FINAL

BASELINE MONITORING REPORT

2022 Annual Baseline Monitoring Report Red Devil Mine, Alaska

Contract Number: 140L63-21-C-0001 Amendment P00001

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ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant of concern
DO	dissolved oxygen
DoD	Department of Defense
DQO	Data Quality Objectives
E&E	Ecology and Environment Inc.
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
ICP	inductively coupled plasma
ID	identification
IDW	Investigation Derived Waste
mg/L	milligrams per liter
MPA	Main Processing Area
MPC	measurement performance criteria
MS	mass spectrometry
MS/MSD	matrix spike/matrix spike duplicates
MW	Monitoring Well
ng/L	nanograms per liter
No.	Number
ORP	oxidation reduction potential
PARCC	Precision, Accuracy, Representativeness, Completeness, and.
	Comparability
PPE	personal protective equipment
QAPP	Quality Assurance Project Plan
QC	Quality Control
RDM	Red Devil Mine
Report	2022 Annual Baseline Monitoring Report
RI	Remedial Investigation

ACRONYMS AND ABBREVIATIONS (CONCLUDED)

RPD	relative percent difference
SMA	Surface Mined Area
Sundance	Sundance Consulting, Inc.,
TAL	Target Analyte List
TDS	Total dissolved solids
TSS	Total suspended solids
Work Plan	Final Work Plan, Groundwater and Surface Water Baseline Monitoring, Red Devil Mine, Alaska
	Reu Devit Mitte, Atusku

1 INTRODUCTION

This 2022 Annual Baseline Monitoring Report (Report) presents the findings of the 2022 spring and fall baseline groundwater and surface water monitoring efforts performed at the Red Devil Mine (RDM) site (Figure 1-1). The RDM is an abandoned mercury mine and ore processing facility located on public lands managed by the Bureau of Land Management (BLM) in southwest Alaska. Historical mining activities included underground and surface mining and ore processing. On-site ore processing included crushing, retorting/furnacing, milling, and flotation. Sundance Consulting, Inc. (Sundance), prepared this Report on behalf of the BLM under Contract Number (No.) 140L63-21-C-0001 Amendment P00001.

This Report summarizes the field activities, procedures, and results for the 2022 spring and fall baseline monitoring of groundwater and surface water efforts performed at RDM site.

1.1 PURPOSE AND OBJECTIVES

The purpose of baseline monitoring was to collect surface water and groundwater samples, as well as stream discharge and groundwater elevation data during spring and fall to inform remedial actions at the RDM. Baseline monitoring expands upon work that began during the 2011–2014 Remedial Investigation (RI) (Ecology and Environment Inc. [E&E], 2014) and continued through the 2015–2018 Supplemental RI (E&E, 2018) and simultaneous annual baseline monitoring for groundwater and surface water during spring and fall. The objectives are to:

- Characterize the seasonal variability in groundwater and surface water hydrology and quality; and
- Characterize the long-term (multiple year) variability in groundwater and surface water hydrology and quality.

1.2 PROJECT LOCATION, SETTING, AND AREAS

The RDM site is located approximately 250 miles west of Anchorage, Alaska. Located on the southwest bank of the Kuskokwim River, approximately 2 miles southeast of the village of Red Devil, the site is 8 miles northwest of the village of Sleetmute, and 75 miles northeast of Aniak, the largest village in the region. Fifteen villages are located downstream of Red Devil on the Kuskokwim River. The legal description for the RDM site is Township 19 North, Range 44 West, Southeast Quarter of Section 6, Sleetmute D-4 Quadrangle, Seward Meridian. The RDM site's approximate coordinates are 61° 45' 38.1" north latitude and 157° 18' 42.7" west longitude (North American Datum 1927). The RDM site is in a remote location, and access to the site is available by boat or barge on the Kuskokwim River or by means of an airstrip at the nearby village of Red Devil. An unimproved road leads from the airstrip through the village of Red Devil to the RDM site. Access to the RDM site is restricted by two locked gates, one on the unimproved road and a boat landing along the Kuskokwim River.

Historical mining operations left tailings and other remnants that have affected local soil, surface water, sediment, and groundwater. Based on the locations of tailings and other features, baseline monitoring is focused on surface water and groundwater in the following areas as shown on historical Figure 1-2 (E&E, 2021):

• Main Processing Area (MPA)—The MPA contained most of the former site structures and was where ore beneficiation and mineral processing was conducted. The area is split by Red Devil Creek. Underground mine openings (e.g., shafts, adits, and stopes to the surface) and ore processing and mine support facilities (e.g., housing and warehousing) were located on the west side of Red Devil Creek until 1955. After 1955, all ore processing was conducted at structures and facilities on the east side of Red Devil Creek.

The MPA includes three monofills, which are essentially landfills that contain demolished mine structure debris and other material. Two of the monofills, #1 and #3, are unlined. Monofill #2, on the east side of Red Devil Creek, is an engineered and lined containment structure for building debris and materials from the demolished post-1955 retort structure.

- Surface Mined Area (SMA)—The SMA is located west of the MPA where historical surface exploration and mining occurred. The SMA is partially underlain by underground mine workings. The "Dolly Sluice" and "Rice Sluice" and their respective deltas on the bank of the Kuskokwim River are associated with the SMA.
- Vicinity of Proposed Repository—The Proposed Repository is located uphill of the SMA on the north side of Red Devil Creek.
- **Red Devil Creek**—Red Devil Creek extends from a reservoir upstream of the MPA to the creek's delta at its confluence with the Kuskokwim River.
- Seep (RD05)—The Seep is located on the north bank of Red Devil Creek downgradient of the former mine operations and tailings area.

2 BASELINE MONITORING FIELD ACTIVITIES

All field activities were performed in accordance with the *Final Work Plan, Groundwater and Surface Water Baseline Monitoring, Red Devil Mine, Alaska* ([*Work Plan*], BLM, 2019), and the addendum to the *Work Plan* (Sundance, 2021). Field activities included tailgate safety meetings, the assessment of the operational status of the monitoring well network, synaptic measurement of groundwater elevations, downloading of transducer data, groundwater sampling, Red Devil Creek and Seep discharge gauging, and surface water sampling. All field documentation, including Tailgate Safety Field Forms, Monitoring Well Integrity Checklists, field notebooks, groundwater sampling forms, surface water sampling forms, and calibration logs, are provided in Attachment 1. Photographic documentation is provided in Attachment 2 and includes a photograph index log with detailed descriptions included in the caption of each photograph collected during the field activities.

Spring and fall field activities occurred between 02 June 2022 and 10 June 2022, and 27 August 2022 and 04 September 2022, respectively. For the spring and fall sampling events, the field team consisted of the field team lead, Site Health and Safety Officer, George Garner, and Field Technician, Nick Potter. A tailgate safety meeting was held with the field team before the start of each day. As field conditions changed during the day because of type of activity or site conditions, participants had undocumented impromptu safety breaks to discuss changing conditions and how they may apply to health and safety during field visit activities. Tailgate safety meeting forms are provided in Attachment 1.

An initial site walk was conducted to assess the site conditions, assess the operational status of the monitoring well network, clear the trail system from recent deadfall from the previous winter and summer seasons, perform a synaptic measurement of groundwater elevations across the site within a 24-hour period, and download transducer data. The initial site walk was followed by low-flow groundwater sampling and field maintenance of groundwater monitoring wells. After completing groundwater well sampling, the field team performed surface water discharge measurements within Red Devil Creek and Seep and surface water sampling of Red Devil Creek. Each baseline monitoring field activity is further described in the following sections. Associated field documentation of the monitoring well survey, groundwater sampling, and surface water sampling are provided in Attachment 1.

2.1 GROUNDWATER ELEVATIONS

Groundwater elevation during the spring and fall 2022 baseline monitoring events consisted of the following:

- Measuring static water levels at all accessible monitoring wells at the RDM site within a 24-hour period to collect a "synaptic snapshot" of groundwater levels.
- Downloading of continuous water level measurements from pressure transducers installed within specific monitoring wells.

The groundwater static water levels were measured on 04 June 2022 and 28 August 2022. Static water level measurements were augmented with the continuous water level measurements

collected from pressure transducers installed within specific monitoring wells between fall 2017 and fall 2022, as described in the *Work Plan* (BLM, 2019, and Sundance, 2021).

Synaptic groundwater elevations for spring and fall 2022 are shown on Figure 2-1 and Figure 2-2, respectively, and tabulated in Table 2-1. Pressure transducer data recorded between September 2020 and September 2022 were downloaded during the spring and fall 2022 field events, and the transducers were then reinstalled on monitoring wells MW50, MW51, MW53, MW54, MW56, MW57, MW58, and MW59, as noted on Figure 1-1. Pressure transducer data-logger files containing depth of submersion time series data were corrected for barometric pressure and converted to groundwater elevations. The resulting groundwater elevation time series plots are presented on Figure 2-3.

2.2 RED DEVIL CREEK AND SEEP DISCHARGE GAUGING

During the 2022 baseline monitoring spring and fall events, Red Devil Creek and Seep discharge gauging was conducted at five locations along Red Devil Creek between the creek's mouth at the Kuskokwim River and the historical reservoir south-southwest of the MPA. Surface water monitoring locations are illustrated on Figure 1-1.

Surface water discharge was measured using the mid-section method at creek monitoring locations following the mid-section methodology described in the *Work Plan* (BLM, 2019). At the Seep (RD05), discharge was measured using the timed fill method described in the *Work Plan* (BLM, 2019). Surface water discharge values are tabulated in Table 2-2.

2.3 GROUNDWATER SAMPLING

Groundwater sampling during the 2022 baseline monitoring spring and fall events was conducted at 26 existing monitoring wells identified on Figure 1-1. Five monitoring wells (MW06, MW16, MW17, MW33, and MW55) were sampled with a peristaltic pump during the spring event; all others were collected using dedicated bladder pumps. Dedicated bladder pumps were installed in MW06, MW16, MW17, MW33, and MW55 prior to sampling during the fall event. All 26 existing monitoring wells identified on Figure 1-1 now have dedicated bladder pumps for groundwater sampling during baseline monitoring events starting in spring 2023. Groundwater samples were collected for the following analyses:

- Total target analyte list (TAL) metals by U.S. Environmental Protection Agency (EPA) Method 6010D/6020B
- Total low-level mercury by EPA Method 1631E
- Dissolved low-level mercury by EPA Method 1631E
- Field water quality parameters including temperature, specific conductivity, dissolved oxygen (DO), pH, oxidation reduction potential (ORP), and turbidity

Field water quality measurements were collected at each monitoring well prior to groundwater sample collection. Groundwater samples were collected using a low-flow sampling methodologies described in the *Work Plan* (BLM, 2019) with either a peristaltic or dedicated bladder pump with a maximum flow rate of 0.5 liters per minute. Analytical data for groundwater samples collected during the spring and fall events are tabulated in Table 2-3 and Table 2-4, respectfully.

2.4 SURFACE WATER SAMPLING

Surface water sampling during the 2022 baseline monitoring spring and fall events was conducted at five locations from just upstream of Red Devil Mine (historical reservoir) to the point where Red Devil Creek discharges into the Kuskokwim River as identified on Figure 1-1.

Surface water samples were collected for the following analyses and methods:

- Total TAL metals by EPA Method 6010D/6020B
- Total low-level mercury by EPA Method 1631E
- Total suspended solids (TSS) by Method SM 2540D
- Total dissolved solids (TDS) by Method SM 2540C
- Inorganic ions by Method MCAWW 300.0
- Nitrate/nitrite (as N) by Method MCAWW 353.2
- Field water quality parameters including temperature, specific conductivity, DO, pH, ORP, and turbidity

Surface water samples were collected using a battery-operated peristaltic pump outfitted with certified-clean, dedicated silicone tubing following sampling methodologies described in the *Work Plan* (BLM, 2019). Analytical data for surface water samples during the spring and fall events are tabulated in Table 2-5 and Table 2-6, respectively.

2.5 SAMPLE HANDLING

Sample handling (e.g., chain-of-custody and field documentation) was conducted as described in the *Work Plan* (BLM, 2019).

2.6 QUALITY CONTROL SAMPLES

Field quality control (QC) samples, including field duplicates and matrix spike/matrix spike duplicates (MS/MSD), were collected for all matrices (e.g., groundwater and surface water) and analytes as described in the *Work Plan* (BLM, 2019).

2.7 INVESTIGATION-DERIVED WASTE MANAGEMENT

Investigation-derived waste (IDW) generated during the 2022 baseline monitoring spring and fall events included the following:

- Monitoring well purge water
- Used dedicated and disposable sampling equipment, personal protective equipment (PPE), and paper towels
- Decontamination fluids generated during groundwater sampling

IDW was managed in accordance with the *Work Plan* (BLM, 2019). Purge water, decontamination water, paper towels, used tubing, and disposable PPE were disposed of in accordance with the procedures described in the *Work Plan* (BLM, 2019 and Sundance, 2021).

3 DEVIATIONS

During the 2022 baseline monitoring spring and fall field activities, the following deviations were made from the *Work Plan* (BLM, 2019). These deviations did not affect project data quality objectives (DQOs) or final conclusions and recommendations. Deviations resulted from field conditions, field observations, field access, available resources on a remote site, and schedule adjustments. Deviations were documented in the field logbooks provided in Attachment 1. There were four deviations from the *Work Plan* (BLM, 2019):

- 1. MW26 was unable to be sampled with the installed bladder pump during the 2022 spring field event. The spring sample was collected using a bailer according to the procedures described in the *Work Plan* (BLM, 2019). The bladder pump was replaced during the 2022 fall sampling event. Further details are provided in the field notes in Attachment 1.
- 2. The RD08 surface water sampling and gauging location were significantly impacted and eroded by spring breakup flooding. A new location, RD08B, was identified upstream of the flood debris depositional zone. Surface water samples and discharge measurements were collected at the new location for 2022 spring and fall. The new location, RD08B, has been updated on all associated figures.
- 3. MW33 was flooded during the 2022 spring breakup flood event. Silt and river water infiltrated the well. The well was purged for several hours to remove any flood water remaining in the well during the spring sampling event. The well was allowed to stabilize for a day before the normal purge and stabilization procedures were performed prior to sampling.
- 4. Bladder pumps were installed in the five remaining monitoring wells, MW06, MW16, MW17, MW33, and MW55, that were using peristaltic pumps historically. The monitoring wells were sampled at least 24 hours after bladder pump installation.

4 BASELINE MONITORING RESULTS

4.1 GROUNDWATER ELEVATION AND SURFACE WATER DISCHARGE MONITORING

Groundwater elevations for all active groundwater wells at RDM were collected during a single 24-hour period during both the spring and fall sampling events. Table 2-1 presents depth to groundwater measurements and calculated groundwater elevations for monitoring wells during the spring and fall 2022 baseline monitoring events. Transducer data were collected from monitoring wells during the same period to allow for pressure and groundwater depth correction. Table 2-1 presents the physically measured groundwater elevations, not the groundwater elevations calculated by pressure transducers.

Surface water discharge measurements were collected during both spring and fall events. Estimated surface water discharge calculations for Red Devil Creek surface water stations during the spring and fall 2022 baseline monitoring events are presented in Table 2-2.

Based on static water elevations, stream elevations, and discharge measurements along Red Devil Creek, and excluding transducer data, groundwater potentiometric surface and surface water discharge maps for the spring and fall 2022 baseline monitoring were generated and are presented on Figure 2-1 and Figure 2-2.

Pressure transducer data was not used to create the potentiometric groundwater surface map (Figure 2-1).

Pressure transducer data-logger files containing depth of submersion time series data were corrected for barometric pressure and converted to groundwater elevations. The resulting groundwater elevation time series plots are presented on Figure 2-3. Spring and fall groundwater well and stream gauging data is included in Attachment 3.

4.2 GROUNDWATER RESULTS

Analytical results for groundwater samples collected during the 2022 spring and fall baseline monitoring event are presented in Table 2-3 and Table 2-4. Maps of all sampling locations with corresponding analytical results for antimony, arsenic, total low-level mercury, and dissolved low-level mercury are presented on Figure 4-1 through Figure 4-6. Analytical Laboratory Data reports are included in Attachment 4. Analytical results are consistent with past sampling results.

4.2.1 2022 Spring Groundwater Results

Twenty-eight primary groundwater samples were collected during the 2022 spring monitoring event. Duplicate samples were collected from the following monitoring wells per the *Final Baseline Quality Assurance Project Plan* (QAPP), which is included as an appendix to the *Work Plan* (BLM, 2019): MW10, MW49, and MW52. A summary for analytical results for groundwater samples is provided in Table 2-3 and shown on Figure 4-1 through Figure 4-3.

• Antimony was detected in all groundwater samples. Antimony concentrations ranged from 0.00015 J to 0.82 milligrams per liter (mg/L) with the highest concentration in groundwater sample 0622MW16GW.

- Arsenic was detected in all groundwater samples. Arsenic concentrations ranged from 0.0003 J to 1.1 mg/L with the highest concentration in groundwater sample 0622MW26GW.
- Total mercury was detected in all groundwater samples. Total mercury concentrations ranged from 0.64 to 14,000 nanograms per liter (ng/L) with the highest concentration in groundwater sample 0622MW26GW.
- Dissolved mercury was detected in all groundwater samples. Dissolved mercury concentrations ranged from 0.44 to 900 ng/L with the highest concentration in groundwater sample 0622MW27GW.

4.2.2 2022 Fall Groundwater Results

Twenty-eight primary groundwater samples were collected during the 2022 fall event. Duplicate samples were collected from the following three monitoring wells per the *QAPP* in the *Work Plan* (BLM, 2019): MW10, MW43, and MW54. A summary for analytical results for groundwater samples is provided in Table 2-4 and shown on Figure 4-4 through Figure 4-6.

- Antimony was detected in all groundwater samples except for one, 0822MW47GW, which was a non-detect. Antimony concentrations ranged from 0.00017 J to 0.41 mg/L with the highest concentration in groundwater sample 0822MW33GW.
- Arsenic was detected in 27 of the 28 primary groundwater samples. Groundwater sample 0822MW47GW was a non-detect. Arsenic concentrations ranged from 0.00027 J to 1.5 mg/L with the highest concentration in groundwater sample 0822MW26GW.
- Total mercury was detected in all groundwater samples. Total mercury concentrations ranged from 1.1 to 3,900 ng/L with the highest concentration in groundwater sample 0822MW26GW.
- Dissolved mercury was detected in all groundwater samples. Dissolved mercury concentrations ranged from 0.39 JB to 970 B ng/L with the highest concentration in groundwater sample 0822MW16GW.

4.3 SURFACE WATER RESULTS

Analytical results of surface water sampling conducted during the 2022 spring and fall baseline monitoring events are presented in Table 2-5 and Table 2-6. Data quality assurance review memoranda are provided in Attachment 5. Maps of all sampling locations with corresponding analytical results for antimony, arsenic, mercury are presented on Figure 4-7 through Figure 4-8. Analytical results are consistent with past sampling results.

4.3.1 2022 Spring Surface Water Results

During the 2022 spring baseline monitoring event, five surface water samples and one field duplicate sample, 0622RD99SW (field duplicate of 0622RD05SW), were collected from Red Devil Creek. A summary of analytical results for spring surface water samples is provided in Table 2-5 and shown on Figure 4-7.

- Antimony was detected in all surface water samples. Antimony concentrations ranged from 0.002 to 0.22 mg/L with the highest concentration in surface water sample 0622RD08BSW.
- Arsenic was detected in all surface water samples. Arsenic concentrations ranged from 0.001 to 1.0 mg/L with the highest concentration in surface water sample 0622RD05SW.
- Mercury was detected in all surface water samples. Mercury concentrations ranged from 2.63 to 950 ng/L with the highest concentration in surface water sample 0622RD05SW.

4.3.2 2022 Fall Surface Water Results

During the 2022 fall baseline monitoring event, five surface water samples and one field duplicate sample, 0822RD99SW (field duplicate of 0822RD05SW), were collected from Red Devil Creek. A summary for analytical results for fall surface water samples is provided in Table 2-6 and shown on Figure 4-8.

- Antimony was detected in all surface water samples. Antimony concentrations ranged from 0.0022 J+ to 0.19 J mg/L, with the highest concentration in surface water sample 0822RD08BSW.
- Arsenic was detected in all surface water samples. Arsenic concentrations ranged from 0.0011 to 1.0 mg/L with the highest concentration in surface water sample 0822RD05SW.
- Mercury was detected in all surface water samples. Mercury concentrations ranged from 3.6 to 2800 ng/L with the highest concentration in surface water sample 0822RD08SW.

5 DATA USABILITY ASSESSMENT

A third-party data validation was performed on 100% of the surface water and groundwater analytical data generated during the 2022 spring and fall sampling events. The validation was inclusive of validation levels Stage 2B (90%) and Stage 4 (10%). The data were validated in accordance with the QAPP (BLM, 2019), EPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA, 2017), and the *Department of Defense* (DoD) *Quality Systems Manual for Environmental Laboratories* Version 5.1 (DoD, 2017).

DQOs are both qualitative and quantitative statements that define the type, quality, and quantity of data necessary to support the decision-making process during project activities. To ensure the collection of data of the type and quality required for project decision-making, data validation results were evaluated for the DQO data quality indicators of precision, bias (accuracy), representativeness, comparability, and completeness (formerly precision, accuracy, representativeness, completeness, and comparability [PARCC] parameters), as outlined in the QAPP. Data quality indicators were evaluated according to analytical and field QC activity and associated measurement performance criteria (MPC). The results of the evaluation were used to assess data usability and completeness.

Spring 2022 samples required qualification due to QC exceedances and procedural issues. The calcium, magnesium, potassium, and sodium sample analyses were originally analyzed and reported by 6020B inductively coupled plasma (ICP)/mass spectrometry (MS). This sample data was unusable due to significant QC and procedural issues. The lab was instructed to reanalyze the four analytes by 6010D ICP. The ICP/MS calcium, magnesium, potassium, and sodium results were rejected, R, as unusable. The more technically correct ICP results are reported for these four analytes.

Surface water and groundwater samples were qualified as non-detect (U) for low-level detections or estimated (J or J+) in method blanks, continuing calibration blanks, initial calibration blanks, equipment blanks, or trip blank samples for metals and low-level mercury analyses for one or more of the following analytes during the spring sampling event:

- Aluminum
- Antimony
- Barium
- Chromium
- Iron
- Lead
- Manganese
- Nickel
- Potassium
- Silver

- Thallium
- Zinc

Surface water and groundwater data were qualified as non-detect (U) for low-level detections or estimated (J or J+) in method blanks, continuing calibration blanks, initial calibration blanks, equipment blanks, or trip blank samples for metals and low-level mercury analyses for one or more of the following analytes during the fall sampling event:

- Arsenic
- Zinc
- Thallium
- Potassium
- Cadmium
- Chromium
- Iron
- Lead
- Manganese
- Nickel
- Silver
- Low-level mercury

Blank qualifications did not impact data usability.

No surface water or groundwater data were qualified due to field or analytical precision MPC exceedances during the spring or fall sampling events. There were minor deviations in field precision during spring and fall sampling events.

During the spring sampling event, metals field duplicate pair 0622RD05SW/0622RD99SW and 0622MW10GW/06222MW99GW (DISS) had relative percent differences (RPDs) greater than \pm the reporting limit for low level mercury. Samples 580-114638-3 (Total), 580-114638-5 (Total), and 580-114638-3 (Diss) were qualified J+ or J- due to high or low MS/MSD recovery.

During the fall sampling event, metals field duplicate pairs 0822MW10GW/0822MW99GW, 0822MW43GW/0822MW98GW, and 0822MW54GW/0822MW97GW had RPDs greater than the reporting limit for low level mercury. Metals field duplicate pair 0822MW10GW/0822MW99GW had RPDs greater than the reporting limit for antimony. Associated sample results were qualified as estimated (J). Sample IDs 580-117490-27, 117490-23, 117490-25, and 117490-26 were qualified as estimated (J±) due to high MS %R.

Field precision qualifications did not impact data usability.

During the spring sampling event, the laboratory reported results for surface water and groundwater samples above the linear curve range and did not analyze a high linear range check

standard. Sample detections reported above the high standard in the calibration curve were qualified as estimated (J) in all samples for the following analytes:

- Aluminum
- Antimony
- Arsenic
- Barium
- Iron
- Manganese
- Nickel

During the fall sampling event, the laboratory reported results for surface water and groundwater samples above the linear curve range and did not analyze a high linear range check standard. Sample detections reported above the high standard in the calibration curve were qualified as estimated (J) in all samples for the following analytes:

- Aluminum
- Antimony
- Arsenic
- Barium
- Iron
- Manganese

All samples analyzed by Method 300.0 for SO4, Cl- and F- in spring were qualified as estimated (J) due to a hold time exceedance. Qualification for holding time and temperature exceedances did not impact data usability.

Accuracy/bias qualifications did not impact data usability.

Analytical laboratory reports are provided in Attachment 4. Further detailed data validation and quality assessment information is provided in the Data Validation Reports in Attachment 5.

5.1 DATA USABILITY ASSESSMENT

The analytical data completeness for the fall and spring sampling events is 100%. The spring sample results that were analyzed via Method 6020B were qualified as rejected (R) for calcium, potassium, magnesium, and sodium. The samples were also analyzed via EPA 6010D and were reported for this method. No other sample results were rejected or unsuitable for use in project decision-making. Metals, mercury, and anion samples were qualified as estimated (J or UJ) for low-level field and analytical blank contamination during both events, indicating minor uncertainty in sample representativeness. In addition, sample results were qualified as estimated (J or UJ) for minor deviations in accuracy/bias and field precision during both sampling events, indicating minor uncertainty. However, qualified data are considered acceptable for use in project decision-making.

6 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

During the 2022 Annual Baseline Monitoring field efforts, samples were collected from groundwater monitoring wells in three areas: the MPA, the SMA, and the vicinity of the Proposed Repository. Additionally, surface water samples were collected from Red Devil Creek and a perennial seep that discharges into Red Devil Creek. The analytical results of these groundwater and surface water samples were reviewed and compared with historical data to identify concentration trends.

6.1 GROUNDWATER CONCLUSIONS

The groundwater analytical results from the 2022 sampling efforts are consistent with results from historical sampling efforts at RDM as seen in *Final 2020 Baseline Monitoring Report, Red Devil Mine, Alaska* (E&E, 2021).

Groundwater elevation results for the 2022 sampling efforts are consistent with trends defined during the RI/Feasibility Study (FS).

The water table surface in the upper SMA and the MPA mimics topography and flows toward Red Devil Creek. Groundwater flow in the lower SMA is locally perturbed by historical mine workings. Although the underground workings have very likely collapsed, this tunnel network is much more conductive than the surrounding bedrock. Consequently, the water table is depressed around the workings. Because the conductivity of the bedrock aquifer is relatively low, the depressed water table extends only a short distance outside of the zone where the tunnel network is prevalent, creating a very steep gradient. The overall effect of the underground workings is very localized (refer to Figure 2-1 and Figure 2-2). In general, groundwater flow within the entire SMA is toward Red Devil Creek.

Continuous groundwater elevation data recorded in 2022 using transducers extends the temporal trends established in previous years, as shown on Figure 2-3. In late spring, groundwater elevations rise quickly to a maximum elevation that correlates with spring breakup. The seasonal maximum elevation lasts only a few days, followed by a recession that extends until the following spring. Water table elevations vary slightly over the summer and fall months in response to local precipitation. Once subsurface freezing becomes prevalent during the winter, water table elevations decrease steadily until the following spring breakup, which is typically in May.

The concentrations of the three primary contaminants of concern (COCs), antimony, arsenic, and mercury, in the groundwater samples from the 2022 baseline monitoring events are within the range expected based on review of data collected during the RI and previous baseline monitoring. Measured concentrations of COCs in individual monitoring wells reflect conditions at that location. The highest COC concentrations occur in the monitoring wells installed in tailings/waste rock in the MPA. Concentrations of these primary COCs are highly variable in the SMA, reflecting the influence of natural mineralization in the immediate vicinity of each monitoring well. In general, groundwater COC concentrations do not appear to be influenced by seasonal water level fluctuations. Minor fluctuations can be seen in some monitoring wells but are generally not consistent across all monitoring wells. Graphs of groundwater primary COC concentrations and water level measurements for all monitoring wells are presented on Figure 6-1 and Figure 6-2.

6.2 SURFACE WATER CONCLUSIONS

The surface water analytical results from the 2022 sampling efforts are consistent with results from historical sampling efforts at RDM as seen in *Final 2020 Baseline Monitoring Report, Red Devil Mine* (E&E, 2021).

The 2022 concentrations of the three primary COCs, antimony, arsenic, and mercury, in the surface water samples are within the range established during the RI. The highest concentrations were detected in samples collected from the Seep (RD05) and RD08B. Comparison of COC concentrations with stream discharge data indicates no correlation. Graphs of surface water primary COC concentrations and discharge measurements for all locations are found on Figure 6-3 and Figure 6-4.

6.3 **RECOMMENDATIONS**

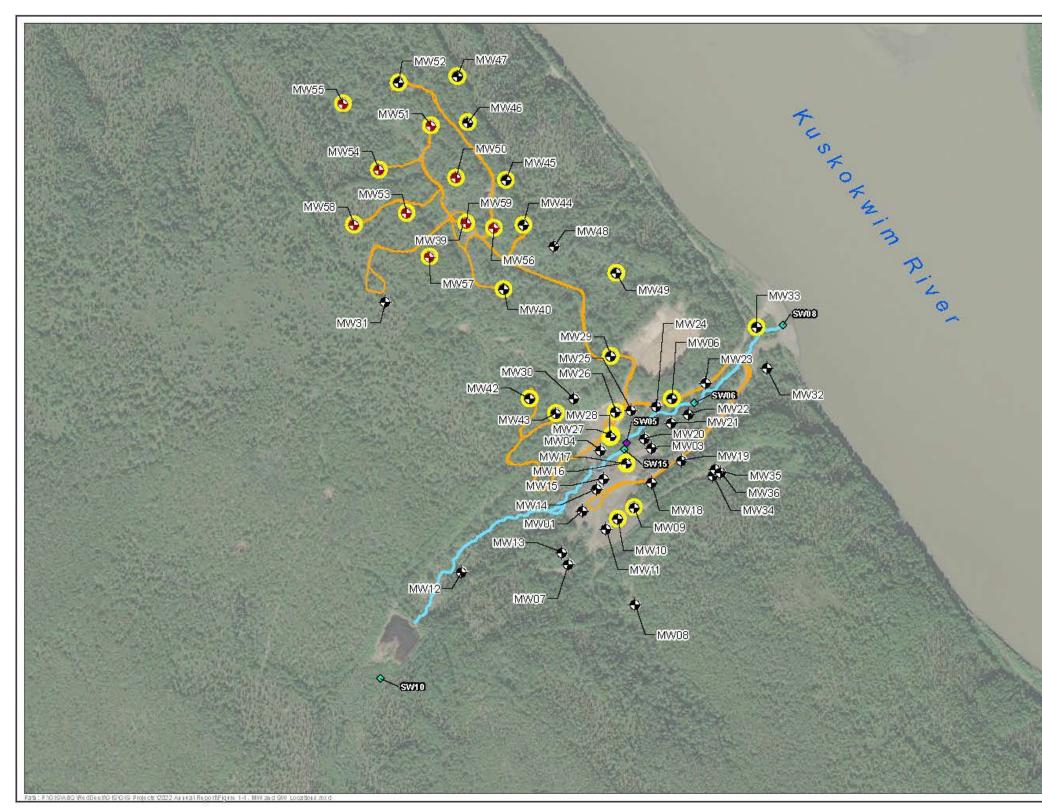
Groundwater sampling and analysis has evolved through the RI/FS phases of this Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) project from characterization to baseline monitoring. Initial goals of groundwater sampling and analysis were consistent with the overall objectives of the RI and were focused primarily on the area along the lower reach of Red Devil Creek referred to as the MPA. Additional monitoring wells have been installed since the initial RI was completed that have broadened our understanding of flow within the bedrock aquifer in areas that are influenced by natural mineralization but are not affected by the tailings and waste rock. The BLM selected a preferred remedial action alternative in 2020 that involves consolidating tailings/waste rock in an engineered repository located in the SMA. Consequently, groundwater characterization emphasizing the area dominated by tailings and a broad range of potential contaminants has transitioned to baseline monitoring of upper elevations (upgradient of the tailings) and more focus on the contaminants that are responsible for most of the environmental risk estimated for the site.

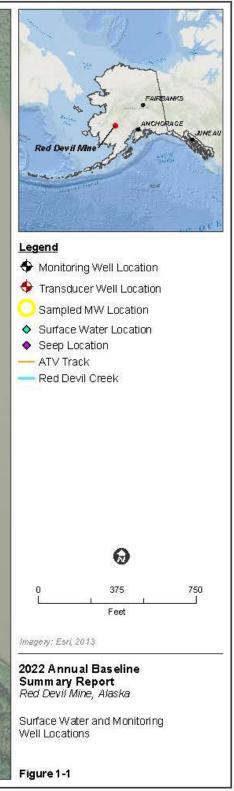
Based on the data collected during the two mobilizations covered by this report, continued monitoring of the same scope is recommended until the Record of Decision is complete and the remedial action has been determined. Baseline monitoring should continue to meet remedial action objectives.

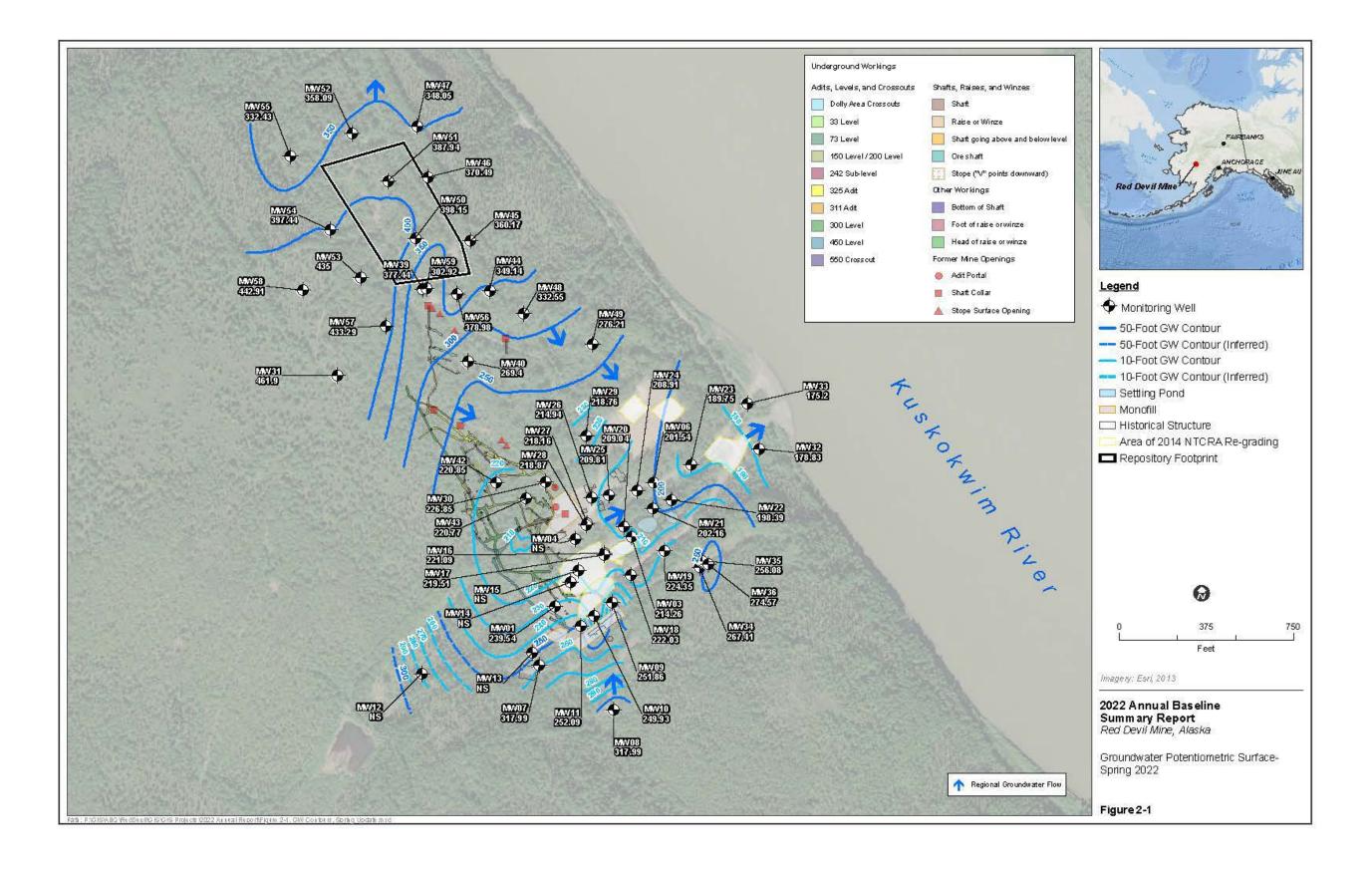
7 **REFERENCES**

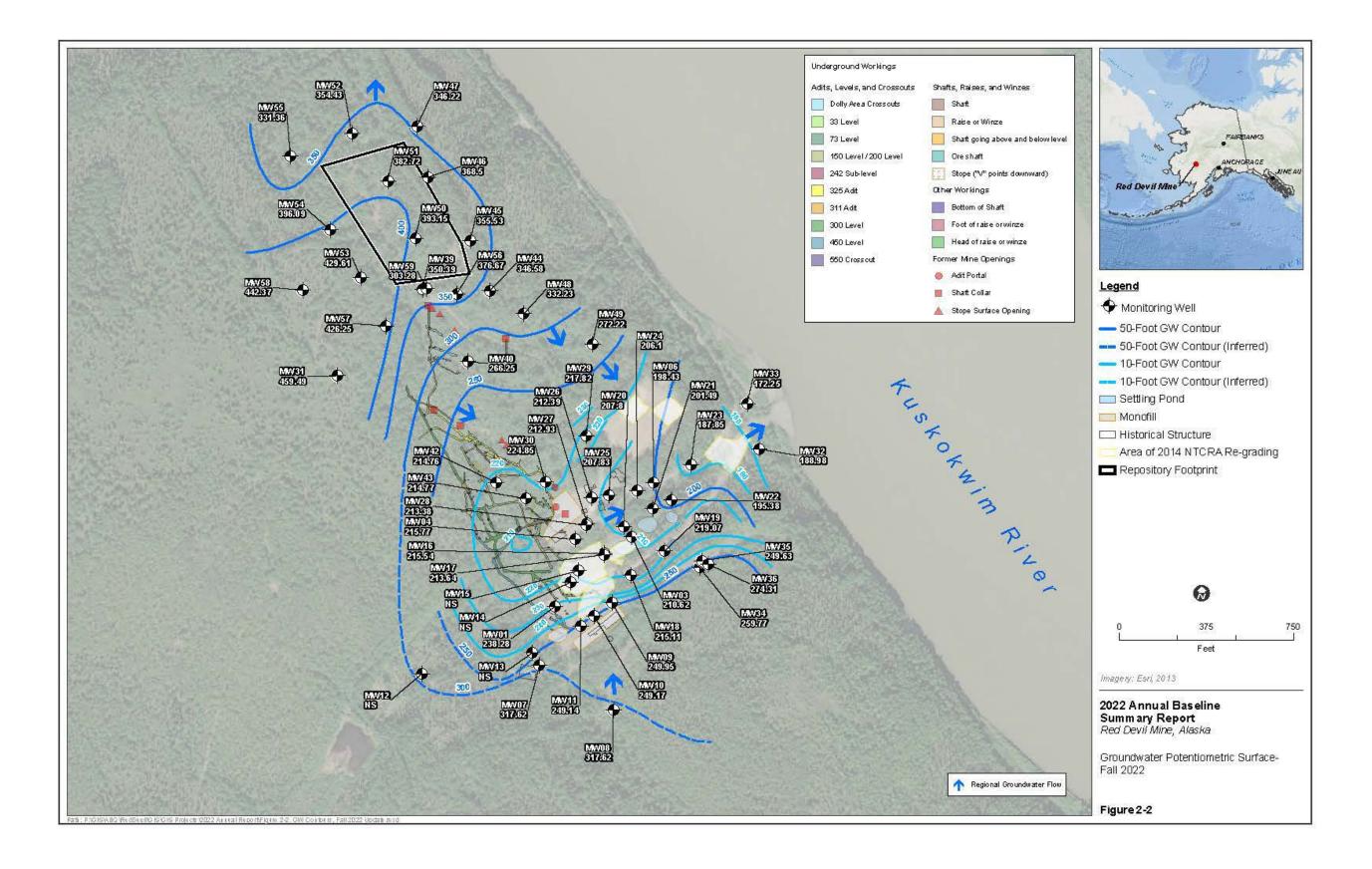
- Department of Defense (DoD), 2017. Department of Defense Quality Systems Manual for Environmental Laboratories, Final Version 5.1. January 2017.
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- Sundance, 2022. 2022 Spring Baseline Monitoring Data Summary Report, Red Devil, Alaska. August 2021.
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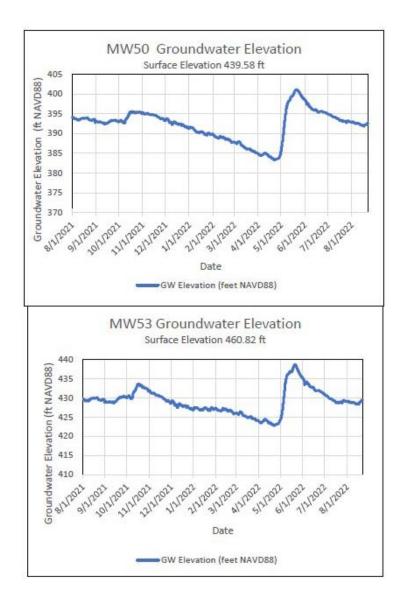
FIGURES



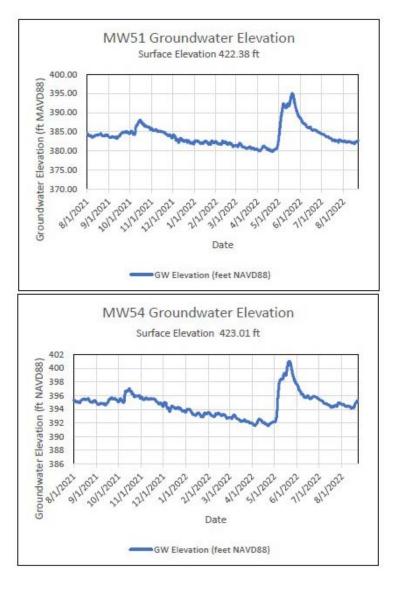












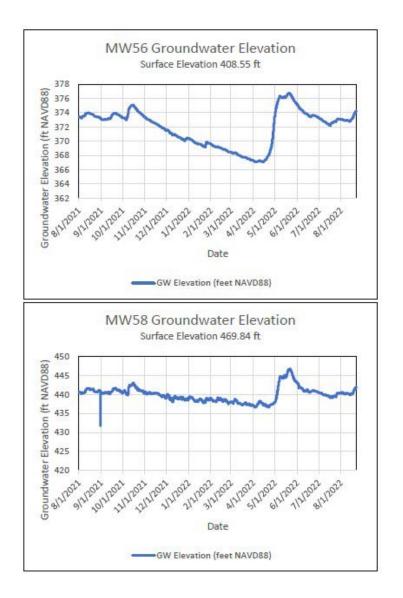
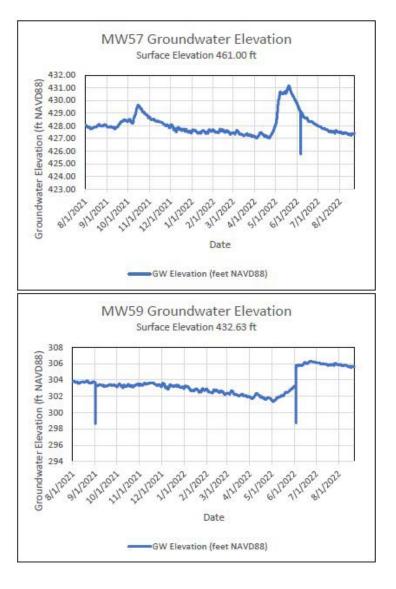
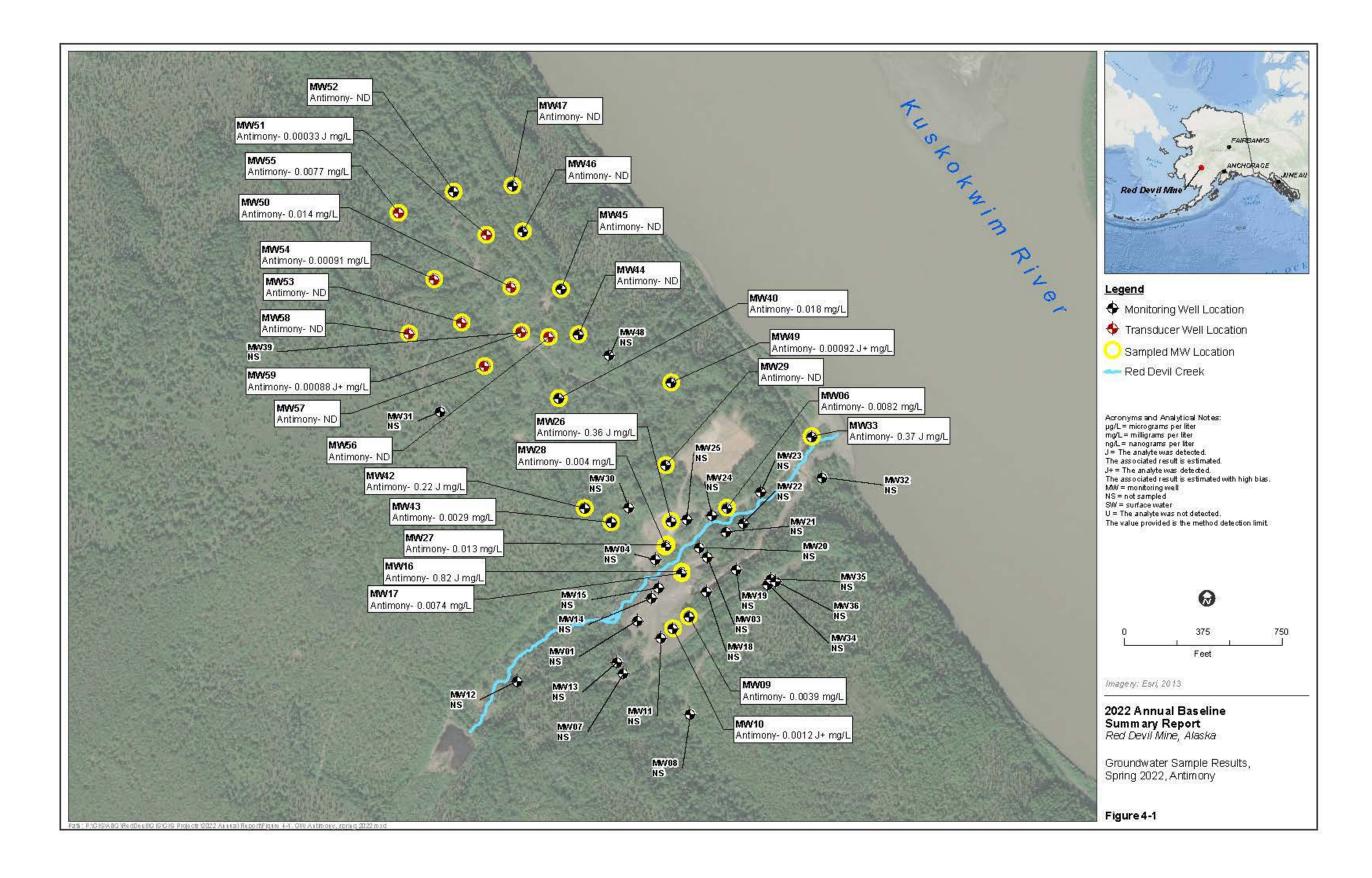
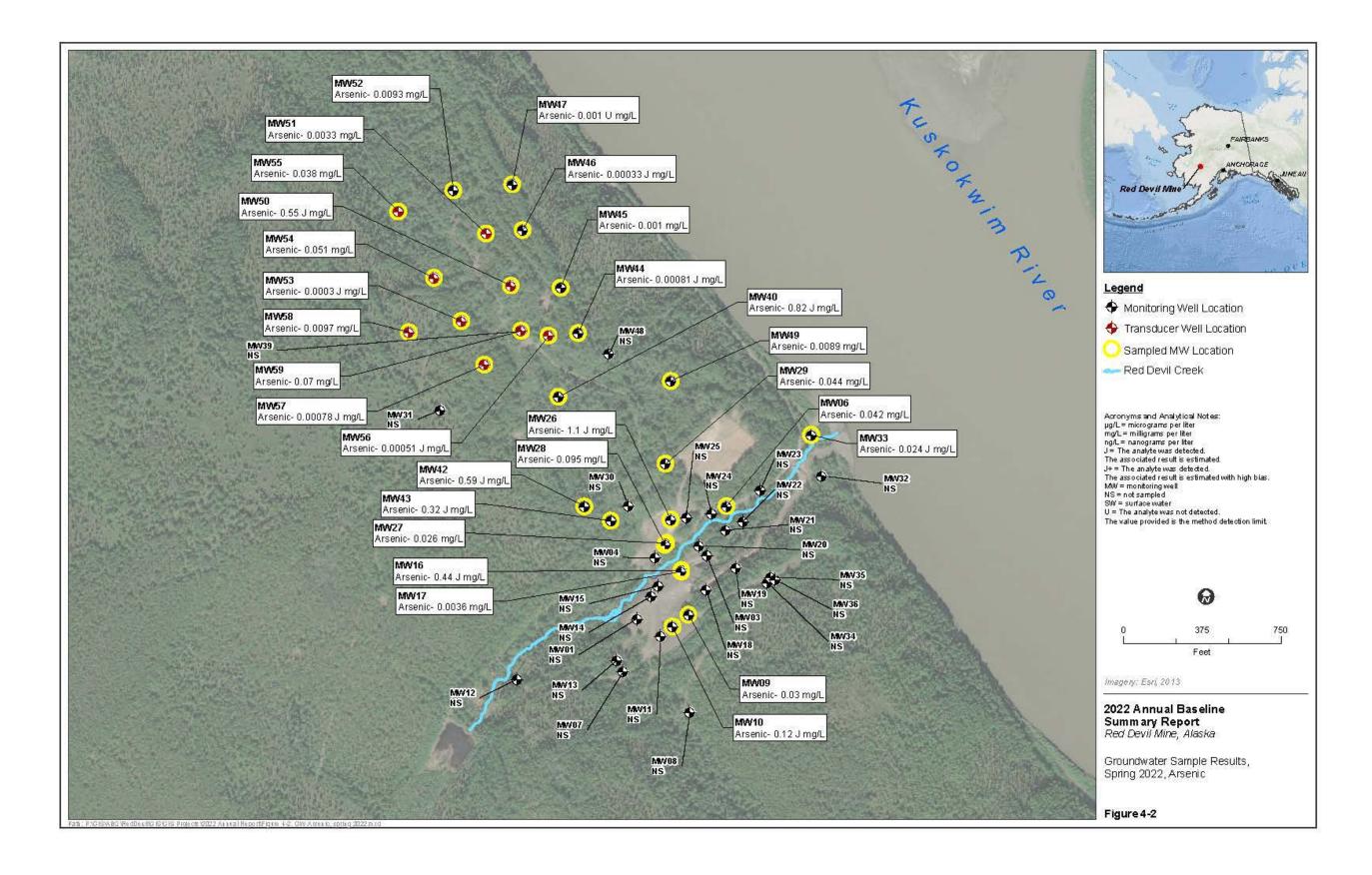
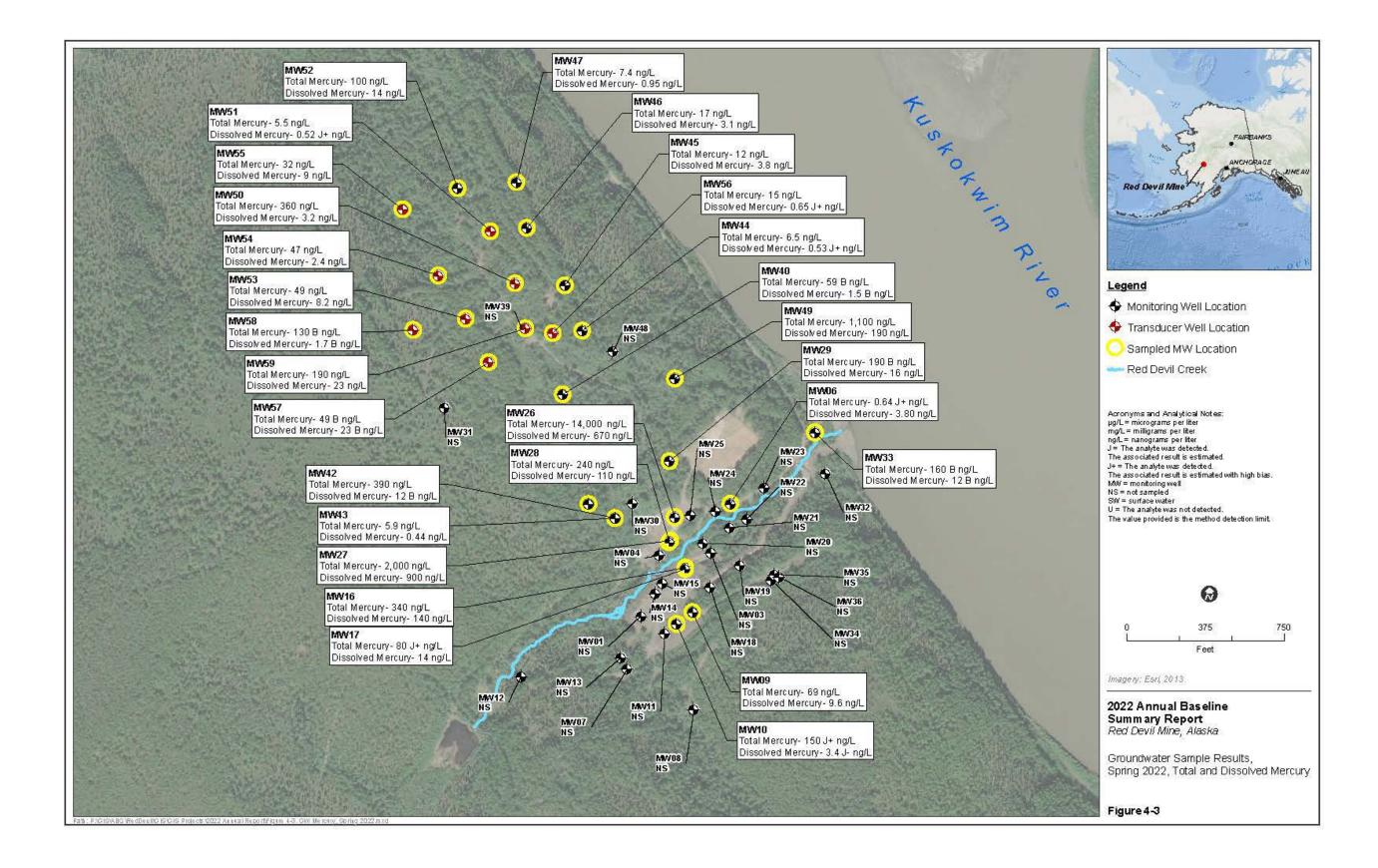


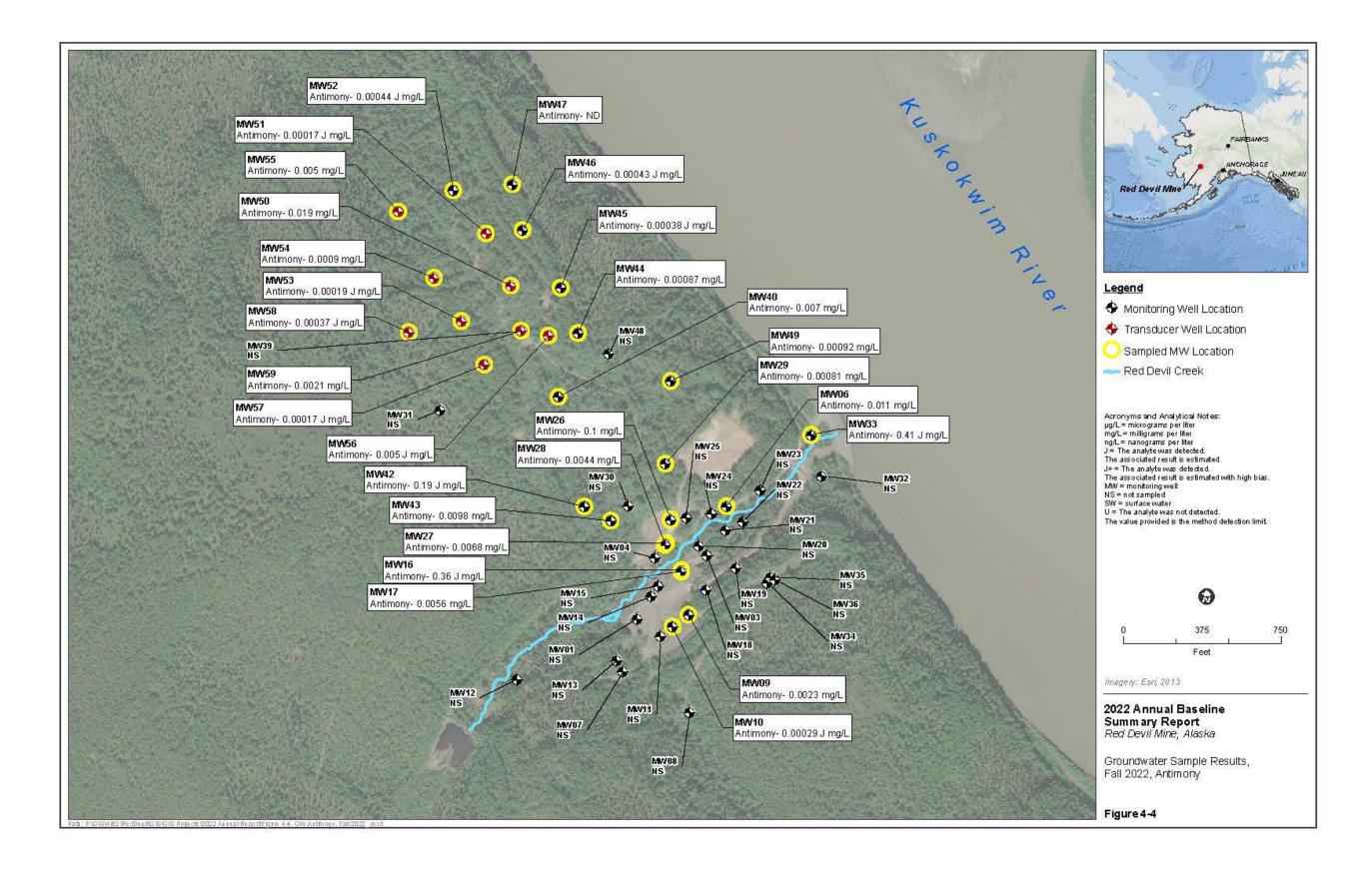
Figure 2-3: Groundwater Elevation Plots

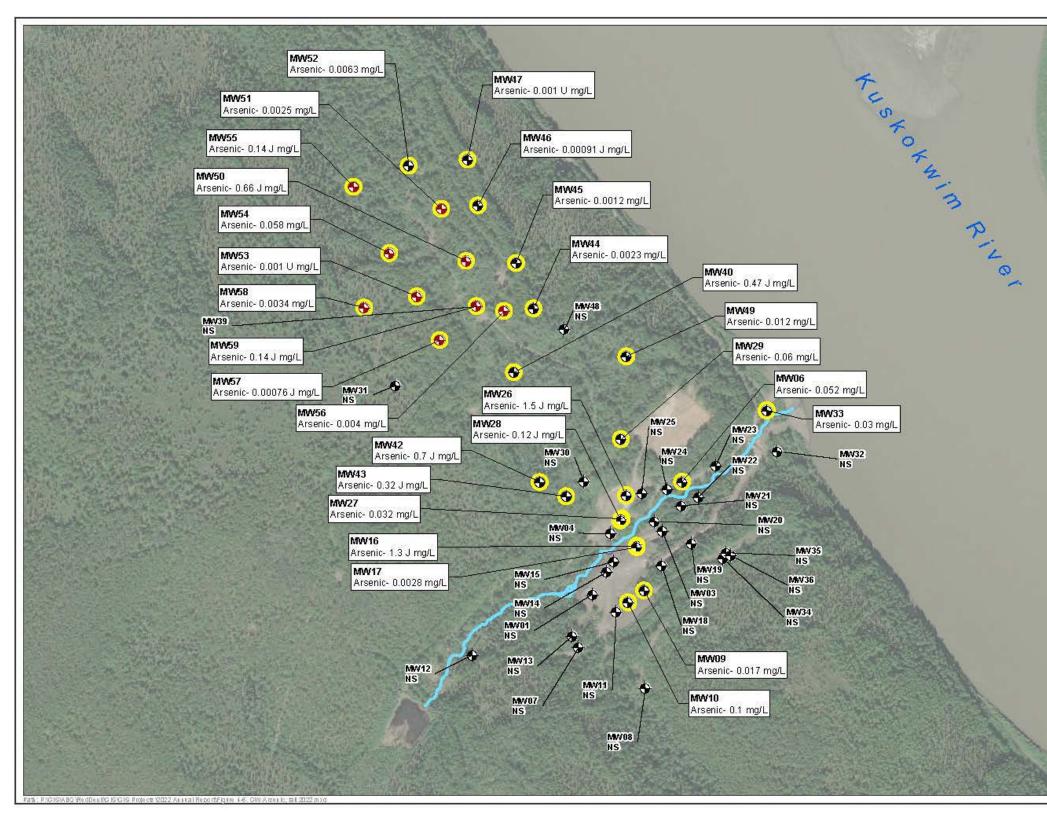


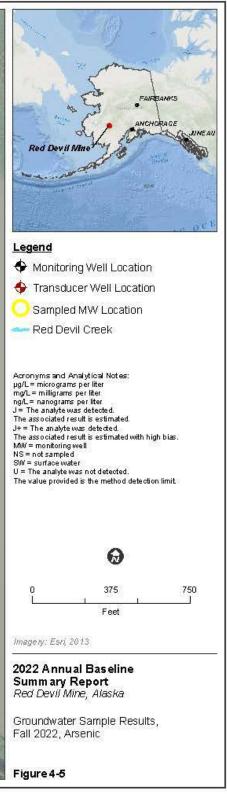


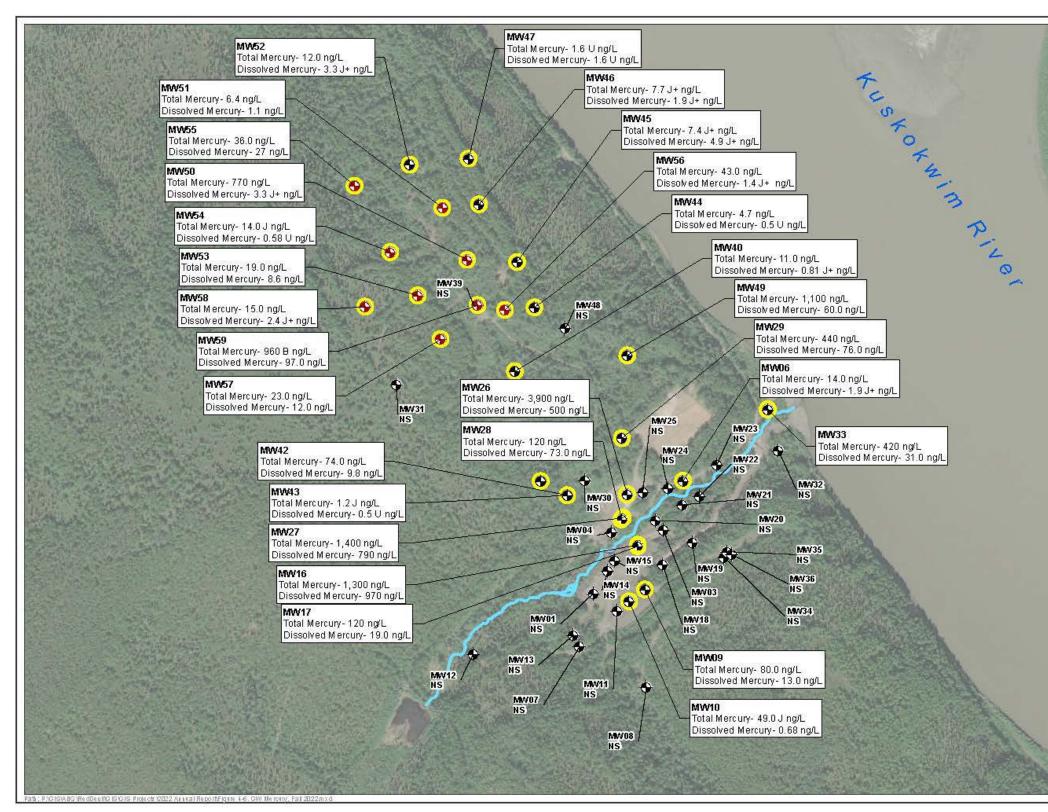




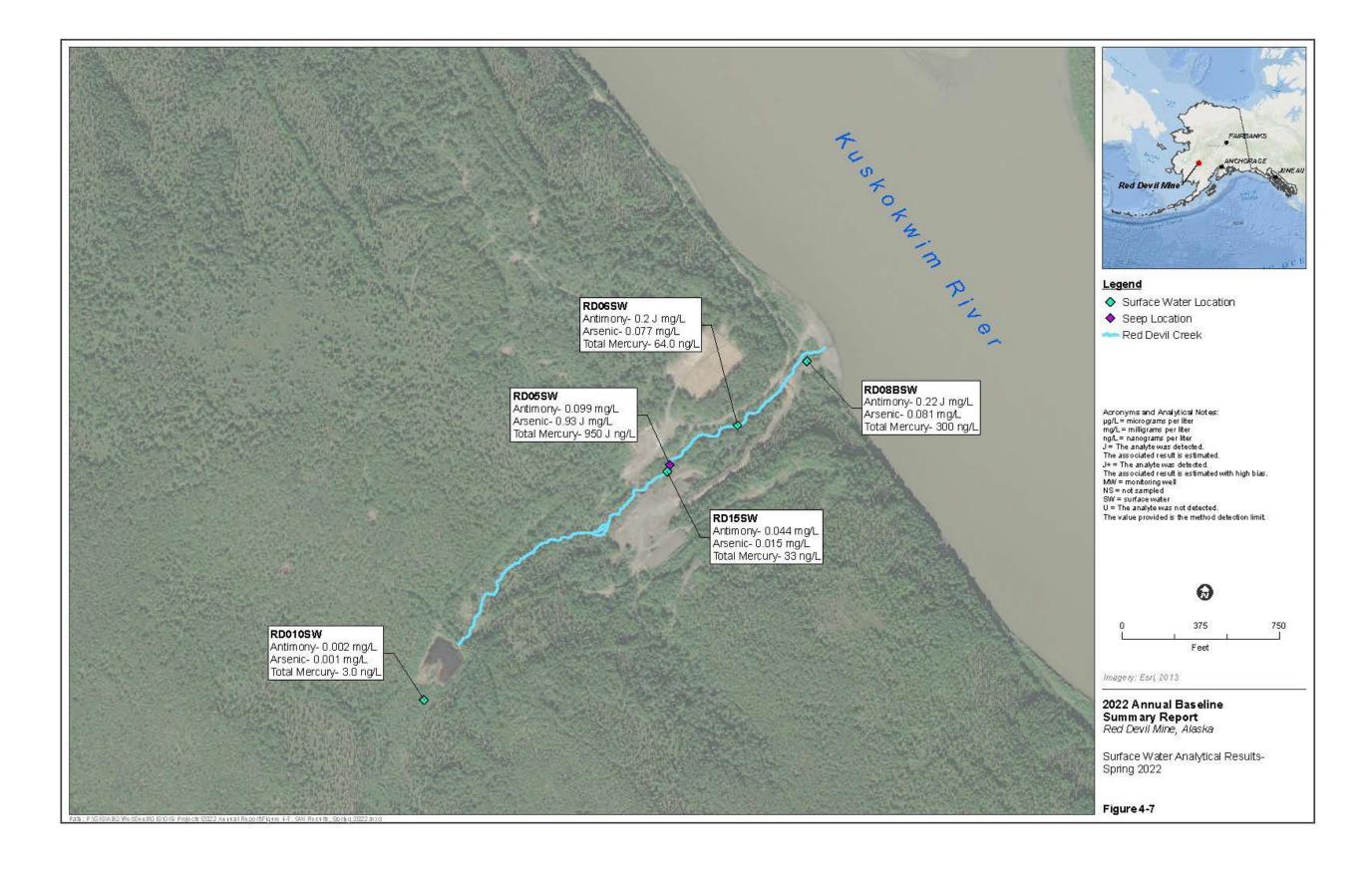


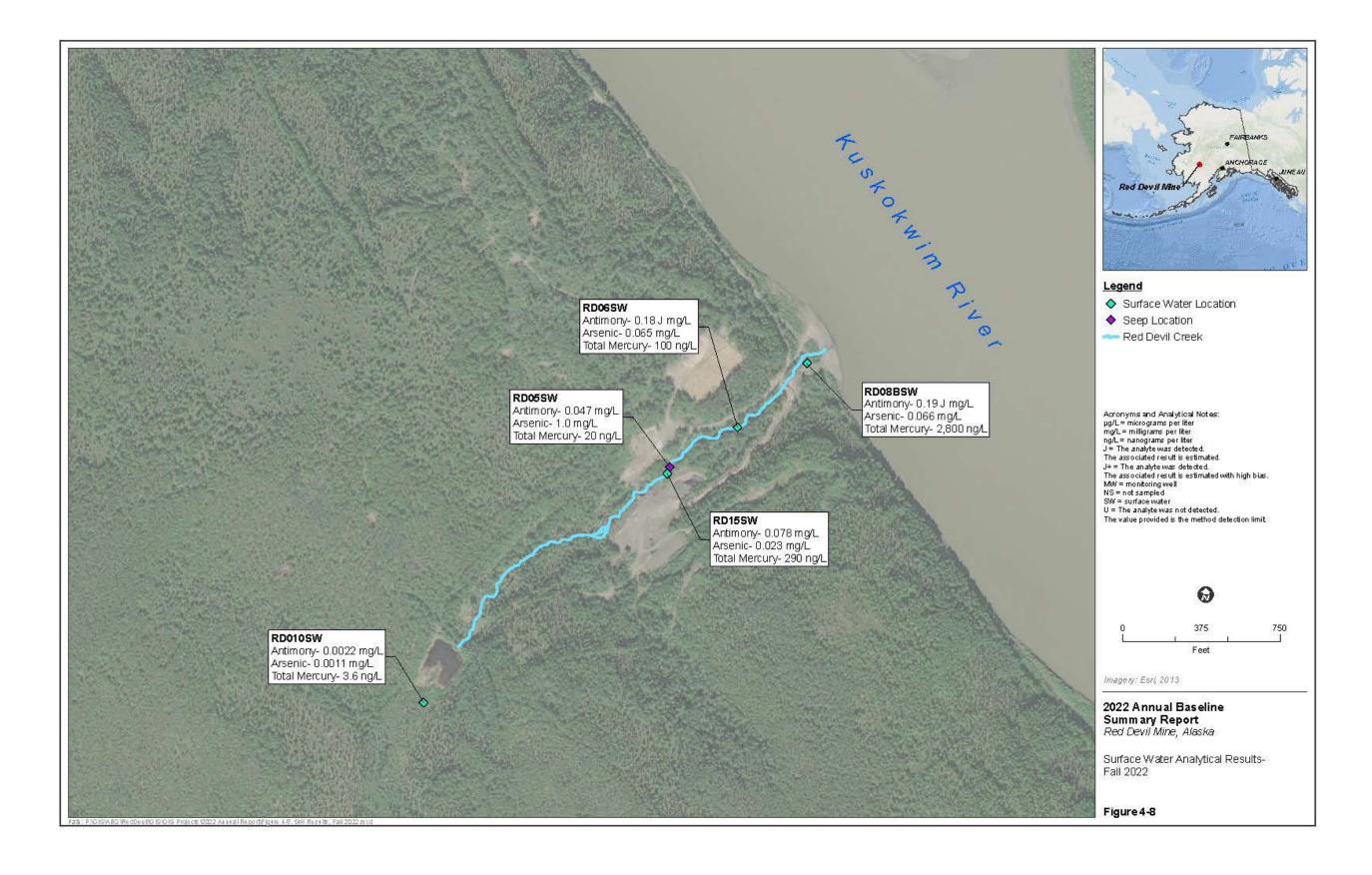












TABLES

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Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW01											
MW01	B01	29.5	19.0 - 29.1	254.51	257.51	17.8 - TD	NR	25.97	6/4/2021	7:42	231.54
MW01	B01	29.5	19.0 - 29.1	254.51	257.51	17.8 - TD	NR	20.11	8/28/2021	9:19	237.40
MW01	B01	29.5	19.0 - 29.1	254.51	257.51	17.8 - TD	NR	17.97	6/1/2022	10:34	239.54
MW01	B01	29.5	19.0 - 29.1	254.51	257.51	17.8 - TD	NR	19.23	8/22/2022	10:06	238.28
MW03						1			1		
MW03	B03	25.5	15.0 - 25.0	228.37	230.77	19.0 - TD	NR	18.84	6/4/2021	9:50	211.93
MW03	B03 B03	25.5	15.0 - 25.0	228.37	230.77	19.0 - TD	NR	20.82	8/28/2021	11:05	209.95
MW03 MW03	B03 B04	25.5 25.5	15.0 - 25.0 15.0 - 25.0	228.37 228.37	230.77 230.77	19.0 - TD 19.0 - TD	NR NR	16.51 20.15	6/1/2022 8/22/2022	12:47 9:42	214.26 210.62
MW03	B04	25.5	15.0 - 25.0	228.37	230.77	19.0 - ID	NK	20.15	8/22/2022	9:42	210.62
MW04 MW04	B04	30.5	20.0 - 30.0	239.92	242.12	25.3 - TD	NR	26.03	6/4/2021	11:29	216.09
MW04 MW04	B04	30.5	20.0 - 30.0	239.92	242.12	25.3 - TD 25.3 - TD	NR	20.03	8/28/2021	12:50	210.09
MW04 MW04	B04	30.5	20.0 - 30.0	239.92	242.12	25.3 - TD	NR	NR	0/20/2021	12.50	214.45
MW04	B04	30.5	20.0 - 30.1	239.92	242.12	25.3 - TD	NR	26.35	8/22/2022	11:47	215.77
MW06	201		2010 2011			2010 12				11117	
MW06	B06	23.5	13.0 - 23.0	214.99	217.49	20.0 - TD	NR	17.38	6/4/2021	11:58	200.11
MW06	B06	23.5	13.0 - 23.0	214.99	217.49	20.0 - TD	NR	19.02	8/28/2021	11:55	198.47
MW06	B06	23.5	13.0 - 23.0	214.99	217.49	20.0 - TD	NR	15.95	6/1/2022	13:37	201.54
MW06	B06	23.5	13.0 - 23.0	214.99	217.49	20.0 - TD	NR	19.06	8/22/2022	14:37	198.43
MW07											
MW07	B07	21.5	11.0 - 21.0	278.39	280.89	14.8 - TD	NR	20.35	6/4/2021	9:15	260.54
MW07	B07	21.5	11.0 - 21.0	278.39	280.89	14.8 - TD	NR	20.93	8/28/2021	10:32	259.96
MW07	B07	21.5	11.0 - 21.0	278.39	280.89	14.8 - TD	NR	20.63	6/1/2022	10:51	260.26
MW07	B07	21.5	11.0 - 21.0	278.39	280.89	14.8 - TD	NR	21.94	8/22/2022	10:50	258.95
MW08	1				1		1	1	1		
MW08	11MP01SB	16.0	5.0 - 15.0	328.92	331.32	2.5 - 4.0, 10.5 - TD	NR	15.6	6/4/2021	9:04	315.73
MW08	11MP01SB	16.0	5.0 - 15.0	328.92	331.32	2.5 - 4.0, 10.5 - TD	NR	14.3	8/28/2021	10:25	317.05
MW08	11MP01SB	16.0	5.0 - 15.0	328.92	331.32	2.5 - 4.0, 10.5 - TD	NR	13.3	6/1/2022	11:25	317.99
MW08	11MP01SB	16.0	5.0 - 15.0	328.92	331.32	2.5 - 4.0, 10.5 - TD	NR	13.7	8/22/2022	1043	317.62
MW09	•		•		•	•	•				
MW09	11MP17SB	31.0	20.0 - 30.0	274.88	277.28	14.0 - 16.0, 31.0 - TD	NR	25.43	6/4/2021	8:20	251.85
MW09	11MP17SB	31.0	20.0 - 30.0	274.88	277.28	14.0 - 16.0, 31.0 - TD	NR	25.37	8/28/2021	9:48	251.91
MW09	11MP17SB	31.0	20.0 - 30.0	274.88	277.28	14.0 - 16.0, 31.0 - TD	NR	25.42	6/1/2022	11:45	251.86

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW09	11MP17SB	31.0	20.0 - 30.0	274.88	277.28	14.0 - 16.0, 31.0 - TD	NR	27.33	8/22/2022	1020	249.95
MW10											
MW10	11MP14SB	61.0	50.0 - 60.0	274.31	276.21	48.0 - TD	NR	54.61	6/4/2021	8:08	221.60
MW10	11MP14SB	61.0	50.0 - 60.0	274.31	276.21	48.0 - TD	NR	30.01	8/28/2021	9:43	246.20
MW10	11MP14SB	61.0	50.0 - 60.0	274.31	276.21	48.0 - TD	NR	26.28	6/1/2022	11:40	249.93
MW10	11MP14SB	61.0	50.0 - 60.0	274.31	276.21	48.0 - TD	NR	27.04	8/22/2022	1016	249.17
MW11	-	1			•	1	1	-			1
MW11	11MP12SB	23.0	12.0 - 22.0	268.70	271.30		NR	21.86	6/4/2021	7:55	249.44
MW11	11MP12SB	23.0	12.0 - 22.0	268.70	271.30		NR	23.55	8/28/2021	9:38	247.75
MW11	11MP12SB	23.0	12.0 - 22.0	268.70	271.30		NR	19.21	6/1/2022	11:34	252.09
MW11 MW12	11MP12SB	23.0	12.0 - 22.0	268.70	271.30		NR	22.16	8/22/2022	1013	249.14
MW12	11RD13SB	15.0	4.0 - 14.0	263.22	265.62	1.0 - TD	NR	NR	6/4/2021	9:25	Inner casing damaged from settling of outer casing, preventing access for DTW measurements.
MW12	11RD13SB	15.0	4.0 - 14.0	263.22	265.62	1.0 - TD	NR	NR	8/28/2021	10:44	Inner casing damaged from settling of outer casing, preventing access for DTW measurements.
MW12	11RD13SB	15.0	4.0 - 14.0	263.22	265.62	1.0 - TD	NR	NR	6/1/2022	11:11	Inner casing damaged from settling of outer casing, preventing access for DTW measurements.
MW12	11RD13SB	15.0	4.0 - 14.0	263.22	265.62	1.0 - TD	NR	NR	8/22/2022	1059	Inner casing damaged from settling of outer casing, preventing access for DTW measurements.
MW13					T	1	1				
MW13	11MP20SB	32.0	21.0 - 31.0	274.30	276.70	27.0 - TD	NR	28.5	6/4/2021	9:20	Dry (Water Elevation <243.3 feet bgs)
MW13	11MP20SB	32.0	21.0 - 31.0	274.30	276.70	27.0 - TD	31.72	DRY	8/28/2021	10:37	Frost jacked, unusable for DTW measurements
MW13	11MP20SB	32.0	21.0 - 31.0	274.30	276.70	27.0 - TD	NR	24.37	6/1/2022	10:56	Frost jacked, unusable for DTW measurements
MW13	11MP20SB	32.0	21.0 - 31.0	274.30	276.70	27.0 - TD	NR	30.9	8/22/2022	1054	Frost jacked, unusable for DTW measurements
MW14											
MW14	11MP25SB	36.0	25.0 - 35.0	246.71	249.01	25.7 - TD					Decommissioned in 2014 NTCRA
MW15					•						
MW15	11MP29SB	26.0	15.0 - 25.0	242.63	244.93	16.2 - TD					Decommissioned in 2014 NTCRA

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW16											
MW16	11MP30SB	22.0	11.0 - 21.0	226.09	228.09	16.0 - TD	NR	11.90	6/4/2021	9:45	216.19
MW16	11MP30SB	22.0	11.0 - 21.0	226.09	228.09	16.0 - TD	NR	13.49	8/28/2021	11:01	214.60
MW16	11MP30SB	22.0	11.0 - 21.0	226.09	228.09	16.0 - TD	NR	7.00	1/15/1900	12:42	221.09
MW16	11MP30SB	22.0	11.0 - 21.0	226.09	228.09	16.0 - TD	NR	12.55	8/22/2022	919	215.54
MW17											
MW17	11MP91SB	52.5	41.5 - 51.5	226.36	228.66	25.0 - 33.0, 33.0 - TD	NR	13.67	6/4/2021	9:40	214.99
MW17	11MP91SB	52.5	41.5 - 51.5	226.36	228.66	25.0 - 33.0, 33.0 - TD	NR	15.82	8/28/2021	10:58	212.84
MW17	11MP91SB	52.5	41.5 - 51.5	226.36	228.66	25.0 - 33.0, 33.0 - TD	NR	9.15	6/1/2022	12:38	219.51
MW17	11MP91SB	52.5	41.5 - 51.5	226.36	228.66	25.0 - 33.0, 33.0 - TD	NR	15.02	8/22/2022	9:17	213.64
MW18		• •			• •						
MW18	11MP31SB	40.0	29.0 - 39.0	241.33	243.83	38.0 - TD	NR	27.55	6/4/2021	10:23	216.28
MW18	11MP31SB	40.0	29.0 - 39.0	241.33	243.83	38.0 - TD	NR	29.87	8/28/2021	11:18	213.96
MW18	11MP31SB	40.0	29.0 - 39.0	241.33	243.83	38.0 - TD	NR	21.80	6/1/2022	13:14	222.03
MW18	11MP31SB	40.0	29.0 - 39.0	241.33	243.83	38.0 - TD	NR	28.72	8/22/2022	9:08	215.11
MW19											
MW19	11MP33SB	43.0	32.0 - 42.0	237.70	240.00	39.0 - TD	NR	17.30	6/4/2021	10:32	222.70
MW19	11MP33SB	43.0	32.0 - 42.0	237.70	240.00	39.0 - TD	NR	21.81	8/28/2021	11:24	218.19
MW19	11MP33SB	43.0	32.0 - 42.0	237.70	240.00	39.0 - TD	NR	15.65	6/1/2022	13:08	224.35
MW19	11MP33SB	43.0	32.0 - 42.0	237.70	240.00	39.0 - TD	NR	20.93	8/22/2022	904	219.07
MW20		-			-			-			
MW20	11MP38SB	15.5	4.5 - 14.5	212.90	215.20	6.5 - TD	NR	7.01	6/4/2021	9:58	208.19
MW20	11MP38SB	15.5	4.5 - 14.5	212.90	215.20	6.5 - TD	NR	7.67	8/28/2021	11:09	207.53
MW20	11MP38SB	15.5	4.5 - 14.5	212.90	215.20	6.5 - TD	NR	6.16	6/1/2022	12:52	209.04
MW20	11MP38SB	15.5	4.5 - 14.5	212.90	215.20	6.5 - TD	NR	7.40	8/22/2022	946	207.80
MW21		1			1	1			1 1		
MW21	11MP39SB	17.5	6.5 - 16.5	208.23	210.13	7.0 - TD	NR	8.48	6/4/2021	10:08	201.65
MW21	11MP39SB	17.5	6.5 - 16.5	208.23	210.13	7.0 - TD	NR	8.96	8/28/2021	11:40	201.17
MW21	11MP39SB	17.5	6.5 - 16.5	208.23	210.13	7.0 - TD	NR	7.97	6/1/2022	12:57	202.16
MW21	11MP39SB	17.5	6.5 - 16.5	208.23	210.13	7.0 - TD	NR	8.64	8/22/2022	950	201.49
MW22		1			1			1	· · ·		
MW22	11MP40SB	15.5	4.5 - 14.5	203.10	205.10	7.8 - TD	NR	8.55	6/4/2021	10:13	196.55
MW22	11MP40SB	15.5	4.5 - 14.5	203.10	205.10	7.8 - TD	NR	9.97	8/28/2021	11:37	195.13
MW22	11MP40SB	15.5	4.5 - 14.5	203.10	205.10	7.8 - TD	NR	6.71	6/1/2022	13:02	198.39
MW22	11MP40SB	15.5	4.5 - 14.5	203.10	205.10	7.8 - TD	NR	9.72	8/22/2022	955	195.38
MW23		20.0	10.0 20.0	201.05	20111	20.0 775	100	15.40	C (4/0001	10.00	100 17
MW23	11MP66SB	29.0	18.0 - 28.0	201.96	204.16	20.0 - TD	NR	15.49	6/4/2021	12:03	188.67
MW23	11MP66SB	29.0	18.0 - 28.0	201.96	204.16	20.0 - TD	NR	16.38	8/28/2021	11:51	187.78

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW23	11MP66SB	29.0	18.0 - 28.0	201.96	204.16	20.0 - TD	NR	14.41	6/1/2022	17:49	189.75
MW23	11MP66SB	29.0	18.0 - 28.0	201.96	204.16	20.0 - TD	NR	16.31	8/22/2022	1111	187.85
MW24					-	-		-			
MW24	11MP62SB	30.0	19.0 - 29.0	221.41	223.51	20.0 - TD	NR	16.16	6/4/2021	11:56	207.35
MW24	11MP62SB	30.0	19.0 - 29.0	221.41	223.51	20.0 - TD	NR	17.45	8/28/2021	11:58	206.06
MW24	11MP62SB	30.0	19.0 - 29.0	221.41	223.51	20.0 - TD	NR	14.60	6/1/2022	13:56	208.91
MW24	11MP62SB	30.0	19.0 - 29.0	221.41	223.51	20.0 - TD	NR	17.41	8/22/2022	1127	206.10
MW25											
MW25	11MP89SB	42.0	31.0 - 41.0	237.56	239.76	32.0 - TD	NR	32.26	6/5/2021	12:47	207.50
MW25	11MP89SB	42.0	31.0 - 41.0	237.56	239.76	32.0 - TD	NR	32.26	8/28/2021	12:39	207.50
MW25	11MP89SB	42.0	31.0 - 41.0	237.56	239.76	32.0 - TD	NR	29.95	6/1/2022	13:51	209.81
MW25	11MP89SB	42.0	31.0 - 41.0	237.56	239.76	32.0 - TD	NR	31.93	8/22/2022	1131	207.83
MW26					-	-		-			
MW26	11MP52SB	43.0	32.0 - 42.0	244.03	245.93	34.0 - TD	NR	34.4	6/4/2021	11:43	211.58
MW26	11MP52SB	43.0	32.0 - 42.0	244.03	245.93	34.0 - TD	NR	36.15	8/28/2021	12:34	209.78
MW26	11MP52SB	43.0	32.0 - 42.0	244.03	245.93	34.0 - TD	NR	31.0	6/1/2022	13:45	214.94
MW26	11MP52SB	43.0	32.0 - 42.0	244.03	245.93	34.0 - TD	NR	33.5	8/22/2022	1134	212.39
MW27								-			
MW27	11MP60SB	34.0	23.0 - 33.0	241.04	242.94	29.0 - TD	NR	29.48	6/4/2021	11:40	213.46
MW27	11MP60SB	34.0	23.0 - 33.0	241.04	242.94	29.0 - TD	NR	30.92	8/28/2021	12:43	212.02
MW27	11MP60SB	34.0	23.0 - 33.0	241.04	242.94	29.0 - TD	NR	24.78	6/1/2022	14:01	218.16
MW27	11MP60SB	34.0	23.0 - 33.0	241.04	242.94	29.0 - TD	NR	30.01	8/22/2022	1139	212.93
MW28			1		1	1		1			1
MW28	11MP88SB	64.0	53.0 - 63.0	239.94	241.94	49.0 - TD	NR	27.95	6/4/2021	11:33	213.99
MW28	11MP88SB	64.0	53.0 - 63.0	239.94	241.94	49.0 - TD	NR	29.51	8/28/2021	12:46	212.43
MW28	11MP88SB	64.0	53.0 - 63.0	239.94	241.94	49.0 - TD	NR	23.07	6/1/2022	14:04	218.87
MW28	11MP88SB	64.0	53.0 - 63.0	239.94	241.94	49.0 - TD	NR	28.56	8/22/2022	1141	213.38
MW29		50.0	50.0 50.0	200.25	202.25	(1.0. 55)	ND	50.5	6/4/2021	16.00	222.75
MW29	11MP41SB	70.0	59.0 - 69.0	280.35	282.25	61.0 - TD	NR	58.5	6/4/2021	16:22	223.75
MW29	11MP41SB	70.0 70.0	59.0 - 69.0	280.35	282.25	61.0 - TD	NR	64.00	9/1/2021	15:00	218.25
MW29	11MP41SB		59.0 - 69.0	280.35	282.25	61.0 - TD	NR	63.49	6/1/2022	14:38	218.76
MW29	11MP41SB	70.0	59.0 - 69.0	280.35	282.25	61.0 - TD	NR	64.43	8/22/2022	1250	217.82
MW30 MW30	11SM31SB	53.0	42.0 - 52.0	275.71	277.41	45.0 - TD	NR	53.66	6/4/2021	16:30	Suspected Dry (Water Elevation <223.7 feet)
MW30	11SM31SB	53.0	42.0 - 52.0	275.71	277.41	45.0 - TD	NR	54.19	8/28/2021	16:21	Suspected Dry (Water Elevation <223.7 feet)
MW30	11SM31SB	53.0	42.0 - 52.0	275.71	277.41	45.0 - TD	NR	50.56	6/1/2022	14:45	226.85
MW30	11SM31SB	53.0	42.0 - 52.0	275.71	277.41	45.0 - TD	NR	52.56	8/22/2022	1257	224.85

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW31											
MW31	11UP11SB	44.8	33.8 - 43.8	495.79	497.99	34.0 - TD	NR	38.56	6/4/2021	15:45	459.43
MW31	11UP11SB	44.8	33.8 - 43.8	495.79	497.99	34.0 - TD	NR	39.02	8/28/2021	15:09	458.97
MW31	11UP11SB	44.8	33.8 - 43.8	495.79	497.99	34.0 - TD	NR	36.09	6/1/2022	16:50	461.90
MW31	11UP11SB	44.8	33.8 - 43.8	495.79	497.99	34.0 - TD	NR	38.5	8/22/2022	0:00	459.49
MW32											
MW32	11RD05SB	25.0	14.0 - 24.0	194.38	196.58	16.5 - TD	NR	18.51	6/4/2021	10:41	178.07
MW32	11RD05SB	25.0	14.0 - 24.0	194.38	196.58	16.5 - TD	NR	19.28	8/28/2021	11:31	177.30
MW32	11RD05SB	25.0	14.0 - 24.0	194.38	196.58	16.5 - TD	NR	17.75	6/1/2022	13:25	178.83
MW32	11RD05SB	25.0	14.0 - 24.0	194.38	196.58	16.5 - TD	NR	7.60	8/22/2022	855	188.98
MW33	1	1	1		•	•	1	-			•
MW33	11RD20SB	23.0	12.0 - 22.0	176.62	178.92	10.5 - TD	NR	6.13	6/4/2021	16:49	172.79
MW33	11RD20SB	23.0	12.0 - 22.0	176.62	178.92	10.5 - TD	NR	8.12	8/28/2021	16:53	170.80
MW33	11RD20SB	23.0	12.0 - 22.0	176.62	178.92	10.5 - TD	NR	3.72	6/1/2022	17:55	175.20
MW33 MW34	11RD20SB	23.0	12.0 - 22.0	176.62	178.92	10.5 - TD	NR	6.67	8/22/2022	838	172.25
MW34		NR	NR	290.95	294.25	1	NR	58.13	6/4/2021	8:35	236.12
	AST5 MW1						-				
MW34	AST5 MW1	NR	NR	290.95	294.25		NR	34.59	8/28/2021	9:55	259.66
MW34	AST5 MW1	NR	NR	290.95	294.25		NR	26.84	6/1/2022	11:56	267.41
MW34	AST5 MW1	NR	NR	290.95	294.25		NR	34.48	8/22/2022	1024	259.77
MW35		ND	ND	205.54	200.24		ND	25.42	C (4/2021]	0.40	252.04
MW35 MW35	AST5 MW2 AST5 MW2	NR NR	NR NR	285.76 285.76	289.26 289.26		NR NR	35.42 39.18	6/4/2021 8/28/2021	8:42 9:59	253.84 250.08
MW35 MW35	AST5 MW2 AST5 MW2	NR	NR	285.76	289.26		NR	33.18	6/1/2022	12:01	256.08
MW35	AST5 MW2	NR	NR	285.76	289.26		NR	39.63	8/22/2022	1027	249.63
MW36						I					
MW36	AST5 MW3	NR	NR	286.33	290.03		NR	15.74	6/4/2021	8:49	274.29
MW36	AST5 MW3	NR	NR	286.33	290.03		NR	16.39	8/28/2021	10:02	273.64
MW36	AST5 MW3	NR	NR	286.33	290.03		NR	15.46	6/1/2022	12:05	274.57
MW36	AST5 MW3	NR	NR	286.33	290.03		NR	15.72	8/22/2022	1031	274.31
MW39											
MW39	SM67	84.0	63 - 83	432.83	435.26		NR	84.81	6/4/2021	14:40	Dry (Water Elevation <349.8 feet)
MW39	SM67	84.0	63 - 83	432.83	435.26		NR	84.79	8/28/2021	15:35	Dry (Water Elevation <349.8 feet)
MW39	SM67	84.0	63 - 83	432.83	435.26		NR	57.82	6/1/2022	16:30	377.44
MW39	SM67	84.0	63 - 83	432.83	435.26		NR	84.87	8/22/2022	1501	350.39

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW40											
MW40	SM68c	140.0	119 - 139	392.86	395.18		NR	127.99	6/4/2021	14:29	267.19
MW40	SM68c	140.0	119 - 139	392.86	395.18		NR	128.91	8/28/2021	15:45	266.27
MW40	SM68c	140.0	119 - 139	392.86	395.18		NR	125.78	6/1/2022	16:18	269.40
MW40	SM68c	140.0	119 - 139	392.86	395.18		NR	128.93	8/22/2022	1643	266.25
MW42											
MW42	SM70b	140.0	119 - 139	339.85	342.34		NR	127.2	6/4/2021	11:08	215.14
MW42	SM70b	140.0	119 - 139	339.85	342.34		NR	128.7	8/28/2021	16:31	213.66
MW42	SM70b	140.0	119 - 139	339.85	342.34		NR	121.5	6/1/2022	14:18	220.85
MW42	SM70b	140.0	119 - 139	339.85	342.34		NR	127.6	8/22/2022	1204	214.76
MW43											
MW43	SM71b	118.5	98 - 118	300.87	303.69		NR	88.62	6/4/2021	11:18	215.07
MW43	SM71b	118.5	98 - 118	300.87	303.69		NR	90.14	8/28/2021	16:38	213.55
MW43	SM71b	118.5	98 - 118	300.87	303.69		NR	82.92	6/1/2022	14:26	220.77
MW43	SM71b	118.5	98 - 118	300.87	303.69		NR	88.92	8/22/2022	1155	214.77
MW44											
MW44	SM72	69	48-68	378.92	381.59		NR	33.80	6/4/2021	16:02	347.79
MW44	SM72	69	48-68	378.92	381.59		NR	35.42	8/28/2021	15:56	346.17
MW44	SM72	69	48-68	378.92	381.59		NR	32.45	6/1/2022	15:06	349.14
MW44	SM72	69	48-68	378.92	381.59		NR	35.01	8/22/2022	1311	346.58
MW45											
MW45	SM73	82	61-81	397.70	400.37		NR	43.91	6/4/2021	13:35	356.46
MW45	SM73	82	61-81	397.70	400.37		NR	46.72	8/28/2021	13:40	353.65
MW45	SM73	82	61-81	397.70	400.37		NR	40.20	6/1/2022	15:32	360.17
MW45	SM73	82	61-81	397.70	400.37		NR	44.84	8/22/2022	1337	355.53
MW46	-										
MW46	SM74	57	36-56	399.62	402.50		NR	33.58	6/4/2021	13:27	368.92
MW46	SM74	57	36-56	399.62	402.50		NR	35.63	8/28/2021	13:32	366.87
MW46	SM74	57	36-56	399.62	402.50		NR	32.01	6/1/2022	15:39	370.49
MW46	SM74	57	36-56	399.62	402.50		NR	34.00	8/22/2022	1342	368.50
MW47	-										
MW47	SM75	67	46-66	380.67	383.67		NR	36.62	6/4/2021	13:14	347.05
MW47	SM75	67	46-66	380.67	383.67		NR	39.06	8/28/2021	13:25	344.61
MW47	SM75	67	46-66	380.67	383.67		NR	35.62	6/1/2022	15:50	348.05
MW47	SM75	67	46-66	380.67	383.67		NR	37.45	8/22/2022	1348	346.22
MW48											
MW48	SM76	44.5	23-43	348.87	351.51		NR	19.51	6/4/2021	16:13	332.00
MW48	SM76	44.5	23-43	348.87	351.51		NR	20.19	8/28/2021	16:02	331.32
MW48	SM76	44.5	23-43	348.87	351.51		NR	18.96	6/1/2022	14:58	332.55
MW48	SM76	44.5	23-43	348.87	351.51		NR	19.28	8/22/2022	1304	332.23

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW49											
MW49	SM77	61.7	40-60	301.15	303.78		NR	29.72	6/4/2021	16:36	274.06
MW49	SM77	61.7	40-60	301.15	303.78		NR	30.31	8/28/2021	16:10	273.47
MW49	SM77	61.7	40-60	301.15	303.78		NR	27.57	6/1/2022	17:40	276.21
MW49	SM77	61.7	40-60	301.15	303.78		NR	31.56	8/22/2022	12:44	272.22
MW50											
MW50	SM78	92	71-91	439.58	442.6501		NR	47.31	6/4/2021	15:15	395.34
MW50	SM78	92	71-91	439.58	442.6501		NR	49.26	8/28/2021	14:30	393.39
MW50	SM78	92	71-91	439.58	442.6501		NR	44.50	6/1/2022	17:01	398.15
MW50	SM78	92	71-91	439.58	442.6501		NR	49.50	8/22/2022	15:01	393.15
MW51											
MW51	SM79	77	56-76	422.38	425.05		NR	38.45	6/4/2021	14:55	386.60
MW51	SM79	77	56-76	422.38	425.05		NR	40.28	8/28/2021	14:03	384.77
MW51	SM79	77	56-76	422.38	425.05		NR	37.11	6/1/2022	17:08	387.94
MW51	SM79	77	56-76	422.38	425.05		NR	42.33	8/22/2022	1522	382.72
MW52											
MW52	SM80	56	35-55	383.91	386.83		NR	30.66	6/4/2021	13:08	356.17
MW52	SM80	56	35-55	383.91	386.83		NR	34.17	8/28/2021	13:17	352.66
MW52	SM80	56	35-55	383.91	386.83		NR	28.74	6/1/2022	15:58	358.09
MW52	SM80	56	35-55	383.91	386.83		NR	32.40	8/22/2022	1355	354.43
MW53											
MW53	SM81	62	41-61	460.82	463.7785		NR	30.43	6/4/2021	15:35	433.35
MW53	SM81	62	41-61	460.82	463.7785		NR	34.08	8/28/2021	14:56	429.70
MW53	SM81	62	41-61	460.82	463.7785		NR	28.78	6/1/2022	17:20	435.00
MW53	SM81	62	41-61	460.82	463.7785		NR	34.17	8/22/2022	1610	429.61
MW54											
MW54	SM82	50	29-49	423.01	425.7406		NR	29.43	6/4/2021	15:05	396.31
MW54	SM82	50	29-49	423.01	425.7406		NR	30.52	8/28/2021	14:17	395.22
MW54	SM82	50	29-49	423.01	425.7406		NR	28.30	6/1/2022	17:14	397.44
MW54	SM82	50	29-49	423.01	425.7406		NR	29.65	8/22/2022	1533	396.09
MW55											
MW55	SM83	27	10-20	341.26	344.09		NR	12.80	6/4/2021	13:00	331.29
MW55	SM83	27	10-20	341.26	344.09		NR	14.08	8/28/2021	13:10	330.01
MW55	SM83	27	10-20	341.26	344.09		NR	11.66	6/1/2022	16:06	332.43
MW55	SM83	27	10-20	341.26	344.09		NR	12.73	8/22/2022	1405	331.36
MW56											
MW56	SM84	76	55-75	408.55	411.329		NR	34.80	6/4/2021	13:43	376.53
MW56	SM84	76	55-75	408.55	411.329		NR	37.93	8/28/2021	13:46	373.40
MW56	SM84	76	55-75	408.55	411.329		NR	32.35	6/1/2022	15:00	378.98
MW56	SM84	76	55-75	408.55	411.329		NR	34.66	8/22/2022	1318	376.67

Monitoring Well ID	Soil Boring ID	Reported Well Total Depth As Constructed (feet bgs)	Reported Screened Interval (feet bgs)	Surveyed Ground Elevation (feet NAVD88)	Surveyed Top of Casing Elevation (feet NAVD88)	GW Observed During Drilling (feet bgs)	Measured Well Total Depth (feet below TOC)	Static Water Level Depth (feet below TOC)	Static Water Level Date	Static Water Level Time	GW Elevation (feet NAVD88)
MW57											
MW57	SM85	60	37.5-57.5	461.00	463.8141		NR	32.22	6/4/2021	15:53	431.59
MW57	SM85	60	37.5-57.5	461.00	463.8141		NR	35.75	8/28/2021	15:17	428.06
MW57	SM85	60	37.5-57.5	461.00	463.8141		NR	30.52	6/1/2022	16:43	433.29
MW57	SM85	60	37.5-57.5	461.00	463.8141		NR	37.56	8/22/2022	1625	426.25
MW58											
MW58	SM86	58	36.62-56.62	469.84	472.7246		NR	30.48	6/4/2021	15:25	442.24
MW58	SM86	58	36.62-56.62	469.84	472.7246		NR	31.76	8/28/2021	14:43	440.96
MW58	SM86	58	36.62-56.62	469.84	472.7246		NR	29.81	6/1/2022	17:28	442.91
MW58	SM86	58	36.62-56.62	469.84	472.7246		NR	30.35	8/22/2022	1600	442.37
MW59											
MW59	SM87	161.5	140-160	432.63	435.4785		NR	133.66	6/4/2021	14:46	301.82
MW59	SM87	161.5	140-160	432.63	435.4785		NR	131.74	8/28/2021	15:28	303.74
MW59	SM87	161.5	140-160	432.63	435.4785		NR	132.56	6/1/2022	16:33	302.92
MW59	SM87	162.5	140-161	432.63	435.4785		NR	132.20	8/22/2022	1418	303.28

Notes

Elevation datum: NAVD88 calculated using GEOID09. TOC refers to the top of PVC inner casing.

Acronyms and Abbreviations

bgs = below ground surface GW = groundwater ID = Identification NAVD88 = North American Vertical Datum, 1988 NR = Not Recorded NTCRA = non-time-critical removal action PVC = polyvinyl chloride TD = Total depth TOC = Top of Casing -- = No information avialable

Locatio)n ¹	RD02	RD03	RD10	RD14	RD04	RD12	RD13	RD15	RD05 (seep)	RD16	RD09	RD06	RD07	RD08B*
Average S	pring			5.14	6.67	12.67	10.53		5.26	0.14	6.88	7.80	6.45		6.35
Average	Fall	5.96	4.09	2.49	2.57	4.70	6.02		2.27	0.12	0.54	3.77	3.25	5.61	2.98
	8/18/2011	5.96	4.09	5.52		5.95	8.24			0.18		5.98	6.81	7.61	7.19
	5/26/2012	NR	NR	12.18		12.67	10.53	-		NR		13.36	14.47	NR	14.20
	9/12/2012	NR	NR	4.64		3.45	3.79			0.16		3.40	3.80	3.61	3.09
	6/19/2015	NR	NR	1.25	1.41	NR	NR	NR	1.40	0.23	1.61	1.40	1.54	NR	1.90
	9/2/2015	NR	NR	0.48	0.54	NR	NR	NR	0.67	0.19	0.60	0.80	0.79	NR	0.81
	9/28/2016	NR	NR	2.45	3.01	NR	NR	NR	3.53	0.35	NR	2.43	5.51	NR	NR
	6/1/2017	NR	NR	1.20	1.54	NR	NR	NR	1.91	0.01	NR	1.55	1.26	NR	2.15
Estimated	9/16/2017	NR	NR	5.22	6.35	NR	NR	NR	6.85	0.05	NR	6.23	7.08	NR	7.38
Discharge (cfs)	5/19/2018	NR	NR	11.60	10.84	NR	NR	NR	15.80	0.33	NR	14.87	13.69	NR	10.41
by Date	5/18/2019	NR	NR	11.47	12.87	NR	NR	NR	13.04	0.12	12.14	NR	15.15	NR	13.12
	9/10/2019	NR	NR	0.42	0.37	NR	NR	NR	0.41	0.01	0.47	NR	0.33	NR	0.26
	6/17/2020	NR	NR	0.54	NR	NR	NR	NR	0.88	0.17	NR	NR	1.11	NR	1.28
	9/2/2020	NR	NR	0.40	NR	NR	NR	NR	0.39	0.03	NR	NR	0.43	NR	0.44
	6/9/2021	NR	NR	1.47	NR	NR	NR	NR	1.68	0.04	NR	NR	1.78	NR	1.39
	9/3/2021	NR	NR	0.76	NR	NR	NR	NR	1.75	0.03	NR	NR	1.23	NR	1.66
	6/6/2022	NR	NR	1.39	NR	NR	NR	NR	2.13	0.05	NR	NR	2.61	NR	2.34*
	8/27/2022	NR	NR	2.89	NR	NR	NR	NR	2.59	0.04	NR	NR	2.60	NR	3.64*

Table 2-2. Red Devil Creek and Seep Discharge Gauging

Notes:

¹ Locations are organized from upstream to downstream along Red Devil Creek to the Kuskokwim River.

^{*} RD08 was washed out due to the spring breakup flooding and replaced by RD08B in June 2022.

Acronyms and Abbreviations:

cfs = cubic feet per second

NR = Not Recorded; Station not monitored

RD = Red Devil

-- = Station not established

			1	1		ter Baseline							
	Station ID		4	MW06	MW09	MW10	MW16	MW17	MW26	MW27	MW28	MW29	MW33
	Geographic Area			Pre-1955 MPA	Surface Mined Area								
	Sample ID		1	0622MW06GW	0622MW09GW	0622MW10GW	0622MW16GW	0622MW17GW	0622MW26GW	0622MW27GW	0622MW28GW	0622MW29GW	0622MW33GW
Analyte	Method		Units										
Metals													
Aluminum	Metals (ICP)	6020B	mg/L	0.040 U	0.062	0.04 U	0.047	0.04 U	1.2 J	0.09	0.04 U	0.85 J	0.11 J
Antimony	Metals (ICP/MS)	6020B	mg/L	0.0082	0.0039	0.0012 J+	0.82 J	0.0074	0.36 J	0.013	0.004	0.0008 U	0.37 J
Arsenic	Metals (ICP/MS)	6020B	mg/L	0.042	0.03	0.12 J	0.44 J	0.0036	1.1 J	0.026	0.095	0.044	0.024
Barium	Metals (ICP/MS)	6020B	mg/L	0.085	0.39 J	0.095	0.036	0.036	0.51 J	0.041	0.044	0.17 J	0.033
Beryllium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.00011 J	0.0004 U	0.0004 U	0.0004 U	0.0004 U				
Cadmium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.00007 J	0.0004 U	0.00014 J	0.0004 U	0.00014 J	0.000061 J	0.0004 U	0.0004 U	0.0004 U
Calcium	Metals (ICP)	6020B	mg/L	30	35	20	19	18 J	48	75	35	45	18
Chromium	Metals (ICP/MS)	6020B	mg/L	0.00080 U	0.00098 J+	0.0008 U	0.0008 U	0.0008 U	0.0042	0.0016	0.0008 U	0.0027	0.0008 U
Cobalt	Metals (ICP/MS)	6020B	mg/L	0.0019	0.00078	0.000059 J	0.0054	0.0004 U	0.02	0.0029	0.0026	0.0018	0.00011 J
Copper	Metals (ICP/MS)	6020B	mg/L	0.00083 J	0.0031	0.00079 J	0.0063	0.00064 J	0.018	0.0051	0.00069 J	0.0024	0.0012 J
Iron	Metals (ICP)	6020B	mg/L	4.7 J	2.3 J	1.3 J	2.1 J	0.1 U	48 J	0.31 J	0.91 J	2.5 J	0.22 J
Lead	Metals (ICP/MS)	6020B	mg/L	0.000400 U	0.00081	0.0004 U	0.00096	0.0004 U	0.0034	0.00045	0.0004 U	0.0004 J+	0.0004 U
Magnesium	Metals (ICP)	6020B	mg/L	29	25	33	48	14	30	50	29	48	14
Manganese	Metals (ICP/MS)	6020B	mg/L	0.64 J	2.3 J	0.14 J	2.6 J	0.0015 J+	5.3 J	1.1 J	0.76 J	0.37 J	0.012
Nickel	Metals (ICP/MS)	6020B	mg/L	0.0034	0.0025 J	0.00038 J	0.0055	0.003 U	0.02	0.018	0.0065	0.0066	0.003 U
Potassium	Metals (ICP)	6020B	mg/L	0.9 J	1 J	1.1 J	2.1 J	0.46 J	3.4	1.4 J	0.86 J	1.2 J	0.81 J
Selenium	Metals (ICP/MS)	6020B	mg/L	0.008 U									
Silver	Metals (ICP/MS)	6020B	mg/L	0.000056 J+	0.000052 J+	0.000061 J+	0.000033 J+	0.000038 J+	0.000058 J+	0.000039 J+	0.0004 U	0.0004 U	0.000069 J+
Sodium	Metals (ICP)	6020B	mg/L	3.7	2.9	3.1	3.7	2.1	3.5	14	8.7	2	3.8
Thallium	Metals (ICP/MS)	6020B	mg/L	0.001000 U	0.0010 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	Metals (ICP/MS)	6020B	mg/L	0.004 U	0.00067 J	0.00093 J	0.0013 J	0.00067 J	0.0051	0.00054 J	0.004 U	0.0035 J	0.0011 J
Zinc	Metals (ICP/MS)	6020B	mg/L	0.007 U	0.012	0.007 U	0.017	0.007 U	0.019	0.014	0.007 U	0.007 U	0.007 U
Mercury	Metals (ICP/MS)	7470A	mg/L	0.0003 U	0.0003 U	0.0003 UJ	0.00025 J	0.0003 U	0.012	0.00081	0.0003 U	0.0003 U	0.0003 U
Total Low Level Mercury		•											
Mercury	Total Mercury	EPA 1631E	ng/L	3.8	69	150 J+	340	80 J+	14000	2000	240	190 B	160 B
Dissolved Low Level Mercury													
Mercury	Dissolved Mercury	EPA 1631E	ng/L	0.64 J+	9.6	3.4 J-	140	14	670	900	110	16	12 B
Field Water Quality Parameters													
Temperature	Field Measurement		Deg C	6.09	7.52	7.91	8.82	8.04	6.21	6.92	5.55	10.59	11.33
pH Conductivity	Field Measurement		pH Units	6.8	6.54	7.21	6.28	7.05	6.58	6.22	6.93	6.66	6.44
Conductivity Turbidity	Field Measurement Field Measurement		μS/cm NTU	373 7.67	231 9.07	212 4.16	450	193	590 59.37	492 8.06	250 1.86	538 33.04	202
Dissolved Oxygen	Field Measurement		mg/L	1.32	4.15	9.8	2	9.65	2.16	292	1.43	0.42	9.65
Oxidation-Reduction Potential	Field Measurement		mV	33.3	56.2	-0.9	57.9	74.2	-10.8	53.9	40.3	-42.4	82.1

Table 2-3. Groundwater Baseline Analytical Data - Spring 2022

Acronyms and Abbreviations

ADEC = Alaska Department of Environmental Conservation

Deg C = Degrees Celsius.

EPA = United States Environmental Protection Agency

GC/MS = Gas Chromatography/Mass Spectrometry

ICP/ MS = Inductively coupled plasma/mass spectrometry

mg/L = milligrams per liter

mS/cm = Millisiemens per centimeter

- mV = Millivolts
- ng/L = Nanograms per liter

NTU = Nephelometric turbidity units

 $\mu g/L = micrograms per liter$

Data Qualifiers:

J = The analyte was detected. The associated result is estimated.

J+ = The analyte was detected. The associated result is estimated with high bias.

J- = The analyte was detected. The associated result is estimated low bias.

U = The analyte was analyzed for but not detected. The value provided is the method detection limit.

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				1 abic 2	3. Groundwa	iter Dasenne	Analytical D	ata - Spring					
	Station ID			MW40	MW42	MW43	MW44	MW45	MW46	MW47	MW49	MW50	MW51
				Surface Mined	Vicinity of the								
	Geographic Area			Area	Proposed								
					Repository								
	Sample ID			0622MW40GW	0622MW42GW	0622MW43GW	0622MW44GW	0622MW45GW	0622MW46GW	0622MW47GW	0622MW49GW	0622MW50GW	0622MW51GW
Analyte	Method		Units										
Metals													
Aluminum	Metals (ICP)	6020B	mg/L	0.04 U	0.086	0.04 U	0.05	0.04 U	0.04 U	0.04 U	3.4 J	0.056	0.04 U
Antimony	Metals (ICP/MS)	6020B	mg/L	0.018	0.22 J	0.0029	0.0008 U	0.0008 U	0.0008 U	0.0008 U	0.00092 J+	0.014	0.00033 J
Arsenic	Metals (ICP/MS)	6020B	mg/L	0.82 J	0.59 J	0.32 J	0.00081 J	0.001	0.00033 J	0.001 U	0.0089	0.55 J	0.0033
Barium	Metals (ICP/MS)	6020B	mg/L	0.14 J	0.13 J	0.13 J	0.026	0.00075 J	0.0025	0.00075 J+	0.058	0.27 J	0.022
Beryllium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Cadmium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.000097 J	0.0004 U	0.0004 U
Calcium	Metals (ICP)	6020B	mg/L	50	47	20	37	17	10	13	9.6	67	18
Chromium	Metals (ICP/MS)	6020B	mg/L	0.0008 U	0.0008 U	0.0008 U	0.0008 U	0.0008 U	0.0008 U	0.0008 U	0.0066	0.0008 U	0.0008 U
Cobalt	Metals (ICP/MS)	6020B	mg/L	0.037	0.0049	0.022	0.0027	0.0004 U	0.000057 J	0.0004 U	0.0027	0.0032	0.00083
Copper	Metals (ICP/MS)	6020B	mg/L	0.001 J	0.0016 J	0.00064 J	0.002 U	0.00092 J	0.00069 J	0.002 U	0.0044	0.00066 J	0.0019 J
Iron	Metals (ICP)	6020B	mg/L	2.4 J	1.8 J	3.4 J	1.1 J	0.1 U	0.13 J	0.1 U	2.4 J	3 J	0.36 J
Lead	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0009	0.0004 U	0.0004 U
Magnesium	Metals (ICP)	6020B	mg/L	55	39	15	33	16	11	15	7.5	59	17
Manganese	Metals (ICP/MS)	6020B	mg/L	0.38 J	0.43 J	2.7 J	0.68 J	0.0019 J+	0.002 U	0.002 U	0.81 J	0.95 J	0.11 J
Nickel	Metals (ICP/MS)	6020B	mg/L	0.12 J	0.076	0.058	0.003 U	0.003 U	0.003 U	0.00061 J	0.013	0.009	0.003 U
Potassium	Metals (ICP)	6020B	mg/L	1 J	0.92 J	0.6 J	0.55 J	0.45 J	0.44 J	0.4 J	1.3 J	0.79 J	0.4 J
Selenium	Metals (ICP/MS)	6020B	mg/L	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
Silver	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0037	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.000039 J+
Sodium	Metals (ICP)	6020B	mg/L	1.8	3.1	2.7	1.9	1	1.2	1.5	1.3	2	1.7
Thallium	Metals (ICP/MS)	6020B	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Vanadium	Metals (ICP/MS)	6020B	mg/L	0.0001 C	0.00072 J	0.001 U	0.0001 C	0.0001 C	0.0007 J	0.001 U	0.001 0	0.0001 C	0.001 U
Zinc	Metals (ICP/MS)	6020B	mg/L	0.0083	0.0072	0.007 U	0.007 U	0.013	0.007 U	0.004 U	0.012	0.000000	0.004 U
Mercury	Metals (ICP/MS)	7470A	mg/L	0.0003 U	0.0003 U	0.0007 U	0.0007 U	0.0003 U	0.0007 U	0.0007 U	0.0012	0.0003 U	0.0007 U
Total Low Level Mercury		/ // 011	g 2	0.0000 0	0.0000 0	0.0000 0	0.0000 0	0.0000 0	0.0000 0	0.0000 0	0100007	0.0000 0	0.0000 0
	1	EPA											<u> </u>
Mercury	Total Mercury	1631E	ng/L	59 B	390	5.9	6.5	12	17	7.4	1100	360	5.5
Dissolved Low Level Mercury			_										
Mercury	Dissolved Mercury	EPA 1631E	ng/L	1.5 B	12 B	0.44	0.53 J+	3.8	3.1	0.95	190	3.2	0.52 J+
Field Water Quality Parameter													
Temperature	Field Measurement		Deg C	8.03	6.4	4.85	4.55	3.78	3.9	9.21	4.59	6.32	7.33
pH	Field Measurement		pH Units	6.91	6.72	6.59	7.17	6.46	6.49	6.66	5.89	6.78	6.4
Conductivity	Field Measurement		µS/cm	591	301	146	404	210	130	186	114	673	216
Turbidity	Field Measurement Field Measurement		NTU mg/I	7.08	14.24	3.77	5.28	1.89	4.35	1.67	67.99 8 24	16.36	6.8
Dissolved Oxygen Oxidation-Reduction Potential	Field Measurement		mg/L mV	3.64 58.6	2.6	1.1 -53.3	0.46	8.8 38	10.74 25.4	7.61	8.24 4.1	4.22 52.1	4.38 0.6
CARation-Acquetion 1 Otential			111.4	50.0	-20.0	-55.5	-40.4	50	2.5.4	10.7	4.1	52.1	0.0

Table 2-3. Groundwater Baseline Analytical Data - Spring 2022

Acronyms and Abbreviations

ADEC = Alaska Department of Environmental Conservation Deg C = Degrees Celsius. EPA = United States Environmental Protection Agency GC/MS = Gas Chromatography/Mass Spectrometry ICP/ MS = Inductively coupled plasma/mass spectrometry mg/L = milligrams per liter mS/cm = Millisiemens per centimeter mV = Millivolts ng/L = Nanograms per liter NTU = Nephelometric turbidity units

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Data Qualifiers:

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Table 2-3. Groundwater Baseline Analytical Data - Spring 2022

						-		le Allalytica	-	0				
	Station ID			MW52	MW53	MW54	MW55	MW56	MW57	MW58	MW59	Duplicate of MW49	Duplicate of MW52	Duplicate of MW10
				Vicinity of the	Vicinity of the	Vicinity of the	Vicinity of the Proposed	Vicinity of the	D 1055 MD 4					
	Geographic Area			Proposed Repository	Proposed Repository	Proposed Repository	Proposed Repository	Proposed Repository	Proposed Repository	Proposed Repository	Proposed Repository	Repository	Proposed Repository	Pre-1955 MPA
	Sample ID		-	0622MW52GW	0622MW53GW	0622MW54GW	0622MW55GW	0622MW56GW	0622MW57GW	0622MW58GW	0622MW59GW	0622MW97GW	0622MW98GW	0622MW99GW
Analyte	Method		Units	00220100200	00221111000011	002211110101	002211110001	0022111100011	00220100700	0022011000010	0022111109011	0022111177011	0022111190011	002211109901
Metals	Wethod		Cinto											
Aluminum	Metals (ICP)	6020B	mg/L	0.67 J	0.067	0.04 U	0.04 U	0.04 U	0.079	0.051	1.3 J	3.3 J	0.75 J	0.04 U
Antimony	Metals (ICP/MS)	6020B	mg/L mg/L	0.0008 U				0.04 U 0.0008 U	0.009 0.0008 U				0.0008 U	
,	Metals (ICP/MS)	6020B			0.0008 U	0.00091	0.0077			0.0008 U	0.00088 J+	0.0009 J+		0.0022
Arsenic			mg/L	0.0093	0.0003 J	0.051	0.038	0.00051 J	0.00078 J	0.0097	0.07	0.009	0.0099	0.12 J
Barium	Metals (ICP/MS)	6020B	mg/L	0.014	0.13 J	0.12 J	0.13 J	0.067	0.0047	0.13 J	0.35 J	0.057	0.015	0.094
Beryllium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U					
Cadmium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.000098 J	0.0004 U	0.0004 U					
Calcium	Metals (ICP)	6020B	mg/L	9.9	19	39	22	45	5.7	28	52	9.5	9.5	19
Chromium	Metals (ICP/MS)	6020B	mg/L	0.0019	0.0008 U	0.0008 U	0.0008 U	0.00034 J	0.00085 J+	0.0008 U	0.0041	0.0065	0.002	0.0008 U
Cobalt	Metals (ICP/MS)	6020B	mg/L	0.0019	0.00032 J	0.0013	0.0024	0.00069	0.000059 J	0.00078	0.0015	0.0028	0.0024	0.000063 J
Copper	Metals (ICP/MS)	6020B	mg/L	0.0014 J	0.00079 J	0.002 U	0.00075 J	0.00074 J	0.00071 J	0.00079 J	0.0039	0.0045	0.0013 J	0.00063 J
Iron	Metals (ICP)	6020B	mg/L	0.59 J	0.1 U	3 J	13 J	0.1 U	0.1 U	8.5 J	2 J	2.4 J	0.62 J	31
Lead	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0023	0.0005	0.00097	0.0004 U	0.0004 U					
Magnesium	Metals (ICP)	6020B	mg/L	6.1	11	39	17	43	3.1	23	52	7.4	5.9	1 J
Manganese	Metals (ICP/MS)	6020B	mg/L	0.086	0.12 J	0.34 J	0.76 J	0.89 J	0.002 U	0.25 J	0.42 J	0.84 J	0.1 J	0.14 J
Nickel	Metals (ICP/MS)	6020B	mg/L	0.0025 J	0.0012 J	0.0065	0.003	0.0059	0.0014 J	0.0032	0.0049	0.013	0.0027 J	0.00036 J
Potassium	Metals (ICP)	6020B	mg/L	0.48 J	0.32 J	0.77 J	0.85 J	0.64 J	0.31 J	0.64 J	1.3 J	1.5 J	0.55 J	
Selenium	Metals (ICP/MS)	6020B	mg/L	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U					
Silver	Metals (ICP/MS)	6020B	mg/L	0.000073 J+	0.00012 J+	0.00068	0.0004 U	0.0004 U	0.000034 J	0.000027 J+	0.00025 J+	0.000039 J+	0.0004 U	0.0004 U
Sodium	Metals (ICP)	6020B	mg/L	2.1	1.7	1.7	2	1.2	1.7	1.4	1.6	1.3	2.1	
Thallium	Metals (ICP/MS)	6020B	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U					
Vanadium	Metals (ICP/MS)	6020B	mg/L	0.0023 J	0.00059 J	0.004 U	0.00054 J	0.004 U	0.00056 J	0.00049 J	0.0045	0.01	0.0027 J	0.00075 J
Zinc	Metals (ICP/MS)	6020B	mg/L	0.007 U	0.007 U	0.0075	0.012	0.007 U	0.007 U					
Mercury	Metals (ICP/MS)	7470A	mg/L	0.0003 U	0.0003 U	0.00015 J	0.00078	0.0003 U	0.00037 J					
Total Low Level Mercury		I	U											
Mercury	Total Mercury	EPA 1631E	ng/L	100	49	47	32	15	49 B	130 B	190	900 B	99	150
Dissolved Low Level Mercury														
Mercury	Dissolved Mercury	EPA 1631E	ng/L	14	8.2	2.4	9	0.65 J+	23 B	1.7 B	23	220	17	2.2 J
Field Water Quality Parameters	•				•	-	•	•	•	•	•	•		
Temperature	Field Measurement		Deg C	4.92	7.75	6.24	5.64	4.04	5.95	8.05	11.35	4.59	4.92	8.04
рН	Field Measurement		pH Units	5.87	6.53	7.02	6.49	6.68	6.13	7.38	6.92	5.89	5.87	7.05
Conductivity	Field Measurement		µS/cm	103	113	452	292	502	62	205	450	114	103	193
Turbidity	Field Measurement		NTU	36.29	0	10.79	12.32	0.74	0	27.32	58.22	67.99	36.29	0
Dissolved Oxygen Oxidation-Reduction Potential	Field Measurement Field Measurement		mg/L mV	11.85 12.7	8.33 62.6	0.67	1.98 33.3	3.17 51.7	11.7 61.6	1.25 35.5	2.89 -3.5	8.24	11.85 12.7	9.65 74.2
Oxidation-Reduction Fotential	rieu measurement		111 V	12.7	02.0	-30	33.3	51.7	01.0	55.5	-3.5	4.1	12.1	/4.2

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GC/MS = Gas Chromatography/Mass Spectrometry

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Data Qualifiers:

J = The analyte was detected. The associated result is estimated.

J+= The analyte was detected. The associated result is estimated with high bias.

J- = The analyte was detected. The associated result is estimated low bias.

 $\mathbf{U}=\mathbf{T}\mathbf{h}\mathbf{e}$ analyte was analyzed for but not detected. The value provided is the method detection limit.

			Station ID	MW06		MW09		MW10		MW16		MW17		MW26	T	MW27	
		Geog	raphic Area	Pre-1955 MPA		Pre-1955 MPA		Pre-1955 MP	Ą	Pre-1955 MPA		Pre-1955 MPA		Pre-1955 MPA	Pr	re-1955 MPA	4
Analyte			Sample ID	0822MW06GW		0822MW09GW		0822MW10G	W	0822MW16GW		0822MW17GW	,	0821MW26GW	08	22MW27G	N
Metals	Method		Units	()		0		0	0)	()	0	1		0
Aluminum	Metals (ICP)	6020B	mg/L	0.023 J	1	0.053		0.04	U	0.071		0.03 J		0.14	T	0.012	J
Antimony	Metals (ICP/MS)	6020B	mg/L	0.011		0.0023		0.00029	J	0.36 J		0.0056		0.1		0.0068	
Arsenic	Metals (ICP/MS)	6020B	mg/L	0.052		0.017		0.1		1.3 J		0.0028		1.5 J		0.032	
Barium	Metals (ICP/MS)	6020B	mg/L	0.089		0.45	J	0.094		0.074		0.045		0.56 J		0.041	
Beryllium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.0004	U	0.0004	U	0.0004 U	1	0.0004 U	J	0.0004 U		0.0004	U
Cadmium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.0004	U	0.0004	U	0.00038 J		0.0004 U	J	0.0004 U	T	0.000088	J
Calcium	Metals (ICP)	6010D	mg/L	27		30		19		35		21		57	T	78	
Chromium	Metals (ICP/MS)	6020B	mg/L	0.0008 U	J	0.0008	U	0.0008	U	0.0008 U	I	0.0008 U	J	0.0019		0.0008	U
Cobalt	Metals (ICP/MS)	6020B	mg/L	0.0018		0.0017		0.0004	U	0.013		0.0004 U	J	0.023	T	0.0033	
Copper	Metals (ICP/MS)	6020B	mg/L	0.00069 J	ſ	0.002	U	0.002	U	0.0013 J		0.002 U	J	0.0055		0.0009	J
Iron	Metals (ICP)	6020B	mg/L	4.2 J	ſ	2.6	J	1		22 J		0.039 J		53 J		0.21	
Lead	Metals (ICP/MS)	6020B	mg/L	0.00019 J	ſ	0.00015	J+	0.0004	U	0.00024 J-	+	0.000051 J		0.00085	1	0.0004	U
Magnesium	Metals (ICP)	6010D	mg/L	27		20		28		63		16		34		50	
Manganese	Metals (ICP/MS)	6020B	mg/L	0.64 J	ſ	5.2	J	0.14	J	9.2 J		0.0014 J		6.7 J		2.3	J
Nickel	Metals (ICP/MS)	6020B	mg/L	0.0048		0.003	U	0.00017	J	0.0047		0.00013 J		0.025		0.033	
Potassium	Metals (ICP)	6010D	mg/L	0.79 J	ſ	0.49		1	J	2.1 J		0.37 J		3.1 J		1.2	J
Selenium	Metals (ICP/MS)	6020B	mg/L	0.008 U		0.008		0.008		0.008 U		0.008 U		0.008 U		0.008	U
Silver	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.0004	U	0.0004		0.0004 U	Į –	0.00003 J	+	0.0004 U		0.000043	J+
Sodium	Metals (ICP)	6010D	mg/L	3.8		2.5		2.9	_	5		2.6		4.1		13	
Thallium	Metals (ICP/MS)	6020B	mg/L	0.001 U	_	0.001		0.001	-	0.001 U	Į –	0.001 U		0.001 U		0.001	U
Vanadium	Metals (ICP/MS)	6020B	mg/L	0.004 U	J	0.004		0.004		0.00098 J		0.004 U	J	0.0013 J		0.004	U
Zinc	Metals (ICP/MS)	6020B	mg/L	0.0051 J	ſ	0.0028	_	0.007	-	0.0063 J		0.0023 J		0.019		0.017	
Mercury	Metals (ICP/MS)	7470A	mg/L	0.0003 U	J	0.0003	U	0.0003	U	0.00098		0.0003 U	J	0.0025		0.00064	1
Total Low Level Mercury																	
Mercury	Total Mercury	EPA 1631E	ng/L	14		80		49	J	1300		120		3900		1400	
Dissolved Low Level Mercury																	
Mercury	Dissolved Mercury	EPA 1631E	ng/L	1.9	J+	13		0.68		970		19		500		790	
Field Water Quality Parameter																	
Temperature	Field Measurement		Deg C	6.0		6.9		9.4		8.4		7.5		9.3	16.1		
pH	Field Measurement		pH Units	6.71		6.68		7.23		6.31		6.95		6.30	5.76		
Conductivity	Field Measurement		µS/cm	322.2		324.1		318.9		760		232.0	_	677	6		
Turbidity	Field Measurement		NTU	3.34		9.55		0.28		7.20		1.31		92.6	0.49		L
Dissolved Oxygen	Field Measurement		mg/L	0.43		1.09		0.72		0.43		8.97		0.87	0.48		L
Oxidation-Reduction Potential	Field Measurement		mV	-13.9		-12.5		38.4		52.8		164.1		44.5	39.0		

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			Station ID	MW28		MW29	MW33		MW40		MW42	MW43	MW44 Vicinity of the Propose	MW45 d Vicinity of the Pr	
		Geograf	phic Area	Pre-1955 MPA		Pre-1955 MPA	Pre-1955 M	A	Surface Mined Are	ea :	Surface Mined Area	Surface Mined Area	Repository	a vicinity of the Pi Repository	•
Analyte		S	ample ID	0822MW28GW	1	0822MW29GW	0822MW330	W	0822MW40GW	7	0822MW42GW	0822MW43GW	0822MW44GW	0822MW450	, ,
Metals	Method		units		0	0		0	0022111110011	_	0	0	0	00221111115	0
Aluminum	Metals (ICP)		ng/L	0.011		0.9	0.6		0.016 J	×	0.021 J	0.017 J	0.044	0.01	¥
Antimony		00000	ng/L ng/L	0.0044	, 	0.00081	0.4	-	0.007		0.19 J	0.0098	0.00087	0.0003	
Arsenic	Metals (ICP/MS)		ng/L	0.12	T	0.06	0.0	_	0.47 J	r	0.7 J	0.32 J	0.0023	0.001	
Barium	Metals (ICP/MS)	00000	ng/L	0.053	, 	0.2	0.04		0.13 J	r	0.15 J	0.12 J	0.03	0.0005	
Beryllium	Metals (ICP/MS)		ng/L	0.0004	IT	0.0004 U	0.000	-	0.0004 U	Т	0.0004 U	0.0004 U	0.0004 U	0.000	
Cadmium	Metals (ICP/MS)		ng/L	0.0004		0.0004 U	0.000		0.0004 U	T	0.0004 U	0.0004 U	0.0004 U	0.000	
Calcium	Metals (ICP)		ng/L	37	0	53	1	-	42		36	22	37		18
Chromium	Metals (ICP/MS)		ng/L	0.0008	IT.	0.0061	0.002	4	0.0008 U	т	0.0008 U	0.0008 U	0.0008 U	0.000	59 I
Cobalt	Metals (ICP/MS)		ng/L	0.003	0	0.0023	0.0004	5	0.028	_	0.0014	0.035	0.0031	0.000	
Copper	Metals (ICP/MS)		ng/L ng/L	0.0018	J	0.0023	0.00	2	0.002 U	J	0.0011 J	0.002 U	0.022	0.000	
Iron	Metals (ICP)		ng/L	1.2		3.7 J	1.	2	1.4		2.3 J	2.8 J	1.9	0).1 U
Lead	Metals (ICP/MS)		ng/L	0.000092	J	0.00055	0.0005	5	0.00012 J	ſ	0.00004 J	0.000047 J+	0.00065	0.000)4 U
Magnesium	Metals (ICP)	6010D m	ng/L	30		54	1	2	45		29	17	33	1	16
Manganese	Metals (ICP/MS)	6020B m	ng/L	0.86	J	0.48 J	0.0	4	0.31 J	ſ	0.42 J	2.7 J	0.86 J	0.001	12 J
Nickel	Metals (ICP/MS)	6020B m	ng/L	0.0082		0.0089	0.00	3 U	0.094		0.016	0.1	0.0026 J	0.00	03 U
Potassium	Metals (ICP)	6010D m	ng/L	0.92	J	1.3 J	0.7	6 J	0.84 J	ſ	0.63 J	0.54 J	0.43 J	0.3	39 J
Selenium	Metals (ICP/MS)	6020B m	ng/L	0.008	U	0.008 U	0.00	8 U	0.008 U	J	0.008 U	0.008 U	0.008 U	0.00	08 U
Silver	Metals (ICP/MS)	6020B m	ng/L	0.000096	J+	0.0004 U	0.000	4 U	0.0004 U	J	0.000045 J+	0.000033 J+	0.000025 J+	0.000	J4 U
Sodium	Metals (ICP)		ng/L	9.8		2.3	4.		1.7		2.7	3.1	2.2	1	.2
Thallium	Metals (ICP/MS)		ng/L	0.001	U	0.001 U	0.00		0.001 U	J	0.001 U	0.001 U	0.001 U		01 U
Vanadium	Metals (ICP/MS)	6020B m	ng/L	0.004	U	0.004	0.002	4 J	0.004 U	J	0.004 U	0.004 U	0.004 U	0.00	04 U
Zinc	Metals (ICP/MS)	6020B m	ng/L	0.0086		0.0072	0.006	7 J	0.0055 J	1	0.005 J	0.0048 J	0.014	0.001	12 J
Mercury	Metals (ICP/MS)	7470A m	ng/L	0.0003	U	0.00015 J	0.0002	8 J	0.0003 U	J	0.0003 U	0.0003 U	0.0003 U	0.000	J3 U
Total Low Level Mercury															
Mercury	Total Mercury	EPA 1631E ^{ng}	g/L	120		440	420		11		74	1.2 J	4.7	7.4	J+
Dissolved Low Level Mercury															
Mercury	Dissolved Mercury	EPA 1631E ng	g/L	73		76	31		0.81 J	J+	9.8	0.5 U	0.5 U	4.9	J+
Field Water Quality Parameters															
Temperature	Field Measurement			8.0		4.4	7.0		6.1		5.3	4.0	4.5	3.6	
pH	Field Measurement	1		6.78		6.44	6.38		6.89		5.62	6.56	6.99	6.58	
Conductivity	Field Measurement			419.6		543	11		516		395.6	267.7	414.0	194.7	
Turbidity	Field Measurement			0.34		247	6.72		10.3		15.3	0.42	9.34	7.51	\square
Dissolved Oxygen	Field Measurement			0.86		0.53	6.18	1	1.26		0.40	0.39	0.54	6.71	
Oxidation-Reduction Potential	Field Measurement	m	ηV	84.6		-2.5	3.8		137.2	8	37.4	72.4	72.2	-7.6	

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J+ = The analyte was detected. The associated result is estimated with high bias.

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			Station ID	MW46		MW47	MW49	,	MW50	MW51	MW52	MW53	MW54	
		Geog	graphic Area	· · ·	ed Vi	icinity of the Proposed	· ·	ed	Vicinity of the Propose	- ×	· ·	· ·	· ·	used
				Repository		Repository	Repository		Repository	Repository	Repository	Repository	Repository	
Analyte			Sample ID	0822MW46GW		0822MW47GW	0822MW49GW		0822MW50GW	0822MW51GW	0822MW52GW	0822MW53GW	0822MW54GW	
	Method		Units	Q	2	Q	Q		Q		Q	Q		Q
Aluminum	Metals (ICP)	6020B	mg/L	0.055	_	0.0068 J	3.6 J		0.12	0.018 J	0.024 J	0.027 J	0.018	J
Antimony	Metals (ICP/MS)	6020B	mg/L	0.00043 J		0.0008 U	0.00092		0.019	0.00017 J	0.00044 J	0.00019 J	0.0009	
	Metals (ICP/MS)	6020B	mg/L	0.00091 J		0.001 U	0.012		0.66 J	0.0025	0.0063	0.001 U	0.058	
Barium	Metals (ICP/MS)	6020B	mg/L	0.0018		0.00099 J	0.066		0.32 J	0.015	0.021	0.13 J	0.14	J
Beryllium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.0004 U	0.00028 J		0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004	U
Cadmium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.0004 U	0.00016 J		0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004	U
Calcium	Metals (ICP)	6010D	mg/L	12		18	12		68	16	14	18	38	
Chromium	Metals (ICP/MS)	6020B	mg/L	0.00065 J		0.0008 U	0.0075		0.0007 J	0.00059 J	0.00082 J+	0.0008 U	0.0008	U
Cobalt	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.000043 J	0.0046		0.0032	0.001	0.00044	0.000062 J	0.0012	
Copper	Metals (ICP/MS)	6020B	mg/L	0.002 U	J	0.0018 J	0.0066		0.0011 J	0.00097 J	0.002 U	0.002 U	0.002	U
Iron	Metals (ICP)	6020B	mg/L	0.1 U	J	0.1 U	3.4 J		2.8 J	0.36	0.036 J	0.066 J	2.9	J
Lead	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.000043 J	0.0015		0.00025 J	0.0004 U	0.0004 U	0.0004 U	0.000063	J
Magnesium	Metals (ICP)	6010D	mg/L	12		20	8.9		56	15	9.8	10	36	
Manganese	Metals (ICP/MS)	6020B	mg/L	0.0013 J		0.037	1.1 J		1.1 J	0.14 J	0.029	0.0099	0.33	J
Nickel	Metals (ICP/MS)	6020B	mg/L	0.003 U	J	0.003 U	0.018		0.007	0.0014 J	0.0015 J	0.0009 J	0.0057	
Potassium	Metals (ICP)	6010D	mg/L	0.41 J		0.45 J	1.4 J		0.67 J	0.28 J	0.31 J	0.33 J	0.65	J
Selenium	Metals (ICP/MS)	6020B	mg/L	0.008 U	J	0.008 U	0.008 U		0.008 U	0.008 U	0.008 U	0.008 U	0.008	U
Silver	Metals (ICP/MS)	6020B	mg/L	0.0004 U	J	0.0004 U	0.00003 J-	F	0.0004 U	0.00042	0.0004 U	0.000036 J+	0.0004	U
Sodium	Metals (ICP)	6010D	mg/L	1.2		1.9	1.6		2	1.9	2.4	1.9	1.8	
Thallium	Metals (ICP/MS)	6020B	mg/L	0.001 U	J	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001	U
Vanadium	Metals (ICP/MS)	6020B	mg/L	0.00052 J		0.004 U	0.012		0.00078 J	0.004 U	0.004 U	0.004 U	0.004	U
Zinc	Metals (ICP/MS)	6020B	mg/L	0.0011 J		0.007 U	0.017		0.0049 J	0.0025 J	0.0011 J	0.0015 J	0.0014	J
Mercury	Metals (ICP/MS)	7470A	mg/L	0.0003 U	J	0.0003 U	0.0013		0.00025 J	0.0003 U	0.0003 U	0.0003 U	0.0003	U
Total Low Level Mercury			0											<u> </u>
Mercury	Total Mercury	EPA 1631E	ng/L	7.7 J	l+	1.6 U	1100		770	6.4	12	19	14	J
Dissolved Low Level Mercury														
Mercury	Dissolved Mercury	EPA 1631E	ng/L	1.9 J	1+	1.6 U	60		3.3 J-	1.1	3.3 J+	8.6	0.58	U
Field Water Quality Parameters														_
Temperature	Field Measurement		Deg C	3.7	5.3	3	5.2		3.9	5.5	4.3	5.2	3.8	
pH	Field Measurement		pH Units	6.67	6.8	89	5.78		6.64	6.44	6.24	6.51	6.87	,
Conductivity	Field Measurement		µS/cm	145.4	20)9.9	1317		6.75	199.5	1760	180.7	474.2	
Turbidity	Field Measurement		NTU	10.2	5.9	96	310		250	5.95	5.31	0.80	8.36	,
Dissolved Oxygen	Field Measurement		mg/L	8.48	4.2	23	5.0		1.27	7.23	8.79	7.47	1.60	
Oxidation-Reduction Potential	Field Measurement		mV	-12.6			35.5		-11.5	183.4	10.5	185.2	69.9	,

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		Geog	Station ID raphic Area		MW56 Vicinity of the Proposed	MW57 Vicinity of the Proposed	MW58 Vicinity of the Proposed	MW59 Vicinity of the Proposed	Duplicate of MW54 Vicinity of the Proposed	Duplicate of MW43 Pre-1955 MPA	Duplicate of MW10 Pre-1955 MPA
		-		Repository	Repository	Repository	Repository	Repository	Repository		
Analyte			Sample ID	0822MW55GW	0822MW56GW	0822MW57GW	0822MW58GW	0822MW59GW	0822MW97GW	0822MW98GW	0822MW99GW
Metals	Method		Units								
Aluminum	Metals (ICP)	6020B	mg/L	0.013 J	0.35	0.026 J	0.084	5.1 J	0.015 J	0.0061 J	0.04 U
Antimony	Metals (ICP/MS)	6020B	mg/L	0.005	0.0005 J	0.00017 J	0.00037 J	0.0021	0.00076 J	0.01	0.0014 J
Arsenic	Metals (ICP/MS)	6020B	mg/L	0.14 J	0.004	0.00076 J	0.0034	0.14 J	0.061	0.34 J	0.1
Barium	Metals (ICP/MS)	6020B	mg/L	0.18 J	0.11 J	0.005	0.11 J	0.53 J	0.14 J	0.13 J	0.095
Beryllium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.00037 J	0.0004 U	0.0004 U	0.0004 U
Cadmium	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.000076 J	0.0004 U	0.0004 U	0.00009 J	0.0004 U	0.000062 J	0.0004 U
Calcium	Metals (ICP)	6010D	mg/L	19	43	8.7	26	54	40	21	19
Chromium	Metals (ICP/MS)	6020B	mg/L	0.001	0.0025	0.00091	0.00082	0.018	0.0008 U	0.0008 U	0.0008 U
Cobalt	Metals (ICP/MS)	6020B	mg/L	0.0017	0.014	0.0004 U	0.00037 J	0.0055	0.0011	0.035	0.0004 U
Copper	Metals (ICP/MS)	6020B	mg/L	0.00077 J	0.003	0.002 U	0.002 U	0.019	0.00099 J	0.002 U	0.002 U
Iron	Metals (ICP)	6020B	mg/L	55 J	0.96	0.1 U	2.9 J	8 J	3 J	2.8 J	1.1
Lead	Metals (ICP/MS)	6020B	mg/L	0.000055 J	0.00032 J	0.0004	0.00006 J	0.0026	0.00005 J	0.000094 J	0.0004 U
Magnesium	Metals (ICP)	6010D	mg/L	11	37	5	21	54	39	17	28
Manganese	Metals (ICP/MS)	6020B	mg/L	0.97 J	5.1 J	0.0016 J	0.098	0.51 J	0.35 J	2.7 J	0.14 J
Nickel	Metals (ICP/MS)	6020B	mg/L	0.0031	0.033	0.0041	0.003 U	0.018	0.0057	0.099	0.00013 J
Potassium	Metals (ICP)	6010D	mg/L	0.94 J	0.55 J	0.19 J	3.3 U	3.3 U	0.66 J	0.48 J	0.98 J
Selenium	Metals (ICP/MS)	6020B	mg/L	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
Silver	Metals (ICP/MS)	6020B	mg/L	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.00018 J+	0.0004 U	0.000092 J+	0.0004 U
Sodium	Metals (ICP)	6010D	mg/L	2.3	1.3	2.1	1.6	1.9	1.8	3	2.9
Thallium	Metals (ICP/MS)	6020B	mg/L	0.001 U	0.001 U	0.001 U	0.000044 J+	0.00012 J+	0.001 U	0.001 U	0.001 U
Vanadium	Metals (ICP/MS)	6020B	mg/L	0.0009 J	0.0019 J	0.004 U	0.0005 J	0.021	0.004 U	0.004 U	0.004 U
Zinc	Metals (ICP/MS)	6020B	mg/L	0.0064 J	0.0079	0.0031 J	0.0018 J	0.021	0.0012 J	0.007	0.007 U
Mercury	Metals (ICP/MS)	7470A	mg/L	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0011	0.0003 U	0.0003 U	0.0003 U
Total Low Level Mercury											
Mercury	Total Mercury	EPA 1631E	ng/L	36	43	23	15	960	6.9 J	34 J	8.5 J
Dissolved Low Level Mercury											
Mercury	Dissolved Mercury	EPA 1631E	ng/L	27	1.4 J+	12	2.4 J+	97	0.78	0.5 U	0.95
Field Water Quality Parameters											
Temperature	Field Measurement		Deg C	4.7	4.7	4.3	4.7	6.5	3.8	4.0	9.4
pH	Field Measurement		pH Units	6.33	6.77	6.26	6.89	6.98		6.56	7.23
Conductivity	Field Measurement		µS/cm	3892	4218	1083	2849	599		267.7	318.9
Turbidity	Field Measurement		NTU	34.7	21.2	1.04	94.8	284		0.42	0.28
Dissolved Oxygen	Field Measurement		mg/L	0.43	1.44	7.90	0.31	0.61		0.39	0.72
Oxidation-Reduction Potential	Field Measurement		mV	5.6	-18.0	9.1	-25.8	66.6	69.9	72.4	38.4

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J+ = The analyte was detected. The associated result is estimated with high bias.

J- = The analyte was detected. The associated result is estimated low bias.

U = The analyte was analyzed for but not detected. The value provided is the method detection limit.

Table 2-5. Surface Water Baseline Analytical Data - Spring 2022

	Sar	nple Location	RD10SW		RD15SW		RD05SW (seep)		RD05SW (seep)		RD06SW		RD08BSW	
		Sample ID	0622RD10SW		0622RD15SW		0622RD05SW		0622RD99SW		0622RD06SW		0622RD08BSW	
	s	ampling Date	6/6/2022		6/6/2022		6/6/2022		6/6/2022		6/6/2022		6/6/2022	
		Matrix	WS		WS		WS		WS		WS		WS	
Analyte	Method	Units	Result	Q		Q		Q		Q		Q		Q
General Chemistry														
Total Dissolved Solids	160.1	mg/L	64		93		240		270		130		82	
Total Suspended Solids	160.2	mg/L	2	U	2	U	3.4		2.6		2	U	2	U
Chloride	300.0	mg/L	0.65	J	0.69	J	0.78	J	0.81	J	0.7	J	0.73	J
Fluoride	300.0	mg/L	0.2	UJ	0.2	UJ	0.2	UJ	0.2	UJ	0.2	UJ	0.2	UJ
Sulfate	300.0	mg/L	8.3	J	8.3	J	31	J	31	J	10	J	10	J
Alkalinity	310.1	mg/L	62		56		260		270		74		74	
Bicarbonate Alkalinity as CaCO3	310.1	mg/L	62		56		260		270		74		74	
Carbonate Alkalinity as CaCO3	310.1	mg/L	7	U	7	U	7	U	7	U	7	U	7	U
Nitrate Nitrite as N	353.2	mg/L	0.16	J+	0.24	J+	0.1	U	0.1	U	0.17	J+	0.14	J+
Metals		null												
Aluminum	6020B	mg/L	0.037	J	0.051		0.012	J	0.0081	J	0.038	J	0.044	
Antimony	6020B	mg/L	0.002		0.044		0.099		0.098		0.2	J	0.22	J
Arsenic	6020B	mg/L	0.001		0.015		0.93	J	1	J	0.077		0.081	
Barium	6020B	mg/L	0.021		0.021		0.1	J	0.11	J	0.026		0.026	
Beryllium	6020B	mg/L	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U
Cadmium	6020B	mg/L	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U
Calcium	6010D	mg/L	14		14		37		36		15		15	
Chromium	6020B	mg/L	0.00037	J	0.00039	J	0.00023	J	0.00022	J	0.00037	J	0.00034	J
Cobalt	6020B	mg/L	0.0004	U	0.000062	J	0.0041		0.0039		0.00021	J	0.00019	J
Copper	6020B	mg/L	0.002	U	0.002	U	0.00074	J	0.00064	J	0.00065	J	0.00073	J
Iron	6020B	mg/L	0.098	J	0.14	J	1.8	J	1.9	J	0.16	J	0.15	J
Lead	6020B	mg/L	0.0004	U	0.000042	J	0.0004	U	0.0004	U	0.000082	J	0.0004	U
Magnesium	6010D	mg/L	8.4		8.5	J	44		43		11	J	11	
Manganese	6020B	mg/L	0.011		0.014		0.21	J	0.21	J	0.025		0.026	
Nickel	6020B	mg/L	0.00027	J+	0.00031	J+	0.018		0.018		0.001	J+	0.0011	J+
Potassium	6010D	mg/L	0.37	J	0.42	J	1.4	J	1.4	J	0.41	J	0.43	J
Selenium	6020B	mg/L	0.008	U	0.008	U	0.008	U	0.008	U	0.008	U	0.008	U
Silver	6020B	mg/L	0.0004	U	0.000051	\mathbf{J} +	0.000032	J+	0.0004	U	0.000025	J+	0.0004	U
Sodium	6010D	mg/L	1.2		1.4		13	R	10		1.8		1.9	
Thallium	6020B	mg/L	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U
Vanadium	6020B	mg/L	0.00059	J	0.00064	J	0.004	U	0.004	U	0.00066	J	0.00055	J
Zinc	6020B	mg/L	0.007	U	0.0023	J+	0.0054	J+	0.0038	J+	0.004	J+	0.0025	J+
Mercury	7470A	mg/L	0.0003	U	0.0003	U	0.0003	U	0.0003	U	0.0003	U	0.0003	U
Low Level Mercury Analysis		null												
Mercury	EPA 1631E	ng/L	3		33		950	J	85	J	64		300	
Field Water Quality Parameters		null			-						-			
Temperature	Field Measurement	Deg C	7.6		5.97		3.65	5	3.65		4.99		4	4.73
pH	Field Measurement	pH Units	7.52		7.6		6.86	5	6.86		7.28			7.2
Conductivity	Field Measurement	µS/cm	137		132		321		321		156			159
Turbidity	Field Measurement	NTU	2.19		2.89		11.12	2	11.12		9.5		4	4.45
Dissolved Oxygen	Field Measurement	mg/L	15.44		13.56		3.13		3.13		15.2			5.51
Oxidation-Reduction Potential	Field Measurement	mV	53.3		38.76		41.6	5	41.6		48.1		7	74.5

Notes

Bold font indicates a detection

- = not applicable

Acronyms and Abbreviations µS/cm = microsiemens per centimeter

ID = Identifer

ID = Identifier

mg/L = milligrams per liter mV = millivolts

ng/L = nanograms per liter

NTU = nephelometric turbidity unit

- WG = groundwater
- WQ = field quality control sample
- WS = surface water

Qu	alifiers

U = not detected at the limit of quantitation J = estimated J + = estimated, high bias J - = estimated, low bias UJ = not detected, estimated

Table 2-6. Surface Water Baseline Analytical Data - Fall 2022

				-	1	-		-		1		-		
		¹ Sample Location	RD10		RD15		RD05		RD05		RD06		RD08B	
		Sample ID	0822RD10SW		0822RD15SW		0822RD05SW		0822RD99SW		0822RD06SW		0822RD08BSW	
		Sampling Date	8/28/2022		8/28/2022		8/28/2022		8/28/2022		8/28/2022		8/28/2022	
		Matrix	WS		WS		WS		WS		WS		WS	
Analyte	Method	Units		Q		Q		Q		Q		Q		Q
General Chemistry						-		-				-		
Total Dissolved Solids	160.1	mg/L	85		71	-	250	-	270		82		97	
Total Suspended Solids	160.2	mg/L	2	U	2.2		4.4		2.8		2	U	2.4	T
Chloride	300.0	mg/L	0.68	5	0.69	J	0.8	J	0.81	J	0.72	J	0.7	5
Fluoride	300.0	mg/L	0.2	U	0.2	U	0.15	J	0.2	U	0.2	U	0.2	U
Sulfate		mg/L	7.6		-	-	36	-	36				10	
Alkalinity	310.1	mg/L	73		72	-	240	-	240		75		82	
Bicarbonate Alkalinity as CaCO3	310.1	mg/L	73		72		240 7	U	240 7		75 7		82 7	
Carbonate Alkalinity as CaCO3	310.1 353.2	mg/L mg/L	0.21	U J+	0.19	U J+	0.1	U	0.1	U U	0.19	U J+	0.16	U J+
Nitrate Nitrite as N Metals	555.2	HIg/L	0.21	J+	0.19	J+	0.1	0	0.1	U	0.19	J+	0.10	J+
Calcium	6010D	mg/L	15		15		36		37		16		16	
Magnesium	6010D	mg/L	8.4		8.8	-	36	-	41		10	-	10	
0	6010D	mg/L	0.22	J	0.3	J	1.2	J	1.2	J	0.29	T	0.26	T
Potassium Sodium	6010D	mg/L	1.4	J	1.5	J	9.6	J	1.2	J	1.9	J	1.8	
	6020B	mg/L	0.045		0.065		0.0064	I	0.04		0.059		0.058	
Aluminum Antimony	6020B	mg/L	0.045		0.065		0.0084	J	0.04		0.059	T	0.058	T
Arsenic	6020B	mg/L	0.0022		0.078		1.0		1.0		0.065	J	0.066	
Barium	6020B	mg/L	0.0011		0.025		0.1		0.1		0.065		0.066	+
Beryllium	6020B	mg/L	0.0024	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U
Cadmium	6020B	mg/L	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U
Chromium	6020B	mg/L	0.0004	I	0.0004	I	0.00059	J	0.0004	J	0.00068	J	0.00065	J
Cobalt	6020B	mg/L	0.000065	I	0.000082	J	0.0052	5	0.0052	,	0.00016	1	0.00016	J
Copper	6020B	mg/L	0.002	U	0.0014	J	0.002	U	0.002	U	0.00065	J	0.00065	J
Iron	6020B	mg/L	0.12	0	0.21	5	2.5	0	2.5	0	0.23	3	0.22	
Lead	6020B	mg/L	0.0004	U	0.0004	U	0.00007		0.000057	J	0.0004	U	0.0004	U
Manganese	6020B	mg/L	0.014	Ū	0.019	0	0.3		0.31		0.025	Ū	0.026	
Nickel	6020B	mg/L	0.00038	J	0.00042	J	0.02		0.019		0.00084	J	0.00078	J
Selenium	6020B	mg/L	0.008	U	0.008	U	0.008	U	0.008	U	0.008	U	0.008	U
Silver	6020B	mg/L	0.000026	J+	0.0004	U	0.0004	U	0.0004	U	0.0004	U	0.0004	U
Thallium	6020B	mg/L	0.001	U	0.001	U	0.00004	J+	0.001	U	0.001	U	0.001	U
Vanadium	6020B	mg/L	0.00049	J	0.00066	J	0.004	U	0.004	U	0.00056	J	0.00056	J
Zinc	6020B	mg/L	0.007	U	0.0043	J	0.0024	J	0.0023	J	0.0016	J	0.0018	J
Mercury	7470A	mg/L	0.0003	U	0.0003	U	0.0003	U	0.0003	U	0.0003	U	0.0003	U
Low Level Mercury Analysis														
Mercury	EPA 1631E	ng/L	3.6		290		20		18		100		2800	
Field Water Quality Parameters														
Temperature	Field Measurement	Deg C	6.00		5.9		3.6		3.6		5.8		5.70	
pH	Field Measurement	pH Units	7.79		7.1		6.74		6.74		6.82		7.32	
Conductivity	Field Measurement	µS/cm	142.4		146.1		476.4		476.4		157.5		158.3	
Turbidity	Field Measurement	NTU	10.6		12.9		38.2		38.2		12.1		20	
Dissolved Oxygen	Field Measurement	mg/L	12.9		13.27		2.33		2.33		13.26		13.11	
Oxidation-Reduction Potential	Field Measurement	mV	173.7	1	259.7	ſ	121.6	ſ	121.6	Γ	263	1	253.2	

Notes

¹ Sample results are arranged from upstream to downstream.

Bold font indicates a detection - = not applicable

Acronyms and Abbreviations

 μ S/cm = microsiemens per centimeter ID = Identifer mg/L = milligrams per liter mV = millivolts ng/L = nanograms per liter NTU = nephelometric turbidity unit Q = qualifiers WG = groundwater WQ = field quality control sample WS = surface water

Qualifiers

U = not detected at the limit of quantitation J = estimated J+ = estimated, high bias J- = estimated, low bias UJ = not detected, estimated

ATTACHMENT 1. FIELD DOCUMENTATION

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ATTACHMENT 1.1 TAILGATE SAFETY FIELD FORMS

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Tailgate Safety Meeting & Job Safety Analysis

Proje	CT & PERSONN	EL INFORMATION	Ň					
Project Name: Red Devil Min	ne Monitoring							
Contract Number: 140L6321C0	0001	Task Order:						
Project Location: Red Dev	1	Date: 6/1/2022 Time: 0730						
PM: Colleen Rust		SSHO:						
SUXOS:								
	WEAT	HER						
	A THE REAL PROPERTY OF	AM	РМ					
TEMPERATURE	5.	5						
WIND	ligh	t						
HUMIDITY	low							
COMMENTS	clear							
ACTIVITI		QUIPMENT & SAI						
Activities to be Performed & Equip	ment Used: fra	il clearing,	water level survey					
))	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Hazards Related to Task: (check all			Sun Exposure					
Biological Hazards Chemicals	Extreme Weather Pinch		Sun Exposure Vehicle Operations					
Contaminant Exposure	☐ Radiation	_	Weather (rain/snow/wind)					
Dehydration	Slip/Trip/Fall	\bowtie	Wildlife					
Explosives	Spills		Other: Saw use					
Additional Safety Topics or Discuss	ions: Road	Condition a	trail					
		condition ~						
	SIGNAT	URES						
Personnel Name	Organiz	zation	Personnel's Signature					
George Garner	Surdanc.	e /	half					
George Garner Nicholus Potter	Sundante		Pepoth					
			/					

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Tailgate Safety Meeting & Job Safety Analysis

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Pro.	IECT & PERSON	NEL INFORMATION						
Project Name: Red Devil Mine Ann	ual Monitoring	×						
Contract Number: 140L6321C000	د ا	Task Order: NA	š					
Project Location: Red Devil Mine		Date: 6/2/2022 Time: 0700						
PM: Colleen Rust		SSHO: George Garner	1					
SUXOS:			. 1					
	WEAT	THER						
		AM	PM					
TEMPERATURE	505		705					
WIND	light	1	ight					
HUMIDITY	low		w					
COMMENTS	clear		lear					
ACTIVIT	and the second s	EQUIPMENT & SAFI	Contraction of the second s					
Activities to be Performed & Equi		sampling						
Hazards Related to Task: (check a Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives	 Extreme Weath Pinch Radiation Slip/Trip/Fall Spills 	⊠ v □ w Ø v	un Exposure ehicle Operations /eather (rain/snow/wind) Vildlife 0ther:					
	SIGNA	TURES						
Personnel Name	Organ	ization	Personnel's Signature					
George Garner	Sund	ance	they have					
Nicholas Potter	Sund	ance	reporter					
			A Der					



Proji	ECT & PERSONN	NEL INFORMATIO	N
Project Name: Red Devil Mine Annu	al Monitoring		
Contract Number: 140L6321C0001 Task Order: NA			
Project Location: Red Devil Mine		Date: 6/3/22	Time: 0700
PM: Colleen Rust		SSHO: George Garner	
SUXOS:			
	WEAT	HER	
		AM	PM
TEMPERATURE	55		
WIND	light		
HUMIDITY	1000		
COMMENTS	Clear		
ACTIVITI		EQUIPMENT & SA	FETY
Activities to be Performed & Equip		ndwater sam	
			/ /
Hazards Related to Task: (check al			
Biological Hazards	Extreme Weathe	r (heat/cold)	Sun Exposure
Chemicals	Pinch		Vehicle Operations Weather (rain/snow/wind)
Contaminant Exposure	Radiation	L Izr	Wildlife
Explosives	\square Spills		Other:
			ouldi.
Additional Safety Topics or Discuss	sions: Sun ex	posure	
新教师供求者的教育者的 的原	SIGNAT	TIDES	
	In the second	and some period in the second second	Denoted D. Characteria
Personnel Name	Organi	THE STATE OF STATE OF STATE	Personnel's Signature
George Garner		/	Thy m
Nicholas Potter	Sunda	ance	VEPOW



Proj	ECT & PERSONNE	L INFORMATION		
Project Name: Red Devil Mine Annu	ual Monitoring			
Contract Number: 140L6321C0001	Contract Number: 140L6321C0001 Task Order: NA			
Project Location: Red Devil Mine		Date: 6/4/22	Time: 0700	
PM: Colleen Rust	S	SHO: George Garner		
SUXOS:				
	WEATH	ER		
	A	1	PM	
TEMPERATURE	505		75	
WIND	light		light	
HUMIDITY	low		low	
COMMENTS	clear	-	clear	
ACTIVITI	es, Hazards, Eq	UIPMENT & SAF	ETY	
Activities to be Performed & Equip	oment Used: (24)	samp lina	will redevelopment	
		1 0 /	/	
Hazards Related to Task: (check al	that apply)			
Biological Hazards	Extreme Weather (heat/cold)	Sun Exposure	
Chemicals	Pinch		Vehicle Operations	
Contaminant Exposure	Radiation		Weather (rain/snow/wind)	
	Slip/Trip/Fall		Wildlife	
L Explosives	Spills		Other:	
Additional Safety Topics or Discuss	sions:			
	5			
	C			
	SIGNATU	A REAL PROPERTY AND A REAL		
Personnel Name	Organizat		Personnel's Signature	
George Garner	Sundanc		lym	
Nicholas Potter	Sundance		verally_	



Pro	JECT & PERSONNEL INFORM	MATION	
Project Name: Red Devil Mine An	nual Monitoring		
Contract Number: 140L6321C000	r: 140L6321C0001 Task Order: NA		
Project Location: Red Devil Mine	Date: 6/5/	22 Time: 6700	
PM: Colleen Rust	SSHO: George	e Garner	
SUXOS:			
	WEATHER		
	AM	PM	
TEMPERATURE	50	705	
WIND	light	light	
HUMIDITY	low	1000	
COMMENTS			
ACTIVI	TIES, HAZARDS, EQUIPMENT	& SAFETY	
Activities to be Performed & Equ		, stream flow measurema	
•	. Our scorpling) Stream Flow master can	
Hazards Related to Task: (check	all that apply)		
Biological Hazards	Extreme Weather (heat/cold)	Sun Exposure	
Chemicals	Pinch	Vehicle Operations	
Contaminant Exposure	Radiation	Weather (rain/snow/wind)	
Dehydration	Slip/Trip/Fall	Wildlife	
L Explosives	└── Spills	U Other:	
Additional Safety Topics or Disc	ussions:		
		*.j.	
	SIGNATURES		
Personnel Name	Organization	Personnel's Signature	
George Garner	Sundance	lyh	
Nicholas Potter	Sundance	9/2	
		V	



Proji	ect & Personne	L INFORMATIC	N	
Project Name: Red Devil Mine Annu	al Monitoring			
Contract Number: 140L6321C0001 Task Order: NA				
Project Location: Red Devil Mine	Da	ite: 6/4/22		Time: 0 700
PM: Colleen Rust	SS	HO: George Garner		
SUXOS:				
	WEATHE	R		
	AM		1.2.1.	PM
TEMPERATURE	50		90	
WIND	light		light	variable
HUMIDITY	mederat	e	low	maderate
COMMENTS		S	· · · ·	red storms
Activities to be Performed & Equip from Solme Hazards Related to Task: (check all Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives Additional Safety Topics or Discuss	that apply) Extreme Weather (h Pinch Radiation Slip/Trip/Fall Spills		Sun E Vehicl	xposure le Operations ner (rain/snow/wind) ife
	SIGNATUR	and the second second		
Personnel Name George Garner	Organizati		Pers	onuel's Signature
Nicholas Potter	Sundance		M	20 Daller
	Sundance		V	CNOTIV



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Tailgate Safety Meeting & Job Safety Analysis

Proji	ECT & PERSONI	NEL INFORMATION	
Project Name: Red Devil Mine Annu	al Monitoring		
Contract Number: 140L6321C0001 Task Order: NA			8
Project Location: Red Devil Mine		Date: 8/22/2022	Time: 0700
PM: Colleen Rust		SSHO: George Garner	
SUXOS:			
	WEAT	HER	
		AM	PM
TEMPERATURE	405		4
WIND	light		
HUMIDITY	100 %		
COMMENTS	foggy		
ACTIVITI		EQUIPMENT & SAF	ETY
Activities to be Performed & Equip	ment Used: (-W	survey, pu	re install
	0.00	/) /	
			3
Hazards Related to Task: (check all Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives	 Extreme Weathe Pinch Radiation Slip/Trip/Fall Spills 	N X X	un Exposure /ehicle Operations Veather (rain/snow/wind) Wildlife Other:
Additional Safety Topics or Discuss	Deur		
	SIGNAT		
Personnel Name	Organi		Personnel's Signature
George Garner	Sunda	120	enge
Nicholas Potter	Sund	ance 1	CPatter
			P



Proj	ECT & PERSON	NEL INFORMATI	ON
Project Name: Red Devil Mine Annu	ual Monitoring		
Contract Number: 140L6321C0001	Contract Number: 140L6321C0001 Task Order: NA		
Project Location: Red Devil Mine		Date: 8/23/22	Time: 0760
PM: Colleen Rust		SSHO: George Garn	
SUXOS:			
	WEAT	HER	
		AM	PM
TEMPERATURE	503		
WIND	5-10 KNts	5	
Нимпотту	high		
COMMENTS	Cloudy		
ACTIVIT	IES, HAZARDS, H	QUIPMENT & S	AFETY
Activities to be Performed & Equip	pment Used: Grau	ndwater s	amplian
	010		pring
Hazards Related to Task: (check a	Alling to the second		
Biological Hazards	Extreme Weathe	r (heat/cold)	Sun Exposure
Chemicals Contaminant Exposure	Pinch Radiation		Vehicle Operations Weather (rain/snow/wind)
Dehydration	Slip/Trip/Fall		
Explosives	Spills		Other:
Additional Safety Topics or Discus	sions: lifting		
* 1	in they		
	SIGNAT	URES	
Personnel Name	Organiz	ation	Personnel's Signature
George Garner	Sunda	nce	Myh
Nicholas Potter	Sunda	ince	2 Sc Poth



Proj	IECT & PERSONNEI	INFORMATION	٧	
Project Name: Red Devil Mine Ann	ual Monitoring			
Contract Number: 140L6321C000	1 Ta	Task Order: NA		
Project Location: Red Devil Mine	Da	ite: 8/24/22	Time: 6730	
PM: Colleen Rust	SS	HO: George Garner		
SUXOS:				
	WEATHE	R		
	AM		PM	
TEMPERATURE	405			
WIND	calm			
HUMIDITY	100%			
COMMENTS	perse fe	g		
ACTIVIT	ries, Hazards, Eq		FETY	
Activities to be Performed & Equ	ipment Used:	-duster :	sampling	
Hazards Related to Task: (check Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives	 Extreme Weather (I Pinch Radiation Slip/Trip/Fall Spills 		Sun Exposure Vehicle Operations Weather (rain/snow/wind) Wildlife Other:	
Additional Safety Topics or Disc	SIGNATU	tratfic,		
Personnel Name	Organiza	A REAL PROPERTY AND A REAL	Personnel's Signature	
George Garner	Sundand	e	Myn	
Nicholas Potter	Sundan	ce	120. Chap	



Proje	CT & PERSONNEL I	NFORMATION	
Project Name: Red Devil Mine Annua	al Monitoring		
Contract Number: 140L6321C0001	Task Order: NA		
Project Location: Red Devil Mine		8/25/22	Time: 0730
PM: Colleen Rust	SSH	O: George Garner	
SUXOS:			
	WEATHER		
	AM		PM
TEMPERATURE	405		
WIND	5-10		
Нимприту			
COMMENTS	100 % Rain		
ACTIVITI	es, Hazards, Equi	PMENT & SAFE	TY
 Chemicals Contaminant Exposure Dehydration Explosives Additional Safety Topics or Discuss	 Pinch Radiation Slip/Trip/Fall Spills sions: weather 	X w X w	chicle Operations eather (rain/snow/wind) /ildlife ther:
	SIGNATURI	ES	
Personnel Name	Organizatio	n	Personnel's Signature
George Garner	Sundance		Mylen
Nicholas Potter	Sundance	/	NE



Proj	IECT & PERSONNEI	INFORMATION		
Project Name: Red Devil Mine Ann	ual Monitoring			
Contract Number: 140L6321C0001	l Ta	Task Order: NA		
Project Location: Red Devil Mine	Da	te: 8/26/22	Time: 0700	
PM: Colleen Rust	Net 2	HO: George Garner		
SUXOS:				
	WEATHE	R		
	AM		PM	
TEMPERATURE	405			
WIND		m		
HUMIDITY	light /ca			
COMMENTS	rain			
ACTIVIT	TIES, HAZARDS, EQ	UIPMENT & SAF	ЕТҮ	
Activities to be Performed & Equi	ipment Used: Grown	lwater san	pling, well	
maintenance			, , , , , , , , , , , , , , , , , , ,	
Hazards Related to Task: (check a Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives	 Extreme Weather (h Pinch Radiation Slip/Trip/Fall Spills 		Sun Exposure /ehicle Operations Weather (rain/snow/wind) Wildlife Other:	
Additional Safety Topics or Discu	signatu	の思いません		
Personnel Name	Organizat	ion	Personnel's Signature	
George Garner	Sundanc	the little state of the second state of the se	Juglin	
Nicholas Potter	Sundanc		An	
Intendias i otter				



PRO.	JECT & PERSONN	NEL INFORMAT	TION	
Project Name: Red Devil Mine Ann	nual Monitoring			
Contract Number: 140L6321C000				
Project Location: Red Devil Mine		Date: 8/27/3	22	Time: 0700
PM: Colleen Rust		SSHO: George Gar	mer	
SUXOS:				
	WEAT	HER		
		AM		PM
TEMPERATURE	405			
WIND	5-10			
HUMIDITY	100% Cloudy			
COMMENTS	Cloudy /	Fog	_	
ACTIVIT	ries, Hazards, I		SAFET	Y
Activities to be Performed & Equ	ipment Used: Su	charce wai	te s	campling, flow
measuremats	04	, luce		/ 0) .
Hazards Related to Task: (check Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives	 Extreme Weather Pinch Radiation Slip/Trip/Fall Spills 		Veh We Wi Oth	
Additional Safety Topics or Discu	ussions: Slips SIGNAT	, burled	de.	bris
Bernard Name	Organ		P	ersonnel's Signature
Personnel Name	Sund		4	he li -
George Garner Nicholas Potter		lance	1	10
INICHOIAS FOUET	June		- 1	L



Proj	ECT & PERSONNEL INFO	RMATION	
Project Name: Red Devil Mine Annu	al Monitoring		
Contract Number: 140L6321C0001	ontract Number: 140L6321C0001 Task Order: NA		
Project Location: Red Devil Mine	Date: 8/2	8/22 Time: 0730	
PM: Colleen Rust	SSHO: Geo	orge Garner	
SUXOS:			
	WEATHER		
	AM	PM	
TEMPERATURE	50		
WIND	light		
HUMIDITY	80 %		
COMMENTS			
ACTIVIT	IES, HAZARDS, EQUIPME	NT & SAFETY	
		ter sampling, sample	
prep.		- p = pu	
1 /			
 Biological Hazards Chemicals Contaminant Exposure Dehydration Explosives 	 Extreme Weather (heat/cold) Pinch Radiation Slip/Trip/Fall Spills 	 Sun Exposure Vehicle Operations Weather (rain/snow/wind) Wildlife Other: 	
Additional Safety Topics or Discus	Dear satery		
	SIGNATURES		
Personnel Name	Organization	Personnel's Signature	
George Garner	Sundance	1 m	
Nicholas Potter	Sundance	- FE	

ATTACHMENT 1.2 MONITORING WELL INTEGRITY CHECKLISTS

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ell ID	. MWOI Inspector's name: GGarner
	1.1.1.2.2
	1034 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes
	Frost jacking measures: Stick up height from ground surface <u>39.25 in</u>
	2,25 in 37 in
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
2.	Is vault flooded? No
	Any odors? Na
	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational? NA
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW = 17.97 ff



ell ID	: MW03 Inspector's name: Q. Garne
te: _	1.11/22
	1247 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 33.75 in
	7.38 in
3.	Is the well lid/vault secure? Yeş
	Is well clearly labeled?
	Photographs of well closedYc5
	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded? No
	Any odors?No
4.	Photographs of well with lid off γ_{es}
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW = 16.51 ft
-	
-	



Nell ID	nspector's name: G. Gainer
Date:	6/1/22
	1337 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>425</u>
2.	Frost jacking measures: Stick up height from ground surface
	30,75
3	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded?
3.	Any odors? Nø
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?Yos
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: $DTW = 15.95$ ft



Well I	D: MW 07 Inspector's name: G. Garner
Date:	6/1/2022
	1051 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface No frost jacking apparent
	- 4,95" 30,55 " inkher 30,55 " inkher
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? Water visible below with growd surface
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples? MA
Co	mments: DTW = 20,63H
0	
3 	



Well II	D: MW 08 Inspector's name: G. Gamer
Date:	6/1/22 0 1
Fime:	1125 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u> \estaces</u>
2.	Frost jacking measures: Stick up height from ground surface
	9.75
3.	Is the well lid/vault secure?Yes
	Is well clearly labeled? Yes
5.	Photographs of well closed <u>Yzs</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded? No
3.	Any odors? Na
4.	Photographs of well with lid off $\frac{1}{\sqrt{\epsilon s}}$
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational? No
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW = 13,33 pf
_	



Well I	D: MW09 Inspector's name: G. Garner
Date:	(1)
	Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
	Is gasket worn or damaged?
2.	Is vault flooded? No
	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? Yes, appration of
3.	Were there any issues in collecting samples?
Co	mments: DTW = 25.42 Af
-	
-	



Date: <u>6/1/22</u>	
///	
Date:	
Before Opening Monitoring Well	
1. Is well cement pad or stickup in good condition? Frost jacked	
2. Frost jacking measures: Stick up height from ground surface 35.75 in	
9.50 in	
3. Is the well lid/vault secure?	
4. Is well clearly labeled? <u>Yes</u>	
5. Photographs of well closed <u>Yes</u>	
After removing lid before sampling well	
1. Is gasket worn or damaged?	
2. Is vault flooded? No	
3. Any odors?	
4. Photographs of well with lid off	
5. Transducer present? Condition? No	
During Groundwater Sampling	
1. Is well operational?Yes	
2. Dedicated pump present? Condition?	
3. Were there any issues in collecting samples?	
Comments: $DTW = 26.28 \text{ ft}$	
Sundance Consulting	Inc

May 2021



ell IC	D: MWII Inspector's name: G. Gamer
	6/1/22 0
ne:	6/1/22 1/34 Inspector's signature: My A Before Opening Monitoring Well
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 36.13
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded?
3.	Any odors? No
4.	Photographs of well with lid off $\underline{\forall}_{es}$
5.	Transducer present? Condition? NO
	During Groundwater Sampling
1.	Is well operational? NA
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW- 19.21 ft
-	



Vell II	D: MW 12 Inspector's name: <u>C Granner</u>
ate:	6/1/22 1
ime:	//// Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface <u>Photo</u> Jacked out at casing /stickup
	casing /stickup
	Is the well lid/vault secure?
	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
	Is gasket worn or damaged?
	Is vault flooded?
	Any odors?
	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: Not sampleable



Well II	D: MW13 Inspector's name: G. Garner
Date:	6/1/2022
	1036 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface 34,17
	Bi70 inch
3.	Is the well lid/vault secure?
	Is well clearly labeled?
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
	Is gasket worn or damaged?
2.	Is vault flooded?
	Any odors? No
4.	Photographs of well with lid off $\gamma_{c\leq}$
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Cor	mments: DTW = 24.37 ff



ell ID	D:MW16	Inspector's name:	G. Garner
ate: _	6/1/22		1 1
me: _	1242	Inspector's signature:	ky h
	Befor	e Opening Monitoring W	ell
1.	Is well cement pad or stickup	in good condition?	Yes
2.	Frost jacking measures: Stick	up height from ground su	rface 32.00
			<u>2,</u> 00
3.	Is the well lid/vault secure?	Yes	
4.	Is well clearly labeled?	425	
5.	Photographs of well closed	Yes	
	After rem	noving lid before samplin	g well
1.	Is gasket worn or damaged? _	No	
2.	Is vault flooded?	No	
3.	Any odors?	No	
4.	Photographs of well with lid o	off Yes	
5.	Transducer present? Conditio	n? <i>N</i> _a	
	Du	ring Groundwater Sampl	ing
1.	Is well operational?	Yos	
2.	Dedicated pump present? Con		
3.	Were there any issues in colle	ecting samples? \mathcal{N}_{a}	
Co	mments:	= 7.15 ft	
_			



2

Vell II	D: <u>MW17</u> Inspector's name: <u>G. Garner</u>
ate:	6/1/2022 / 1
	1238 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Frost jacked
	Frost jacking measures: Stick up height from ground surface 39.00 [m
	13.13 in metal = 34.13 in ground settled around concrete
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded?
	Any odors?
4.	Photographs of well with lid off
5.	Transducer present? Condition?
1.	Is well operational?
	Dedicated pump present? Condition? <u>No</u>
3.	Were there any issues in collecting samples?
Co	mments: DTW = 0.9.15



Well II	D: MW18 Inspector's name: G. Garner
Date:	4/1/2022
	1314 Inspector's signature: My h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface 33.00 ;
	15.00 in
3.	Is the well lid/vault secure? Yes
4.	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded?
3.	Any odors? No
	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW = 21.80 ff



Well ID:	Inspector's name: G. Gainer				
Date: <u>4/1/22</u>					
ime:	Inspector's signature:				
	Before Opening Monitoring Well				
1. Is well cer	ment pad or stickup in good condition? <u>Yes</u>				
2. Frost jack	ing measures: Stick up height from ground surface				
-	10.00 in				
3. Is the wel	l lid/vault secure?				
4. Is well cle	arly labeled?				
5. Photograp	phs of well closed				
	After removing lid before sampling well				
1. Is gasket v	worn or damaged? No				
2. Is vault flo	poded?Na				
3. Any odors	s?No				
4. Photograp	phs of well with lid off				
5. Transduce	er present? Condition?				
	During Groundwater Sampling				
1. Is well op	erational?				
2. Dedicated	pump present? Condition?				
3. Were the	re any issues in collecting samples?				
Comments:	DTW = 15.65 AF				
8 					
*					



Well I	D: MW20 Inspector's name: G.Garner			
Date:	6/1/02			
	1252 Inspector's signature: hypertermined			
	Before Opening Monitoring Well			
1.	Is well cement pad or stickup in good condition?			
2.	Frost jacking measures: Stick up height from ground surface 37, 13 in			
	7.50			
3.	Is the well lid/vault secure?			
	Is well clearly labeled?			
	Photographs of well closed Yes			
After removing lid before sampling well				
1.	Is gasket worn or damaged?No			
2.	Is vault flooded?No			
3.	Any odors? No			
4.	Photographs of well with lid off			
5.	Transducer present? Condition?			
	During Groundwater Sampling			
1.	Is well operational?			
2.	Dedicated pump present? Condition?			
3.	Were there any issues in collecting samples?			
	mments: $DTW = 6.16 + 4$			
3				
21 <u></u>				
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May 2021



Well ID	D: <u>MW2</u> Insp	ector's name:	G. Gærner
Date: _	2 11 1		
Time: _	/257 Insp	ector's signature:	lyh
	Before Openi	ng Monitoring Well	V
1.	Is well cement pad or stickup in good	condition? <u>/es</u>	
2.	Frost jacking measures: Stick up heigh	it from ground surfac	ce30.00-in
		10.00 in	5.5 between concrete ad
3.	Is the well lid/vault secure?		ground
4.	Is well clearly labeled?		
5.	Photographs of well closed <u>Yes</u>	1.	
	After removing l	id before sampling w	vell
1.	. Is gasket worn or damaged?	,	
	. Is vault flooded?		
3.	. Any odors? \mathcal{N}_{c}		
4.	. Photographs of well with lid off		
5.	. Transducer present? Condition?		
	During Gr	oundwater Sampling	5
1.	. Is well operational?	NA	
2.	. Dedicated pump present? Condition)	
3.	. Were there any issues in collecting sa	imples?	
Co	omments: $D \Gamma W = 7.97$	ft	
2			
3			
0			
			Sundance Consulting Inc.



	D: MW22 Inspector's name: G. Garna					
	6/1/22					
me:	Inspector's signature:					
	Before Opening Monitoring Well					
1.	Is well cement pad or stickup in good condition?					
2.	Frost jacking measures: Stick up height from ground surface 39,00					
	8.25 in 30.75 in					
3.	Is the well lid/vault secure?					
4.	Is well clearly labeled?Yes					
	Photographs of well closed					
	After removing lid before sampling well					
1.	Is gasket worn or damaged?					
	Is vault flooded? Ne					
3.	Any odors? No					
	Photographs of well with lid off					
	Transducer present? Condition? No					
	During Groundwater Sampling					
1.	Is well operational?					
2.	Dedicated pump present? Condition?					
	Were there any issues in collecting samples?					
Cor	mments:					
	DTW = 4.71 H					



Vell ID	: MW23 Inspector's name: G. Garner			
Date: _	6/1/22			
	6/1/22 1749 Inspector's signature: Maple			
	Before Opening Monitoring Well			
1.	Is well cement pad or stickup in good condition? Yes			
	Frost jacking measures: Stick up height from ground surface			
	/3.75			
3.	Is the well lid/vault secure?			
	Is well clearly labeled?			
	Photographs of well closed Yes			
	After removing lid before sampling well			
1.	Is gasket worn or damaged? No			
2.	Is vault flooded?			
3.	Any odors?No			
4.	Photographs of well with lid off			
5.	Transducer present? Condition?			
	During Groundwater Sampling NA			
1.	Is well operational?			
2.	Dedicated pump present? Condition?			
3.	Were there any issues in collecting samples?			
Co	Comments: $pTw = 14.41 \text{ C}$			
-				
_				
_				



Vell II	D: MW24 Inspector's name: G. Garner			
	1.1.1.100			
	1354 Inspector's signature:			
ime:				
	Before Opening Monitoring Well			
	Is well cement pad or stickup in good condition?			
2.	Frost jacking measures: Stick up height from ground surface <u>32,75</u>			
	9.5 in			
3.	Is the well lid/vault secure?Xes			
	Is well clearly labeled?			
5.	Photographs of well closed			
	After removing lid before sampling well			
1.	Is gasket worn or damaged?			
	Is vault flooded?			
3.	Any odors?No			
	Photographs of well with lid off			
	Transducer present? Condition? No			
	During Groundwater Sampling			
1.	Is well operational?			
2.	Dedicated pump present? Condition?			
3.	Were there any issues in collecting samples?			
Со	mments: $DTul = 14 10 \text{ all}$			
	DTW = 14,60 ft			
	Sundance Consulting In			

May 2021



Well II	D: MW25 Inspector's name: G. Garner			
Date:	6/1/22 1 1			
Time:	Inspector's signature:			
	Before Opening Monitoring Well			
1.	Is well cement pad or stickup in good condition? <u>$\sqrt{e_s}$</u>			
2.	Frost jacking measures: Stick up height from ground surface 35.75			
	<u>14.25</u> 31.5			
3.	Is the well lid/vault secure?			
	Is well clearly labeled? Yes			
	Photographs of well closed			
	After removing lid before sampling well			
1.	Is gasket worn or damaged?No			
	Is vault flooded?			
3.	Any odors? No			
4.	Photographs of well with lid off			
5.	Transducer present? Condition?			
	During Groundwater Sampling			
1.	Is well operational?			
2.	Dedicated pump present? Condition?			
3.	Were there any issues in collecting samples?			
Co	mments:			
	DTW = 29.95			
-				
5 -				
3 				



ate: _	: <u>MW26</u> Inspector's name: <u>G-Garner</u>
mo	6/1/22
me	1345 Inspector's signature: ky h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface 32, 63 in
	#c 11.38 in
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded? No
	Any odors?No
	Photographs of well with lid off
	Transducer present? Condition? N_{σ}
	During Groundwater Sampling
1.	Is well operational? De Yes
2.	Dedicated pump present? Condition? Yes, non functional,
	Were there any issues in collecting samples? Tes pump failed, Sampled with bailer,
Com	pTw = 30.99 ff



Vell II	D: MW27 Inspector's name: G. Garner
	6/1/22 1 1
	1401 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes, but separated from grown
	Frost jacking measures: Stick up height from ground surface 32.00
	7.50
3.	Is the well lid/vault secure?
4.	Is well clearly labeled? <u>Yes</u>
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
	Is gasket worn or damaged?
	Is vault flooded? No
3.	Any odors? No
	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? <u>Yes</u> apraliand
3.	Were there any issues in collecting samples?
Co	mments:
	DTW = 24.78 PF
	Sundance Consulting Inc. May 2021



Date:	
Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition?	
Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition?	
 2. Frost jacking measures: Stick up height from ground surface	
 2. Frost jacking measures: Stick up height from ground surface	round
 3. Is the well lid/vault secure? <u>Yes</u> 4. Is well clearly labeled? <u>Yes</u> 	
4. Is well clearly labeled?	
4. Is well clearly labeled?	
After removing lid before sampling well	
1. Is gasket worn or damaged? No	
2. Is vault flooded? No	
3. Any odors? No	
4. Photographs of well with lid off	
5. Transducer present? Condition?	
During Groundwater Sampling	
1. Is well operational?	
2. Dedicated pump present? Condition? <u>Las</u> , <u>aperational</u>	
3. Were there any issues in collecting samples?	
Comments: DTW = 23.07 ft	



 4. Is well clearly labeled? <u>Yes</u> 5. Photographs of well closed <u>Yes</u> After removing lid before sampling well 1. Is gasket worn or damaged? <u>No</u> 2. Is vault flooded? <u>No</u> 3. Any odors? <u>No</u> 4. Photographs of well with lid off <u>Yes</u> 	ell ID	Inspector's name: G. Garner
Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? Yes 2. Frost jacking measures: Stick up height from ground surface	te: _	6/1/22 / /
Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition?	ne: _	1430 Inspector's signature: My M
 Frost jacking measures: Stick up height from ground surface		Before Opening Monitoring Well
 Frost jacking measures: Stick up height from ground surface	1.	Is well cement pad or stickup in good condition?
3. Is the well lid/vault secure? Yes 4. Is well clearly labeled? Yes 5. Photographs of well closed Yes After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No 4. Photographs of well with lid off Yes 5. Transducer present? Condition? No 1. Is well operational? Yes 0 Dedicated pump present? Condition? Yes 2. Dedicated pump present? Condition? Yes 2. Dedicated pump present? Condition? Yes 3. Were there any issues in collecting samples? No	2.	Frost jacking measures: Stick up height from ground surface
 4. Is well clearly labeled? <u>Yes</u> 5. Photographs of well closed <u>Yes</u> After removing lid before sampling well 1. Is gasket worn or damaged? <u>No</u> 2. Is vault flooded? <u>No</u> 3. Any odors? <u>No</u> 4. Photographs of well with lid off <u>Yes</u> 5. Transducer present? Condition? <u>No</u> During Groundwater Sampling 1. Is well operational? <u>Yes</u> 2. Dedicated pump present? Condition? <u>Yes</u> <u>aperational</u> 3. Were there any issues in collecting samples? <u>No</u> 		
 4. Is well clearly labeled? <u>Yes</u> 5. Photographs of well closed <u>Yes</u> After removing lid before sampling well 1. Is gasket worn or damaged? <u>No</u> 2. Is vault flooded? <u>No</u> 3. Any odors? <u>No</u> 4. Photographs of well with lid off <u>Yes</u> 5. Transducer present? Condition? <u>No</u> During Groundwater Sampling 1. Is well operational? <u>Yes</u> 2. Dedicated pump present? Condition? <u>Yes</u> <u>aperational</u> 3. Were there any issues in collecting samples? <u>No</u> 	3.	Is the well lid/vault secure? <u>Yes</u>
After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No 4. Photographs of well with lid off Yes 5. Transducer present? Condition? No During Groundwater Sampling 1. Is well operational? Yes 2. Dedicated pump present? Condition? Yes 3. Were there any issues in collecting samples? No Comments:		
 Is gasket worn or damaged?	5.	Photographs of well closed
 2. Is vault flooded?		After removing lid before sampling well
 Is vault flooded?	1.	Is gasket worn or damaged?
 3. Any odors?		
 4. Photographs of well with lid off <u>yes</u> 5. Transducer present? Condition? <u>No</u> 5. Transducer present? Condition? <u>No</u> 1. Is well operational? <u>Yes</u> 2. Dedicated pump present? Condition? <u>Yes</u> <u>aperational</u> 3. Were there any issues in collecting samples? <u>No</u> Comments: 		Any odors? No
 5. Transducer present? Condition?		
 Is well operational? <u>Yes</u> Dedicated pump present? Condition? <u>Yes</u> aperational Were there any issues in collecting samples? <u>No</u> Comments: 		Transducer present? Condition?
 Dedicated pump present? Condition? <u>Yes</u>, aperatind Were there any issues in collecting samples? <u>No</u> Comments: 		During Groundwater Sampling
3. Were there any issues in collecting samples?	1.	Is well operational?
3. Were there any issues in collecting samples?	2.	Dedicated pump present? Condition? Jes aperatind
		Were there any issues in collecting samples?
DTW = 63.49	Con	nments:
		DTW = 63.49
	-	



/ell IC	D: MW30 Inspector's name: G. Garner
ate: _	6/1/22 1 1
me:	1445 Inspector's signature: kg h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
	9,25
3.	Is the well lid/vault secure?Yes
4.	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
	Is gasket worn or damaged? No
2.	Is vault flooded? Ho
3.	Any odors? Vo
4.	Photographs of well with lid off
5.	Transducer present? Condition?Na
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Со	mments: $DTW = 50, 56 ff$
	41.67 - 17 Q VI



	D: MW 31 Inspector's name: G. Garner
Date:	6/1/22 0 1
ime:	1650 Inspector's signature: Ag h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
4.	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: PTW = 36.09 ft
	· · · · · · · · · · · · · · · · · · ·
<u></u>	



/ell I[D: MW32 Inspector's name: G. Gainer
ate:	6/1/22
ime:	1325 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 43.50
	18.85
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
	Any odors? No
	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW = 17,75 Pt
3	



Well ID	. MW 33 Inspector's name: G. Garmer
Date:	(11/22)
	1755 Inspector's signature: Ag h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Is well cement pad or stickup in good condition? \sqrt{cs} Frost jacking measures: Stick up height from ground surface 25.25 m
	5.06
3.	Is the well lid/vault secure?Yes
	Is well clearly labeled?
	Photographs of well closed Yes
	After removing lid before sampling well
1	
2.	Is gasket worn or damaged? Yes Is vault flooded? Not currently but was
3.	Any odors?No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational? Yes
	Dedicated pump present? Condition?
	Were there any issues in collecting samples? Will was redeveloped and sampled 24 hrs later.
Co	ining the well and on sample tubing.
-	DTW= 3.72 ft



Vell II	D: MW 34 Inspector's name: G-Gaing
Date:	6/1/22
	Inspector's signature: h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface45.50 in
	<u> </u>
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged?/o
2.	Is vault flooded? No
	Any odors?No
	Photographs of well with lid off Yes
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: $DTW = 26.84$ ff
C	
	Sundance Consulting Inc

May 2021



Well II	: MW 35 Inspector's name: G. Garner
Date:	1/1/22
Time:	1201 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface
	5,00.44
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
	Is vault flooded? No
	Any odors? No
	Photographs of well with lid off $\underline{\gamma}_{\mathcal{CS}}$
	Transducer present? Condition?
×	During Groundwater Sampling
1.	Is well operational? NA
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Cor	nments: DTW = 33.18 A
0	



ell ID:	MW 36 Inspector's name: G. Garner
te:	6/1/22 1 1
ne:	1205 Inspector's signature:
	Before Opening Monitoring Well
1.	s well cement pad or stickup in good condition? No frost jacked
	Frost jacking measures: Stick up height from ground surface 48.00 in
	0.375 in 47.625 in
	s the well lid/vault secure?
4. I	s well clearly labeled?
5. I	Photographs of well closed
	After removing lid before sampling well
1. I	s gasket worn or damaged?
2. 1	s vault flooded? No
3. /	Any odors? Na
4. I	Photographs of well with lid off
5	Transducer present? Condition?
	During Groundwater Sampling
1. I	s well operational? No
2. 1	Dedicated pump present? Condition?
3. \	Were there any issues in collecting samples?
Com	priments: PTW = 15.46 ff



Vell II	D: <u>MW 39</u> Inspector's name: <u>G. Garner</u>
ate:	6/1/22
ime:	Inspector's signature: Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? No, jacked up 6 inches
2.	Frost jacking measures: Stick up height from ground surface 35 - 25 in
	9.00 in 26.25
3.	Is the well lid/vault secure?Yes
	Is well clearly labeled? Yes
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged? <u>Yes no gasket</u>
	Is vault flooded?
3.	Any odors? No
4.	Photographs of well with lid off
	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments: DTW = 57.82 ff
_	



Well II	D: MW40 Inspector's name: <u>G. Garner</u>
	6/1/22
	1618 Inspector's signature: My Kan
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Cement is ~ 12 inches above gre
2.	Frost jacking measures: Stick up height from ground surface 39.00
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
2.	Is vault flooded? No
	Any odors? No
4.	Photographs of well with lid offYes
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? Yes, operational
3.	Were there any issues in collecting samples?
Co	<i>No</i>
CO	mments: $\overline{pTW} - 125.78 \text{A}$
_	



D: MW42 Inspector's name: G. Garner
6/1/22
1418 Inspector's signature: hy h
Before Opening Monitoring Well
Is well cement pad or stickup in good condition?
Frost jacking measures: Stick up height from ground surface 33.00 im
2.50 in 30,50 in
Is the well lid/vault secure?
Is well clearly labeled?
Photographs of well closed <u>Yes</u>
After removing lid before sampling well
Is gasket worn or damaged?No
Is vault flooded? Nø
Any odors?No
Photographs of well with lid off
Transducer present? Condition?
During Groundwater Sampling
Is well operational?
Dedicated pump present? Condition? Yes, aperational
Were there any issues in collecting samples?
No
mments: $DTW = 121,49$ Af



ell IC	D: MW43 Inspector's name: G. Garne
ate: _	6/1/22 1 1
me:	142.4 Inspector's signature: Kg Kanner
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
	1.50 in 33.75 in
3	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
	Is vault flooded? Na
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? Mes, operatind
3.	Were there any issues in collecting samples?
Co	mments: $DTW = 82.92 \text{ ft}$
-	



_
-



/ell IC	D: MW45 Inspector's name: G. Garner
ate:	
me:	1532 Inspector's signature: hgh
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Ves</u>
2.	Frost jacking measures: Stick up height from ground surface
	1.00 in 34.00
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed $2es$
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational? Yes
2.	Dedicated pump present? Condition? Yes operation
	Were there any issues in collecting samples?
Co	mments: DTW = 40.20 pt
_	



Well I	D: MW46 Inspector's name: G. Garner
	6/1/22
	15.39 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
	Frost jacking measures: Stick up height from ground surface 42.75
	4.75 in 38.00
3.	Is the well lid/vault secure?
4.	Is well clearly labeled? <u>Yes</u>
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged? \mathcal{N}_{o}
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? operationd
3.	Were there any issues in collecting samples?
Co	mments: DTW = 32.01 CF



Well II	D: MW47 Inspector's name: G. Gainer
Date:	6/1/22 /
Time:	6/1/22 15:50 Inspector's signature: May land
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 40, 50
	37.75
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
2.	Is vault flooded? No
	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? /es aperational
3.	Were there any issues in collecting samples?
Co	mments: $DTW = 54.79 \text{ At}$



Date: $4/1/22$ Time: 1458 Inspector's signature: 464 Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? $4e5$ 2. Frost jacking measures: Stick up height from ground surface 38.60 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 4.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00	's name:G.Garmer	D:WWY8 Insp
Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? Yes 2. Frost jacking measures: Stick up height from ground surface 38.00 4. Is well lid/vault secure? Yes 4. Is well clearly labeled? Yes After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No During Groundwater Sampling 1. Is well operational? Mo During Groundwater Sampling 1. Is well operational? Mo Outing Groundwater Sampling 1. Is well operational? Mo Outing Groundwater Sampling 1. Is well operational? Mo Outing Groundwater Sampling 1. Is well operational? MA Outing Samples?	1	6/1/22
Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? y_{es} 2. Frost jacking measures: Stick up height from ground surface 38.00 2. Frost jacking measures: Stick up height from ground surface 38.00 3. Is the well lid/vault secure? y_{es} 3. Is the well lid/vault secure? y_{es} 4. Is well clearly labeled? y_{es} 5. Photographs of well closed y_{es} After removing lid before sampling well 1. Is gasket worn or damaged? N_o 2. Is vault flooded? N_o 3. Any odors? N_o During Groundwater Sampling 1. Is well operational? MA Quick of the end of the e	's signature:	1458 Insp
 2. Frost jacking measures: Stick up height from ground surface		
3. Is the well lid/vault secure? Yes 4. Is well clearly labeled? Yes 5. Photographs of well closed Yes After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No 4. Photographs of well with lid off Yes 5. Transducer present? Condition? No During Groundwater Sampling 1. Is well operational? Mo 2. Mo So 3. Any odors? No 4. Photographs of well with lid off Yes 5. Transducer present? Condition? Mo During Groundwater Sampling 1. Is well operational? MA 2. Dedicated pump present? Condition? Mo Comments:	tion?	Is well cement pad or stickup in good
3. Is the well lid/vault secure? 965 4. Is well clearly labeled? 965 9. Photographs of well closed 965 After removing lid before sampling well 1. Is gasket worn or damaged? 966 1. Is gasket worn or damaged? 967 968 969 969 969 969 969 969 969 969 969 969 969 969 969 969 969 969 969 960 960 960 961 961 961 962 963 964 964 964 965 965 966 967 967 968 969 969 969 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960 960	ground surface	Frost jacking measures: Stick up heigh
 4. Is well clearly labeled?	4,00	
 4. Is well clearly labeled?	3	Is the well lid/vault secure?
 5. Photographs of well closedYes		
After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No 4. Photographs of well with lid off Yer 5. Transducer present? Condition? No During Groundwater Sampling 1. Is well operational? MA 2. Dedicated pump present? Condition? MA 3. Were there any issues in collecting samples?		
 2. Is vault flooded?No		
 Any odors?	0	Is gasket worn or damaged?
 4. Photographs of well with lid off	0	Is vault flooded?
 5. Transducer present? Condition?No During Groundwater Sampling 1. Is well operational?NA 2. Dedicated pump present? Condition? 3. Were there any issues in collecting samples? Comments: 	>	Any odors?
During Groundwater Sampling 1. Is well operational? 2. Dedicated pump present? Condition? 3. Were there any issues in collecting samples? Comments:	{	Photographs of well with lid off
 Is well operational?	10	Transducer present? Condition?
 Dedicated pump present? Condition?	ater Sampling	During Gro
 Were there any issues in collecting samples? Comments: 	NA	Is well operational?
Comments:		Dedicated pump present? Condition?
	?	Were there any issues in collecting sar
	18,96	1.1.1.2. 1994 Tot A TOT TO



/ell ID	: MW49 Inspector's name: G. Garner
	6/1/22
	1740 Inspector's signature: My lu
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
	7,25
3	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed
5.	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded? No
	Any odors?No
	Photographs of well with lid off $2e^{\frac{1}{2}}$
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?Y_5
2.	Dedicated pump present? Condition? Yes operational
3.	Were there any issues in collecting samples?
Cor	nments: DTW = 27.57
-	



Well ID: MW SO	Inspector's name: G. Garner
Date: 6/1/22	· · · · · · · · · · · · · · · · · · ·
Time: 1701	
Befo	ore Opening Monitoring Well
1. Is well cement pad or stickup	o in good condition? <u>Yes</u>
2. Frost jacking measures: Stick	up height from ground surface <u>44,00</u>
	3.50
	10.50
	40150
	45-
Is well clearly labeled?	Yer
5. Photographs of well closed _	Yes
After re	moving lid before sampling well
1. Is gasket worn or damaged?	No
2. Is vault flooded?	No No
4. Photographs of well with lid	off <u>Yes</u>
5. Transducer present? Condition	on?
D	uring Groundwater Sampling
1. Is well operational?	Yes
2. Dedicated pump present? Co	ondition? Yes
3. Were there any issues in coll	ecting samples?
	No
Comments:	DTW= 44 50 F4
	UIN- 17,30 FT



lell ID: MWS/	Inspector's name: G. Garner
ate: 6/1/2022	A
me: 1708	Inspector's signature: 19 h
	Before Opening Monitoring Well
1. Is well cement pa	d or stickup in good condition? <u>4</u> cs
2. Frost jacking mea	sures: Stick up height from ground surface39, 25
	3.13 36.12
3 Is the well lid/yau	It secure?
 Is well clearly labe 	Ver Yer
	ell closed <u>Yes</u>
	After removing lid before sampling well
1. Is gasket worn or	damaged? No
	No
	No
	ell with lid off
	nt? Condition? <u>Yes</u>
	During Groundwater Sampling
1. Is well operationa	1? <u>Yes</u>
2. Dedicated pump p	present? Condition? Yes, aperational
3. Were there any is	sues in collecting samples?
Comments:	DTW= 37.11 ft



/ell ID: MW52	Inspector's name:	G. Garner
ate:	<u> </u>	1
me: _/558	Inspector's signature	ky him
Be	fore Opening Monitoring W	ell
1. Is well cement pad or stick	up in good condition?	Yes
2. Frost jacking measures: Sti	ck up height from ground su	rface 42,75
Г	4	,75
	▲ · · · · · · · · · · · · · · · · · · ·	
2		38.00
	*	
3. Is the well lid/vault secure?	? Yes	
4. Is well clearly labeled?	Yes	
5. Photographs of well closed	Yes	
After r	removing lid before samplin	g well
1. Is gasket worn or damaged	? <i>No</i>	
2. Is vault flooded?		
3. Any odors?	No	
4. Photographs of well with li	d off	
5. Transducer present? Condi	tion?	
	During Groundwater Sampl	ing
1. Is well operational?	N. yes	1
2. Dedicated pump present?	Condition? <u>Yes</u>	operational,
3. Were there any issues in co	ollecting samples?	*
-	No	
Comments:	DTW = 28.74 B	£
		Sundance Consulting Inc
		May 2021



Well I	D: MW53 Inspector's name: G. Garner
Date:	6/1/22
Time:	6/1/22 1720 Inspector's signature: My Man Before Opening Monitoring Well
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes
2.	Frost jacking measures: Stick up height from ground surface 40.75
	4,25 36.50
3.	Is the well lid/vault secure? <u>Yes</u>
	Is well clearly labeled?
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? Yes operational
3.	Were there any issues in collecting samples?
Co	mments: $(-1) = 22.70$
	DTW = 28.78 4
×	



Well I	D: MW54 Inspector's name: G. Garner
Date:	6/1/22
Time:	1714 Inspector's signature: hoh
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface <u>44.25</u>
	6.75
3.	Is the well lid/vault secure?
4.	V
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded?
3.	Any odors? No
4.	Photographs of well with lid off $\frac{1}{2}$
5.	Transducer present? Condition?Yes
	During Groundwater Sampling
1.	Is well operational?Yes
2.	Dedicated pump present? Condition? Yes, operatimal,
3.	Were there any issues in collecting samples?
Co	mments: $DTW = 28,30$ ft
U	lell cap is installed too low. When the well is grow,
-1	ravel can fall in the well. Well pump is likely unretrievable lue to gravel falling into well.
	and to grave vourng mis area e



Well I	D: MW55 Inspector's name: G. Garner
Date:	6/1/22
Time:	1606 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
	7.13 in
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors?No
	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? No peristaltic pump
	Were there any issues in collecting samples?
Со	mments:
-	DTW = 11.66
2010.00	



Nell II	D: MW.56 Inspector's name: G. Gurner
Date:	1/1/22
Time:	15 Inspector's signature: Ag h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface <u>41.38</u>
3.	Is the well lid/vault secure?
	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors?NB
4.	Photographs of well with lid off
5.	Transducer present? Condition? Yes, good condition
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? Jes, operational
3.	Were there any issues in collecting samples?
Co	mments: pTW = 32.35
-	
-	



Well I	: MW57 Inspector's name: G. Garner
Date:	6/1/22
Time:	1643 Inspector's signature: ky h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
4.	Is well clearly labeled? <u>Yes</u>
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded? No
	Any odors? No
	Photographs of well with lid off <u>/es</u>
5.	Transducer present? Condition? <u>Yes</u> good.
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition? Yes operational
3.	Were there any issues in collecting samples?
Co	mments: DTW = 30.52
	Sundance Consulting Inc. May 2021



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Nell II	D: MW58 Inspector's name: G. Garner
Date:	6/1/22
Time:	1728 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface 42.25
	3-25
	39.00
3.	Is the well lid/vault secure? Yes
4.	Is well clearly labeled? Yes
5.	Photographs of well closed <u>Ves</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
	Is vault flooded? No
	Any odors? No
4.	Photographs of well with lid off <u>Yes</u>
5.	Transducer present? Condition? Yes
	During Groundwater Sampling
1.	Is well operational? Yes
2.	Dedicated pump present? Condition? Yes oper Aland
3.	Were there any issues in collecting samples?
6-	<i>No</i>
0	mments: $DTW = 29.81 \text{ Ff}$
	Sundance Consulting Inc



Well I	D: MW 59 Inspector's name: G. Garner
Date:	6/1/22 1
Time:	1633 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface 39,50
	3,00
	36.50
3.	Is the well lid/vault secure?
	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition? Yes good operational condition,
	During Groundwater Sampling
1.	Is well operational? Yes
2.	Dedicated pump present? Condition? Yes, operational
3.	Were there any issues in collecting samples? Scrad holes in airline. Ale Repaired and functional.
Co	mments:
-	DTW = 132.56 ff
5	
	Sundance Consulting Inc.

May 2021



/ell ID:	Inspector's name:GG / NP
ate: 9/22/22	, 1
me: 1006	4 0
	Before Opening Monitoring Well
1. Is well cement pad or sti	ckup in good condition? <u>Yes</u>
2. Frost jacking measures:	Stick up height from ground surface <u>39,47"</u>
1	
3. Is the well lid/vault secu	re?
4. Is well clearly labeled? _	Yes
	sed Yeg
	er removing lid before sampling well
1. Is gasket worn or damag	ged?/V_0
2. Is vault flooded?	No
3. Any odors?	No
4. Photographs of well with	h lid off /cc
5. Transducer present? Co	ndition? Na
	During Groundwater Sampling
1. Is well operational?	NA
2. Dedicated pump presen	t? Condition?
3. Were there any issues in	
	NA
Comments: Pump is	lodged in well
	Sundance Consulting Ir May 20

May



ell IC	ID: MW03 Inspe	ector's name: <u>GG NP</u>
te:	8/22/22	A A
	:0942 Inspe	ector's signature: Agh
	Before Openin	g Monitoring Well
1.	. Is well cement pad or stickup in good of	ondition? <u>Yes</u>
2.	. Frost jacking measures: Stick up height	from ground surface <u>33.75 in</u>
		,
		Yes
5.	. Photographs of well closed	tes
		before sampling well
2.	. Is vault flooded?	
		0
4.	. Photographs of well with lid off	105
5.	. Transducer present? Condition?	No
		undwater Sampling
1.	. Is well operational?	NA
2.	. Dedicated pump present? Condition?	
	. Were there any issues in collecting san	
Со	omments:	
_		

Sundance Consulting Inc. May 2021

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ell IC	D: MW04 Inspector's name: 66/NP
	0/Ra/02
me:	1147 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes but lass
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded?Na
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Cor	mments:
<u></u>	



ell ID: $\underline{MU06}$ Inspector's name: $\underline{66/M6}$ te: $\underline{8/32/32}$ ne: $\underline{1117}$ Inspector's signature: Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? $\underline{4es}$ 2. Frost jacking measures: Stick up height from ground surface $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{4.15}$ well clearly labeled? $\underline{4es}$ $\underline{4.15}$ well clearly labeled? $\underline{4es}$ $\underline{4.15}$ well clearly labeled? $\underline{4es}$ $\underline{5.15}$ Photographs of well closed $\underline{4es}$ $\underline{4.15}$ well flooded? $\underline{4es}$ $\underline{5.15}$ vault flooded? $\underline{4es}$ $\underline{5.15}$ vault flooded? $\underline{4es}$ $\underline{5.15}$ Transducer present? Condition? $\underline{4es}$ $\underline{5.15}$ well operational? $\underline{4es}$ $\underline{5.15}$ Dedicated pump present? Condition? $\underline{4es}$ $\underline{5.15}$ well operational? $\underline{4es}$ $\underline{5.15}$ Were there any issues in collecting samples? $\underline{5.15}$ comments: $\underline{4es}$ is stalled	Inspector's signature: Before Opening Monitoring Well or stickup in good condition?Yes ares: Stick up height from ground surface36.25 ares: Stick up height from ground surface36.25 areayes secure?yes ed?yes ed?yes It closedyes After removing lid before sampling well amaged?No No No No No No No No No No No No No No No No No No No No
Inspector's signature: Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? Yes 2. Frost jacking measures: Stick up height from ground surface 36.25 Image: Stick up height from ground surface 36.25 Is well clearly labeled? Yes Is well clearly labeled? Yes Image: Stick up height from ground well 1 Is gasket worn or damaged? No Image: Stick up height flooded? No Image: Stick up height flood	
 Is well cement pad or stickup in good condition? Yes Frost jacking measures: Stick up height from ground surface 36.25 Frost jacking measures: Stick up height from ground surface 36.25 Is the well lid/vault secure? Yes Is well clearly labeled? Yes Photographs of well closed Yes After removing lid before sampling well Is gasket worn or damaged? No Is vault flooded? No Any odors? No Any odors? No Transducer present? Condition? No Is well operational? Is well operational? Dedicated pump present? Condition? Yes Barp installed Were there any issues in collecting samples? 	bor stickup in good condition? $\underline{Y_{e.s.}}$ ares: Stick up height from ground surface $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$ $\underline{36.25}$
 Frost jacking measures: Stick up height from ground surface 36.25 Frost jacking measures: Stick up height from ground surface 36.25 Is the well lid/vault secure? Yes Is well clearly labeled? Yes Photographs of well closed Yes After removing lid before sampling well Is gasket worn or damaged? No Is vault flooded? No Any odors? No Any odors? No Photographs of well with lid off Yes Transducer present? Condition? No During Groundwater Sampling Is well operational? Dedicated pump present? Condition? Yes Were there any issues in collecting samples? 	amaged?
3. Is the well lid/vault secure? Yes 4. Is well clearly labeled? Yes 5. Photographs of well closed Yes After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No 4. Photographs of well with lid off Yes 5. Transducer present? Condition? No 1. Is well operational? 2. Dedicated pump present? Condition? Yes 3. Were there any issues in collecting samples?	secure? Yes ed? Yes ed? Yes Il closed Yes After removing lid before sampling well amaged? No No No No No No No No No
 4. Is well clearly labeled?	ed? <u>Yes</u> Il closed <u>Yes</u> After removing lid before sampling well amaged? <u>No</u> <u>No</u> Il with lid off <u>Yes</u>
 4. Is well clearly labeled?	ed? <u>Yes</u> Il closed <u>Yes</u> After removing lid before sampling well amaged? <u>No</u> <u>No</u> Il with lid off <u>Yes</u>
 5. Photographs of well closed	Il closedYes After removing lid before sampling well amaged?No No No Il with lid offYes_
After removing lid before sampling well 1. Is gasket worn or damaged? No 2. Is vault flooded? No 3. Any odors? No 4. Photographs of well with lid off Yes 5. Transducer present? Condition? No During Groundwater Sampling 1. Is well operational? 2. Dedicated pump present? Condition? Yes 3. Were there any issues in collecting samples?	After removing lid before sampling well amaged?
 Is gasket worn or damaged?	amaged?
 2. Is vault flooded?	No No Il with lid offYes
 Any odors?	No Il with lid off Yes
 4. Photographs of well with lid off	II with lid off
 Transducer present? Condition?	
During Groundwater Sampling 1. Is well operational? 2. Dedicated pump present? Condition? 4. Dedicated pump present? Condition? 5. Were there any issues in collecting samples?	. 1
 Is well operational? Dedicated pump present? Condition? <u>Yes</u> Pump installed Were there any issues in collecting samples? 	t? Condition? No
 Dedicated pump present? Condition? <u>Yes</u> Pump installed Were there any issues in collecting samples? 	
 Were there any issues in collecting samples? 	?
	resent? Condition? <u>Yes Purp</u> installed
Comments:	ues in collecting samples?
ing my fulled	Pup installed

	MWO7	Inspector's name: <u>GG/NP</u>		
te: _	8/22/22	<i>K</i>		
	1050	Inspector's signature:		
	Before	Opening Monitoring Well		
1.	Is well cement pad or stickup in	good condition? Yes		
2.	Frost jacking measures: Stick up	b height from ground surface35.5 in		
3.	Is the well lid/vault secure?	Yes		
4.	Is well clearly labeled?	Yes		
5.	Photographs of well closed	Yes		
	After removing lid before sampling well			
1.	Is gasket worn or damaged?			
2.	Is vault flooded?			
3.	Any odors?	No		
4.	Photographs of well with lid of	FYes		
5.	Transducer present? Condition	?No		
		ing Groundwater Sampling		
1.	Is well operational?	NA		
2.	Dedicated pump present? Cond	dition?		
3.	Were there any issues in collec	NA		
	mments:			

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Contraction of the second	Sundance Consulting Inc.	
	Consulting Inc.	

ell IC	D: MWOB Ins	spector's name: <u>66/NP</u>
te:	8/22/22	
ne:	_1043Ins	spector's signature:
	Before Oper	ning Monitoring Well
1.	Is well cement pad or stickup in good	d condition? Yes
2.	Frost jacking measures: Stick up heig	ght from ground surface 38 in
		1
		2
3.	Is the well lid/vault secure?	Yes
4.	Is well clearly labeled?	Yes
5.	Photographs of well closed	Yes
	After removing	lid before sampling well
1.	Is gasket worn or damaged?	No
2.	Is vault flooded?	No
		No
4.	Photographs of well with lid off	Yes
5.	Transducer present? Condition?	No
	During Gr	roundwater Sampling
1.	Is well operational?	
2.	Dedicated pump present? Condition	
3.	Were there any issues in collecting s	amples?
Со	omments:	
		5 F



Date: <u>8/22/32</u> Time: <u>1018</u> Inspector's signature: <u>MyM</u> Before Opening Monitoring Well 1. Is well cement pad or stickup in good condition? <u>Yes</u> 2. Frost jacking measures: Stick up height from ground surface	
1. Is well cement pad or stickup in good condition? $4es$	
1. Is well cement pad or stickup in good condition? $4es$	
2. Frost jacking measures: Stick up height from ground surface	
3. Is the well lid/vault secure? Yes	
4. Is well clearly labeled? <u>Yes</u>	
5. Photographs of well closed Yes	
After removing lid before sampling well	
1. Is gasket worn or damaged?	
2. Is vault flooded? No	
3. Any odors? No	
4. Photographs of well with lid off	
5. Transducer present? Condition?	
During Groundwater Sampling	
1. Is well operational?	
2. Dedicated pump present? Condition? <u>Yes</u>	
3. Were there any issues in collecting samples?	
Comments:	

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The section of	Sundance Consulting Inc.	
- Self-	Consulting leg.	

	D: $MW10$ Inspector's name: GG/NP
te:	8/22/22
	1016 Inspector's signature: 66/NP
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 35. 75 in
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? N_a
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
	Is well operational?Y=5
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Со	mments:



II ID	ID: <u>MWII</u> Inspector's name: <u>GG NP</u>	
:e:_	8/22/22	
	: 1013 Inspector's signature:	
	Before Opening Monitoring Well	
1.	. Is well cement pad or stickup in good condition? $4es$	
2.	. Frost jacking measures: Stick up height from ground surface <u>36.1</u>	11
*		
3.	. Is the well lid/vault secure? <u>/e_s</u>	
4.	. Is well clearly labeled?	
5.	. Photographs of well closed	
	After removing lid before sampling well	
1.	Is gasket worn or damaged?	
2.	. Is vault flooded? No	
3.	8. Any odors? No	
4.	Photographs of well with lid off	
5.	. Transducer present? Condition? No	
	During Groundwater Sampling	
1.	Is well operational?	
2.	. Dedicated pump present? Condition?	
3.	. Were there any issues in collecting samples?	
Co	Comments:	

	$\frac{MW13}{6(22/22)}$ Inspector's name: $\frac{66/NR}{100}$
	<u>8/22/22</u> 1054 Inspector's signature: My h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
	Frost jacking measures: Stick up height from ground surface 34.25" in
	↓ <u> </u>
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded? No
	Any odors? No
	Photographs of well with lid off
	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
	Dedicated pump present? Condition?
	Were there any issues in collecting samples?
	NA
Co	mments:



1. Is	MW14 Inspector's name: GG 9/22/22 Inspector's signature: Maye 0919 Inspector's signature: Maye Before Opening Monitoring Well well cement pad or stickup in good condition? Yes rost jacking measures: Stick up height from ground surface 32 in
1. Is	Before Opening Monitoring Well well cement pad or stickup in good condition?
	Before Opening Monitoring Well well cement pad or stickup in good condition?
2. Fr	rost jacking measures: Stick up height from ground surface <u>32</u> ia
3. Is	the well lid/vault secure? Yes
4. Is	well clearly labeled?
5. Ph	hotographs of well closed <u>/es</u>
	After removing lid before sampling well
1. Is	gasket worn or damaged?
2. Is	vault flooded? No
3. Ar	ny odors?Na
	hotographs of well with lid off
	ransducer present? Condition?
	During Groundwater Sampling
1. Is	well operational?
2. De	edicated pump present? Condition?
	/ere there any issues in collecting samples?
-	
Comn	ments:
SLI	perating from ground our force
	A man of the second sec



Well I	D: MWI7 Inspector's name: GG-
Date:	8/22/22 0. 1
Time:	0918 Inspector's signature: My h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes but jacked up.
	Frost jacking measures: Stick up height from ground surface 39 /m
	☐ ☐ 1
3.	Is the well lid/vault secure? Yes
4.	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged? \mathcal{N}_o
2.	Is vault flooded?Na
3.	Any odors? No
	Photographs of well with lid off
	Transducer present? Condition? \mathcal{N}_{0}
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Cor	nments:
	from the arround surface Well Casias is upphly t
ver ui	all is a dili

	D:M W (8	Inspector's name:	66	NP.
te:	8/82/22		Ω	Λ
ne:	090 8	Inspector's signature:	My	gu
	Before	Opening Monitoring Well	U	
1.	Is well cement pad or stickup in	good condition?	Yes.	
2.	Frost jacking measures: Stick up	height from ground surface	3	
		7		
		1		
			-	
3.	Is the well lid/vault secure?			
4.	Is well clearly labeled?			
5.	Photographs of well closed	er ensemble and have		
	After remo	oving lid before sampling we	11	
	Is gasket worn or damaged?	No		
2.	Is gasket worn or damaged? Is vault flooded?	N o No		
2. 3.	Is gasket worn or damaged? Is vault flooded? Any odors?	No No N		
2. 3. 4.	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off	No No Yes		
2. 3. 4.	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition	N 0 N0 N Yes ?		
2. 3. 4. 5.	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition? Duri	No No No Yes ? ng Groundwater Sampling		
2. 3. 4. 5.	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition Duri Is well operational?	No No No Yes ? ng Groundwater Sampling MA		
 2. 3. 4. 5. 1. 2. 	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition Duri Is well operational? Dedicated pump present? Cond	No No No No No No No No No No No No No N		
 2. 3. 4. 5. 1. 2. 	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition Duri Is well operational?	No No No No No No No No No No No No No N		
 2. 3. 4. 5. 1. 2. 3. 	Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition Duri Is well operational? Dedicated pump present? Cond	No No No No No No No No No No No No No N		

ell IC	D: MW 19	Inspector's name:	NP
te:	8/22/22	6	Λ
	0904	Inspector's signature:	g-
	Before	Opening Monitoring Well	
1.	Is well cement pad or stickup in	n good condition? <u>Yes</u>	
2.	Frost jacking measures: Stick up	p height from ground surface	8.5 in
		7	
		Yes	
		Yee	
5.	Photographs of well closed	4.5	
	After remo	oving lid before sampling well	
	Is gasket worn or damaged?		
		No	
		No	
4.	Photographs of well with lid of	f	
5.	Transducer present? Condition	1? No	
		ing Groundwater Sampling	
1.	Is well operational?	NA	
2.	Dedicated pump present? Con	dition?	
3.	Were there any issues in collec	ting samples?	
Co	omments:		
		Not sampled	



ell II	D: <u>MW 20</u> Inspector's name: <u>GG NP</u>
te:	8/22/22
ne:	0946 Inspector's signature: My have
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? $4es$
2.	Frost jacking measures: Stick up height from ground surface 37, 25 in
3.	Is the well lid/vault secure?Yes
	Is well clearly labeled? Yes
5.	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:
	1

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	- Starter	Sundance	15
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D: MW21	Inspector's name:	OG/NP
0/22/22		1. 1
6950	Inspector's signature:	Azh
Before C		0
Is well cement pad or stickup in g	good condition? <u>Yes</u>	
Frost jacking measures: Stick up	height from ground surface	e30 in
		_
Is the well lid/vault secure?	105	
	NA	
mments:		
	0/22/22 0950 Before O Is well cement pad or stickup in gement pad or stickup in gement pad stickup in gements Frost jacking measures: Stick up for stickup in gement pad stickup in gements Is well cement pad or stickup in gements Is the well lid/vault secure? Is well clearly labeled? Photographs of well closed After remove Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Duringe Is well operational? Duringe Is well operational? Dedicated pump present? Condition?	0/22/22 0150 Inspector's signature:



	: Mw 25 Inspector's name: GG /NP
	9/22/22
	0953 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 39
3.	Is the well lid/vault secure?
	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off 4
	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:
_	



	5/22/22
	9/ 22/22 Inspector's signature: Mg 1111 Inspector's signature: Mg Before Opening Monitoring Well Inspector's signature: Mg
ie: _	Pefere Opening Menitoring Well
	Is well cement pad or stickup in good condition?
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 30 ± 100
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?



ell ID	: <u>MW 29</u> Inspector's name: <u>GG /NP</u>
te:	9/22/22
	9/22/22 1/27 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 3234 in
3.	Is the well lid/vault secure?
	Is well clearly labeled?
	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded?
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:
_	

	: MW 25	Inspector's name:
te: _	8/22/22	
ne:	113/	Inspector's signature:
		Before Opening Monitoring Well
1.	Is well cement pad or st	ickup in good condition?
2.	Frost jacking measures:	Stick up height from ground surface 35, 75 in
	1000 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 -	
3.	Is the well lid/vault secu	ure? Yes
4.	Is well clearly labeled?	Yes
	Photographs of well clo	
	Aft	er removing lid before sampling well
1.	Is gasket worn or dama	
2.		No
3.	Any odors?	Na
	Photographs of well wi	
	Transducer present? Co	
		During Groundwater Sampling
1.	Is well operational?	NA
2.	Dedicated pump prese	nt? Condition?
3.		
Co	omments:	

_



ell ID	: MW26	Inspector's name: <u>66/NP</u>
te: _	8/22/22	1- 1
ne:_	1134	Inspector's signature:
	Before	Opening Monitoring Well
1.	Is well cement pad or stickup in	good condition? Yes
		height from ground surface 32.75 in
3.	Is the well lid/vault secure?	Yes
4.	Is well clearly labeled?	Yes
5.	Photographs of well closed	Yes
	After remo	ving lid before sampling well
1.	Is gasket worn or damaged?	No
2.	Is vault flooded?	No
3.	Any odors?	No
4.	Photographs of well with lid off	Yes
5.	Transducer present? Condition?	PNo
	Duri	ng Groundwater Sampling
1.	Is well operational?	Yes, new pump installe
2.	Dedicated pump present? Cond	lition?
3.	Were there any issues in collect	ting samples? Pump replaced
Cor	mments:	
	7	
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Deleter Services	Sundance	
	Consulting Inc.	

Monitoring Well Integrity Checklist

e:	8/22/22 4	
e: _	1139 Inspector's signature: May Manitoring Well	_
	Before Opening Monitoring Well	
1.	Is well cement pad or stickup in good condition?	
2.	Frost jacking measures: Stick up height from ground surface <u>32</u> in	
	Is the well lid/vault secure?	
	Is well clearly labeled?	
5.	Photographs of well closed	
	After removing lid before sampling well	
1.	Is gasket worn or damaged? <u>No</u>	
	Is vault flooded? No	
	Any odors? No	
	Photographs of well with lid off	
5.	Transducer present? Condition?	
	During Groundwater Sampling	
2.	Dedicated pump present? Condition?	
3.	Were there any issues in collecting samples?	
Cor	omments:	
_		
_		



ell II	D: MW28 Inspector's name: GG
ate:	8/22/22
me:	1141 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? //es
2.	Frost jacking measures: Stick up height from ground surface 30.5 im
3.	Is the well lid/vault secure? <u>Yes</u>
	Is well clearly labeled?
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded?No
3.	Any odors? Na
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples? No
	mments:



	: MW29 Inspector's name: GG
e: _	8/22/22
ne:	1250 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
	Is well clearly labeled? Kes
	Photographs of well closed <u>Yes</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:
_	

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-	Sundance	15
	Consulling Inc.	-

II ID: <u>Mw30</u>	Inspector's name:GG
e:	A A
ne: 1257	Inspector's signature:
Befor	re Opening Monitoring Well
1. Is well cement pad or stickup	in good condition?
2. Frost jacking measures: Stick	up height from ground surface
1.3	A
	*
Is the well lid/vault secure?	Yes
 Is well clearly labeled? 	Ves
5. Photographs of well closed	Yes
After ren	noving lid before sampling well
 Is gasket worn or damaged? _ 	No
2. Is vault flooded?	No
3. Any odors?	No
4. Photographs of well with lid o	offX
5. Transducer present? Conditio	n?N
Du	ring Groundwater Sampling
1. Is well operational?	NA
Dedicated pump present? Cor	ndition?NR
 Were there any issues in colle 	cting samples?
Comments:	

May 2021

11 10	ID: MIN3/ Inspector's nam	ne: <u>GG</u>
e: _	: 8/22/22	1. 1
e:	: <u>38,50</u> Inspector's sign	nature: Myh-
	Before Opening Monitor	
1.	. Is well cement pad or stickup in good condition?	Yes
2.	. Frost jacking measures: Stick up height from grou	und surface
3.	. Is the well lid/vault secure?	
4.	. Is well clearly labeled?	
5.	5. Photographs of well closed	
	After removing lid before sa	impling well
1.	. Is gasket worn or damaged?	6
3.	8. Any odors? No	
4.	Photographs of well with lid off	
5.	5. Transducer present? Condition?)
	During Groundwater	
	Is well operational?	
2.	Dedicated pump present? Condition?	
3.	8. Were there any issues in collecting samples?	_
6-		
Co	Comments:	

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a second second	Consulting Inc.	

II ID	: <u>Mw32</u> Inspector's name: <u>66/NP</u>
e:	8/20/22
	0855 Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface <u>43.5</u> in
3.	Is the well lid/vault secure?
4.	Is well clearly labeled? 4cs
5.	Photographs of well closed <u>Yeş</u>
	After removing lid before sampling well
1.	Is gasket worn or damaged?
	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
	Is well operational?NA
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples? None collected
Со	mments:
(

1 ID: MW 33	Inspector's name: GG/NP
e: E/22	2 1
e: <u>C838</u>	Inspector's signature:
	re Opening Monitoring Well
 Is well cement pad or stickup 	
Frost jacking measures: Stick	up height from ground surface
	_
	Î Î Î Î Î Î Î Î Î Î Î Î Î Î Î Î Î Î Î
2 Is the well lid/yoult secure?	Yes
 Is well clearly labeled? 	
 Photographs of well closed 	
	moving lid before sampling well
 Is gasket worn or damaged? 	
 Is vault flooded? 	
3. Any odors?	
4. Photographs of well with lid	off Yes
5. Transducer present? Conditi	
	uring Groundwater Sampling
1. Is well operational?	Tes
2. Dedicated pump present? Co	ondition? Yes
3. Were there any issues in coll	lecting samples?
	N_0



ell ID: MW 34		GG/NP			
te: <u>8/22/22</u>		b la			
me: 1024	Inspector's signature:	Bange Sem			
	Before Opening Monitoring Well				
1. Is well cement pad or st	ickup in good condition?	Yes			
2. Frost jacking measures:	Stick up height from ground surfa	ice 45.5 in			
	*	_			
3. Is the well lid/vault secu	ire? Yes				
4. Is well clearly labeled? _	Yes				
5. Photographs of well close	sed Yes				
Aft	er removing lid before sampling v	well			
	ged? No				
2. Is vault flooded?	No				
3. Any odors?	No				
4. Photographs of well wit	h lid off <u>Yes</u>				
5. Transducer present? Co	ndition? No				
	During Groundwater Sampling	g			
1. Is well operational?	/	VA			
2. Dedicated pump presen	t? Condition?				
	Were there any issues in collecting samples?				
	/	VA			
Comments:					
	7				

Contraction of the local division of the loc	0	1 6
The second	Sundance Consulting Inc.	
In the second second	Consulting Inc.	

ell II	D: <u>MW 35</u> Inspector's name: <u>GG / NP</u>		
te:	0/22/22		
	D: M(D) SS Inspector's name: GG/NT 0/22/22 1027 Inspector's signature: Juny Before Opening Monitoring Well		
	Before Opening Monitoring Well		
1.	Is well cement pad or stickup in good condition?		
2.	Frost jacking measures: Stick up height from ground surface 46.0 in		
	Is the well lid/vault secure?		
	Is well clearly labeled? Yes		
5.	Photographs of well closed		
	After removing lid before sampling well		
1.	Is gasket worn or damaged?		
2.	Is vault flooded?		
3.	Any odors? No		
	Photographs of well with lid off		
5.	Transducer present? Condition? No		
	During Groundwater Sampling		
1.	Is well operational? NA		
2.	Dedicated pump present? Condition?		
	Were there any issues in collecting samples?		
Co	mments:		
_			



: MW 36	Inspector's name:GG/NP	
8/22/22		
1031	Inspector's signature: hy h	
Before C	Opening Monitoring Well	
Is well cement pad or stickup in g	good condition?	
Frost jacking measures: Stick up	height from ground surface jacked out of a	
	Ì	
	↑	
Is the well lid/vault secure?	No, unable to close	
Is well clearly labeled?	Yes	
Photographs of well closed	N/A wont close	
After remov	ving lid before sampling well	
	No	
Is vault flooded?	No	
Any odors?	No	
Photographs of well with lid off	Yes	
Transducer present? Condition?	No	
Durin	ng Groundwater Sampling	
Is well operational?	NA	
Dedicated pump present? Condition?		
Were there any issues in collecti		
	NA	
mments:		
	Before C Is well cement pad or stickup in p Frost jacking measures: Stick up Is the well lid/vault secure? Is well clearly labeled? Photographs of well closed Is gasket worn or damaged? Is vault flooded? Any odors? Photographs of well with lid off Transducer present? Condition? Durin Is well operational? Were there any issues in collection	

	Monitoring Well Integrity Checklist	
	D: <u>MW 39</u> Inspector's name: <u>GG</u>	п
te:	5/22/22 1416 Inspector's signature: My K	/
ne:		~
	Before Opening Monitoring Well	
	Is well cement pad or stickup in good condition?	
2.	Frost jacking measures: Stick up height from ground surface	
3.	Is the well lid/vault secure?	
4.	Is well clearly labeled?	
5.	Photographs of well closed	
	After removing lid before sampling well	
1.	Is gasket worn or damaged?	
2.	Is vault flooded?	
3.	Any odors?	
4.	Photographs of well with lid off	
5.	Transducer present? Condition?	
	During Groundwater Sampling	
1.	Is well operational?	
2.	Dedicated pump present? Condition?	
3.	Were there any issues in collecting samples?	
Со	mments: Barologger installed.	
0		

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in the second	Sundance	
and the second s	Consulting Inc.	ι.

	D: MWY0 Inspector's name: M. GG
te:	2/22/22
ie:	1643 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? Yes, but seperated from
	Frost jacking measures: Stick up height from ground surface 39.0 in
3.	Is the well lid/vault secure? <u>Yes</u>
4.	Is well clearly labeled? Yes
5.	Photographs of well closedYes
	After removing lid before sampling well
	Is gasket worn or damaged? No
	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Со	mments: ground surface seperating from concrete base



11 11	D: MW42 Inspector's name: <u>GG/NP</u>
e:	8/22/22
e:	1204 Inspector's signature: My h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
	Frost jacking measures: Stick up height from ground surface <u>33</u> in
3.	Is the well lid/vault secure? $\underline{\gamma_{e\varsigma}}$
4.	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors?No
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Со	mments:
_	



Well I	/ell ID: <u>MW43</u> Inspector's name:	GG/NP
Date:	ate: _ 8/22/22	
Time:	me: <u>1155</u> Inspector's signature	"_ My M_
	Before Opening Monitoring W	
1.	1. Is well cement pad or stickup in good condition?	25
	2. Frost jacking measures: Stick up height from ground su	
3.	3. Is the well lid/vault secure?	
	4. Is well clearly labeled? <u>Ks</u>	
5.	5. Photographs of well closed Yes	
	After removing lid before sampling	g well
1.	1. Is gasket worn or damaged?	
2.	2. Is vault flooded?	
3.	3. Any odors? No	
4.	4. Photographs of well with lid off <u>Yes</u>	
5.	5. Transducer present? Condition?	4 A A
	During Groundwater Sampl	ing
1.	1. Is well operational?	
2.	2. Dedicated pump present? Condition? <u>4e5</u>	
3.	3. Were there any issues in collecting samples?	
	No	
Co	Comments:	
		Sundance Consulting Inc.

May 2021



II IL	D: MW44 Inspector's name: 66/NVP
e: _	8/22/22
e:_	13/1 Inspector's signature:
	Before Opening Monitoring Well
	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface $38i$
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded?No
3.	Any odors?N
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples? $\mathcal{N}_{\mathcal{O}}$
Col	mments:
_	

11 10	D: MW45 Inspector's name: GG-
	8/22/22
ie:	
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure? Yes
4.	Is well clearly labeled? Yes
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
2.	Is vault flooded?No
3.	Any odors? No
4.	Photographs of well with lid offYes
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational? Yes
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples? $\mathcal{N}_{\mathcal{O}}$
Cor	mments:



ell I(D: <u>MW 46</u> Inspe	ctor's name:66
te:	8/22/22	1 1
ne:	Inspe	ctor's signature:
		g Monitoring Well
1.	Is well cement pad or stickup in good co	ondition? <u>Yes</u>
2.	Frost jacking measures: Stick up height	from ground surface 42,75 in
3.	ls the well lid/vault secure?	Yes
		Yes
		Yes
	After removing lid	before sampling well
1.	Is gasket worn or damaged?	No
		No
		No
4.	Photographs of well with lid off	Yes
5.	Transducer present? Condition?	No
	During Grou	ndwater Sampling
1.	Is well operational?	Yes
2.	Dedicated pump present? Condition?	les
3.	Were there any issues in collecting samp	ples?
Cor	mments:	
-		



	D: MW47 Inspector's name: GG/NP
te:	8/22/22 /0 1
	1346 Inspector's signature: My h
	Before Opening Monitoring Well
	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 40.5 in
	¥
3.	Is the well lid/vault secure?
4.	Is well clearly labeled? Yes
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? No
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition? No
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
	Were there any issues in collecting samples?
Co	mments:



201.01	D: <u>AWY8</u> Inspector's name: <u>GG</u> /NP
te:	8/22/22 10
ne:	1304 Inspector's signature: My M
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure? Yes
	Is well clearly labeled?
	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged?
2.	Is vault flooded? Mo
3.	Any odors?No
	Photographs of well with lid off Ye s
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational? Yes
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples? \mathcal{N}_{0}

ell ID	MW49	Inspector's name: <u>GG /NP</u>
	8/22/22	
	1241-1	Inspector's signature: Kuy Kan
		Opening Monitoring Well
1.	Is well cement pad or stickup in	
		height from ground surface
		1
		↑
		↓
3.	Is the well lid/vault secure?	Yes
	Is well clearly labeled?	
	Photographs of well closed	
	After remov	ving lid before sampling well
1.	Is gasket worn or damaged?	No
2.	Is vault flooded?	No
	Any odors?	
4. 1	Photographs of well with lid off	Yes
5.	Transducer present? Condition?	No
	Durin	ng Groundwater Sampling
1.	Is well operational?	Yes
2. [Dedicated pump present? Condit	
3. \	Were there any issues in collectin	ng samples?
-		No
Com	iments:	

Name of Concession, name o	0	1 Г
	Sundance	
	Sundance Consulting Inc.	

ell IC	D: MWSO Inspector's name: GG
te:	8/22/22 00 1
ne:	1509 Inspector's signature: 1/2 h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
	Is well clearly labeled?
5.	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
2.	Is vault flooded? No
3.	Any odors? No
	Photographs of well with lid off
	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:

Sundance Consulting Inc. May 2021

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ell II	D: MW51 Inspector's name: GG	
	<u>- 8/22/22</u>	
me:	IS22 Inspector's signature:	-
	Before Opening Monitoring Well	
1.	Is well cement pad or stickup in good condition?	
2.	Frost jacking measures: Stick up height from ground surface 39.25	in
3.	Is the well lid/vault secure?/es	
4.	Is well clearly labeled?Yes	
5.	Photographs of well closed	
	After removing lid before sampling well	
	Is gasket worn or damaged?	
2.	Is vault flooded? Po	
3.	Any odors? No	_
4.	Photographs of well with lid off	
5.	Transducer present? Condition? Yes	
	During Groundwater Sampling	
	Is well operational?	
2.	Dedicated pump present? Condition?	
3.	Were there any issues in collecting samples?	
	Nø	
Co	omments:	



Well I	D: MW 52 Inspector's name: GC/NP
Date:	
Time:	1355 Inspector's signature: by h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface 42,75 in
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged?No
2.	Is vault flooded? N_a
3.	Any odors? No
4.	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational? Res
2.	Dedicated pump present? Condition? Yes
3.	Were there any issues in collecting samples?
Со	mments:



Nell I	D: MW53 Inspector's name: GG
	8/22/22
	1610 Inspector's signature: My h
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure? $\frac{1}{\sqrt{r_s}}$
4.	Is well clearly labeled?
	Photographs of well closed Yer
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
	Is vault flooded? No
	Any odors? Na
4.	Photographs of well with lid off Yes
	Transducer present? Condition? Yes
	During Groundwater Sampling
1.	Is well operational?
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:
-	



Vell II	D: MW55 Inspector's name: 66/NP
ate:	
	<u>9/22/22</u> <u>1405</u> Inspector's signature:
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition? <u>Yes</u>
	Frost jacking measures: Stick up height from ground surface
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed Yes
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
	Is vault flooded?Ne
3.	Any odors?No
	Photographs of well with lid off
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational?/es
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
	No
Cor	mments:
	New planp This taked
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1 A 4 4 5 1	Consulting Inc.	
NAME OF TAXABLE PARTY.	the second s	- 400

/ell IC	D: MW57 Inspector's name: GG
ate: _	8/22/22 6 1
	1625 Inspector's signature: My the
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
2.	Frost jacking measures: Stick up height from ground surface
3	
з. л	Is the well lid/vault secure?
4. 5	Photographs of well closedYes
5.	
1	After removing lid before sampling well Is gasket worn or damaged?
	Is vault flooded? No
	Any odors? No
4.	Photographs of well with lid off Yes
5.	Transducer present? Condition?
	During Groundwater Sampling
1.	Is well operational? <u>Yes</u>
	Dedicated pump present? Condition?
	Were there any issues in collecting samples? $\mathcal{N}_{\mathcal{O}}$
Со	mments:
-	

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Sundance Consulting Inc.	
Consultion inc	1

11 10	IID: <u>MW56</u> Inspector's name: <u>GG</u>	
e:	6100/00	1
	e: <u>1318</u> Inspector's signature:	~
	Before Opening Monitoring Well	
1.	 Is well cement pad or stickup in good condition?	
	2. Frost jacking measures: Stick up height from ground surface <u>41,5</u>	in
3.	3. Is the well lid/vault secure?	
4.	4. Is well clearly labeled?	
	5. Photographs of well closed	
	After removing lid before sampling well	
1.	1. Is gasket worn or damaged?	
2.	2. Is vault flooded? No	
	3. Any odors? No	
	4. Photographs of well with lid off	
5.	5. Transducer present? Condition? Yes good	
	During Groundwater Sampling	
1.	1. Is well operational?	
2.	2. Dedicated pump present? Condition?	
3.	3. Were there any issues in collecting samples?	
	No No	
Со	Comments:	
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-		_

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Constant of the second	Sundance Consulting Inc.	
	Consulting Inc.	

ell IC	D: <u>MW.58</u> Inspector's name: <u>GG</u>
te:	8/22/22 1 1
	<u>8/22/22</u> 1600 Inspector's signature: <u>ky h</u>
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
	Frost jacking measures: Stick up height from ground surface 42.25 in
	↓ ┌── ↓ ───
	<u></u>
3.	Is the well lid/vault secure?
4.	Is well clearly labeled?
5.	Photographs of well closed
	After removing lid before sampling well
1.	Is gasket worn or damaged? No
	Is vault flooded?
	Any odors?
4.	Photographs of well with lid off
5.	Transducer present? Condition? Yes
	During Groundwater Sampling
1.	Is well operational?Yes
2.	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
	No
Co	mments:
-	
-	

Sundance Consulting Inc. May 2021



ell IC	D: <u>MW59</u> Inspector's name: <u>GG</u>
te:	8/22/22
	1418 Inspector's signature: My L
	Before Opening Monitoring Well
1.	Is well cement pad or stickup in good condition?
	Frost jacking measures: Stick up height from ground surface 39,5 in
3.	Is the well lid/vault secure? /es
	Is well clearly labeled?Yes
	Photographs of well closedYes
5.	After removing lid before sampling well
1	Is gasket worn or damaged?
	Is vault flooded?
	Any odors? Na
	Photographs of well with lid off
5.	Transducer present? Condition? Yes Barologger.
	During Groundwater Sampling
	Is well operational? <u>Yes</u>
	Dedicated pump present? Condition?
3.	Were there any issues in collecting samples?
Co	mments:
	Barologger moved to MW39 to collect
-	

ATTACHMENT 1.3 FIELD NOTEBOOKS

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Location Red Devil Date 6/1/2028 Project / Client Red Devil Monitoring - BLM 503 Clear Sunny to 75 sunny 0708 Prop Gear Satety brief Load out gear. Leave for mine. Clear trail along 0730 0745 the route. 0940 Arrive at mine site. Scout out RDOS Surface water 0945 site 0950 River has washed out RDOS. Extensive ice scour along river and higher water levels at riverstan in 2021. Photos taken of scour and sign, 1000 Conduct evaluation of tailings area. Photos of scour and crossion textures taken. Contral gabions are being pushed into creek, narrowing channel, 1030 Bigin collecting DTW measurements. 1800 Complete well survey Return to Hodge. Arrive at lodge. 1825

Location Red Devil Date 4/2/2022 31 Project / Client Red Devil Monstoring BEM 50 clear to 75 sunny 0200 Safety brief. 0730 Land atv's for sampling 0830 Leave lodge, 0900 Arrive at mine and set up on MW 10 and MW09 to begin sampling. 0940 Kinked hose in MW 09 Pull and reset pump. Continue purging. 1210 Complete sampling MW10, (Dup, M5/1050) Sample fime: 1115 Duplicate Sample time : 1118 1200 Bhon to MW42 (6) ad MW27 1250 Beyin purging MWY2 (G). 1415 Complete sampling at MW42 Move to MW 43. 1520 Complete MW 43, More to MW29. 1555 Begin purging MW 29. 1718 Complete sampling at MW22. 1720 Troubleshoot MW26 with Nick, Will atlompt sampling again tomorrow. 1735 Leave for lodge, 1800 Arrive at lodge to calibrate equipment,

136 Location Red Devil Date 6/3/2022 Project / Client Red Devil Monitoring - BCM 50s Clear to 25 clear 0700 Safety brief 0730 Leave for mine, 0800 Arrive at mine set up on MW 26 and MW40. 0900 Unable to get MW 26 pupping Mo Unable to get MW 24 payping, Move to MW59. Complete MWYO, Move to MW50. Unable to get MW59 pumping, More to MW51. 1012 1030 Complete Sampling at MW 50, Move to MW 57, 1200 Bigin purging set up on MW 57. Complete sampling at MW57. Move to MW53. 1220 1322 to MW 53. Complete MWS3, Move to 1450 MW 58, Begins purging MW 58. 1510 Complete MW 58, Move to 1620 retrieve trailer and remaining sample cooler at MW 53-Move to river to locate new SW 1630 location and repair signs, 1240 Leave siter Return to lodge. ----1800

Location Red Devil Date 6/4/22 37 Project/Client Red Devil Monitoring BCM 50s Clear to 75 clear 0700 Sately briet 0730 Leave for mine after leading. 0800 Arrive at Mine, Set up and surge purge MW33+to remore river water / silt. Nick sets up OBK Set MW33 running at 0.25 L/min. Surged will to suspend and remove any river sitt from flood. 0840 Sot y on MWS2 to purge and 1045 Complete sampling on MWS2. Replaced water line due to leaky freeze value. Collected Duplicate 04 22 MW 98 GW. 1056 Turned att pump at NW 33. Kennore. approximately ~ 41.5 & from well. We will allow for 24 recharge before we attempt sampling, of MW33-1105 Set up on MW47. 1250 Complete MW 47. More to MW 59. 1500 Complete MW 59. More to MW 26 to troubleshoot. 1630 Unable to get pump to work on MW26. Retruction

Location Red Ocvil Date 6/4/22 Project / Client Red Devil Monitoring - BLM 70s Partly Cloudy 1630 Contid Replaced air and water lines of MW26, Disassembled pump and examined bladder, Bladder is creased and may not be re-expanding; Recommend replacing bladder. Will sample with bailer tomorrow. 1645 Leave site for the day.

Location Red Devil Date 6/5/22 Project/Client Red Devil Monitoring -BLM 0700 Safety brief. 0710 Prop field gear. 0810 Leave for site. Attempted to call flight service to schedule everly gickup on June 7th. 0840 Arrive at mine. Set up an MW 16 + NW17. Return to lodge to contact air 0900

service and get battery. Rotum to MW49 to begin purge, 0950 Bigin sayling and purgin MW49 1000 1200 Carplete MUS49 More to MW26. HOO Complete bailing and sampling at MW 26, String ture doo in well (diesel), Complete trial of stream flow 1430 equipmate Leave rite 1500 Armin at ladge.

40 Location Red Devil Date lefte/22 Project / Client 30 chear 0700 Safety brief. 0730 Depart lodge, Arrive at RD 08B saysle 0850 location for stream sampling, Collect 0622 RD08BSW sample at 0838 atternat locutia upstream adside of flood influenced areas Stram Plow gauging: (6. ft wide) Point Depthered Width typelow Ft/s 2000 0,5A 2.55 depth in Ott 3000 0.5 3.92 Cr 7Pcm 0,5 3.94 8.5 mm 0.5 3,30 4.500 0.5 2.89 5 2.65 5.0 m 015 5,5 mm 0,5 1.98 7 4.0 0.5 1,57 8 2.57 4.0 - 0.5 9 4.0 - 0.5 2.45 10 3.0 000 0.5 1.60 11 1,0 m 0,5 6.78 12 Edge 13 5957 More to RDBle to collect saple

Location Red Devil Date 6/6/22 41

Project / Client

000 Nove to RDOG. 1610 Collect RDG6 saple 0622RDO65W Stream Flow (FAt wicke) Depth Cont Width (PH) flow (ft/s Point 4.0 1 0.5 2,14 2 12.0 2.62 015 34 10.0 1.82 0.5 3-24 11.0 0.5 6.0 0.5 3.14 5 0.5 2.81 6 8.5 0.5 7 250 3,5 8 0.5 1.82 9 1.0 0,42 0.5 10 EDge Depth in (on Pt) cm mox depth ~ 12 on 1058 More to RD15 and RD05 1125 Collect RD 15 and US/MSP. 1145 Collect RDO5 and duplicate 0602 Rb 295W. Sie next page for Rols. RD05 Flow = 1.5 L/5 Rite in the Rain

Location Red Devil Date 6/6/22 Project/Client Red Devil Mine Monistoring _00s Clear Hot 1200 RD15 stream flow Paint Depter Width (A) Flow V ofs 1 800 015 0.08 10 ===== G15 1.02 2 13 015 2.40 11.500 0.5 2.032 4 0,5 2+62 14.5 5 1.47 0,5 11.5 9 0.5 0.63 9 0.3 0.15 8 0,5 -021 9 5 0 0 0 10 Edge Complete RDIS and ROS samplings 1240 More to RD10. Arrive at RD 10, Set survey rod 1330 at location to mark it more permanently. Go to down load all transducco 1400 data that remains, 1530 Complete all transducer downloads 1540 Return to lodge.

Location Red Devil Date 4/6/22 Project / Client Red Devil Mine Monitoring Depth cm Width(A) Flows Streamtoff SW Pt/S R+ RDIO 0.21 0,5 7.0 1 0.65 4.0 2 8,5 1.47 16,5 4 1.83 1.56 10.5 7.5 1.47 6 7.0 1,06 8 0,64 7.5 6.5 9 0.42 9.0 0,51 10 11 Undercutedge 2,5 0,23 Rete in the Rain

20Location Red Dun LAK Date 6/10/21 Project / Client Red Devil Monitoring / BLM 50 cloudy Safely brief. Prep bottles for ABRA sampling 0759 Leave for site, Remis on ster Will start 13833 at River and work upstream for sampling, Complete sought of SWOG DA 30 6935 1050 Surface water Complete Sampling, Riturn to lodge for sample 1130 pref. Arrive at ladge 1200 Receive notice that the 1230 charter flight needs to pick us up early, ETA 3 pm. "Leave Red Devil via charter 1500 Flight 470

Location Red Nevil Mine Date 8/22/22 Project/Client Red DEVIL Mine Moniforing Nicholas Potter 11 08:40 Check water level of mw33 OG. G7, very moust & hymid: TH FER warmer due to the mugginness Bald Eagle was seen foosting tree by the month of Red Devil creek 0846 Installed blader pum at MW-33. Easy "Installytion 09:05620rg is recordin Dispitation to water 07.13 installing pumps @ MW 164 MW 17 5137 youmps installed 14:30 MW 59 14:30 MW 51 14:23 MW 51 14:36 MW 54 15:36 MW 54 15:54 NW 53 16:20 MW 53 0943 MW03 182.2 10:13 MW 53 74 17 16:20 MW 57 37.56 7:20 returned to lodge ·28 building sample K°,+

Location Ked DeVil A Date 08/23/22 12 Project/Client Red DeVilmine Monitoring, BLM Nick Potter 07:20 start preping equitment 08:00 Leave for the mine Set up on mwog Sampled MW09 140 Set up on mw 33 by Ri ner pymp working! Cloudy Loday but no Fain so far, the 13:00 San eren poping out how ethen. Bud one ever Batnot overwhelming present Sampled MW-33 13:20 13:30 jupch NP ON MWOG 14:09 54 mwob : s found nell 14:30 9mpped mylogo pon Mw27 520 600 5ampl 22 & Packlyg Finith egding back to the lodo 7:00 returned to lodge FURBID ralibrating water autil

Location Red Del _____ Date 082422 13 ine mon Horing /BL Project / Client Red Del (J'SCUSZe (Ł Ve a MW 26 DLAIM 29 y MW44 01) MWYL 5/14h7 Kin the 'UU has 9 pv connet/onto the brast 11 tup when the do not work Constitut ð 5-mphe muss 3 on MW 45 6 hP Samt 10 MW45 MW46 UI On 5 MMAI ONNU 47 Q/ also merel to have it's M HEnto MWH Samp rd NND Rite in the Rain

Location Red Del Location Ked VeVI Date 0/26/2-Project/Client Red DeVI mine moi foring /13 14 ick Potter NVX toda 2mu 40 (T) Hode RINK 1/45 phil (alp PULPUNS MWV 1941 Samper 5.4 +61 0 10001 Criffe & gdd to wet to 55 Sampled MU 50 POUMP int NW 74 1/24/10 riv ampled MW 50 13: 17 @ MW S AVIVE 400' MWE Sample 30 Ked throug & becoming chilled hege ing back will finish hells fomalows

Location Red DeVII Date B/26/22 15 Project/Client Red DEVNMING MONIFORING/BLM VICK Pol B35- 5et up on mw 0853 water 7 Chanky has Rotish Perj'iP Lants 00941 Sampte NW 58 retura-11 to mw 9458 + 922 61255 res anick conect 11:05 completed matingher of 56 mins in good working order. T add ad MEDD-Ø Miller 305 We Fetune 2 bock to base c symple) to phip for he plantisto convinct X Mitgel Mater nynve to when on Rite in the Rain.

ev/il A Location Rec 16 __ Date 0 DEVI Bianual monitoring Project / Client Red diFri JJ:ng am 007 5000 8 B SWOO SW005/15 swiD unch 1200 on today are in the other 200 Kul 9 P

44 Location <u>Red Devil AK</u> Date 0/22/2022 Project/Client <u>Red Devil Monitoring</u> BLM. SOs Rain Safity brief. Discuss bear activity. 0700 Leave for mine. USD Arrive at mine, 0233 DTW GW maisuremints 3935 Begin 6.67 At DTW A MW 33 0338 7,60 ft DTW. MW 32 0855 DTW 20.93 ft MW 19 090.4 DTW 28 72 PL MW18 0908 DTWA 15.02 ft MW I7 0917 OTW R 12.55 ft 0919 MW-16 DTW 20.150+ MW03 0942 DTW 7.40 ft MW20 0946 DTW 8.64 ft MW 21 0750 DTW 6.9.72 ft MW 22 0955 DTW 19.23 At MWOI 1006 DTW 22.16 ft MWI 1013 DTW 27.04 ft MW 10 1016 27.33 ft MW 07 1020 34, 84 Ft NWW 34 1024 39-63 \$4 MW 35 1027 15.72 PV MW36 1031 13.70 St MWOS 1043 21.94 ft MWO7 1050 30. 90 ft MW.13 1054

Location Red Devil AK Date 2/22/22 Project/Client Red Devil Monitoring BLM 50s Rain Not measured jackeed. MW12 1059 MW23 16.31 ft DTW 1111 DTWX 19.0684 MUOL 1117 MW 24 1127 17,41 ft DTW. MW 25 1131 31.93 AF DTW MW 26 1134 33,54 Rt DTW 30,01 At 139 MW27 DTO · MW 28 1141 28,56 44 OTW 1147 MWOY 26.35 84 DTW 1155 MW 43 88,90 A DTW 1204 MW 42 127,58 ft DTW Lund. 12/0 31.56 ft. MW49 1244 DTU 64.43.ft MW 29 250 prw 52,56 44 MW30 1257 DTW 19.28 ft 1304 MW48Drw 1311 MW 44 35.01 ft DTW MUSC 1318 34.6a H DIW 1337 44.84 At MW45 DTW 1342 34.00 MW 40 Ft DTW 37.45 ft 1348 DTW MW47 MW 52 1355 32.40 DTW At 1405 12.73 Af MWSS DTW 1418 MW 59 122.20 DTW At

Rite in the Rain

Kite in

Location Red Ocvil AK Date 8/22/22 46 Project / Client Red Pevil Annual Monitoring 505 Rain drop Barologger at removed Barologger 1455 MW39 3 ft btoc from MW.59. 84:87ft DTW MW 39 1501 TO = 85.87 ff 49.50ft DTW MW 50 1509 42,33 Ft DTW MWSI 1522 DTW 29.65 A MWSY 1533 30.35 ft DYW MWS8 1600 34,17 ft DTW MW53 1610 37.56ft PTW MWS7 1625 38.50 ft DTW MW 31 1632 DTW 128,93 AL MW 40 transducer 1643 Complete GW survey and downloads, All & transduccos 1650 downloaded successfully, Leave site. Arrive et lodge for and calibration. sample prep 1720 Agh

Red Devil AK Date 3/23/2022 Project/Client Red Devil Annual Monitoring 50s Cloudy 0700 Safety brief, 0755 Complete load out and leave for mlne. 0820 Arrive at Mine and set up on MW 09 and MW10 Cellect MW 10 sample. 1033 1035 Collect MW98 duplicate @ MW10. 1130 Complete sampling at MW10. More to MW 16 and MW17, 150 Begin set up on MW17 to parge for sampling, Complete sapling at news 7, Collect 1315 MS/MSD. 1330 Begin purging/sampling at MW16. Sample MW16 1410 Complete MW Ro. Purge water 1500 using winterization kit. Set up on MU 28, 1510 Collect sample at MW 28. 610 Complete sapling. Retarn to 1630 lodge Arrive at 1766 ladge. Rite in the Kais

Location <u>Red Devil AL</u> Date <u>8/24/22</u> Project/Client <u>Red Devil Annual Monitoring Blue</u> 505 roggy Satury brief 0700 Louve for mine after load out 0745 Arrive at mine. Start with Mwag 0820 . and MW 42. Tissue with air back at fittings, Attempt to field repair with new fitting is unsuccessfuld Field splice with tubing and zig fles to hold sen Begin purging NW 42. Stabilized. Collect sample with sample 0940 1045 time of 1100, DE22 MW42GW Complete sampling at MWY2. Move to 112 MW43, Set up a MW 43. 1/25 Cellect 0822 MW43GW MS/MSD 1220 and duplicate 0822 MW98GW, Complete sampling at MW43. 1250 Sot up on MW44. Begin purging. Complete MW44. Move to MIN 29 1335 1433 MW 59 1500 Set up on MW 59. Troubleshoot loose air fitting, Replex with crimp fitting (non brass). Beyin purging. 15.50

Location Red Devil AK Date 8/24/22 49 Project/Client Red Devil Aunual Moniforing BL 605 Clear Extremely turbic water during 1505 purge. (400+ NTU), Caplete sampling at MW59. Was able to fix air fitting with 17/2 spare parts, Leave site, 1725 Arrive at lodge, 750 Rite in the.

Project/Client Red Devil Arnul Monitoring BLN 40s Rain Safety brief and load out, Contact AAT about earlier 6700 0 800 Plight Leave for mine. Set up on MW 49 (NP) ad 0820 0900 MW 40(0G) Complete sampling at MW40. 1042 Move to MWSI. Complete sampling at MWS1. Move to MWS4. 1045 1150 Complete sampling at MW54. Collected duplicat (MW97) 1200 1310 at MW 54. at MW 27. More to MW 53. Complete sampling at MW 53. Leave site for the day, 1330 1430 1500 Arrive at lodger. 1530

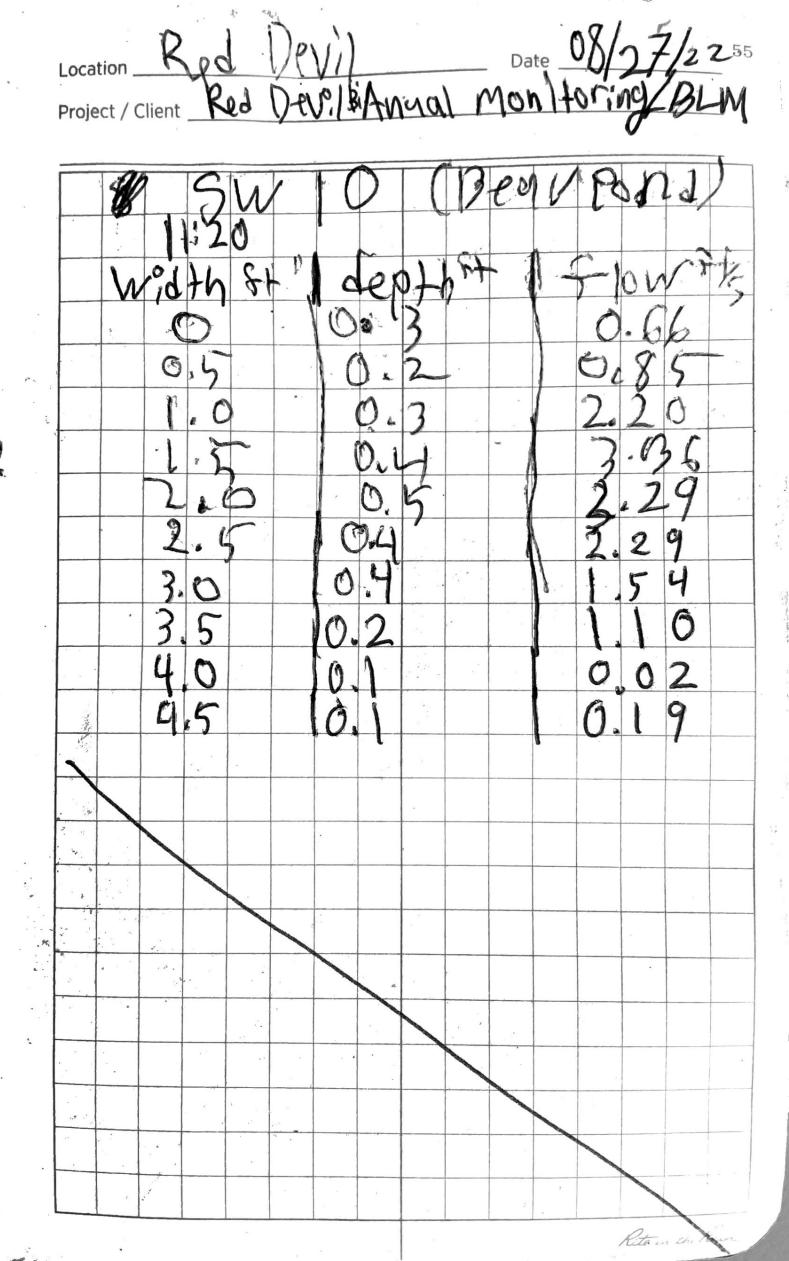
Location Red Devil AK Date 8/25/22 Project/Client Red Devil Annual Monitoring BLM 0700 Safet, brief. Begin load out. 0800 Leave for site. 0820 Arrive at mine. Set up at MW 26 and MW58, Replace pump at MW26 Collect sample at MC 845 Ma 26, 1/20 Complete sampling at title 32 1230 MUDG Return to lodge to BC 1300 samples. Fild work complete for the day 1330

1 0

Location Red Oevil AK Date 2/27/22 Project/Client Red Devil Annual Monitoring 52 405 Cloudy windy Sabety brief. Plan out 0730 maintenance Load out for well maintenance 0830 and stream discharge. Leave lodge. 0845 Minc a collect strum Arrive a 0915 flow measurements, Beginning and progressing upstream, (ff)(44/3) 1930 Width Depth Flow R008 0 Q.50 0,10 1.0' 1.43 3.55 0:40 1.5 0.30 2.0 3.7 2.6 0.50 2.5 2.7 3,0 0.40 7.3 0.40 3.7 1.73 0.3() 4,0 0.5 -37 0. 2.0 0 1.57 5.5 0 10 0.1 1.27 6.0 0.10 elge 6.9 12 0 13

Red Devil AK Date 2/27/2253 Location ____ Project / Client Red Devil Annul Monstoring 40es Foggy Mist Width (Pt) Depth (fr) R006 Flow (4) Fage N 05 d 0 Ċ 0 2 Ó Ö Ó O, 6). 6 Rite in the Kai

54 Location Reddevil Date 08/27/22 Project/Client Red Devil Angul Mon Loring BLM flow Swil wilth depth 0:4 0.5 0.5 C 500 0 C 0 F 0,5 0.4 6,0 6.2 0.9 0.1 693 ()Swas (Seep) =. 1 L/min • •



56 des Location Red Devil Date 3/27/202 Project / Client Red Devil Mine Annual Maritoring Perform will maintonance 1230 on monitorry well Return to Lodge s. Riturn to 1500 £.

Location <u>Red Devil</u> Date <u>8/28/22⁵⁷</u> Project/Client <u>Red Devil Annwal Monitoring</u> 0800 Satchy brief and pr sample bettles. 0845 Arri Leave for mine, 0910 Arrive of Mine to sample RDOEBand work upstream Collect ROOSB, 0915 C-plote RD08B. 3940 0945 More to RDOL. Collect 0222 ROOGSW More to RDOS(Secp) a 10/0 RD15. Collect 0822 RDOSSW and 1015 duplicate at 0822 RD99502 at 1012, Collect 0822 RD155W ms/msp 1030 More to RD10, 1105 Collect RD10 sample. 1125 Complete sampling Return to lodge for sompe prep and QC, 1135 1145 Rite in the

ATTACHMENT 1.3 FIELD NOTEBOOKS

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Location Red Devil Date 6/1/2028 Project / Client Red Devil Monitority - BLM 503 Clear Sunny to 75 sunny 0708 Prop Gear Safety brief Load out gear. Leave for mine. Clear trail along 0730 0745 the route. 0940 Arrive at mine site 0945 Scout out RDOS Surface water site, 0950 River has washed out RDOS. Extensive ice scour along river and higher water levels at rivership in 2021. Photos taken of scour and sign, 1000 Conduct evaluation of tailings area. Photos of scour and crossion textures taken. Central gabions are being pushed into creek, narrowing channel. 1030 Bigin collecting DTW measurements. 1800 Complete well survey Return to Addge. Arrive at ladge. 1825

Location Red Devil Date 4/2/2422 31 Project / Client Red Devil Monstoring BEM 50 clear to 75 sunny 0200 Safety brief. 0730 Land atvs for sampling 0830 Leave lodge, 0900 Arrive at mine and set up on MW 10 ad MW09 to begin sampling. 0940 Kinked hose in MW 09 Pull and reset pump. Continue purging. 1210 Complete sampling MW10, (Dup, M5/M50) Sample fime : 1115 Duplicate Sample time: 1118 1200 Bhove to MW42 (6) ad MW27 1250 Bryin purging MWY2 (G). 1415 Complete sampling at MW42 Move to MW 43. 1820 Complete MW 43, More to MW29. 1555 Begin purging MW 29. 1718 Complete sampling at MW22. 1720 Troubleshoot MW26 with Nick, Will atlampt sampling again tomorrow. 1735 Leave for lodge, 1800 Arrive at lodge to calibrate equipment,

136 Location Red Devil Date 6/3/20 22 Project / Client Red Devil Monitoring - BCM \$25 Clear to 25 clear 0700 Satity brief 0730 Leave for mine, 0800 Arrive at mine set up on MW26 and MW40. 0900 Unable to get MW26 popping, More Unable to get MW 24 papping, Move to MW 59. Complete MWYO, Move to MW50. Unable to get MW59 pumping, More to MW51. 1012 1030 Complete Sampling at MW 50, Move to MW 57, 1200 Bigin purging set up on MW 57. Complete sampling at MW57. Move to MW 53. 1220 13.22 to MW 53. Complete MWS3, Move to 1450 MW 58, Begins purging MW 58. 1510 1620 Complete MW 58, Move to retrieve trailer and remaining sample cooler at MW 53-Move to river to locate new SW 1630 location and repair signs, 1240 Leave site Return to lodge. -1800

Location Red Devil Date 6/4/22 37 Project / Client Red Devil Monitoring BLM 50s Clear to 75 clear 0200 Satch, brief 0730 Leave for mine after landing. 0800 Arrive at Mine Set up and surge purge MW33+to remore river water / silt. Nick sets up OBK Set MUBB running at 0.25 L/min. Surged well to suspend and remove any river sift from flocal. 0840 Set y on MWS2 to purge and 1045 Complete sampling on MWS2. Replaced water line due to leaky freeze value. Collected Duplicate 04 22 MW 98 GW. 1056 Turned att pump at NW 33. Kenore approximately ~ 41.5 & from well. We will allow for 24 recharge before we attempt sampling, of MW33-1105 Set up on MW47. 1250 Complete MW 47. More to MW 59. 1500 Complete MW 59. More to MW 26 to troubleshoot.

Location Red Devil Date 6/4/22 Project / Client Red Devil Monitoring - BLM 70s Partly Cloudy 1630 Contid Replaced air and water lines of MW26, Disassembled pump and examined bladdes, Bladder is creased and may not be re-expanding; Recommend replacing bladder. Will sample with bailer tomorrow. 1645 Leave site for the day.

Location Red Devil Date 6/5/22 Project / Chent Red Devil Monitoring -BLM 0700 Safety brief.

0710 Prop field gear. 0810 Leave for site. Attempted to call flight service to schedule everly pickup on June 7 K. 0840 Arrive at mine. Set up an MW 16 + NW17. Return to lodge to contact air 0900 service and get battery. Rotum to MW49 to begin purge, 0950 Bigin sapling and purgin MW49 1000 1200 Carplete MUS49 More to MW26. HOO Complete bailing and sampling at MW 26, String fuel odor in well (diesel), Complete trial of stream flow 1430 equipments Leave site 1500 Arnin at ladge.

40 Location Red Devil Date lefte/22 Project / Client 30 chear 0700 Safety brief. 0730 Depart lodge, Arrive at RD 08B saysle 0850 location for stream sampling, Collect 0622 RD08BSW sample at 0838 atternat locutia upstream adside of flood influenced areas Stram Plow gauging: (6. ft wide) Point Depthered Width typelow Ft/s 2000 0,5A 2.55 depth in Ott 3000 0.5 3.92 Cr 7Pcm 0,5 3.94 8.5 mm 0.5 3,30 4.500 0.5 2.89 5 2.65 5.0 m 015 5,5 mm 0,5 1.98 7 4.0 0.5 1,57 8 2.57 4.0 - 0.5 9 4.0 - 0.5 2.45 10 3.0 000 0.5 1.60 11 1,0 m 0,5 6.78 12 Edge 13 5957 More to RDBle to collect saple

Location Red Devil Date 6/6/22 41

Project / Client

000 Nove to RDOG. 1610 Collect RDG6 saple 0622RDO65W Stream Flow (FAt wicke) Depth Cont Width (PH) flow (ft/s Point 4.0 1 0.5 2,14 2 12.0 2.62 015 34 10.0 1.82 0.5 3-24 11.0 0.5 6.0 0.5 3.14 5 0.5 2.81 6 8.5 0.5 7 250 3,5 8 0.5 182 9 1.0 0,42 0.5 10 EDge Depth in (on Pt) cm mox depth ~ 12 on 1058 More to RD15 and RD05 1125 Collect RD 15 and US/MSP. 1145 Collect RDO5 and duplicate 0602 Rb 295W. Sie next page for Rols. RD05 Flow = 1.5 L/5 Rite in the Rain

Location Red Devil Date 6/6/22 Project/Client Red Devil Mine Monistoring _00s Clear Hot 1200 RD15 stream flow Paint Depter Width (A) Flow V ofs 1 800 015 0.08 10 ===== G15 1.02 2 13 015 2.40 11.500 0.5 2.032 4 0,5 2+62 14.5 5 1.47 0,5 11.5 9 0.5 0.63 9 0.3 0.15 8 0,5 -021 9 5 0 0 0 10 Edge Complete RDIS and ROS samplings 1240 More to RD10. Arrive at RD 10, Set survey rod 1330 at location to mark it more permanently. Go to down load all transducco 1400 data that remains, 1530 Complete all transducer downloads 1540 Return to lodge.

Location Red Devil Date 4/6/22 Project / Client Red Devil Mine Monitoring Depth cm Width(A) Flow Streamtoff SW Pt/S R+ RDIO 0.21 0,5 7.0 1 0.65 4.0 2 8,5 1.47 16,5 4 1.83 1.56 10.5 7.5 1.47 6 7.0 1,06 8 0,64 7.5 6.5 9 0.42 9.0 0,51 10 11 Undercutedge 2,5 0,23 Rete in the Rain

20Location Red Dun LAK Date 6/10/21 Project / Client Red Devil Monitoring / BLM 50 cloudy Safely brief. Prep bottles for ABRA sampling 0759 Leave for site, Remis on ster Will start 13833 at River and work upstream for sampling, Complete sought of SWOG DA 30 6935 1050 Surface water Complete Sampling, Riturn to lodge for sample 1130 pref. Arrive at ladge 1200 Receive notice that the 1230 charter flight needs to pick us up early, ETA 3 pm. "Leave Red Devil via charter 1500 Flight 4/0

Location Red Nevil Mine Date 8/22/22 Project/Client Red DEVIL Mine Moniforing Nicholas Potter 11 08:40 Check water level of mw33 OG. G7, very moust & hymidt Tt fell warmpr dut to the mugginness Bald Eagle was spen foosting trait by the month of Red Devil creek 0846 Installed blader pum at MW-33. Easy "Installytion 09:05620rg is relovin Dispit to water 09.13 installing pumps @ MW 164 MW 17 5\$ 37 youmps installed 0943 MW03 14:30 MW 51 132.2 14:30 MW 51 132.2 14:30 MW 51 42.33 15:36 MW 54 29.65 15:54 NW 58 30.35 16:20 MW 53 34.17 16:20 MW 57 37.56 17:20 retwined to lodge ·28 building sample Ko, +)

12 Location Ked DeVil A Date 08/23/22 Project/Client Red DeVilmine Monitoring, BLM Nick Potter 07:20 Start preping equitment 08:00 Leave for the mine Set up on mwog 50 mp/led MW09 140 Set up on mu 33 by Ri new pymp working we 13:00 Cloudy today but no Fain so far, the San eran poping out how ethen. Buy one ever Egtnot overwhelming present Sampled MW-33 13:20 13:30 jupch 14:09 SET UP ON MWOG mwob :5 fowing well 14:30 99mpp2 miloc@1455 pon MW27 520 600 Samples Finithed Packlyg eg dhe ball to the lodo 7:00 returned to lodge 7:10 ralibrating water autil & FWBid)

Location Red Dev ____ Date 082422 13 ine mon Horing /BL Project / Client Red Del N 1 J'SCUSER(S Ve a MW 26 DLAIN 129 y MW44 01) P.d MWYY 5/19/17 h13 9 Kin the UU po the brast connet/onto 11 typ when the do not work consistently w ð 5-mphe muss 3 on mw 45 6 hP Samt 10 MW45 41 MW46 On 5 4mpl Onmu 47 gp also merel to herve it's MI HEnto MNH ed 2 Somp MAD Rite in the Rain

Location Red DeVI) _____ Date ______ 14 Project / Client Red DeVil mine moi Horing /13 Vick Potter Rainv& het toda mu 49 (\mathcal{D}) NIR A phil tode Kink lines CONO PURPING Hed MWH 0945 Sampepe W 52 M No Latin 100017 to wet to Cristil & gdd - Sampled MW 55 4 pourping por 50 Ariver rayind ampled MW 50 13: 33 1400 Arive OMWE 1444 Sample MW 57 50g/ked throng & becoming chilled hegt ing back will finish held fomatows

Location Red DeVII Date 8/26/22 15 Project/Client Red DEVNMINE moniforing/BLM VICK Pot B35 Set up on MW 5 0853 water is chanky has Rotisti Perj'iP Lants Sampte nw 58 20941 returned to mw 9458 + ald brass airport, winterizaton need to volace. res anick conect 11:05 completed matingner of 56 111 was in good working order. T add ad ME ab -1-1 min 9 1305 We returned bock to base c sumple) the plantisto convince Juffered water hynn to when an N., Rite in the Rain.

Location Red Devil AK Date 08/27 Project / Client Red Devil Bianual Monifering 16 SWOO 8B SWOO 6 diFri Samp 0070 SW005/15 swid unch 1200 e on today are in the othe booku 6 iP

Location <u>Red Devil AK</u> Date 0/20/2002 Project/Client <u>Red Devil Moniforing</u> BLM, SOs Rain Safety brief. Discuss bear activity. 0700 Leave for mine. USD Arrive at mine. 0233 GW maisurements DTW 3335 Begin 6.67 At DTW A MW 33 0338 7,60 ft DTW. MW 32 0855 DTW 20.93 ft MW19 090.4 DTW 28 72 PL MW 18 0908 DTWA 15.02 ft MW 17 0917 OTW A 12.55 ft 0919 MW 16 DTW 20.150+ MW03 0942 DTW 7.40 ft MW 20 0946 DTW 8.64 ft MW 21 0750 DTW 9.72 ft MW 22 095.5 DTW 19.23 Pt MWOI 1006 DTW 22,16 ff MWIL 1013 DTW 27.04 ft INW 10 1016 27.33 ft MW 07 1020 34,84 Ft NWW 34 1024 39.63 \$4 MW 35 1027 15.72 PP MW36 1031 13.70 ft MWOS 1043 21.94 ft MWO7 1050 30. 90 ft MW.13 1054

Location Red Devil AK Date 2/22/22 Project/Client Red Devil Monitoring BLM 50s Rain Not measured jacked. 1059 MW121 MW23 16.31 ft DTW 1111 DTWX MUOL 19.06 84 1117 MW 24 1127 17,41 ft DTW MW 25 1131 31.93 AF DTW 1134 MW 26 33,54 Rt DTW 139 30,01 At MW27 DTO · MW 28 1141 28,56 ft OTW 1147 MWOY 26.35 84 DTW 1155 MW 43 88,90 A DTW 1204 MW 42 127,58 ft pru Lund. 12/0 31.56 ft. MW49 1244 DTU 64.43.ft MW 29 1250 prw 52,54 44 MW30 1257 DTW 1304 MW48 19.28 ft Drw 1311 mw 44 35.01 ft DTW MUSC 1318 DIW 34.66 # 44.84 1337 At MW45 DTW 1342 MW 40 34.00 Ft PTW 1348 37,45 ft DTW MW47 MW 52 1355 32.40 At DTW 1405 12.73 Af MUSS DTW # 1418 MW 59 122.20 DTW At

Rete in the Rain

46 Location Red Devil AK Date \$/32/32 Project / Client Red Pevil Annual Moniforing 505 Rain drop Barologger at removed Barologger 1455 MW39 3 ft btoc from MW.59. 84.87Ft DTW MW 39 1501 TD = 85.87 ff 49.50ft DTW MW 50 1509 DTW 42,33 Ft MWSI 1522 DTW 29.65 A MWSY 1533 30.35 ft DYW MWS8 1600 34,17 ft PTW MW53 1610 37.564 PTW NUW57 1625 38.50 ft DTW MW31 1632 DTW 128,93 Ft MW 40 Complete GW survey and transducer 1643 1650 downloads, All 8 transduccos downloaded successfully, Leave siter Arrive et lodge for and calibration. sample prep 1720 Agla

Location Red Devil AK Date 3/23/2022 Project/Client Red Devil Annual Monitoring 50s Cloudy 0700 Safety brief, 0755 Complete load out and leave for mine. 0820 Arrive at Mine and set up on MW 09 and MW10 Cellect MW10 sample. 1033 1035 Collect MW98 duplicate @ MW10. 1130 Complete sampling at MW10. More to MW 16 and MW17, Begin set up on MW17 to 1150 purge for sampling, Complete sapling at NWI7, Collect 1315 MS/MSD. Begin purging/ sampling at Mar16. 1330-Sample MW16. 1410 Complete MW Mo. Purge water 1500 using winterization kit. Set up on MOU 28, 1510 Collect sample at MW 28. 610 Complete sapling. Retarn to 1630 lodge. 1766 Arrive at ladge. Rite in the Rais

Location Red Devil AL Date 9/24/22 Project/Client Red Devil Annual Monitoring Blue 505 roggy Satury brief 0700 Louve for mine after load out 0745 Arrive at mine. Start with Mw29 1 nw 42. 0820 · and MW 42. Tissue with air leak at fittings, Attempt to field repair with new \$_____\$ fitting is unsuccessfuld Field splice with tubing and zig ties to hold sen Begin purging NW 42. Stabilized. Collect sample with sample 0940 1045 time of 1100, DE22 MW42GW Complete sampling at MWY2. Move to 112 MW43, Set up a MW 43. 1/25 Cellect 0822 MW43GW MS/MSD 1220 and duplicate 0822 MW98GW, Complete sampling at MW43. Set up on MW441. Beyin purging. Complete MW44. Move to MW 59. 1250 1335 1433 MW 59 1500 Set up on MW 59. Troubleshoot. loose air fitting, Replex with crimp fitting (non brass). Beyin purging. 15.50

Location Red Devil AK Date 8/24/22 49 Project/Client Red Devil Annual Moniforing BL 605 Clear Extremely turbic water during 1505 purge. (400+ NTU), Caplete sapling at MW59. Was able to fix air fitting with 17/2 spare parts, Leave site. 1725 Arrive at lodge. 1750 Rito in the.

Project/Client Red Devil Annul Monitoring BLA 40s Rain Safety brief and load out. Contact AAT about earlier 6700 0 800 flighti Leave for mine. Set up on MW 49 (NP) ad 0820 0900 MW 40(06), Complete sampling at MW40, Move to MWSI. 1042 Complete sampling at MWS1. Move to MWS4. 1045 1150 Complete sampling at MWS4. Collected duplicat (MW97) 1200 1310 at MW 54. at MW 27. More to MW 53. Complete sampling at MW 53. Leave site for the day, 1330 1430 1500 Arrive at lodger. 1530

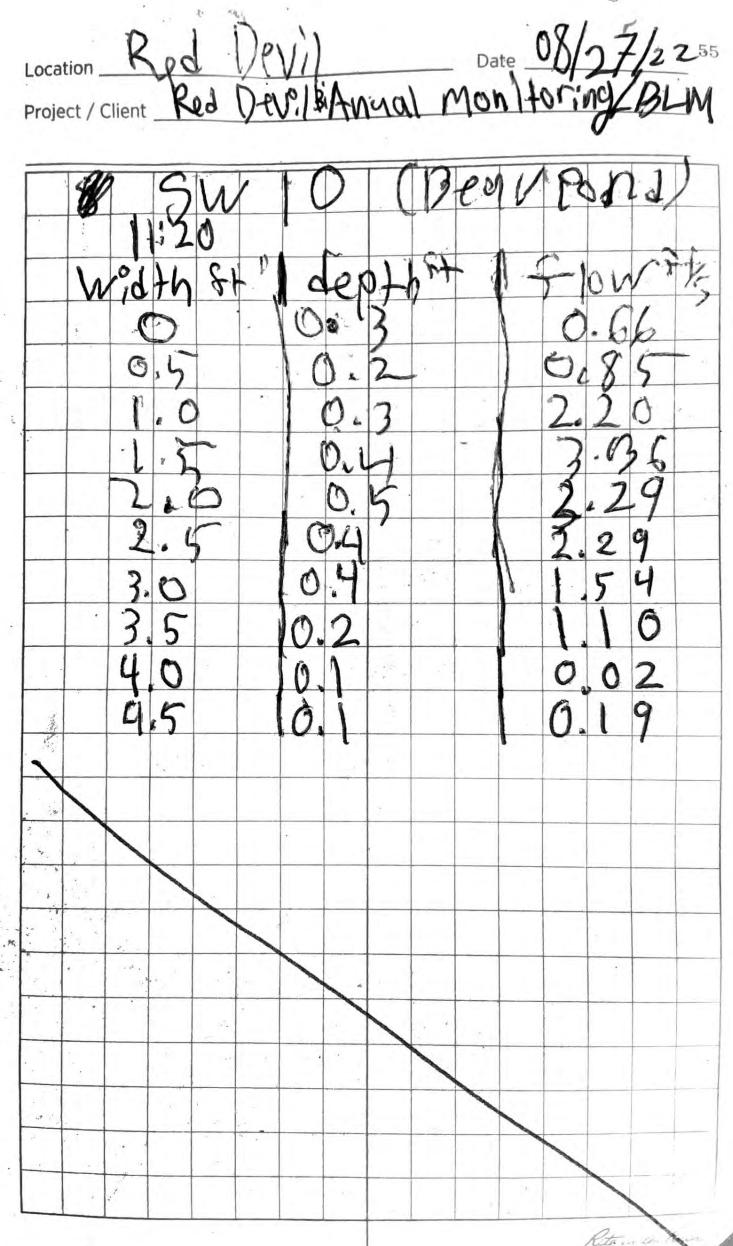
Location Red Devil AK Date 8/25/22 Project/Client Red Devil Annual Monitoring BLM 0700 Safet, brief. Begin load out. 0800 Leave for site. 0820 Arrive at mine. Set up at MW 26 and MW58, Replace pump at MW26 Collect sample at MC 845 MU26 120 Complete sampling at total 1230 MUDG Return to lodge to QC 1300 samples, Fild work complete for the day 1330

ņ

Location Red Oevil AK Date 8/27/22 Project/Client Red Devil Annual Monitoring 52 405 Cloudy windy Sabety brief. Plan out 0730 maintenance Load out for will maintenance 0830 and stream discharge. Leave lodge. 0845 Mine to collect stram Arrive at 0915 flow measurements, Beginning and progressing upstream, (ft) (44/3) (ft)1930 Width Depth Flow R008 0 0.50 0,10 1.0' 1.43 3.55 0:40 1.5 2 6.30 2.0 3.7 2.67 0.50 2.5 2.7 3.0 0.40 7.3 0.40 3.7 1.734.0 0.3() 7 0.2 1-37 8 0.1 2.00 0 9 1.57 5.5 0.10 10 1.22 6.0 0.10 elge 6.9 12 .0 13

Red Devil AK Date 2/27/2253 Location -Project / Client Red Devil Annul Monstoring 40es Foggy Mist Width (Pt) Depth (++) R006 Flow (4) Fage N 0.5 d 0 Ć 0 2 Ó Ø Ó 0 6). 6 i Rite in the Kai

54 Location Reddevil Date 08/27/22 Project/Client Red Devil Angui Mon Loring BLM flow F+15 SWIL wilth depth 10:47 0.5 0.5 C 500 0.3 0 9 0 F D15 0:3 0.4 . . . 0,4 0.2 0.9 0.1 693 0 1 L/min Swas (Seep) = 4.1 • •



56 200 Location Red Devil Date 3/27/202 Project / Client Red Devil Mine Annual Maritoring Perform will maintonance 1230 on monitorry wills. Riturn to Lodge. Riturn to 1500 A

Location <u>Red Devil</u> Date <u>8/28/22⁵⁷</u> Project/Client <u>Red Devil Annwal Monitoring</u> Satchy brief and pr 0800 sample bettles. 0845 Arri Leave for mine, 0910 Arrive of Mine to sample RDOEBand work upstream Collect ROOSB, 0915 C-plote RD08B. 3940 0945 More to RDOL. Collect 0222 ROOGSW More to RDOS(Seep) and 10/0 RD15. Collect 0822 Roos Sw and 1015 duplicate at 0822 RD99502 at 1018, Collect 0822 RD155W ms/msp 1030 More to RD10, 1105 Collect RD10 sample. 1125 Complete sampling Return to lodge for sompe prep and QC, 1135 1145 Rete in in

ATTACHMENT 1.4 GROUNDWATER SAMPLING FORMS

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le construction de la constructi	Consulting Inc.	
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Low-Flow Groundwater Sampling & Stabilization Form

Sample conection mormation						
Time Finish:	16.20		Checked By:	66	1 1	-
Well & Purge Info	a second s	in the	23 . 4.	-1 + -1	1.1	2
DTW (ft. bTOC):		-9 ft	TD-DTW=Water ^I Col	umn		
Liter/Foot:	-	L/ft		and the second se		
Liters in Well:		Sec. F	- Water Column x-L/ft	1. 1. 1.		
Three Well Volumes:		. L	Liters in Well x 3			2 AP 3
Sample Depth:		ft	Depth of Pump Intak	e		
10	1		1	, í l.	4"	2.47
and the second			1 La ra		the states	1
	YSI 51	6 MP 5	Serial No.:	11410	\$846	
Water Level Meter:	50117+	-102	Serial No.:	2141	1	1
Turbidity Meter:	MiddT	PW	Serial No.:	2020	07904	
	Aley	15	Serial No.:	554	510 11	
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Sample Collection	on Informatio		the second se	the second day of the	the second s	Nod
Parameter	# Containers			the second se		Initials
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otes:	-		2							
			51	s.e						
	1					_		and *St	abilizatio	n Data
Time (24 hrs)	Volume Removed (L)	Temp * *± 3% *C, min ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1454	L. L. B		8	STA	RT PURG	ING			2600	
1459	1.0	5.77	398	1.60	6.57	34.2	10,60	16,20	.100	
1504	•	6.13	390	1.38	6.68	32.0	11.88	-41	ti i	
1509		6:01	386	1140	6.70	22.9	14.87	11	u	
1414		5.97	381	441	16.75	33.8	10-81	11:	li	
5 80.	1.1	5.98	370	1,41	6.74	34.0	11,99	11	11 -	
19-24		6.09	377	1.36	6.76	33.3	10.30	1612	11	
120.		6-17	376	633	6.71	33.5	721	1))1	
534		6.13	325	1.28	6.78	32.9	9.54	C/	N	
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1000	Sundance	
	Consulting Inc.	
	Constitute Inc.	- ATTANE

Low-Flow Groundwater Sampling & Stabilization Form

Client/Site: Contract No.: Date: Time Start: Time Finish:	BLM Red Devil N 140L6321C0001 06/02/2 09/20	Nine 22	Project No.: Samplers: Checked By:	Well ID.: BU06-007 Nic K Po	MW09 Her	
Well & Purge Infe	ormation					
TD (ft. bTOC): DTW (ft. bTOC): Water Column: Liter/Foot: Liters in Well: Three Well Volumes: Sample Depth:		62 ft 625,50ft ft L/ft L ft	TD-DTW=Water Col See ***Well Volume Water Column x L/ft	Calculation*** table	20 - 30 A ***Well Volume Well Diameter 5/8" 2" 4"	1.11
Field Equipment						
Multiparameter Water Quality Meter: Water Level Meter: Turbidity Meter: Pump Type:	1525	PW	Serial No.: Serial No.: Serial No.: Serial No.:	29499 2020079	3 NA	
Purge Method:	Optimum Flow Ra	Inertial ate Set at $\frac{14}{14}$	Othe Seconds Refill	r: Seconds Discharg	je	
Sampling Method: Peristaltic Pump Bladder Pump : 	Optimum Flow R		Othe		Qupsi	
Sample Collecti	the second se		31548 CL	MS/MSD? :	Yes 🗆	No p
Parameter	# Containers	Filtered?	Preservative Nitric	Method 6020B LL, 7470A	Container Type	Initials
TAL Metals		No No	HCI	1631 LL Hg	8oz Glass	NP
Total LL Mercury Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	NP
			1 N N N			
		1	612121313			Page 1 of 2

Low-Flow Groundwater Sample & Stabilization Form

Well ID:	NW 09		Sample ID:	0622 M	WOGG	W		Sample Time:
Date: 6	12/22		Dup. Sample ID:					Dup. Sample Time:
Notes:	to all a	1.2	F 511	Sec. Sec.				
N49	to pull pai	M +0	lett co	nachen	- K	-		
-	Volume Temp	Spec. Cond.			Purging Turbidity		abilizatio	n Data
Time (24 hrs)	Volume Temp Removed *± 3% *C, min (L) ± 0.2*C	(µS/cm) *±3%		pH ORP (mV) ± 0.1 *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
0.19			START P	PURGING			(
10:17	5.91	(84	646 6	- 19 92.5	27.16	26.22	.225	
10:24	6.27	184	4.04 (5.48 80.0	29.67		.200	
10 29	6.85	190	420 6	53 75.2	300 Ely	526.45	.150	Turb, 1955 30.92
10 34	7.10	197	3.96 €	153 67.7	28.30	26.51	.100	
10 39	7.23	20%	4.10 6.	5 63.7	21,16	26.68	11	
1044	7.34	212	4,526	50 62,6	19.43	FEQ7	11	sup of
049	7.53	216	5.026	50 61.9	19.21	2/02	U	j ve sp
1054	2.47	218	4,496	.56 6,6	15.79	27.11	11	
1059	7.56	222	4.436	12 61.2	13.04	27.3	11	
1104	7.53	125	4.34 6.	52 59,2	10.91	27.37	11	
109	7.56	228		53 57.5	10.11	27.56	ti	
1114	7.152	231		54 56.2	9.07	27.70	11	stabill-zte begin symping
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Low-Flow Groundwater Sampling & Stabilization Form

Client/Site:	BLM Red Devil M	line		Well ID.:	MUIO	
			Project No.:	BU06-007		
			Samplers:	G. Garner	/	
			- complete.			
			-	GG		
DTW (ft. bTOC): 26,56 Nater Column:		Checked By:	00			
Well & Purge Info						
TD (ft. bTOC):	55.2	3 topung ft	Scre	eened Interval (ft.):	50-60.0	0
DTW (ft. bTOC):	26,56	ft				
Water Column:	L. C. F.	ft	TD-DTW=Water Co	lumn		
Liter/Foot:	0.6	os lit	See ***Well Volume	Calculation*** table	***Well Volume C	Calculation***
Liters in Well:		L	Water Column x L/f	(C. 1997) (C. 1997)	Well Diameter	L/ft
Three Well Volumes:	-	L	Liters in Well x 3	î	5/8"	0.06
Sample Depth:	56	.0 64 ft	Depth of Pump Inta	ke	2"	0.605
oumpie sepun					4"	2.47
Field Equipment				1.2.2.2.2	1000	
Multiparameter Water	NICI		Station P	110 04	21	
Quality Meter:		1 C	Serial No.:	06624	21	
Water Level Meter:	Dipper 9	52	Serial No.:	0705		
Turbidity Meter:	Micro J	PW	Serial No.:	2014 07	081	
Accession of the second			-	MP3	01365	
Pump Type:			nst Serial No.:	MP3	01365	
			nistSerial No.:	Mf3	01365	
Pump Type: Purge Method:	MP 50 B	alder /Sol	nstSerial No.: □ Othe		01365	
Pump Type: Purge Method: Peristaltic Pump	Mº 50 B	Inertial	□ Othe	ər:	-	
Pump Type: Purge Method: Peristaltic Pump Bladder Pump :	Mº 50 B	Inertial	□ Othe	ər:	-	
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method:	M [®] 50 B	Inertial Inertial ate Set at <u>12,5</u>	ロ Othe Seconds Refill <u>り, メ</u>	er:Seconds Discharg	-	
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method:	M [®] 50 B	Inertial Inertial Inertial	ロ Othe Seconds Refill <u>り, メ</u> ロ Othe	er:Seconds Discharg	ge @ 38 psi	
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method:	M [®] 50 B	Inertial Inertial Inertial	ロ Othe Seconds Refill <u>り, メ</u> ロ Othe	er:Seconds Discharg	ge @ 38 psi	
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump :	MESO B	Inertial Inertial Inertial Inertial ate Set at <u>12.5</u>	ロ Othe Seconds Refill <u>り, メ</u> ロ Othe	er: Seconds Discharg er: Seconds Discharg MS/MSD? :	ge @ 38 p≤1 ge @ 38 p≤1 ge @ 38 p≤1	No 🗆
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump :	ME SO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra ME Containers	Inertial Inertial Inertial Inertial ate Set at 13.5 n Filtered?	☐ Othe Seconds Refill <u>2, 5</u> ☐ Othe Seconds Refill <u>2,5</u> Preservative	er: Seconds Discharg er: Seconds Discharg Seconds Discharg MS/MSD? : Method	ge	No □ Initials
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collectio	ME SO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra ME Containers	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric	er: Seconds Discharg er: Seconds Discharg MS/MSD? : Method 6020B LL, 7470A	ge <u>38 ps 1</u> ge <u>38 ps 1</u> <u>Yes p</u> Container Type 250 ml Plastic	No ロ Initials オメ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg Seconds Discharg S/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オメ メオ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric	er: Seconds Discharg er: Seconds Discharg MS/MSD? : Method 6020B LL, 7470A	ge <u>38 ps 1</u> ge <u>38 ps 1</u> <u>Yes p</u> Container Type 250 ml Plastic	No ロ Initials オメ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg Seconds Discharg S/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オム メイ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg Seconds Discharg S/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オム メイ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オム メイ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オメ メオ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オメ メオ
Pump Type: Purge Method: Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	MESO B Optimum Flow Ra Optimum Flow Ra Optimum Flow Ra Differmation # Containers 4 4 	Inertial Inertial Inertial Inertial ate Set at 12.5 n Filtered? No No	□ Othe Seconds Refill <u>2, 5</u> □ Othe Seconds Refill <u>2, 5</u> Preservative Nitric HCI	er: Seconds Discharg er: Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg 1631 LL Hg	ge ← 38 p≤1 ge ← 38 p≤1 Yes ∲ Container Type 250 ml Plastic Boz Glass	No ロ Initials オメ メオ

Low-Flow Groundwater Sample & Stabilization Form

/	2						GW			Sample Time: 1115
Date: 6/	2/22	2		Dup. Sample	ID: 04 5	12 MW9	19GW			Dup. Sample Time: /// 8
Notes: Du	pand	MS	IMSD	collect	Fed					n n o
	-		1	-			Purging	and *St	abilization	n Data
Time (24 hrs)	Volume Removed (L)	Temp *± 3% *C, min ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%		Flow Rate	Color/Odor/Notes
1010			£-0	STA	RT PURG	NG	1			Adjust flow and check pump
1035	1.0	7.17	0,324	16,2	6.69	6.4	11.34	27.73	0.10	Adjust flow and cleck pump Oil 4/min @ 12.5-2.5 4CPM @ 38 psi
1046	1.5	7.41	0.319	14.1	6.79	9,3	9.29	27.73	0,10	
1045	2.0	7.50	0,318	13.1	6.93	6.3	6.45	27.79	0,10	
1070 1076 1075 1055 1055 1100 1103 110 1115	3.0	7.74	0.316	11.5	7.09	7,8	3.44			
1100	3.5	7.78	0,316	10,8	7.14	3.4		27.80		and the second se
103	4.0	7,82	0,316	10,1	2,18	-1.7	2.52	27.80		
110		7.9/	212	9.8	7,21	-0.9	4.14	27.81		
115	5.0								0.10	Collect sample @ 1115
					1000		0			pro Carro
0					1			100		
								1.00		
	-				100					
		1.3	10	12.21	1					
		1.5.10		EL						
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				-						
	1.00	1		-		1		17		
	1.14			12 3	1	1.0		1		
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			1.000	10.121	- 3		1			
		1.1		112						
				1010			-			
			1.5	ALC: N		115				
	100		11111		-	10				
-	0.00	1 - 1	100	-	-		Samela	d?: Ye		

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8	Consulting Inc.	15	Low-I	Flow Grour	ndwater Sa Stabilizat	
Client/Site: Contract No.: Date: Time Start: LOV Time Finish:	BLM Red Devil I 140L6321C0007		Project No.: Samplers:	Well ID.: BU06-007	MWI SK Pot GG	6 ter
Well & Purge Info	ormation	1.1.1.1.1				
TD (ft. bTOC): DTW (ft. bTOC): Water Column:	8.	4.14 ft 287 ft ft	TD-DTW=Water Co	blumn	11-21.0	1
Liter/Foot:		605 L/tt		e Calculation*** table	Well Diameter	L/ft
Liters in Well:	Of C		-	1	5/8"	
Three Well Volumes:		L	-			0.06
Sample Depth:		ft	Depth of Pump Inta	ke	2"	0.605
Field Equipment					4"	2.47
Quality Meter: Water Level Meter: Turbidity Meter: Pump Type:	Soli 74 Alex	556 MP) 102 TPW	Serial No.: Serial No.: Serial No.: Serial No.:	294 2014 554	991 07081 151	
Purge Method:						
Peristaltic Pump		Inertial	□ Othe	er:		
	Optimum Flow Ra		Seconds Refill	Seconds Discharg	De	1.1.1
Sampling Method:		NA 201221				
Peristaltic Pump		Inertial	C Othe	er:	-	- 10
Bladder Pump :	Optimum Flow Ra	ate Set at	Seconds Refill	Seconds Discharg	ge	
Sample Collectio	the second se	the second se		MS/MSD? :	Yes 🛛	No 🏚
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric	6020B LL, 7470A		100
Total LL Mercury	1	No	HCI	1631 LL Hg 1631 LL Hg	8oz Glass 8oz Glass	100
Dissolved LL Mercury	<u> </u>	Yes			002 01035	14 1
		1.18	-			1
		al and	- Man Man		Constant States	
		, <u>bi</u>		-		1
	-					1
	-	19.1			141-12	

Low-Flow Groundwater Sample & Stabilization Form

				1.1				and *St	abilization D	ata	
ne Irs)	Volume Removed (L)	Temp *± 3% *C, min ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes	1
05			1.1.1.1	STAF	RT PURG	NG			1	STATES IN THE STATES	
0	1.1	9.31	450	2.65	6-23	132.6	0.00	9.45	0.00	LICE HILL B	
15	1	9.26	448	1,91	6:28	61.7	0.00	9.72	0-100		2.3
-0		9,29	448	2.04	6.29	60.3	0.00	9.87	0.100	WZ	
5		5.82	450	2.00	628	57.9	The	1.85	ILK	- turbity 0:17 0.00 turbity	
0	NP	0 0	1100			1	0.27	1.25-1.			
5	wry	102 11	rend	3.	3.1	~		1.1.1	1	Non man	1
0	No. E	0		and a	1 6	1.1		-		Stabilized	
		1		111	1					- All	1.1
- 6	151		7.4		1					sympted 11:31	1
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-	-	-			-	-					-
			-	10121		100		-			-
-			1.00			6 L		ed?: Ye	1		



Client/Site: Contract No.: Date: Time Start:	BLM Red Devil N 140L6321C0001 6/5/22 9:10	line	Project No.: Samplers:	Well ID.: BU06-007 MICK	MW17	
Time Finish:	11:00		Checked By:	(36	1
Well & Purge Infe	ormation			Sal	1111	
TD (ft. bTOC): DTW (ft. bTOC): Water Column:	<u> </u>	<u>e 64</u> A	TD-DTW=Water Col	umn	41, 5- 51	
Liter/Foot:	0,	605 L/ft	See ***Well Volume Water Column x L/ft	Calculation*** table	Well Diameter	L/ft
Liters in Well:	-	L	-		5/8"	0.06
Three Well Volumes:		L	_ Liters in Well x 3		2"	0.605
Sample Depth:	-	ft	Depth of Pump Intak	e	4"	2.47
Field Equipment	1		经济公司工			
Multiparameter Water Quality Meter:		MPS	Serial No.:	114	100848	
Water Level Meter:	JO117+ 1	62	Serial No.:	- 414	44	
Turbidity Meter:	Microte	N	Serial No.:	12011	1070 21	
Pump Type:	Alexis		Serial No.:	- 554	1	
Purge Method:		Inertial	C Othe	Second Street		-
Bladder Pump :	Optimum Flow Ra	ate Set at	Seconds Refill	_ Seconds Discharg	je	
Sampling Method:		Inertial	C Othe	-	3-14	
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	_ Seconds Discharg		/
Sample Collecti				MS/MSD? :	Yes 🛊	No 🗆
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	2	No	Nitric HCl	6020B LL, 7470A 1631 LL Hg	8oz Glass	Nh
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	0-10
Dissolved LL Mercury	3	Yes	пы	i voi ce rig	-or church	1
					17	(
71.1.1						
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				1	. N. C.	

					N	(P				Low-Flow Groundwater Sample & Stabilization Form
Well ID:	Mu	117	-	Sample ID:	the		1622N	NHE	6W/	Sample Time: () 2 ()
Date:	5/5/	22		Dup. Sample				1 mp		Dup. Sample Time:
Notes:	11		67							
								-		
								and *St	abilization	Data
Time (24 hrs)	Volume Removed (L)	Temp *± 3% *C, min ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
69:25	the first			STAF	T PURG	ING			0-10.0	
09:30		8:30	206	11.70	6.81	80.0.	0,00	10.60	11	
09:30		8.20	198	10.87	6.96	82.8	0.00	10.64		
09 40	-	8.36	19-7	10-26	6.43	32.7	0.00	4	11	and the second sec
09 40	1 1	S.Co	194	1017	Gac	83.7	0.00	11	11	
0950		8.78	103	9,75	6.98	83.0	0.00	11	II	
A9 55		000	194	975	100	81.30	0.00	4	11	
10 00		7 01	192	9 78	911	78.9	0.00	14	11	
10 05	1	7.76	193	9.54	7.02	704	6.00	11	11	
10 10	1 - 1	701	102	9.56	Zall	74.7	0.00	u	11	1111
4615		8.84	193	9.65	5.5	74.2	0.00	n	1	Stabilized .
1010		0.07	17	1)	(10)	1-1-1-1	0100	a.	11	
TATA			-	1211	1					sampreing
-	-	10001000				-				
	5 5 4	1.1				58				
	- post		-	1.1.1	1					
	1				-		-			
	-	-	-		1.16		1	-	-	
_	-			S. 1.	1	1.000	-	1000		
1000			_							
	2		1.6.3.1	1331			1		1.1	
2 11			4	0-1-1-1	1				-	
	1.1.1		1		2 2				1	
				1210						
	1.001				-					
				1 1 21	5 3			1		
	1-2-7			1 13		1				
	1.21		1.55			146 1			1	
	1 5			1010	1.1		24 H		X	
1.55		10			1	-	Sample	d?: Ye	s t No	0
	~	2/1								



Client/Site:	BLM Red Devil N	line		Well ID.:	MW26	
Contract No.:	140L6321C0001	1.1	Project No.:	BU06-007		
Date:	6/5/20		Samplers:	GG	1	
Time Start:	1208					
Time Finish:	1400	-	Checked By:	66		
Well & Purge Info				1		
TD (ft. bTOC):	45.00	ft	Scre	ened Interval (ft.):	32.0-42.	00
DTW (ft. bTOC):	32.01	ft	-		11	
Water Column:	12.79	i ft	- TD-DTW=Water Col	lumn		1
Liter/Foot:	0.60		See ***Well Volume	1. Sec. 1. Sec. 1	***Well Volume (Calculation***
Liters in Well:	יריל		- Water Column x L/ft	Contraction of the second	Well Diameter	L/ft
Three Well Volumes:	23,0			1 1 1	5/8"	0.06
	0-010		-	1	2"	0.605
Sample Depth:	+-1	ft	_ Depth of Pump Intak	e	4"	2.47
Field Equipment	1.			ALL AND	TIT	
Multiparameter Water	- Inder		1	isensie -		
Quality Meter:	YSI	536	Serial No.:	068240	2)	
Water Level Meter:	DipperT	2	Serial No.:	0705		
Turbidity Meter:	Micro	TPW	Serial No.:	2020 0	7903	1.0
	1001000		-	and the second second	100	
Pump Type:	1.7.	NA	Serial No.:	NA		
Purge Method:		ž	1 1		0.4	
Peristaltic Pump		Inertial	X Othe	. Bailer		
Bladder Pump :	Optimum Flow Ra	ate Set at	Seconds Refill	_Seconds Discharg	ge	
Sampling Method:		1 1		1-1010	And A Section 1	
Peristaltic Pump		Inertial	Othe	r: Bailes		1 21
		ate Set at	Seconds Refill	- Internet	1	
Bladder Pump :			Seconds Renn		1	No. 5-4
Sample Collection			Destauration	MS/MSD? :	Yes Container Type	No 🔀
Parameter	# Containers	Filtered?	Preservative Nitric	Method 6020B LL, 7470A		12/2
TAL Metals Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	Dy
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	\$14
200000000000000000000000000000000000000	1			14546-05	No. of Contraction	
			-			1
	-	1		-2-E-283		
1.1.1.1.1.1.1	a family of			1		1
			1 Contractor	a lotte	PT-1	1212
	-	1 1	1 1 1 1		1	
		1.18	1	1 6 6 7 1		
1	1211	1. 1. 1. 1. 1. 1.		Section 1	dealers and	1 - Land
	_	12.12				Page 1 of 2

Well ID: N				Sample ID:	062	anw	2664	7		Sample Time: 1340	
Date: 6/	15/20	22	1.1	Dup. Sample	ID:	-		-		Dup. Sample Time:	
Date: 6/ Notes: Bo	iler s	amp le	1.00				1.1				
	1.3.4	1		9.14							_
-	Volume	Temp	Spec. Cond.				Purging Turbidity				+
Time (24 hrs)	Removed (L)	Temp *± 3% 'C, min ± 0.2'C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	cml ALS Color/Odor/Notes	
1222		1 2 0.2 0	1 2010	STAF	RT PURG	ING	1 10%				
1223	9.8	8.95	640	1.73	6.12	60.1	72.91	32.21	-	444	
1223 1235 1245 1300	8.5	6,63	613	2.26	6.18	45.0		36.92	-	398	
1245	17.0	6.01	619	2.61.8	3 6.37	-3.7			-	396	
1300	26.0	5.68	619	1,91	6.46	15.8		38,50	-	38/	
1315	35.0	6,35	615	2.06	6.50	-0.9		40,32			-
1315 1331	45	6.21	600			-1.9	54.65			385	
1336		6,21		2,16	6.58	-10.8	52.37		-		
										collect sample @ 1340	-
		1	1	Cherry	1.00		2				
	1.5.1								2		
	1.5.1		1.7-5						1		
			12						100		
		1.1.1		111			1			201	
	Ler 1		1-1-1								
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				. 1 1	- 1						
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	1		1 - 1 - 1	I HO							
	1		0.04	22121	2-1						-
1.1.1	1.64			1-1-23							-
	-										
	5 3	1-1									-
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1.00						8.4.1	1		1 1		+
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	Consulting Inc.	
		A STAN

Client/Site: Contract No.: Date:	BLM Red Devil N 140L6321C0001	line 122	Project No.: Samplers:	Well ID.: BU06-007	Potter	27
Time Start: Time Finish:	13:57		Checked By:			
Well & Purge Infe	ormation				1.00	10000
TD (ft. bTOC): DTW (ft. bTOC): Water Column:	35. 25.	65 ft 1 <u>5 ft</u> ft			23.0 - 33.	
Liter/Foot:	0.00	5 L/ft	See ***Well Volume	Calculation*** table	***Well Volume	the second s
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	Depth of Pump Intak	e	2"	0.605
					4"	2.47
Field Equipment						1
Multiparameter Water Quality Meter:	YSI	556 M	Serial No.:	11 H1	00848	
Water Level Meter:	Soli Jt ma	Herlaven met	Serial No.:	29499		
Turbidity Meter:	M'aDTP	N	Serial No.:	20200	793	
	the	1	- Constraints	N	R	
Pump Type:		5-41	Serial No.:	IV		
Purge Method:	Optimum Flow Ra	Inertial	Othe Seconds Refill 7	r: _ Seconds Dischar	qe	
Sampling Method:	opunum now ru					
Peristaltic Pump		Inertial	C Othe	r:		
Bladder Pump :	Optimum Flow R	0.1	Seconds Refill		ge 🔘 22	P59 -
Sample Collection	on Informatio	n		MS/MSD? :	Yes 🗆	No p
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A	250 ml Plastic 8oz Glass	Xlo
Total LL Mercury	(No	HCI	1631 LL Hg 1631 LL Hg	8oz Glass	WF 2
Dissolved LL Mercury		Yes	HCI	1031 LL Hg	OUZ Glass	
			1	10	C	- 1
					The second	- 1
			,			- 1
			y Ya we da			

D:	MW	VL7		Sample ID:		0627	-MV	127	GW	Sample Time: 14,55
06/	021	22		Dup. Sample	ID:					Dup. Sample Time:
	Sara	not th	ial D	Ti						
-	TOTY	101 11	Tert N	1.00	-	-	Duraina	and tCt	abilization	Data
me	Volume	Temp	Spec. Cond.	DO (mg/L)	pH	ORP (mV)	Turbidity	DTW	Flow Rate	Data
hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	*± 10%	*± 0.1	*± 10 mV	(NTU) *± 10%	(ft)	Umin	Color/Odor/Notes
57				STAF	RT PURG	ING				
581	-	1.1.1.1.	1.1.1							- Pump mail fyction pulled working @
83									- 1.2	-14:02
80	15	7.17	493	5.87	6.14	75.3	6,28	25.19	1300	
13	2.25	7.15	491	4.37	6.16	71.3	6169	25.51	150	
18	3.00	6.97	491	3,93	6.7	69,8	2.81	26.51	ü	
13	3.75	6.74	489	3.59	6.18	65.9	5.50	26,57	11	
28	4.50	6,60	486	3.76	6.18	546	5.62	25.51	11	t
77	5.15	6.24	488	3.11	6.21	94.3	6.87	11	4	
X	6.00	6.68	488	3.10	6:21	57.7	6,88	li	11	
3	5.75	6.81	489	8.94	6.21	521	8.64	11	11	
8	a DT	6:97	492	2,91	6.22	521	8.30	11	71	
-3		16.92	492	292	6.22	51,9	8.06	M	11	Stabilized begin sampling
		U					0			5ymp/ed 14:55
					1000					
									5	
	1.1	11	1		201				-	
		1.2.14		3	6-1					
		14							1	
				172	14-11					
				5 21	1	1.11	1		1	1. 1
	1 1				1	122			1.1	S
		-							1.31	
	2				1/		191	-	X	
		· - 1					Sample	d?: Ye	s t No	

Contraction of the local division of the loc	0 .	
1 mar	Sundance	
	Consulting Inc.	
	consulting lies.	- America

Client/Site: Contract No.: Date: Time Start:	BLM Red Devil 140L6321C000 06/02 12:6		Project No.: Samplers:	Well ID.: BU06-007 NICK	MW2 Poffer	-6
Time Finish:	12:4	0	Checked By:	60	5	
Well & Purge Info	ormation		y			
TD (ft. bTOC): DTW (ft. bTOC): Water Column:	23	5,58 ft ;50 ft ft			530-63.	- Al
Liter/Foot:	0.6	,05 L/ft	See ***Well Volume	Calculation*** table	***Well Volume C	
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	Depth of Pump Intak	e	2"	0.605
	1000				4"	2.47
Field Equipment					111	
Multiparameter Water Quality Meter:	VSI 1	556 MPS	Serial No.:	114100	0848	
Water Level Meter:	Soll)+ w	+ter Lavel meter	Serial No.:	29499	1	
Turbidity Meter:	Mir fo T	PW	Serial No.:	202007	793	
Pump Type:	bladda	C	Serial No.:	NA	E.	2
Fump Type.						
Purge Method:						
Peristaltic Pump	-	Inertial	□ Othe	-		
Bladder Pump :	Optimum Flow F	Rate Set at	Seconds Refill	_ Seconds Discharg	ge	
Sampling Method:						
Peristaltic Pump		Inertial	Othe		0	
Bladder Pump :	Optimum Flow I	Rate Set at	Seconds Refill 7	_ Seconds Discharg	e @ 40 P.	59
Sample Collection	on Informati		1. 2. 2	MS/MSD? :	Yes 🗆	No to
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric HCI	6020B LL, 7470A 1631 LL Hg	80z Glass	VV.
Total LL Mercury	(No	HCI	1631 LL Hg	8oz Glass	2 ho
Dissolved LL Mercury	+ +	Yes				V
1 1-1 - 1	1.1			1 2	1.000	See Alera
					1	
	-					1
	-					6.5
						1 and
						1
			1		A	1

ID:	MW	28		Sample ID:		22 N	1W2	8G1	N	Sample Time: 3:30
	06/62	122	-	Dup. Sample	ID:	_				Dup. Sample Time:
E				CLOP 1						1 St 1 St 1 St 2 St 2 St 2 St 2 St 2 St
-	1.1.1	-	_	1.1		_	Duraina	and *Ct	abilization	Data
ïme	Volume	Temp	Spec. Cond.	DO (mg/L)	pH	ORP (mV)	Turbidity	DTW	Flow Rate	
4 hrs)	Removed (L)	*± 3% *C, min ± 0.2*C	(µS/cm) *±3%	*± 10%	*± 0.1	"± 10 mV	(NTU) *± 10%	(ft)	L/min	Color/Odor/Notes
52	1-1			STAF	RT PURG	ING		2+NE	1200	MOCOION
57		6.65	263	2.98	6.67	69.6	5.70	24th	11-	23.5 DIN
02		5.73	256	2.74	6.84	67.5	6.55	23.48	11	23.48DTW
07	1	5.56	252	170	6,90	61.8	5:72	23.55	11	
(2		5.51	251	1.71	6.91	56.5	3.55	47.99	11	
17	1	5.47	250	1.50	693	42.6	1.95	23,55	1	
22		5.59	250	1.47	693		2.26	23.50		
17		5.55	240	1.43	6.93	427	1.86	23,50	ų	Stablized Started
2	N7				2	1.0				Samping 4+ 13:70
t	npit	19					<u></u> ii			
h	9 his	4						-		
				CT T R			Sec.	1 2 3	-	
				1.2.5						
					-		2 13		-	
	111						1.1			
1				-	2				1	12
	1	1			- 1		1			
								-	1.1.1	
		4			1			1	1.00	Cult
	1.00			1112						
									1	
										151 12
									5	43
1.3										
			_						/	
	1.1	1 .0	1	1000	-		Sample	ed?: Ye	s 🗹 No	0
tial of Sa	mpler: _/	NP								



Client/Site:	BLM Red Devil N	line		Well ID.:	MW29	
Contract No.:	140L6321C0001		Project No.:	BU06-007	1	
Date:	6/2/22		Samplers:	GG		
Time Start:	1555			A 2		
Time Finish:	1720		Checked By:	GC		
Well & Purge Info	ormation					
TD (ft. bTOC):	71,	50 ft	Scre	ened Interval (ft.):	59-69	
DTW (ft. bTOC):	50.05	ft				
Water Column:	1.00	ft	TD-DTW=Water Col	umn		
Liter/Foot:	0,60	L/ft کر	See ***Well Volume	Calculation*** table	***Well Volume C	alculation***
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	 Depth of Pump Intak 	e	2"	0.605
campio ropan	-		-		- 4"	2.47
Field Equipment						
Multiparameter Water	Y51 5	<1.	Serial No.:	ALGOUDI	10.1	
Quality Meter:			-	8662421	-1	
Water Level Meter:	Dipper	12	_ Serial No.:	0705	1.00	
Turbidity Meter:	Mycro TI	°W	Serial No.:	2014 07	160	
Pump Type:	MP-50/	Solinst	Serial No.:	1365		
Purge Method:				1		
Peristaltic Pump		Inertial	□ Othe	r:		
SA SUCCESSION	Optimum Flow Ra	Fr to tot at	Seconds Refill _ 7	Seconds Dischar	ne re un pei	
Bladder Pump :	Optimum Flow Ra	ale Set al 9			so C 10 psi	
Sampling Method:	П	Inertial	Othe	-		
Peristaltic Pump						1
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill _ 7	_ Seconds Dischar	ge e 40 ps	/
Sample Collection	on Informatio		1.2	MS/MSD? :	Yes D	No 🖌
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric HCI	6020B LL, 7470A 1631 LL Hg	8oz Glass	15 134
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	90
Dissolved LL Mercury	1	Yes	HCI	TOOT EE TIG		An
				1.94	12.1	
	12-21-3		-			
		244	A CONTRACTOR			P
	1		1		10000	-
			1			-
					1	1
				19 118		-

Well ID:	MW29	9		Sample ID:	062	2 MW	2964	J			Sample Time: 1650
Date:	6/2/2			Dup. Sample							Dup. Sample Time:
Notes:										1	
		_			_		Pullin		1.11	D.	the second se
	Volume	Temp	Spec. Cond.				Turbidity		abilizatio		
Time (24 hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	cond uS/cm	Color/Odor/Notes
1555	1.1.1			STAF	RT PURG	NG					
1605	0.7	11,15	645	1.75	6.59	46.5	70.93	50,10	0,07	472	
1610	1,05	11,20	618	1.01	6,59	-4.5	65.73	50.11	0.07	455	5 5 5
1615		11.71	564	0.80	6.58	-2211	44,28			420	
1620	1.25		553		6.59	-29.4	35.64	50,11	0.07	411	
1625	2.10	11,48	548			-32,1	28.17	50.11	0.07	407	
1610 1615 1625 1625 1630 1635 1640 1645	2.45		543			-32.3		1	0,07	404	
11,35		11.43	541				33.39			401	
1640	3.15	11.01	540	0.42	6.67	-46.6			0.07	395	
1645	3.50	10.59	538	0,42	6.66	-42.4	33.04	50,11	3.07	390	
1650					1		00101	Din		2.0	Cellect samples @ 1650
	1.1				1						Supret C 1050
		1						1.1			4
	1	N	1		1		-				
		1.7.5	1.1.1		100.1						
1.1				1		15		-			
				1						1	
							1	1.00	1		
-							-				
		-	-		-					1 1 1 1 1	
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		-					-				
				-	-				-		
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		-			-		-	-			
					-	-	-	- 57	-		
					-				-		
_					-						1.0
					-	1.2					
	111	1.14			_		Sample	d?: Ye	S N	o 🗆	

Initial of Sampler:

Page 2 of 2

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	Consulling Inc.	
	Consulting Inc.	-

Client/Site: Contract No.: Date: Time Start: Time Finish:	BLM Red Devil M 140L6321C0001 1250 1250 1347		 Project No.: Samplers: Checked By: 	Well ID.: BU06-007	MW 33 Ity Potr	
Well & Purge Info	rmation					1
TD (ft. bTOC): DTW (ft. bTOC): Water Column: Liter/Foot: Liters in Well: Three Well Volumes: Sample Depth:		1.40 ft <u>0</u> ft ft 05 L/ft L ft ft	TD-DTW=Water.Co See ***Well Volume Water Column x L/ft Liters in Well x 3	Calculation*** table	/ 2 - 22 ***Well Volume Well Diameter 5/8" 2" 4"	
Field Equipment						
Multiparameter Water Quality Meter: Water Level Meter: Turbidity Meter: Pump Type:	Y) (51 Soll)k Micro AleXi	162 192 19W	Serial No.: Serial No.: Serial No.: Serial No.:	29499 201402 5546	100140 1 081 71	
Purge Method:	Optimum Flow Ra	Inertial	Othe	-	ge	
Sampling Method:	Optimum Flow R	the new second	Othe		ge	
Sample Collectio	n Informatio	n		MS/MSD? :	Yes 🗆	No
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric HCI	6020B LL, 7470A 1631 LL Hg	250 ml Plastic 8oz Glass	Xh
Total LL Mercury Dissolved LL Mercury		No Yes	HCI	1631 LL Hg	8oz Glass	hall

ate: 6	MW	12		Dup. Sample	ID:	2 MI			- 1-	Dup. Sample Time:
tes:		~	-			1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 1911 - 19				
		1	1.1			1	Purging	and *S	tabilization	n Data
Time (24 hrs)	Volume Removed	Temp *± 3% *C, min	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	Color/Odor/Notes
12 50	(L)	± 0.2°C	1 376	STAF	RT PURG	ING	1076	-		
1 55		12:11	224	12,21	6.19	145	0.00	4,40	D-100	
300	1 2	11.33	207	10.19	6.37	1000	0.00	11	11	
305		11,09	207	10.32	0.37	82.2	0.00	11	11	pre-terret () ()
310		10.91	203	10.18	6.45	82.2	10	11.	11	P1 14 / P1
315		11, 37	202	9.6.5	GUIU	82.1	11	11	Tu .	Stel hilizia
1.1.1				1.0.1	Dint	0-1		1.		Samplin 2
320				100	197	1.1				- Purid
	and i	Diget Pro	The Contract							
		the state			-					the second s
		4	and the second	NEW CONTRACT						
									-	
		1000	1.25%		-			-	-	
-		15-17-54		11	-					
			15	300						
	1.2			- anger						
		-	- ford of						1	and the second
				1.1.1	-					and the second sec
				-	-	1.1.1.1	· · · · ·			
11				3.2	- 6			-		
			1147	1 - 7 - 7	-	4	17	2		
				115.2	-	1.1			-	
					1	1.1			1	
	1									
		121	1				6		_	
			5 15-1	1.5	103		S and	-	1	
- 1	111	b det	1	1112		6.515			18	
						111-2			1. 19	
1.1.1				211121	8.00	111-1		-		
	-			-			Sample	d?: Y	es th/N	lo 🗆
nitial of Sa	. /	9-11-	_						T/	Page 2 of



Client/Site:	BLM Red Devil N	line	1.00	Well ID.:	MW 40	1
Contract No.:	140L6321C0001		Project No.:	BU06-007	S	
Date:	6/3/22		Samplers:	GG.		
Time Start:	.0800		0		31. J. J.	
Time Finish:	1012		Checked By	GG	1000	1.12
Well & Purge Infe	ormation		24		and the	E
TD (ft. bTOC): top of	pmp 135	.31 ft	Scre	ened Interval (ft.):	119-13	9
DTW (ft. bTOC):	126	19 ft	- 11 M		-	1 2 3 4
Water Column:		ft	TD-DTW=Water Col	umn	and the second	1
Liter/Foot:	0.4	05 L/ft	See ***Well Volume	Calculation*** table	***Well Volume	and the second second
Liters in Well:		L	Water Column x L/ft	- 1	Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06
Sample Depth:	136.	80 ft	Depth of Pump Intak	e	2"	0.605
					4"	2.47
Field Equipment			E	12013	4.1.1.1.	-
Multiparameter Water Quality Meter:	YSI 55	le	Serial No.:	114100	848	
Water Level Meter:	Dipper Te		Serial No.:	0705		
Turbidity Meter:	Micro TP.		Serial No.:	20200	7903	
Pump Type:	MP-50		Serial No.:	1365		
Duran Marthautz			104 U	1 .	11.	5
Purge Method:		Inertial	□ Othe	r	1.87	
				-	a a is a	d
Sampling Method:	Optimum Flow Ra	lie Set at	Seconds Relin	_ Seconds Discharg	ge C G P	5/
Peristaltic Pump		Inertial	Othe	6 . / S. L .		
Bladder Pump :	Optimum Flow R	te Set at 35	Seconds Refill 25	Seconds Dischard	ae and a	
Sample Collectio				MS/MSD? :	Yes a	No 🗶
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A		66
Total LL Mercury		No	HCI	1631 LL Hg	8oz Glass	66
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	66-
	-		1			2
				Vi prime 1.1	11 11 11 11	
	S		1			1
				Ir man		
			-		1.1.1.1.1.1.1.1	- I m

Well ID: MU	140		- 1 B	Sample ID:	0422	MW4	OGW				Sample Time: 0910
Date: 6/	3/22			Dup. Sample	ID:	-	-		-	-	Dup. Sample Time:
Notes:	Leaky	air fi	Hing .	Dup. Sample	replace	e ment,					
	(0			0	Purging	and *St	abilizatio	n Data	
Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	End us/cm	Color/Odor/Notes
0822	1			STAF	RT PURG	ING			1	1.1.1.1	
0832	1.0	6.45	572	38.64	6.61	130,0	14,04	126.20	01	369	
0837	1.5	5.79	573	12.91	6.71	75,3	18,22	126.20	0.1	363	significant orange/brown particulates
0842	2,0	5,82		9.50	6.73	67.9	51.74	126.20	0,1	368	0
0849	2.5			13.00		-			-		Damped flow through cell to clear particulate
0852	3,0	6.84	591	5.09	6.86	61.4	19.46	126.20	0,1	386	
0852	3.5	7.13	590	4.78	6.88	62.4	14.27	126.20	0.1	389	/
1902	4.0	1.57	390	3.95	6.90	61.0	9,69	126.2	0.1	394	
0902	4,5	8,03	591	3.64	6.91	58.6	9,69 7.08	126.20	0,1	400	
0910			1		1.1						Sauple time @ 0910
0.70	1000			1			1	1.5	1		7
	-								1		
1 - 1			1.00					1. 21	2		
-										1-2-11	
				1				1			
										1	
	-	-					1. L		0.000		
				1.1.1			1	-	12	1	211
					5.1	-		1	10 8	1.1.1.1.1.1.1	
										1 1 2	
-	-		1	1.1.2					11		
	-	-	-				-				
					-						
	1		1	1 2							
-	-	-							1	2.21	
	-	-		1 10					1.		
	-	-			-				12 1		
	-	-		-	-	1.1.1	1		1		
				1	-	1	Samul	ad2 · V	es 🖄	No 🗆	
1		~ k					Sampi	cur. 1	69 (1		Page 2 of 2



Client/Site:	BLM Red Devil	Mine	-0.1	Well ID.:	MW 42	
Contract No.:	140L6321C000	1	Project No.:	BU06-007		
Date:	6/2/22		Samplers:	GG	1	
Time Start:	1240					
Time Finish:	1412		Checked By:	GG		
Well & Purge Info	ormation		lear an		and the second	
TD (ft. bTOC):	142.35	ft ft	Scre	ened Interval (ft.):	119-139	
DTW (ft. bTOC):	121,72) ft				1
Water Column:		ft	TD-DTW=Water Co	lumn		1-2-2-2
Liter/Foot:	0,60	5 L/ft	- See ***Well Volume	Calculation*** table	***Well Volume	Calculation***
Liters in Well:		Ĺ			Well Diameter	L/ft
Three Well Volumes:		L			5/8"	0.06
Sample Depth:	137.			(e	2"	0.605
	- 13 11				4"	2.47
Field Equipment						
Multiparameter Water Quality Meter:	Y51 55	le	Serial No.:	06624	21	
Water Level Meter:	Dipper		Serial No.:	6705		
Turbidity Meter:	Micro		Serial No.:	20140	70 01	
Pump Type:	MP 50 /		Serial No.:	- 1365		
Durse Method:			= 0	1		
Purge Method:		Inertial	Othe	r		
Bladder Pump :			Seconds Refill 15		ge @~70p	ei' (
Sampling Method:	opundin now it				ge e rop	57
Peristaltic Pump		Inertial	□ Othe	r:		1 2 1 1
			Seconds Refill 15		4. 70.00	1
Bladder Pump :			Seconds Remi 75			
Sample Collectio		the second se	Description	MS/MSD? :		No X
Parameter	# Containers	Filtered?	Preservative Nitric	Method 6020B LL, 7470A	Container Type 250 ml Plastic	Initials GG
TAL Metals Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	66
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	66-
	1			1		
A CALLSON IN				1		
				1 1 2 2 3		
			-	11		and the
			-			lete!
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	1			all a line and	and the second	the second s

Well ID: /	1042			Sample ID:	0622	MWY	12GW			Sample Time: 1345
	12/2	2		Dup. Sample				-		Dup. Sample Time:
Notes:	1 1 -									
	Volume	Temp	Spec. Cond.	1.2	10000	-	Purging		abilization	Data
Time (24 hrs)	Removed (L)		(µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0,1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1250	1.2			1	RT PURG	ING				
1300	0.7	7,65	281	9,3	6.28	54.0	13.44	121,90	0.07	
1250 1300 130 5	1.05	6.95	290	11.9	6.46	-17,6	14.76	121.90	0.07	
1310 1315	1,40	6.54	294	19.2	6,55	-14.7	9,43	121.90	0.07	
1315	1.75	6,33	296	17.4	6.61	31.6	7,36	121.72	0.07	
1320 1325	2.10	6.40	297	15.2	6.66	49.2	9.44		0.07	suspended particles (tan/orange) in discharge
1325	2,45	6-24	297	14.1	6.68	48.7	9.89		0.07	
1330	2,80	6.29	298	2.0	6.75	26.3	11.18		0,07	YSI shut off
1335		6.21	299	2.6	6.72	-12.9	10,89		0.07	
1340		6.40	30/	2.4	6.72	-20, Le	14.24	121.76	0,07	
1345		1.1.1	_		10.11	100	100000	1. 10	1 2	1345 Collect sample,
					1.1		1		3.31	
1								-	-	
(1.00		1.1			1.1.1			
	1.11									
1.1							1.1			
					1		1			
1.11				1 1 1						
1		1.1.1	(11123						
1.1			1	1102				1		
			1	1919				10.00		
								1	-	
					-	-				
				1 251						
	1						S		5	
						1910				
				1111-1			1			
				1 31					6.75	
	-		-			1	Samela	12 · V-	s 🖾 N	
		61					Jample	ur. re	NA	

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Client/Site:	BLM Red Devil I	Vine	<u>.</u>	Well ID.:	MW43	
Contract No.:	140L6321C0001	r i i	Project No.:	BU06-007		
Date:	6/2/202:	2	Samplers:	GG		
Time Start:	1429					
Time Finish:	1520		Checked By:			
Well & Purge Info		P	- I-			1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
TD (ft. bTOC):	120.	78 ft	Scre	ened Interval (ft.):	98-118	
DTW (ft. bTOC):	83.07	ft		1. 6. 1. 1. 1.		
Water Column:		ft	TD-DTW=Water Co	lumn	1	
Liter/Foot:	0,60	05 L/ft	See ***Well Volume	Calculation*** table	***Well Volume	Calculation***
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	 Depth of Pump Intak 	e	2"	0.605
			-		4"	2.47
Field Equipment						
Multiparameter Water Quality Meter:	Y51 55	4	Serial No.:	0662	421	
Water Level Meter:	Dipper	T2	Serial No.:	0705		
Turbidity Meter:	Micro 7		Serial No.:	20140-	7021	
Pump Type:	MP-50 / 5		- Serial No.:	1365	-	
Fump Type.	19 00 10	orns	- Senar No	1265		
Purge Method:						
Peristaltic Pump		Inertial	□ Othe	в		
Bladder Pump :	Optimum Flow R	ate Set at 20	Seconds Refill _/0	Seconds Dischar	ge C GOps	1
Sampling Method:				Section and the		
Peristaltic Pump		Inertial	□ Othe	r.		
Bladder Pump:	Optimum Flow R	ate Set at 20	Seconds Refill 10	Seconds Dischar	ge e 60ps	1
Sample Collection				MS/MSD? :	Yes D	No 🗶
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A		24
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	A A
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	JA.
		14-1			1	1
					1	
		1				
			and the second	-		
					-	
				-		

Well ID: M	W43			Sample ID:	062	2 MW4	13GW				Sample	Time: 15 18	
Date: 6/2 Notes:				Dup. Sample			-			1.1		mple Time:	
Notes:	m	. /	ine 1	21	a .	a	gives 0	11	Lin				
	205 1	concinge /	103 00	scharge	66	opsi g					1.141		1000
-	Volume	Temp	Spec. Cond.			000 / 10	Turbidity		abilization	Data	2		
Time (24 hrs)	Removed (L)	*± 3% *C, min ± 0.2*C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min		300	Color/Odor/Notes	
1440				_	RT PURG						1.0.0		
1445	0,5	6.26	192	7.90	6.01	23.1	5,89	83.11	0.1				
1450 1455 1500 1505 1510 1515	1.0	5.43	176	3.10	6.24	23.1	6.03	83.11	0,1		÷.	A. S. S. S. S. S.	
1455	1.5	5,12	152	2.25	6.41	-25.4	8,53	83.11	0,1	1 7	- I - I - I - I	÷	
1500	20	4.99	148	1,97	16.47	-32.3	6.07	83.11	0.1				
1505	2.5	4.99	146	1.55	6,53	-38,2	5.57 4.42 3.77	83.11	0.1	au .	-		
1510	3.0	4.89	146	1,37	6.56	-41.9	4.42	83.11	0.1				
1515	3.5	4,85	146	1,10	6.59	-53.3	3.77	83.11	0.1			4	
	1. 1.									1518	collect	sample	
										-+9			
											1 - X	24 C 24 C	
			-										
14			1	1.1	1							and the second second second	
	-						-				1.5		
	1000	-	-							1			
				1.1	-						1		
			1										
				ISTEN.	-				-	÷			
						-	-	-					
-					-		-	-		-			
	-		-		-	-		-					
					-								
-					-		-	-			-		
-	-		12.00		-	-				100			
			1		-					121-2			
					2	5 St 12 -		-				3/12/14/14/14	
1. 2. 1.	4.1.1		1										
							Sample	d?: Ye	s A No				

1. A.	C /	
	Sundance Consulting Inc.	
	Consulting Inc.	-

Client/Site: Contract No.: Date: Time Start: Time Finish:	BLM Red Devil 1 140L6321C0001 15-440 15		Project No.: Samplers: Checked By:	Well ID.: BU06-007 MICK	MW 44 Potter	
Well & Purge Info	/	-	oncered by.			
TD (ft. bTOC):	Jimation	ft	Scre	ened Interval (ft.):	11111	
DTW (ft. bTOC): Water Column:	- 72.	89 ft • ft	TD-DTW=Water Col			
Liter/Foot:		L/ft	See ***Well Volume	Calculation*** table	***Well Volume	Specific and the second second
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:		Ĺ.	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	Depth of Pump Intak	e	2"	0.605
					4"	2.47
Field Equipment						
Multiparameter Water Quality Meter:	VSIU	TG MP;	Serial No.:	066 24	21 133	
Water Level Meter:	50115+	102	Serial No.:	294 9	11	
	Micro	TPW	Serial No.:	2014 0	the second second second	
Turbidity Meter:		. /				
Pump Type:	Blad	der	Serial No.:	~ 1	IA	
Purge Method:			12/3	, @ 35 P	si 121+7-	the
Peristaltic Pump		Inertial	Othe	r.		
Bladder Pump :	Optimum Flow R	ate Set at 12 s	Seconds Refill 3	_Seconds Discharg	ge	
Sampling Method:						1.200
Peristaltic Pump		montan	□ Othe			1
Bladder Pump :	Optimum Flow R	ate Set ats	Seconds Refill	_ Seconds Discharg	ge @ 35	/
Sample Collection	on Informatio		1. 1. 1. 1. 1.	MS/MSD? :	Yes 🛛	No
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric	6020B LL, 7470A	250 ml Plastic 8oz Glass	VI
Total LL Mercury	1	No	HCI	1631 LL Hg 1631 LL Hg	8oz Glass	hen
Dissolved LL Mercury		Yes	HCI	1001 EE Hg	002 01000	1 PM
					11.201.201	1
	м ¹					
21 1						
			a sugar			1
	1		1000	1		1
					1. C. C. C.	
1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		1.000		A Providence		1000

ell ID:	MW	44		Sample ID:		640	MWW	44	GW	
e:	061	031.	22	Dup. Sample	D:					Dup. Sample Time:
es:										
			-	-		_	Duraina	and *C	abilization	n Data
Time	Volume	Temp	Spec. Cond.	DO (mg/L)	pН	ORP (mV)	Turbidity	DTW	Flow Rate	
Time (24 hrs)	Removed (L)	*± 3% *C, min ± 0.2*C	(µS/cm) *±3%	*± 10%	*± 0.1	*± 10 mV	(NTU) *± 10%	(ft)	L/min	Color/Odor/Notes
550		2		STAF	T PURG	ING			3 -	
5 55		6.0.9	428	4.71	6.88	59.6	10.64	7291	-200	
:00	1.1.1	6.37	466	1.58	7,05	-191	90.24	N	,150	
30'5		5.17	409	0.8	7,14	-46.5	63.89	11	41	
10		4.97	407	0.66	715	-478	38.30	li	10	
-20	76:15	4.76	406	0.55	7.17	-462	24.90	11	11	
25	16:20	4.81	403	6.59	7.16	-465	-195-4	19	11	
35	16:25	4480	206	0,61	716	-45.0	14.53	11	4	
30		4.77	404	0.71	7.16	-46.4	10,82	- li	u-	
35		4.72	403	0.65	7.16	25.7	10.62	h	61	
40	1	4.82	1104	0.56	7.17	-41.5	6.57	U	1	
45		4.75	404	5.55	715	-41.1	1165	[1	Ц	
50		4.81	405	0.91	615	-4016	8.44	n	10	
55		4,79	404	0.46	1.19	-41.7	5.07	11	4	A
60	-	4.71	404	0.47	7.18	-42-9	4.81	10	11	abilizat coursi to t
105		4.55	YOU	6.45	7.17	- 454	5.28	11	11	STADIZEL Samploy-0
1	1						1.1	1.68	-	
- 1					-				-	Sample 1714
-	1		-					-		
8.4	- F -			1.1	-					
		1		1445		1		-		
	-			192	_			11-		
	-							<u></u>	-	
-								-	-	
11			-		8.1	- 3 G				
	1				18 -	-	1 - 1		1.00	
					8	51		1	1	
11						112				
	1	100	1		2		Sample	d?: Y	es 🕅 N	No 🗆 Page

	GI	15
1	Sundance Consulting Inc.	()
		A MANDA

Client/Site: Contract No.: Date: Time Start:	BLM Red Devil 140L6321C000 6/4 0 9.6		Project No.: Samplers:	Well ID.: BU06-007	MW41	
Time Finish:	10:3	0	Checked By:	/	the second	121
Well & Purge Info	ormation					
TD (ft. bTOC): DTW (ft. bTOC): Water Column:	42	79.4 ft 64 ft ft	TD-DTW=Water Col	Land Color	61-81	Calculation***
Liter/Foot: Liters in Well:	0.405	L/ft	See ***Well Volume Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:		1		1. 1.	5/8"	0.06
		L	_ Liters in Well x 3		2"	0.605
Sample Depth:		ft	Depth of Pump Intak	e	4"	2.47
Field Equipment		0.011	ALC: NO	1 1 1	G F i I I	
Multiparameter Water Quality Meter:	VS-	TIGMI	Serial No.:	11H	100848	
Water Level Meter:	50/17× 1	02	Serial No.:	129490	1)	
Turbidity Meter:	MicroF	OW	Serial No.:	202007	903	
Pump Type:	plad	der	Serial No.:	N.J	A golden	1 1.
Purge Method:	Optimum Flow R	Inertial ate Set at	Othe Seconds Refill	۹/ 6) r Seconds Dischar	40 10JLY	tor
Sampling Method:					1. 1. 1. 1.	
Peristaltic Pump		Inertial	□ Othe	r.	1 4 3 4 1	
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	_ Seconds Dischar	9e @ 40 PS	0
Sample Collectio	n Informatio	n	1 1 1	MS/MSD? :	Yes 🛛	No 🌢
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric	6020B LL, 7470A	250 ml Plastic 8oz Glass	VG
Total LL Mercury Dissolved LL Mercury	1	No	HCI	1631 LL Hg 1631 LL Hg	8oz Glass	10
Dissolved LL Mercury	-	Yes		1031 EE Hg	002 Glass	14/
	1 1 1 1	1	1 3 14			
		1 1 1 1	5 6 3	11	1-1-1-2-4	100 A
		T. L	13	1	1	1
and the second second	-	1 1 4	1 5 - 2	4.43	Arra Far	AL-
			A. A. S. Mark	1		1
	-		1	1		-
	1 2 3	1.1	1 1 -	1		
	-		- the second sec			

Well ID:	MW	45		Sample ID:	06	22M	w Wh	GW	1	Sample Time: 1020
Date:	6/6		~	Dup. Sample					_	Dup. Sample Time:
Notes:			1.1.1					1		
	-					_	Durain	and tot	abilization	a Deta
	Volume	Temp	Spec. Cond.		-	Sector And	Turbidity		abilization	n Data
Time (24 hrs)	Removed (L)	*± 3% *C, min ± 0.2*C	(µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate	Color/Odor/Notes
956			a-l-t-	STA	RT PURG	NG	011		015	
1000		2.54	215	11-5	6.28	19.4	1.97	44.90	0.15	
1005		772	217	19:92	6.74	30.4	177	11	11	
1010		3.77	210	9.09	16 43	18.2	1.40	44/5	1	
	121	3.7X	20	3:80	6.46	38.0	1.89	11	4	Stochilizee
1015		1.0	1.13LE					the C	1	Stolhilized Sampled QD 1020
11		1.1.1		12.51				1.1		
1.1.1	1.1		1 25 10							
-			1	1				1		
	1				-			1		
	-	1.1.1.1							1	n and a second data and a state of the second se
								-		
								1		
	-							-		
								-		
5	-	a farra far								and a second and a second and a second as a second
	-			25.2				-		
	-	-					1.00	-		
										and the second
			1.1					1		and the second sec
				-	-					
			1				1.00	1.		
	1	-				-		-		
			1							
			a later	1 60						
					-	1.79	1			
					- 3	Eren			I	
			1.11		2			1	2 5	
	1 1				12.00	36363	19.1		/	
	-	11	1				Sampl	ed?: Ye	es M N	lo 🗆
	-	AL	/		_		campi			

No. of Concession, Name	C I	
-	Sundance	
	Consulling Inc.	
		4000

Client/Site:	BLM Red Devil	Mine		Well ID.:	MW 46	1
Contract No.:	140L6321C000	1	Project No.:	BU06-007	0	
Date:	6/4/	22	Samplers:	NICK	pott	
Time Start:	11:60		-			
Time Finish:	12:00		Checked By:	19/	4	L COL
Well & Purge Info	ormation					
TD (ft. bTOC):		9,71 ft	Scr	ened Interval (ft.):	36-56	
DTW (ft. bTOC):	-	17:31 ft		i i i	1	
Water Column:		ft	The second se	lump		
Liter/Foot:	0,60	-	÷		***Well Volume	Calculation***
	0100	· · · ·	-	Calculation*** table	Well Diameter	L/ft
Liters in Well:		L	-		5/8"	
Three Well Volumes:	-	L	-	. · · · · · · · ·		0.06
Sample Depth:		ft	Depth of Pump Intal	ke i i i i i i i i i i i i i i i i i i i	2"	0.605
					4"	2.47
Field Equipment	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			1.1.1.1.1	4-1-91-4	
Multiparameter Water Quality Meter:	YSTES	GMP7	Serial No.:	114	100848	
Water Level Meter:	SOUSH	102	Serial No.:	09499	F 0 12	
	Micro	1Div	Senar No.:	2.62057	2~2	
Turbidity Meter:	TIALICIA	IP VV	Serial No.:	20200/	102	-1
Pump Type:	Ug dd-er		Serial No.:	N	1	0
Purge Method:	1100	1	0	10,5,26	last year	
Peristaltic Pump	п	Inertial	Othe	r.	2111 1	
1		I.	F	The lot of	1	
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	_ Seconds Discharg	ge	
Sampling Method:	-					1.1.1
Peristaltic Pump			□ Othe			-
Bladder Pump :	Optimum Flow Ra	ate Set at 10	Seconds Refill	_ Seconds Dischar	ge L 5 PT,	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
Sample Collectio	n Informatio	n		MS/MSD? :	Yes 🗆	No 🗆
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric	6020B LL, 7470A		N
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	Ven
Dissolved LL Mercury	1	Yes	нсі	1631 LL Hg	8oz Glass	Np
		the second second				
					1. 1. 1	1 1 2 1
	k-1			1 marsh	is no the	
				Jul 1	And a state of	
					1.7.1.2.11	1.5.5
	in the second se	i		-	1 1 1 1 3 3	30
				-		
	Total L			123	St. Bridge & St.	all a service in the

D:	mw	46		Sample ID:	06	221	NWH	66	W	Sample Time: 1140
	6/2	+/22		Dup. Sample	ID:					Dup-Sample Time:
		1 .								
_	1.1	_		1			Durning	and *C+	abilization	Data
	Volume	Temp	Spec. Cond.	DO (ORP (mV)	Turbidity	DTW	Flow Rate	
ne hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	*± 10 mV	(NTU) *± 10%	(ft)	L/min	Color/Odor/Notes
)	1 1 1		1.0.1	STAF	RT PURG	ING .		10 2		
	1.1	4.17	15/	12.14	6.23	26.9	617	3292	600	
10	1 4 1	407	118	11.81	- 6.32	1271	5.79	32.82	,200	
5		7.79	- [9]	11,27	16. WI	26.5	5.22	72.00	u	
30		3.79	129	10.11	6.46	25.8	5.38	11	K	54461284
10	1.1	3.90	130	10.74	61 419	25.4	4.35	32.83	1)	sumple at 1140
		and the					31	10-		
	1									
	5.5		1 1 1		1 . 1					
	111			3.001	1					
					1					
	1	1 2 3	144	a			-	1.		
1		11								
	1	-								
-	1	1	1.1.4.4	199	1					
	-		1.1.1.1		1			1		
-	1		-				-			
-	-		-	1.1.1			-	-		
-	-			-	-	-	-	-		
-	- 70		1 1		-					
	-		1.1.1	23	-			-		Englisher and the second s
-				10.0	-			13		
_	-			-	-		-	-		in the second se
	-				-			-		
				1.11		1.1		-	-	
	1							-	12	
	1				_					
									1	
							1		1	
		0					Sample	ed?: Ye	es 🖾 N	• 🗆



Client/Site: Contract No.:	BLM Red Devil M 140L6321C0001		- Project No.:	Well ID.: BU06-007	MW47	
Date:	614/22		Samplers:	G. C	sarner	S
Time Start:	115	2.11.	_			1
Time Finish:	1250		Checked By:	MA		
Well & Purge Info	ormation					
TD (ft. bTOC): Top of	pmp 57.31	ft	Scre	ened Interval (ft.):	46-66	· · · · · ·
DTW (ft. bTOC):	35.62	ft				· · · · · · · · · · · · · · · · · · ·
Water Column:		ft	TD-DTW=Water Col	umn	a state of the	1
Liter/Foot:	0.605	L/ft	See ***Well Volume	Calculation*** table	***Well Volume C	alculation***
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:	1.1.1) L	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	 Depth of Pump Intak 	e	2"	0.605
Sumple Deput	1				4"	2.47
Field Equipment				C	G. In .	
Multiparameter Water Quality Meter:	YS1 556		Serial No.:	866242	1	
Water Level Meter:			Serial No.:	0705		
Turbidity Meter:	Dipper T Micro TO	ω	Serial No.:	2014 070	081	
	MP-50 /			1365		1
Pump Type:	mp of	-01				
Purge Method:						
Peristaltic Pump		Inertial	□ Othe	r.		
Bladder Pump :	Optimum Flow R	ate Set at 9	Seconds Refill 6	Seconds Discharg	e @ 35 ps	,'
Sampling Method:						100
Peristaltic Pump		Inertial	□ Othe	r:		1.2
Bladder Pump :	Optimum Flow R	ate Set at 9	Seconds Refill	Seconds Discharg	ge @ 35 ps	24
Sample Collection				MS/MSD? :	Yes D	Nog
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A	250 ml Plastic	19.17
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	12 19
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	AN
	-			A CONTRACTOR		1
				Sec.4	A STREET, N	
					ALC: N	
				1000		1 3 3
						1
		p del		-		-
				1		1.000
May 2021			1	1	N	Page 1 of 2

Well ID: N Date: 6/0 Notes:	1647	7		Sample ID:	0622	MWY	17GW)			Sample Time:	1225
Date: 6/	4122	1.1	and a	Dup. Sample		1		-			Dup. Sample Time:	
Notes:	1	1.00		3412						-		
			_			_						
	Volume	Temp	Spec. Cond.		1		Purging Turbidity		abilizatio			
Time (24 hrs)	Removed (L)	*± 3% °C, min ± 0.2°C		DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate	Cond ps/c.	Color/O	dor/Notes
1136			1.1.	STA	RT PURG			_			10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1146	0.5	7.65	194	12.70	6.49	24.5	3.84	35.64	0.05	129		
11 36 1146 1151	0,75	7,60	190	9.60	6.57	10.5	2.29	35.64	0.05	127		
1156	1.00		190	8.97	6.60	8.4	3.40	35.64	0.05	127		
1201	1.25	8.10	188	8,13	6.63		3,50	35.64	0,05	127	1 Sec. 19	
1206	1.50	8.56	186	7.53	6.65				0,05		1. S. M.	the test of the
1211	1,75	9.06	185,	7.38	6.64		0.79	35.64	0.05	129	S	
1216	2.00	9.14		8,00			1.69		0.05			1
1221	2.25	9.21	186	7.61	6.66		1.67		0.05	130	7.1.1.1.1.1	
	1-1-1				100		-			1	cleat sample a	2 1225
		- 4									and supre	= /400
		1	1.1.1	1251	-		1	1	F C			1
	1			4C 1 1					1.5	1 1 5	2.2.2.2	6
				1111	1.0				-		1 - L -	
	1.0	1.0					1			1 1 1		
100 P 1				181 1				-				
-	1.											
	-						-		-			
		1.1	-	-			7				tel tel tel	
		-	-								48	
		-	-				-		-			
	-					-	-		-	1	1.1	
			1	-			_					
_					-	-	1		-	<u>221</u>		
			-				10					
	-				-					10.11	1.4.4.4.6.6	
								1	1.12	1211 2	2.2.2.2.0.0.8	
											142.5821	
		91-10	-				Sample	d?: Ye	SAN	lo 🗆		

1.1	C /	
	Sundance	
	Consulling Inc.	Prot

Client/Site:	BLM Red Devil	Mine		Well ID.:	MW49			
Contract No.:	140L6321C000	1	Project No.:	BU06-007				
Date:	61512:	2	Samplers:	GG				
Time Start:	1000		3		A starter 1			
Time Finish:	1200		Checked By:	66				
Well & Purge Info	ormation							
TD (ft. bTOC):		63.75 ft	Scre	eened Interval (ft.):	40-60			
DTW (ft. bTOC):	27.93	5 ft						
Water Column:		ft ft	TD-DTW=Water Co	lumn		in the second		
Liter/Foot:	0,0	.05 L/ft	See ***Well Volume	Calculation*** table	***Well Volume C	Calculation***		
Liters in Well:		L.	Water Column x L/ft		Well Diameter	L/ft		
Three Well Volumes:		L	Liters in Well x 3	21-	5/8"	0.06		
Sample Depth:		ft	Depth of Pump Intal	(e	2"	0.605		
				A State of the second	4"	2.47		
Field Equipment			1 1	N. S.	221.20			
Multiparameter Water Quality Meter:	Y51 53	56	Serial No.:	86G 242	10			
Water Level Meter:	Dipper		Serial No.:	0705	2.0			
Turbidity Meter:	MICRO TP		Serial No.:	202007	903			
Pump Type:	MP-50 /-	Solinst	Serial No.:	Serial No.: 1345				
Purge Method:	the second se		the standard	2.52.46				
Peristaltic Pump		Inertial	Othe	с -	in start	1.1.1.1		
Bladder Pump :	Optimum Flow R	ate Set at 10	Seconds Refill	_Seconds Dischar	ge @ 30ps/			
Sampling Method:			151193	1 C.				
Peristaltic Pump		Inertial	C Othe	n - 191-0				
Bladder Pump :	Optimum Flow R	ate Set at 10	Seconds Refill _3	_ Seconds Dischar	ge @ 30 p	3/		
Sample Collectio	n Informatio	n		MS/MSD? :	Yes D	Nob		
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials		
TAL Metals	2	No	Nitric	6020B LL, 7470A		NB		
Total LL Mercury	2	No	HCI	1631 LL Hg	8oz Glass	134		
Dissolved LL Mercury	2	Yes	HCI	1631 LL Hg	8oz Glass	H.Y		
	1		1.845	The second				
				15 2 10 1 1				
				-				
			12	1				
						1		
				4		1 days		

Well ID:	MWY4			Sample ID:	0620	X MW	19GW				Sample	Time:	1115	
Date: (a	15/22	2		Dup. Sample	ID: GL	22 M	W970	GW		-	Dup. Sar	nple Time:	1120	
Notes: Pu	Hed pur	p duc +	o kink	ed hose	e. Bla	ck stai	w97 aning on	gump	o + +	using.	and the second se		1000	
1	- 1	1		-	-		Purging	and *St	tabilizatio	n Data	1		1.1.1.1	1.5
Time (24 hrs)	Volume Removed (L)	Temp *± 3% *C, min ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)		Cond my	m	Color/Od	lor/Notes	122
1015			CALC	STA	RT PURG	ING	-	_	-	1 3.4	Card and a second second		1	15.2
1020	0.75	5.69	162	13,40	5.51	23,1	44.90			102	1.98			
1025	1,50	4.91	128	9.15	5.59	-0.8	66,90			079	- 38L V		4 1 1	1
1030	2,25	4,72	122	8,29	5.61	-0.9		28.00	0,15	75			1 3 3 1	1
1035	3.00	4.53	119	7.98.	5.64	0.4	84.27	28,00	0,15	73	÷	- +·	- 1	1
1040	3.75	4,48	119	7.86	5.67	1.1	93.02	28,00	0.15	72				
1045	4.50	4.54	117	7,72	5,75	2.0	92.99	28,00	0,15	72	5		1 4 4 2	
1050	5.25		117		5,81	4.5			0,15	71		- 5.1	1 1 2	
1155	6.00	4.47	116		5.86		77.03			70	1		-	
1100		4.62	115	8,31	3.07		77.69	28.00	0,15	70 70			1:	1.
1105		4.54	115	8.40	5.87		69.68			69	1		1	1
1110	8.25	4.54	114	8.24	5,88		74.24				1.0.00		14	
111.5	9.00	4.59	114	8.24	5.89	4.1	67.99		0.15	70 69	Collect	Sampl	20115	
m	11.00	11.5	1	1	-		1 - 2	125						
	1.1.1		1				1.000	1 = 1		1 1 1	1 4 6 5 1		P 1	
	1 1 1 1	1.5	1.1	1	1		1.		1.1.7				1.1.6	
	1	1	1.4											
	13 .	12.2.2	-	12 4 1					1110				2	1.1.1
		1.11	1-1	1.000		-	1.1		1.163		1	100	121	
	111		-	1.4218	1			1.1	111	-		L	A PARTY AND	1.2.2
-	1	1	1	1122	1		1.13			+1		-	1 3 2 6	
-	1.1	-	1.0	1.1.1				1		-				
-	1	-	-	1.1.1	1			1						1.1.1.1.1
-			-	1	-			-	1	4.8.0				1.1.1.1.1
-	-				-				1	1.2	10			
-	-	-	-				1			1 1 1	2.2.1	111		7
-	-	1.0	1	-					1		1	1 11	W/1	
	-	-	-		-							1		1.1.1
-				1	-	-			1		0	-		-
		11.0					Sample	ed?: Y	es A	No 🗆				1 C C C C C C C C C C C C C C C C C C C

Initial of Sampler.



Client/Site:	BLM Red Devil	Mine		Well ID.:	Muso	1
Contract No.:	140L6321C000	1 249	Project No.:	BU06-007		
Date:	6/3/22	8	Samplers:	GG	1.1.1.1	
Time Start:	1025	e sets	e e e la la	1	Ŧ	
Time Finish:	1200	U	Checked By:	BG	in a t	
Well & Purge Info	ormation	3		1		
TD (ft. bTOC):	82.00	ン ft	Scr	eened Interval (ft.):	71-91	5 - L - A
DTW (ft. bTOC):	44.6	5 ft		1 9 4	3- T	1112
Water Column:		ft	TD-DTW=Water Co	lumn	1	E. maril
Liter/Foot:	0.40	ے ل\ft	See ***Well Volume	Calculation*** table	***Well Volume	Calculation***
Liters in Well:		- L	Water Column x L/fi		Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	Depth of Pump Intal	ke	2"	. 0.605
	the second		and the	the state of a	4"	2.47
Field Equipment		1	10	1.0	der La	
Multiparameter Water Quality Meter:	YS1 550	6	Serial No.:	11 HI 00	840	
Water Level Meter:	Dipperte	2	Serial No.:	0705	5:01	
Turbidity Meter:	Micro	TPW	Serial No.:	2020	07903	
Pump Type:	MP-50		Serial No.:	10 29	365	
Purge Method:		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	X) Carlo	E Ce	×. (*	1
Peristaltic Pump		Inertial	□ Othe	r:	1	
Bladder Pump :	Optimum Flow R	ate Set at 17	Seconds Refill 3	Seconds Dischar	ge @ 45 psi	3 cpm
Sampling Method:			1-2 -2 Y	14	1 5 -	
Peristaltic Pump		Inertial	D Othe	r:		
Bladder Pump :	Optimum Flow R	ate Set at 17_	Seconds Refill 3	Seconds Dischar	ge @ 45 psi	3 cpm
Sample Collectio	n Informatio	n		MS/MSD? :	Yes 🗆	Nox
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric	6020B LL, 7470A		19.19
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	MM
Dissolved LL Mercury	(Yes	HCI	1631 LL Hg	8oz Glass	MA
			- and -	1		
				1 2 3		
			1	1		
	No.		11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		1.1.1	
		in the second se	- Carola		and a second	-
				- Pi		E E
			-	1000 - 1	1.5.4	2
	Design of the local sector			A DESCRIPTION OF A	the second s	the second se

Well ID: //				Sample ID:	0622	MWS	OGW		Sample Time: 1145 Dup. Sample Time:		
Date: 6/. Notes:	3/22			Dup. Sample	ID:						
Notes:	1			-		-				1-1	
						_		1 +0+	1.10-41-	- Dete	
-	Volume	Temp	Spec. Cond.				Turbidity		abilizatio		
Time (24 hrs)	Removed (L)		(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate	Cond pester	Color/Odor/Notes
1030		1 1 0.2 0	1 10/0	STAF	T PURG	ING	1 21074			1 2	
1040	1.0	6,27	688	38.45	4.68	50.9	27.86	44,70	0.1	442	
1045	1.5	6.03	687	14,15			61.13	45.02	0.1	438	
1050	2.0	5,92	684	8.18			61.67			436	ton/brown chunks in line
1055	2.5		682	5.39			85.73			429	
1050 1055 1100	3.0	5.52	682	4.80			1	45.03		428	
102				- 15					-		Emptical flow call to drain sediment
1110	4,0	5.95	671	4.75	6.71	40,1	52,27	45.03	0.1	427	
1110		6.07	671			43.2	45.16			429	
1120	5,0	110	676		6.74		34.88			432	
1125	5.5		678		design of the second se	46.6	32,76			432	
1130	6,0	6.22	676			49,7		45.03		433	
1130		6.24	676		6.77			45,03		434	
1140		6.26	676		6.79			45.03		434	a y mar a na an a
11.45		6.32	673	4.22	6.78	52.1	16.34		_	1	Collect sample @ 1145
1.12	1.5		0.5		1		1	12.02	0.1		suffec no
				1	- 24			2			
		1		9.53						1.2	
		012				1000			1.000		· · · · · · · · · · · · · · · · · · ·
		1			1	41	-				the second s
-	-		12						-		
-	-	-			-						
-	-				-						
	-	-									
	-	-	-	1 1 1 1			-		-		The second se
-					-						
	-	-			-				-		
		-	-	1				-	1.3		
					-			10.11	~		
		40		10.1			Sample	ed?: Ye	s 🕱 I	No []	

Initial of Sampler: ______

 Sundance	15
Consulting Inc.	
	CT IS

Client/Site: Contract No.: Date:	BLM Red Devil		– Project No.: Samplers:	Well ID.: BU06-007	NW	52			
Time Start:	11:41	C	_ oumpiero.		1				
Time Finish:	17:40	í	Checked By:	G	F				
Well & Purge Info	ormation	A		6					
TD (ft. bTOC):		79.5 ft	Scre	ened Interval (ft.):	56-76				
DTW (ft. bTOC):	Sec. 24	37.4 A	<u></u>						
Water Column:		ft	TD-DTW=Water Co	lumn					
Liter/Foot:	0.0	605 L/ft	See ***Well Volume	Calculation*** table	***Well Volume Calculation***				
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft			
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06			
Sample Depth:		ft	Depth of Pump Intak	ke	2"	0.605			
	1000			1	4"	2.47			
Field Equipment									
Multiparameter Water Quality Meter:	YSI GG	6 MPS	Serial No.:	06(7	242/38				
Water Level Meter:	Solist	102	Serial No.:	Serial No.: 294 941					
Turbidity Meter:	Matt	2M	Serial No.:	Serial No.: 201467081					
Pump Type:	19dd	er	Serial No.:		/1	1			
Purge Method:		12	, 1, 75	la) + ye	~				
Peristaltic Pump		Inertial	□ Othe	r.		Los als			
Bladder Pump :	Optimum Flow R	ate Set at <u>12</u>	Seconds Refill	Seconds Dischar	ge				
Sampling Method:	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		4	100 A	-				
Peristaltic Pump		Inertial	□ Othe	r.					
Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill	_ Seconds Dischar	ge @ 35 P.	5;			
Sample Collectio	on Informatio	n	- 4	MS/MSD? :	Yes 🛛	No 6			
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials			
TAL Metals	1	No	Nitric	6020B LL, 7470A		IV /			
Total LL Mercury	1	No	HCI	1631 LL Hg 1631 LL Hg	8oz Glass 8oz Glass	W			
Dissolved LL Mercury	1	Yes	HCI	1031-LE Hg	ouz Glass	- VP			
	1	1.2725	1	1. T.		1			
		19115		1	20121				
			1		ni and				
Contraction Contraction						-			
1						1 1 2			
			134.50		1000	La de la s			

):	IVI	N, h	1	Sample ID:		0022	- MN	91	GW	Sample Time: 19120
S	61	11 L	2	Dup. Sample I	D:			-		Dup. Sample Time:
							Purging	and *St	abilization	n Data
Time	Volume	Temp	Spec. Cond.	DO (mg/L)	pH	ORP (mV)	Turbidity	DTW	Flow Rate	Color/Odor/Notes
Time 24 hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	*± 10%	*±0.1	*± 10 mV	(NTU) *± 10%	(ft)	L/min	COLON-COLONNOLES
1.55		~		STAR	T PURG	NG	- tra	1.41	0.150	
1:00	1	6.10	188	7.04	6.10	-0.4	5 69	71.0		
-05	1.5.9	5.18	180	622	6.72	11.0	4726	37.60	LL	
2,0		562	181	5.54	6.34	18.9	28.81	11	Ц	
495		594	186	5.28	6.35	22.6	22.79	11	11	
220		491	120	5.10	6.15	250	17.1	ų	11	OR L AA
125	-	5.95	195	6.76	6:57	-2.0	12:14	U	11	004.90
1-70		6.09	197	4.77	6.75	2000	10,15	4	11	A MI WANT TO THE
274		6,57	000	6:30	6.27	14,6	147	11-	11	turbity 17.99
290		6.47	200	4178	612	10,9	9.39	1	- ll.	
245		6.83	201	460	6.14	5.4	8:76	11	V	2 * * * *
250		6.88	205	4,56	6.1	8170	6,44	W	11	
1-60		6.97	207	4,98	6.14	165	5.25	11	il	
100		7.13	20	4.47	6136	lip	9.10	11	11	
7 05		720	212	7190	6.67	1+0	7.00	11	11	
510		7.77	211	41/4	8.06		7.82	11	11	Chillert
115	1.5	213	216	438	6.40	0.6	6:80	11	11	Sty bill zet
				0				1	26	Jamped 1320
_				1.14			1	-	-	
				1.95	-			-	1- 1-	
				177.81					10.00	
		1 E	1.1	199			-	1		
								-		
			-	1				-	-	
1	-	1.1		1 28		1.11		1	1	
		1.1	1.100		-		*		-	
		1123	1512						12 -	
									1	2
		n M					Sample	ed?: Y	es 🗗 I	No 🗆 Pag



Client/Site:	BLM Red Devil	Mine		Well ID.:	MWS2	1				
Contract No.:	140L6321C000	1	Project No.:	BU06-007	2.2.2					
Date:	6/4/20	L	Samplers:	GG	-					
Time Start:	0845									
Time Finish:	1843		Checked By:	GG	ALC: NO	1.5.6.				
Well & Purge Info	ormation		1		1000					
TD (ft. bTOC):	59	.33 ft	Scre	ened Interval (ft.):	35-55					
DTW (ft. bTOC):	29.10	ft ft								
Water Column:		ft	TD-DTW=Water Co	lumn		1				
Liter/Foot:	0.605	L/ft	- See ***Well Volume	Calculation*** table	***Well Volume	Calculation***				
Liters in Well:		L	The second second	a manage states a states	Well Diameter	L/ft				
Three Well Volumes:		L	Liters in Well x 3		5/8"	0.06				
Sample Depth:	45.7		-	(e	2"	0.605				
oumpie popun					4"	2.47				
Field Equipment			1 4.7	2.21	1000					
Multiparameter Water Quality Meter:	451 5	56	Serial No.:	066 24	21	1991				
Water Level Meter:		-9	-	Serial No.: 0705						
			-	AVIAZARI						
Turbidity Meter:	Micro TP	1	Serial No.:	The second s						
Pump Type:	MP-50 /	Solinst	_ Serial No.:	1365		Ela.				
Purge Method:						1.1				
Peristaltic Pump		Inertial	□ Othe	n	.t	and the second				
Bladder Pump :	Optimum Flow R	ate Set at 10.5	Seconds Refill 4.3	Seconds Dischar	ge. 4cpm C	30psi				
Sampling Method:			1							
Peristaltic Pump		Inertial	□ Othe	n :	385-11					
Bladder Pump :	Optimum Flow R	ate Set at 10,5	Seconds Refill 4.5	Seconds Dischar	ge 4cpm C	2 30 psi				
Sample Collectio	and the second second	A	<u></u>	MS/MSD? :						
Parameter	# Containers	Filtered?	Preservative	Method	Yes Container Type	No 🕱				
TAL Metals	2	No	Nitric	6020B LL, 7470A		1218				
Total LL Mercury	2	No	HCI	1631 LL Hg	8oz Glass	4.12				
Dissolved LL Mercury	9	Yes	HCI	1631 LL Hg	8oz Glass	J.M				
			1							
			-	1		1				
and the second second	-	1	1 1	1						
			1	1. 1.		1				
1			10	Charles may	Sec. 7 1.54	13				
				192	121 3 7 83	1.2.2				
		14 - 14 F			1. 1. 1. 1.	1 2 91				
and the second second				La Cart	COMPLET A	1.2.3				

Nell ID: MW52			Sample ID:	0423	MWS	26U)	Sample Time: / 0 20					
Date: 1.1L	1722				Dup. Sample ID: 0622 MW 98 GW Dup. Sample Time: 1025 oplaced water line, Broken freeze fitting,								
Notes:	Lemoves	1 auro	and v	eplaced	wat	~ tine	Brok	cn f	recze	fitting	,		
		1º P		1	- we				A company of the second				
			C	5.4.5	-		Purging Turbidity		abilizatio		THE MAKES THE E		
Time (24 hrs)	Volume Removed (L)	Temp *± 3% 'C, min ± 0.2'C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Cond no /c.	Color/Odor/Notes		
0933					RT PURGI								
0943	1.5		137	12,90	5.46	10:0	42.47	a/21:	00.15		Gray staining a tabe and to water		
0943	2,25	5.05	119	12.52	5.37	11.0	51.55			74			
0953 0958 0938	3,00	5,08	111	12,23	5.65	12.8	55,98			68			
0938	3.75	4.96	106	12,00	5.73	13.0	55,76	29.40	0.15	65			
003	4.50	5.01	109	11.98	5.79	13,1	59.00	29,40	0.15	65			
1008	5,25	4.97	103	11.97	5.81	13.1	51.45	29.40	0.15	64 63			
1008 1013 1018	6.00	4.94	103	11,97	5,85	13.0	42.39	29.40	0.15				
1018	6.75	4,92	103	11.85	5,87	12.7	36.29	29,40	0.15	63			
	1	1 1 1		1.1.1	12. 6	1					Collect sample and duplicate.		
			12.25	1.181	1.00	1.	1		1		1020 1025.		
				11-1						-			
	1		1			1212	12.17	1.5		3			
				1 1 1						1.250			
			10	-	102			1.1		1 4			
				115	19	6		1 -		1 1 1			
		11	-				1 1						
		-	1		1		1-11	1	13-18				
	-		-		-0		1000	1	1.00				
	1				1.5	111		- 11	-				
-	-		1 152-0						1				
-			1		2	1.00		-					
	-		-	-	200			-			1 1 1 Yol		
				-		-		-		13 - 1 - 1			
-		-	-		-	-	-	-		1			
1				115	-		-		-				
					-		-	- 2	1				
		1				-	-	-	1				
					-								
					1.02		Sampl	ed?: Y	es 🔍	No 🗆			
Initial of S	ampler	月九									- Page 2 of 2		



Client/Site:	BLM Red Devil	Mine	_	Well ID.:	MW53					
Contract No.:	140L6321C000	L _A b	Project No.:	BU06-007						
Date:	6/3/22		Samplers:	G. Garna						
Time Start:	1345					1-26				
Time Finish:	1450		Checked By:	12	1.13					
Well & Purge Info	ormation			- 44						
TD (ft. bTOC): Topof	pmp 51.4	ft	Scre	ened Interval (ft.):	41-61					
DTW (ft. bTOC):	29,06	ft								
Water Column:		ft	TD-DTW=Water Co	lumn	and the second					
Liter/Foot:	0,600	S L/ft	See ***Well Volume	Calculation*** table	***Well Volume C	Calculation***				
Liters in Well:		Ĺ	Water Column x L/fl		Well Diameter	L/ft				
Three Well Volumes:	E.L.	L	Liters in Well x 3		- 5/8"	0.06				
Sample Depth:		ft	Depth of Pump Intal	ke	2"	0.605				
	· · · · · · · ·				4"	2.47				
Field Equipment										
Multiparameter Water Quality Meter:	YS1 55	56	Serial No.:	11 4100	848					
Water Level Meter:	Dipper	V2	Serial No.:	0705		· · · · · · · · · · · · · · · · · · ·				
Turbidity Meter:	Micro		Serial No.:	10.000						
Pump Type:	MP-SO	4	Serial No.:	Serial No.: 1365						
Purge Method:										
Peristaltic Pump		Inertial	Othe	n i						
Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill 3	Seconds Discharg	ge @ ~ 30 psi	4cpm				
Sampling Method:		20.2								
Peristaltic Pump		Inertial	C Othe	n:						
Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill3	_Seconds Discharg	ge @ ~ 30ps	i 4cpm				
Sample Collectio	on Informatio	the second s		MS/MSD? :	Yes 🗆	Nog				
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials				
TAL Metals	- la	No	Nitric	6020B LL, 7470A	250 ml Plastic 8oz Glass	A.A.				
Total LL Mercury Dissolved LL Mercury		No Yes	HCI HCI	1631 LL Hg 1631 LL Hg	8oz Glass	MA				
Dissolved LE Mercury	1	165		loor LE rig	002 01035	NA				
				1.1.1.1.1.1	20201	1 2				
		1		in marke						
					-					
	-					1				
				1.000						
					6 8 4 8 C 6					
				The second	1.1201					

Well ID: $MW53$ Sample ID: $0622MW53GW$							Sample Time: 1425 Dup. Sample Time:				
Date: 6/3/22 Dup. Sample ID:											
Notes:	Loos	e air	fittin	9	1						
	1.1.						Durain	and *Ct	abilizatio	n Data	
Time	Volume	Temp	Spec. Cond.	DO (mg/L)	pH	ORP (mV)	Turbidity	DTW			
(24 hrs)	Removed (L)	*± 3% *C, min ± 0.2*C	(µS/cm) * ± 3%	*± 10%	*± 0.1	*± 10 mV	(NTU) *± 10%	(ft)	Flow Rate	Cond us/cm	Color/Odor/Notes
1355	1.1.1	111	1 and	STA	RT PURG	ING				E.C.	
1400	0,5	9.85	207	9.40	6.32	72,4	0,00	29.10	0.1	146	
1405	1.0	9.11	185	8,40	6.45	68,3	0,00	9.10	Bil	129	
1410	1,5	8.31	172	8,51	6.49	65.5	0,00 8,00 0,00 0,00	29.10	0.1	118	
1415	2.0	7,89	168	8,44	6.52	62.9	0.00	29.10	0,1	113	
1420	2.5	7,75	169	8,33	6.53	62.6	0.00	29,10	0.1	113	
1425	3.0	1.1.1		1.15				-			Cellect sample @ 1425
	1.25		-	1.1				2.1.5			
111	1	12.1									
11				1.1	1	-					
			1		1	-	1				
				-							
			-						1		
		1111	1.1.1	1			-				
	1			11 21	12			-			
			-								
	-								-	1	
	-			6 3	-		-				
	-			1	-		-	-			
-	-							-	-		
	-		-		-		-	-			
	-	1.		-			-	-	- 12		
-	-			-	-			-			
	-							-	-	12	
	-			-	-			-	-		
100	-				-		-				
				121	- 1	1140				1-21-21	
					3		1 · ·	-			
					-	3.5			2	1	
							Sample	ed?: Ye	es ⊠∢ I	No 🗆	

The second second	C /	
	Jundance	
	Consulting Inc.	

Client/Site: Contract No.: Date: Time Start: Time Finish:	BLM Red Devil 140L6321C900 140L6321C900 14,18 14,18		Project No.: Samplers: Checked By:	Well ID.: BU06-007 NICK Pa	MW.54 MW.54	
Well & Purge Info	ormation					185
TD (ft. bTOC): DTW (ft. bTOC): Water Column: Liter/Foot: Liters in Well: Three Well Volumes: Sample Depth:	- 28.	3.00 est ft 49 ft ft 605 L/ft L ft	TD-DTW=Water Co See ***Well Volume Water Column x L/ft Liters in Well x 3	Calculation*** table	29-49 ***Well Volume Well Diameter 5/8" 2"	Calculation*** L/ft 0.06 0.605
campie Deptin					4"	2.47
Field Equipment	1				1101-1	
Multiparameter Water Quality Meter: Water Level Meter: Turbidity Meter: Pump Type:	VSI 5 Solis+ MixroTI Mp BI	102 Nov	Serial No.: Serial No.: Serial No.: Serial No.:	0662 294991 201407 Na	2421BB 7081	
Purge Method:		Inertial	laj+ yregn □ Othe Seconds Refill 25			
Sampling Method: Peristaltic Pump Bladder Pump : 	Optimum Flow R		ロ Othe Seconds Refill ユゲ		ge @ 28, P;	5%
Sample Collectio	on Informatio	the second s		MS/MSD? :	Yes 🛛	No p
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No No	Nitric HCI	6020B LL, 7470A	250 ml Plastic 8oz Glass	NG
Total LL Mercury Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg 1631 LL Hg	8oz Glass	all
	1					M
						The second

Page 1 of 2

D:	MWSH		Sample ID:	0	622	MW 5	HGV	\checkmark	Sample Time:	
	6/3/27		Dup. Sample						Dup, Sample Time:	
Pum	p stuck	but fu	actional					-		
110.	F studie	and in			_		1.00		P.4.	-
1	Volume Temp	Spec. Con				Purging		abilization	Data	-
ime hrs)	Removed *± 3% °C.	min (µS/cm)	d. DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes	
10	(L) ± 0.2*	C *±3%	and the second sec	RT PURG	ING	1 1070		-		
15	6.7	\$ 47	2 5.06	6:92	- 50.0	105.6	28.4	0.150		1
20	6.0	8 460	2.80	6.94	-29.6	148.7	28.50	11		17.
25	5.90		1.76	6.99	-346	27: 93	28.53	4	Lun Pa	2
0	5.8	1440	t. 21	7.00	-3.25	3631	28,54	10		
15	5,7	7 44-	7 1.10	7.04	-2017	22.61	1	11		
45	5.8	1447	7 1.10	7.01	-31.4	22.80	28.60	11 -	Turbity 19.74	2
	Gia	4 447	11.22	7.01	-30.1	16,58	28.58	1		
1.2		2448	0.80	7.01	-32.2	13:07	2859	11	7	-
	6.12	450		104	-37.0	12:24	28.6	11		12
	6.2	2 450	0.70	703	-396	11.14	U	11		-
-	6.2	1 452	0:67	7.02	-380	10.79	4	11	Sa 0/12 RJ	
		1.1	1.12.1	-	~				Samper 15:10	
		1.				1			1	_
		1.1		1	1		-	-		
				-				-		
		1	1.1.1	1						-
		1	1. 1. 2.	1		1	3			-
				1000	-		7			
1.1	1.1.1		1.				1.12			-
	1.1.1	1111		-			-	1		
		100	1.1.25	3	- 1		B			-
1			1.1.1.1	-			-			
11		1.12		-			-			-
		-			-		-			
2					-					-
		-				-	-			-
		1						1		-
		-				Sampl	ed?: Y	es 🗷 N	• 🗆	Page 2

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	Sundance Consulting Inc.	1.00
1	Consulting Inc.	- And

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Client/Site: Contract No.: Date: Time Start: Time Finish:	BLM Red Devil 140L6321C000 43:00 17:00 17:00	1	Project No.: Samplers: Checked By:	Well ID.: BU06-007 MILLC	MW55 POHer Z	
Well & Purge Info	ormation	· · · ·			1	1
TD (ft. bTOC): DTW (ft. bTOC): Water Column: Liter/Foot:	22 12.15 0.60	2, 57 ft ft 95 L/ft	TD-DTW=Water Co	eened Interval (ft.): lumn Calculation*** table	- 10 - 20 ***Well Volume (Calculation***
Liters in Well:	1	L	Water Column x L/f		Well Diameter	L/ft
Three Well Volumes:		L	Liters in Well x 3	1	5/8"	0.06
Sample Depth:	Sec. 10 August	ft	Depth of Pump Intal	ke	2"	0.605
			1.4	11	1 4"	2.47
Field Equipment			1 1		1	
Multiparameter Water Quality Meter: Water Level Meter: Turbidity Meter: Pump Type:	V9.T Soligt Microt Aexis	Peristalicp	Serial No.: Serial No.: Serial No.:	1141 214491 202000 55451	103	
Purge Method:	Doptimum Flow R	Inertial	Othe Seconds Refill	r: _ Seconds Dischar	ne	
Sampling Method:	optimum row ru				ac.	11
Peristaltic Pump		Inertial	Othe Seconds Refill		49.	24
		al and the second second				
Sample Collectio	# Containers	Filtered?	Preservative	MS/MSD? : Method	Yes Container Type	No q Initials
TAL Metals	# Containers	No	Nitric	6020B LL, 7470A	and the second se	11 M
Total LL Mercury	i	No	HCI	1631 LL Hg	8oz Glass	14
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	MA
	inge			1.1.2.5	1.1	1.000
	-					
		the second second		1		
				10000		
		Land Contract				- 1 C
S.S. State					1.1.1.2.2.2	1 2 2
			the second second		1	10000
			The factor of the second se			

:	WV	y hh		Sample ID:		9622	MWU	140	7~	Sample Time: 1405
1	5/4	122		Oup. Sample	ID:			-	-	Dup-Sample Time:
-		-	-		_		Duraina	and tot	abilization	Data
	Volume	Temp	Spec. Cond.	-		000 (-10	Turbidity		1	Data
ne hrs)	Removed (L)	*± 3% *C, min ± 0.2*C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
00	1.41			STAF	RT PURG	the second se				
05		6.21	756	2.72	617	26.2	35.08	12.70	,100	
0	1. 1. 1	6.28	347	2.46	6.26	31.7	25.44	11	11-	
5	1-1-1	6:20	342	2.40	6337	\$2.99	22.99	1275	11	00P = 34.1
10	121	6,04	326	2.28	6.34	73.5	1665	11	h	
5		6.28	377	2.17	638	33.8	1769	11	11	
0		6.34	321	2.40	61 92	32.5	13,65	11	il	
5		6.48	312	2,13	6.45	32.3	13.65	11	4	
0	1	0.04	310	2.16	6.47	31,0	13.67	11	11/	
5		5.7	206	2.04	646	biv	13.95	1	11	
0		557	398	2.00	6.49	172.9	13.50	11	11	
DO	1111	5.64	292		6.49	123	12.32	11	1)	Stap/128d
04		13.04	- IF	11=10	e sel t	11.1	161-		1	SUMPIT
94			30							
-			1							
-	7 1 3		in the start						-	the state of the s
-	-	1.1		-					-	and the second se
-		1								
- 1	-	-	-	-	-			-		
-					-					
-	1-1-1			1.4.4.5				-		
		1.2						-		
				1212	-	1000	1. 11		1	
			1						1	
				17					-	
	12124	1.1		1.15						
	1114			1.17	1					
					1.3		1.1.1		2 2	
-	1.1.1			111111	100					

8	Consulting Inc.	15	Low-F	low Grour	ndwater San Stabilizati	
Client/Site: Contract No.: Date: Time Start: Time Finish:	BLM Red Devil 140L6321C000	000	Project No.:	Well ID.: BU06-007 Niels 20	MW-A4 Hun	-56
Well & Purge Infe			Checked By:			-
TD (ft. bTOC): DTW (ft. bTOC): 3 Water Column:	78,65 N	p ft 20 ft			55-75	1
Liter/Foot:	0.0	eos Lift	See ***Well Volume	e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	-	L	Water Column x L/f	t	Well Diameter	L/ft
Three Well Volumes:	1.1	L	Liters in Well x 3		5/8"	0.06
Sample Depth:	-	. ft	Depth of Pump Inta	ke	2"	0.605
5 T 1 2 3	1000			mante an la	4"	2.47
Water Level Meter: Turbidity Meter: Pump Type: Purge Method:	Micro bla	DPW DPW	Serial No.: Serial No.: Serial No.:	2020079 NG 10)+ 1/2011		O INST Keal
 Peristaltic Pump Bladder Pump : 	Optimum Flow R	Inertial ate Set at $\frac{1}{2}$	Othe Seconds Refill	er:Seconds Discharg	infort -	1/5
Sampling Method:		Inertial ate Set at	Othe Seconds Refill		je @ 40 P	50
Sample Collection	the second s			MS/MSD? :	Yes 🗆	No 🖬
Parameter	# Containers	Filtered?	Preservative	Method .	Container Type	Initials
TAL Metals Total LL Mercury	1	No	Nitric HCI	6020B LL, 7470A 1631 LL Hg	250 ml Plastic 8oz Glass	the
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	nFT
H.						1

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D:	Art	FA	NP	Sample ID:	00	22	MWS	6 (JW	Sample Time: 0919
	173	The	-111	Dup. Sample	~ ~ ~		1111.	0	-	Dup. Sample Time:
:	0/ /	1	-014/14	par et			A	-		
			1.1.1					and *St	abilizatio	on Data
Time 24 hrs)	Volume Removed	Temp *± 3% *C, min	Spec. Cond. (µS/cm)	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU)	DTW (ft)	Flow Rate	Color/Odor/Notes
X25	(L)	± 0.2°C	*±3%	and the second second	RT PURG	2	*± 10%	1 14	0.150	
830	1 - 1	4.63	482	(15)	616	HORDW	94.86	3240	10.150	59.0 ORT
035		4.08	.482	3.96	6.52	54.7	2.89	2140	11	
40		2.43	485	3:70	6.57	542	2.20	23.59	ti	I PARTY IN COMPANY
45	1	3.98	Lao	4.00	6.60	64.0	3.46	BEF	11	
50		3.12	197	3.85	6.61	575	2.32	2757	11	
55		4.05	496	9-66	6.63	my	1.06	37.59		
00	-	395	501	3.37	6.65	54.6	2,21	87.61	11	
010		4.01	501	3.24	666	14.6	6.91	33.67		
1 n	-	4.04	502	117	81.7	517	0. 74	32.66	11	StabilZed, Samplad 9:19
1U		7.14	144	1.1	0.00	7 107	01 /9	7160		mon 39 / mpt
-	-	100	-		0	- 12-				
-							-		-	
-			-		-		-			
-			-	1	-	-	-	-		
-			-		-		-	-		
-			-	-				1	-	
-	1				-			-		
-				-	-					
-										
2.4		-		10.43	-			-		
					1			-		
- 1			1	-	1	-		-		
				1.1.1.1.1.1				-		
	-1							-	-	
-		1				-	1 - 1-		S	1A.
	1				-	-	1.00	-		
						1.1	-	-	-	
1.	1				-					

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Client/Site:	BLM Red Devil	Mine	1000	Well ID.:	MW57	
Contract No.:	140L6321C000	1	Project No.:	BU06-007	1.1.1	
Date:	6/3/22		Samplers:	GG		
Time Start:	1220					
Time Finish:	1322		Checked By:	1h	I D Collin	
Well & Purge Info	ormation					
TD (ft. bTOC): tof 0	fpump 47,89	ft	Scre	ened Interval (ft.):	37.5-57	.5
DTW (ft. bTOC):	30,9	3 ft				
Water Column:		ft	TD-DTW=Water Co	lumn		
Liter/Foot:	0.605	L/ft	See ***Well Volume	Calculation*** table	***Well Volume	Calculation***
Liters in Well:		L	-		Well Diameter	L/ft
Three Well Volumes:		L			5/8"	0.06
Sample Depth:	1.1.1.1	ft	-	(e	2"	0.605
	21221			and the state of t	4"	2.47
Field Equipment				ALC: NO DEC		
Multiparameter Water	Vet	eri		11 11 04	0416	
Quality Meter:	YSI .		Serial No.:	11 MI 00		
Water Level Meter:	Dipper		Serial No.:	0705		
Turbidity Meter:	Micro		Serial No.:	2020	07903	
Pump Type:	MP-S	50	Serial No.:	136-	5	
Purge Method:			с.	e tra Ph		
Peristaltic Pump		Inertial	□ Othe	n	·	1.1.1.1.1.1.1
Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill 3	Seconds Dischar	ge @ ~22.ps	i 4cpm
Sampling Method:						-
Peristaltic Pump		Inertial	□ Othe	n		
😡 Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill 3	_Seconds Dischar	ge @ ~ 22 051	4cpm
Sample Collectio		a second s	<u>u</u>	MS/MSD? :	Yes 🗆	No 😹
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A		124
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	AH
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	MA
			-	10	1 2 1 2 2	
				Contraction of the	1.1.1	-
and the second second		1.000		The service of the se	1.7.1.1.1.1	1
	-			1	12 2 1 1 2 1	1.
			1	1		1 - Del
	1			- march		1000
	1		1 1			1.51
and the second second				a state iste	Lat. Chart	Low Lord La

ell ID: jn	1157			Sample ID:	0622	NWS	FGW				Sample Time: /3/0 Dup. Sample Time:
	6/3/22 Dup. Sample ID:										Dup. Sample Time:
tes:	13/22			1					1.2		
								_		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	The second se
-	_		1					and *St	abilizatio		
Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *± 3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	cond pis/cm	Color/Odor/Notes
1230	(6/		1.1.1	STA	RT PURG	ING				Adjusted	l flow + pressure
1240	0.5	7,40	119	17.10	6.63	65.6	0.00	31.00	0,1	76	
1245		6.63	97	13.48	6.00	64.5	0,00	31.00	0,1	62	191.
250	1.5	6.25	74	12.50	6.03	64.9	0.00	31,00	0,1	47	
2.55	2.0	6,25	66	12.01	6.06	62.9	0,00	31.00	0.1	42	
300	2.5	5,95	66	11.96	6.08	62,3	0,00	31.01		40	
205	3.0	6.02		11.77	6.11	61.9	0.00	31.01		39	
1245 1250 1255 1255 1300 1310	0.0	6.02	42	11,70	6.13	61.6	0.00	31.01		39	Collect sample @ 1310
210			1.1.	1						1	
	1				1000				1		
-	-		1.1.1								
-	1							1	1. 2		
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			-			-		-	-		
				1119			1	-	-	1.4.1	
	BALL							1		1.5	
-101-	1 di tu								1		
1.11	1				1		Samp	led? :)	res 🛛	No 🗆	
		1 th									Page 2



Client/Site:	BLM Red Devil	Mine		Well ID.:	MW 58	
Contract No.:	140L6321C000	1	Project No.:	BU06-007		1
Date:	6/3/22		Samplers:	GG		
Time Start:	1500			1.1.1	1	
Time Finish:	1640		Checked By:	19.4		
Well & Purge Inf	ormation	1	101 111	100		
TD (ft. bTOC): top	tpmp47.11	ft	Scre	eened Interval (ft.)	36,62-	56.62
DTW (ft. bTOC):	30.00	ft				1
Water Column:		ft	TD-DTW=Water Co	lumn		1
Liter/Foot:	0.405	L/ft	- See ***Well Volume	Calculation*** table	***Well Volume	Calculation***
Liters in Well:		L	Water Column x L/ft		Well Diameter	L/ft
Three Well Volumes:	1	Ĺ	Liters in Well x 3		5/8"	0.06
Sample Depth:		ft	 Depth of Pump Intal 	ke	2"	0.605
			-	interfection la	4"	2.47
Field Equipment			1 Louis In Ca	E LA LA		
Multiparameter Water Quality Meter:	Y51 55	6	Serial No.:	11. 41008	348	I DE
Water Level Meter:	Dipper		- Serial No.:	0705	2. 1	
Turbidity Meter:	MicroT	PW	Serial No.:		07983	
Pump Type:	MP-50		Serial No.:	13	65	
Purge Method:				24 0 -		
Peristaltic Pump		Inertial	□ Othe	n		1.2.1.1
X Bladder Pump :	Optimum Flow R	ate Set at <u>26</u>	Seconds Refill 4	Seconds Dischar	ge @ 32	psi
Sampling Method:			181	10.00		
Peristaltic Pump		Inertial	D Othe	C _{at}		10.00
Bladder Pump :	Optimum Flow R	ate Set at 24	Seconds Refill _ 4	_Seconds Dischar	ge e 321	osi
Sample Collectio				MS/MSD? :	Yes D	Nod
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A		Jehn .
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	55
Dissolved LL Mercury	-	Yes	HCI	1631 LL Hg	8oz Glass	then
			1	1		1 - 1 1
	1.00		Constant .	Arren arrest		1 7 1
	1					
	-	in the second	1.30 7 10 1	1.1.1	A CONTRACTOR	1
				to the store	1-1-1-2-1	1 202
	-		f is it.	10 10		-
	1.1.1			A Sector of L		1.2.3

May 2021

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Vell ID: M	W 58			Sample ID:	0622	2 MW	586W			1	Sample Time: 1628
	2/22			Dup. Sample			-	_			Dup. Sample Time:
ate: 6/3 otes:	+1 or		-	12.0							
		- 1.5	1.1	2111	-						
- D-			Free Cand				Purging Turbidity				The last out the last
Time (24 hrs)		Temp *± 3% *C, min		DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate	Cond Ben	Color/Odor/Notes
1510	(L)	± 0.2°C	*±3%	STAF	RT PURG	ING	110/0	100		Adjuste	d pressure and flow
1520	0.7	10.20	315	5.68	7.11	59.4	24,34	30.05	OA7	215	
1525	1.05	9.04	307	2.75	7,21	47.6	35,99	30.05	0,07	213	
1530	1.40	8.68	301	1.78	7,30	41.6	247.8	30,05	0.07	207	Bronge sediment
1535		8,65	301	1.40	7.34	4012	637.6	30,05	0,07	207	thick arange sediment (Dung flow cell
		8,45	301	1.91	7.19	42.5		30.05	0,07	206	
1550		8.45	301	1,90	7.37	39.3	125.0	30.05		207	slowly clearing
1555		8.14	304	1.44	7,37	37,7	96.75	30,05	0,07	204	, ,
1400		8,10	303	1.53	7,38	37.8	89,62		0.07	206	
1605	3,85		303	1,31	7,37	37.5	63,54	30,05	0.07	205	
1610	4,20	7.86	303	1.28	7,37	38,3	33,27	30.05	0.07	204	
1615	4,55		303	1.25	2.38		27,32	30,05	0.07	205	
1620	1135	01-5			1.50		1 ans	-	2.5	1	Collect sample at 1620
1000	1				1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		1		1110		
		1.0					1.00		1.1		
			-			- 11	11.11				
-	-		-						12		
		-			1.1		1 1 1				
-			-	1100	1						
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	-			1.1.1.2				-			
1	-		-	1.00			-	-	1		
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1	1	-	-	-	-			-			
			-	-		1	-	-	1		
					-	1			~		
2				1-111			Sampl	ed?: Y	es 🗚	No 🗆	Page 2 of

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Client/Site:	BLM Red Devil	Mine	1	Well ID.:	MW59					
Contract No.:	140L6321C000	1	Project No.:	BU06-007	-C. C. S. L. L.					
Date:	6/4/22		Samplers:	GG						
Time Start:	1320		1.19		1. Sec	2.00				
Time Finish:	1510	. 1 . 1 1	Checked By:	12.	Å					
Well & Purge Info	ormation	6	11.			1				
TD (ft. bTOC): top	of pup 151	.05 ft		Screened Interval (ft.)	: 140-16	60				
DTW (ft. bTOC):		2.21 ft	1 1 1	111151	- I					
Water Column:	1 1	ft	TD-DTW=Wate	TD-DTW=Water Column						
Liter/Foot:	٥.	605 L/ft	See ***Well Vo	ume Calculation*** table	***Well Volume	Calculation***				
Liters in Well:		L	- Water Column	and the second second second	Well Diameter	L/ft				
Three Well Volumes:	1.1	L	Liters in Well x		5/8"	0.06				
Sample Depth:		ft	Depth of Pump							
	1 1	1	_ Ceparor amp	Intake	4"	2.47				
Field Equipment	11-1-1	-1	1511	1.11 - 194	Sec. 1. 1. 1.					
Multiparameter Water Quality Meter:	Y5I 55	Tla	0	B10 2	4 21	_				
	And the second second	5.45 F	_ Serial No.:		0662421					
Water Level Meter:	Dipper		Serial No.:	Serial No.: 0705						
Turbidity Meter:	Micro	PW	Serial No.:	Serial No.:						
Pump Type:	mp-50	Solinst	Serial No.:	136	5					
Purge Method:	THE P	CANE .	· · · · ·	-						
Peristaltic Pump		Inertial		Other:	and the second second					
				22 Seconds Dischar	rge e ~70psi	1				
Sampling Method:										
Peristaltic Pump		Inertial		Other:	£ . }					
Bladder Pump :	Optimum Flow R	ate Set at _38	Seconds Refill	2 Seconds Dischar	rge Cr70ps	1				
Sample Collectio	n Informatio	n	11	MS/MSD? :	Yes D	No 🛠				
Parameter	# Containers	Filtered?	Preservativ	e Method	Container Type	Initials				
TAL Metals	1.	No	Nitric	6020B LL, 7470A		13 A				
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	MM				
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	Ma				
10000		1	1	1	1					
	1	1	10000	1	10.4					
			1 20	1	1	1				
	la la la la	1	Land F	E						
					1 25 10 -					
+	1. 201	1.			1. 10 10 100	1				
	1 1 4		1-2-2-21	1	111.					
May 2021			1000	1 Jacob	derthe					

Well ID: 14			Sample ID:	0620	2 MWS	9GW				Sample Time: 1430	
Date: 6/	4/22			Dup. Sample							Dup. Sample Time:
Notes:	-/										
	Volume	Toma	Same Cand		-			the second se	abilizatio		
Time (24 hrs)	Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	Cond us	
1320	0.6			START PURGING						Varied	flow
1340	10.36		596	11.43	7.03	43,8	30,56		0.03		
1345	0.75	11,38	610	11.50	6.94	25.5	54.85	82.25	0.03	449	
1350	0.90	10,85	611	10.69	6.94	17.6	58,51	132.25	0.03	446	
13 55	1.05	11.19	608	7,19	6.94	8.6	69,20	132.25	0,03	447	
1400	1,20	11.77	606	5.31	6,93	6.3	66.20			453	
1405	1.35	12.03	606	4.53	6.93	5.9	64.95	132.25	0,03	456	
1410	1.50	12.15	610			5-2	59.49	132.25	6.03	449	
1413	1.45	11.73	612	3,45	16.92	3,0	61.36	132.25	0.03	447	
1420	1.80	11,55	609	3.06	6.93	-1,8	58,27	132.25	0.03	452	
1425	1,95	11.35	609	2.89	6.92	-3.5	58.22	132.25	0,03	450	
											1430 Sample Time
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			1								
				10							
	1								1		
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	1				1						
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								1			
		1.1.1									
							Sample	d?: Ye	s X M	No 🗆	
Initial of Sa	mpler:	ANY									Page 2 of 2



Client/Site:	BLM Red Devil Mine		Well ID.:	mw de	2					
Contract No.:	140L6321C0001	Project No.:	BU06-007							
Date:	14:057 08/23/22	Samplers:	AN							
Time Start:			- 41							
Time Finish:	1510	Checked By:	they I	h						
Well & Purge Infe	ormation	chickness Lyr	-0							
TD (ft. bTOC):	26,12 ft	Scr	ened Interval (ft.):	13.0-23.0	1					
DTW (ft. bTOC):	19:05 ft		ened interval (it.).	1/10 2 /.0						
Water Column:		TD-DTW=Water Co	TD-DTW/=Water Column							
Liter/Foot:	O. Cos L/ft	See ***Well Volume	1	***Well Volume Calculation***						
Liters in Well:	L. 28 L	Water Column x L/ft	and the second se	Well Diameter	L/ft					
Three Well Volumes:	12:83 1	Liters in Well x 3		5/8"	0.06					
Sample Depth:	240 ft	Depth of Pump Intak	e	(2")	0.605					
				4"	2.47					
Field Equipment										
Multiparameter Water	VSI PR Guatro		DIC Lata	21						
Quality Meter:	CIT TO YUNO	Serial No.:	-20104	24						
Water Level Meter:	7011/1/1- mozer 12	Serial No.:								
Turbidity Meter:	2100/ 14rbilimeta	Serial No.:	-166041							
Pump Type:	baltin	Serial No.:		19						
Purge Method:										
Peristaltic Pump	Inertial	Other	-							
Bladder Pump :	Optimum Flow Rate Set at Se	conds Refill	Seconds Discharg	e						
Sampling Method:				-						
Peristaltic Pump	Inertial	□ Other	÷							
Bladder Pump :	Optimum Flow Rate Set at Se	conds Refill	_Seconds Discharg	e						
Sample Collectio	on Information		MS/MSD? :	Yes 🗆	No 🗙					
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note					
Disolvedmercenry		HCI		gozamber						
Total Mel Enry		NIFFIC		802 gun ball						
IOTAL INGTAL)		NUMIC		250 MLPoly						
		C								

ell ID:	MWI	06.		Sample ID:	e ID: 08 22-MW 06 GW					Sample Time: 4 1 5 5
e:	MW108/2	11/22		Dup. Sample ID:				-	Dup. Sample Time:	
es:										
_					_				10. A 10.	
-	Volume	Temo	Spec Cond	Concerned I	-	-	Purging	1	abilizatio	n Data
Time 24 hrs)	Removed (L)	Temp *± 3% *C, min ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
412			in)	STAF	RT PURG				6.00	
417	0.75	11.7	0,965	14.00	6.62	-9.0	20.0.	19.16	0.15	
122	1.50	60	0:3252	1,60	6.71	-13.9	[8.3	19.20	11	
27	2.25	5.7	09241	0.93	6.72	-14.6	11.6	U	4	
32	3.00	5.9	0.7233	0,99	672	14.6	6.48	11	, []	
137	3.75	6-2	0.3232	0,49	6.71	=14.0	4.76	11	11	
4.412	4.50	6.0	0. 3272	0.43	6.71	-11.4	3.34	11	11	Jabilez et Sympthy
			/	1			1.11			
			[]							
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							Sample	d?: Ye	s A N	lo 🗆

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Client/Site:	BLM Red Devil Mine	Well ID.:	MWOO			
Contract No.:	140L6321C0001	Project No.: BU06-007				
Date:	08/23/22	Samplers: Nichool	Her			
Time Start:	09:20		1			
Time Finish:	12:4	Checked By: My K				
Well & Purge Info	ormation					
TD (ft. bTOC):	134,62 ft	Screened Interval (ft.):	14.0-16.0)		
DTW (ft. bTOC):	27:74 ft					
Water Column:	6.88 ft	TD-DTW=Water Column				
Liter/Foot:	0.605 L/ft	See ***Well Volume Calculation*** table	***Well Volume Calculation***			
Liters in Well:	4.16 4	Water Column x L/ft	Well Diameter	L/ft		
Three Well Volumes:	12.49 L	Liters in Well x 3	5/8"	0.06		
Sample Depth:	` 30 ft	Depth of Pump Intake	2"	0.605		
			4"	2.47		
Field Equipment			1.0			
Multiparameter Water Quality Meter:	NSI Ma Quatro	Serial No.: 2100	4221			
Water Level Meter:	5011915-102	Serial No.: 2949	d			
Turbidity Meter:	2100p Typbidi metur	Serial No.: 1660	-1			
Pump Type:	blyder	Serial No.:	1			
Purge Method:			- B.	1		
Peristaltic Pump	Inertial	Other:				
Bladder Pump :	Optimum Flow Rate Set at Set	econds Refill Seconds Discharg	je	5		
Sampling Method:						
Peristaltic Pump	Inertial	Other:				
Bladder Pump :	Optimum Flow Rate Set at 5	econds Refill 10 Seconds Discharg	e @270PSi			
Sample Collectio		MS/MSD? :	Yes 🗆	Nos		
Parameter	# Containers (fill in for each well)	Preservative Method	Container Type	Note		
MECCURY JUSION	1	HE I	802 amber Boz amber			
metal) allow	de l	NULFIS	250 ML POLY			
set sy		A CRITIC	and the foll			
			-			

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/ell ID:	NW~C	g		Sample ID:	087	2 MI	N/09	GN	/	Sample Time: 1140
ate: <	3/23	3/ 2-	2	Dup. Sample	D:	-				Dup. Sample Time:
otes:				a.						
			-							à
-	Volume	Temp	Spec. Cond.		*				abilizatio	
Time (24 hrs)		'± 3% °C, min ± 0.2°C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
10:25		1 0.2 0		3,50 STAF	T PURG	the second s	1 *± 10%		0.10	
1(1:70	,50	0,80	0.3539	30.617	6.28	5.8	21. 5	2770	0.10	Smells Like 2955 NP (bottle use For Flauris
0:35	RI	8.2	0.3234	2.19	6,47	6	25.1	27.82	6.1	LOOL what Smells)
U UC	1.75	6.9	0.2900	1.42	6.53	- 9.5	32.6	22.02	1 15	1,75L
Q:45	2.50	6.7	0.2870	1.41	6.58	-6.8	26.7	28/6	15	2.502
50	3.75	6.8	0,26	1:33	6.57	- 6,4	26.8	28:30	0. (-	
0 55	1.50	6.7	02953	2.57	CIT	-4.3	25.9	29.74	0.15	PHW 28.43
1:00	5.25	7.1	53:31	3.07	6.01	-3+4	16.5	28.59	11	
105	6.00	6.7	03093	2,46	65-6	-61	14.2	28.76	11	
N ND	6.75	6.8	0316	2,02	6,60	-8.3	11.5	28.90	11-	
115		6. 8	03166	1:515	6.64	p qo	.11.1	29.05	11	6
20	8.25	7.0	63190	1.31	6.66	-11.2	8,82	29.17	11	
215		6-8	03230	1,19	6.67	-2.0	8.82	29.37	U	1.4.4
30	9.75	6.9	0.3241	1.09	6.68	-12.5	9.55	29.50	11	376/1/Zed Samping
~									1	
								1 2 2 3		
					1					
		1.1.1								14°1 T
					1.11					
									a.	
2.1.1							1. Sec		1	1 A A
				1						
				-						
					15.11					ŧ.
			1.00						-	
							Sample	d?: Ye	es 🔽 M	No 🗆
		is								

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Client/Site:	BLM Red Devil	Mine		Well ID.:	MWIO				
Contract No.:	140L6321C000	1	Project No.:	BU06-007		10			
Date:	0/23/20	22	Samplers:	66					
Time Start:	0850								
Time Finish:	1130		Checked By:	NP					
Well & Purge Info	rmation			/					
TD (ft. bTOC):	63	3.53 tt	Scre	ened Interval (ft.):	50-6	0			
DTW (ft. bTOC):	27.4	9 ft							
Water Column:	36,0)4 ft	TD-DTW=Water Col	umn					
Liter/Foot:	0,605	L/ft	See ***Well Volume	Calculation*** table	***Well Volume	Calculation***			
Liters in Well:	21.8	L	Water Column x L/ft		Well Diameter	L/ft			
Three Well Volumes:	45,4	1 L	Liters in Well x 3		5/8"	0.06			
Sample Depth:	~40	ft	Depth of Pump Intak	e	2"	0.605			
					4"	2.47			
Field Equipment									
Multiparameter Water	Ver 2 A	uatra	Serial No.:	1022:	12				
Quality Meter:	Dipper Ti				2 04				
Water Level Meter:			Serial No.: 0705						
Turbidity Meter:		21008	Serial No.:						
Pump Type:	Bladde	(Serial No.:	-					
Purge Method:		19 - A.							
Peristaltic Pump		Inertial	□ Other			-			
Bladder Pump :	Optimum Flow R	ate Set at 7.5 S	Seconds Refill 7.5	Seconds Discharg	ge C ~ 28 PSI	,			
Sampling Method:									
Peristaltic Pump		Inertial	□ Other	1					
Bladder Pump :	Optimum Flow R	ate Set at 7.5 s	Seconds Refill 7.5	_ Seconds Discharg	ge @ ~ 30 psi				
Sample Collectio	n Informatio	n		MS/MSD? :	Yes 🛛	No			
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials			
TAL Metals	2	No	Nitric	6020B LL, 7470A		14 4			
Total LL Mercury	2	No	HCI	1631 LL Hg 1631 LL Hg	8oz Glass 8oz Glass	19 19			
Dissolved LL Mercury	2	Yes	rici	1051 LL Hg	002 Glass	14-22			
Duplicatela									
0822 MW99 GU	J				1				
				-					

Well ID: MW10			Sample ID:	0822	MW 106	-ω			Sample Time: 10.3.3			
Date: 8/. Notes:	23/22			Dup. Sample	ID: GB)	2 MW9	9GW			Dup. Sample Time: 1035		
Notes:												
		-	.5									
							Purging	g and *St	abilization	Data		
Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW Flow Rate (ft) L/min	Color/Odor/Notes			
1000	=			-	RTPURG	Y			0.05	7,5 / 7,5 (0×30 psi		
1005	0,25	8.9	318,9	0,76	7.09	61.4	0.54	28,13	0,05			
1010	0.50	9.1	318.3	0.69	7.15	53,5	0,27	28.13	0.05			
1015 1820	0.75	9.3	318.9	0.64	7.19	44.4	0.63	28.13	0.05			
1000	1.00	9.5	318.9	0.72		42.7	0.37	28:13	0.05			
1025	1,25		317.3	0,75	7.25	39.7	0,87		0.05			
10 30	1.50	9.4	318.9	0.72	7.23		0,28	28.13	0,05			
1025 1030 1033			1.0.1							Collect sample.		
		1				-	1			some sopre.		
1												
									-			
		#11-					1					
				-				1				
					1		2					
					+		-					
				-	-				-			
-			30.1		1	+	1		1			
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					1		1					
	1											
			1									
							Sample	ed?: Ye	es X N	• 🗆		
Initial of Sa	ampler:	RA								Page 2 of 2		



Contract No.: Date: Time Start:	140L6321C00 8/23/20	01	Project No.:	Well ID.:	MW16			
	8123120			BU06-007				
Time Start:	100/00	22	Samplers:	GG				
and the second	1330		_					
Time Finish:	1500	3	Checked By:	NA				
Well & Purge Infor	mation							
TD (ft. bTOC):	2	4,08	t Sc	reened Interval (ft.)	: 11-2	21		
DTW (ft. bTOC):	12.42	é – 1 (ť					
Water Column:	1	1.66	t TD-DTW=Water 0	Column				
Liter/Foot:	0.60	S LA	t See ***Well Volun	ne Calculation*** table	***Well Volume Calculation***			
Liters in Well:	7.0	5 1	Water Column x L		Well Diameter	L/ft		
Three Well Volumes:	21.	16 1	Liters in Well x 3		5/8"	0.06		
Sample Depth:	2.	2ft 1	t Depth of Pump Int	ake	2"	0.605		
					4"	2.47		
Field Equipment								
Multiparameter Water Quality Meter:	YSI Pro	Quatro	Serial No.:	102 20	20			
Water Level Meter:	Pieper	Ta	Serial No.:	0705	- a			
Turbidity Meter:	HACH	1 2100 P	Serial No.:	11741	1.4			
Pump Type:	Blad	der	Serial No.:					
Purge Method:								
Peristaltic Pump		Inertial	Oth	er:				
Bladder Pump : Op	timum Flow R	ate Set at 13	Seconds Refill	2 Seconds Dischar	ge CNDOPSI	1		
Sampling Method:					ge C ac psi			
Peristaltic Pump		Inertial	Othe	ar:				
R Bladder Pump : Op	timum Flow P	B Sot at TT						
Sample Collection I	Informatio		Seconds Refill	the second s				
the second se	# Containers	Filtered?	Preservative	MS/MSD? : Method	Yes D	No 🗡		
AL Metals	1	No	Nitric	6020B LL, 7470A	Container Type	Initials		
Fotal LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	4 M		
Dissolved LL Mercury	ĺ.	Yes	HCI	1631 LL Hg	8oz Glass	N 10		
				1				
May 2021								

Well ID:	MW	16		Sample ID:	0822	MWIG	GW	Sample Time: j4/6			
Date: 8/	23/22			Dup. Sample	ID:	NI	7				Dup. Sample Time:
Notes:	Adj	urted	pressure	due te	draw	down	several	times.	First	use of bladder	Sample Time: 1410 Dup. Sample Time: - pump in this well,
	1.0.1		1					g and *St	abilization	Data	
Time (24 hrs)	Volume Removed (L)	Temp *± 3% *C, mir ± 0.2*C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min		Color/Odor/Notes
1335	-				RT PURG	-		-	_		
1345	0,5	8.3	751	0.87	6,31	59.3	52.8	14,48	0,05		
1350	0,75	8,4	753	0,70	6.31	57.5	29.0	14,48			
1355	1.00	8,4 8,6	754	0,51	6.31	55,5	15.7	14,48			
1400	1,25	8,6	756	0.48	6.31	54.8	10,9	14.48	0.05		
1405	1.50	8,4	756	0.45	6.31	54.0	8.81	14,48	0.05		
1345 1350 1355 1400 1405 1410	1,75	8.4	760	0.43	6.31	54.8 54.0 52.8	7.20	14:48	0.05	Collect so	inple a 1410
-		_									/
							-				
									2.2		
			2	2							
		F							0		
					12						
					1						
						C					
			5								
										f	
	1									1.7	
										1.0	
× 1							1		1		
		here					Sample	ed?: Ye	s X N	o 🗆	



Client/Site:	BLM Red De	vil Mine		Well ID.:	MWIZ	
Contract No.:	140L6321C0	001	Project No :		_10:0017	
Date:	9/23/0	22	a second second second	GG		
Time Start:	1150		_ oumpiers.			-
Time Finish:	1325		Project No.: BU06-00 Samplers: G ft Screened Inter ft TD-DTW=Water Column L/ft See ***Well Volume Calculation** L Water Column x L/ft L Liters in Well x 3 ft Depth of Pump Intake Serial No.: I Serial No.: I Serial No.: I al Other: al Other: al Other: al Other: al Other: at Seconds Refill Seconds Defile MS/MSt Filtered? Preservative Method	0/1	1)	
Well & Purge Info	ormation					
TD (ft. bTOC):	54	,77 ft	Sc	reened Interval (ft)	. 415	-515
DTW (ft. bTOC):	15.	0	-	inter fur (it.)	(1.)	2012
Water Column:	39	1	-	olumn		
Liter/Foot:	0.6		-		***Well Volum	e Calculation***
Liters in Well:		1 11			Well Diameter	L/ft
Three Well Volumes:	72	٨	-		5/8"	0.06
Sample Depth:	5	20	-	ka	2"	0.605
	-			ike	4"	10.000
Field Equipment				-	4	2.47
Multiparameter Water	Vot 6	RI				
Quality Meter:	DI I	ro Quatro	Serial No.:	1022	22	
Water Level Meter:	Dipper	72	Serial No.:	0705	5	
Turbidity Meter:	HACH	2100P	Serial No.:	1174	11	
Pump Type:	Bladd	1	-		4	
			_ Serial No.:			
Purge Method:						
Peristaltic Pump	E	Inertial	□ Othe	er:		
Bladder Pump :	Optimum Flow F	Rate Set at 10 s	Seconds Refill 5	Seconds Dischar	20 20	
Sampling Method:				_ Decorids Dischar	ge 30 psi	
Peristaltic Pump		Inertial	C Othe	r		
and the second second second						
Bladder Pump : (Optimum Flow F	Rate Set atS	Seconds Refill 5	_ Seconds Discharg	ge @ 30 psi	
Sample Collection Parameter	the second s	the second se		MS/MSD? :	Yes 🕅	No 🗆
Farameter FAL Metals	# Containers	Filtered?	of the surgery of the second se	Method	Container Type	Initials
Total LL Mercury	3	No		6020B LL, 7470A		17.15
Dissolved LL Mercury	2	Yes	the second se		8oz Glass	1319
	2	163		1631 LL Hg	8oz Glass	1919
						(F)
						1
						2

Well ID:	D: MW17			Sample ID:	080	22 MW	1760	U		Sample Time: 1230			
Date: 🔗	123/2	2		Dup. Sample	e ID:					Dup. Sample Time:			
Notes:	First	sample	collec	ited w	ith	new B	ladd er	pump	sys	stem			
							Purging	g and *St	abilizatio	tion Data	-		
Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	te Color/Odor/Notes			
1158		1	1 10/0	STA	RT PURG	ING	1 10%		1		_		
1203	0,375	7.4	254,7	9.38	4.57	164.9	5.92	15.25	0.075	5			
1208	0,75	7.5	249,9	9.28	6.67		2.80	-	0.075				
1213 1218 1223 1228	1.125	7.2	235.8	9.32	6.83	163,9	2,28	15.25	0.075				
1218	1.500		232,1	9,18	6.91	163,9	1.76	15.25	0.075				
1223	1.875	7.2	232.7	910	6.94	163.7	1.45		0,075				
1228	2.25	7.5	232.0		6.95	154.1	1.31		0.075				
1230				1						collect sample and MS/MSD			
	-				1		-						
-				1									
-													
		-											
								-					
					1								
			-										
-							0.000						
									1.00				
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				_		5							
10									1				
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	1.										1		
								- 4			an sur		
								1		line and the second sec			
		- 1					Sample	ed?: Ye	s R N	No 🗆			
Initial of Sa	mpler:	Gb								Page 2	of 2		



Client/Site:	BLM Red Dev	il Mine		Well ID.:	MW26				
Contract No.:	140L6321C00	01	Project No.:						
Date:	8/26/2	022	Samplers:	GG					
Time Start:	0830								
Time Finish:	1230		Checked By	. 100					
Well & Purge Inf	ormation								
TD (ft. bTOC):	4	5.00	ft	Screened Interval (ft.	: 32-4	2			
DTW (ft. bTOC):	34	.01	ft			~			
Water Column:	10	1.99	ft TD-DTW=Wat	er Column					
Liter/Foot:	0	605		See ***Well Volume Calculation*** table ***Well Volume Calculation					
Liters in Well:	6.65		L Water Column		Well Diameter	L/ft			
Three Well Volumes:	19,9		L Liters in Well x		5/8"	0.06			
Sample Depth:	40	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	ft Depth of Pump		2"	0.605			
			Deptil of Pullit) make	4"	2.47			
Field Equipment					4	2.47			
Multiparameter Water		0 i			-				
Quality Meter:	YSI P.	· Questro	Serial No.:	1022	33				
Water Level Meter:	Dipper	-12	Serial No.:	070.	5				
Turbidity Meter:	HACH	1 2100	P Serial No.:	117	41				
Pump Type:	Georgeno	Blader	Serial No.:						
						1			
Purge Method:									
Peristaltic Pump		Inertial		Other:					
Bladder Pump :	Optimum Flow R	ate Set at 13	Seconds Refill	3 Seconds Dischar	ae 25psi	= 0.0254/n.			
Sampling Method:						14.			
Peristaltic Pump		Inertial		Other:					
Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill	3 Seconds Dischar	a B DE ac	0 10511			
Sample Collectio	n Informatio	n				the second se			
Parameter	# Containers	Filtered?	Preservativ	MS/MSD? : e Method	Yes Container Type	No 😥			
TAL Metals	1	No	Nitric	6020B LL, 7470A		Initials			
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	4 h			
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	1412			
					-				

Well ID:	nw21	6		Sample ID:	082	2 MW	2666			Sample Time: 1120
Date: 8/	26/2	022		Dup. Sample	ID:		_	-		Dup. Sample Time:
Notes: I	nstall		new p	ump						
			1	/	-					
-	Volume	Temp	Spec. Cond.				Turbidity		abilization I	Data
Time (24 hrs)		*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1030		0.1		1	RT PURG			Laters		
1035	0.125	8.6	629	1.43	6.16		242		0.025	brown, cloudy strong fael ador
1040	0.25		677			65.7		34.42	0.025	
1045	0.375	8,6	671	1.03	6.22	60.1	221	\$4.42	0.025	
1050	0,50	8.9	467	0.76	6.23	57.3	184		0.025	
1055	0.625	9.1	664			54.2	144	34.42	0.025	->
1100	0.75	9.6	463	0.89	6.26	51.1	130		0,025	
1105	0,225	9,6	667	VI- C	6.28		110	34.42	0,025	
1100 1105 1110	1,00	9.7	670	0,82	6.29	46.8	103	34,42	0.025	
1115	1.025	2,3	677	0.97	6.30	44.5	92.6	34,42	0.025	
										Collect sample
	3									1
	1	1								
					3.11		()			
			1.00							
			(
							1			
						-				
					_					
	0	AL			-		Sample	ed?: Ye	s No	
Initial of Sa		TH							e1	Page 2 of 2

Sundance	15
Consulting Inc.	

Client/Site:	BLM Red Devil Mine		Well ID.:	AND -DA	1.91					
Contract No.:	140L6321C0001	Project No.:	BU06-007	VVVV	41					
Date:	08/23/22	Samplers:	1/0							
Time Start:	1520,									
Time Finish:	1628	Checked By:	- 6 4	A						
Well & Purge Inf	formation	_ one one of by.		y/~	, 1					
TD (ft. bTOC):	35,65 ft	Ser	eened Interval (ft.):	23.0 ~	77 0					
DTW (ft. bTOC):	30.01 ft		eeneu miterval (n.).	1.21-1	27.0					
Water Column:	5.64 ft	- TD-DTW=Water Co	lump							
Liter/Foot:	-7.410P 0.605tm	See ***Well Volume Calculation*** table ***Well Volume Calculation***								
Liters in Well:	3.41	Water Column x L/f		Well Diameter L/ft						
Three Well Volumes:	10.23	Liters in Well x 3		5/8"						
Sample Depth:	2.4	-		2"	0.06					
	30 ~34 ft	_ Depth of Pump Intal	(e	4"	0,605					
Field Equipment				4	2.47					
Multiparameter Water	WET PRAN									
Quality Meter:	Y) [110 aug +10	Serial No.:	21 9042	21						
Water Level Meter:	50111+ molel 102	Serial No.:	N201940	- 29499)					
Turbidity Meter:	260 & Turbeliniter	Serial No.:	LGGGY							
Pump Type:	BAJAN		PN							
. amp Type:	- stild a	Serial No.:								
Purge Method:										
Peristaltic Pump	Inertial	□ Other								
Bladder Pump :	Optimum Flow Rate Set at S	Seconds Refill	Seconds Dischard	I.P.	11					
Sampling Method:										
Peristaltic Pump	Inertial	□ Other								
Bladder Pump :	Ontimum Flow Pato Sat at									
	Optimum Flow Rate Set at S	econds Renii		e	-					
Sample Collection	n information		MS/MSD?:	Yes 🗆	No 🖌					
Parameter	# Containara (fill in far anak wall)	D								
And and a second se	# Containers (fill in for each well)	Preservative	Method	Container Type	Note					
Disclud Mercury	# Containers (fill in for each well)	HC1	Method	802 9mb-1	Note					
Disclud Mercury	# Containers (fill in for each well)	HC	Method	8 02 and Ar 8 5 Z ada b Ar	Note					
Disolved Mercury Total Mercury	# Containers (fill in for each well)	HC1	Method	802 9mb-1	Note					
Disolved Mercury Total Mercury	# Containers (fill in for each well)	HC	Method	8 02 and Ar 8 5 Z ada b Ar	Note					
Disolved Mercury Total Mercury	# Containers (fill in for each well)	HC	Method	8 02 and pr 8 02 and pr 240 mc poly	Note					
Disolved Mercury Total Mercury	# Containers (fill in for each well)	HC	Method	8 02 and Ar 8 5 Z ada b Ar	Note					
Disolved Mercury Total Mercury	# Containers (fill in for each well)	HC	Method	8 02 and pr 8 02 and pr 240 mc poly	Note					
Disolved Mercury Total Mercury	# Containers (fill in for each well)	HC	Method	8 02 and or Buz and or 25 mi poly	Note					
Total Mercury		HC	Method	8 02 and or Buz and or 25 mi poly	Note					

Well ID:	170	127		Sample ID:	C	1822	- MV	V 2-	7 6	Sample Time: 6:00
Date:	823	22		Dup. Sample	ID:	-				Dup. Sample Time:
Notes:			. 2							
		~								
	Volume	Temp	Spec. Cond.		-		Purging Turbidity		abilization	n Data
Time (24 hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1527				STAF	RT PURG	ING	-			
15-32	0.75	1518	0.0011	4.4	6.27	10.6	fils	30,38	16.15	
1537	1.50	14.9.	00000	619	6.09	20.7	0:53	30 2	7 Y	
1542	2.25	1631	8.0008	595	70.52	28.2	0:46	3020	11	
1447	7.00	6.7	0.0007	0.49	5.85	35.0	0.50	30.18	11	
TEE2	3.75	16.1	0.00050	148	5.76	39 P	0.49	10.17	7 17	Stabilized samplobild
0.1.1					11				- 1	
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-										
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	1					-				
					1.1					
				-						
		1								
		-	-							9
1						-				
					1		1			
A.							-			
					-					
			-				Sample	ed?: Y	es 🖬 N	lo 🗆
					_				V	



	BLM Red Dev	il Mine		Well ID .:	MW28					
Contract No.:	140L6321C00	01	Project No.:	BU06-007	- www					
Date:	9/23/2	020	Samplers:	GG						
Time Start:	1520	3	_	0						
Time Finish:	- 10	,30	Checked By:	NR						
Well & Purge Info	ormation			(
TD (ft. bTOC):	6:	5,58	t Sci	reened Interval (ft.)	: 53-6.	3				
DTW (ft. bTOC):	26.	54 1	t							
Water Column:	39,0	14 1	t TD-DTW=Water C	olumn						
Liter/Foot:	0.6	05 L/1	t See ***Well Volum	See ***Well Volume Calculation*** table ***Well Volume Calculation						
Liters in Well:	23	2.0	Water Column x L/	and the second sec	Well Diameter	L/ft				
Three Well Volumes:		01	Liters in Well x 3		5/8"	0.06				
Sample Depth:	~60	1	t Depth of Pump Inta	ake.	2"	0.605				
			beput of Pump inte	ike	4"	2.47				
Field Equipment						2.47				
Multiparameter Water	Ver 0	A I	N	and the second						
Quality Meter:	YSI Pre	Quatro	Serial No.:	10222	22					
Water Level Meter:	Dipper	T2	Serial No.:	0705						
Turbidity Meter:	HACH 2	100 P	Serial No.:	1174	1					
Pump Type:	Bladde		Serial No.:		1					
		C.W.								
	1000000									
Purge Method:										
Purge Method:] Inertial	□ Othe	er:						
Peristaltic Pump] Inertial			ne a 30.00	1				
Peristaltic Pump] Inertial	C Othe Seconds Refill <u>1.5</u>		ge <u>c 30 ps</u> j	1				
Peristaltic Pump Bladder Pump :		Inertial ate Set at <u>13.5</u>	Seconds Refill 1,5	Seconds Discharg	ge <u>c 30 ps</u> j					
 Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump 	Optimum Flow R] Inertial ate Set at <u>13.5</u> Inertial	Seconds Refill <u>1.5</u>	Seconds Discharg		1				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump :	Optimum Flow R	I Inertial ate Set at <u>13.5</u> I Inertial ate Set at <u>[3.5</u>	Seconds Refill 1,5	Seconds Discharg	ge (@ 30 ps/					
 Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection 	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u>	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u>	_ Seconds Discharg	ge (≈ 36 ps/ Yes □	No 🗶				
 Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Sample Collection Parameter 	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered?	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative	Seconds Discharg	ge (ª 30 ps / Yes □ Container Type	No 🗶 Initials				
 Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Bladder Pump : 	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u>	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric	Seconds Discharg	ge (2 30 ps/ Yes Container Type 250 ml Plastic	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Bladder Pump : Gample Collection Parameter FAL Metals Fotal LL Mercury	Optimum Flow R	I Inertial ate Set at <u>13.5</u> I Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative	Seconds Discharg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Sample Collection Parameter FAL Metals Fotal LL Mercury	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge (2 30 ps/ Yes Container Type 250 ml Plastic	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Sample Collection Parameter FAL Metals Fotal LL Mercury	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Bladder Pump : Gample Collection Parameter TAL Metals Total LL Mercury	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				
 Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Sample Collection 	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				
Peristaltic Pump Bladder Pump : Sampling Method: Peristaltic Pump Bladder Pump : Bladder Pump : Sample Collection Parameter TAL Metals Total LL Mercury	Optimum Flow R	Inertial ate Set at <u>13.5</u> Inertial ate Set at <u>[3.5</u> n Filtered? No	Seconds Refill <u>1.5</u> Othe Seconds Refill <u>1.5</u> Preservative Nitric HCI	Seconds Discharg Seconds Discharg MS/MSD? : Method 6020B LL, 7470A 1631 LL Hg	ge C 30 ps / Yes Container Type 250 ml Plastic 8oz Glass	No X Initials				

Well ID: M	W28			Sample ID:	0822	MW 2	BEW			Sample Time: 1605
Well ID: <u>M</u> Date: <u>8/2</u> Notes:	3/22			Dup. Sample	ID:	-				Dup. Sample Time:
Notes:										
						_				
	Volume	Toma	Case Cand						abilization	n Data
Time (24 hrs)		Temp *± 3% °C, min ± 0,2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1530		1.0.0			RT PURG			-		
1535	0.25	8,2	428.5	1.35	6.67		2.97	26.58		
1540	0.50	7.8	424.1	1.27	6.72	131,2	0.46		0.05	
1545	0.75	7.8	4227	0,96	6.74	105.9	0.47	26,58	0.05	
1550	1.00	7.9	422.6	6.84	6.76	93.3	0,38	26.58	0.05	
1555	1.25	7.9	419.9	0.82	6.78	82.7	0264	26.58	0.05	
1555 1600 1605	1,50	8,0	419.6	0,86	6.78	84,6	0,34	\$6.58	0.05	
1605	1.75				1.2			26.58	0,05	Sayled
	1000		1		1	1	-			
								1		
2			1		-	1				
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					1.0					
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-										
				1.8				1		
	<u></u>			2.	-					
	2						1			
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		1								
		-								
									-	
							Sample	ed?: Ye	s X N	No 🗆
Initial of Sa	mpler:	14								Page 2 of 2

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The second se	Consulting Inc.	
and the second second		TEAS

Client/Site:	BLM Red Devil Mine	11	Well ID.:	11 W-2	a				
Contract No.:	140L6321C0001	Project No.:	BU06-007	-W VV-A	1				
Date:	9/24/22	Samplers:	000-001	2	1				
Time Start:	08:20				-				
Time Finish:	09140	Checked By:	- Ks	A	29				
Well & Purge Infe	ormation		-0	10-					
TD (ft. bTOC):	71:25 ft	Scr	eened Interval (ft.)	59-0-1	NAN				
DTW (ft. bTOC):	-64-13 ft				2.60				
Water Column:	7,12 ft	- TD-DTW=Water Co	blumn						
Liter/Foot:	(4,3) DibosL/ft	See ***Well Volume Calculation*** table ***Well Volume Calculation***							
Liters in Well:	L	- Water Column x L/f		Well Diameter	L/ft				
Three Well Volumes:	12,92 1	- Liters in Well x 3		5/8"	0.06				
Sample Depth:	~69 ft	Depth of Pump Inta		(2")	0.605				
		_ Deput of Fullp Inta	Ne -	4"					
Field Equipment				4	2.47				
Multiparameter Water	VSTAR		alch	11.7 1					
Quality Meter:	DL'anotro	Serial No.:	21010	4221					
Water Level Meter:	Solinist me 20102	Serial No.:	294	171					
Turbidity Meter:	2001 lurhidit	y Serial No.:	166	64					
Pump Type:	Blater	Serial No.:	IN IN	ra					
Purge Method:									
Peristaltic Pump		-							
1	Inertial	□ Other							
W. State of the st	Optimum Flow Rate Set at Set	econds Refill	_ Seconds Discharg	e					
Sampling Method:									
Peristaltic Pump	Inertial	□ Other							
Bladder Pump : 0	Optimum Flow Rate Set at Se	econds Refill	Seconds Discharg	e pro 42					
Sample Collection	n Information		MS/MSD? :	Yes 🛛	No 🗆				
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note				
lotal marcunty		HEL		802 9/05					
Disolved mercury	1 V	154		goz gital					
Prod amount	1	Nathic		a Some poly					
				1					
				1 9					

Well ID: N	W	20		Sample ID:	05	7221	NWS	296	W	Sample Time: 09	
Date:	00	12-2	Þ	Dup. Sample		-				Dup. Sample Time:	2.5
Notes:	0		-		-						
	-		and '	-							1.2
	L M - L	-		*			Purging	g and *St	abilizatio	n Data	
Time (24 hrs)	Volume Removed	Temp *± 3% °C, min	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	Color/Odor/Notes	5
083.190	(L)	± 0.2°C	*±3%		RT PURG		*± 10%	(11)	Chian		
09:45	I	4.3	0548	C . 3	C.t-	48	762	64.36	0.2	Do 0.84 Mg	
08.50	2	44	KI-I-I	0.3	6.42	0.7	262	64.46	11	10 01 12	
08 55	3	4.2	1.545	658	6.7	1	256		11		
(mail)	E.	4.4	010542	0,70	6.48	14	1	64.44	1		
00:05	E C	Y.Y	0.54]	0.55	644	-2.1	247	py by	11	autication pites	4
101	2	4.1	0:14)	0.13	047	-2,5	24/	6451	11	stoblized sempling	-
						-		-		scimpled oglf	-5
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Client/Site:	BLM Red Devil Mine		Well ID.:	MW 33	
Contract No.:	140L6321C0001	Project No.:	BU06-007		
Date:	0823122	Samplers:	18		
Time Start:	10:UN				
Time Finish:	13:30	Checked By:	Kh	~	
Well & Purge Info	ormation		0		
TD (ft. bTOC):	6.923 W ft	5-24,40 Scre	eened Interval (ft.):	12-2-	2
DTW (ft. bTOC):	f ft	is to			13
Water Column:	14.48 ft	TD-DTW=Water Co	lumn		
Liter/Foot:	0,605 L/ft	***Well Volume C	alculation***		
Liters in Well:	8.76, L	Water Column x L/ft	Calculation*** table	Well Diameter	L/ft
Three Well Volumes:	26.28 L	Liters in Well x 3		5/8"	0.06
Sample Depth:	2.2' ft	Depth of Pump Intak	(2")	0.605	
				4"	2.47
Field Equipment					
Multiparameter Water Quality Meter:	YSI PROQUATIO	0	21010	11271	
	Callelel	Serial No.:	- 4000	7201	
Water Level Meter:		Serial No.:	294991		
Turbidity Meter:	2100p Turbidhiety	Serial No.:	166-04		
Pump Type:	D gader	Serial No.:	- ML		
Purge Method:					
Peristaltic Pump	Inertial	□ Othe	r.		
Bladder Pump :	Optimum Flow Rate Set at Set			e	
Sampling Method:					
Peristaltic Pump	Inertial	C Other	r:		
Bladder Pump :	Optimum Flow Rate Set at Set	econds Refill	_Seconds Discharg	е	
Sample Collectio	n Information		MS/MSD? :	Yes 🗆	No 🕫
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note
Makery Loty		Hel		gozymbe	
mariny disoli metal to ba	AC 1	HC NITY IE		80Z9mbm	
intradit is int		W MI		25 TUMI RULY	
		1.0			

Low-Flow Groundwater Sample & Stabilization Form

We ID M.W. 37 Iserge ID O.S. 2.2 M.W. 33 GW Iserge Trace J. 2.6 Date: 0.5 0.5 2.1 M.W. 33 GW Iserge Trace J. 2.6 Date: 0.5 0.5 1.0 1.0 1.0 Iserge Trace Dip. Sample Trace We ID Memory Trace 0.0 1.0 1.0 1.0 1.0 Dip. Sample Trace The ID Memory Trace 0.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 1.0 1.0 12 - 10 1.0 1.0 1.0 1.0 <	Well ID:	NW3?	2		Sample ID:	08	22 M	W33	GW		Sample Time: 13.20
Units of and the second of th	Date: ()	8/2	3/22		Dup. Sample	ID:	~	_			
Time Velue Time Spec. Cond. OUMPLY Image: Conditional status of the status o	lotes:										
Time Velue Time Spec. Cond. OUMPLY Image: Conditional status of the status o											
Image: Construction of the start purchase Image: Construction of the start purchase 12 42 15 74 0.517 74 0.6017 6.65 (4) 12 2.65 15 12:57 1.50 74 0.6017 6.65 (4) 12 2.65 15 13:01 3.06 6.05 6.95 6.95 6.95 6.95 6.95 13:01 3.06 6.06 6.32 3.8 2.72 11 11 12:07 3.75 7.6 0.0011 6.96 6.97 3.8 2.72 11 11 12:07 3.75 7.6 0.0011 6.96 6.97 3.8 7.72 11 11 12:07 3.75 7.6 0.0011 6.96 6.72 11 11 12:07 3.75 7.6 0.0011 6.96 6.72 11 11 12:07 3.75 7.6 0.0011 6.96 6.72 11 11 12:07 13.75 7.6 0.0011 6.96 6.72 11 11 12:07 13.75 14 14 14 14 14 14:07 14 14 14 <		Volume	Temp	Spec. Cond.				Turbidity			n Data
17. 4.0 6.1 START PURGING 12. 47 0.75 7.5 0.617 573 1.4 12. 57 1.5 7.4 0.6017 6.75 2.5 1.5 12. 57 1.55 7.4 0.6017 6.75 2.5 1.5 13.01 3.05 6.0517 6.72 11 11 13.01 3.05 6.0011 6.05 6.32 7.8 7.4 11 13.01 3.05 6.0011 6.05 6.32 7.8 7.4 11 11 12:07 3.75 7.6 0.0011 6.18 6.72 11 11 547 14 11 12:07 3.75 7.6 0.0011 6.18 6.72 11 11 547 14 11 12:07 3.75 7.6 0.0011 6.18 6.72 11 11 11 11 12:07 3.75 7.6 0.0011 6.18 6.72 11 11 11 11 12:07 13.75 14 11 <th></th> <th>Removed (L)</th> <th>*± 3% °C, min ± 0.2°C</th> <th>(µS/cm) *±3%</th> <th>*± 10%</th> <th>*± 0.1</th> <th></th> <th>(NTU) *± 10%</th> <th>DTW (ft)</th> <th>Flow Rate</th> <th>Color/Odor/Notes</th>		Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	*± 10%	*± 0.1		(NTU) *± 10%	DTW (ft)	Flow Rate	Color/Odor/Notes
22-55 1.58 Z 4 0.0015 6.05 6.19 23 22 23.4 9 94 6 11 12:57 2.25 76 0.0013 6.07 6.39 32 23.4 9 94 6 11 13:02 3.75 76 0.0011 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 76 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 76 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 14:00 10 10 10 10 10 10 10 10 10 10 10 10 1	7.42 MS START PURGING										
22-55 1.58 Z 4 0.0015 6.05 6.19 23 22 23.4 9 94 6 11 12:57 2.25 76 0.0013 6.07 6.39 32 23.4 9 94 6 11 13:02 3.75 76 0.0011 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 76 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 76 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 13:02 3.75 7.6 0.001 6.18 6.98 3.8 6.72 11 11 5table semplas 14:00 10 10 10 10 10 10 10 10 10 10 10 10 1			2.8		593	6.42	16	47.2		15	
13.02 3.06 CA 6.0012 6.06 6.38 3.8 2.3.4 11 H 13:07 3.75 7.6 0.0011 6.9 6.98 3.9 6.72 11 H 5 to be semplified 			7.4		6.05		2.5			-0.15	
12:07 3.75 7.6 0.0011 6.18 3.8 6.72 11 1 517114 547114 547114				0-0013			3.2		6.96	11	
	11.14				6.06	6.38	3.8	27-4	1	4	
	13:07	3.75	7.6	0.001	6.18	6.138	38	6.72	11-	11	Stable Sending
Image: Sampled?: Yes No											
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Image: Sampled?: Yes No								8			
Image: Sampled?: Yes No											
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	Initial of Sar	npler:	110			-					

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	Consulting Inc.	
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Client/Site:	BLM Red De	vil Mine			Well ID.:	MW40			
Contract No.:	140L6321C0	001		Project No.:	BU06-007		-		
Date:	8/25/2	022		Samplers:	GG	2	1		
Time Start:	0900)							
Time Finish:	1035		3	Checked By:	NP	2			
Well & Purge Infe	ormation								
TD (ft. bTOC):	142	.35	ft	Sc	reened Interval (ft.)	119~1	39		
DTW (ft. bTOC):	128,70		ft			annual de la l			
Water Column:	13.	65	ft	TD-DTW=Water C	olumn				
Liter/Foot:		605.	L/ft	See ***Well Volum	e Calculation*** table	***Well Volum	e Calculation***		
Liters in Well:	8,2		L	Water Column x L/		Well Diameter	L/ft		
Three Well Volumes:	24			Liters in Well x 3		5/8"	0.06		
Sample Depth:		138	ft	Depth of Pump Inta	ke	2"	0.605		
				Departor 1 amp ma	ine .	4"	2.47		
Field Equipment							4.71		
Multiparameter Water	NCI D	01.							
Quality Meter:	751 Pro	Quatro		Serial No.:	102922				
Water Level Meter:	Dipper	19		Serial No.:	0705	705			
Turbidity Meter:	MACH	2100P		Serial No.:	erial No.: 11741				
Pump Type:	Blo	dder		Serial No.:		-			
				ochar no					
Purge Method:									
Peristaltic Pump		Inertial		Othe	er	1.			
Bladder Pump :	Optimum Flow	Rate Set at	35 Se	conds Refill	Seconds Dischar	no (8 1/ -	-' DAZU		
Sampling Method:	- Posterio Com		00		_ Seconds Dischar	ge @ 65 p	si = 0.05 %		
Peristaltic Pump	[Inertial		🗋 Othe	ar.				
and the second s			-						
			Se Se	conds Refill	Seconds Dischar	ge Ce 65 ps,	:		
Sample Collection	the second se	NO TRACE		-	MS/MSD? :	Yes 🛛	No 🙀		
Parameter AL Metals	# Containers	Filtere	the state of the s	Preservative Nitric	Method	Container Type	Initials		
otal LL Mercury	1	No		ICI	6020B LL, 7470A 1631 LL Hg	250 ml Plastic 8oz Glass	49		
Dissolved LL Mercury	1	Yes		ICI	1631 LL Hg	8oz Glass	14/F		
		-							
		+							
					1				

May 2021

Well ID: M	W40			Sample ID:	0825	2 mW 4	OGW			Sample Time: 1015 Dup. Sample Time:		
Date: 6/3 Notes:	5/20:	22		Dup. Sample	ID:	-						
Notes:	/				1.4							
-	Volume	Temp	Spec. Cond.	-	1				abilization	Data		
Time (24 hrs)	Removed (L)		(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes		
0925 START PURGING									0,05 c/min @ 35/25 @ 65 p51			
0930	0.25	1.10	641	.4.13	6.49		17.5	128.75				
0935	0.50	Q.4	568	2.50	6.83		20,7					
0935 0935 0945 0945 0955	0.75	6:3	558	2:20		206.2	18.7	1	0,05			
0945	1,00	6.2	543	1.90	6.87	197.8	11.7	128.75				
0950	1,25		533		6.87	182.1	9,85	128.75	0,05			
0955	1.50	6.1	523	1.68	6.87	172.4	10.0	12875	0,05			
1000	1.75	5.9	520	1.46	6.87	158.8	13,3	128.75	0.05			
1005	2,00	6:0	516	1.41	6.87	146.3	11.3		0,05			
1010	2.25	6.1	516	1.26	6.89	137,2	10:3	128.75	0.05			
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						-	Come l	12. 1	- 17 H			
		MA					Sample	ed?: Ye	No No			
Initial of Sa	moler									Page 2 of 2		



Client/Site:	BLM Red Dev	il Mine		Well ID.:	mwy2	
Contract No.:	140L6321C00	01	Project No.:	BU06-007		
Date:	8/24/2	122	Samplers:	66		
Time Start:	0940					
Time Finish:	1112		Checked By:	M		
Well & Purge Inf						
TD (ft. bTOC):	14	12,45	ft Scr	eened Interval (ft.	119-1	39
DTW (ft. bTOC):	127.	50	ft	en e	<u> </u>	
Water Column:	14.		ft TD-DTW=Water Co	lumn		
Liter/Foot:	0.605	L		e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	9,04		L Water Column x L/f		Well Diameter	L/ft
Three Well Volumes:	27,1	2	L Liters in Well x 3	114	5/8"	0.06
Sample Depth:	13		ft Depth of Pump Inta	ke .	2"	0.605
				no.	4"	2.47
Field Equipment						
Multiparameter Water Quality Meter:	YSI Pro	autro	Serial No.:	102223	2	
Water Level Meter:	Dipper	12	Serial No.:	0705		
Turbidity Meter:	HACH	21008	Serial No.:	11741	1	
Pump Type:	Bladd	1	Serial No.:			
			Genar No			
Purge Method:						
Peristaltic Pump		Inertial	□ Othe	r:		
Bladder Pump :	Optimum Flow F	ate Set at . 40	Seconds Refill _20	Seconds Dischar	ge @ 70 ps/	
Sampling Method:	* 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1				ge ioper	
Peristaltic Pump	. E	Inertial	□ Othe	c		
🖄 Bladder Pump :	Ontimum Flow P	ato Sat at 41			1	
Sample Collection			Seconds Relini	the second s	ge @ 70 ps/	-
Parameter	# Containers	Filtered?	Propositive	MS/MSD? :	Yes 🛛	Nox
TAL Metals	# Containers	No	Preservative Nitric	Method 6020B LL, 7470A	Container Type	Initials
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	HH
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	plot-
			1 7 1 1 1 1			
				1		-
		1				

Well ID: M	W42	-		Sample ID:	0822	2 MWY	2GW			Sample Time: //00 Dup. Sample Time:		
Date: 8/2 Notes:	4/200	12		Dup. Sample	ID:			-				
Notes:			-									
					-			1+0	1.11. 41.	Data		
	Volume	Temp	Spec. Cond.		1		Turbidity		abilization	Data		
Time (24 hrs)		*± 3% °C, min ± 0.2°C		DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes		
0940		1 1 0.2 0	1 2010	STAF	RT PURG	ING	1 100	1				
0955	0,38	6.2	515	1.19	6.49	195.6	2.55	127.50	0.025			
1000	0.50	6.2	499	1.80	6.55	191.3	5.97	127.50	0.025			
1005	0.625	6.3	469	1,56		178,8	9.64	127.50	0.025			
0940 0955 1000 1005 1010 1015 1025 1025 1025 10	0.750	6.4	442.3	1.24	6.59	159.7	11.9	127.50	0.025			
1015	0,975	6.4	432.2	1.03	6.60	134.9	14.8	127.50	0.025			
1020	@1.125	5.0	399.6	0:73	6-61	106.6	24.6	127.50	0.05	increased to 70 psi		
1025	1.375				Gilel		24.7	127.50	0.05	duped How through due to large particles		
1030	1.625	5.1	394.4			106.6	28.1	127,50	0.05	1 0 0 1		
1635	1.375	5.2	393.0	0.44	6.62	94,3	19.3	127.50	0.05			
1040	2.125	5,2	395.3	0,41		89.9	18.1	127.5	0.05			
1045	2,375	5,3	395.6	0,40		87.4	15.3	127.5	0.05			
										Cillect sample		
		100	A 4									
				2.1								
	12			-								
							1.0					
								1				
-			1									
						-		1		4		
		-		-			-					
							Sample	ed?: Ye	es K No			
Initial of Sa	moler	38	-			_				Page 2 of 2		



Client/Site:	BLM Red Devi	I Mine		Well ID.:	MW73	
Contract No.:	140L6321C00	01	Project No.:	BU06-007		
Date:	3/24/20	2.2	Samplers:	GG		
Time Start:	1123					
Time Finish:	1305		Checked By:	NA		
Well & Purge Infe	ormation					1
TD (ft. bTOC):	120	,70	t Scr	eened Interval (ft.)	: 98 -11	8
DTW (ft. bTOC):	68.87	f	t			
Water Column:	31.8	3 f	t TD-DTW=Water Co	olumn		
Liter/Foot:	0,603	L/f	t See ***Well Volum	e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	19,26	L	Water Column x L/i		Well Diameter	L/ft
Three Well Volumes:	57.8	L	Liters in Well x 3		5/8"	0.06
Sample Depth:	~ 115		t Depth of Pump Inta	ke	2"	0.605
and the second	4			N.	4"	2.47
Field Equipment			5			2.11
Multiparameter Water Quality Meter:	451 Pro	Chatre	Serial No.:	10220	12	
Water Level Meter:		2	Serial No.:	0705		
Turbidity Meter:	HACH	2100P	Serial No.:	117	41	
Pump Type:	Bla	lder	Serial No.:		11-	
Purge Method:						
Peristaltic Pump		Inertial	Othe	n		
🖄 Bladder Pump :	Optimum Flow R	ate Set at _ 30	Seconds Refill _/O		ge @ 60 851	,
Sampling Method:				-	30 - 40 921	
Peristaltic Pump		Inertial	□ Othe	r:		
Bladder Pump :	Optimum Flow R	ate Set at _20	Seconds Refill 10	Seconds Dischar	ge - 10-	
Sample Collection	n Informatio	n		MS/MSD? :	Yes X	No 🗆
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	4	No	Nitric	6020B LL, 7470A	250 ml Plastic	13.14
Total LL Mercury	4	No	HCI	1631 LL Hg	8oz Glass	4.11
Dissolved LL Mercury	4	Yes	HCI	1631 LL Hg	8oz Glass	AN
	1.			-		
				12 1		
				192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 - 192 -		

Well ID: M	W43			Sample ID:	0822	MW 43	3GW			Sample Time: 1220
Date: 8/3 Notes:		2		Dup. Sample	ID: 08	22 M	W 986	εw		Dup. Sample Time: 1225
Notes:	Adia	ste al	MS/							
	Ungine	one crea		ngg		_	Duraina	and *St	abilization	2 Data
Time	Volume	Temp	Spec. Cond.	DO (mg/L)		ORP (mV)	Turbidity	DTW	Flow Rate	i Data
(24 hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	*± 10%	pH *± 0.1	*± 10 mV	(NTU) *± 10%	(ft)	L/min	Color/Odor/Notes
1130				STAF	RT PURG					Adjust flow
1140 1145 1150 1155 1200	1.5	4.1	248.6		6.36			88.90	0.15	Adjust flow 0.15 Main @ 2 cycles 205/105 @ 60 psi
1145	2,25	4.1	252.8	0.77	6.48	106.5	7.75	88,90	0.15	
1150	3.00	4.0	260.7	0.63	6.51	96.2	3.17 1.18 0.61 0.41	88,90	0,15	
1155	3.75	4.1	264.1	0.55	6.53	88.2	1.18	88.90	0,15	
1200	4.50	4.1	266.5	8.47	6.54	81.3	0.61	88,90	0.15	
1205	5,25	4.1	266.7	0.44	655	76.6	0.41	88,90	0.15	
1210	6.00	4.0	267.7	0.39	6.56	72.4	0,42	88,90	0.15	Collect sample
							-			Collect sample
	1.000				1					
	1000									
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					1.0			S		
			0.0					-	1	
	1									
	-									
				-						
1			1							
				-	- 1					
							Sample	ed?: Ye		o 🗆
Initial of Sa	moler	197			_		oampie		A	Page 2 of 2



Client/Site:	BLM Red Dev	il Mine		Well ID.:	MW 44	
Contract No.:	140L6321C00	01	Project No.:	BU06-007		
Date:	3/24/2022		Samplers:	GG		
Time Start:	1335		-	0		
Time Finish:	1433		Checked By:	M		
Well & Purge Infe	ormation					
TD (ft. bTOC):	7	1.15 ft	Scr	eened Interval (ft.):	48-68	3
DTW (ft. bTOC):	34	78 ft			-0	
Water Column:	36,	37 ft	TD-DTW=Water Co	olumn		
Liter/Foot:	0.60	DS L/ft	See ***Well Volume	e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	22	,0 L	Water Column x L/f	t	Well Diameter	L/ft
Three Well Volumes:	66	0 1	Liters in Well x 3		5/8"	0.06
Sample Depth:	~(e0 ft	Depth of Pump Inta	ke	(2")	0.605
					4"	2.47
Field Equipment						
Multiparameter Water Quality Meter:	VET P	o Chatro	Serial No.:	102222		
Water Level Meter:	Diane	T2				
	HACH	2100 P	_ Serial No.:	0705	100	
Turbidity Meter:			Serial No.:			
Pump Type:	Bladder	5	Serial No.:			
Purge Method:					4	
Peristaltic Pump	0	Inertial	□ Othe	er:		
Bladder Pump :	Optimum Flow I	Rate Set at _//	Seconds Refill 4	Seconds Dischar	ge @ 35 psi	
Sampling Method:						
Peristaltic Pump	E	Inertial	□ Othe	er:		
Bladder Pump :	Optimum Flow F	Rate Set at	Seconds Refill	Seconds Discharg	ge @ 35 psi	
Sample Collectio	n Informatio	on		MS/MSD? :	Yes 🛛	No
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A	250 ml Plastic	MR.
Total LL Mercury Dissolved LL Mercury		No	HCI	1631 LL Hg	8oz Glass	AA
Dissolved LL Mercury		Yes	HCI	1631 LL Hg	8oz Glass	
		-				
				-		
		-				

lell ID: ///	N44					MW44	66			Sample Time: 1415		
ite: 8/2	4/202	2		Dup. Sample	ID:			_		Dup. Sample Time:		
otes:												
							-					
	Volume	Temp	Spec. Cond.				Purging	_	abilization	Data		
Time (24 hrs)	Removed (L)	*± 3% °C, min ± 0.2°C	(µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes		
1335				_	RT PURG			-		A REAL PROPERTY AND A REAL		
345	1.0	4.8	419.5	1,55	6.81	154.5	20.5	34.90				
BSO	1,5	4,8	412.6	0,87	6.89	118.5	20.8	34.90				
355	2.0		414.0.	0.73	6.72	103.7	15.3	34.20	0.1			
400	2.5	4.5	414.1	0.60	6.95	89.0	14.2	34.80	0,1			
405	3.0	4.5	414,4	0.58	6.97	79.0	11.1	34.80	0.1			
110	3.5	4,3	414.0	0.54	6.99	72.2	9.34	34.80	0,1			
400 405 410 415	4.0	1			1000					Collect somple		
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4												
		.0.	2				Sample	d?: Ye	S A N			



Client/Site:	BLM Red Devil Mine		Well ID.:	MULLIE	
Contract No.:	140L6321C0001	Project No.:	BU06-007		
Date:	08/24	Samplers:	mp		
Time Start:	133.6			1	
Time Finish:	1428	Checked By:	Ma.	l •	
Well & Purge Infe	ormation		P		
TD (ft. bTOC):	_79,40 ft	Scr	eened Interval (ft.):	61-81	
DTW (ft. bTOC):	_44.47 ft			01	
Water Column:	- 94,97 ft	TD-DTW=Water Co	lumn		
Liter/Foot:	0.605 . L/ft	See ***Well Volume	Calculation*** table	***Well Volume (Calculation***
Liters in Well:	_21.16 L	Water Column x L/f		Well Diameter	L/ft
Three Well Volumes:	_ 63.47 L	Liters in Well x 3		5/8"	0.06
Sample Depth:	~75 ft	Depth of Pump Inta	(e	2"	0.605
	4	-		4"	2.47
Field Equipment				4	
Multiparameter Water Quality Meter:	VSTPG Quatra	Serial No.:	21010	4221	
Water Level Meter:	301154 model 102		PL AN2	201 201	1991
	2100 tul's motor	Serial No.:	2441	191020	7411
Turbidity Meter:	- yo inplaimeta	Serial No.:	16607		
Pump Type:	blader	Serial No.:	IV	7	
Purge Method:				_	
Peristaltic Pump	Inertial	□ Othe	-		
Bladder Pump :	Optimum Flow Rate Set at S	econds Refill	_ Seconds Discharg	0	
Sampling Method:					
Peristaltic Pump	Inertial	□ Other			
Bladder Pump :	Optimum Flow Rate Set atS	1.1			
Sample Collection			_ Seconds Discharg		
Parameter	# Containers (fill in for each well)	Preservative	MS/MSD? : Method	Yes	No X
5 70 more mile	dry I	MC	Method	Suc gials	Note
of al myrann		Hel	· ·	0 02 7 (4))	
Bral Metals ((Mitris		250 ML DOLV	
					Let 1
May 2024					

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Well ID: M Date:	WL	15		Sample ID:	08	221	MWL	+5 (SW	Sample Time: 14 10
	08	24(2	2	Dup. Sample		NA		/		Dup. Sample Time: NA
Notes:										
	-							_		
	Volume	Temp	Snec Cond		-		Purging		abilization	n Data
Time (24 hrs)	Removed (L)	Temp *± 3% °C, min ± 0.2°C	*±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
13.38	0	1	m5	STAF	RT PURG	ING		LA	1.0.0-	
1343	0.4	4.2	101726	12				4460	0.15	
1343	0.75	4.2	0.1920	8,50	6.67	-12.1	21.2	44.60	0.15	
1348	1.50	3.9	0:1939	7.36	6.60	-8-8	14.9	44.67		
13 53	2.25	3.8	0.1950	7.04	6:59	-8.1	10.4	44.68	11	
\$ 1358.	3.00		5.1949	6.70	6.58	-7.8	7.36	-11	[]	1-(1)
1403	3.75	2.6	61947	6.71	6.58	-7.6	7.51	U	M	stubilized sumpling
115										
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	-			-						
				-						
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		-					Sample	d?: Ye	s U N	0 🗆
Initial of San	npler:	rp							ic.	Page 2 of 2

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Client/Site:	BLM Red Devil Mine		Well ID.:	WH G	
Contract No.:	140L6321C0001	Project No.:	BU06-007	10	
Date:	1441 08/24/2:	Samplers:	2000-007	0	
Time Start:	D T	_			
Time Finish:	1525	Checked By:	A	A	
Well & Purge Infe	ormation	¥			
TD (ft. bTOC):	-59.7) ft	Sci	eened Interval (ft.):	36 - 6	s p
DTW (ft. bTOC):	t		(,-		-6
Water Column:	_25.40 ft	TD-DTW=Water C	olumn		
Liter/Foot:	0. 605 Lift		e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	15.3F L	Water Column x L/	and the second se	Well Diameter	L/ft
Three Well Volumes:	46.10 L	Liters in Well x 3		5/8"	0.06
Sample Depth:	~45 ft	Depth of Pump Inta	ke	2"	0.605
				4"	2.47
Field Equipment					
Multiparameter Water Quality Meter:	SEGLYSI AGU	Serial No.:	21010	A PC IN	
Water Level Meter:	501157 mall 102	Serial No.:	70490	14 - 4+	
Turbidity Meter:	2100P Table Meter	Serial No.:	T66 64		
Pump Type:	plader	Serial No.:	Nguy		-
Purge Method:					
Peristaltic Pump	🗆 Inertial	□ Othe	n		
Bladder Pump : 0	Optimum Flow Rate Set at S	econds Refill	Seconds Discharge	9	
Sampling Method:	and a second second				
Peristaltic Pump	Inertial	□ Othe			
Bladder Pump : 0	Optimum Flow Rate Set at S	econds Refill	_Seconds Discharge	DO DTY	
Sample Collection		v	MS/MSD? :	Yes a	No by
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note
DISO Dedmaranty	1	K(C)		8.2 Ulus	
total metal		HCI VIE		8 02 91919	
		WILLI	1	LGO ME goly	
				1	
May 2021					

Well ID:	min	16		Sample ID:	O	822	- MW	LO	GW	Sample Time:
Date:	081	16	-2	Dup. Sample	e ID:	-				Dup. Sample Time:
Notes:										
		_								
	Volume	Tomp	Spec. Cond.	-	-		Purging		abilization	n Data
Time (24 hrs)	Removed (L)	Temp *± 3% *C, min ± 0.2*C	*±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1942	-	111	mi	STA	RT PURG	ING	a. 4 1	12	1.4.1	
1447	17	4-1	01454	0.14	6.0	744	27.6	34,27	10.15	2
1452	650	4.0	01463	8.48	6.69	-13,3	15.0	3420	1 U	
1457	1.25	3:9	0.1459	8.59	6.68	-129	17.9	11	11	
15:02	9.00	3.7	0.1454	8,48	6.67	-12.6	10,2	11	1	stabillard soupling
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		m					Sample	d?: Ye	s N	0
Initial of San	mpler:	Vr								Page 2 of 2



Client/Site:	BLM Red Devil Mine		Well ID.:	MW4	L
Contract No.:	140L6321C0001	Project No.:	BU06-007	-1411-17	
Date:	08/24/22	Samplers:	NP		
Time Start:	15:38	-			
Time Finish:	16135	Checked By:	they	4_	
Well & Purge Infe	ormation		0		
TD (ft. bTOC):	69.44 tt	Sci	eened Interval (ft.):	46 - 66	
DTW (ft. bTOC):	_ 37.50 ft				
Water Column:	34 ft	TD-DTW=Water C	olumn		
Liter/Foot:	L/ft	See ***Well Volum	e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	L9.32 L	Water Column x L/	and the second	Well Diameter	L/ft
Three Well Volumes:	57.97 L	Liters in Well x 3		5/8"	0.06
Sample Depth:	~40 ft	Depth of Pump Inta	ke	(2")	0.605
				4"	2.47
Field Equipment					
Multiparameter Water Quality Meter:	YSI ProQuAtio	Serial No.:	710	104221	
Water Level Meter:	50/152 motel 102	Serial No.:	29	400	
Turbidity Meter:	2100/ Turhidit		10	- F L L L	
	blader	Serial No.:	6	604	
Pump Type:	0(4.60	Serial No.:		01	
Purge Method:					
Peristaltic Pump	Inertial	□ Othe	r:		
Bladder Pump :	Optimum Flow Rate Set at S	econds Refill	Seconds Discharo	e	
Sampling Method:				-	
Peristaltic Pump	Inertial	□ Othe	r:		
Bladder Pump : 0	Optimum Flow Rate Set at S	econds Refill	Seconds Discharge	9	
Sample Collection			MS/MSD? :	Yes 🗆	No by
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note
to fall murcury		HC		812 2/22	
Disoluted multicuty		HCI		Soz aran	
IVEN INGLAN		NIFELC		250 mepoly	
		-			
		-			

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Well ID:	MM	147		Sample ID:	08	22n	AWH:	7GV	V	Sample Time: 1627
Date:	062	4 2	12	Dup. Sample			1			Dup. Sample Time:
Notes:	U									
	1 Values	-	10.00				Purging	and *St	abilizatio	on Data
Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
14-48	-	10 0	1 1 1 2		RT PURG	ING			_	1+1++ + m 15-56
4553	105	5.5	0:1911	5.77	6.84	-21.5	14,6	9450	.20	+1m- = 16:00
15:50	2	5.2	6:2022	473	6.87	~23.3	10.3	11	M	+ime= 16:05
16:10	3	5.3	0.2076	4:23	6.81	-24,2	9,29	4	4	
16:15	4	5.25	0:2099	4,23	6589	-24.2	5.96	0	ťť	SMBILIZER SAMPLIE
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-		ATR	_				Sample	d?: Yes	s q N	No 🗆
Initial of Sar	npler: 🗸	11								Page 2 of 2

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Client/Site:	BLM Red Dev	I Mine	The second second second	Well ID.:	mui 9							
Contract No .:	140L6321C00	01	Project No.:	BU06-007	1-4-1							
Date:	0.81	25/22	Samplers:	1	1							
Time Start:	SVA	bd	_		10							
Time Finish:	095	5	Checked By:	A	- A -							
Well & Purge Infe	ormation			0								
TD (ft. bTOC):	29,0	GINP	ft 69.750	reened Interval (ft.)	: 40- h	0						
DTW (ft. bTOC):			ft	······································	- (- 0	0						
Water Column:	43.8	0	ft TD-DTW=Water C	olumo								
Liter/Foot:	0,60	15 U			***Well Volum	e Calculation***						
Liters in Well:	26.	1 m		Water Column x L/ft Well Diameter L/ft								
Three Well Volumes:	79	50										
Sample Depth:		4.00	a construction of the second	Liters in Well x 3 5/8" 0.06 Depth of Pump Intake 2" 0.605								
				IKC	4"	2.47						
Field Equipment				-	4	2.41						
Multiparameter Water	Ve-	al a si	· · · · · ·		3							
Quality Meter:	121	MOQUAN	Serial No.:	216	£ 210/01	1221						
Water Level Meter:	-50/157	U FliLom	2 Serial No.:	24	991							
Turbidity Meter:	210	OP talb	W Serial No .:	1600	211							
Pump Type:	13/a 1	4 M		-14.61	14							
rump rype.		<u> </u>	Serial No.:		1							
Purge Method:												
Peristaltic Pump		Inertial	□ Othe	er:								
Bladder Pump :	Optimum Flow R	ate Set at	_Seconds Refill	Seconds Dischoo								
Sampling Method:				_ Seconds Dischar	ge							
Peristaltic Pump		Inertial	Othe	r								
					THE STREET							
			Seconds Refill	_ Seconds Discharg	ge							
Sample Collection		n		MS/MSD? :	Yes 🗆	No No						
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials						
TAL Metals		No	Nitric	6020B LL, 7470A		NA						
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	NAM						
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	110						
						1						
1												
	1											
				1								
				1								

ell ID:	MAR	11	0	Sample ID:	0	622	MW	49	GV	Sample Time: OQ LL
ate:	"AC	12h	m	Dup. Sample	ID:	V		0 1		Dup. Sample Time:
tes:	04	r - y							1.1	
									2	
							Purging	and *Sta	abilization	Data
Time	Volume Removed	Temp *± 3% °C, min	Spec. Cond. (µS/cm)	DO (mg/L)	рН	ORP (mV) *± 10 mV	Turbidity (NTU)	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
(24 hrs)	(L)	± 0.2°C	*±3%	*± 10%	*± 0.1		*± 10%	(11)	Unan	
111		12 0	10 2 30	STAP	RT PURG	312	2017	12001	0.11-	
2420	C.M	5:2	0.214	6.27	5.72	1 341	122	2011	Alla.	
925	1.50	54	1114	5.80	5.77	362	106	11.01	11.	
220	2.25	52	191 1	506	578	75.6	110	31. 62	11	21.171 - 11
10		5.2	1317	5.0	578	35.5	310			Right Z+ ! Symphibit
	-		1			'		-		Sampling
1										
	2		1000						-	
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			-					1	-	
		-								
			-					1		
		-			-					
-	-	-	-		-		-			
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		1								
			6-1							
							-			
-								-		1
		-								
	1	1					Sampl	ed?: Y	es D N	
nitial of Si		1							V	Pa,



Client/Site:	BLM Red Dev	I Mine		Well ID.:	MWEG	2
Contract No.:	140L6321C00	01	Project No.:	BU06-007		
Date:	08/2	5 192	Samplers:	NA	2	
Time Start:	10 5	0			~	
Time Finish:	1219	2	Checked By:	they	a	
Well & Purge Infe	ormation			ð		
TD (ft. bTOC):	91	i. 96, f	t Scr	eened Interval (ft.):	71.91	
DTW (ft. bTOC):	410	008 f				
Water Column:	4	6 . 28 +	TD-DTW=Water Co	piumn		
Liter/Foot:	0.0	O5 L/F	See *** Well Volume	e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	28	.00 L			Well Diameter	L/ft
Three Well Volumes:	84.	6 ц	Liters in Well x 3		5/8"	0.06
Sample Depth:		~85 f	Depth of Pump Inta	ke	2"	0.605
					4"	2.47
Field Equipment					A	
Multiparameter Water	VSTO	A1.62	No	210	12 11 2 2 1	
Quality Meter:	- CALLET	Panatio	Serial No.:	- Zil	10 7 2 21	
Water Level Meter:	20/11	T MO JEII	Serial No.:	- 4499		
Turbidity Meter:	200	1 JD , Vine	Serial No.:	16601	ŕ	
Pump Type:	12/3	viti	Serial No.:	MA		
Purge Method:						
Peristaltic Pump		Inertial	□ Othe	ir:		
_			Seconds Refill			
Sampling Method:	opunum riow ri			_ Seconds Discharg	Je	
Peristaltic Pump		Inertial	Othe	r,		
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	Seconds Discharg	ge	
Sample Collectio	n Informatio	n	13	MS/MSD? :	Yes 🛛	No 🗆
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals		No	Nitric	6020B LL, 7470A		5/2
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	14
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	Jus -
						6
			1			

Well ID:	MW	50		Sample ID:	0	0622	MNW	50	GW	Sample Time:
Date:	29	25 2	2	Dup. Sample	ID:	4	-	1		Dup. Sample Time:
Notes:	00	~)								
							Purging	and *St	abilization	Data
Time	Volume	Temp *± 3% 'C, min	Spec. Cond. (µS/cm)	DO (mg/L) *± 10%	pH	ORP (mV)	Turbidity	DTW	Flow Rate	
(24 hrs)	(L)	± 0.2°C	*±3%		*± 0.1	*± 10 mV	(NTU) *± 10%	(ft)	L/min	Color/Odor/Notes
IDEL				STAF	RT PURG	NG				
1310	C.Th	5.3	665	1:13	6.61	-25	30	494	1015	
1315	6.5	3.9	\$76	1:40	6,64	-11,5	57:	495	11	
1120'	215	5.4	670	1:32	6.64	-11.5	281	44.2	11	
1225	3.6	34	1-75	1.27	6.11	-11.5	2he	445	1	steriste servit int
1221	11	- 4	- 47	1.41	0.14	143	70	111		
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				-						
			1							
-										
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			-							
-										
	-				1.					
			8							
			1		-		Sample	d?: Ye	s the No	



Client/Site:	BLM Red Dev	il Mine		Well ID.:	NWSI	
Contract No .:	140L6321C00	01	Project No.:	BU06-007		
Date:	2/25/27		Samplers:	GG-		1
Time Start:	1100					
Time Finish:	115	9	Checked By:	NP		
Well & Purge Inf	ormation	le.				
TD (ft. bTOC):	77	79.5	ft Scr	eened Interval (ft	1: 56-7.6	
DTW (ft. bTOC):	42.10		ft	eensu moorvar (na		
Water Column:	37,4		ft TD-DTW=Water C	alumn		
Liter/Foot:		105 U		e Calculation*** table	***Well Volum	e Calculation***
Liters in Well:	22.6		L Water Column x L/		Well Diameter	L/ft
Three Well Volumes:	67.	a	L Liters in Well x 3		5/8"	0.06
Sample Depth:	6611	A			2"	
and the second		0	ft Depth of Pump Inta	ke	4"	0.605
Field Equipment					4	2.47
Multiparameter Water	11-1 1		1. 1. No. 1.	-		21
Quality Meter:	<u> 151 10</u>	in.	Serial No.:	10222	2	
Water Level Meter:	Dipper	72	Serial No.:	0705		
Turbidity Meter:	HACH :	2100P	Serial No.:	117.	41-	
Pump Type:	Bladde	(Serial No.:		5.	
Purge Method:						
Peristaltic Pump		Inertial	□ Othe	r:		
Bladder Pump :	Optimum Flow R	ate Set at 12	Seconds Refill 3	Seconds Dischar	ge @ 35 psi	
Sampling Method:			_		5-0-0-0	
Peristaltic Pump		Inertial	C Othe	r:		
Bladder Pump :	Ontimum Flow P	ato Sat at /)	Sambada Defit		- 2	1
Semale Only .	opunum now r		Seconds Refill _3	_ Seconds Dischar	ge C 35 ps/	ć.
Sample Collection	# Containers	n Filtered?	Description	MS/MSD? :	Yes 🗆	No
TAL Metals	# Containers	No	Preservative Nitric	Method 6020B LL. 7470A	Container Type	Initials
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	MM
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	1215
1 Sec.	175					
		2.07				

Well ID: M	W 51			Sample ID:	082	2MW5	SIGW			Sample Time: 1/50		
Well ID: M Date: 8/ Notes:	25/20	152		Dup. Sample	ID:		_			Dup. Sample Time:		
Notes:	1											
-				_		_		-				
	1 Valuma	Trees	I Court	-					tabilization	Data		
Time (24 hrs)	Volume Removed (L)	Temp *± 3% 'C, min ± 0,2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes		
1100					RT PURG		_	_				
1105	0.25	6.2	201,5	8.43	6.38	174.1	14.8	42.10				
1110	0,50	6.1	196.1	8.39	6-38	174.5	12.2	42.10	0.05			
1105 1110 1115 1120 1125	0.75	5.7	191.4 195.7 199.5	7:89	6.39	177,2	12.2	42.10	0.05		S 18	
1120	1.20	5.6	195.7	7.52	6.42	181,4	7,80	42.10	0.05			
1125	1,25	5,5	199.5	7.23	6.44	183.4	5.95	42.10	0.05	4		
		1	1 1 2							collect somple	p.	
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							Sample	ed?: Ye				
Initial of C	malar	192				_	Sample	ur. 16				
Initial of Sa	impier:	11-										Page 2 of 2

Constant of	C /	
	Sundance	
	Consulling Inc.	
and the second se		- ALTER

Client/Site:	BLM Red Dev	I Mine	and the second	Well ID.:	MINET	-				
Contract No.:	140L6321C00	01,	Project No.:	BU06-007		-				
Date:	.08	25 22	Samplers:	100						
Time Start:	1810									
Time Finish:	11.30		Checked By:	-	h					
Well & Purge Info	ormation									
TD (ft. bTOC):	59.	13	t Sci	eened Interval (ft.)	· 21-1	t				
DTW (ft. bTOC):	24	0	t	concu interval (it.)		J				
Water Column:	24		t TD-DTW≕Water C	clump.						
Liter/Foot:	6.6	US LA	-	e Calculation*** table	***Well Volume Calculation*					
Liters in Well:	14.5	11	- Water Column x L/		Well Diameter	L/ft				
Three Well Volumes:	44	62 1	Liters in Well x 3		5/8"	0.06				
Sample Depth:		10	t Depth of Pump Inta	ko	2"	0,605				
				ĸe	4"					
Field Equipment			All some parts		4	2.47				
Multiparameter Water	UST .	N DI 1	12	0171	11 - 0 1					
Quality Meter:	1/+	VIO ULAT	Serial No.:	-11(0422					
Water Level Meter:	Solist	Mar 102	Serial No.:	2949	91					
Turbidity Meter:	21001	The billife	Serial No.:	16601						
Pump Type:	Blar	1. V	-	IA A						
rump rype.	01-4	10	Serial No.:	- tv f						
Purge Method:										
Peristaltic Pump		Inertial	D Othe	er:						
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	Seconds Dischar	20					
Sampling Method:				_ Occords Discital	ge					
Peristaltic Pump		Inertial	C Othe	r.						
1										
			Seconds Refill	Seconds Dischar	ge					
Sample Collection	The second s	THE OWNER AND ADDRESS OF A DAMAGE		MS/MSD? :	Yes 🗆	No 🗆				
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials				
TAL Metals		No	Nitric	6020B LL, 7470A		VM				
Total LL Mercury Dissolved LL Mercury		No	HCI	1631 LL Hg	8oz Glass	Vila				
Dissolved LL Mercury		Yes	HCI	1631 LL Hg	8oz Glass	NAY				
			- freedom in the second second							
i interes										
	ч.									
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Vell ID:	M	N/57	-	Sample ID:	09	222 M	W526	2W		Sample Time:			
ate:	OX	26 3	2	Dup. Sample	ID:		~			Dup. Sample Time:			
otes:	0		-										
		-	18.0	5									
	Values	Toma	Free Cand	_					tabilization	n Data			
Time (24 hrs)	Volume Removed		Spec. Cond. (µS/cm)	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU)	DTW (ft)	Flow Rate L/min	Color/Odor/Notes			
1020	(L)	± 0.2°C	*±3%		RT PURG		*± 10%	1.9					
iont	8175	4.3	3585	4.32	6.83	-20.4	36.0	192197	0.75				
0 7.0	6:40	4.7	401	GAU	0.92	-27.5	24.4	11	1				
10 95	2.24	4.7	42.02	OLL	C.ge	-28.6	182	11	11				
1-0	8.00	12	2717	5.75	6. 58	-7.7	019	K	11				
10 an	ZA	542	2057	8.60	6.240	416	218	11	11	5= Stably			
	Sil	.0.2	1813	8.60	6.27	9.9	4.00	11	U U				
0 60	5.25	4.3	1760		6:24,	10.55	5.31	25	11	Stabilized sampling			
	Jaco	-terle	6/60	0.12	o oti	10: 75	7:21		101	The old set a short the			
		-											
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			1							+			
				1.00					1				
		0					Sample	ed?: Y	es 🗹 N				
Initial of San	npler:	N								Page 2 of 2			



Client/Site:	BLM Red Dev	il Mine		Well ID.:	M1. 183	
Contract No.:	140L6321C00	01	Project No.:	BU06-007	- Paulas	
Date:	1350	- 8/25/.	Samplers:	BOOG-OOT		
Time Start:	1330	1	LOC oumpiers.	_00		
Time Finish:		30	Checked By:	- 1	-6)	
Well & Purge Infe	ormation				1	
TD (ft. bTOC):	6	5,00	ft Sci	reened Interval (ft.)	1: 41-61	-
DTW (ft. bTOC):		33.78	ft	series intervar (it.)		
Water Column:	31,	22	ft TD-DTW=Water C	olumn		
Liter/Foot:		0.101		e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	18.8		L Water Column x L/		Well Diameter	L/ft
Three Well Volumes:	56,6		L Liters in Well x 3		5/8"	0.06
Sample Depth:	~60		ft Depth of Pump Inta	ko	2"	0.605
				ine	4"	2.47
Field Equipment			T the		<u> </u>	2.41
Multiparameter Water	VICT O	01				
Quality Meter:	151 Pr	o Quetre	Serial No.:	102	222	
Water Level Meter:	Dipper	T2	Serial No.:	0705	1	
Turbidity Meter:	MACH	1 2100P	Serial No.:	1174	7	
Pump Type:	Bladder		Serial No.:	~	-	
Purge Method:						
	-					
Peristaltic Pump		Inertial	Othe			
D Bladder Pump :	Optimum Flow R	ate Set at 12	_ Seconds Refill 3	_ Seconds Dischar	ge @ 30 PSI	
Sampling Method:						
Peristaltic Pump		Inertial	□ Othe			
Bladder Pump : 0	Optimum Flow R	ate Set at 12	_ Seconds Refill _ 3	Seconds Dischar	ge @ 30 pt	/
Sample Collection	n Informatio	n		MS/MSD? :	Yes D	Nox
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A	250 ml Plastic	1 1
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	918
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	Spend.



By 25 / 20 2 Days, Sample ID:	Nell ID:	MWS	53		Sample ID:	082	ZMW	53GW)			Sample Time:	1405
Purging and "Stabilization Data Tome of the size continue of the size of the si	Date: 8/2	5/20	22									Dup. Sample Time:	
Time Value Time Sec. Cond. (1) Operation Prior Other (1) Prior Prior </th <th>lotes:</th> <th></th>	lotes:												
Time Value Time Sec. Cond. (1) Operation Prior Other (1) Prior Prior </th <th></th> <th></th> <th>_</th> <th></th> <th></th> <th></th> <th></th> <th>Duraina</th> <th>and *Ct</th> <th>abilization</th> <th>Data</th> <th></th> <th></th>			_					Duraina	and *Ct	abilization	Data		
Column (D) 1 2000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 41000 1 410000 1 410000 1 410000<	Time		Temp	Spec. Cond.	DO (mail)	nH	OPP (m)()	Turbidity			Data		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	(24 hrs)		*± 3% *C, min ± 0.2*C	(µS/cm) *±3%	*± 10%	*± 0.1	*± 10 mV	(NTU)	(ft)			Color/O	dor/Notes
845 1.5 \$ \$ 3 1758 €.57 6.34 174.9 1.07 34.21 6.1 50 2.0 5.4 172.4 72.4 72.4 6.43 172.4 0.64 37.21 0.1 355 2.5 5.0 178,3 7.56 6.46 182.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 172.4 0.54 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.30 34.21 0.1 1005 0 5.2 160.7 7.47 6.51 185.2 0.20 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20 185.2 0.20	(330							r					
3.50 3.0 5.7 172.4 7.91 6.43 177.4 0.64 37.41 0.1 3.55 3.5 5.8 178.3 7.56 6.46 182.5 0.52 34.31 0.1 (60 3.0 5.2 160.7 7.47 6.51 185.2 0.50 34.21 0.1 405 Colle & sample Colle & sample C	1340			181,3	8.77	4.17	1760	1.68					
3.50 3.0 5.7 172.4 7.91 6.43 177.4 0.64 37.41 0.1 3.55 3.5 5.8 178.3 7.56 6.46 182.5 0.52 34.31 0.1 (60 3.0 5.2 160.7 7.47 6.51 185.2 0.50 34.21 0.1 405 Colle & sample Colle & sample C	345	1.5	5.3	175.8	8.57	6.34	174.9	1.07	34.2	0,1			
205 204 204 Sample 205 204 Sample 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 205 205 205 205 205 205 205 205 205 205	1350	20	5.4	172.4	7.91	643	179.4	0.64	34.21	au			
205 204 204 Sample 205 204 Sample 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 205 205 205 205 205 205 205 205 205 205	1355	2.5	5,2	178.3	7.56	6.48	182.5	0.52	34021	0,h			
205 204 204 Sample 205 204 Sample 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 204 205 205 205 205 205 205 205 205 205 205 205	400	3,0	5.2	180.7	7.47	6.51	185.2	0.20	34.21	0.1			
	1405		-								Colle &	sample	/
				1	-							/	
					-					1			
		1											
Sampled? : Yes No													
Sampled? : Yes No													
Sampled? : Yes No													
Sampled? : Yes No							1						
	100				141			1					
					-								
							1						
				1 1 1									
					1								
				-									
								-			-		
	5							Sample	d2 · V	AS NO			
tial of Sampler: 11 M Page 2 of	Initial of Car	malar 1	14					oumpic		7 11			Page 2 of 2



Client/Site:	BLM Red Devi	I Mine	1.1	Well ID.:	musy	
Contract No.:	140L6321C00	01	Project No.:	BU06-007		
Date:	8.125	22	Samplers:			
Time Start:	1210					1.1
Time Finish:	1310		Checked By:	NA		
Well & Purge Inf	ormation		Contraction of the Contraction of The Contraction	1		
TD (ft. bTOC):	5.	3.1	t Scr	eened Interval (ff.)	29-4	19
DTW (ft. bTOC):	29.7	2 1	t			
Water Column:	23	3.38 1	t TD-DTW=Water C	olumn		
Liter/Foot:		605 L/f		e Calculation*** table	***Well Volum	e Calculation***
Liters in Well:	14,1	11	. Water Column x L/		Well Diameter	L/ft
Three Well Volumes:	42,0	4 1	Liters in Well x 3		5/8"	0.06
Sample Depth:	~4	6	t Depth of Pump Inta	ke	2"	0.605
		×		ine .	4"	2.47
Field Equipment					L	
Multiparameter Water Quality Meter:	YSI Pro	Quarter	Serial No.:	10299	2	
Water Level Meter:	Dipper	TZ	Serial No.:	0705	<u>va</u>	
Turbidity Meter:	HACH	2100 F	Serial No.:	11701		
Pump Type:	Bla	0 1				
Pump Type:	U [a	ddcr	Serial No.:			
Purge Method:						
Peristaltic Pump		Inertial	🖾 Othe	er:		
Bladder Pump :	Optimum Flow R	ate Set at 2	Seconds Refill 5	Seconds Dischard	ge @ 300	12.
Sampling Method:		1			1	21
Peristaltic Pump		Inertial	Othe	r:		
Bladder Pump :	Optimum Flow R	ate Set at 1/0	Seconds Refill	Seconds Dischar	20	
Sample Collection		- State of the second second			ANT	
Parameter	# Containers	Filtered?	Preservative	MS/MSD? : Method	Yes Container Type	No d
TAL Metals	a	No	Nitric	and the second s	250 ml Plastic	initials
Total LL Mercury	2	No	HCI	1631 LL Hg	8oz Glass	MM
Dissolved LL Mercury	2	Yes	HCI	1631 LL Hg	8oz Glass	10 10
				-		
			-			

Well ID: W	vell ID: MW59 ate: 8/25/2022 otes:				082	2 MWS	4GW			Sample Time: 12.45		
Date: 8/2	5/20:	22	-	Dup. Sample	D: OR	2 MWS 822 M	W970	GW		Dup. Sample Time: 1250		
Notes:									-	1 1 200		
-	Volume	Temp	Spec. Cond.		1		Turbidity		abilization			
Time (24 hrs)	Removed (L)	Temp *± 3% °C, min ± 0.2°C	h (μS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes		
1210	-	- 12	1	-	RT PURG		Te 17 #	1				
1215	1,25	3.3	469,8	1.50	6.80	92.4	21.5	22,80	0,23			
1220	2.50	3.3	470,8	1.07	6.82	92,7	21.5	29,80	6.25			
1210 1215 1220 1220 1225 1230 1235 1240	3.75	3.2	479.7 479.7 479.5 475.1 474.2	1.09	6.85	82.9	14,3	29.80	0,25			
1230	5.00	3,2	479.5	0.95	6.86	75.4	9.13	29,80	0.25			
1235	5.25	3,7	475,1	1.81	6.88	71,8	7.26	29.80	0.25			
1240	7,50	3,0	474.2	1,60	6.87	69.9	8,36	29,80	0.25			
						-				Collect Saple at 1245		
					1							
						-		1				
			1.5									
			-									
				-								
							-					
			- 4.				1					
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		-					-					
		La.					Sample	d?: Ye	s 📈 No	No 🗆		
Initial of Sa	mpler:	114								Page 2 of 2		

Sugar 1	C /	
	Sundance	
Sector States	Consulting inc.	-
		AND IS

Client/Site:	BLM Red Dev	il Mine		Well ID.: WY90				
Contract No.:	140L6321C00	01	Project No.:	BU06-007				
Date:	08/25	723	Samplers:	MP				
Time Start:	11-	35			1			
Time Finish:	12	40.	Checked By:	H	K			
Well & Purge Inf	ormation				-			
TD (ft. bTOC):	22	.57	ft Sci	eened Interval (ft.): 10-20	1		
DTW (ft. bTOC):	14	07	ft	coned interval (it.				
Water Column:	A.	0.1	ft TD-DTW=Water C	ahimp				
Liter/Foot:	6.	605 L		e Calculation*** table	***Well Volum	e Calculation***		
Liters in Well:	ч.	10	L Water Column x L/		Well Diameter			
Three Well Volumes:	13	01	Liters in Well x 3	n -	5/8"	L/ft		
Sample Depth:	······				2"	0.06		
the second		10 20	ft Depth of Pump Inta	ike		0.605		
Field Equipment					4"	2.47		
Multiparameter Water	VETO	And ut		1 - 1 - 1				
Quality Meter:	12+1	10 waght	Serial No :	2/0/0	2422)			
Water Level Meter:	5011) F	molu 102	Serial No.:	240691	-			
Turbidity Meter:	2000	Turbidilly	Serial No.:	10004	1			
Pump Type:	BMO	al	Serial No.:	190,7	1000			
			Serial No.:	<u></u>				
Purge Method:								
Peristaltic Pump	0	Inertial	Othe	r:				
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	Seconds Dischar	00	and the second		
Sampling Method:					ge			
Peristaltic Pump		Inertial	□ Othe	r.				
Bladder Pump :	Ontinum Flaur D							
the second se			Seconds Refill	Seconds Dischar	ge			
Sample Collection	the second se	the second se		MS/MSD? :	Yes 🗆	No		
TAL Metals	# Containers	Filtered?	Preservative	Method	Container Type	Initials		
Total LL Mercury		No	Nitric HCI	6020B LL, 747CA 1631 LL Hg	250 ml Plastic 8oz Glass	N		
Dissolved LL Mercury	6	Yes	HCI	1631 LL Hg	80z Glass	22		
	1			1.con ce rig	002 01855	NY		
	in the last		1	1				

Well ID: M	W 5 9	1		Sample ID:	08:	22 h	AW 55	Gu	/	Sample Time: 12 25
Date: 8	251	22		Dup. Sample	ID:		1 10			Dup. Sample Time:
Notes:	,									
-							Duraina	and *Ct	hilization	Data
Time	Volume	Temp	Spec. Cond.	-			Turbidity		abilization	Data
Time (24 hrs)	Removed (L)	Temp *± 3% *C, min ± 0.2*C	(µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
142			1	STAF	RT PURG	NG				
147	1	4.7	,4000	120	6.21	11.6	707	15.7	Bit	
NEL	2	4.4	4300	0,54	6-24	9.8	907	15.14	612	
1157	0.75	4.7	12 tok	0.45	6129	7.6	125	17	0.05	
12:02	3.40	1.8.	4017	044	Gir.	6.0	110	11	Tk	
	4.22	4-7	2856	6.42	6 32	5,0	06.3	14.5	11	
12.12	5	417	3892	ウンラ	6.33	37	8	1-3	11	in allizer all sumailing -
	-									
		FB		1						
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				12						
		-								
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				-						
		6								
			-	S						
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							-			
							Sample	1?: Ye	s 🗹 No	
The second second										,



Client/Site:	BLM Red Devil Mine		Well ID.:	MMLEG							
Contract No.:	140L6321C0001	Project No.:	Project No.: BU06-007								
Date:	08/24/22	Samplers:	Np								
Time Start:	19 45			/							
Time Finish:	1310	Checked By:	they	h							
Well & Purge Inf	ormation										
TD (ft. bTOC):	- 78,65 ft	Scr	eened Interval (ft.):	55-フナ	-						
DTW (ft. bTOC):	<u>34.60</u> ft			1110							
Water Column:	_ 44.05 ft	TD-DTW=Water Co	lumn								
Liter/Foot:	liber L/ft	See ***Well Volume	Calculation*** table	***Well Volume (Calculation***						
Liters in Well:	_26.65 L	Water Column x L/ft		Well Diameter	L/ft						
Three Well Volumes:	-79,95 L	Liters in Well x 3		5/8"	0.06						
Sample Depth:	~70 ft	Depth of Pump Intak	e	2"	0.605						
				4"	2.47						
Field Equipment											
Multiparameter Water Quality Meter:	V 51 DO Rugtic	Serial No.:	21(1)	11/22/							
Water Level Meter:	SO 1157 molellon	Serial No.:	7949	42-1							
Turbidity Meter:	7,100 P Tubbin APP	Serial No.:	16 M								
Pump Type:	blader	Serial No.:	Na.	1							
Purge Method:											
Peristaltic Pump	Inertial	□ Other									
D Bladder Pump :	Optimum Flow Rate Set at Set	econds Refill	Seconds Discharge	9							
Sampling Method:											
Peristaltic Pump	Inertial	C Other									
Bladder Pump :	Optimum Flow Rate Set at Se	econds Refill	Seconds Discharge	9							
Sample Collection			MS/MSD? :	Yes 🗆	No 😿						
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note						
Disolved marcury Total Marcury		Hel		802 2195							
		Hel		So= glass							
LAT VIEWLY		MCI	2	150 mL 7614							
				-							
				-							
total moreily		Hel	2	iso me fory							

Low-Flow Groundwater Sample & Stabilization Form

Well ID:	nw 5	6.		Sample ID:	08	22	MW	66	GW	Sample Time: 1300
Date:	281	24/	22	Dup. Sample	ID:	-	1	.)		Dup. Sample Time:
Notes:		00			D	D.	1			*
	9-205	0112	intal	Ce, w	2/	tixe	7			
	Values	- /	10.00	1			Purging	and *St	abilizatio	ion Data
Time (24 hrs)	Volume Removed (L)	Temp *± 3% °C, min ± 0.2°C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU)	DTW (ft)	Flow Rate	te Color/Odor/Notes
lint	(1)	I I 0.2 C	M9		T PURG		*± 10%	(
1200	1.0	4,6	0:3727	2.90	6.82	-205	216			
12.05	2.0	U.O	A. 3520	2.70	0.80	-146	185	2460	0.2	
10210	2.0	4.6	6.3521	242	679	-18, 9	99,4	34.96	11 0	
1215	ý.0	4.3	5 3963	2.31	6.78	-18.2	106	3498	-1/	
120	5	4.4	A14000	2.08	6.77	-18.0	970	35.00	11	
125	6	9.4	0 40 K	1.96	6.77	-180	60,1	35.04	1	
230	7	4.0	0:4119	1.80	6.79	-17.9	50.6	35.10	11	
1235	8	4.5	0.4161.	17 664	6=77	-17.9	35.5	3509		
140	9	4.5 5	0,4197	1,5-9	6.775	47.95	29,4	35.10	4	
		4.7	6.4218	1-44	6.77	-18.0	21,2	3509	11	Stall292 SAMDING
						0		- p I	4	the first
									-	
									1-17	
								1		
								2		
				-						
	-	C 10								
							1		1	
		0			-	1	Sampleo	1? : Yes	s No	No 🗆
Initial of Sam	pler:	VY.								Page 2 of 2

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and the second second	Sundance	
	Consulting Inc.	
and the second se		P CELS

Client/Site:	BLM Red Devi	I Mine		Well ID.:	Alla/ E	7			
Contract No.:	140L6321C00	01 1 2	Project No.:	BU06-007					
Date:	08/2	1 12	Samplers:	Alt	2				
Time Start:	14	00							
Time Finish:	150	0	Checked By:	A	1 hr				
Well & Purge Info	ormation			0					
TD (ft. bTOC):	60.1	29	t Scr	eened Interval (ft.):	37.5-	575			
DTW (ft. bTOC):	37	1. 4	t			1.7.1			
Water Column:	2:2	- m	t TD-DTW=Water Co	olumn					
Liter/Foot:	O,	605 LI	er danme i	e Calculation*** table	***Well Volume	Calculation***			
Liters in Well:	131	(1	Water Column x L/f		Well Diameter	L/ft			
Three Well Volumes:	40,9	27	Liters in Well x 3		5/8"	0.06			
Sample Depth:		NEC	t Depth of Pump Inta	ka	2"	0.605			
			C Depth of Pomp inta	ĸe	4"	2.47			
Field Equipment				AU		2.41			
Multiparameter Water	VIST V	10000		7101	11001	-			
Quality Meter:	YZEE	10Ghat	Serial No.:	LICIO	YLL				
Water Level Meter:	Solin	1+molel 4	Serial No.:	74991					
Turbidity Meter:	2000 Ti	162' met	Serial No.:	IRG OL	÷				
Pump Type:	pla.	ler	Serial No.:		01				
Purge Method:									
Peristaltic Pump		Inertial	🗆 Othe	ir:					
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	Seconds Discharg	je	-			
Sampling Method:									
Peristaltic Pump		Inertial	C Othe	r:					
Bladder Pump :	Optimum Flow R	ate Set at	Seconds Refill	Seconds Discharg	ge				
Sample Collection	n Informatio	n	1994)	MS/MSD? :	Yes 🗅	No 😥			
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials			
TAL Metals	1	No	Nitric	6020B LL, 7470A		VI.			
Total LL Mercury	1	No	HCI	1631 LL Hg	8oz Glass	the			
Dissolved LL Mercury	1	Yes	HCI	1631 LL Hg	8oz Glass	NA			
			1						
			1						

Well ID:	MU	Vhi	Z	Sample ID:	08	22 MW	STGI	J		Sample Time: Ly Ly Ly
Date:	05	XIE	22	Dup. Sample	ID:					Dup. Sample Time:
Notes:										
							_			
	Volume	Temo	Spec Cond				Purging Turbidity		abilization	n Data
Time (24 hrs)	Removed (L)	Temp *± 3% 'C, min ± 0.2'C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	рН *± 0.1	ORP (mV) *± 10 mV	(NTU) *± 10%	DTW (ft)	Flow Rate L/min	Color/Odor/Notes
1411	2	1.1		STAF	RT PURG	NG				
415	6.76	44	1077	5.52	C-30	7	274	3771	1014	
154:	1.5	4.4	10 12	1, 2	C17	3.6	14.5	3774	111	
1426	225	4.3	1057	7.90	4	tet	14	3771		ampling stabilized
			1 x 1		-					Empling
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1 - 3							1			
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					-				- 25	· · · · · · · · · · · · · · · · · · ·
		-						10 11	1	
	_	10		_		1	Sample	a?: Ye	s 🏿 No	



Client/Site:	BLM Red Devil Mine		Well ID.:	MW 57	
Contract No.:	140L6321C0001	Project No.:	BU06-007		
Date:	08/26/22	Samplers:	NO		
Time Start:	08:15	and shows	./		
Time Finish:	1000	Checked By:	Mat	h	
Well & Purge Info	ormation		0		
TD (ft. bTOC):	60.39 ft	Scr	eened Interval (ft.):	36.62-5.	6.62
DTW (ft. bTOC):			and the Make		1
Water Column:	29,76 ft	TD-DTW=Water Co	olumn		
Liter/Foot:	0.605 L/ft	See ***Well Volume	e Calculation*** table	***Well Volume C	alculation***
Liters in Well:	18.00 L	Water Column x L/f	t	Well Diameter	L/ft
Three Well Volumes:	54.00 L	Liters in Well x 3		5/8"	0.06
Sample Depth:	~55 ft	Depth of Pump Inta	ke	(2")	(0:605)
				4"	2.47
Field Equipment					
Multiparameter Water Quality Meter:	VIT No Quatro	Serial No.:	HONTO	21-10/4	701
Water Level Meter:	50/11/55-mety 201	Serial No.:	24901	-1610 9	- lef
Turbidity Meter:	21000 Turbidination	Serial No.:	16604		
Pump Type:	2115 10 2115	Serial No.:	MA		
t amp type.		Serial No.:		1	-
Purge Method:					
Peristaltic Pump	🔲 Inertial	□ Othe	r: ,		
Bladder Pump :	Optimum Flow Rate Set at S	econds Refill	_ Seconds Discharg	e	
Sampling Method:		-			
Peristaltic Pump	Inertial	D Othe	r.		
Bladder Pump :	Optimum Flow Rate Set at Set	econds Refill	_ Seconds Discharg	e	
Sample Collection	n Information		MS/MSD? :	Yes 🗆	No 🛛
Parameter	# Containers (fill in for each well)	Preservative	Method	Container Type	Note
D: 17016-82 March	N .	HE		602 9/452	
Total Mercury		HEL		802 yright	
to tal Inchall		Nitric		250 M PROPER	
	-		1		

Low-Flow Groundwater Sample & Stabilization Form

Well ID: N	W	58		Sample ID:	O	822	MW	58	(2W	Sample Time: DGL
Date: 0	8 25	- 22		Dup. Sample	D:	0		10	V	Dup. Sample Time:
Notes:										
-	Volume	Temp	Spac Cond		1		Purging	and *St	abilization	Data
Time (24 hrs)	Removed (L)	Temp *± 3% 'C, min ± 0.2'C	Spec. Cond. (µS/cm) *±3%	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU) *± 10%	DTW (ft)	Flow Rate	Color/Odor/Notes
68:50		1 10.20	1 13%	STAF	RT PURG		*± 10%	(Criticit	
08:55	the state	5.2	2911	1,02-	6.76	4.8	711	30.46	1.10	Chunky 1= 0.50
09:00	1.0	5.6	7867	0:118	655	-68	771	30.99		
09 10	05	4.8	2840	0.27	6:75	-18.9	282	2010	M	
0910	2.0	4.9	2949	0. 33	C.TX	-10,11	2112	31.09	17	
20115	2.5	4.7	2857	0.37	6 \$2	-218	210	81:12	VL-	
09'20	3.0	4.7	2849	0.36	6.85	-24.0	176	31.13	1(1.
09 20	3.5	9.7.	28017	0.31	6.83	5 =2:5.8	94.8	31.16		57-5/11/2 -2
	0		.,		and A	5	FIF /	- I'CD		1 (11.12)
	1									
		1			-		-			
						-		-	-	
				-						1
			1					-	-	
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			-	-				-		
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								-		
				-				-		
		-		-			-	-		
						-				
					-				-	
									1	
		N		_			Sampled	l?: Yes	s 🗗 No	
itial of Sam	pler:	N								



Client/Site:	BLM Red Devil	Mine		Well ID.:	MINS?	
Contract No.:	140L6321C000	1	Project No.:	BU06-007		
Date:	8/24/20	122	Samplers:	GG	1	
Time Start:	1500		_			
Time Finish:	1711		Checked By:	NO		
Well & Purge Infe	ormation					
TD (ft. bTOC):	16	4.1 ft	Scr	eened Interval (ft.):	140-1	60
DTW (ft. bTOC):		,30 ft				
Water Column:		1.95 ft		blumn		
Liter/Foot:	0	605 L/ft	See ***Well Volume	e Calculation*** table	***Well Volume	Calculation***
Liters in Well:	19,24	L			Well Diameter	L/ft
Three Well Volumes:	57,	72 L	Liters in Well x 3		5/8"	0.06
Sample Depth:	19	59 ft	Depth of Pump Inta	ke	2"	0.605
					4"	2.47
Field Equipment						
Multiparameter Water Quality Meter:	YSI Pro	Quatro	Serial No.:	1022:	22	
Water Level Meter:	Dipper T	2	Serial No.:	0705		
Turbidity Meter:	HACH à	100 P	Serial No.:	117	141	
Pump Type:	Bladde	1	Serial No.:	-	-	
Purge Method:					~	
Peristaltic Pump		Inertial	□ Othe	r:		
Bladder Pump :	Optimum Flow R	ate Set at 30	Seconds Refill 30	Seconds Discharg	ge 0 90 ps	si
Sampling Method:						
Peristaltic Pump		Inertial	□ Othe	r:		
Bladder Pump :	Optimum Flow Ra	ate Set at 30	Seconds Refill 30	Seconds Discharg	ge @ 90 ps	1
Sample Collectio	n Informatio	n	-10 -	MS/MSD? :	Yes 🗆	No×
Parameter	# Containers	Filtered?	Preservative	Method	Container Type	Initials
TAL Metals	1	No	Nitric	6020B LL, 7470A		44
Total LL Mercury	- L-	No	HCI	1631 LL Hg	8oz Glass	14 1g
Dissolved LL Mercury		Yes	HCI	1631 LL Hg	8oz Glass	MA
				-		
				1		
	14					
				1000		

WSY	$\frac{1}{59} \qquad \qquad$					5	Sample Time: 1655					
8/24/2022			Dup. Sample	ID:					Dup. Sample Time:			
st stai	ning m	tubing.	Very turk	oid de	uring purg	ling.						
_			-				and *St	abilizatio	n Data			
	Temp *± 3% 'C, min	Spec. Cond. (µS/cm)	DO (mg/L) *± 10%	pH *± 0.1	ORP (mV) *± 10 mV	Turbidity (NTU)	DTW	Flow Rate			Color/Odor/Notes	
(L)	± 0.2°C	*±3%				*± 10%						
0,25	7.1	612	6-61			6.41	132,30	0.05				
0,50			2.85	-			-					
	6.4	606					132.30	0.05				
1.00	6.3	605	0,93	6.87	127.8							
1,25	6.4	604	0,77	6,90	110.2							
1.50	6.8	602	0,67	6.92	93.6				2			
1.75	6.8	601	0,65	6.92	87.7	385						
2.00	6.8	602	0,59	6.93	78.9	374						
2,25	6.9	603	0.68	6.94	76.1	337	132.30	0,05				
2:50	6.3	603	0.62	6.95	72,6	348	132.30	0.05				
2.75	6.5	597	0.70	7.01	67.3	340			100			
3,00	6.5	599	0,61	6,98	66.6	284	132,30	0.05				
-									Collect	Sampl	e.	
		2								/		
			-	-					-			
	(* * · · · ·		_				1					
								1				
								0	1			
								1.	1			
				1								
		1										
								2				
						Sample	d?: Ye	s X M	lo 🗆			
	Volume Removed (L) 0,25 0,75 1,06 1,25 1,50 1,75 2,00 2,25 2,50 2,75	Volume Removed Temp $\pm 3\%$ °C, min $\pm 0.2°C$ 0,25 7,1 0,50 6,6 0,75 6,4 1,06 6,3 1,25 6,4 1,50 6,8 2,00 6,8 2,00 6,9	$Y/2022$ st staining on tubing. Volume Removed Temp $\frac{1}{23\%}$ 'C, min $\frac{1}{23\%}$ 0.25 7.1 612 0.25 7.1 612 0.25 7.1 606 0.75 6.4 606 1.35 6.4 602 1.35 6.4 602 1.35 6.9 602 1.75 6.8 602 2.00 6.8 602 2.50 6.3 603 2.50 6.5 5977	Volume Temp $3 \pm 3\%$ Spec. Cond. $(\mu S/cm)$ DO (mg/L) $\pm 3\%$ Volume Temp $\pm 3\%$ Spec. Cond. $(\mu S/cm)$ DO (mg/L) $\pm 10\%$ 0.25 7.1 612 6-6/ 0.25 7.1 612 6-6/ 0.35 6.4 606 2.85 0.75 6.4 606 1.10 1.06 6.3 605 0.93 1.25 6.4 602 0.67 1.35 6.9 602 0.67 1.75 6.8 602 0.59 2.00 6.8 602 0.59 2.105 6.3 603 0.68 2.150 6.5 597 0.70	Volume Temp Spec. Cond. (μ S/cm) DO (mg/L) pH *± 3% °C. min ± 0.2°C Volume Temp Spec. Cond. (μ S/cm) DO (mg/L) pH *± 10% (L) ± 3% °C. min ± 0.2°C DO (mg/L) pH *± 10% 0.25 7.1 G12 G-G/ G.97 0.35 G.4 G06 2.85 G.81 0.75 G.4 G06 1.10 G.87 1.06 G.3 G05 0.93 G.87 1.35 G.4 G02 0.67 G.92 1.50 G.9 G02 0.67 G.92 1.75 G.8 G02 0.67 G.92 2.00 G.8 G02 0.67 G.93 2.15 G.9 G03 0.68 G.94 2.150 G.3 G03 0.68 G.94	4/2022 Dup. Sample ID: st staining on tubing. Very turbid during purg 12020 12020 st staining on tubing. Very turbid during purg 12020 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000 12000	24/2022 Dup. Sample ID: At staining in tubing. Vry turbid during purging. Purging. Volume Temp Spec. Cond. (µSicm) DO (mg/L) *± 10% pH *± 0.1 ORP (mV) *± 0.1 Turbidity (NTU) *± 00% 0.25 7.1 612 6-6/ 6.97 197.8 6.4/ 0.25 7.1 612 6-6/ 6.97 197.8 6.4/ 0.25 7.1 612 6-6/ 6.97 197.8 6.4/ 0.25 7.1 612 6-6/ 6.97 197.8 6.4/ 0.25 7.1 612 6-6/ 6.97 197.8 6.4/ 0.25 7.4 606 7.10 6.97 197.8 6.4/ 1.05 6.9 601 7.6 6.91 108.3 213 1.06 6.3 602 0.67 6.92 87.7 385 3.00 6.8 602 0.57 6.93 70.6 348 2.75 6.5 597	24/2022 Dup. Sample ID: st staining on tubing. Kry turbid during purging. Volume Removed $\frac{1}{23\%}$ (C,min (U) Spec. Cond. (µS(cm)) D0 (mg/L) $\frac{1}{210\%}$ PH (µS(cm)) ORP (mV) $\frac{1}{210W}$ Turbidity (NTU) $\frac{1}{210W}$ DV (W) 0.25 7.1 612 6-64 6.97 197.8 6.41 133.30 0.75 6.4 604 2.85 6.91 198.3 213 133.30 0.75 6.4 604 1.10 6.94 150.3 464 132.30 1.35 6.4 604 0.77 6.70 118.3 213 132.30 1.35 6.4 602 0.67 6.92 73.6 421 132.30 1.35 6.4 602 0.67 6.92 73.6 42.1 132.30 1.35 6.4 602 0.67 6.92 73.6 42.1 132.30 2.05 6.9 6.02 0.59 6.92 72.6 349 132.30 2.25 <td>24 J2022 Dup. Sample ID: st staining on tubing. Very turbid during purging. Volume Removed Temp 12 3% C. million Doc (mgl.) (µ2 ± 3% PH 2 10% ORP (mV) 1 ± 10% Turbidity 1 ± 10% DTW (NTU) Flow Rate (m) 0:25 7.1 6 12 6.6 6.97 /97.8 6.141 /33.30 0.05 0:25 7.1 6 12 6.6 6.97 /97.8 6.141 /33.30 0.05 0:25 7.1 6 12 6.6 /2.85 6.31 /08.3 213 33.30 0.05 0:25 7.1 6 12 6.04 0.97 6.97 /97.8 6.141 /32.30 0.05 1:35 6.4 400 1.10 4.97 /32.80 0.05 1:00 4.92 132.30 0.05 /32.30 0.05 1:35 6.4 602 0.57 6.73 78.7 374 /32.30 0.05 2:00 6.3 602 0.57 72.6</td> <td>24/2022 Dup. Sample ID: st staining a tubing, Very turbid during purging, Purging and *Stabilization Data Volume Removed *1 3% °C, min Spec. Cond. (µS(m) DO (mg/L) *10% pH *20.1 ORP (mV) *10 mV Turbidity (NTU) *10 mV DTW Flow Rate Umin 0.25 7.1 612 6.6/ 6.97 197.8 6.4/ 132.30 0.05 0.25 7.1 612 6.6/ 6.97 197.8 6.4/ 132.30 0.05 0.75 6.4 606 2.85 6.81 188.3 213 132.30 0.05 1.06 6.3 605 0.93 6.87 127.8 5/5 132.30 0.05 1.35 6.4 604 0.77 6.90 118.2 442/ 132.30 0.05 1.35 6.9 602 0.67 6.92 87.7 385 132.30 0.05 1.35 6.9 602 0.67 6.92 87.7 385 132.30 0.05</td> <td>14/2022 Dup. Sample 10: </td> <td>U/ J032 Dep. Sample 10: Dep. Sample 10: t staining m tubing, thry turbid during purging. Purging and "Stabilization Data Removed is 3% C nm Spec. Cond. (is 3% C nm Open Simple 70% 1 13 (b) (c) nm 12 (b) (m) 12 (b) (m) Purging and "Stabilization Data Color/Oder/Notes Open Simple 70: Open Simple 70</td>	24 J2022 Dup. Sample ID: st staining on tubing. Very turbid during purging. Volume Removed Temp 12 3% C. million Doc (mgl.) (µ2 ± 3% PH 2 10% ORP (mV) 1 ± 10% Turbidity 1 ± 10% DTW (NTU) Flow Rate (m) 0:25 7.1 6 12 6.6 6.97 /97.8 6.141 /33.30 0.05 0:25 7.1 6 12 6.6 6.97 /97.8 6.141 /33.30 0.05 0:25 7.1 6 12 6.6 /2.85 6.31 /08.3 213 33.30 0.05 0:25 7.1 6 12 6.04 0.97 6.97 /97.8 6.141 /32.30 0.05 1:35 6.4 400 1.10 4.97 /32.80 0.05 1:00 4.92 132.30 0.05 /32.30 0.05 1:35 6.4 602 0.57 6.73 78.7 374 /32.30 0.05 2:00 6.3 602 0.57 72.6	24/2022 Dup. Sample ID: st staining a tubing, Very turbid during purging, Purging and *Stabilization Data Volume Removed *1 3% °C, min Spec. Cond. (µS(m) DO (mg/L) *10% pH *20.1 ORP (mV) *10 mV Turbidity (NTU) *10 mV DTW Flow Rate Umin 0.25 7.1 612 6.6/ 6.97 197.8 6.4/ 132.30 0.05 0.25 7.1 612 6.6/ 6.97 197.8 6.4/ 132.30 0.05 0.75 6.4 606 2.85 6.81 188.3 213 132.30 0.05 1.06 6.3 605 0.93 6.87 127.8 5/5 132.30 0.05 1.35 6.4 604 0.77 6.90 118.2 442/ 132.30 0.05 1.35 6.9 602 0.67 6.92 87.7 385 132.30 0.05 1.35 6.9 602 0.67 6.92 87.7 385 132.30 0.05	14/2022 Dup. Sample 10:	U/ J032 Dep. Sample 10: Dep. Sample 10: t staining m tubing, thry turbid during purging. Purging and "Stabilization Data Removed is 3% C nm Spec. Cond. (is 3% C nm Open Simple 70% 1 13 (b) (c) nm 12 (b) (m) 12 (b) (m) Purging and "Stabilization Data Color/Oder/Notes Open Simple 70: Open Simple 70

ATTACHMENT 1.5 SURFACE WATER SAMPLING FORMS

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Project Name: Red Devil Mine									
Project Name:	Red Devil Mine								
Project No.:	BU06-007								
Sample Type:	SW								
Pump Type:	NA								
Sample Team:	GG/NP								

4.000	
Surfa	ace Water
Sample (Collection Log
Sample Location:	RDOS
Sample ID:	0622RD 05 SW
Date:	6/6/22
Time:	1140
COC #:	
Trip Blank ID:	TBOR

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	2	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	814
Total LL Mercury	8 oz	2	glass	Unfiltered	HCI	4º C	90 days	20
TSS and TDS**	1 L	2	plastic	Unfiltered	None	4º C	7 days	1519
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	2	plastic	Unfiltered	None	4° C	28 days/ 14 days	MA
Nitrate-Nitrite	250 mL	2	plastic	Unfiltered	Sulfuric	4º C	28 days	BM

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS and TDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By: 66

Reviewed By:

M

Time	Temp °C	Spec Con µS/cm	DO mg/L	pН	ORP	Turb. NTU	Notes
1140	3.65	301	31/3	6.86	41.6	11,12	Dup @ 1145

Sunda Consulting	Project Name: Red Devil Mine Project No.: BU06-007								
Project Name:	Red Devil Mine								
Project No.:	BU06-007								
Sample Type:	SW								
Pump Type:	Peri								
Sample Team:	GG/NP								

Surface Water Sample Collection Log

Sample Location:	RDOLO
Sample ID:	0622RD06 SW
Date:	616/22
Time:	1010
COC #:	
Trip Blank ID:	TB03

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	U	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	AN
Total LL Mercury	8 oz	(glass	Unfiltered	HCI	4º C	90 days	192
TSS and TDS**	1L)	plastic	Unfiltered	None	4º C	7 days	SX
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	1	plastic	Unfiltered	None	4º C	28 days/ 14 days	14/4
Nitrate-Nitrite	250 mL	1	plastic	Unfiltered	Sulfuric	4º C	28 days	MA

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

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**The TSS andTDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By: 60

Reviewed By:

H

Spec Con DO Temp °C Time pH ORP Turb. NTU Notes µS/cm mg/L 1010 4.99 15,20 48.1 7.50 156 128

Sunda Consetting	ance 15
Project Name:	Red Devil Mine
Project No.:	BU06-007
Sample Type:	SW
Pump Type:	leci
Sample Team:	GG/NP

Surface Water Sample Collection Log Sample Location: RD 09B (Alternate) Sample ID: 0622RDC035W Date: 6/6/20 Time: 0330 COC #: Trip Blank ID: TB03

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	1	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	29
Total LL Mercury	8 oz	1	glass	Unfiltered	HCI	4º C	90 days	134
TSS and TDS**	1 L	1	plastic	Unfiltered	None	4º C	7 days	194
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	1	plastic	Unfiltered	None	4º C	28 days/ 14 days	12 12
Nitrate-Nitrite	250 mL	1	plastic	Unfiltered	Sulfuric		28 days *	X 14

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS and TDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By: 66

Reviewed By:

Spec Con DO Time Temp °C pH ORP Turb. NTU Notes µS/cm mg/L 0838 4.73 159 7.20 74.5 5.51 8 4.45

Sunda Consulting	unce 15
Project Name:	Red Devil Mine
Project No.:	BU06-007
Sample Type:	SW
Pump Type:	1
Sample Team:	GG/NP
and the second se	

Surface Water Sample Collection Log

Sample Location:	RD /0
Sample ID:	0622RD/0 SW
Date:	6/4/22
Time:	1330
COC #:	
Trip Blank ID:	TB03

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	1	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	A.M
Total LL Mercury	8 oz	1	glass	Unfiltered	HCI		90 days	14/4
TSS and TDS**	1L	1	plastic	Unfiltered	None	4º C -	7 days	13 12
Inorganic Ions (Cl, F, SO ₄) and Alkalinity***	250 mL	i	plastic	Unfiltered	None	4º C	28 days/ 14 days	1.H
Nitrate-Nitrite	250 mL	1	-	Unfiltered			28 days	A.H

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS andTDS are sampled together in a 1 L container.

***The Inorganic Ions and Alkalinity are sampled together in a 250 ml container.

Logged By: GG

Reviewed By:

1/2

Time	Temp °C	Spec Con µS/cm	DO mg/L	pН	ORP	Turb. NTU	Notes
1330	7,60	137	15:44	7.52	53.3	2.19	

Sunda Converting	ance 15
Project Name:	Red Devil Mine
Project No.:	BU06-007
Sample Type:	SW
Pump Type:	lici
Sample Team:	GG/NP

Surfa	ace Water
Sample	Collection Log
Sample Location:	RD 15
Sample ID:	0622RD/5SW
Date:	6/4/22
Time:	1125
COC #:	
Trip Blank ID:	TB03

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	3	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	My
Total LL Mercury	8 oz	3	glass	Unfiltered	HCI	4º C	90 days	By
TSS and TDS**	1L -	3	plastic	Unfiltered	None	4º C	7 days	44
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	3		Unfiltered		4º C	28 days/ 14 days	AN
Nitrate-Nitrite	250 mL	3		Unfiltered		4° C		4h

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time **The TSS andTDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

GG Logged By:

Reviewed By:

外外

Time	Temp °C	Spec Con µS/cm	DO mg/L	pН	ORP	Turb. NTU	Notes
1125	5.97	132	13.56	7.60	38.76	2.89	MS/MSD

Sund	ance 15
Project Name:	Red Devil Mine
Project No.	: BU06-007
Sample Type:	SW
Pump Type:	Peri
Sample Team:	GG/NP

Surfa	ice Water
Sample (Collection Log
Sample Location:	RD 05 (Seep)
Sample ID:	0822RD45 SW
Date:	8/28/22
Time:	1015
COC #:	51 T
Trip Blank ID:	TB04

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	1/1	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	
Total LL Mercury	8 oz	4/1	glass	Unfiltered	HCI	4º C	90 days	
TSS and TDS**	1L	1/1	0	Unfiltered	None	4º C	7 days	
Inorganic Ions (Cl, F, SO ₄) and Alkalinity***	250 mL	VI	plastic	Unfiltered	None	4º C	28 days/ 14 days	
Nitrate-Nitrite	250 mL	1/1		Unfiltered		4º C	28 days	

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS andTDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

0822 R0995W a 1018 inste 40

Logged By: <u>GG</u>

Time	Temp ^o C	Spec Con µS/cm	DO mg/L	pН	ORP	Turb. NTU	Notes
1015	3.6	476.4	2.33	6.74	121.0	38.2	

unce 15
Red Devil Mine
BU06-007
SW
Peri
GG/NP

Surface Water Sample Collection Log

Sample Location:	RD 06
Sample ID:	0822RD06SW
Date:	8/28/22
Time:	0955
COC #:	
Trip Blank ID:	1

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type		Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	1	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	17M
Total LL Mercury	8 oz	1	glass	Unfiltered	HCI	4º C	90 days	10
TSS and TDS**	1L)	plastic	Unfiltered	None	4º C	7 days	14
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	1	plastic	Unfiltered	None	4º C	28 days/ 14 days	Plu
Nitrate-Nitrite	250 mL	1	plastic	Unfiltered	Sulfuric	4º C	28 days	12/7

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS and TDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By:

Reviewed By:

Time	Temp ^o C	Spec Con µS/cm	DO mg/L	pH HR	ORP	Turb. NTU	Notes
0955	5.8	157.5	11.03	5.64	263,0	121	

13.26 4.82

ance 15
Red Devil Mine
BU06-007
SW
Peri
GG/NP

Surfa	ice Water
Sample G	Collection Log
Sample Location:	RDO88
Sample ID:	0822RDa8BSW
Date:	8/28/22
Time:	0915
COC #:	
Trip Blank ID:	

Bottle Filtered/ Methods (listed in Bottle Initials Hold Time Preservative Temperature Sample Volume Type Unfiltered prioritized order) Count 180 days/ 28 days* Hn plastic Unfiltered Nitric ambient 250 mL TAL Metals 4º C HCI 90 days 4 Unfiltered glass Total LL Mercury 8 oz 4º C 7 days plastic Unfiltered None TSS and TDS** 1L Inorganic Ions (Cl, F, SO₄) 4º C 28 days/ 14 days plastic Unfiltered None and Alkalinity*** 250 mL 4º C 28 days plastic Unfiltered Sulfuric 250 mL Nitrate-Nitrite

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS andTDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By: <u>GG/NP</u>

Time	Temp ^o C	Spec Con µS/cm	DO mg/L	рН	ORP	Turb. NTU	Notes
0915	5.7	158,3	13.11	7.32	253,2	20.0	

Sunda	
Project Name:	Red Devil Mine
Project No.:	BU06-007
Sample Type:	SW
Pump Type:	Peri
Sample Team:	GG/NP

Surfa	ice Water
Sample C	Collection Log
Sample Location:	RD 18
Sample ID:	0822RD / SW
Date:	8/28 /22
Time:	1125
COC #:	
Trip Blank ID:	TBOY

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	1	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	11
Total LL Mercury	8 oz	i	glass	Unfiltered	HCI	4º C	90 days	X
TSS and TDS**	11	1	plastic	Unfiltered	None	4º C	7 days	1 L
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	1	plastic	Unfiltered	None	4º C	28 days/ 14 days	K.
Nitrate-Nitrite	250 mL	1	plastic	Unfiltered	Sulfuric	4º C	28 days	1

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS andTDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By: GG

Time	Temp ^o C	Spec Con µS/cm	DO mg/L	рН	ORP	Turb. NTU	Notes
1125	6.0	142.4	12.90	7.79	173.7	10,6	

Sunda Consulting	
Project Name:	Red Devil Mine
Project No.:	BU06-007
Sample Type:	SW
Pump Type:	Peri
Sample Team:	GG/NP

Surface Water Sample Collection Log

Sample Location:	RD/5
Sample ID:	0822RD/5 SW
Date:	8/28/22
Time:	1030
COC #:	
Trip Blank ID:	TBOY
COC #:	1000

Methods (listed in prioritized order)	Sample Volume	Bottle Count	Bottle Type	Filtered/ Unfiltered	Preservative	Temperature	Hold Time	Initials
TAL Metals	250 mL	3	plastic	Unfiltered	Nitric	ambient	180 days/ 28 days*	NH
Total LL Mercury	8 oz	3	glass	Unfiltered	HCI	4º C	90 days	1914
TSS and TDS**	1 L	3	plastic	Unfiltered	None	4º C	7 days	11 1.
Inorganic lons (Cl, F, SO ₄) and Alkalinity***	250 mL	3	plastic	Unfiltered	None	4º C	28 days/ 14 days	AA
Nitrate-Nitrite	250 mL	3	plastic	Unfiltered	Sulfuric	4º C	28 days	NIC

Comments: * The TAL Hg analyzed by EPA Method 7470A has a 28 day hold time

**The TSS andTDS are sampled together in a 1 L container.

***The Inorganic lons and Alkalinity are sampled together in a 250 ml container.

Logged By:

Time	Temp ^o C	Spec Con µS/cm	DO mg/L	рН	ORP	Turb. NTU	Notes
1030	5.9	146.1	13.27	7.10	259.7	12.9	

ATTACHMENT 1.6 CALIBRATION LOGS

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Turbidity Calibration Log

Micro VPW Model: 202007903 Serial Number: Manufacturer Calibration Date & Time & Temp **Calibration Reading** Acceptable (√) Standard Date: 6/1/22 131000 1001 1 1000 34 10.0 9,90 V 10,0 1858 Time: 0,02 0.02 V 1000 Date: 6/2/22 1000 10.0 10,0 L 1814 Time: 0.02 Date: 6/3/22 1000 1000 10.0 10.0 L Time: 1832 0.02 0.02 Date: 6/4/22 1000 1000 ~ 10.0 10,04 V 1733 0.02 Time: 0.03 V 1000 Date: 6/5/22 1000 999.4 V 10,0 10,0 V 1522 0.02 Time: 0,02 V Date: Time: Date: Time:



Turbidity Calibration Log

Micro TPW Model: 201407081 Serial Number:

Manufacturer Calibration Date & Time & Temp **Calibration Reading** Acceptable (√) Standard Date: 6/1/22 1000 1000 V 10,0 10,0 V Time: 1857 0.02 0.02 V Date: 6/2/22 998.3 1000 1 10.0 10,0 1815 Time: 0.02 0.02 1000 4/3/22 Date: 1000 v 10.0 10.0 V 1835 Time 0.02 a02 V 614122 1000 Date: 1000 1 10,0 10.0 V 1740 0,02 Time: 0,02 V Date: Time: Date: Time Date: Time: Date: Time: Date: Time:

Sundance Canuality Inc.

Water Quality Meter Calibration Log

Model: Serial Number: Date & Time & Temp Calibration Information Initial Calibration Readings **Final Calibration Readings** 22 85 Date: pH (4.0) ,0 pH (7.0) 001 7.00 Time: 3 pH (10.0) 0 0.04 200 Spec Cond (µS/cm) Temp: 240. DO (mg/L) 12 ORP (mV) Date: Q pH (4.0) G 4.0 q 0 00 pH (7.0) Time: pH (10.0) ñ 0.01 L C 7 Spec Cond (µS/cm) 6 17 41 Temp: 34 .16 DO (mg/L) ORP (mV) 40.0 Date: l t'm pH (4.0) pH (7.0) 01 00 Time: Ð 0.01 pH (10.0) 0 6 Spec Cond (µS/cm) 7 0 Temp: DO (mg/L) k 501 ORP (mV) f 11 1 (Date: pH (4.0) 4 1 410 91 6 pH (7.0) 50 0.00 Time: pH (10.0) 0,0 Spec Cond (µS/cm) 2 TU 41 Temp: 23.06 Q DO (mg/L) ORP (mV) 2 44 .5 L 0.0 Date: pH (4.0) pH (7.0) Time: pH (10.0) Spec Cond (µS/cm) Temp: DO (mg/L) ORP (mV) Date: pH (4.0) pH (7.0) Time: pH (10.0) Spec Cond (µS/cm) Temp: DO (mg/L) ORP (mV)

Sundance Consulting Inc. May 2021

Sundance

556 MP5 Model: Serial Number: 11 400848

Date & Time & Temp	Calibration Information Initial Calibration Readings	s Final Calibration Readings
Date: 6/1/22	рн (4.0) Ц, О	4.01
	pH (7.0) 7.60	7.00
rime: 19:20	pH (10.0) [0,1.6	10.04
	Spec Cond Walking NP + 86 + 1.0	32 - 1211 WP OTHO Prom
Temp: 2/2	DO (mg/L)	8:64
Clo	ORP (mV) 274.3	240.0
ate: 6/1/22	рн (4.0) Ц + ОО	4.01
OTALF	рн (7.0) 7.04	7.00
ime: 18.15	рн (10.0) 7 1 80	9,40
(V-t t	Spec Cond (µS/cm)	6.412
emp: 23.7	DO (mg/L) 7.41	218
	ORP (mV) 2264	240.0
Date: (13/2') рн (4.0) (1.) 2	4.01
BIJ L	pH (7.0) 61 98	7.00
ime: 18.20	pH (10.0)	10:01
10.90	Space Cond (uS/om)	1413
emp: 7325	DO (mg/L)	8.44
L).) X	ORP (mV) 24-2-2	240.0
ate: 6/4/22	PH (4.0) 4,62	4,09
p/ y - y	pH (7.0) 7.10 2	7.00
me: 17:00	pH (10.0) 400 L	
	Spec Cond (µS/cm)	1412
emp: 23.65	DO (mg/L)	14075
21.67	ORP (mV) 24 (4 3	240.0
Date: 15/12	pH (4.0) 2107	378
44/22	2	7,02
ime: 15:20	D D al	10.01
me. () . 20	1.000	1412
		8.14
emp: 23, 25	DO (mg/L) 949 ORP (mV) 234	
10		240.0
ate:	pH (4.0)	
	pH (7.0)	
me:	pH (10.0)	
	Spec Cond (µS/cm)	
emp:	DO (mg/L)	
	ORP (mV)	

WP

Sundance Consulting Inc. May 2021

Turbidity Calibration Log

ER TURB Model Serial Number: ON 6 6

Date & Time & Temp	Manufacturer Calibration Standard	Calibration Reading	Acceptable (✓
Date: 08/23/22	>0.1,20	1	
Time: 18:05	800	V	
Date: 08/24/12	70.7,20	1	
Time: \$ 10.	100	T T	
Date: 08/25/22	20.	Vy	
Time: 16:31	800		
Date: 08/27/24	70: 20	V	
Time: Date:	608		
Time:			
Date:			
Time:			
Date:			
Time:			
Date:			
Time:	-		
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Turbidity Calibration Log

Mod Serial Numbe	el: 2100P T	arbeimeter	_
Date & Time & Temp	Manufacturer Calibration Standard	Calibration Reading	Acceptable (✓)
Date: 08/23/22	70.1,20	V	
Time: 18:05	100	1	
Date: 08/14/12	201,20	V	
Time: 18:10	100 860	V,	
Date: 68/25/22	20,200		
Time: 6.35	810		
Date:			
Time:			
Date:			
Time:			
Date:			
Time:			
Date:			
Time:		100	
Date:			
Time:			
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Time: Date:			
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Date:			
ime:	2		

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440 Model Li Serial Number:

ate & Time & Temp	Calibration Information	Initial Calibration Readings	Final Calibration Readings
Date: 08/23/22	pH (4.0)	3.92	7.93,1
	рН (7.0)	6.86	6.85
"ime: 1710	pH (10.0)	9,87	10.00
	Spec Cond (µS/cm)	1.376	141)
emp: 18.8	DO (mg/L)	100.8	99.4
(0.0	ORP (mV)	245.3	240
Date: NR/24/17	pH (4.0)	4.00	4.00
Q 0/ 2. 1/22	pH (7.0)	6.99	7.00
ime: 1740	pH (10.0)	0.03	10.00
	Spec Cond (µS/cm)	1426	1412
Temp: 18, 1	DO (mg/L)	100.09	99.3
10.10	ORP (mV)	241.1	2.40.00
Date: 08/25/2	pH (4.0)	3.99	4.00
(ILI)EV	pH (7.0)	7.1	7.00
Time: 6.03	pH (10.0)	10-16	10.01
	Spec Cond (µS/cm)	1381	1413
	DO (mg/L)	9 619	99:0
11.7	ORP (mV)	24516	240
Date:	pH (4.0)		
	pH (7.0)		
Time:	pH (10.0)		
	Spec Cond (µS/cm)		2
Temp:	DO (mg/L)		
, comp.	ORP (mV)		
Date:	pH (4.0)		
	pH (7.0)		Martin Contraction
Time:	pH (10.0)		
	Spec Cond (µS/cm)		
Temp:	DO (mg/L)		
romp.	ORP (mV)		
Date:	pH (4.0)		
	pH (7.0)		
Time:	pH (10.0)		
	Spec Cond (µS/cm)		
Temp:	DO (mg/L)		
	ORP (mV)		

Sundance Consulting Inc. May 2021



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Water Quality Meter Calibration Log

+V0 Model: 0 UL Serial Number: L C

Date & Time & Temp	Calibration Information	Initial Calibration Readings	Final Calibration Readings
Date: 08/23/12	рН (4.0)	H.O.L.NP 3.97	4.00
1 1 1 -	pH (7.0)	6.94	6.94
Time: 710	рН (10.0)	0,99	0.00
1001	Spec Cond (µS/cm)	100.9	99.2
Temp: 8.8	DO (mg/L)	1595	1413
ch it	ORP (mV)	248.7	240
Date: 00/2-1/2	2 pH (4.0)	4:01	4.00
1- 1-2	pH (7.0)	7.01	7.00
Time: 740	pH (10.0)	10.01	10.010
1 100	Spec Cond (µS/cm)	+1301	13017 1413
Temp: 18	DO (mg/L)	91.26	19.9%
(Q')	ORP (mV)	2439	240.00
Date: 0125/22	pH (4.0)	4.03	4.00
10102	pH (7.0)	7.06	7.00
Time: 16 V 3	pH (10.0)	0.37	10.01
	Spec Cond (µS/cm)	347	1413
Temp:	DO (mg/L)	10.2.8	99.0
111P	ORP (mV)	2301-6	240
Date: OR/MI	pH (4.0)	4.07	4.00
0-4/2	2 рн (7.0)	7.03	7.00
ime: 14120	pH (10.0)	9.96	11.012
11.90	Spec Cond (µS/cm)	1-75	14/7
emp: 18	DO (mg/L)	121.7	98.5
10.9	ORP (mV)	234.5	-2 Lit
ate:	pH (4.0)		
	pH (7.0)		
ime:	pH (10.0)		
	Spec Cond (µS/cm)		
emp:	DO (mg/L)		
	ORP (mV)		
ate:	pH (4.0)		
	pH (7.0)		
ime:	pH (10.0)		
	Spec Cond (µS/cm)		
emp:	DO (mg/L)		
14	ORP (mV)		

ATTACHMENT 2. PHOTOGRAPH DOCUMENTATION

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Photograph 2-1. MW33 with new bladder pump system installed 22 August 2022.



Photograph 2-2. MW12, frost jacked with collapsed PVC. 22 August 2022.



Photograph 2-3. MW10, Collection of a filtered sample. 22 August 2022.



Photograph 2-4. RD05 Seep location with precipitate delta, August 2022.



Photograph 2-5. RD15, Stream sample collection setup August 2022.



Photograph 2-6. Erosion features adjacent to MW16 and MW17, August 2022.



Photograph 2-7. Soil stockpile overview in August 2022.



Photograph 2-8. Reworked Red Devil Creek stream channel with gabions, August 2022.



Photograph 2-9. MW10 well gauging. 22 August 2022.



Photograph 2-10. MW10 settling around concrete base August 2022.



Photograph 2-11. High river levels covering RD08 sampling location.



Photograph 2-12. RD08B replacement sampling location 100 feet upstream of RD08.

ATTACHMENT 3. SUPPLEMENTAL DATA

(Provided on a CD)

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ATTACHMENT 4. ANALYTICAL LABORATORY REPORTS

(Provided on a CD)

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ATTACHMENT 5. DATA VALIDATION REPORTS

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ATTACHMENT 5.1 2022 SPRING DATA VALIDATION REPORT

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I. Project Information

File Name:	580-114638-1 DV Report.0_Metals_GenChem								
Analysis:	MT, WC	MT, WC							
SDG#:	580-114638-1 (Rev1)	Reviewer:	KKOL	Rev Date:	08/26/2022				
Matrix:	Surface Water Groundwater	2nd Rev:	CTD	2nd Rev Date:	11/8/2022				
Validation Level:	Stage2B/Stage4	# Samples:	42	# RE/DL:	0				

II. Secondary Review List

Narrative:	Form Is:					
Qualifications in text match Form Is	"U" / "J" lab codes carried over					
Spell check	Appropriate qual codes used					
Pagination, appropriate headers/footers	Form I IDs match sample ID table					
Correct project site name/manager on cover and introduction pages						
Required Edits/Changes:						
Add comprehensive table of qualifiers						
Add X qualifier definition						
Add Overall Assessment section						
Revision (include revision #, date and reason):						
Revision 0						
Validator Signature:						
Review Signature:						

Data Validation Report

Red Devil Mine, Alaska

Sample Delivery Group

580-114638-1

Prepared for

Sundance Consulting, Inc. 8210 Louisiana Blvd NE Suite C Albuquerque, NM 87113 Attention: Colleen Rust, PG

11/10/2022

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III.	Acronyms and Abbreviations	5
°C	Celsius	
%	Percent	
%D	percent difference	
CCA	•	
CCE	-	lank
CCV	_	
COC	chain of custody	
CLP	Contract Laboratory Pro	ogram
DL	detection limit	
DIS	S dissolved	
EPA	US Environmental Prote	ection Agency
EB	equipment blank	
FB	field blank	
FD	field duplicate	
GW	ground water	
ICA	L initial calibration	
ICB	initial calibration blank	
ICV	initial calibration verification	ation
IS	internal standard	
J	estimated value	
LCS	laboratory control samp	ole
LL F	- ,	
LOD		
LOC	•	
MB		
MS	matrix spike	
MS	· · · · · · · · · · · · · · ·	
ND	nondetect	
QAI		am Plan
QC	quality control	
QSN		
R	Rejected	
RL	reporting limit	
RPD	•	
RRF		
RSD		ION
SDG	1 70 1	
TB	trip blank total dissolved solids	
TDS		
TSS SW		
5 VV U	not detected	
U		d value is an ostimato
01	not detected; associated	a value is all estimate

IV. Introduction

Project Name: Red Devil Mine Sample Delivery Group: 580-114638-1 Client Project Manager: Colleen Rust Matrix: Surface Water QC Level: Stage 2B/Stage 4 No. of Samples: 42 Laboratory: Eurofins TestAmerica Seattle

Table 1 – Sample Summary

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
1	0622MW33GW 0622MW33GW DISS	580-114638-1	GW	6/05/2022	6020B, 6010D, 7470A, 1631E 1631E	Stage 4
2	0622MW09GW 0622MW09GW DISS	580-114638-2	GW	6/02/2022	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
3	0622MW10GW 0622MW10GW DISS	580-114638-3	GW	6/02/2022	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
4	0622MW16GW 0622MW16GW DISS	580-114638-4	GW	6/05/2022	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
5	0622MW17GW 0622MW17GW	580-114638-5	GW	6/05/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	DISS				1631E	

Sample	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation
Count 6	0622MW99GW	580-114638-6	GW	6/02/2022	6020B,	Level Stage 2B
-	00221010035600	500 114050 0	GW	0,02,2022	6010D, 7470A, 1631E	Stuge 2D
	0622MW99GW DISS				1631E	
7	0622MW26GW	580-114638-7	GW	6/05/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW26GW DISS				1631E	
8	0622MW27GW	580-114638-8	GW	6/02/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW27GW DISS				1631E	
9	0622MW98GW	580-114638-9	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW98GW DISS				1631E	
10	0622MW28GW	580-114638-10	GW	6/02/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW28GW DISS				1631E	
11	0622TB01	580-114638-11	ТВ	6/01/2022	1631E	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
12	0622MW29GW	580-114638-12	GW	6/02/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW29GW DISS				1631E	
13	0622MW06GW	580-114638-13	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW06GW DISS				1631E	
14	0622MW40GW	580-114638-14	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW40GW DISS				1631E	
15	0622MW42GW	580-114638-15	GW	6/02/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW42GW DISS				1631E	
16	0622MW43GW	580-114638-16	GW	6/02/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW43GW DISS				1631E	
17	0622MW44GW	580-114638-17	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW44GW DISS				1631E	

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
18	0622MW45GW	580-114638-18	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW45GW DISS				1631E	
19	0622MW46GW	580-114638-19	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 4
	0622MW46GW DISS				1631E	
20	0622MW47GW	580-114638-20	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW47GW DISS				1631E	
21	0622MW97GW	580-114638-21	GW	6/05/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW97GW DISS				1631E	
22	0622MW49GW	580-114638-22	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW49GW DISS				1631E	
23	0622MW50GW	580-114638-23	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW50GW DISS				1631E	
24	0622TB02	580-114638-24	ТВ	6/01/2022	1631E	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
25	0622RD05SW	580-114638-25	SW	6/06/2022	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B
26	0622RD99SW	580-114638-26	SW	6/06/2022	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B
27	0622MW51GW 0622MW51GW DISS	580-114638-27	GW	6/03/2022	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
28	0622MW52GW 0622MW52GW DISS	580-114638-28	GW	6/04/2022	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
29	0622MW53GW	580-114638-29	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW53GW DISS				1631E	

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
30	0622MW54GW	580-114638-30	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW54GW DISS				1631E	
31	0622MW55GW	580-114638-31	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 4
	0622MW55GW DISS				1631E	
32	0622MW56GW	580-114638-32	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW56GW DISS				1631E	
33	0622MW57GW	580-114638-33	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW57GW DISS				1631E	
34	0622MW58GW	580-114638-34	GW	6/03/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW58GW DISS				1631E	
35	0622MW59GW	580-114638-35	GW	6/04/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
	0622MW59GW DISS				1631E	

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
36	0622TB03	580-114638-36	ТВ	6/01/2022	1631E	Stage 2B
37	0622EB01GW	580-114638-37	EB	6/05/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
38	0622EB02GW	580-114638-38	EB	6/05/2022	6020B, 6010D, 7470A, 1631E	Stage 2B
39	0622RD06SW	580-114638-39	SW	6/06/2022	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 4
40	0622RD08BSW	580-114638-40	SW	6/06/2022	6020B, 6010D 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B
41	0622RD15SW	580-114638-41	SW	6/06/2022	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
42	0622RD10SW	580-114638-42	SW	6/06/2022	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B

V. Sample Management

The case narrative, the sample receiving checklist, chain-of-custody (COC) records for sample delivery group (SDG) 580-114638-1 were reviewed and the review findings are listed below.

- The laboratory's Login Sample Receipt Checklist and the COCs noted all coolers were received within the temperature limits of ≤6°C and ≥0°C, with the following exception: The cooler which contained the wet chemistry testing samples (nitrate+nitrite, TDS, TSS, alkalinity and anions) arrived outside temp limits at 7.8/8.0°C.
- The samples were received intact, and properly preserved, as applicable, with the cooler temperature exception listed above.
- Sample receipt exceptions:
 - The metals samples are required to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH >2: 0622MW59GW (580-114638-35). The sample was preserved to the appropriate pH in the laboratory on 6/10/22 at1350 (Reagent: 3097392).
 - The container label for the following samples did not match the information listed on the COC: 0622MW09GW (580-114638-2), 0622MW16GW (580-114638-4) and 0622MW40GW (580-114638-14).
 - Sample -2: The sample had two different times given across the COCs. The time which was consistent with the containers was used for login (1120).
 - Sample -4: One of the containers for 1631 had a label which gave the time of collection as 1020. The remaining containers matched the COC.
 - Sample -14: The date of collection for sample -14 given on the COC is 6/22/22, which was incorrect as samples were received on 6/9/22. The date of 06/03/22 on the containers was used for login.
- The COC information agrees with the laboratory report for requested field samples and tests, as applicable, with the COC exceptions listed above.
- The laboratory's Sample Receiving Checklists note that the cooler's custody seal, if present, is intact.
- Total and dissolved volumes were received at the lab for the ground water (GW) low level mercury (LL Hg) sample analyses performed by Method 1631E. The dissolved sample volumes were field filtered.
- The samples for nitrate+nitrite by Method 353.2 were subcontracted to the Eurofins Lancaster, PA Laboratory.
- Field and laboratory personnel signed and dated the COCs.

Table 2 - Data Qualifier Definitions

Qualifier	Definition
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

VI. SW-846 Methods 6020B, 6010D AND 7470A — Metals and Mercury

K. Okonzak-Lowry of Oak Services reviewed the SDG August 26, 2022.

VI.1. Holding Times

Analytical holding times, 28 days for mercury and six months for the remaining metals, were met.

VI.2. Tuning and Calibration

All 6020B ICP/MS tuning criteria were met. Mass calibrations were ≤ 0.1 atomic mass unit (amu) from the true value. Resolution was < 0.9 amu full width at 10% peak height and all %RSDs were $\leq 5\%$. A blank and five standards were used in the initial calibration. Correlation coefficients were ≥ 0.995 . The range of the ICP/MS calibration curves is low. The high standard for a number of trace analytes is 100 ppb. The lab reported results above the linear curve range and did not analyze a high linear range check standard. Sample detects reported above the high standard in the calibration curve for antimony, aluminum, barium, iron, nickel, manganese and arsenic were qualified as estimated, J. It should be noted that a Stage 4 validation was not performed for the 6010D ICP analyses for calcium (Ca), potassium (K), magnesium (Mg) and sodium (Na). The ICP raw data provided by the laboratory did not include the initial calibration curve calculation information. The calibration check standards, blanks, lab QC samples and field sample raw data is reported in mg/L. The raw instrument readings are not shown in the raw data. It could not be determined which standards were used in the initial calibration. The Form 13, Analysis Run Logs, indicate that the calibration curve was reprocessed to analyze and report Na for several of the field samples in the data package.

Issue	Analyte	Qualifier	Samples
Sample detects	Antimony	J	580-114638-1
reported above the			580-114638-4
calibration curve			580-114638-7
linear range			580-114638-15
_			580-114638-39
			580-114638-40
	Aluminum	J	580-114638-21
			580-114638-22
	Barium	J	580-114638-2
			580-114638-7
			580-114638-12
			580-114638-14
			580-114638-15
			580-114638-16
			580-114638-23
			580-114638-26
			580-114638-29
			580-114638-30
			580-114638-31
			580-114638-34
			580-114638-35
	Iron	J	580-114638-2
			580-114638-7
			580-114638-12
			580-114638-13
			580-114638-14
			580-114638-16
			580-114638-21
			580-114638-22
			580-114638-23
			580-114638-30 580-114638-31
	Nickel	J	580-114638-34 580-114638-14
		J	580-114638-2
	Manganese	J	580-114638-2
			580-114638-4
			580-114638-6
			580-114638-7

Table 3 - Metals and Mercury Tuning and Calibration

Issue	Analyte	Qualifier	Samples
			580-114638-8
			580-114638-10
			580-114638-12
			580-114638-13
			580-114638-14
			580-114638-15
			580-114638-16
			580-114638-17
			580-114638-21
			580-114638-22
			580-114638-23
			580-114638-25
			580-114638-26
			580-114638-27
			580-114638-29
			580-114638-30
			580-114638-31
			580-114638-32
			580-114638-34
			580-114638-35
	Arsenic	J	580-114638-3
			580-114638-4
			580-114638-6
			580-114638-7
			580-114638-14
			580-114638-15
			580-114638-16
			580-114638-23
			580-114638-25
			580-114638-26

For all ICP/MS analytes the reported ICV and CCV recoveries were within 90-110% and the low-level CCV recoveries were within 80-120%.

For all ICP analytes the reported ICV and CCV recoveries were within 90-110% and the low-level CCV (CCVL) recoveries were within 80-120%, with the exception of two bracketing CCVL check standards for Na. Sample qualifications were not required for the high CCVL recoveries

A blank and 5 non-zero standards were used for the CVAA calibration. The initial (ICV) and continuing calibration recoveries (CCV) were within 90-110%.

VI.3. Laboratory Quality Control Samples

VI.3.1. Calibration blanks and Method Blanks

No target analytes were reported in the method blanks (MB) or bracketing calibration blanks (ICB/CCB) of sufficient concentration to warrant qualification of site sample results except as noted in the table below. For the positive blank concentrations, associated detected sample results that were below the reporting limit (RL) were qualified as nondetect (U) at the RL. Associated detected sample results that were greater than RL and <5× the blank concentration were qualified as estimated with high bias (J+) using professional judgement.

Analyte	Blank concentration	Qualified Samples
Antimony	0.205 J μg/L (CCB 580- 396030/40)	580-114638-12
Thallium	0.191 J to 0.0.532 J ug/L (7/05/22 and 7/06/22 Analytical Run ICBs and CCBs)	580-114638-1 through -13, 580-114638-18 through -22, 580-114638-29 through -32, 114638- 39 through -42
Lead	0.041 J ug/L (7/05/22 ICB)	580-114638-1, -3, -5, -6, -9, -10, -13, -14, -15, -18, -23, -25, -28 and -29
Potassium	0.199 J to 0.435 J mg/L (Analytical Run ICBs and CCBs)	580-114638-1 through -6, 280-114638-8 through -35, 580-114638-39 through -42

VI.3.2. Interference Check Samples

Interference Check Samples (ICSA/B): ICSAB recoveries were within the control limits of 80-120% or $\pm 2 \times$ the reporting limit, whichever is greater. One or more interferents were present in several samples at concentrations comparable to those of the ICSAs. As noted in the table below, non-spiked analytes zinc, silver, lead, barium and nickel were present in the ICSAs at greater than MDL. For analytes with positive ICSA results, associated detected results which were <10× the ICSA concentration were qualified as estimated with high bias (J+). The ICP/MS ICS interferent levels were at 10,000 µg/L; therefore, the samples were assessed based on interferents being present at ≥10,000 µg/L in the samples. The ICP samples did not have interferents at concentrations comparable to the ICP ICSA solution, and sample qualifications were not required.

Table 5 - Metals Interference Check Samples

Analyte	ICSA Concentration ICSA 580-396030/11	Qualified Samples
Zinc	1.08 J μg/L	580-114638-25, -26,
Silver	0.041 J μg/L	580-114638-1, -2, -3, -4, -5, -7, -8, -13, -21, -25, -27, -28, -29, -34, -35
Lead	0.041 J μg/L	580-114638-12
Zinc	1.65 J μg/L	580-114638-39, -40, -41
Analyte	ICSA Concentration ICSA 580-396099/11	Qualified Samples
Silver	0.041 J μg/L	580-114638-39, -41
Nickel	0.172 J μg/L	580-114638-39, -40, -41, -42
Barium	0.450 J μg/L	580-114638-20

VI.3.3. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Target analytes were recovered within the control limits of 70-130% recovery (%R), and the relative percent difference (RPDs) were \leq 20%. The ICP/MS LCS/LCSD analyses were performed at 20× due to the calibration range.

VI.3.4. Laboratory Duplicates

Laboratory duplicate analyses were performed on samples 580-114638-3, 580-114638-17 and 580-114638-41 for ICP/MS metals and 580-114638-3, 580-114638-5, and 580-114638-41 for Hg and ICP. Original and duplicate sample values \geq 5× the RL were within the control limit of 20% Relative Percent Difference (RPD). The control limit of ±RL was met when the sample or duplicate result was <5× the RL. All results were within control limit criteria.

VI.3.5. Matrix Spike/Matrix Spike Duplicate

MS/MSD analyses were performed on samples 580-114638-3, 580-114638-5, and 580-114638-41 for metals and Hg and 580-114638-17 for ICP/MS only. MS recoveries were not assessed when the parent sample concentrations were more than 4× the spike amount. Recoveries for all target analytes met control limits of 75-125%R, and the RPDs were ≤20%. For the ICP/MS analysis, the parent samples were analyzed undiluted, and the MS/MSD samples were analyzed at a 20× dilution due to instrument calibration range. Sample qualifications were not assigned.

VI.3.6. Post Digestion Spike

The laboratory performed ICP/MS post digestion spike (PDS) analyses for samples 580-114638-3, 580-114638-17 and 580-114638-41 for all reported analytes, and the recoveries were within control limit criteria. The ICP/MS PDS analyses were performed at 20× due to the calibration range.

VI.3.7. Serial Dilution

ICP/MS serial dilution analysis was performed on samples 580-114638-3, 580-114638-17 and 580-114638-41. ICP serial dilution analysis was performed on samples 580-114638-3, 580-114638-5 and 580-114638-41. Results were not assessed unless the parent sample concentration was >50× the MDL. The control limit of ≤10% difference (%D) of the original sample results was met for all target analytes, with the exception of the ICP Ca serial dilution result for Sample 280-114638-5. The parent sample result was qualified as estimated, J.

VI.3.8. Internal Standards Performance

According to the raw data sample results, all ICPMS sample internal standard intensities were within the control limits of 60-125% of the calibration blank. Sample qualifications were not required.

VI.3.9. Sample Result Verification

Sample results were verified for the Level 4 validation, with the exception of the ICP analysis, for samples 580-114638-1, 580-114638-19, 580-114638-31 and 580-114638-39. Sample result verification is not applicable for Level 2B validation samples. Detects below the RL were qualified as estimated (J). Nondetects are valid to the RL.

VI.4. Field QC Samples

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. The remaining detects were used to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

VI.4.1. Field Blanks and Equipment Blanks

Field blank samples were not identified in this SDG for these analyses.

Equipment blank samples 0622EB01GW and 0622EB02GW were collected and associated with the GW samples as listed in the table below:

Equipment Blanks				
Blank ID	0622EB01GW	0622EB02GW		
Water Level	Solinst	Dipper T2		
Meter				
Associated	0622MW06GW	0622MW10GW		
Samples	0622MW09GW	0622MW26GW		
Samples	0622MW17GW	0622MW29GW		
	0622MW16GW	0622MW40GW		
	0622MW27GW	0622MW42GW		
	0622MW28GW	0622MW43GW		
	0622MW33GW	0622MW47GW		
	0622MW44GW	0622MW49GW		
	0622MW45GW	0622MW50GW		
	0622MW46GW	0622MW52GW		
	0622MW51GW	0622MW53GW		
	0622MW54GW	0622MW57GW		
	0622MW55GW	0622MW58GW		
	0622MW56GW	0622MW59GW		
		0622MW99GW		
		0622MW97GW		
		0622MW98GW		

Aluminum, antimony, barium, chromium, iron, manganese, nickel and zinc were detected in 0622EB01GW at 0.0077 J, 0.00018 J, 0.00034 J, 0.00025 J, 0.017 J, 0.00069 J, 0.00018 J and 0.0017 J mg/L, respectively. Aluminum, antimony, chromium, iron, manganese and zinc were detected in 0622EB02GW at 0.0094 J, 0.00024 J, 0.00023 J, 0.023 J, 0.0010 J and 0.0015 J mg/L, respectively.

For EB detects, associated detected sample results that were below the reporting limit (RL) were qualified as nondetect (U) at the RL. Associated detected sample results that were greater than RL and <5× the blank concentration were qualified as estimated with high bias (J+).

Analyte	EB Blank concentration (mg/L)	Qualified Samples
Aluminum	0.0077 J (EB01)	580-114638-5, -10, -13, -27, -30, -31, -32
Barium	0.00034 J (EB01)	580-114638-18, -19
Antimony	0.00018 J (EB01)	580-114638-17, -18, -19, -27,
Chromium	0.00025 J (EB01)	580-114638-1, -2, -4, -5, -10, -13, -17, -18, - 19, -27, -30, -31, -32
Iron	0.017 J (EB01)	580-114638-5, -18, -32
Manganese	0.00069 J (EB01)	580-114638-5, -18, -19
Nickel	0.00018 J (EB01)	580-114638-1, -5, -17, -18, -19, -27
Zinc	0.0017 J (EB01)	580-114638-1, -5, -10, -13, -17, -19, -27, -30, - 31, -32
Chromium	0.00023 J (EB02)	580-114638-3, -6, -14, -15, -16, -20, -23, -29, -33, -34
Aluminum	0.0094 J (EB02)	580-114638-3, -6, -14, -20
Antimony	0.00024 J (EB02)	580-114638-3, -9, -21, -22, -28, -29, -33, -34, - 35
Zinc	0.0015 J (EB02)	580-114638-3, -6, -9, -12, -14, -15, -16, -20, - 23, -28, -29, -33, -34, -35
Iron	0.023 J (EB02)	580-114638-20, -29, -33
Manganese	0.0010 J (EB02)	580-114638-20, -33

Table 7 - Metals and Mercury Equipment Blank Qualifiers

VI.4.2. Field Duplicates

Samples 0622MW10GW and 0622MW99GW, 0622MW49GW and 0622MW97GW, 0622MW52GW and 0622MW98GW and 0622RD05SW and 0622RD99SW. The control limits of \leq 30% for all target analytes greater than 5x RL and ±RL for all results <5x RL were met except as noted in the table below. Associated results in the field duplicate pair were qualified as estimated (J) for detects and (UJ) for nondetects.

Table 8 - Metals and Mercury Field Duplicates

Field duplicate samples	Analyte	RPD/±RL
0622MW10GW/0622MW99GW	Hg (0.0003U/0.00037 mg/L)	>±RL

VII. EPA Method 1631, Revision E – Total and Dissolved Mercury

K. Okonzak-Lowry of Oak Services reviewed the SDG on September 5, 2022

VII.1. Holding Times

Sample preservation and analytical holding times were met. The samples analyzed for dissolved mercury were filtered in the field. The water samples were preserved (oxidized with BrCl) in the sample bottles within 28 days of collection by Eurofins Seattle laboratory personnel on 6/10/2022. 580-114638-1 Page | 17

VII.2. Calibration

A blank and 5 non-zero standards were used for the cold vapor atomic fluorescence spectrometry calibration. Calibration criteria were met. ICV and CCV %Rs were within the laboratory control limits of 77-123%R.

VII.3. Laboratory QC Samples

VII.3.1. Calibration Blanks and Method Blanks

No mercury reported in the method blanks (MB) or bracketing calibration blanks (ICB/CCB) of sufficient concentration to warrant qualification of site sample results except as noted in the table below. MB 580-393383/88 had a Hg trace level detect at 0.0940 J ng/L. It was determined at validation that no sample qualifications were required. For the positive blank concentrations, associated detected sample results that were below the reporting limit (RL)were qualified as nondetect (U) at the RL. Associated detected sample results that were greater than RL and <5× the blank concentration were qualified as estimated with high bias (J+).

Table 9 - Method 1631 Calibration Blanks and Method Blanks

Analyte	Blank concentration (ng/L)	Qualified Samples
Mercury	7/07/22 Analytical Run:	580-114638-11 (0622TB01) 0.50 U
	ICB 580-396386/10 (0.118 J)	580-114638-16 (Diss) 0.50 U
	7/08/22 Analytical Run	580-114638-24 (0622TB02) 0.50 U
	CCB 580-396548/34 (0.148 J)	NA

VII.3.2. Laboratory Control Sample/Laboratory Control Sample Duplicate

Target analytes were recovered within the laboratory control limits of 77-123% recovery, and the RPDs were \leq 24%. Sample qualification was not required.

VII.3.3. Matrix Spike/Matrix Spike Duplicate

MS/MSD analyses were performed on Samples 580-114638-3 (Total and Diss), 580-114638-5 (Total and Diss), 580-114638-6 (Diss), 580-114638-14 (Diss), 580-114638-20 (Total), 580-114638-26 (Total), 580-114638-27 (Total), 114638-32 (Total), 580-114638-41 (Total) from this SDG. For Sample 580-114638-3 (Total) the MS was recovered above control limits at 144%. For Sample 580-114638-5 (Total) the MSD was recovered above control limits at 127%. For Sample 580-114638-3 (Diss) the MSD was recovered below control limits at 66%. The Sample 580-114638-3 and 580-114638-5 Total mercury detects were qualified as estimated with a potential high bias (J+). The Sample 580-114638-3 Diss mercury detect was qualified as estimated with a potential low bias (J-). The remaining recoveries and RPDs were within the laboratory established control limits of 71-125%R and 24% RPD.

VII.4. Field QC Samples

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. The remaining detects were used to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

VII.4.1. Field Blanks, Equipment Blanks, and Trip Blanks

Field blank samples were not identified in this SDG for these analyses. Equipment blank samples 0622EB01GW and 0622EB02GW were collected and associated with the GW samples as listed in the table below.

Equipment Blanks		
Blank ID	0622EB01GW	0622EB02GW
Water Level Meter	Solinst	Dipper T2
Associated	0622MW06GW	0622MW10GW
Samples	0622MW09GW	0622MW26GW
Samples	0622MW17GW	0622MW29GW
	0622MW16GW	0622MW40GW
	0622MW27GW	0622MW42GW
	0622MW28GW	0622MW43GW
	0622MW33GW	0622MW47GW
	0622MW44GW	0622MW49GW
	0622MW45GW	0622MW50GW
	0622MW46GW	0622MW52GW
	0622MW51GW	0622MW53GW
	0622MW54GW	0622MW57GW
	0622MW55GW	0622MW58GW
	0622MW56GW	0622MW59GW
		0622MW99GW
		0622MW97GW
		0622MW98GW

Table 10 - Method 1631 Equipment Blank Association

Table 11 - Method 1631 Equipment Blank Qualifications

Analyte	Equipment Blank concentration (ng/L)	Qualified Samples
Mercury	0622EB01GW (0.38 J ng/L)	580-114638-13 (DISS) 0.64 J+
		580-114638-17 (DISS) 0.53 J+
		580-114638-27 (DISS) 0.52 J+
		580-114638-32 (DISS) 0.65 J+

Trip blank samples 0622TB01, 0622TB02 and 0622TB03 were shipped with the low level mercury samples. Each trip blank was associated with the samples shipped in the same cooler.

Table 12 - Method 1631 Trip Blank Association

Trip Blanks			
Blank ID	0622TB01GW	0622TB02GW	0622TB03GW
	(Total and Diss)	(Total and Diss)	(Total and Diss)
Cooler ID	Cooler 1	Cooler 2	Cooler 3
	0622MW33GW	0622MW29GW	0622MW51GW
	0622MW09GW	0622MW06GW	0622MW52GW
	0622MW10GW	0622MW40GW	0622MW53GW
	0622MW16GW	0622MW42GW	0622MW54GW
Associated Samples (Total and Dissolved)	0622MW17GW	0622MW43GW	0622MW55GW
	0622MW99GW	0622MW44GW	0622MW56GW
	0622MW26GW	0622MW45GW	0622MW57GW
	0622MW27GW	0622MW46GW	0622MW58GW
	0622MW98GW	0622MW47GW	0622MW59GW
	0622MW28GW	0622MW97GW	0622RD06SW
		0622MW49GW	0622RD08BSW
		0622MW50GW	0622RD15SW
		0622RD05SW	0622RD10SW
		0622RD99SW	

There were no sample qualifications required for trip blank detects. The reported trace level Hg detects for trip blanks 0622TB01 and 0622TB02 were subsequently qualified as nondetect at the RL, 0.50 U ng/L, due to associated ICB/CCB Hg detects. Hg was detected in trip blank 0622TB03 at 0.14 J μ g/L, but additional blank qualifications were not required for the associated field samples.

VII.4.2. Field Duplicates

Samples 0622MW10GW and 0622MW99GW, 0622MW49GW and 0622MW97GW, 0622MW52GW and 0622MW98GW and 0622RD05SW (total and dissolved) and 0622RD99SW (total) were identified as field duplicate pairs. The control limits of \leq 30% for all target analytes greater than 5x RL and ±RL for all results <5x RL were met except as noted in the table below. Associated results in the field duplicate pair were qualified as estimated (J) for detects.

Table 13 - Method 1631 Mercury Field Duplicates

Field duplicate samples	Analyte	RPD/±RL
0622RD05SW/0622RD99SW	Hg (950 / 85 ng/L)	167%RPD
0622MW10GW/06222MW99GW (DISS)	Hg (3.4 / 2.2 ng/L)	>±RL

VII.5. Sample Result Verification and Reported Detection Limits

The laboratory analyzed for low level mercury by EPA Method 1631E. Total mercury was analyzed for six surface water (SW) samples. Total and dissolved mercury was analyzed for the groundwater (GW) samples.

Mercury quantification was verified for the Level 4 validation samples. Sample result verification is not applicable for Level 2B validation samples. Detects reported below the RL were qualified as estimated (J).

Nondetects are valid to the RL. Multiple samples were analyzed at dilutions to bring detects within the calibration linear range due to the level of mercury found in the samples.

VIII. Various EPA Methods – General Minerals

K. Okonzak-Lowry of Oak Services reviewed the SDG on September 7, 2022.

VIII.1. Holding Times and Sample Management

The cooler which contained the wet chemistry testing samples (nitrate+nitrite (NO3+NO2), TDS, TSS, alkalinity and anions) arrived outside temp limits at 7.8/8.0°C. Since the samples were received the day after shipping at a temperature >6°C but \leq 10°C, professional judgement was used, and the sample analyses were not qualified for temperature.

Table 14 - General Minerals Analytical Method Holding Times

Analytical Method	Analysis Holding Time (days)
353.2 (NO3+NO2 as N)	28
300.0 (anions SO4, Cl-, F-)	28
310.1 (alkalinity)	14
Total Dissolved Solids (TDS)	7
Total Suspended Solids (TSS)	7

The analytical holding times were met except as noted in the table below. Reported detects are qualified as estimated (J). Reported nondetects are qualified as estimated (UJ).

Table 15 - General Minerals Holding Time Qualifications

Analyte	Days to Analysis	Qualified Samples
Method 300.0 SO4, Cl- and F-	29 Days	580-114638-25, 580-114638-26, 580-114638-39, 580-114638-40, 580-114638-41, 580-114638-42

VIII.2. Calibration

The correlation coefficients (r) were \geq 0.995. ICV and CCV recoveries associated with reported sample results were within the laboratory control limits.

VIII.3. Laboratory QC Samples

VIII.3.1. Calibration Blanks and Method Blanks

No reported detects in the method blanks (MB) or bracketing calibration blanks (ICB/CCB) were of sufficient concentration to warrant qualification of site sample results.

VIII.3.2. Laboratory Control Samples

LCS and LCSD (as appropriate) recoveries and RPDs were within laboratory control limits.

VIII.3.3. Laboratory Duplicates

Laboratory duplicate analyses were performed on Sample 580-105705-15 from this SDG. RPDs were within laboratory control limits.

VIII.3.4. Matrix Spike/Matrix Spike Duplicate

MS/MSD analyses were performed on Samples 580-114638-41 for Methods 300.0 and 353.2 and 580-114638-26 for Method 300.0. The spike recoveries and RPDs were within laboratory control limits except for Method 353.2 NO3+NO2. The Sample 580-114638-41 MS/MSD recoveries were 138% and 110%, respectively. It was determined that the surface water samples are of similar matrix; therefore, the nitrate + nitrite detects were qualified as estimated with a high bias (J+) for samples 580-114638-39, 580-114638-40, 580-114638-41 and 580-114638-42.

VIII.4. Sample Result Verification

Result quantification was verified for the Level 4 validation Sample 580-114638-39. Sample result verification is not applicable for Level 2B validation samples. Detects reported below the RL were qualified as estimated (J). Nondetects are valid to the RL.

VIII.5. Field QC Samples

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. The remaining detects were used to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

VIII.5.1. Field Blanks and Equipment Blanks

Field blank or equipment blank samples were not analyzed for these surface water sample analyses.

VIII.5.2. Field Duplicates

Samples 580-1114638-25 and 580-114638-26 were identified as the field duplicate pair. The control limits of \leq 30% for all target analytes greater than 5x RL and ±RL for all results <5x RL were met.

IX. Overall Assessment

Samples required qualification due to quality control exceedances and procedural issues. The Ca, Mg, K and Na sample analyses were originally analyzed and reported by 6020B ICP/MS. This sample data was unusable due to major quality control and procedural issues. The lab was instructed to reanalyze the four analytes by 6010D ICP. The ICP/MS Ca, Mg, K and Na results were rejected, R, as unusable. The more technically correct ICP results are reported for these four analytes.

As noted in Section VI.2, a Stage 4 validation was not performed for the 6010D ICP analyses for calcium (Ca), potassium (K), magnesium (Mg) and sodium (Na) due to missing calibration information in the laboratory raw data package.

X. Data Qualification Summary

Table 16 - Data Qualification	Summary	Table
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Sample	Analyte	Qualifier	Reason
All metals samples in the SDG	ICP/MS Ca, Mg, K and Na resuls	R – rejected as unusable	The ICP/MS results were rejected to report the more technically correct ICP results
580-114638-1, -4, -7, -15, -39 and -40	Antimony	J (detects)	Sample detects > calibration range
580-114638-21 and -22	Aluminum	J (detects)	Sample detects > calibration range
580-114638-2, -7, - 12, -14, -15, -16, -23, -26, -29, -30, -31, -34, and -35	Barium	J (detects)	Sample detects > calibration range
580-114638-2, -7, - 12, -13, -14, -16, -21, -22, -23, -30, -31 and -34	Iron	J (detects)	Sample detects > calibration range
580-114638-14	Nickel	J (detects)	Sample detects > calibration range
580-114638-2, -3, -4, -6, -7, -8, -10, 12, -13, -14, -15, -16, -17, -21, -22, -23, -25, -26, -27, -29, -30, -31, -32, -34 and -35	Manganese	J (detects)	Sample detects > calibration range
580-114638-3, -4, -6, -7, -14, -15, -16, -23, - 25 and -26	Arsenic	J (detects)	Sample detects > calibration range
580-114638-12	Antimony	U at RL (detects < RL)	CCB detect

Sample	Analyte	Qualifier	Reason
580-114638-1	Thallium	U at RL (detects < RL)	ICB and CCB detects
through -13, 580-			
114638-18 through -			
22, 580-114638-29			
through -32, 114638-			
39 through -42			
580-114638-1, -3, -5,	Lead	U at RL (detects < RL)	ICB detect
-6, -9, -10, -13, -14, -		,	
15, -18, -23, -25, -28			
and -29			
580-114638-1	Potassium	U at RL (detects < RL)	ICB and CCB detects
through -6, 280-		,	
114638-8 through -			
35, 580-114638-39			
through -42			
580-114638-25, -26,	Zinc	J+ (detects < 10x the	ICSA detect > MDL
580-114638-39, -40, -		ICSA detect)	
41			
580-114638-1, -2, -3, -	Silver	J+ (detects < 10x the	ICSA detect > MDL
4, -5, -7, -8, -13, -21, -		ICSA detect)	
25, -27, -28, -29, -34, -			
35, 580-114638-39, -			
41			
580-114638-12	Lead	J+ (detects < 10x the ICSA detect)	ICSA detect > MDL
580-114638-20	Barium	J+ (detects < 10x the	ICSA detect > MDL
		ICSA detect)	
580-114638-39, -40, -	Nickel	J+ (detects < 10x the	ICSA detect > MDL
41, -42		ICSA detect)	
280-114638-5	Calcium	J (detects)	Serial dilution > 10%D
580-114638-5, -10, -	Aluminum	U at RL (detects < RL)	EB01 and EB02 detect
13, -27, -30, -31, -32			
580-114638-3, -6, -			
14, -20			
580-114638-18, -19	Barium	U at RL (detects < RL)	EB01 detect
580-114638-17, -18, -	Antimony	U at RL (detects < RL)	EB01 and EB02
19, -27, 580-114638-		J+ (detects > RL)	detects
3, -9, -21, -22, -28,			
-29, -33, -34, -35			
580-114638-1, -2, -4,	Chromium	U at RL (detect < RL)	EB01 and EB02
-5, -10, -13, -17, -18, -		J+ (detects > RL)	detects
19, -27, -30, -31,			
-32, 580-114638-3, -			

Sample	Analyte	Qualifier	Reason
6, -14, -15, -16,			
-20, -23, -29, -33, -34			
580-114638-5, -18, -	Iron	U at RL (detect < RL)	EB01 and EB02
32, 580-114638-20, -			detects
29, -33			
580-114638-5, -18, -	Manganese	U at RL (detect < RL)	EB01 and EB02
19, 580-114638-20, -		J+ (detects > RL)	detects
33			
580-114638-1, -5, -	Nickel	U at RL (detect < RL)	EB01 detect
17, -18, -19, -27			
580-114638-1, -5, -	Zinc	U at RL (detect < RL)	EB01 and EB02
10, -13, -17, -19, -27,		J+ (detects > RL)	detects
-30, -31, -32, 580-			
114638-3, -6, -9, -12,			
-14, -15, -16, -20, -23,			
-28, -29, -33, -34, -35			
0622MW10GW and	Mercury	J (detect)	FD results >±RL
0622MW99GW		UJ (nondetect)	
580-114638-11	LL Mercury	U at RL (detects < RL)	Bracketing ICB and
(0622TB01)			ССВ
580-114638-16 (Diss),			detects
580-114638-24			
(0622TB02)			
580-114638-3 (Total)	LL Mercury	J+ (detects)	MS/MSD high
580-114638-5 (Total)			recovery
580-114638-3 (Diss)	LL Mercury	J- (detect)	MS/MSD low
			recovery
580-114638-13(DISS),	LL Mercury	J+ (detects)	EB01 detect
580-114638-17 (DISS)			
580-114638-27 (DISS) 580-114638-32 (DISS)			
0622RD05SW and	LL Mercury	J (detects)	FD results >±RL or
0622RD99SW	LLIVIEICULY	J (delects)	>RPD limit
0622MW10GW and			
06222MW10GW and			
(DISS)			
580-114638-25, 580-	Method 300.0	J (detects)	HT exceedance
114638-26, 580-	SO4, Cl- and F-	UJ (nondetects)	
114638-39, 580-			
114638-40, 580-			
114638-41, 580-			
114638-42			
580-114638-39, 580-	Method 353.2	J+- (detects)	High MS %R
114638-40, 580-	NO3+NO2		-
114638-41 and 580-			
114638-42, 580-			

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ATTACHMENT 5.2 2022 FALL DATA VALIDATION REPORT

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I. Project Information

File Name:	580-117490-1 DV	580-117490-1 DV Report.0_Metals_GenChem						
Analysis:	MT, WC	MT, WC						
SDG#:	580-117490-1	Reviewer:	KKOL	Rev Date:	11/10/2022			
Matrix:	Surface Water Groundwater	2nd Rev:	CTD	2nd Rev Date:	11/14/2022			
Validation Level:	Stage2B/Stage4	# Samples:	42	# RE/DL:	0			

II. Secondary Review List

Narrative:		Form Is:
Qualifications in text r	natch Form Is	"U" / "J" lab codes carried over
Spell check		Appropriate qual codes used
Pagination, appropria	te headers/footers	Form I IDs match sample ID table
Correct project site r introduction pages	name/manager on cover	and
Required Edits/Chang NA	es:	
Revision (include revis Revision 0	sion #, date and reason):	
Validator Signature:	Kathryn K. Okonzak- Lowry	Digitally signed by Kathryn K. Okonzak-Lowry Date: 2022.11.15 10:27:11 -07'00'
Review Signature:		Casterning Shun leton

Draft Data Validation Report

Red Devil Mine, Alaska

Sample Delivery Group

580-117490-1

Prepared for

Sundance Consulting, Inc. 8210 Louisiana Blvd NE Suite C Albuquerque, NM 87113 Attention: Colleen Rust, PG

11/10/2022

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III. Acr	onyms and Abbreviations
°C	Celsius
%	Percent
%D	percent difference
CCAL	continuing calibration
CCB	continuing calibration blank
CCV	continuing calibration verification
COC	chain of custody
CLP	Contract Laboratory Program
DL	detection limit
DISS	dissolved
EPA	US Environmental Protection Agency
EB	equipment blank
FB	field blank
FD	field duplicate
GW	ground water
ICAL	initial calibration
ICB	initial calibration blank
ICV	initial calibration verification
IS	internal standard
J	estimated value
LCS	laboratory control sample
LL Hg	low level mercury
LOD	limit of detection
LOQ	limit of quantification
MB	method blank
MS	matrix spike
MSD	matrix spike duplicate
ND	nondetect
QAPP	Quality Assurance Program Plan
QC	quality control
QSM	Quality Systems Manual
R	Rejected
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
RSD	relative standard deviation
SDG	sample delivery group
TB	trip blank
TDS	total dissolved solids
TSS SW	total suspended solids surface water
U UJ	not detected
01	not detected; associated value is an estimate

IV. Introduction

Project Name: Red Devil Mine Sample Delivery Group: 580-117490-1 Client Project Manager: Colleen Rust Matrix: Groundwater and Surface Water QC Level: Stage 2B/Stage 4 No. of Samples: 43 Laboratory: Eurofins TestAmerica Seattle

Table 1 – Sample Summary

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
1	0822MW09GW 0822MW09GW DISS	580-117490-1	GW	8/23/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 4
2	0822MW10GW 0822MW10GW DISS	580-117490-2	GW	8/23/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
3	0822MW16GW 0822MW16GW DISS	580-117490-3	GW	8/23/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
4	0822MW17GW 0822MW17GW DISS	580-117490-4	GW	8/23/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
5	0822MW99GW	580-117490-5	GW	8/23/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW99GW DISS				1631E	
6	0822MW26GW	580-117490-6	GW	08/26/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW26GW DISS				1631E	
7	0822MW27GW	580-117490-7	GW	08/23/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW27GW DISS				1631E	
8	0822MW98GW	580-117490-8	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW98GW DISS				1631E	
9	0822MW28GW	580-117490-9	GW	08/23/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW28GW DISS				1631E	
10	0822TB01GW	580-117490-10	GW	08/23/22	1631E	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
11	0822MW29GW	580-117490-11	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW29GW DISS				1631E	
12	0822MW06GW	580-117490-12	GW	08/23/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW06GW DISS				1631E	
13	0822MW40GW	580-117490-13	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW40GW DISS				1631E	
14	0822MW42GW	580-117490-14	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW42GW DISS				1631E	
15	0822MW43GW	580-117490-15	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW43GW DISS				1631E	
16	0822MW44GW	580-117490-16	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW44GW DISS				1631E	

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
17	0822MW47GW 0822MW47GW	580-117490-17	GW	08/24/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
	DISS					
18	0822MW97GW	580-117490-18	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW97GW DISS				1631E	
19	0822MW49GW	580-117490-19	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 4
	0822MW49GW DISS				1631E	
20	0822MW50GW	580-117490-20	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW50GW DISS				1631E	
21	0822TB02GW	580-117490-21	ТВ	08/23/22	1631E	Stage 2B
22	0822RD05SW	580-117490-22	SW	08/28/22	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
23	0822RD08BSW	580-117490-23	SW	08/28/22	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B
24	0822TB04SW	580-117490-24	ТВ	08/23/22	1631E	Stage 2B
25	0822RD06SW	580-117490-25	SW	08/28/22	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 4
26	0822RD10SW	580-117490-26	SW	08/28/22	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B
27	0822RD15SW	580-117490-27	SW	08/28/22	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1, 160.2	Stage 2B
28	0822RD99SW	580-117490-28	SW	08/28/22	6020B, 6010D, 7470A, 1631E, 353.2, 310.1, 160.1,	Stage 2B

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
					160.2	
29	0822MW46GW	580-117490-29	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW46GW DISS				1631E	
30	0822MW45GW	580-117490-30	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW45GW DISS				1631E	
31	0822MW33GW	580-117490-31	GW	08/23/22	6020B, 6010D, 7470A, 1631E	Stage 4
	0822MW33GW DISS				1631E	
32	0822MW51GW	580-117490-33	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW51GW DISS				1631E	
33	0822MW52GW	580-117490-34	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW52GW DISS				1631E	

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
34	0822MW53GW	580-117490-35	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW53GW DISS				1631E	
35	0822MW54GW	580-117490-36	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW54GW DISS				1631E	
36	0822MW55GW	580-117490-37	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW55GW DISS				1631E	
37	0822MW56GW	580-117490-38	GW	08/24/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW56GW DISS				1631E	
38	0822MW57GW	580-117490-39	GW	08/25/22	6020B, 6010D, 7470A, 1631E	Stage 2B
	0822MW57GW DISS				1631E	

Sample Count	Field Sample ID	Lab Sample ID	Matrix	Collection	Method	Validation Level
39	0822MW58GW 0822MW58GW DISS	580-117490-40	GW	08/26/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 4
40	0822MW59GW 0822MW59GW DISS	580-117490-41	GW	08/24/22	6020B, 6010D, 7470A, 1631E 1631E	Stage 2B
41	0822TB03GW	580-117490-42	ТВ	08/23/22	1631E	Stage 2B
42	0822EB01GW	580-117490-43	EB	08/26/22	6020B, 6010D, 7470A, 1631E	Stage 2B
43	0822EB02GW	580-117490-44	EB	08/26/22	6020B, 6010D, 7470A, 1631E	Stage 2B

V. Sample Management

The case narrative, the sample receiving checklist, chain-of-custody (COC) records for sample delivery group (SDG) 580-117490-1 were reviewed and the review findings are listed below.

- The laboratory's Login Sample Receipt Checklist and the COCs noted all coolers were received within the temperature limits of ≤6°C and ≥0°C.
- The samples were received intact, and properly preserved, as applicable.
- The sample containers associated with coolers #3 (6/7) and #5(2/7) were delayed in shipping and arrived 9/1/22 at 0940. Both coolers were received within required temperature range.
- Sample receipt exceptions:
 - On 9/15/22 the client confirmed by email that the method on COC was incorrect for Ca, Mg, K, Na. These were run by method 6010D instead.
 - The sample ID on the container label for the following sample did not match the information listed on the Chain-of-Custody (COC): 0822TB01GW (580-117490-10). The container labels list 0822TB01GW, while the COC lists 0822TB01GW. The sample was logged per the container label.
 - The Chain-of-Custody (COC) was incomplete as received. No sample date time is provided on COC associated with the 1631 LL Mercury containers for the following sample: 0822MW97GW (580-117490-18). The sample date/time was taken from the COC associated with the Total Metals container and confirmed on the LL Hg containers.
 - The sample time on the metals container label for the following sample did not match the information listed on the Chain-of-Custody (COC): 0822MW47GW (580-117490-17). The container labels list 1622, while the COC lists 1022. The COC associated with the LL mercury containers for this sample lists 1622 therefore the sample was logged by the LL Hg COC/container time.
 - The COC was incomplete as received. The COC associated with the 335.2. 160.1, 160.2 containers lack sample times. These container sample times was verified against the COC associated with the LL Hg containers.0822RD05SW (580-117490-22), 0822RD08SW (580-117490-23), 0822RD06SW (580-117490-25), 0822RD10SW (580-117490-26), 0822RD15SW (580-117490-27], 0822RD15SW (580-117490-27[MS]), 0822RD15SW (580-117490-27[MSD]) and 0822RD9SW (580-117490-28).
 - The sample time on the metals container label for the following sample did not match the information listed on the COC: 0822MW49GW (580-117490-19). The container labels list 0945, while the COC lists 0905. The sample time on the COC associated with the LL Hg containers lists 0945. Since this time matches the container labels the sample time used for this sample was 0945.
 - The sample ID on the container labels for the following sample did not match the information listed on the COC: 0822RD08SW (580-117490-23). The container labels list 0822RD08BSW, while the COC lists 0822RD08SW. Client confirmed the sample ID on the COC was correct.

information listed on the COC: 0822MW33GW (580-117490-31). The container labels list 08MW22GW, while the COC lists 0822MW22GW. Client confirmed that the correct sample ID for this sample is actually 0822MW33GW.

- The following sample appears on 2 COCs associated with 2 different coolers listing LL Hg analysis: 0822MW29GW (580-117490-11). These containers were received in cooler #7 and logged as 580-117490-11. The 2nd occurrence of 580-117490-32 has no containers or analyses associated. The laboratory did not assign a field sample to the lab ID 580-117490-32.
- The COC information agrees with the laboratory report for requested field samples and tests, as applicable, with the COC exceptions listed above.
- The laboratory's Sample Receiving Checklists note that the cooler's custody seal, if present, is intact.
- Total and dissolved volumes were received at the lab for the ground water (GW) low level mercury (LL Hg) sample analyses performed by Method 1631E. The dissolved sample volumes were field filtered.
- The samples for nitrate+nitrite by Method 353.2 were subcontracted to the Eurofins Lancaster, PA Laboratory. The subcontract Sample Receiving Checklist notes that the custody seal was not applicable.
- Field and laboratory personnel signed and dated the COCs.

Table 2 – Data Qualifier Definitions

Qualifier	Definition
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

VI. SW-846 Methods 6020B, 6010D AND 7470A — Metals and Mercury

K. Okonzak-Lowry of Oak Services reviewed the SDG November 11, 2022.

VI.1. Holding Times

Analytical holding times, 28 days for mercury and six months for the remaining metals, were met.

VI.2. Tuning and Calibration

All 6020B ICP/MS tuning criteria were met. Mass calibrations were ≤ 0.1 atomic mass unit (amu) from the true value. Resolution was < 0.9 amu full width at 10% peak height and all %RSDs were $\leq 5\%$. A blank and five standards were used in the initial calibration. Correlation coefficients were ≥ 0.995 . The range of the ICP/MS calibration curves is low. The high standard for a number of trace analytes is 100 ppb. The lab reported results above the linear curve range and did not analyze a high linear range check standard. Sample detects reported above the high standard in the calibration curve for antimony, aluminum, barium, iron, manganese and arsenic were qualified as estimated, J.

It should be noted that a Stage 4 validation was not performed for the 6010D ICP analyses for calcium (Ca), potassium (K), magnesium (Mg) and sodium (Na). The ICP raw data provided by the laboratory did not include the initial calibration curve calculation information. The calibration check standards, blanks,

lab QC samples and field sample raw data is reported in mg/L. The raw instrument readings are not shown in the raw data. It could not be determined which standards were used in the initial calibration.

Issue	Analyte	Qualifier	Samples
Sample detects reported above the	Antimony	J	580-117490-3, -14, -23, -25, -31
calibration curve linear range	Aluminum	J	580-11749-19, -41
	Barium	J	580-117490-1, -6, -8, -13, -14, -15, -18, -20, - 35, -36, -37, -38, -40, -41
	Iron	J	580-117490-1, -3, -6, -8, -11, -12, -14, -15, -18, -19, -20, -22, -28, -36, -37, -40, -41
	Manganese	J	580-117490-1, -2, -3, -5, -6, -7, -8, -9, -11, -12, -13, -14, -15, -16, -18, -19, -20, -22, -28, -33, - 36, -37, -38, -41
	Arsenic	J	580-117490-3, -6, -8, -9, -13, -14, -15, -20, -22, -28, -37, -41

For all ICP/MS analytes the reported ICV and CCV recoveries were within 90-110% and the low-level CCV recoveries were within 80-120%.

For all ICP analytes the reported ICV and CCV recoveries were within 90-110% and the low-level CCV (CCVL) recoveries were within 80-120%, with the exception of three bracketing CCVL check standards for Na (127%R, 129%R, 124%R) and one bracketing CCVL check standard for Mg (78%). No results required qualification because all samples had detections greater than the CCVL.

A blank and 5 non-zero standards were used for the CVAA calibration. The initial (ICV) and continuing calibration recoveries (CCV) were within 90-110%.

VI.3. Laboratory Quality Control Samples

VI.3.1. Calibration blanks and Method Blanks

No target analytes were reported in the method blanks (MB) or bracketing calibration blanks (ICB/CCB) of sufficient concentration to warrant qualification of site sample results except as noted in the table below. For the positive blank concentrations, associated detected sample results that were below the reporting limit (RL) were qualified as nondetect (U) at the RL. Associated detected sample results that were greater than RL and <5× the blank concentration were qualified as estimated with high bias (J+) using professional judgement.

Analyte	Blank concentration	Qualified Samples
Thallium MB 404391/22-A	0.0000630 mg/L	0822MW09GW (580-117490-1) – 0.0010 U 0822MW10GW (580-117490-2) – 0.0010 U
		0822MW16GW (580-117490-3) – 0.0010 U
Thallium MB 404461/22-A	0.0000710 mg/L	0822MW99GW (580-117490-5) – 0.0010 U
		0822MW26GW (580-117490-6) – 0.0010 U
		0822MW98GW (580-117490-8) – 0.0010 U
		0822MW28GW (580-117490-9) – 0.0010 U
		0822MW43GW (580-117490-15) – 0.0010 U
Thallium MB 404459/22-A	0.000030 mg/L	0822MW49GW (580-117490-19) – 0.0010 U
Potassium CCB 404409/27	0.210 J mg/L	0822MW58GW (580-117490-40) – 3.3 U
Potassium CCB 404409/27	0.189 J mg/L	0822MW59GW (580-117490-41) – 3.3 U

VI.3.2. Interference Check Samples

Interference Check Samples (ICSA/B): ICSAB recoveries were within the control limits of 80-120% or $\pm 2 \times$ the reporting limit, whichever is greater. One or more interferents were present in several samples at concentrations comparable to those of the ICSAs. As noted in the table below, non-spiked analytes zinc, silver, lead, barium and nickel were present in the ICSAs at greater than MDL. For analytes with positive ICSA results, associated detected results which were <10× the ICSA concentration were qualified as estimated with high bias (J+). The ICP/MS ICS interferent levels were at 10,000 µg/L; therefore, the samples were assessed based on interferents being present at ≥10,000 µg/L in the samples. The ICP samples did not have interferents at concentrations comparable to the ICP ICSA solution, and sample qualifications were not required.

Analyte	ICSA Number	Qualified Samples (units mg/L)
Lead	ICSA 580-404711/11	0822MW09GW (580-117490-1) 0.00015 J+
		0822MW16GW (580-117490-3) 0.00024 J+
		0822MW43GW (580-117490-15) 0.000047 J+
Silver	ICSA 580-404711/11	0822MW43GW (580-117490-15) 0.000033 J+
Silver	ICSA 580-404740/11	0822MW49GW (580-117490-19) 0.000030 J+
		0822MW42GW (580-117490-14) 0.000045 J+
		0822MW44GW (580-117490-16) 0.000025 J+
		0822MW17GW (580-117490-4) 0.000030 J+
		0822MW27GW (580-117490-7) 0.000043 J+
		0822MW98GW (580-117490-8) 0.000092 J+
		0822MW28GW (580-117490-9) 0.000096 J+
Silver	ICSA 580-404910/11	0822RD10SW (580-117490-26) 0.000026 J+
		0822MW53GW (580-117490-35) 0.000036 J+
		0822MW59GW (580-117490-41) 0.00018 J+

Table 5 – Metals Interference Check Samples

Analyte	ICSA Number	Qualified Samples (units mg/L)
Thallium	ICSA 580-404910/11	0822RD05SW (580-117490-22) 0.000040 J+
		0822MW58GW (580-117490-40) 0.000044 J+
		0822MW59GW (580-117490-41) 0.00012 J+

VI.3.3. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Target analytes were recovered within the control limits of 70-130% recovery (%R), and the relative percent difference (RPDs) were \leq 20%. The ICP/MS LCS/LCSD analyses were performed at 20× due to the calibration range.

VI.3.4. Laboratory Duplicates

Laboratory duplicate analyses were performed on samples 580-117490-1, 580-117490-15 and 580-117490-27 for ICP/MS and ICP metals and 580-117490-2, 580-117490-15 and 580-117490-27 for Hg. Original and duplicate sample values \geq 5× the RL were within the control limit of 20% Relative Percent Difference (RPD). The control limit of ±RL was met when the sample or duplicate result was <5× the RL. All results were within control limit criteria.

VI.3.5. Matrix Spike/Matrix Spike Duplicate

MS/MSD analyses were performed on samples 580-117490-1 for ICP and ICP/MS, 580-117490-4 and 580-117490-15 and 580-117490-27 for metals and Hg and 580-117490-2 for Hg only. MS recoveries were not assessed when the parent sample concentrations were more than 4× the spike amount. Recoveries for all target analytes met control limits of 75-125%R, and the RPDs were ≤20%. For the ICP/MS analysis, the parent samples were analyzed undiluted, and the MS/MSD samples were analyzed at a 20× dilution due to instrument calibration range. Sample qualifications were not assigned.

VI.3.6. Post Digestion Spike

The laboratory performed ICP/MS and ICP post digestion spike (PDS) analyses for Samples 580-117490-1, 580-117490-15 and 580-117490-27 for all reported analytes, and the recoveries were within control limit criteria. The ICP/MS PDS analyses were performed at 20× due to the calibration range.

VI.3.7. Serial Dilution

ICP/MS and ICP serial dilution analysis was performed on Samples 580-117490-1, 580-117490-15 and 580-117490-27. Results were not assessed unless the parent sample concentration was >50× the MDL. The control limit of ≤10% difference (%D) of the original sample results was met for all target analytes, with the exception of the ICP Ca serial dilution result for Sample 580-117490-27. The parent sample result was qualified as estimated, J.

VI.3.8. Internal Standards Performance

According to the raw data sample results, all ICP and ICPMS sample internal standard intensities were within the control limits of 60-125% of the calibration blank. Sample qualifications were not required.

VI.3.9. Sample Result Verification

Sample result verification is not applicable for Stage 2B validation samples. Detects below the RL were qualified as estimated (J). Nondetects are valid to the RL. Sample verification will be performed for Stage 4 validation submitted with the final version of this DVR.

VI.4. Field QC Samples

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. The remaining detects were used to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

VI.4.1. Field Blanks and Equipment Blanks

Field blank samples were not identified in this SDG for these analyses.

Equipment blank samples 0822EB01GW and 0822EB02GW were collected and associated with the GW samples as **ked**in the table below:

Equipment Blanks		
Blank ID	0822EB01GW	0822EB02GW
Water Level Meter	Solinst	Dipper T2
Accessisted Samples	0822MW06GW	0822MW10GW
Associated Samples	0822MW09GW	0822MW16GW
	0822MW27GW	0822MW17GW
	0822MW29GW	0822MW26GW
	0822MW33GW	0822MW28GW
	0822MW45GW	0822MW40GW
	0822MW46GW	0822MW42GW
	0822MW47GW	0822MW43GW
	0822MW49GW	0822MW44GW
	0822MW50GW	0822MW51GW
	0822MW52GW	0822MW53GW
	0822MW55GW	0822MW54GW
	0822MW56GW	0822MW59GW
	0822MW57GW	0822MW97GW
	0822MW58GW	0822MW98GW
		0822MW99GW

Table 6 – Metals and Mercury Equipment Blank Association

Chromium, iron, and nickel were detected in 0822EB01GW at 0.00048 J, 0.015 J, 0.00053 J mg/L, respectively. Arsenic and chromium were detected in 0822EB02GW at 0.00020 J and 0.00048 J mg/L, respectively.

For EB detects, associated detected sample results that were below the reporting limit (RL) were qualified as nondetect (U) at the RL. Associated detected sample results that were greater than RL and <5× the Draft 580-117490 DVR Page | 15

blank concentration were qualified as estimated with high bias (J+).

Analyte	EB Blank concentration	Qualified Samples		
EB01				
Chromium	0.00048 J mg/L	0822MW09GW - 0.00080 U 0822MW27GW - 0.00080 U 0822MW06GW - 0.00080 U 0822MW47GW - 0.00080 U 0822MW50GW - 0.00080 U 0822MW46GW - 0.00080 U 0822MW45GW - 0.00080 U 0822MW51GW - 0.00080 U 0822MW57GW - 0.00091 J+ 0822MW58GW - 0.00082 J+		
Iron	0.015 J mg/L	0822MW47GW – 0.10 U 0822MW46GW – 0.10 U 0822MW45GW – 0.10 U 0822MW57GW – 0.10 U		
Nickel	0.00053 J mg/L	0822MW09GW - 0.0030 U 0822MW47GW - 0.0030 U 0822MW46GW - 0.0030 U 0822MW45GW - 0.0030 U 0822MW33GW - 0.0030 U 0822MW58GW - 0.0030 U		
	•	EB02		
Arsenic	0.00020 J mg/L	0822MW53GW – 0.0010 U		
Chromium	0.00048 J mg/L	0822MW10GW - 0.00080 U 0822MW16GW - 0.00080 U 0822MW17GW - 0.00080 U 0822MW99GW - 0.00080 U 0822MW98GW - 0.00080 U 0822MW28GW - 0.00080 U 0822MW40GW - 0.00080 U 0822MW42GW - 0.00080 U 0822MW43GW - 0.00080 U 0822MW44GW - 0.00080 U 0822MW97GW - 0.00080 U 0822MW52GW - 0.00082 J+ 0822MW53GW - 0.00080 U 0822MW54GW - 0.00080 U		

VI.4.2. Field Duplicates

Samples 0822MW10GW and 0822MW99GW, 0822MW43GW and 0822MW98GW, 0822MW54GW and 0822MW97GW and 0822RD05SW and 0822RD99SW. The control limits of ≤30% for all target analytes greater than 5x RL and ±RL for all results <5x RL were met except as noted in the table below. Associated results in the field duplicate pair were qualified as estimated (J) for detects and (UJ) for nondetects.

Table 8 – Metals and Mercury Field Duplicates

Field duplicate samples	Analyte	RPD/±RL
0822MW10GW/0822MW99GW	Antimony (0.00029 J / 0.0014 J mg/L)	>±RL

VII. EPA Method 1631, Revision E – Total and Dissolved Mercury

K. Okonzak-Lowry of Oak Services reviewed the SDG on November 13, 2022

VII.1. Holding Times

Sample preservation and analytical holding times were met. The samples analyzed for dissolved mercury were filtered in the field.

VII.2. Calibration

A blank and 5 non-zero standards were used for the cold vapor atomic fluorescence spectrometry calibration. Calibration criteria were met. ICV and CCV %Rs were within the laboratory control limits of 77-123%R.

VII.3. Laboratory QC Samples

VII.3.1. Calibration Blanks and Method Blanks

No mercury reported in the method blanks (MB) or bracketing calibration blanks (ICB/CCB) of sufficient concentration to warrant qualification of site sample results except as noted in the table below. For the positive blank concentrations, associated detected sample results that were below the reporting limit (RL) were qualified as nondetect (U) at the RL. Associated detected sample results that were greater than RL and <5× the blank concentration were qualified as estimated with high bias (J+).

Table 9 – Method 1631 Calibration Blanks and Method Blanks

Analyte	Blank concentration (ng/L)	Qualified Samples
Mercury	LL Hg MB 403830-17	0822MW43GW DISS (580-117490-15DISS) – 0.50 U
	0.117	0822TB02GW (580-117490-21) – 0.50 U
		0822TB04SW (580-117490-24) – 0.50 U
	LL Hg CCB 580-403548/115 0.123J	0822MW98GW DISS (580-117490-8 DISS) – 0.50 U
	LL Hg CCB 580-403691/87 0.130J	0822MW44GW DISS (580-117490-16 DISS) – 0.50 U
	LL Hg CCB 580-403830/57 0.235J	0822MW40GW DISS (580-117490-13 DISS) - 0.81 J+
	LL Hg CCB 580-404098/58 0.423J	0822MW56GW DISS (580-117490-38 DISS) – 1.4 J+
		0822TB03GWGW (580-117490-42) – 0.58 J+

Analyte	Blank concentration (ng/L)	Qualified Samples
		0822EB01GW (580-117490-43) – 1.6 J+
		0822EB02GW (580-117490-44) – 0.50 U

VII.3.2. Laboratory Control Sample/Laboratory Control Sample Duplicate

Target analytes were recovered within the laboratory control limits of 77-123% recovery, and the RPDs were \leq 24%. Sample qualification was not required.

VII.3.3. Matrix Spike/Matrix Spike Duplicate

MS/MSD analyses were performed on Samples 580-117490-2 (diss), 580-117490-4 (total and diss), 580-117490-15 (total and diss), 580-117490-8 (total), 580-117490-27 (total), 580-117490-38 (total), 580-117490-40 (total) from this SDG. The recoveries and RPDs were within the laboratory established control limits of 71-125%R and 24% RPD.

VII.4. Field QC Samples

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. The remaining detects were used to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

VII.4.1. Field Blanks, Equipment Blanks, and Trip Blanks

Field blank samples were not identified in this SDG for these analyses.

Equipment blank samples 0822EB01GW and 0822EB02GW were collected and associated with the GW samples as listed in the table below.

Equipment Blanks		
Blank ID	0822EB01GW	0822EB02GW
Water Level Meter	Solinst	Dipper T2
Associated Samples	0822MW06GW	0822MW10GW
Associated Samples	0822MW09GW	0822MW16GW
	0822MW27GW	0822MW17GW
	0822MW29GW	0822MW26GW
	0822MW33GW	0822MW28GW
	0822MW45GW	0822MW40GW
	0822MW46GW	0822MW42GW
	0822MW47GW	0822MW43GW
	0822MW49GW	0822MW44GW
	0822MW50GW	0822MW51GW
	0822MW52GW	0822MW53GW
	0822MW55GW	0822MW54GW
	0822MW56GW	0822MW59GW
	0822MW57GW	0822MW97GW

Table 10 – Method 1631 Equipment Blank Association

Equipment Blanks			
Blank ID	0822EB01GW	0822EB02GW	
Water Level Meter	Solinst	Dipper T2	
	0822MW58GW	0822MW98GW	
		0822MW99GW	

There were sample qualifications required for the 0822EB01GW detect as listed in the table below. The reported trace level Hg detect for 0822EB02GW (0.23 J ng/L) was subsequently qualified as nondetect at the RL, 0.50 U ng/L, due to an associated CCB Hg detect.

Table 11 – Method 1631 Equipment Blank Qualifications

Analyte	Equipment Blank concentration (ng/L)	Qualified Samples
Mercury	0822EB01GW (1.6 ng/L)	0822MW06GW DISS (1.9 J+) 0822MW47GW TOT/DISS (1.6U each) 0822MW46GW (7.7 J+) 0822MW46GW DISS (1.9 J+) 0822MW45GW (7.4 J+) 0822MW45GW DISS (4.9 J+) 0822MW50GW DISS (3.3 J+) 0822MW52GW DISS (3.3 J+) 0822MW52GW DISS (1.6 U) 0822MW58GW DISS (2.4 J+)

Trip blank samples 0822TB01GW, 0822TB02GW, 0822TB03GW and 0822TB04SW were shipped with the low level mercury samples. Each trip blank was associated with the samples shipped in the same cooler.

Table 12 – Method 1631 Trip Blank Association

Trip Blanks				
Blank ID	0822TB01GW (Total and Diss)	0822TB02GW (Total and Diss)	0822TB03GW (Total and Diss)	0822TB04SW (Total and Diss)
Qualified TB Result (ng/L)	0.12 J	0.50 U	0.58 J	0.50 U
	0822MW09GW	0822MW06GW	0822MW51GW	0822MW29GW
	0822MW10GW	0822MW40GW	0822MW52GW	0822MW46GW
	0822MW16GW	0822MW42GW	0822MW53GW	0822MW45GW
A	0822MW17GW	0822MW43GW	0822MW54GW	0822MW33GW
Associated Samples (Total	0822MW99GW	0822MW44GW	0822MW55GW	0822RD05SW
and Dissolved)	0822MW26GW	0822MW47GW	0822MW56GW	0822RD06SW
	0822MW27GW	0822MW49GW	0822MW57GW	0822RD08SW
	0822MW98GW	0822MW50GW	0822MW58GW	0822RD10SW
	0822MW28GW	0822MW97GW	0822MW59GW	0822RD15SW
				0822RD99SW

Table 13 – Method 1631 Trip Blank Qualifications

Analyte	Equipment Blank concentration (ng/L)	Qualified Samples
Mercury	0822TB03GW (0.58 J)	0822MW54GW DISS (0.58 U)
		0822MW58GW DISS (2.4 J+)

There were two sample qualifications required for the 0822TB03GW detect as listed in the table above. The reported trace level Hg detects for trip blanks 0822TB02GW and 0822TB04SW were subsequently qualified as nondetect at the RL, 0.50 U ng/L, due to an associated MB Hg detect. Hg was detected in trip blank 0822TB01GW at 0.12 J μ g/L, but additional blank qualifications were not required for the associated field samples.

VII.4.2. Field Duplicates

Samples 0822MW10GW and 0822MW99GW, 0822MW43GW and 0822MW98GW, 0822MW54GW and 0822MW97GW (total and dissolved) and 0822RD05SW and 0822RD99SW (total) were identified as field duplicate pairs. The control limits of \leq 30% for all target analytes greater than 5x RL and ±RL for all results <5x RL were met except as noted in the table below. Associated results in the field duplicate pair were qualified as estimated (J) for detects.

Table 14 – Method 1631 Mercury Field Duplicates

Field duplicate samples	Analyte	RPD/±RL
0822MW10GW / 0822MW99GW	Hg (49 / 8.5 ng/L)	141%RPD
0822MW43GW / 0822MW98GW	Hg (1.2 / 34 ng/L)	186%RPD
0822MW54GW / 0822MW97GW	Hg (14 / 6.9 ng/L)	68%RPD

VII.5. Sample Result Verification and Reported Detection Limits

The laboratory analyzed for low level mercury by EPA Method 1631E. Total mercury was analyzed for six surface water (SW) samples. Total and dissolved mercury was analyzed for the groundwater (GW) samples.

Mercury quantification was verified for the Level 4 validation samples. Sample result verification is not applicable for Level 2B validation samples. Detects reported below the RL were qualified as estimated (J). Nondetects are valid to the RL. Multiple samples were analyzed at dilutions to bring detects within the calibration linear range due to the level of mercury found in the samples.

VIII. Various EPA Methods – General Minerals

K. Okonzak-Lowry of Oak Services reviewed the SDG on November 14, 2022.

VIII.1. Holding Times and Sample Management

The samples for nitrate+nitrite by Method 353.2 were subcontracted to the Eurofins Lancaster, PA Laboratory.

Table 15 – General Minerals Analytical Method Holding Times

Analytical Method	Analysis Holding Time (days)
353.2 (NO3+NO2 as N)	28
300.0 (anions SO4, Cl-, F-)	28
310.1 (alkalinity)	14
Total Dissolved Solids (TDS)	7
Total Suspended Solids (TSS)	7

The analytical holding times were met for all sample analyses. No qualifications were required.

VIII.2. Calibration

ICV and CCV recoveries associated with reported sample results were within the laboratory control limits.

VIII.3. Laboratory QC Samples

VIII.3.1. Calibration Blanks and Method Blanks

No reported detects in the method blanks (MB) or bracketing calibration blanks (ICB/CCB) were of sufficient concentration to warrant qualification of site sample results.

VIII.3.2. Laboratory Control Samples

LCS and LCSD (as appropriate) recoveries and RPDs were within laboratory control limits.

VIII.3.3. Laboratory Duplicates

Laboratory duplicate analyses were performed on Sample 0822RD15SW (580-117490-27). for Methods 310.1, 160.1, 160.2 and 353.2. RPDs were within laboratory control limits.

VIII.3.4. Matrix Spike/Matrix Spike Duplicate

MS/MSD analyses were performed on Sample 0822RD15SW (580-117490-27) for Methods 300.0 and 353.2. The spike recoveries and RPDs were within laboratory control limits except for Method 353.2 NO3+NO2. The Sample 0822RD15SW MS/MSD recoveries were 118% and 110%, respectively. It was determined that the surface water samples are of similar matrix; therefore, the nitrate + nitrite detects were qualified as estimated with a high bias (J+) for samples 0822RD15SW, 0822RD08BSW, 0822RD06SW and 0822RD10SW.

VIII.4. Sample Result Verification

Sample result verification is not applicable for Level 2B validation samples. Detects reported below the RL were qualified as estimated (J). Nondetects are valid to the RL.

VIII.5. Field QC Samples

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. The remaining detects were used to evaluate the associated site samples. Findings associated with field QC samples are summarized below.

VIII.5.1. Field Blanks and Equipment Blanks

Field blank or equipment blank samples were not analyzed for these surface water sample analyses.

VIII.5.2. Field Duplicates

Samples 0822RD05SW and 0822RD99SW were identified as the field duplicate pair. The control limits of \leq 30% for all target analytes greater than 5x RL and ±RL for all results <5x RL were met.

IX. Overall Assessment

Samples required qualification due to quality control exceedances and procedural issues. No samples were rejected in this SDG. Stage 2B validation was performed on all samples for this draft. The final version of the DVR will include the completed Stage 4 validation results for methods for which the required documentation is available.

As noted in Section VI.2, a Stage 4 validation was not performed for the 6010D ICP analyses for calcium (Ca), potassium (K), magnesium (Mg) and sodium (Na).

X. Data Qualification Summary

Table 16 – Data Qualification Summary Table

Sample	Analyte	Qualifier	Reason
580-117490-3, -14, - 23, -25, -31	Antimony	J (detects)	Sample detects > calibration range
580-11749-19, -41	Aluminum	J (detects)	Sample detects > calibration range
580-117490-1, -6, -8, -13, -14, -15, -18, -20, -35, -36, -37, -38, -40, -41	Barium	J (detects)	Sample detects > calibration range
580-117490-1, -3, -6, -8, -11, -12, -14, -15, - 18, -19, -20, -22, -28, -36, -37, -40, -41		J (detects)	Sample detects > calibration range
580-117490-1, -2, -3, -5, -6, -7, -8, -9, -11, - 12, -13, -14, -15, -16, -18, -19, -20, -22, -28, -33, -36, -37, -38, -41	Manganese	J (detects)	Sample detects > calibration range
580-117490-3, -6, -8, -9, -13, -14, -15, -20, - 22, -28, -37, -41		J (detects)	Sample detects > calibration range
580-117490-1, -2, -3, -5, -6, -8, -9, -15, -19	Thallium	U at RL (detects < RL)	MB detects

Sample	Analyte	Qualifier	Reason
580-117490-40, -41	Potassium	U at RL (detects < RL)	CCB detects
580-117490-15, -19, -	Silver	J+ (detects < 10x the	ICSA detect > MDL
14, -16, -4, -7, -8, -9, -		ICSA detect)	
26, -35, -41			
580-117490-22, -40, -	Thallium	J+ (detects < 10x the	ICSA detect > MDL
41		ICSA detect)	
500 447400 4 0 45			
580-117490-1, -3, -15	Lead	J+ (detects < 10x the	ICSA detect > MDL
		ICSA detect)	
580-117490-27	Calcium	J (detects)	Serial dilution > 10%D
500-117450-27	Calcium	5 (detects)	
580-117490-1, -7, -	Chromium	U at RL (detects < RL)	EB01 and EB02 detect
12, -17, -2, -29, -30, -		J+ (detects > RL)	
33, -39, -40, -2, -3, -4,			
-5, -8, -9, -13, -14, -			
15, -16, -18, -34, -35,			
-36			
580-117490-17, -29,	Iron	U at RL (detects < RL)	EB01 detect
-30, -39			
580-117490-1, -17, -	Nickel	U at RL (detects < RL)	EB01 detect
29, -30, -31, -40	MCKCI		
580-117490-35	Arsenic	U at RL (detect < RL)	EB02 detect
0822MW10GW and	Antimony	J (detects)	FD results >±RL
0822MW99GW			
			MD data at
580-117490-15 (Diss) 580-117490-21	LL Mercury	U at RL (detects < RL)	MB detect
(0822TB02GW)			
580-117490-24			
(0822TB04SW)			
580-117490-8 (Diss),	LL Mercury	U at RL (detects < RL)	Bracketing CCB detects
-16 (DISS), -13 (Diss),	,	J+ (detects)	_
-38 (Diss),			
-42 (0822TB03GW),			
-43 (0822EB01GW),			
-44 (0822EB02GW))			
580-117490-12 (Diss)	LL Mercury	U at RL (detects < RL)	EB01 detect > RL at 1.6 ng/L
-17 (Total and Diss),		U at EB01 detect level	
-29 (Total and Diss),		(detects > RL and <eb)< td=""><td></td></eb)<>	

Sample	Analyte	Qualifier	Reason
-30 (Total and Diss),		J+ (detects > EB01)	
-20 (Diss), -34 (Diss),			
-38 (Diss), -40 (Diss)			
580-117490-36 (Diss)	LL Mercury	U at TB03 detect level	TB03 detect > RL at 0.58J ng/L
580-117490-40 (Diss)		(detect > RL and <eb)< td=""><td></td></eb)<>	
		J+ (detect > TB03)	
0822MW10GW and	LL Mercury	J (detects)	FD results >RPD limit
0822MW99GW,			
0822MW43GW and			
0822MW98GW,			
0822MW54GW and			
0822MW97GW			
580-117490-27, -23, -	Method	J+- (detects)	High MS %R
25, -26	353.2		
	NO3+NO2		

XI. References

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