



Great River Energy **Stanton Station**

Assessment of Corrective Measures - Semi-Annual Report, Closed Bottom Ash Impoundment

07-31-2026

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Great River Energy

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Revisions

Rev	Date	Details
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1. Introduction

WSP USA (WSP) has prepared this semi-annual report for the ongoing evaluation of corrective measures for the Bottom Ash Impoundment at Great River Energy's (GRE) Stanton Station in accordance with the North Dakota Department of Environmental Quality (NDDEQ) Coal Combustion Residuals (CCR) Rule found in North Dakota Administrative Code (NDAC) Title 33.1, Article 20, Chapter 08 (the State CCR rule). This semi-annual report was prepared to document progress towards selection and design of a remedy as part of the groundwater corrective measures addressing the statistically significant level (SSL) of arsenic above the groundwater protection standards (GWPS) in groundwater at MW-203 and molybdenum at MW-201 downgradient of the Bottom Ash Impoundment. The GWPS for arsenic at the Bottom Ash Impoundment is set at the United States Environmental Protection Agency (USEPA) maximum contaminant level (MCL) of 0.01 milligrams per liter (mg/L). The GWPS for molybdenum at the Bottom Ash Impoundment is set at 0.1 mg/L, which is the value for molybdenum indicated within the USEPA CCR Rule in 40 Code of Federal Regulations (CFR) Part 257.95(h)(2).

The SSL for molybdenum at MW-201 was identified March 28, 2025, following completion of assessment monitoring statistics associated with the fourth quarter (Q4) 2024 semi-annual sampling and testing event. A notification identifying the SSL for molybdenum was posted online and submitted to the NDDEQ on April 8, 2025 (within 30 days of identifying the SSL). The Assessment of Corrective Measures (ACM) was initiated on June 26, 2025, within 90 days of identifying the SSL for molybdenum.

The SSL for arsenic at MW-203 was identified July 22, 2025, following completion of assessment monitoring statistics associated with the first quarter (Q1) 2025 annual sampling and testing event and initiation of the ACM at the Bottom Ash Impoundment. A notification identifying the SSL for arsenic was posted online and submitted to the NDDEQ on August 1, 2025 (within 30 days of identifying the SSL). The ACM for the arsenic SSL was initiated July 22, 2025, by incorporation into the ongoing ACM for the Bottom Ash Impoundment, within 90 days of identifying the SSL.

The ACM for the Bottom Ash Impoundment was completed and submitted to the NDDEQ for approval on September 24, 2025. This semi-annual report covers activities conducted since January 2026, following completion of the 2025 Annual Groundwater Monitoring and Corrective Action Report (WSP 2026).

Since completion of the ACM, additional laboratory analysis and data collection has been undertaken, and items have been identified that are necessary to resolve prior to remedy selection. Section 3 (including Figure 2) describes the efforts taken to date and anticipated work to be completed for final remedy selection based on the requirements of NDAC 33.1-20-08-06(7).

1.1 Purpose

The purpose of the ACM is to identify potential corrective measures to prevent further releases and to remediate any identified releases to groundwater at the Bottom Ash Impoundment. Based on the findings of the ACM, further evaluation is being performed, site-specific studies are being completed, and



a final long-term corrective action plan is being developed pursuant to NDAC 33.1-20-08-06(6) and (7). This process is iterative and composed of multiple steps to analyze the effectiveness of corrective measures to address the migration of CCR constituents in groundwater downgradient of the Bottom Ash Impoundment.

1.2 Evaluation of corrective measures

Pursuant to NDAC 33.1-20-08-06(6), WSP, on behalf of GRE, is further evaluating the potential corrective measures identified in the ACM Report (WSP 2025) to identify a remedy or combination of remedies.

1.2.1 Source control corrective measures

The previously completed closure in place of the Bottom Ash Impoundment and installation of the final cover system provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Prior to initiation of assessment monitoring and the ACM, the Bottom Ash Impoundment was closed with an engineered final cover placed over CCR left in place. Closure in place was completed in accordance with the closure plan (GAI 2019). The cover system was designed to minimize infiltration and erosion and to meet or exceed the requirements of NDAC 33.1-20-08-07(3)(d)(3). Due to the reduced infiltration through the final cover and the lack of contact between CCR and groundwater, the closure of the Bottom Ash Impoundment is anticipated to perform well as a source control.

The bottom ash within the Bottom Ash Impoundment south cell was originally hydraulically sluiced into the cell. The sluice water and precipitation falling on the footprint during operation and closure construction accumulated within the bottom ash. During closure construction, free water was pumped from the south cell and additional waste material from the closure of the north and center cells was added to achieve final waste grades. In addition to removal of free water within the south cell, the constructed sump was pumped during closure construction to remove leachate that accumulated during closure. Construction of the engineered composite cover significantly reduced the infiltration of precipitation into the waste, but residual water remains within the bottom ash following closure construction.

The removal of leachate will reduce leakage through potential defects in the composite liner by reducing the driving head. To remove the residual water, leachate accumulating in the sump has been regularly pumped out and disposed of off-site. Through early 2025, this was accomplished with a vacuum truck pumping the sump dry as often as every few days. In 2025, GRE installed a dedicated pump and holding tank along with solar/battery power and other controls. This new system pumps leachate from the sump as the leachate accumulates, maintaining the depth of leachate in the sump between approximately 1 and 1.5 feet. This system is planned to operate through the post-closure period.

1.2.2 Groundwater remediation corrective measures

In addition to the closure and final cover source control corrective measures, the following groundwater remediation corrective measures were identified in the ACM as potentially feasible for use at the Bottom Ash Impoundment:

- Monitored Natural Attenuation (MNA) and Enhanced Monitored Natural Attenuation (Enhanced MNA)
- Hydraulic Containment (Groundwater Pump and Treat)
- Geochemical Approaches (In Situ Injection)
- Permeable Reactive Barriers
- Phytoremediation

As outlined below, certain options are no longer being evaluated for a number of reasons. At present, the following groundwater remediation corrective measures are still being evaluated for implementation at the Bottom Ash Impoundment:

- MNA and Enhanced MNA
- In Situ Injection

The other options originally identified in the ACM report are not currently being evaluated based on the following site-specific reasons:

- Phytoremediation is not currently being evaluated as a corrective measure of the site based on the depth to groundwater. Depending on plant type, many root systems for plants used in traditional phytoremediation approaches focus on the upper 1 to 2 feet from the ground surface (ITRC 2009). Groundwater downgradient of the Bottom Ash Impoundment is approximately 10 to 20 feet below the ground surface.
- Permeable reactive barriers are not currently being evaluated due to the depth to bedrock. Critically, for a permeable reactive barrier to be effective, the barrier should ideally “extend to and be keyed into a competent bedrock layer or aquitard” to prevent circumvention of groundwater around the installed barrier (ITRC 2011). Downgradient of the Bottom Ash Impoundment, materials have been mixed through both natural deposition and alternation to the conditions through closure and removal of the industrial site, making identification of a continuous material suitable for keying a barrier difficult.
- Hydraulic containment (groundwater pump and treat) is not currently being evaluated as a stand-alone remedy. Pump and treat extraction technologies tend to be more efficient for constituents that are not readily attenuated by mechanisms such as adsorption. Additional chemical testing, similar to that used for evaluating in situ injection, is necessary to determine the extraction potential for arsenic with different treatment technologies and can be executed concurrently with testing for other alternatives.

If the currently pursued measures prove not to be adequate, these or other potential corrective measures may be considered in the future.

2. Summary of work completed – January 2026 to July 2026

The following subsections summarize field activities, desktop analyses, and supplemental data collected between January 2026 and July 2026, following completion of the most recent annual report (WSP 2026). This work further delineates the nature and extent of the SSL and continues the evaluation of the potential groundwater remediation corrective measures presented in the ACM Report (WSP 2025).

The collected data continues to be used to evaluate the feasibility, mechanisms, rates, and stability of identified potential corrective measure alternatives to address the SSLs for arsenic and molybdenum in groundwater downgradient of the Bottom Ash Impoundment. Evaluations of the data as they relate to remedy selection alternatives are ongoing and will be presented in future report(s).

2.1 Groundwater monitoring and analysis activities

CCR compliance monitoring related activities have been conducted at the Bottom Ash Impoundment since June 2016. An assessment monitoring program was initiated for the Bottom Ash Impoundment in Q1 of 2024 following the identification of statistically significant increases (SSI) for boron, sulfate, and total dissolved solids at MW-203. Following the transition to assessment monitoring, samples have been collected and analyzed for the assessment monitoring and detection monitoring parameter lists.

Since completion of the most recent annual report in January 2026 (WSP 2026), additional samples have been collected as required by the assessment monitoring program. Groundwater was sampled in March 2026 and June 2026 from the monitoring network wells and the nature and extent wells installed in 2025. The March 2026 sample is the annual assessment monitoring sample and was analyzed solely for the assessment monitoring parameter list. The June 2026 sample was collected for the semi-annual detection and assessment monitoring sampling event, with samples analyzed for both the detection monitoring and assessment monitoring parameter lists.

The March 2026 annual assessment sample for arsenic at MW-203 was 0.026 mg/L and continues to be identified as an SSL based on the confidence interval approach for assessment monitoring statistics at Stanton Station. The March 2026 annual assessment monitoring sample for molybdenum at MW-201 was 0.180 mg/L and continues to be identified as an SSL based on the confidence interval approach for assessment monitoring statistics at Stanton Station. A notification of the continued SSLs was posted to GRE's publicly accessible CCR website and provided to the NDDEQ.

Results have been received, but have not yet been evaluated for the June 2026 monitoring event. Data evaluation and statistical analysis will be completed following receipt of the associated data. Results of the statistical analysis will be addressed within the required timeframes stipulated by the State CCR rule,



with notifications posted as required and results included in the 2026 Annual Groundwater Monitoring and Corrective Action Report, due in January 2027.

2.1.1 Groundwater flow direction and gradient

Depth to groundwater measured in March 2026 prior to purging and sampling at the site wells was used to estimate groundwater elevations and groundwater contours around the Bottom Ash Impoundment (Figure 1). Based on the Q1 2026 groundwater elevations, the shallow groundwater at the Bottom Ash Impoundment generally flows to the north and northeast towards the Missouri River.

2.2 Nature and extent delineation

The locations of the site monitoring wells and a potentiometric surface contour map showing the March 2026 groundwater contours are shown in Figure 1. Table 1 provides a summary of the construction details for the site monitoring wells.

To aid in plume delineation, both dissolved and total analysis have been conducted for a subset of parameters in Q4 2025 and throughout 2026. Total analysis captures both the dissolved aqueous concentrations present in samples, as well as the insoluble particulate concentrations. Dissolved concentrations are determined by filtering samples prior to analysis, to remove insoluble particulates greater than 0.45 microns in diameter. In 2026, the assessment monitoring metals and aluminum, iron, and manganese, as primary components of most soils, have been tested using both total and dissolved analysis. In sample results tested to date, differences between dissolved and total concentrations of both the assessment monitoring parameters and the soil component parameters have been minimal, suggesting the results have not been impacted by excess turbidity caused by artificially suspended particulates.

Review of the total and dissolved molybdenum concentrations from the Q4 2025 and Q1 2026 sampling events suggest that measured concentrations are representative of the site groundwater. Appendix A includes figures presenting the total and dissolved molybdenum concentrations measured during the Q4 2025 and Q1 2026 events. In each of the figures, locations that are color-coded orange or red had molybdenum concentrations greater than the GWPS (0.10 mg/L) to narrow in upon and bound the highest site molybdenum concentrations associated with the Bottom Ash Impoundment. A preliminary area indicating the molybdenum plume surrounding MW-201 is depicted on the figures in Appendix A. The area where molybdenum exceeds the GWPS around MW-201 consists of a portion of the area previously occupied by the Center Cell of the Bottom Ash Impoundment within the uppermost encountered groundwater.

Review of the total and dissolved arsenic concentrations from the Q4 2025 and Q1 2026 sampling events suggest that measured concentrations are representative of the site groundwater. Appendix B includes a figure presenting the total and dissolved arsenic concentrations measured during the Q4 2025 and Q1 2026 events. In each of the figures, locations that are color-coded orange or red had arsenic concentrations greater than the GWPS (0.01 mg/L) to narrow in upon and bound the site arsenic concentrations associated with the Bottom Ash Impoundment. Full delineation of the plume surrounding



MW-203 has not been finalized. Additional information is needed between MW-227 and MW-229 to determine the extents of the plume in the direction of groundwater flow, and to the south of MW-228 to determine the boundary of the plume.

2.3 Solids analysis

As discussed in the Bottom Ash Impoundment ACM (WSP 2025), solids samples were collected during drilling at the wells installed in 2025 and sent for analysis by SGS Canada Inc. Samples were analyzed using quantitative TESCAN Integrated Mineral Analyzer technology (TIMA-X). Results of the TIMA-X analysis are included in Appendix C and will be used in support of remedy selection in conjunction with the sequential extraction procedure (SEP; Tessier et al. 1979) and X-ray diffraction (XRD) including clay speciation results (WSP 2026).

2.4 Tier I MNA analysis

A desktop study was initiated for the first tier of the USEPA's recommended phased approach for evaluating MNA (USEPA 2015). The first tier of analysis for MNA aims to demonstrate the capacity for active removal for the constituent(s) of interest from groundwater, and associated stability of the plume. Tier I analysis for the Bottom Ash Impoundment is ongoing.

2.5 Dewatering modeling

As part of source control, starting in April 2026 once weather conditions allowed, leachate accumulating in the sump began being pumped out again and disposed off-site. In addition, the model of the Bottom Ash Impoundment was updated based on site pumping information, and was used to evaluate the potential of adding additional dewatering wells within the impoundment.

3. Summary of remedy selection process activities

3.1 Work completed to date

The following steps have been taken to progress towards final remedy selection since the identification of the SSLs for molybdenum at MW-201 and arsenic at MW-203.

- Completion of the Assessment of Corrective Measures Report in 2025.
- Installation and development of 4 nature and extent wells surrounding MW-201, 3 nature and extent wells surrounding MW-203, and an additional property boundary well in 2025.
- Geochemical testing of aquifer solids collected during drilling in 2025.
- Installation of dedicated low-flow pumps in the new wells in 2025.
- Groundwater sampling and analysis from the Bottom Ash Impoundment network wells and nature and extent wells to further understand the extent and magnitude of molybdenum and arsenic above the GWPS downgradient of the Bottom Ash Impoundment between 2025 and the present.
- Development of a Leapfrog geologic model to better visualize site hydrogeological information in support of the site conceptual model.
- Ongoing geochemical modeling and evaluation of MNA following EPA's Tier I guidance in 2026.
- Modeling of the Bottom Ash Impoundment with respect to leachate accumulation in the sump and the potential effects of adding additional dewatering wells within the impoundment footprint.

Figure 2 presents a simplified Gantt chart of the work conducted to date and activities planned for the next 6 months (until the next annual report), with the intent of holding the public meeting and selecting a remedy as soon as feasible.

3.2 Remedy selection

At present, selection of a final remedy is expected to be based on the following information:

- Plume delineation
 - The molybdenum plume downgradient of the Bottom Ash Impoundment appears to be small and not extending outside of the footprint of the prior Center Cell of the Bottom Ash Impoundment.
 - Delineation of the arsenic plume to the east of the Bottom Ash Impoundment has not been completed.



- GWPS attainment
 - For any selected remedy, attainment of the GWPS for molybdenum and arsenic will be required.
- Holistic site approach
 - The final remedy selection for the Bottom Ash Impoundment will account for the potential for interaction with groundwater from the Bottom Ash Landfill and the potential to mobilize other assessment monitoring parameters.

4. Planned activities

On behalf of GRE, WSP is implementing activities to support the corrective action remedy selection process. Groundwater monitoring at the site will continue to be used to track site conditions. S GRE and WSP will continue data collection efforts, as necessary, to further refine the conceptual model and evaluate the feasibility of remedies identified in the ACM Report (WSP 2025) in order to select a final remedy.

Supplementary data collection and evaluation activities planned to be completed in the next 6 months prior to the next annual report in January 2027 include:

- Plume delineation
 - Continue to review the results from samples collected in Q2 2026 to determine of the extent of the plumes near MW-201 and MW-203.
 - Additionally, the need for direct sampling and/or additional wells to further delineate the plume will be determined.
- Groundwater monitoring
 - Review results of the Q2 2026 semi-annual detection monitoring and assessment monitoring samples.
 - Collect Q4 2026 semi-annual detection monitoring and assessment monitoring samples.
- Tier I MNA
 - Complete Tier I MNA evaluation.
- Source control
 - Continued pumping of leachate from the sump to reduce potential leakage from the unit.

On behalf of GRE, WSP will continue to prepare semi-annual progress reports to document the progress in selecting and designing a groundwater remedy in accordance with NDAC 33.1-20-08-06(6) and (7) until a final remedy is selected. Prior to the final selection of a corrective measure, a public meeting will be scheduled a minimum of 30 days before the selection of the remedy to present the result of the corrective measures assessment. The next semi-annual report will be included in the 2026 annual groundwater monitoring and corrective action report, due January 31, 2027.

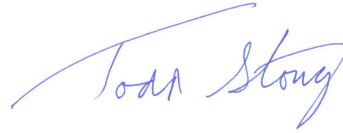
Upon selection of a remedy, a final report will be prepared describing the selected remedy and how the remedy meets the standards in NDAC 33.1-20-08-06(6) and (7). The final remedy selection report must be approved by the NDDEQ per NDAC 33.1-20-08-06(7)(a). Once the remedy has been selected and approved by the NDDEQ, the implementation of the remedy will be initiated in accordance with NDAC 33.1-20-08-06(8).

Signatures

WSP USA Inc.



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Tables



Table 1: Stanton Station Monitoring Well Summary - Bottom Ash Impoundment

			TOC Elevation ^(a)	Ground Surface Elevation ^(a)	Screen Interval	Top of Screen Elevation	Bottom of Screen Elevation	Sand Pack Interval	Geologic Unit(s)
Location	Well ID	Date Constructed	ft AMSL	ft AMSL	ft bgs	ft AMSL	ft AMSL	ft bgs	Completed In
Upgradient/Side-gradient	MW-6B	9/8/1992	1,711.5	1,709.4	28.4-38.4	1,681.3	1,671.3	19.0-38.5	Outwash
	MW-7A	8/27/1992	1,713.7	1,711.3	7.0-17.0	1,704.1	1,694.1	5.0-18.0	Silty sand/clay
	MW-7B	9/9/1992	1,712.9	1,711.2	28.1-38.1	1,682.7	1,672.7	23.0-38.5	Silty sand/outwash
	MW-8B	9/3/1992	1,749.8	1,747.6	54.0-64.0	1,694.4	1,684.4	49.0-64.5	Outwash
	MW-105	11/18/2015	1,717.0	1,714.0	9.0-19.0	1,705.0	1,695.0	7.0-19.0	Clay/outwash
Bottom Ash Landfill Downgradient	MW-9N	7/19/2010	1,703.5	1,701.0	11.5-21.5	1,689.5	1,679.5	9.5-21.5	Sand, clayey sand, gravel
	MW-102	11/17/2015	1,712.1	1,708.8	14.0-24.0	1,694.8	1,684.8	12.0-24.0	Silty sand/clay
	MW-103	11/17/2015	1,709.5	1,706.2	14.0-24.0	1,692.2	1,682.2	12.0-24.0	Outwash
Bottom Ash Impoundment Downgradient	MW-201	8/10/2020	1,704.9	1,701.9	9.5-19.5	1,692.4	1,682.4	7.0-19.5	Fat clay, sand w/silt
	MW-202	8/10/2020	1,703.7	1,701.6	8.0 - 18.0	1,693.6	1,683.6	6.0-18.0	Fat clay, lean clay w/sand
	MW-203	8/10/2020	1,705.8	1,702.7	6.0 -16.0	1,696.7	1,686.7	5.0-16.0	Sand w/silt, fat clay
Bottom Ash Impoundment Non-network Wells	MW-1R	11/8/1995	1,706.7	1,703.5	23.7-32.7	1,679.8	1,670.8	21.7-34.7	Gravel, fat clay
	MW-104	11/17/2015	1,712.0	1,709.0	14.0-24.0	1,695.0	1,685.0	12.0-24.0	Outwash
Bottom Ash Landfill Nature and Extent Delineation Wells	MW-214	5/12/2022	1,709.2	1,705.8	5.0 - 15.0	1,700.8	1,690.8	4.0 - 15.0	Fat clay, silty sand
	MW-219	2/6/2023	1,705.1	1,702.2	10.0 - 20.0	1,692.2	1,682.2	8.0 - 20.0	Silty sand, clayey sand
	MW-301	2/10/2023	1,698.6	1,695.5	20.0 - 35.0	1,675.5	1,660.5	18.0 - 35.0	Lean clay, lean clay with sand, clayey sand
Property Boundary	MW-PB1	8/11/2020	1,698.8	1,695.9	15.0 - 25.0	1,680.9	1,670.9	13.0 - 25.0	Silt w/sand, silty sand
	MW-PB3	2/9/2023	1,701.6	1,698.5	24.0 - 39.0	1,674.5	1,659.5	18.0 - 39.0	Sandy lean clay
	MW-PB1R	6/17/2025	1,699.8	1,695.7	26.0-36.0	1,669.7	1,659.7	24.0-36.0	Clayey Sand
Bottom Ash Impoundment Nature and Extent Delineation Investigation	MW-223	6/17/2025	1,705.9	1,702.5	11.0-16.0	1,691.5	1,686.5	9.0-16.0	Lean Clay
	MW-224	6/17/2025	1,705.1	1,701.4	11.0-16.0	1,690.4	1,685.4	9.0-16.0	Sandy Fat Clay
	MW-225	6/17/2025	1,705.2	1,701.4	11.0-16.0	1,690.4	1,685.4	9.0-16.0	Clayey Sand
	MW-226	6/17/2025	1,702.5	1,699.5	11.0-16.0	1,688.5	1,683.5	9.0-16.0	Poorly Graded Sand
	MW-227	6/17/2025	1,704.4	1,701.1	11.0-16.0	1,690.1	1,685.1	9.0-16.0	Clayey Sand
	MW-228	6/17/2025	1,706.8	1,703.3	6.0-11.0	1,697.3	1,692.3	4.0-11.0	Poorly Graded Sand With Clay
	MW-229	6/17/2025	1,706.4	1,702.5	11.0-16.0	1,691.5	1,686.5	9.0-16.0	Fat Clay with Sand and Fat Clay
	MW-230	7/1/2025	1,704.7	1,701.7	34.0-39.0	1,667.7	1,662.7	32.0-39.0	Sandy Silt

Notes:

Well construction measurements are from the original bore log, well data sheet, or well construction form.

Well construction information for MW-9N and MW-1R shown in italics are estimates based on the original well logs, accounting for the casing reductions completed in June 2020.

a. TOC (top of casing) and ground surface elevations surveyed by Interstate Engineering, Inc. in September 2020, October 2022, April 2023, and July 2025.

ft AMSL: feet above mean sea level; ft bgs = feet below ground surface; GW = groundwater



Figures



Figure 2 - Bottom Ash Impoundment - Assessment of Corrective Measures and Remedy Selection Timeline

Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026
Well Sampling and Analysis						Well Sampling & Analysis	
SSL							
	ACM						
	Drilling, Well Installation, Well Development, Installation of Dedicated Low-Flow Pumps - Initial Nature and Extent Wells					Drilling, Well Installation, Well Development - Additional Nature and Extent Wells	
	Geochemical and Geotechnical Lab Testing of Soil Samples						
				Measure Total and Dissolved Metals in Groundwater Samples		Measure Total and Dissolved Metals in Groundwater Samples	
				Evaluate Well Turbidity, Total vs. Dissolved Metals, and Plume Delineation		Evaluate Well Turbidity, Total vs. Dissolved Metals, and Plume Delineation	
				MNA Tier I			



Appendix A Bottom Ash Impoundment molybdenum nature and extent



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LEGEND - Q1 2026 TOTAL MOLYBDENUM

- RESULT ND < 0.002
- RESULT 0.002 TO < 0.1
- RESULT 0.1 TO < 0.2
- RESULT > 0.2
- CLOSED BOTTOM ASH LANDFILL/IMPOUNDMENT FOOTPRINT
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER CONTOURS AND ELEVATIONS

NOTE(S)

- AERIAL IMAGERY OBTAINED FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURE IMAGERY PROGRAM, 2023.
- GROUNDWATER CONTOURS ARE BASED ON Q1 2026 ELEVATION INFORMATION FROM THE SHOWN MONITORING WELLS, AS WELL AS MONITORING WELLS AND PIEZOMETERS NOT SHOWN.
- THE NORTH AND CENTER CELLS OF THE BOTTOM ASH IMPOUNDMENT WERE CLOSED BY REMOVAL OF WASTE AND LINER.
- THE SOUTH CELL OF THE BOTTOM ASH IMPOUNDMENT WAS CLOSED WITH A FINAL COVER OVER PLACED WASTE.
- THE BOTTOM ASH LANDFILL WAS CLOSED BY CONSOLIDATION OF PLACED WASTE INTO A SMALLER FOOTPRINT AND CONSTRUCTION OF A FINAL COVER.
- TOTAL MOLYBDENUM RESULTS ARE FROM Q1 2026 SAMPLING EVENT.
- ALL CONCENTRATION AREAS ARE FOR VISUAL PURPOSES. THESE ARE ESTIMATIONS BASED ON THE Q1 2026 SAMPLING EVENT.



Q1 2026 TOTAL MOLYBDENUM CONCENTRATIONS
GREAT RIVER ENERGY - STANTON STATION
BOTTOM ASH IMPOUNDMENT
FIGURE 3

Path: \\wsp-pblwan-net\US-Central\Data\USL\K-100\GreatRiverEnergy\STANTON\09_PROJECT\SQ150219\Annual Monitoring Reports\2150219_2026_WQ-StantonNDEQ_Q1-DissolvedBottom Ash Impoundment.dwg | File Name: 2150219_2026_WQ-StantonNDEQ_Q1-DissolvedBottom Ash Impoundment.dwg



LEGEND - Q1 2026 DISSOLVED MOLYBDENUM

- RESULT ND < 0.002
- RESULT 0.002 TO < 0.1
- RESULT 0.1 TO < 0.2
- RESULT > 0.2
- CLOSED BOTTOM ASH LANDFILL/IMPOUNDMENT FOOTPRINT
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER CONTOURS AND ELEVATIONS

- NOTE(S)**
- AERIAL IMAGERY OBTAINED FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURE IMAGERY PROGRAM, 2023.
 - GROUNDWATER CONTOURS ARE BASED ON Q1 2026 ELEVATION INFORMATION FROM THE SHOWN MONITORING WELLS, AS WELL AS MONITORING WELLS AND PIEZOMETERS NOT SHOWN.
 - THE NORTH AND CENTER CELLS OF THE BOTTOM ASH IMPOUNDMENT WERE CLOSED BY REMOVAL OF WASTE AND LINER.
 - THE SOUTH CELL OF THE BOTTOM ASH IMPOUNDMENT WAS CLOSED WITH A FINAL COVER OVER PLACED WASTE.
 - THE BOTTOM ASH LANDFILL WAS CLOSED BY CONSOLIDATION OF PLACED WASTE INTO A SMALLER FOOTPRINT AND CONSTRUCTION OF A FINAL COVER.
 - DISSOLVED MOLYBDENUM RESULTS ARE FROM Q1 2026 SAMPLING EVENT.
 - ALL CONCENTRATION AREAS ARE FOR VISUAL PURPOSES. THESE ARE ESTIMATIONS BASED ON THE Q1 2026 SAMPLING EVENT.



**Q1 2026 DISSOLVED MOLYBDENUM CONCENTRATIONS
GREAT RIVER ENERGY - STANTON STATION
BOTTOM ASH IMPOUNDMENT
FIGURE 4**



Appendix B Bottom Ash Impoundment arsenic nature and extent



Path: \\wsp-pjw-natl\US-Central\Data\USLJ\100\GreatRiverEnergy\STANTON\09_PROJECT\S0150219\Annual Monitoring Reports\2150219_2025_VQ-StantonNDECO_C04_DischargeBottomAshImpoundment.dwg | File Name: 2150219_2025_VQ-StantonNDECO_C04_DischargeBottomAshImpoundment.dwg



LEGEND - Q4 2025 DISSOLVED ARSENIC

- RESULT ND < 0.002
- RESULT 0.002 TO < 0.01
- RESULT 0.01 TO < 0.02
- RESULT > 0.02
- CLOSED BOTTOM ASH LANDFILL/IMPOUNDMENT FOOTPRINT
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER CONTOURS AND ELEVATIONS

- NOTE(S)**
- AERIAL IMAGERY OBTAINED FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURE IMAGERY PROGRAM, 2023.
 - GROUNDWATER CONTOURS ARE BASED ON NOVEMBER-DECEMBER 2025 ELEVATION INFORMATION FROM THE SHOWN MONITORING WELLS, AS WELL AS MONITORING WELLS AND PIEZOMETERS NOT SHOWN.
 - THE NORTH AND CENTER CELLS OF THE BOTTOM ASH IMPOUNDMENT WERE CLOSED BY REMOVAL OF WASTE AND LINER.
 - THE SOUTH CELL OF THE BOTTOM ASH IMPOUNDMENT WAS CLOSED WITH A FINAL COVER OVER PLACED WASTE.
 - THE BOTTOM ASH LANDFILL WAS CLOSED BY CONSOLIDATION OF PLACED WASTE INTO A SMALLER FOOTPRINT AND CONSTRUCTION OF A FINAL COVER.
 - DISSOLVED ARSENIC RESULTS ARE FROM Q4 2025 SAMPLING EVENT.



**Q4 2025 DISSOLVED ARSENIC CONCENTRATIONS
GREAT RIVER ENERGY - STANTON STATION
BOTTOM ASH IMPOUNDMENT
FIGURE 2**

Path: \\wsp-pblwan-net\US-Central\Data\USLJ\100\area\GREAT RIVER ENERGY\STANTON\09_PROJECT\SQ150219\Annual Monitoring Reports\SQ150219_2026_VQ-StantonNDEQ_O1_Totals-Bottom Ash Impoundment.dwg | File Name: 2150219_2026_VQ-StantonNDEQ_O1_Totals-Bottom Ash Impoundment.dwg



LEGEND - Q1 2026 TOTAL ARSENIC

- RESULT ND < 0.002
- RESULT 0.002 TO < 0.01
- RESULT 0.01 TO < 0.02
- RESULT > 0.02
- CLOSED BOTTOM ASH LANDFILL/IMPOUNDMENT FOOTPRINT
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER CONTOURS AND ELEVATIONS

NOTE(S)

- AERIAL IMAGERY OBTAINED FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURE IMAGERY PROGRAM, 2023.
- GROUNDWATER CONTOURS ARE BASED ON NOVEMBER-DECEMBER 2025 ELEVATION INFORMATION FROM THE SHOWN MONITORING WELLS, AS WELL AS MONITORING WELLS AND PIEZOMETERS NOT SHOWN.
- THE NORTH AND CENTER CELLS OF THE BOTTOM ASH IMPOUNDMENT WERE CLOSED BY REMOVAL OF WASTE AND LINER.
- THE SOUTH CELL OF THE BOTTOM ASH IMPOUNDMENT WAS CLOSED WITH A FINAL COVER OVER PLACED WASTE.
- THE BOTTOM ASH LANDFILL WAS CLOSED BY CONSOLIDATION OF PLACED WASTE INTO A SMALLER FOOTPRINT AND CONSTRUCTION OF A FINAL COVER.
- TOTAL ARSENIC RESULTS ARE FROM Q1 2026 SAMPLING EVENT.



0 200 400
1" = 200' FEET



Q1 2026 TOTAL ARSENIC CONCENTRATIONS
GREAT RIVER ENERGY - STANTON STATION
BOTTOM ASH IMPOUNDMENT
FIGURE 3

Path: \\wsp-jpwan-net\US-Central\Data\USLJ\100\area\GREAT RIVER ENERGY\STANTON\09_PROJECT\SQ150219\Annual Monitoring Reports\2150219_2025_VQ-StantonNDECO_01_Discharge\Bottom Ash Impoundment.dwg | File Name: 2150219_2025_VQ-StantonNDECO_01_Discharge\Bottom Ash Impoundment.dwg



LEGEND - Q1 2026 DISSOLVED ARSENIC

- RESULT ND < 0.002
- RESULT 0.002 TO < 0.01
- RESULT 0.01 TO < 0.02
- RESULT > 0.02
- CLOSED BOTTOM ASH LANDFILL/IMPOUNDMENT FOOTPRINT
- GENERAL DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER CONTOURS AND ELEVATIONS

- NOTE(S)**
- AERIAL IMAGERY OBTAINED FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURE IMAGERY PROGRAM, 2023.
 - GROUNDWATER CONTOURS ARE BASED ON NOVEMBER-DECEMBER 2025 ELEVATION INFORMATION FROM THE SHOWN MONITORING WELLS, AS WELL AS MONITORING WELLS AND PIEZOMETERS NOT SHOWN.
 - THE NORTH AND CENTER CELLS OF THE BOTTOM ASH IMPOUNDMENT WERE CLOSED BY REMOVAL OF WASTE AND LINER.
 - THE SOUTH CELL OF THE BOTTOM ASH IMPOUNDMENT WAS CLOSED WITH A FINAL COVER OVER PLACED WASTE.
 - THE BOTTOM ASH LANDFILL WAS CLOSED BY CONSOLIDATION OF PLACED WASTE INTO A SMALLER FOOTPRINT AND CONSTRUCTION OF A FINAL COVER.
 - DISSOLVED ARSENIC RESULTS ARE FROM Q1 2026 SAMPLIN



**Q1 2026 DISSOLVED ARSENIC CONCENTRATIONS
GREAT RIVER ENERGY - STANTON STATION
BOTTOM ASH IMPOUNDMENT
FIGURE 4**



Appendix C SGS Canada – TIMA-X results





TIMA DATA

prepared for:

WSP-USA

CA20I-00000-211-20191-02

MI7012-DEC25

May 28, 2026 (Updated July 09, 2026)

Prepared by:



Lain Glossop
Group Leader - Mineralogy

Reviewed by:

Logan Jameson
Senior Mineralogist

QT-CA-MIN-MET-MN-I01 rev 0.1

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy) (METH# 8.11.1) used by SGS Minerals Services

SGS Canada Inc.

3260 Production Way, Burnaby, BC V5A 4W4
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Member of the SGS Group (SGS SA)



Method Summary

Quantitative TIMA Analysis:

The mineralogical analysis was conducted with the TIMA-X technology. TIMA-X is an acronym for TESCAN Integrated Mineral Analyzer, which is one of the newest Automated Scanning Electron Microscopy (ASEM) instruments on the market. It is based on four Energy Dispersive X-Ray (EDX) silicon drift detectors (SDD) attached to a TESCAN MIRA (field-emission gun – FEG) platform, which also includes backscattered electron (BSE) and secondary electron (SE) detectors. The TIMA system utilizes both the EDX and BSE signals to identify minerals at each measurement point (or each homogenous segment of a grain, depending upon the analysis mode). It is optimized to deal with rapidly acquired low-count spectra. These EDX (and BSE) spectra (and BSE data) are compared to entries in a mineral library on a first match principle to identify the mineral phase, where this mineral library is based on theoretical mineral/phase composition or created by the user based on BSE, X-ray spectral windows counts, and/or ratios.

It must be noted, that due to the difference in grain size, all size fractions contain particles that are close to the measurement area (~3 µm) and the spacing of the measurement points and therefore can encounter less precision in the measurements. In addition, the X-ray beam can scatter at the edges of particles and can lead to inaccurate analytical results. As the particles become smaller, the edges constitute a more significant percentage of the total particle mass. Therefore, some bias might be introduced, especially in the fine fraction, and caution is advised in interpreting the results in this particular fraction.

The limit of detection for any element within a phase is >1-2 wt% or 10,000 - 20,000 ppm by automated SEM-based EDS methods. Any elements that are present below this level are likely not to be detected. Accurate element reconciliation between TIMA calculated values and geochemical assay values is not possible for elements that are distributed in phases where the level of the element does not exceed 10,000 - 20,000 PPM. Many minerals display compositional variation with solid solutions between end members. Therefore, in order to balance the TIMA calculated assay to direct chemical assay more accurately, EMPA is recommended to quantify the mineral chemistries in the sample.

If geochemical assays have not been conducted by SGS, we cannot guarantee that values provided by another lab are representative of the material that was analyzed by SGS.

It is not possible to distinguish chemically similar phases by any EDS-based SEM system (eg. magnetite and hematite). X-ray diffraction is required to speciate chemically similar minerals, or polymorphs properly.

Amorphous phases cannot be classified as minerals because one of the fundamental criteria for a substance to be considered a mineral is that it possesses a crystalline structure. A crystalline structure means the atoms are arranged in a highly ordered, repeating pattern that extends in three dimensions. This internal order is what gives minerals their characteristic physical properties, such as cleavage and consistent optical behavior. In contrast, amorphous materials lack this long-range atomic order; their atoms are arranged randomly rather than in a regular lattice. While amorphous phases may share similar chemical compositions with certain minerals, the absence of crystallinity disqualifies them from being classified as minerals under the widely accepted definition by the International Mineralogical Association (IMA). In the event that there are phases present in a sample that do not fit the definition of a known mineral, the phase will be identified in the report with a name consisting of the elements present. Semi-quantitative EDS data for the phase can be provided.

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TIMA Analysis Definitions

Liberation and Associations

Pure – A particle that has 100% volume of mineral of interest.

Free- A particle that has $\geq 95\%$ volume of mineral of interest or $\geq 90\%$ volume of mineral of interest, depending on project.

Liberated - A particle that has $\leq 95\%$ - $\geq 80\%$ volume of mineral of interest or $\leq 90\%$ - $\geq 80\%$, depending on project.

Binary Associations- A particle that has ≥ 90 area% of the two minerals of interest or ≥ 95 area% of the two minerals of interest, depending on project.

Binary/Ternary Associations- A particle that has $\geq 90\%$ volume of three minerals of interest or $\geq 95\%$ volume of three minerals of interest (depending on project) either individually or grouped.

Complex - Particles that do not fall into the above categories

Exposure

May 28, 2026 (Updated July 09, 2026)

Exposure values are calculated as the free surface % (% of the grain surface that is exposed to atmosphere) of each grain of the mineral of interest.

The 30% exposure value is considered an empirical threshold above which minerals may float. Minerals with less than 30% exposure might not float, but if they are recovered, then they will dilute the grade of the sulphide concentrate.

Grain Size

The grain size report serves to study the distribution of the grain size of a specific phase; within the TIMA software, it is defined as equivalent circle diameter (d). It is the diameter of a circle that has the same area (A) as the particle (or grain). The diameter is defined in pixels and then multiplied by pixel spacing (Ps) to obtain size in micrometres. The precise definition is described in the following formula: $d = 2 \cdot \sqrt{(A/\pi)} \cdot Ps$.

Mean Line Intercept

The value is calculated as weighted average of mean linear intercept lengths across the particle in four directions (horizontal – IH, vertical IV, Primary diagonal IPD and Counter-diagonal ICD). The weight for both IPD and ICD is 1/3 and for IH and IV is 1/6.

The mean line intercept length is calculated as area (A) of the particle (in pixels) divided by multiplication of number of linear intercepts (I) and distance between intercepts, which is 1 pixel for horizontal and vertical intercepts and $1/(\sqrt{2})$ pixels for diagonal and counter-diagonal intercepts, respectively.

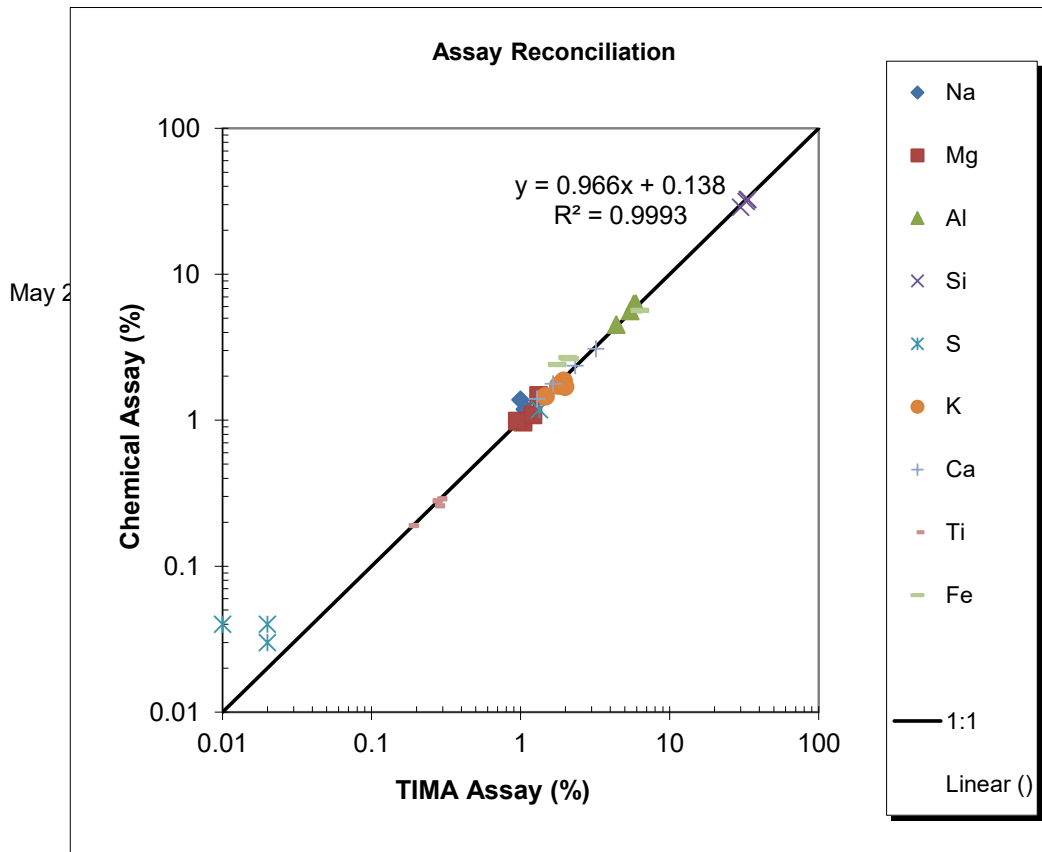


Notes

Please note: Assay reconciliation, modal mineralogy, elemental deportments and grain size distributions are conducted using double-transverse polished sections, which reduces the effect of density segregation. All other reports are generated using standard polished sections (non-transverse), to increase particle counts and textural representativity; therefore, a difference between the absolute mass totals between the report types may be observed.

May 28, 2026

Assay Reconciliation



Sample	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Element				
Na TIMA Calculated	1.00	1.08	1.07	1.13
Na Chemical Assay	1.38	1.20	1.19	1.09
Mg TIMA Calculated	1.04	0.95	1.21	1.32
Mg Chemical Assay	0.97	0.99	1.09	1.48
Al TIMA Calculated	5.76	5.45	5.92	4.39
Al Chemical Assay	6.25	5.61	6.30	4.51
Si TIMA Calculated	33.6	33.3	32.7	30.0
Si Chemical Assay	32.6	32.5	31.6	28.8
S TIMA Calculated	0.02	0.02	0.01	1.34
S Chemical Assay	0.04	0.03	0.04	1.18
K TIMA Calculated	1.94	1.79	1.99	1.47
K Chemical Assay	1.86	1.73	1.70	1.46
Ca TIMA Calculated	1.29	2.33	1.65	3.20
Ca Chemical Assay	1.40	2.37	1.78	3.09
Ti TIMA Calculated	0.26	0.27	0.28	0.18
Ti Chemical Assay	0.28	0.26	0.29	0.19
Fe TIMA Calculated	2.07	1.76	2.14	6.33
Fe Chemical Assay	2.69	2.41	2.64	5.67

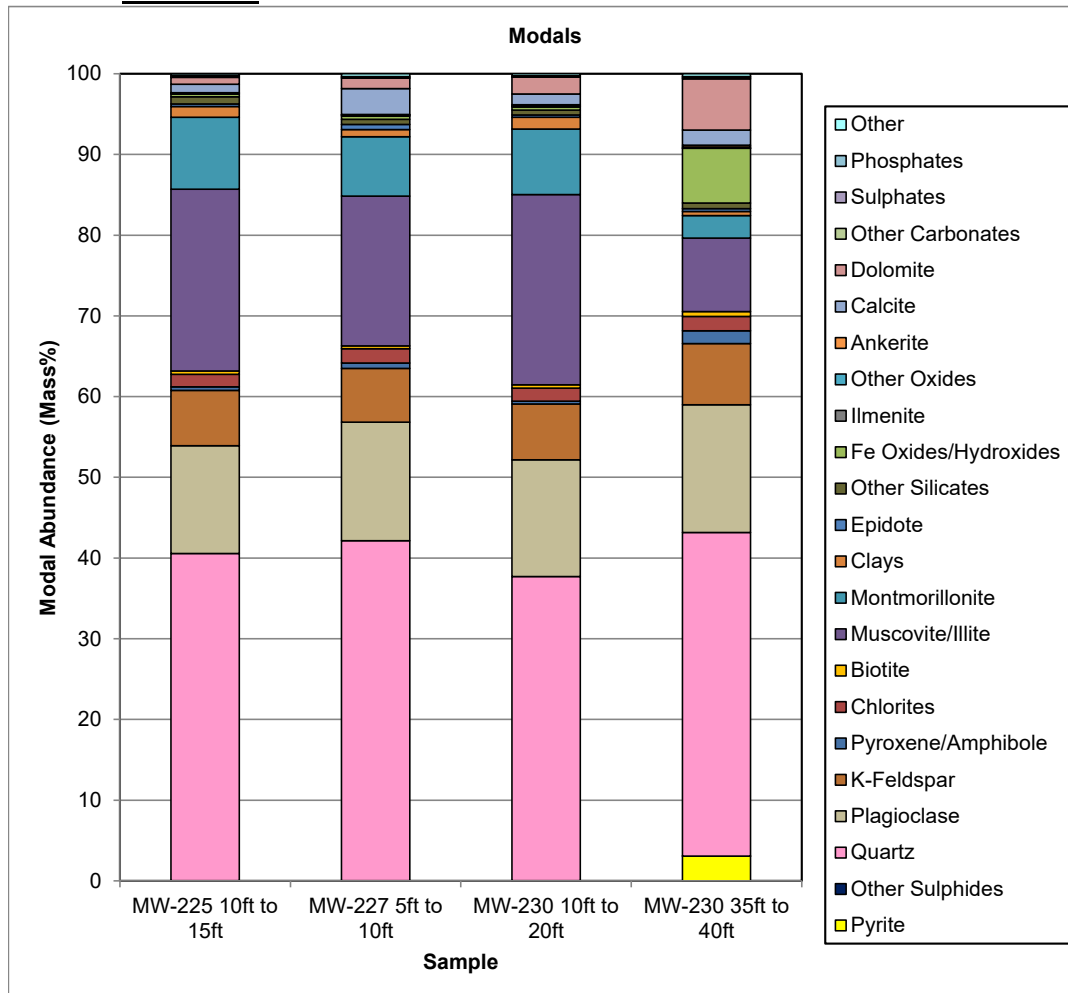
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CA20I-00000-211-20191-02
MI7012-DEC25

High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) - QT-CA-MIN-MET-MN-I01 rev 0.1

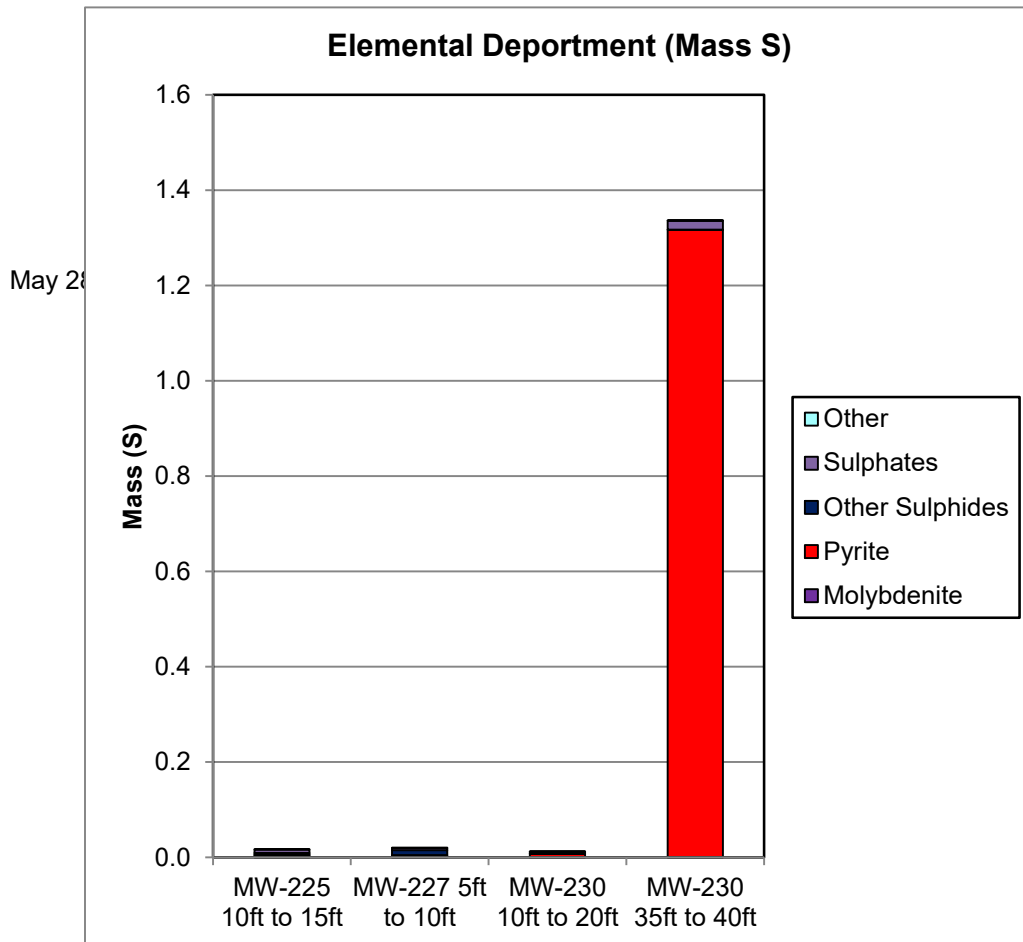
Modals

Survey		CA20I-00000-211-20191-02 / MI7012-DEC25			
Project		WSP-USA			
Sample		MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Median Particle Size (µm)		74	62	66	66
		Sample	Sample	Sample	Sample
Jupdate	Mineral Mass (%)				
	Molybdenite	0.01	0.01	0.00	0.00
	Pyrite	0.01	0.01	0.01	3.08
	Other Sulphides	0.01	0.03	0.00	0.00
	Quartz	40.5	42.1	37.7	40.1
	Plagioclase	13.3	14.7	14.4	15.9
	K-Feldspar	6.86	6.64	6.93	7.58
	Pyroxene/Amphibole	0.44	0.68	0.34	1.56
	Chlorites	1.57	1.78	1.63	1.77
	Biotite	0.42	0.36	0.41	0.63
	Muscovite/Illite	22.5	18.5	23.6	9.10
	Montmorillonite	8.91	7.36	8.11	2.79
	Clays	1.35	0.88	1.46	0.51
	Epidote	0.32	0.63	0.28	0.35
	Other Silicates	0.87	0.62	0.61	0.68
	Fe Oxides/Hydroxides	0.36	0.41	0.43	6.78
	Ilmenite	0.01	0.04	0.03	0.02
	Other Oxides	0.11	0.12	0.14	0.16
	Ankerite	0.03	0.03	0.09	0.21
	Calcite	1.03	3.20	1.31	1.87
	Dolomite	0.88	1.29	2.11	6.37
	Other Carbonates	0.00	0.00	0.00	0.00
	Sulphates	0.05	0.03	0.02	0.12
	Phosphates	0.15	0.17	0.14	0.16
	Other	0.24	0.35	0.24	0.34
	Total	100.0	100.0	100.0	100.0
Mean Line Intercept Length (µm)	Molybdenite	5	5	5	4
	Pyrite	5	7	14	11
	Other Sulphides	9	39	6	5
	Quartz	18	15	18	16
	Plagioclase	11	11	10	14
	K-Feldspar	8	8	8	9
	Pyroxene/Amphibole	5	4	4	9
	Chlorites	5	5	5	5
	Biotite	5	5	5	6
	Muscovite/Illite	6	5	6	5
	Montmorillonite	5	5	5	4
	Clays	4	4	4	4
	Epidote	5	4	5	6
	Other Silicates	7	5	4	5
	Fe Oxides/Hydroxides	6	6	5	12
	Ilmenite	5	12	7	6
	Other Oxides	5	5	6	7
	Ankerite	5	4	7	5
	Calcite	5	6	6	6
	Dolomite	10	8	14	14
	Sulphates	7	8	7	5
	Phosphates	7	6	6	7
	Other	4	4	4	4

Modals Chart

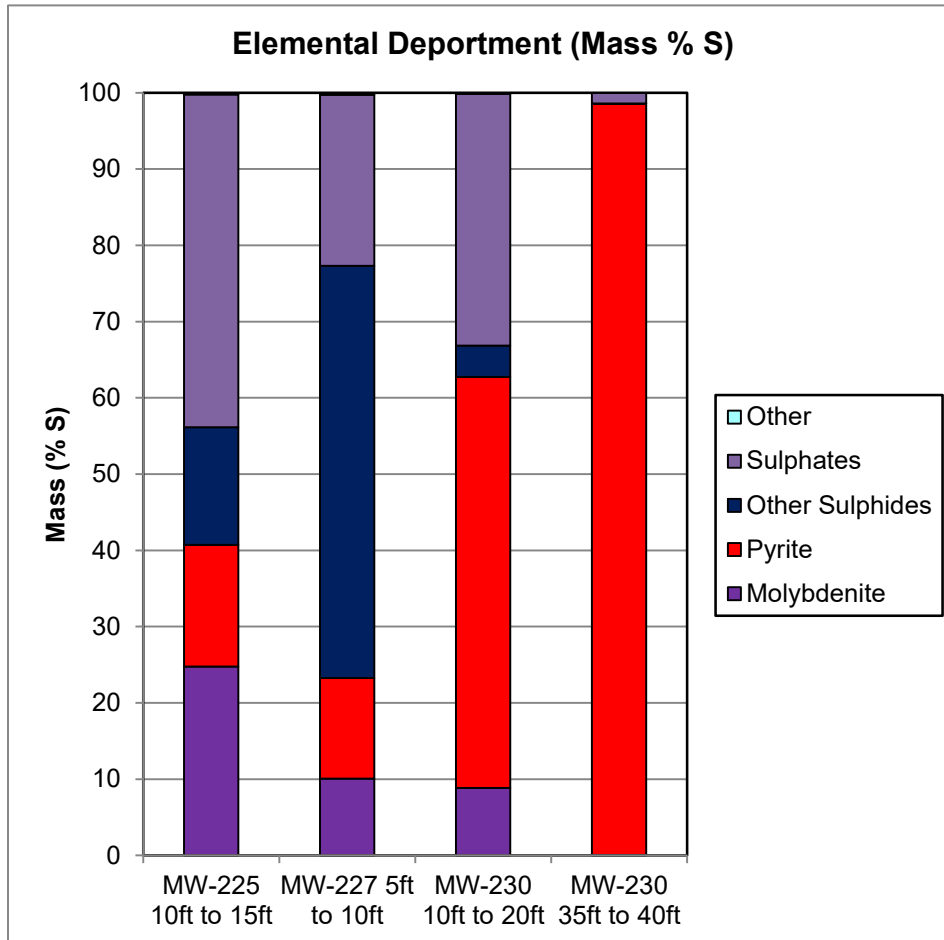


S Department - Absolute



Mineral Name	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Molybdenite	0.00	0.00	0.00	0.00
Pyrite	0.00	0.00	0.01	1.32
Other Sulphides	0.00	0.01	0.00	0.00
Sulphates	0.01	0.00	0.00	0.02
Other	0.00	0.00	0.00	0.00
Total	0.02	0.02	0.01	1.34

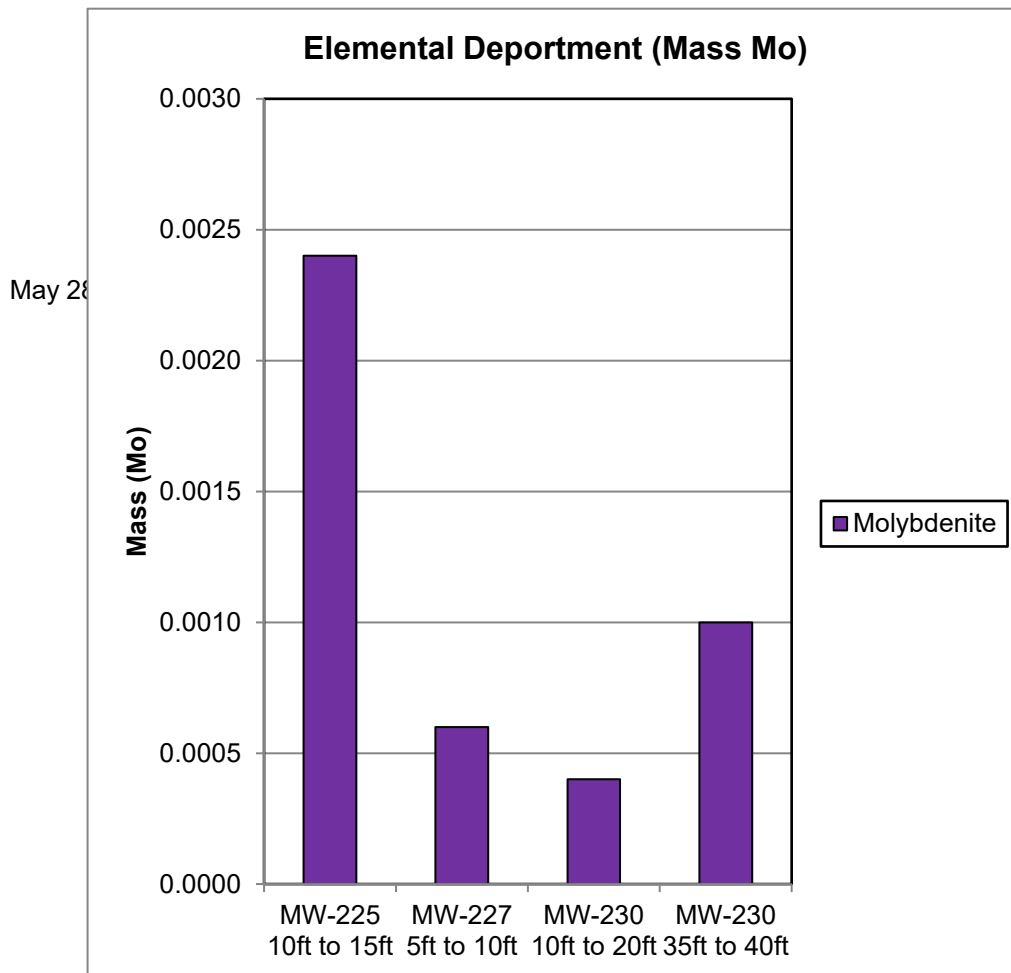
S Department - Normalized



Mineral Name	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Molybdenite	24.8	10.1	8.84	0.07
Pyrite	15.9	13.2	53.9	98.5
Other Sulphides	15.5	54.1	4.13	0.04
Sulphates	43.6	22.4	33.0	1.41
Other	0.21	0.24	0.14	0.00
Total	100.0	100.0	100.0	100.0

High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) -
QT-CA-MIN-MET-MN-I01 rev 0.1

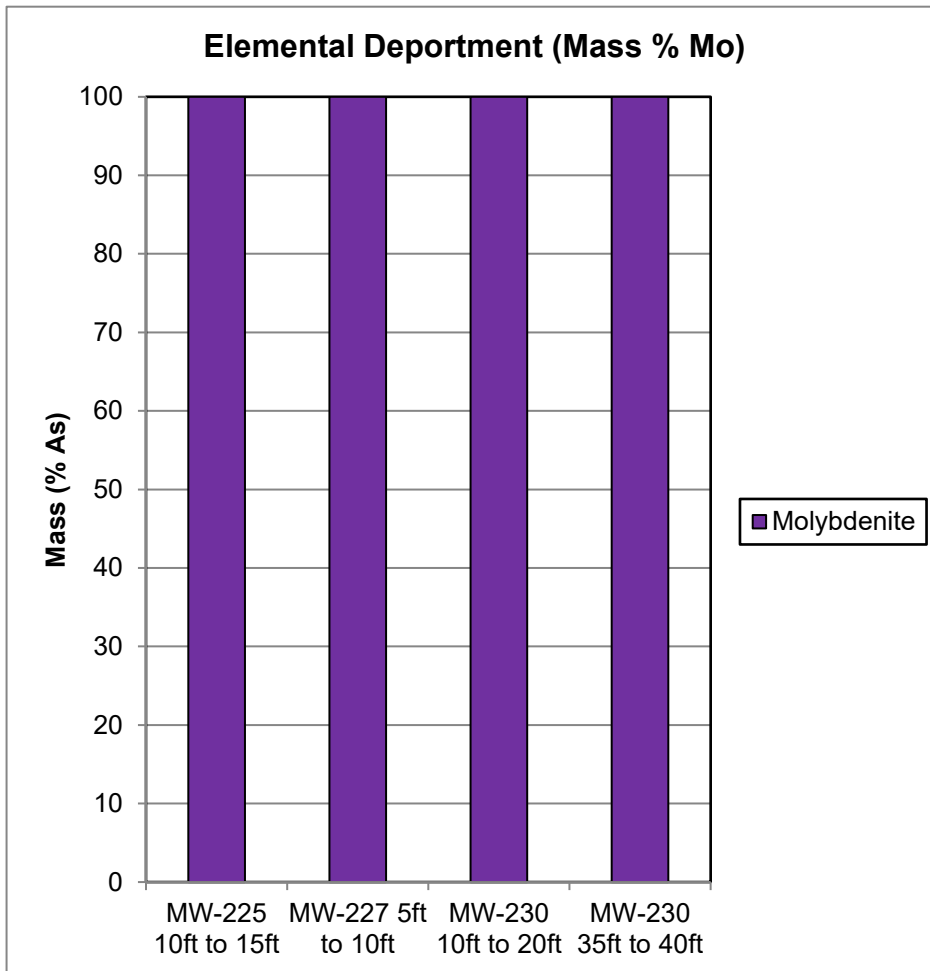
Mo Department - Absolute



Mineral Name	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Molybdenite	0.0024	0.0006	0.0004	0.0010
Total	0.0024	0.0006	0.0004	0.0010

High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) -
QT-CA-MIN-MET-MN-I01 rev 0.1

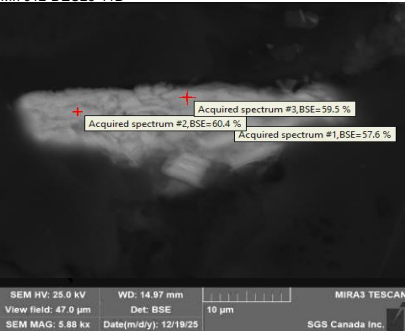
Mo Department - Normalized



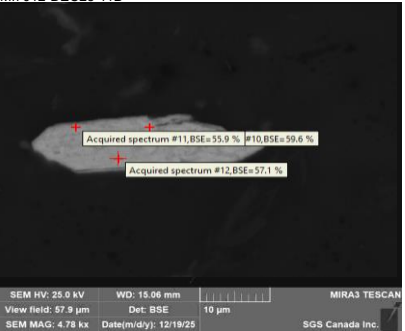
Mineral Name	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Molybdenite	100.0	100.0	100.0	100.0
Total	100.0	100.0	100.0	100.0

SEM-EDS (Manual online)

MW-225 10ft to 15ft
MI7012-DEC25 41B



MW-225 10ft to 15ft
MI7012-DEC25 41B

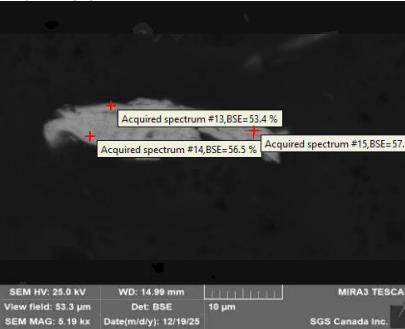


Spectra

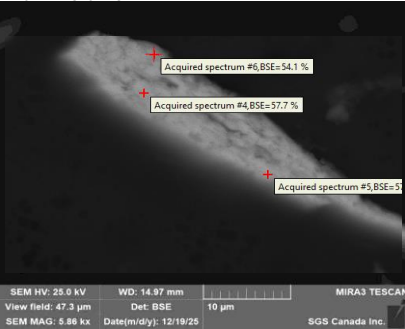
Spectrum	S	Mo	Total
41B_01 Acquired spectrum #1,BSE=57.6%	38.1	61.9	100.0
41B_01 Acquired spectrum #2,BSE=60.4%	37.9	62.1	100.0
41B_01 Acquired spectrum #3,BSE=59.5%	37.9	62.1	100.0

Spectrum	S	Mo	Total
41B_02 Acquired spectrum #10,BSE=59.6%	38.0	62.0	100.0
41B_02 Acquired spectrum #11,BSE=55.9%	37.8	62.2	100.0
41B_02 Acquired spectrum #12,BSE=57.1%	38.0	62.0	100.0

MW-225 10ft to 15ft
MI7012-DEC25 41B



MW-225 10ft to 15ft
MI7012-DEC25 41C

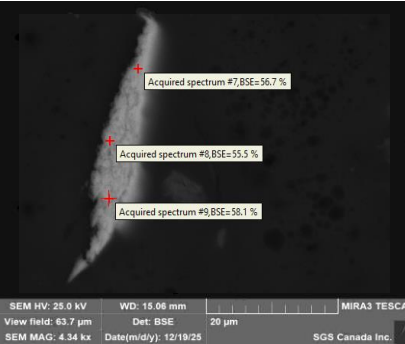


Spectra

Spectrum	S	Mo	Total
41B_03 Acquired spectrum #13,BSE=53.4%	37.6	62.4	100.0
41B_03 Acquired spectrum #14,BSE=56.5%	37.8	62.2	100.0
41B_03 Acquired spectrum #15,BSE=57.5%	37.8	62.2	100.0

Spectrum	S	Mo	Total
41C_01 Acquired spectrum #4,BSE=57.7%	38.0	62.0	100.0
41C_01 Acquired spectrum #5,BSE=55.5%	37.9	62.1	100.0
41C_01 Acquired spectrum #6,BSE=54.1%	37.6	62.4	100.0

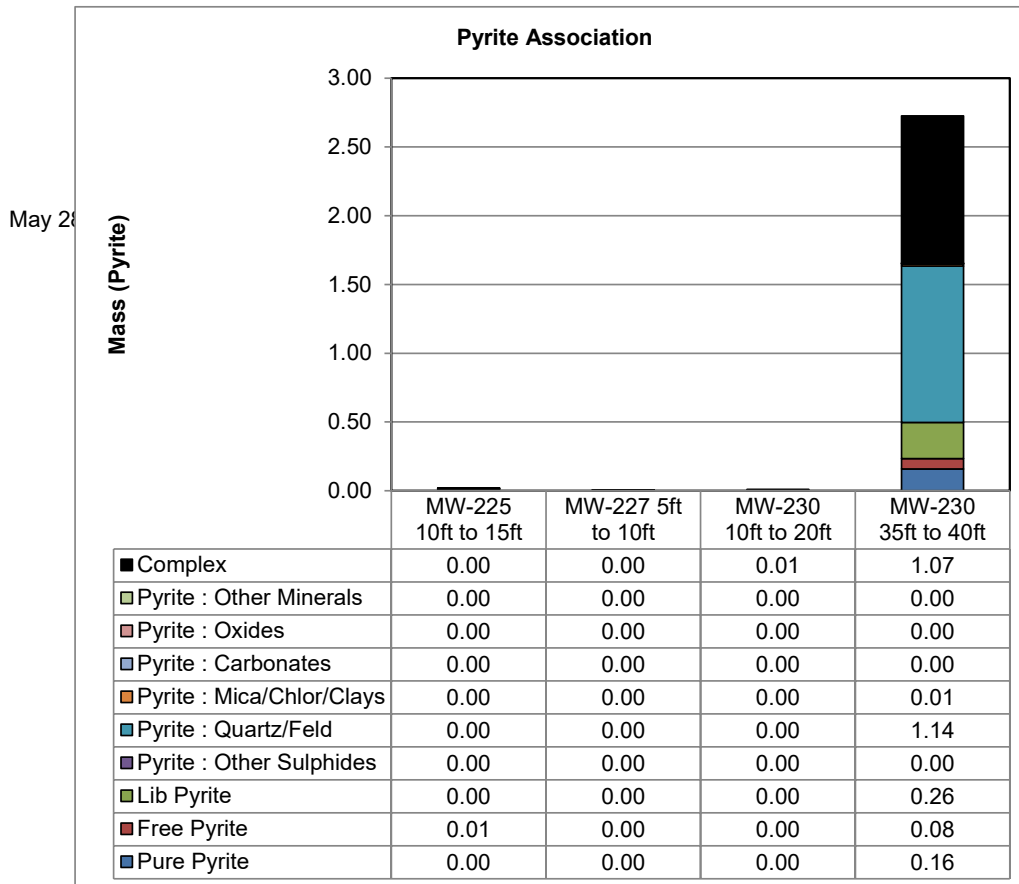
MW-225 10ft to 15ft
MI7012-DEC25 41C



Spectra

Spectrum	S	Mo	Total
41C_02 Acquired spectrum #7,BSE=56.7%	37.7	62.3	100.0
41C_02 Acquired spectrum #8,BSE=55.5%	37.7	62.3	100.0
41C_02 Acquired spectrum #9,BSE=58.1%	38.0	62.0	100.0

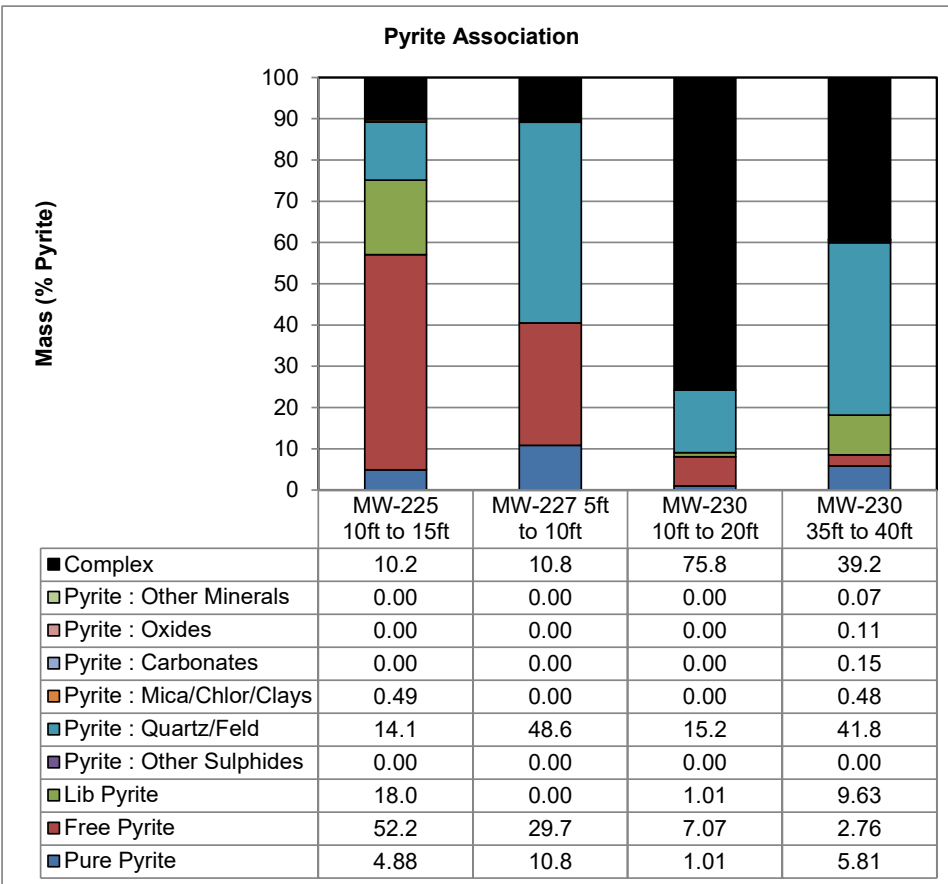
Pyrite Association



Absolute Mass of Pyrite Across Samples

Category	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Pure Pyrite	0.00	0.00	0.00	0.16
Free Pyrite	0.01	0.00	0.00	0.08
Lib Pyrite	0.00	0.00	0.00	0.26
Pyrite : Other Sulphides	0.00	0.00	0.00	0.00
Pyrite : Quartz/Feld	0.00	0.00	0.00	1.14
Pyrite : Mica/Chlor/Clays	0.00	0.00	0.00	0.01
Pyrite : Carbonates	0.00	0.00	0.00	0.00
Pyrite : Oxides	0.00	0.00	0.00	0.00
Pyrite : Other Minerals	0.00	0.00	0.00	0.00
Complex	0.00	0.00	0.01	1.07
Total	0.02	0.00	0.01	2.73

Pyrite Association

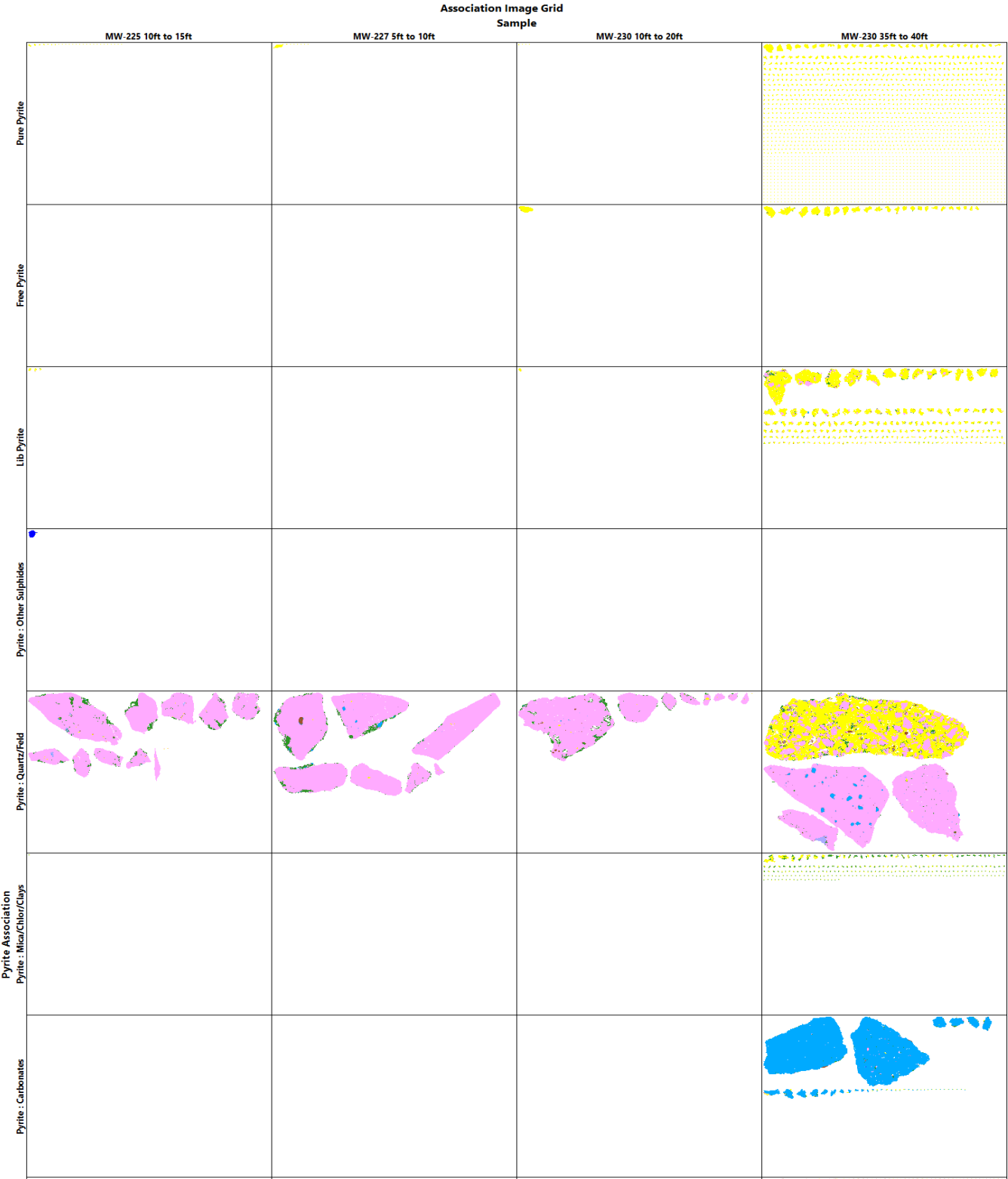


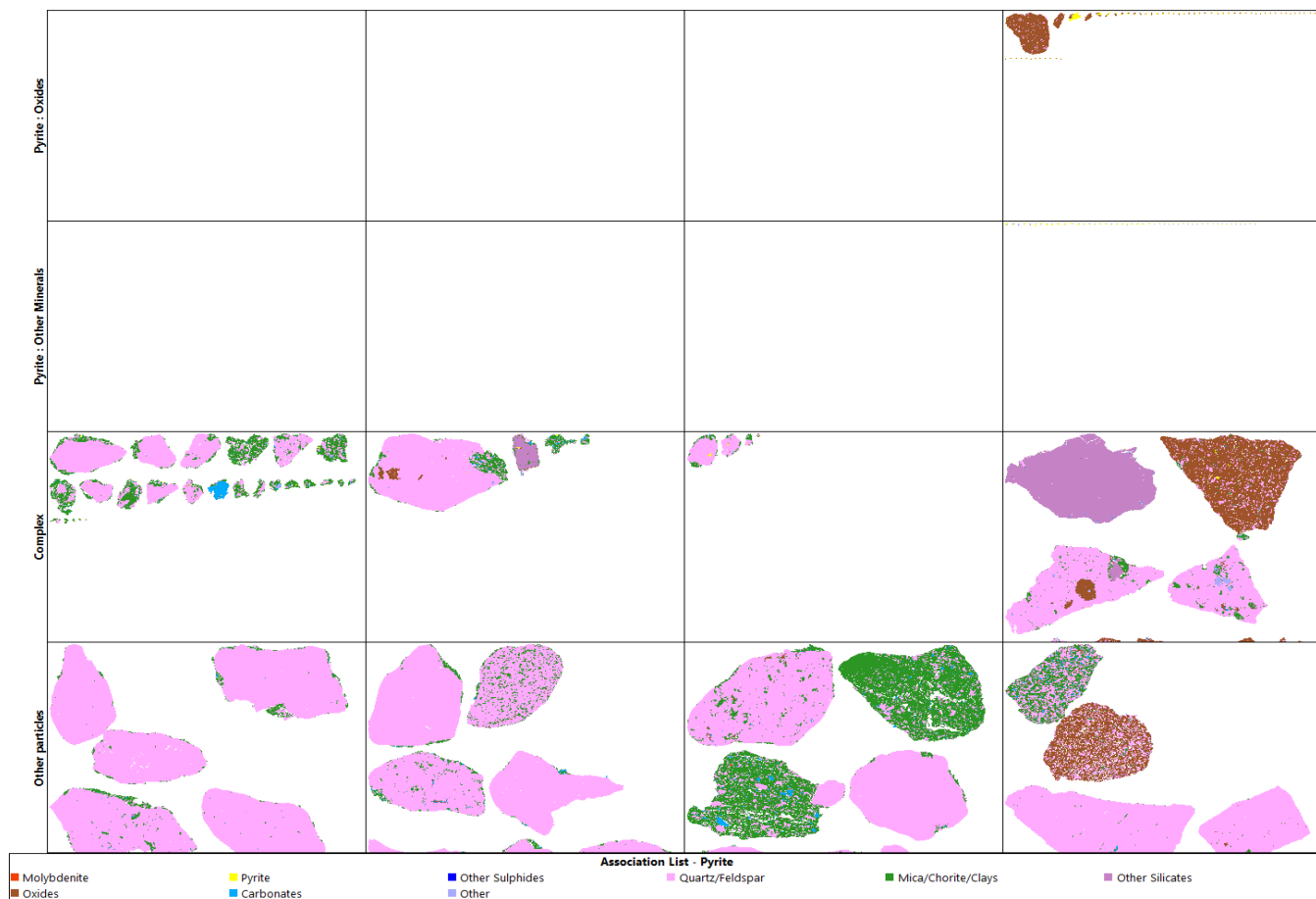
Normalized Mass of Pyrite Across Samples

Category	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Pure Pyrite	4.88	10.8	1.01	5.81
Free Pyrite	52.2	29.7	7.07	2.76
Lib Pyrite	18.0	0.00	1.01	9.63
Pyrite : Other Sulphides	0.00	0.00	0.00	0.00
Pyrite : Quartz/Feld	14.1	48.6	15.2	41.8
Pyrite : Mica/Chlor/Clays	0.49	0.00	0.00	0.48
Pyrite : Carbonates	0.00	0.00	0.00	0.15
Pyrite : Oxides	0.00	0.00	0.00	0.11
Pyrite : Other Minerals	0.00	0.00	0.00	0.07
Complex	10.2	10.8	75.8	39.2
Total	100.0	100.0	100.0	100.0

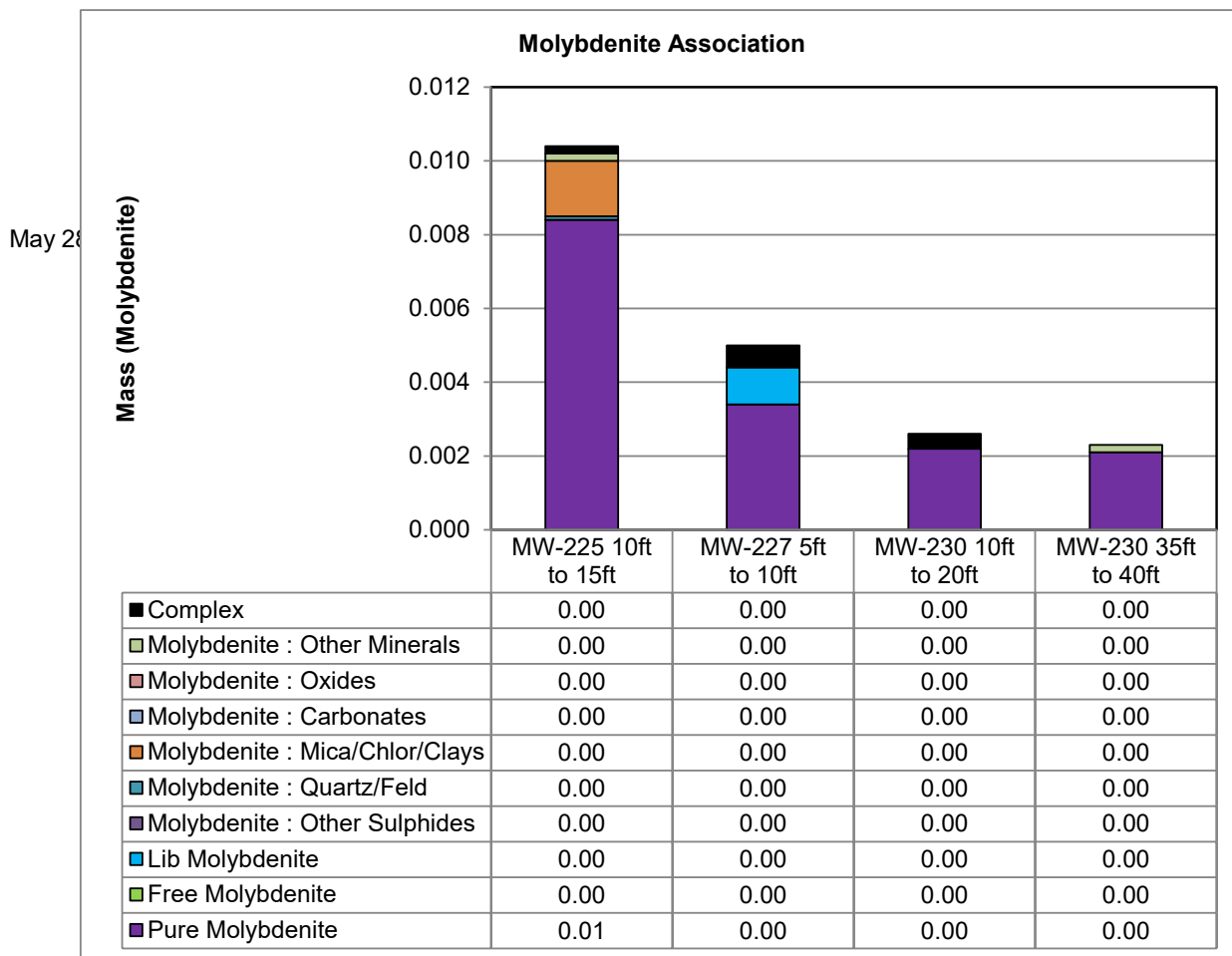
High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) -
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Pyrite Association Image Grid





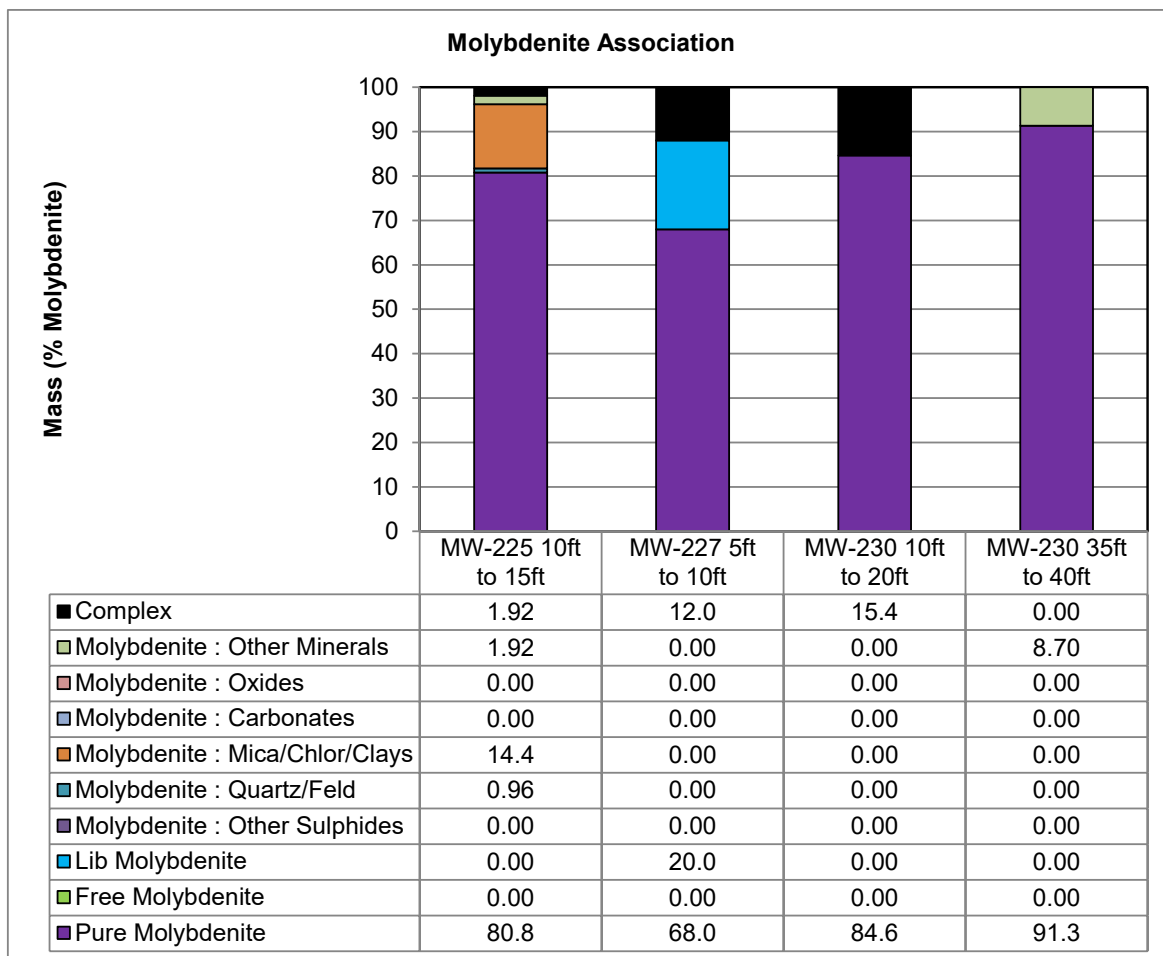
Molybdenite Association



Absolute Mass of Molybdenite Across Samples

Category	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Pure Molybdenite	0.01	0.00	0.00	0.00
Free Molybdenite	0.00	0.00	0.00	0.00
Lib Molybdenite	0.00	0.00	0.00	0.00
Molybdenite : Other Sulphides	0.00	0.00	0.00	0.00
Molybdenite : Quartz/Feld	0.00	0.00	0.00	0.00
Molybdenite : Mica/Chlor/Clays	0.00	0.00	0.00	0.00
Molybdenite : Carbonates	0.00	0.00	0.00	0.00
Molybdenite : Oxides	0.00	0.00	0.00	0.00
Molybdenite : Other Minerals	0.00	0.00	0.00	0.00
Complex	0.00	0.00	0.00	0.00
Total	0.01	0.01	0.00	0.00

Molybdenite Association

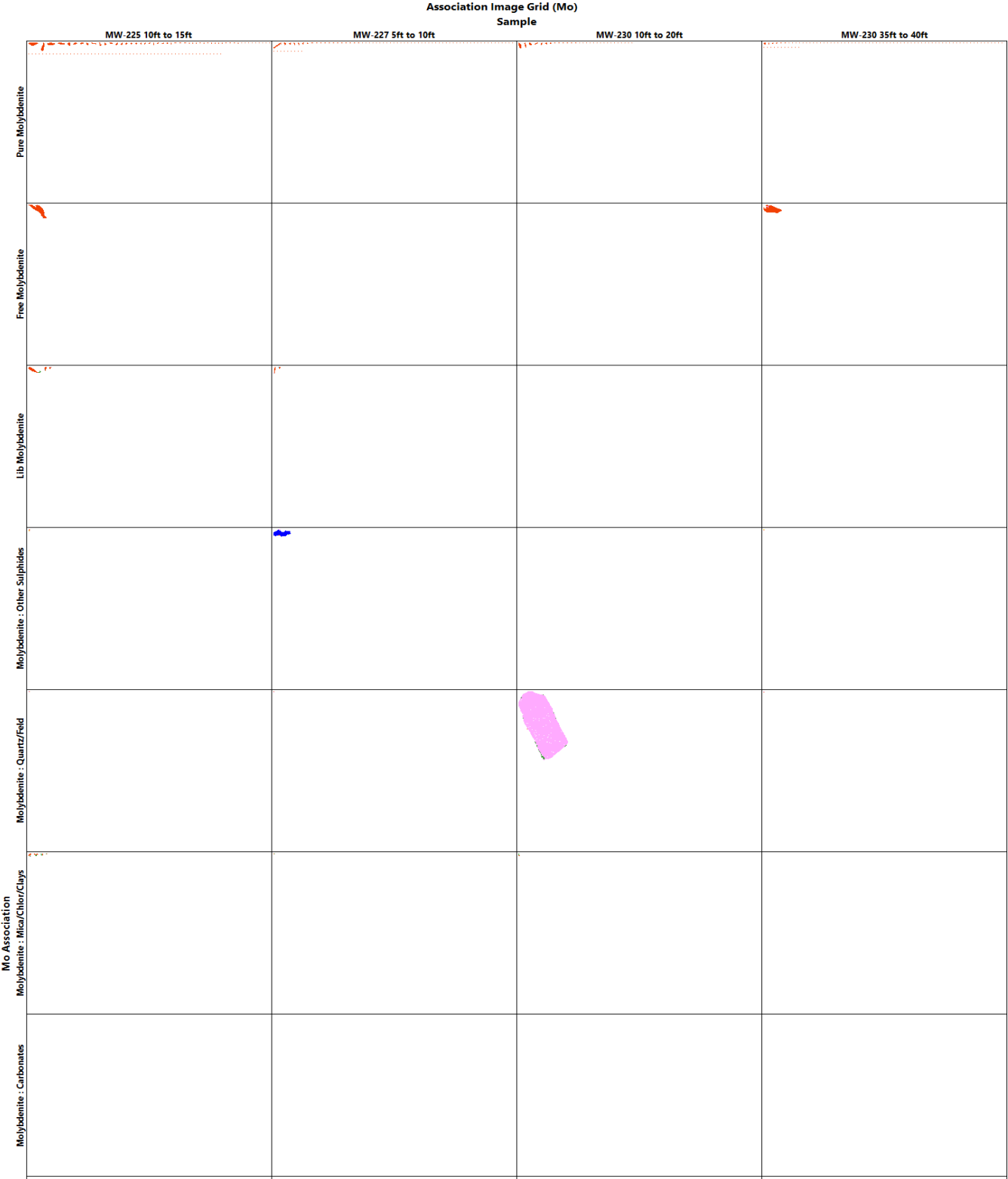


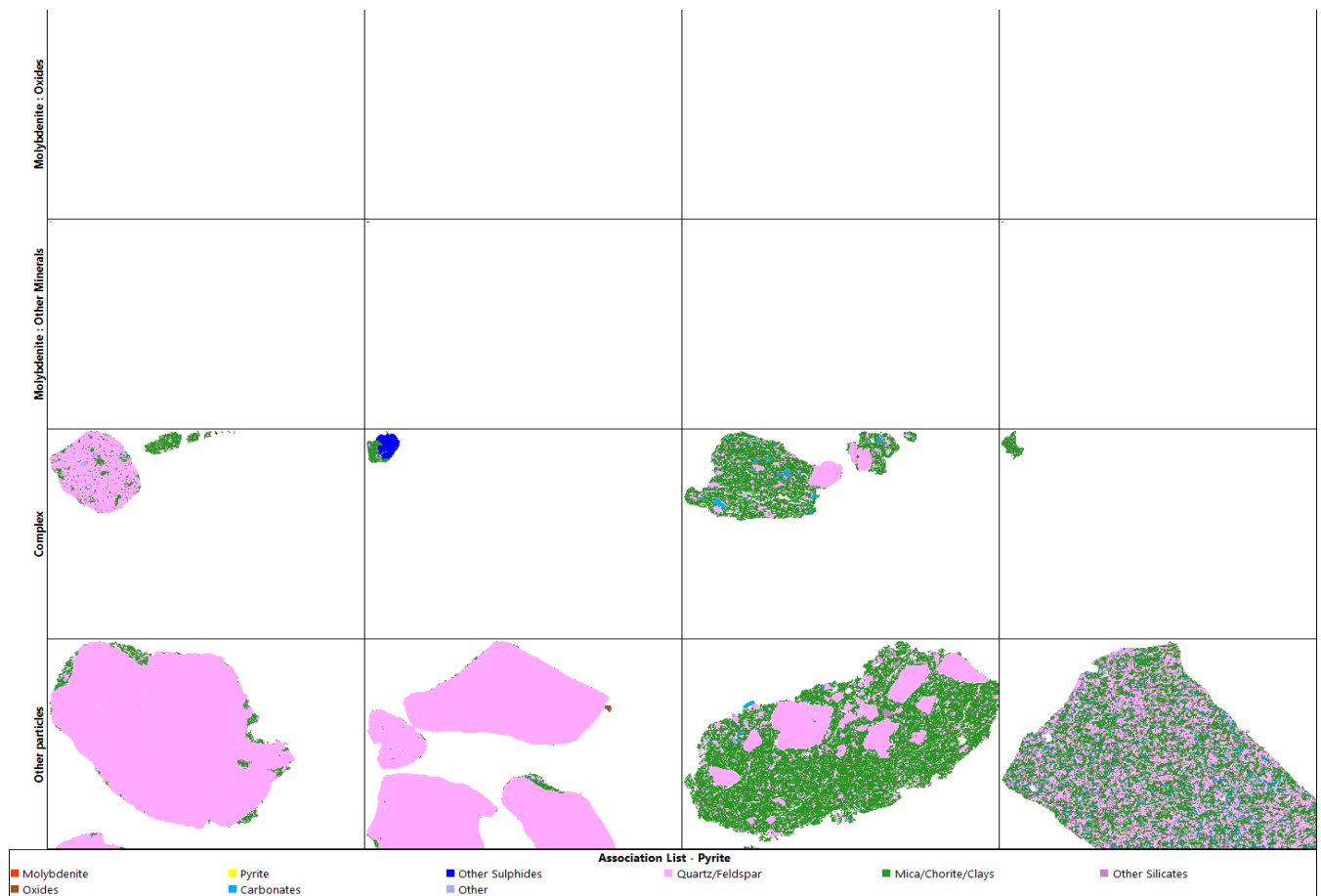
Normalized Mass of Molybdenite Across Samples

Category	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Pure Molybdenite	80.8	68.0	84.6	91.3
Free Molybdenite	0.00	0.00	0.00	0.00
Lib Molybdenite	0.00	20.0	0.00	0.00
Molybdenite : Other Sulphides	0.00	0.00	0.00	0.00
Molybdenite : Quartz/Feld	0.96	0.00	0.00	0.00
Molybdenite : Mica/Chlor/Clays	14.4	0.00	0.00	0.00
Molybdenite : Carbonates	0.00	0.00	0.00	0.00
Molybdenite : Oxides	0.00	0.00	0.00	0.00
Molybdenite : Other Minerals	1.92	0.00	0.00	8.70
Complex	1.92	12.0	15.4	0.00
Total	100.0	100.0	100.0	100.0

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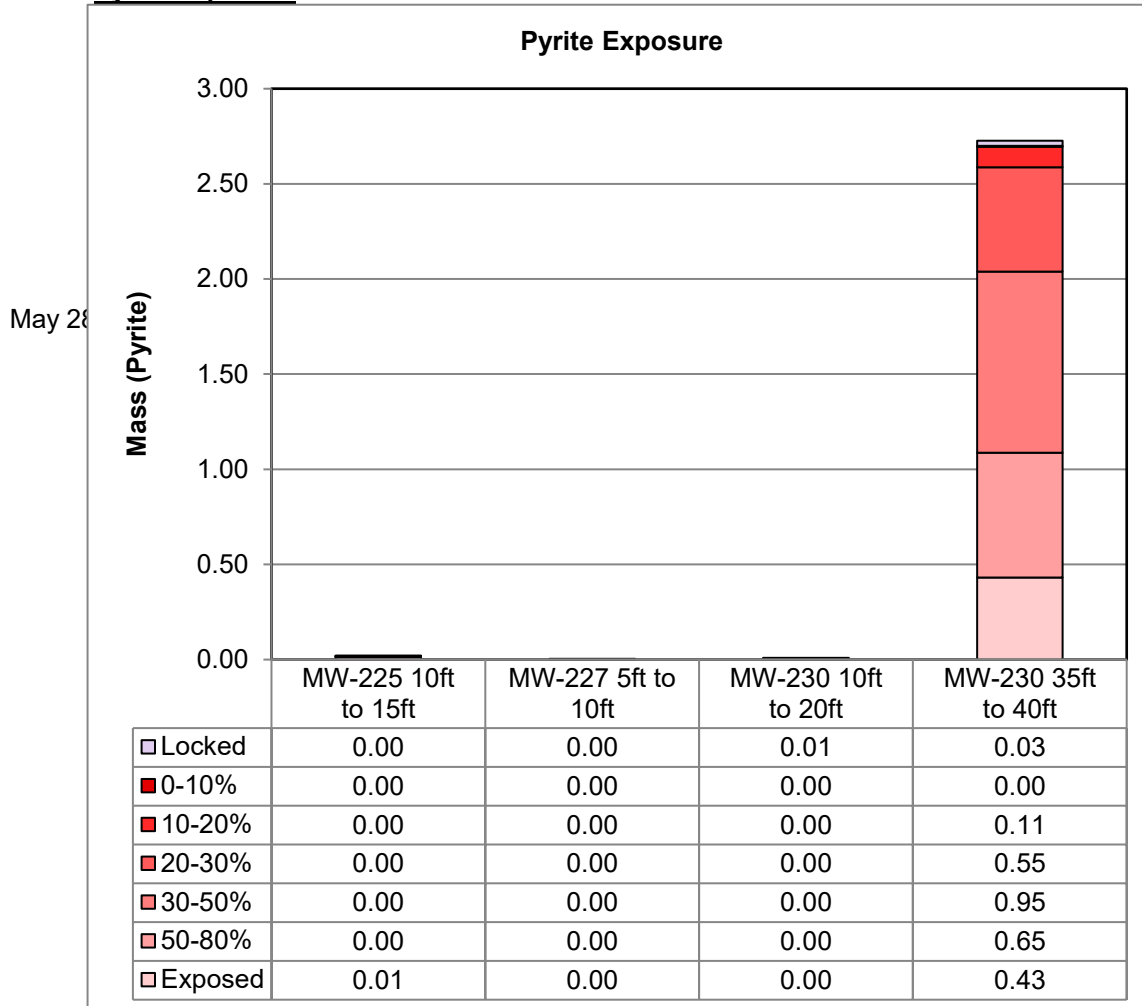
Molybdenite Association Image Grid





High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) - QT-CA-MIN-MET-MN-I01 rev 0.1

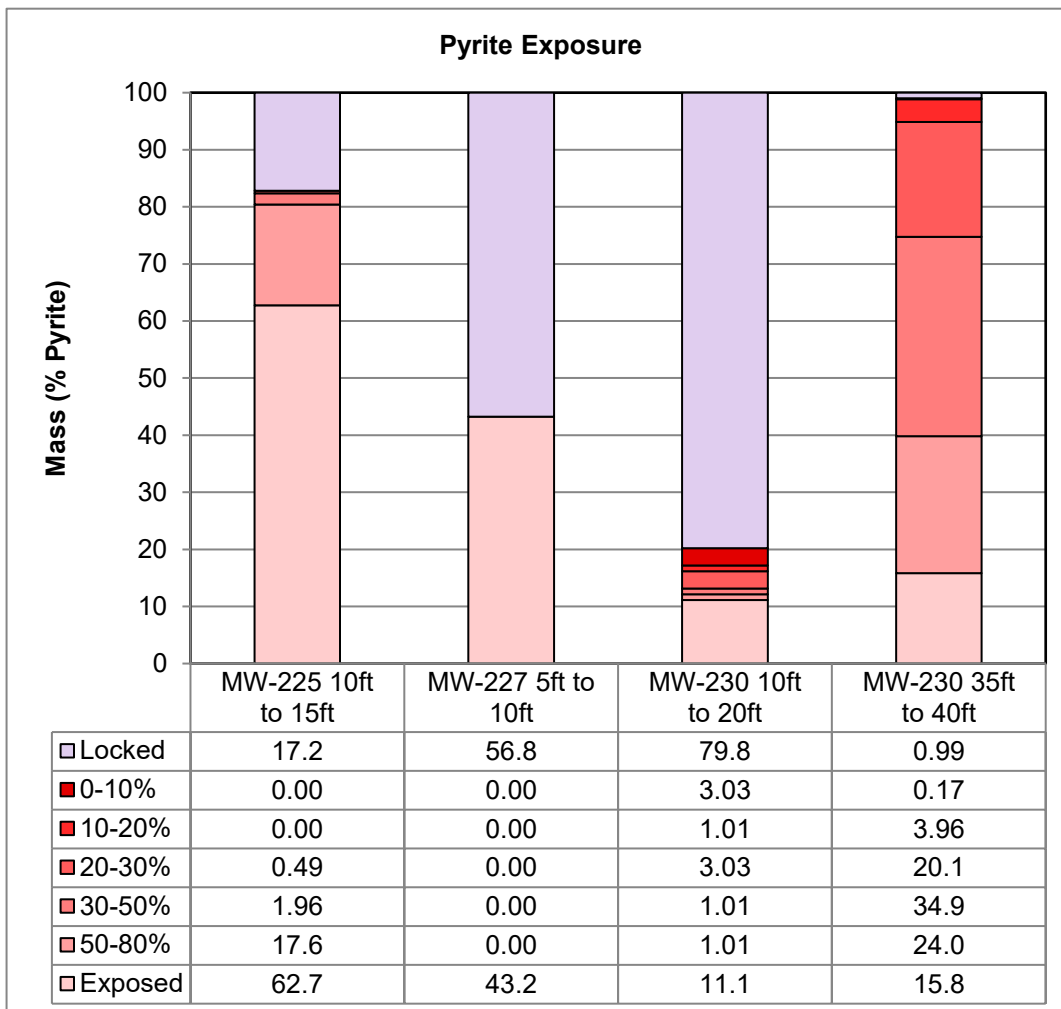
Pyrite Exposure



Absolute Mass of Pyrite Across Samples

Exposure	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Exposed	0.01	0.00	0.00	0.43
50-80%	0.00	0.00	0.00	0.65
30-50%	0.00	0.00	0.00	0.95
20-30%	0.00	0.00	0.00	0.55
10-20%	0.00	0.00	0.00	0.11
0-10%	0.00	0.00	0.00	0.00
Locked	0.00	0.00	0.01	0.03
Total	0.02	0.00	0.01	2.73

Pyrite Exposure

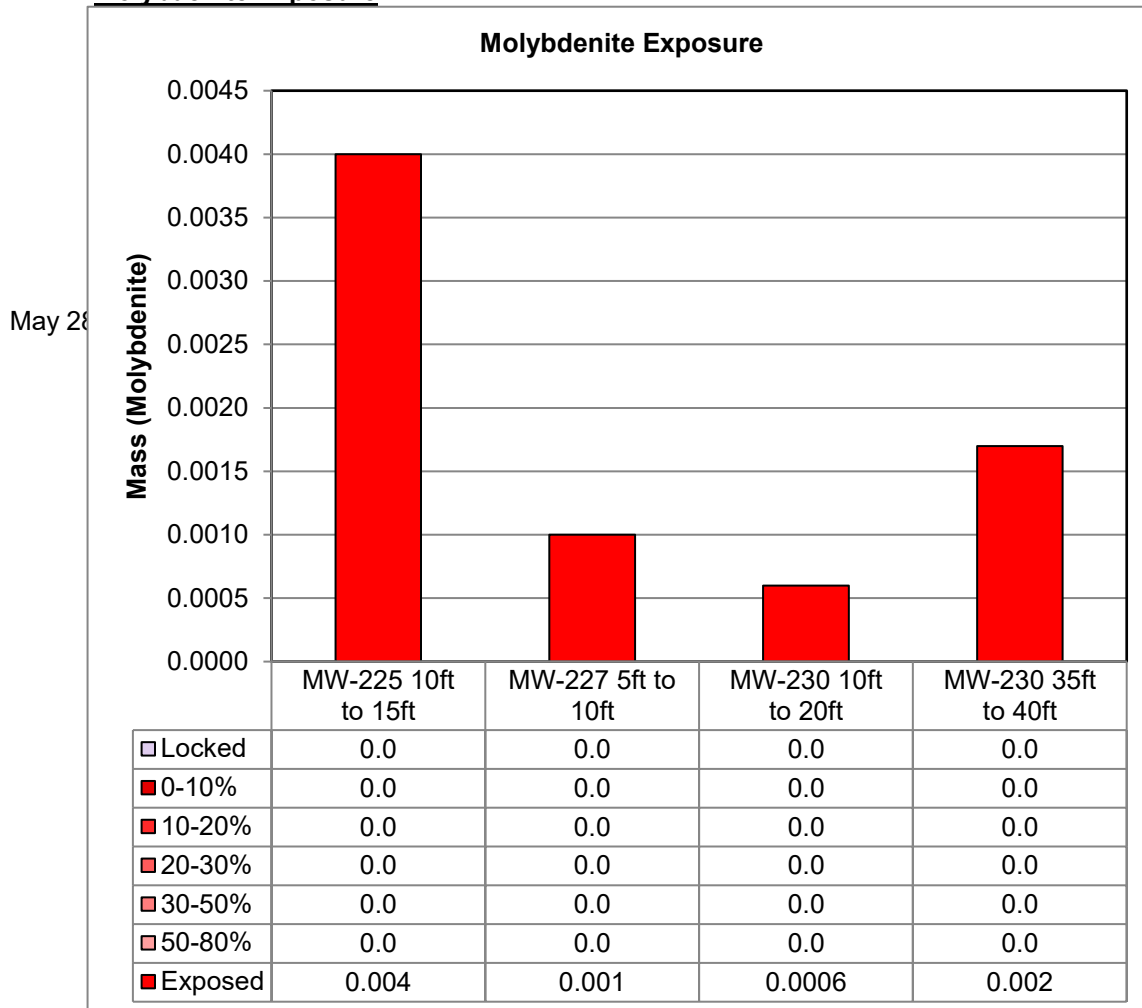


Normalized Mass of Pyrite Across Samples

Exposure	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Exposed	62.7	43.2	11.1	15.8
50-80%	17.6	0.00	1.01	24.0
30-50%	1.96	0.00	1.01	34.9
20-30%	0.49	0.00	3.03	20.1
10-20%	0.00	0.00	1.01	3.96
0-10%	0.00	0.00	3.03	0.17
Locked	17.2	56.8	79.8	0.99
Total	100.0	100.0	100.0	100.0

High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) - QT-CA-MIN-MET-MN-I01 rev 0.1

Molybdenite Exposure

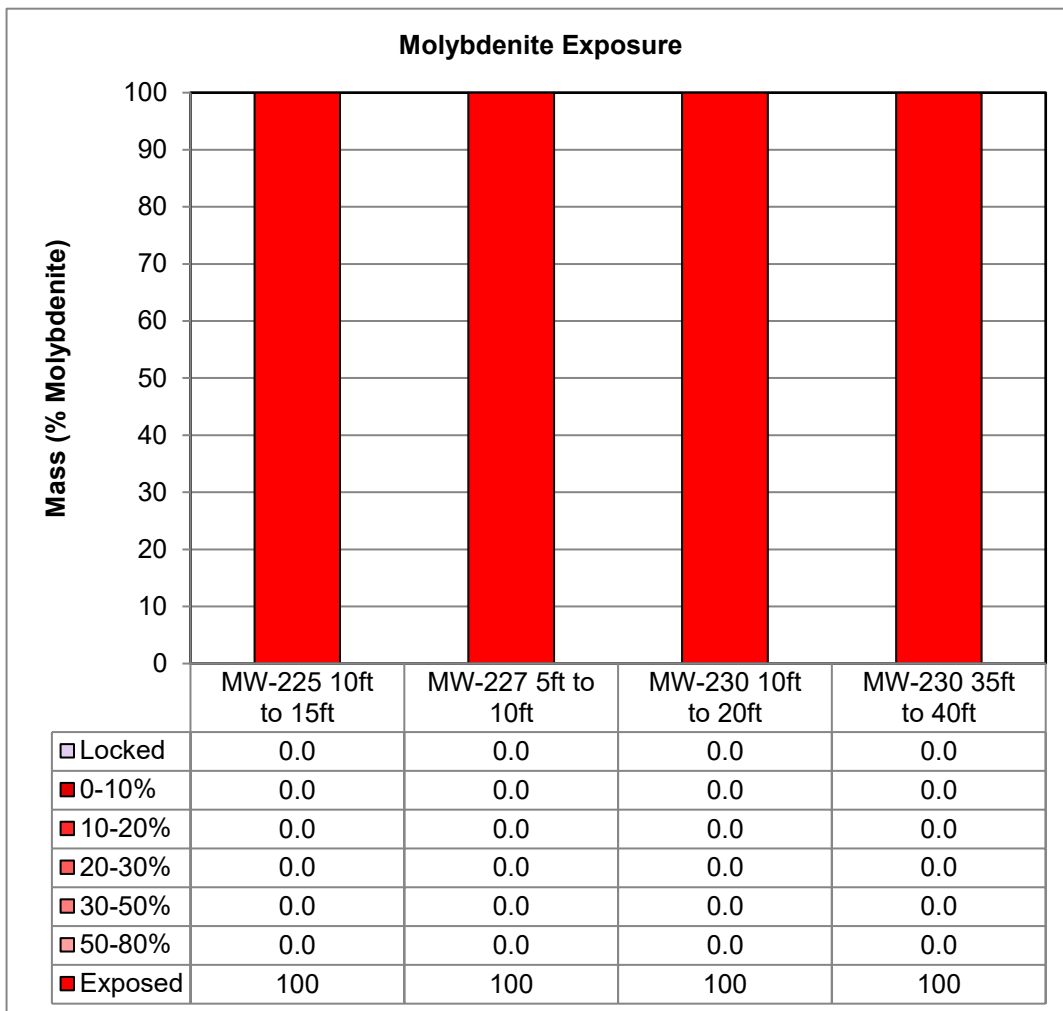


Absolute Mass of Molybdenite Across Samples

Exposure	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Exposed	0.004	0.001	0.0006	0.002
50-80%	0.0	0.0	0.0	0.0
30-50%	0.0	0.0	0.0	0.0
20-30%	0.0	0.0	0.0	0.0
10-20%	0.0	0.0	0.0	0.0
0-10%	0.0	0.0	0.0	0.0
Locked	0.0	0.0	0.0	0.0
Total	0.004	0.001	0.0006	0.002

High Definition Mineralogical Analysis using TIMA (TESCAN Integrated Mineral Analyzer) - QT-CA-MIN-MET-MN-I01 rev 0.1

Molybdenite Exposure

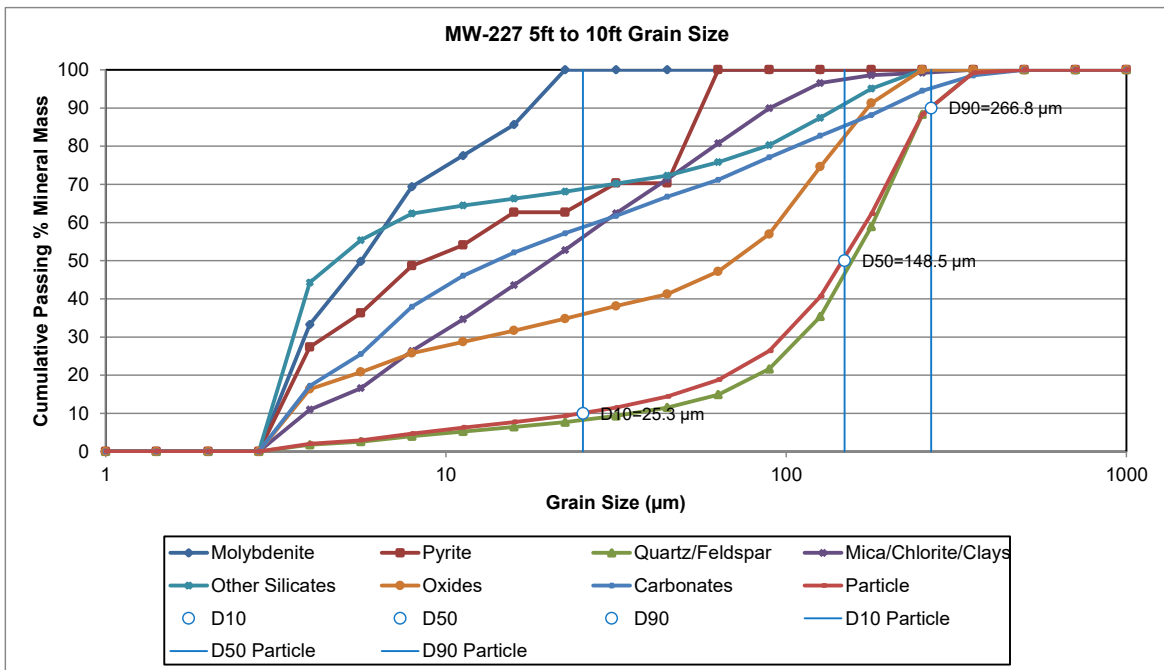
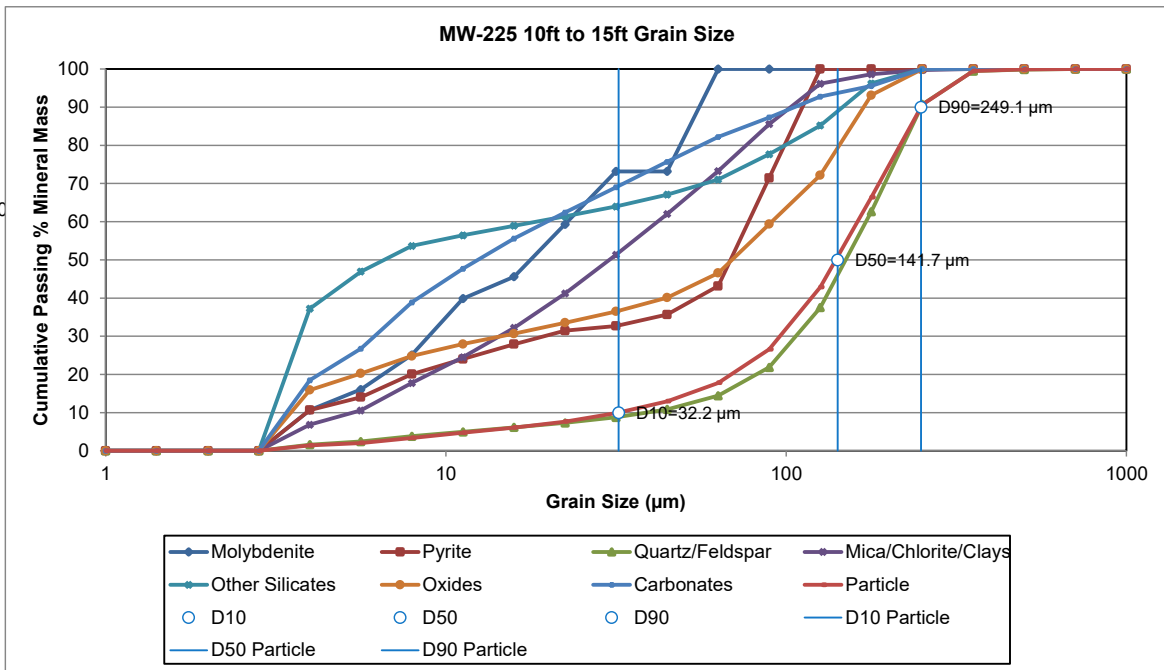


Normalized Mass of Molybdenite Across Samples

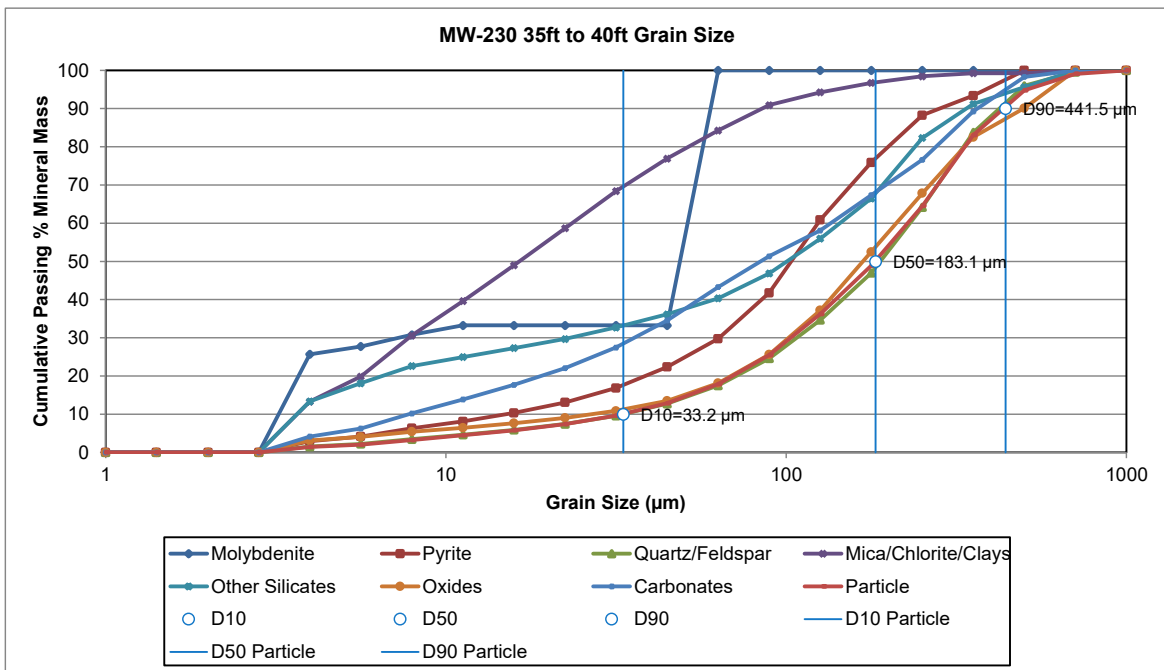
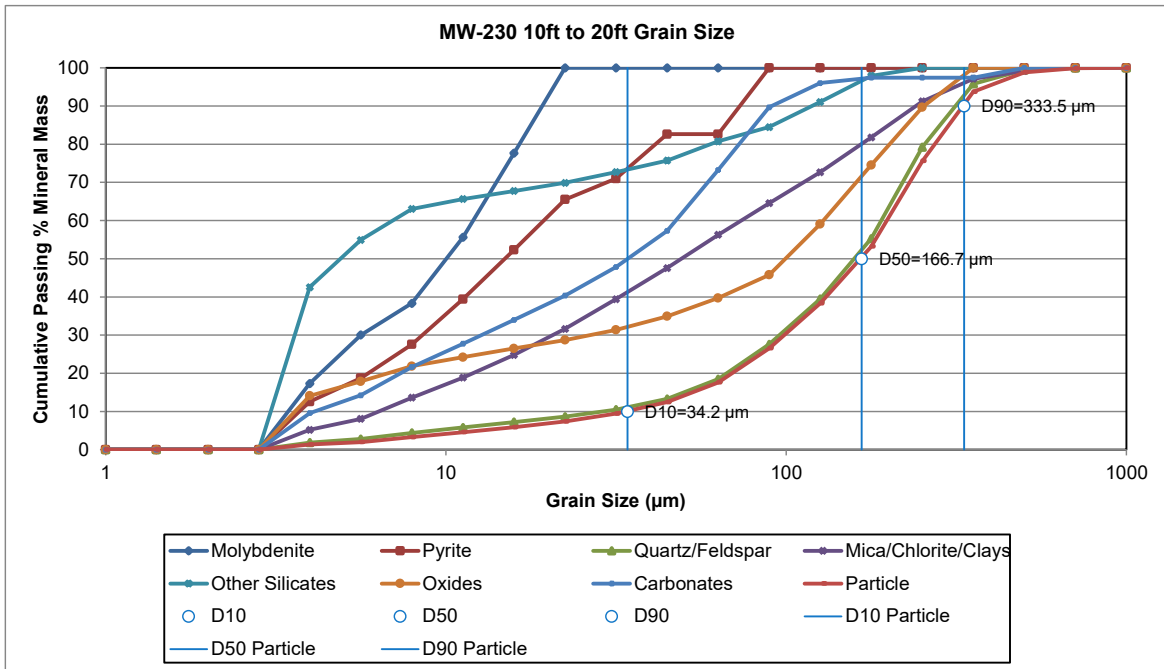
Exposure	MW-225 10ft to 15ft	MW-227 5ft to 10ft	MW-230 10ft to 20ft	MW-230 35ft to 40ft
Exposed	100	100	100	100
50-80%	0.0	0.0	0.0	0.0
30-50%	0.0	0.0	0.0	0.0
20-30%	0.0	0.0	0.0	0.0
10-20%	0.0	0.0	0.0	0.0
0-10%	0.0	0.0	0.0	0.0
Locked	0.0	0.0	0.0	0.0
Total	100	100	100	100

Cumulative Passing Grain Size Distribution

May 28, 20



Cumulative Passing Grain Size Distribution



Grain Stats Table

	Statistic (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-225 10ft to 15ft	Minimum	3	3	3	3	3	3	3	3
	P10	3	3	40	5	3	3	3	3
	P20	7	8	84	9	3	5	5	5
	P30	10	17	110	14	3	14	6	6
	P40	11	59	131	21	5	43	8	8
	Median	20	78	152	30	6	72	12	12
	P60	23	83	172	42	18	90	20	20
	P70	23	83	193	57	59	116	33	33
	P80	46	114	217	76	98	151	56	56
	P90	46	114	249	101	149	167	102	102
	Maximum	46	114	667	294	214	233	238	238
	Mean	6	5	8	6	4	4	5	5
	Statistic (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-227 5ft to 10ft	Minimum	3	3	3	3	3	3	3	3
	P10	3	3	36	3	3	3	3	3
	P20	3	3	84	6	3	5	5	5
	P30	3	5	112	9	3	13	6	6
	P40	5	6	136	14	3	37	8	8
	Median	6	8	159	20	5	70	14	14
	P60	8	14	180	29	7	93	28	28
	P70	8	24	202	42	30	112	58	58
	P80	12	49	226	61	88	136	106	106
	P90	16	49	258	89	132	172	201	201
	Maximum	16	49	480	314	218	234	358	358
	Mean	4	4	7	5	4	4	5	5
	Statistic (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-230 10ft to 20ft	Minimum	3	3	3	3	3	3	3	3
	P10	3	3	29	6	3	3	5	5
	P20	5	6	68	12	3	7	8	8
	P30	5	8	96	21	3	27	12	12
	P40	8	11	128	33	3	65	22	22
	Median	9	14	160	49	5	104	34	34
	P60	12	19	191	73	7	128	48	48
	P70	12	27	221	111	22	158	59	59
	P80	17	40	254	166	60	197	73	73
	P90	17	65	300	239	115	253	90	90
	Maximum	17	65	556	595	195	279	460	460
	Mean	5	5	7	6	4	4	5	5
	Statistic (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-230 35ft to 40ft	Minimum	3	3	3	3	3	3	3	3
	P10	3	15	33	3	3	27	8	8
	P20	3	39	72	6	6	71	19	19
	P30	6	63	108	8	23	103	36	36
	P40	48	84	148	11	61	136	55	55
	Median	48	105	191	16	103	169	83	83
	P60	48	125	233	23	142	203	139	139
	P70	48	150	279	34	195	266	198	198
	P80	48	215	326	51	240	323	269	269
	P90	48	293	409	84	341	497	362	362
	Maximum	48	410	817	515	528	689	617	617
	Mean	4	7	8	5	5	6	6	6
	Statistic (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle

Mineral Values are Cumulative Passing % Mineral Mass

	Top size (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-225 10ft to 15ft	1	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	11	11	2	7	37	16	18	1
	6	16	14	2	11	47	20	27	2
	8	25	20	4	18	54	25	39	3
	11	40	24	5	25	56	28	48	5
	16	46	28	6	32	59	31	56	6
	22	59	31	7	41	61	34	62	8
	32	73	33	9	51	64	36	69	10
	45	73	36	11	62	67	40	76	13
	63	100	43	14	73	71	47	82	18
	89	100	71	22	86	78	59	87	27
	126	100	100	38	96	85	72	93	43
	178	100	100	63	99	96	93	96	66
	251	100	100	91	100	100	100	100	91
	355	100	100	99	100	100	100	100	99
	501	100	100	100	100	100	100	100	100
	708	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	Top size (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-227 5ft to 10ft	1	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	33	27	2	11	44	16	17	2
	6	50	36	3	17	55	21	26	3
	8	69	49	4	26	62	26	38	5
	11	78	54	5	35	64	29	46	6
	16	86	63	6	44	66	32	52	8
	22	100	63	8	53	68	35	57	9
	32	100	70	9	62	70	38	62	11
	45	100	70	12	71	72	41	67	14
	63	100	100	15	81	76	47	71	19
	89	100	100	22	90	80	57	77	26
	126	100	100	35	97	87	75	83	41
	178	100	100	59	99	95	91	88	62
	251	100	100	88	99	100	100	95	88
	355	100	100	99	100	100	100	99	99
	501	100	100	100	100	100	100	100	100
	708	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	Top size (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-230 10ft to 20ft	1	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	17	13	2	5	43	14	10	1
	6	30	19	3	8	55	18	14	2
	8	38	28	4	14	63	22	22	3
	11	56	39	6	19	66	24	28	5
	16	78	52	7	25	68	27	34	6
	22	100	66	9	32	70	29	40	7
	32	100	71	10	39	73	31	48	9
	45	100	83	13	48	76	35	57	12
	63	100	83	18	56	81	40	73	18
	89	100	100	28	65	84	46	90	27
	126	100	100	39	73	91	59	96	38
	178	100	100	55	82	98	75	97	53
	251	100	100	79	91	100	90	97	76
	355	100	100	96	97	100	100	97	94
	501	100	100	99	99	100	100	100	99
	708	100	100	100	100	100	100	100	100
	1000	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	Top size (µm)	Molybdenite	Pyrite	Quartz/Feldspar	Mica/Chlorite/Clays	Other Silicates	Oxides	Carbonates	Particle
MW-230 35ft to 40ft	1	0	0	0	0	0	0	0	0
	1	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0
	4	26	3	2	13	13	3	4	1
	6	28	4	2	20	18	4	6	2
	8	31	6	3	31	23	5	10	3
	11	33	8	5	40	25	6	14	4
	16	33	10	6	49	27	8	18	6
	22	33	13	7	59	30	9	22	7
	32	33	17	10	68	33	11	27	10
	45	33	22	13	77	36	13	35	13
	63	100	30	18	84	40	18	43	18
	89	100	42	25	91	47	26	51	25
	126	100	61	35	94	56	37	58	36
	178	100	76	47	97	66	52	67	49
	251	100	88	64	98	82	68	77	65
	355	100	93	84	99	91	83	89	83
	501	100	100	96	99	96	90	98	95
	708	100	100	100	100	100	100	100	99
	1000	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100

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Median P80 Table

Sample	MW-225 10ft to 15ft		MW-227 5ft to 10ft		MW-230 10ft to 20ft		MW-230 35ft to 40ft	
Grain Size (µm)	Median	P80	Median	P80	Median	P80	Median	P80
Molybdenite	20	46	6	12	9	17	48	48
Pyrite	78	114	8	49	14	40	105	215
Quartz/Feldspar	152	217	159	226	160	254	191	326
Mica/Chlorite/Clays	30	76	20	61	49	166	16	51
Other Silicates	6	98	5	88	5	60	103	240
Oxides	72	151	70	136	104	197	169	323
28, 2026 (Updated July 09, 2	12	56	14	106	34	73	83	269
Particle	12	56	14	106	34	73	83	269

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