GENERAL

No piezometric trigger elevation exceedances were observed at QPP monitoring sites during Q4 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.

2.3.2 EAST-WEST EMBANKMENT

Piezometric monitoring within the East-West Embankment during Q4 2023 generally observed slightly increasing pore water pressures along Section 8+00W, with decreasing piezometric elevations observed on Section 0+00. Notable piezometric trends observed within the East-West Embankment are summarized below. No data are available from QPP and non-QPP sensors within DH15-S5 and DH17-S2 beneath the Central Pedestal Area East-West Embankment crest during Q4 2023. These sensors were damaged by construction; however, replacement sensors were installed in the general vicinity of the damaged instruments as part of the 2023 Site Investigation Program. Data from these sites will be incorporated into subsequent quarterly monitoring letters.

Piezometric QPP sensors installed within the East-West Embankment along Section 8+00W generally monitored slightly increasing pore water pressures during Q4 2023. Supporting findings include:

- QPP monitoring site DH15-S3 observed relatively stable pore water pressures (approximately 0.1 ft increase) during Q4 2023.
- QPP monitoring sites MW94-11 and MW94-08 monitored slightly increasing pore water pressures (approximately 0.4 ft at both sites).
- QPP sensor DH15-S4 VW2 (Section 8+00W) observed steadily increasing pore water pressure (approximately 4.4 ft) during Q4 2023 but remains below 28 ft below the trigger elevation.
- Non-QPP sensor DH23-S3 VW3 (installed downstream of DH15-S4) monitored a 2.5 ft pore water pressure increase between November 7th and December 21st, 2024.

- Non-QPP Geo4Sight instrumentation within drillhole DH20-S2 within the upstream embankment slope and foundation on Section 8+00W, monitored relatively stable pore pressures during Q4 2023.

Piezometric conditions monitored by QPP and non-QPP sites on East-West Embankment Section 0+00 decreased slightly throughout the quarter. Key findings include:

- QPP sensor DH19-S7 VW1 continued to monitor slightly decreasing pore water pressures (approximately 1.5 ft) within the basal saturated zone.
- QPP monitoring site DH17-S1 monitored a minor pore water pressure decrease (approximately 1.2 ft decrease) during Q4 2023.
- Non-QPP Geo4Sight instrumentation within drillhole DH21-S4 monitored relatively stable pore pressures during Q4 2023.

Non-QPP sensor DH19-S7 VW7 previously monitored a piezometric response to EL. 6,450 ft embankment construction within the historical 1982 lift-top on Section 0+00. Sensor readings have fluctuated significantly following completion of construction (beginning in approximately May 2023), which may indicate an instrumentation issue. This behavior continued during Q4 2023, and findings are summarized below:

- DH19-S7 VW7 observed an overall quarterly pore water pressure decrease of approximately 12 ft during Q4 2023; however, two significant fluctuations (approximately 30 ft) followed by a rapid return to prior conditions was observed from October 1st through November 18th, 2023, and December 9th and December 31st, 2023.
- The cause of the fluctuating trend is uncertain and additional monitoring and investigation of sensor performance is recommended to determine whether it may be an instrumentation issue.

2.3.3 NORTH-SOUTH EMBANKMENT

Limited piezometric data are available from QPP sites within the North-South Embankment due to damage resulting from recent El. 6,450 ft embankment lift construction. Available piezometric instruments continue to indicate relatively constant pore water pressures during Q4 2023. Key findings include:

- Monitoring well MW12-01 monitored slightly decreasing pore water pressures (approximately 0.7 ft) during Q4 2023. The current elevation remains approximately 10 ft below the QPP threshold elevation, and the pore pressures appear to be reducing with time.
- No data are available from QPP sensors DH18-S2 VW2 (after October 10, 2023), MW12-05 (after August 8, 2023), and DH18-S1 VW2 (after March 8, 2023) due to suspected damage from EL. 6,450 ft embankment construction. KP plans to replace sensors DH18-S2 VW2 and DH18-S1 VW1 during the 2024 Site Investigation program (as discussed previously in Section 2.1) and updated QPPs will be developed following installation.

2.3.4 WEST EMBANKMENT AND DRAIN

Relatively constant or slightly decreasing pore water pressures were observed within the West Embankment and West Embankment Drain (WED) during Q4 2023. Key findings include:

- QPP sensors in drillhole DH15-12 (VW1, VW2, and VW3), installed within the West Embankment foundation, observed slightly increasing pore water pressures (approximately <0.1 to 0.16 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) observed relatively constant pore pressures (quarterly changes of less than +/-0.1 ft). 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 decrease (approximately 1 ft) during Q4 2023.

2.3.5 TAILINGS MASS

Pore water pressure instrumentation installed within the tailings mass upstream of the Central Pedestal Area of the East-West Embankment generally monitored increasing pore water pressures during Q4 2023. Key findings include:

- Pore pressures upstream of the rockfill surcharge at non-QPP sites SCPT15-04 VW2 and SCPT15-05 VW2 monitored increases in piezometric elevation of approximately 7.2 ft and 5.3 ft, respectively during Q4 2023. The increasing trends started in May 2023 and correspond with pervasive use of nearby 12-inch diameter tailings discharges.
- Non-QPP sites DH17-S3 VW2 and SCPT15-03 VW1, installed beneath the central rockfill surcharge, monitored slightly increasing piezometric elevations (approximately 3 ft during Q4 2023).
- Non-QPP sensors SCPT21-S5 VW3 and VW2 monitored steady increases in piezometric elevation (approximately 3 and 7 ft, respectively) during Q4 2023, while nearby tailings discharge from the 12-inch diameter lines was active. Sensor SCPT21-S5 VW2 began recording erroneous data on November 26, 2023, and the sensor appears to be damaged.

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 Q4 2023. Key findings include:

- Tailings pore water pressures upstream of the North-South Embankment remained relatively constant during Q4 2023.
  - Non-QPP sensor DH19-S6 VW6 observed slightly decreasing pore water pressures (approx.1 ft)
  - Non-QPP sensors SCPT21-S2 VW2 and SCPT21-S4 VW2 monitored slightly increasing pore water pressures (approximately 2 ft and 2.3 ft, respectively).
  - Sensor SCPT21-S1 monitored relatively stable pore water pressures during Q4 2023
- Instruments installed within the tailings upstream of the East-West Embankment monitored stable or increasing pore water pressures during Q4 2023. Non-QPP sensor SCPT15-06 VW2 monitored a pore water pressure increase of approximately 6 ft during Q4 2023, continuing an increasing trend first observed in April 2023. This trend corresponds with significant usage of the nearby tailings discharges 3-1, 2-1, and the 12-inch discharge points.

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 as part of the routine YDTI monitoring programs. A summary of the available displacement monitoring techniques and key monitoring trends from Q4 2023 are provided in the following sections. Quarterly monitoring generally observed continued constant rate surface deformations within regions of historical rockfill outside of recent

construction 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 six locations along the North-South Embankment. These monuments were previously surveyed using Differential Global Positioning System (DGPS) survey equipment; however, MR transitioned to prisms and total station surveying methods in September 2023.
- **Satellite-based interferometric Synthetic Aperture Radar** (inSAR) Bulletin and SqueeSAR analyses with comprehensive coverage of the YDTI embankments. Data collection is active from approximately April through October annually, while snow-free conditions persist. Two (2) short-term inSAR bulletins and SqueeSAR data up to December 8, 2023 were available for review in Q4 2023.
- **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.
- **Manual Inclinometers** located in drillholes DH21-S2, and DH21-S3within the Central Pedestal Area and North-South Embankment and surveyed with a traversing-probe.
- **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 or manual download, depending on the data transmission method. The trends and conditions observed in the monitoring data during Q4 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

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 Q4 2023 do not indicate development of unexpected deformations within the downstream embankment shell nor evidence of progressive (accelerating) deformation following substantial completion of construction. Only minor embankment construction activities occurred during Q4 2023, including infilling and regrading areas along the EL. 6,450 ft crest at the

Central Pedestal Area. Increasing deformation rates were not anticipated or observed as a result of these activities. Key findings are discussed by embankment in the following sections.

3.2.2 EAST-WEST EMBANKMENT DEFORMATIONS

Construction of the EL. 6,450 ft lift of the East-West Embankment was substantially completed in August 2022 and monitoring since (including during Q4 2023) indicates slowing surface and subsurface deformation rates both within and downstream areas of recent construction. A high-level summary of monitored Q4 2023 deformations is provided below:

- Two inSAR bulletins are available during Q4 2023 and indicate displacement rates have continued to slow slightly. Long-term inSAR displacement data (SqueeSAR) available downstream of the construction area (up to November 4, 2023) also indicate slowing displacement rates throughout the downstream slope of the East-West Embankment in the Central Pedestal Area.
- GNSS and total station survey-monuments indicate constant or slightly slowing surface deformation rates within the East-West Embankment since substantial completion of the El. 6,450 ft lift:
  - Survey-monuments installed along the central Tailings Pipeline Ramp (GNSS DH19-S7, DS-1, DS-2, DS-3, and DS-4) have monitored slowing vertical and lateral (predominantly southward) deformations since August 2022.
  - Survey-monuments installed along the El. 6,150 ft bench (MS-1, MS-2, and MS-3) generally have continued to exhibit slowing displacement rates since substantial construction completion. Slightly elevated vertical displacement rates were monitored at GNSS DH19-S5 (EL. 6,150 ft bench west of Section 8+00W) during Q3 and Q4 2023. No discernable increase to lateral displacement rates were observed and continued monitoring into January 2024 has shown that the vertical displacement rates returned to the previously observed lower rates. Available inSAR data does not appear to corroborate this increase. Continued monitoring during Q1 2024 is recommended.
  - Survey-monuments installed along the Seep 10 Bench (GNSS DH19-S3, SB-1, SB-2, and SB-3) indicate slowing deformation rates since mid-2022. The GNSS DH19-S4 survey-monument (installed on the Seep 10 Bench on Section 8+00W) monitored slightly elevated vertical deformation rates during Q3 and Q4 2023. Lateral displacement rates did not materially increase and continued monitoring into January 2024 has shown that the vertical displacement rates returned to the previously observed lower rates. Available inSAR and DGPS survey-monument data do not exhibit this same increase; however, continued monitoring during Q1 2024 is recommended.
- Seep 10 Bench inclinometers (DH19-S3, DH19-S4, and DH21-S2) indicate that deformation rates have generally remained constant or slowed slightly during Q4 2023. Data for DH19-S3 was limited during Q4 since the site was offline due to an instrumentation issue from October 21 to December 12, 2023.
- Geo4Sight instrumentation (DH20-S2 and DH21-S4) from beneath the surcharge on Sections 8+00W and 0+00 has continued to monitor minimal displacement following completion of the rockfill surcharge and embankment lift construction.

3.2.3 NORTH-SOUTH EMBANKMENT DEFORMATIONS

North-South Embankment El. 6,450 ft lift construction was substantially completed in March 2023 and observed surface and subsurface deformations since (including during Q4 2023) have slowed. A high-level summary of monitored Q4 2023 conditions is provided below:

- InSAR bulletins and SqueeSAR analysis continue to indicate elevated deformation rates within and localized around areas of recent North-South Embankment EL. 6,450 ft lift construction. Observed rates continue to slow with time following construction.
- Manual survey-monuments installed along the North-South Embankment (NS-01, NS-02, NS-03, NS-04, NS-05, and NS-06) indicate slightly elevated, generally slowing deformation rates following the substantial conclusion of EL. 6,450 ft lift construction. The highest Q4 2023 displacement rates were observed near Section 0+00 (at monument NS-01) at the corner of the North-South Embankment, where several lifts were placed and continue to settle. It is anticipated that rates will continue to slow in Q1 2024.
- Inclinometer DH21-S3, installed within the North-South Embankment and foundation near Section 28+00N, has monitored relatively minor downslope displacement and settlement since March 2022. Observed displacement rates are influenced by noise from ongoing settlement but do not indicate sustained increasing rates. More substantial settlement influence is present between approximately 100 and 150 ftbgs, in proximity to the interface between older rockfill (2009) and more recent (2018 and 2019) downstream step-out lifts.

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 by available deformation monitoring data from multiple monitoring methods.

4.0 CONCLUSIONS

KP supports MR with routine monitoring of YDTI hydrogeological and geotechnical conditions, as part of their operational surveillance plan for the tailings facility, as described in the TOMS Manual (MR/KP, 2023). Piezometric conditions, 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 Q4 2023. Relatively stable piezometric conditions were monitored throughout the North-South, East-West, and West-Embankments (including the WED) during Q4 2023. Minor pore water pressure increases were observed along East-West Embankment Section 8+00W during the quarter. Minor, isolated influence on piezometric conditions from construction remains apparent and is anticipated to dissipate with time following completion of EL. 6,450 ft lift placement.

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 displacement rates (from survey-monuments, inSAR, inclinometers) throughout the North-South and East-West Embankments continued to slow during Q4 2023 following construction. Findings do not indicate development of progressive deformations following construction. KP anticipates that elevated deformation rates resulting from construction will continue to slow and stabilize with time. GNSS survey-monuments DH19-S4 (Seep 10 Bench, Section 8+00W) and DH19-S5 (EL. 6,150 ft bench, west of Section 8+00W) indicated very slightly elevated vertical deformation rates during Q3 and Q4 2023. No corresponding increase to lateral displacement rates has been observed and available inSAR and DGPS survey-monuments do not appear to exhibit corresponding trends. Surface deformation monitoring data at these two sites will continue to be evaluated to confirm behavior throughout early-2024.

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.
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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 and Deformation Monitoring Instrumentation
Figure 2 Rev 0	Summary of Measured Piezometric Elevations vs. QPP Triggers East-West Embankment
Figure 3 Rev 0	Summary of Measured Piezometric Elevations vs. QPP Triggers East-West Embankment
Figure 4 Rev 0	Summary of Measured Piezometric Elevations vs. QPP Triggers North-South Embankment
Figure 5 Rev 0	Summary of Measured Piezometric Elevations vs. QPP Triggers West Embankment
Figure 6 Rev 0	Summary of Measured Piezometric Elevations vs. QPP Triggers West Embankment
Figure 7 Rev 0	Piezometric Conditions Along East-West Embankment Section 8+00W (Looking West)
Figure 8 Rev 0	Comparison of Monitored Surface Deformations at GNSS Instrumentation Sites
Appendix A	GNSS and Total Station Deformation Plots
Appendix B	Inclinometer Deformation Plots
Appendix C	Geo4Sight Deformation Plots
Appendix D	InSAR Bulletin

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

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TABLE 1

MONTANA RESOURCES, LLC
MONTANA RESOURCES

YDTI PIEZOMETRIC AND DEFORMATION MONITORING UPDATE (Q4 2023)
SUMMARY OF PIEZOMETRIC QUANTITATIVE PERFORMANCE PARAMETER (QPP) MONITORING

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Monitoring Region	QPP Instrumentation Site	Monitoring Site Type [1]	Piezometric Trigger Elevation (ft)	Maximum Piezometric Elevation Recorded Q4 2023 (ft)	End of Q4 2023 Piezometric Elevation (ft)	Exceeded Trigger Elevation During Q4 2023 (Yes/No)	Pore Pressure Change Q4 2023 (ft)	Comments
East-West Embankment	MW94-08	VWP Sensor	5,680	5,669	5,669	No	0.38	
	MW94-11	VWP Sensor	5,693	5,672	5,672	No	0.37	
	DH15-S3 VW1	VWP Sensor	5,690	5,664	5,664	No	0.10	
	DH15-S4 VW1	VWP Sensor	5,740	5,712	5,712	No	1.12	Most recent readings are from December 14, 2023.
	DH15-S4 VW2	VWP Sensor	5,800	5,772	5,772	No	4.40	
	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) in 2024.
	DH17-S1 VW2	VWP Sensor	5,741	5,714	5,713	No	-1.24	
	DH18-S3 VW3	VWP Sensor	6,044	6,022	6,022	No	0.16	
	DH19-S7 VW1	VWP Sensor	5,770	5,727	5,725	No	-1.51	
North-South Embankment	MW12-01	VWP Sensor	5,940	5,931	5,930	No	-0.72	
	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 on March 8, 2023 and subsequently abandoned. Sensor to be replaced in 2024.
	DH18-S2 VW2	VWP Sensor	6,029	-	-	-	-	Damaged by construction on October 10, 2023 and subsequently abandoned. Sensor to be replaced in 2024.
West Embankment	VWP-DP1	VWP Sensor	6,374	6,342	6,342	No	0.09	
	VWP-DP2	VWP Sensor	6,366	6,339	6,339	No	-0.01	
	DH15-12 VW1	VWP Sensor	6,372	6,353	6,351	No	0.06	
	DH15-12 VW2	VWP Sensor	6,372	6,353	6,353	No	0.16	
	DH15-12 VW3	VWP Sensor	6,372	5,664	6,352	No	0.11	

M:\1\01\00126\29\A\Correspondence\VA24-00030 - Q4 2023 Piezometric and Deformation Monitoring Summary\Tables\[QPP Compliance Figures and Table Q4.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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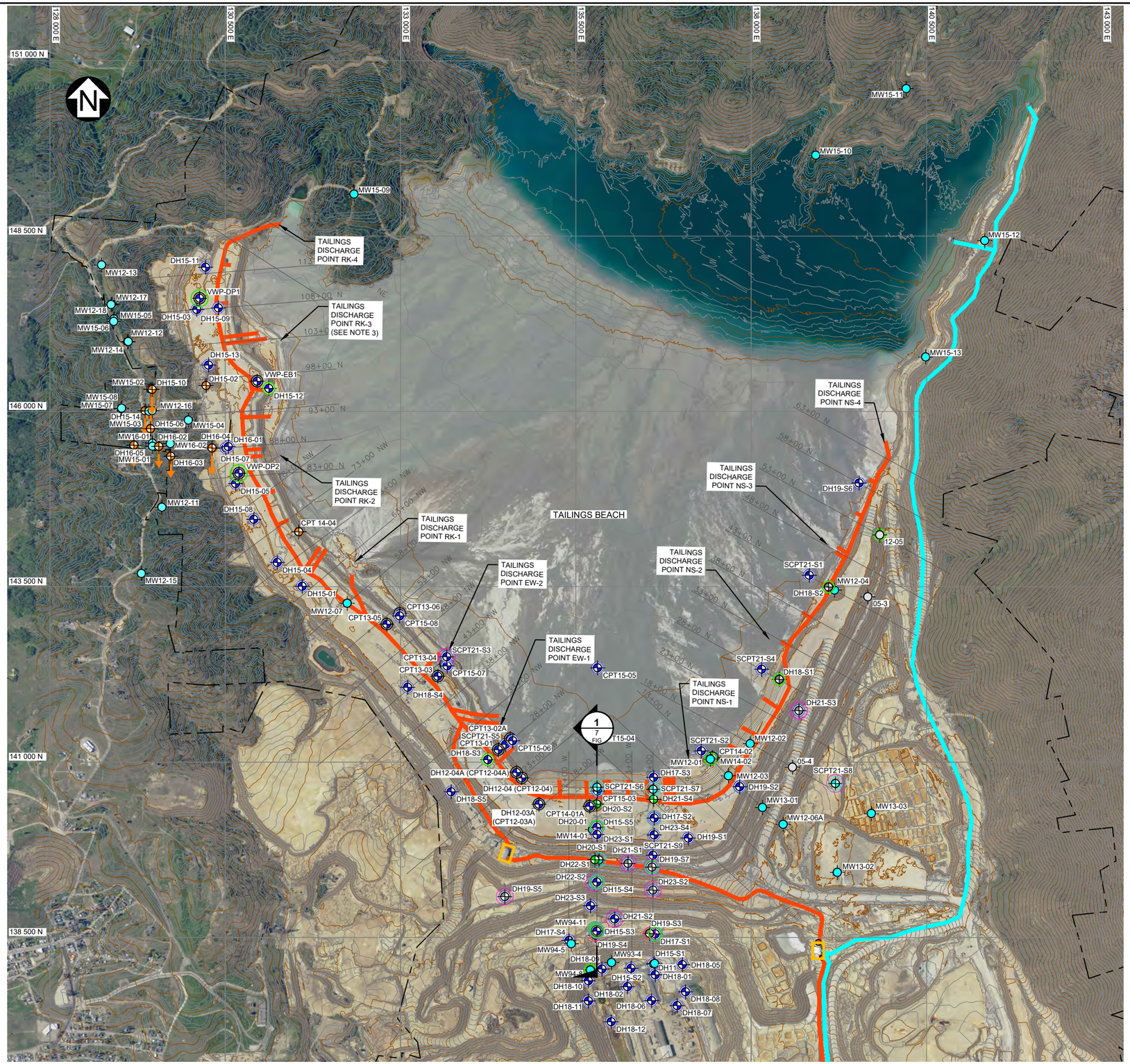

NOTES:

1. COORDINATE SYSTEM AND ELEVATIONS BASED ON ANACONDA MINE GRID.
2. QPP MONITORING SITES = QUANTITATIVE PERFORMANCE PARAMETER
   CPP MONITORING SITES = CONSTRUCTION PERFORMANCE PARAMETER.
3. RK-3 TAILINGS DISCHARGE POINT WAS RELOCATED NORTH IN OCTOBER 2017.
4. THE AERIAL PHOTO SHOWN IS FROM JULY, 2023.
5. SEPTEMBER 2023 TOPOGRAPHY PROVIDED BY MONTANA RESOURCES, LLC.
6. NO PORE WATER PRESSURE DATA ARE AVAILABLE FROM DH20-S1 AND DH22-S1 AS THE INSTRUMENTS ARE NOT FUNCTIONAL.

LEGEND:

- MONITORING WELL/ STANDPIPE - VIBRATING WIRE PIEZOMETER
- DRILLHOLE WITH NESTED VIBRATING WIRE PIEZOMETERS AND GEO4SIGHT INSTRUMENTATION
- GEOPHYSICAL CASING
- INCLINOMETER
- INCLINOMETER WITH NESTED VIBRATING WIRE PIEZOMETERS
- NESTED VIBRATING WIRE PIEZOMETERS
- SINGLE VIBRATING WIRE PIEZOMETER
- VERTICAL DRILLHOLE
- ANGLED DRILLHOLE
- DRY MONITORING WELL
- QPP MONITORING SITES²
- CPP MONITORING SITES²
- TAILINGS PIPELINE
- RECLAIM PIPELINE
- PROPERTY LINE

SCALE A 500 0 500 1000 1500 2000 2500 ft

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YANKEE DOODLE TAILINGS IMPOUNDMENT ACTIVE PIEZOMETRIC INSTRUMENTATION AND MONITORING SITES

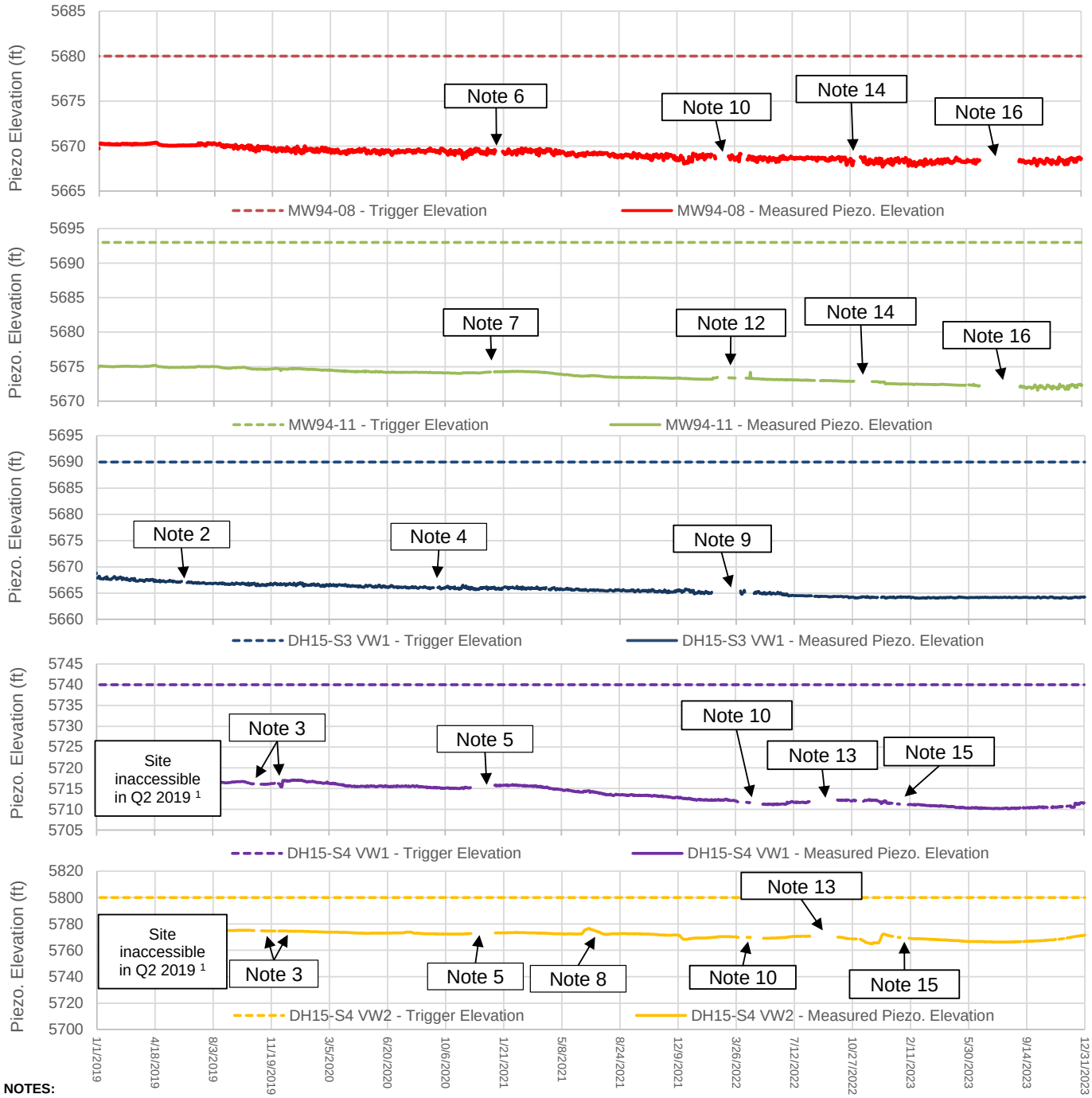
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF NO. VA24-00030

FIGURE 1

REV 0



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 TO A NEW LOGGER.
4. NO DATA WERE COLLECTED 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 BETWEEN AUGUST 9 AND OCTOBER 4, 2022, DUE TO SUSPECTED LOGGER ISSUE.
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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SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS EAST-WEST EMBANKMENT

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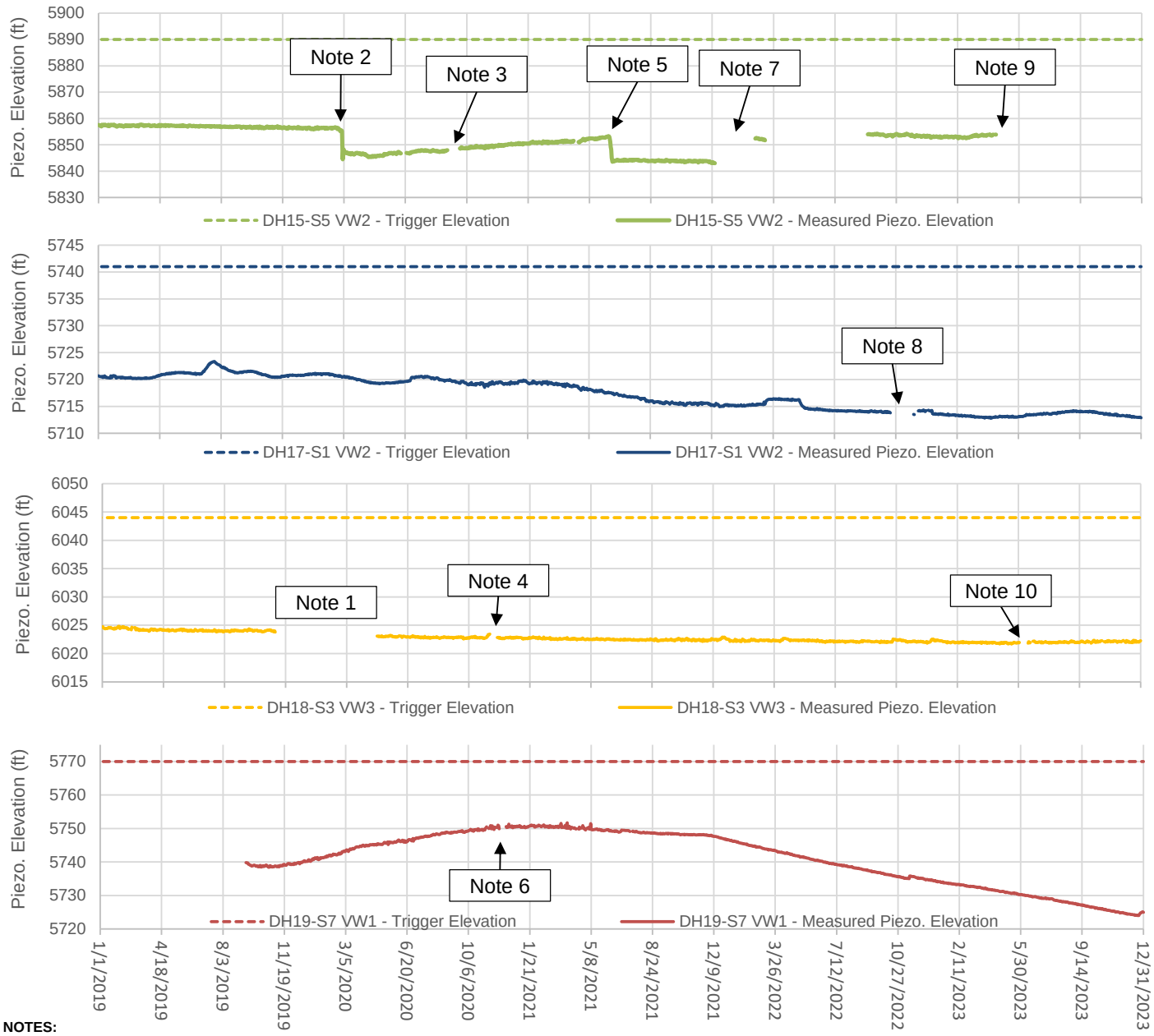
P/A NO.	REF. NO.
VA101-126/29	VA24-00030

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. THE SENSOR WAS SUBSEQUENTLY ABANDONED AND WILL BE REPLACED WITH SENSOR(S) FROM DH23-S1.
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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SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS EAST-WEST EMBANKMENT

Knight Piésold CONSULTING

P/A NO.	REF. NO.
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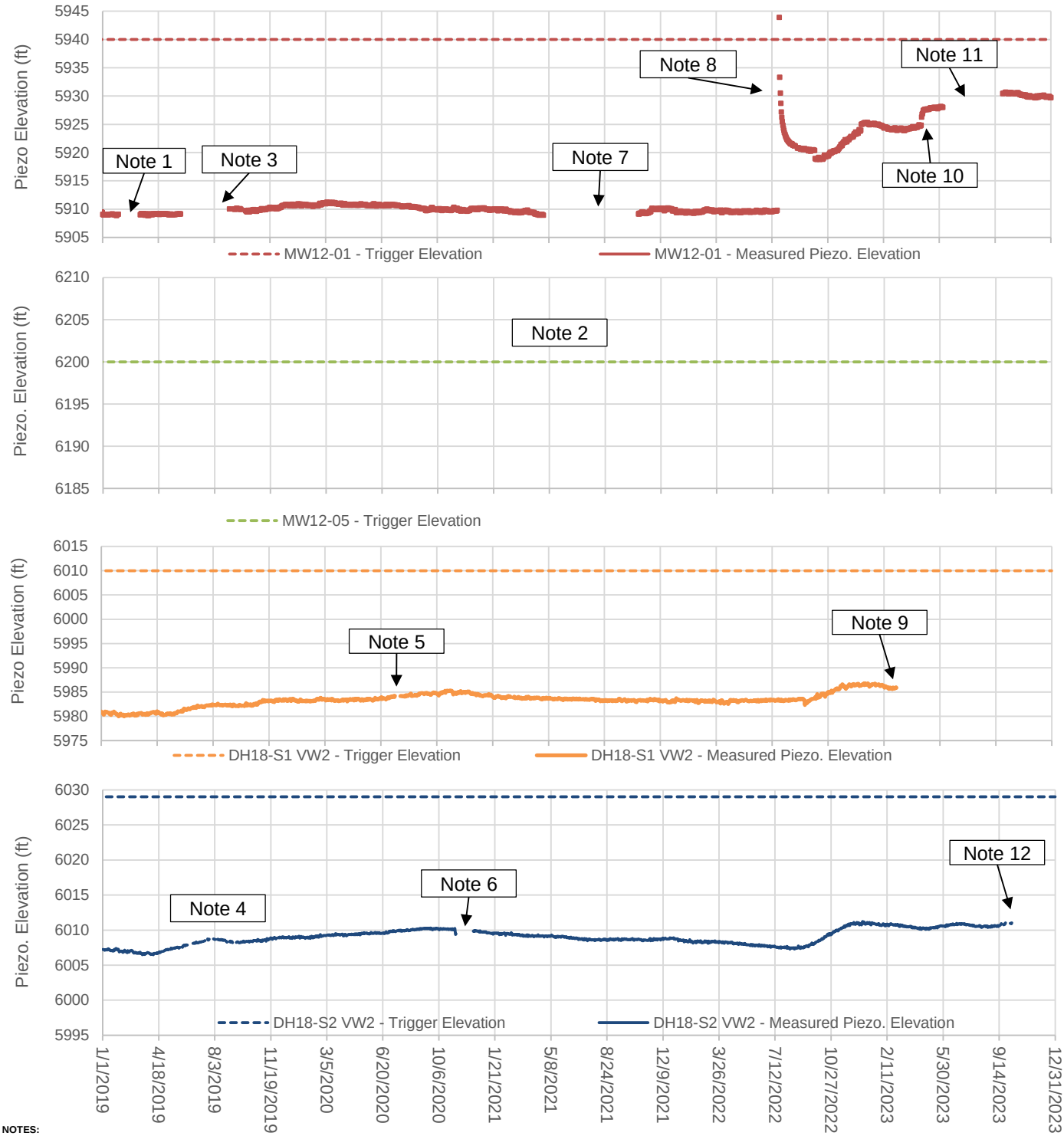
FIGURE 3 REV 0



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 IS PLANNED TO BE REPLACED IN 2024.
10. SENSOR MW12-01 MONITORED AN INCREASE IN PIEZOMETRIC ELEVATION THAT MAY HAVE RESULTED FROM RISING TAILINGS LEVEL OR ALLUVIAL FACING PLACEMENT.
11. SENSOR MW12-01 STOPPED COLLECTING DATA BETWEEN JUNE 6 AND SEPTEMBER 29, 2023 DUE TO HARDWARE CONNECTION ISSUE.
12. DH18-S2 VW2 STOPPED COLLECTING DATA ON OCTOBER 10, 2023. TO BE REPLACED IN 2024.

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

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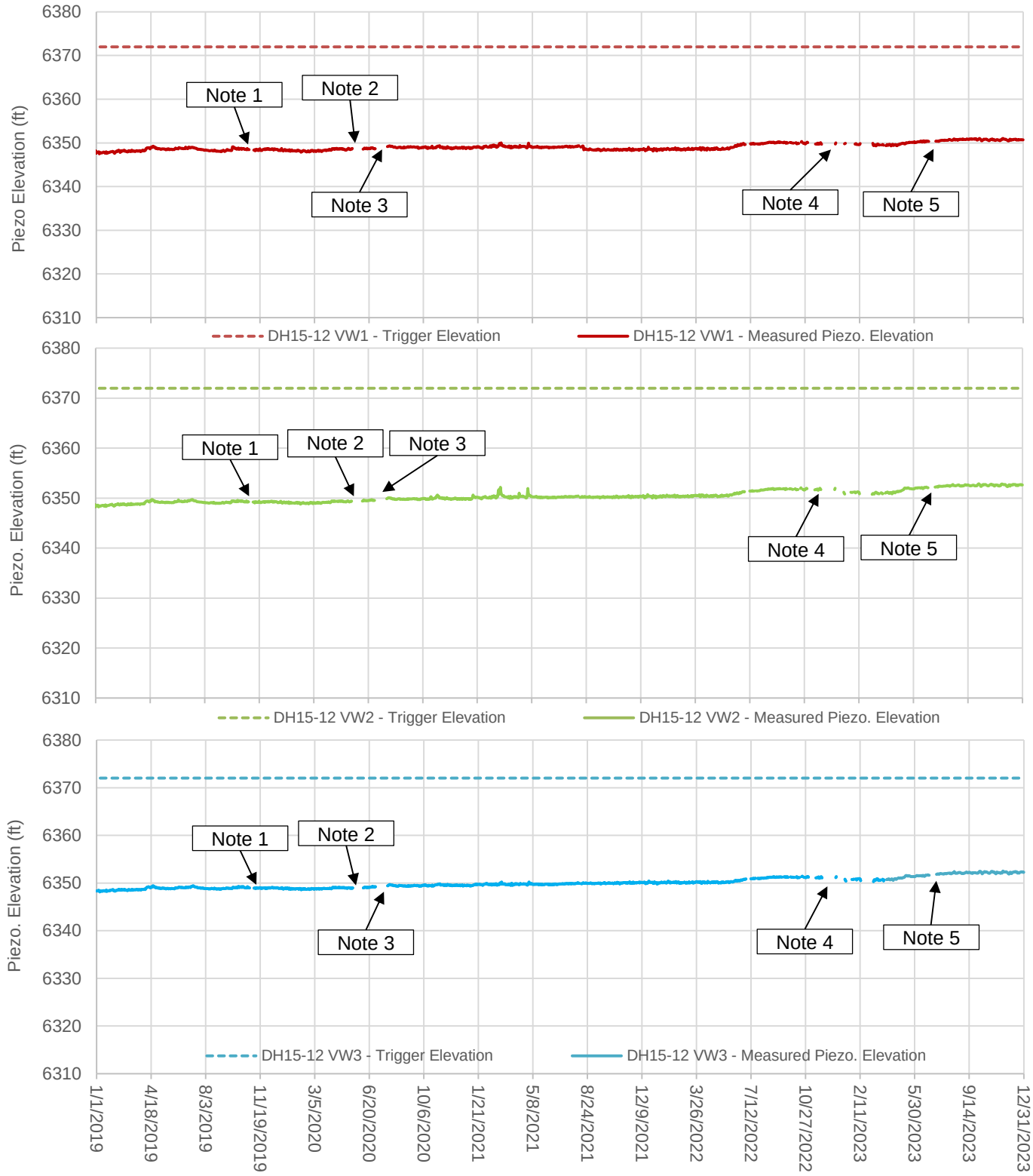
REF. NO. VA24-00030

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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SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS WEST EMBANKMENT

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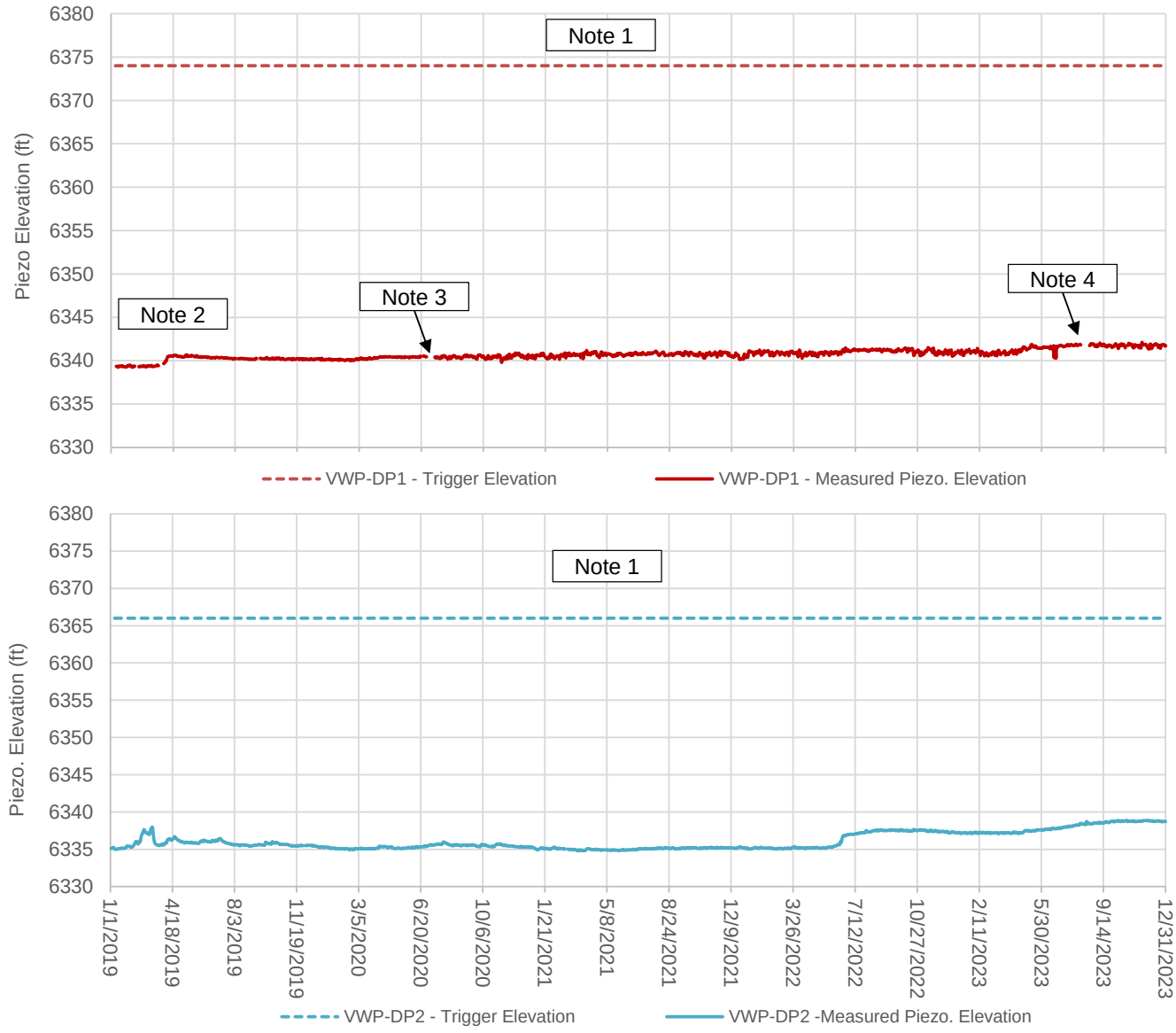
P/A NO. VA101-126/29

REF. NO. VA24-00030

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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SUMMARY OF MEASURED VS. QPP TRIGGER PIEZOMETRIC ELEVATIONS WEST EMBANKMENT

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FIGURE 6

REV 0

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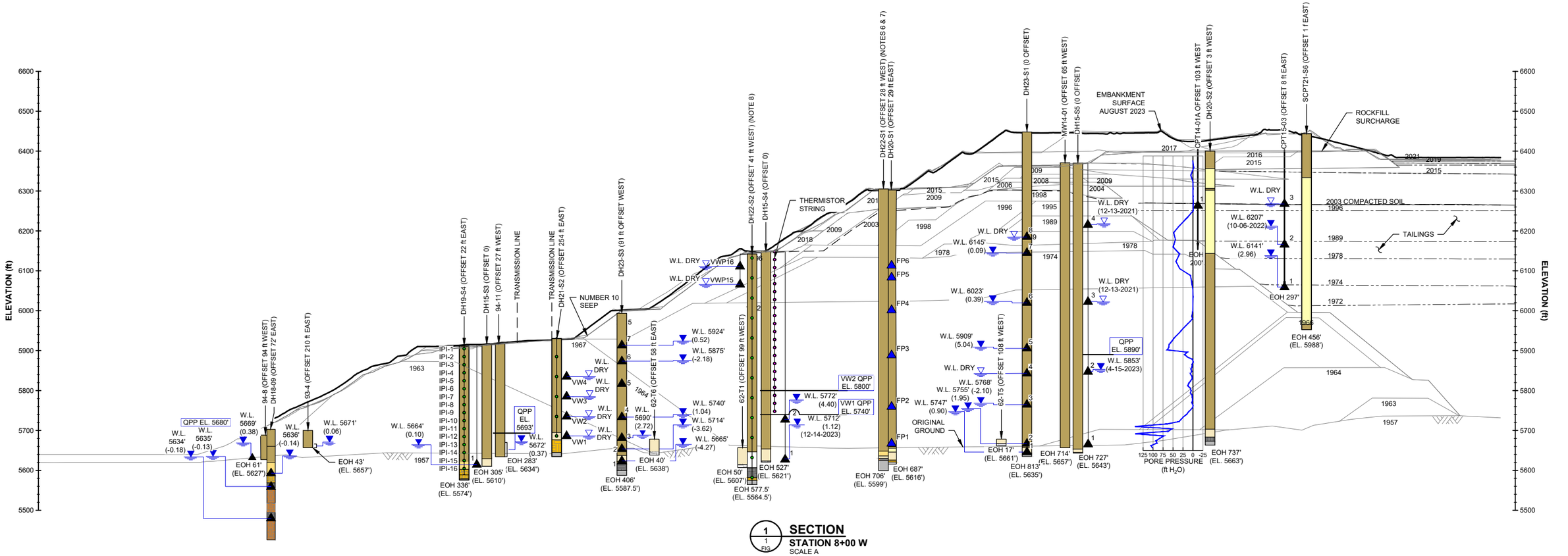

1 FIG 1 **SECTION**
STATION 8+00 W
SCALE A

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 Q4 2023 READINGS (DECEMBER 31, 2023), UNLESS OTHERWISE INDICATED.
4. CHANGE IN WATER LEVEL FOR QPP SITES IS RELATIVE TO END OF Q3 2023.
5. NO PORE WATER PRESSURE DATA ARE AVAILABLE FROM DH20-S1 AS THE INSTRUMENTATION IS NOT FUNCTIONAL.
6. MONITORING WELL MW14-01 ABANDONED DUE TO RISER BLOCKAGE DURING Q4 2019, RESULTING IN ERRONEOUS DATA. DATA OMITTED FOR CLARITY.
7. QPP STANDS FOR QUANTITIVE PERFORMANCE PARAMETER.
8. NO PORE WATER PRESSURE DATA ARE AVAILABLE FROM DH20-S1 AS THE INSTRUMENTATION IS NOT FUNCTIONAL.
9. 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.
10. DRILLHOLE DH22-S1 CONTAINS 119 MARKERS, 59 OF WHICH INCLUDE PORE WATER PRESSURE INSTRUMENTATION. ELECTRICAL AND COMMUNICATIONS ISSUES WITH THE READER AND MARKERS HAVE PRECLUDED DATA COLLECTION SINCE INSTALLATION IN OCTOBER 2022.
11. ALL SIX VWPS INSTALLED AT DH22-S1 WERE DAMAGED DURING GROUTING AND ARE NOT FUNCTIONAL.
12. FOURTEEN OF SIXTEEN VWPS INSTALLED AT DH22-S2 WERE DAMAGED DURING GROUTING AND ARE NOT FUNCTIONAL.
13. PORE PRESSURE MARKER 11 FROM DH20-S2 HAS RECORDED ERRONEOUS VALUES SINCE DECEMBER 2, 2022. DATA HAVE BEEN OMITTED FOR CLARITY.
14. DH23-S3 CHANGE IN PIEZOMETER LEVELS CALCULATED USING A START DATE OF NOVEMBER 8, 2023.

LEGEND:

- TAILINGS
- EMBANKMENT FILL
- ALLUVIUM
- RECENT ALLUVIUM
- HIGHLY ALTERED BEDROCK
- HIGHLY WEATHERED BEDROCK
- MODERATELY WEATHERED BEDROCK
- COMPETENT BEDROCK
- NO RECOVERY

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

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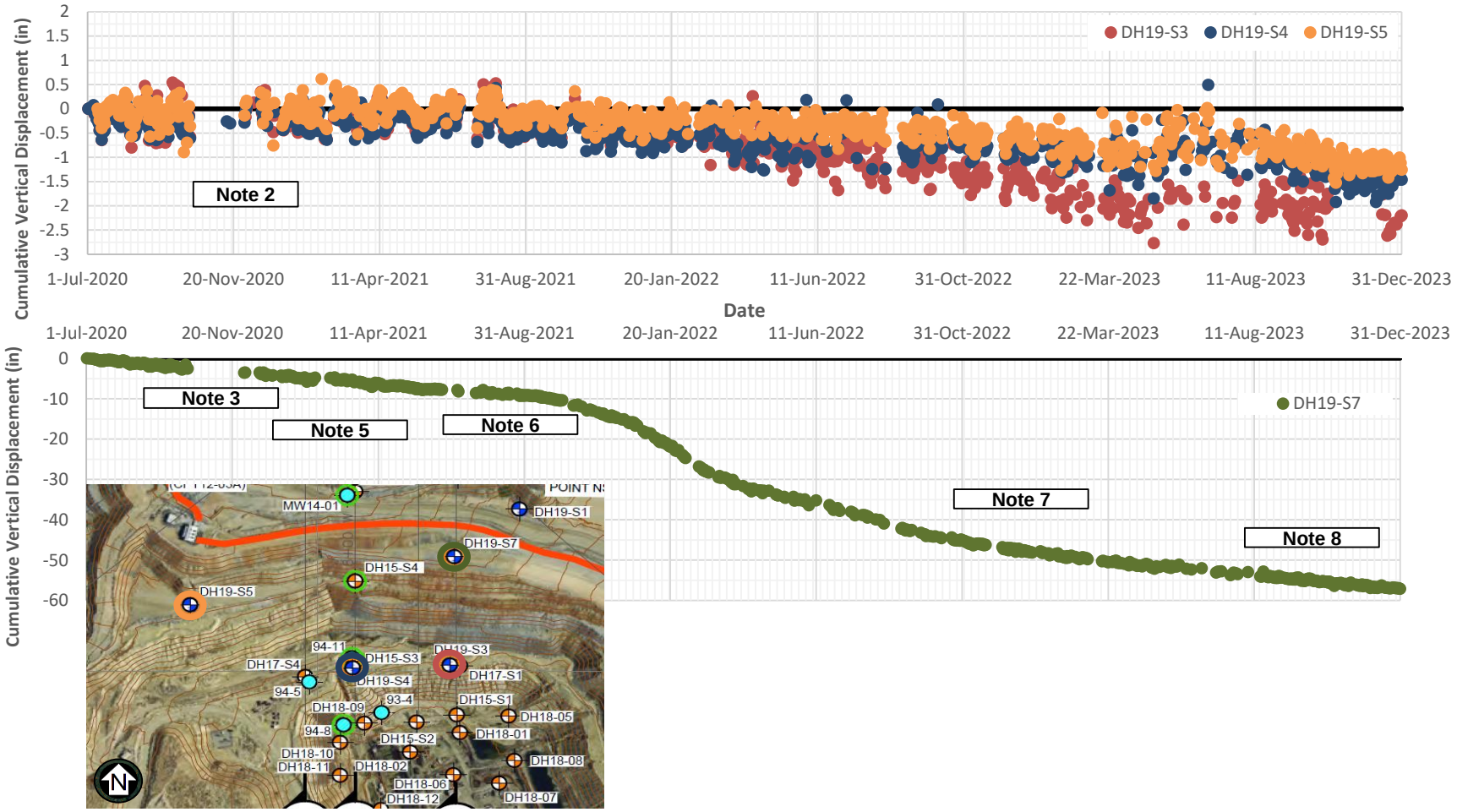
FIGURE 7 | REV 0

SAVED: M:\101\00126\29\A\Cad\FIGS\B66, 3/11/2024 8:03:32 AM , RMCLELLAN PRINTED: 4/29/2024 4:02:29 PM, FIG 7, RMCLELLAN
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 ISSUE.

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MONTANA RESOURCES

COMPARISON OF CUMULATIVE VERTICAL GNSS DISPLACEMENT MAGNITUDES (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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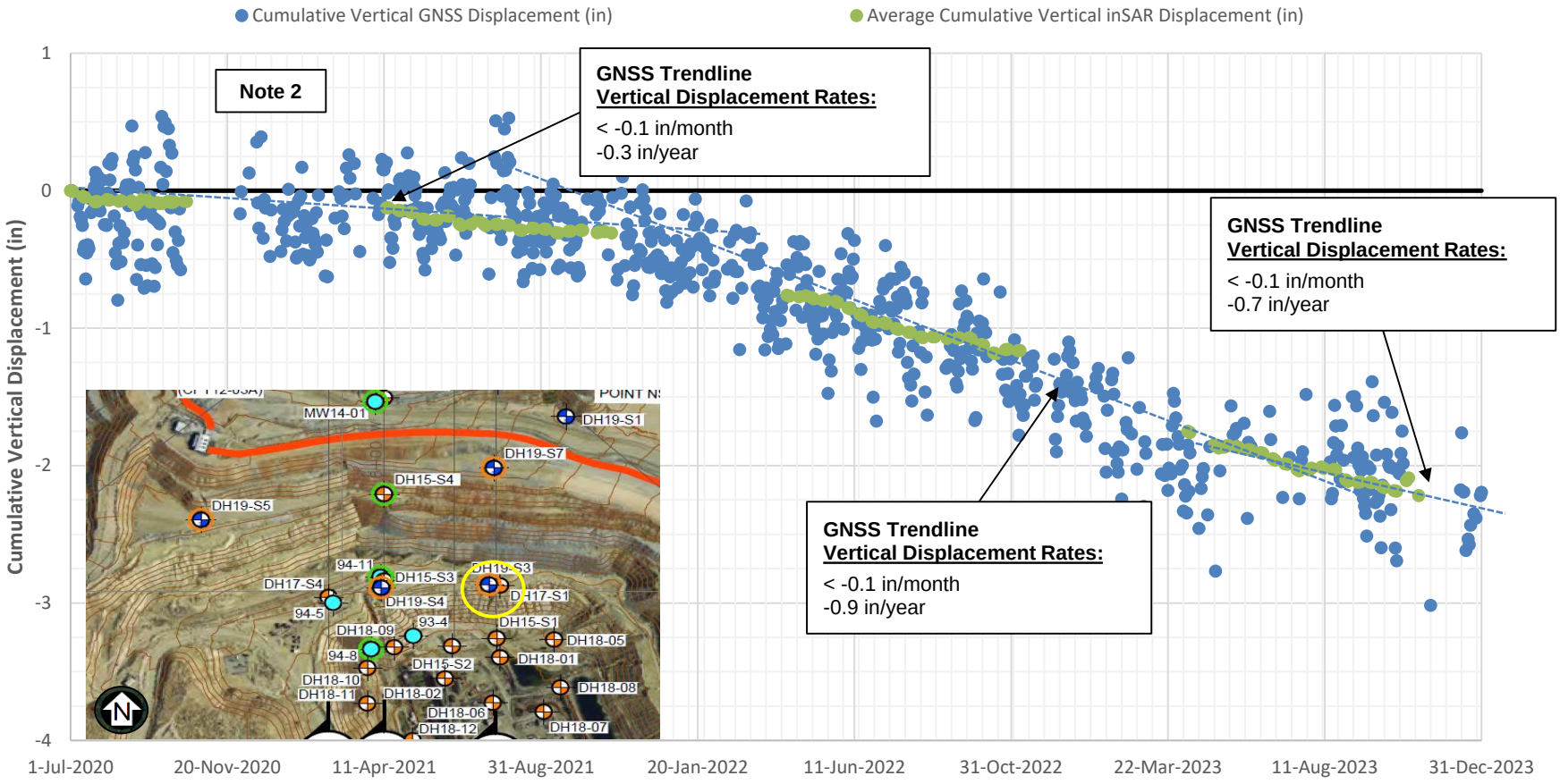
FIGURE 8

REV 0

APPENDIX A

GNSS and Total Station 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 ISSUE.
12. LIMITED DATA WERE COLLECTED FROM OCTOBER 21 TO DECEMBER 12, 2023 DUE TO A HARDWARE ISSUE.

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MONTANA RESOURCES

CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S3 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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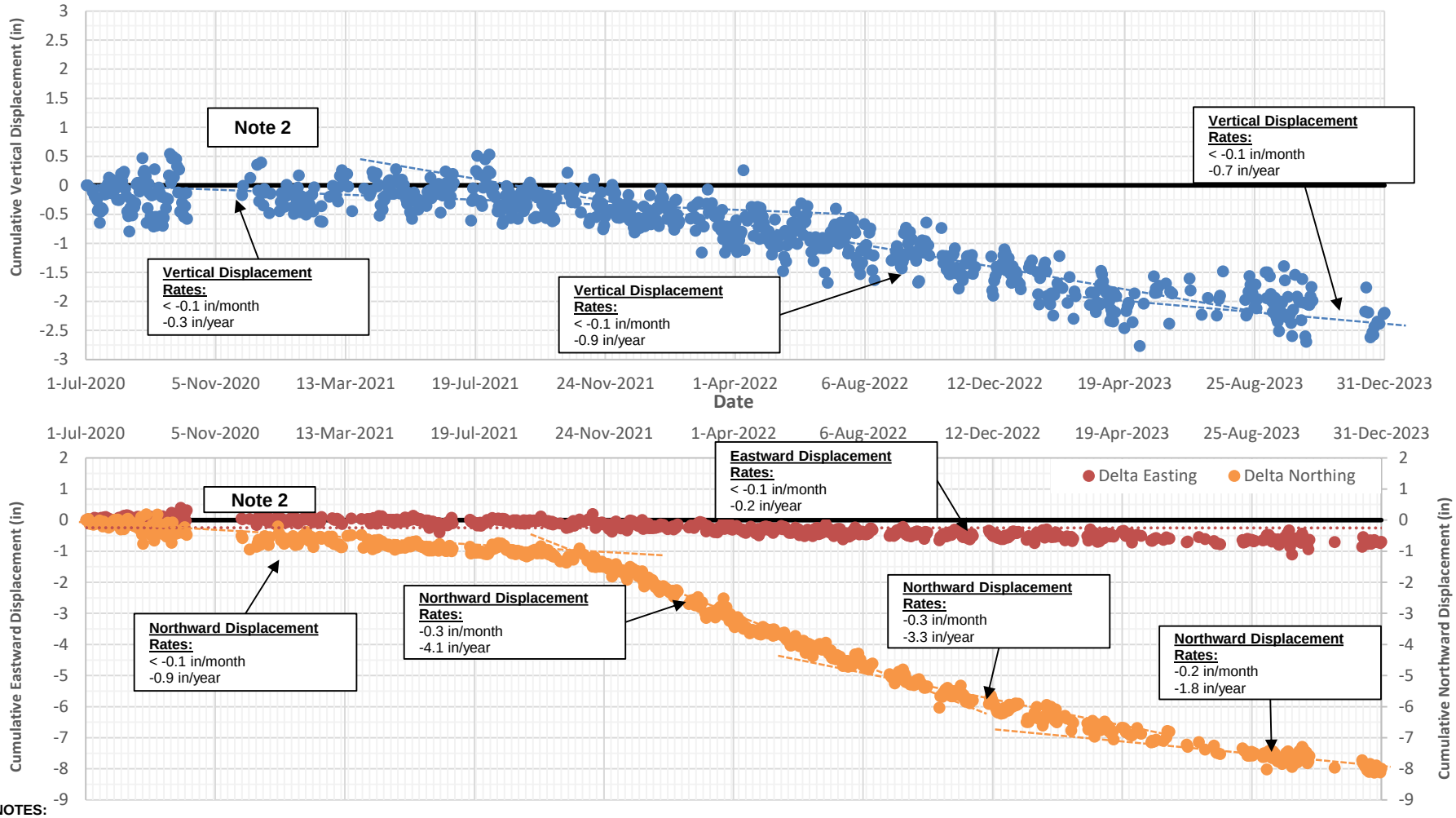
P/A NO. VA101-126/29

REF. NO. VA24-00030

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 ISSUE.
10. LIMITED DATA WERE COLLECTED FROM OCTOBER 21 TO DECEMBER 12, 2023 DUE TO A HARDWARE ISSUE.

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CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S3 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

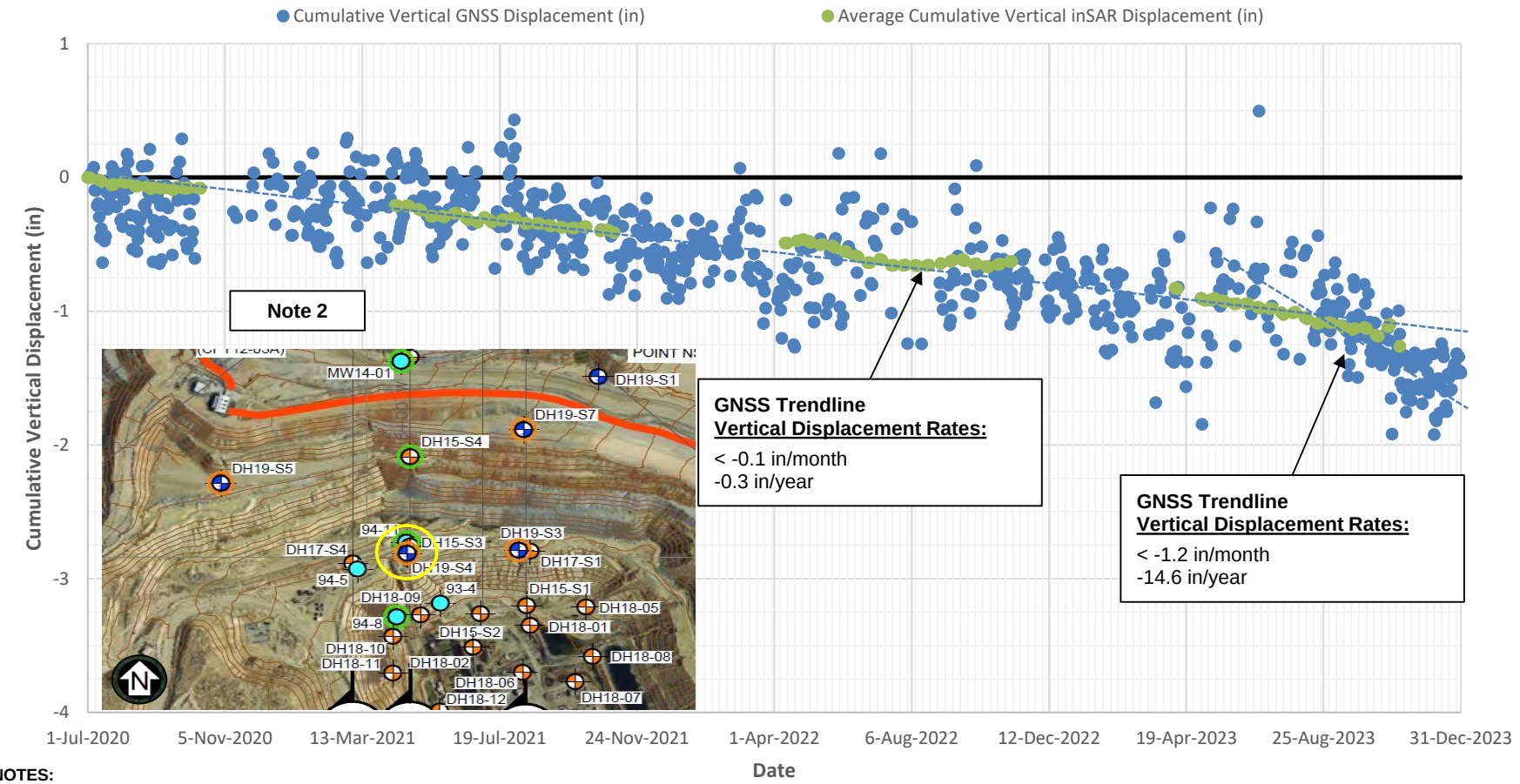
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

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.

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CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S4 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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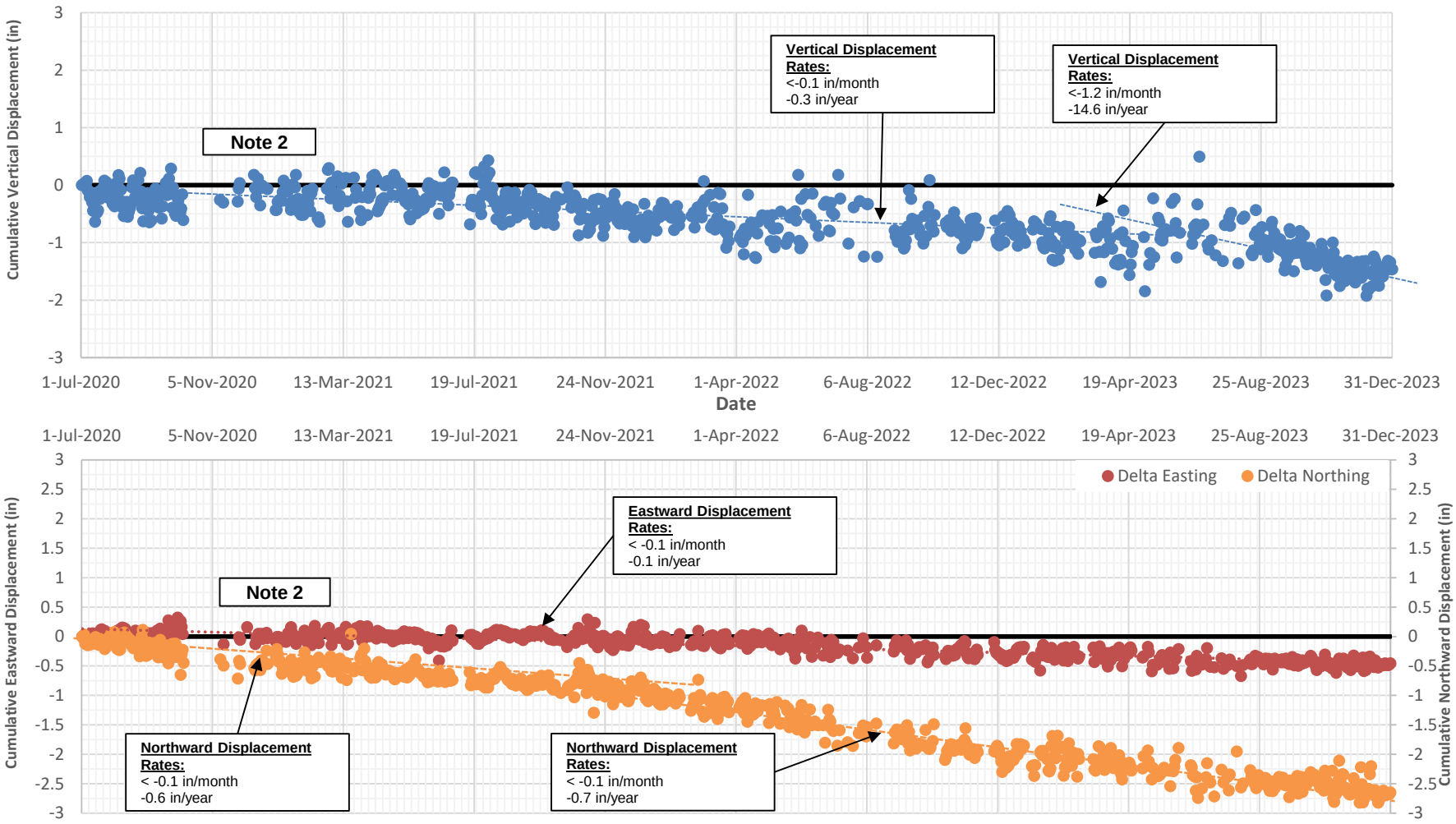
P/A NO. VA101-126/29

REF. NO. VA24-00030

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 ISSUE.

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CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S4 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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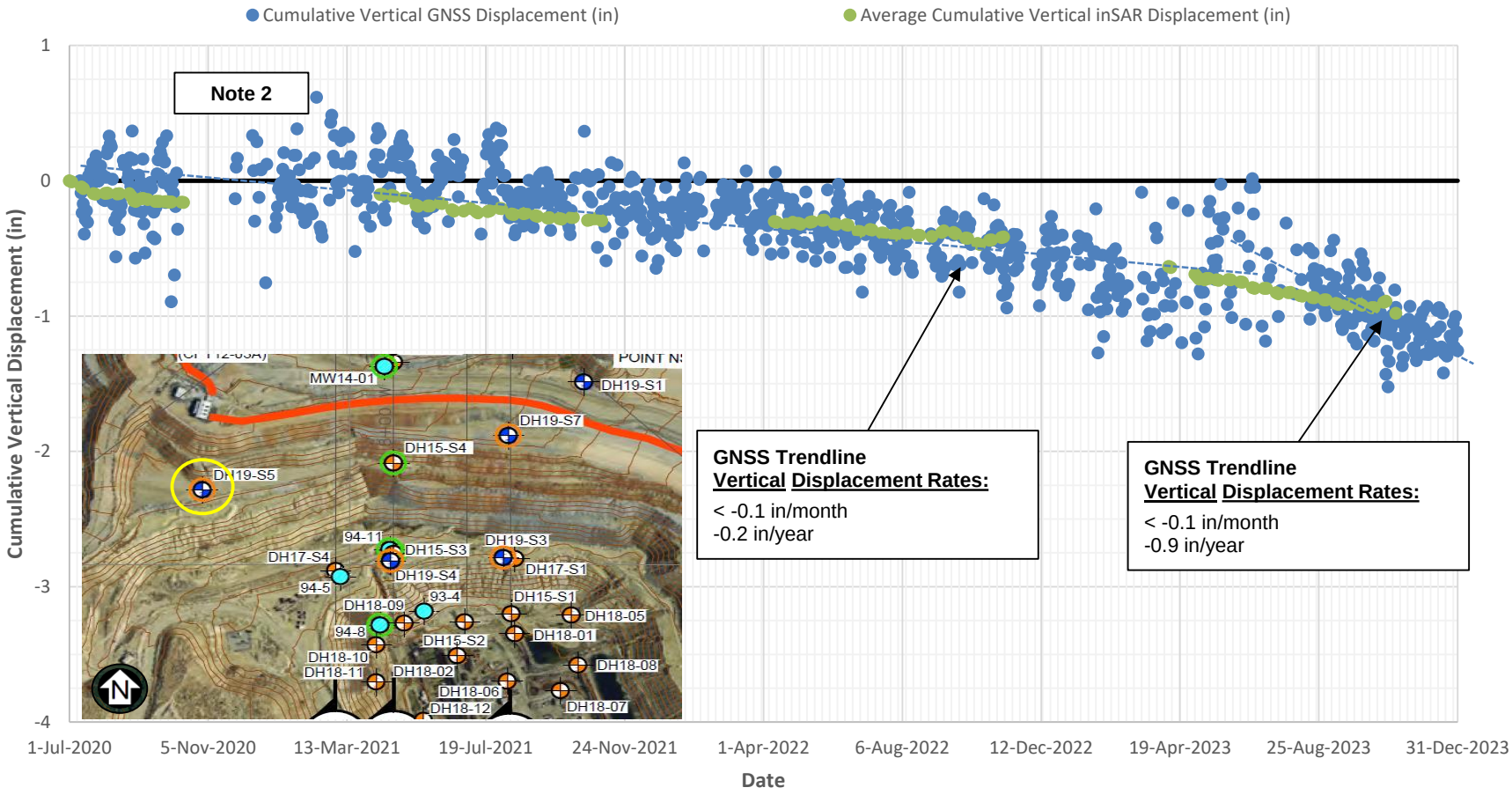
P/A NO. VA101-126/29

REF. NO. VA24-00030

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 ISSUE.

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CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S5 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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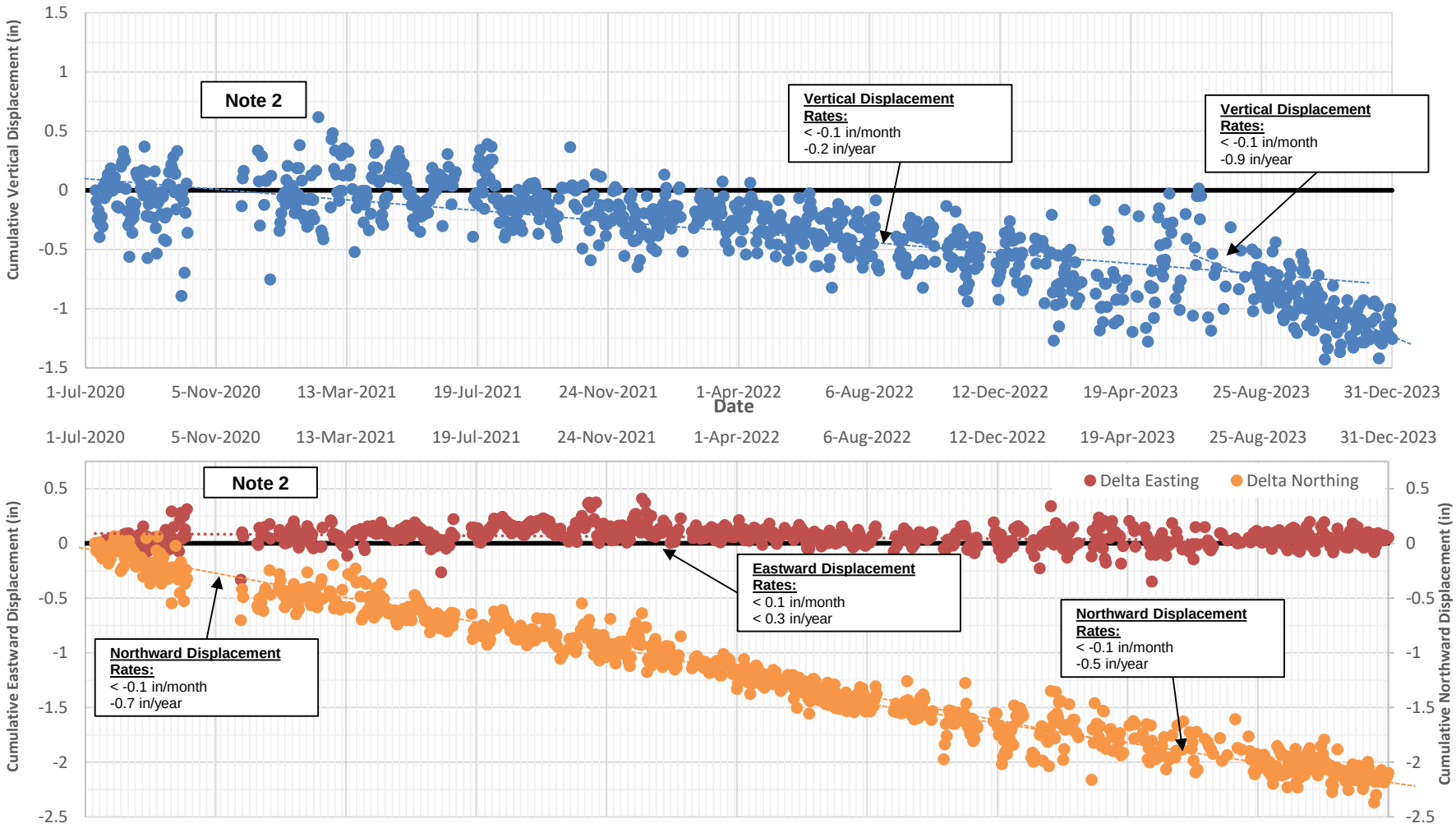
P/A NO. VA101-126/29

REF. NO. VA24-00030

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 SERVER 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 ISSUE.

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CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S5 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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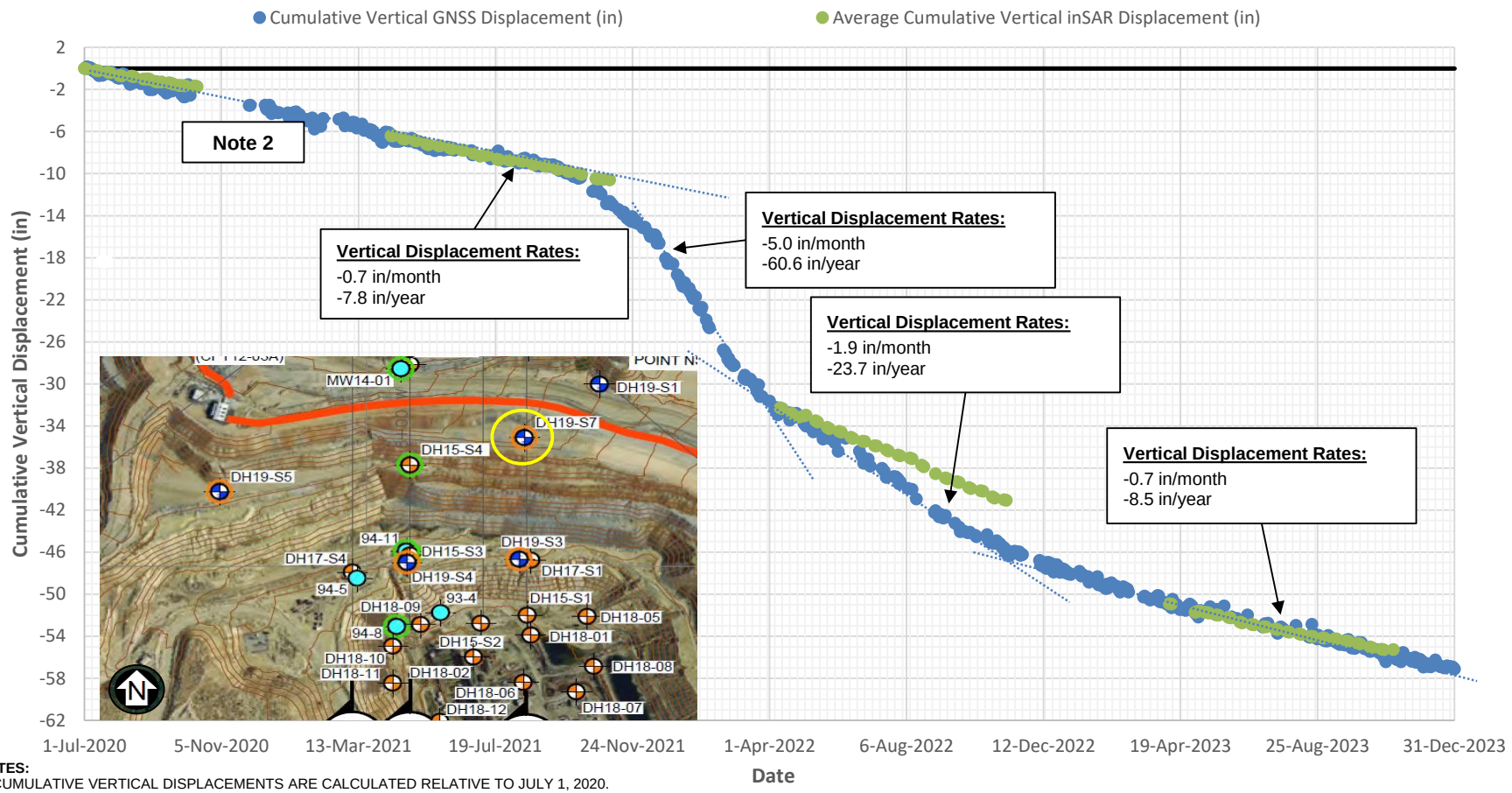
P/A NO. VA101-126/29

REF. NO. VA24-00030

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 ISSUE.

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CUMULATIVE VERTICAL DISPLACEMENTS MONITORED AT DH19-S7 (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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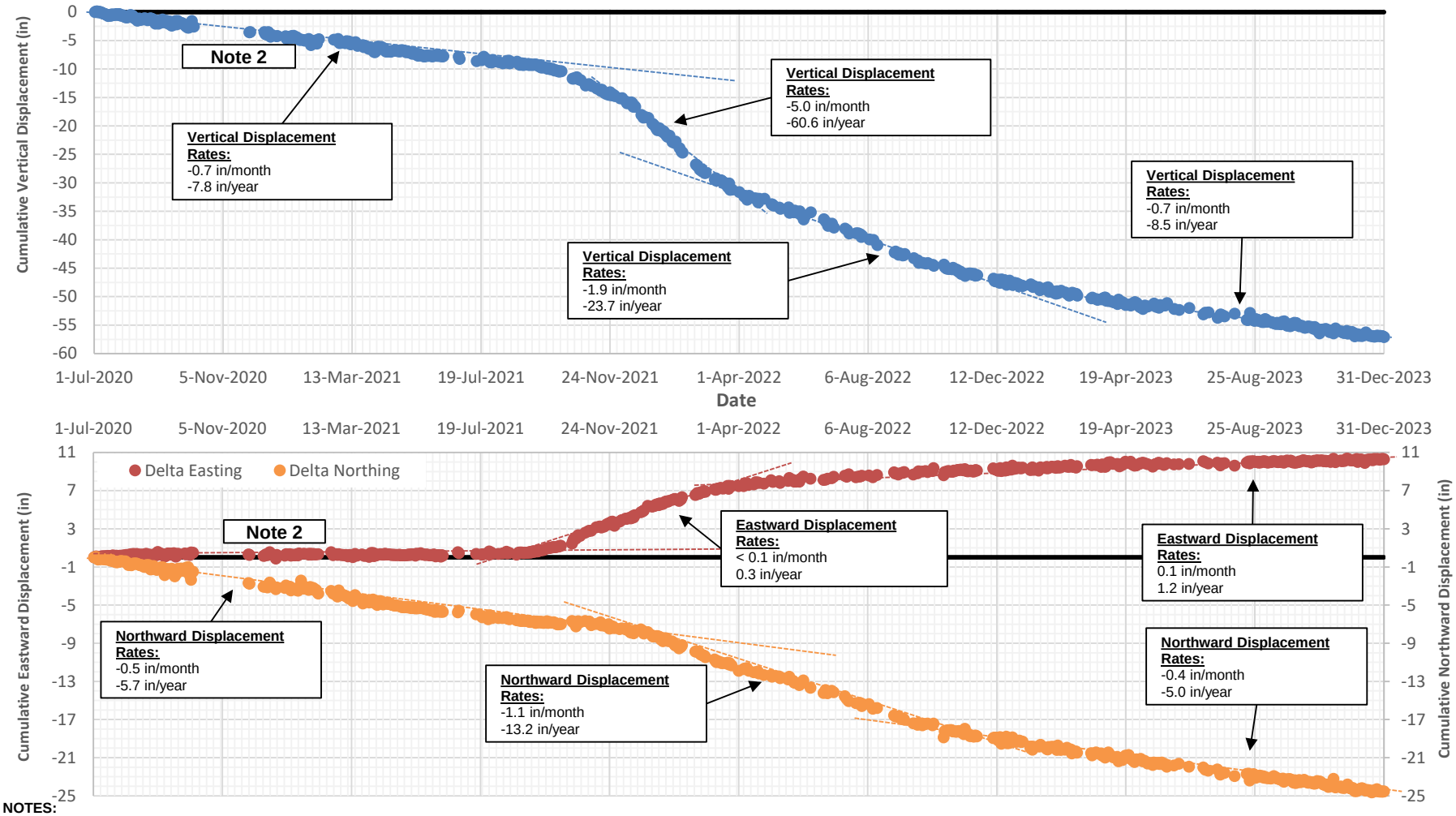
REF. NO. VA24-00030

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 ISSUE.

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CUMULATIVE VERTICAL & LATERAL DISPLACEMENTS MONITORED AT DH19-S7 (JULY 1, 2020 DECEMBER 31, 2023)

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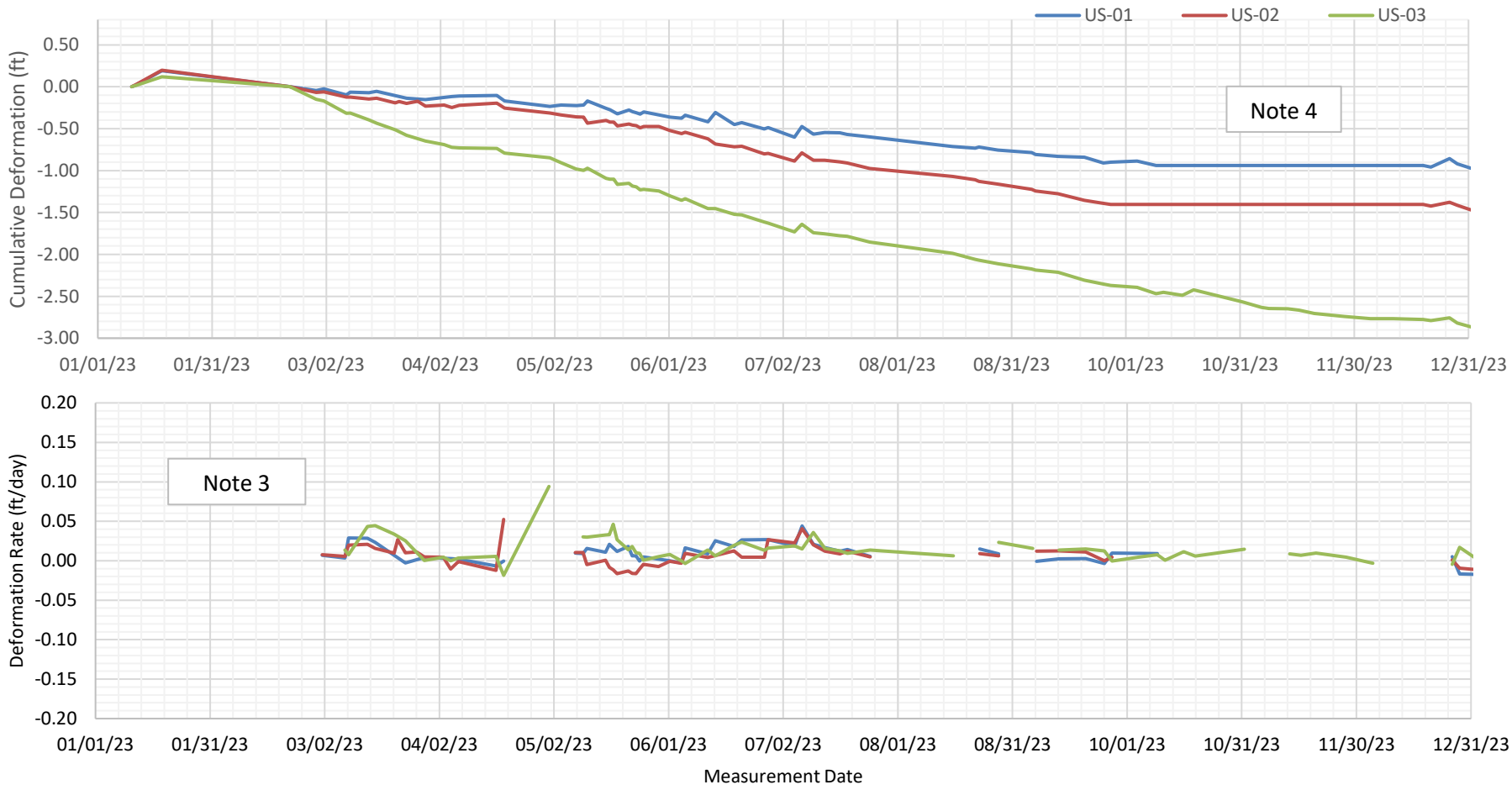
P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.8

REV 0



NOTES:

1. UPSTREAM MONUMENTS WERE ACTIVATED ON FEBRUARY 21, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENTS US-01 AND US-02 WERE TEMPORARILY REMOVED BETWEEN SEPTEMBER 27 TO DECEMBER 19, 2023 DUE TO CONSTRUCTION.

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REF. NO. VA24-00030

FIGURE A.9

REV 0

NOTES:

1. UPSTREAM MONUMENTS WERE ACTIVATED ON FEBRUARY 21, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENTS US-01 AND US-02 WERE TEMPORARILY REMOVED BETWEEN SEPTEMBER 27 TO DECEMBER 19, 2023 DUE TO CONSTRUCTION.

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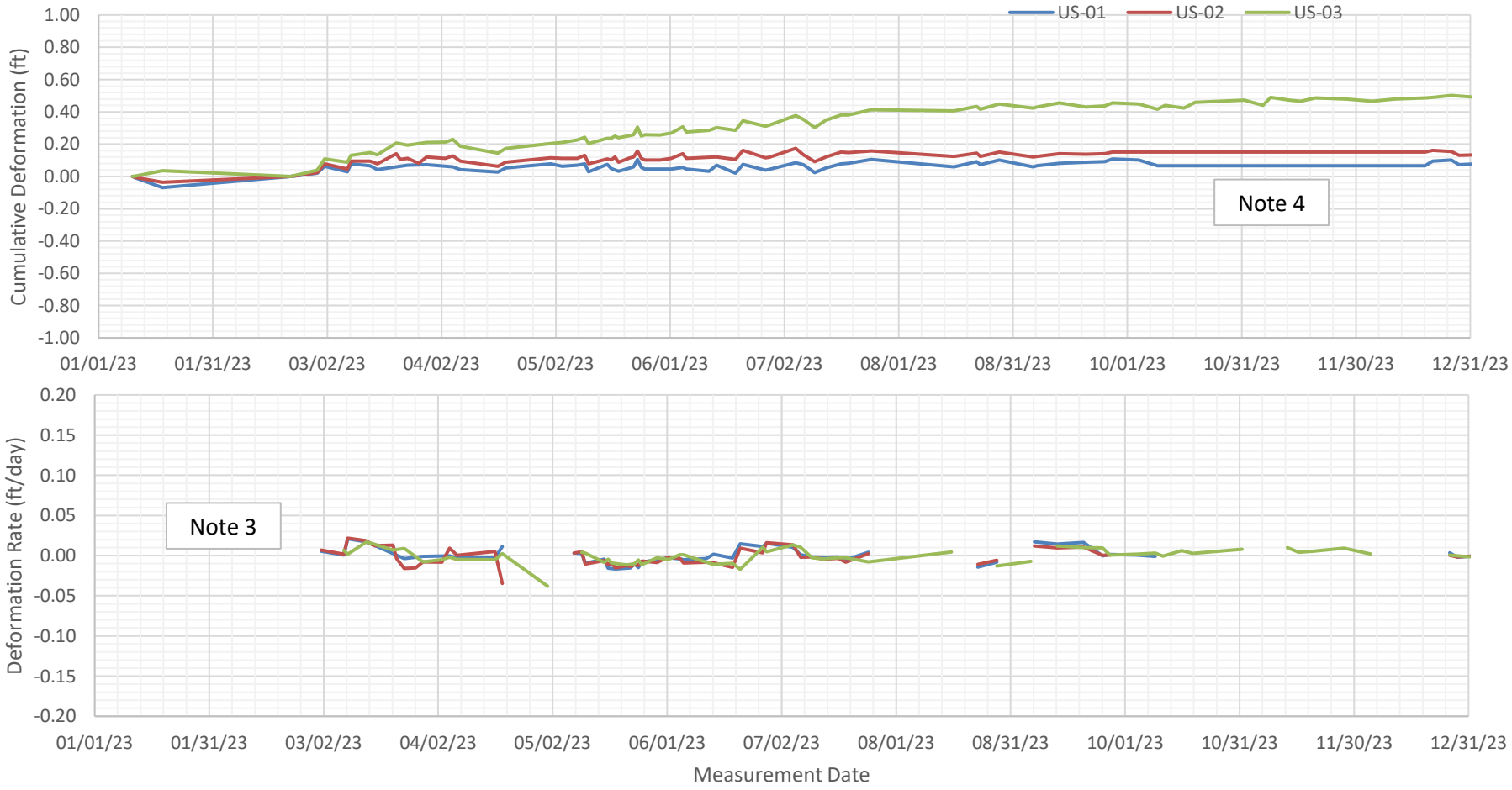
REF. NO. VA24-00030

FIGURE A.10

REV 0



NOTES:

1. UPSTREAM MONUMENTS WERE ACTIVATED ON FEBRUARY 21, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENTS US-01 AND US-02 WERE TEMPORARILY REMOVED BETWEEN SEPTEMBER 27 TO DECEMBER 19, 2023 DUE TO CONSTRUCTION.

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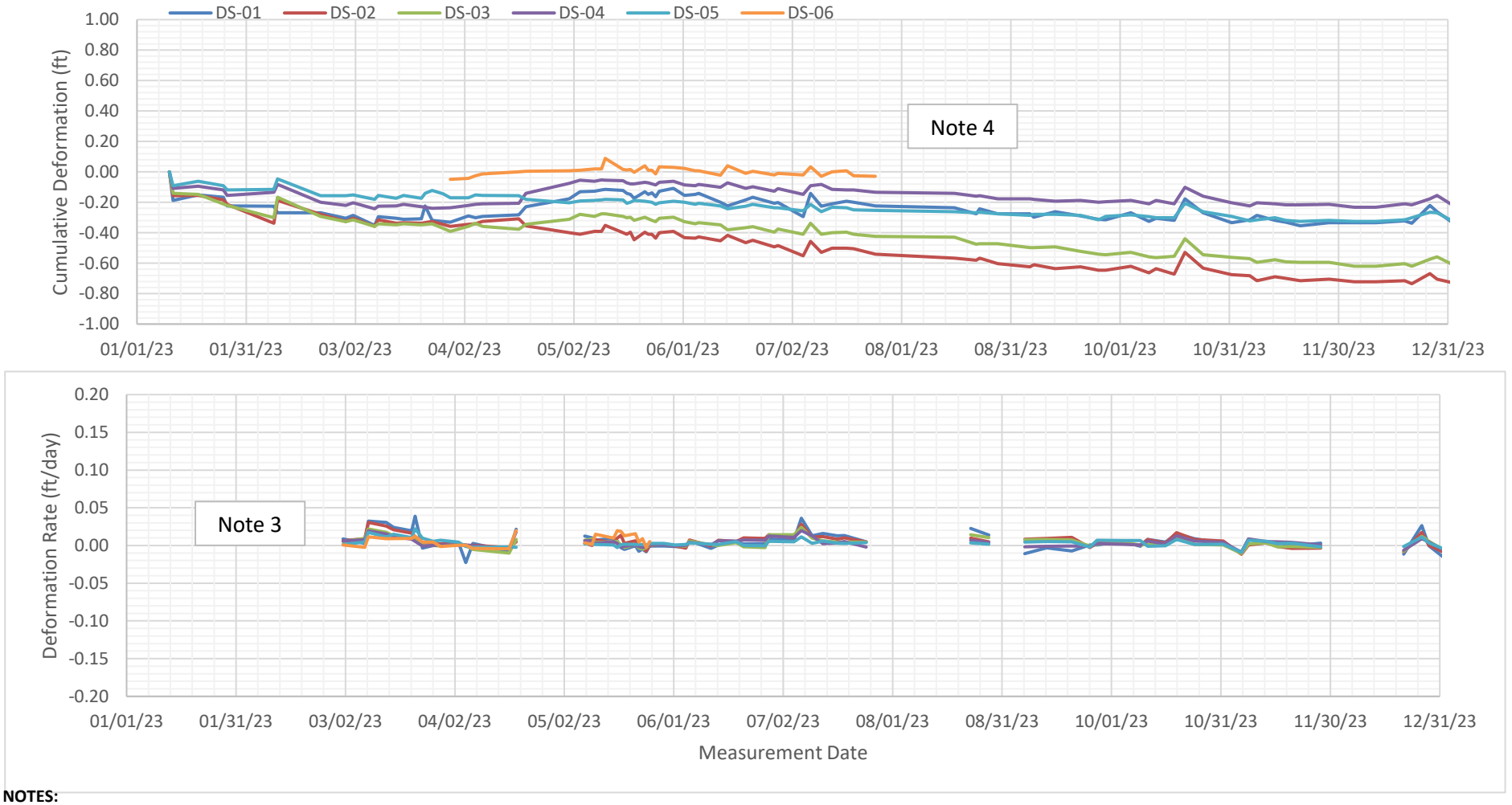
REF. NO. VA24-00030

FIGURE A.11

REV 0



NOTES:

1. DOWNSTREAM MONUMENTS WERE ACTIVATED ON JANUARY 10, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENT DS-06 HAS BEEN TEMPORARILY REMOVED SINCE JULY 25, 2023 DUE TO CONSTRUCTION.

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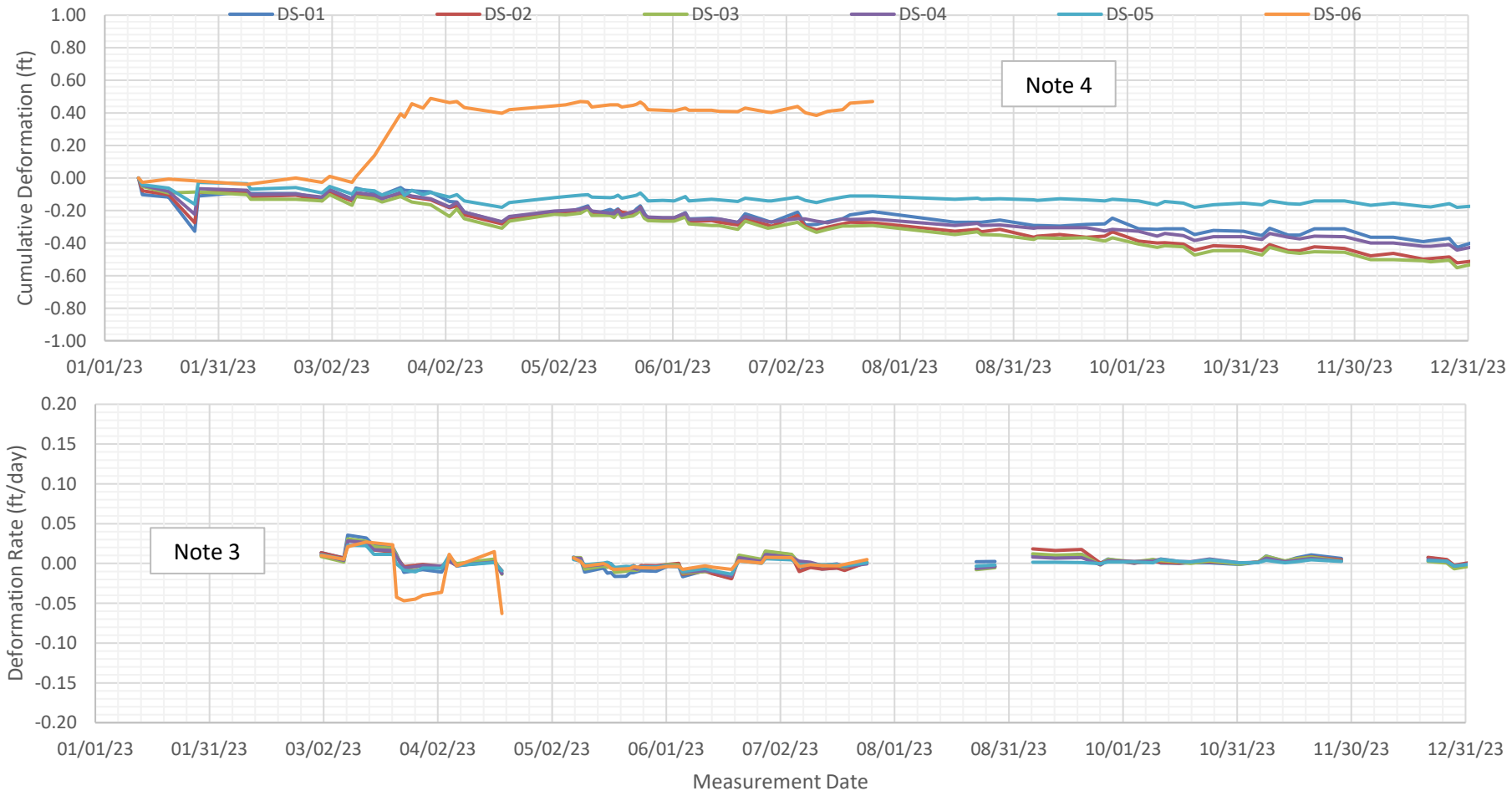
REF. NO. VA24-00030

FIGURE A.12

REV 0



NOTES:

1. DOWNSTREAM MONUMENTS WERE ACTIVATED ON JANUARY 10, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENT DS-06 HAS BEEN TEMPORARILY REMOVED SINCE JULY 25, 2023 DUE TO CONSTRUCTION.

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NORTH-SOUTH DEFORMATION

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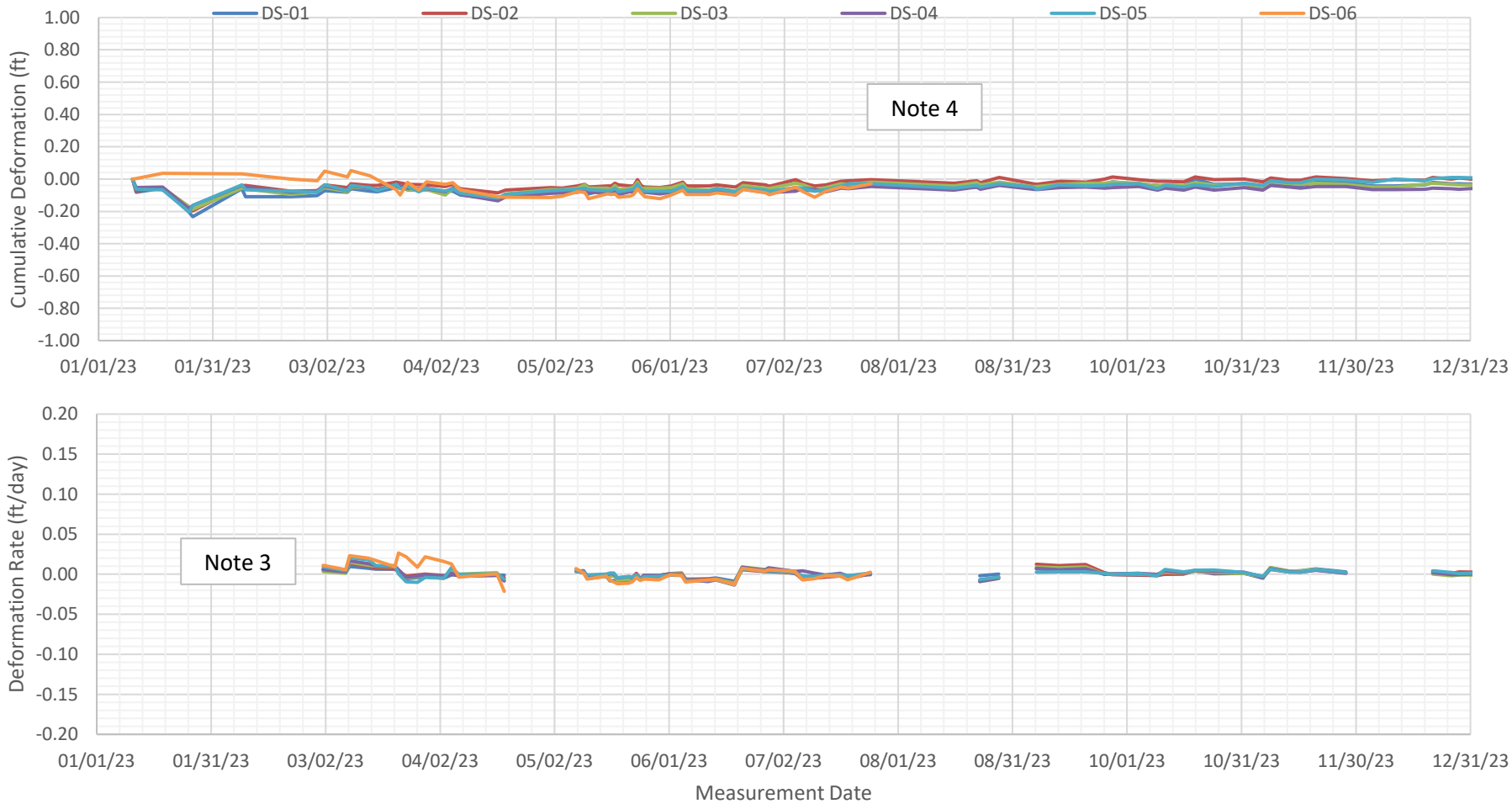
REF. NO. VA24-00030

FIGURE A.13

REV 0



NOTES:

1. DOWNSTREAM MONUMENTS WERE ACTIVATED ON JANUARY 10, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENT DS-06 HAS BEEN TEMPORARILY REMOVED SINCE JULY 25, 2023 DUE TO CONSTRUCTION.

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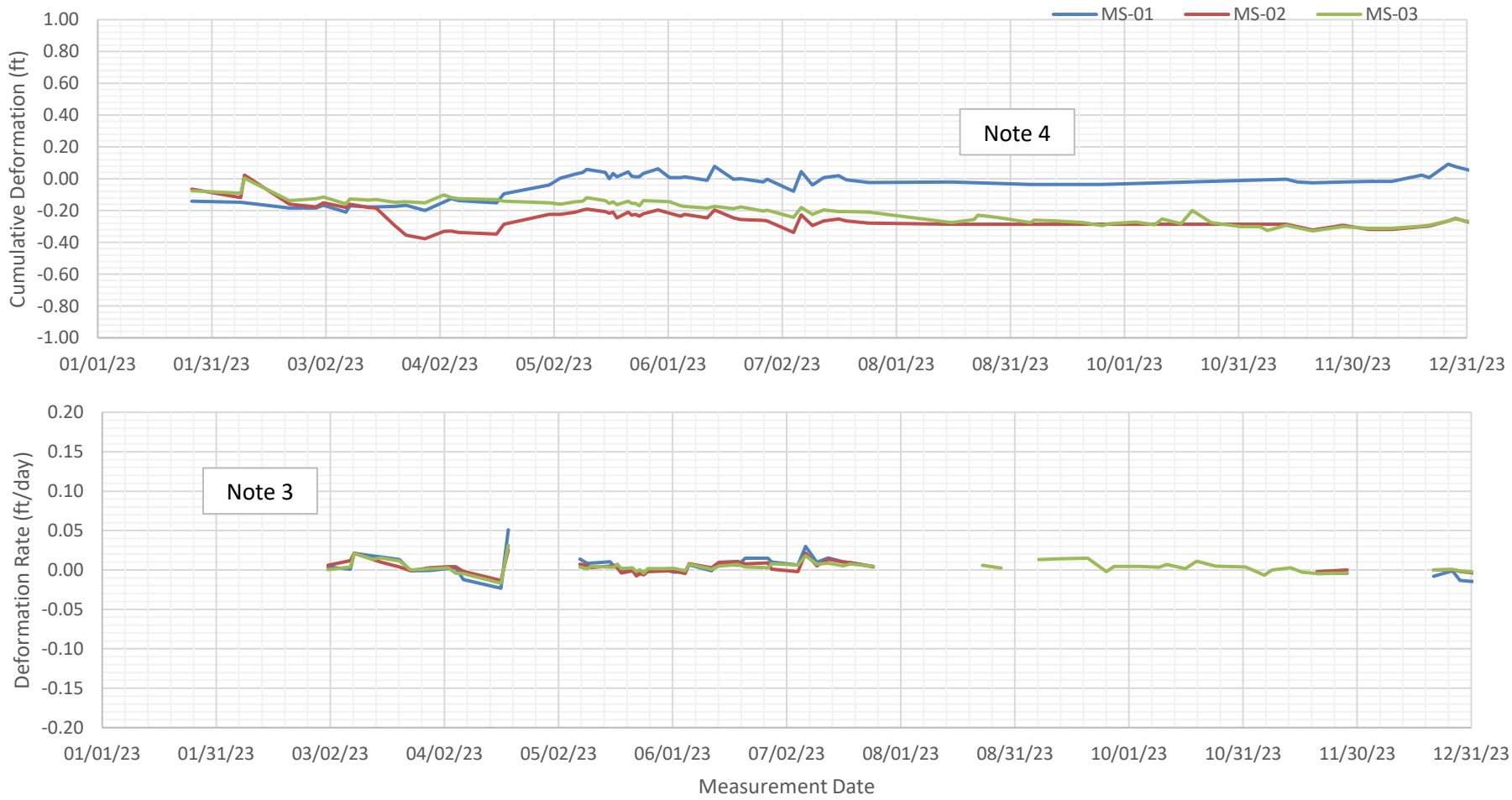
FIGURE A.14

REV 0



NOTES:

1. MIDSLOPE MONUMENTS WERE ACTIVATED ON JANUARY 18, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENTS MS-01 AND MS-02 WERE TEMPORARILY REMOVED BETWEEN JULY 25 AND NOVEMBER 13, 2023 DUE TO CONSTRUCTION.

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MIDSLOPE TOTAL STATION MONUMENTS
VERTICAL DEFORMATION

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P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.15

REV 0

NOTES:

1. MIDSLOPE MONUMENTS WERE ACTIVATED ON JANUARY 18, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENTS MS-01 AND MS-02 WERE TEMPORARILY REMOVED BETWEEN JULY 25 AND NOVEMBER 13, 2023 DUE TO CONSTRUCTION.

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NORTH-SOUTH DEFORMATION

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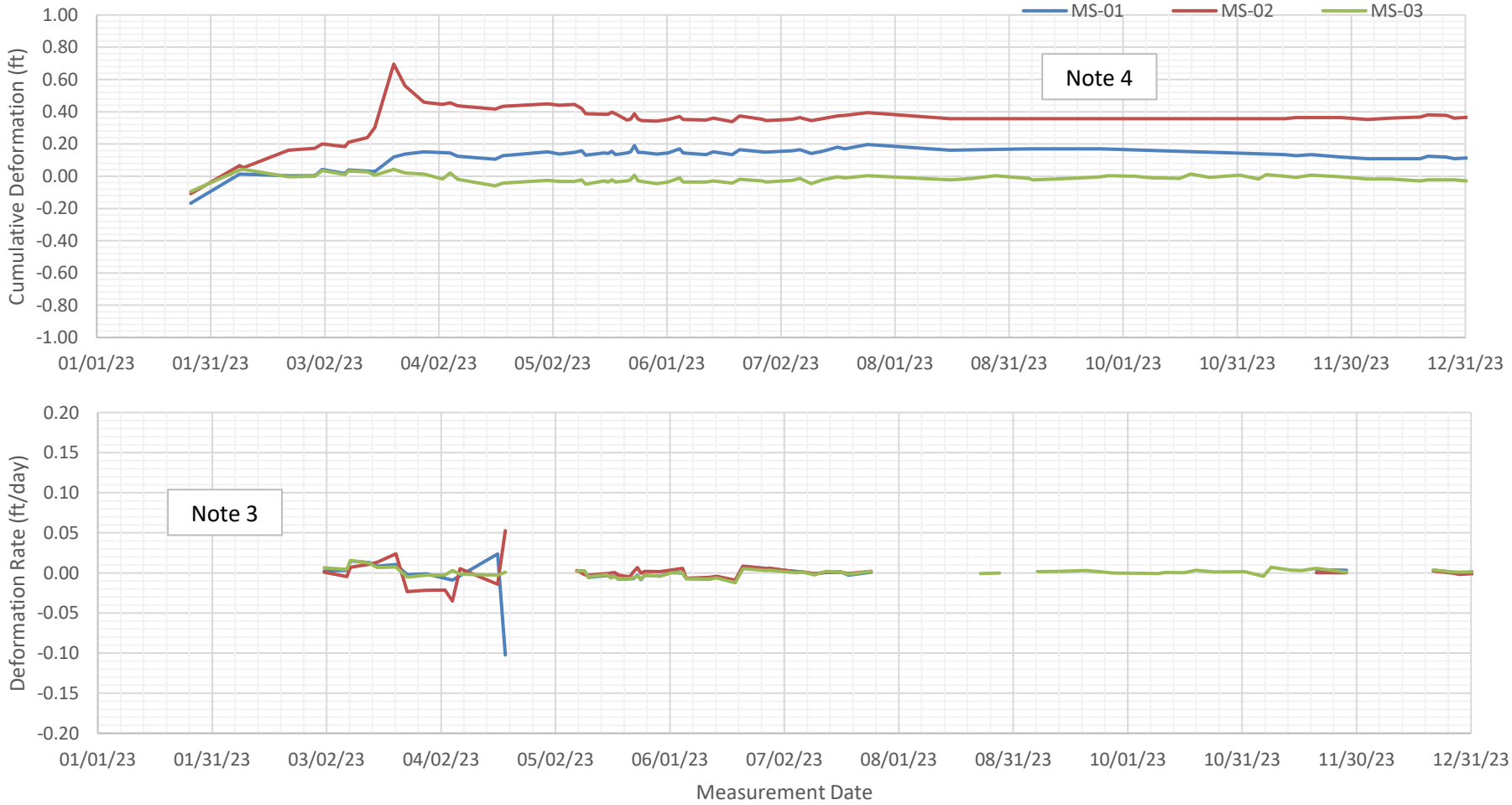
REF. NO. VA24-00030

FIGURE A.16

REV 0



NOTES:

1. MIDSLOPE MONUMENTS WERE ACTIVATED ON JANUARY 18, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.
4. MONUMENTS MS-01 AND MS-02 WERE TEMPORARILY REMOVED BETWEEN JULY 25 AND NOVEMBER 13, 2023 DUE TO CONSTRUCTION.

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MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
MIDSLOPE TOTAL STATION MONUMENTS
EAST-WEST DEFORMATION

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.17

REV 0

NOTES:

1. SEEP 10 BENCH MONUMENTS WERE ACTIVATED ON JANUARY 10, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.

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MONTANA RESOURCES LLC.

MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
SEEP 10 BENCH TOTAL STATION MONUMENTS
VERTICAL DEFORMATION

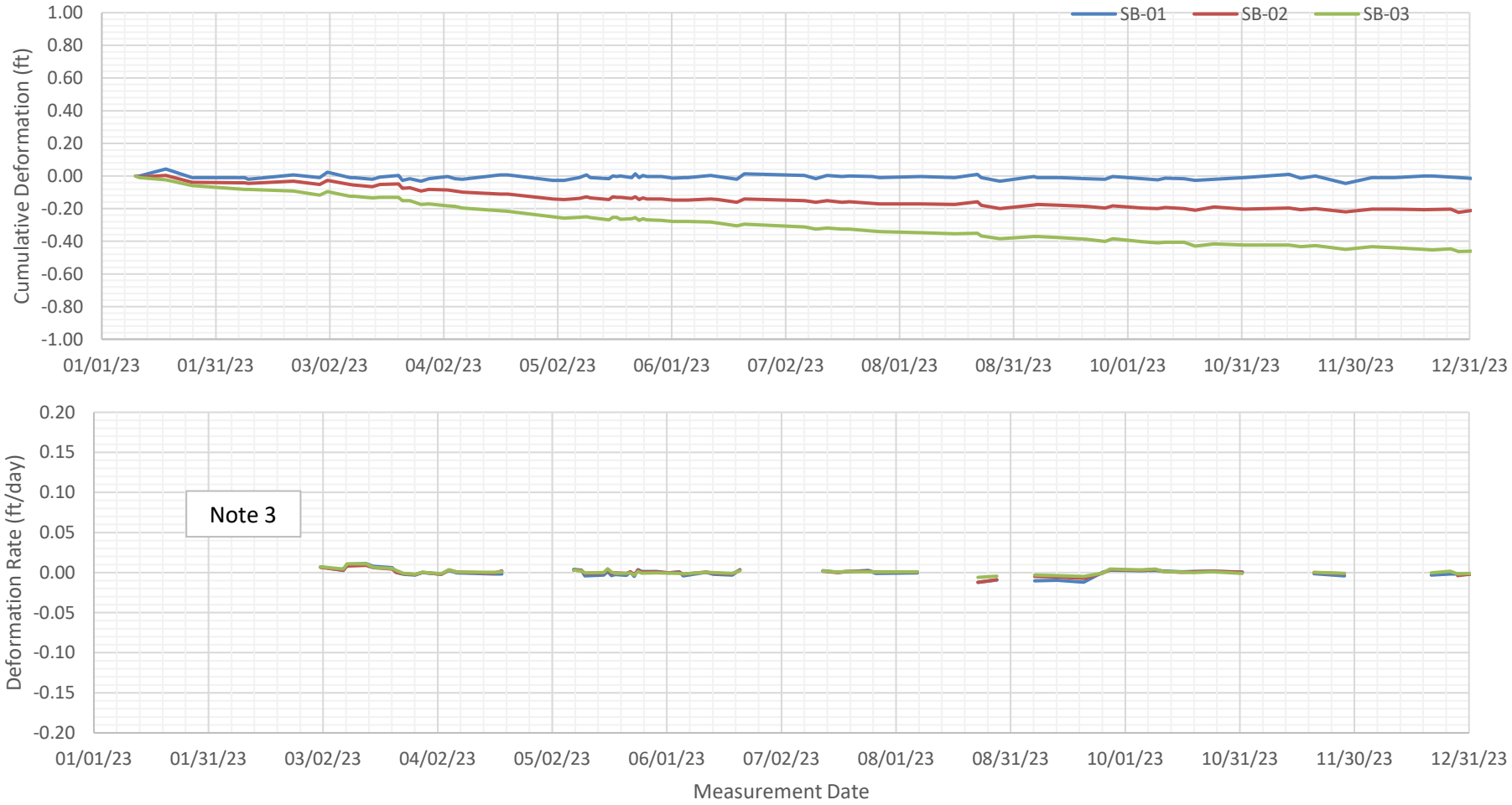
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.18

REV 0



NOTES:

1. SEEP 10 BENCH MONUMENTS WERE ACTIVATED ON JANUARY 10, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.

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MONTANA RESOURCES LLC.

MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
SEEP 10 BENCH TOTAL STATION MONUMENTS
NORTH-SOUTH DEFORMATION

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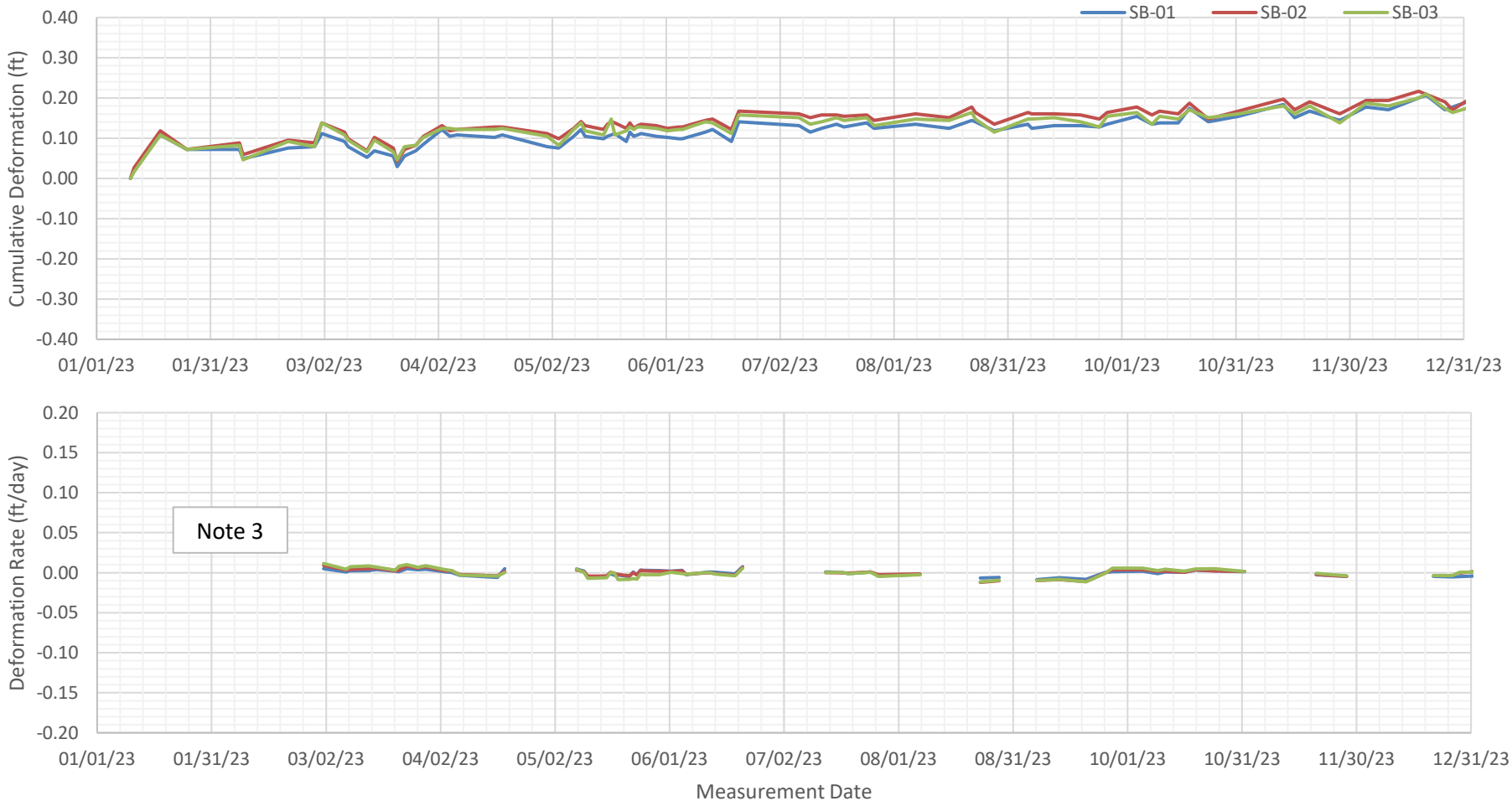
P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.19

REV 0



NOTES:

1. SEEP 10 BENCH MONUMENTS WERE ACTIVATED ON JANUARY 10, 2023, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021.
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.

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MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
SEEP 10 BENCH TOTAL STATION MONUMENTS
EAST-WEST DEFORMATION

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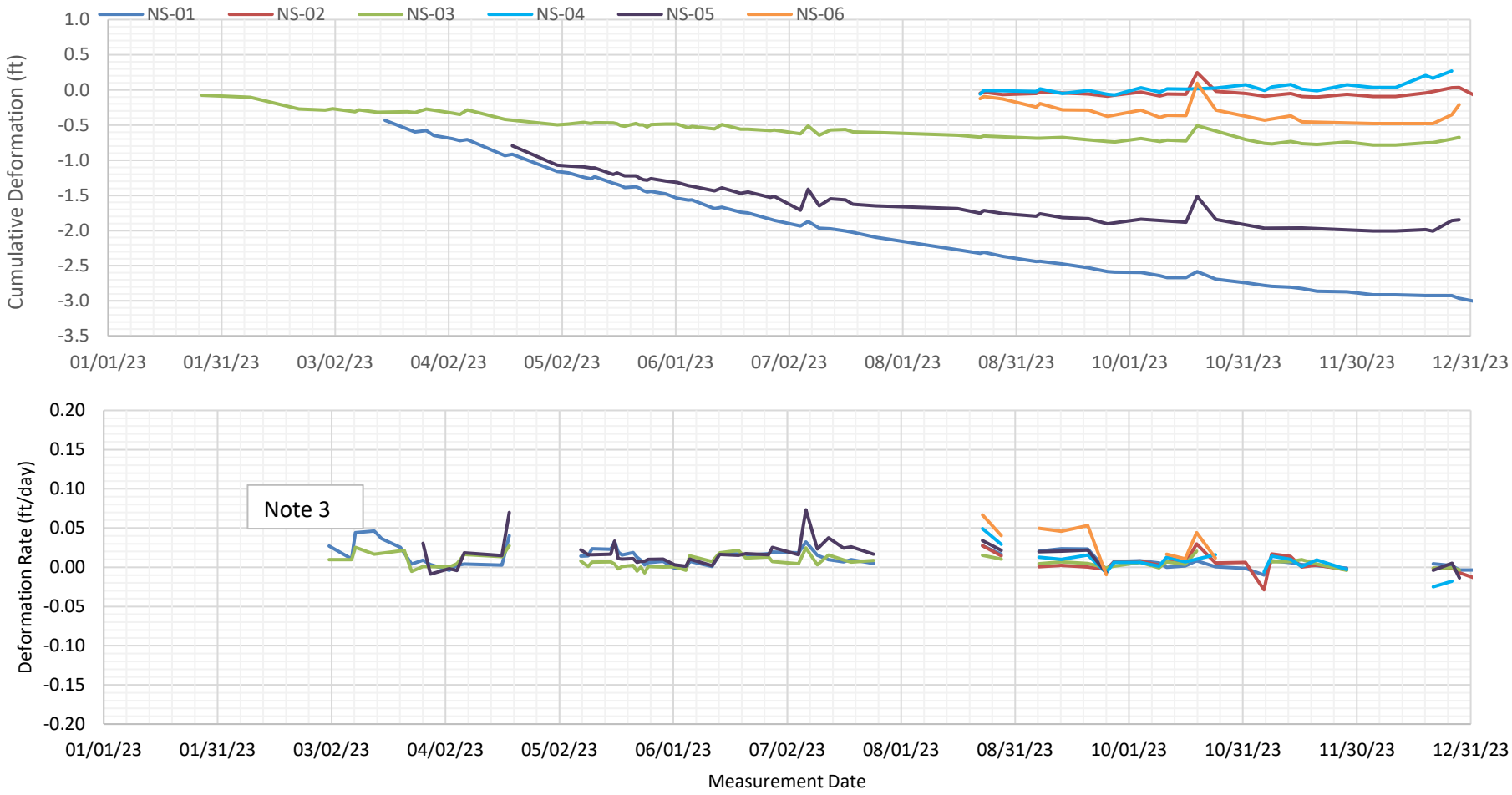
P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.20

REV 0



NOTES:

1. MONUMENTS NS-03, NS-01 AND NS-05 WERE ACTIVATED ON JANUARY 18, FEBRUARY 21 AND MARCH 2, 2023, RESPECTIVELY, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021. MONUMENTS NS-02, NS-04 AND NS-06 WERE LATER ACTIVATED ON AUGUST 16, 2023
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.

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MONTANA RESOURCES LLC.

MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
NORTH-SOUTH EMBANKMENT TOTAL STATION
MONUMENTS VERTICAL DEFORMATION

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.21

REV 0

NOTES:

1. MONUMENTS NS-03, NS-01 AND NS-05 WERE ACTIVATED ON JANUARY 18, FEBRUARY 21 AND MARCH 2, 2023, RESPECTIVELY, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021. MONUMENTS NS-02, NS-04 AND NS-06 WERE LATER ACTIVATED ON AUGUST 16, 2023
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.

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MONTANA RESOURCES LLC.

MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
NORTH-SOUTH EMBANKMENT TOTAL STATION
MONUMENTS VERTICAL DEFORMATION

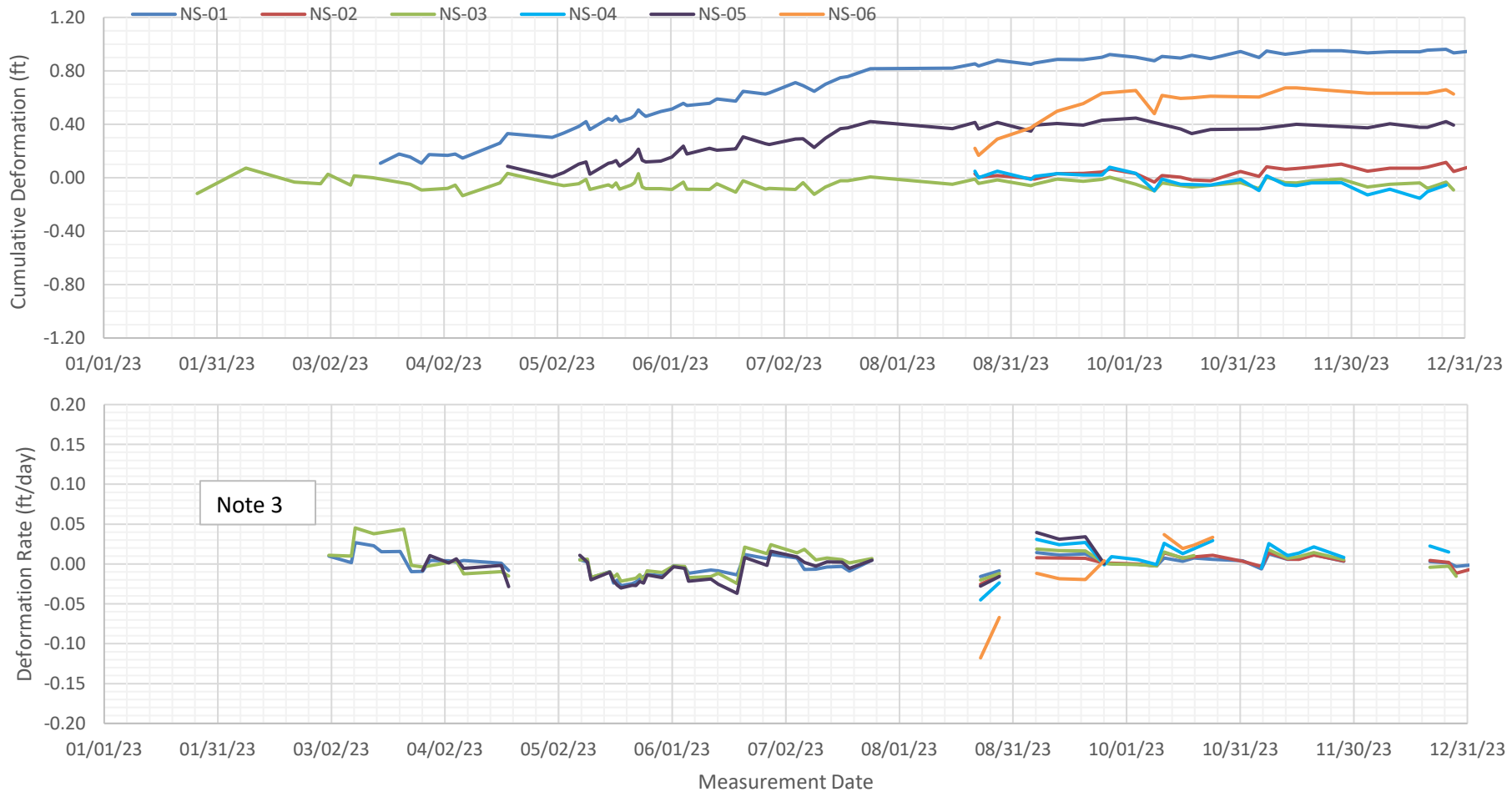
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE A.22

REV 0



NOTES:

1. MONUMENTS NS-03, NS-01 AND NS-05 WERE ACTIVATED ON JANUARY 18, FEBRUARY 21 AND MARCH 2, 2023, RESPECTIVELY, FOLLOWING DGPS SURVEY COVERAGE SINCE MID-2021. MONUMENTS NS-02, NS-04 AND NS-06 WERE LATER ACTIVATED ON AUGUST 16, 2023
2. NEGATIVE VERTICAL DISPLACEMENTS INDICATE DOWNWARD DISPLACEMENT.
3. DEFORMATION RATES ARE CALCULATED AS A 14-DAY AVERAGE USING A MINIMUM OF 3 DATA POINTS. DATA GAPS ARE PRESENT IN THE DEFORMATION RATE PLOT WHERE INSUFFICIENT DEFORMATION MEASUREMENTS ARE AVAILABLE FOR THE MOVING AVERAGE. DATA GAPS ARE PRESENT DUE TO LIMITED SURVEY STAFF AVAILABILITY.

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

MONTANA RESOURCES

EL. 6,450 CONSTRUCTION MONITORING
NORTH-SOUTH EMBANKMENT TOTAL STATION
MONUMENTS VERTICAL DEFORMATION

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

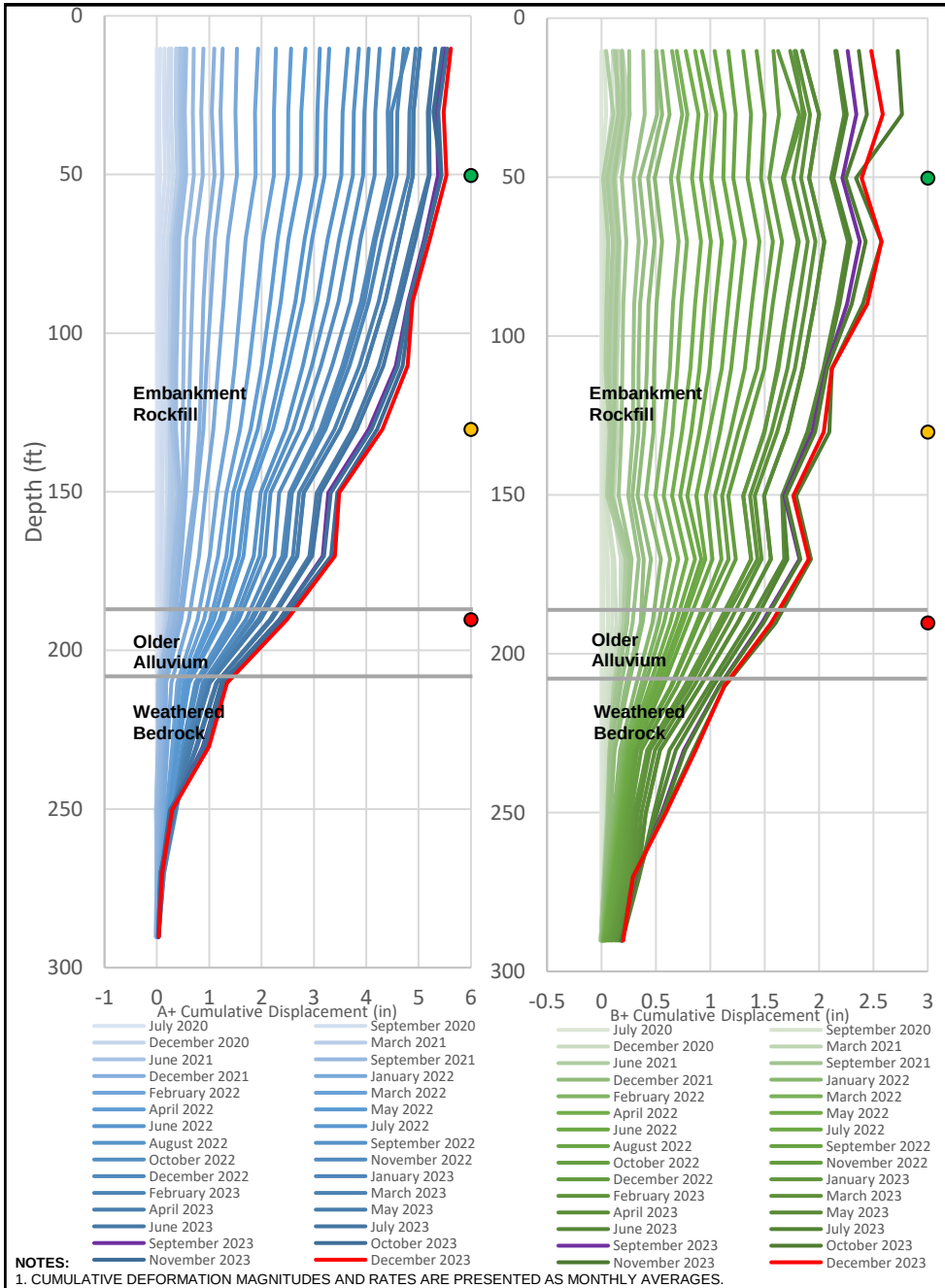
FIGURE A.23

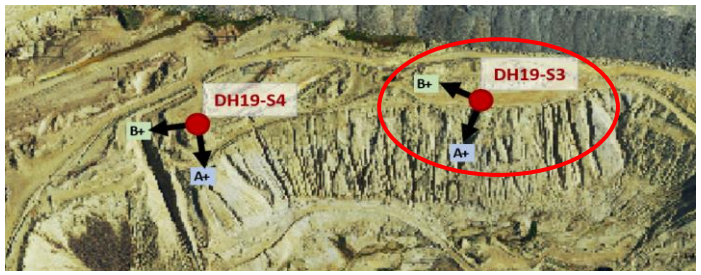
REV 0

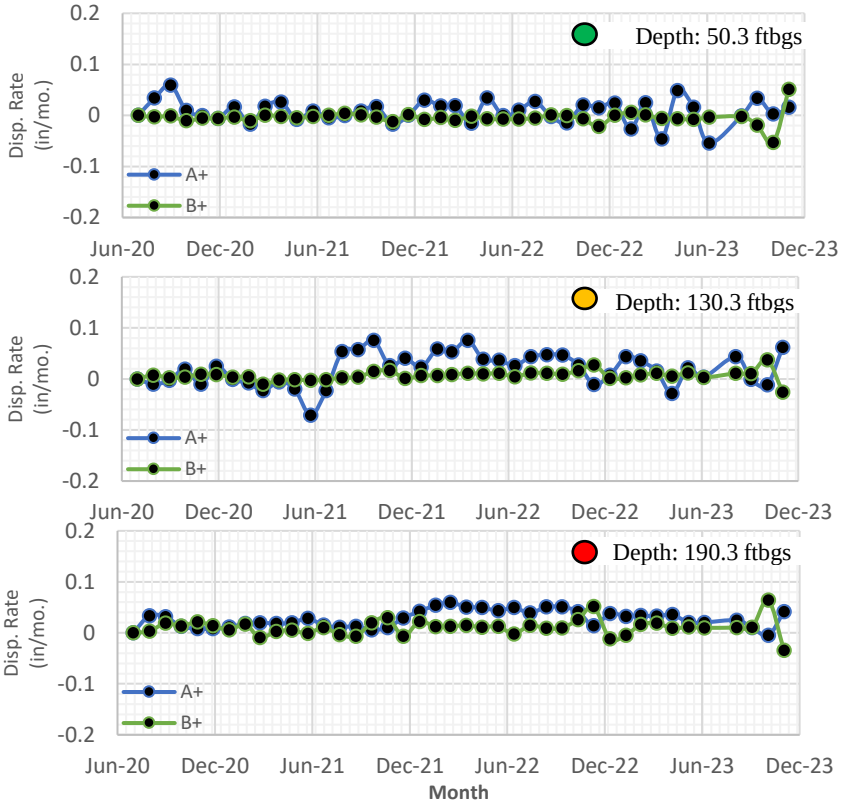
APPENDIX B

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.

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

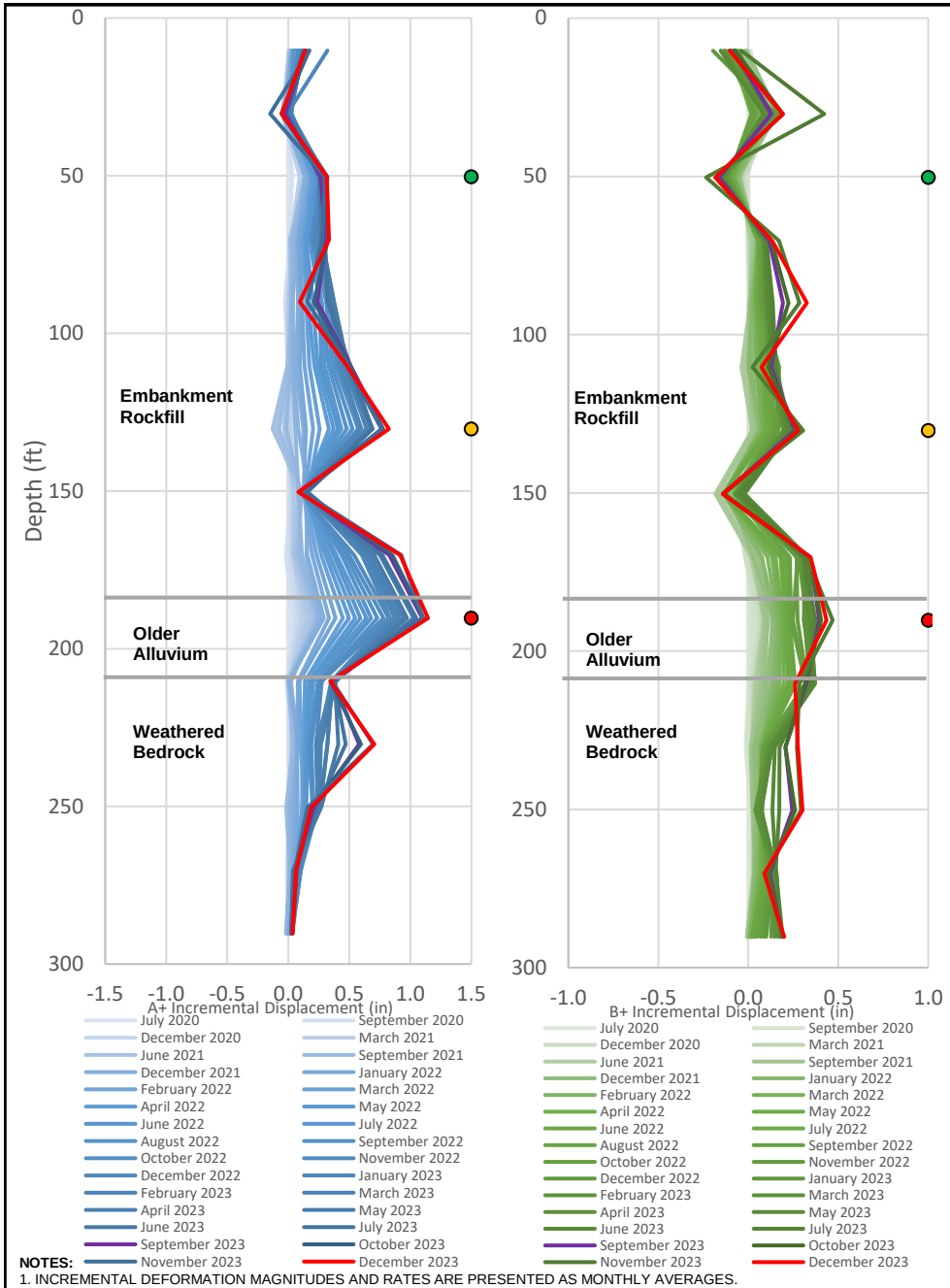
Knight Piésold CONSULTING

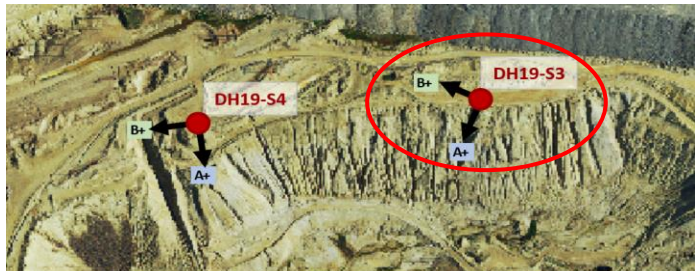
P/A NO. VA101-126/29

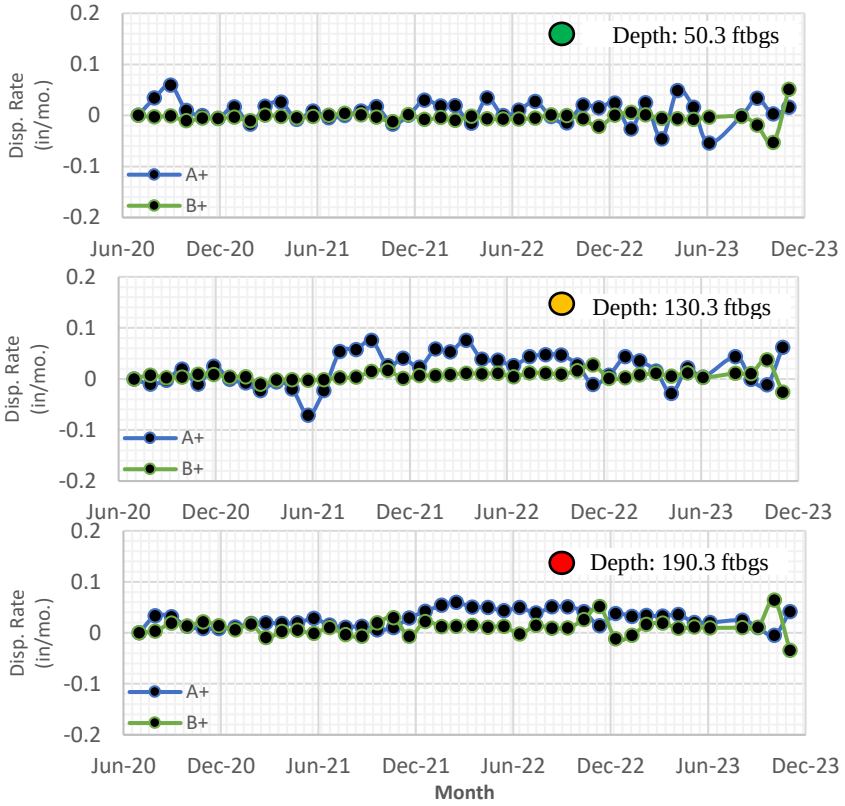
REF. NO. VA24-00030

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.

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MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

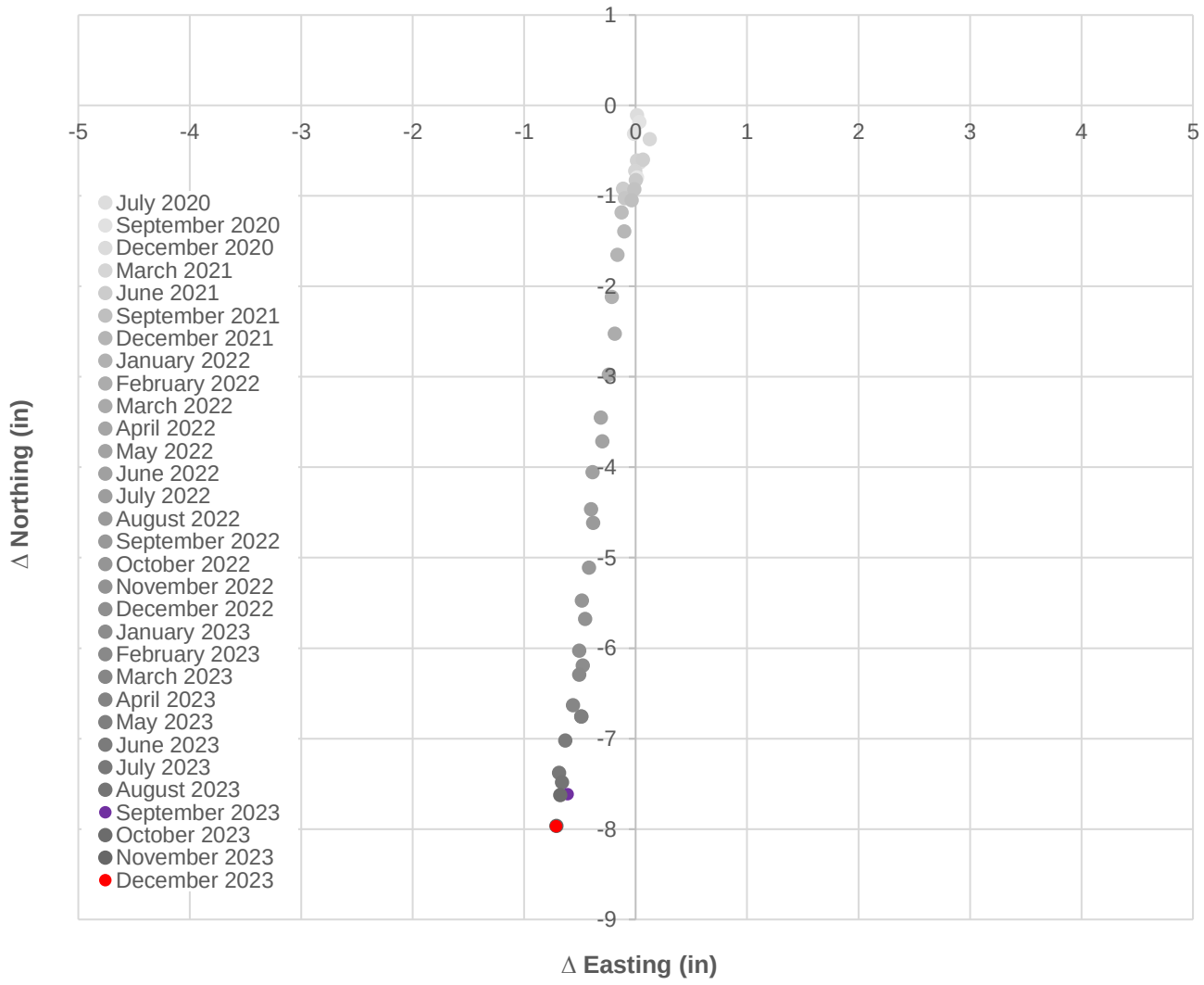
Knight Piésold CONSULTING

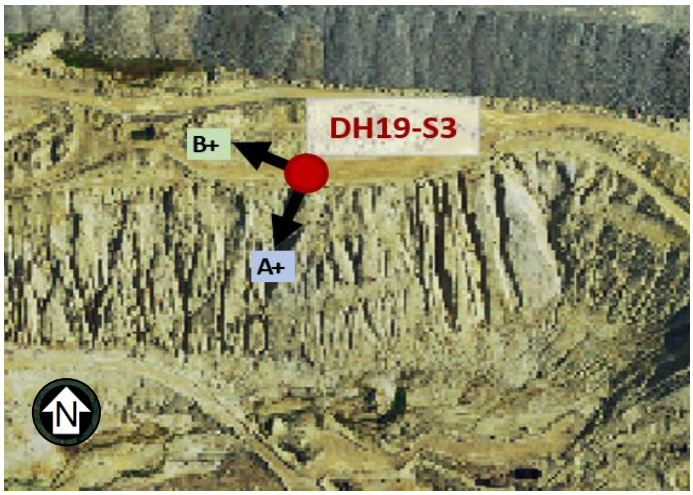
P/A NO. VA101-126/29

REF. NO. VA24-00030

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.

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MONTANA RESOURCES, LLC

MONTANA RESOURCES

DH19-S3 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2021 THROUGH DECEMBER 31, 2023)

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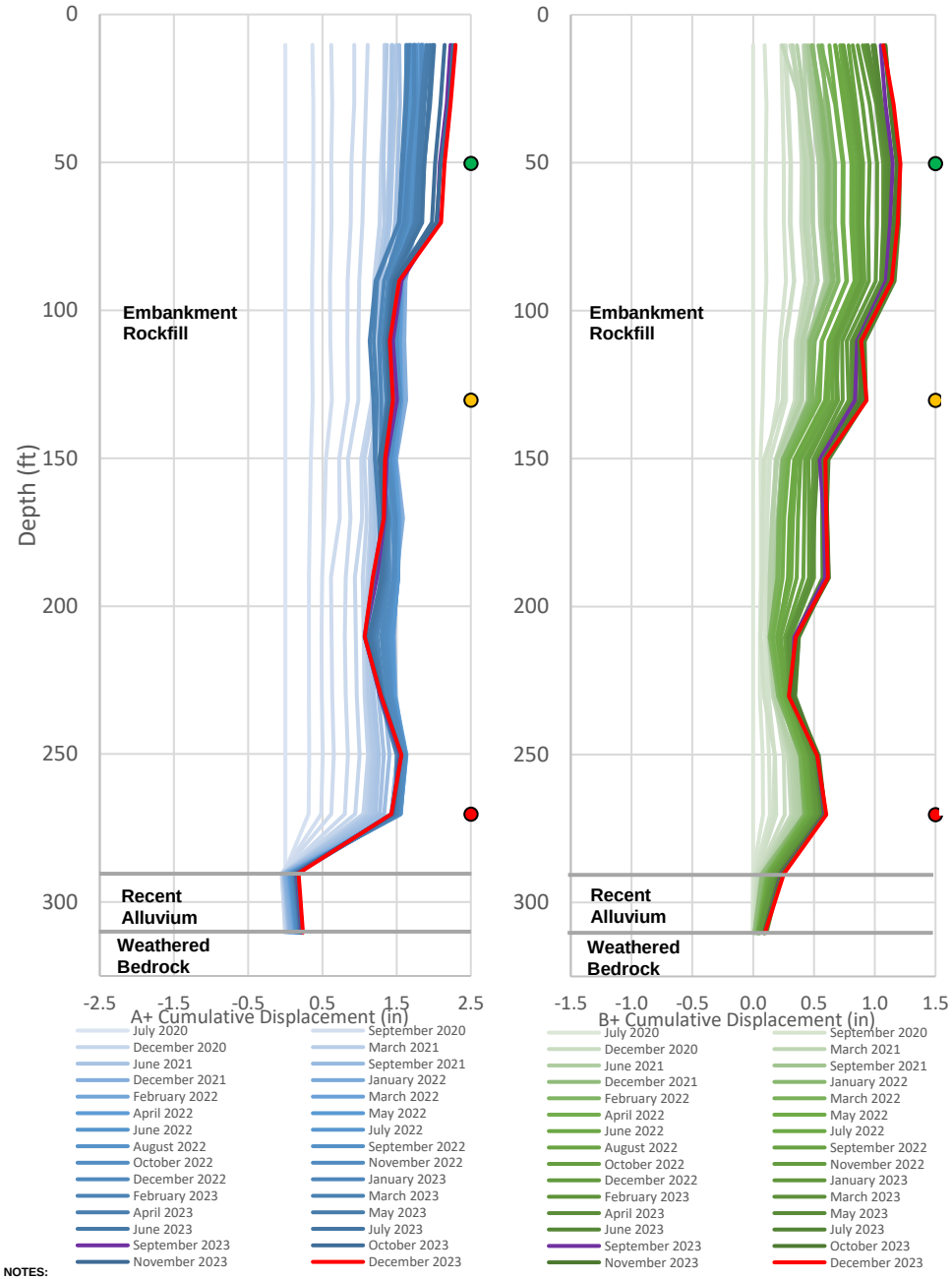
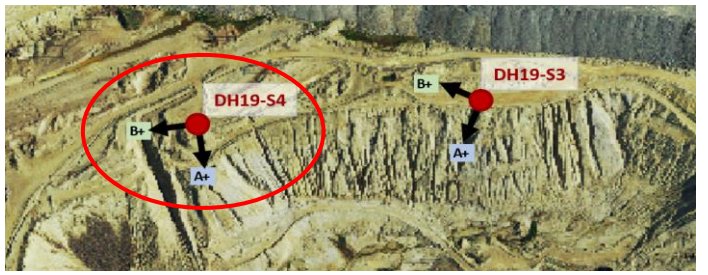
P/A NO. VA101-126/29

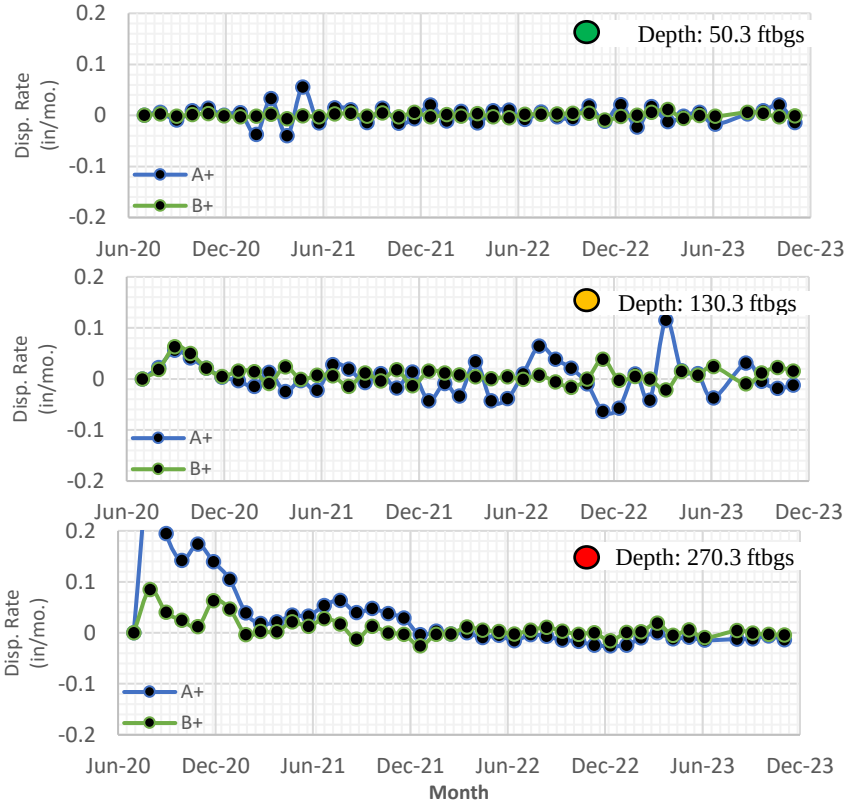
REF. NO. VA24-00030

FIGURE B.3

REV 0







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
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MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

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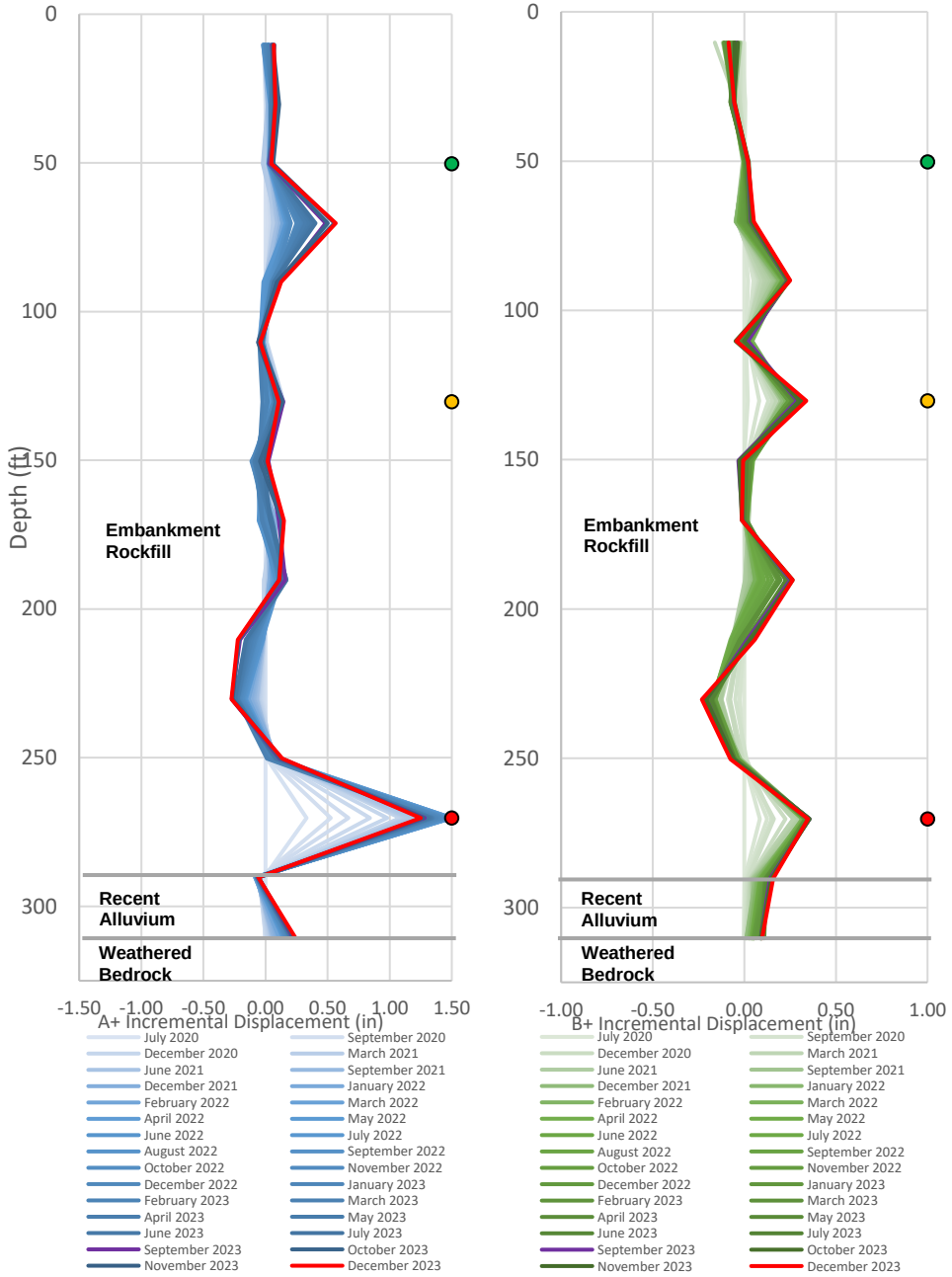
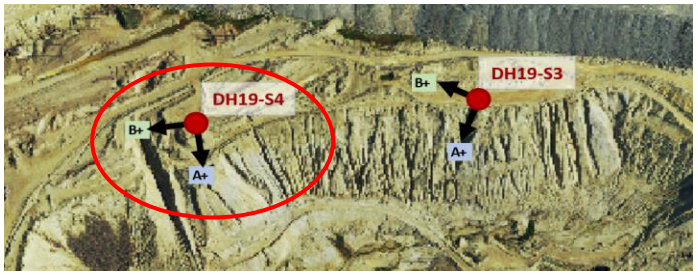
P/A NO. VA101-126/29

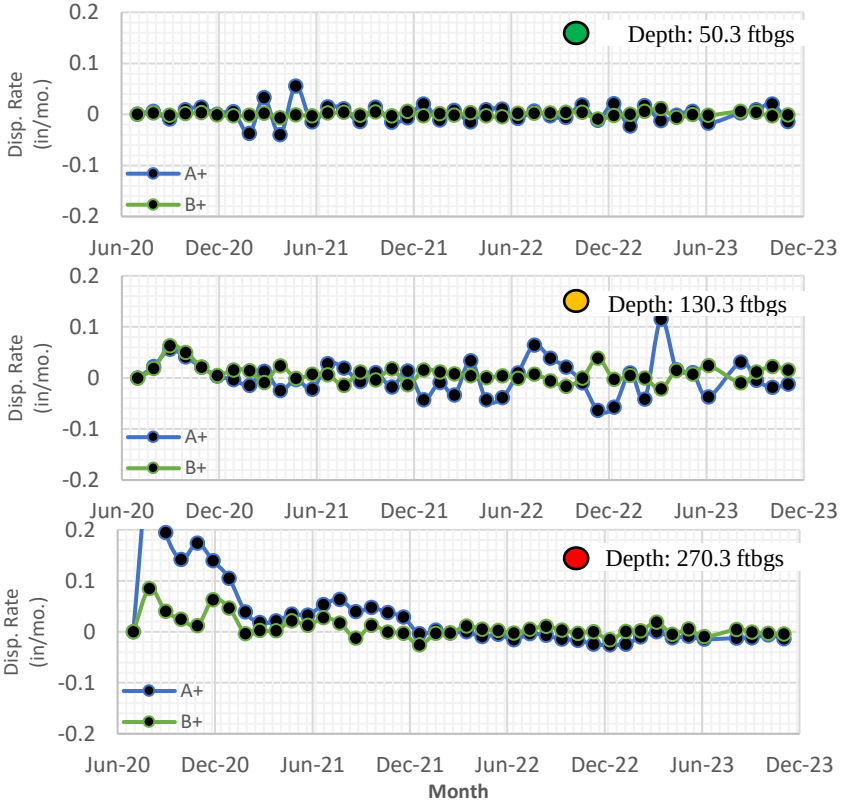
REF. NO. VA24-00030

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.

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

MONTANA RESOURCES

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

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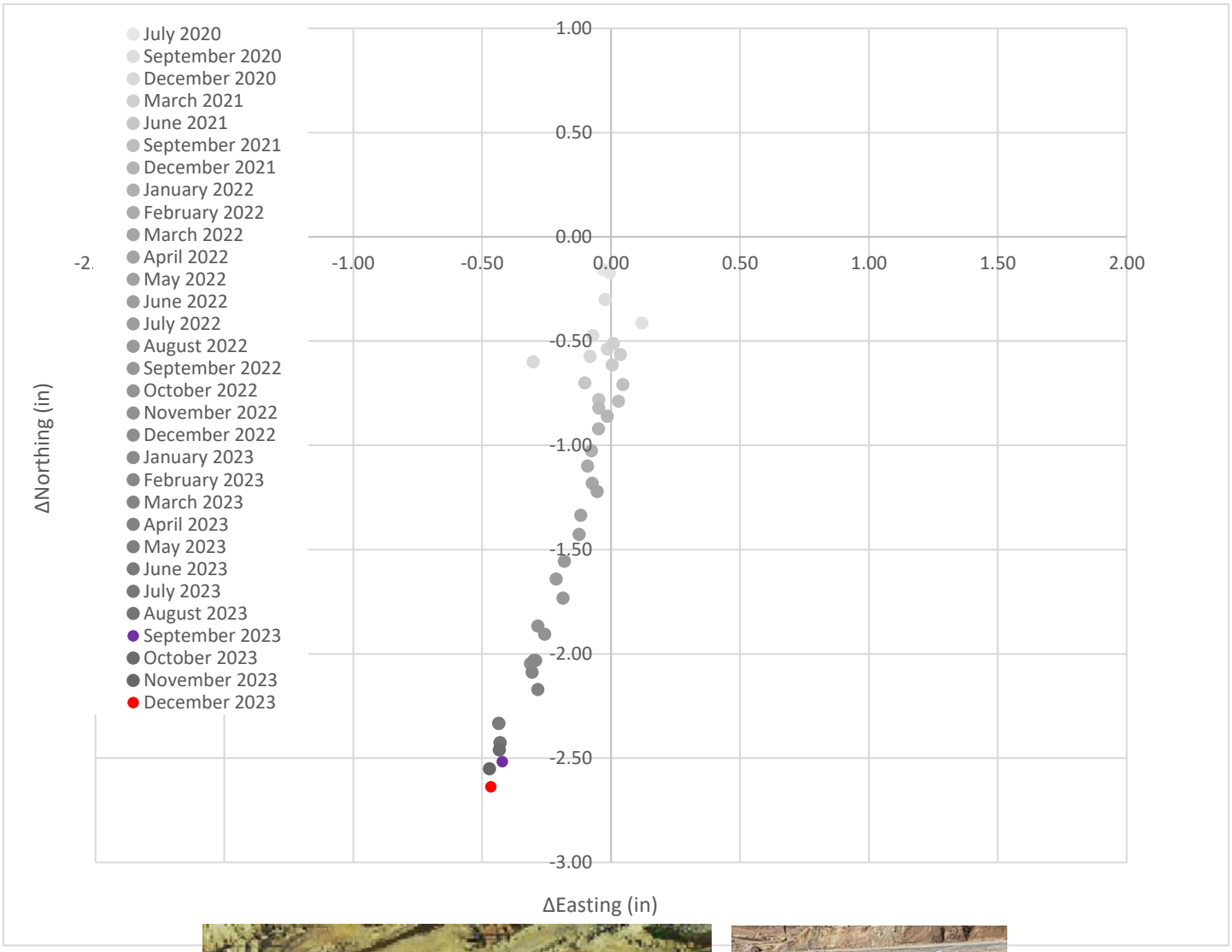
P/A NO. VA101-126/29

REF. NO. VA24-00030

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.

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

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DH19-S4 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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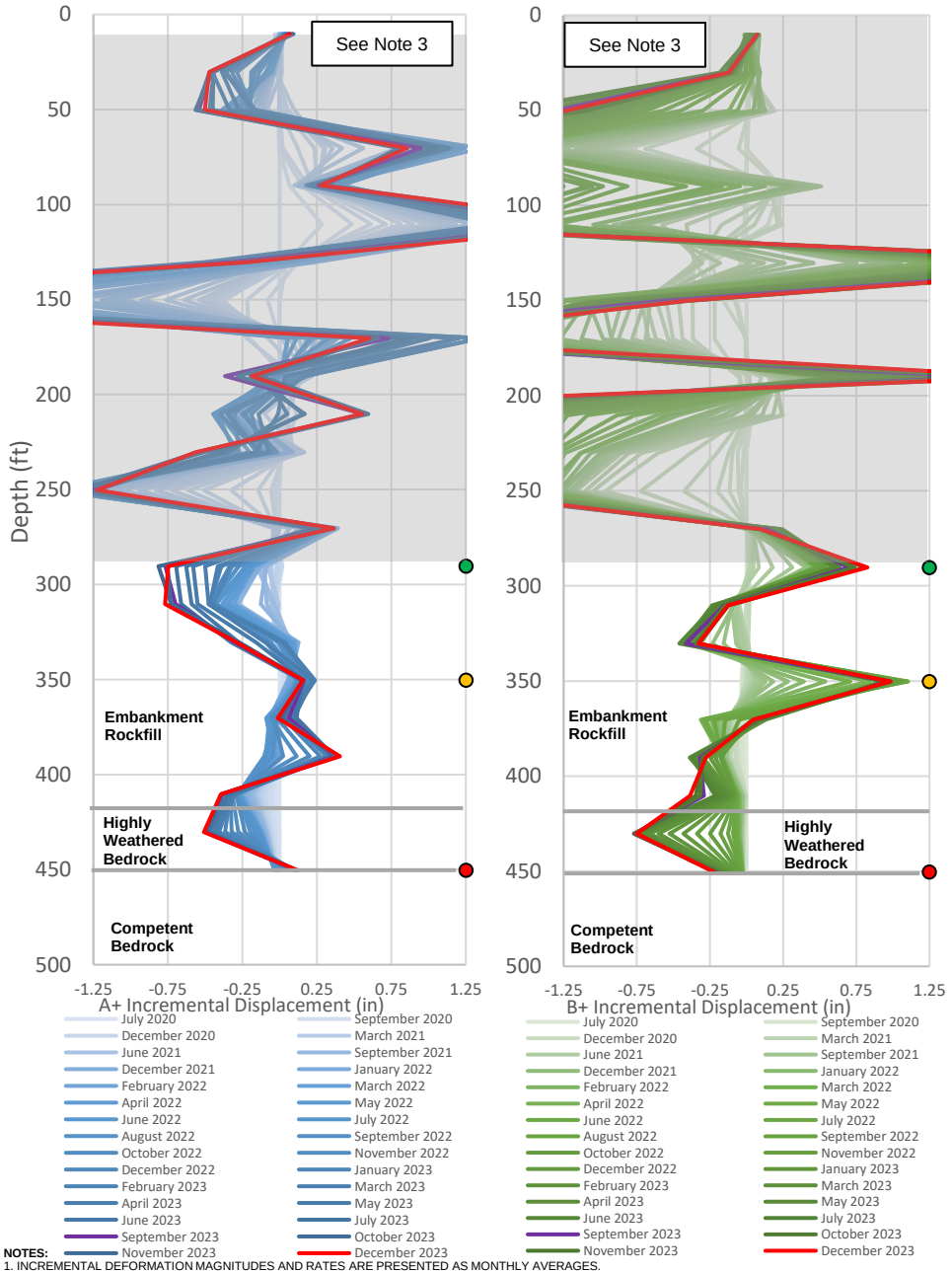
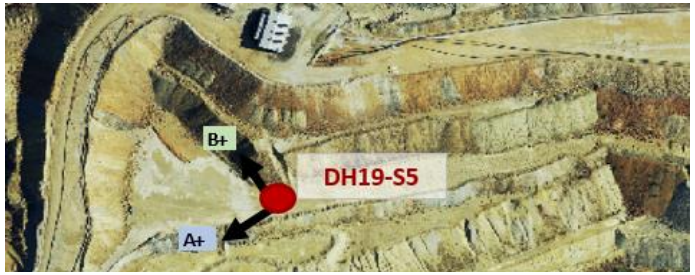
P/A NO. VA101-126/29

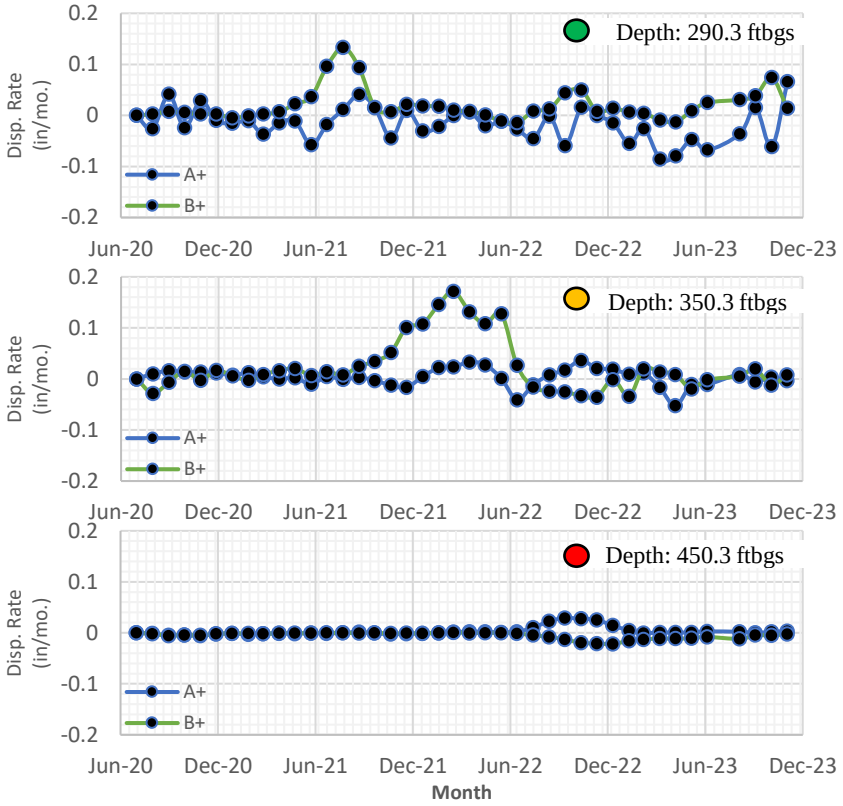
REF. NO. VA24-00030

FIGURE B.6

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

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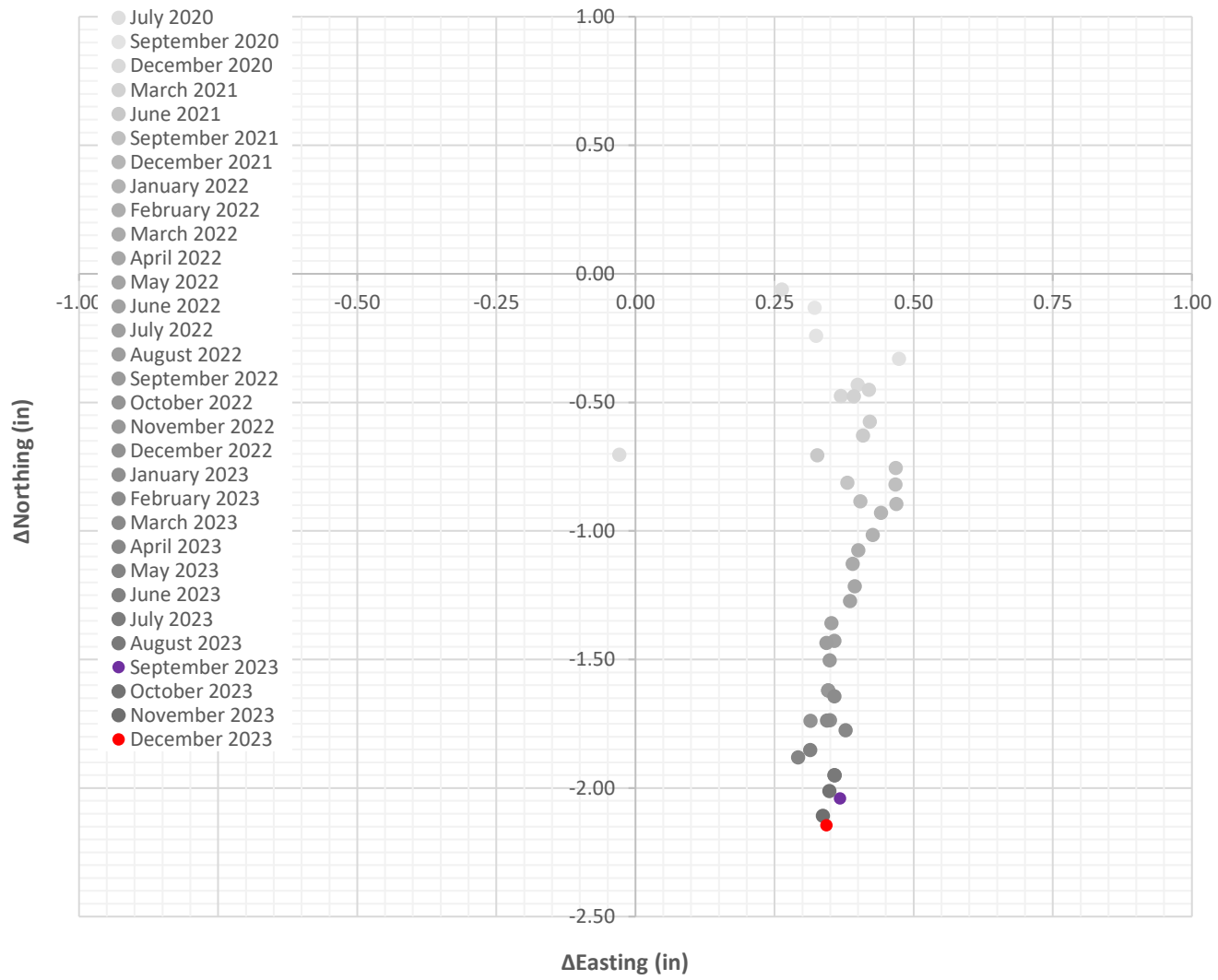
P/A NO. VA101-126/29

REF. NO. VA24-00030

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 MANAGEMENT ISSUE.

MONTANA RESOURCES, LLC

MONTANA RESOURCES

DH19-S5 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

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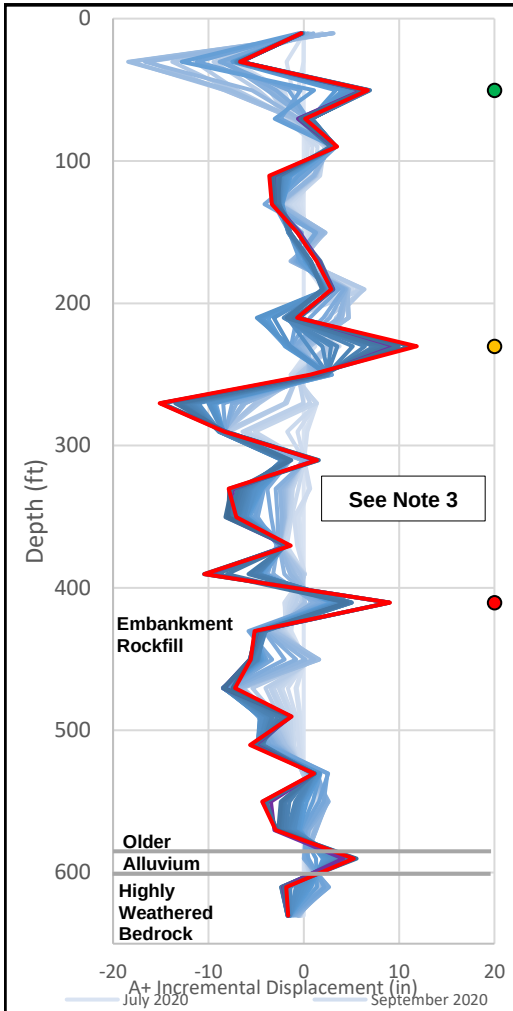
P/A NO. VA101-126/29

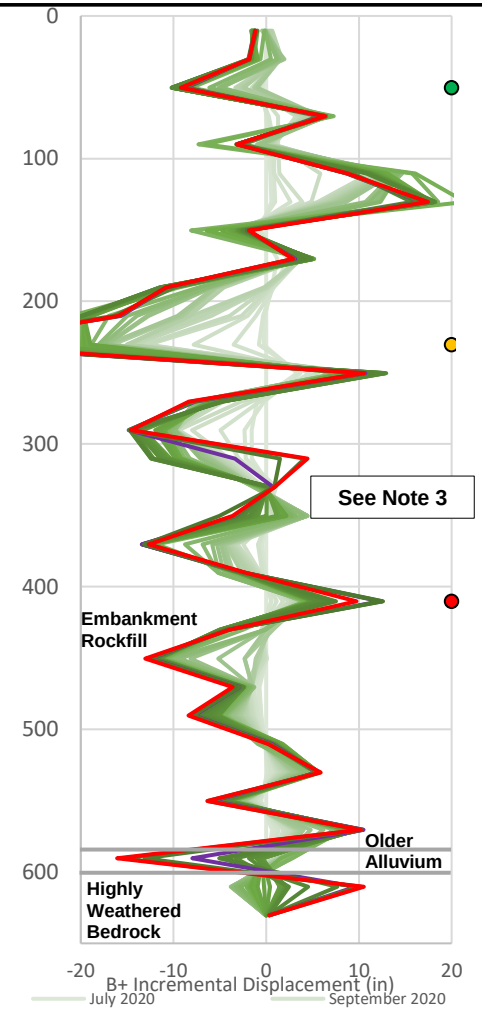
REF. NO. VA24-00030

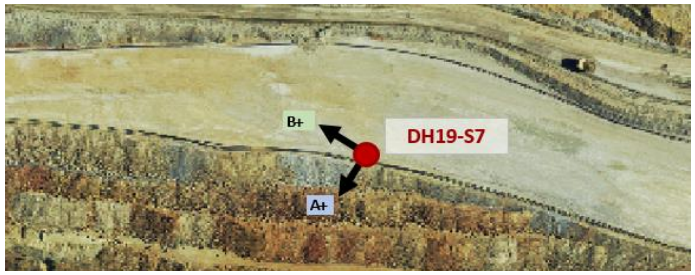
FIGURE B.8

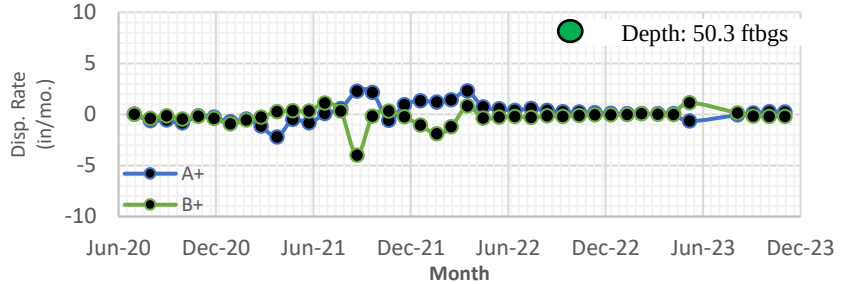
REV 0

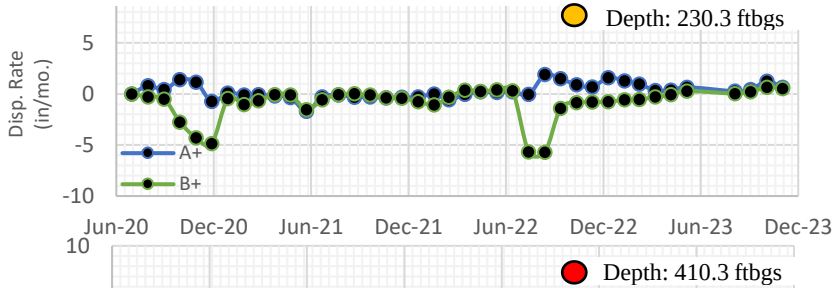
REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	15JAN'24	ISSUED WITH LETTER	CNN	KTD

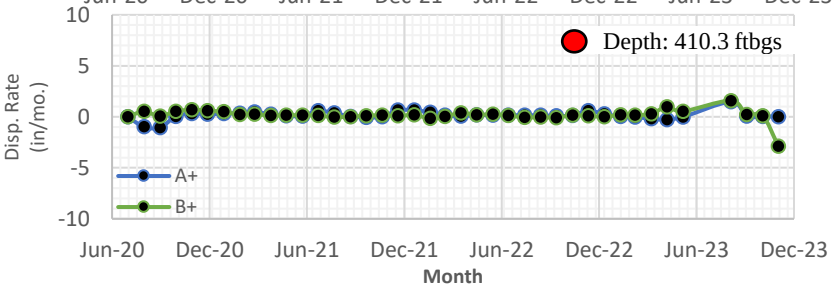












NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. DEFORMATION DATA THROUGHOUT THE EMBANKMENT ROCKFILL ARE INTERPRETED TO RESULT PREDOMINANTLY FROM SETTLEMENT-DERIVED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

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MONTANA RESOURCES

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

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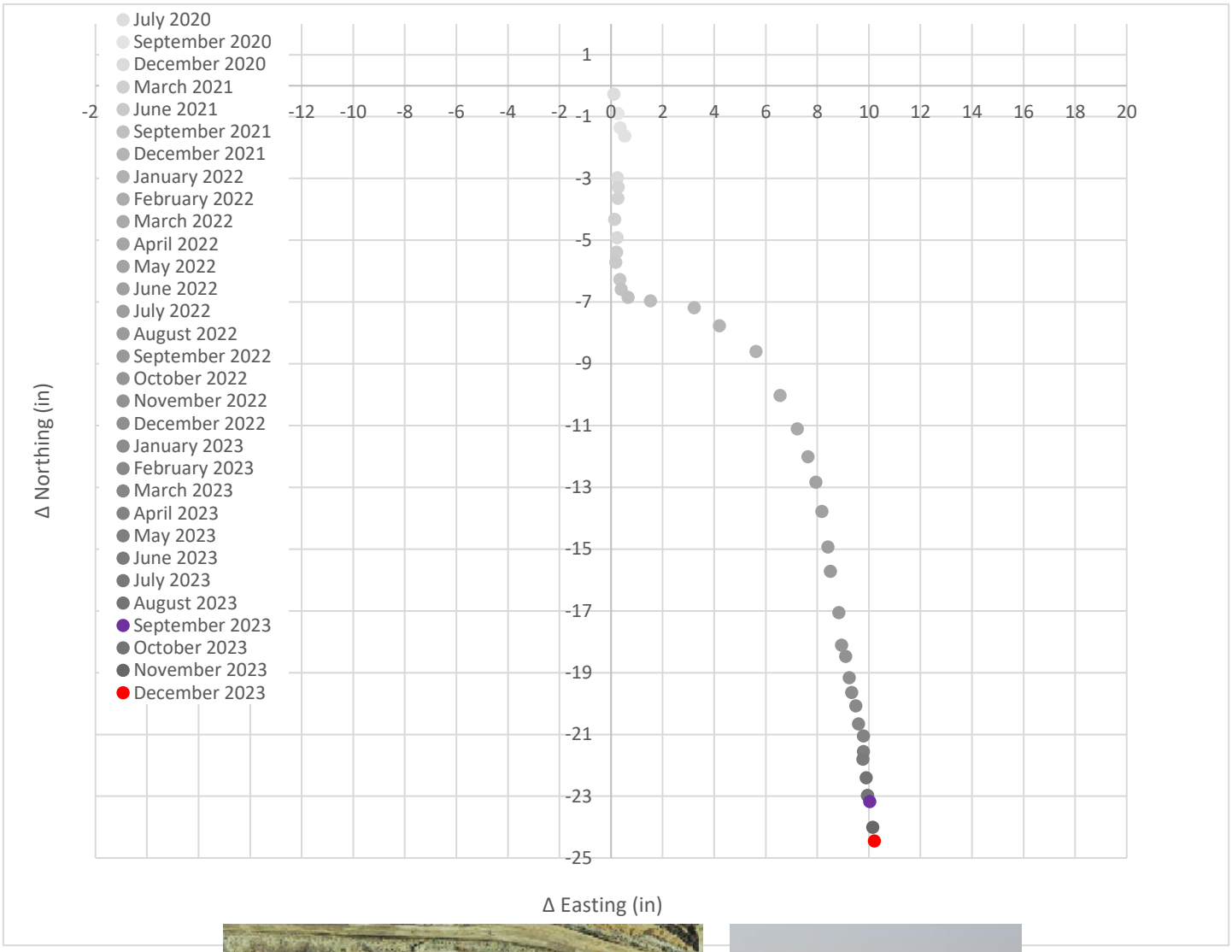
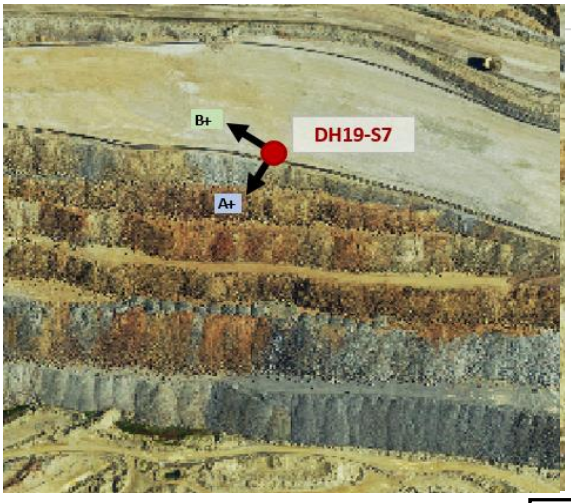
REF. NO. VA24-00030

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

MONTANA RESOURCES

DH19-S7 GNSS-BASED INCLINOMETER COLLAR WANDER (JULY 1, 2020 THROUGH DECEMBER 31, 2023)

Knight Piésold CONSULTING

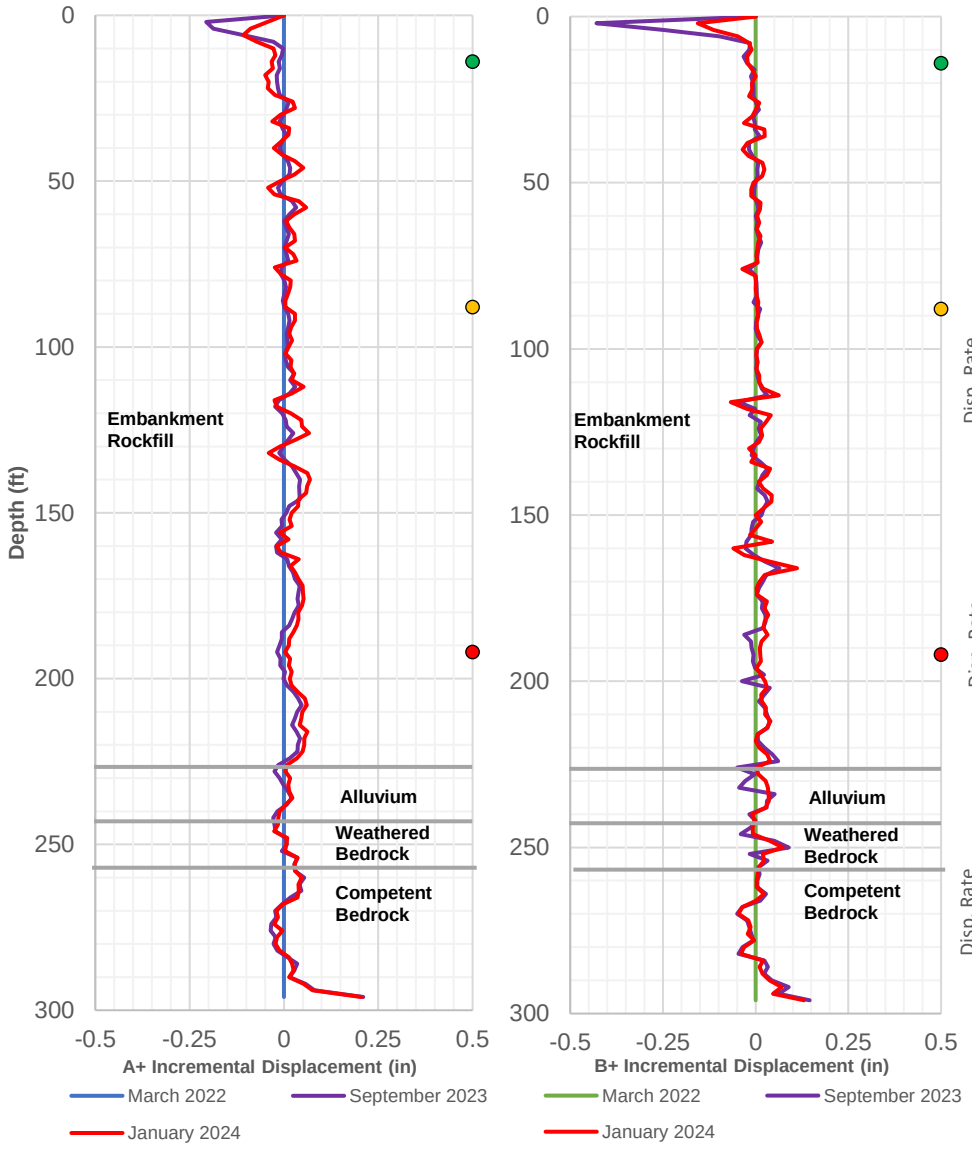
P/A NO. VA101-126/29

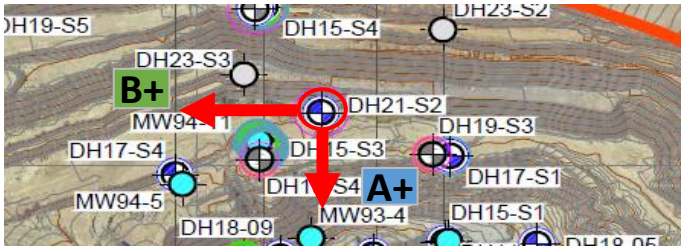
REF. NO. VA24-00030

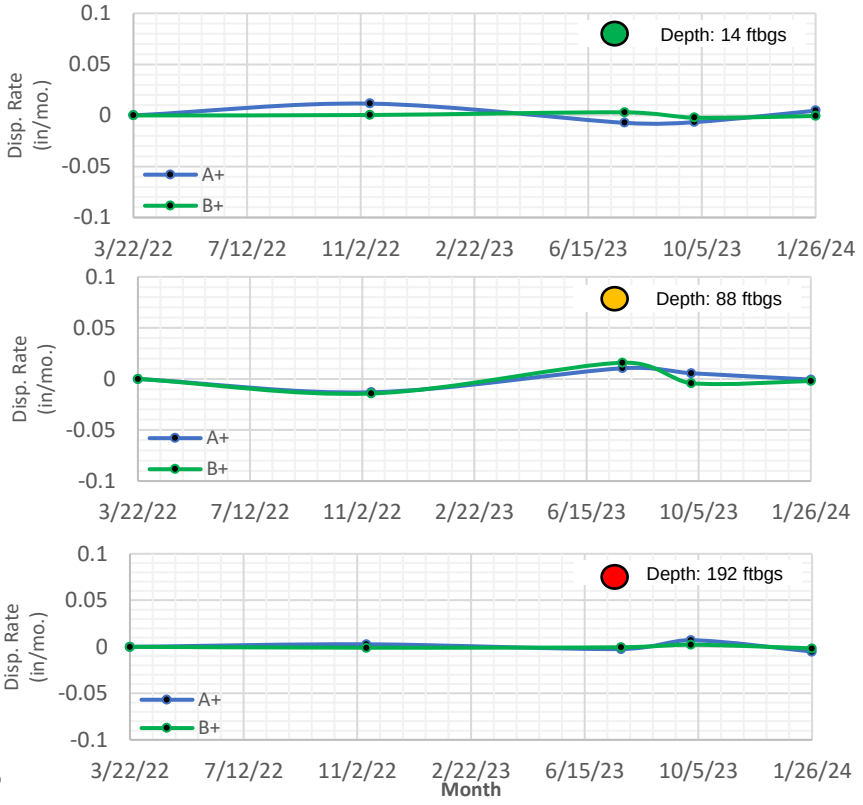
FIGURE B.10

REV 0

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	15JAN'24	ISSUED WITH LETTER	CNN	KTD







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES WHERE DATA IS AVAILABLE.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. LIMITED DATA ARE AVAILABLE DUE TO LIMITED SURVEY STAFF AVAILABILITY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	29JAN'24	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

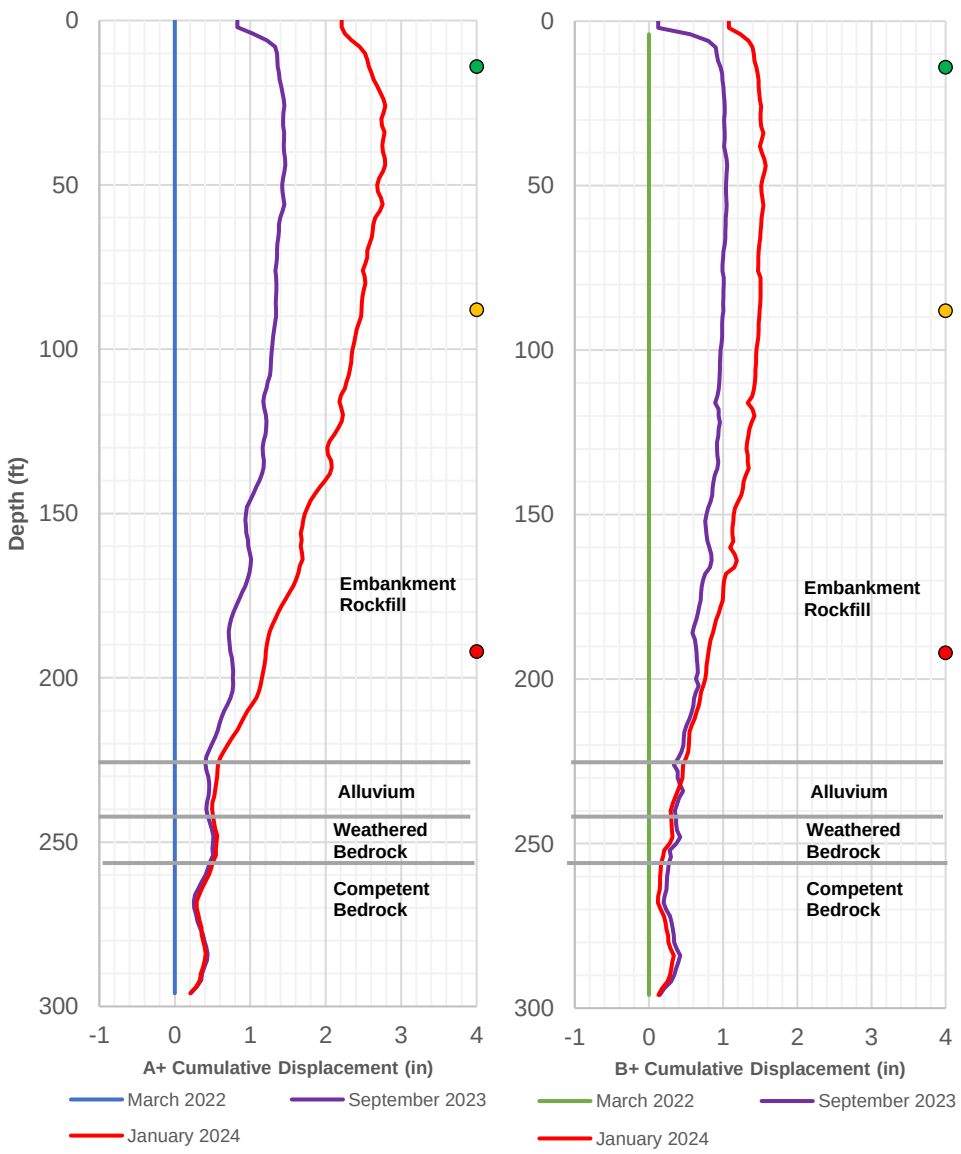
Knight Piésold CONSULTING

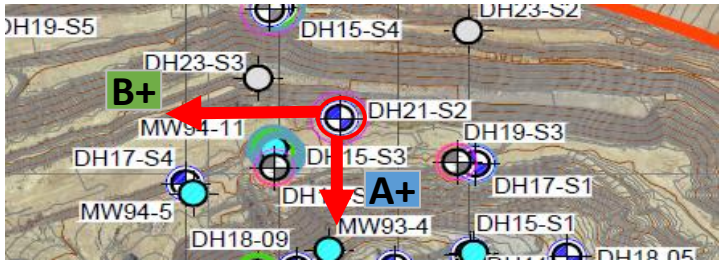
P/A NO. VA101-126/29

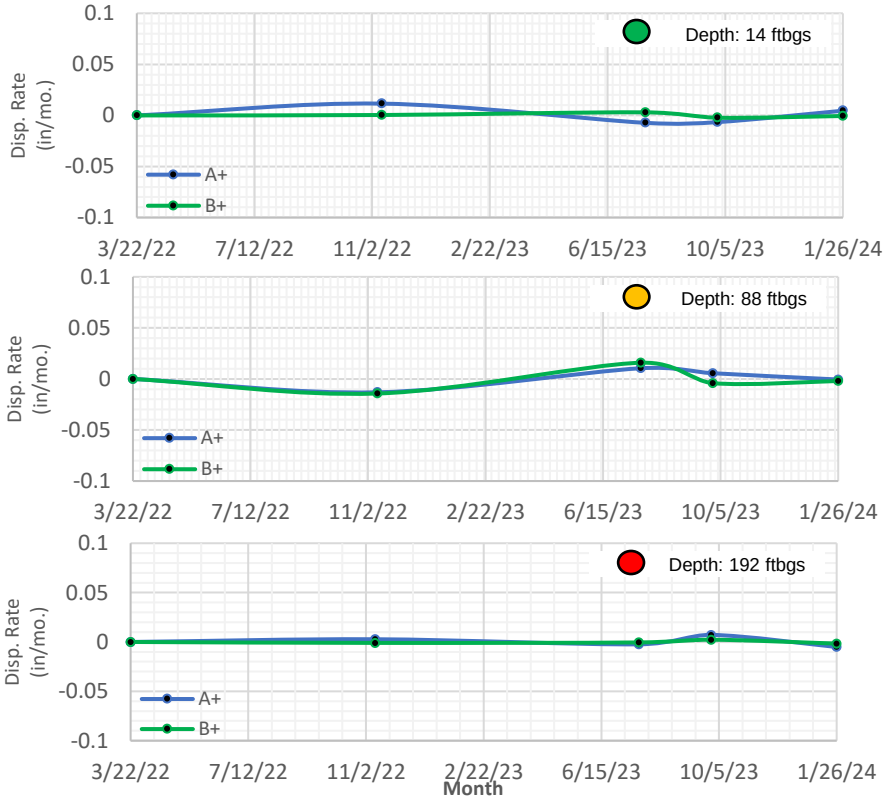
REF. NO. VA24-00030

FIGURE B.11

REV 0







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES WHERE DATA IS AVAILABLE.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHWARD AND WESTWARD DISPLACEMENTS, RESPECTIVELY.
3. LIMITED DATA ARE AVAILABLE DUE TO LIMITED SURVEY STAFF AVAILABILITY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	29JAN'24	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

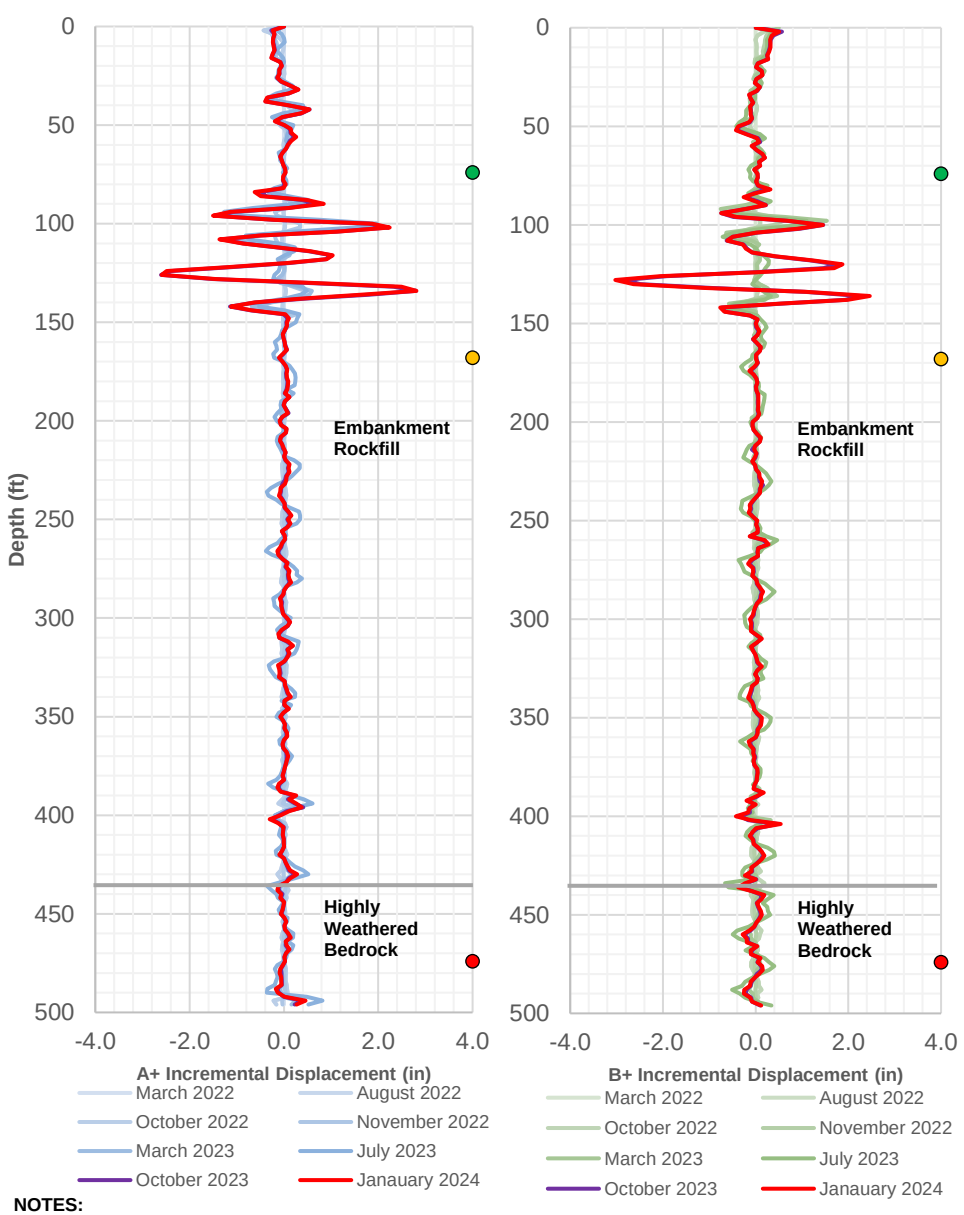
Knight Piésold CONSULTING

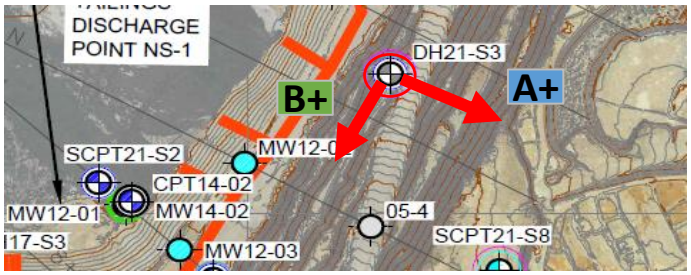
P/A NO. VA101-126/29

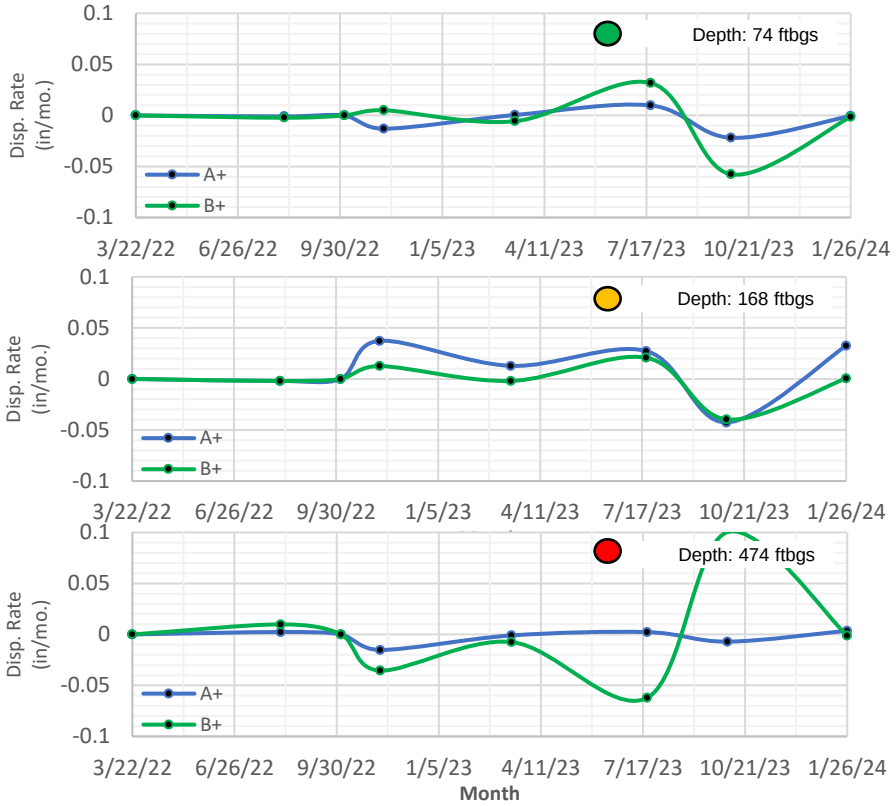
REF. NO. VA24-00030

FIGURE B.12

REV 0







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES WHERE DATA IS AVAILABLE.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHEASTWARD AND SOUTHWESTWARD DISPLACEMENTS, RESPECTIVELY.
3. LIMITED DATA ARE AVAILABLE DUE TO LIMITED SURVEY STAFF AVAILABILITY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	29JAN'24	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

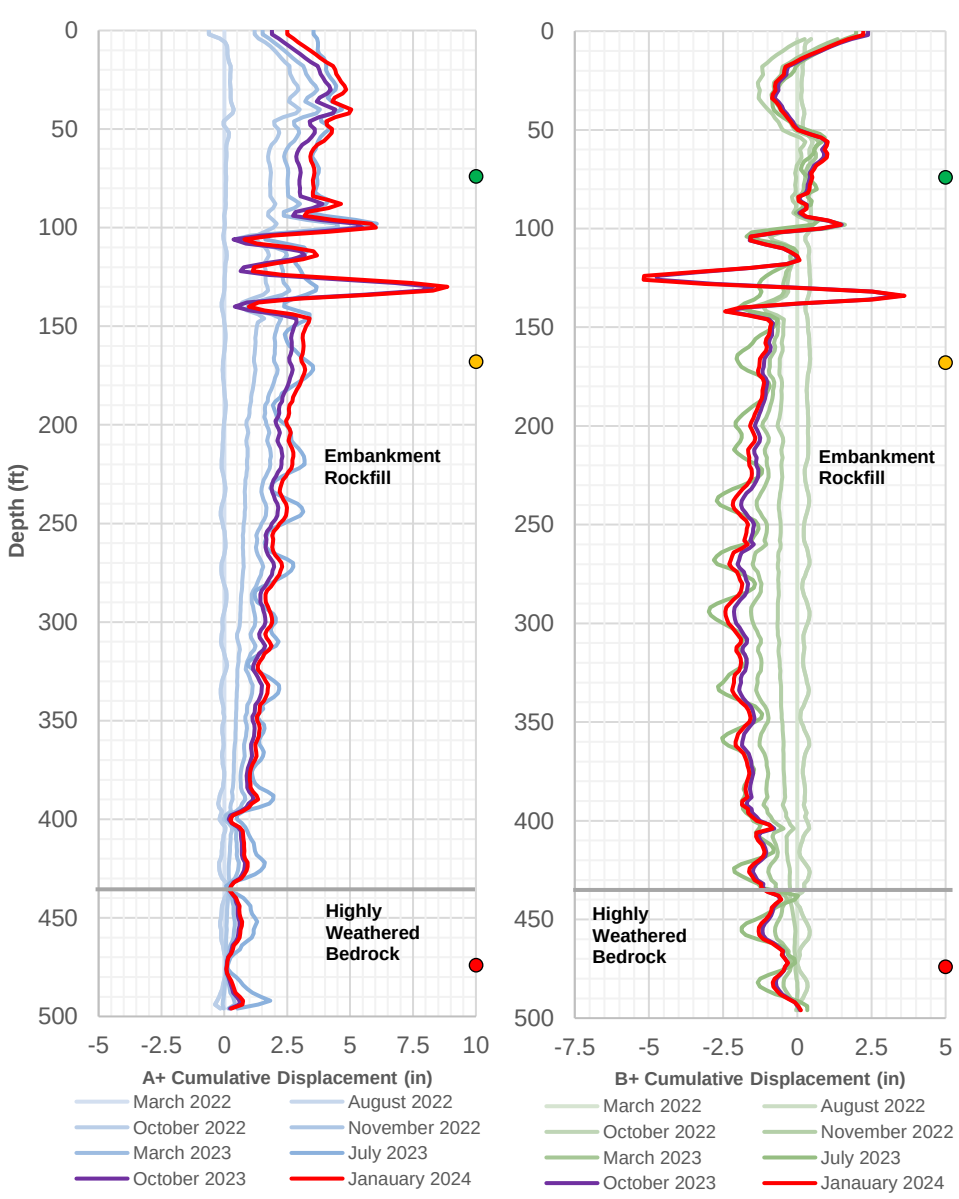
Knight Piésold CONSULTING

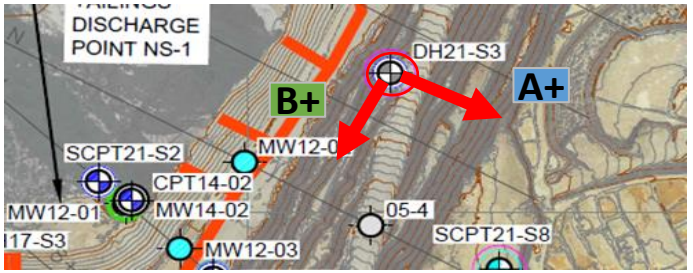
P/A NO. VA101-126/29

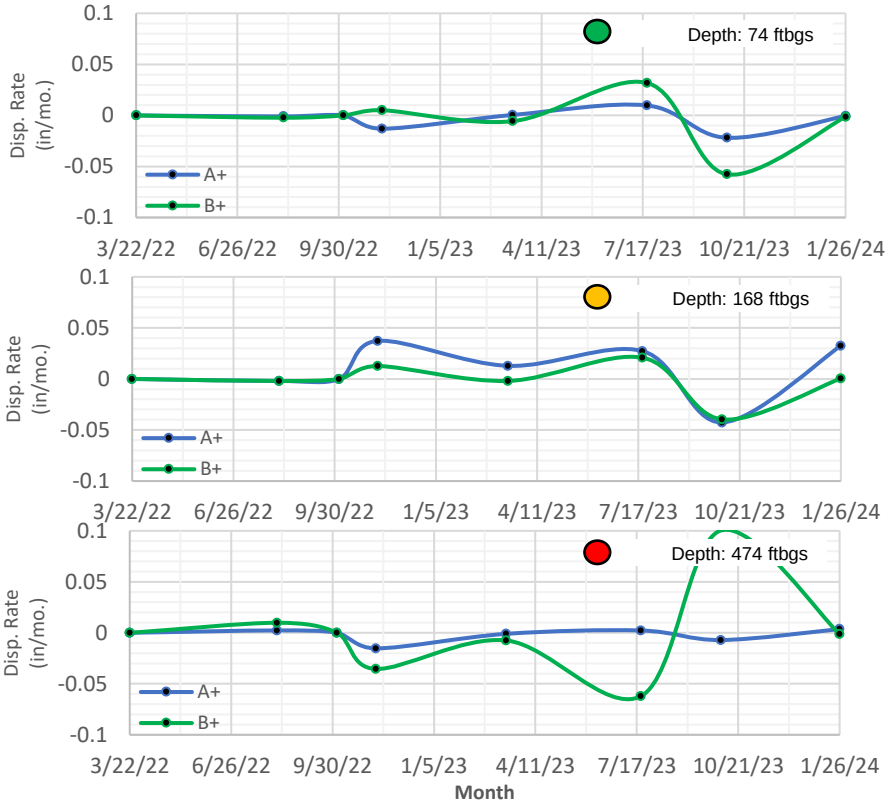
REF. NO. VA24-00030

FIGURE B.13

REV 0







NOTES:
1. INCREMENTAL DEFORMATION MAGNITUDES AND RATES ARE PRESENTED AS MONTHLY AVERAGES WHERE DATA IS AVAILABLE.
2. POSITIVE A+ AND B+ DEFORMATIONS INDICATE SOUTHEASTWARD AND SOUTHWESTWARD DISPLACEMENTS, RESPECTIVELY.
3. LIMITED DATA ARE AVAILABLE DUE TO LIMITED SURVEY STAFF AVAILABILITY.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	29JAN'24	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

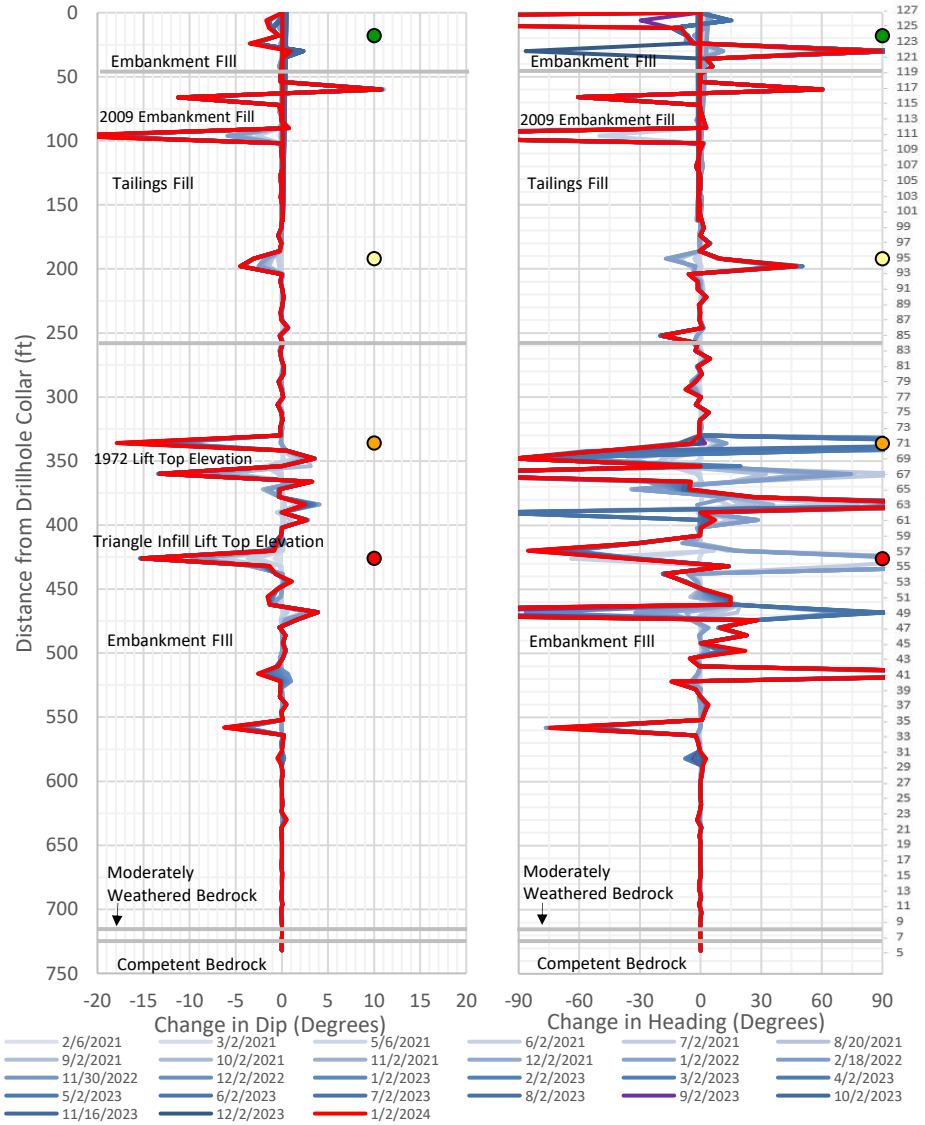
FIGURE B.14

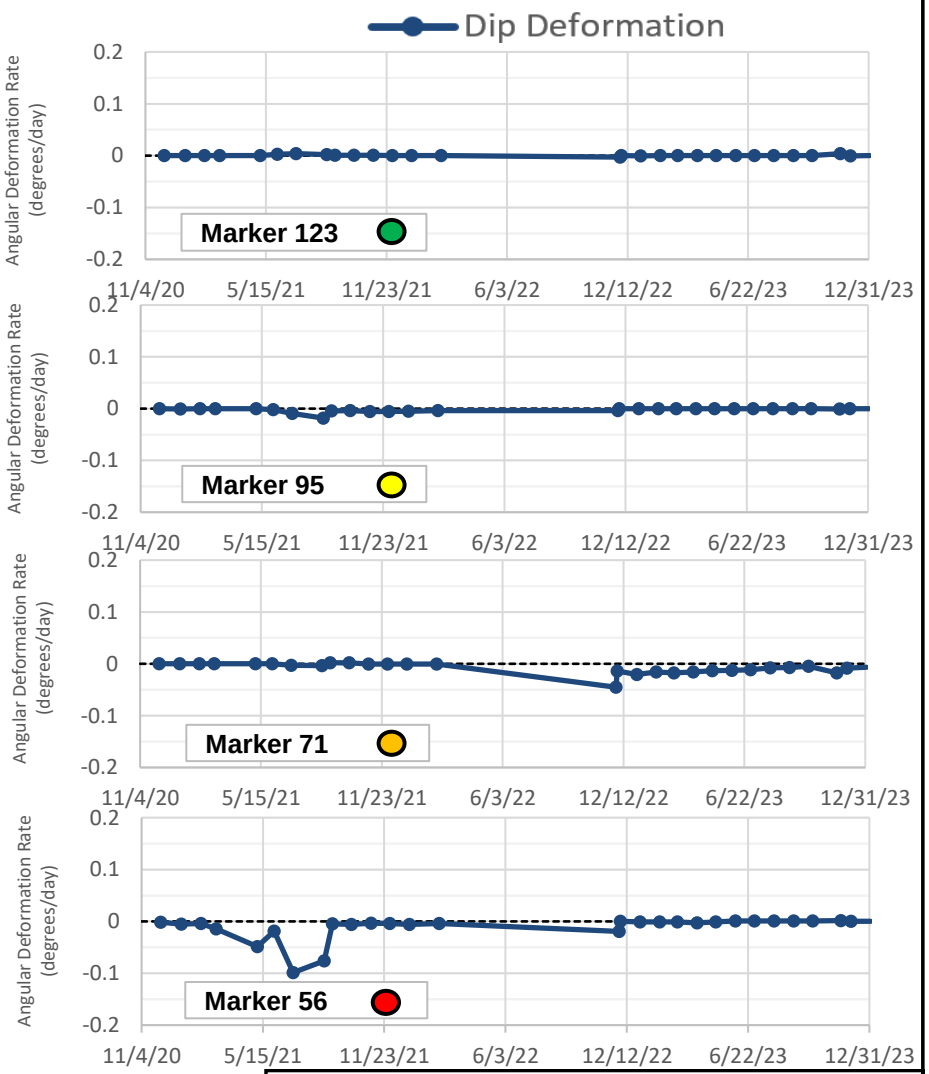
REV 0

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 JANUARY 2, 2024.
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	08FEB'24	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC

MONTANA RESOURCES

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

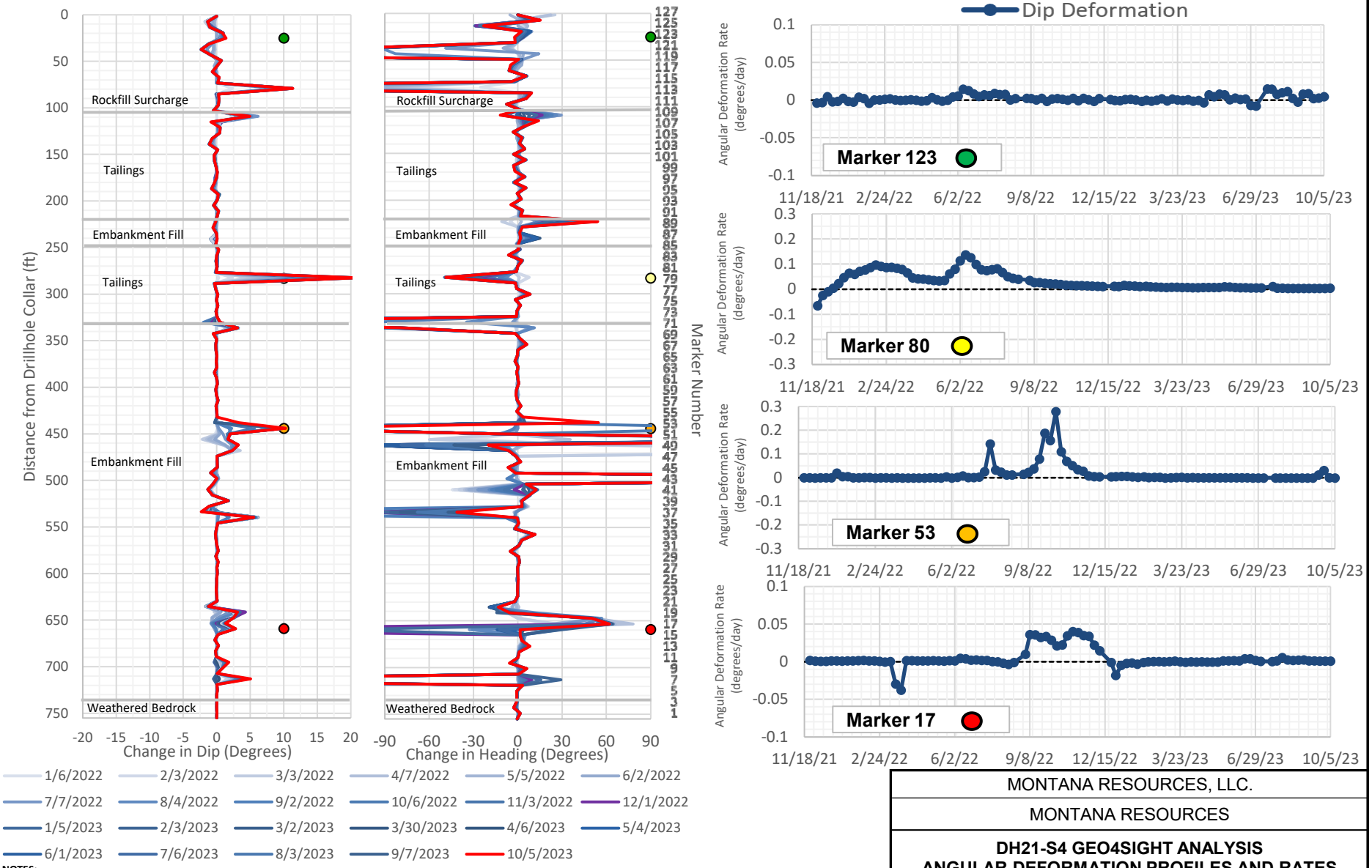
Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

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.
4. GEO4SIGHT INSTRUMENTATION IN DH21-S4 HAS BEEN OFFLINE AFTER OCTOBER 5, 2023, DUE TO CONSTRUCTION RELATED FILLING AND REGRADING ON EL. 6450 FT.

REV	DATE	DESCRIPTION	PREP'D	RVW'D
0	02FEB'24	ISSUED WITH LETTER	CNN	KTD

MONTANA RESOURCES, LLC.

MONTANA RESOURCES

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

Knight Piésold CONSULTING

P/A NO. VA101-126/29

REF. NO. VA24-00030

FIGURE C.2

REV 0

APPENDIX D

InSAR Bulletins

(Page D-1 to D-2)

137,533

143,058

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

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

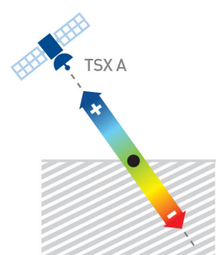
Visibility

Surface variation

No Information

Possible motion

Movement Detection Threshold: ±0.2 in



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

137,533

InSAR Bulletin

Yankee Doodle Tailings Impoundment

13 Oct 2023 - 04 Nov 2023

COMMENTS

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

West Embankment Up to **(i)** -0.8 inches, **(ii)** -1.5 inches, **(iii)** -1.3 inches, and **(iv)** -1.0 inch

East-West Embankment Up to **(v)** -1.4 inches, and **(vi)** -1.3 inches

East Embankment Up to **(vii)** -1.0 inch in the southern region, **(viii)** -1.1 inches, **(ix)** -0.9 inches, and **(x)** up to -1.1 inches in the northern region

PROCESSING DATA

Date range (UTC)	13 Oct 2023 - 04 Nov 2023
Interval	22 days
Satellite (resolution)	TSX (10x10 ft)
Orbit (angle)	Ascending (θ=29°)
Normal Baseline	95 [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