GR SILVER MINING LTD

# National Instrument (NI) 43-101 2023 Technical Report and Mineral Resource Update for the Plomosas Project

## Sinaloa State, Mexico


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ACS

## Contents


**1 Summary ... 1-1**
1.1 Access and Location ... 1-1
1.2 History ... 1-1
1.2.1 Plomosas Property ... 1-1
1.2.2 San Marcial Property ... 1-2
1.2.3 La Trinidad Property ... 1-3
1.3 Mineralization ... 1-3
1.4 Exploration ... 1-5
1.5 Geology ... 1-5
1.6 Drilling ... 1-6
1.7 Mineral Resource Estimate ... 1-6
1.8 Conclusions and Recommendations ... 1-8
**2 Introduction ... 2-1**
2.1 Terms of Reference ... 2-1
2.2 Qualified Persons ... 2-1
2.3 Information Sources and References ... 2-1
**3 Reliance on Other Experts ... 3-1**
3.1 Mineral Tenure ... 3-1
**4 Property Description and Location ... 4-1**
4.1 Location ... 4-1
4.2 Land Tenure and Underlying Agreements ... 4-2
4.3 Permitting Considerations ... 4-10
4.4 Environmental Considerations ... 4-11
4.5 Social and Community Relations ... 4-12
4.6 Comment on Property Description and Location ... 4-12
**5 Accessibility, Climate, Local Resources, Infrastructure and Physiography ... 5-1**
5.1 Climate ... 5-2
5.2 Local Resources and Infrastructure ... 5-3
5.3 Physiography ... 5-6
**6 History ... 6-1**
6.1 Plomosas Mine Area ... 6-1
6.2 San Marcial Area ... 6-3
6.3 La Trinidad Area ... 6-3
**7 Geological Setting and Mineralization ... 7-1**
7.1 Regional Geology ... 7-1
7.1.1 Late Cretaceous to Early Eocene—Lower Volcanic Complex ... 7-2
7.1.2 Late Eocene to Mid Miocene—Upper Volcanic Supergroup ... 7-2
7.1.3 Structural Setting ... 7-2
7.2 Local Geology ... 7-8
7.2.1 Geology of the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas ... 7-11
7.3 Structure ... 7-16
7.3.1 San Marcial Area ... 7-16
7.3.2 Plomosas Mine Area ... 7-19
7.3.3 San Juan–La Colorada Area ... 7-22

7.4 Mineralization and Alteration ....... 7-24
7.4.1 San Marcial Area ....... 7-25
7.4.2 Plomosas Mine Area ....... 7-29
7.4.3 San Juan–La Colorada Area ....... 7-31
**8 Deposit Types ....... 8-1**
**9 Exploration ....... 9-1**
9.1 Geophysical Surveys ....... 9-2
9.1.1 San Marcial Area ....... 9-2
9.2 Surface Mapping ....... 9-8
9.2.1 San Marcial Area ....... 9-8
9.2.2 Plomosas Mine Area ....... 9-12
9.2.3 San Juan–La Colorada Area ....... 9-12
9.3 Underground Mapping and Sampling ....... 9-12
9.3.1 San Marcial Area ....... 9-12
9.3.2 Plomosas Mine Area ....... 9-13
9.3.3 San Juan–La Colorada Area ....... 9-15
9.4 Litho-Geochemical Sampling ....... 9-15
9.5 Surface Sampling ....... 9-16
9.5.1 San Marcial Area ....... 9-16
9.6 Underground Channel Sampling ....... 9-17
9.6.1 San Marcial Area ....... 9-17
9.6.2 Plomosas Mine Area ....... 9-17
9.6.3 San Juan–La Colorada Area ....... 9-18
**10 Drilling ....... 10-1**
10.1 Drilling Programs—San Marcial Area ....... 10-3
10.1.1 Drill-Hole Collar Locations ....... 10-7
10.1.2 Downhole Surveys ....... 10-11
10.1.3 Sample Length and True Thickness ....... 10-11
10.1.4 Core Logging ....... 10-13
10.1.5 Recovery ....... 10-13
10.2 Drilling Programs—Plomosas Mine Area ....... 10-15
10.2.1 Drill-Hole Collar Locations 2020–2021 and 2022 Drilling Programs ....... 10-19
10.2.2 Sample Length and True Thickness ....... 10-21
10.2.3 Downhole Surveys ....... 10-22
10.2.4 Core Logging ....... 10-22
10.2.5 Recovery ....... 10-24
10.3 Drilling Programs—San Juan–La Colorada Area ....... 10-25
10.3.1 Drill-Hole Collar Locations 2021–2022 Drilling Programs San Juan–La Colorada ....... 10-26
10.3.2 Downhole Surveys ....... 10-27
10.3.3 Core Logging ....... 10-28
10.3.4 Recovery ....... 10-28
10.3.5 Sample Length and True Thickness ....... 10-29
10.4 Portable Drilling ....... 10-30
10.4.1 Portable Drilling—Underground ....... 10-30
10.4.2 Portable Drilling—Surface ....... 10-31
**11 Sample Preparation, Analyses, and Security ....... 11-1**
11.1 Sampling Methods ....... 11-1
11.1.1 IMMSA ....... 11-1
11.1.2 Gold-Ore ....... 11-2
11.1.3 Aurcana ....... 11-2

11.1.4 Silvermex ... 11-2
11.1.5 First Majestic ... 11-3
11.1.6 Goldplay ... 11-3
11.1.7 GR Silver ... 11-4
11.2 Sample Analyses and Security ... 11-6
11.2.1 IMMSA ... 11-6
11.2.2 Gold-Ore ... 11-6
11.2.3 Aurcana ... 11-7
11.2.4 Silvermex ... 11-7
11.2.5 First Majestic ... 11-8
11.2.6 Goldplay ... 11-9
11.2.7 GR Silver ... 11-10
11.3 QA/QC Protocols ... 11-12
11.3.1 IMMSA ... 11-12
11.3.2 Gold-Ore ... 11-12
11.3.3 Aurcana ... 11-12
11.3.4 Silvermex ... 11-12
11.3.5 First Majestic ... 11-13
11.3.6 Goldplay ... 11-17
11.3.7 GR Silver ... 11-18
11.4 Bulk Density Determinations ... 11-26
11.5 Qualified Person Comments ... 11-26
**12 Data Verification ... 12-1**
12.1.1 Database Verifications ... 12-1
12.1.2 Verification of Analytical Quality Control Data ... 12-2
12.2 Verification of Metallurgical Results ... 12-2
12.3 QP Comments ... 12-2
**13 Mineral Processing and Metallurgical Testing ... 13-1**
13.1 Metallurgical Testing on San Marcial Samples—2001 ... 13-1
13.2 Metallurgical Testing on Six San Marcial Samples—2010 ... 13-1
13.3 Testing on Three San Marcial Composites—2019 ... 13-2
13.3.1 Comminution ... 13-3
13.3.2 Flotation ... 13-4
13.3.3 Leaching ... 13-5
13.4 San Juan Bulk Sample—2020 ... 13-6
13.4.1 Methods and Procedures ... 13-8
13.4.2 Discussion of Results ... 13-11
13.5 Metallurgical Testwork by Base Met Labs—2021 ... 13-14
13.5.1 Description of Sampling and Preparation—Plomosas Mine ... 13-15
13.5.2 Description of Sampling and Preparation—San Juan Deposit ... 13-19
13.5.3 Testwork Description ... 13-21
13.5.4 Discussion of Results ... 13-21
13.6 Final Metallurgical Assumptions ... 13-23
**14 Mineral Resource Estimates ... 14-1**
14.1 Resource Database—All Deposits ... 14-1
14.2 Exploration Data Analysis ... 14-3
14.2.1 San Marcial Mineral Resource Model ... 14-3
14.2.2 Plomosas Mine Mineral Resource Model ... 14-4
14.2.3 San Juan and La Colorada Mineral Resource Model ... 14-5
14.3 Evaluation of Extreme Assay Values ... 14-7

14.3.1 San Marcial Model ... 14-7
14.3.2 Plomosas Model ... 14-7
14.3.3 San Juan–La Colorada Model ... 14-8
14.4 Compositing ... 14-8
14.4.1 San Marcial Model ... 14-8
14.4.2 Plomosas Mine Model ... 14-9
14.4.3 San Juan–La Colorada Mineral Resource Model ... 14-10
14.5 Solid Modelling ... 14-10
14.5.1 San Marcial Model ... 14-10
14.5.2 Plomosas Mine Model ... 14-11
14.5.3 San Juan–La Colorada Model ... 14-13
14.6 Variography ... 14-15
14.6.1 San Marcial Model ... 14-15
14.6.2 Plomosas Mine Model ... 14-15
14.6.3 San Juan and La Colorada Model ... 14-16
14.7 Resource Estimation Methodology ... 14-16
14.7.1 San Marcial Model ... 14-16
14.7.2 Plomosas Model ... 14-16
14.7.3 San Juan and La Colorada Model ... 14-17
14.8 Mineral Resource Classification ... 14-19
14.8.1 San Marcial Model ... 14-20
14.8.2 Plomosas Model ... 14-20
14.8.3 San Juan–La Colorada Model ... 14-21
14.9 Validation of the Block Model ... 14-21
14.9.1 Visual Comparison ... 14-21
14.9.2 Swath Plots ... 14-24
14.9.3 Reconciliation of Plomosas Mined-Out Stopes ... 14-28
14.10 Mineral Resource Statement ... 14-30
14.11 Grade Sensitivity Analysis ... 14-32
14.12 Risks and Opportunities ... 14-34
14.12.1 Risks ... 14-34
14.12.2 Opportunities ... 14-35
**15 Adjacent Properties ... 15-1**
**16 Other Relevant Data and Information ... 16-1**
**17 Interpretation and Conclusions ... 17-1**
**18 Recommendations ... 18-1**
**19 References ... 19-1**
**20 Certificates of Qualified Person ... 20-1**
20.1 Dr. Gilles Arseneau, P.Geo. ... 20-1
20.2 Shane Tad Crowie, P.Eng. ... 20-2

## Tables


| | | |
|---|---|---|
| Table 1-1: | Recoveries for the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas | 1-7 |
| Table 1-2: | Mineral Resource Estimate, ACS, March 15, 2023 | 1-8 |
| Table 4-1: | Plomosas Project Mining Concessions | 4-5 |
| Table 4-2: | Summary of Royalties Affecting the Plomosas Project Mining Concessions | 4-9 |
| Table 4-3: | Summary of Permits and Authorizations for the San Marcial Area | 4-10 |
| Table 4-4: | Summary of Permits and Authorizations for the Plomosas Mine and San Juan–La Colorada Areas | 4-10 |
| Table 4-5: | Summary of Permits and Authorizations for the La Trinidad Area | 4-11 |
| Table 6-1: | IMMSA Historical Production—Plomosas Mine Area (1986–2000) | 6-2 |
| Table 6-2: | Recent Chronology of Exploration in the San Marcial Area | 6-3 |
| Table 6-3: | Marlin Historical Production—Trinidad Mine Area | 6-4 |
| Table 8-1: | Summary of Deposit Types and Mineralization Events by Area | 8-3 |
| Table 9-1: | GR Silver Exploration Activity on the San Marcial Area since 2019 | 9-1 |
| Table 9-2: | Plomosas Property—GR Silver Exploration Activity post-2021 Resource Estimation | 9-2 |
| Table 10-1: | San Marcial Area Drilling Programs by Year | 10-3 |
| Table 10-2: | Significant Drill Intercepts at the San Marcial Area (Including SE Area Discovery) | 10-12 |
| Table 10-3: | Breakdown of Drill Holes and Metres Drilled at Plomosas Mine Area | 10-15 |
| Table 10-4: | Breakdown of Drill Holes and Metres Drilled by GR Silver and Third-Party Drill Rigs | 10-15 |
| Table 10-5: | Drill Rig Details—2020–2021 and 2022 GR Silver Drilling Campaign at Plomosas Mine Area | 10-16 |
| Table 10-6: | Selected Sample Results from Plomosas Mine Area Drilling 2020–2021 and 2022 | 10-22 |
| Table 10-7: | Breakdown of Drill Holes and Metres Drilled at San Juan–La Colorada | 10-25 |
| Table 10-8: | Drill Rig Details—2020 to 2022 GR Silver Drilling Campaign at San Juan–La Colorada Area | 10-25 |
| Table 10-9: | Selected Sample Results from San Juan–La Colorada Area Drilling 2020–2021 and 2022 | 10-30 |
| Table 11-1: | First Majestic QA/QC Samples | 11-9 |
| Table 11-2: | Frequency of Internal Quality Control Samples at SGS Laboratory (Durango) | 11-10 |
| Table 11-3: | Silvermex Quality Control Samples | 11-12 |
| Table 11-4: | Summary of QC Sample Types Used by First Majestic | 11-13 |
| Table 12-1: | Check Samples Collected by ACS During Site Visits | 12-1 |
| Table 13-1: | San Marcial Bulk Sample—Processing Assay Results and Precious-Metal Recoveries | 13-2 |
| Table 13-2: | Lead-Bearing Minerals in Three San Marcial Composites | 13-3 |
| Table 13-3: | Zinc-Bearing Minerals in Three San Marcial Composites | 13-3 |
| Table 13-4: | San Marcial Composites Bond Ball Mill Work Index Test Results | 13-4 |
| Table 13-5: | San Marcial Sulphide Composite Locked Cycle Test Results | 13-5 |
| Table 13-6: | San Marcial Composites Leach Test Results | 13-6 |
| Table 13-7: | San Juan Bulk Sample—Processing Assay Results and Precious Metal Recoveries | 13-11 |
| Table 13-8: | San Juan Bulk Sample—Concentrate Sampling Results | 13-14 |
| Table 13-9: | Summary of Plomosas Mine Geochemical Samples Selected for Metallurgical Composite | 13-16 |
| Table 13-10: | Summary of San Juan Deposit Geochemical Samples Selected for Metallurgical Composites | 13-19 |
| Table 13-11: | Plomosas Mine and San Juan Sample Head Assays | 13-21 |
| Table 13-12: | San Juan Ore Hardness Test Results | 13-22 |
| Table 13-13: | Plomosas Mine and San Juan Flotation Test Summary—Recoveries | 13-22 |
| Table 13-14: | Plomosas Mine and San Juan Flotation Test Summary—Concentrate Grades | 13-23 |
| Table 13-15: | Plomosas, San Juan, and San Marcial Deposit Recoveries | 13-23 |
| Table 14-1: | Plomosas Project, Drilling by Area | 14-2 |
| Table 14-2: | Plomosas Project, Drilling by Company | 14-2 |
| Table 14-3: | Bulk Density Averages by Area | 14-3 |
| Table 14-4: | Rock Codes for San Marcial Area | 14-3 |

Table 14-5: Summary Statistics of Uncapped Assay Data for the San Marcial Area ..... 14-3
Table 14-6: Summary Statistics of Capped Assay Data for the San Marcial Area ..... 14-4
Table 14-7: Rock Codes for Plomosas Mine ..... 14-4
Table 14-8: Summary Statistics of Uncapped Assay Data for the Plomosas Mine Area ..... 14-5
Table 14-9: Summary Statistics of Capped Assay Data for the Plomosas Mine Area ..... 14-5
Table 14-10: Rock Codes for San Juan Area ..... 14-5
Table 14-11: Rock Codes for La Colorada Area ..... 14-6
Table 14-12: Summary Statistics of Uncapped Assay Data for the San Juan and La Colorada Areas ..... 14-6
Table 14-13: Summary Statistics of Capped Assay Data for the San Juan and La Colorada Areas ..... 14-6
Table 14-14: San Marcial Assay Capping Level ..... 14-7
Table 14-15: Plomosas Assay Capping Level ..... 14-8
Table 14-16: San Juan–La Colorada Assay Capping Level ..... 14-8
Table 14-17: Summary Statistics of Capped Composite Data for the San Marcial Area ..... 14-9
Table 14-18: Summary Statistics of Capped Composite Data for the Plomosas Mine Area ..... 14-10
Table 14-19: Summary Statistics of Capped Composite Data for the San Juan–La Colorada Area ..... 14-10
Table 14-20: Rock Codes for Plomosas Area Model ..... 14-13
Table 14-21: Rock Codes for San Juan and La Colorada Model ..... 14-14
Table 14-22: Exponential Correlogram for the San Marcial Model ..... 14-15
Table 14-23: Exponential Correlogram Models for the Plomosas Model ..... 14-15
Table 14-24: San Marcial Block Model Parameters ..... 14-16
Table 14-25: Grade Estimation Parameters for the San Marcial Model ..... 14-16
Table 14-26: Plomosas Mine Model Parameters ..... 14-16
Table 14-27: Grade Estimation Parameters for Plomosas Mine Model ..... 14-17
Table 14-28: San Juan and La Colorada Block Model Setup Parameters ..... 14-17
Table 14-29: San Juan and La Colorada Estimation Parameters ..... 14-18
Table 14-30: Parameters Used to Calculate the Dollar Equivalent Value for San Marcial ..... 14-19
Table 14-31: Parameters Used to Calculate Dollar Equivalent Value for Plomosas Mine Area ..... 14-19
Table 14-32: Parameters Used to Calculate Dollar Equivalent Value for San Juan and La Colorada ..... 14-19
Table 14-33: Assumptions for Conceptual Open Pit Optimization at the Plomosas Mine Area ..... 14-30
Table 14-34: Assumptions Considered for Underground Mining Conditions at the Plomosas Mine Area ..... 14-31
Table 14-35: Plomosas Project, Mineral Resource Statement, ACS March 15, 2023 ..... 14-31
Table 14-36: Plomosas Project, Mineral Resource Statement by Area, ACS March 15, 2023 ..... 14-32
Table 16-1: Infrastructure Remaining at the Plomosas Mine Area ..... 16-1
Table 16-2: Remaining Infrastructure at the La Trinidad Area ..... 16-1

## Figures

Figure 4-1: Plomosas Project Location ..... 4-2
Figure 4-2: Minera San Marcial Concessions: Plomosas Project—San Marcial Area ..... 4-3
Figure 4-3: Minera La Rastra Concessions: Plomosas Project—Plomosas Mine and San Juan–La Colorada Areas ..... 4-4
Figure 4-4: Ejido La Rastra, Ejido Tebaira, and Ejido Maloya Location—Plomosas Project ..... 4-6
Figure 4-5: Ejido La Rastra and the Four Properties (A, B, C, and D) Location—100% Owned by Minera La Rastra ..... 4-7
Figure 4-6: Historical Tailings Disposal Area Owned by a Third Party Within the Plomosas Mine Area Concessions ..... 4-12
Figure 5-1: Access to San Marcial, Plomosas Mine, and San Juan–La Colorada Areas from El Rosario ..... 5-1
Figure 5-2: Monthly Temperature Variability 2013 to 2023, La Rastra ..... 5-2

Figure 5-3: Average Monthly Rainfall La Rastra ... 5-3
Figure 5-4: View of La Rastra Village, Approximately 5 km from Plomosas Mine Area ... 5-4
Figure 5-5: View of Perleros Camp and Office Facilities ... 5-4
Figure 5-6: Historical IMMSA Plant Site and Lower Underground Mine Access at Plomosas Mine ... 5-5
Figure 5-7: Aerial View of the Plomosas Property Physiography, Looking East ... 5-6
Figure 7-1: Location of the Rosario Mining District and GR Silver Concessions in the Sierra Madre Occidental ... 7-1
Figure 7-2: Evolution of Tectonic Stress and Structures from Eocene to Miocene in Southern Sinaloa ... 7-4
Figure 7-3: Sinaloa Batholith Exposed in ENE-WSW-trending Canyons (D1 Stress Regime) of Southern Sinaloa ... 7-5
Figure 7-4: Plomosas Project and Resource Areas on Rosario Mining District Regional Geology Map ... 7-6
Figure 7-5: Legend for Rosario Mining District Geology Map ... 7-7
Figure 7-6: San Marcial, Plomosas Mine, and San Juan–La Colorada Areas—Local Geology Map ... 7-8
Figure 7-7: Plomosas Project—Detailed Mapping Coverage and Regional Cross-Section Locations ... 7-9
Figure 7-8: Schematic Cross-Section from San Juan–La Colorada in the SW (A) and Plomosas in the NE (B) ... 7-10
Figure 7-9: Schematic Cross-Section from San Marcial in the South (C) to Plomosas in the North (D) ... 7-10
Figure 7-10: General Stratigraphic Column of the San Marcial Area ... 7-12
Figure 7-11: General Stratigraphic Column of the Plomosas Mine Area ... 7-13
Figure 7-12: Legend for Stratigraphic Column of the Plomosas Mine Area ... 7-14
Figure 7-13: General Stratigraphic Column of the San Juan–La Colorada Area ... 7-15
Figure 7-14: Structural Controls in San Marcial Area ... 7-17
Figure 7-15: E–W to ENE–WSW Structural Controls in San Marcial Area ... 7-18
Figure 7-16: Plomosas Mine Area—Cross-Cutting Relationship of the Different Fault Systems ... 7-19
Figure 7-17: Plomosas Mine Area—Relationship of Microdiorite with Plomosas Breccia ... 7-20
Figure 7-18: Plomosas Mine W-E Cross Section: NW–SE Faults Controlling Lower and Upper Stockwork Zones ... 7-21
Figure 7-19: Structural Control of Mineralization in the Plomosas Mine Area ... 7-22
Figure 7-20: Structural Control in San Juan and La Colorada Area ... 7-23
Figure 7-21: Plomosas Project: Relationship Between Geology, Mineralized Structures, Mine Workings and Key Targets ... 7-24
Figure 7-22: Mineralized Textures of Hydrothermal Breccias in SE Area of San Marcial ... 7-26
Figure 7-23: Mineralized Textures of Crackle Breccias in SE Area of San Marcial ... 7-27
Figure 7-24: Mineralized Textures of Massive Sulphide Vein Breccia in San Marcial Area ... 7-28
Figure 7-25: Alteration in Las Uvas Area SW of San Marcial Area ... 7-28
Figure 7-26: Mineralization Textures in Section 2551650N in Plomosas Mine Area ... 7-29
Figure 7-27: Mineralization Textures in Section 2551800N in Plomosas Mine Area ... 7-30
Figure 7-28: Mineralization Textures in Section 2551900N in Plomosas Mine Area ... 7-30
Figure 7-29: Summary of Paragenetic Sequence in Plomosas Mine Area ... 7-31
Figure 7-30: Fluid Inclusion Data from Plomosas Mine Area ... 7-32
Figure 8-1: Schematic of an Intermediate to Low-Sulphidation System ... 8-2
Figure 9-1: Ground Geophysical Survey Area in Relation to Key Target Areas ... 9-3
Figure 9-2: San Marcial Area—Total Magnetic Intensity RTP (Reduced to Pole) and Key Structures ... 9-4
Figure 9-3: San Marcial Area—Resistivity Map and Key Structures. ... 9-5
Figure 9-4: San Marcial Area—Chargeability Map and Key Structures ... 9-6
Figure 9-5: Target Zones Identified from the Ground Geophysical Survey in San Marcial Area ... 9-7
Figure 9-6: San Marcial—Example of 3D Resistivity, Chargeability and Magnetics in Relation to San Marcial Breccia (Line 200NW) ... 9-8
Figure 9-7: San Marcial Area—Resource Expansion Exploration Areas DH-1 to DH-3 ... 9-10
Figure 9-8: San Marcial—Exploration Focus South and Southeast of the Resource Area ... 9-11

Figure 9-9: Geological and Structural Mapping in the San Marcial Tunnel ... 9-13
Figure 9-10: Plomosas Mine Area—Geological and Structural Mapping (Examples from the 950 and 775 Levels) ... 9-14
Figure 9-11: San Marcial Area Litho-Geochemistry Program - Sample Distribution and Arsenic Raw Data ... 9-16
Figure 9-12: Plomosas Mine—Channel Sampling with Powder Recovery for pXRF Analysis ... 9-17
Figure 9-13: Plomosas Mine Area—Channel Sampling of Powder/Pulps for pXRF ... 9-18
Figure 10-1: San Marcial (Including SE Area Discovery) Area Drilling Plan ... 10-1
Figure 10-2: Plomosas Mine Area Drilling Plan ... 10-2
Figure 10-3: San Juan–La Colorada Area Drilling Plan ... 10-3
Figure 10-4: San Marcial Drill-Hole Core Shed at the Perleros Camp ... 10-4
Figure 10-5: Underground Adit Completed in 2021, and the 2021 Underground Drilling Program ... 10-5
Figure 10-6: Underground Drilling—San Marcial Tunnel 2021 ... 10-6
Figure 10-7: General View—2022 Drilling Program ... 10-7
Figure 10-8: San Marcial Pre-2019 Drill-Hole Collar Surface Locations ... 10-8
Figure 10-9: GR Silver Surface Core Drill Holes ... 10-9
Figure 10-10: GR Silver San Marcial Underground Core Drill Holes ... 10-10
Figure 10-11: San Marcial Area Mineralized Zones Sample Length Histogram ... 10-11
Figure 10-12: San Marcial Area Core Recovery Drill-Hole Data Analysis ... 10-14
Figure 10-13: Boart Longyear LM 75 Owned and Operated by Intercore—at Plomosas Underground Level 833 ... 10-16
Figure 10-14: Ingetrol Explorer E-75 Owned and Operated by GR Silver—at Plomosas Mine Area Underground Level 825 ... 10-17
Figure 10-15: NW 150 Owned and Operated by GR Silver—at Plomosas Mine Area Surface ... 10-17
Figure 10-16: Portable Drill Rigs Operated by GR Silver—at Plomosas Mine Area Underground ... 10-18
Figure 10-17: Ultra 20E Owned and Operated by GR Silver—at Plomosas Mine Area Underground Level 1000 ... 10-18
Figure 10-18: GR Silver Drilling Program Surface Hole ... 10-19
Figure 10-19: GR Silver Underground Drill-Collar Markers—Plomosas Mine Area (2022) ... 10-20
Figure 10-20: Histogram of Sample Interval Length for Plomosas Mine Area ... 10-21
Figure 10-21: Core Logging, RQD, Core Cleaning, Photography, and Core Cutting at the GR Silver Core Shed Facilities at Plomosas ... 10-23
Figure 10-22: Data Analysis Core Recovery Drill Holes—Plomosas Mine Area ... 10-24
Figure 10-23: Drill Hole Collars—Surface Holes San Juan Area ... 10-26
Figure 10-24: Underground Drill Collars—San Juan ... 10-27
Figure 10-25: Data Analysis Core Recovery Drill Holes San Juan–La Colorada Area ... 10-28
Figure 10-26: Histogram of Sample Interval Length—San Juan–La Colorada Area ... 10-29
Figure 10-27: Portable Drill Rigs—Adapted for Tight Spaces Underground ... 10-30
Figure 10-28: Adapted Portable Drill Rig to Difficult Access Areas at Surface ... 10-31
Figure 11-1: Validation of Core Boxes on Arrival at the Core Shed—Plomosas Camp ... 11-4
Figure 11-2: Logging Core at the Core Shed—Plomosas Camp ... 11-5
Figure 11-3: Cutting Core with a Diamond Saw at the Plomosas Core Shed ... 11-6
Figure 11-4: Sample Preparation Process Flowchart—SGS Laboratory (Durango) ... 11-11
Figure 11-5: Ag ppm Laboratorio Central vs. Ag ppm SGS Laboratory ... 11-15
Figure 11-6: Au ppm Laboratorio Central vs. Au ppm SGS Laboratory ... 11-15
Figure 11-7: Pb ppm Laboratorio Central vs. Pb ppm SGS Laboratory ... 11-16
Figure 11-8: Zn ppm Laboratorio Central vs. Zn ppm SGS Laboratory ... 11-16
Figure 11-9: Coarse Blank Performance from 2020 to 2022 ... 11-19
Figure 11-10: Coarse Duplicate Results for Silver ... 11-20
Figure 11-11: Coarse Duplicate Results for Gold ... 11-20
Figure 11-12: Coarse Duplicate Results for Lead ... 11-21
Figure 11-13: Coarse Duplicate Results for Zinc ... 11-21

Figure 11-14: Silver Results for All Pulps from Plomosas Mine and San Juan–La Colorada Areas ........ 11-23
Figure 11-15: Gold Results for all Pulps from Plomosas and San Juan–La Colorada Areas ........ 11-23
Figure 11-16: Zinc Results for all Pulps from Plomosas and San Juan–La Colorada Areas ........ 11-24
Figure 11-17: Lead Results for all Pulps from Plomosas and San Juan–La Colorada Areas ........ 11-24
Figure 11-18: Comparison of Original Gold-Ore Assays with GR Silver Re-assay Values ........ 11-25
Figure 13-1: Sample Location of the Metallurgical Bulk Sample—San Juan ........ 13-7
Figure 13-2: Transportation of Bulk Sample Material from Outside of the San Juan Tunnel to the Processing Plant ........ 13-8
Figure 13-3: Bulk Sample Material in Piles Outside the San Juan Tunnel ........ 13-9
Figure 13-4: Drilling and Cutting Activities Underground at San Juan Mine ........ 13-9
Figure 13-5: Crushing of Bulk Sample and Piling of Crushed Material at the Processing Plant ........ 13-9
Figure 13-6: Processing of Sample Material ........ 13-10
Figure 13-7: Met-Sin 70 t/d Processing and Sampling Flowsheet ........ 13-10
Figure 13-8: Plomosas Mine—Location of Individual Samples from Different Underground Levels with Metallurgical Composite Samples Shown by Same Colours ........ 13-18
Figure 13-9: Location of Samples—San Juan Deposit ........ 13-20
Figure 14-1: Histogram of Sample Lengths in the San Marcial Area ........ 14-9
Figure 14-2: San Marcial Mineralized Domains—Perspective View Looking North ........ 14-11
Figure 14-3: 20$US Zone Internal to the Pb + Zn Zone—Perspective View Looking North ........ 14-12
Figure 14-4: Pb + Zn Zone and Plomosas Breccia—Perspective View Looking North ........ 14-12
Figure 14-5: San Juan Faults and Mineralization—Plan Perspective View ........ 14-13
Figure 14-6: La Colorada Faults and Mineralization—Plan Perspective View ........ 14-14
Figure 14-7: Plan View Comparing Estimated Block Values with Drill-Hole Composited Values for San Marcial ........ 14-22
Figure 14-8: Cross-Section Looking North Comparing Estimated Block Values with Drill-Hole Composited Values for Plomosas Mine Area ........ 14-23
Figure 14-9: Plan View Comparing Estimated Block Value with Drill-Hole Composites for the San Juan Area ........ 14-23
Figure 14-10: Plan View Comparing Estimated Block Value with Drill-Hole Composites for the La Colorada Area ........ 14-24
Figure 14-11: Swath Plots for San Marcial Model ........ 14-25
Figure 14-12: Swath Plots for Plomosas Model ........ 14-26
Figure 14-13: Swath Plots for the San Juan–La Colorada Model ........ 14-27
Figure 14-14: Surveyed Stope Volumes—Cross-Section Perspective Looking East ........ 14-29
Figure 14-15: Grade Tonnage Curves for the San Marcial Model ........ 14-33
Figure 14-16: Grade Tonnage Curves for the Plomosas Model ........ 14-33
Figure 14-17: Grade Tonnage Curves for the San Juan Model ........ 14-34
Figure 14-18: Perspective View Looking Southeast Showing Mined-Out Volumes Surveyed with Laser ........ 14-35
Figure 15-1: La Colorada Mine ........ 15-1
Figure 15-2: La Colorada Mine Concession Location (Blue)—GR Silver Concessions ........ 15-2
Figure 18-1: Areas with Planned Allocation of the Recommended Budget ........ 18-2

## Appendix A

Title Opinions—Las Rastra, Oro Gold, and San Marcial

## Abbreviations, Acronyms, and Units of Measure

' ....... minute (plane angle)
" ....... second (plane angle)
% ....... percent
< ....... less than
> ....... greater than
°C ....... degrees Celsius
a ....... annum (year)
AAS ....... atomic absorption spectrometry
ACS ....... Arseneau Consulting Services Inc.
Ag ....... silver
AgEq ....... silver equivalent
Almaden ....... Almaden Resources Corporation
APEGBC ....... Association of Professional Engineers and Geoscientists of the Province of British Columbia
As ....... arsenic
Au ....... gold
AuEq ....... Gold Equivalent
Aurcana ....... Aurcana Corporation
Basemet ....... Base Metallurgical Laboratories
Bureau Veritas Canada Inc. ....... Previously Acme Labs
C$ ....... Canadian dollars
CFE ....... Comisión Federal de Electricidad (Federal Commission of Electricity)
CIM ....... Canadian Institute of Mining, Metallurgy and Petroleum
cm ....... Centimetre
CONAGUA ....... Comisión Nacional del Agua
CoV ....... Coefficients of Variation
CRM ....... Certified reference material
Cu ....... copper
d ....... day
DTU ....... Documento Técnico Unificado
EGC ....... Eldorado Gold Corp.
Ejido Tebaira ....... Ejido El Naranjo o Tebaira
First Majestic ....... First Majestic Silver Corp.
ft ....... foot
g ....... gram
g/t ....... grams per tonne
Goldplay ....... Goldplay Exploration Limited
GR Silver ....... GR Silver Mining Ltd.
Grupo México ....... Grupo México S.A. de C.V.
h ....... hour
ha ....... hectare (10,000 $m^2$)

ICP-AES ........ inductively coupled plasma–atomic emissions spectrometry
ICP-MS ........ Inductively coupled plasma mass spectrometry
ICP-OES ........ inductively coupled plasma–optical emission spectrometry
IMMSA ........ Industrial Minera Mexico, S.A.
IPL ........ International Plasma Labs Limited
IS ........ intermediate-sulphidation
kg ........ kilogram
km ........ kilometre
kt ........ kiloton
lb ........ pound(s)
LIMS ........ laboratory information management system
LS ........ low-sulphidation
LVC ........ Lower Volcanic Complex
m ........ metre
M ........ million
$m^2$ ........ square metre
$m^3$ ........ cubic metre
Mako ........ Mako Mining Corp.
Marlin ........ Marlin Gold Mining Ltd.
Metalla ........ Metalla Royalty & Streaming Ltd.
Met-Sin ........ Met-Sin Industriales, S.A. de C.V.
MIA ........ Manifestaciones de Impacto Ambiental (Environmental Impact Assessment)
Minera Camargo ........ Minera Camargo, S.A. de C.V.
Minera La Rastra ........ Minera La Rastra S.A. de C.V.
Minera Matatán ........ Minera Matatán S.A. de C.V.
Minera San Marcial ........ Compañia Minera San Marcial S.A. de C.V.
mm ........ millimetre
MRE ........ Mineral Resource Estimate
MSO ........ Mining Stope Optimizer
Mt ........ million tonnes
NI 43-101 ........ National Instrument 43-101 Standards of Disclosure for Mineral Projects
now GR Silver ........ Goldplay Exploration Ltd.
NSR ........ net smelter return
Oro Gold ........ Oro Gold Resources Ltd.
oz ........ ounce
Pb ........ lead
ppm ........ parts per million
QP ........ Qualified Person
RO ........ reverse osmosis
ROM ........ run-of-mine
RQD ........ rock quality designation
SE Area ........ Southeast Area

SEMARNAT ................................. Secretaría de Medio Ambiente y Recursos Naturales
Silver Standard ........................... Silver Standard Resources Inc.
Silver Standard Mexico ................ Silver Standard México, S.A. de C.V.
Silvermex ..................................... Silvermex Resources Ltd.
SMO ............................................ Sierra Madre Occidental
SRK.............................................. SRK Consulting
SSR Mining .................................. SSR Mining Ltd.
t .................................................... tonne (1,000 kg) (metric ton)
t/a ................................................. tonnes per year
t/d ................................................. tonnes per day
t/h ................................................. tonnes per hour
this Technical Report ................... NI 43-101 2023 Technical Report and Mineral Resource Update for the Plomosas Project, Sinaloa State, Mexico
US$ .............................................. United States dollar
UVS.............................................. Upper Volcanic Supergroup
Zn ................................................. zinc
µm ................................................ microns
DDH ............................................. diamond drill holes
CH ................................................. Channels
oz ................................................. troy ounce

# Date and Signature Page

The undersigned prepared this Technical Report, titled *National Instrument (NI) 43-101 2023 Technical Report and Mineral Resource Update for the Plomosas Project, Sinaloa State, Mexico*, and dated May 3, 2023, in support of the public disclosure for public listing. The format and content of this Technical Report conforms to the National Instrument 43-101 (NI 43-101) guidelines of the Canadian Securities Administrators.

Dated May 3, 2023.

**Original Signed and Sealed**

*Dr. Gilles Arseneau, P.Geo.*
*Arseneau Consulting Services Inc.*

**Original Signed and Sealed**

*Shane Tad Crowie, P.Eng.*
*JDS Energy & Mining Inc.*

# 1 SUMMARY

GR Silver Mining Ltd. (GR Silver) contracted Arseneau Consulting Services Inc. (ACS) to prepare a Mineral Resource estimate (MRE) and supporting Technical Report in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101) for the Plomosas Project (the Project) near the village of La Rastra, Sinaloa State, Mexico.

This Technical Report was prepared to support GR Silver's second disclosure of Mineral Resources for the Plomosas Project.

## 1.1 Access and Location

The Project is in the southeast corner of Sinaloa State about 100 km east-southeast, of Mazatlán, within the Rosario Mining District. The Project combines three contiguous properties acquired and integrated by GR Silver between 2018 and 2021—the San Marcial Area in the San Marcial Property, the Plomosas Mine and San Juan–La Colorada Areas in the Plomosas Property, and the La Trinidad Property; these are described in more detail in Section 4.

The Plomosas Project is accessed from Mazatlán as follows: travel approximately 70 km southeast along either the Federal Highway 15D (toll road) or Highway 15 (no tolls) to the town of El Rosario, then continue on Highway 15 for 2 km, crossing the Rio Baluarte, before turning left at the turnoff towards Matatán. Continue on the local sealed road through the villages of Las Habitas and Matatán, then continue east along the partially sealed local road for 11 km before veering left at Palmarito and continuing 22 km along the unsealed local road through the village of La Rastra. On the outskirts of La Rastra on the eastern side, an unsealed road junction provides access to the Plomosas Mine Area 10 km to the east, and to the south-southeast towards the San Juan–La Colorada (2 km) and San Marcial (10 km) Areas. To access the La Trinidad Area, turn right at Palmarito, and follow the local unsealed road towards the Maloya community.

## 1.2 History

Mineralization in the Plomosas Project was first discovered in the middle of the 18$^{th}$ century.

### *1.2.1 Plomosas Property*

Limited mining activity was conducted intermittently from 1950 into the 1990s, when Minera Nacional discovered the La Cruz Vein (one of the main mineralized zones of the Plomosas Mine Area), which became the centre of exploration.

Grupo México S.A. de C.V.'s (Grupo México) subsidiary, Industrial Minera México, S.A. de C.V. (IMMSA) explored the Plomosas Property from the early 1970s into the 1980s, including surface and underground drilling, with a focus on Pb–Zn–Ag–Au polymetallic mineralization hosted in the vicinity of the Plomosas Mine Area. In 1986, IMMSA initiated underground room-and-pillar operations at the Plomosas mine, and built a 600 t/d crushing–milling plant and large infrastructure that operated from

1986 to 2001. It completed a total of 7,400 m of underground development by the time it ceased operations in 2001, and produced 2.5 Mt averaging 173 g/t Ag, 0.62 g/t Au, 1.90% Zn, and 2.22% Pb. Historical documentation indicates sales to Trafigura of commercial grade Pb–Zn concentrates with Ag–Au credits throughout the entire period of the historical operations.

Aurcana Corporation (Aurcana) acquired 100% of the Plomosas Property from IMMSA on February 22, 2007. Aurcana carried out limited exploration that included eight diamond drill holes totalling 2,269 m, as well as limited surface and underground mapping and sampling.

On December 4, 2009, Silvermex Resources Ltd. (Silvermex) completed the acquisition of all outstanding shares of Aurcana de México S.A. de C.V. from Aurcana, thereby acquiring the Plomosas Property.

On April 3, 2012, First Majestic Silver Corp. (First Majestic) completed the acquisition of all shares of Silvermex, thereby acquiring 100% of the Plomosas Property. First Majestic carried out exploration from 2012 to 2019, including a diamond drilling program from 2016 to 2018 comprising 131 drill holes: 68 at the Plomosas Mine Area (58 underground holes and 10 surface holes), 47 surface holes at the San Juan–La Colorada Area, and 16 surface holes drilled at other targets—totalling 37,140 m.

None of the previous owners completed an NI 43-101 technical report for the Plomosas Property.

On March 30, 2020, GR Silver acquired all of the shares of Minera La Rastra S.A. de C.V. (Minera La Rastra) from First Majestic, thereby acquiring 100% of the Plomosas Property. As consideration, GR Silver paid C$100,000 and granted a subsidiary of First Majestic a 2% net smelter return (NSR) royalty on the Project—with half of the NSR being subject to a buy-back option for US$1.0 million—and issued to First Majestic 17,097,500 common shares of GR Silver. In December 2022, First Majestic completed the sale and assignment of its NSR royalty on the Plomosas Property to Metalla Royalty & Streaming Ltd.

GR Silver carried out exploration from 2020 to 2022, including a diamond drilling program. In that time, the GR Silver drilled 384 drill holes on surface and underground, for a total of 35,087 m.

### *1.2.2 San Marcial Property*

The San Marcial Property is an exploration stage property 5 km southeast of the Plomosas Mine Property, with no evidence of large historical production, only small workings at shallow depth. Local prospectors completed initial exploration work in the 1970s and 1980s. From 1985 to 2010, intermittent exploration was conducted on the San Marcial Property.

Gold-Ore Resources Ltd. (Gold-Ore) conducted the first drilling between 2000 and 2002, followed by Silver Standard Resources Inc. (Silver Standard) in 2002.

In 2007, Silvermex optioned the property from Silver Standard and undertook a drilling program as a precursor to completing an initial NI 43-101 MRE on the San Marcial Area in 2008.

In 2010, Silvermex completed a further 22 drill holes at the San Marcial Area, as well as trenching and preliminary metallurgical testing. Silvermex did not update its MRE with this latest information prior to exiting the option agreement that it held on the San Marcial Property.

In April 2018, GR Silver entered into an option agreement with Silver Standard to acquire a 100% interest in the San Marcial Property. Under the three-year option agreement, GR Silver was required to incur $3,000,000 in exploration expenditures on San Marcial and complete an updated NI 43-101-compliant MRE report.

In May 2021, after satisfying all conditions of the option agreement, GR Silver acquired 100% of Compañia Minera San Marcial S.A. de C.V., which owns the San Marcial Property.

Since initial diamond drilling in 2019, GR Silver has drilled 106 holes on the San Marcial Property, including eight underground diamond core holes, for a total of 11,674 m.

### *1.2.3 La Trinidad Property*

Gold mineralization was discovered in the La Trinidad Property in the early 1900s. Anaconda carried out exploration on the La Trinidad Property between 1984 and 1988. In 1992, Almaden Resources Corporation (Almaden) acquired the property. Almaden optioned the property to Eldorado Gold Corp. (EGC) in 1995. EGC carried out additional exploration, and in 1996 initiated open pit and heap leach operations at the La Trinidad Area, which continued into 1998. Minera Camargo, S.A. de C.V. (Minera Camargo) staked the concessions in 2005. Oro Gold Resources Ltd. acquired the concessions in 2005 and carried out exploration until 2010. Following a business transaction, Oro Gold Resources Ltd. changed its name to Oro Mining Ltd. and went on to complete a historical NI 43-101 technical report (SRK Consulting [SRK], 2011). Marlin Gold Mining Ltd. (Marlin), formerly Oro Mining Ltd., later completed a historical preliminary economic assessment (SRK, 2013). Marlin ran a five-year open pit heap leach operation in the La Trinidad Area from early 2014 to March 2019.

## 1.3 Mineralization

Mineralization on the Plomosas Project can be described as intermediate- to low-sulphidation epithermal, which occurs at the San Marcial Area, the Plomosas Mine Area, the San Juan–La Colorada Area, and the La Trinidad Area. Several episodes of mineralization have been identified and are intricately connected to the tectonic and structural evolution of the Sierra Madre Occidental (SMO) during the Tertiary.

- The San Marcial Area displays indications of a low-sulphidation epithermal system, with four multi-phase mineralizing events, as identified by minerographic studies, rich in silver, lead, and zinc. In the San Marcial Property, a number of mineralization styles have been identified, including three main breccia types:
  - Hematitic hydrothermal breccia—hematite + calcite + quartz.
  - Siliceous hydrothermal breccia—chlorite + quartz + pyrite.

- Tectonic breccia—this is a breccia with hydraulic fracturing over 100 m thick in places. In the south of the San Marcial deposit there is evidence of hematitic alteration of the matrix and quartz veinlets, sometimes with chalcopyrite, cutting the breccia.

The San Marcial breccia-hosted deposit is strongly associated with a NW–SE-oriented structural trend, and possibly affected by other crosscutting structural features. While the San Marcial deposit is best considered a silver deposit, the mineralization is multi-commodity, with zinc and lead closely associated with silver. The main mineralization at San Marcial consists of an assemblage that includes both the hematitic and adjacent siliceous breccias, in a close relationship with the San Marcial Fault. The breccia zone, up to 50 m wide in parts, is subparallel to the San Marcial Fault, which has likely undergone multiple phases of movement and reactivation. Mineralizing fluids of variable composition and remobilization of existing mineralization resulted in irregular distribution of the three main metals within the mineralized structural package.

The SE Area discovery at San Marcial Area, in 2022, confirmed the extension of breccia mineralization along the NW–SE target contact zone, approximately 250 m to the southeast of the original resource. The SE Area hosts hydrothermal breccia-style mineralization, which is associated with a flexure in the contact that is affected by a pair of NE–SW trending faults. The host rocks differ from those hosting silver mineralization on the NW portion of the San Marcial Mineral Resource, consisting of a wide chlorite-rich volcano-sedimentary unit which consists of brecciation and stockworks more than 100 m thick in places and flooded by hematite-calcite-quartz. The mineralization is silver-rich with lesser Pb–Zn–Au. The chloritic (green) volcano-sedimentary unit hosting the breccia is underlain by a silicified (grey) volcano-sedimentary unit, sometimes banded and stockworked. The Company is investigating the potential continuity of this mineralization further to the southeast along the target contact.

At the Plomosas Mine Area, a hydrothermal polymetallic breccia mineralization (Pb–Zn–Au–Ag) mainly occurs as massive to close-spaced disseminated sulphides, with veins, stockworks, and sulphide stringers hosted in brecciated sequences of rhyolite and andesite tuffs. The breccia is hosted in a mainly N–S-oriented shallow-angle fault, dipping west. Quartz and calcite are the main gangue minerals in the breccia. Sulphide mineral assemblages include galena, sphalerite, pyrite, chalcopyrite, and bornite. Silver-rich minerals such as acanthite and argentite are common. Late-stage Ag–Au-rich epithermal quartz veining in high-angle faults is commonly observed overprinting Pb–Zn–Ag mineralization in the hydrothermal breccias and enriching the mineral body with Ag–Au or defining precious metals-only mineralized zones.

At the San Juan–La Colorada Area, a large intermediate- to low-sulphidation epithermal gold–silver system is hosted predominantly by high-angle faults, whereas the Pb–Zn–Ag mineralization is preferentially in NW–SE-oriented, east-dipping, shallow-angle faults.

The La Trinidad Area includes the Taunus Pit, which operated until 2018. The Taunus gold mineralization lies near the contact between intermediate volcanic rocks to the west, and felsic intrusive to sub-intrusive rocks to the east. The contact between the two units forms a narrow V-shape with the andesitic units to the west and a quartz feldspar porphyry breccia at the center of the V. The eastern contact is defined by the near-vertical, north–south-trending Chandler Fault. This fault forms the boundary between the quartz feldspar porphyry breccia to the west and a fractured quartz feldspar porphyry to the east. The mostly fine-grained gold mineralization is derived from an intermediate-sulphidation epithermal system, with minor sulphides including pyrite, chalcopyrite, digenite, covellite, and native silver, as well as secondary minerals in the upper supergene levels. Mineralization has been recorded along strike to the north and south of the pit, providing additional exploration potential.

## 1.4 Exploration

Following acquisition of the three properties that form the Plomosas Project, the Company completed a detailed data review of the exploration data from each property, related to the geological, geochemical, and geophysical exploration programs completed by previous owners. For each individual property, the databases were integrated in a GIS platform to prioritize exploration and drilling programs, which culminated in detailed drilling for Mineral Resource estimation in the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas.

Other exploration activities undertaken on the Plomosas Project since the previous two NI 43-101 Technical Reports by the Company included detailed geological and structural mapping, trench sampling, channel sampling, rock chip sampling, litho-geochemical sampling, multi-element analysis with in-house portable XRF apparatus, a ground geophysical survey (IP and magnetics), and drilling.

Ongoing fieldwork has defined multiple veins and a large epithermal system in the Plomosas Projects, where the footprint of the intermediate- to low-sulphidation epithermal system has been extensively expanded into numerous exploration targets in the vicinity of areas that are the subject of the MRE.

## 1.5 Geology

The Plomosas Project is located in the SMO, which formed as the result of Cretaceous–Cenozoic magmatic and tectonic episodes related to the subduction of the Farallon Plate beneath North America, and to the opening of the Gulf of California. The SMO is divided into two main Tertiary volcanic units—the Upper Volcanic Supergroup (UVS) and the Lower Volcanic Complex (LVC)—both of which are separated unconformably by a period of erosion and associated local felsic-intrusive activity.

The local geology at the Project can be subdivided into two distinct underlying rock types: the first distinct rock type comprises bimodal volcanic rock units assigned to the LVC, dominated by andesitic pyroclastic units, tuffs, and extrusive flows. The LVC is underlain by a basal volcaniclastic sedimentary rock unit that is possibly of older Jurassic age. Separated in places by a basal conglomerate, the LVC is overlain by the second distinct rock type—thick layers of Oligocene- to Miocene-age felsic ignimbrites and rhyolites, and minor mafic units. The two distinct rock units are generally tilted 30° to 50° to the west as a result of extensional faulting.

## 1.6 Drilling

From 1976 to 2000, IMMSA drilled 485 holes totalling 85,989 m in the Plomosas Project. From these, 221 holes totalling 42,607 m were drilled in the immediate area of the Plomosas Mine Area – 37,240 m from surface and 5,367 m from underground platforms. There were 166 holes drilled at the San Juan-La Colorada Area totalling 26,990 m. 98 drill holes were completed by IMMSA in other regional exploration targets.

Gold-Ore carried out drilling from 2000 to 2002, drilling six holes in 2000 for 602 m and 17 holes in 2002 totalling 2,528 m targeting the San Marcial Area in the NW portion of the Mineral Resource.

Aurcana drilled seven holes in the Plomosas Mine Area between 2007 and 2008; three from underground and four from surface platforms, for a total of 1,872 m.

Silvermex drilled between 2008 and 2010, completing 29 holes for 5,826 m targeted at the NW portion of the San Marcial mineralization.

First Majestic drilled 131 core holes on the Plomosas Project between 2016 and 2018, 73 from surface and 58 from underground. Of the 131 core holes, 68 were in the immediate Plomosas Mine Area and 47 in the San Juan–La Colorada Area.

GR Silver carried out drilling programs on the Plomosas Project from 2019 to 2022. GR Silver owns five of its own rigs, which were used during the latter stages of this period, which were operated by contract and GR Silver employees. GR Silver has drilled 436 holes with its own rigs, for a total of 31,401 m on the Plomosas Project. GR Silver also contracted third-party drilling companies that drilled an additional 70 holes for a total of 15,360 m on the Plomosas and San Marcial Properties during that period. GR Silver also re-drilled some of the IMMSA historical holes replacing a total of 133 historical holes from the database in the Plomosas Mine Area and it also removed 32 IMMSA historical drill holes from San Juan-La Colorada Area.

## 1.7 Mineral Resource Estimate

The Mineral Resource model presented in this Technical Report represents GR Silver's second MRE for the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas, part of the Plomosas Project. The MRE incorporates all GR Silver drilling, and drilling completed by First Majestic, Silvermex, Gold-Ore, Aurcana, and IMMSA.

The database used for the MRE was reviewed and audited by the QP, Dr. Arseneau. The QP modelled mineralization boundaries using a geological interpretation prepared by GR Silver geological staff. The QP is of the opinion that the drilling information is sufficiently reliable to interpret, with confidence, the boundaries of the mineralization domains, and that the assaying data are sufficiently reliable to support estimation of Mineral Resources.

The San Marcial Area MRE is based on 122 drill holes totaling 19,451 m. The Plomosas Mine Area MRE is based on 60,349 m from 432 validated drill holes. In all, 133 historical IMMSA drill holes—those which were only partially sampled—were removed from the database because nearby recent drilling indicated that the mineralized zone was wider than depicted by the old IMMSA partially sampled holes. The San Juan–La Colorada Area MRE includes 54,823 m of drilling from 294 holes. Other areas have historical drilling that have not been incorporated in this Technical Report.

The Plomosas Project MRE is estimated using three separate three-dimensional block models using Geovia Gems (Version 6.8.4). One model covers the San Marcial Area, one the Plomosas Mine Area, and one the San Juan–La Colorada Area. The San Marcial Area was estimated by ordinary kriging into 10 by 5 by 10 m blocks and the Plomosas Mine Area was estimated by ordinary kriging into 5 m cube blocks. The San Juan–La Colorada Area was estimated using the inverse distance squared method and 5 m cubed blocks. Unsampled historical intervals inside the mineralization domains were assigned zero values prior to compositing. Grades were capped at 1.0 m prior to compositing. Block grades were estimated in three successive passes for the San Marcial and Plomosas Mine Areas and four passes for the San Juan–La Colorada Area. The IMMSA drill holes were used only for passes two and three at the Plomosas Mine Area, and for passes three and four at the San Juan–La Colorada Area. Blocks estimated with IMMSA drill holes were all classified as Inferred Mineral Resources.

For the San Marcial Area, blocks were classified as Indicated Mineral Resources if estimated during passes one or two and with at least three drill holes. For the Plomosas Mine Area model, blocks were classified as Indicated Mineral Resources if estimated during the first estimation pass, using no IMMSA drill holes, and informed by at least three drill holes within an average distance of 50 m. The San Juan–La Colorada Area blocks classified as Indicated Mineral Resources were estimated during pass one or two, with at least four drill holes. Mineral Resources are reported using a dollar equivalent based on metal prices and recoveries determined from recent metallurgical testwork (Table 1-1). Copper was not included in the dollar-equivalent formula for the San Marcial Area because of limited metallurgical test results of San Marcial mineralization.

***Table 1-1: Recoveries for the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas***

| Metal | Price (US$)[a] | Recoveries (%) | | |
|---|---|---|---|---|
| | | San Marcial | Plomosas | San Juan–La Colorada |
| Copper | 4.20/lb | 80 | 80 | 26 |
| Lead | 1.10/lb | 59 | 69 | 58 |
| Zinc | 1.30/lb | 80 | 75 | 47 |
| Gold | 1,750/oz | 80 | 86 | 79 |
| Silver | 22.00/oz | 94 | 74 | 71 |

Notes: [a] Metal prices are derived from *Energy & Metals Consensus Forecasts* long-term pricing (December 2022); oz = troy ounce.

The reasonable prospect of eventual extraction was defined by generating a Whittle-optimized pit shell based on the metal prices and recoveries given in Table 1-1, and assuming a total open pit mining cost and processing cost of US$30/t supported by data collected from similar deposits and operations in Sinaloa State. Underground resources were restricted to shapes defined by stope optimizer software assuming combined underground mining and processing costs of US$60/t supported by data collected from similar deposits and operations in Sinaloa State.

The QP estimates that the Plomosas Project contains combined Indicated Mineral Resources totalling 15.0 Mt grading 0.18 g/t Au, 117 g/t Ag, 0.4% Pb, and 0.6% Zn; and 9.0 Mt of Inferred Mineral Resources grading 0.38 g/t Au, 78 g/t Ag, 0.7% Pb, and 1.0% Zn. The ACS estimates of Mineral Resources are summarized in Table 1-2.

***Table 1-2: Mineral Resource Estimate, ACS, March 15, 2023***

| Area | Mineral Resource Class | Type | Tonnes (Mt) | Average Grade | | | | | | Contained Metal | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) | AgEq (g/t) | Ag (Moz) | Au (Koz) | Pb (Kt) | Zn (Kt) | Cu (Kt) | AgEq (Moz) |
| San Marcial | Indicated | OP | 9 | 146 | 0.04 | 0.2 | 0.3 | 0 | 161 | 42 | 10.2 | 16 | 28 | 0 | 47 |
| | Inferred | OP | 2 | 127 | 0.03 | 0.1 | 0.2 | 0 | 136 | 6 | 1.4 | 1 | 3 | 0 | 7 |
| San Marcial | Indicated | UG | 1 | 176 | 0.06 | 0.3 | 0.6 | 0 | 206 | 4 | 1.5 | 2 | 4 | 0 | 5 |
| | Inferred | UG | 1 | 164 | 0.03 | 0.2 | 0.4 | 0 | 182 | 8 | 1.6 | 3 | 5 | 0 | 9 |
| Plomosas | Indicated | OP | 2 | 93 | 0.24 | 1.0 | 0.9 | 0.07 | 193 | 5 | 11.9 | 16 | 14 | 1 | 10 |
| | Inferred | OP | 1 | 66 | 0.28 | 1.0 | 1.0 | 0.06 | 174 | 2 | 7.8 | 9 | 9 | 1 | 5 |
| Plomosas | Indicated | UG | 3 | 35 | 0.57 | 0.9 | 1.3 | 0.08 | 204 | 4 | 58.0 | 30 | 42 | 3 | 21 |
| | Inferred | UG | 2 | 38 | 0.57 | 0.9 | 1.1 | 0.06 | 175 | 3 | 39.4 | 20 | 23 | 1 | 12 |
| San Juan–La Colorada | Indicated | OP | 0.1 | 161 | 0.29 | 0.3 | 0.6 | 0.02 | 211 | 0.4 | 0.8 | 0 | 1 | 0 | 1 |
| | Inferred | OP | 0.2 | 103 | 0.24 | 0.5 | 0.8 | 0.02 | 159 | 0.7 | 1.6 | 1 | 2 | 0 | 1 |
| San Juan–La Colorada | Indicated | UG | 0.1 | 90 | 0.61 | 1.1 | 0.8 | 0.04 | 199 | 0.3 | 2.1 | 1 | 1 | 0 | 1 |
| | Inferred | UG | 2.6 | 34 | 0.69 | 1.2 | 1.9 | 0.04 | 182 | 2.8 | 56.4 | 31 | 49 | 1 | 15 |
| **Total Indicated** | | | **15** | **117** | **0.18** | **0.4** | **0.6** | **0.03** | **179** | **55** | 84.5 | 64 | 90 | **4** | **85** |
| **Total Inferred** | | | **9** | **78** | **0.38** | **0.7** | **1.0** | **0.03** | **171** | **22** | 108.2 | 64 | 91 | **3** | **49** |

Notes: Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), *CIM Definition Standards on Mineral Resources and Reserves* (CIM, 2014).
Numbers may not add up due to rounding.
Silver equivalent (AgEq) is calculated by dividing the US$ value by the silver price multiplied by the silver recovery. Dollar equivalent is estimated using the information in Section 14 (Table 14-30 to Table 14-32).
Open pit cut-off price is US$30 and underground cut-off price is US$60.
Mineral Resources for the La Colorada deposit were clipped against the GR Silver property boundary to exclude material outside of the GR Silver property.

## 1.8 Conclusions and Recommendations

The Plomosas Project is in the southeast corner of Sinaloa State about 100 km east-southeast of Mazatlán, within the Rosario Mining District.

IMMSA, Grupo México's subsidiary, explored the Plomosas Property from the early 1970s to the mid-1980s, with a focus on Pb–Zn polymetallic shallow mineralization, hosted in north–south structures in the vicinity of historical workings known as the La Cruz mine (now the Plomosas mine). IMMSA operated an underground mine at the Plomosas Mine Area between 1986 and 2000. During this time, IMMSA extracted 2.5 Mt averaging 173 g/t Ag, 0.62 g/t Au, 1.90% Zn, and 2.22% Pb. The operations ceased in 2001 due to unfavourable commodity prices, which prevented adequate economic returns at the time.

Mineralization on the Plomosas Project has been identified as belonging to intermediate- to low-sulphidation epithermal polymetallic deposits, with multiple overprinting mineralized events resulting in precious metal-rich zones. Mineralization occurs in multiple areas within the Plomosas Project. The San Marcial, Plomosas Mine, and San Juan–La Colorada Areas represent the areas of most advanced exploration. Mineralization is polymetallic (Au-Ag-Cu-Pb-Zn) and mainly occurs as massive to close-spaced disseminated sulphides, with veins, stockworks, and sulphide stringers hosted in brecciated sequences of rhyolite and andesite tuffs. Quartz and calcite are the main gangue minerals. Sulphide mineral assemblages include galena, sphalerite, chalcopyrite, pyrite, and bornite. Recent exploration and drilling results suggest the presence of high-grade precious metals-only mineralized systems hosted within high-angle faults.

GR Silver optioned the San Marcial Property in 2018, completing its acquisition in 2021, and acquired the Plomosas Property in 2020, and has drilled 490 holes on the two properties, 293 from surface and 197 from underground, for a total of 46,761 m. The GR Silver drill program along with the historical drilling on the Project were compiled to prepare the Mineral Resources presented in this report.

Exploration and drilling programs on the Plomosas Project have defined Mineral Resources at the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas. The Indicated Mineral Resources for the three areas total 15 Mt grading 117 g/t Ag, 0.18 g/t Au, 0.4% Pb, 0.6% Zn, and 0.03% Cu. The Inferred Mineral Resources for the three areas total 9 Mt grading 78 g/t Ag, 0.38 g/t Au, 0.7% Pb, 1.0% Zn, and 0.03% Cu.

The QP recommends that GR Silver continue to explore the Plomosas Project. Specifically, the drill program should be expanded to further define the mineralization in the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas along strike and down-dip, aiming to expand Mineral Resources based on exploratory data suggesting continuity of mineralization outside of the limits of the Mineral Resource areas.

Dr. Arseneau believes that the Plomosas Project has the potential to delineate additional Mineral Resources and that further exploration is warranted. The highly prospective nature of the Plomosas Project, seen in the presence of historical mines, existing Mineral Resources, and the recent GR Silver discovery of the SE Area at San Marcial, confirms that further activities by GR Silver exploration programs are warranted, including drilling.

# 2 INTRODUCTION

GR Silver Mining Ltd. (GR Silver) contracted Arseneau Consulting Services Inc. (ACS) to prepare a Mineral Resource estimate (MRE) and technical report in accordance with National Instrument 43-101 (NI 43-101) *Standards of Disclosure for Mineral Projects* for the Plomosas Project, in Sinaloa State, Mexico.

## 2.1 Terms of Reference

This report titled *National Instrument (NI) 43-101 2023 Technical Report and Mineral Resource Update for the Plomosas Project, Sinaloa, Mexico* (Technical Report) with an Effective Date of March 15, 2023, was prepared to support GR Silver's second disclosure of Mineral Resources for the Plomosas Project.

This Technical Report includes technical information that required calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding, and consequently introduce a small margin of error. Where these occur, the authors do not consider them to be material.

## 2.2 Qualified Persons

Dr. Gilles Arseneau, P.Geo., of ACS, is the principal author of this Technical Report. Dr. Arseneau is an independent qualified person (QP) as defined in NI 43-101 and Member 23474 of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (APEGBC). ACS is licenced to operate in British Columbia under Permit number 1000256, issued by APEGBC on July 2, 2022.

Gilles Arseneau visited the Project from November 3 to 7, 2020, and from December 5 to 7, 2022.

Shane Tad Crowie, P.Eng., is an independent QP as the term is defined in NI 43-101. Mr. Crowie is currently employed as Senior Metallurgist with JDS Energy & Mining Inc. He is a graduate of the University of British Columbia, with a B.A.Sc. in Mining and Mineral Process Engineering (2001). Mr. Crowie is responsible for Section 13 of this Technical Report.

## 2.3 Information Sources and References

The primary sources for this Technical Report are information collected during the 2020 and 2022 site visits, data provided by GR Silver, a WSP Canada Inc. (WSP) (2019, March 26) technical report prepared for Goldplay Exploration Ltd. (now GR Silver), and an amended version of that report from June 2020 (McCracken and Filipov, 2020).

The author has reviewed and analyzed data and reports provided by GR Silver, together with publicly available data, drawing his own conclusions, augmented by direct field examination.

All monetary values are given in Canadian dollars (C$) unless otherwise stated.

# 3 RELIANCE ON OTHER EXPERTS

The QP who prepared this Technical Report have also relied on information provided by experts who are not QPs, or persons who are not listed as authors for this Technical Report for information concerning legal, tax, political, environmental, permitting, and title matters. The QP believes that it is reasonable to rely on these experts, based on the assumption that the experts have the necessary education, professional designations and relevant experience on matters pertaining to this Technical Report.

## 3.1 Mineral Tenure

The authors have not reviewed the mineral tenure, nor independently verified the legal status, ownership of the Project area, or underlying property agreements, and for all the information pertaining to mineral claims related to the Project, as well as ownership, has relied on title opinions for Minera La Rastra, S.A. de C.V. Mining Concessions, the Oro Gold de México, S.A. de C.V. Mining Concessions and the Compañía Minera San Marcial, S.A. de C.V. (refer to Appendix A). Mining Concessions provided by GR Silver's legal counsel in Mexico, DBR Abogados, S.C., dated April 27, 2023.

# 4 PROPERTY DESCRIPTION AND LOCATION

## 4.1 Location

The Plomosas Project is in southeastern Sinaloa State, Mexico, on the edge of the Sierra Madre Occidental (SMO). It is near the border between Nayarit and Durango States, approximately 100 km east-southeast of Mazatlán and 35 km east of the municipality of Rosario, within the Rosario Mining District (Figure 4-1).

The Plomosas Project comprises three properties, each made up of a group of mining concessions with common ownership. The three Mineral Resource areas described in this Technical Report—the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas—are located within the first two of the properties listed below, while the third property hosts the La Trinidad Area, consisting of the past-producing La Trinidad open pit mine and heap leach operations:

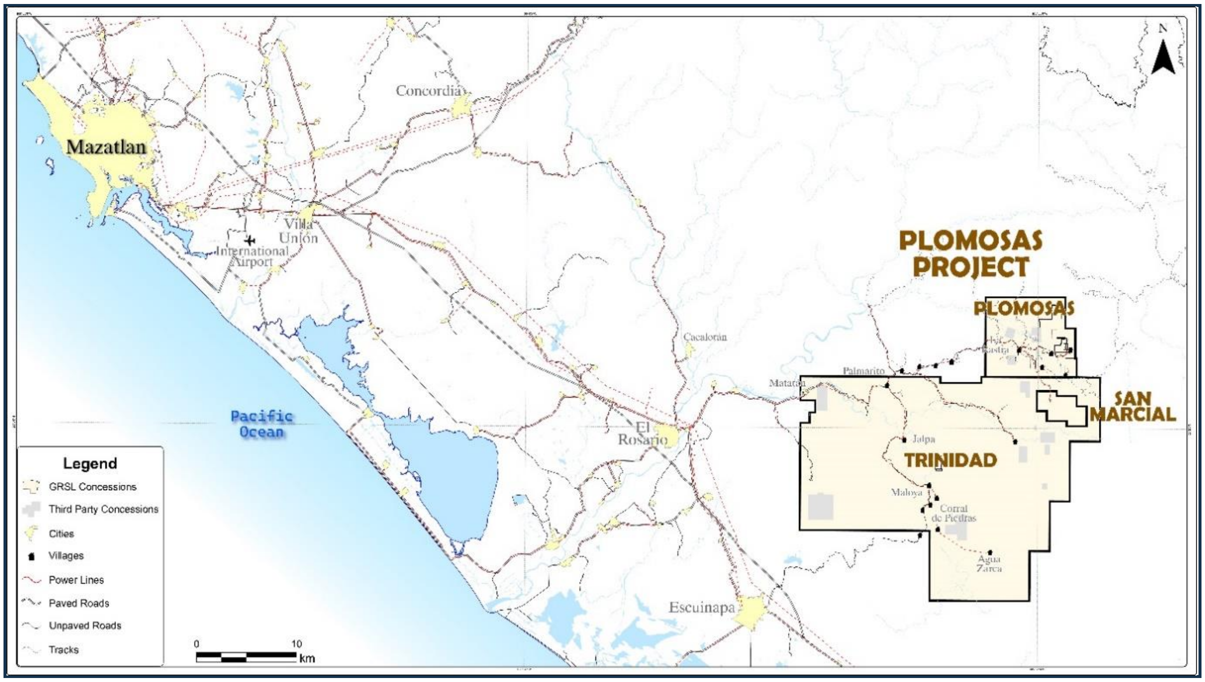
1. San Marcial Property—two mining concessions owned by Minera San Marcial:
   a. **San Marcial Area—**7.3 km south-southeast of the historic mining village of La Rastra.
2. Plomosas Property—11 mining concessions owned by Minera La Rastra:
   b. **Plomosas Mine Area**—the former La Cruz historical underground mine, 5 km east of the historic mining village of La Rastra
   c. **San Juan–La Colorada Area**—2 km south–southeast of the historic mining village of La Rastra.
3. La Trinidad Property—4 mining concessions owned by Oro Gold.
   d. **La Trinidad Area**—27 km east-southeast of the municipality of Rosario.

The San Marcial Property is centred at UTM coordinates 451,000E and 2,545,700N (WGS 84). The elevation of this property varies from 400 to 1,000 m above sea level.

The Plomosas Property is centred at UTM coordinates 451,500E and 2,551,500N (WGS 84). The elevation of this property varies from 400 to 1,200 m above sea level. The La Trinidad Property is centred at UTM coordinates 440700 E and 2539500N (WGS 84). The elevation of this property varies from 50 to 1,950 m above sea level.

The Plomosas Project is accessed from Mazatlán as follows: travel approximately 70 km southeast along either the Federal Highway 15D (toll road) or Highway 15 (no tolls) to the town of El Rosario, then continue on Highway 15 for 2 km, crossing the Rio Baluarte, before turning left at the turnoff towards Matatán. Continue on the local sealed road through the villages of Las Habitas and Matatán, then continue east along the partially sealed local road for 11 km before veering left at Palmarito and continuing 22 km along the unsealed local road through the village of La Rastra. On the outskirts of La Rastra on the eastern side, an unsealed road junction provides access to the Plomosas Mine Area 10 km to the east, and to the south-southeast towards the San Juan–La Colorada (2 km) and San Marcial (10 km) Areas. The access to the La Trinidad Area is by turning right at Palmarito, along a local unsealed road towards the Maloya community.

***Figure 4-1: Plomosas Project Location***



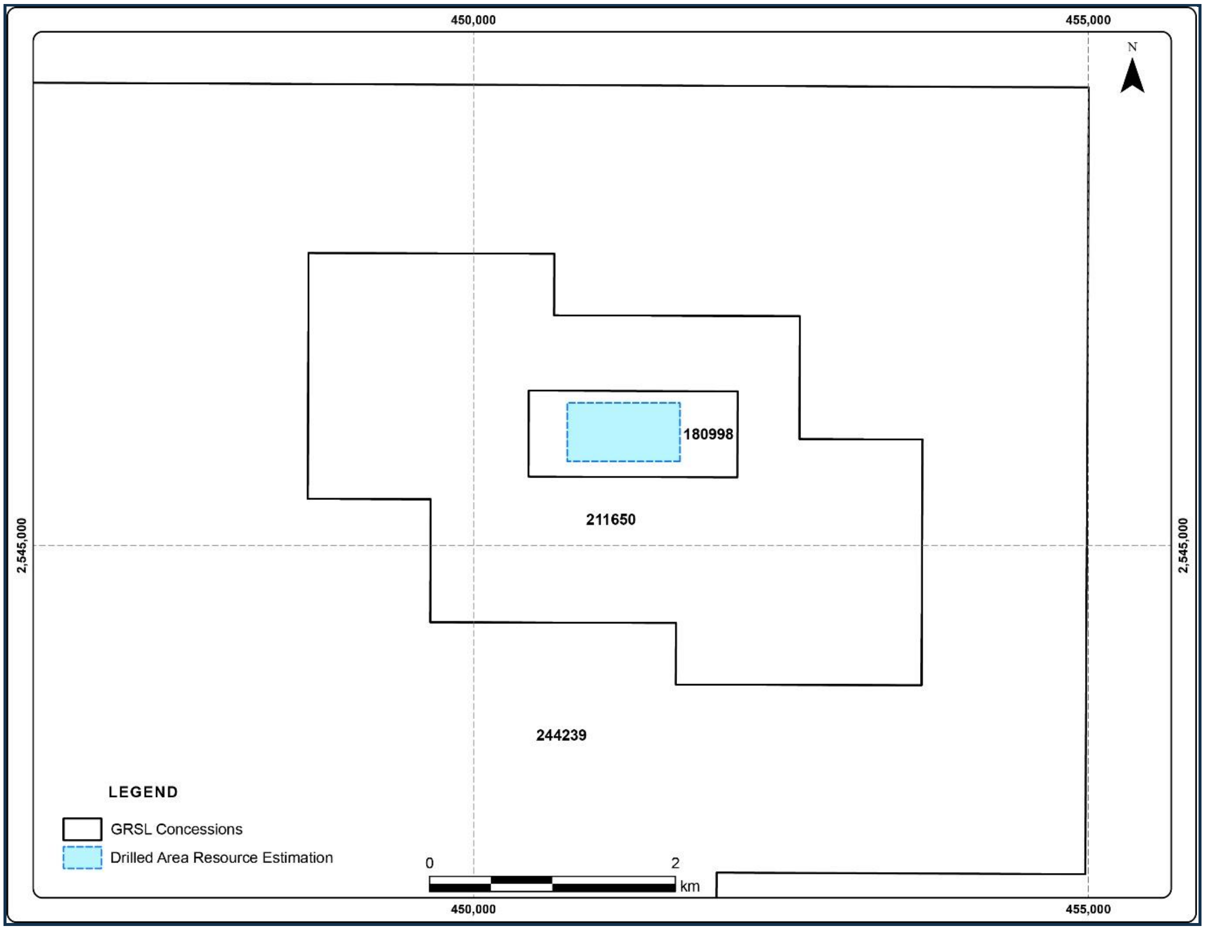

Source: GR Silver (2023).

## 4.2 Land Tenure and Underlying Agreements

The Plomosas Project consists of 17 mining concessions totalling 43,187.1 ha.

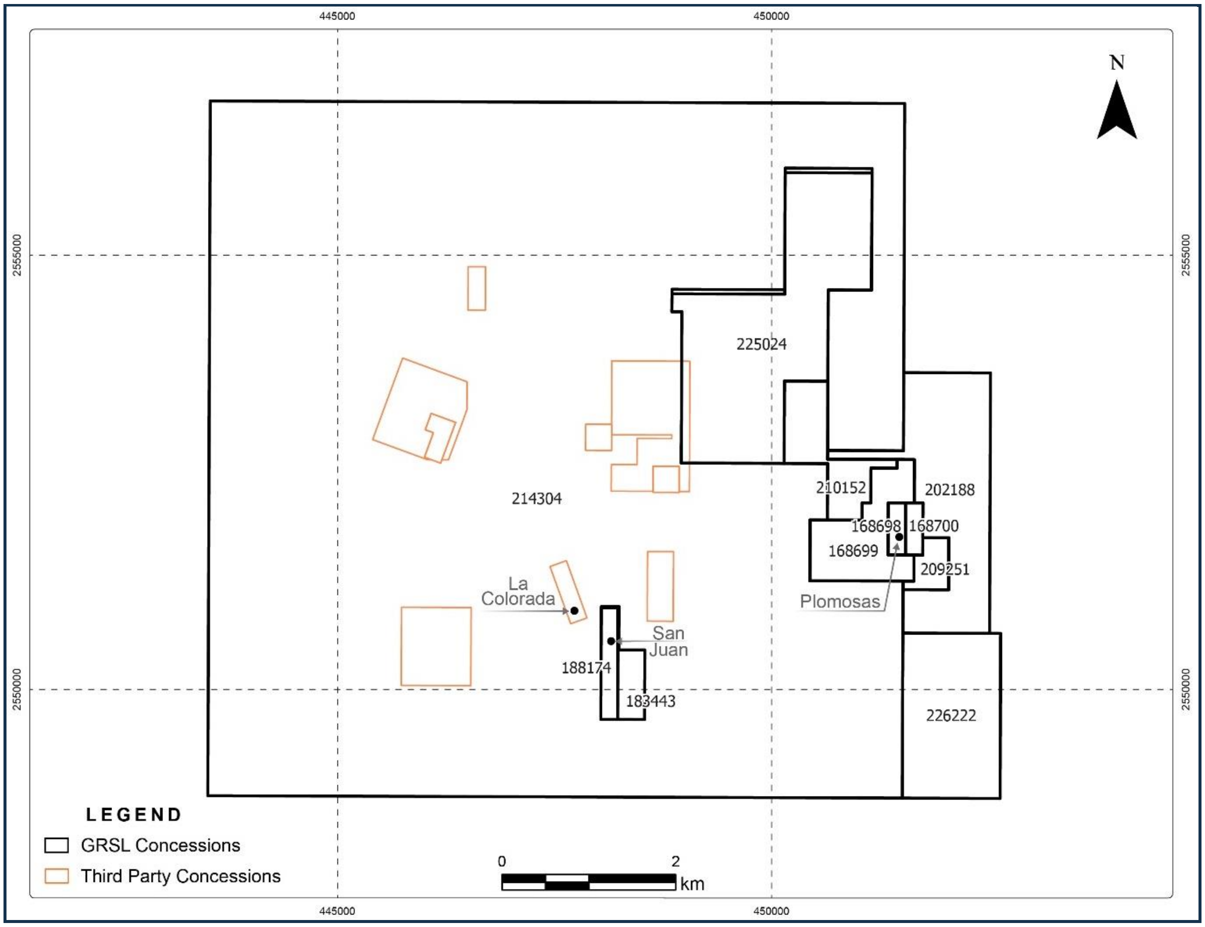
The San Marcial Property (including the San Marcial Area) consists of two concessions totalling 1,250 ha (Figure 4-2), 100% owned by Compañia Minera San Marcial S.A. de C.V. (Minera San Marcial), a wholly owned subsidiary of GR Silver in Mexico. The Plomosas Property (including the Plomosas Mine and San Juan–La Colorada Areas) consists of eleven mining concessions totalling 6,573.5 ha (Figure 4-3), 100% owned by Minera La Rastra S.A. de C.V. (Minera La Rastra), a wholly owned subsidiary of GR Silver in Mexico. The La Trinidad Property's four mining concessions (Figure 4-4), totalling 35,363 ha, are 100% owned by Oro Gold de México S.A. de C.V. (Oro Gold), a wholly owned subsidiary of GR Silver in Mexico.

***Figure 4-2: Minera San Marcial Concessions: Plomosas Project—San Marcial Area***




Source: GR Silver (2023).

***Figure 4-3: Minera La Rastra Concessions: Plomosas Project—Plomosas Mine and San Juan–La Colorada Areas***




Source: GR Silver (2023).

The *Mexican Mining Law* was amended in 2005, removing the distinction between an exploration concession and an exploitation concession. As a result, the properties were converted to mining concessions under the new legislation and given expiry dates that are 50 years from the date that they were originally recorded with the Public Registry of Mining. Under the *Mexican Mining Law*, duties are assessed against each mining concession, and they are calculated by multiplying a rate defined by the Mexican government based on the age and number of hectares of the respective concession. These duties are paid semi-annually, in January and July, to the Secretary of Finance (*Secretaría de Hacienda y Crédito Público*). All 17 mining concessions (Table 4-1) remain valid from the record date of title. Semi-annual mining duties were paid in July 2022, and minimum annual exploration work requirements have been met. For the 17 mining concessions that comprise the Plomosas Project, mining duties of $101,453 were paid in July 2022.

***Table 4-1: Plomosas Project Mining Concessions***

| Concession | Title Number | Type | Surface Area (ha) | Granted | Expiry | Area Name | Company |
|---|---|---|---|---|---|---|---|
| Mina de San Marcial | 180998 | Exploitation | 119.0000 | Aug 13, 1987 | Aug 13, 2037 | San Marcial | Minera San Marcial |
| Ampliación San Marcial | 211650 | Exploitation | 1,131.0000 | Jun 22, 2000 | Jun 22, 2050 | San Marcial | Minera San Marcial |
| Plomosas | 168698 | Exploitation | 12.0000 | Jul 02, 1981 | Jul 01, 2031 | Plomosas Mine | Minera La Rastra |
| Segunda Ampliación de Plomosas | 168699 | Exploitation | 100.0000 | Jul 02, 1981 | Jul 01, 2031 | Plomosas Mine | Minera La Rastra |
| Continuación de Plomosas | 168700 | Exploitation | 12.0000 | Jul 02, 1981 | Jul 01, 2031 | Plomosas Mine | Minera La Rastra |
| La Rastra 2 | 183443 | Exploitation | 25.4275 | Oct 20, 1988 | Oct 19, 2038 | San Juan–La Colorada | Minera La Rastra |
| San Juan | 188174 | Exploitation | 24.5725 | Jun 15, 1983 | Jun 14, 2033 | San Juan–La Colorada | Minera La Rastra |
| La Estrella | 202188 | Exploitation | 261.6800 | Jul 30, 1992 | Jul 29 2042 | Plomosas Mine | Minera La Rastra |
| Plomosas 3 | 209251 | Exploitation | 23.2700 | Mar 19, 1999 | Mar 18, 2049 | Plomosas Mine | Minera La Rastra |
| Plomosas 2 | 210152 | Exploitation | 83.5000 | Dec 19, 1991 | Dec 18, 2041 | Plomosas Mine | Minera La Rastra |
| La Rastra | 214304 | Exploitation | 5,396.0027 | Jul 08, 1994 | Jul 07, 2044 | Plomosas | Minera La Rastra |
| Plomosas 4 | 225024 | Exploitation | 420.9633 | Jul 08, 2005 | Jul 07, 2055 | Plomosas | Minera La Rastra |
| Los Arcos | 226222 | Exploitation | 214.1300 | May 08, 1996 | May 07, 2046 | Plomosas | Minera La Rastra |
| Reducción la Nueva Trinidad[a] | 244239 | Exploitation | 35,173.5088 | Nov 22, 2006 | Nov 22, 2056 | La Trinidad | Oro Gold |
| Nancy | 226638 | Exploitation | 100.0000 | Feb 3, 2006 | Feb 3, 2056 | La Trinidad | Oro Gold |
| San Carlos | 237870 | Exploitation | 79.5781 | May 17, 2011 | May 17, 2061 | La Trinidad | Oro Gold |
| San Carlos I | 241108 | Exploitation | 10.4219 | Nov 22, 2012 | Nov 22, 2062 | La Trinidad | Oro Gold |
| **Total** | | | **43,187.0548** | | | | |

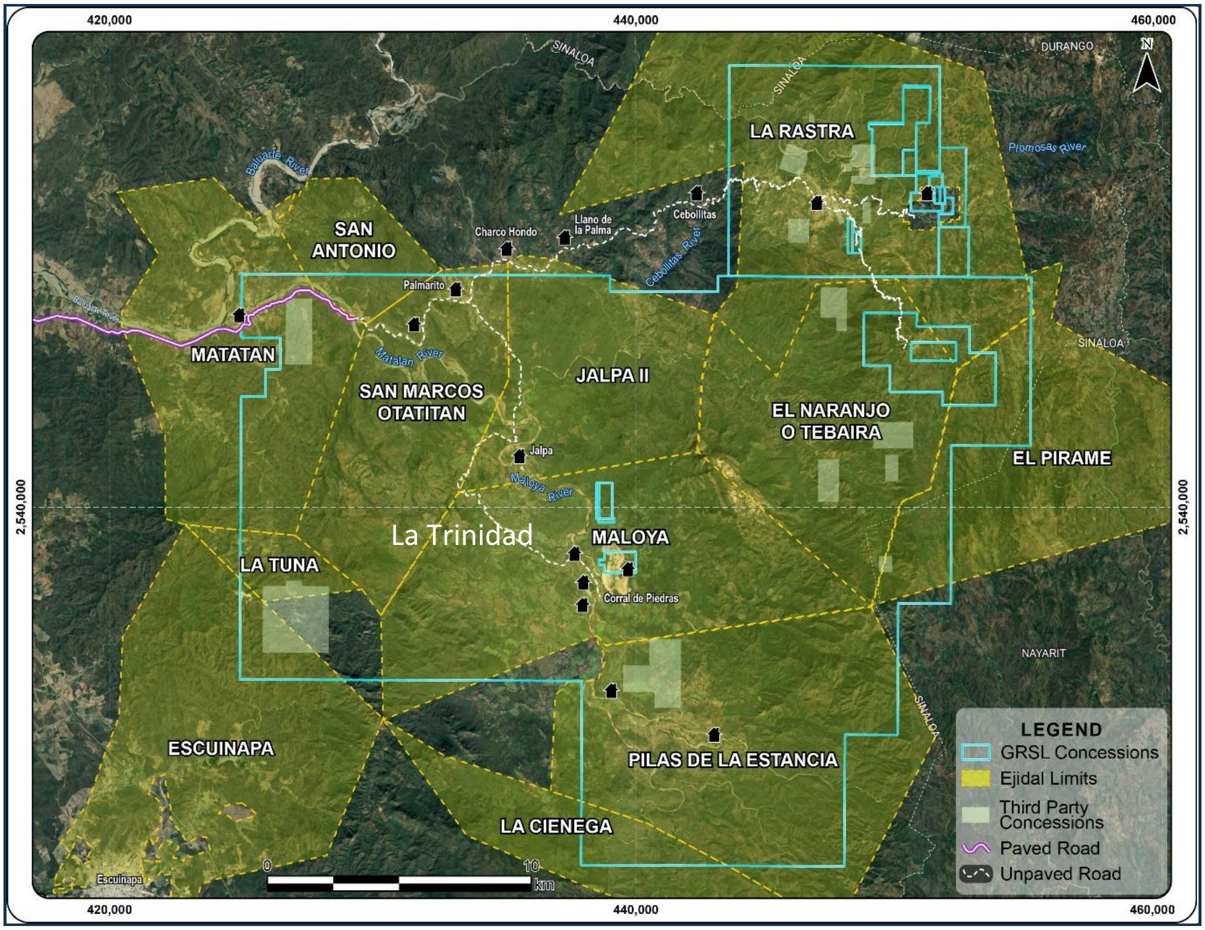
**Note:** [a] June 2021 reduction subject to Government approval.

Mining concessions can be extended beyond the expiry date for an additional 50 years, according to Article 15 of the Mexican Mining Code. To obtain such an extension, the concession holder is required to submit an extension request to the Mexican Secretary of Mines five years prior to the stated expiry date.

Mining concessions in Mexico are separate from surface rights. Permission for surface access must be granted by the owners of the surface rights to the areas covered by any exploration program inside the concessions. Gaining permission commonly involves direct negotiations.

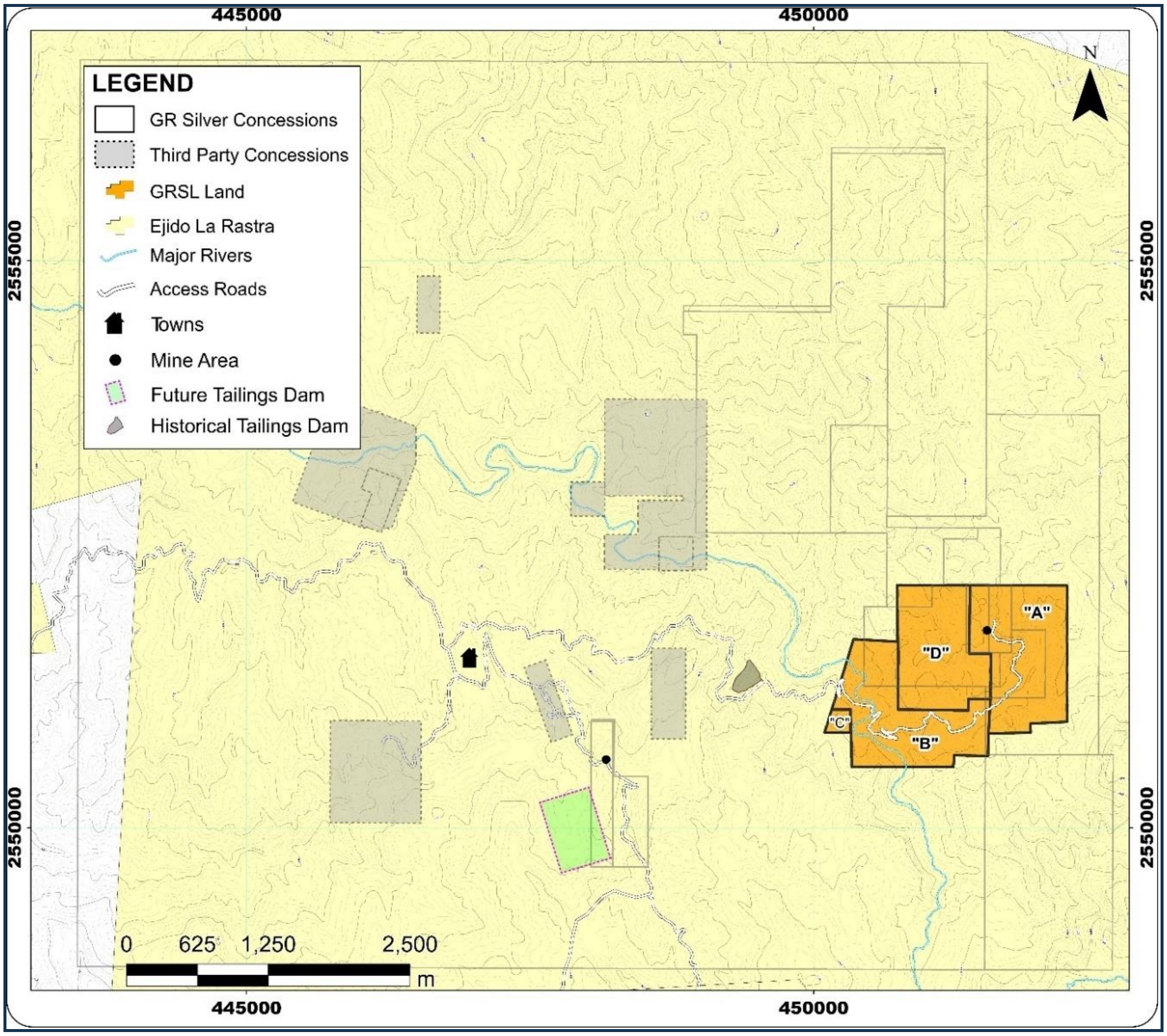
The surface rights covering the majority of the San Marcial Area are owned by the Ejido El Naranjo o Tebaira (Ejido Tebaira) (Figure 4-4). The surface rights covering the majority of the Plomosas Mine and San Juan–La Colorada Areas are owned by the Ejido La Rastra. Surface rights over a portion of the Plomosas Property are 100% owned by Minera La Rastra (Figure 4-5), covering most of the historical underground mine and existing facilities in the Plomosas Mine Area.

*Figure 4-4: Ejido La Rastra, Ejido Tebaira, and Ejido Maloya Location—Plomosas Project*




Source: GR Silver (2023).

***Figure 4-5: Ejido La Rastra and the Four Properties (A, B, C, and D) Location—100% Owned by Minera La Rastra***




Source: GR Silver (2023).

Minera La Rastra has executed agreements with Ejido La Rastra to allow access, surface exploration, and exploitation activities on the eleven concessions that it owns within the Plomosas Project. This agreement is in good standing, providing the Company full access to carry out its exploration programs. The first 20-year agreement between Minera La Rastra and Ejido La Rastra was executed on March 2, 2008, authorizing exploration and exploitation activities, including mining and processing on the eleven concessions. The 2008 agreement defined the terms of surface access to the eleven concessions, including an annual payment in Mexican pesos per hectare. On May 3, 2017, Minera La Rastra and Ejido La Rastra executed a secondary agreement including additional clauses to address vegetation removal in areas planned for exploration. On September 6, 2022, Minera La Rastra and Ejido La Rastra amended the May 3, 2017, agreement and included additional clauses to address vegetation removal in areas planned for exploration, and related compensation to Ejido La Rastra for 2022–2027. The Plomosas Mine and San Juan–La Colorada Areas include historical underground mine sites, and the current agreement with Ejido La Rastra provides authorization for exploitation activities until September 6, 2028, including mining and processing on the concessions.

Minera San Marcial executed an agreement with Ejido Tebaira on January 30, 2023, to allow access and surface exploration activities in all areas under exploration in the San Marcial Area. This agreement is in good standing, providing the Company full access to carry out its exploration programs until 2042.

Oro Gold executed an agreement with Ejido Maloya, valid until July 2024, covering 699 ha of the concessions forming the La Trinidad Property (Figure 4-4). This agreement is in good standing, providing the Company full access to carry out its exploration programs.

On March 30, 2020, GR Silver acquired 100% of Minera La Rastra, a wholly owned subsidiary of First Majestic Silver Corp. (First Majestic), and holder of eleven of the mining concessions within the Plomosas Project (Figure 4-3). As consideration for a 100% interest in Minera La Rastra, GR Silver and its Mexican subsidiary paid C$100,000; granted a subsidiary of First Majestic a 2% net smelter return (NSR) royalty on the concessions; and issued to First Majestic 17,097,500 common shares of GR Silver. Metalla Royalty & Streaming Ltd. (Metalla) completed the acquisition of the NSR from First Majestic on December 21, 2022. GR Silver has the one-time right at any time to purchase from Metalla half of the NSR by one-time payment of US$1.0 million.

On May 6, 2021, GR Silver made the final option payment of C$2.5 million and issued 1,500,000 common shares to SSR Mining Ltd. (SSR Mining), as required under the San Marcial option agreement dated April 17, 2018, for acquiring two concessions—Mina de San Marcial and Ampliación San Marcial—from SSR Mining's subsidiary, Silver Standard México, S.A. de C.V. (Silver Standard México). SSR Mining's subsidiary, Silver Standard México was also granted a 0.75% NSR royalty, which was subsequently acquired by EMX Royalty Corp. in October 2021. GR Silver has a buy-back right on that NSR royalty, which can be exercised at any time by payment of C$1.25 million. Additionally, Silver Standard México granted Met-Sin Industriales S.A. de C.V. (Met-Sin) a 3.0% NSR royalty, to which GR Silver has a buy-back right of US$600,000 per 1.0% of the NSR royalty, plus associated VAT, that can be exercised at any time, and from time to time, in whole or in part.

On April 1, 2021, GR Silver completed the acquisition of 100% of Marlin Gold Mining Ltd. (Marlin) a British Columbia incorporated company, from Mako Mining Corp. (Mako). Marlin owns 100% of Oro Gold , which owns four concessions forming the La Trinidad Property within the Plomosas Project, and includes the past producer La Trinidad open pit Au mine, that ceased operating in 2019. As consideration for all of the issued and outstanding shares of Marlin, GR Silver paid C$50,000 to Mako, and Oro Gold granted Mako a 1% NSR royalty on the concessions owned by Oro Gold. Mako will be solely liable and responsible for all reclamation, decommissioning, restoration, closure, or other environmental corrective, clean-up, monitoring, or remediation obligations and liabilities, relating directly or indirectly to any activities conducted in relation to the concessions part of the La Trinidad Area (the Closure Plan Activities) as set forth in the *Secretaría de Medio Ambiente y Recursos Naturales* (SEMARNAT) approval (as of February 16, 2020), and shall be responsible for, and shall pay all costs related to the Closure Plan Activities at the La Trinidad mine, and all other matters that may be required to obtain the Closure Plan Certification.

Terms of all royalties, buy-back rights, and related payments to which the Plomosas Project is subject, are summarized in Table 4-2.

***Table 4-2: Summary of Royalties Affecting the Plomosas Project Mining Concessions***

| Company | Royalties Payable and Concessions | Buy-Back |
|---|---|---|
| Minera La Rastra S.A. de C.V. | "Plomosas," "Segunda Ampliación de Plomosas," "Continuación de Plomosas," "La Rastra 2," "San Juan," "La Estrella," "Plomosas 3," "Plomosas 2," "La Rastra," "Plomosas 4" and "Los Arcos" concessions. Minera La Rastra is bound to pay monthly royalties to Industrial Minera México, S.A. de C.V., depending on the price of Zn, for the exploitation of the mining claims covered by these concessions, as indicated below:<br>i) 3.5% when the price of Zn ≥ US$1.50/lb<br>ii) 3.0% when the price of Zn ≥ US$1.20/lb<br>iii) 2.5% when the price of Zn ≥ US$1.00/lb<br>iv) 1.75% when the price of Zn < US$1.00/lb. | |
| Minera La Rastra S.A. de C.V. | "Plomosas," "Segunda Ampliación de Plomosas," "Continuación de Plomosas," "La Rastra 2," "San Juan," "La Estrella," "Plomosas 3," "Plomosas 2," "La Rastra," "Plomosas 4" and "Los Arcos" concessions. Minera La Rastra is bound to pay a perpetual 2.0% NSR Royalty to Metalla from these concessions. | GR Silver has the right to buy back half of the NSR Royalty (i.e., 1.0%) for US$1,000,000 plus VAT, that can be exercised at any time and from time to time. |
| Compañía Minera San Marcial, S.A. de C.V. | "Mina de San Marcial" and "Ampliación San Marcial" concessions. Minera San Marcial is bound to pay a 3.0% NSR Royalty to Met-Sin Industriales, S.A. de C.V. from these concessions. | GR Silver has a buy-back right on the NSR Royalty of US$600,000 plus VAT per 1.0%, that can be exercised at any time and from time to time, in whole or in part. |
| Compañía Minera San Marcial, S.A. de C.V. | "Mina de San Marcial" and "Ampliación San Marcial" concessions. Minera San Marcial is bound to pay a 0.75% NSR Royalty to EMX Royalty Corporation from these concessions. | GR Silver has a buy-back right on the NSR Royalty that can be exercised at any time by paying C$1,250,000 plus VAT. |
| Oro Gold de México, S.A. de C.V. | "Reducción La Nueva Trinidad" and "Nancy" concessions. Oro Gold is bound to pay an NSR Royalty to Minera Camargo S.A. de C.V. from these concessions, which shall be paid as follows and once the initial investment has been recovered, or the mining claim covered by the concession has been in production for two years, whichever occurs first:<br>a) 0.5% NSR if ounce gold price is ≤US$400.00; and<br>b) 1.0% NSR if ounce gold price is >US$400.00 | The Company has a buy-back right on the NSR Royalty of US$1,000,000 plus VAT per 0.5%, that can be exercised at any time and from time to time, in whole or in part. |
| Oro Gold de México, S.A. de C.V. | "Nancy" concession. Oro Gold is bound to pay to Paulino Meza Villapudua an NSR Royalty from these concessions as follows:<br>a) 0.5% NSR if ounce gold price < US$400.00;<br>b) 1.0% NSR if ounce gold price is between US$400.00 and 499.99; and<br>c) 1.5% NSR if ounce gold price > US$500.00 | The Company has the right to buy back the NSR Royalty for US$1,000,000 plus VAT, that can be exercised at any time. |
| Oro Gold de México, S.A. de C.V. | "Reducción La Nueva Trinidad," "San Carlos," "San Carlos I" and "Nancy" concessions. Oro Gold is bound to pay a 1.0% NSR Royalty to Mako, from these concessions. | The Company has the right to buy back the NSR Royalty for US$2,000,000 plus VAT, that can be exercised at any time. |

## 4.3 Permitting Considerations

Within the Plomosas Project, the Plomosas Mine, and San Juan–La Colorada Areas are sites with a previous history of modern underground mining and processing facilities. The San Marcial Area is at the exploration stage, with limited evidence of historical artisanal mining on site.

Table 4-3 shows the current permitting status, indicating permits granted and valid, and those at the application stage.

*Table 4-3: Summary of Permits and Authorizations for the San Marcial Area*

| Permit | Current Status | Agency | Term | Comments |
|---|---|---|---|---|
| Use of Land and Exploration Access | Active | Agreement with Ejido Tebaira until 2042 | 2022–2042 (Renewable) | |
| MIA/DTU SEMARNAT | Under review after filing, with amendments, with the agency | SEMARNAT | | |

In the early 1990s at the Plomosas Mine and San Juan–La Colorada Areas, Minera La Rastra completed environmental surveys and studies to support existing permits and authorizations. The following permits and authorizations are valid for these areas for the purpose of any potential restart of underground mining and processing. Table 4-4 and Table 4-5 show the current permitting status, indicating still-valid permits for previous operations.

*Table 4-4: Summary of Permits and Authorizations for the Plomosas Mine and San Juan–La Colorada Areas*

| Permit | Current Status | Agency | Term | Comments |
|---|---|---|---|---|
| Use of Land and Exploration Access | Active | Agreement with Ejido La Rastra until 2028 | 2002–2028 (Renewable) | Includes authorization for use of land for new tailings disposal site |
| Underground Mining Exploitation Permit | Active for 600 t/d | SEMARNAT | - | - |
| MIA/DTU SEMARNAT | Does not apply—Previous operational site | SEMARNAT | - | - |
| Power Supply | Active | CFE—25 km 99 kW power line operative to the Plomosas Area | - | - |
| Water Supply and Discharges | Active | CONAGUA | - | Allows for use of water from underground and surface |
| Employee Social Security | Active | - | - | - |
| Explosives Permit | Active | - | - | - |

Notes: CFE = Comisión Federal de Electricidad (Federal Commission of Electricity); CONAGUA = Comisión Nacional del Agua; DTU = Documento Técnico Unificado; MIA = Manifestaciones de Impacto Ambiental (Environmental Impact Assessment); SEMARNAT = Secretaría de Medio Ambiente y Recursos Naturales.

The La Trinidad Area is at the exploration stage. Table 4-5 shows the current permitting status, indicating permits granted and valid, and those at the application stage.

*Table 4-5: Summary of Permits and Authorizations for the La Trinidad Area*

| Permit | Current Status | Agency | Term | Comments |
|---|---|---|---|---|
| Use of Land and Exploration Access | Active | Agreement with Ejido Maloya until July 2024 | 2012–2024 (Renewable) | - |
| Use of Land and Exploration Access | Active | Agreement with Individual Landowners until July 2024 | 2012–2024 (Renewable) | - |
| MIA/DTU SEMARNAT | Active | SEMARNAT | - | Area under reclamation with extension of reclamation period granted for period 2022–2027. |
| Water Supply and Discharges | Active | CONAGUA | - | Allows for use of water for exploration and operational needs. |
| Employee Social Security | Active | - | - | - |

## 4.4 Environmental Considerations

At the San Marcial Area there are no remnants of historical mining; it is an exploration site, with basic camp facilities for temporary use during exploration programs.

At the Plomosas Mine and San Juan–La Colorada Areas remnants exist that show the active mining history and community development that once existed in this district. There are numerous historical mine portals and shafts, partially overgrown with vegetation, which have been flagged and/or fenced. The previous underground mining and processing plant, which ceased operation in 2003, left remnants of buildings and the historical plant on site. First Majestic donated the previous tailings disposal area (Figure 4-6) to the Ejido La Rastra on March 5, 2015. The Ejido La Rastra granted Minera La Rastra the right to use a new area of 29.5 ha for a future tailings disposal site. Ejido La Rastra subsequently sold the material in the previous tailings disposal area to Mexican third-party operators. In 2022, Minera La Rastra filed a notification to inform SEMARNAT of the transfer of ownership of materials in the previous tailings disposal area and environmental responsibilities to the Mexican third-party.

Remnants exist at the La Trinidad Area that shows the previous open pit mining and heap leaching history. There are remnants of infrastructure on site, such as buildings and processing areas, which are now partially covered by vegetation. Most of these remnants have been flagged and/or fenced. The previous open pit mining and processing plant ceased operations in 2019. All pending reclamation activities are the full responsibility of Mako, the previous operator and owner of the concessions covering the La Trinidad Area. According to the March 2021 purchase agreement with Mako, it will be solely liable and responsible for the Closure Plan Activities and shall also be responsible for, and shall pay all costs related to, the Closure Plan Activities and all other matters that may be required to obtain the Closure Plan Certification.

***Figure 4-6: Historical Tailings Disposal Area Owned by a Third Party Within the Plomosas Mine Area Concessions***

Source: GR Silver (2023).

## 4.5 Social and Community Relations

GR Silver has adopted a commitment to transparency with all local communities within the Plomosas Project. The Company has a continuous engagement with local communities and ejidos, fostering strong relationships. GR Silver has signed long-term agreements allowing exploration and exploitation in some areas of the Plomosas Project. The Company recognizes the importance of building a strong social license with surrounding communities and has worked together with them, setting up initial programs of awareness of its activities in the region. GR Silver aims to have a predominance of locally hired personnel or Mexican nationals employed in its Plomosas Project operations.

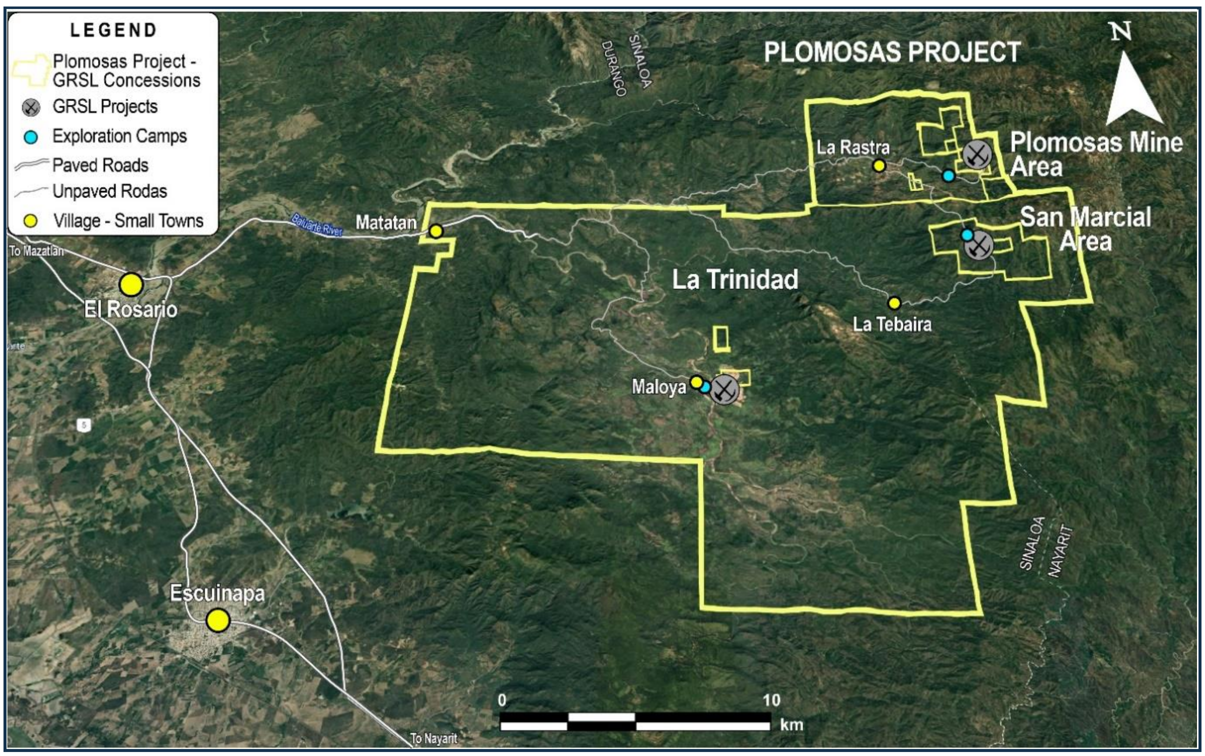
## 4.6 Comment on Property Description and Location

To the best of the QP's knowledge, there are no significant factors and risks that may affect access, title, or the right or ability to perform work on the Plomosas Project that have not been discussed in this Technical Report.

# 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Mazatlán is the starting point for accessing the Plomosas Project; it is home of the main international airport for the state of Sinaloa and one of the two main ports, with direct flights to Mexico City and various ports in the U.S.A. and Canada. From Mazatlán the Project can be reached by road, either Federal Highway 15D (toll road) or Highway 15 (no tolls), travelling southeast to the town of El Rosario (Figure 4-1). From El Rosario the Plomosas Project resource areas are a 1.5 to 2 hour drive east on Highway 15 for 2 km, crossing the Baluarte River bridge before turning left at the second turnoff on Calle Melchor Ocampo Norte towards Matatán. The route continues on the local sealed road through the villages of Las Habitas and Matatán, then east for 11 km before veering left at a fork and continuing 22 km along the unsealed local road to the village of La Rastra. On the eastern outskirts of La Rastra, the route continues east for 10 km to the Plomosas Mine Area; another secondary road on the outskirts of the village of La Rastra travels southeast for 2 km past the San Juan–La Colorada Area, reaching the San Marcial Area another 8 km to the southeast (Figure 5-1).

***Figure 5-1: Access to San Marcial, Plomosas Mine, and San Juan–La Colorada Areas from El Rosario***

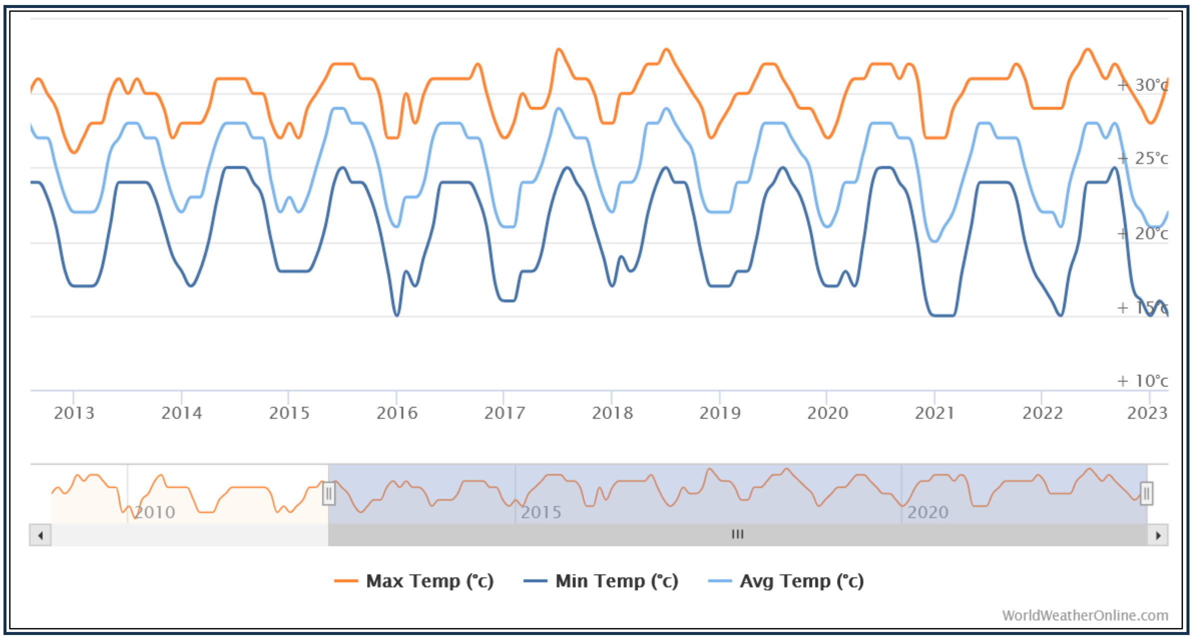



Source: GR Silver (2021).

## 5.1 Climate

The regional climate ranges from semi-warm sub-humid to hot sub-humid, influenced by the semi-cold climate of the highlands and the tropical influences entering the SMO through deep canyons to the west. Maximum temperatures are typically in the low to mid 30s Celsius in the middle of the year and drop to the mid to high 20s Celsius from November to February. Minimum temperatures average in the low to mid 20s Celsius during the middle of the year and drop to an average of 15°C in the colder months (Figure 5-2).

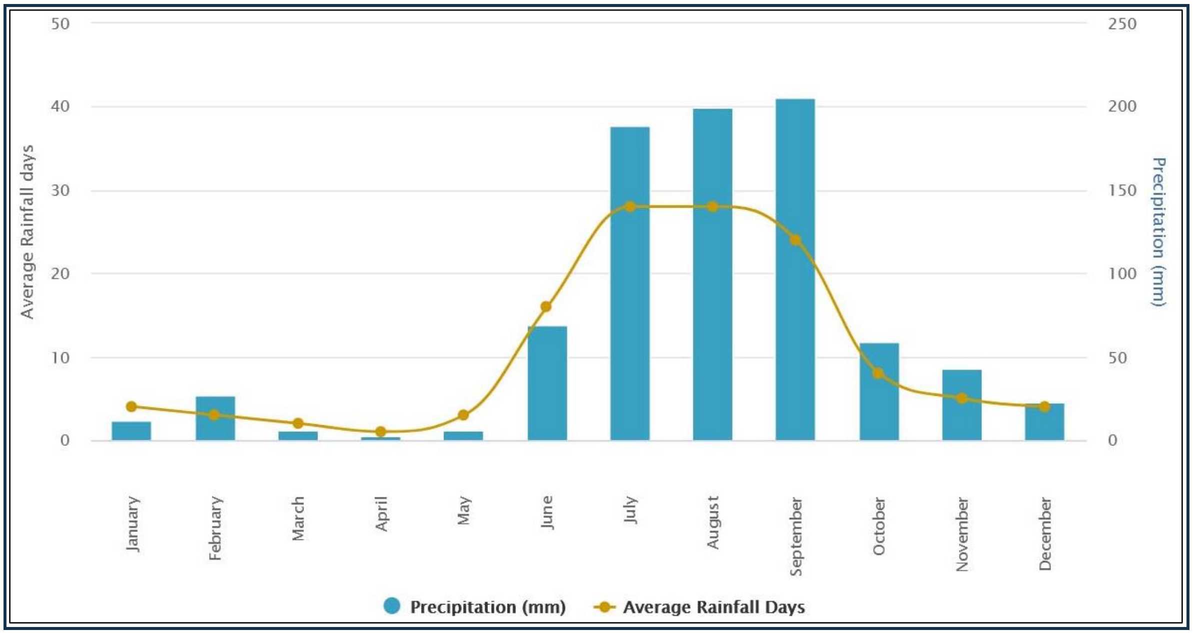
***Figure 5-2: Monthly Temperature Variability 2013 to 2023, La Rastra***




Source: www.worldweatheronline.com (2023).

Rainfall in the area is seasonal, with the number of rain days and the volume of rainfall increasing from around June until October and November (Figure 5-3). The remainder of the year is much drier, with little rain of significance apart from isolated storms. All exploration activities at the Plomosas Project can operate year-round; however, activity can be affected by excessive rain and temporary road washouts during the wet season, and four-wheel drive vehicles are recommended year-round as a precaution.

***Figure 5-3: Average Monthly Rainfall La Rastra***




Source: www.worldweatheronline.com (2021).

## 5.2 Local Resources and Infrastructure

The Project is in the Municipality of Rosario; the town of El Rosario is the major population and supply centre for the region, with a population of approximately 16,000. The closest accommodations to the Plomosas Project are in the villages of La Rastra and Matatán, which offer numerous houses for rent, with electricity and telephone; the two towns also host a local workforce (Figure 5-4). The majority of GR Silver workers are sourced from the surrounding villages and towns, as well as other parts of Sinaloa State, and surrounding states.

Some extensive facilities and infrastructure are in place at the Plomosas Property, including a secure, fully functional 190-person mining camp facility known as Perleros (Figure 5-5); 7.4 km of underground development; a tailings dam; a 60 km (33 kV) power line (connected to the Mexican regional power grid); an infirmary; offices; core shack facilities; a water tank; internet connection; general buildings; and warehouses.

***Figure 5-4: View of La Rastra Village, Approximately 5 km from Plomosas Mine Area***


Source: GR Silver (2023).

***Figure 5-5: View of Perleros Camp and Office Facilities***

Source: GR Silver (2021).

The San Marcial Property has an established exploration camp that can house over 30 people, along with an office, internet connection, kitchen facilities, medical room, and generator power. A power line has been installed to the San Marcial property but is yet to be connected to the Mexican regional power grid. The property includes a 285 m-long tunnel that cuts the main breccia mineralization and extends an additional 150 m beyond the breccia, providing the Company with underground access to drill the resource down dip more efficiently.

The Plomosas Property includes a past-producing underground mine (the Plomosas Mine), a series of small, shallow historical workings (or small underground development sites) such as San Juan, La Colorada, El Saltito, and San Francisco, as well as numerous silver and gold exploration targets.

Industrial Minera México, S.A. de C.V. (IMMSA) operated the Plomosas underground mine and a 600 t/d processing plant from 1986 to 2001, and some of the foundations and other ancillary facilities remain on site today (Figure 5-6).

***Figure 5-6: Historical IMMSA Plant Site and Lower Underground Mine Access at Plomosas Mine***

Source: GR Silver (2021).

## 5.3 Physiography

The Project is in the western limit of the sub-province of Zona de Barrancas, which is on the edge of the SMO physiographic province, very close to the plains and rolling hills of the coastal plain. The SMO province is characterized by relief of high and large volcanic plateaus, dissected by deep gorges that drain westward towards the Pacific Ocean. The Plomosas Project is in an area where the topography varies between 400 and 1,200 m above sea level (Figure 5-7).

Vegetation at the Plomosas Project is influenced by the semi-cold climate of the highlands and the tropical influences entering the SMO through deep canyons along its western flank. As a result, the vegetation varies from oak forest to tropical semi-deciduous forest, with areas of subtropical scrub (Gonzalez et al., 2012). Vegetation is thickest during the wet season and diminishes during the dry season.

*Figure 5-7: Aerial View of the Plomosas Property Physiography, Looking East*

Source: GR Silver (2021).

GR Silver holds sufficient surface rights to easily support a mining operation and processing plant infrastructure, and areas for waste and tailings disposal. In addition, GR Silver has access to power, water, and necessary personnel to support all possible future operations.

# 6 HISTORY

The Plomosas Project is known historically as a significant area for silver, gold, lead, and zinc production. Historical production initiated with the Spaniards as early as 1700s, with local historical references from the library in Rosario indicating that, from the 1780s well into the 1900s, the La Rastra to San Marcial corridor was an active Ag–Au prospecting area with over 20 known prospects and/or small-scale mines. More modern underground/open pit and processing plant operations were set up in the late 1980s, 1990s, and early 2000s, in the region that today forms the Plomosas Project.

## 6.1 Plomosas Mine Area

Spaniards exploring in the highlands of Sinaloa first discovered mineralization in the Plomosas Mine Area in the mid 18$^{th}$ century. The earliest recorded mining dates back to 1772, with the discovery of mineralization at the Mina La Abundancia, now known as the Plomosas Mine Area. Over the following decades, various operators intermittently worked the mine for silver on a small scale.

In 1885, the mine was drained using steam-driven pumps, and the old workings were deepened to access Pb–Zn mineralization, but due to operational issues mining was restricted to silver-rich mineralization at shallower levels. The operation was abandoned in 1888. In 1930, the Mexican Premier company acquired the mine, but mined only for short periods.

In the 1950s and 1960s, Minera Nacional undertook exploration and development work, followed by Asarco Méxicana S.A. This involved exploration, diamond drilling, and initial underground development in the 1970s. In 1974, Asarco Méxicana S.A. became IMMSA, a subsidiary of the current Grupo México S.A. de C.V. Also In the 1970s, metallurgical research and testwork was carried out to design a process for dealing with a Pb–Ag concentrate with high zinc content, which could be treated at IMMSA's smelter plant at Avalos, Chihuahua (Dunkley, 2020).

In 1986, IMMSA commenced underground operations at the Plomosas mine, using room and pillar mining methods. The company constructed a 600 t/d crusher/mill/flotation processing circuit that operated until 2000. During this period, IMMSA completed almost 7.4 km of underground development to support the room and pillar operations. Processing plant feed was mainly sourced from base metal-rich mineralized zones from the Plomosas underground mine, producing zinc and lead concentrates with Ag–Au credits.

In the two decades prior to 2001, IMMSA carried out exploration programs while simultaneously advancing mining operations at the Plomosas mine. The exploration focused on shallow polymetallic Pb–Zn–Ag–Au mineralization hosted in northwest–southeast-trending structures in the vicinity of the Plomosas Mine Area. All historical exploration completed by IMMSA is referred to in the NI 43-101 technical report on Mineral Resources (Arseneau and Crowie, 2021).

IMMSA's historical production reports indicate that 2.5 Mt of ore were extracted from selective high-grade Pb–Zn zones. A summary of IMMSA's historical production is provided in Table 6-1.

***Table 6-1: IMMSA Historical Production—Plomosas Mine Area (1986–2000)***

| Concept | Unit | Production Years | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1986 | 1987 | 1987 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| Ore Milled | t | 95,133 | 164,974 | 164,239 | 147,611 | 194,279 | 202,976 | 193,729 | 188,227 | 172,983 | 178,282 | 185,026 | 189,611 | 180,884 | 187,471 | 94,381 |
| ***Mill Feed*** | | | | | | | | | | | | | | | | |
| Au | g/t | 0 | 0 | 0 | 0 | 0 | 0 | 0.64 | 1.74 | 1.61 | 1.06 | 0.94 | 0.63 | 0.75 | 0.56 | 1.17 |
| Ag | g/t | 338 | 334 | 309 | 220 | 204 | 197 | 195 | 177 | 111 | 97 | 116.9 | 79.77 | 88.73 | 96.87 | 103 |
| Pb | % | 2.62 | 1.19 | 1.4 | 1.83 | 2.47 | 3.08 | 3.13 | 3.37 | 2.25 | 2.25 | 2.15 | 1.79 | 1.88 | 1.96 | 1.67 |
| Cu | % | 0.18 | 0.11 | 0.13 | 0 | 0.12 | 0 | 0.16 | 0.22 | 0.15 | 0.13 | 0.11 | 0.16 | 0.16 | 0.13 | 0.19 |
| Zn | % | 1.58 | 0.97 | 1 | 1.22 | .14 | 1.83 | 2.66 | 2.28 | 2.28 | 2.17 | 1.85 | 2.02 | 2.42 | 2.08 | 2.57 |
| ***Metal Content*** | | | | | | | | | | | | | | | | |
| Au | g | 0 | 0 | 0 | 0 | 0 | 0 | 124 | 327 | 279 | 189 | 174 | 120 | 135 | 105 | 110 |
| Ag | g | 32,155 | 55,101 | 50,750 | 32,474 | 39,633 | 39,986 | 37,777 | 33,316 | 19,201 | 17,293 | 21,608 | 15,130 | 16,050 | 18,161 | 9,674 |
| Pb | t | 2,492 | 1,963 | 2,299 | 2,701 | 4,799 | 6,252 | 6,064 | 6,343 | 4,359 | 4,011 | 3,976 | 3,404 | 3,399 | 3,670 | 1,572 |
| Cu | t | 171 | 181 | 214 | - | 233 | - | 310 | 414 | 259 | 232 | 205 | 312 | 291 | 247 | 177 |
| Zn | t | 1,503 | 1,600 | 1,642 | 1,801 | 2,720 | 3,714 | 4,262 | 5,007 | 3,944 | 3,869 | 3,425 | 3,836 | 4,385 | 3,907 | 2,429 |
| ***Recovery*** | | | | | | | | | | | | | | | | |
| Au in Pb, Cu, Zn Conc. | | 0-0-0 | 0-0-0 | 0-0-0 | 0-0-0 | 0-0-0 | 0-0-0 | 48-0-8- | 0 | 48-0-9 | 36-0-14 | 40-0-12 | 36-0-15 | 40-0-18 | 55-0-44 | 0 |
| Ag in Pb, Cu, Zn Conc. | | 52-0-0 | 67-0-0 | 40-0-0 | 61-0-0 | 67-0-0 | 69-0-0 | 56-0-9 | 56-0-3 | 46-0-12 | 40-0-16 | 40-0-32 | 34-0-19 | 38-029 | 49-0-18 | 0 |
| Pb in Pb Conc. | | 49.5 | 62 | 34.5 | 70 | 79 | 67 | 58 | 59 | 56 | 54 | 56 | 57 | 58 | 64 | 0 |
| Cu in Cu Conc. | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Zn in Z Conc. | | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 15 | 36 | 44 | 50 | 51 | 51 | 52 | 0 |
| ***Conc. Production*** | | | | | | | | | | | | | | | | |
| Pb | t | 2,856 | 3,269 | 4,308 | 4,995 | 8,886 | 9,865 | 6,915 | 2,407 | 3,983 | 3,484 | 3,650 | 3,371 | 3,280 | 4,138 | 2,240 |
| Bulk | t | 381 | 56 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Zn | | 0 | 0 | 0 | 0 | 0 | 0 | 2,190 | 1,629 | 3,155 | 3,884 | 4,116 | 4,566 | 5,053 | 4,300 | 2,466 |

Source: Internal IMMSA reports.
Notes: Numbers are rounded.
During mining operations, in the Plomosas–La Cruz Mine were extracted lead and zinc minerals with variable silver, gold, and copper content, as well as lead and zinc concentrates.

## 6.2 San Marcial Area

The San Marcial Area historical mining activity was limited to artisanal mining, which was concentrated in isolated, small old pits and tunnels. Historical files at the library in Rosario indicate that a private U.S.A.-based company initiated underground drifting in the 1930s, but was interrupted without evidence of further developments. Artisanal small-scale mining is reported in the area since the mid 1980s. The exploration history of the San Marcial Area commenced in the late 1980s, with the chronology of exploration activities since that time summarized in Table 6-2.

***Table 6-2: Recent Chronology of Exploration in the San Marcial Area***

| Year | Company/Individual | Work | Target |
|---|---|---|---|
| 1984 to 1990 | IMMSA | Sampling of vein structures and mapping | Veins 1 and 2 at San Marcial Silver |
| 1988 | Frisco S.A. de C.V. | Sampling of vein | Veins 1 and 2 at San Marcial Silver |
| 1999 | CDE México S.A. de C.V. | Sampling of vein | Veins 1 and 2 at San Marcial Silver |
| 2000 to 2002 | Gold-Ore Resources Ltd. | Stream sediments, trenching, initial 600 m shallow drilling program and metallurgical testwork | Veins 1 and 2 at San Marcial Silver |
| 2002 | Silver Standard Resources Inc. | 2,500 m drilling program | Veins 1 and 2 at San Marcial Silver |
| 2007 | Silvermex Resources Ltd. | Option agreement over the property | Review exploration targets |
| 2008 | Silvermex Silvermex Resources Ltd. | 1,750 m drilling program | Confirmation drilling and surface exploration |
| 2010 | Silvermex Silvermex Resources Ltd. | 3,700 m drilling program and metallurgical testwork | Shallow infill drilling |
| 2018 to Present | Compañía Minera San Marcial S.A. de C.V. | Detailed geological mapping, ground-geophysical and regional litho-geochemistry surveys. Drilling programs for resource expansion and new targets, metallurgical testwork | NI 43-101 (2019)<br>Discovery of SE Area<br>NI 43-101 (2023) |

Note: After McCracken and Filipov (2020).

## 6.3 La Trinidad Area

The La Trinidad Area was discovered by Don Porfidio, a Mexican *gambusino* who worked the iron oxide-rich veins for gold near the village of Buena Vista, Sinaloa, in the early 1900s. At that time, the towns of Maloya and Pilas de Estancia, located to the north and south of Buena Vista, respectively, were centres for small-scale placer gold-mining operations. Anaconda carried out 1,800 m of diamond drilling in the area before it left Mexico in 1988. In 1992, Almaden Resources Corporation (Almaden) acquired property covering the La Trinidad gold mineralization and increased the land position by staking adjacent areas. Almaden optioned the property to Eldorado Gold Corp. (EGC) in 1995, and the joint venture eventually increased the size of the property to approximately 20,000 ha.

EGC carried out additional exploration, and in 1996 initiated open pit and heap leach operations on the La Trinidad Area. Based on EGC annual reports of 1996–1998, historical production from the La Trinidad Area commenced in 1996; by 1998 51,692 oz of gold had been produced from a shallow open pit-heap leach operation. EGC shut down its business in Mexico in 1998, and the La Trinidad operation was placed on care and maintenance.

Minera Camargo, S.A. de C.V. staked the concessions in 2005. Oro Gold Resources Ltd. acquired the concessions in 2005 and, after obtaining title to the property in 2007, carried out exploration until 2010. Following a business transaction, Oro Gold Resources Ltd. changed its name to Oro Mining Ltd. and went on to complete a historical NI 43-101 technical report (SRK Consulting [SRK], 2011). The exploration program included geological mapping, soil and stream sediments survey, ground geophysical survey, and exploration and infill drilling, including large core-diameter drilling. Marlin Gold Mining Ltd. (Marlin), (formerly Oro Mining Ltd.) later completed a historical preliminary economic assessment (SRK, 2013).

Based on the Marlin assessment, a five-year operation was designed to mine oxide material from the Trinidad Pit at an average mining rate of 37 kt/d (run-of-mine [ROM]) and process it on a heap leach facility (still present on site) to produce 90 koz Au. Marlin ran the La Trinidad operation from early 2014 to March 2019.

Marlin historical production reports indicate that 3.7 Mt of ore were extracted from the Trinidad Pit. Table 6-3 summarizes Marlin's historical production.

***Table 6-3: Marlin Historical Production—Trinidad Mine Area***

| Year | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| Total Mined (kt) | 7,463 | 10,326 | 12,603 | 19,076 | 12,354 | - |
| ROM (kt) | 560 | 659 | 720 | 876 | 853 | |
| Ounces Au on Pad | 15,240 | 19,788 | 66,705 | 43,450 | 37,509 | |
| Ounces Au Produced | 9,145 | 14,060 | 24,238 | 36,979 | 21,169 | 6,213 |
| Ounces Au Sold | 7,412 | 15,103 | 17,829 | 43,052 | 21,169 | 6,184 |

In November 2018, Mako Mining Corp. (Mako) acquired Marlin, the owner of the La Trinidad Property and mine operation. In March 2021, Mako executed an agreement with GR Silver pursuant to which the latter acquired 100% of the common shares of Marlin. As per a binding agreement, Mako remains responsible for reclamation activities and associated costs at the La Trinidad mine, until it receives approval from the Mexican government that reclamation is complete.

# 7 GEOLOGICAL SETTING AND MINERALIZATION

## 7.1 Regional Geology

Large sections of Sinaloa State, Mexico, are dominated by the SMO, a prominent 1,500 km-long, 200–400 km-wide mountain range that stretches from the U.S.A.–Mexico border in the north to approximately the Nayarit–Jalisco state boundary in the south (Figure 7-1). The SMO formed as the result of Cretaceous–Cenozoic magmatic and tectonic episodes related to the subduction of the Farallon Plate beneath North America and the opening of the Gulf of California (Ferrari et al., 2013).

***Figure 7-1: Location of the Rosario Mining District and GR Silver Concessions in the Sierra Madre Occidental***


Source: GR Silver (2021).

Most of southern Sinaloa is underlain by a large, composite batholith of Early Cretaceous to Early Tertiary age, a continuation of the Cordilleran batholiths of California and Baja California (Henry et al., 2003). Three main stages of the Sinaloa batholith are documented:

1. Early gabbro may have been emplaced during the Early Cretaceous with K–Ar cooling ages of 135 Ma.
2. Foliated pre-tectonic or syn-tectonic rocks are mostly tonalites and were emplaced while the region was being deformed at approximately 90 Ma during the initial stages of the Laramide orogeny.
3. Post-tectonic intrusive units are predominantly granodioritic to granitic in composition and lack evidence of deformation.

They were emplaced between approximately 82 and 45 Ma, showing a west-to-east migration of intrusion related to the development of the Farallon Plate's subduction (Henry et al., 2003).

The most important regional geological units within the respective geological time scale are described below. Most rock exposures in the SMO are Late Cretaceous to Early Miocene; the exposed rock having formed during two main periods of continental magmatic activity (Ferrari et al., 2017).

### *7.1.1 Late Cretaceous to Early Eocene—Lower Volcanic Complex*

The first period of activity took place during the Late Cretaceous to Early Eocene Laramide orogeny (50–100 Ma) and produced mostly bimodal intermediate intrusive and volcanic rock units, collectively known as the Lower Volcanic Complex (LVC) and Tarahumara volcanic units in northwest Mexico (Henry et al., 2003; McDowell et al., 1977). Rock units of the LVC are generally coeval with the post-tectonic plutons (82–45 Ma). The LVC comprises andesitic to rhyolitic lavas, ash-flow and air-fall tuffs, volcaniclastic sedimentary rocks, and minor hypabyssal intrusions. Ranging from Sonora to Sinaloa, these units are known to host many mineral deposits of porphyry copper type and epithermal base- and precious-metal type (Montoya-Lopera et al., 2019; Valencia-Moreno et al., 2017).

### *7.1.2 Late Eocene to Mid Miocene—Upper Volcanic Supergroup*

The second period of continental magmatic activity started in the Late Eocene, following a quiet transitional period. Most of the SMO is a silicic igneous province that was emplaced during the last phase of subduction of the Farallon Plate from the Late Eocene to Mid Miocene and is linked to the progressive thinning of the upper plate and establishment of a shallow asthenospheric mantle beneath western Mexico (Ferrari et al., 2013). Igneous activity of this magmatic province is marked by ignimbrite flare-ups and lesser mafic volcanism. Collectively known as the Upper Volcanic Supergroup (UVS), these volcanic units are characteristically bimodal and composed of thick layers of felsic ignimbrites, rhyolites, and minor mafic units. In southern Sinaloa, and similar to the rest of the SMO, two main pulses have been identified in the UVS: an Early Oligocene pulse (approximately 32.5–29 Ma) and a later Miocene pulse (24–20 Ma) (Montoya-Lopera et al., 2019). The composition, eruptive scale, volume and output rate of the silicic volcanism that characterized the Oligo-Miocene SMO ignimbrite flare-ups are clearly different from the previous Laramide-age subduction-related arc magmatism of western Mexico (Ferrari et al., 2007).

### *7.1.3 Structural Setting*

In southern Sinaloa State, several key structural trends are recognized and linked to subsequent episodes of tectonic stress (Ferrari et al., 2013; Horner and Enriquez, 1999; Horner and Steyrer, 2005; Montoya-Lopera et al., 2019) (Figure 7-2):

- **D1:** During the Early Tertiary, the Laramide orogeny is characterized by ENE-directed contractional deformation (D1), developing a thin-skinned fold-and-thrust belt in the SMO and tensional gashes with E–W to ENE–WSW orientation. A large ENE–WSW-trending fault-fracture system was created by differential movement of the fault blocks, resulting in the deeply incised

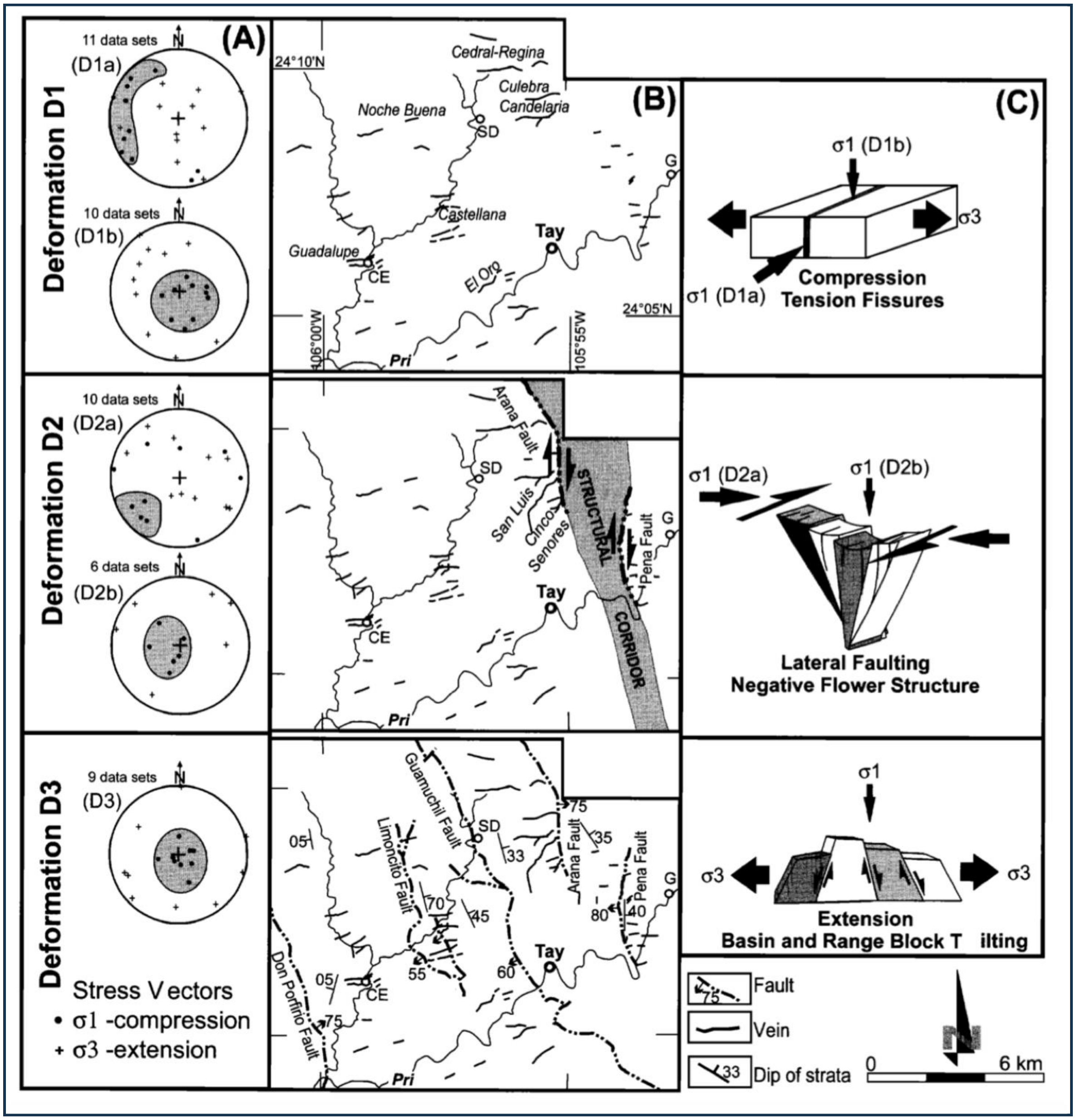
ENE–WSW-trending canyons seen in Sinaloa today (e.g., Rio Baluarte in the Rosario Mining District, as seen in Figure 7-3). Early mineralized epithermal structures and veins have E–W to ENE–WSW trends.

- **D2**: During the Early Oligocene, the principal horizontal stress rotated from ENE-directed to a more NE-directed position, resulting in a N–S-trending strike-slip to transtensional fault system, often with a dextral sense. This stage marks the transition from compression to an extensional tectonic stress regime. Resulting fissures and faults often contain rhyolitic dykes and have hydrothermal veining, such as seen at San Dimas (Smith et al., 1982), and result in significant normal fault deformation.
- **D3**: After cessation of contractional deformation, extensional tectonics followed in the Early Oligocene to Late Miocene (approximately 27–15 Ma), resulting in NNW–SSE- to NW–SE-striking normal faults that caused significant vertical displacement and created prominent graben structures with associated continental sedimentary deposits, such as the Concordia and Panuco grabens. In places, extensional stress reactivated D1- or D2-related faults that were generated during Laramide contractional to transtensional deformation. As a result of extensional block faulting and tilting, felsic ignimbrites of the second episode (Miocene: 24–20 Ma) rest horizontally and unconformably on eroded and gently dipping tuffs of the first episode (Oligocene 32.5–29 Ma).

The Rosario Mining District is a regional historical mining district in southern Sinaloa, encompassing mining areas that stretch from the town of Rosario in the west to the Plomosas Mine Area in the east, covering an area of over 1,000 $km^2$. It is in large part covered by the western outreaches of Eocene to Oligocene volcanic rocks (Figure 7-4 and Figure 7-5). The majority is covered by felsic ignimbrites, tuffs, and rhyolite flows of the UVS, mostly from the Oligocene flare-up events. Only smaller areas in the northeast of the Rosario Mining District are continuously covered by later second-pulse Miocene felsic flare-up events.

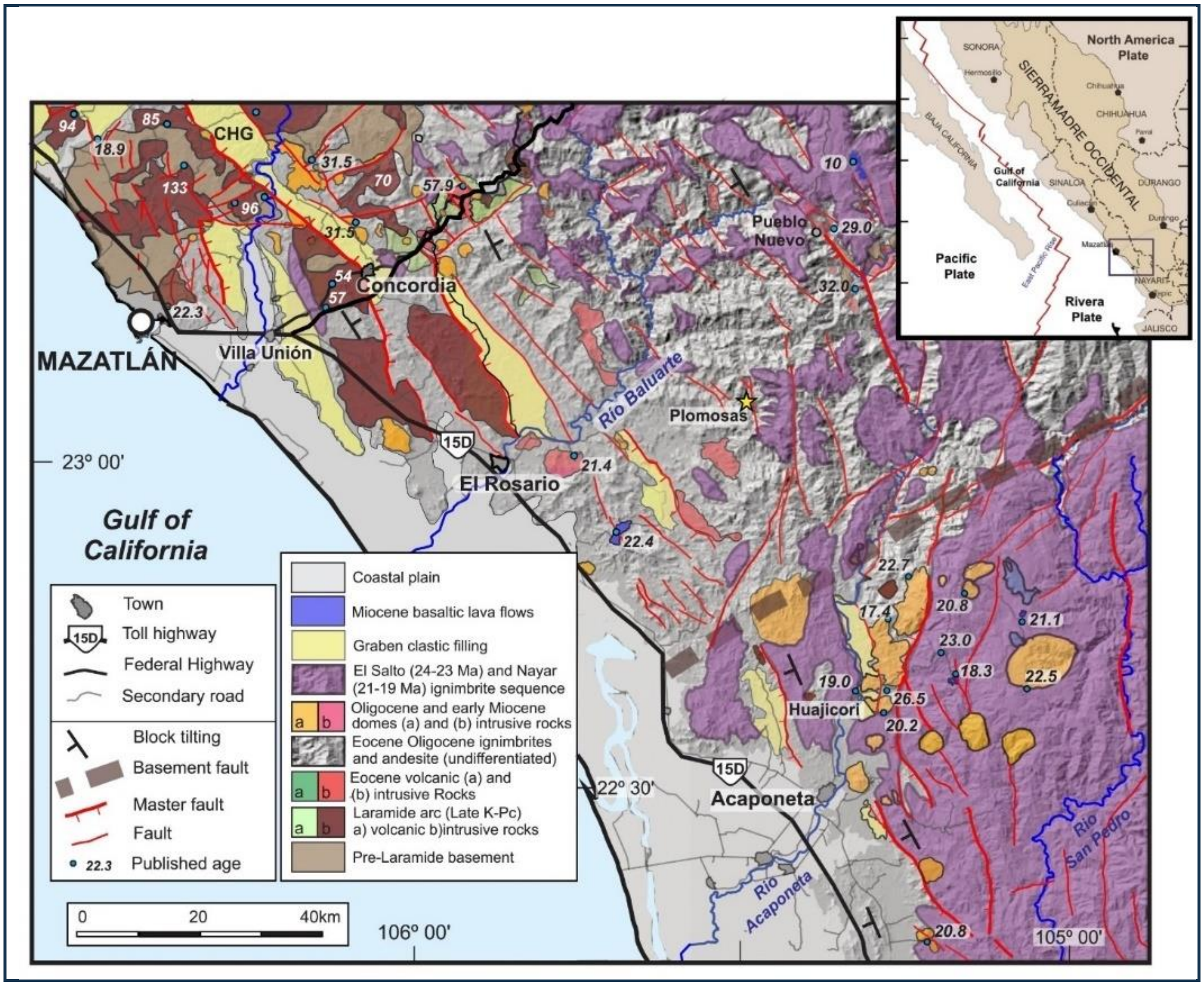
Underlying bimodal volcanic rocks of the LVC are found in erosional windows and horst structures related to the D3 extensional tectonic regime, oriented NW–SE, E–W and N–S. Effectively, most of the westernmost outcrops of the UVS are abruptly limited by large-scale NW–SE-trending horst and graben structures (e.g., Panuco graben). Intrusive rocks of the Sinaloa batholith, and Permian to Cretaceous sedimentary units outcrop along NW–SE-trending horst structures in the western areas of the Project, on trend with the town of Rosario. Most of the western district is covered by Pleistocene to Quaternary age alluvial deposits.

***Figure 7-2: Evolution of Tectonic Stress and Structures from Eocene to Miocene in Southern Sinaloa***



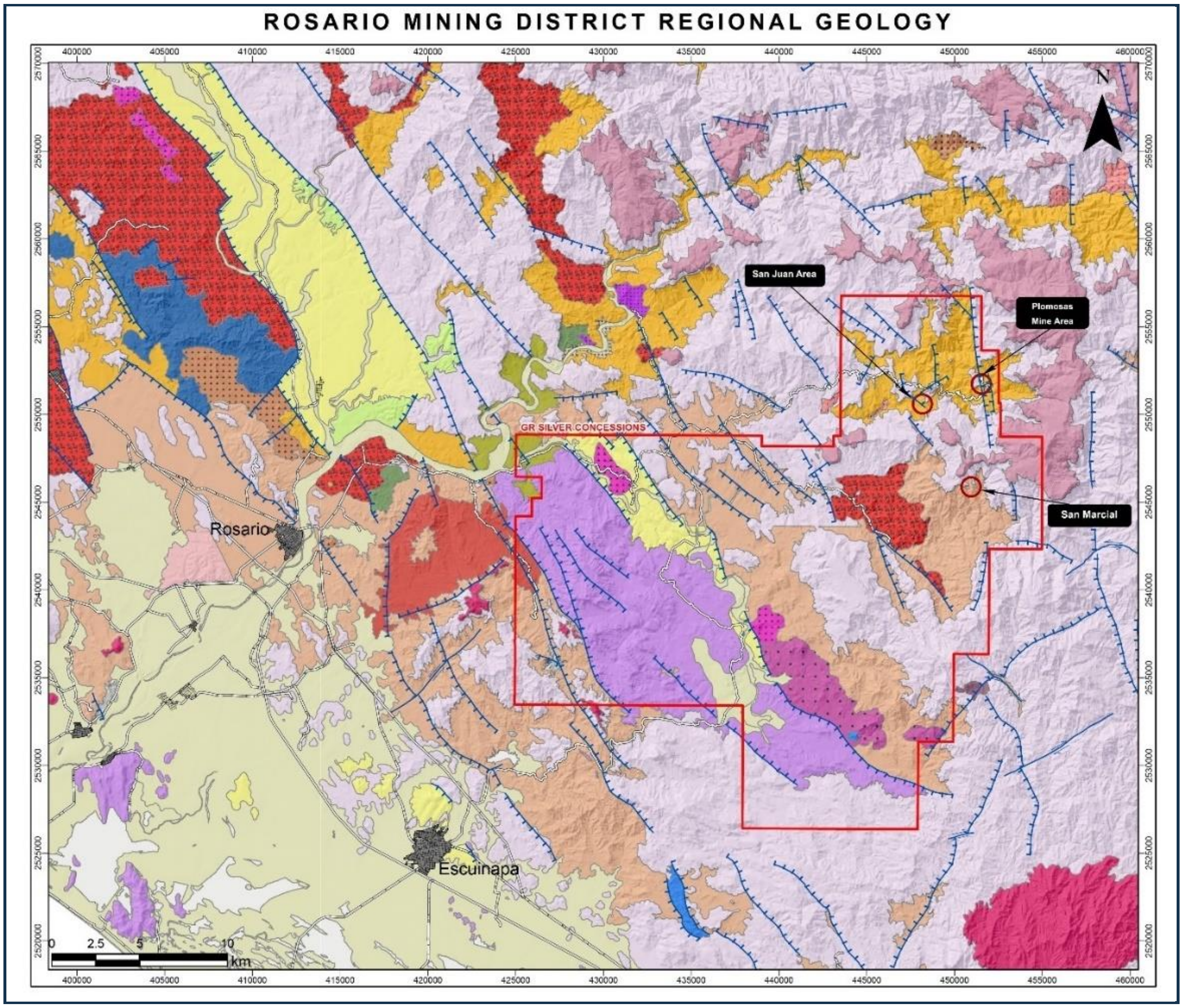

Source: Horner and Enriquez (1999).

*Figure 7-3: Sinaloa Batholith Exposed in ENE-WSW-trending Canyons (D1 Stress Regime) of Southern Sinaloa*




Source: Ferrari et al. (2013).

***Figure 7-4: Plomosas Project and Resource Areas on Rosario Mining District Regional Geology Map***




Source: GR Silver (2023).
Note: See legend Figure 7-5.

*Figure 7-5: Legend for Rosario Mining District Geology Map*

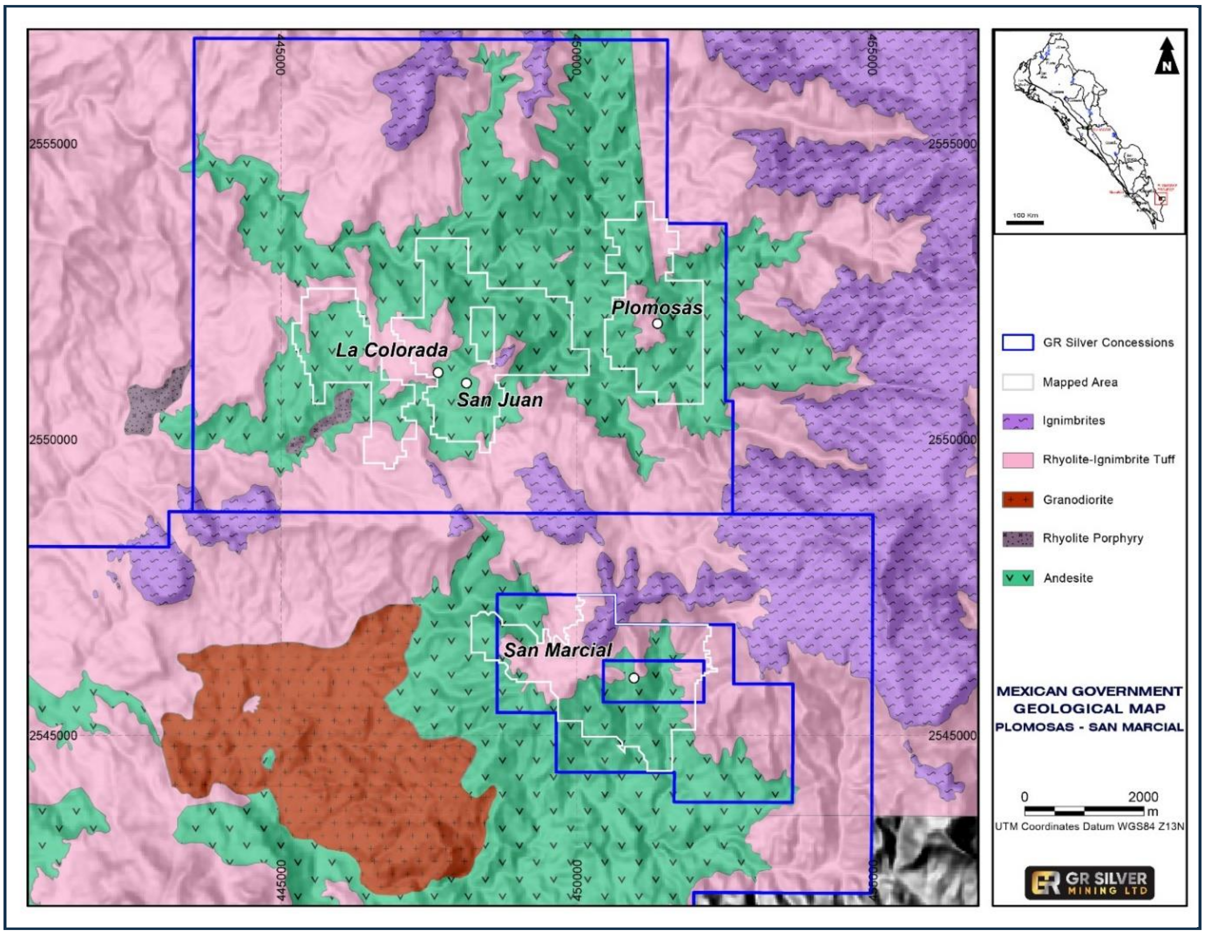

Source: GR Silver (2021).

## 7.2 Local Geology

The only available geological maps covering the Plomosas Project are 1:50,000 map sheets published by the Mexican Geological Survey (Figure 7-6).

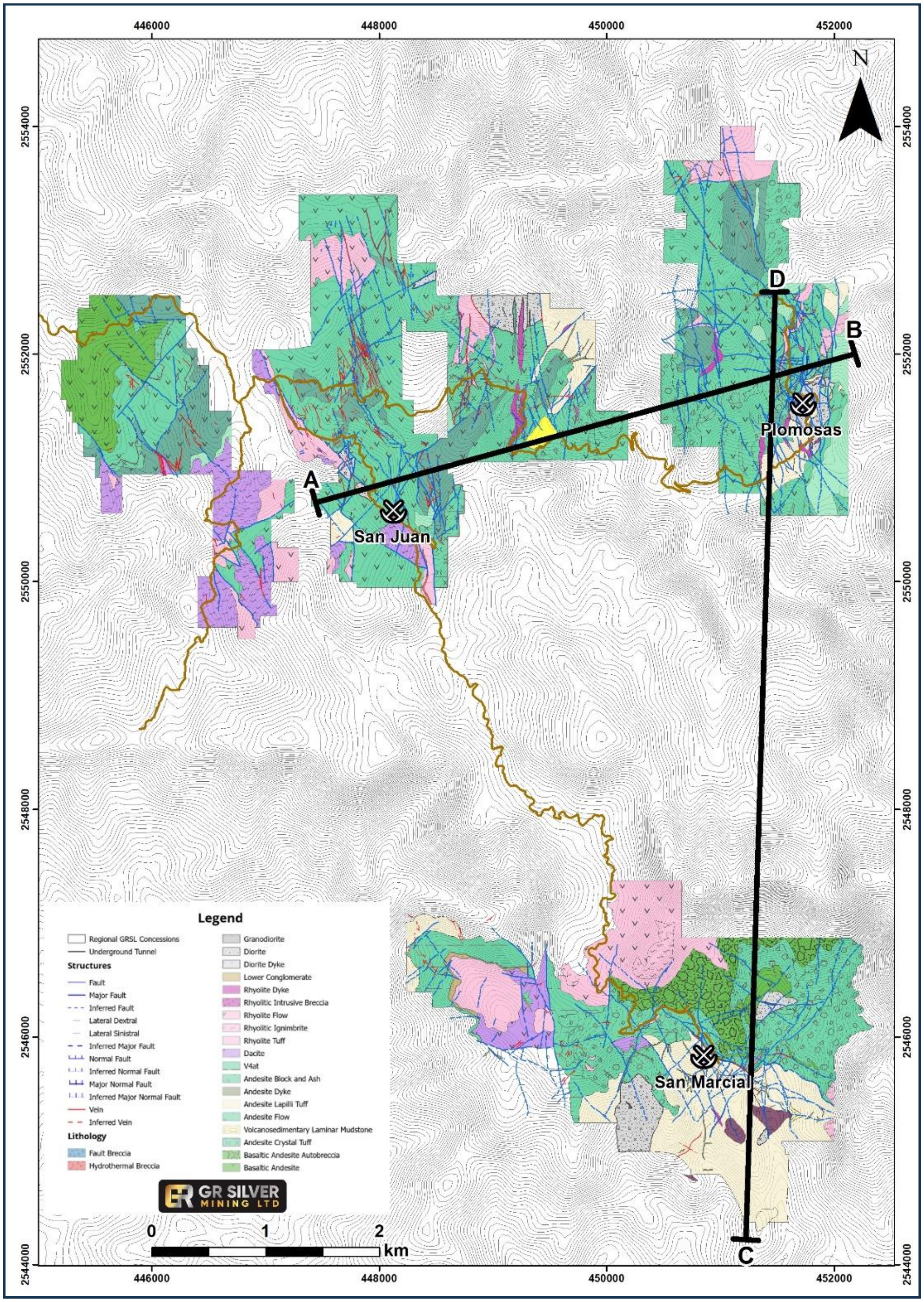
GR Silver has completed detailed maps at the deposit scale (1:2,000) for the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas (Figure 7-7). The areas are approximately 3.5 km apart, but share a similar stratigraphy, with mafic units dominating in the upper section and felsic units in the lower sequence (Figure 7-8). The San Marcial Area is 6 km south of the Plomosas Mine Area and a similar distance from the San Juan–La Colorada Area. San Marcial shares a similar stratigraphic column; however, it is differentiated by the presence of Paleocene-age intrusive rocks (Figure 7-9).

***Figure 7-6: San Marcial, Plomosas Mine, and San Juan–La Colorada Areas—Local Geology Map***



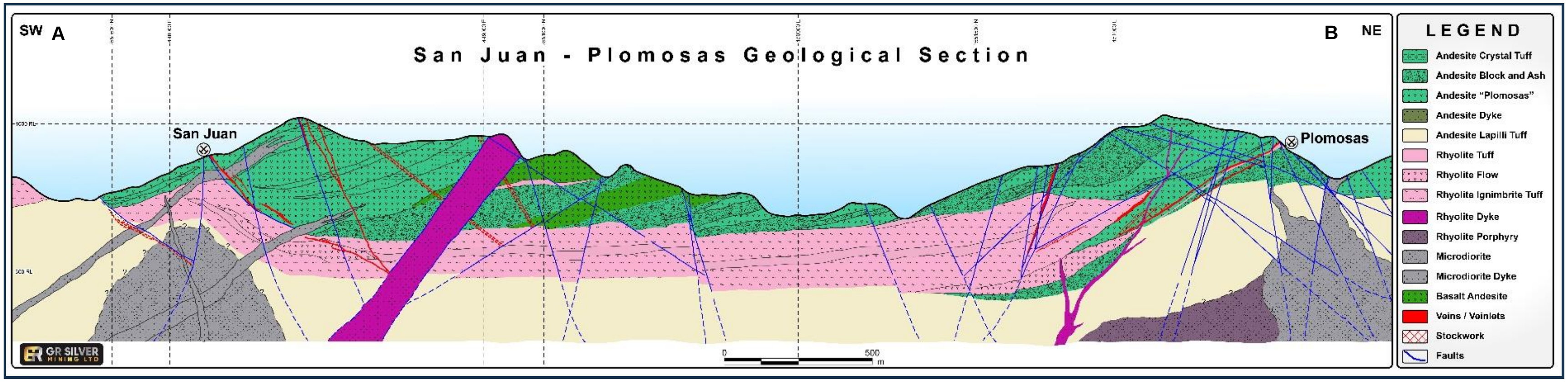

Source: GR Silver (2023).
Note: Detailed legend of the San Marcial, Plomosas Mine, and San Juan–-La Colorada Areas can be found in Figure 7-8 and Section 7.2.1.

***Figure 7-7: Plomosas Project—Detailed Mapping Coverage and Regional Cross-Section Locations***



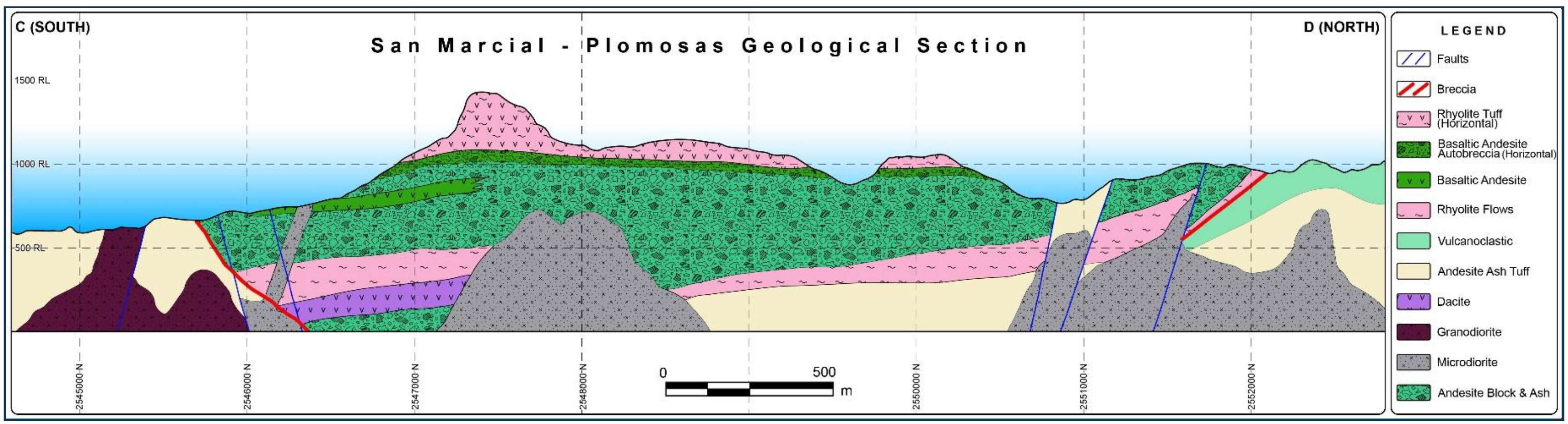

Source: GR Silver (2023).

***Figure 7-8: Schematic Cross-Section from San Juan–La Colorada in the SW (A) and Plomosas in the NE (B)***




Source: GR Silver (2021).

***Figure 7-9: Schematic Cross-Section from San Marcial in the South (C) to Plomosas in the North (D)***




Source: GR Silver (2023).

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### 7.2.1 Geology of the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas

Figure 7-10 to Figure 7-13 summarize the stratigraphy of the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas.

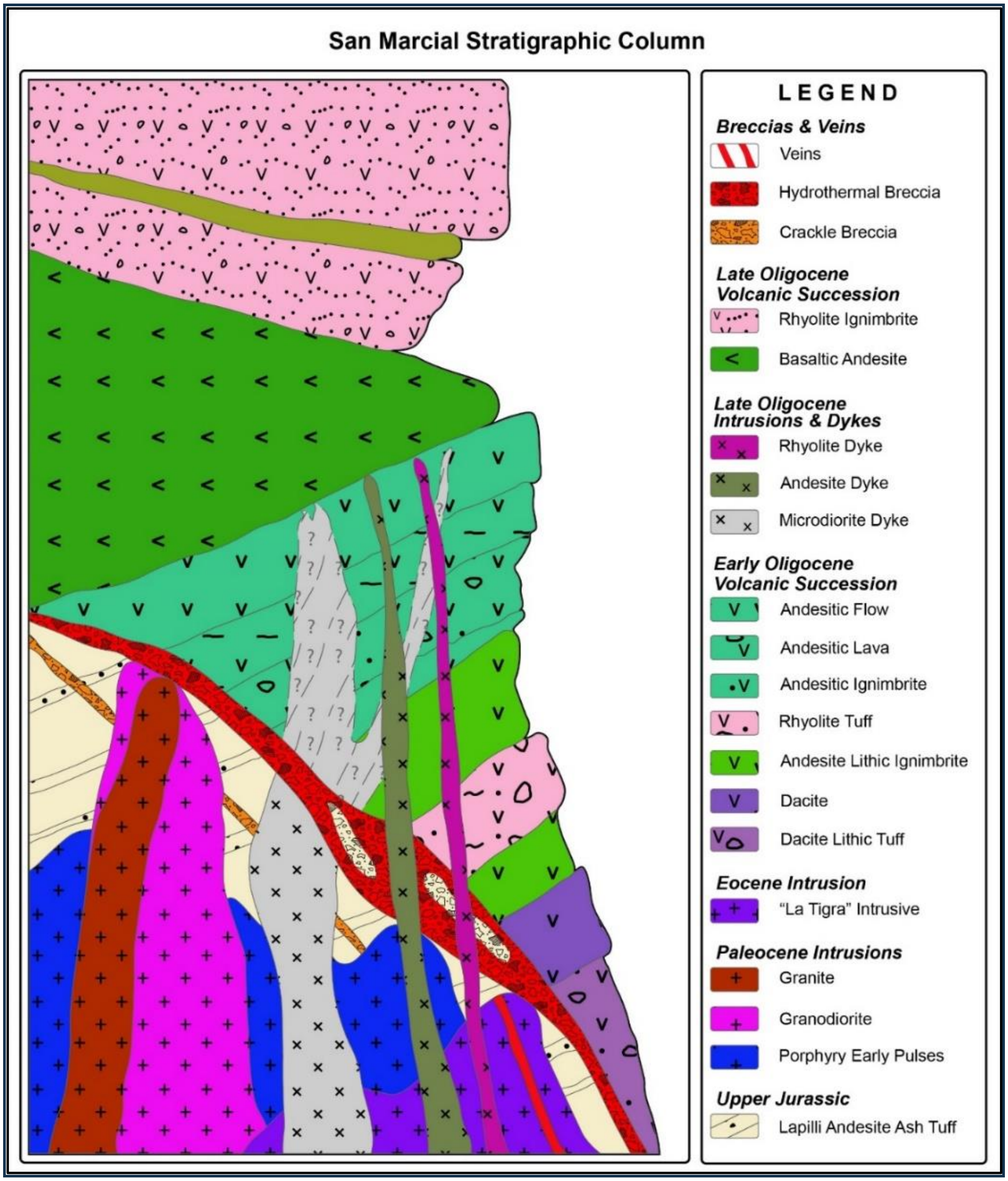
#### Late Jurassic Magmatism

The oldest rock unit in the Project is exposed in the lower part of the Plomosas underground mine and in a valley close to the San Juan deposit (Pb_017 in Figure 7-11). This unit comprises a series of alternating rhyolitic lavas and polymictic rhyolitic ignimbrites that commonly present a porphyritic texture, are reddish to grey and contain rounded lithic rock fragments and broken crystals in a groundmass of fine plagioclase and glass. A similar rock unit is present at San Marcial; however, age dating has not yet confirmed a corresponding age with Plomosas and San Juan.

#### Paleocene Hypabyssal Intrusions

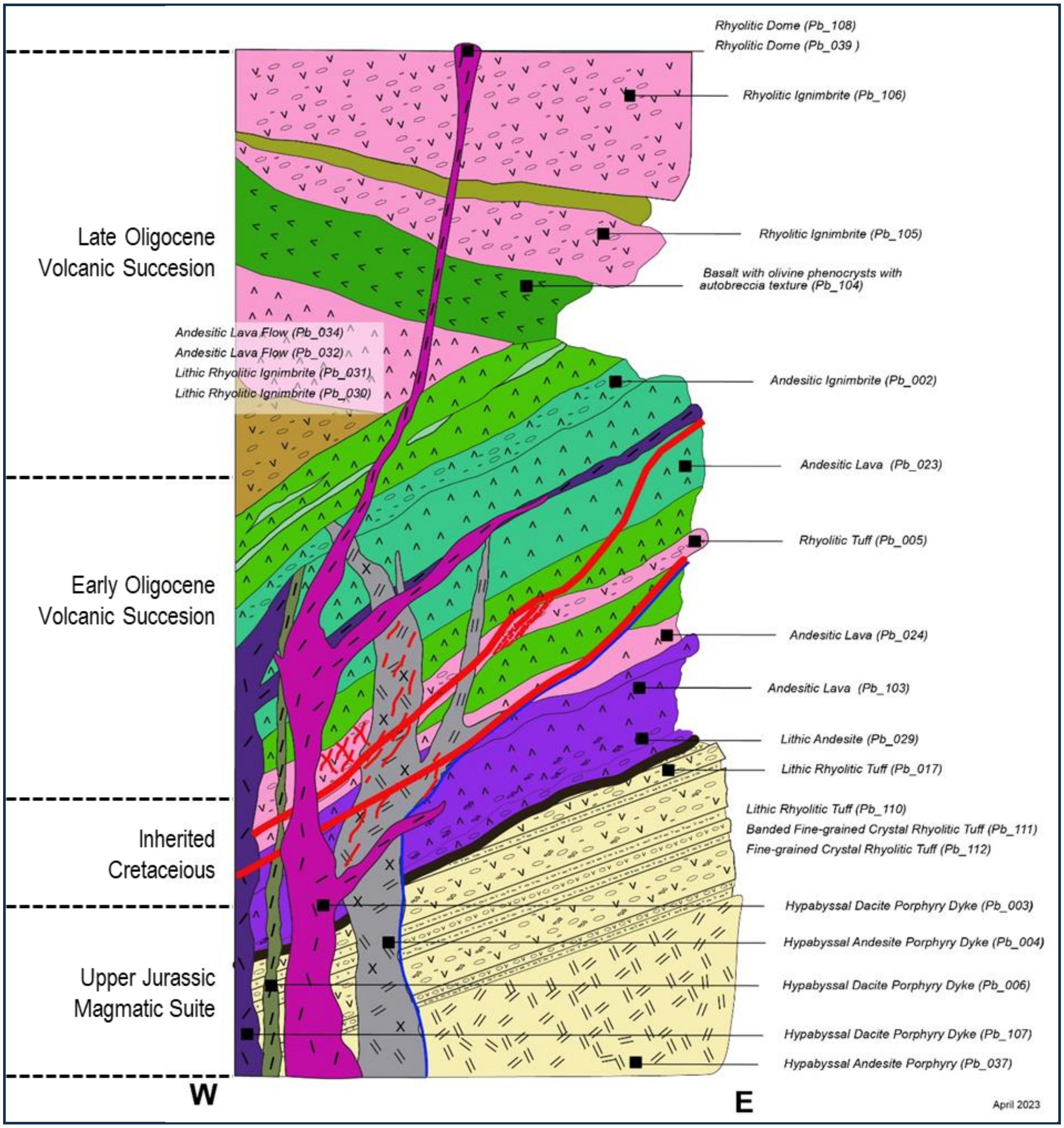
Age dating results by Montoya-Lopera et al. (in preparation) from a porphyritic granodioritic intrusion in the southern part of the San Marcial Property indicate Middle Paleocene age. Similar ages have been reported regionally in the SMO (Montoya-Lopera et al., 2019) and interpreted to be associated with porphyry-style mineralization.

*Figure 7-10: General Stratigraphic Column of the San Marcial Area*




Source: GR Silver (2023).

***Figure 7-11: General Stratigraphic Column of the Plomosas Mine Area***

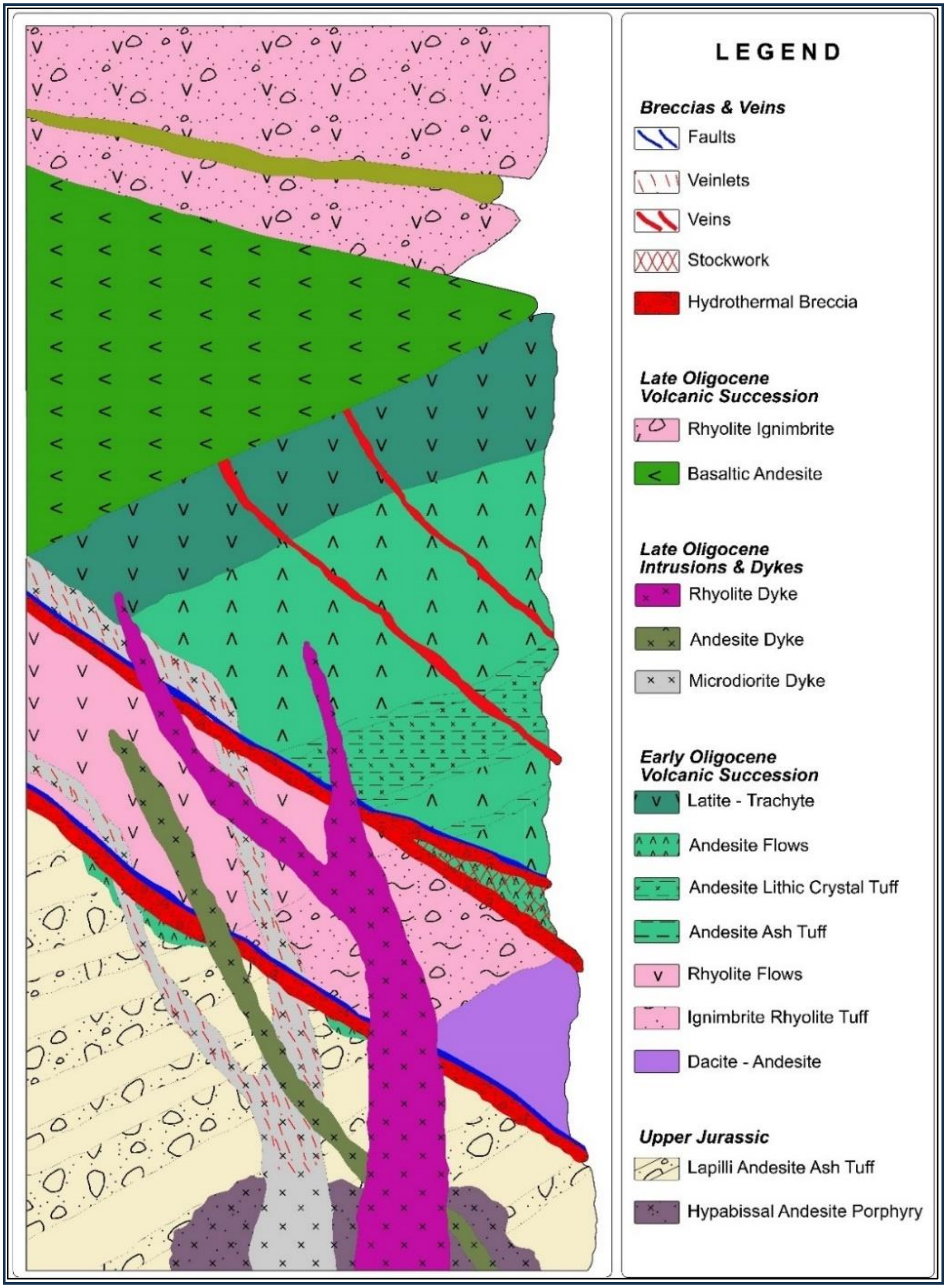



Source: GR Silver (2023).
Note: See Figure 7-12 for Legend.

*Figure 7-12: Legend for Stratigraphic Column of the Plomosas Mine Area*


Source: GR Silver (2023).

*Figure 7-13: General Stratigraphic Column of the San Juan–La Colorada Area*




Source: GR Silver (2023).

#### *Early Oligocene Volcanic Successions and Hypabyssal Intrusions*

In the San Marcial and Plomosas Areas, lithic ignimbrites, intermediate dykes, and lava flows overlie the Late Jurassic sequence in erosional discordance, with a cumulative thickness estimated up to 400 m. The early Oligocene sequence commonly displays a lithic-rich andesite at its base, reddish to grey in colour. This unit consists of quartz > plagioclase in a groundmass of microcrystalline plagioclases and glass with heterogeneous rock fragments, followed by a succession of fine-grained andesitic lava flows, which transitions to a porphyritic texture (Pb_103 and Pb_024 in Figure 7-11). A rhyolitic tuff (Pb_005 in Figure 7-10) is intercalated within the andesitic lavas, and an andesitic ignimbrite is exposed at the top of the sequence (Pb_002 in Figure 7-10).

The San Marcial and Plomosas Areas are cross-cut by felsic dykes striking NE–SW and NW–SE that cut most of the stratigraphy (Pb_003 and Pb_006 in Figure 7-10). Petrographically, these dykes consist of porphyritic dacite intrusions rich in quartz > plagioclase > biotite, with euhedral pyroxenes in a fine quartz matrix. Re-absorbed base-metal crystals and euhedral chalcopyrite are also present in these lithologies.

A diorite intrusion is exposed in the Plomosas Mine Area (Pb_004 in Figure 7-11). This unit also outcrops close to the Plomosas River and in lower parts of the San Juan–La Colorada Area. This hypabyssal intrusive is an andesitic porphyry with holocrystalline porphyritic crowded texture.

#### *Upper Ignimbrite and Lavas Suite*

An angular unconformity (about 30°) separates the previous succession from a second package of silicic ignimbrites, lava flows, and rhyolitic domes. This package can be followed easily in the landscape, as the tops of the ignimbrites form a remarkably continuous planar surface.

## 7.3 Structure

### *7.3.1 San Marcial Area*

The most prominent features are the NW–SE faults in the central area, with evidence of N–S cross-cutting faults, both associated with the D3 deformation (Figure 7-14). To the south and southeast, the E–W- to ENE–WSW-trending structures associated with D1 to D2 deformations are present in the older Late Jurassic unit, exposed within erosional valleys and creek canyons. Reactivation of NE–SW faults during early D3 stage is believed responsible for fluid migration along fault structures, which is very important in the identification of mineralized shoots where these faults intersect with the NW–SE trend.

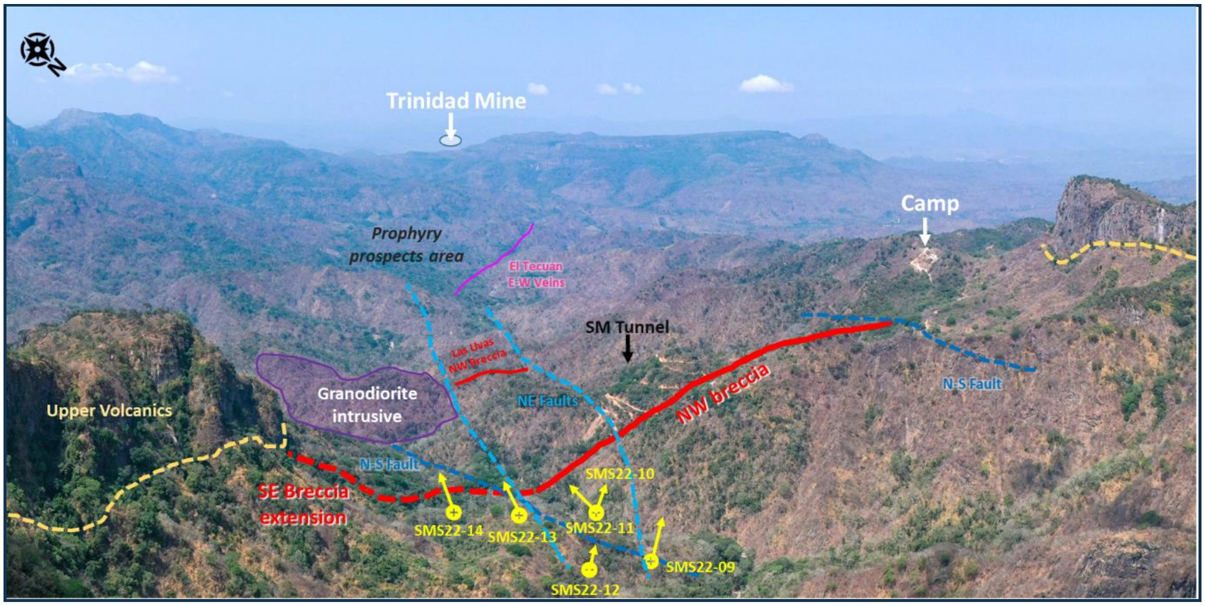
#### *E–W to ENE–WSW Faults and Veins (D1)*

These structures are believed to have formed as a result of differential movement of fault blocks associated with the Early Tertiary Laramide orogeny. Typically, the E–W structures are strike-slip faults; however, during D3 deformation the E–W trend may have been reactivated, resulting in normal displacements and cross-cutting relationships with NW–SE and NE–SW faults (Figure 7-15). Similar faulting is seen to the south of San Marcial at El Tecuan.

### *NE–SW Normal Faults and Breccias (D3)*

The NE–SW extensional normal faults play an important role in fluid mobilization. Hydrothermal breccias and veins are frequently found following this northeast trend and cross-cutting the majority of the stratigraphic column up to Early Oligocene. Intersections of NE–SW-trending structures with NW–SE-trending structures are the most prospective targets to explore. A new GR Silver discovery in August 2022 of high-grade silver mineralization in the SE Area of San Marcial is associated with this NE–SW normal fault system (Figure 7-14).

***Figure 7-14: Structural Controls in San Marcial Area***




Source: GR Silver (2023).

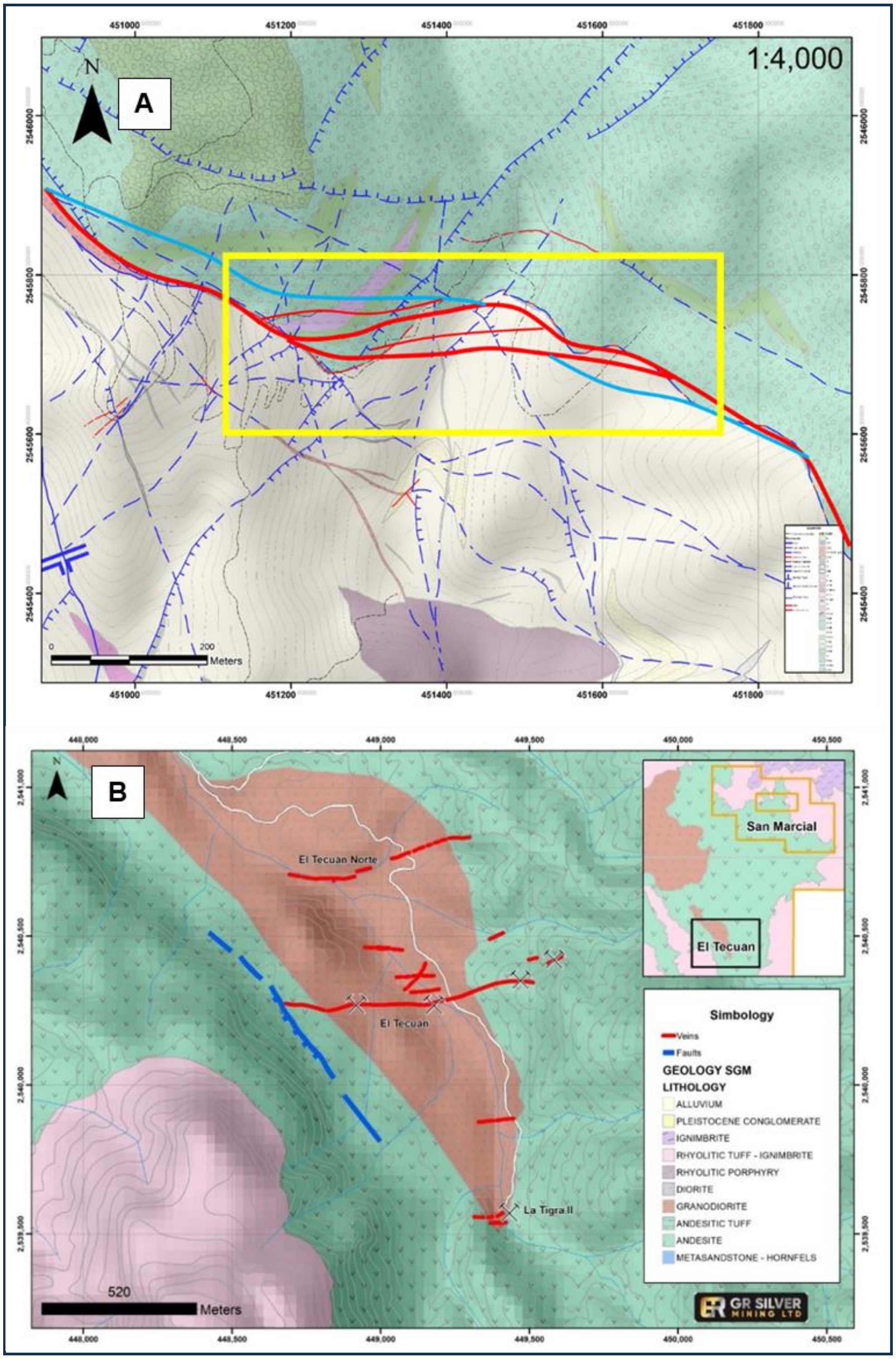
### *NW–SE and NNW–SSE Normal Faults (D3)*

Similar to the San Juan–La Colorada Area, in the San Marcial Area the most prominent features are the NW–SE faults, which show significant vertical displacement of several metres, with dip angles of 45° to 65° to the northeast. The San Marcial Breccia is along one of these faults, which puts the Late Jurassic unit in contact with the Early Oligocene sequence.

### *N–S Normal Faults (D3)*

N–S-trending faults appear to be a late phase of the D3 deformation at San Marcial. Subvertical to 65° in dip angle, the N–S normal faults are cross-cutting all units within the sequence from the Early Jurassic to the upper volcanics of the Late Oligocene. No significant mineralization has been found associated with N–S faults in the San Marcial Area (Figure 7-15).

*Figure 7-15: E–W to ENE–WSW Structural Controls in San Marcial Area*




Source: GR Silver (2023).

Notes: **A)** Sigmoidal interpretation of NW–SE trend with extensional E–W pre-existent faults at the intersection with NE–SW trend generating ore shoots in the recently discovered SE Area of San Marcial.

**B)** El Tecuan target consisting of E–W polymetallic veins hosted within the granite intrusive as erosional window of D1 deformation stage.

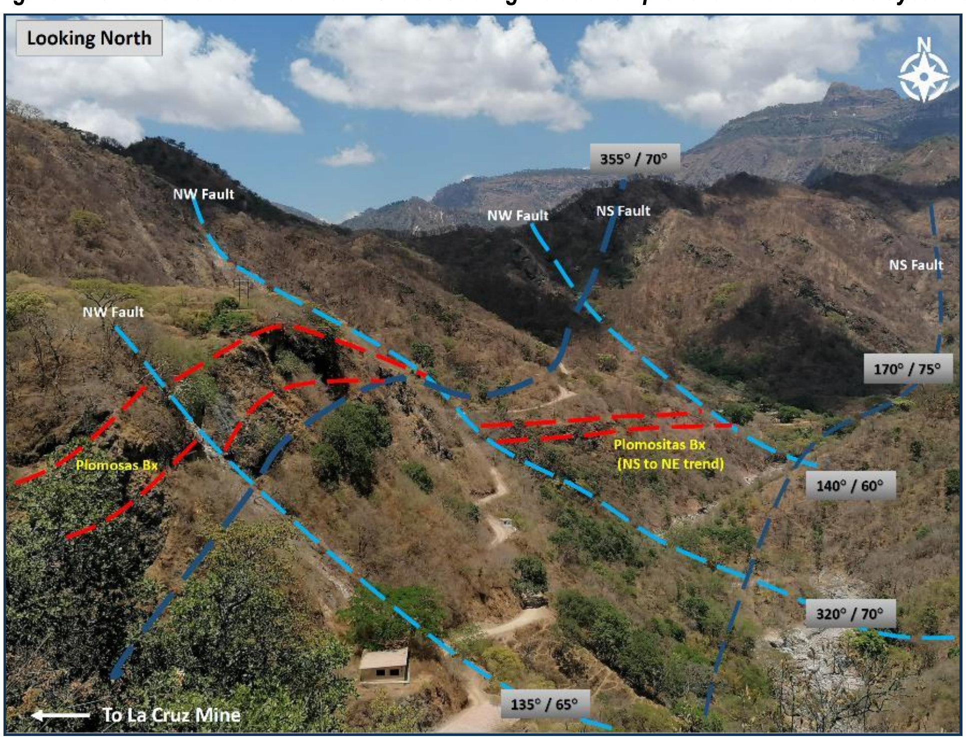
### *7.3.2 Plomosas Mine Area*

Multiple systems of fault and breccia structures have been identified at the Plomosas Mine Area during surface and underground mapping (Figure 7-16).

#### *Plomosas Fault (Low-Angle N–S; D1)*

The principal mineralized structure in the Plomosas Mine Area is a low-angle N–S-trending fault breccia (Plomosas Fault) that contains the main Pb–Zn–Ag–Au mineralized zone of the Plomosas Mine Area. At surface, the outline of the fault can be traced over at least 1 km. It terminates to the south when in contact with the microdiorite intrusion, about 150 m south of the upper access to the historical underground mine. The fault has a general dip angle of 30°–40° to the west, with regular steps and steeper dips. The structure is interpreted to have initially been a reverse fault, possibly related to the ENE-directed contractional deformation (D1) during the Early Tertiary. Later, the fault reactivated and reverted to a normal fault in the more transtensional, or extensional, environment of the D2 or D3 tectonic stress regimes. Maximum displacement is only a couple of metres, and main movement indicators show normal faulting. The original dip of the fault is likely to have been significantly flatter, considering the later tilting of the LVC rock units towards the west during the extensional tectonic regime (D3). Smaller parallel splays have been identified. Additionally, small reverse fault structures have been identified in the mafic volcanic-rich units of the LVC on the east side of the Plomosas River.

***Figure 7-16: Plomosas Mine Area—Cross-Cutting Relationship of the Different Fault Systems***



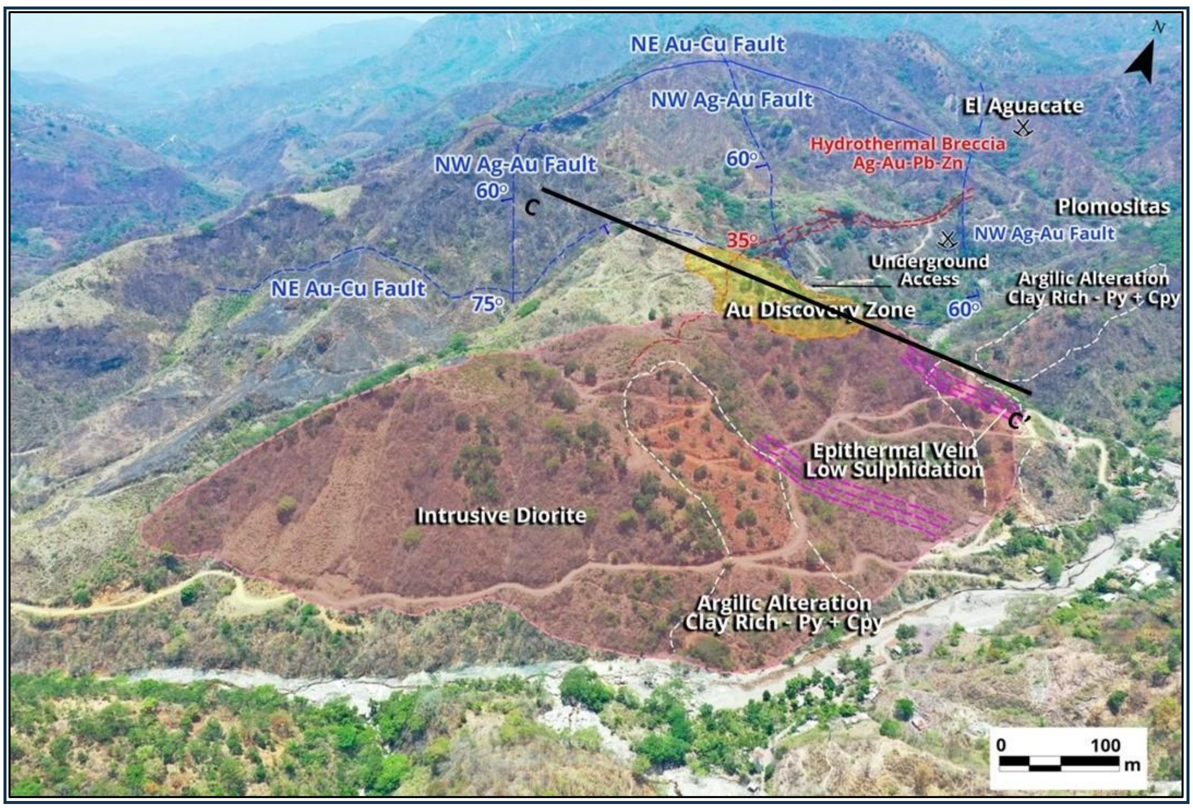

Source: GR Silver (2021).
Note: Bx = Pb–Zn–Ag–Au breccia.

### *Microdiorite Intrusion and NE–SW Faulting (NE–SW to NNE–SSW; D2)*

A large elongate microdiorite body (1.0 km x 0.2 km) is emplaced along a NE–SW-trending fault in the south and southwest of the Plomosas Mine Area, dipping steeply 55° to the northwest. Intrusion of the microdiorite deforms and cuts off the Plomosas Fault, providing evidence that this event post-dates compressional events of the D1 tectonic regime (Figure 7-17).

The microdiorite intrusion is interpreted to be part of the D2 tectonic regime, transitional from the Laramide compressional (D1) to extensional (D3) regimes: NE–SW faults are tensional in this regime, with no significant displacement, and provide opportunity for intrusive units to take advantage of zones of weakness.

*Figure 7-17: Plomosas Mine Area—Relationship of Microdiorite with Plomosas Breccia*




Source: GR Silver (2021).

### *NW–SE Faults (D3)*

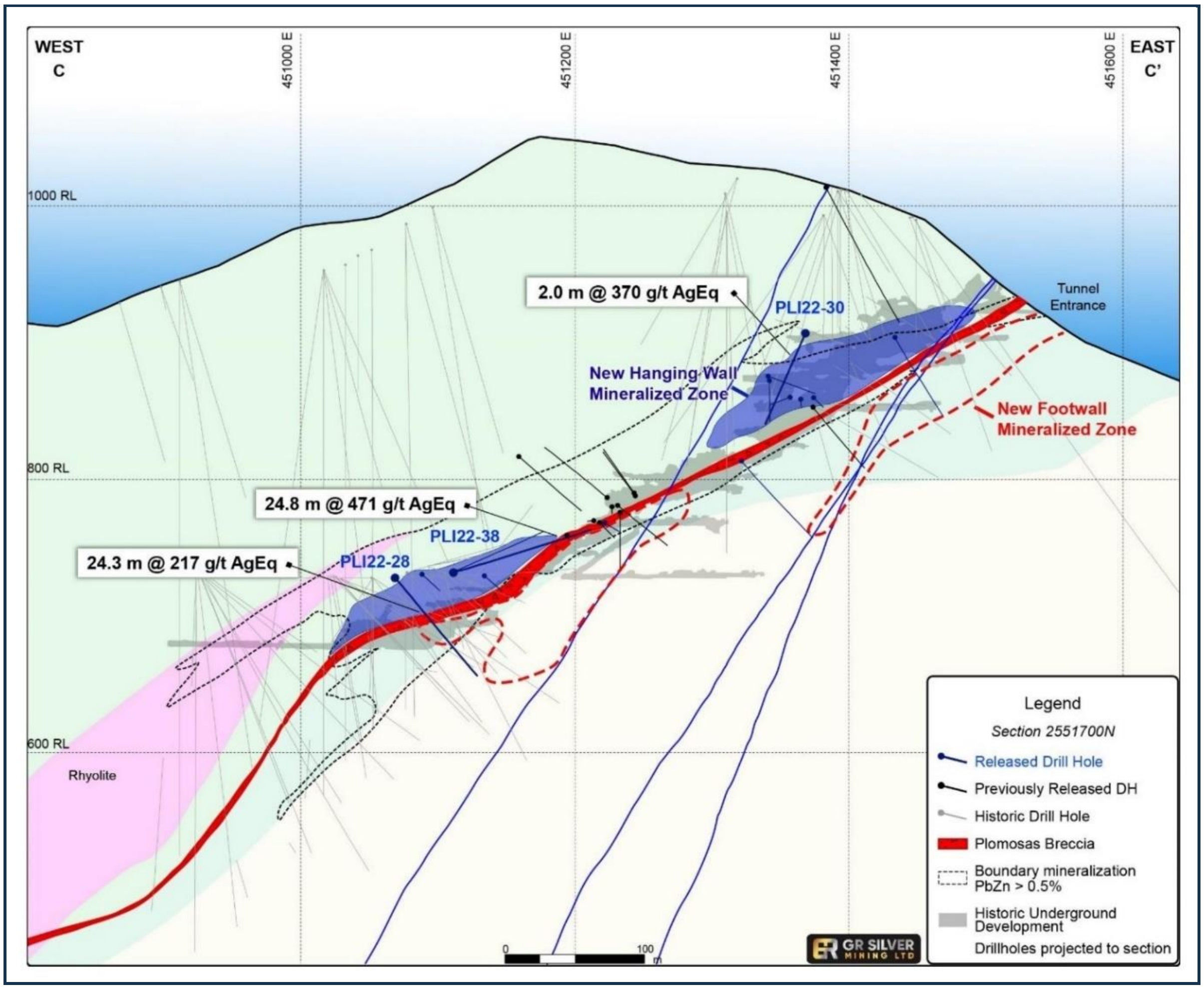
NW–SE faults are one of the most common extensional normal fault systems documented in the Rosario Mining District and are responsible for widespread horst and graben structures. In the Plomosas Mine Area, normal displacement is not found to be significant, only a couple of metres at most, as evidenced by cross-cutting relationships with the Plomosas Fault. Recently these structures have been interpreted as being responsible for generating Pb–Zn stockwork mineralization in the hanging wall of the Plomosas Breccia and low-grade gold mineralization in the footwall of the breccia

(Figure 7-18). At deposit scale, northwest normal graben faults are controlling the shape and extension of the Plomosas Breccia (Figure 7-19).

### *N–S Fault Reactivation and Rhyolite Dyke Intrusions (D3)*

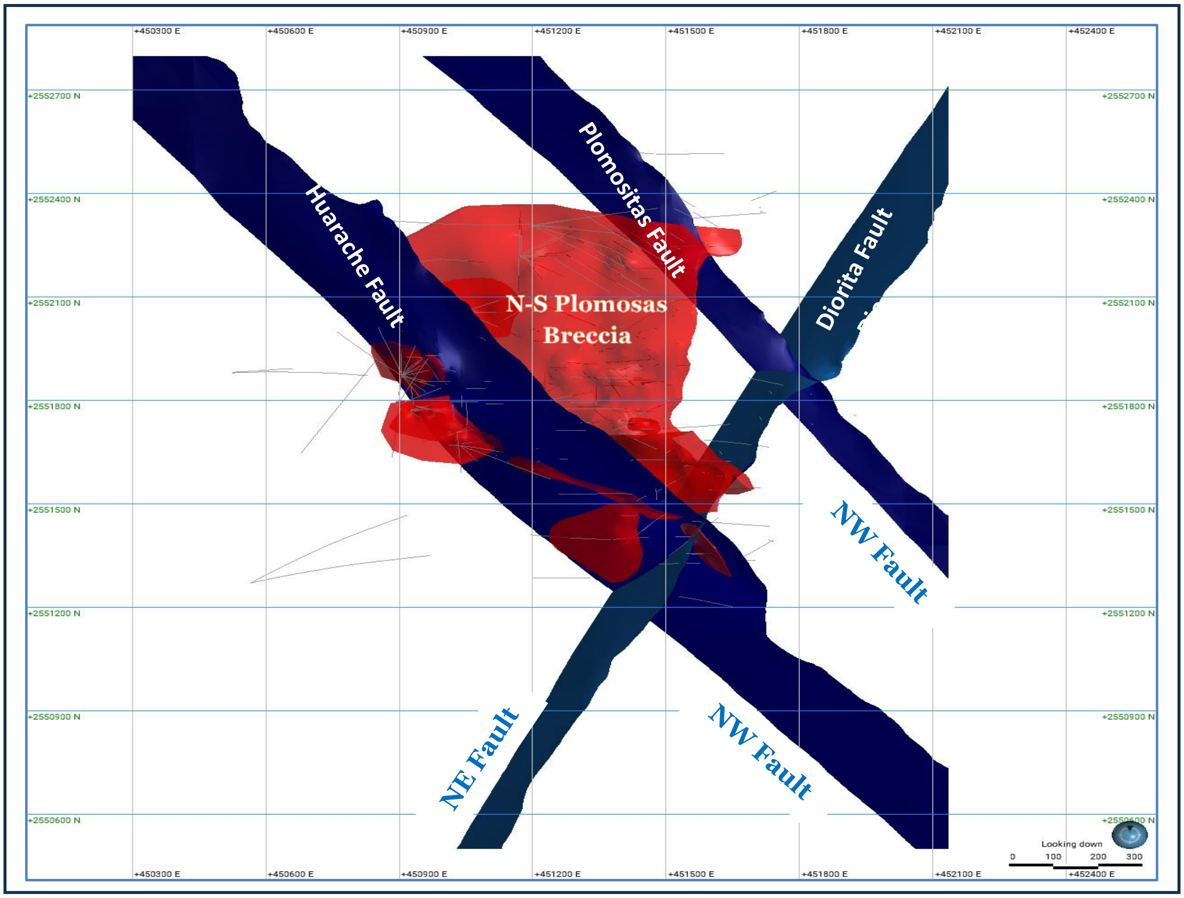
To the east, the Plomosas Mine Area is delimited by a regional-scale, N–S-trending fault marked by the Plomosas River. This feature is a normal fault, with small parallel faults downfaulting the eastern block and marking the boundary to the felsic units of the UVS to the east. No significant vertical displacement is seen associated with the principal structures. Multiple rhyolite dykes have been mapped intruding into N–S-trending structures and cutting earlier NE–SW-oriented microdiorite intrusions.

***Figure 7-18: Plomosas Mine W-E Cross Section: NW–SE Faults Controlling Lower and Upper Stockwork Zones***




Source: GR Silver (2023).

*Figure 7-19: Structural Control of Mineralization in the Plomosas Mine Area*




Source: GR Silver (2023).

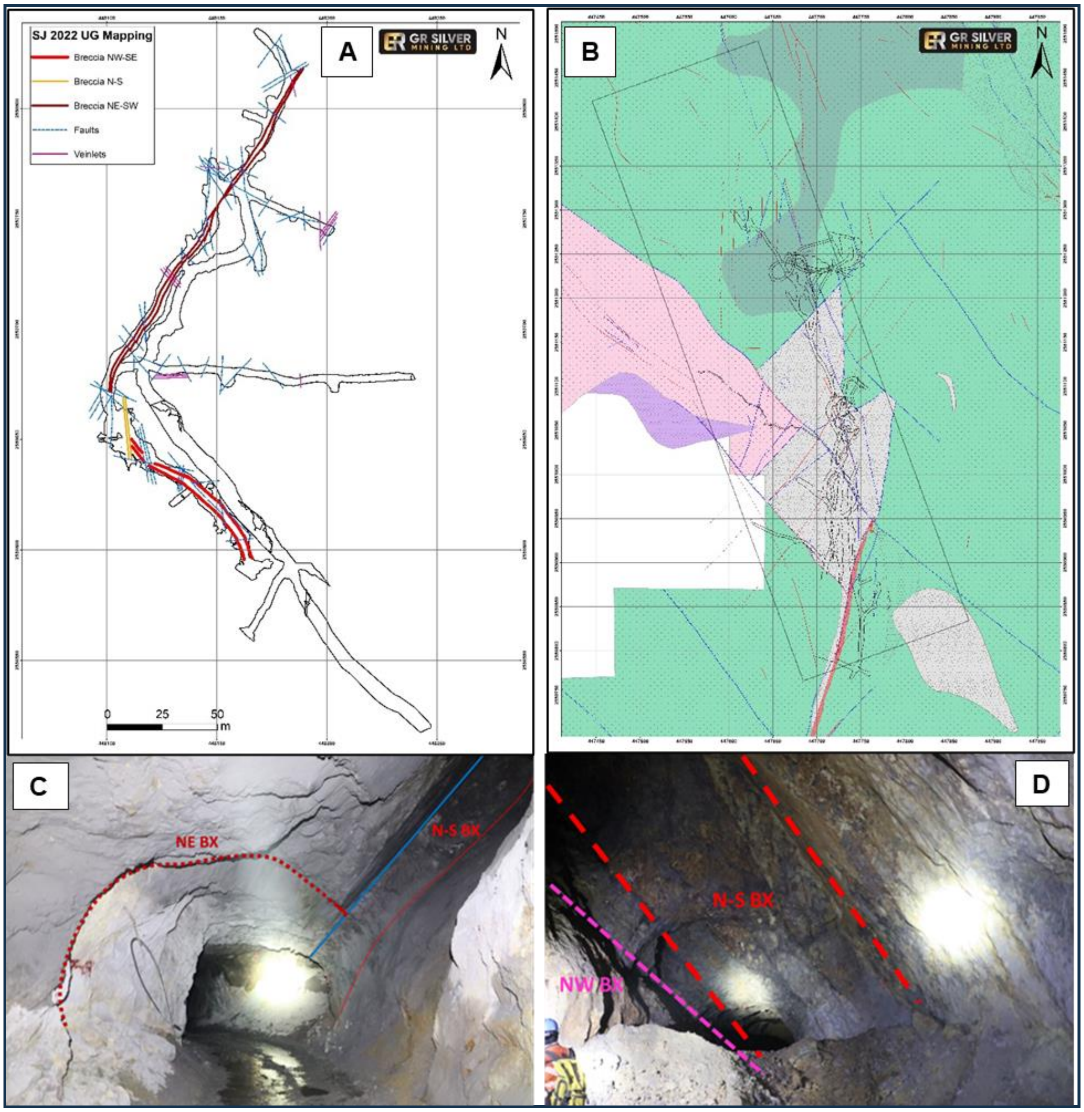
### *7.3.3 San Juan–La Colorada Area*

Structural features in the San Juan–La Colorada Area are dominated by normal faulted structures that occurred during Mid to Late Tertiary extensional deformation (D3) and resulted in dismemberment of the San Juan–La Colorada Area into structural blocks. Earlier structural features (D1–D2) are less common and are likely to have been masked by the extensional faulting and mineralization. Breccias have been emplaced along three main structural trends: NE–SW, N–S, and NW–SE, respectively, in order of cross-cutting relationships (Figure 7-20).

#### *NE–SW Normal Faults (D3)*

Recent mapping at the San Juan and La Colorada mines revealed a strong control of breccias and stockworks associated with NE–SW structures associated with the D3 event. This early-stage system during D3 formation is associated with Ag–Pb–Zn mineralization and has typical normal fault features.

***Figure 7-20: Structural Control in San Juan and La Colorada Area***




Source: GR Silver (2023).
**A)** New structural underground mapping in San Juan Mine.
**B)** Underground mapping in La Colorada and structural interpretation.
**C)** Crosscutting relationship of N–S breccia cut NE–SW breccia in La Colorada.
**D)** Crosscutting relationship of NW–SE breccia cut N–S breccia in La Colorada.

### *N–S Normal Faults (D3)*

Compared to the NE–SW mineralized structures, the N–S faults have a more district-scale continuity and have been mapped from the San Francisco vein system northwards towards the Trampolín area. The San Francisco vein appears to follow a N–S oriented normal fault dipping about 50° to the east, with significant vertical movement of several hundred metres. The La Colorada main structure is following a similar N–S structure.

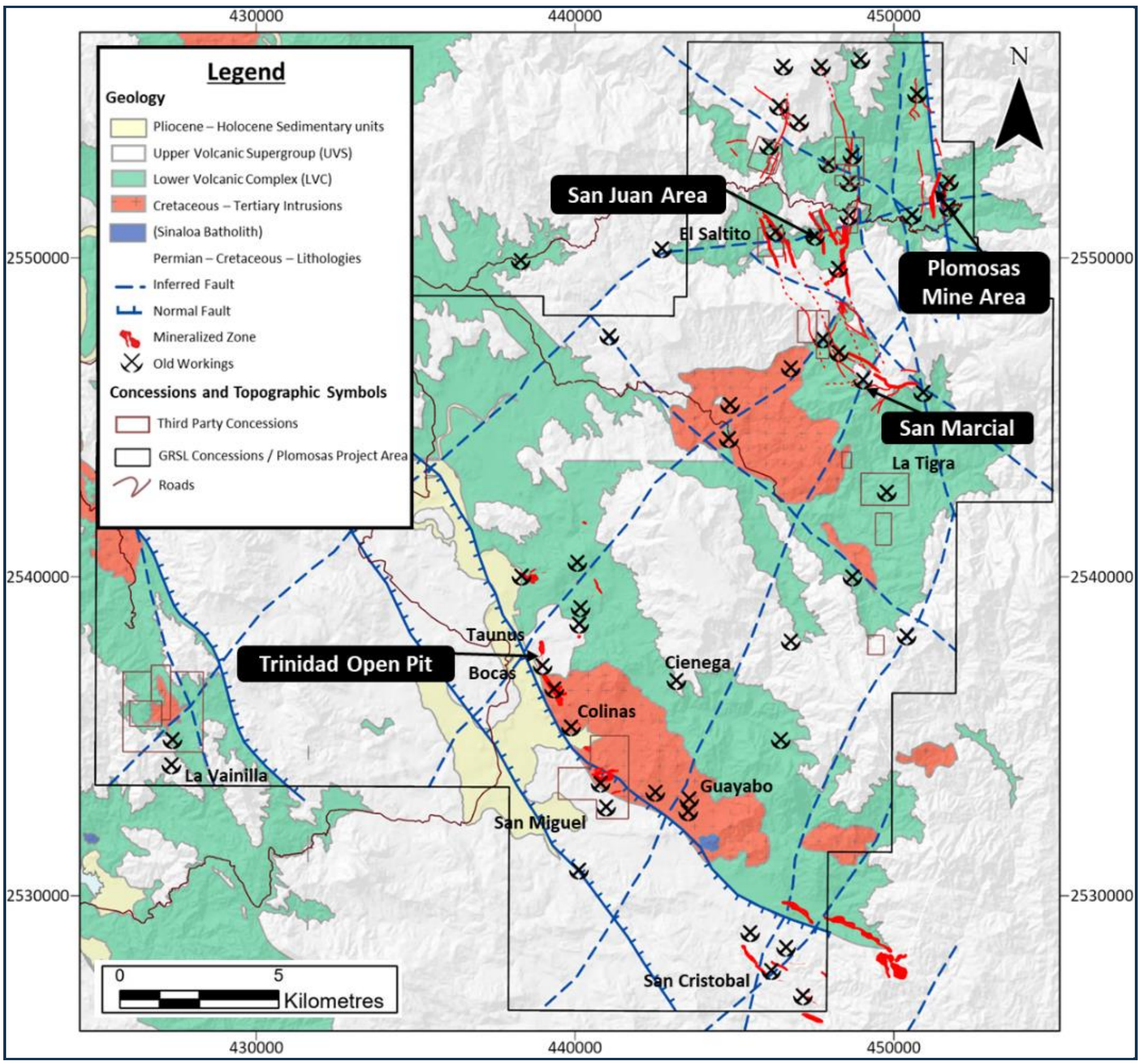
### *NW–SE and NNW–SSE Normal Faults (D3)*

These faults can be traced along the La Colorada, Yecora, and San Juan faults where larger breccias are emplaced. Unlike the Plomosas Mine Area, NW–SE breccias in San Juan and La Colorada are dipping to the east and are therefore cross-cutting the stratigraphy, which is dipping to the west.

## 7.4 Mineralization and Alteration

Mineralization at San Marcial, Plomosas Mine, and San Juan–La Colorada Areas occurs principally in fault structures as vein or breccia bodies (Figure 7-21).

***Figure 7-21: Plomosas Project: Relationship Between Geology, Mineralized Structures, Mine Workings and Key Targets***




Source: GR Silver (2022).

### *7.4.1 San Marcial Area*

#### *Low- to Intermediate-Epithermal System*

A low- to intermediate-sulphidation epithermal-style system is considered the main mineralization event, which is focused on a NW–SE structural feature with a 60° dip to the northeast. Typically, at San Marcial a polymictic breccia, cemented by hematite, weak silicification, and disseminated sulphides both in the matrix and in fragments, is developed at the fault contact between the upper volcanics in the hanging wall, and the Late Jurassic volcanics in the footwall. A multi-phase hydrothermal breccia with intense silicification and angular to subrounded fragments of vein and pre-existent breccias (Figure 7-22A) is commonly found on the footwall of the San Marcial breccia. Between these two breccias, variations of breccias can be seen at different stages of brecciation with less hematite matrix (Figure 7-22C and D) in transition to crackle breccia and unbrecciated wallrock.

Chlorite–calcite > quartz > kaolinite–illite are frequently found as alteration minerals in the breccias at San Marcial.

The crackle breccias are an early stage of hydrothermal breccias formed by progressive brecciation of the wall rock by hematite-rich fluids. Three examples of crackle breccias are presented (Figure 7-23A to C) showing less intensity of hematite and brecciation respectively, however silver grades continue to be of economic interest in these breccias. Pb–Zn content tends to be low in crackle breccias and silver is generally related to sulfosalts. Silicification is not common, whereas calcite is more abundant.

The San Marcial Breccia can be traced along the contact between the upper and lower volcanics for at least 1.5 km, and the 2023 drilling confirmed an extension to a depth of 500 m below surface. Average widths for the San Marcial Breccia ranges from 4–8 m; however, including the underlying hydrothermal breccia and internal crackle breccias, the zone can reach up to 120 m wide. The mineralization averages 22 m true width in the main resource area and 53 m in the SE Area.

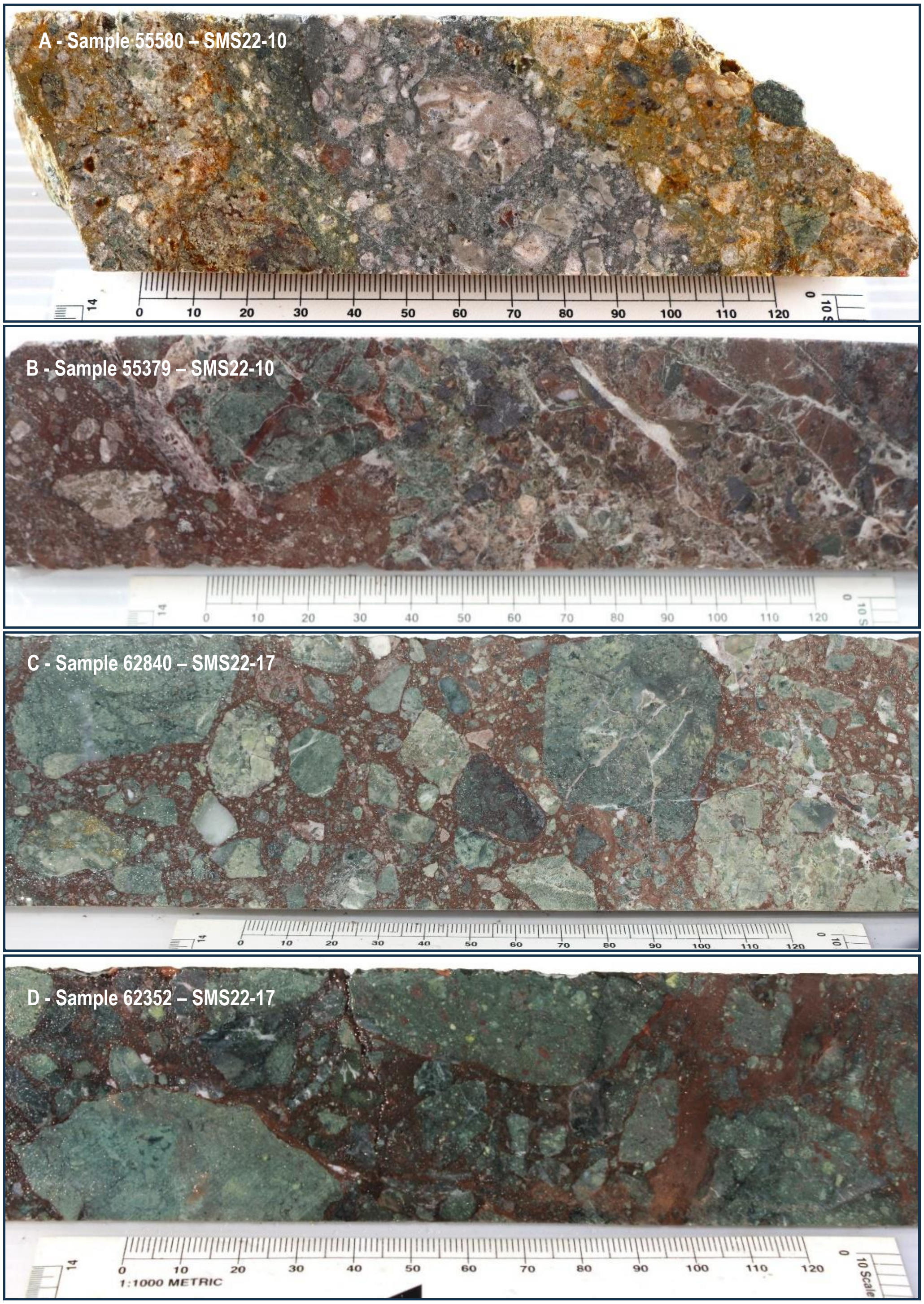
#### *Late Low-Sulphidation Epithermal System*

A late cross-cutting event of low-sulphidation epithermal veining is present in the central zone and SE Area at San Marcial, consisting of quartz–calcite–barite with an increase in Pb–Zn content and silver sulphides (Figure 7-23D). This event can both increase grades in breccias or remobilize and overprint with higher Pb–Zn anomalies. In some of the deepest drill holes, a narrow massive Pb–Zn replacement vein with high-grade silver (up to 26,150 g/t Ag) was identified, indicating that the mineralization is still open at depth (Figure 7-24A, B).

#### *Lower Stockwork and Veins in the Basal Unit*

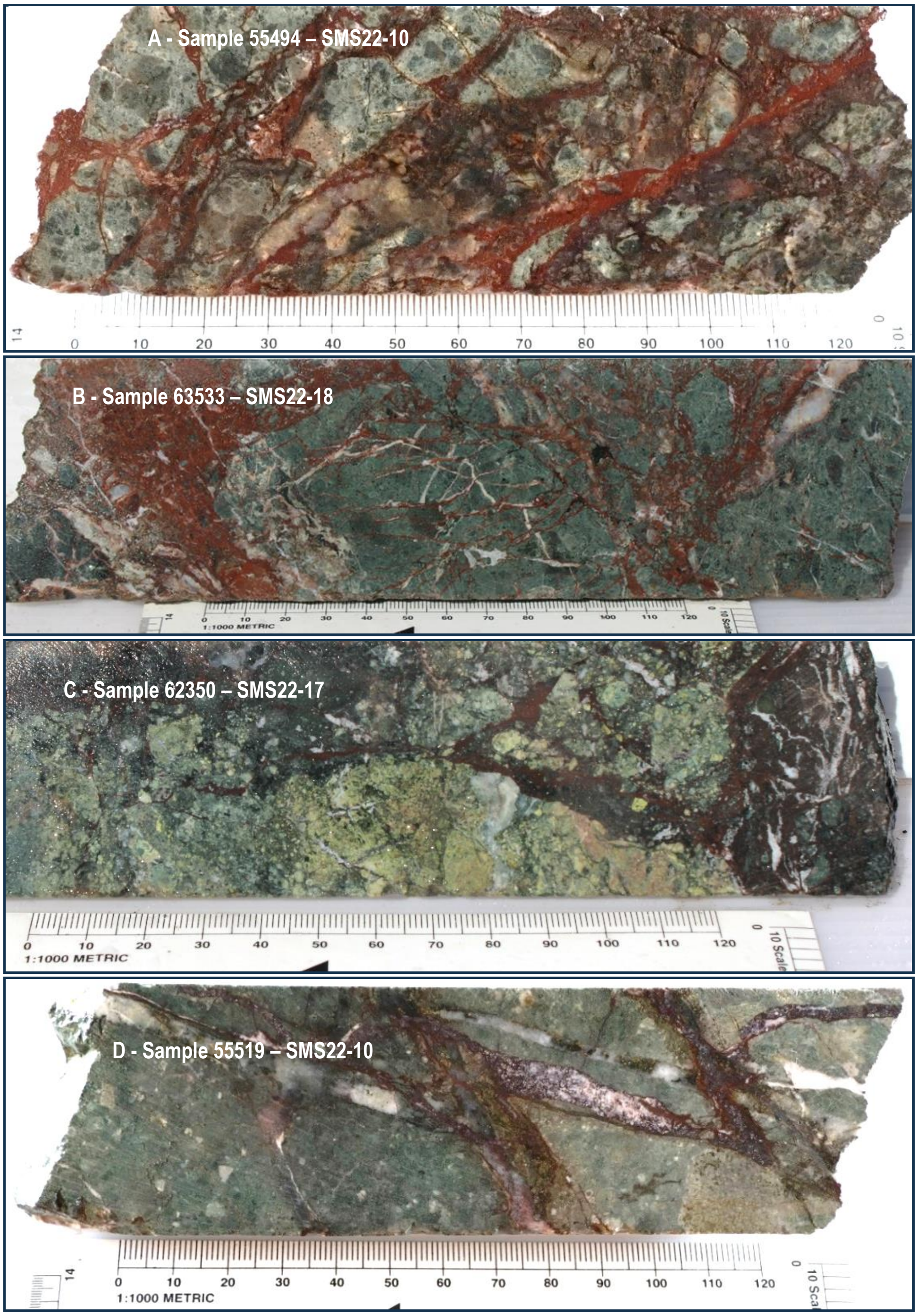
The basal Late Jurassic unit is frequently strongly silicified and contains disseminated pyrite and As–Mo anomalies. In these areas, low-grade gold anomalies have been identified from laboratory analyses. Intense silicification halos and chlorite-tourmaline alteration of the wallrock are common (Figure 7-25A), as are quartz–tourmaline–sericite in veins and veinlets (Figure 7-25).

***Figure 7-22: Mineralized Textures of Hydrothermal Breccias in SE Area of San Marcial***



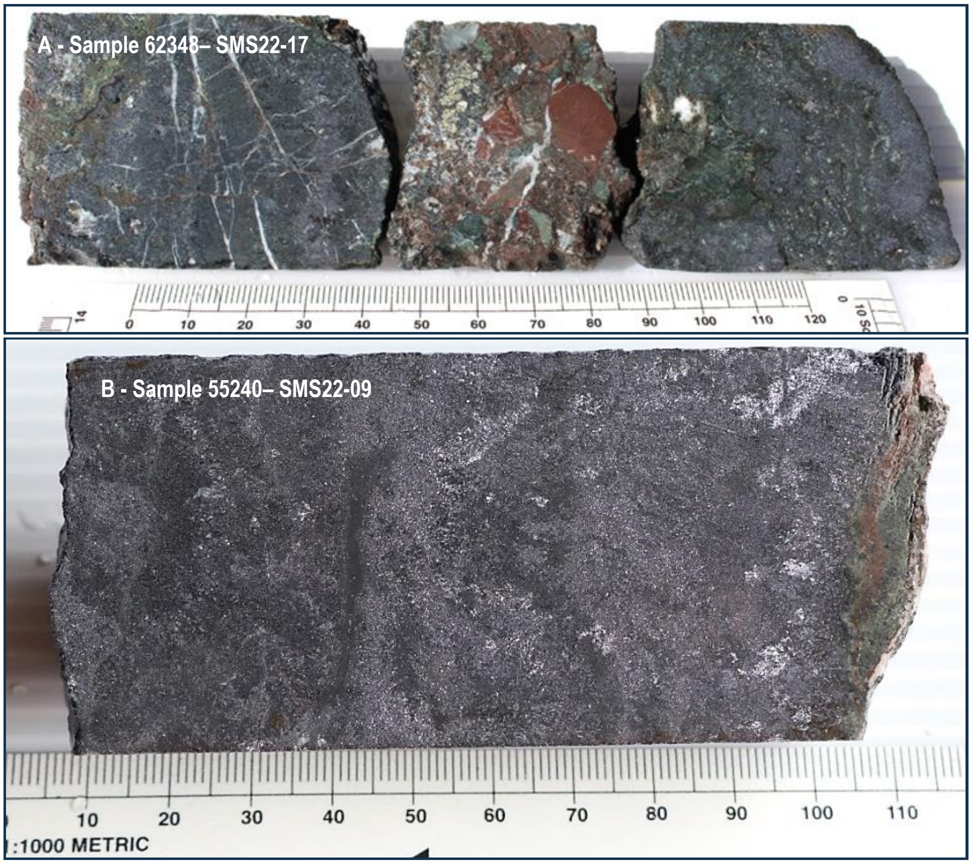

Source: GR Silver (2021).

***Figure 7-23: Mineralized Textures of Crackle Breccias in SE Area of San Marcial***



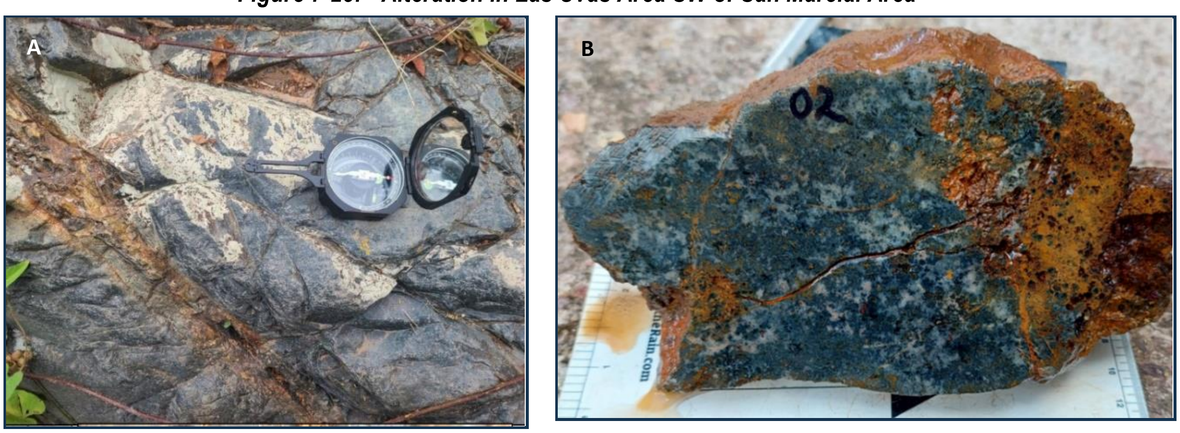

Source: GR Silver (2021).

***Figure 7-24: Mineralized Textures of Massive Sulphide Vein Breccia in San Marcial Area***




Source: GR Silver (2021).

***Figure 7-25: Alteration in Las Uvas Area SW of San Marcial Area***




Source: GR Silver (2023).

### *7.4.2 Plomosas Mine Area*

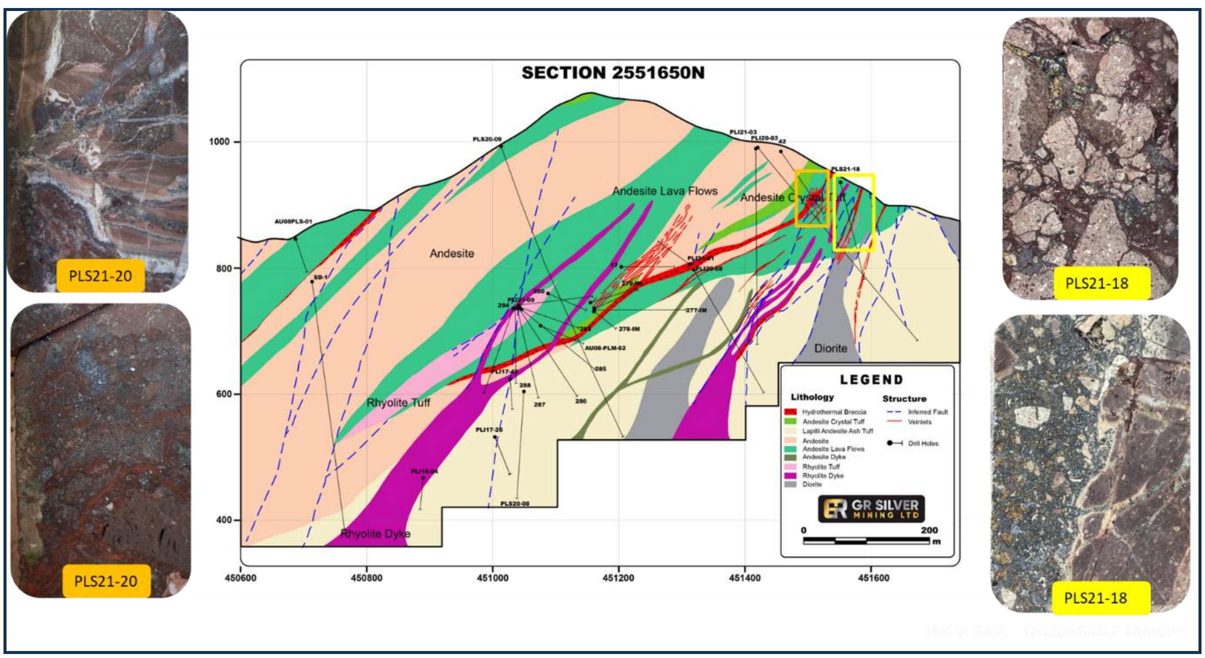
Hydrothermal breccias, crackle breccias, veining, stockworks, and occasional well-defined veins (>10 cm) are the more common mineralization styles at the Plomosas Mine Area (Figure 7-26 to Figure 7-28). The massive sulphide zone (~30° west dip) in the Plomosas mine is underlain by a brecciated interval containing silicified clasts, including brecciated laminated silica gel, cemented by silica gel (grey), with strong Au–Ag mineralization and lesser Pb–Zn–Cu.

The shallower veins in the Plomosas mine generally have a high Ag:Au ratio compared to similar veins at depth, where the lower Ag:Au ratio is a result of gold grades being >10 g/t within narrow quartz-veined intervals. These epithermal features are cut by a fault zone associated with the lithological contact between lower and upper volcanic units, and followed by Pb–Zn–Ag mineralization without silicification.

Widespread silicification is common in the breccia, and galena–sphalerite are the principal Pb–Zn sulphide minerals, respectively, often occurring with pyrite and lesser amounts of chalcopyrite. Sphalerite is iron-poor and of light-green colour. Silver minerals are usually present as silver sulphides and sulfosalts. Silver-rich veins can have ginguro-type bands in colloform, late quartz, amethyst, and greenish-coloured quartz. Visible gold is not common but may be related to chalcopyrite.

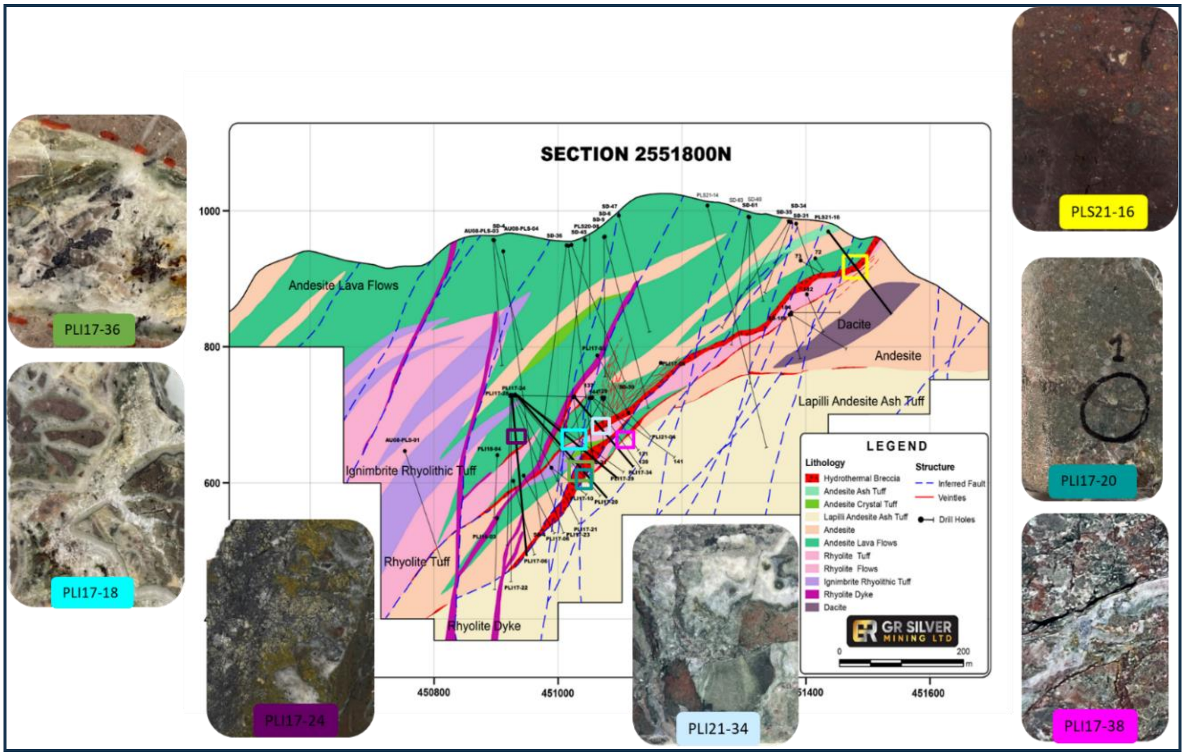
Silicification, quartz stockwork, pyrite, and argillic alteration (possibly illite), are found in the southwest sector of the Plomosas Mine Area and are associated with a diorite intrusion. This unit could be the source of Pb–Zn–Ag mineralization, as the breccia appears to stop abruptly at the contact with the diorite.

***Figure 7-26: Mineralization Textures in Section 2551650N in Plomosas Mine Area***



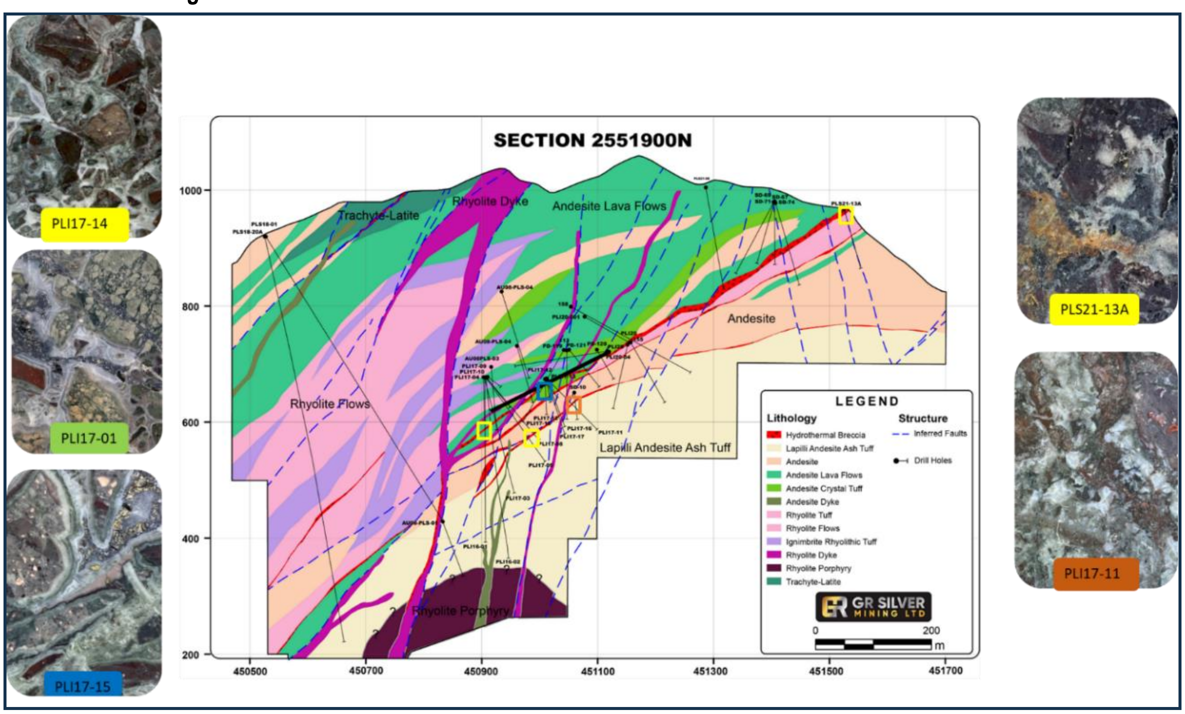

Source: GR Silver (2022).

***Figure 7-27: Mineralization Textures in Section 2551800N in Plomosas Mine Area***




Source: GR Silver (2022).

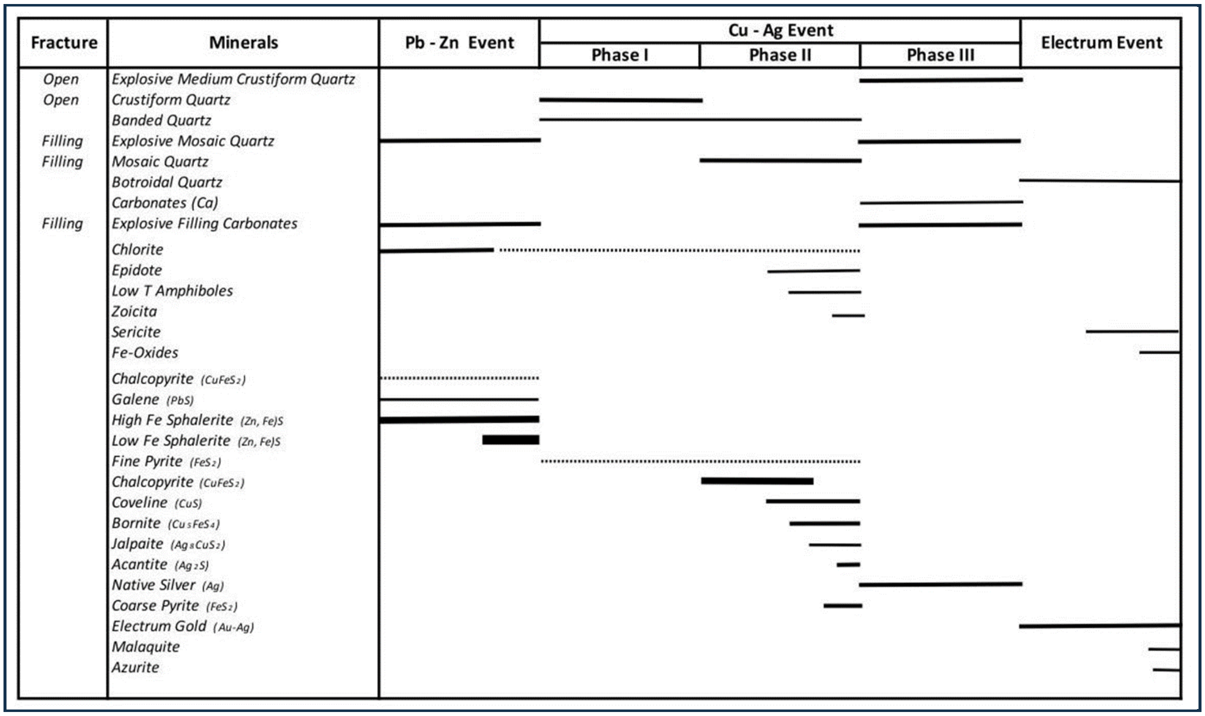
***Figure 7-28: Mineralization Textures in Section 2551900N in Plomosas Mine Area***




Source: GR Silver (2022).

For the Plomosas Mine Area the paragenetic sequence has been defined by Montoya-Lopera et al. (in preparation) (Figure 7-29).

***Figure 7-29: Summary of Paragenetic Sequence in Plomosas Mine Area***




Source: Montoya-Lopera et al. (in preparation).

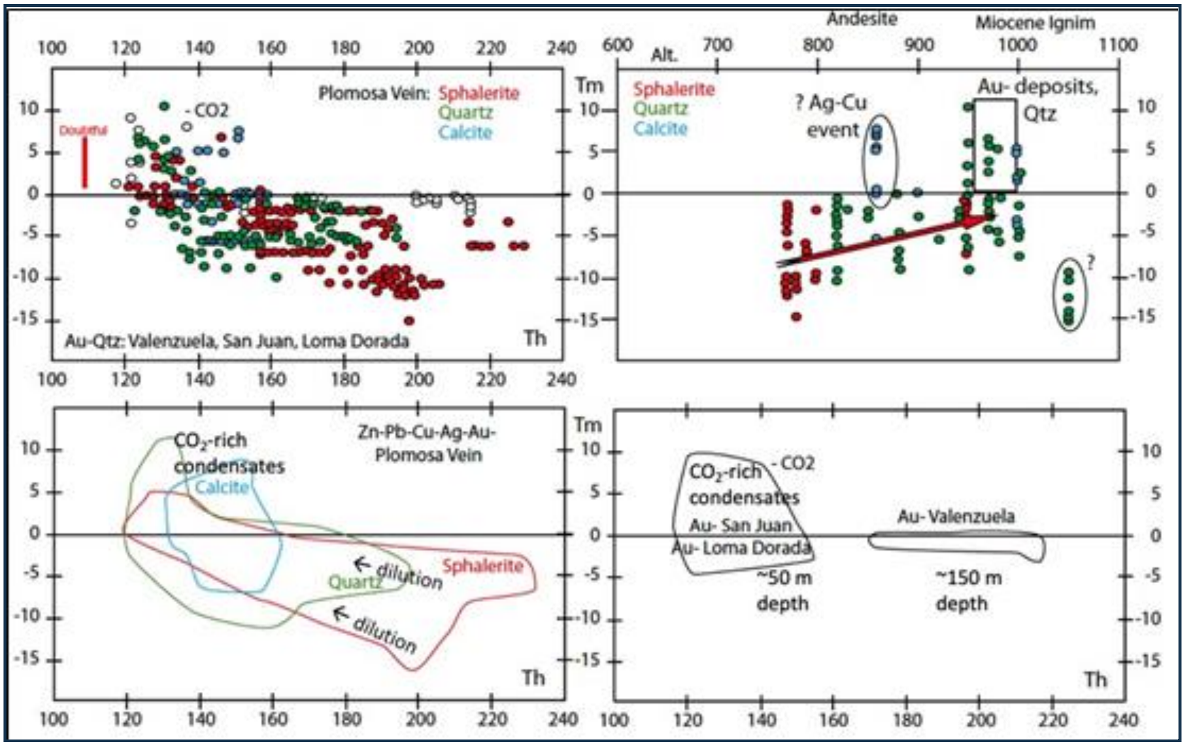
Fluid inclusion data collected by Gonzalez-Partida et al. (1994) and plotted by Montoya-Lopera et al. (in preparation) indicate a maximum temperature of 200°C (quartz) to 220°C (sphalerite), associated with a moderate salinity fluid (about 15 wt% NaCl equivalent, locally higher). There is a trend to lower salinity at lower temperature, to nil NaCl in both sphalerite and quartz and the calcite formed at <160°C from a low-salinity, but $CO_2$-rich, fluid. This $CO_2$-rich fluid typically formed on the margin of the system (and in the Plomosas mine at the higher elevation), and was the diluent of the hotter fluid, which accounts for the trend in data (Figure 7-30).

This fluid inclusion temperatures for sphalerite (<200–220°C) at Plomosas are consistent with clay mineralogy of samples near, and below, Pb–Zn–Ag-rich breccias at San Marcial. Also, positive melting temperature (Tm) values at shallow depths are due to high $CO_2$ content at <150°C; this is consistent with the presence of shallow clays.

### *7.4.3 San Juan–La Colorada Area*

Mineralization in the San Juan–La Colorada Area is linked to a system of individual veins and breccia structures with multiple cross-cutting relationships of different events.

*Figure 7-30: Fluid Inclusion Data from Plomosas Mine Area*




Source: Gonzales-Partida et al. (1984) re-analyzed by Montoya-Lopera (in preparation).

### San Juan Vein Breccia

Two structures define the principal mineralization zone at San Juan. The NW–SE breccia has an approximately 250 m strike length and is 200 m deep, plunging east-northeast and a NE–SW-trending fault structure with a strike length of 300 m.

The breccia is often supported by the matrix and cement containing sphalerite, galena, acanthite, and pyrite, with traces of chalcopyrite. Other mineralization styles include small-scale veining, as well as stockworks in areas of brittle fracture. Breccia clasts of Ag–Zn–Pb(±Au) sulphides contain evidence of previous brecciation of Pb–Zn (±Ag) sulphides together with Pb–Zn sulphide mineralization.

### La Colorada Breccias and Veins

The La Colorada mineralization is mainly a hydrothermal breccia system emplaced in varying directions; however, the N–S trend has historically been the focus of mining activity. The N–S La Colorada structure consists principally of a Au–Ag–Pb–Zn-mineralized quartz and hematite matrix. Sphalerite, galena, and acanthite are found in the quartz veins in small quantities.

Generally, three types of mineralized structures are observed, based on mineralogy, allowing a preliminary paragenesis of:

- Quartz–hematite–sphalerite–galena–acanthite
- Quartz–hematite–pyrite–chalcopyrite with Au
- Quartz–calcite–anhydrite (late mineralization with Pb–Zn–Ag sulfosalts.

# 8 DEPOSIT TYPES

Mineralization at the Plomosas Project can be assigned to the intermediate-sulphidation (IS) to low-sulphidation (LS) epithermal polymetallic type, and transitioning to the LS epithermal type, according to the terminology of Hedenquist et al. (2000). Both are epithermal mineralization styles that typically display features such as veins, breccias, stockworks, and replacement bodies, and are common in Mexico (Camprubi and Albinson, 2007). Both LS and IS type mineralization usually precipitate from hydrothermal fluids in fissures and fractures at <300°C, and have a magmatic affiliation.

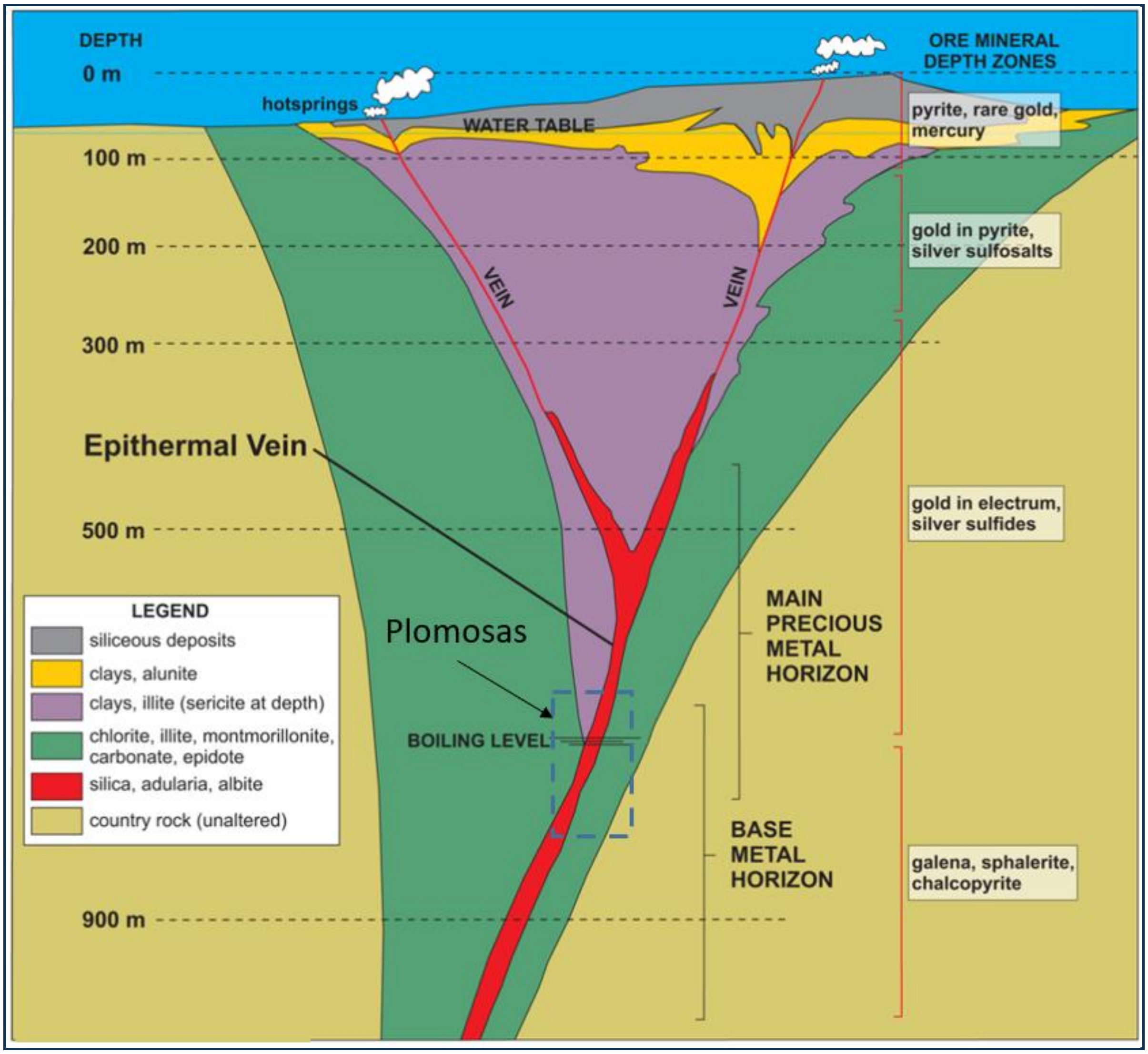
Characteristically, IS epithermal deposits are more base metal-rich with high Pb-, Zn- and Cu-bearing sulphide mineral content, significant silver content, and gold concentrations. The LS type has a lower total sulphide content, but higher concentrations of gold and silver, and precipitates at lower temperatures compared to the IS mineralization. Following Buchanan (1981), LS deposits are located at a shallower level relative to the IS deposits. Epithermal deposits can be zoned vertically over 250 to 350 m from a base-metal-poor, gold- and silver-rich upper zone, to a relatively silver-rich base-metal intermediate zone, to a lower base-metal-rich zone (Figure 8-1). At the Plomosas Project, there are transitions from base-metal-rich to silver- and gold-rich zones, which is likely the result of fluctuations in the hydrothermal fluid conditions and changes of the system over time, resulting in several overprinting mineralization events (Figure 8-1).

Structurally controlled epithermal mineralization is usually centred on hydrothermal conduits such as faults and unconformities. Deposits can be hundreds of metres in strike length. Vein systems can be laterally extensive, but mineralized shoots have relatively restricted vertical extents. High-grade mineralization is commonly found in dilational zones in faults, at flexures, and splays. Common textures include open-space filling; symmetrical and other layering; crustification; comb structure; colloform banding and multiple brecciation that can be expressed as jigsaw breccia, crackle breccia, or chaotic breccia; to name a few.

The Mineral Resource area at San Marcial is predominantly an LS epithermal style, breccia-hosted deposit, and strongly associated with a NW–SE oriented structural trend. It is considered to be a silver deposit with Zn–Pb mineralization closely associated with the silver. In addition to the breccia and fault-hosted mineralization at San Marcial, zones of stockwork mineralization are also present, generally peripheral to the breccia/fault mineralization. In the vicinity of the breccia/fault, these stockwork veins can be mineralized and particularly rich in lead, zinc, and locally in gold. The latter system appears to be influenced by an early regional porphyry copper system, that includes anomalous gold, with a number of intrusive bodies to the south of the resource currently being investigated.

The Plomosas Mine Area is associated with a N–S oriented structural trend with frequent NW–SE oriented cross cutting faults. At San Juan-La Colorada, the structural controls are primarily oriented N–S, as well as NE–SW, but with a later NW trending stockwork system. The base metal-rich events at both Plomosas Mine and San Juan–La Colorada are more likely to have originated as IS epithermal style and later transitioning to LS style epithermal mineralization with increased precious metals (Table 8-1).

***Figure 8-1: Schematic of an Intermediate to Low-Sulphidation System***




Source: Buchanan (1981).

Table 8-1 provides a description of mineralization events and associated deposit types for the San Marcial, Plomosas Mine and San Juan–La Colorada Areas.

***Table 8-1: Summary of Deposit Types and Mineralization Events by Area***

| Areas | Mineralization Event | Deposit Type |
|---|---|---|
| San Marcial | **1st Mineralization event:** quartz stockwork and irregular veining filled with pyrite and lesser chalcopyrite and tourmaline, with albite halos related to low grade Au and As-Mo anomalies in the lower unit | Porphyry copper system |
| | **2nd Mineralization event:** NW-SE Ag-Pb-Zn breccias in two phases: 1) hematite and carbonate flooding in crackle and jigsaw breccias in a weakly silicified wallrock with dissemianted Ag sulphides and sulfosalts >> Pb-Zn sulphides in matrix (Figure 7-22B); 2) advanced stage of hydrothermal breccias with carbonate-hematite cementing weakly silicified fragments with disseminated Ag-Pb-Zn sulphides and Ag sulfosalts in matrix (Figure 7-23A). | IS to LS |
| | **3rd Mineralization event:** quartz stockwork and veinlets of polymetallic Zn>Pb with Ag sulphides following NW and NE trends with late stage coarse-grained barite and calcite (Figure 7-23D) | LS |
| Plomosas Mine | **1st Mineralization event:** Pb-Zn event, probably coeval with diorite intrusion hosted in the Plomosas breccia (Figure 7-26) | LS |
| | **2nd Mineralization event:** Cu-Ag event pre-dates main Ag-bearing event (Figure 7-27) | IS to LS |
| | **3rd Mineralization event:** the 2nd Cu-Ag event comes in at a later stage (Figure 7-28) | IS to LS |
| | **4th Mineralization event:** Au-bearing event is last and overprints Cu-Ag. Gold is found at grain-boundaries of copper minerals. Gold is native as electrum in small crystals (Figure 7-28) | LS |
| San Juan–La Colorada | N-S breccias with quartz-chlorite-hematite matrix cementing with disseminated Pb-Zn-Ag mineralization. | LS |
| | Polymetallic NE–SW veins and stockwork of quartz-chlorite-hematite containing pyrite-chalcopyrite-galena-sphalerite and bornite at deeper levels. | IS to LS |
| | NW stockwork and breccias with amethyst quartz related to Au-Ag mineralization and cross cutting previous events. | LS |

# 9 EXPLORATION

Exploration activities at the San Marcial Area prior to, and associated with, the 2019 San Marcial NI 43-101 MRE are described in McCracken and Filipov (2020). Likewise, exploration activities at the Plomosas Mine and San Juan–La Colorada Areas prior to, and associated with, the 2021 Plomosas NI 43-101 MRE are described in Arseneau and Crowie (2021). Exploration activity carried out following each of those reports is summarized in Table 9-1 and Table 9-2, respectively.

Surface and underground geological mapping campaigns at the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas have improved the understanding of geological and structural controls on mineralization in each area. This work has resulted in expansion of the known mineralization in each area, as well as the discovery of new veins and breccias, including the SE Area discovery at San Marcial. Surface and underground channel sampling programs were also carried out in the three areas.

***Table 9-1: GR Silver Exploration Activity on the San Marcial Area since 2019***

| Exploration Activity | San Marcial Area |
|---|---|
| Geologic mapping ($km^2$)—surface | 5.5 |
| Geologic mapping ($km^2$)—underground | 1.0 |
| Ground geophysics—IP and Resistivity (linear km) | 75.7 |
| Ground geophysics—Magnetics (linear km) | 73.8 |
| Litho-geochemistry samples | 15,274 |
| Litho-geochemistry program area ($km^2$) | 9.2 |
| Core re-logging (m) | 546.8 |
| Surface powder samples—pXRF analyses | 2,199 |
| Surface channel samples | 338 |
| Surface channel sampling (m) | 337.7 |
| Underground channel samples | 39 |
| Underground channel sampling (m) | 25 |
| Portable drill holes | 31 |
| Portable drill—core drilling (m) | 440.5 |
| Diamond core holes | 38 |
| Diamond core drilling (m) | 9,941.1 |
| 3D geological modelling | ✓ |

*Table 9-2: Plomosas Property—GR Silver Exploration Activity post-2021 Resource Estimation*

| Exploration Activity | Plomosas Mine Area | San Juan–La Colorada Area |
|---|---|---|
| Geologic mapping ($km^2$)—surface | 0.5 | 0 |
| Geologic mapping ($km^2$) —underground | 10.3 | 1.75 |
| Core re-logging (m) | 276 | 0 |
| Underground powder samples—pXRF analyses | 1,664 | 185 |
| Portable drill holes | 111 | 11 |
| Portable drill—core drilling (m) | 1,730.15 | 115.1 |
| Diamond core holes | 87 | 8 |
| Diamond core drilling (m) | 10,403.85 | 553.0 |
| 3D geological modelling | ✓ | ✓ |

## 9.1 Geophysical Surveys

### *9.1.1 San Marcial Area*

During 2021, a ground-based DC resistivity and induced polarization (DCIP) survey was carried out, in conjunction with a ground magnetic survey, at the San Marcial Property. This first-ever geophysical survey on the San Marcial Property was commissioned by GR Silver and carried out by Dias Geophysical Ltd. The DCIP survey consisted of 35 lines which were approximately 2 to 2.5 km in length for a total of 75.7 line km, with line spacing of 200 m for outer zones and line spacing of 100 m for the central area covering the 2019 San Marcial resource area. The magnetic survey was a walking survey collected along the same lines used for the DCIP survey and in total, 73.8 line km of magnetic data were collected.

The initial objective of the survey was to understand the geophysical signature and hence define new targets within the San Marcial Property. However, the survey area was extended to the northwest to connect the San Marcial mineralization with the southern extent of the San Juan–La Colorada mineralization and the El Saltito mineralization (Figure 9-1). This extension covered an under-explored area—known as the Gap area—that had been acquired by GR Silver as part of the La Trinidad transaction early in 2021.

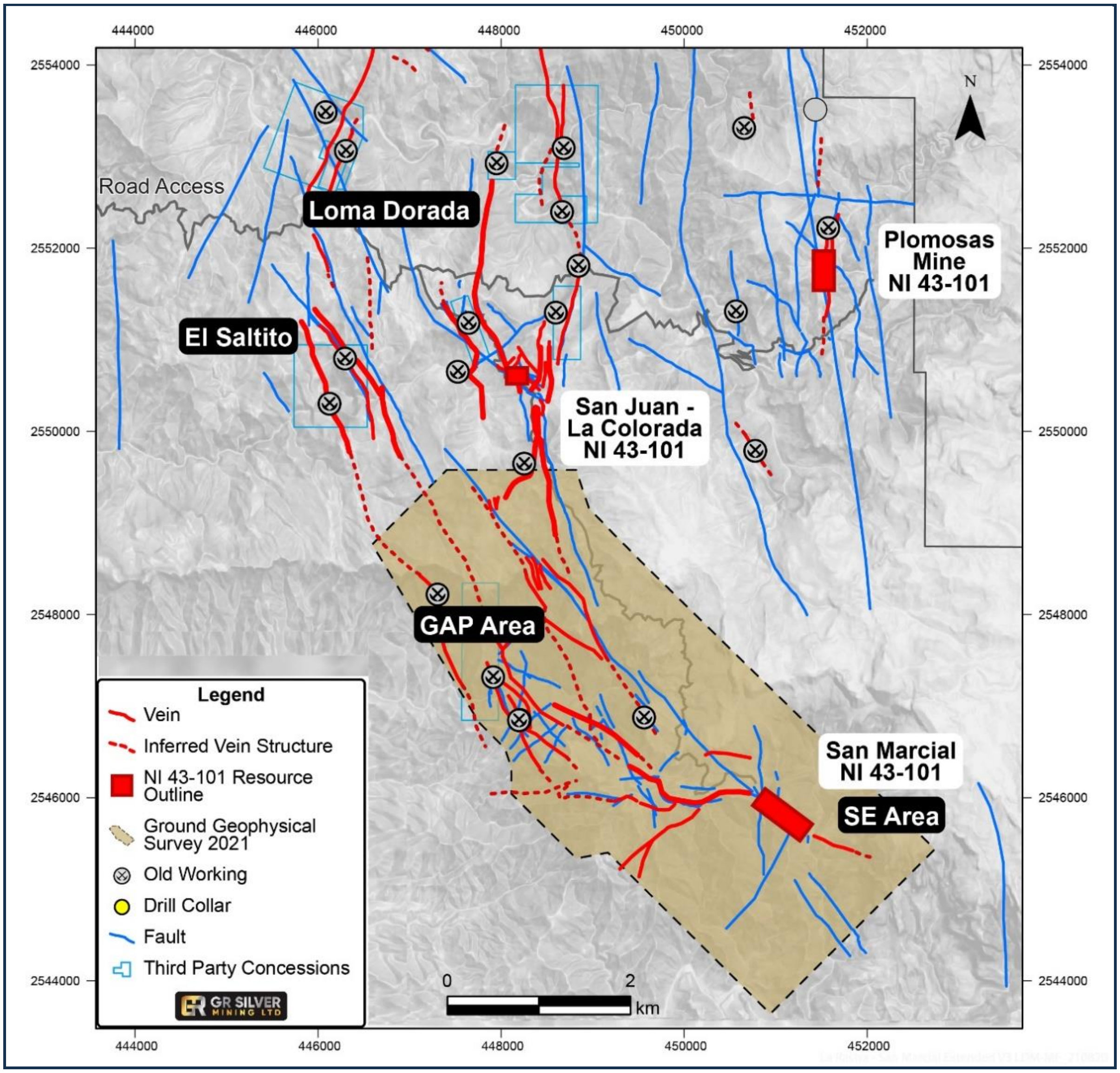
The contoured surface data is represented in Figure 9-2 to Figure 9-4.Based on the results, five key target areas were defined (Figure 9-5). Two of these target zones, SM1 and SM2, correspond to the resource area in San Marcial and follow-up exploration has commenced.

SM1 corresponds with the contact of the upper and lower volcanic groups to the southeast of the known mineralization. The contact in this area steps to the northeast and the chargeability anomaly coincides with this jog. The resistivity and magnetic responses in this area are moderate, similar to the San Marcial mineralized zone. This target was instrumental in the discovery of the SE Area mineralization in 2022.

SM2 correlates with a large area of moderate chargeability that extends to the south of the San Marcial deposit. The resistivity within SM2 is moderate with a small area of low resistivity associated with the increased chargeability in the northern most part of the zone. The lower portion of the zone is associated with magnetic highs that are interpreted to be microdiorite intrusions. Exploration activities have commenced in this area with mapping and sampling.

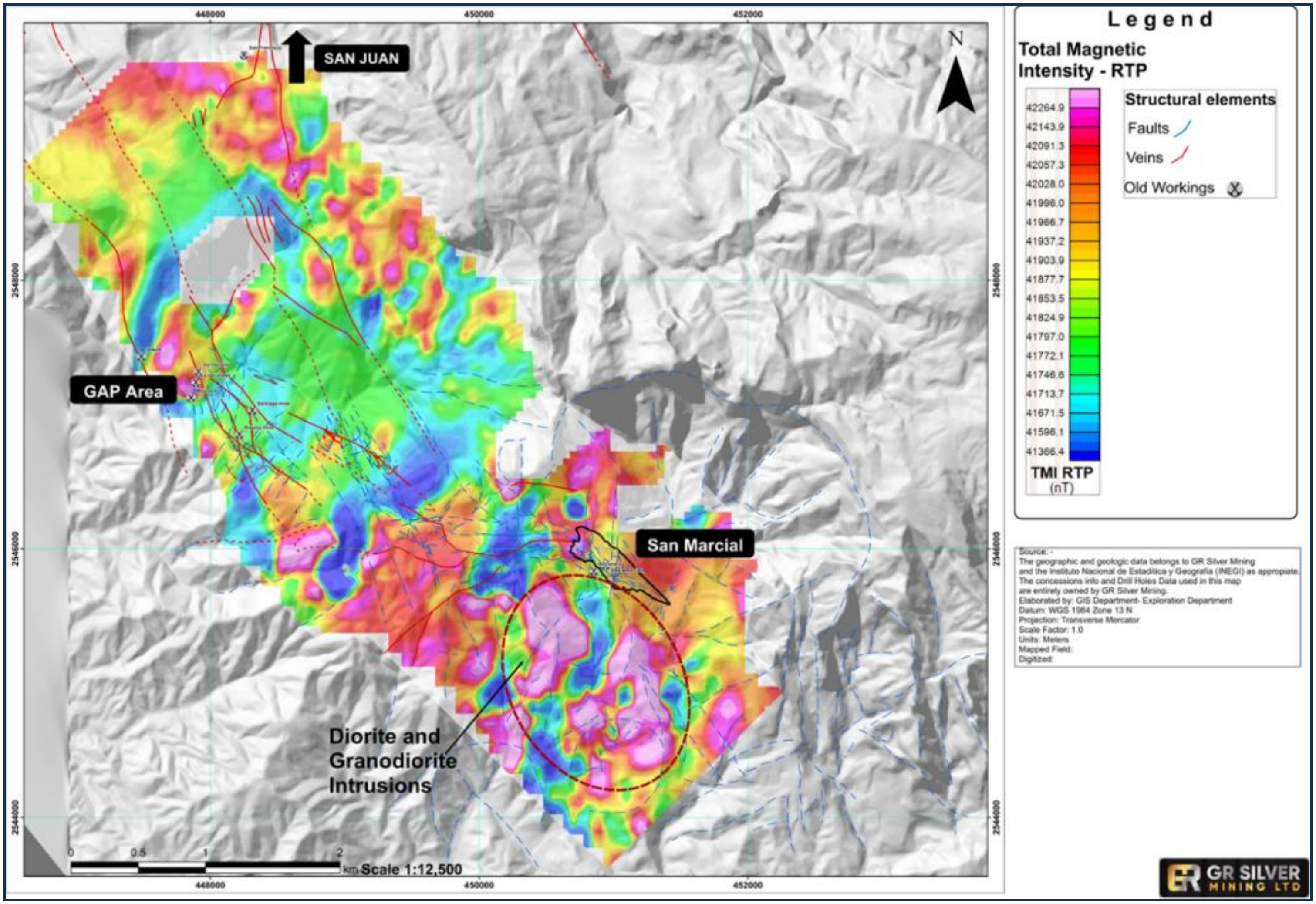
Additional anomalies generated by the ground geophysical survey are to be followed up.

***Figure 9-1: Ground Geophysical Survey Area in Relation to Key Target Areas***



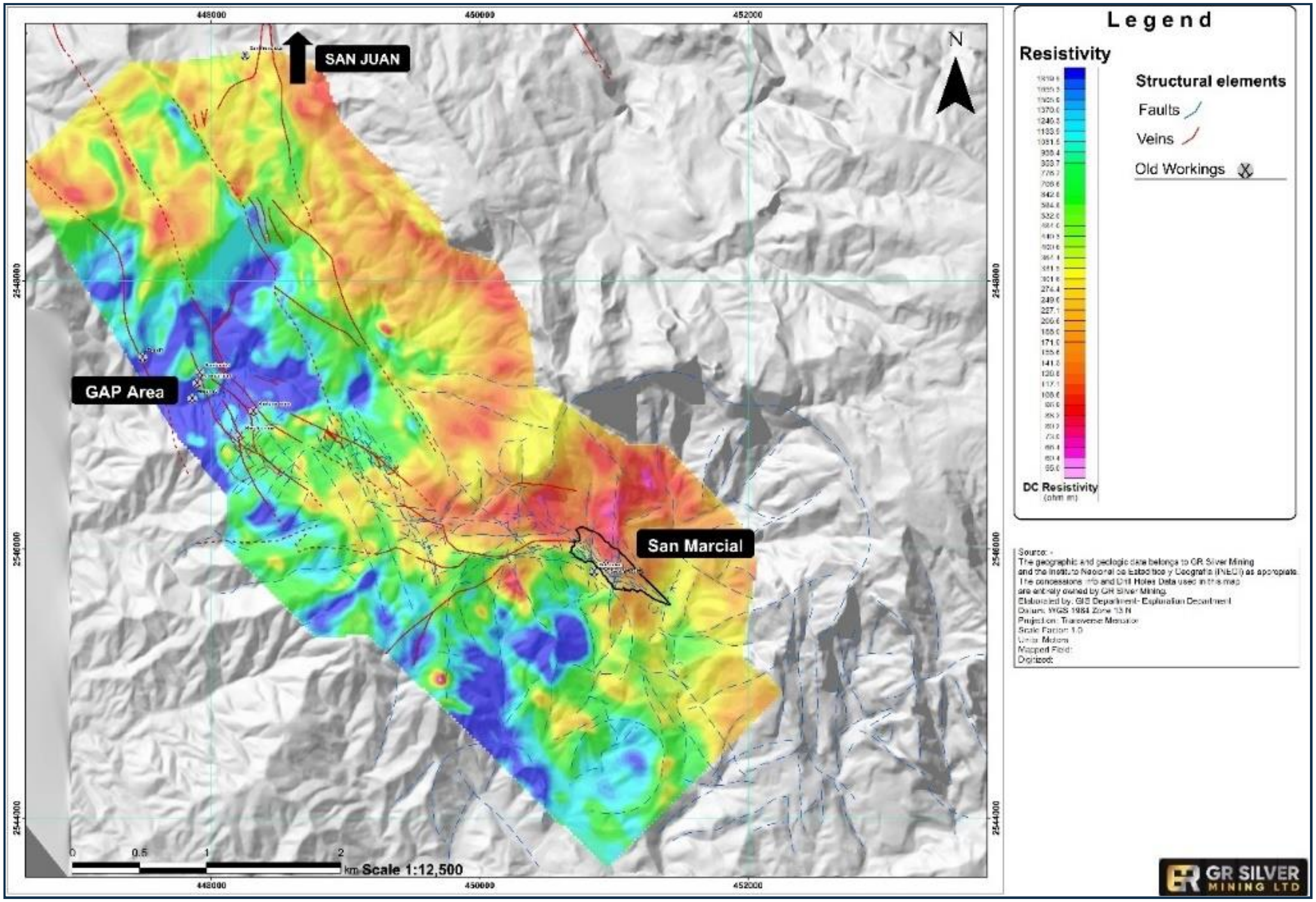

Source: GR Silver (2021).

*Figure 9-2: San Marcial Area—Total Magnetic Intensity RTP (Reduced to Pole) and Key Structures*



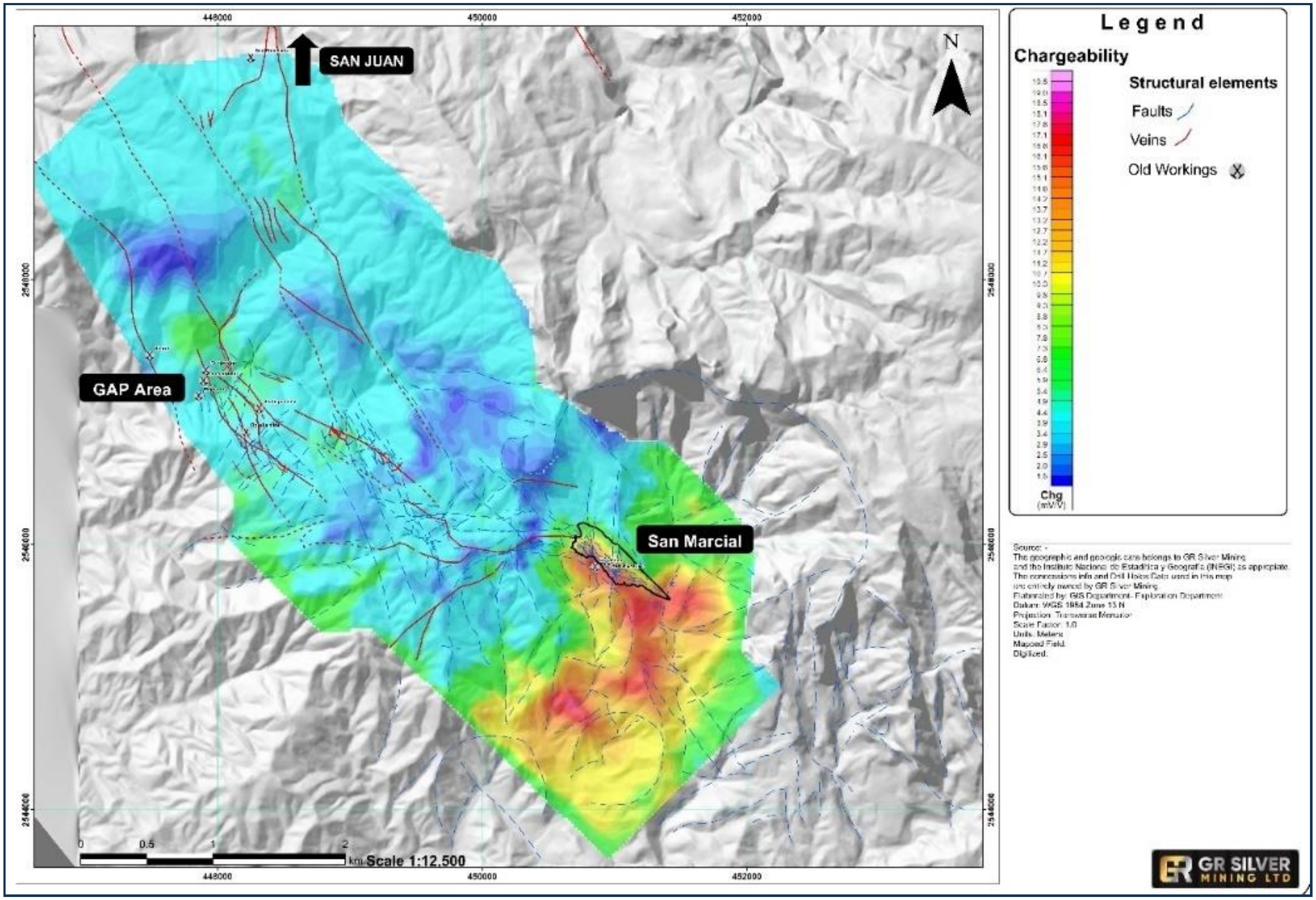

Source: After Milne et al. (2021).

*Figure 9-3: San Marcial Area—Resistivity Map and Key Structures.*



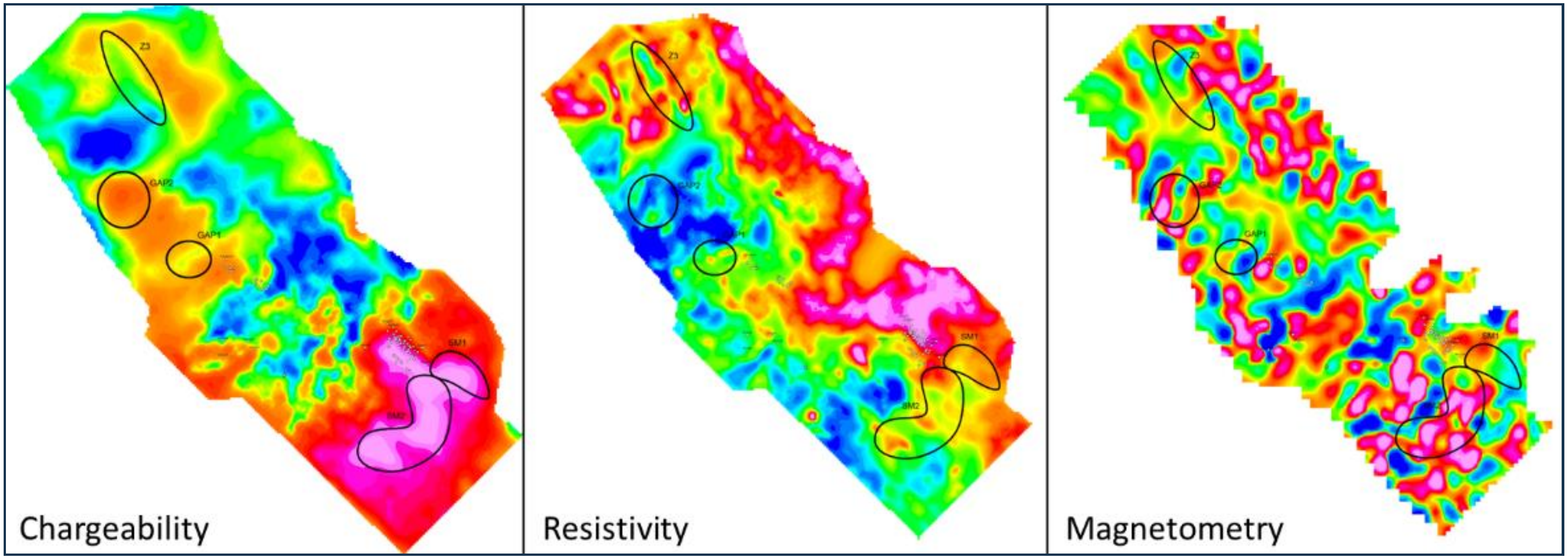

Source: After Milne et al. (2021).

***Figure 9-4: San Marcial Area—Chargeability Map and Key Structures***



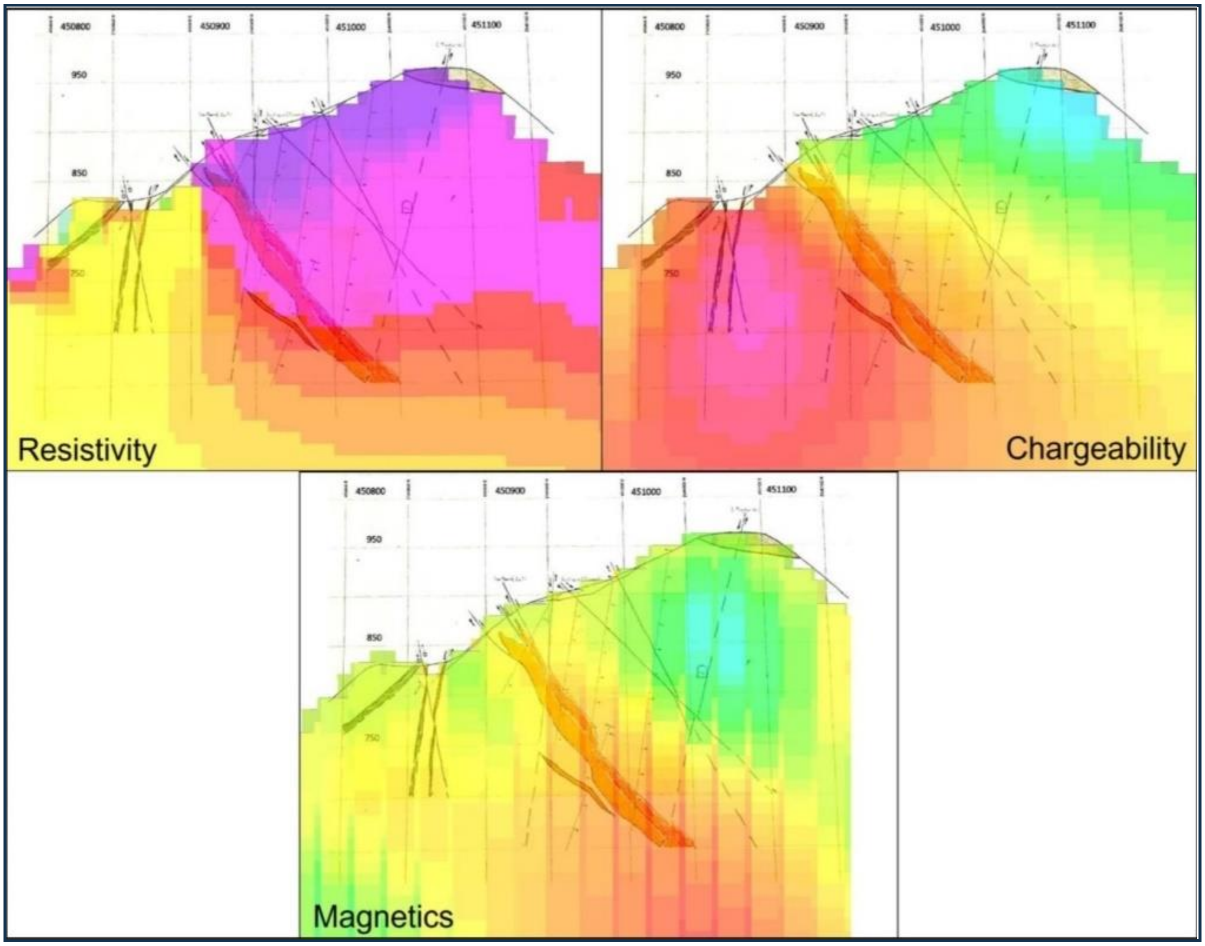

Source: After Milne et al. (2021).

***Figure 9-5: Target Zones Identified from the Ground Geophysical Survey in San Marcial Area***




Source: After Milne et al. (2021).

***Figure 9-6: San Marcial—Example of 3D Resistivity, Chargeability and Magnetics in Relation to San Marcial Breccia (Line 200NW)***




Source: Milne et al. (2021).

## 9.2 Surface Mapping

The geological mapping on the Plomosas Project involved detailed lithology, structure and alteration outcrop mapping. Data acquisition included structural data measurements for contacts, bedding, faults and veins/breccias, using the standard dip angle and dip direction methodology.

### *9.2.1 San Marcial Area*

At San Marcial, the geological mapping covers 5.5 km$^2$ at 1:5,000 scale, including new areas to the south and southeast. The area to the south and southeast of the San Marcial resource was identified as being highly prospective for the discovery of additional mineralization of the San Marcial type. This was supported by the chargeability anomalies identified in this zone following the ground geophysical survey and interpretation.

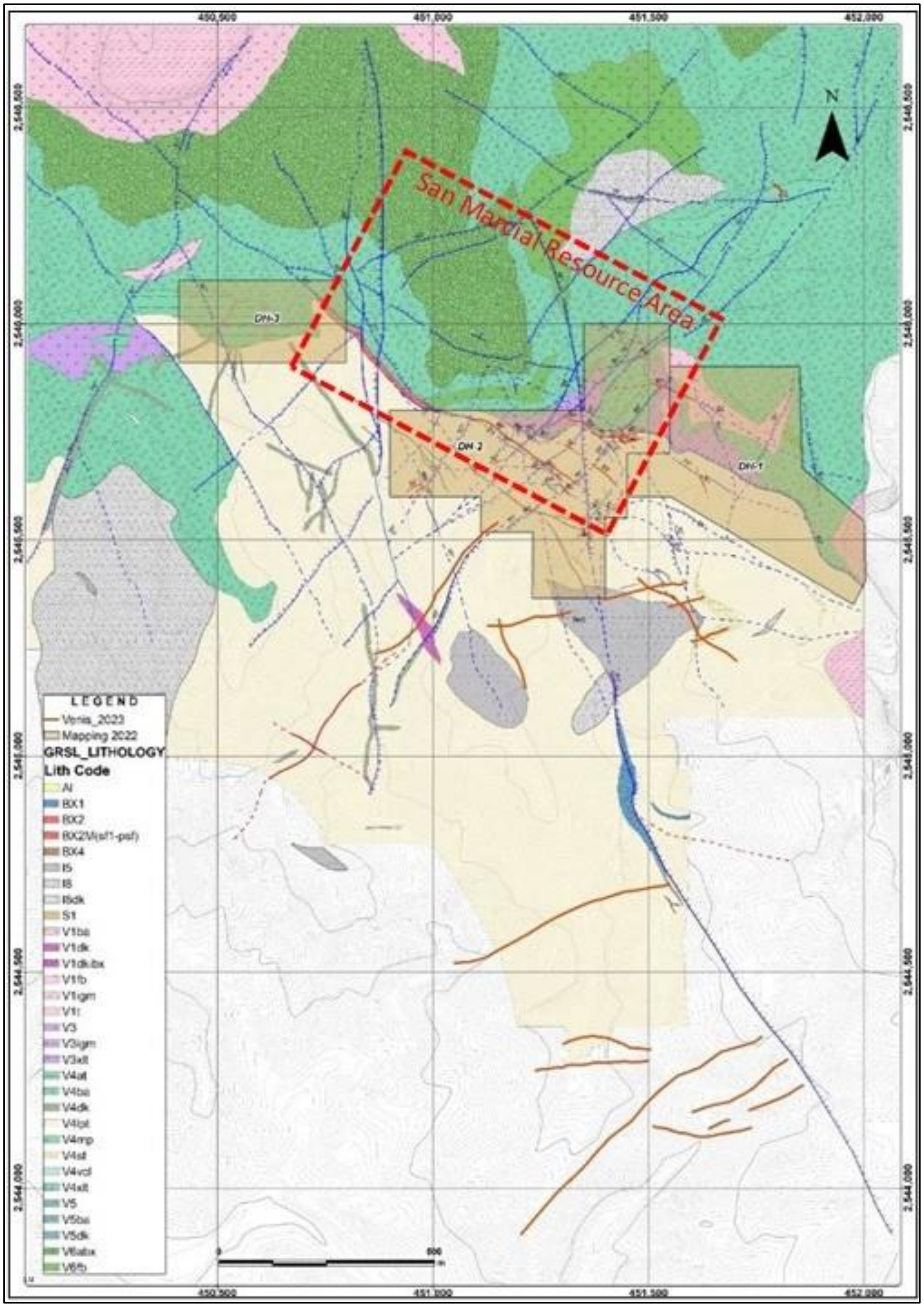
The San Marcial geological model continues to evolve as the new mapping reveals increased prospectivity along the contact between upper and lower volcanics, where breccias and veins were emplaced. The NW-SE trend is cross cutting stratigraphy and could be related to a diorite intrusive of Late Oligocene age. A new stratigraphic column has been developed at San Marcial (Figure 7-10) as a result of five years of GR Silver's exploration knowledge, as well as good correlations with the geological models and stratigraphy for the nearby Plomosas Mine and San Juan–La Colorada Areas. Structural geology plays an important role with complex NE-SW, E-W and N-S cross cutting relationships creating fracturing, and hence suitable traps, in the wallrock to host mineralization.

Three zones (DH-1 to DH-3) (Figure 9-7) were defined along the target contact – that hosts the San Marcial Breccia mineralization - for detailed mapping and definition of new drill targets. DH-2 contains the majority of the new SE Area discovery mineralization, whereas DH-1 covers the extension of the key target contact further to the southeast of the SE Area discovery (Figure 9-7).

Prospectivity to the southeast along the target contact is supported by the contrast of the high chargeability geophysics in the lower silicified and pyritic unit, with the low chargeability response in the upper volcanics. As a consequence, the area to the southeast in DH-1 remains an exploration target for at least 600 m along the unexplored target contact with this geophysical signature (Figure 9-7). Exploration activities have commenced in both DH-1 and DH-2 to identify drill targets.

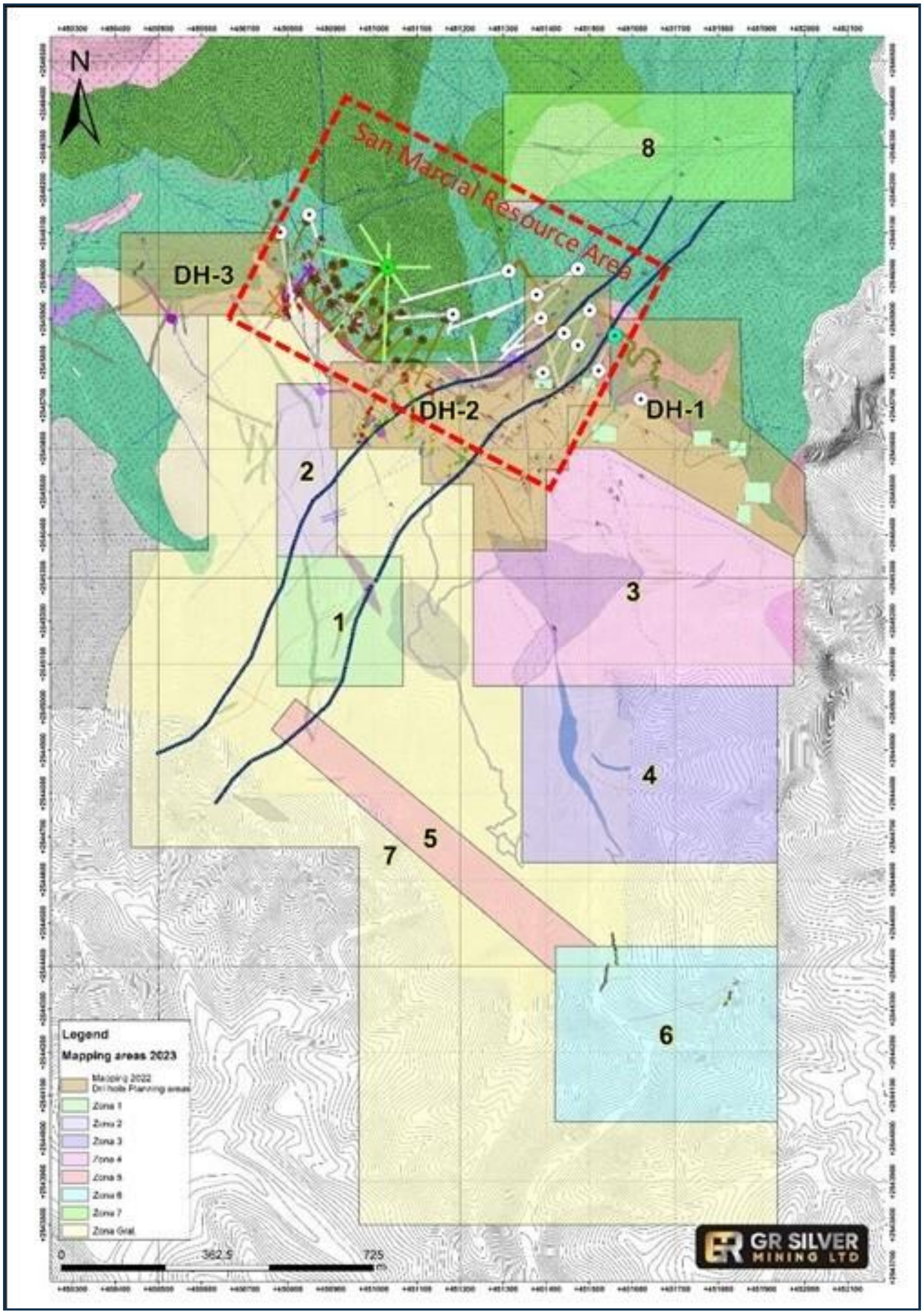
The area further to the south was divided into seven specific study zones (Zones 1 to 7) as shown in Figure 9-8. Exploration to the south of the San Marcial resource is key to define any possible relationship between the mineralized breccias, veins and stockworks and the granodiorite intrusive located 800 m south of the San Marcial resource area (Figure 9-8). Mapping and channel sampling has commenced in these seven zones to identify new targets for potential mineralization.

***Figure 9-7: San Marcial Area—Resource Expansion Exploration Areas DH-1 to DH-3***




Source: GR Silver (2023).

***Figure 9-8**: San Marcial—Exploration Focus South and Southeast of the Resource Area*




Source: GR Silver (2023).

#### *9.2.2 Plomosas Mine Area*

Only minimal surface geological mapping was completed for the Plomosas Mine Area since the 2021 MRE, covering approximately 0.5 $km^2$ at the scale of 1:2,000. The majority of work completed in this period was underground, within the old mine workings.

The main outcomes of surface mapping were validating important changes in the geology and structure compared to the limited information available from historic maps. A microdiorite intrusive unit was identified, possibly controlling hydrothermal fluids producing the Plomosas Breccia. An updated stratigraphic column has been produced for the Plomosas Mine Area (Figure 7-11), aided by the age dating and geo-chronostratigraphic study by Montoya-Lopera et al. (in preparation).

#### *9.2.3 San Juan–La Colorada Area*

Limited surface mapping has been completed at the San Juan–La Colorada Area since the 2021 MRE. An updated stratigraphic column for the San Juan–La Colorada Area is detailed in Section 7 (Figure 7-13).

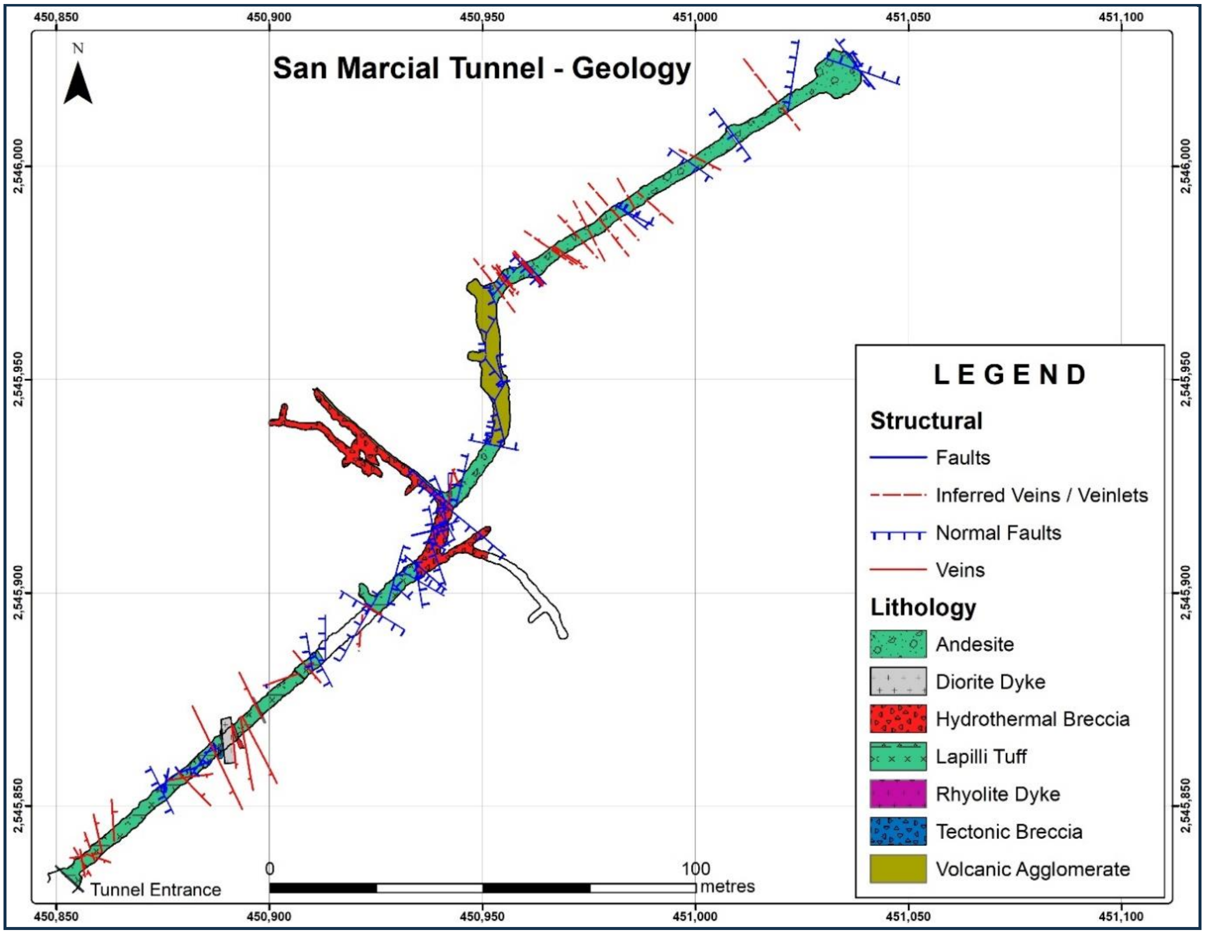
### 9.3 Underground Mapping and Sampling

#### *9.3.1 San Marcial Area*

During 2021, GR Silver undertook a program to extend the length of the original San Marcial tunnel to provide access to drill the depth extensions of the San Marcial Breccia. The tunnel was extended approximately 160 m to the northeast where an underground platform was constructed to carry out the underground drilling program at the end of 2021 consisting of eight drill holes, totalling 2,436 m.

Additionally, the original tunnel was expanded in size to allow access and improve safety conditions. The dimensions of the tunnel are now 285 m long, and 3 m wide x 3 m high. The drill platform at the end of the tunnel was expanded to at least 6 m x 6 m x 6 m, and reinforced to allow for safe working conditions. After completion of the expansion/extension, the length of the tunnel was mapped for geology and structures (Figure 9-9) with selective sampling.

***Figure 9-9: Geological and Structural Mapping in the San Marcial Tunnel***




Source: GR Silver (2022).

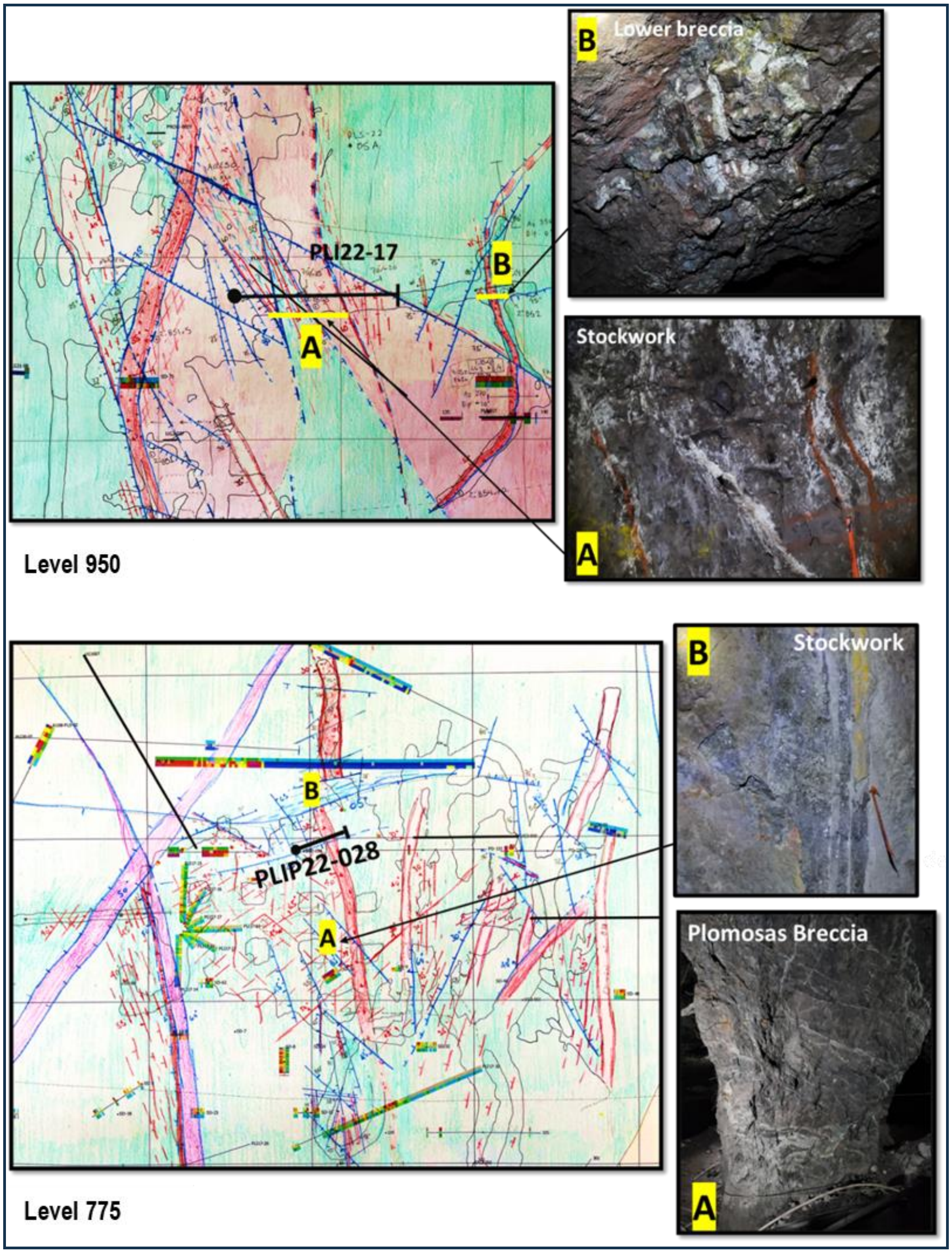
### *9.3.2 Plomosas Mine Area*

During 2022, a new underground mapping program was carried out at 1:250 scale on all levels of the Plomosas mine. A total of 10.3 km$^2$ were covered. The new mapping improved the geological understanding (Figure 9-10) and was used to define a new geological model. An additional program of channel sampling, with powder recovery for portable XRF (pXRF) analysis by GR Silver's in-house pXRF equipment, was undertaken to speed up the assay results to support the mapping process (see Section 9.6.2).

The mapping resulted in an improved understanding of the controls of multiple phases of base metal and precious metal mineralization in veins and breccias.

Bedding and mineralized breccias coincide with N-S trends, illustrating the subparallel nature of the Plomosas Breccia and stratigraphic units plunging with 30°–40° to the west. Many N-S trending breccias are related to the steeply dipping N-S trending rhyolite dykes and can be categorized as contact breccias. Faults and veins show a more complex pattern composed of NW-SE to N-S dominating trends with a minor NE-SW trend. This shows the complexity of late extensional faulting and mineralization at the Plomosas Mine and San Juan Areas.

***Figure 9-10: Plomosas Mine Area—Geological and Structural Mapping (Examples from the 950 and 775 Levels)***




Source: GR Silver (2022).

#### *9.3.3 San Juan–La Colorada Area*

Similar to the Plomosas Mine Area, a geological and structural mapping program was undertaken in the San Juan–La Colorada Area during 2022; in the San Juan historical underground workings and La Colorada underground workings. The mineralization in the San Juan and La Colorada deposits is controlled by "pinch and swell"-type veins and breccias along N-S, NW-SE and NE-SW structural trends.

During 2022, a new underground mapping program was carried out at 1:250 scale on the three levels of the San Juan mine, covering a total of 1.75 $km^2$. The new mapping improved the geological understanding and was used to define a new geological model. A program of channel sampling, with powder recovery for analysis by GR Silver's in-house pXRF equipment, was undertaken, similar to the program at the Plomosas mine.

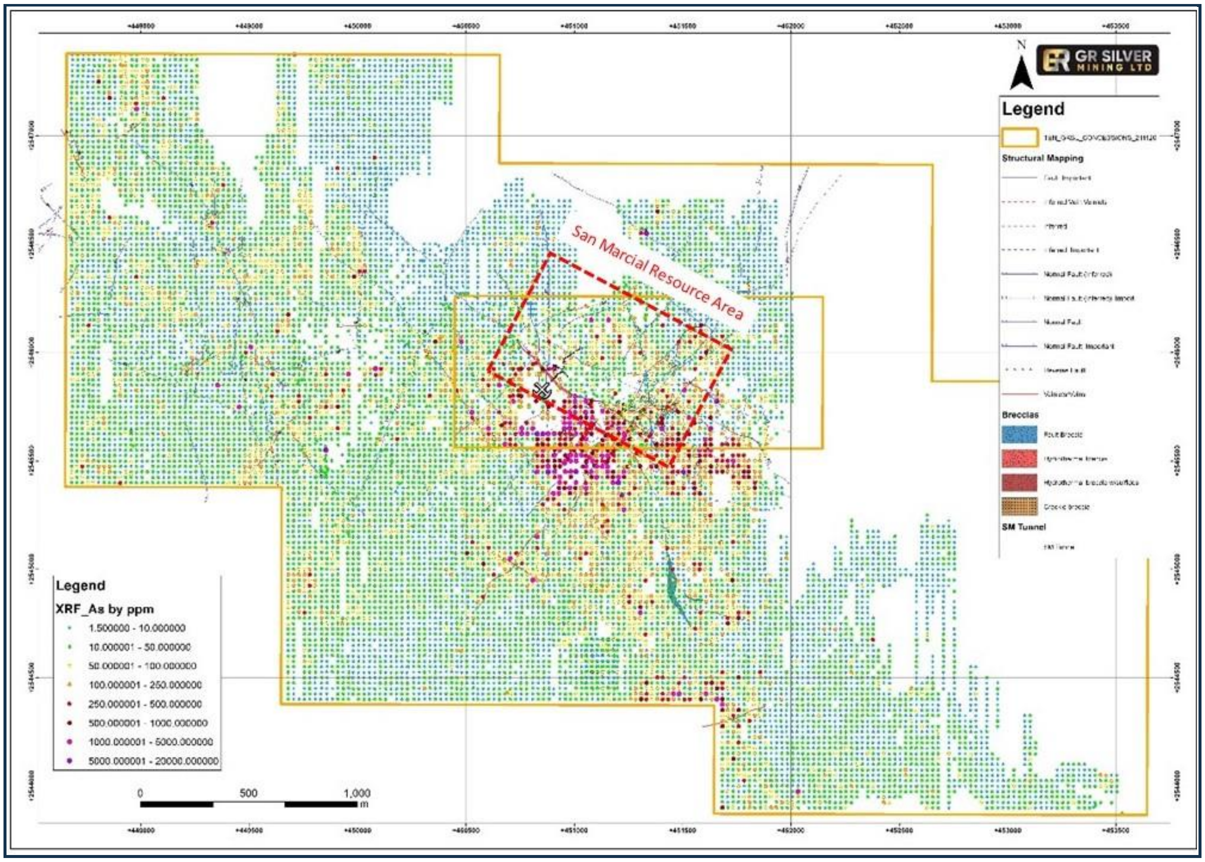
Met-Sin, the owners of the adjacent La Colorada underground mine, provided access to the GR Silver geologists in 2022 to undertake a short mapping and sampling program to assist with the interpretation of geology, structures and mineralization of the La Colorada system that continues along strike and down dip onto the GR Silver property.

The mapping of these two areas resulted in an improved understanding of the controls of multiple phases of base metal and precious metal mineralization in veins and breccias, allowing for refinement of the San Juan-La Colorada 3D geological model.

### 9.4 Litho-Geochemical Sampling

At the San Marcial Property, the litho-geochemical sampling program was extended in a number of stages between 2019 and 2022, to finally cover an area of 9.2 $km^2$ with 15,274 samples (Figure 9-11). The objective of this program is to collect rock samples in a systematic grid of 25 m x 25 m across the property, to describe the lithology, alteration and mineralization, and to perform pXRF multi-element analysis on each sample. Apart from the major elements and trace, or pathfinder, elements analyzed by the pXRF, the ratios between Ti and Zr were reviewed to assist in the lithological classification of the rock and to improve geological mapping.

***Figure 9-11: San Marcial Area Litho-Geochemistry Program - Sample Distribution and Arsenic Raw Data***




Source: GR Silver (2021).

## 9.5 Surface Sampling

No surface sampling was undertaken at the Plomosas Mine and San Juan–La Colorada Areas since the 2021 MRE.

### *9.5.1 San Marcial Area*

During 2019 and 2020 a surface channel and trenching program was carried out in the San Marcial Area. The objective was to extend the mineralized footprint from the main resource area to the NW, south and SE, with a focus along the target contact zone and other subparallel structures in the footwall. A total of 338 channel samples over 337.7 m were collected and analyzed at the SGS laboratory in Durango, while 2,199 channel samples were collected using powder recovery, with the pulps analyzed using pXRF. Important results in this area included trench SMtr-001 which intersected 56 m at 196 g/t Ag at the NW end of the 2019 San Marcial resource area; and SMtr-022 which intersected 24 m at 219 g/t Ag and 0.25 g/t Au, revealing a new area to explore to the SE of the 2019 San Marcial resource area, and which became one of the key factors in the SE Area discovery in 2022 with drill hole SMS22-10.

## 9.6 Underground Channel Sampling

### *9.6.1 San Marcial Area*

In 2020, after expansion of the original section of the San Marcial tunnel, 39 channel samples were collected in specific mineralized areas of the tunnel to replicate results from previous underground channel sampling performed in 2018. The sampling successfully confirmed the high grades in the San Marcial Breccia, for example sample GR_17232 which contained 192 g/t Ag, 0.8 % Pb and 3.2 % Zn, which also confirmed the high Pb+Zn grades near the hanging wall contact, close to surface.

### *9.6.2 Plomosas Mine Area*

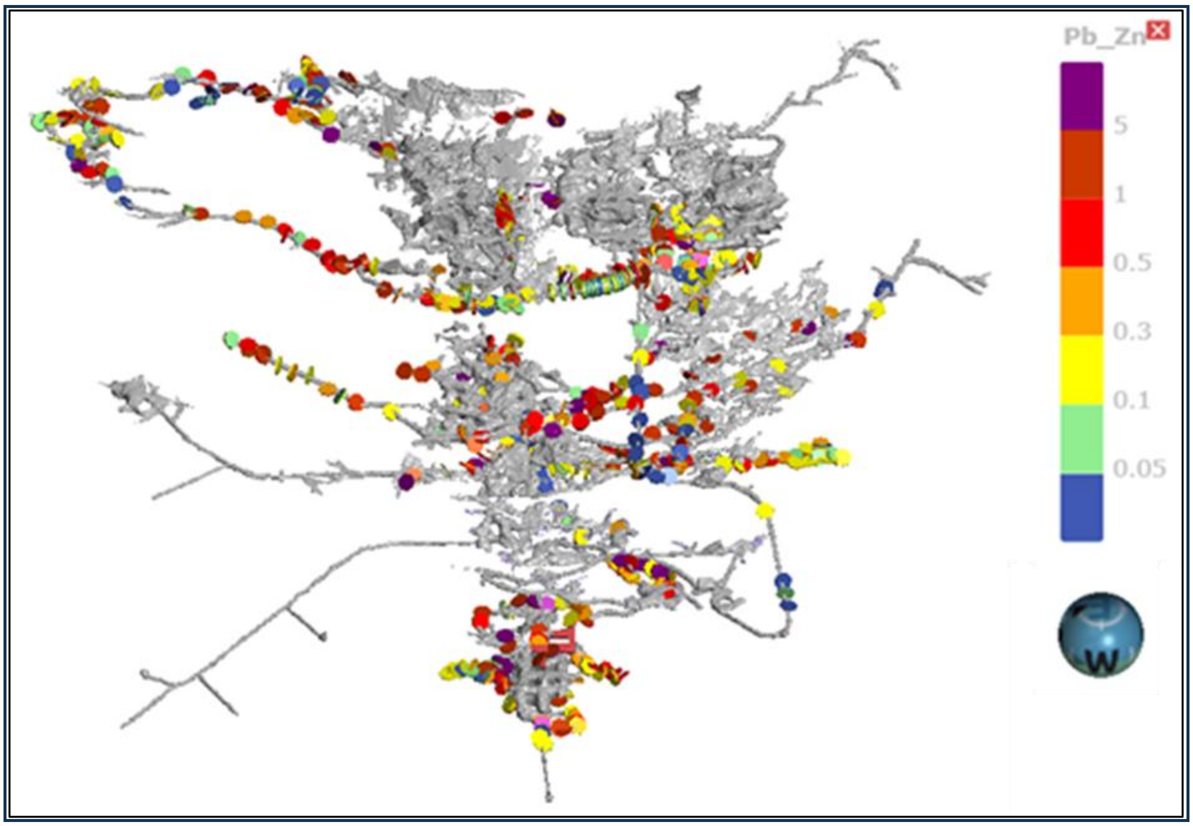
A program of channel sampling, with powder recovery and analysis by GR Silver's in-house pXRF equipment (Figure 9-12), was undertaken to speed up the assay results to support the mapping process, as discussed in Section 9.3.2. The distribution of combined Pb+Zn pXRF results from powder recovery channel sampling are shown in Figure 9-13.

***Figure 9-12: Plomosas Mine—Channel Sampling with Powder Recovery for pXRF Analysis***


Source: GR Silver (2022).

In addition to the sampling with powder recovery, a separate channel sampling program for laboratory analysis was undertaken in the Plomosas mine. The channel sample locations were marked with spray paint and the rock face was cleaned using a brush and water. Channels were cut using a hand-held rock saw with 7" diamond disc. At the Plomosas mine, the channels were cut 5 cm wide and 2.5 cm deep. Using chisels, the sample material was recovered directly into the sample bag when possible or on an underlying plastic sheet, and finally deposited into another plastic sample bag. To avoid contamination, every plastic sheet was cleaned with water before collecting the next sample. Sample bags were prepared with sample numbers written on the sample bag, the corresponding laboratory sample tag number placed into the bag, and the bag sealed with plastic zip ties. After the sample was obtained, the channel was marked with the sample number and using white spray paint, aluminium tags and flagging tape, so it is easier to identify the sample location inside the mine.

***Figure 9-13: Plomosas Mine Area—Channel Sampling of Powder/Pulps for pXRF***




Source: GR Silver (2022).

### *9.6.3 San Juan–La Colorada Area*

During 2021, GR Silver's underground sampling campaign was focused on the San Juan mine tunnel to corroborate and validate historic sampling results. A total of 219 channel samples was collected by GR Silver (Arseneau and Crowie, 2021).

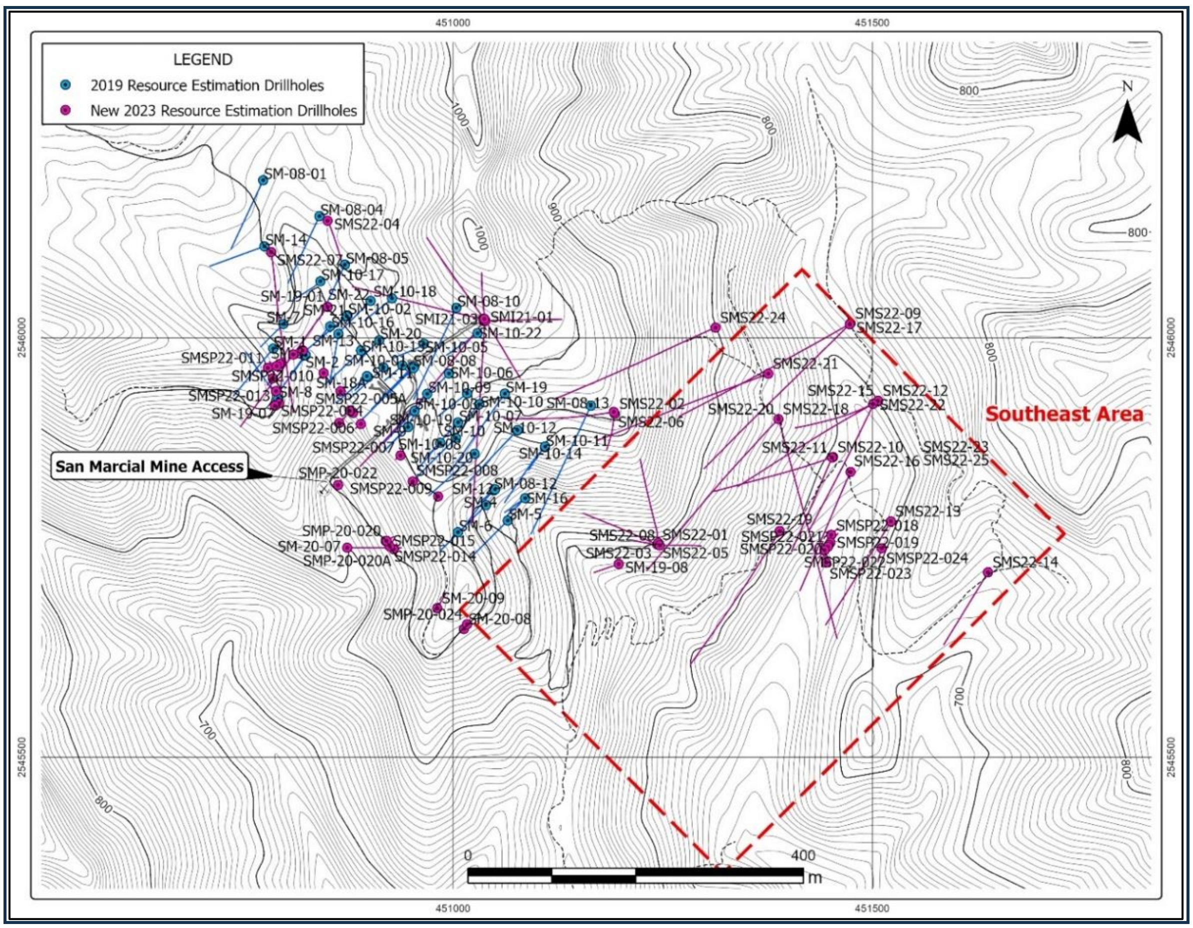
As noted in Section 9.3, Met-Sin, the owners of the adjacent La Colorada underground mine, provided access to the GR Silver geologists in 2022 to undertake a short mapping and sampling program. During that period, 185 channel samples for pXRF analysis were collected at the underground La Colorada mine. The objective of this program was to have better understanding of geochemical and mineralization controls inside the La Colorada mine and to use this information to explore for similar structures inside the adjacent GR Silver concessions. From this mapping and sampling program, a Pb-Zn-Ag stockwork was discovered crosscutting the main breccia, and particularly well developed on the hanging wall. This provides further exploration targets along the continuation of the structure northwards towards the Loma Dorada area.

# 10 DRILLING

The drill programs described here include GR Silver's 2019–2022 surface and underground core drilling, as well as those of the previous concession owners of the Plomosas Project, IMMSA from 1976 through 2000, Aurcana Corporation (Aurcana) in 2007 and 2008, and First Majestic between 2016 and 2018.

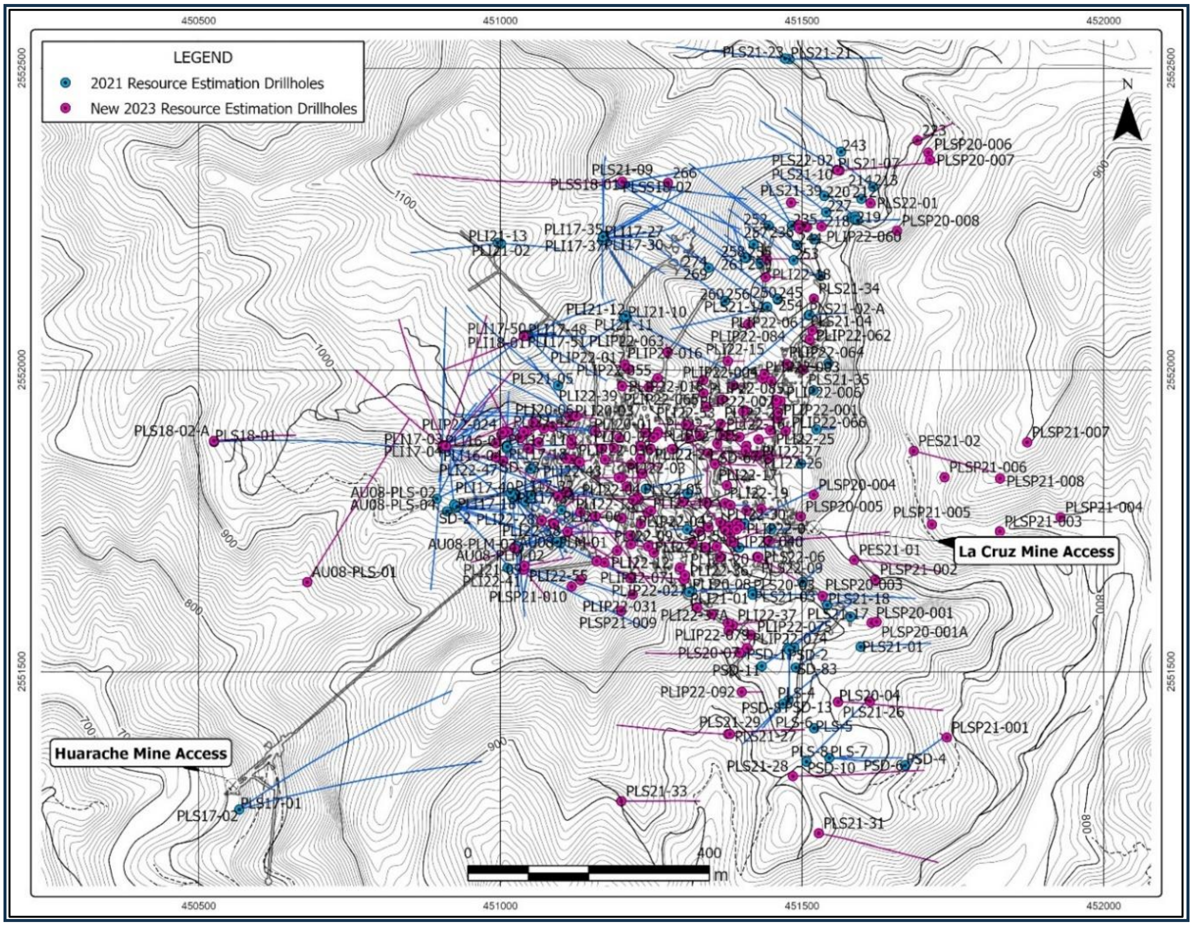
Figure 10-1 to Figure 10-3 show drilling plans for the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas, respectively.

***Figure 10-1: San Marcial (Including SE Area Discovery) Area Drilling Plan***



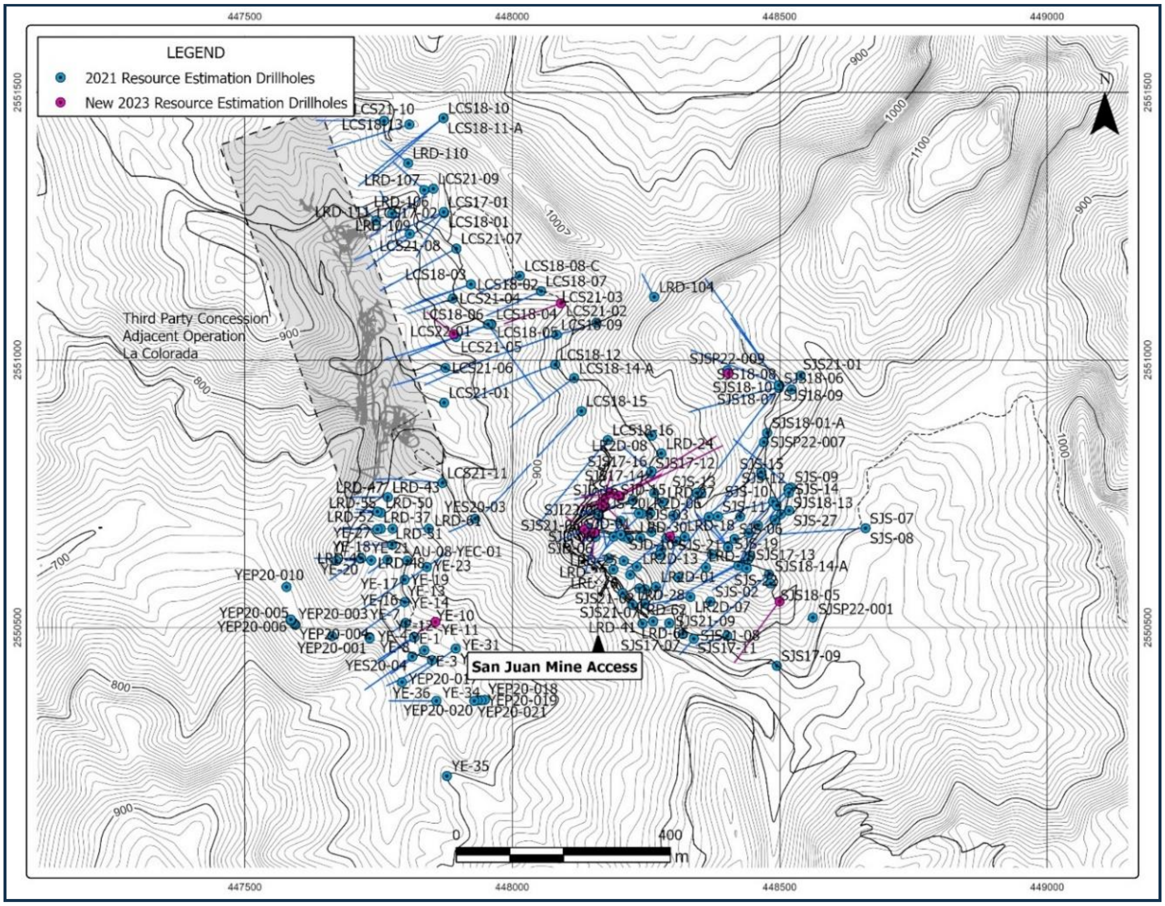

Source: GR Silver (2023).
Notes: Blue Pre-2019 Drilling Program; Purple 2019–2022 Drilling Program.

***Figure 10-2: Plomosas Mine Area Drilling Plan***




Source: GR Silver (2023).
Notes: Blue Pre-2021–2022 Drilling Program, Purple 2021–2022 Drilling Program.

*Figure 10-3: San Juan–La Colorada Area Drilling Plan*




Source: GR Silver (2023).
Notes: Blue Pre-2021–2022 Drilling Program; Purple 2021–2022 Drilling Program.

## 10.1 Drilling Programs—San Marcial Area

As shown in Table 10-1, the following drilling programs were carried out in the San Marcial Area and integrated in the current Mineral Resource estimation.

*Table 10-1: San Marcial Area Drilling Programs by Year*

| Year | Company | Drill Holes | Length (m) | Type | Contractor | Drill Rig Type |
|---|---|---|---|---|---|---|
| Jan 2001–Jun 2002 | Gold-Ore Silver Standard de México S.A. de C.V. | 23 | 3,129.49 | Surface | Major Drilling de México S.A. de C.V. | Longyear 38 and Christensen CS100 |
| Jun–Aug 2008 | Silvermex | 7 | 1,767.75 | Surface | Arrendamiento de Maquinaria y Minería S.A. de C.V. | Longyear LF -70 |
| Apr–Jul 2010 | Silvermex | 22 | 4,058.15 | Surface | Perforaciones Corbeil S.A. de C.V. | Versa Drill |
| 2019 | GR Silver | 3 | 422.0 | Surface | Ore Drilling | - |
| 2020 | GR Silver | 7 | 193.3 | Surface | Owned Operated drill rigs | - |
| 2021 | GR Silver | 8 | 2,436.0 | Underground | Maza Drilling S.A. de C.V. | VersaDrill I |
| 2022 | GR Silver | 52 | 7,444.7 | Surface | Owned Operated drill rigs | NW150, NW500 |

The surface programs carried out between June 2001 and July 2010, were predominantly shallow, core drill-holes (Figure 10-1) along the main 500 m-long zone defined by historical mapping as an area of silver-mineralized hydrothermal breccias. All core from 2001 through 2010 is stored at the Perleros camp core sheds (Figure 10-4), together with all historical documentation related to all these 52 holes that were previously used in the 2019 NI 43-101 resource estimation, amended in 2020 (McCracken and Filipov, 2020).

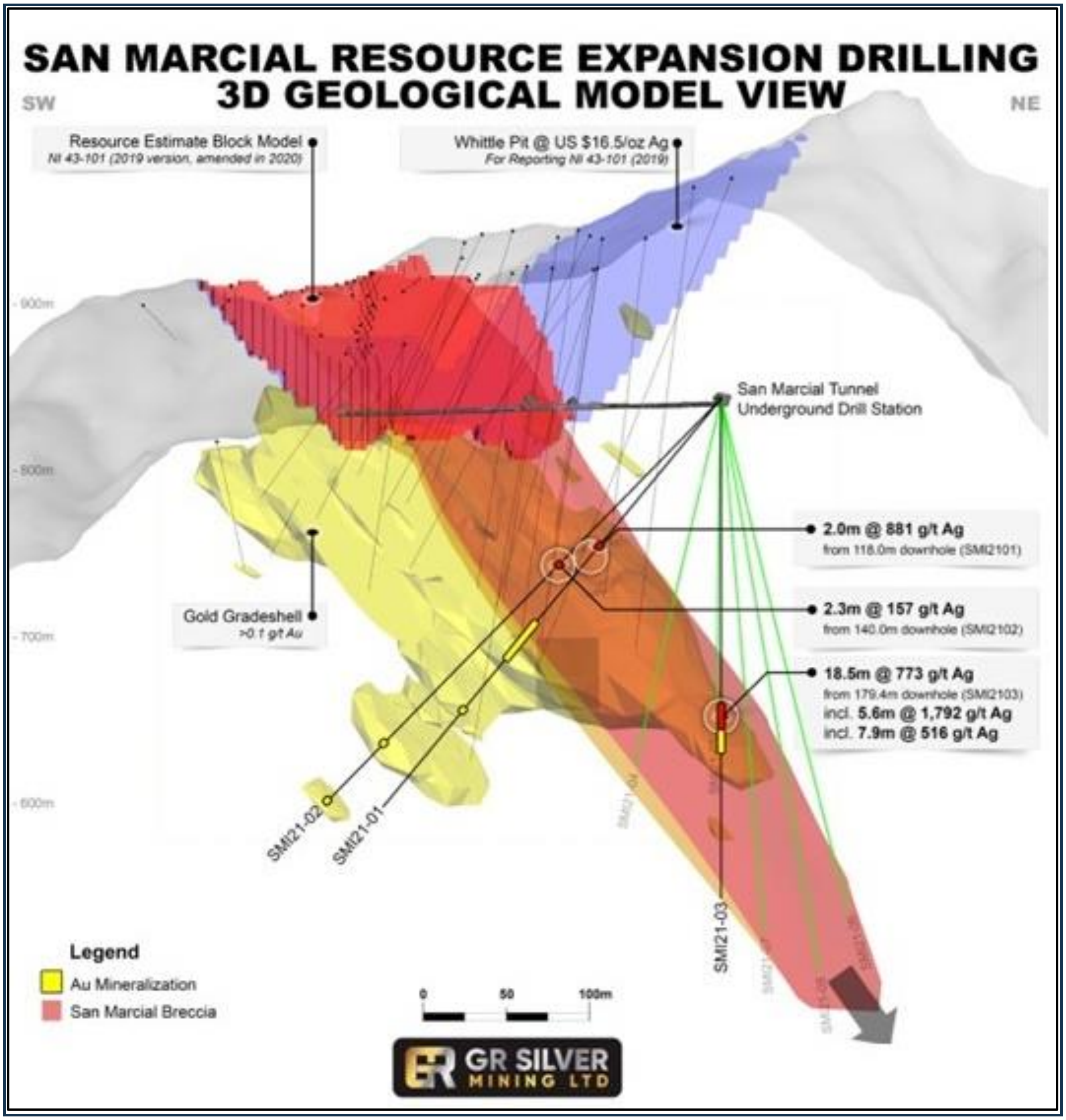
***Figure 10-4: San Marcial Drill-Hole Core Shed at the Perleros Camp***

Source: GR Silver (2023).

GR Silver initiated a surface drilling program in 2019 and 2020, mainly designed to define boundaries of silver mineralization in the 2019 NI 43-101 Mineral Resource area. Later in 2021, after completing 125 m of underground development, GR Silver carried out an underground drilling program that aimed to explore down-plunge controls of the high-grade silver mineralization encountered in the old historical workings. Eight drill holes were completed from a single underground drill station (Figure 10-5), allowing GR Silver to successfully define deeper down-plunge continuity of high-grade silver mineralization immediately below the 2019 NI 43-101 Mineral Resource area (Figure 10-6).

After completing the 2021 drilling program, GR Silver carried out exploration further southeast of the 2019 NI 43-101 Mineral Resource area limits, and at near-surface exposures of the previous MRE. GR Silver integrated geological mapping, ground geophysical survey, and litho-geochemical sampling; moreover, this work stimulated a shallow surface-drilling program in a new area, which discovered a wide close-to-surface silver mineralization on which 52 holes were completed in 2022 (Figure 10-7).

***Figure 10-5: Underground Adit Completed in 2021, and the 2021 Underground Drilling Program***

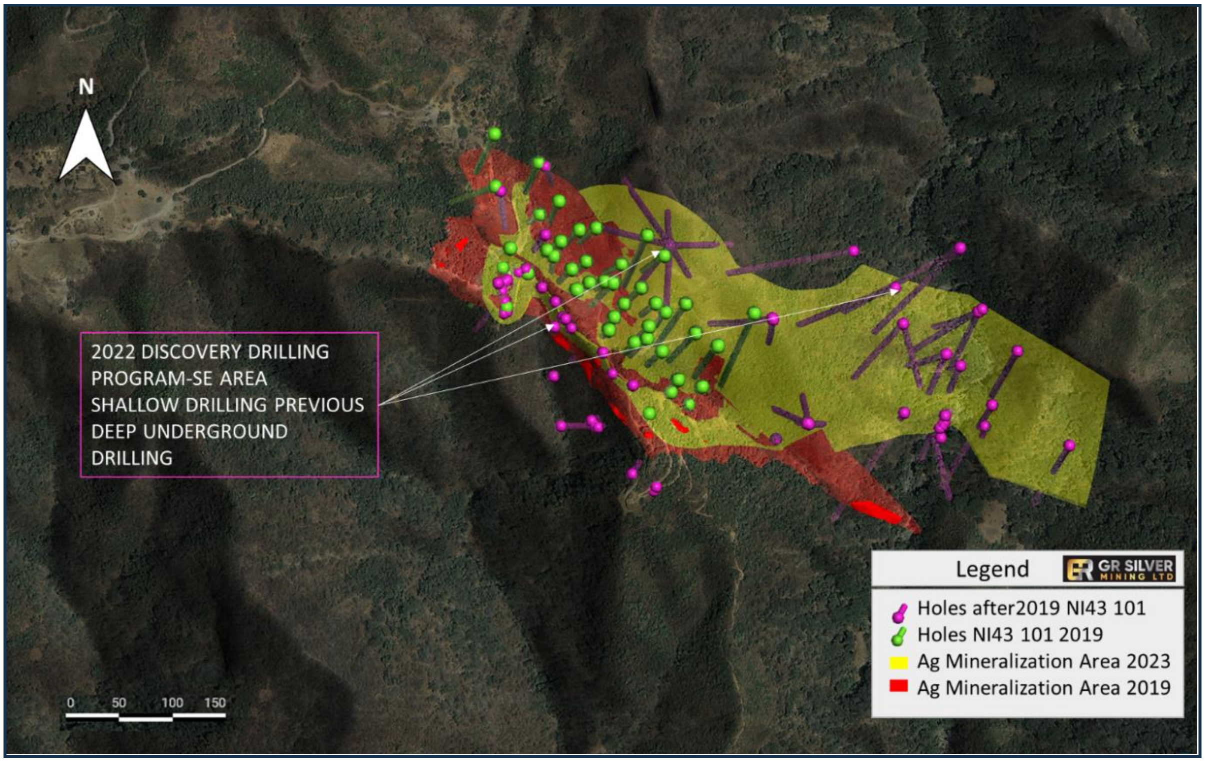



Source: GR Silver (2023).

***Figure 10-6: Underground Drilling—San Marcial Tunnel 2021***

Source: GR Silver (2023).

*Figure 10-7: General View—2022 Drilling Program*




Source: GR Silver (2023).

### *10.1.1 Drill-Hole Collar Locations*

GR Silver geologists attempted to locate all pre-2019 drill holes in the field. The Company was able to confirm all but five locations of historical drill holes in the San Marcial Area, where field evidence of drill pads was confirmed, but the hole collar itself had been destroyed. Those five locations are: SM-07, SM-12, SM-10 to SM-13, SM-10 to SM-14, and SM-20 to SM-07.

When evidence of a drill collar was confirmed on site, in cases where the collar was physically identified a cement monument was placed on the site and later surveyed by an independent surveyor to validate the location of all drill holes. The discovery of these drill hole sites, combined with the reports, and maps available on site, allowed additional validation of coordinates, where the original site was covered or reforested.

A Company geologist with a hand-held GPS unit initially located all drill-hole locations. After drilling, the collar locations were located using differential GNSS Trimble GPS. An independent surveyor located drill holes by surveying the drill collars and tying those coordinates to survey points using a total station. Figure 10-8 to Figure 10-10 are examples of historical monuments that GR Silver found and which were surveyed in the San Marcial Area.

***Figure 10-8: San Marcial Pre-2019 Drill-Hole Collar Surface Locations***


Source: GR Silver (2023).

***Figure 10-9: GR Silver Surface Core Drill Holes***


Source: GR Silver (2023).

***Figure 10-10: GR Silver San Marcial Underground Core Drill Holes***


Source: GR Silver (2023).

GR Silver completed collar surveys of all drill holes used in this report's MRE.

### *10.1.2 Downhole Surveys*

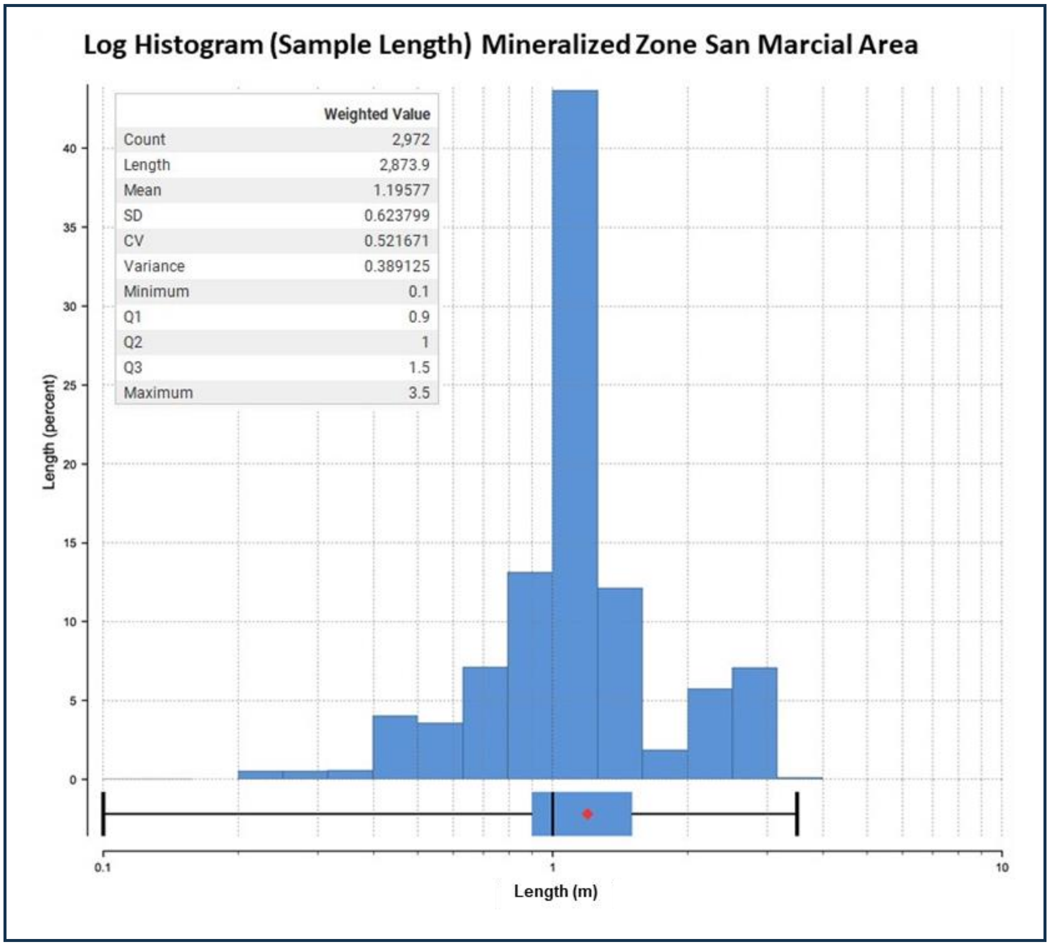
GR Silver encountered historical information related to the downhole survey for the drill holes completed in 2001, 2002, and 2008. All SMSP-series holes drilled by GR Silver (Table 10-2) are short (<30 m) and were not surveyed downhole, with inclination and dip assumed as defined at the collar.

The downhole survey for drill holes SM-01 to SM-22 was conducted using a single-shot Ausmin system. The 2008 and 2010 drill holes were surveyed with Core Beil's FlexIT tool. All 2019–2022 drill holes were surveyed using the Devico Devicore BBT Tool. All measurements were completed at regular intervals between 25 and 100 m.

### *10.1.3 Sample Length and True Thickness*

The geologist determined sample lengths during logging. The average sample length for the diamond drill-hole samples was 1.1 m, with 95% of the samples ≤1.5 m (Figure 10-11). All sample limits honored the geological contacts and mineralization controls.

*Figure 10-11: San Marcial Area Mineralized Zones Sample Length Histogram*




Source: GR Silver (2023).

Most of the drill holes were planned to intersect the mineralization at a near-perpendicular angle. The preferred orientation of the drill holes was azimuth 220° and dip −50°. A few holes were drilled subparallel to the main orientation aiming to test the assumed mineralization geometry. Table 10-2 summarizes some of the best drill intersections reported at the San Marcial Area.

***Table 10-2: Significant Drill Intercepts at the San Marcial Area (Including SE Area Discovery)***

| Hole No. | From (m) | To (m) | Drilled Width (m) | True Width (m) | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) |
|---|---|---|---|---|---|---|---|---|---|
| SM-2 | 0.39 | 12.0 | 11.6 | 11.0 | 350 | NA | 0.2 | 0.5 | NA |
| SM-3 | 0.2 | 15.0 | 14.8 | 10.6 | 227 | NA | 0.2 | 0.4 | NA |
| SM-4 | 6.0 | 63.0 | 57.0 | 53.9 | 235 | NA | 0.3 | 0.5 | NA |
| SM-5 | 1.4 | 21.0 | 19.6 | 17.2 | 282 | NA | 0.2 | 0.2 | NA |
| SM-9 | 30.0 | 44.5 | 14.5 | 12.7 | 540 | NA | 0.2 | 0.4 | NA |
| SM-11 | 114.0 | 132.0 | 18.0 | 11.8 | 419 | NA | 0.4 | 0.7 | NA |
| SM-13 | 50.0 | 73.2 | 23.2 | 17.5 | 621 | NA | 0.5 | 0.9 | NA |
| SM-18A | 38.9 | 63.9 | 25.0 | 21.6 | 175 | NA | 0.3 | 0.5 | NA |
| SM-20 | 74.6 | 84.8 | 10.6 | 7.9 | 55 | NA | 0.2 | 0.3 | NA |
| SM-08-08 | 93.0 | 186.30 | 93.3 | 71.5 | 104 | 0.01 | 0.5 | 0.8 | NA |
| SM-08-12 | 17.4 | 61.0 | 43.6 | 39.0 | 140 | NA | 0.1 | 0.2 | NA |
| SM-10-03 | 38.0 | 95.2 | 57.2 | 53.6 | 57 | NA | 0.1 | 0.4 | NA |
| SM-10-06 | 151.5 | 190.4 | 38.9 | 27.5 | 103.2 | 0.08 | 0.2 | 0.4 | NA |
| SM-10-07 | 103.2 | 160.5 | 57.3 | 51.6 | 59 | 0.02 | 0.6 | 0.7 | NA |
| SM-10-08 | 62.7 | 120 | 57.3 | 46.5 | 57 | NA | 0.3 | 0.4 | NA |
| SM-10-15 | 53.8 | 66.3 | 12.5 | 11.2 | 349 | 0.03 | 0.3 | 0.3 | NA |
| SM-10-21 | 24.6 | 42.5 | 17.9 | 17.5 | 202 | NA | 0.3 | 0.3 | NA |
| SM-10-22 | 245.7 | 259.2 | 19.5 | 19.5 | 143 | 0.2 | 0.1 | 0.2 | NA |
| SM-19-07 | 0.0 | 17.0 | 17.0 | 17.0 | 136 | NA | 0.1 | 0.1 | NA |
| SMI-21-01 | 109.5 | 135.6 | 26.1 | 24.5 | 97 | 0.02 | 0.2 | 0.2 | NA |
| SMI-21-03 | 179.4 | 197.9 | 18.5 | 13.5 | 773 | 0.02 | 0.3 | 0.4 | NA |
| SMI-21-04 | 154.0 | 192.0 | 38.0 | 29.1 | 299 | 0.04 | 0.2 | 0.4 | NA |
| SMI-21-07 | 239.6 | 247.0 | 7.4 | 3.7 | 201 | 0.02 | 0.2 | 0.3 | NA |
| SMI-21-07 | 270.0 | 287.0 | 17.0 | 8.5 | 124 | 0.01 | 0.1 | 0.1 | NA |
| SMSP-22-01 | 0.0 | 7.0 | 7.0 | 7.0 | 241 | 0.01 | 0.1 | 0.4 | NA |
| SMSP-22-02 | 0.0 | 14.2 | 14.0 | 14.0 | 128 | 0.01 | 0.2 | 0.5 | NA |
| SMSP-22-03 | 0.6 | 16.0 | 15.4 | 15.2 | 547 | 0.01 | 0.2 | 0.6 | NA |
| SMSP-22-04 | 0.0 | 14.6 | 14.6 | 6.2 | 175 | 0.02 | 0.3 | 0.7 | NA |
| SMSP-22-05A | 0.0 | 11.0 | 11.0 | 10.8 | 245 | 0.01 | 0.1 | 0.2 | NA |
| SMSP-22-06 | 0.0 | 16.5 | 16.5 | 16.4 | 130 | 0.01 | 0.2 | 0.3 | NA |
| SMSP-22-07 | 0.0 | 15.0 | 15.30 | 14.5 | 185 | 0.03 | 0.1 | 0.4 | NA |
| SMSP-22-09 | 299.3 | 304.9 | 5.6 | 5.6 | 1,223 | 0.01 | 1.4 | 1.2 | NA |
| SMSP-22-10 | 0.0 | 16.7 | 16.7 | 7.1 | 193 | NA | 0.2 | 0.4 | NA |
| SMSP-22-11 | 0.0 | 9.0 | 9.0 | 9.0 | 246 | 0.01 | 0.1 | 0.4 | NA |
| SMSP-22-12 | 0.0 | 15.0 | 15.0 | 14.9 | 324 | NA | 0.1 | 0.2 | NA |
| SMSP-22-22 | 3.0 | 6.2 | 3.2 | 1.8 | 436 | NA | 0.1 | 0.2 | NA |

| Hole No. | From (m) | To (m) | Drilled Width (m) | True Width (m) | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) |
|---|---|---|---|---|---|---|---|---|---|
| SMS-22-02 | 285.9 | 288.7 | 2.8 | 2.3 | 455 | 0.01 | 0.1 | 0.2 | NA |
| SMS-22-03 | 83.2 | 98.6 | 15.4 | 11.8 | 75 | 0.08 | NA | 0.2 | NA |
| SMS-22-09 | 83.2 | 98.6 | 15.4 | 11.8 | 75 | 0.08 | NA | 0.2 | NA |
| SMS-22-10 | 98.5 | 200.1 | 101.6 | 58.3 | 308 | 0.02 | 1.6 | 1.3 | NA |
| SMS-22-11 | 85.2 | 160.9 | 75.7 | 48.7 | 92 | 0.02 | NA | NA | NA |
| SMS-22-12 | 222.4 | 266.9 | 44.5 | 32 | 98 | 0.03 | 0.4 | 0.6 | NA |
| SMS-22-16 | 65.8 | 188.9 | 123.1 | 111.6 | 112 | 0.06 | NA | 0.1 | NA |
| SMS-22-17 | 287.1 | 301.2 | 14.1 | 13.9 | 186 | 0.02 | 0.4 | 1.1 | NA |
| SMS-22-18 | 137.7 | 211.2 | 73.5 | 69.1 | 72 | 0.01 | NA | NA | NA |
| SMS-22-20 | 150.7 | 336.2 | 185.5 | 119.2 | 111 | 0.08 | NA | NA | NA |
| SMS-22-22 | 174.2 | 256.9 | 82.7 | 71.6 | 121 | 0.06 | 0.1 | 0.3 | NA |
| SMS-22-23 | 156.4 | 179.6 | 23.2 | 17.8 | 124 | 0.01 | NA | NA | NA |

Notes: Numbers may be rounded; NA = no significant assays.

### *10.1.4 Core Logging*

GR Silver geologists performed all core logging at the Plomosas camp; core is stored in a recently built core shed. Details of the core-logging procedures are described in Section 10.2.4.

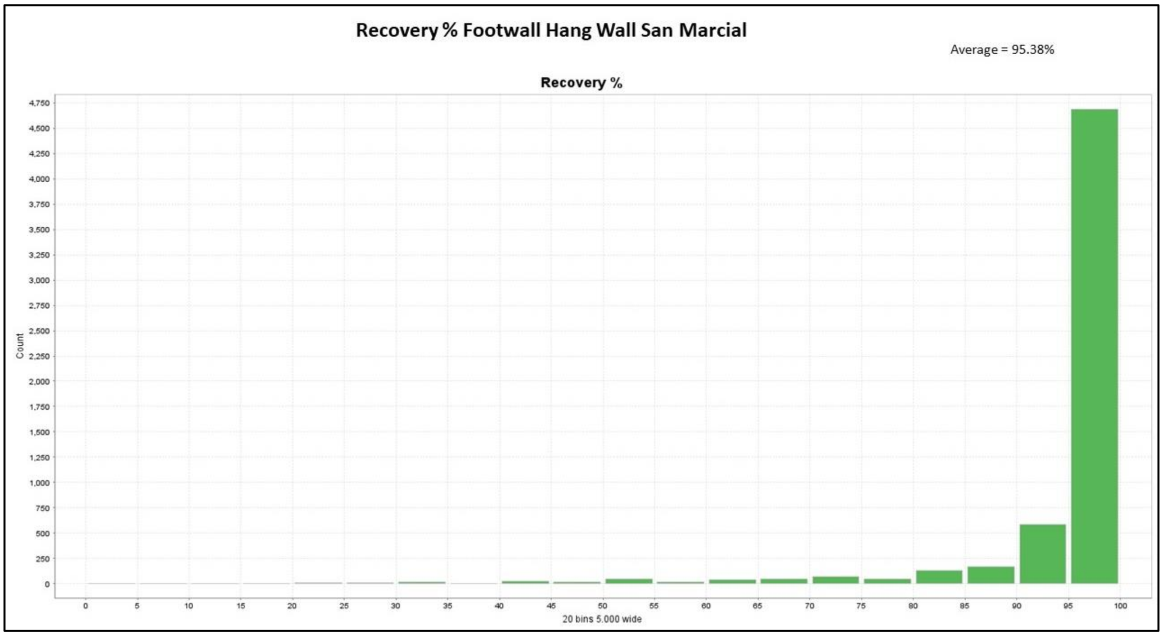
### *10.1.5 Recovery*

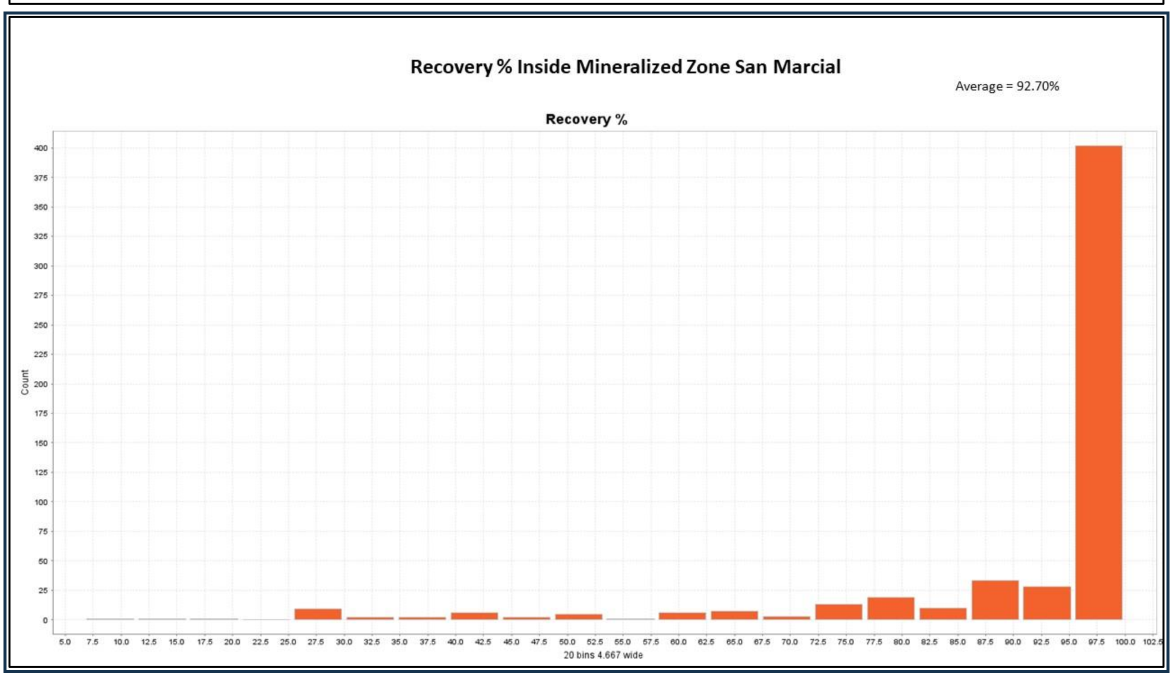
Recovery information related to the San Marcial core drill holes is available on core logging sheets, and these data have been digitalized or imported into MX Deposit.

Most of the drill holes reported good recoveries. In the footwall and hanging wall of the mineralized zones, recoveries averaged 96%, while within the mineralized zone, recoveries were 92% to 94%.

Figure 10-12 illustrates the recovery for all holes in the San Marcial Area.

***Figure 10-12: San Marcial Area Core Recovery Drill-Hole Data Analysis***




Source: GR Silver (2023).

## 10.2 Drilling Programs—Plomosas Mine Area

The previous drill programs in the Plomosas Mine Area are described in detail in Arseneau and Crowie (2021). GR Silver carried out surface and underground drilling programs in 2020–2021 and 2022 (Figure 10-2). Table 10-3 summarizes the total number and length of holes drilled by each company in the Plomosas Mine Area.

***Table 10-3: Breakdown of Drill Holes and Metres Drilled at Plomosas Mine Area***

| Company | Holes | Metres |
|---|---|---|
| IMMSA | 221 | 42,607 |
| Aurcana | 7 | 1,873 |
| First Majestic | 68 | 15,662 |
| GR Silver | 262 | 23,858 |
| **Total** | **558** | **84,000** |

The historical drilling completed by IMMSA was selectively sampled, and core is available only for limited intervals. The GR Silver 2022 drilling program aimed to replace most of the IMMSA drill holes inside the resource area. In all, 137 (24,411 m) historical IMMSA drill holes were removed from the previous drilling database and replaced by GR Silver holes completed in 2022.

GR Silver carried out surface and underground drilling programs in the Plomosas Mine Area in 2020, 2021, and 2022. Third-party drilling contractors carried out the initial drilling programs in 2020 and 2021 (Figure 10-13). In 2021 and 2022 GR Silver initiated drill programs using Company owned-and-operated drill rigs (Figure 10-14 and Figure 10-15). The distribution of drilling completed by third parties and by GR Silver is summarized in Table 10-4 for the Plomosas Mine Area.

***Table 10-4: Breakdown of Drill Holes and Metres Drilled by GR Silver and Third-Party Drill Rigs***

| Company | Holes | Metres |
|---|---|---|
| Intercore | 21 | 3,094 |
| Maza Drilling | 6 | 2,871 |
| GR Silver | 262 | 23,858 |
| **Total** | **289** | **29,823** |

The drilling program in 2021 and 2022 was completed using a wide range of drill rigs, as described in Table 10-5.

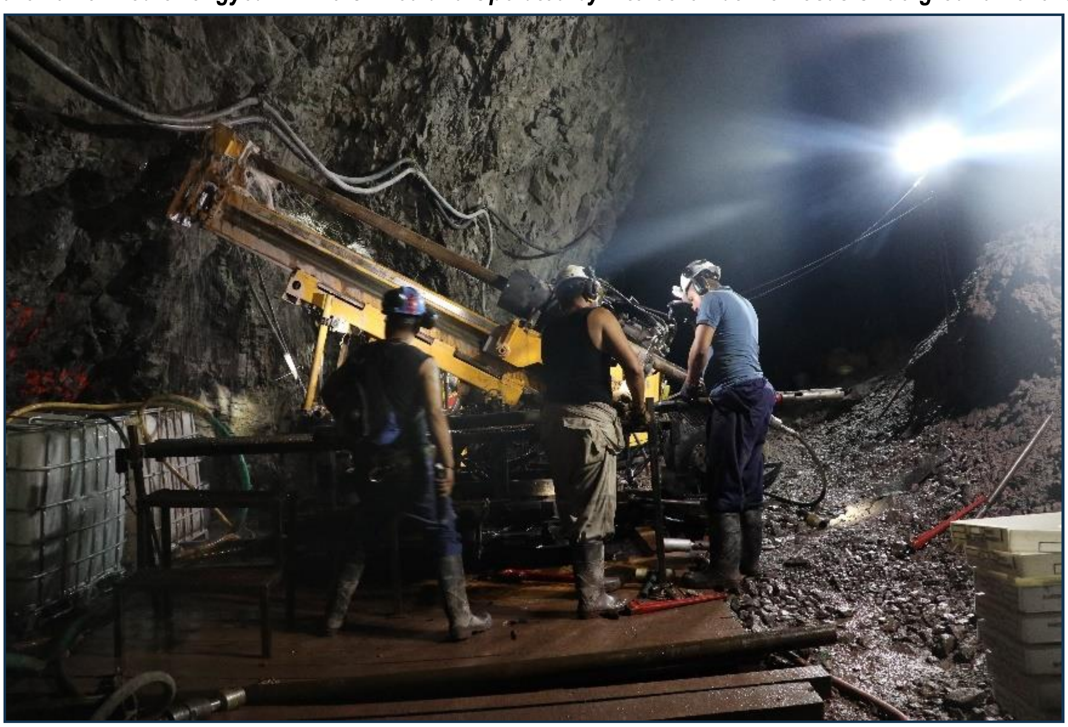
*Table 10-5: Drill Rig Details—2020–2021 and 2022 GR Silver Drilling Campaign at Plomosas Mine Area*

| Drill Type Reference | Owner | Operated By | Core Size |
|---|---|---|---|
| LM 75 (Boart Longyear) | Intercore | Intercore | HQ/NQ |
| VersaDrill KM 1.4 | MazaDrilling | MazaDrilling | HQ/NQ |
| NW-150-1 | GR Silver | GR Silver | HQ/NQ |
| NW-150-2 | GR Silver | GR Silver | HQ/NQ |
| NW-500-1 | GR Silver | GR Silver | HQ/NQ |
| Ultra 20E | GR Silver | GR Silver | BQ |
| Ingetrol 25 | GR Silver | GR Silver | NQ |
| Portable Drill Rig | GR Silver | GR Silver | BQ |

GR Silver-owned and the independently owned rigs drilled HQ/NQ size core. The 2020–2021 and 2022 surface and underground core-drilling campaign consisted of 181 underground drill holes totalling 9,988 m and 78 surface drill holes totalling 13,201 m.

In all, 59 portable short drill-rig holes were completed inside the historic mine for a total of 731 m (Figure 10-16). An additional 41 drill holes were completed using the small-diameter Ultra 20E drill, for a total of 892 m (Figure 10-17). Because of the smaller core size generated by the Ultra 20E dill rig, the entire drill core recovered from the Ultra 20E drill was sent to the lab for assay, and no core remains stored on site; only rejects and pulps are part of the QA/QC sampling records.

*Figure 10-13: Boart Longyear LM 75 Owned and Operated by Intercore—at Plomosas Underground Level 833*



Source: GR Silver (2023).

***Figure 10-14: Ingetrol Explorer E-75 Owned and Operated by GR Silver—at Plomosas Mine Area Underground Level 825***

Source: GR Silver (2023).

***Figure 10-15: NW 150 Owned and Operated by GR Silver—at Plomosas Mine Area Surface***

Source: GR Silver (2023).

***Figure 10-16: Portable Drill Rigs Operated by GR Silver—at Plomosas Mine Area Underground***

Source: GR Silver (2023).

***Figure 10-17: Ultra 20E Owned and Operated by GR Silver—at Plomosas Mine Area Underground Level 1000***

Source: GR Silver (2023).

### 10.2.1 Drill-Hole Collar Locations 2020–2021 and 2022 Drilling Programs

All GR Silver geologist using a hand-held GPS to take the azimuth line of drill-hole locations, and those of the surface holes were established using a Brunton compass. The underground drill-hole collars were initially identified using topographic control points inside the historic mine. Following drilling, all drill collars were surveyed by independent surveyors, using a total station, with data automatically transferred to the database and a cement monument placed on the site, permanently marking the drill-hole location (Figure 10-18 and Figure 10-19).

Collar survey data were then plotted in 2-D and 3-D to confirm locations based on existing field and underground information.

*Figure 10-18: GR Silver Drilling Program Surface Hole*


Source: GR Silver (2023).

*Figure 10-19: GR Silver Underground Drill-Collar Markers—Plomosas Mine Area (2022)*

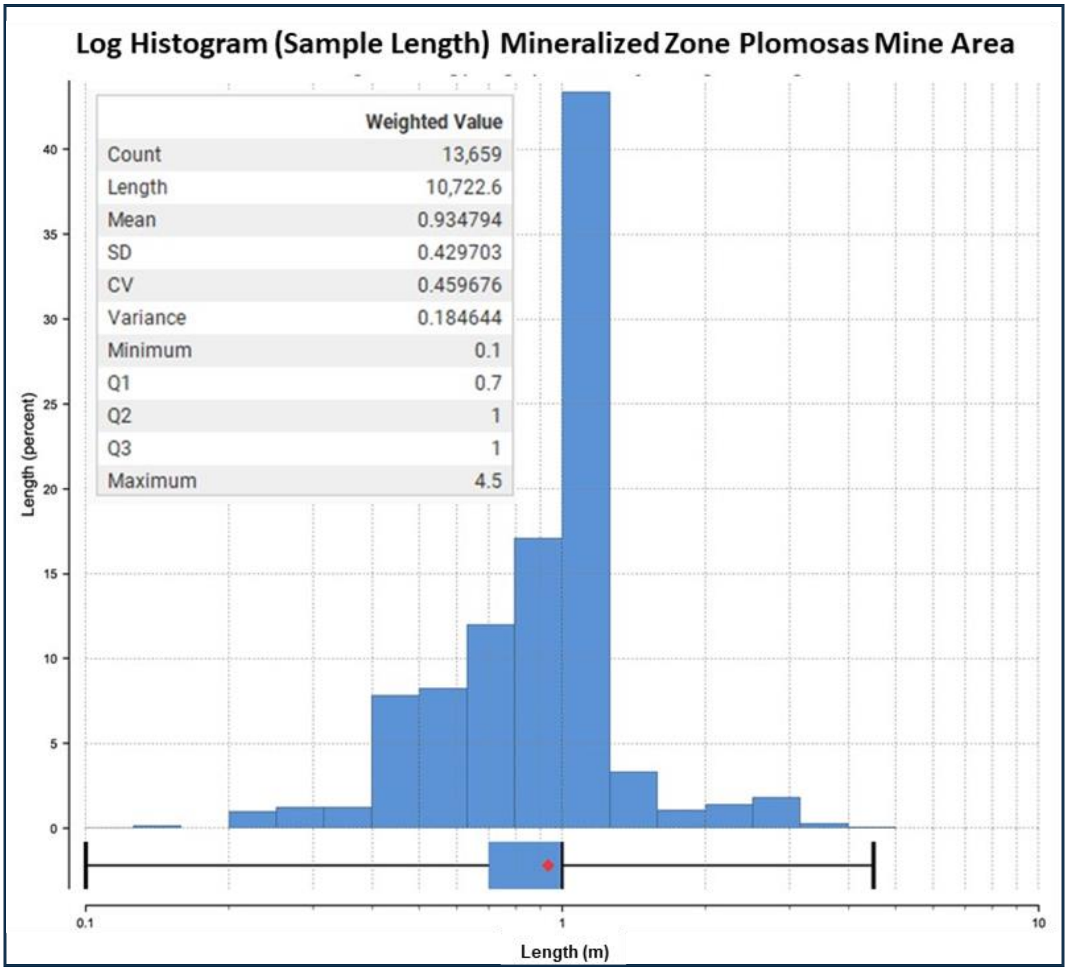

Source: GR Silver (2023).
Note: PLIP (Portable Drill Rig, PLI Ultra20E-sIngentrol, or NWDrill Rig).

Drill-collar locations for the historical drilling completed by IMMSA, Aurcana, and First Majestic are referred in Arseneau and Crowie (2021).

### *10.2.2 Sample Length and True Thickness*

The geologist determined sample lengths during logging. The average sample length for the diamond drill-hole samples was 0.9 m, with 95% of the samples being ≤1.5 m (Figure 10-21). All sample limits honored the geological contacts and mineralization controls.

***Figure 10-20: Histogram of Sample Interval Length for Plomosas Mine Area***




Source: GR Silver (2023).

Table 10-6 displays the best drilling results and highlights for the Plomosas Mine Area 2020–2021 and 2022 drilling program.

**Table 10-6: Selected Sample Results from Plomosas Mine Area Drilling 2020–2021 and 2022**

| Hole No. | From (m) | To (m) | Drilled Width (m) | Est. True Width (m) | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) | AgEq (g/t) |
|---|---|---|---|---|---|---|---|---|---|---|
| PLS20-01 | 8.0 | 16.5 | 8.5 | 6.0 | 85 | 0.40 | 1.1 | 0.6 | - | - |
| Includes | 11.5 | 15.0 | 3.5 | 2.5 | 172 | 0.90 | 2.7 | 1.4 | - | - |
| PLI20-04 | 98.0 | 181.0 | 83.0 | 68 | 33 | 2.52 | 0.9 | 2.9 | 0.3 | 397 |
| Includes | 139.0 | 150.0 | 11.0 | 7.8 | 135 | 9.41 | 5.7 | 9.8 | 0.2 | 1,428 |
| PLI20-05 | 76.0 | 80.0 | 4.0 | 3.5 | 39 | 2.63 | 0.2 | 0.1 | 0.2 | 287 |
| | 108.9 | 109.5 | 0.6 | 0.5 | 227 | 19.95 | 1.3 | 4.7 | 1.0 | 2,191 |
| PLI21-07 | 89.5 | 97.0 | 7.5 | 4.8 | 126 | 0.03 | NA | 0.1 | NA | 122 |
| PLI21-07 | 112.5 | 145.0 | 32.5 | 24.9 | 250 | 0.18 | 1.1 | 0.6 | NA | 293 |
| PLS21-20 | 50.0 | 59.3 | 9.3 | 9.0 | 141 | 0.31 | NA | 0.7 | NA | 181 |
| Includes | 53.0 | 58.5 | 5.5 | 5.3 | 210 | 0.43 | NA | 1.1 | NA | 268 |
| PLI21-15A | 22.5 | 30.5 | 8.0 | 7.6 | 227 | 0.27 | 1.7 | 1.4 | 0.1 | 327 |
| PLS22-03 | 105.0 | 112.2 | 7.2 | 4.5 | 257 | 0.01 | 0.3 | 0.4 | NA | 258 |
| PLS22-04 | 55.9 | 69.1 | 13.2 | 8.5 | 410 | 0.30 | 1.0 | 1.0 | 0.2 | 479 |
| PLS22-05A | 87.4 | 111.5 | 24.1 | 19.7 | 1,094 | 0.05 | 1.1 | 1.1 | 0.1 | 1,076 |
| PLS22-06 | 94.5 | 112.7 | 18.2 | 16.0 | 289 | 0.01 | 0.1 | NA | NA | 270 |
| PLS21-38 | 100.5 | 114.0 | 13.5 | 9.5 | 372 | nNA | NA | 0.1 | 0.1 | 348 |
| PLIP22-13 | 12.8 | 19.3 | 6.5 | 6.5 | 1,458 | NA | 0.2 | 0.2 | 0.2 | 1,353 |
| PLI22-12 | 17.9 | 23.6 | 5.7 | 5.7 | 514 | 0.10 | 0.4 | 0.5 | NA | 505 |
| PLI22-20 | 16.8 | 22.5 | 5.8 | 5.0 | 399 | 0.05 | 1.0 | 1.8 | 0.1 | 466 |
| PLI22-23 | 8.5 | 53.0 | 44.5 | 36.5 | 268 | 1.00 | 2.4 | 1.7 | 0.2 | 470 |
| PLI22-25 | 0.0 | 12.1 | 12.1 | 11.4 | 629 | 0.56 | 9.2 | 4.0 | 0.4 | 1,039 |
| PLI22-38 | 66.7 | 91.5 | 24.8 | 15.9 | 301 | 0.41 | 1.6 | 2.1 | NA | 424 |
| PLI22-42 | 0.0 | 27.3 | 27.3 | 20.9 | 43 | 1.96 | 1.2 | 2.1 | 0.3 | 339 |
| PLIP22-30 | 0.0 | 14.1 | 14.1 | 14.1 | 69 | 2.67 | 0.1 | 0.2 | 0.2 | 318 |
| PLIP22-94 | 0.0 | 21.7 | 21.7 | 19.7 | 158 | 0.05 | 1.9 | 1.8 | 0.1 | 270 |

Notes: Numbers may be rounded; NA = no significant assays; * AgEq = calculated from the metal prices and recoveries using the equation; AgEq is calculated from the metal prices and recoveries using the equation AgEq = ((Au grade*Au price*Au Recovery) + (Ag grade*Ag Price*Ag Recovery) + (Pb grade*Pb Price*Pb Recovery) + (Cu grade*Cu Price*Cu Recovery) + (Zn grade*Zn Price*Zn Recovery)) / (Ag Price*Ag Recovery).

### 10.2.3 Downhole Surveys

All 2020–2021 and 2022 campaign drill holes were surveyed to monitor the downhole deviation. GR Silver and Maza Drilling used a Devico DeviCore BBT Tool and Intercore used a Reflex EZ-TRAC tool. An initial measurement was taken between 20 and 30 m, then at 50 m intervals. Portable, short drill-holes, which average 30 m, did not have downhole survey completed due to the BQ hole diameter.

### 10.2.4 Core Logging

GR Silver geologists performed all core logging at the Plomosas camp.

Once the initial assessment of the boxes containing whole core was completed, core was measured and marked (directly on the core). The start and end metreage of each core box were marked on the upper left and lower right corners, respectively, of the box. The box number and metreage were indicated on the end of the core box for easy identification while stored.

The logging geologist digitally recorded the information in MX Deposit directly, using a tablet; geotechnical data, such as rock quality designation (RQD) and recovery, were also collected, along with lithology, alteration, mineralization, and structural data. The geologist responsible for each specific drill hole marked all sampling intervals for assay analyses, and inserted the QA/QC samples (Certified Reference Materials [CRM], coarse blanks, and field duplicates) at regular intervals along the core, using geological and structural features as a guide. In the absence of zones of interest, QC samples were inserted every six samples.

Once logging and sample marking were completed, the core was photographed wet and dry, with the hole ID, box number, and start/end metreage clearly visible on a placard. The core boxes were then transferred from the logging facility to the core-cutting shack. Tagged and labelled sample bags specific to the drill hole being sampled were provided to the core cutting technician. The core was cut in half and placed into clear plastic sample bags. The remaining half core samples were placed back into the core boxes, which were then stacked outside the core shed on a wooden palette. Once a complete hole was cut, the core boxes were moved to the core storage location. All core is stored at the Plomosas camp site.

Historical core from drill holes completed by previous owners was re-logged, and data collection formatted as per the GR Silver drill holes. For holes with absent core, historical documentation, including historical logs, were used to collect the geological information. Figure 7-21 illustrates different stages of the core logging process at the Plomosas core shed.

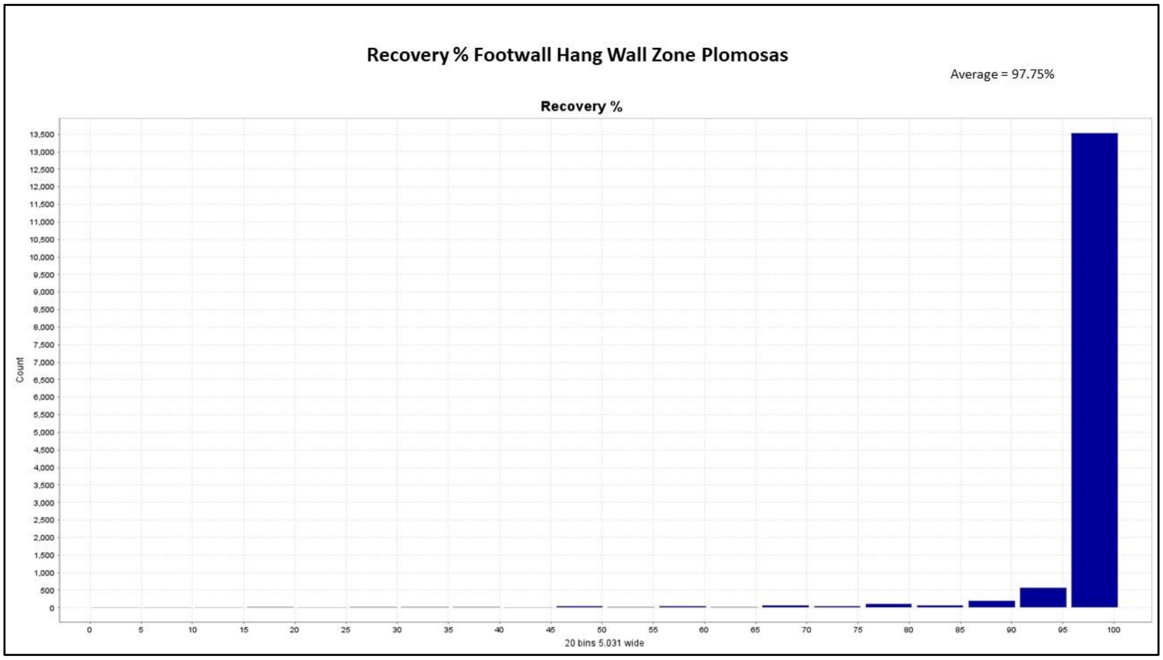
***Figure 10-21: Core Logging, RQD, Core Cleaning, Photography, and Core Cutting at the GR Silver Core Shed Facilities at Plomosas***

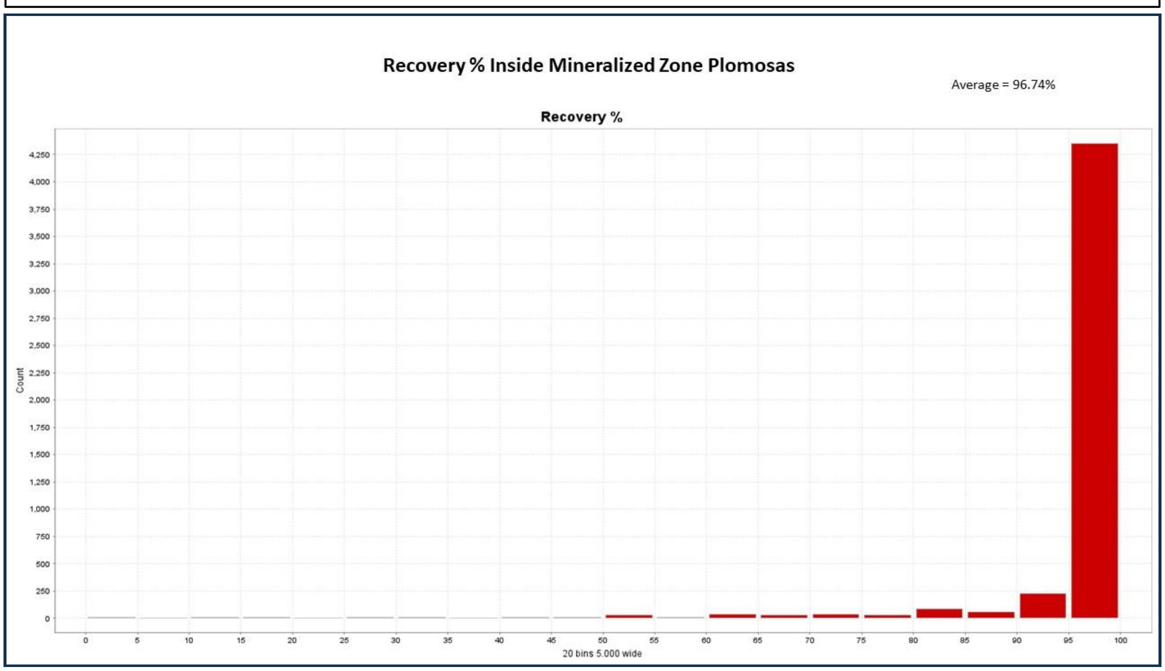
Source: GR Silver (2023).

### *10.2.5 Recovery*

Core recovery was excellent (over 95%) for GR Silver drilling completed in 2020–2021 and 2022, except in the fault zones and at the beginning of drill holes where recovery was generally low due to overburden. Figure 10-22 shows a summary of the core recovery data for the main mineralized zone and footwall and hanging wall waste zones.

***Figure 10-22: Data Analysis Core Recovery Drill Holes—Plomosas Mine Area***




Source: GR Silver (2023).

## 10.3 Drilling Programs—San Juan–La Colorada Area

The previous drill programs in the San Juan–La Colorada Area are described in detail in Arseneau and Crowie (2021). GR Silver carried out surface and underground drilling programs in 2020–2021 and 2022. Table 10-7 summarizes the total number of holes drilled by each company in the San Juan–La Colorada Area.

***Table 10-7: Breakdown of Drill Holes and Metres Drilled at San Juan–La Colorada***

| Company | Holes | Metres |
|---|---|---|
| IMMSA | 166 | 26,990 |
| Aurcana | 11 | 2,013 |
| First Majestic | 47 | 16,437 |
| GR Silver | 62 | 5,791 |
| **Total** | **286** | **51,231** |

The IMMSA drill holes were selectively sampled and assayed, and core is available only for sampled intervals. The GR Silver infill drilling program aimed to replace some of these selectively sampled IMMSA drill holes inside the resource area to provide more representative sampling across the entire mineralized interval. In all, 32 historical IMMSA drill holes were removed from the previous drilling database.

GR Silver drilling also targeted new mineralized structures recently mapped in the adjacent underground La Colorada mine, with potential to define new mineralized zones and incorporate them in the MRE.

The GR Silver drilling program was completed using GR Silver-owned and operated equipment, as described in Table 10-8. GR Silver-owned and operated rigs drilled HQ/NQ size core.

***Table 10-8: Drill Rig Details—2020 to 2022 GR Silver Drilling Campaign at San Juan–La Colorada Area***

| Drill Type Reference | Owner | Operated By | Core Size |
|---|---|---|---|
| NW-150-1 | GR Silver | GR Silver | HQ/NQ |
| NW-150-2 | GR Silver | GR Silver | HQ/NQ |
| NW-500-1 | GR Silver | GR Silver | HQ/NQ |
| Ingetrol 25 | GR Silver | GR Silver | NQ |
| Portable Drill Rig | GR Silver | GR Silver | BQ |

An additional seven drill holes were completed in 2022 using the small-diameter drill Ingetrol-25, for a total of 498 m. Because of the smaller core size generated by the Ingetrol-25 rig, the core was not split for assaying and full core was sent to the lab for assay. As a result, only rejects and pulps that were part of the QA/QC remain as sampling records.

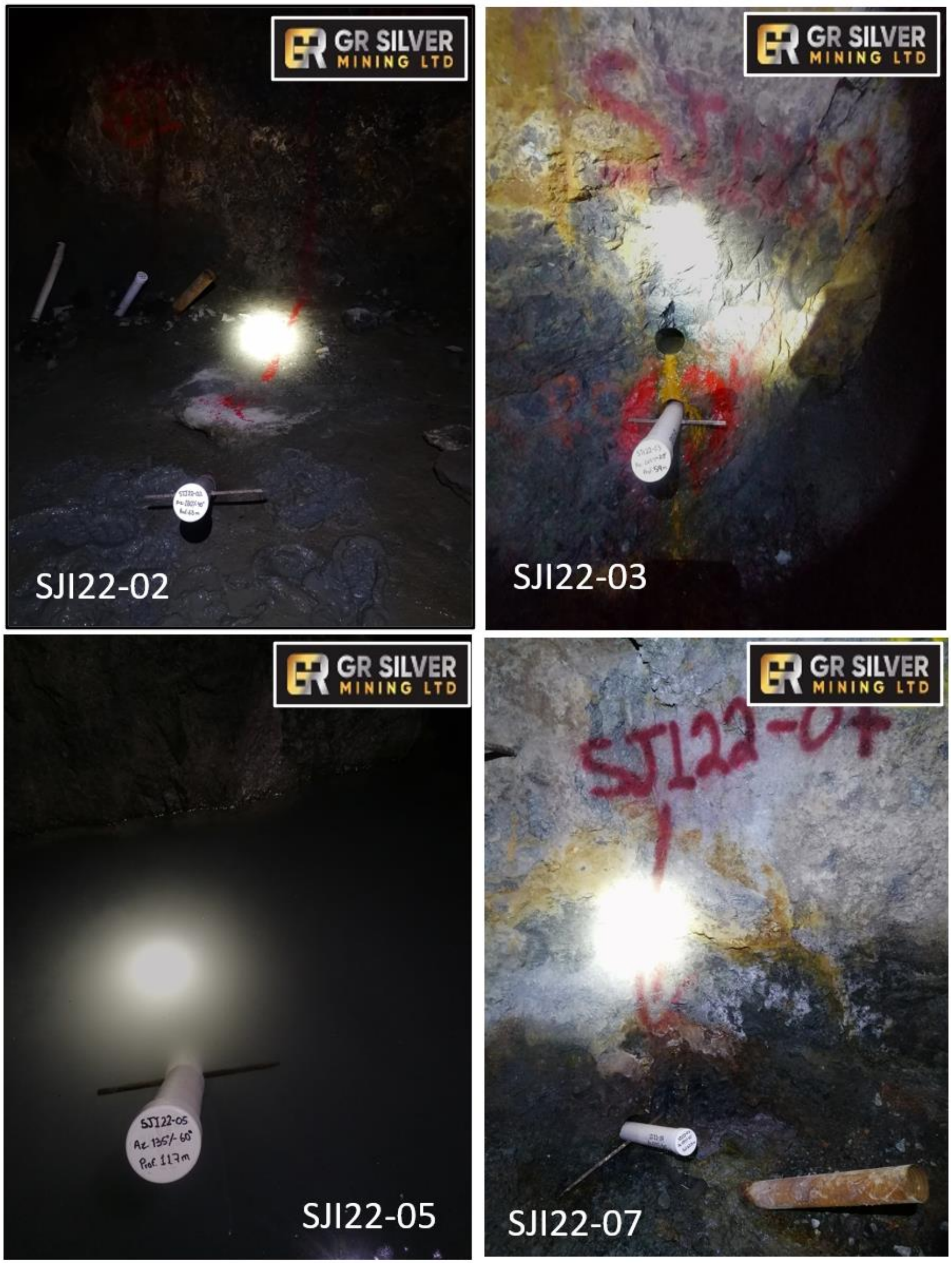
### 10.3.1 Drill-Hole Collar Locations 2021–2022 Drilling Programs San Juan–La Colorada

All GR Silver drill holes were located by a geologist using a hand-held GPS, and azimuth line drill-hole locations were established using a Brunton compass. The underground drill-hole collars were initially identified using topographic control points inside the San Juan historic mine. Following drilling, all drill collars were surveyed by independent surveyors, using a total station, data were automatically transferred to the database, and a cement monument was placed on the site permanently marking the drill-hole location (Figure 10-23 and Figure 10-24). Collar survey data were then plotted in 2-D and 3-D to confirm locations based on existing field and underground information.

***Figure 10-23: Drill Hole Collars—Surface Holes San Juan Area***


Source: GR Silver (2023).

***Figure 10-24: Underground Drill Collars—San Juan***




Source: GR Silver (2023).

### *10.3.2 Downhole Surveys*

All 2020–2021 and 2022 campaign drill holes were surveyed as described in Section 10.2.3.

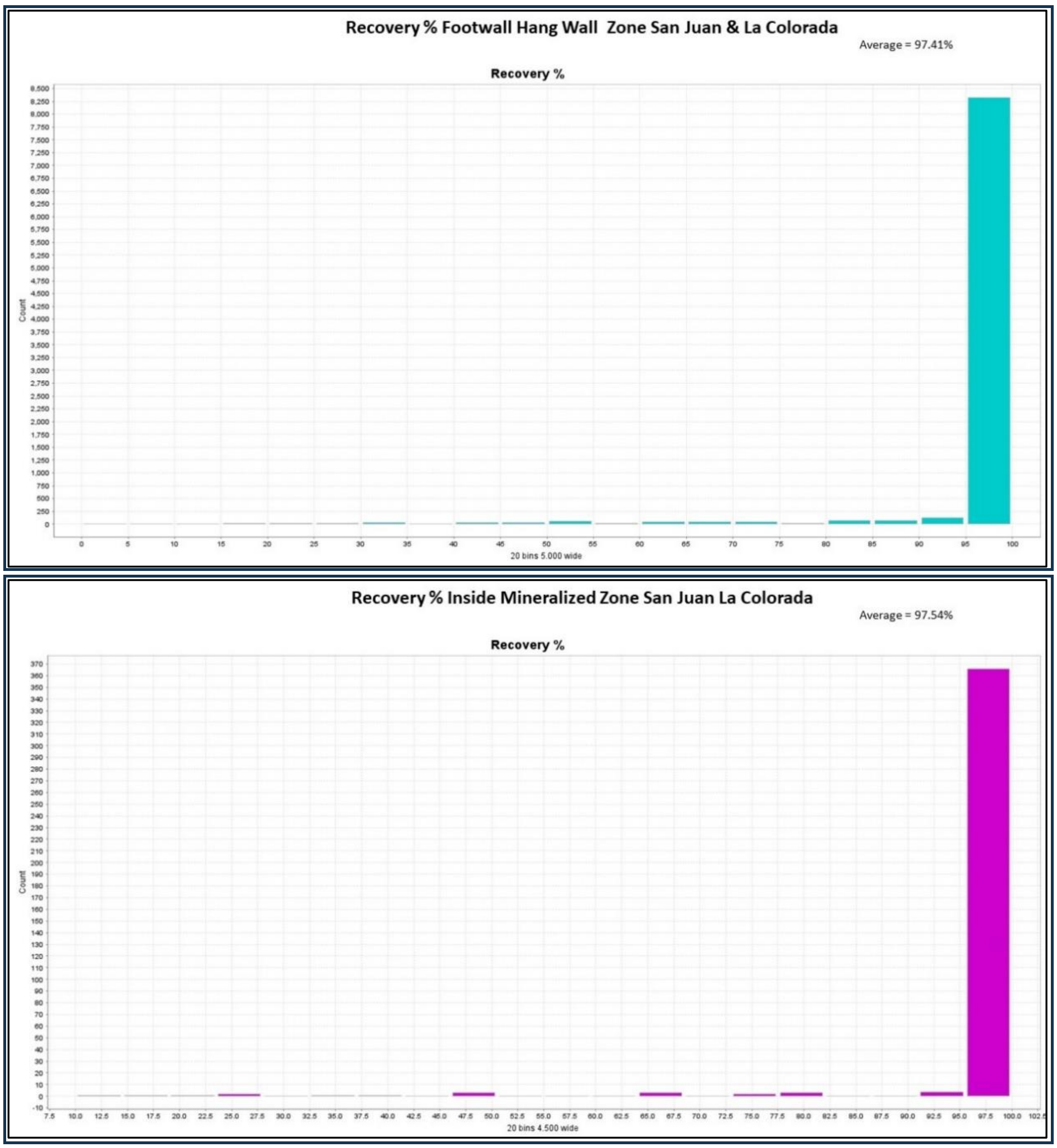
### *10.3.3 Core Logging*

All core logging is described in Section 10.2.4.

### *10.3.4 Recovery*

Core recovery was excellent for drilling completed in 2020–2021 and 2022 by GR Silver in the San Juan–La Colorada Area. Figure 10-25 shows a summary of the core recovery data for the main mineralized zone and footwall and hanging wall waste zones.

***Figure 10-25: Data Analysis Core Recovery Drill Holes San Juan–La Colorada Area***

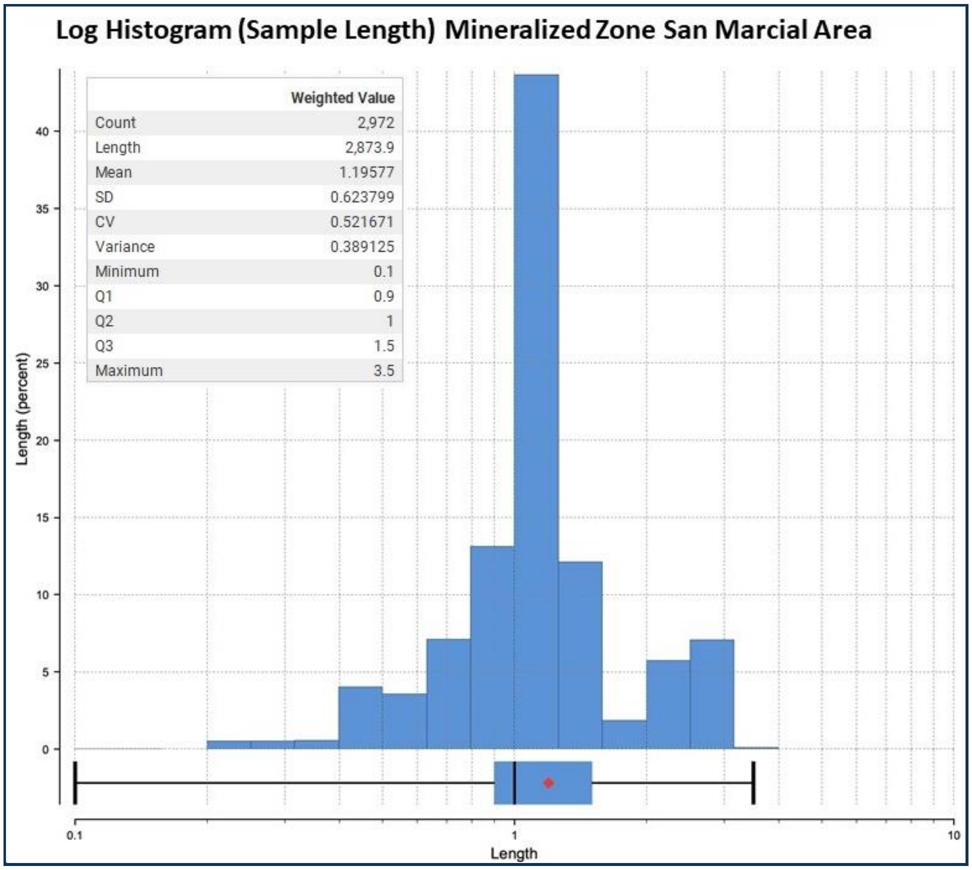



Source: GR Silver (2023).

### 10.3.5 Sample Length and True Thickness

The geologist determined sample lengths during logging. The average sample length for the diamond drill-hole samples was 1.2 m, with 95% of the samples being ≤1.5 m (Figure 10-26). All sample limits obeyed the geological contacts and mineralization controls.

**Figure 10-26: Histogram of Sample Interval Length—San Juan–La Colorada Area**




Source: GR Silver (2023).

Table 10-9 displays the best drilling results and highlights for the San Juan–La Colorada Area related to the 2020–2021 and 2022 drilling program.

*Table 10-9: Selected Sample Results from San Juan–La Colorada Area Drilling 2020–2021 and 2022*

| Hole No. | From (m) | To (m) | Drilled Width (m) | Est. True Width (m) | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) | AgEq (g/t) |
|---|---|---|---|---|---|---|---|---|---|---|
| LCS21-04 | 170.0 | 179.0 | 9.0 | 7.4 | 710 | 1.82 | 1.1 | 0.3 | 0.06 | 844 |
| Includes | 176.9 | 177.5 | 0.6 | 0.5 | 8,519 | 18.77 | 8.9 | 0.7 | 0.03 | 9,591 |
| SJS21-02 | 55.2 | 60.9 | 5.7 | 4.4 | 611 | 0.04 | 0.5 | 1.7 | 0.01 | 632 |
| Includes | 55.2 | 56.9 | 1.7 | 1.5 | 1,762 | 0.10 | 1.3 | 4.9 | 0.01 | 1,815 |
| Includes | 55.2 | 55.9 | 0.7 | 0.6 | 3,755 | 0.03 | 2.5 | 9.7 | 0.50 | 3,869 |
| SJS21-04 | 117.0 | 127.5 | 10.5 | 9.8 | 242 | 0.31 | 0.4 | 0.8 | 0.02 | 286 |
| Includes | 118.2 | 120.3 | 2.1 | 1.9 | 954 | 1.29 | 1.2 | 1.6 | 0.01 | 1,064 |
| YES20-01 | 37.0 | 42.5 | 5.5 | 5.5 | 264 | 0.4 | 0.3 | 0.6 | 0.01 | 303 |
| Includes | 39.5 | 41.0 | 1.5 | 1.5 | 943 | 1.10 | 0.5 | 1.3 | 0.01 | 1,009 |
| SJI22-02 | 19.3 | 37.0 | 17.7 | 14.7 | 124 | 0.14 | 0.1 | 0.5 | 0.01 | 145 |
| Includes | 30.9 | 35.3 | 4.4 | 4.3 | 409 | 0.35 | 0.4 | 1.1 | 0.02 | 452 |

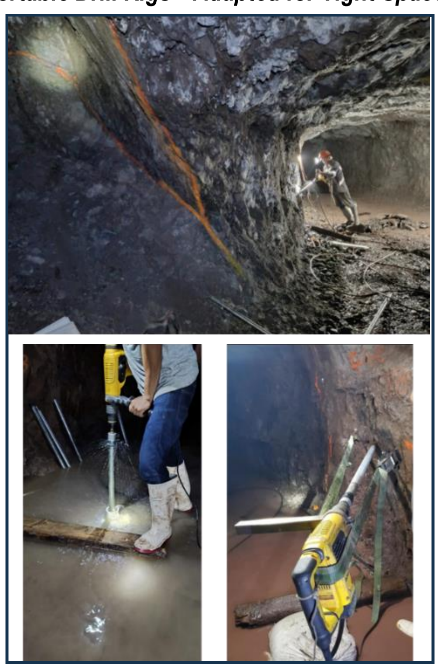
## 10.4 Portable Drilling

Details of GR Silver's diamond drilling and portable drilling programs are provided in Section 10.

### *10.4.1 Portable Drilling—Underground*

Hand made adapted portable drill rigs were used in the Plomosas mine to replace information from channel samples with BQ size core. Drill rigs can reach up to 25 m depth with excellent recovery and can be used in small and constrained spaces (Figure 10-27).

*Figure 10-27: Portable Drill Rigs—Adapted for Tight Spaces Underground*



Source: GR Silver (2022).

#### *10.4.2 Portable Drilling—Surface*

Adapted portable drill rigs were used in the San Marcial Area on surface to replace information from historical channels and trenches with BQ size core. Drill rigs can reach up to 25 m with excellent recovery and can be used in small spaces, with difficult topographical access and leave negligible environmental footprint (Figure 10-28).

***Figure 10-28: Adapted Portable Drill Rig to Difficult Access Areas at Surface***

Source: GR Silver (2022).

# 11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The Plomosas Project has been the subject of several exploration programs carried out by various owners in the past.

Gold-Ore drilled the San Marcial Area in 2000 and 2002; Silvermex Resources Ltd. (Silvermex) drilled in 2008 and 2010; and GR Silver drilled from 2019 to 2022.

IMMSA drilled the Plomosas Mine Area between 1995 and 2000; Aurcana drilled in 2008; First Majestic drilled from 2016 to 2018; and GR Silver drilled from 2020 to 2022.

IMMSA drilled the San Juan–La Colorada Area in 1994; Aurcana drilled in 2008; First Majestic drilled in 2017 and 2018; and GR Silver drilled in 2021 and 2022.

Each company used different quality-control protocols over the years. Little information is available from Gold-Ore and IMMSA, which were the earliest programs.

## 11.1 Sampling Methods

The sampling methods and procedures were essentially the same for the historical and GR Silver core-drilling programs. The sample preparation and assaying procedures described below are reported in historical documentation that GR Silver obtained from Aurcana and First Majestic, showing that all companies followed similar procedures, with minor variations.

### *11.1.1 IMMSA*

IMMSA's sampling is reported in historical drill hole logs. Samples were generally taken at regular intervals, with sample length varying from 1 to 3 m within mineralized zones; core was cut using a diamond saw. The historical report suggests that sampling was generally restricted to areas of visible sulphide mineralization defined during the systematic logging of core (historical logging data documentation confirms the logging and sampling process).

IMMSA's geologists recorded geological information on paper logs, noting the main lithologies, alteration, and predominant geological structures. Most of the drill logs are available on site; the Company has scanned them to produce digital files, and entered the data in a digital database.

Sampling lengths were variable, and it is apparent that sampling was performed selectively on the main mineralized zones, or where sulphide (galena and sphalerite) was visible. Only remnants of selective core intervals are available on site at Plomosas, defining selective core libraries for IMMSA drill holes. The selective core intervals are present in the form of one 4 to 5 cm piece of core for every metre drilled in some selected historical drill holes.

Drill core was sampled using a diamond saw, and no pulps or rejects remain from the IMMSA sampling.

There are no records of IMMSA's drilling program QA/QC protocols, but both First Majestic and GR Silver have carried out confirmation drilling programs to help validate and lessen the impact of the IMMSA drill results.

#### *11.1.2 Gold-Ore*

Gold-Ore collected 1,463 samples from NQ and HQ core drill holes. Core samples were logged, and intervals defined as ranging from 1 to 2 m in mineralized zones; occasionally barren zones were sampled at 3 to 4 m intervals. Each sample was described using standardized log formats for all key variables. Most of the samples were split using mechanical splitters.

#### *11.1.3 Aurcana*

Aurcana personnel carried out or supervised the drill-core sampling process. Sampling was performed at regular intervals. Samples were generally broken at geological contacts, and all samples were collected by sawing the core in half lengthwise with a diamond saw. Half the core was placed in a bag and transferred to the core shed to remain under custody; later these were shipped to the assay laboratory. The other half was returned to the core box for storage at the core shed. Once enough samples were collected to make a full batch, they were shipped by ground courier to Acme Labs in Guadalajara, Jalisco, for preparation and analysis. Drill logs and assay certificates are available, and all core is stored at the Plomosas camp site. In some specific drill holes, sections of core outside the main zones of interest remained unsampled.

#### *11.1.4 Silvermex*

Silvermex collected 3,524 samples from NQ and HQ core drill holes. Core samples were logged, and sample intervals ranged from 1 to 2 m, with about half the samples 1 m or less. Standardized log formats were used to log all key variables to describe each sample. Most of the samples were split using mechanical splitters.

The core boxes were collected at the drill site and transported safely to the Plomosas camp site sample facilities. At the Plomosas camp, core boxes were washed to remove grease and dirt.

Core samples were collected from the mineralized intervals and from 5 to 10 m above and below the zone of interest. The standard sample length was 1 m, increasing to 1.5 m in zones of more consistent geology. Some samples were less than 1 m to accommodate geological contacts.

The sample limits were marked on the core and boxes as well. Sample numbers, interval length, and limits were recorded in an Excel file prior to cutting, to ensure that a complete logging and sampling record of the drill core was available in one file.

Once core was logged and samples marked, core boxes were sent to the splitting area where an electric diamond saw was used to cut the core, pre-marked by the geologist, respecting interval limits.

Half core was then placed in bags, and lots shipped to the ALS Chemex Lab in Guadalajara for sample preparation. A geologist supervised all sampling and packing.

#### *11.1.5 First Majestic*

The Company's review of core boxes stored at Plomosas, internal technical reports, and logging data documents and reports available on site revealed that First Majestic core sampling protocols followed standard industry practices. First Majestic geologists carried out logging, and data were entered into DataShed software. The core was initially photographed, and core boxes were marked with hole ID, box number, and start and end metreage. First Majestic technicians cut the core in half at site using a diamond blade saw. Half the core was placed in a clear plastic sample bag with respective tag number and transferred under custody to the core shed. The remaining half core was placed back into the core box and stored in a covered facility at the Plomosas camp. The samples for analysis were stored at the core shed, in custody, until a full batch was compiled for ground courier to deliver to First Majestic's Laboratorio Central facilities in La Parilla, Durango, for sample preparation and assaying. GR Silver's discussions with First Majestic operational management revealed that although an internal operational laboratory at a mine site was used during this program, all required sample handling protocols followed internal standards. In some specific drill holes, sections of core outside the main zones of interest remained unsampled.

#### *11.1.6 Goldplay*

Goldplay Exploration Limited (Goldplay) carried out sampling at San Marcial in 2019. On January 9, 2020, Goldplay changed its name to GR Silver Mining Ltd.

Goldplay's 2019 sampling at the San Marcial deposit followed standard practices. Independent contractors drilled the core and delivered it daily to the San Marcial camp where Goldplay employees and contractors logged it. The core boxes were closed securely and transferred to Goldplay's Rosario core warehouse where Goldplay geologists and technicians carried out sample preparation, RQD measurements, photography, core cutting, sampling, and storage.

Lithological contacts and structural boundaries were established to define sample limits. Each sample was marked, on the core and on the plastic core box, indicating beginning and end with arrows. A line was drawn parallel to the core axis to indicate the cut line for the sampling technician.

Samples were defined mostly as a standard 1 m interval, and less if there were lithological or structure boundaries. The minimal sampling length was 50 cm, and occasionally up to 2 m in zones with low core recovery.

A sample number was assigned by writing it on the core box, filling in the sample book with all information required, including a brief description of each sampled interval. Quality control samples, such as standards, blanks, and duplicates had their numbers reserved to ensure that each drill hole had the necessary quality control samples.

Once all samples were marked on the core box, the boxes were delivered to the cutting area to cut samples using an electric diamond saw, following the sampling line marked on the core by the geologist.

The samples were stored in batches ranging from 40 to 50 samples, then a reliable courier service was engaged to ship them from Rosario to the SGS de México, S.A. de C.V., laboratory facilities in Durango for preparation and analysis.

After the acquisition of the Plomosas Property, all historical and Goldplay drill core boxes, lab rejects and pulps from San Marcial were transported safely to the Plomosas under-cover core storage facility.

### *11.1.7 GR Silver*

From 2020 to 2022 GR Silver carried out all drill-core sampling. GR Silver's core sampling protocols followed standard industry best practices. After placing drilled core into boxes at the drill site, a GR Silver geologist reviewed the drill-core boxes, which were then secured, and transported daily to the core-logging facility at the Plomosas camp. Once each drill hole was completed and the box delivered to the core shed, all boxes were laid out on the logging table to validate all drill-hole details, including metreage tags and core condition. A technician then checked and photographed the core at the core shed (Figure 11-1).

***Figure 11-1: Validation of Core Boxes on Arrival at the Core Shed—Plomosas Camp***

Source: GR Silver (2021).

Following validation of the core boxes, GR Silver's geological staff released them for logging. Initially, a summary core log was created, to mark the main geological contacts along the full length of the drill core. Data were then entered directly into MX Deposit software using tablets at the core logging facility (Figure 11-2).

***Figure 11-2: Logging Core at the Core Shed—Plomosas Camp***

Source: GR Silver (2021).

During detailed logging, GR Silver geologists defined all sample intervals using lithological and alteration limits as boundaries, and subsequently marked the beginning and end of each sample. A line was then drawn indicating the cutting line for the saw operator along the length of the core axis. Sample lengths were generally a minimum of 50 cm and no greater than 1 m. However, a small number of narrow, isolated structures were sampled at less than 50 cm. Sample tags were then stapled to the shoulder of the box, identifying the sample location and limits for each sample.

“From” and “To” were marked on the core box to assist the operator when cutting the specific core intervals with the diamond saw (Figure 11-3). Geologists used sample-numbering booklets to assist in process control and avoid sample mixing. The booklets contain three identically numbered parts, one part was kept with the database manager at the exploration office, one was placed in the sample bag and one remained stapled to the core box for future reference.

***Figure 11-3: Cutting Core with a Diamond Saw at the Plomosas Core Shed***

Source: GR Silver (2021).

## 11.2 Sample Analyses and Security

### *11.2.1 IMMSA*

IMMSA completed their sample preparation on site at Plomosas and at the IMMSA San Luis de Potosi laboratory facilities. No information is available on the analytical methods, assay laboratory, or security measures used during the IMMSA drill program. Based on the period of the assays, from the mid 1980s until 2001, no QA/QC is available in relation to any of the assays IMMSA completed. Historical documentation available on site reports the elements assayed, results, and date of assays for all IMMSA core drill holes. For many drill holes, a certificate-type document was included on historical reports.

### *11.2.2 Gold-Ore*

All Gold-Ore samples were shipped to Chemex's preparation facilities in Guadalajara. In 2000, Chemex Lab, now ALS Global, was an internationally recognized independent laboratory specializing in assay for the mining industry. The QP is not aware of the certification that the Guadalajara lab held at the time of the analysis, but ALS Global has always maintained the highest degree of certification. The current ALS Global laboratory in Vancouver holds ISO/IEC 17025:2017 certification.

At the Guadalajara lab, the samples were dried, crushed, split with standard Jones Splitter, and a 1 kg portion pulverized to $P_{85}$ 76 µm mesh. A 250 g aliquot was then shipped to ALS Chemex Labs in Vancouver for analysis.

Gold analysis was completed on a 30 g aliquot using fire assay methodology with atomic absorption finish.

Silver and 26 other elements, including arsenic, copper, lead, zinc, and barium, were digested with four acids and analyzed using inductively coupled plasma–atomic emissions spectrometry (ICP-AES) analysis under Chemex's standard ICP-MS package. Any silver analysis greater than 100 ppm was subsequently re-run by fire assay with gravimetric finishing.

Pulps and rejects were stored at the laboratory and not returned to the Project site.

### *11.2.3 Aurcana*

Aurcana reported that sample custody entailed all samples being stored at the Plomosas camp until a full batch was ready for shipment. The samples were then shipped using a third-party courier service. All half-core drill samples were shipped to Acme Labs in Guadalajara for sample preparation, then the prepared pulps were couriered to Acme Labs in Vancouver for chemical analysis.

Acme Labs (now Bureau Veritas Canada Inc.) is an internationally recognized assay laboratory that maintains the highest levels of quality control and quality management systems. The Vancouver laboratory was ISO9001:2000 certified in 2008 when the Aurcana samples were being processed. Standard QA/QC protocols were applied in all sampling and assaying procedures, as evidenced by insertion of standards, duplicates, and blanks in each sample batch.

At Acme Labs in Guadalajara, all samples were entered into a laboratory information management system (LIMS) for sample tracking and custody control following the Acme internal protocols. In Guadalajara, the original half core samples were dried in an oven at 90°C for 12 hours. After drying, the samples were crushed in a jaw crusher to $P_{80}$ 10 mesh. A 250 g homogeneous split was taken to represent the original sample. Acme Labs pulverized samples using low-chrome steel ring-and-puck pulverizers to standards of $P_{85}$ 200 mesh. A sieve test was used to monitor the process on select and random samples at the primary crushing stage and at pulverization. A 30 g pulp subsample was then obtained using a riffle splitting device and shipped to Vancouver for aqua regia digestion ICP-AES analysis. Acme Labs used the method known in-house as 7AR Group and 6 Group (gold 0.01 g/t fire assay on 30 g sample). At Acme Labs in Vancouver, samples were digested using hot aqua regia immersion, and base metal concentrations were determined using ICP-AES. Gold and silver values were analyzed by lead fusion fire assay and gravimetric finish on a 30 g sample.

### *11.2.4 Silvermex*

Samples from the 2008 drill program were shipped to International Plasma Labs Limited (IPL) in Hermosillo for crushing and pulverizing, then to the IPL Laboratory in in Richmond, B.C., Canada, for analysis. IPL is an independent ISO-certified full-service laboratory that offers trace-metals analyses and certified assays to the mining industry. The laboratory has been in operation since the late 1980s.

At IPL, all samples were oven dried for four hours at 60°C. Once dried, they were crushed in a Rhino jaw crusher to $P_{75}$ 10 mesh. The jaw crusher was cleaned between samples by passing gravel through it. Post crushing, the sample was passed through a Jones Riffle Splitter to obtain a 250 g subsample. The 250 g aliquot was then pulverized to $P_{95}$ 150 mesh. A 100 g split was then extracted from the pulverized sample and shipped to IPL's laboratory in Canada for ICP assay.

Samples collected during the 2010 drill program were shipped to Chemex's preparation facilities in Guadalajara for analysis. On arrival in Guadalajara, the core samples were dried, crushed, then passed through a 70-mesh screen. The fine crushed material ($P_{70}$ 2 mm) was split to prepare a 250 g subsample for pulverization. All rejects material was returned to Silvermex. The 250 g pulp was then shipped to the ALS Chemex Lab in Vancouver.

The assay procedure consisted of multi-acid digestion using four acids, and ICP-AES. For silver assays greater than 100 g/t, a 30 g sample of the original pulp was sent to be re-assayed using fire assay with gravimetric finish.

Inspectorate in Reno, Nevada conducted additional check assays. Inspectorate, now Bureau Veritas, is an independent assay laboratory. The certification Inspectorate held in 2010 is not known, but Bureau Veritas maintains ISO9001 and ISO/IEC 17025 certifications.

#### *11.2.5 First Majestic*

All First Majestic drill-core samples were sent to their own Laboratorio Central facilities in La Parilla, Durango, for sample preparation and assaying. The First Majestic laboratory is not independent of First Majestic, and ACS is not aware if the lab is internationally certified. However, First Majestic did verify the assay quality by inserting blanks and internationally produced standards, and also sent 570 pulps for check assays—selected by First Majestic QA/QC personnel at La Parilla—to the SGS de México, S.A. de C.V. facilities in Durango, an independent assay laboratory. These pulps were analyzed for silver and gold by fire assay with atomic absorption finish. All samples above 10 ppm Au and 300 ppm Ag were assayed with a gravimetric finish. Base metals—lead and zinc—were analyzed using inductively coupled plasma optical emission spectrometry (ICP-OES).

GR Silver received sampling, sample preparation, assaying information, and documentation related to the entire First Majestic core drilling program completed between 2016 and 2018. A digital database with full QA/QC data was delivered to GR Silver on the Project acquisition date. Upon GR Silver's request, First Majestic returned pulps and first split rejects from the 2016 to 2018 drill core program, as well as core for all holes; these are now all stored at the Plomosas site. Although all First Majestic analyses were carried out at their internal Laboratorio Central in Durango, standard QA/QC programs and external validations were performed at SGS Laboratories in Durango.

The QA/QC frequency for the shipment of samples to the Laboratorio Central is described in internal memos as follows: "Five quality control samples are inserted in every 26-sample batch. These include the use of the three different CDN Labs multi-element standards, coarse and fine blanks, and field, reject and pulp duplicates." The CDN Labs standards, coarse and fine blanks, and field, reject, and pulp duplicates related to the 2016–2018 core drilling program are described in Table 11-1.

**Table 11-1: First Majestic QA/QC Samples**

| Name | Description |
|---|---|
| CDN-ME-1602 | Multi-element standard |
| CDN-ME-1603 | Multi-element standard |
| CDN-ME-1604 | Multi-element standard |
| DM-3/4A1 | Coarse blank |
| SM3-BLANK-LP_P95#1/4 | Coarse blank |
| SM3-BLANK-LP_P95#200 | Fine blank |
| SRM_FINO_PLQZ_18 | Fine Blank |
| BLK_Fino_SMQZ_17 | Fine Blank |

The analytical methods used were as follows:

- Gold: 30 g by lead fusion with atomic absorption spectrometry (AAS) finish for samples between 0.01 and 10 g/t Au; for samples >10 g/t, fire assay with gravimetric finish.
- Silver: 3-acid digestion with AAS finish for samples between 0.5 and 300 g/t Ag; for samples >300 g/t, fire assay with gravimetric finish.
- Lead: aqua regia digestion ICP-20 element package OES for samples between 0.006 and 10% Pb up to August 2017, after that they used an aqua regia digestion ICP-34 element package for Pb between 4 and 100,000 ppm.
- Zn: aqua regia digestion ICP-20 element package OES for samples between 0.006 and 10% Zn up to August 2017, after that they used an aqua regia digestion ICP-34 element package for Zn between 5 and 100,000 ppm. For Zn values greater than 10% a multi-acid digestion with ICP-MS.

On average, eight QA/QC samples were inserted in the sample preparation and assaying batches: five blanks and three standards.

### *11.2.6 Goldplay*

Goldplay samples were batched for preparation and analysis, then shipped to SGS, Durango, using a reliable courier service.

Once at SGS, samples were dried, crushed to $P_{80}$ 1 mm mesh, then split to obtain a 1 kg sample. The 1 kg sample was pulverized to $P_{95}$ 106 µm. The pulverized sample was split with a 250 g portion separated for assay and the 750 g portion was returned to the Company.

All samples were then analyzed for gold and silver and for 32 elements using ICP-AES. Silver and gold that returned over limit values were re-assayed by fire assay with a gravimetric finish.

### *11.2.7 GR Silver*

GR Silver samples collected between 2020 and 2022 were released only when a full batch of at least 50 samples was accumulated. The batch was then dispatched in a third-party truck, managed directly by SGS Laboratories, and transported to SGS de México, S.A. de C.V., laboratory facilities in Durango for sample preparation and assaying.

SGS is an internationally recognized assay laboratory that maintains the highest levels of quality control and quality management systems. The Durango and Burnaby laboratories are both ISO/IEC 17025 certified.

At SGS in Durango, all samples were delivered to the gate and stored in their custody on individual pallets separated by company of origin. Bags with samples were opened and their content validated against requisition documents. Each sample was then individually weighed and entered into the SGS LIMS system for sample tracking, using a unique bar code. If excessive humidity was noticed in any of the samples, they were dried by placing the samples on metal trays, and heated in an oven at 105°C for 12 hours.

The next stage of sample preparation was crushing to reduce the sample size, typically to 1 mm (18 mesh), using a Smart Boyd Crusher Rotating Sample Divider (RSD) Combo from Rocklabs. The Smart Boyd Crusher RSD Combo automates all crushing procedures and also includes an automatic split adjustment dependent on sample weight.

The drill-core samples were automatically split using the RSD to divide the sample, typically into a 1 kg subsample for pulverizing and subsequent split and analysis, and the remainder stored as a reject. In the normal SGS preparation process, samples with fragments larger than the opening of the Smart Boyd Crusher are crushed using a traditional jaw crusher system and split using a Jones Riffle Splitter. As GR Silver core samples were not large diameter, there is no registration of this manual use of crusher and splitter combination for the GR Silver core samples.

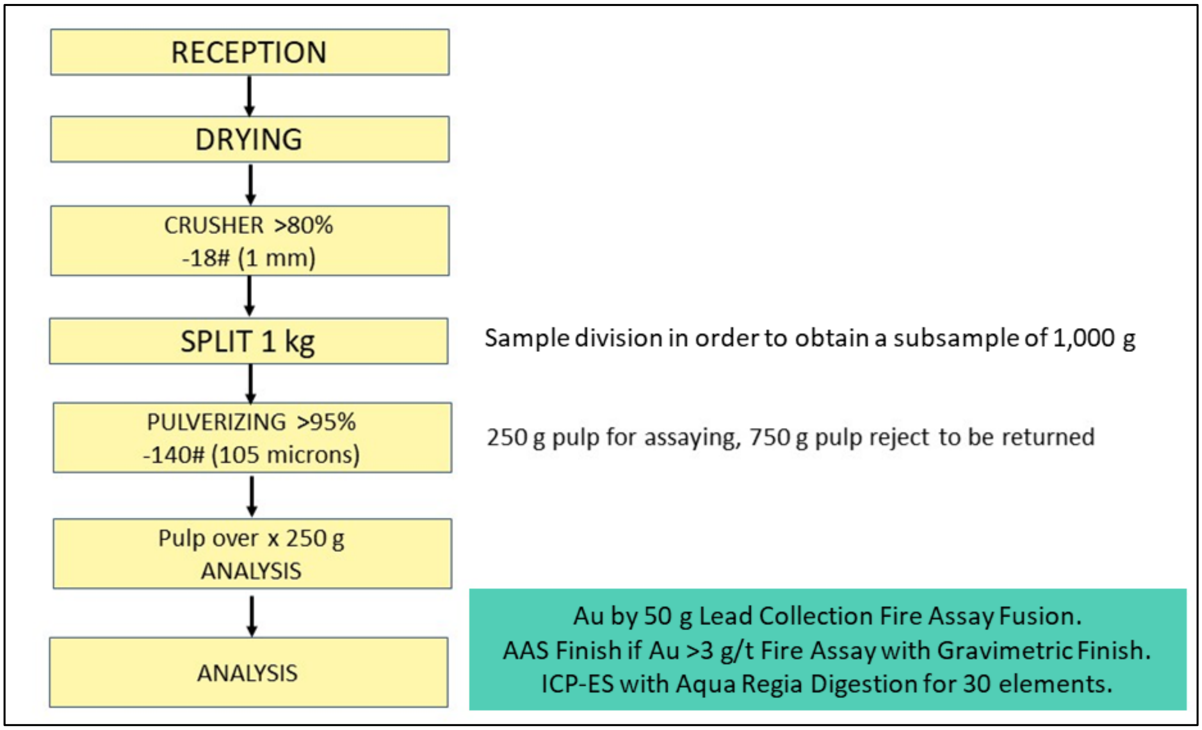
Crushed samples were transferred to a clean pot, and the pot placed into a vibratory mill. The sample pulverizing was done using pots made of either hardened chrome steel or mild steel material. Samples were typically pulverized to 105 µm (140 mesh). A series of control samples, internal blanks, and GR Silver blanks were introduced in each batch during the preparation process to ensure that no contamination is introduced. The frequency of insertion of control samples is detailed in Table 11-2.

***Table 11-2: Frequency of Internal Quality Control Samples at SGS Laboratory (Durango)***

| Crushing/Pulverizing Parameters | Frequency | Quality Control Requirement *If not specified otherwise by the client* |
|---|---|---|
| Crush Prep. Blank | At the start of batch | $P_{80}$ 18 mesh (1 mm) |
| Crush Prep. Replicates | Every 35 samples | $P_{80}$ 18 mesh (1 mm) |
| Crush % Passing Checks | Every 35 samples | $P_{80}$ 18 mesh (1 mm) |
| Pulverized Prep. Blank | At the start of batch | $P_{95}$ 140 mesh (105 µm) |
| Pulverized Prep. Replicates | Every 35 samples | $P_{95}$ 140 mesh (105 µm) |
| Pulverized % Passing Checks | Every 35 samples | $P_{95}$ 140 mesh (105 µm) |

The sample preparation and analysis flowsheet for the SGS Laboratory in Durango is illustrated in Figure 11-4.

***Figure 11-4: Sample Preparation Process Flowchart—SGS Laboratory (Durango)***




Source: GR Silver (2021).

After crushing and pulverizing, SGS generated a 50 g liquid for analysis. Base metal values were analyzed using a four-acid digestion (a combination of nitric acid [$HNO_3$], hydrofluoric acid [HF], perchloric acid [$HClO_4$], and hydrochloric acid [HCl]) and ICP-OES. All samples with lead, zinc, and copper >1% were re-assayed by sodium peroxide fusion and ICP-OES, with an upper limit of 30%.

For silver, SGS also used the ICP-OES analysis method. An aliquot of the pulp was prepared using four-acid digestion. The four-acid digestion is based on a minimum sample weight of 0.5 g.

All samples with ICP-OES values over 100 ppm Ag were re-assayed by fire assay with gravimetric finish in the same facilities, or couriered to SGS in Canada.

Gold was analyzed by lead fusion and AAS. Over-limit samples with >10 g/t Au were analyzed by lead fusion fire assay and gravimetric finish.

Split coarse rejects and pulps were stored at the SGS warehouse for custody for a period of 30 days, or longer upon request. During the custody period the company reviews assays and QA/QC, and if action is required to re-assay, email is submitted to SGS during the custody period to complete re-assay of any specific batch of samples.

## 11.3 QA/QC Protocols

### *11.3.1 IMMSA*

No information is available on the QA/QC protocols that may have been in place during the IMMSA drilling programs. Assay results are available on logs and internal reports; these have been transferred to digital format and entered into GR Silver's MX Deposit database.

### *11.3.2 Gold-Ore*

No information is available on the QA/QC protocols that may have been in place during the Gold-Ore drilling programs. A review of Gold-Ore's public disclosure indicates that limited duplicate samples were collected during the drilling program, but there is no mention of standards or blanks. Assay results are available on logs and internal reports; these have been transferred to digital format and entered into GR Silver's database. A review of the assay certificates collected during the 2002 drill program indicates that Gold-Ore used blanks and standards but did not document them.

### *11.3.3 Aurcana*

Aurcana collected 170 drill-core samples upon selectively sampled core from surface and underground drill holes. A set, including a standard, a blank, and duplicate samples, was included in the sample batches submitted to Acme Labs for sample preparation and assaying. Sample batches were completed with an average of 30 samples, with QA/QC samples inserted at the beginning and end of the batch.

### *11.3.4 Silvermex*

CRM, standards, blanks, and sample duplicates were inserted into the sample stream routinely for all analytical runs during the Silvermex drill programs. In all, 3,524 samples were collected between 2008 and 2010. Table 11-3 summarizes all QA/QC samples inserted in the sample stream.

***Table 11-3: Silvermex Quality Control Samples***

| Sample Type | No. of Samples | Percentage of Total (%) |
|---|---|---|
| Normal | 3,524 | - |
| Blank | 37 | 1.05 |
| Duplicate | 38 | 1.08 |
| Standard | 78 | 2.21 |
| Pulp Re-Assay | 211 | 5.99 |
| Coarse Reject Re-Assay | 210 | 5.796 |
| Empire Lab Pulp Assay | 298 | 8.46 |

### *11.3.5 First Majestic*

First Majestic QA/QC protocols included inserting alternating blanks and standard reference materials every 20 samples in all core drill-hole sample batches. Standards were sourced from CDN Resource Laboratories, Langley, B.C. The blank used was a commercial limestone landscaping gravel sourced from an industrial vendor.

Table 11-4 describes a summary of the QA/QC samples used during the First Majestic drilling program from 2016 to 2018. A total of 308 standards and 323 blanks was submitted in all batches of samples delivered to SGS in Durango.

***Table 11-4: Summary of QC Sample Types Used by First Majestic***

| Standard | Type |
|---|---|
| CDN-ME-1602 | Standard |
| CDN-ME-1603 | Standard |
| CDN-ME-1604 | Standard |
| DM-3/4A1 | Coarse Blank |
| SM3-BLANK-LP_P95#1/4 | Coarse Blank |
| SM3-BLANK-LP_P95#200 | Fine Blank |
| SRM_FINO_PLQZ_18 | Fine Blank |
| BLK_Fino_SMQZ_17 | Fine Blank |

#### *Standards*

The three medium- to high-grade standard materials used in the First Majestic sampling program are commercial multi-element standard reference materials from CDN Resource Laboratories, Langley.

No QA/QC results reported inconsistent values based on the data reviewed by the QP.

#### *Blanks*

Material used as blanks was purchased from a local exploration and mining supplier, Sonora Naturals, in Hermosillo, Sonora State, México:

- SM3-BLANK-LP_P95#200: silicic sand
- SM3-BLANK-LP_P95#1/4: gravel size silica
- DM-3/4A1: silicic gravel
- SRM_FINO_PLQZ_18: silicic sand
- BLK_Fino_SMQZ_17: silicic sand.

#### *Duplicates*

As part of the QA/QC program, First Majestic included core duplicates, first split rejects, and pulp duplicates in the sample stream. One of each type of control sample was included per batch (average batch size was 40 samples). Samples identified with the code "Dup" are field duplicates, obtained by cutting the half core sample in half, and producing two samples of quarter core out of one selected interval. Samples identified as "CDUP" are requests to the laboratory to prepare two samples of the coarse reject at the coarse split part of the sample preparation flowsheet after crushing. Samples identified "PDUP" are pulp duplicates, returned to the lab for re-assays.

### *External Lab Checks*

First Majestic completed external lab check assays, using SGS Laboratories in Durango, México. A total of 570 pulps was sent directly from First Majestic's Laboratorio Central to SGS facilities. The analytical methods requested were equivalent to those performed at Laboratorio Central, owned and operated by First Majestic. The following assay methods were applied at the SGS Laboratory:

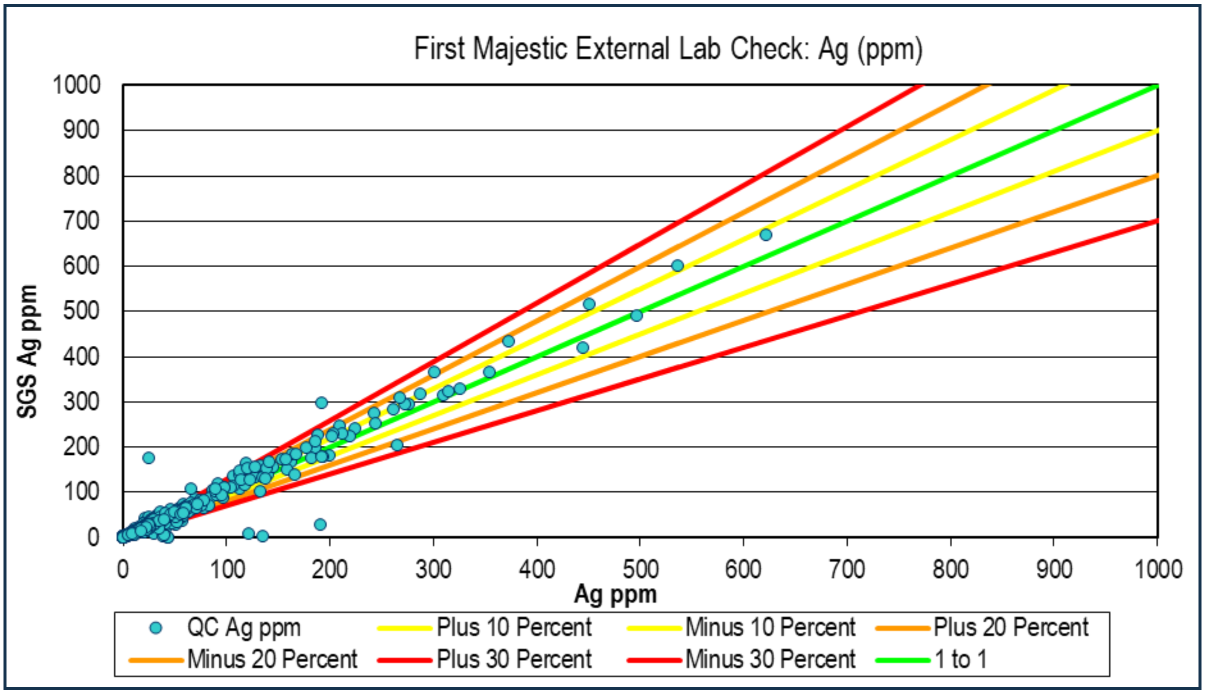
- Au: 30 g by lead fusion with AAS finish for samples between 0.005 and 10 g/t Au (GE_FAA313); samples >10 g/t analyzed by fire assay with gravimetric finish (GO_FAG303).
- Ag: 4-acid digestion with AAS finish for samples between 0.3 and 100 ppm Ag (GE_ASS42E); samples >100 g/t by fire assay with gravimetric finish (GO_FAG313).
- Pb: 2-acid digestion ICP-AES 34 element package for Pb between 2 and 10,000 ppm (GE_ICP14B); samples >10,000 ppm, sodium peroxide fusion for values up to 30% Pb (GO_ICP90Q); and
- Zn: 2-acid digestion ICP-AES 34 element package for Zn between 1 and 10,000 ppm (GE_ICP14B); samples >10,000 ppm, sodium peroxide fusion for values up to 30% Zn (GO_ICP90Q).

Figure 11-5 to Figure 11-8 illustrate the results and comparisons of check samples analyzed at both the Laboratorio Central and the SGS Lab.

A compilation and review of the external lab data check samples from the drill program indicate that there were no significant issues with the First Majestic drill-hole analytical data.

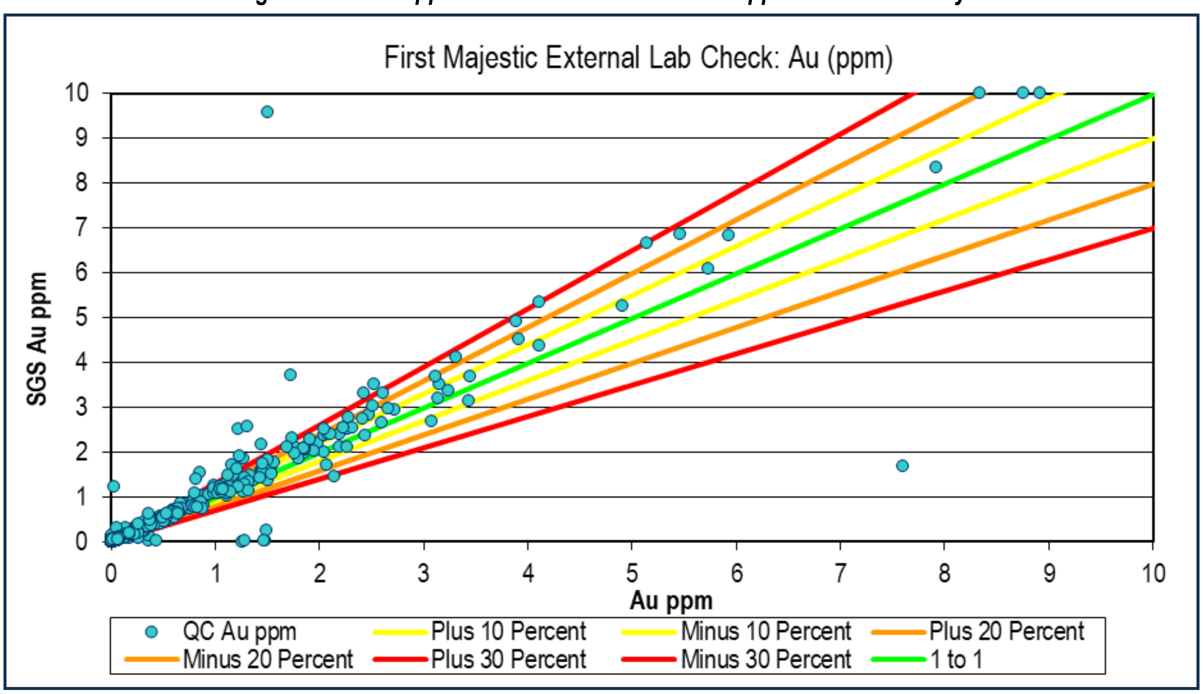
In relation to the internal QA/QC samples, a few standard failures needed to be checked but no re-runs were needed. There are a few coarse blank failures from early 2017 that suggest mild contamination, and a few occurrences where blank and original sample have the same values, suggesting that they are duplicates rather than blanks. Overall, the QA/QC results are generally good and acceptable for inclusion in Mineral Resource estimation.

***Figure 11-5: Ag ppm Laboratorio Central vs. Ag ppm SGS Laboratory***



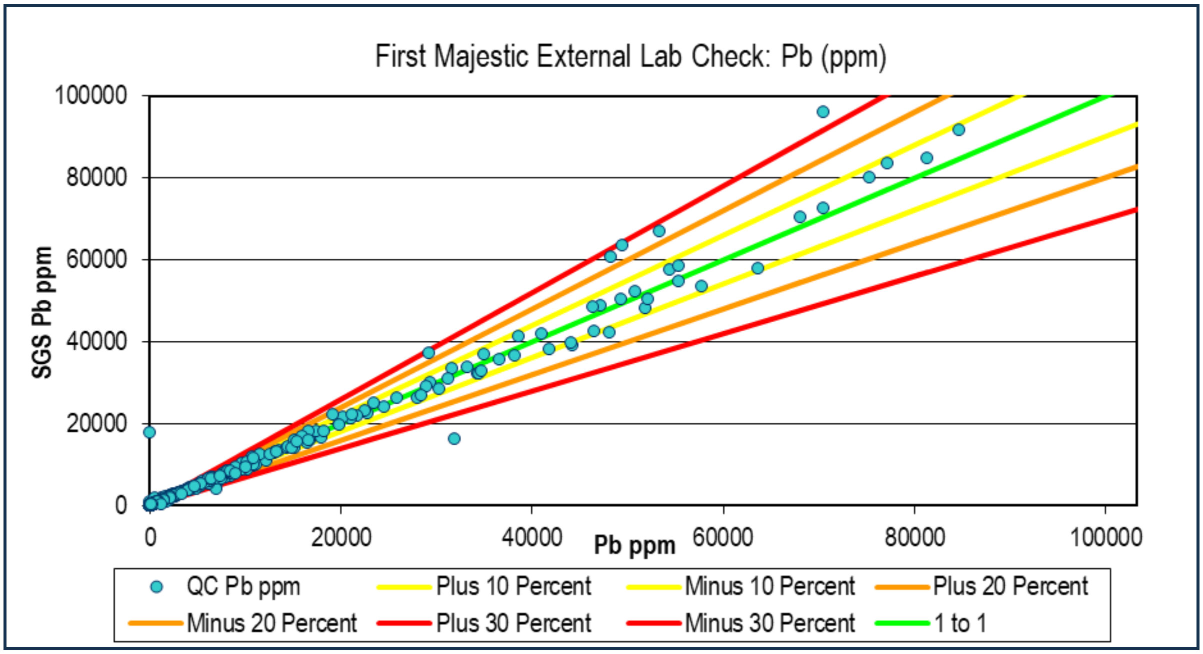

Source: GR Silver (2021).

***Figure 11-6: Au ppm Laboratorio Central vs. Au ppm SGS Laboratory***



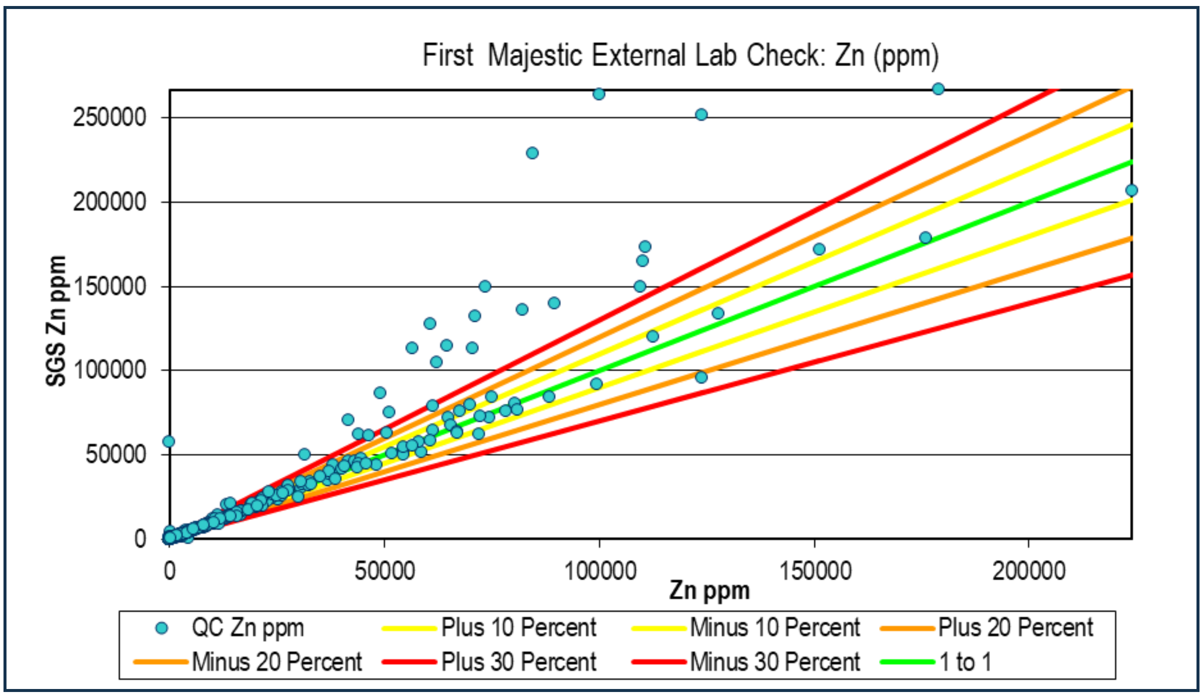

Source: GR Silver (2021).

***Figure 11-7: Pb ppm Laboratorio Central vs. Pb ppm SGS Laboratory***




Source: GR Silver (2021).

***Figure 11-8: Zn ppm Laboratorio Central vs. Zn ppm SGS Laboratory***




Source: GR Silver (2021).

#### *11.3.6 Goldplay*

The standards used on the 2018 sampling program were commercial standard reference materials obtained from CDN Resource Laboratories, Langley, B.C. A total of three standards were used during this program: one addressing low-medium grade and two high-grade standards.

In 2019, the Goldplay QA/QC program included the insertion of blanks (3 per 50 samples), duplicate assays (3 per 50 samples), and standard reference material (3 per 50 samples).

***Standards***

CDN prepared all reference material using the same procedure. First, reject ore material was dried, crushed, pulverized, then passed through a 270-mesh screen. The +270 material was discarded. The −270 material was mixed for five days in a double-cone mixer. Splits were taken and sent to 15 commercial laboratories for round-robin assaying.

In all, 174 samples of CRM pulp Standards, and 162 coarse, barren blank samples (blank) were sent to the SGS laboratory as part of Goldplay's Quality Control program.

***Blanks***

Two different blanks were used in the 2019 San Marcial program. One was a coarse blank purchased from a vendor; this material is an industrial-grade coarse silica sand in the 40 to 50 mesh size. The second was a rhyolite sample that Goldplay collected from an outcrop near the Las Habitas Ejido. The rhyolite source material was selected after taking two samples from the outcrop and sending them to the SGS Laboratories for analysis. The two samples analyzed were confirmed to have no mineralized material containing silver, zinc, lead, or gold.

The blank material was stored in a safe, segregated area in the core shed. The sampling personnel would collect the material to insert into the sample stream (approximately 1 kg), where specified by the core logging geologist. No issues were observed related to blanks for silver analysis, and a review of the blank assay data showed that the blank material performed very well.

Goldplay also used the blank to monitor gold, zinc, and lead during the 2019 program, and all results were acceptable and confirmed the integrity of the assaying program for the related lots of samples.

***Duplicate Samples***

Goldplay has recovered original assay certificates for all samples collected during the 2010 Silvermex sampling program. Pulps and rejects related to historical samples collected during the 2010 sampling program are currently stored at GR Silver's storage site in the Plomosas Core Facility.

Goldplay determined that it was prudent to re-analyze a selection of the samples remaining from the 2010 sampling program to validate the historical assay results. In all, Goldplay re-assayed 1,049 pulps and 121 rejects from the 2010 program.

All drill-hole collars have been located on site, and all core boxes related to all drill holes sampled in these programs are currently stored at GR Silver's storage site in Plomosas Core Facility. Goldplay obtained original downhole survey data for the 22 core drill holes from the 2010 sampling program's original drilling contractors, which the site geologist validated. Goldplay's personnel completed full validation of quality, integrity, and consistency of the information prior to adding this information to the assay database. The on-site QP reviewed all information related to the assays in this program.

#### *11.3.7 GR Silver*

GR Silver's QA/QC protocols were introduced immediately at the beginning of the core drilling program in 2020. The program included blanks, standards, and field duplicate samples in all the sample batches sent to the SGS laboratories.

Each batch of 50 samples included 3 standards from CDN Resource Laboratories, 3 coarse blanks placed at the beginning and at the end of a mineralized zone and 3 duplicates. In all, 559 samples (pulps) were sent to Bureau Veritas for external assay checks.

***Standards***

Initially in 2020, two CRMs were used to represent a low- to medium-grade CRM used during the core sampling. In 2021, four additional samples were added to the list of CRMs inserted in the assay stream.

Additionally, to cover gold over-limits, GR Silver acquired the high-grade CRM CDN-GS-20C. In 2022, three more samples were added to the list of CRMs used.

Any samples that returned values outside of two standard deviations of the expected value for the standard were flagged as warning; any sample falling outside of three standard deviation was considered a failure, and the batch was re-assayed unless supported by other well-behaved standards within the same batch.

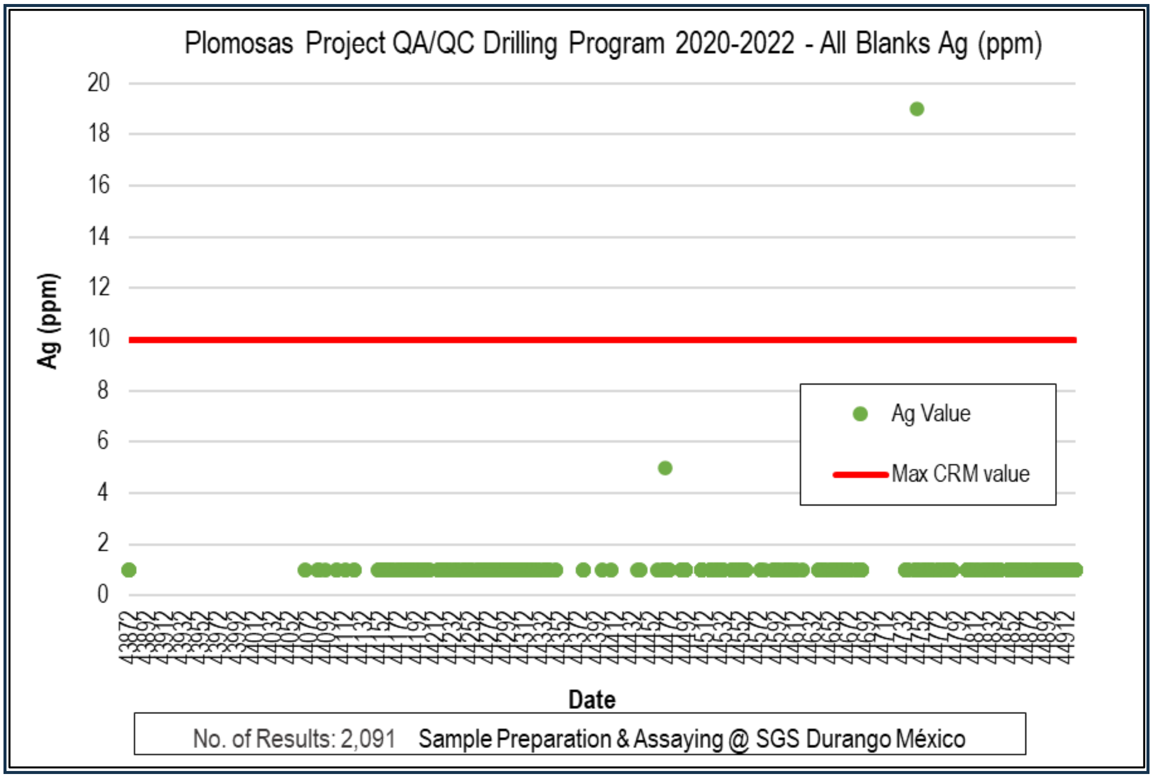
All of the QA/QC control charts illustrate a low percentage of warnings or failures during the drilling program, sample preparation and assaying at SGS Laboratories. No sample batches were re-assayed, even after isolated fails, due to the robustness of the other QA/QC sample results in the same batch.

***Coarse Blank***

The source of material for the blank samples was a rhyolitic tuff collected by GR Silver personnel from El Habal, one of GR Silver's concessions near the city of Rosario. Material is kept in rice bags at the Plomosas core shed. Bags containing 1 kg of blank material are prepared as needed for each sample shipment. This material has been used since 2018, and has provided excellent performance as a blank material for both gold and silver.

From 2020 to 2022, 2,091 coarse blanks were inserted in the assay stream. All but one performed within the expected guidelines; the lone failure was probably a mislabeled standard (Figure 11-9).

*Figure 11-9: Coarse Blank Performance from 2020 to 2022*

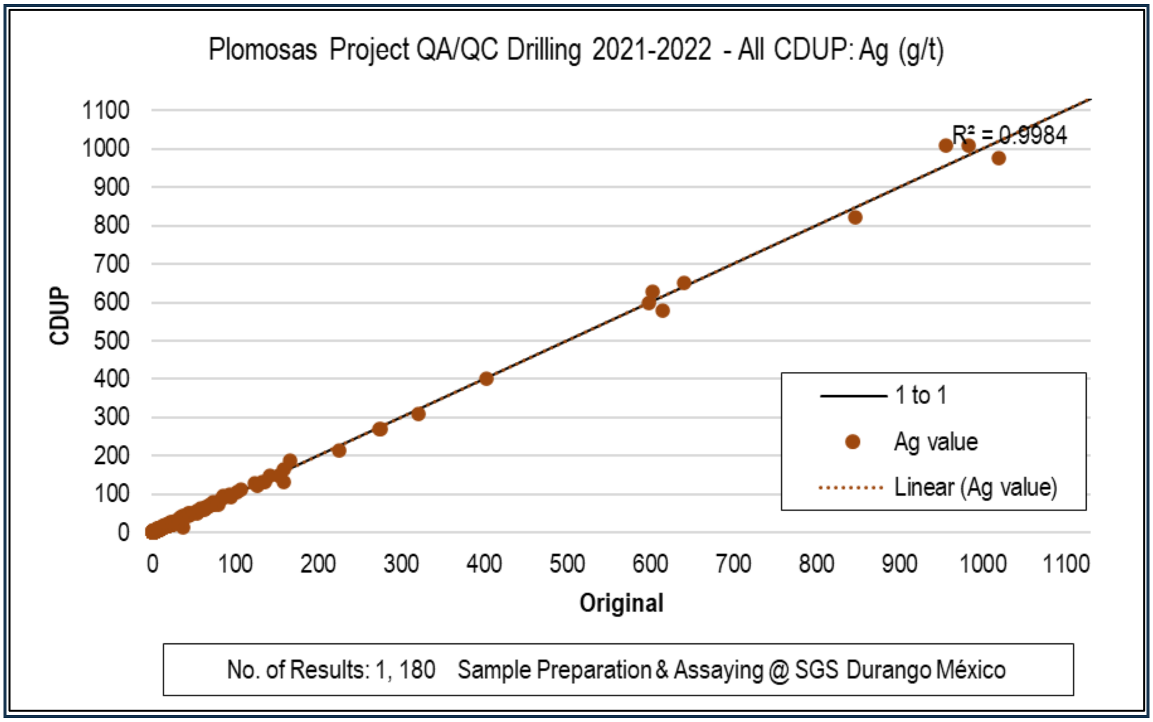



Source: GR Silver (2022).

### *Duplicates (Re-Assays)*

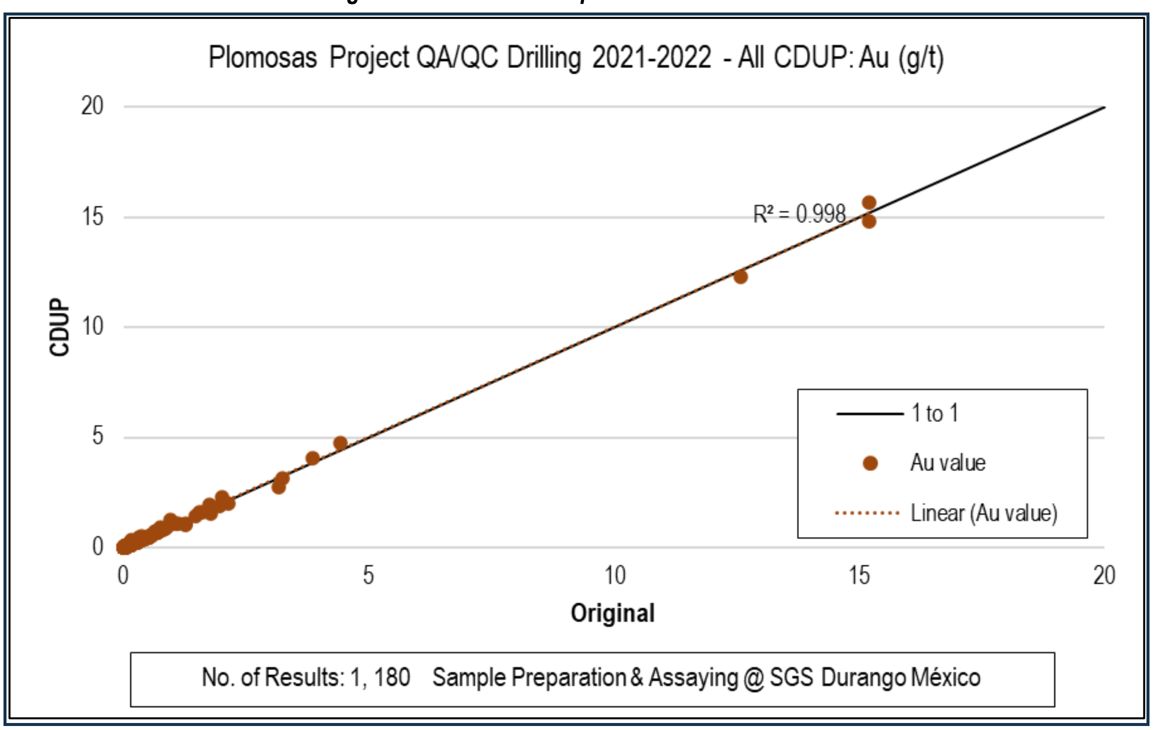
Between 2020 and 2022, GR Silver ran a total of 427 field duplicate samples, 1,180 coarse duplicates, and 853 pulp duplicates at SGS as part of their regular sampling program. Figure 11-10 to Figure 11-13 show the results of the coarse duplicates for silver, gold, lead, and zinc. It can be seen that the results of the duplicate samples are in very good agreement with the original assays, showing no evidence of bias at the SGS assay laboratory.

***Figure 11-10: Coarse Duplicate Results for Silver***



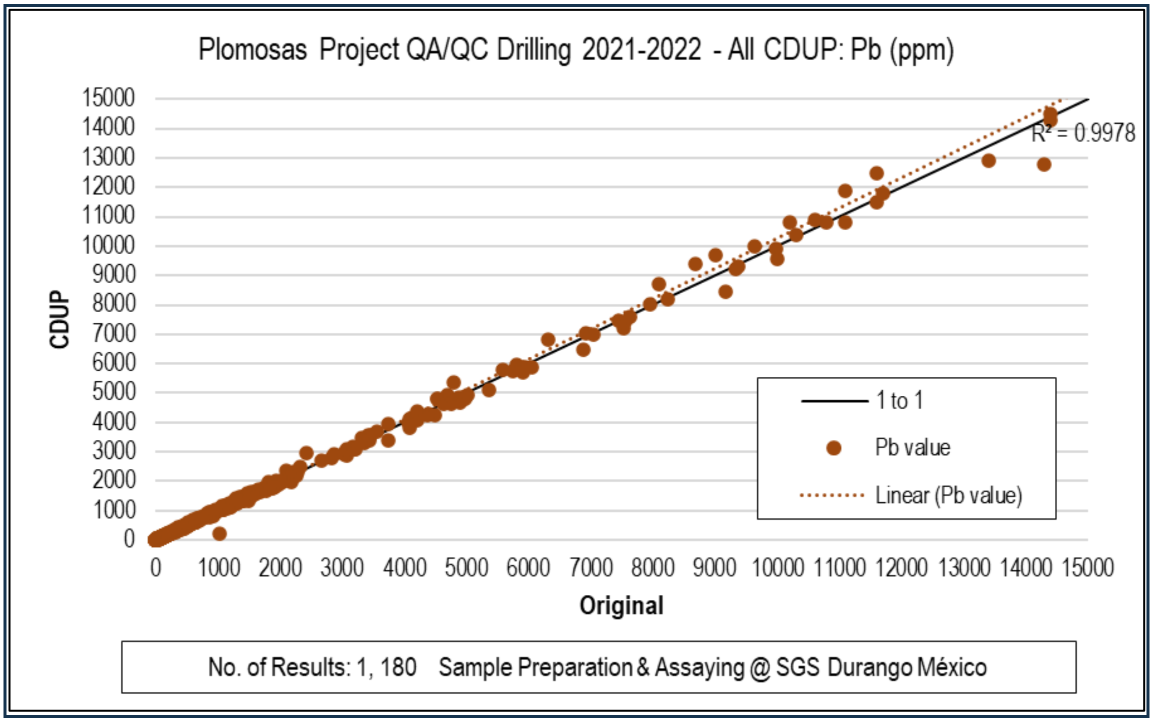

Source: GR Silver (2022).

***Figure 11-11: Coarse Duplicate Results for Gold***



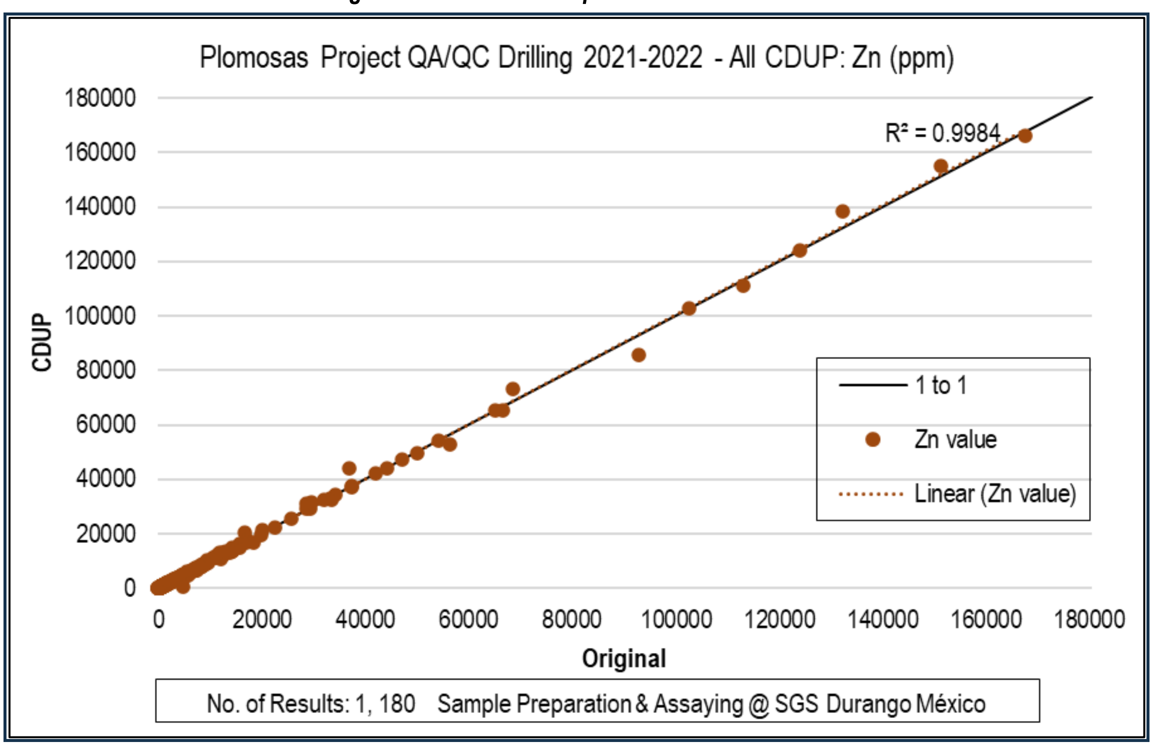

Source: GR Silver (2022).

***Figure 11-12: Coarse Duplicate Results for Lead***




Source: GR Silver (2022).

***Figure 11-13: Coarse Duplicate Results for Zinc***




Source: GR Silver (2022).

### *External Lab Checks*

GR Silver selected pulps received from SGS for re-analysis for the purposes of quality control protocols and to monitor the precision and accuracy of analytical results, contamination control of samples, and diagnosis and identification of sources of error in data used in the estimation of Mineral Resources. The re-assay program was carried out at Bureau Veritas, an ISO-certified, accredited laboratory.

In the laboratory, pulps and coarse rejects were homogenized. Coarse rejects were also pulverized. Sample preparation (if required) and analytical methods were the same as applied in the primary assay program at SGS Durango. Assaying is completed on aliquots in different locations. The following summarize aliquots and assay locations.

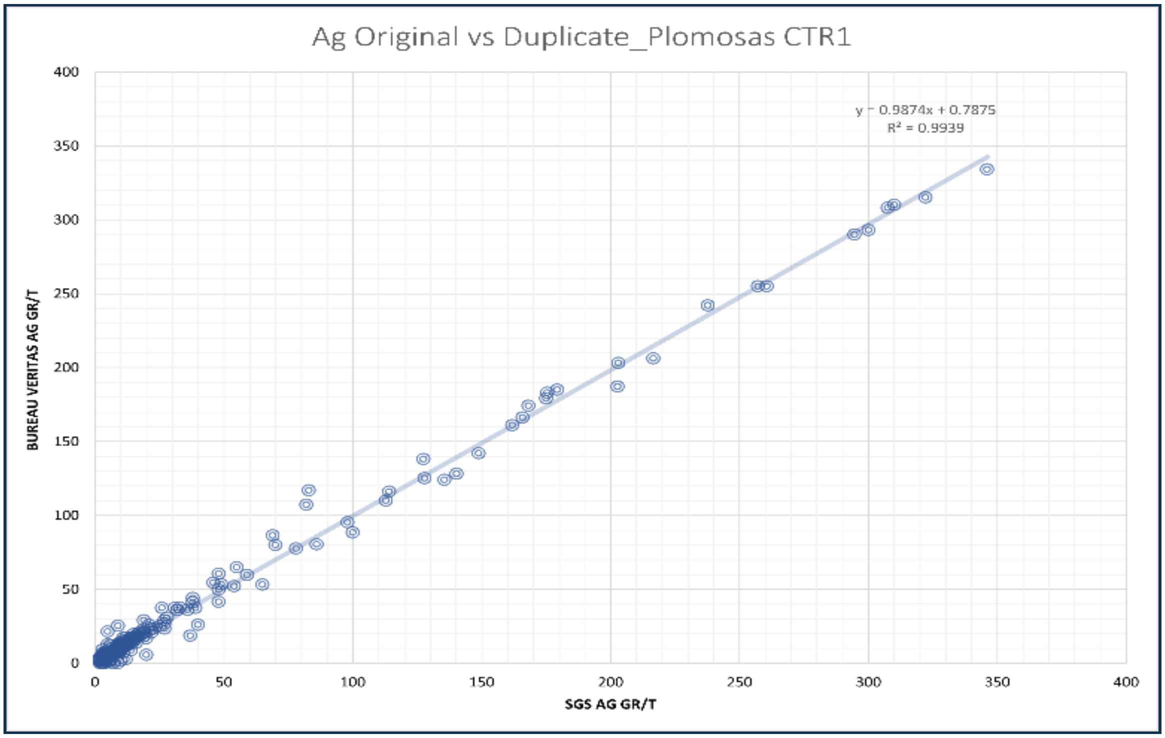
- 30 g fire assay for Au, AAS (FA430)
- 0.25 g 35 element digest ICP-AES (MA300)
- Special instructions: if Au >10 ppm GO FA530/If Ag >100 ppm GO_FAG530/If Zn/Pb/Cu> 10,000 ppm GO PF370
- FA430-FA530 takes place in Hermosillo, Sonora State
- MA300 takes place in Vancouver, B.C.

Figure 11-14 to Figure 11-17 show the results for the 559 pulp duplicates from Plomosas Mine and San Juan–La Colorada Areas sent to Bureau Veritas for validation. Overall, the pulp duplicates performed very well, indicating no apparent bias with SGS assays.

As can be seen in the graphs, the coefficient of determination ($R^2$) is high for most of the elements, which indicates a good correlation between the original data and those expected in the duplicate test.

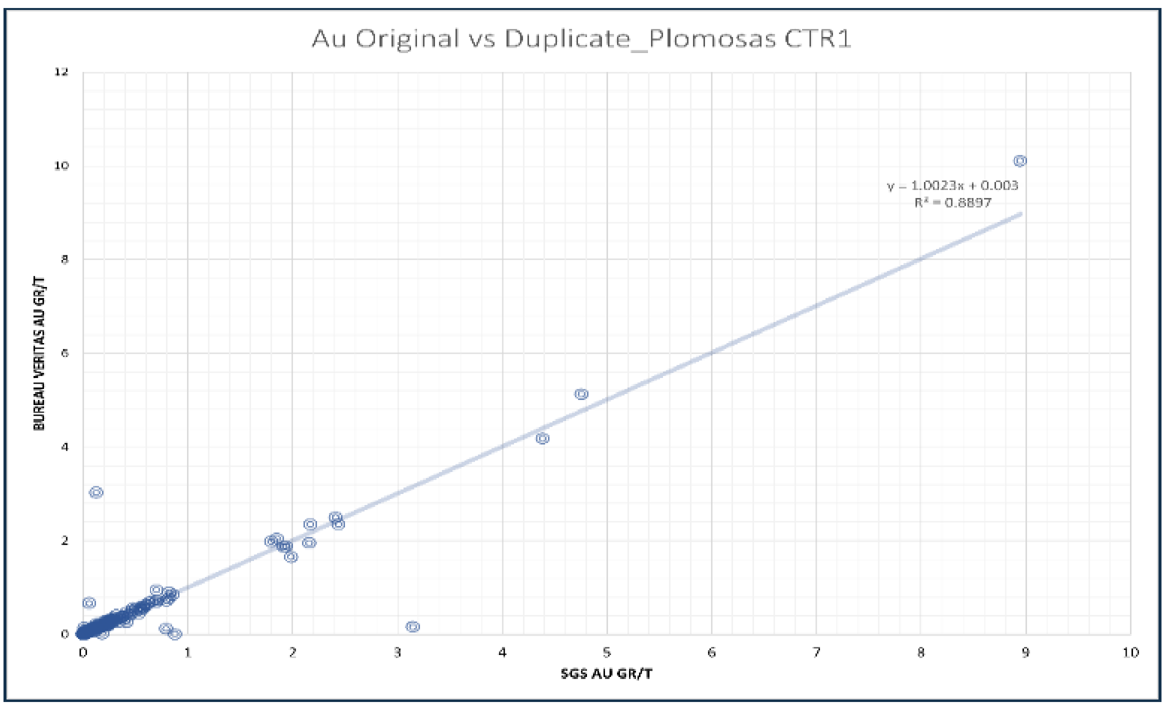
The standards and blanks inserted in the batch submitted for re-assaying did not report any inconsistency.

***Figure 11-14: Silver Results for All Pulps from Plomosas Mine and San Juan–La Colorada Areas***



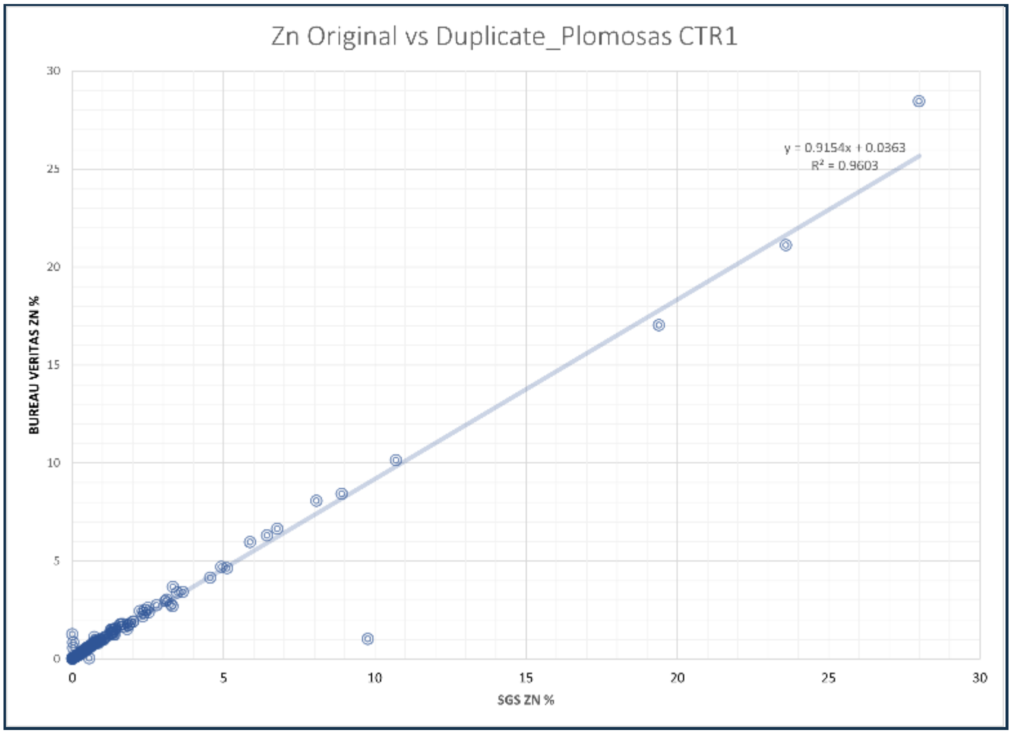

Source: GR Silver (2022).

***Figure 11-15: Gold Results for all Pulps from Plomosas and San Juan–La Colorada Areas***



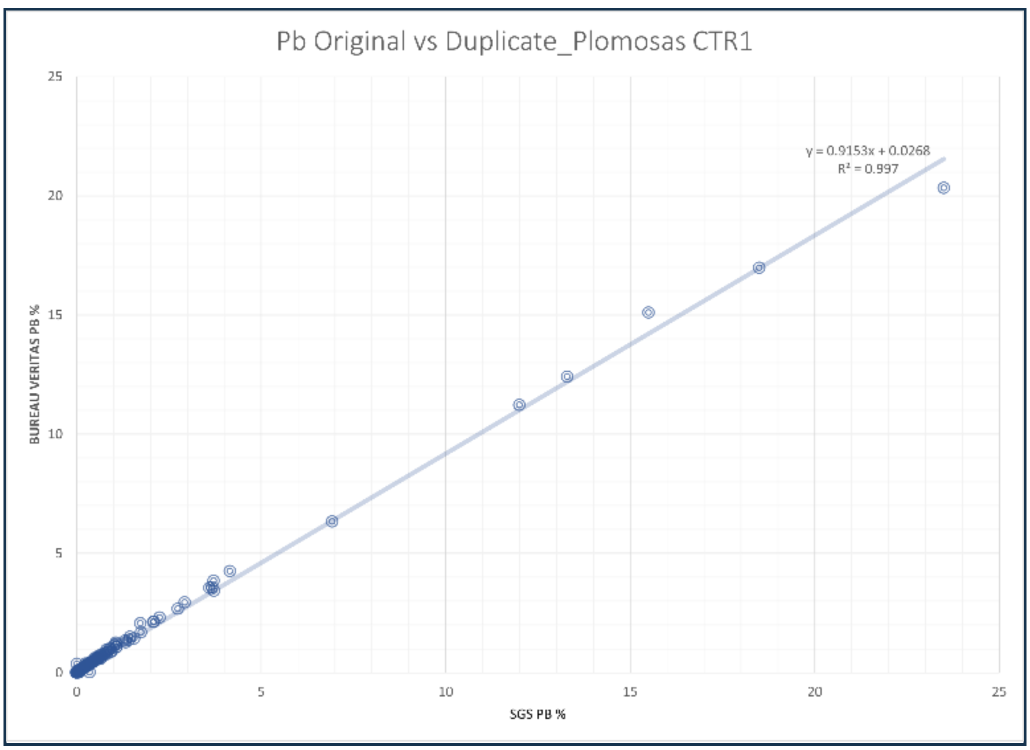

Source: GR Silver (2022).

*Figure 11-16: Zinc Results for all Pulps from Plomosas and San Juan–La Colorada Areas*




Source: GR Silver (2022).

*Figure 11-17: Lead Results for all Pulps from Plomosas and San Juan–La Colorada Areas*



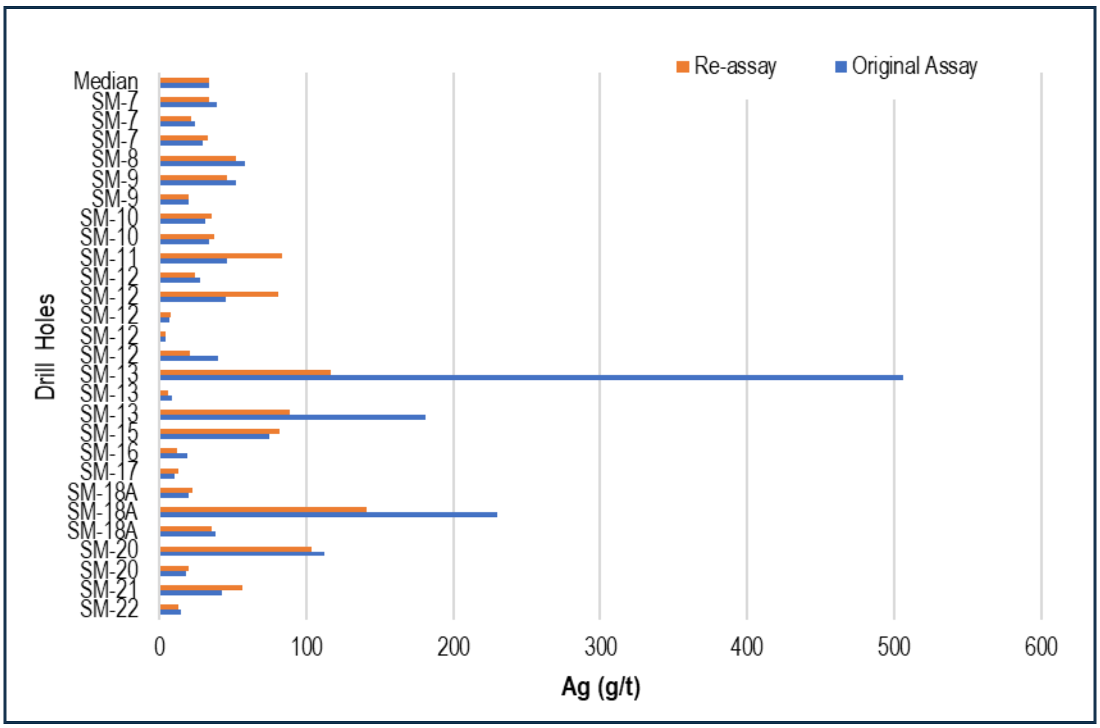

Source: GR Silver (2022).

### *Re-Sampling of Gold-Ore Core*

In 2022, GR Silver re-sampled 15 drill holes initially sampled by Gold-Ore. The initial samples were collected over longer intervals that were not necessarily representative of the variability within the mineralized unit at San Marcial. The GR Silver sampling was carried out at 1 m intervals and replaced the older 3 m sample lengths. In total, 448 GR Silver samples replaced 157 samples originally collected by Gold-Ore.

The comparison of the re-sampling program with the original assay results helps to validate the Gold-Ore data and confirmed that there is no apparent bias in the original Gold-Ore sampling. Figure 11-18 compares the original Gold-Ore sampling with the GR Silver quarter-core re-assays. As can be seen, the two data sets have the same median, and most intervals returned similar values to those in the original data. A noted exception is SM-13, a drill hole that returned a 506 g/t Ag value compared to 117 g/t for the re-assay program. The QP is of the opinion that this is more indicative of local variation than assay bias.

***Figure 11-18: Comparison of Original Gold-Ore Assays with GR Silver Re-assay Values***




Source: GR Silver (2023).

## 11.4 Bulk Density Determinations

Bulk density determinations for the Plomosas Project are routinely collected during the drill program. Full core samples (15 to 25 cm long) are collected every 30 m downhole. Bulk density is determined by the following procedure:

1. The sample is dried in an oven at 110°C for about 4 hours
2. The sample is then allowed to cool off for a few minutes
3. The dry sample weight is recorded
4. The sample is dipped completely in melted paraffin and allowed to dry
5. The weight of the coated sample is recorded
6. The sample is immersed in water and the wet weight is recorded.

The bulk density is then determined using the formula:

$$Bulk\ density = \frac{Weight\ dry}{Weight\ dry - Weight\ wet}$$

## 11.5 Qualified Person Comments

The QP is of the opinion that the sample security, preparation, and analytical procedures used by Aurcana, Silvermex, First Majestic, Goldplay, and GR Silver are in keeping with best practice industry standards and are acceptable for the estimation of Mineral Resources. The information collected from the Gold-Ore drill program appears adequate, although the QA/QC data could not be located. A review of the Gold-Ore drill holes compared to nearby drill holes does not indicate any bias in the Gold-Ore drill data, and the re-sampling program of the Gold-Ore intervals within the mineralized intervals eliminates any possible risks with the Gold-Ore data, as the re-assays were used and not the original data. All Gold-Ore assays were verified against original assay certificates, and no errors were detected. The Gold-Ore data have a limited influence on the San Marcial MRE given that the area is well covered by more recent drill campaigns, and that most mineralized intervals were re-assayed by GR Silver. For these reasons the QP decided to include the Gold-Ore data in the estimation of the San Marcial Mineral Resource.

Data from the IMMSA drilling program are insufficient for inclusion in the estimation of the Indicated Mineral Resource. However, the IMMSA data can be used to identify the location of the mineralized body and can be used in geological interpretations of the Plomosas structure, and the identification of the Inferred Mineral Resource.

# 12 DATA VERIFICATION

The QP, Dr. Arseneau, of ACS, carried out visits to the Plomosas Project on November 3 to 7, 2020, and on December 5 to 7, 2022. During these visits, the surface and underground geology was examined at the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas. The mineralization was observed in drill core, and 35 drill pads were verified with hand-held GPS. The eastings and northings of the drill pads agreed well with the locations provided in the GR Silver drill-hole database.

Selected samples were collected from drill core, from a high-grade pillar underground at the Plomosas Mine (Table 12-1). The samples collected were not intended to be true duplicates of samples GR Silver had collected; they were intended only to identify that mineralization occurs at the Project at levels previously reported and that independent sampling can generate results similar to what has been reported for the Project in the past. The samples collected from core did return similar values to previously collected samples.

***Table 12-1: Check Samples Collected by ACS During Site Visits***

| ACS Results | | | | | | Original Sample Values | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample No. | Au (g/t) | Ag (g/t) | Cu (%) | Pb (%) | Zn (%) | Au (g/t) | Ag (g/t) | Cu (%) | Pb (%) | Zn (%) | Description |
| 21582 | 13.02 | 254 | 0.39 | >30 | >30 | NS | NS | NS | NS | NS | Pillar Samples |
| 21583 | 0.03 | 2 | 0.00 | 0.23 | 0.71 | 0.22 | 3 | 0.00 | 0.46 | 1.23 | Core sample |
| 21584 | 0.12 | 5 | 0.06 | 0.70 | 2.14 | 0.10 | 4 | 0.06 | 0.55 | 1.49 | Core sample |
| 21585 | 0.70 | 26 | 0.04 | 9.09 | 10.70 | 0.69 | 28 | 0.04 | 6..81 | 7.50 | Core sample |
| 21586 | 0.28 | 66 | 0.01 | 0.05 | 0.14 | NS | NS | NS | NS | NS | Pillar Samples |
| I951094 | NA | 234 | 0.00 | 0.14 | 0.27 | 0.01 | 233 | 0.00 | 0.15 | 0.36 | Core sample |
| I951095 | NA | 136 | 0.00 | 0.14 | 0.35 | 0.02 | 196 | 0.01 | 0.17 | 0.37 | Core sample |
| I951096 | NA | 148 | 0.01 | 0.02 | 0.04 | 0.00 | 129 | 0.01 | 0.02 | 0.04 | Core sample |
| I951097 | NA | 219 | 0.01 | 2.69 | 2.37 | 0.12 | 142 | 0.00 | 3.16 | 1.00 | Core sample |
| I951098 | NA | 108 | 0.01 | 0.12 | 0.21 | 0.04 | 117 | 0.01 | 0.15 | 0.26 | Core sample |
| I951099 | NA | 40 | 0.01 | 0.03 | 0.10 | 0.03 | 49 | 0.01 | 0.03 | 0.11 | Core sample |

### *12.1.1 Database Verifications*

Drill-core logs were verified by checking drill core against logged lithologies. The QP is of the opinion that the general logging procedures and the observations from drill core from the GR Silver and First Majestic drill programs agreed with the descriptions in the GR Silver database.

All of the GR Silver assay data for the San Marcial, Plomosas, and San Juan–La Colorada Areas, and all of the Silvermex assays were verified by checking original assay certificates against the assay data in the drill-hole database; no significant errors were noted. In all, 3,494 (22%) of the First Majestic assay records, selected at random, were verified against original assay certificates, and 13 errors were noted; all errors were corrected prior to the preparation of the Mineral Resource estimation.

#### *12.1.2 Verification of Analytical Quality Control Data*

There are no records of the QA/QC program used for the IMMSA or Gold-Ore drill programs. Aurcana had a limited QA/QC program in place during its drill program, but no information is available on the results of its QA/QC program.

The QP verified the results of the QA/QC programs implemented by Silvermex and First Majestic, as well as Goldplay (later GR Silver)'s program of re-sampling and re-assaying of the First Majestic core, and found that First Majestic's QA/QC program rendered its results acceptable for inclusion in a Mineral Resource estimation. The standards performed well, and there was no evidence of sample contamination. The duplicate samples sent to SGS by GR Silver agreed reasonably well with the original assay data and seem to suggest that the original results may have reflected lower-than-actual lead and zinc values for higher-grade assays (>7% Pb and >5% Zn).

The QP verified the Goldplay (later GR Silver) QA/QC program for the 2019 to 2022 drill programs and found it to be in keeping with industry standard practices; international standards were used to assure accuracy, and blanks and duplicate samples were routinely inserted in the assay stream. GR Silver implemented a program of pulp re-assays where 559 samples were sent to Bureau Veritas for verification.

Overall, the review of the original assay certificates combined with the review of the QA/QC program results showed that the Plomosas Project assay data were reliable and acceptable for inclusion in a MRE.

### 12.2 Verification of Metallurgical Results

The flotation test results were verified during the original testwork program by comparing the calculated feed grade from each test to the expected value from the head assays. The results were further verified by reviewing the assay certificates for the testwork assays.

It is Mr. Crowie's opinion that the testwork conducted was performed at industry standards, and the results are valid for predicting mill recoveries in the MRE given in this Technical Report.

### 12.3 QP Comments

Dr. Arseneau is of the opinion that the data included in the GR Silver Plomosas Project database are adequate for the estimation of Mineral Resources. However, because of IMMSA's lack of a QA/QC program and the lack of existing drill core from the IMMSA drilling program, assay data from IMMSA's drilling are insufficient for inclusion in the estimation of Indicated Mineral Resources. Nevertheless, the IMMSA drill data can be used to identify the location of the mineralized body and in the geological interpretation of the Plomosas structure, as well as the estimation of Inferred Mineral Resources.

# 13 MINERAL PROCESSING AND METALLURGICAL TESTING

Since 2001, previous workers have completed two metallurgical programs at San Marcial, followed by three metallurgical programs undertaken by GR Silver on the San Marcial, Plomosas Mine, and San Juan deposits:

- 2001 metallurgical testing on San Marcial samples
- 2010 metallurgical testing on six San Marcial samples
- 2019 metallurgical testing on three San Marcial composites
- 2020 bulk sample testing at a third-party mill in Mexico, with sample sourced from the San Juan deposit
- 2021 metallurgical testing of six samples of material collected at the Plomosas Mine and San Juan deposit (Phase 1) by Base Met Labs in Kamloops, B.C., Canada.

Each metallurgical program is described in Sections 13.2 through 13.6.

## 13.1 Metallurgical Testing on San Marcial Samples—2001

In March 2001, Gold-Ore selected five oxide and sulphide samples from holes SM-2, SM-4, and SM-5, and submitted them to ALS Chemex in Reno, Nevada, for cyanide leach tests. The original reject split was pulverized to $P_{90}$ 200 mesh and subjected to cyanide leaching in vats for 72 hours. Reported recoveries ranged from 80% to 120% (recoveries greater than 100% reflect a common 3% to 7% loss on ignition during the original fire assays).

Additional preliminary metallurgical testwork was carried out on four composite samples comprising drill-core rejects that were submitted to Process Research Associates Ltd. in Vancouver, B.C. Composites were made from the mineralized intervals in holes SM-3, SM-5, SM-6, and SM-7. Overall recovery using flotation followed by cyanidation ranged from 90% to 97.9%, with an average of 94.8%. The flotation concentrates grades following one stage of cleaning varied from 900 to 54,000 g/t Ag. The lead grade varied from 0.48% to 12.3%, and the zinc grade varied from 1.17% to 16.2%. The lower-grade concentrate corresponds to high pyrite content. Only one-half of the metal content was recovered to the cleaned concentrates. No fatal flaws in the metallurgy were indicated. Additional testwork was deemed to be required to determine optimum conditions for flotation, particularly in terms of the concentrate grade.

## 13.2 Metallurgical Testing on Six San Marcial Samples—2010

In 2010, Silvermex invited Inspectorate America, PRA Metallurgical Division, to carry out a confirmatory metallurgical testing program to evaluate silver recovery on six samples originating from San Marcial. The objective of the program was to determine the best process-treatment option. The test program consisted of head characterization and metallurgical testing. Standard chemical analyses were conducted on freshly blasted vein samples only. More detailed assaying, optical mineralogy, Bond Ball Mill Work Index, and metallurgical recovery testing (cyanide leaching and bench-scale flotation) were carried out on a composite of the six samples. The samples used were collected from trenches excavated in 2010. They were considered representative of near-surface oxidized mineralization.

Head assays of the vein samples ranged from 66 to 620 ppm Ag, an average of 275 ppm Au, 0.45% sulphide sulphur, and approximately 1% combined Pb+Zn. The composite sample gave a grade of 306 ppm Ag.

- A Bond Ball Mill Work Index test was carried out at a standard closing screen size of 150 mesh Tyler (105 µm). The result was 14.7 kWh/t, indicating that the composite blend was average hardness.
- Baseline bottle roll cyanidation was conducted on ground whole ore to assess the sensitivity of silver recoveries, kinetics, and reagent requirements. The baseline test results and flattening of the silver-leach profiles suggested that the standard 72 hours of retention was adequate.

The San Marcial samples were found to be amenable to direct cyanide leaching, with up to 88% Ag recovery in a 72 hour bottle roll cyanidation test; however, the samples may not be amenable to flotation only, even with aggressive conditions using sulphidizing and activating reagents. Given the efficient upgrading of silver and the likely removal of labile sulphide components that could interfere in leaching, pre-concentration by flotation followed by cyanide leaching was considered still viable.

## 13.3 Testing on Three San Marcial Composites—2019

In 2019, 69 quarter-HQ core samples weighing a total of 146 kg were received at Base Met Labs in Kamloops. The samples were divided into three ore types: Oxide, Transition, and Sulphide. The sample mass for each of the three ore types was approximately 50 kg.

Upon receipt, the samples were crushed to $P_{100}$ 6 mesh, composited into the three ore types, and split into metallurgical charges. A sample was collected for a head assay; assay results are given in Table 13-1.

***Table 13-1: San Marcial Bulk Sample—Processing Assay Results and Precious-Metal Recoveries***

| Composite | Assays (% or g/t) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Pb (%) | Zn (%) | Fe (%) | Ag (g/t) | $Ag_2$ (g/t) | S (%) | Au (g/t) |
| Oxide Head 1 | 0.26 | 0.49 | 5.80 | 97 | 97 | 0.08 | 0.02 |
| Oxide Head 2 | 0.27 | 0.48 | 5.80 | 87 | 101 | 0.08 | 0.02 |
| **Average** | **0.27** | **0.49** | **5.80** | **-** | **96** | **0.08** | **0.02** |
| Transition Head 1 | 0.33 | 0.62 | 5.40 | 121 | 188 | 2.45 | 0.06 |
| Transition Head 2 | 0.34 | 0.65 | 5.30 | 131 | 148 | 2.42 | 0.07 |
| **Average** | **0.34** | **0.64** | **5.35** | **-** | **147** | **2.44** | **0.06** |
| Sulphide Head 1 | 0.40 | 1.41 | 6.90 | 135 | - | 7.54 | 0.22 |
| Sulphide Head 2 | 0.40 | 1.53 | 7.00 | 137 | - | 7.47 | 0.24 |
| **Average** | **0.40** | **1.47** | **6.95** | **136** | **-** | **7.51** | **0.23** |

Source: Base Met Labs (2019).
Note: $Ag_2$ refers to a duplicate assay on the sample.

A mineralogy study was conducted on each of the three composites to determine the minerals containing the valuable metals present in the deposit. Table 13-2 and Table 13-3 show the composition of the lead and zinc minerals respectively.

Lead minerals for the Transition and Sulphide composites were primarily galena with some traces of other minerals. In the case of the Oxide composite, there was much greater variability of the lead-bearing minerals.

The zinc-bearing minerals in the Transition composite had a higher variability than the lead mineralization in the transition zone.

*Table 13-2: Lead-Bearing Minerals in Three San Marcial Composites*

| Lead-Bearing Minerals | Lead Distribution (%) | | |
|---|---|---|---|
| | Oxide | Transition | Sulphide |
| Galena | 33.6 | 95.9 | 99.1 |
| Kombatite | 9.3 | 0.9 | 0.6 |
| Mottramite–Descloizite | 24.5 | 0.0 | 0.0 |
| Cesarolite/Coronadite | 32.6 | 3.2 | 0.3 |
| **Total** | **100** | **100** | **100** |

Source: Base Met Labs (2019).

*Table 13-3: Zinc-Bearing Minerals in Three San Marcial Composites*

| Zinc-Bearing Minerals | Zinc Distribution (%) | | |
|---|---|---|---|
| | Oxide | Transition | Sulphide |
| Sphalerite | 6.8 | 57.6 | 91.7 |
| Mottramite–Descloizite | 2.8 | 0.0 | 0.0 |
| Zinalsite | 12.4 | 9.0 | 5.4 |
| Smithsonite | 0.1 | 1.2 | 0.1 |
| Chlorite/Baileychlore | 77.9 | 32.1 | 2.8 |
| **Total** | **100** | **100** | **100** |

Source: Base Met Labs (2019).

### *13.3.1 Comminution*

A Bond Ball Mill Work Index determination was completed using a standard Bico Bond mill on each of the three composites. All three of the ore zones were higher-than-average hardness. The Oxide sample was the softest and the Transition and Sulphide samples were equal in hardness. The results can be seen in Table 13-4.

**Table 13-4: San Marcial Composites Bond Ball Mill Work Index Test Results**

| Composite | Sizing µm $K_{80}$ | | |
|---|---|---|---|
| | Feed | Product | kWh/t |
| Oxide | 2,005 | 76 | 16.5 |
| Transition | 1,949 | 79 | 21.1 |
| Sulphide | 1,929 | 78 | 21.0 |

Source: Base Met Labs (2019).
Note: $K_{80}$ = The size at which 80% of particles by mass are smaller than that size range of the initial particles in single particle impact breakage test

### *13.3.2 Flotation*

A series of rougher and cleaner flotation tests was conducted on the three composite samples to determine the optimal conditions for recovering lead, silver, and zinc.

A typical selective Pb-Zn flotation circuit and reagents were chosen for this program. Zinc sulphate and cyanide were used to depress sphalerite (zinc) in the lead rougher circuit, then copper sulphate was used to activate the sphalerite in the zinc circuit. This testwork campaign focused on determining if flotation could be used to economically produce lead, zinc, and silver, and did not put much emphasis on optimizing reagent addition.

Initial tests on the Oxide sample confirmed that the oxidized minerals would not respond well to using flotation to recover base and precious metals. Further testing on this sample was aborted after a few tests.

The Sulphide composite demonstrated good results, with 56% of the lead recovered to a concentrate grading 47% Pb, and 73% of the zinc reporting to a zinc concentrate with a grade of 54% Zn. The silver recoveries to the lead and zinc concentrates combined were just over 50%, with grades in the lead concentrate of 9,300 g/t Ag and 1,420 g/t Ag in the zinc concentrate.

The Transition zone composite had a single-batch cleaner test performed on it. The metallurgical performance did not achieve the recoveries and concentrate grades demonstrated by the Sulphide composite, with 41% of the lead reporting to a lead concentrate with a grade of 38.4%. The zinc concentrate had a grade of 43.8% and achieved a recovery of 52.1%. Approximately 50% of the silver was recovered to the two concentrates, with a grade of 13,300 g/t Ag in the lead concentrate and 3,690 g/t Ag in the zinc concentrate.

A locked cycle test was performed on the Sulphide zone composite (Table 13-5). The lead and zinc results showed higher recoveries, but appeared to be on the same grade recovery curve as the batch cleaner test, so the concentrate grades of the two concentrates were lower. The overall silver recovery was 67.7% to the lead and zinc concentrates.

***Table 13-5: San Marcial Sulphide Composite Locked Cycle Test Results***

| Product | Weight | | Assay (% or g/t) | | | | | Distribution (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | % | g | Ag | Pb | Zn | Fe | S | Ag | Pb | Zn | Fe | S |
| **Pb Concentrate** | **0.5** | **9.8** | **7,970** | **44.2** | **16.9** | **7.7** | **25.3** | **30.3** | **59.5** | **5.9** | **0.6** | **1.7** |
| Pb 2nd Cleaner Tailings | 0.2 | 3.2 | 3,000 | 7.6 | 11.70 | 16.40 | 22.8 | 3.7 | 3.3 | 1.3 | 0.4 | 0.5 |
| Pb 2nd Cleaner Feed | 0.7 | 13.0 | 6,747 | 35.2 | 15.62 | 9.84 | 24.7 | 34.1 | 63 | 7.2 | 1.0 | 2.2 |
| Pb 1st Cleaner Tailings | 3.6 | 71.6 | 550 | 1.3 | 3.90 | 10.20 | 11.6 | 15.3 | 13.0 | 9.9 | 5.6 | 5.7 |
| Pb 1st Cleaner Feed | 4.3 | 84.6 | 1502 | 6.5 | 5.70 | 10.14 | 13.6 | 49.4 | 75.9 | 17.1 | 6.5 | 7.9 |
| Pb RO Concentrate | 4.1 | 81.4 | 1,443 | 6.5 | 5.47 | 9.90 | 13.2 | 45.6 | 72.5 | 15.7 | 6.1 | 7.4 |
| Pb RO Tailings | 95.9 | 1,893.3 | 74 | 0.11 | 1.26 | 6.52 | 7.10 | 54.35 | 27.5 | 84.3 | 93.9 | 92.6 |
| **Zn Concentrate** | **2.3** | **46.0** | **2,110** | **2.27** | **49.0** | **8.9** | **30.1** | **37.7** | **14.4** | **79.7** | **3.1** | **9.5** |
| Zn 3rd Cleaner Tailings | 0.2 | 3.9 | 2,100 | 2.56 | 7.50 | 32.80 | 19.0 | 3.2 | 1.4 | 1.0 | 1.0 | 0.5 |
| Zn 3rd Cleaner Feed | 2.5 | 49.9 | 2,109 | 2.3 | 45.8 | 10.8 | 29.2 | 40.9 | 15.7 | 80.8 | 4.1 | 10.0 |
| Zn 2nd Cleaner Tailings | 0.6 | 11.2 | 780 | 0.97 | 2.4 | 16.9 | 10.7 | 3.4 | 1.5 | 0.9 | 1.4 | 0.8 |
| Zn 2nd Cleaner Feed | 3.1 | 61.1 | 1,866 | 2.1 | 37.8 | 11.9 | 25.8 | 44.3 | 17.2 | 81.7 | 5.5 | 10.9 |
| Zn 1st Cleaner Tailings | 6.8 | 133.3 | 148 | 0.22 | 0.5 | 7.9 | 5.86 | 7.66 | 4.0 | 2.4 | 8.0 | 5.4 |
| Zn 1st Cleaner Feed | 9.8 | 194.4 | 688 | 0.8 | 12.2 | 9.2 | 12.1 | 52.0 | 21.2 | 84.1 | 13.5 | 16.3 |
| Zn RO Concentrate | 9.1 | 179.3 | 651 | 0.75 | 13.0 | 8.2 | 12.08 | 45.37 | 18.4 | 82.1 | 11.1 | 14.9 |
| **Zn RO Tailings** | **90.4** | **1,785.6** | **35** | **0.09** | **0.2** | **6.5** | **6.78** | **24.28** | **22.1** | **12.0** | **88.3** | **83.4** |
| Flotation Feed | 100.0 | 1,974.7 | 130 | 0.37 | 1.43 | 6.7 | 7.35 | 100.00 | 100 | 100 | 100 | 100 |

Source: Base Met Labs (2019).
Note: RO = reverse osmosis.

### *13.3.3 Leaching*

A series of leach tests was conducted to determine the expected silver recovery. Gold recovery was not measured for the majority of the samples, but there was a single gold solution assay conducted on Leach Test 25.

The testing demonstrated that silver could be recovered by leaching with cyanide (Table 13-6).

*Table 13-6: San Marcial Composites Leach Test Results*

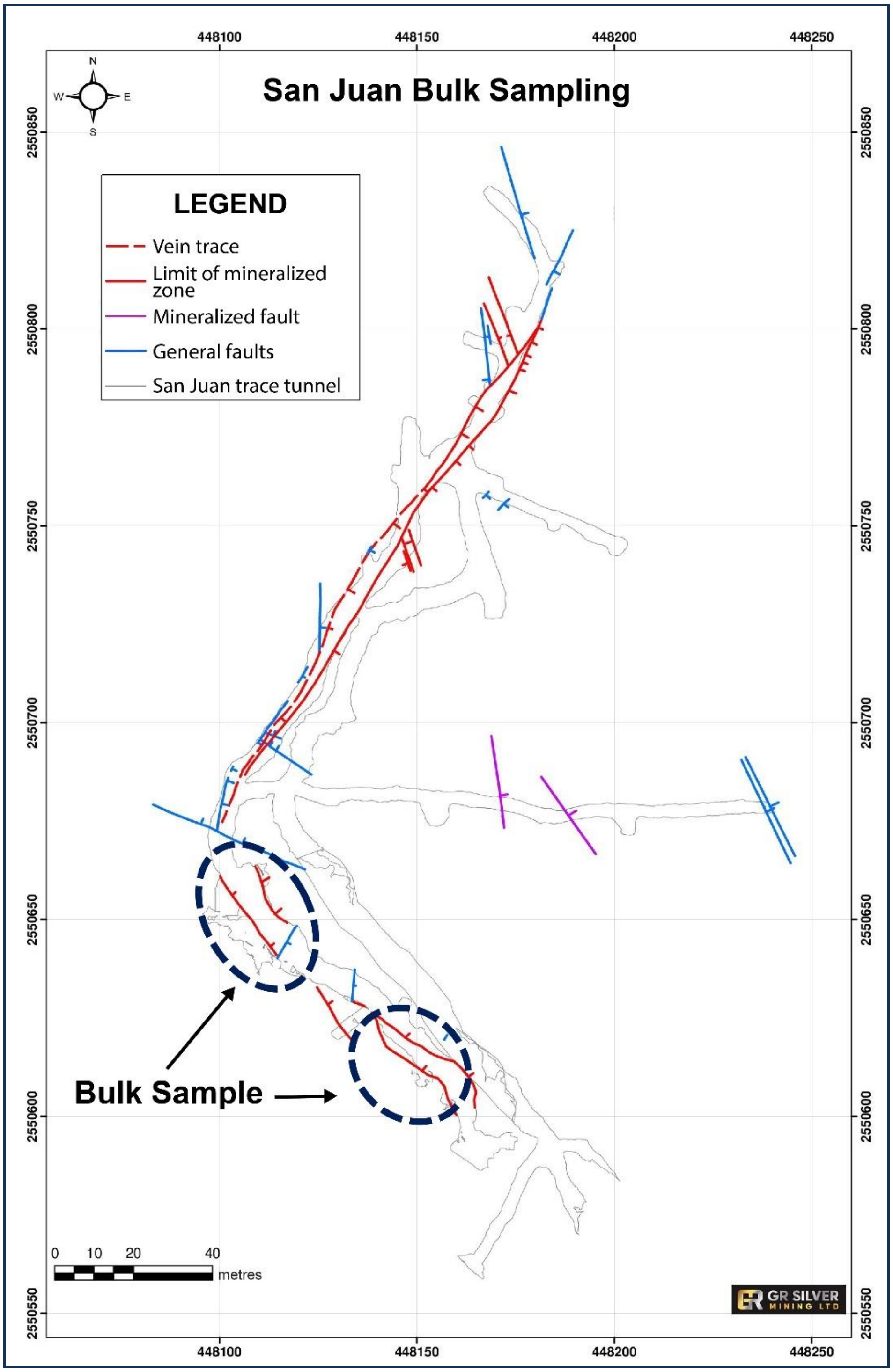
| Composite | Test | Grind ($\mu m$ $K_{80}$) | Reagent Dosage (g/t) | | Sparge Gas | Consumption (kg/t) | | Recovery |
|---|---|---|---|---|---|---|---|---|
| | | | NaCN | $PbNO_3$ | | Lime | NaCN | |
| Oxide | 4 | 46 | 1,000 | 0 | $O_2$ | 1.27 | 1.10 | 87.0 |
| | 5 | 92 | 1,000 | 0 | $O_2$ | 1.43 | 0.54 | 82.0 |
| | 14 | 46 | 1,000 | 250 | $O_2$ | 1.14 | 1.28 | 88.5 |
| | 15 | 46 | 1,000 | 0 | Air | 0.95 | 2.10 | 80.8 |
| | 23 | 46 | 500 | 250 | $O_2$ | 1.40 | 0.58 | 86.9 |
| | 26 | 46 | 1,500 | 250 | $O_2$ | 1.10 | 1.28 | 89.9 |
| Transition | 6 | 48 | 1,000 | 0 | $O_2$ | 1.21 | 1.80 | 92.4 |
| | 7 | 77 | 1,000 | 0 | $O_2$ | 1.21 | 1.16 | 91.2 |
| | 16 | 48 | 1,000 | 250 | $O_2$ | 1.42 | 3.00 | 93.5 |
| | 17 | 48 | 1,000 | 0 | Air | 1.11 | 3.36 | 92.9 |
| | 24 | 48 | 500 | 250 | $O_2$ | 1.31 | 1.40 | 92.1 |
| | 27 | 48 | 1,500 | 250 | $O_2$ | 1.14 | 2.14 | 92.9 |
| Sulphide | 8 | 52 | 1,000 | 0 | $O_2$ | 1.20 | 3.46 | 90.4 |
| | 9 | 95 | 1,000 | 0 | $O_2$ | 1.20 | 1.60 | 86.5 |
| | 18 | 52 | 1,000 | 250 | $O_2$ | 1.23 | 2.44 | 89.8 |
| | 19 | 52 | 1,000 | 0 | Air | 1.26 | 3.58 | 87.6 |
| | 25 | 52 | 500 | 250 | $O_2$ | 1.58 | 2.22 | 87.4 |
| | 28 | 52 | 1,500 | 250 | $O_2$ | 1.18 | 2.50 | 89.9 |

Source: Base Met Labs (2019).

## 13.4 San Juan Bulk Sample—2020

In 2020, GR Silver geologists collected a bulk sample of the mineralized San Juan Breccia, with the intention of conducting a pilot metallurgical test. Extraction of mineralized material was carried out at the main level (Level 871) of the San Juan mine, from within the first 100 m from the tunnel entrance (Figure 13-1). The bulk sample extracted corresponded to 2,700 tonnes from the main San Juan Breccia , located inside the San Juan tunnel.

***Figure 13-1: Sample Location of the Metallurgical Bulk Sample—San Juan***




Source: Arseneau and Crowie (2021).

### 13.4.1 Methods and Procedures

The sample locations for the bulk sample were identified in the first 100 m of the San Juan entrance tunnel, where GR Silver identified a representative mineralized section of the San Juan Breccia with expected base and precious metal concentrations, based on previous channel sampling and geochemical analysis by an independent external laboratory.

Prior to excavation and extraction, the entire sample area selected for mineralized bulk sampling was cleaned to remove old loose material. The mining method was similar to cut-and-fill; it consisted of cutting layers starting from the lower part of the San Juan Breccia, taking the cut upwards, and leaving all the mined material on the floor to be used as a work platform. Drilling and cutting were carried out using two work shifts per day, under the supervision of trained safety personnel. Once enough material had been accumulated, the mined material was removed with a Scooptram and transported to the tunnel exit on the main level and stored as small piles of approximately 21 tonnes each, for a total of 2,700 tonnes. The entire process, from extraction to processing and sampling, is illustrated in Figure 13-2 to Figure 13-7.

The mineralized material was transported for processing to a local beneficiation plant owned by Met-Sin., 3 km from the San Juan tunnel. The plant has a capacity of 70 t/d. The sample material was processed by crushing, milling, and flotation, as shown in the flowsheet (Figure 13-7). The entire 2,700-tonne bulk sample was processed in a circuit dedicated to this sample for 16 days. Prior to flotation the mineralized material was crushed and ground to a particle size of $P_{80}$ 74 µm. This particle size was chosen based on IMMSA's previous milling practice at the Plomosas mine.

Representative samples were collected while the pilot plant was operating, to characterize the feed, concentrate, and tailings. Samples were collected twice each day. As such, 96 samples were collected—32 head samples, 32 concentrate samples, and 32 tailings samples (Table 13-1). The feed, concentrate, and tailing samples were manually collected from the processing plant, from the cyclone overflow pipe, concentrate launder, and tailings pipe respectively (see Figure 13-7).

*Figure 13-2: Transportation of Bulk Sample Material from Outside of the San Juan Tunnel to the Processing Plant*

Source: Arseneau and Crowie (2021).

***Figure 13-3: Bulk Sample Material in Piles Outside the San Juan Tunnel***


Source: Arseneau and Crowie (2021).

***Figure 13-4: Drilling and Cutting Activities Underground at San Juan Mine***


Source: Arseneau and Crowie (2021).

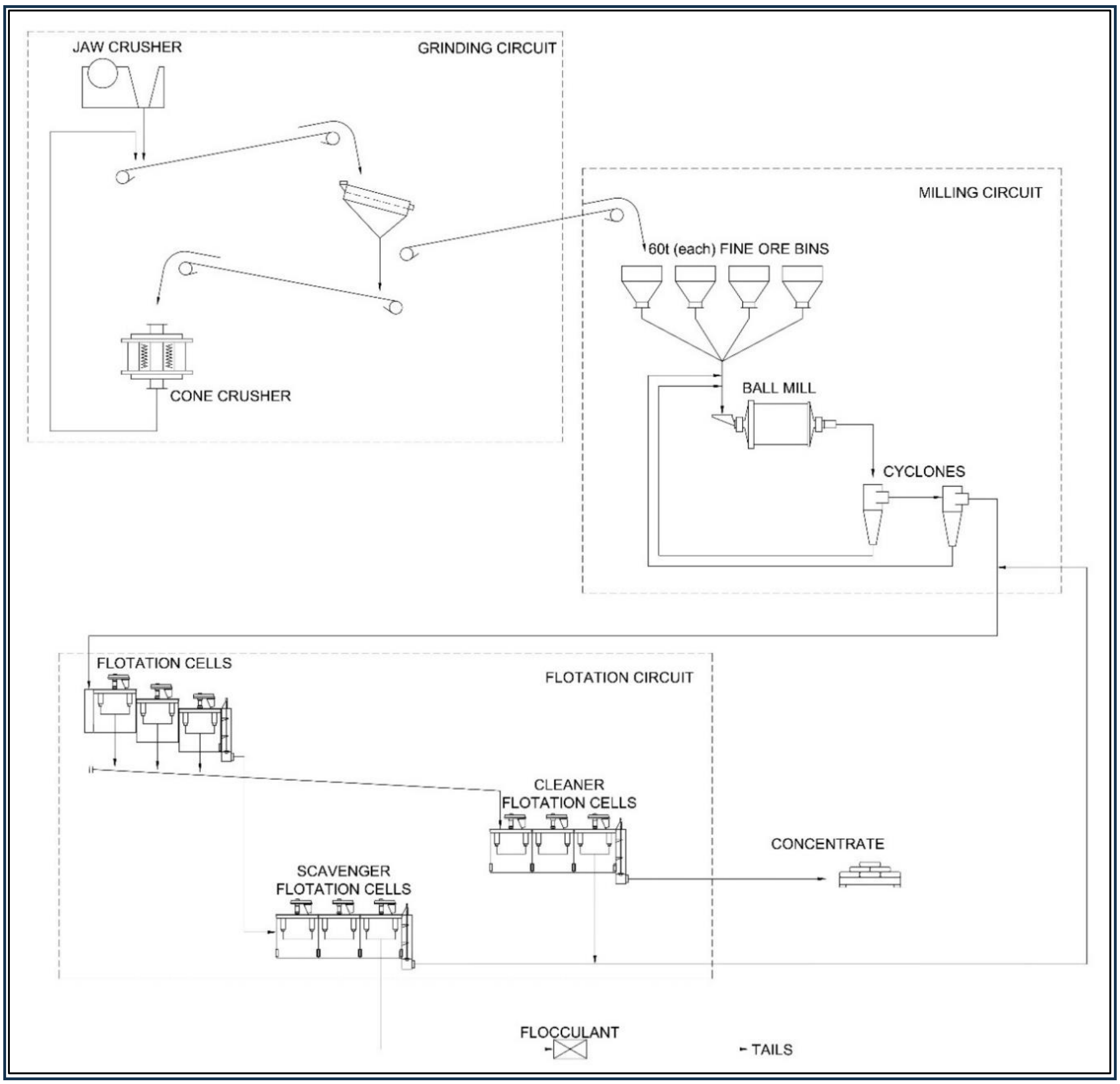
***Figure 13-5: Crushing of Bulk Sample and Piling of Crushed Material at the Processing Plant***


Source: Arseneau and Crowie (2021).

***Figure 13-6: Processing of Sample Material***

**Source:** Arseneau and Crowie (2021).
**Notes:** Head Sample Point (Left); Concentrate Sampling (Centre); Tailings Sampling (Right).

***Figure 13-7: Met-Sin 70 t/d Processing and Sampling Flowsheet***




Source: After Arseneau and Crowie (2021).

### *13.4.2 Discussion of Results*

During the pilot plant trial, 24 tonnes (reconciled with the Trafigura smelter in Mexico) of high-grade silver and gold concentrate were produced from the San Juan deposit, demonstrating that a high-grade, Ag–Au concentrate is achievable using standard grinding and flotation processing technologies.

Estimated results of the bulk sampling program indicate that the average gold recovery (based on independent assay data from SGS laboratories) was 71.4%, and the average silver recovery was 70.1% (Table 13-7). The main objective of the bulk sampling program was to collect a sample not only highlighting high-grade zones, but also representing average grades of the mineralization, which was achieved.

***Table 13-7: San Juan Bulk Sample—Processing Assay Results and Precious Metal Recoveries***

| Sample Type | GR Silver Sample ID | SGS Laboratory Assays | | Recovery—SGS | |
|---|---|---|---|---|---|
| | | Au_GO_FAG333 g/t | Ag_GO_FAG333 g/t | Au % | Ag % |
| Head | 21192 | 1.61 | 119 | 84.7 | 75.1 |
| Concentrate | 21193 | 90.63 | 6,850 | | |
| Tailings | 21194 | 0.25 | 30 | | |
| Head | 21196 | 0.76 | 146 | 67.4 | 69.0 |
| Concentrate | 21197 | 67.75 | 10,138 | | |
| Tailings | 21198 | 0.25 | 46 | | |
| Head | 21199 | 0.63 | 150 | 60.7 | 72.6 |
| Concentrate | 21200 | 39.33 | 9,016 | | |
| Tailings | 21202 | 0.25 | 42 | | |
| Head | 21203 | 0.56 | 147 | 55.6 | 63.3 |
| Concentrate | 21204 | 58.24 | 11,965 | | |
| Tailings | 21205 | 0.25 | 54 | | |
| Head | 21206 | 0.88 | 174 | 72.0 | 74.7 |
| Concentrate | 21207 | 46.12 | 8,867 | | |
| Tailings | 21208 | 0.25 | 45 | | |
| Head | 21209 | 0.96 | 185 | 74.4 | 72.5 |
| Concentrate | 21210 | 47.35 | 10,980 | | |
| Tailings | 21212 | 0.25 | 52 | | |
| Head | 21213 | 0.95 | 243 | 74.2 | 79.7 |
| Concentrate | 21214 | 34.32 | 10,524 | | |
| Tailings | 21216 | 0.25 | 50 | | |
| Head | 21217 | 0.74 | 173 | 66.7 | 73.0 |
| Concentrate | 21218 | 37.07 | 10,528 | | |
| Tailings | 21219 | 0.25 | 47 | | |
| Head | 21220 | 0.89 | 197 | 72.3 | 76.0 |
| Concentrate | 21222 | 46.26 | 10,255 | | |
| Tailings | 21223 | 0.25 | 48 | | |
| Head | 21224 | 0.72 | 208 | 65.7 | 69.4 |
| Concentrate | 21225 | 38.99 | 15,058 | | |
| Tailings | 21226 | 0.25 | 64 | | |

| Sample Type | GR Silver Sample ID | SGS Laboratory Assays | | Recovery—SGS | |
|---|---|---|---|---|---|
| | | Au_GO_FAG333 g/t | Ag_GO_FAG333 g/t | Au % | Ag % |
| Head | 21227 | 0.55 | 203 | 55.0 | 68.9 |
| Concentrate | 21228 | 31.08 | 12,385 | | |
| Tailings | 21229 | 0.25 | 64 | | |
| Head | 21230 | 0.58 | 194 | 57.4 | 65.0 |
| Concentrate | 21232 | 31.19 | 12,452 | | |
| Tailings | 21233 | 0.25 | 68 | | |
| Head | 21234 | 0.61 | 223 | 59.4 | 67.6 |
| Concentrate | 21236 | 39.88 | 14,152 | | |
| Tailings | 21237 | 0.25 | 73 | | |
| Head | 21238 | 0.6 | 246 | 58.5 | 84.5 |
| Concentrate | 21239 | 102.77 | 29,212 | | |
| Tailings | 21240 | 0.25 | 39 | | |
| Head | 21242 | 0.57 | 241 | 56.3 | 59.9 |
| Concentrate | 21243 | 105.04 | 23,122 | | |
| Tailings | 21244 | 0.25 | 97 | | |
| Head | 21245 | 0.58 | 226 | 57.1 | 66.8 |
| Concentrate | 21246 | 86.73 | 19,407 | | |
| Tailings | 21247 | 0.25 | 76 | | |
| Head | 21248 | 0.95 | 233 | 73.9 | 62.0 |
| Concentrate | 21249 | 90.47 | 19,938 | | |
| Tailings | 21250 | 0.25 | 89 | | |
| Head | 21252 | 0.7 | 209 | 64.4 | 60.0 |
| Concentrate | 21253 | 123.81 | 22,242 | | |
| Tailings | 21254 | 0.25 | 84 | | |
| Head | 21256 | 0.83 | 255 | 70.3 | 53.4 |
| Concentrate | 21257 | 45.78 | 16825 | | |
| Tailings | 21258 | 0.25 | 120 | | |
| Head | 21259 | 0.68 | 297 | 63.7 | 75.4 |
| Concentrate | 21260 | 36.63 | 17,593 | | |
| Tailings | 21262 | 0.25 | 74 | | |
| Head | 21263 | 0.63 | 247 | 60.7 | 67.3 |
| Concentrate | 21264 | 37.91 | 20,771 | | |
| Tailings | 21265 | 0.25 | 81 | | |
| Head | 21266 | 0.58 | 341 | 57.1 | 74.5 |
| Concentrate | 21267 | 59.53 | 33,244 | | |
| Tailings | 21268 | 0.25 | 88 | | |
| Head | 21269 | 0.63 | 326 | 60.7 | 71.6 |
| Concentrate | 21270 | 44.04 | 27,195 | | |
| Tailings | 21272 | 0.25 | 93 | | |
| Head | 21273 | 2.145 | 247 | 88.9 | 61.0 |
| Concentrate | 21274 | 37.79 | 24,785 | | |
| Tailings | 21276 | 0.25 | 97 | | |

| Sample Type | GR Silver Sample ID | SGS Laboratory Assays | | Recovery—SGS | |
|---|---|---|---|---|---|
| | | Au_GO_FAG333 g/t | Ag_GO_FAG333 g/t | Au % | Ag % |
| Head | 21277 | 2.9025 | 239 | 92.1 | 70.3 |
| Concentrate | 21278 | 32.7 | 32,388 | | |
| Tailings | 21279 | 0.25 | 71 | | |
| Head | 21280 | 2.9025 | 253 | 92.1 | 73.8 |
| Concentrate | 21282 | 32.62 | 24,993 | | |
| Tailings | 21283 | 0.25 | 67 | | |
| Head | 21284 | 2.9025 | 253 | 92.0 | 65.0 |
| Concentrate | 21285 | 34.72 | 28,786 | | |
| Tailings | 21286 | 0.25 | 89 | | |
| Head | 21287 | 2.9025 | 245 | 91.9 | 63.0 |
| Concentrate | 21288 | 41.41 | 36,252 | | |
| Tailings | 21289 | 0.25 | 91 | | |
| Head | 21290 | 2.9025 | 213 | 92.1 | 64.7 |
| Concentrate | 21292 | 30.46 | 25,160 | | |
| Tailings | 21293 | 0.25 | 76 | | |
| Head | 21294 | 2.9025 | 247 | 92.2 | 79.0 |
| Concentrate | 21296 | 27.5 | 15,018 | | |
| Tailings | 21297 | 0.25 | 53 | | |
| Head | 21298 | 3.66 | 50 | 85.7 | 80.3 |
| Concentrate | 21299 | 25.138 | 2,822 | | |
| Tailings | 21300 | 0.6 | 10 | | |
| Head | 19379 | 2.05 | 32 | 69.9 | 84.6 |
| Concentrate | 19380 | 21.561 | 2,818 | | |
| Tailings | 19381 | 0.66 | 5 | | |

Source: Arseneau and Crowie (2021).

From the accumulated concentrate, homogeneous samples of the final product were taken, giving higher values of silver and gold, and more consistent assay results. The 16 samples collected from the 24-tonne concentrate, weighing an average of 1.36 kg each, were analyzed at SGS in Durango, Mexico, with reported average concentrations of 15,151 g/t Ag and 46.1 g/t Au (Table 13-8). The reconciled concentrate grades from the Trafigura smelter were 14,776 g/t Ag and 45.7 g/t Au.

These positive results from the pilot plant encouraged GR Silver to continue the metallurgical testwork program and to investigate further gold and silver recoveries in more detail.

*Table 13-8: San Juan Bulk Sample—Concentrate Sampling Results*

| Sample No. | Sample Wt. (kg) | Ag (g/t) | Au (g/t) |
|---|---|---|---|
| 19382 | 1.42 | 15,189 | 48.6 |
| 19383 | 1.24 | 15,184 | 45.5 |
| 19384 | 1.31 | 15,254 | 46.2 |
| 19385 | 1.23 | 15,620 | 45.8 |
| 19386 | 1.15 | 15,197 | 44.4 |
| 19387 | 0.88 | 1,529 | 45.8 |
| 19389 | 1.36 | 15,549 | 46.0 |
| 19390 | 1.60 | 1,590 | 44.7 |
| 19391 | 1.43 | 1,568 | 48.0 |
| 19393 | 1.43 | 14,956 | 45.4 |
| 19394 | 1.03 | 1,511 | 44.6 |
| 19395 | 1.49 | 14,975 | 47.1 |
| 19396 | 1.58 | 15,447 | 46.1 |
| 19397 | 1.66 | 14,947 | 49.2 |
| 19398 | 1.50 | 14,930 | 45.5 |
| 19400 | 1.46 | 14,964 | 44.6 |
| Average | 1.36 | 15,147 | 46.2 |
| **Total** | **21.77** | - | - |

Source: Arseneau and Crowie (2021).

## 13.5 Metallurgical Testwork by Base Met Labs—2021

In all, six samples were sent to Base Met Labs in Kamloops in April 2021. The samples were composited by area for metallurgical testing: 39 from the Plomosas mine were composited into four samples (PH1-01, PH1-02, PH1-03, and PH1-04), and 15 samples from the San Juan deposit were composited into two samples (SJMT-01 and SJMT-02). The testwork was then carried out on each composite.

The samples were meant to represent the various mineralized material grades found around the two deposits, varying around low, medium, and high grades of base metals and high and low grades of precious metals.

The testwork comprised:

- Head assays
- Hardness testing (Bond Ball Mill Work Index [$Wi_{BM}$] and HIT test methods [Axb])
- Leach tests
- Rougher flotation tests
- Initial cleaner flotation tests
- Follow-up cleaner flotation tests.

#### *13.5.1 Description of Sampling and Preparation—Plomosas Mine*

Phase 1 metallurgical samples comprised underground channel samples taken inside the Plomosas mine between Levels 775 (lower level) and 862 (intermediate level). Assay results for selected samples combined information from GR Silver and historical samples from Aurcana. For Aurcana samples, new geochemical samples were collected to validate original samples with assay results dating back to 2007, using GR Silver's preferred laboratory (SGS Durango).

Four initial metallurgical domains were defined for the Plomosas mine:

1. Polymetallic (Ag-Au-Cu-Pb-Zn) hosted in quartz and sulphide veins and veinlets (stockwork)
2. Polymetallic—mainly Au-Ag sulphide veins and veinlets (stockwork)
3. Plomosas hydrothermal breccia (typical Plomosas breccia silver with Pb–Zn)
4. Plomosas hydrothermal breccia (massive Pb–Zn replacement with gold).

Table 13-9 summarizes the assay results and individual sample weights for metallurgical composites. Figure 13-8 displays the sample locations.

In Table 13-9 metallurgical samples were labelled with a Metallurgical Sample ID number, which uses the paradigm PLMET-PH1-01: PLMET for Plomosas Metallurgical; PH1 for the Phase; 01 is the number of the sample in this phase.

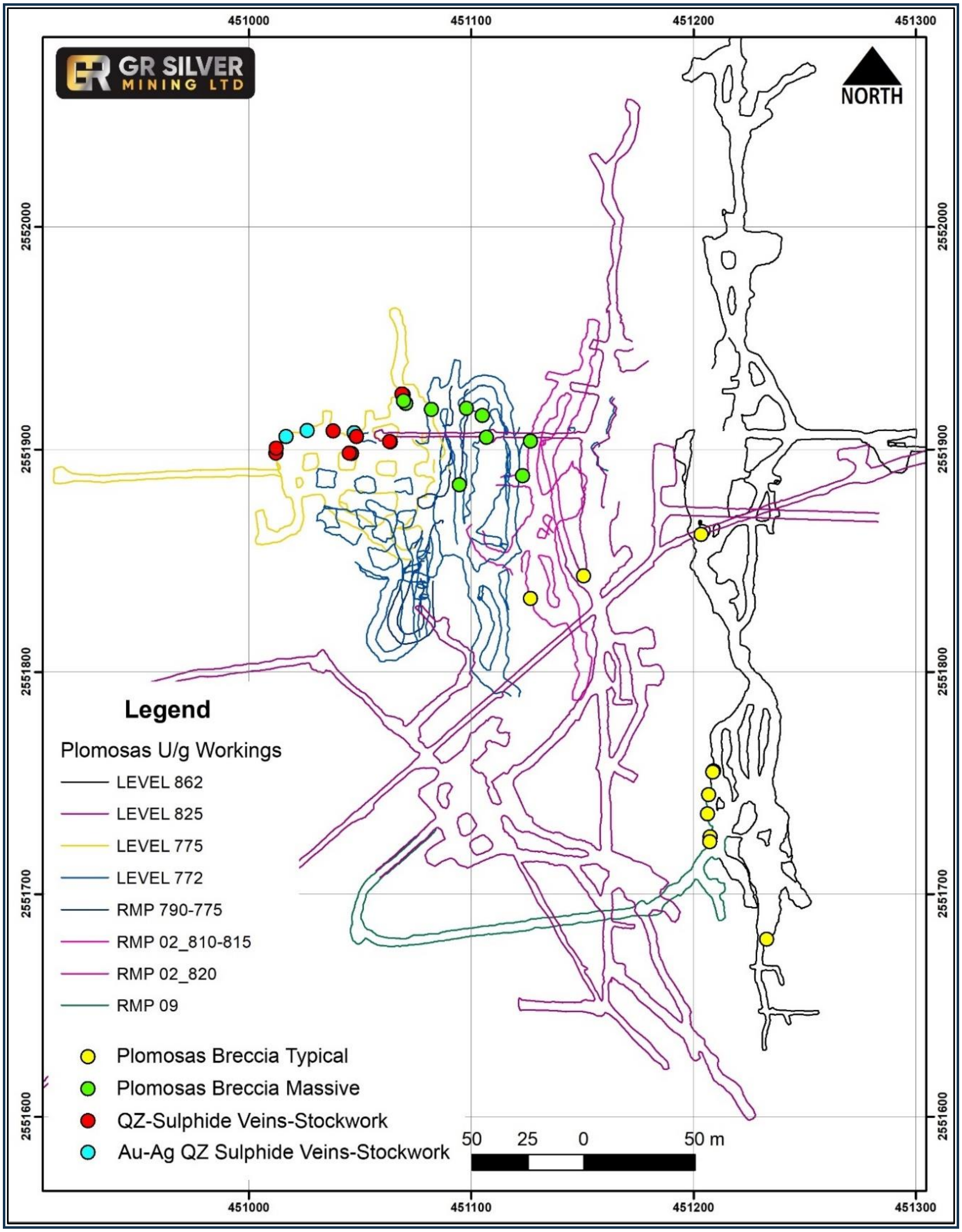
***Table 13-9: Summary of Plomosas Mine Geochemical Samples Selected for Metallurgical Composite***

| Sample ID | Assay Results Sampler | Location | UTM North | UTM East | Elevation | Length (m) | Au (ppm) | Ag (ppm) | Cu (%) | Pb (%) | Zn (%) | Metallurgical Sample ID | Weight (kg) | Bucket No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Polymetallic (Ag–Au–Cu–Pb–Zn) QZ-Sulphide Veins (Stockwork)*** | | | | | | | | | | | | | | |
| 15821 | GRSILVER | 775 (West Wall) | 2551898.41 | 451012.23 | 702.6 | 2.00 | 18.91 | 395 | 0.56 | 1.87 | 11.40 | PLMET-PH1-01 | 10.70 | 1 |
| 15824 | GRSILVER | 775 \|(West Wall) | 2551900.66 | 451012.39 | 702.6 | 0.75 | 9.28 | 127 | 0.23 | 0.56 | 16.10 | PLMET-PH1-01 | 3.56 | |
| 15836 | GRSILVER | 775 (North Wall) | 2551908.30 | 451038.00 | 705.5 | 1.00 | 5.96 | 69 | 0.87 | 0.88 | 7.52 | PLMET-PH1-01 | 4.57 | |
| 15816 | GRSILVER | 775 (North East Wall) | 2551924.61 | 451069.39 | 706.5 | 2.00 | 6.98 | 237 | 0.18 | 1.09 | 3.26 | PLMET-PH1-01 | 6.56 | 2 |
| 15817 | GRSILVER | 775 (Northeast Wall) | 2551924.99 | 451069.03 | 706.5 | 0.75 | 31.72 | 1,104 | 0.49 | 26.40 | 14.10 | PLMET-PH1-01 | 5.25 | |
| 15855 | GRSILVER | 775 (Pillar 10) | 2551903.47 | 451063.69 | 705.5 | 1.00 | 6.89 | 140 | 3.26 | 2.88 | 6.54 | PLMET-PH1-01 | 3.70 | |
| 15858 | GRSILVER | 775 (Pillar 10) | 2551903.71 | 451063.33 | 707.5 | 1.00 | 21.27 | 175 | 0.57 | 3.02 | 7.63 | PLMET-PH1-01 | 3.58 | |
| 15839 | GRSILVER | 775 (North Wall) | 2551905.83 | 451048.47 | 705.5 | 1.00 | 8.44 | 368 | 4.47 | 1.83 | 14.10 | PLMET-PH1-01 | 3.66 | 3 |
| 15846 | GRSILVER | 775 (Pillar 7) | 2551898.13 | 451047.13 | 705.5 | 1.00 | 5.30 | 75 | 0.49 | 2.65 | 11.40 | PLMET-PH1-01 | 7.73 | |
| 15852 | GRSILVER | 775 (Pillar 7) | 2551898.37 | 451045.19 | 709.5 | 1.00 | 1.35 | 53 | 0.45 | 0.89 | 9.96 | PLMET-PH1-01 | 6.55 | |
| **Weighted Average** | | | | | | | **11.46** | **267** | **1.05** | **3.32** | **9.49** | | **55.86** | |
| ***Au–Ag QZ–Sulphide Veins (Stockwork)*** | | | | | | | | | | | | | | |
| 15818 | GRSILVER | 775 (North Wall) | 2551905.86 | 451016.75 | 701.5 | 1.25 | 2.44 | 623 | 0.06 | 0.30 | 0.77 | PLMET-PH1-02 | 6.75 | 1 |
| 15819 | GRSILVER | 775 (North Wall) | 2551905.86 | 451016.75 | 703.5 | 2.00 | 4.87 | 307 | 1.14 | 1.65 | 0.45 | PLMET-PH1-02 | 3.65 | |
| 15820 | GRSILVER | 775 (North Wall) | 2551905.86 | 451016.75 | 705.5 | 2.00 | 4.87 | 130 | 0.60 | 0.23 | 0.87 | PLMET-PH1-02 | 6.46 | |
| 15829 | GRSILVER | 775 (North Wall) | 2551908.47 | 451026.27 | 707.5 | 1.00 | 1.67 | 98 | 0.90 | 0.18 | 0.93 | PLMET-PH1-02 | 4.81 | 2 |
| 15832 | GRSILVER | 775 (North Wall) | 2551908.30 | 451038.00 | 703.5 | 0.40 | 3.91 | 73 | 1.44 | 0.09 | 0.07 | PLMET-PH1-02 | 3.54 | |
| su15838 | GRSILVER | 775 (North Wall) | 2551905.83 | 451048.47 | 705.5 | 0.40 | 10.27 | 119 | 0.56 | 0.55 | 0.93 | PLMET-PH1-02 | 2.61 | |
| 15840 | GRSILVER | 775 (North Wall) | 2551906.64 | 451048.04 | 707.5 | 1.00 | 2.67 | 52 | 0.15 | 0.28 | 0.45 | PLMET-PH1-02 | 3.60 | |
| 15844 | GRSILVER | 775 (North Wall) | 2551907.51 | 451047.47 | 709.5 | 1.00 | 37.52 | 287 | 1.11 | 0.46 | 1.08 | PLMET-PH1-02 | 4.43 | |
| **Weighted Average** | | | | | | | **7.74** | **239** | **0.72** | **0.59** | **0.71** | | **35.85** | |
| ***Plomosas Breccia (Typical Ag with Pb–Zn)*** | | | | | | | | | | | | | | |
| 777 | AURCANA | 825 | 2551843.22 | 451150.68 | 752.1 | 1.45 | 0.38 | 159 | 0.23 | 1.86 | 0.64 | PLMET-PH1-03 | 10.82 | 1 |
| 758 | AURCANA | Ramp 2 (800) | 2551832.97 | 451126.69 | 734.2 | 0.9 | 0.86 | 235 | 0.39 | 7.93 | 4.51 | PLMET-PH1-03 | 6.53 | |
| 1193 | AURCANA | Level 862 (central) | 2551861.79 | 451203.40 | 790.2 | 1.1 | 0.43 | 20 | 0.07 | 4.13 | 5.21 | PLMET-PH1-03 | 7.01 | 2 |
| 1194 | AURCANA | Level 862 (central) | 2551861.79 | 451203.40 | 789.1 | 0.6 | 0.20 | 111 | 0.18 | 3.12 | 1.84 | PLMET-PH1-03 | 7.49 | |
| 1213 | AURCANA | Level 862 (south) | 2551679.67 | 451232.90 | 792.2 | 1.2 | 0.18 | 422 | 0.04 | 0.83 | 1.70 | PLMET-PH1-03 | 5.29 | 3 |
| 1223 | AURCANA | Level 862 (central) | 2551755.38 | 451209.01 | 791.3 | 1.15 | 0.05 | 316 | 0.07 | 1.67 | 1.60 | PLMET-PH1-03 | 6.56 | |
| 1224 | AURCANA | Level 862 (central) | 2551754.90 | 451208.75 | 791.3 | 1.2 | 0.07 | 137 | 0.01 | 0.43 | 0.64 | PLMET-PH1-03 | 6.51 | |
| 1228 | AURCANA | Level 862 (south) | 2551744.75 | 451206.94 | 791.3 | 1.3 | 0.19 | 625 | 0.06 | 0.54 | 1.99 | PLMET-PH1-03 | 12.12 | 4 |

| Sample ID | Assay Results Sampler | Location | UTM North | UTM East | Elevation | Length (m) | Au (ppm) | Ag (ppm) | Cu (%) | Pb (%) | Zn (%) | Metallurgical Sample ID | Weight (kg) | Bucket No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1229 | AURCANA | Level 862 (south) | 2551736.07 | 451206.36 | 791.3 | 1.1 | 1.19 | 160 | 0.07 | 1.25 | 3.23 | PLMET-PH1-03 | 9.02 | |
| 1237 | AURCANA | Level 862 (south) | 2551725.77 | 451207.55 | 793.1 | 1.5 | 1.88 | 99 | 0.04 | 1.99 | 5.68 | PLMET-PH1-03 | 10.43 | 5 |
| 1238 | AURCANA | Level 862 (south) | 2551723.49 | 451207.43 | 793.1 | 1.2 | 1.89 | 232 | 0.03 | 0.69 | 1.97 | PLMET-PH1-03 | 11.59 | |
| **Weighted Average** | | | | | | | **0.70** | **235** | **0.10** | **2.01** | **2.64** | | **93.37** | |
| ***Plomosas Breccia Massive Pb–Zn Sulphides Replacement with Au*** | | | | | | | | | | | | | | |
| 935 | AURCANA | Level 815 | 2551905.52 | 451106.97 | 731.8 | 0.5 | 4.05 | 86 | 0.10 | 28.55 | 32.30 | PLMET-PH1-04 | 8.52 | 1 |
| 939 | AURCANA | Level 815 | 2551888.20 | 451123.17 | 732.4 | 2 | 2.62 | 73 | 0.12 | 25.52 | 20.26 | PLMET-PH1-04 | 4.41 | |
| 928 | AURCANA | Ramp 2 (800) | 2551884.12 | 451094.78 | 713.7 | 2 | 1.19 | 31 | 0.12 | 2.33 | 4.74 | PLMET-PH1-04 | 6.05 | 2 |
| 932 | AURCANA | Level 815 | 2551915.30 | 451105.09 | 732.3 | 1.25 | 1.99 | 44 | 0.12 | 6.26 | 11.27 | PLMET-PH1-04 | 5.83 | |
| 936 | AURCANA | Level 815 | 2551903.85 | 451126.68 | 730.9 | 1.5 | 2.86 | 54 | 0.24 | 14.92 | 20.72 | PLMET-PH1-04 | 6.76 | |
| 896 | AURCANA | Ramp 2 (800) | 2551918.47 | 451098.01 | 716.5 | 1.3 | 1.42 | 42 | 0.10 | 3.60 | 12.24 | PLMET-PH1-04 | 4.66 | 3 |
| 898 | AURCANA | Ramp 2 (800) | 2551918.47 | 451098.01 | 719.0 | 0.5 | 2.66 | 78 | 0.13 | 5.89 | 18.87 | PLMET-PH1-04 | 2.94 | |
| 15865 | GRSILVER | 775 (East Wall) | 2551920.80 | 451070.70 | 703.6 | 1 | 3.22 | 85 | 0.06 | 10.70 | 27.60 | PLMET-PH1-04 | 5.31 | 4 |
| 15866 | GRSILVER | 775 (East Wall) | 2551921.90 | 451069.70 | 702.0 | 1 | 4.30 | 93 | 0.06 | 14.10 | 30.00 | PLMET-PH1-04 | 4.89 | |
| 15872 | GRSILVER | 775 (East Wall) | 2551918.00 | 451082.20 | 707.0 | 1 | 2.97 | 59 | 0.04 | 28.50 | 20.10 | PLMET-PH1-04 | 6.90 | |
| **Weighted Average** | | | | | | | **2.50** | **60** | **0.12** | **13.37** | **17.79** | | **56.27** | |

Source: Arseneau and Crowie (2021).

***Figure 13-8: Plomosas Mine—Location of Individual Samples from Different Underground Levels with Metallurgical Composite Samples Shown by Same Colours***




Source: After Arseneau and Crowie (2021).

### *13.5.2 Description of Sampling and Preparation—San Juan Deposit*

For this sampling phase of the San Juan deposit, two samples were collected (SJMT-01 and SMT-02); these were chosen using previous channel sample results, most of which had been collected originally by GR Silver, the remainder by Aurcana (Table 13-10). The samples were taken at different points within the San Juan tunnel due to the specifications requested regarding the preferred grade levels (Figure 13-9).

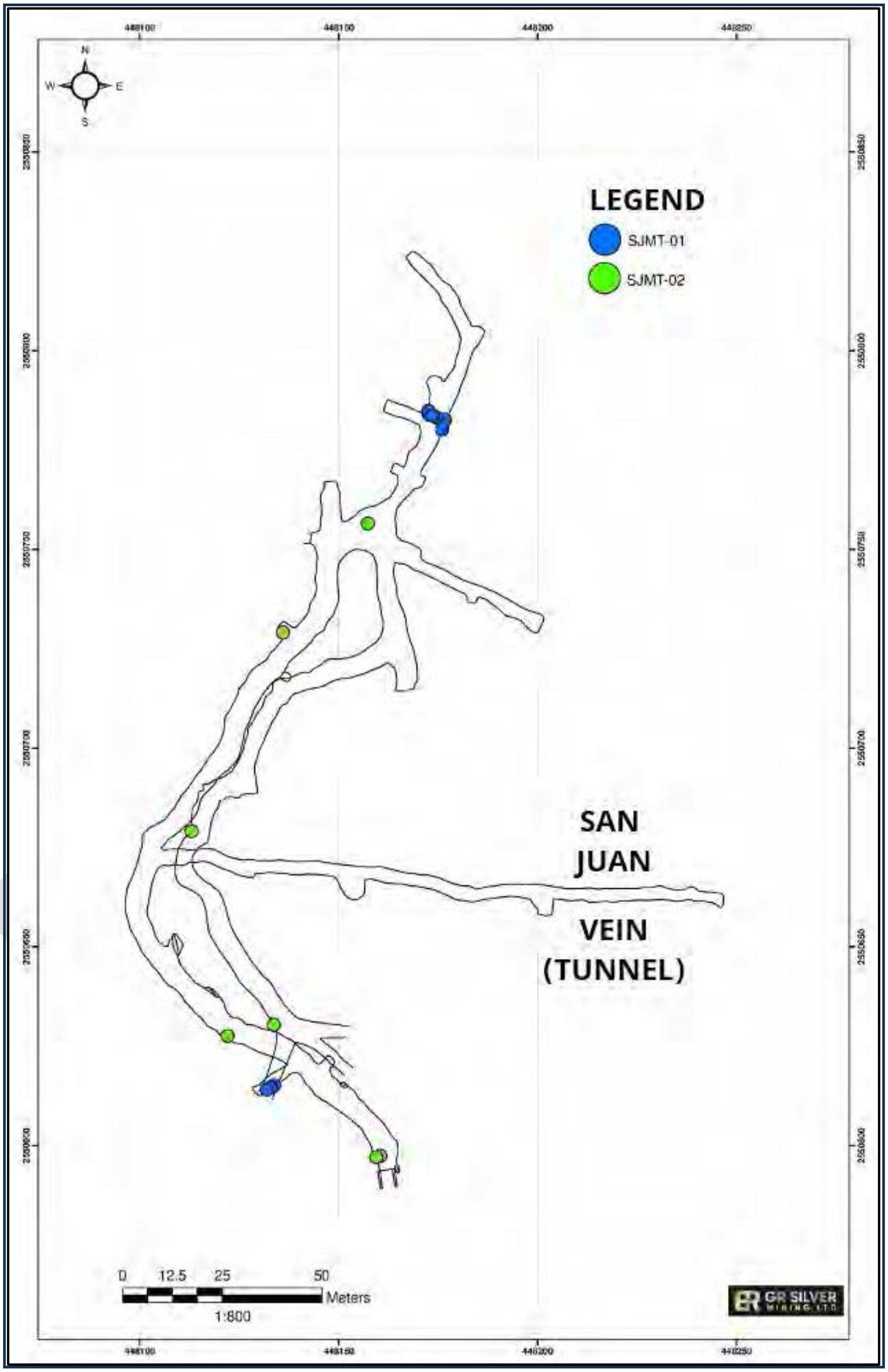
***Table 13-10: Summary of San Juan Deposit Geochemical Samples Selected for Metallurgical Composites***

| Project | Target | Company | Sample | Au ppm | Ag ppm | Pb ppm | Zn ppm | Weight (kg) | Total (kg) |
|---|---|---|---|---|---|---|---|---|---|
| ***SJMT-01*** | | | | | | | | | |
| Plomosas | San Juan | GRS | GR_14522 | 0.057 | 497 | 18,700 | 32,000 | 1.81 | 31 |
| Plomosas | San Juan | GRS | GR_14523 | 0.021 | 35 | 7,269 | 13,400 | 2.07 | |
| Plomosas | San Juan | GRS | GR_14524 | 0.029 | 34 | 8,900 | 17,800 | 1.17 | |
| Plomosas | San Juan | GRS | GR_14552 | 0.163 | 23 | 18,500 | 4,895 | 4.12 | |
| Plomosas | San Juan | GRS | GR_14553 | 0.018 | 22 | 8,383 | 20,700 | 3.87 | |
| Plomosas | San Juan | GRS | GR_15553 | 0.086 | 16 | 3,299 | 18,500 | 5.04 | |
| Plomosas | San Juan | GRS | GR_15554 | 0.166 | 12 | 19,000 | 15,000 | 3.01 | |
| Plomosas | San Juan | GRS | GR_15556 | 0.107 | 49 | 4,942 | 12,900 | 7.34 | |
| Plomosas | San Juan | GRS | GR_15562 | 0.022 | 42 | 13,800 | 17,800 | 2.57 | |
| | | | **Average** | **0.074** | **81** | **11,421** | **16,999** | | |

| Project | Target | Company | Sample | Au ppm | Ag ppm | Pb % | Zn % | Weight (kg) | Total (kg) |
|---|---|---|---|---|---|---|---|---|---|
| ***SJMT-02*** | | | | | | | | | |
| Plomosas | San Juan | Aurcana | SJ-196 | 1.61 | 117 | 0.2 | 0.37 | 6.17 | 30.54 |
| Plomosas | San Juan | Aurcana | SJ-291 | 5.9 | 1,167 | 0.07 | 0.17 | 4.42 | |
| Plomosas | San Juan | GRS | GR_14562 | 0.679 | 380 | 0.0962 | 0.2434 | 1.98 | |
| Plomosas | San Juan | GRS | GR_14514 | 0.99 | 460 | 0.1266 | 0.3562 | 5.86 | |
| Plomosas | San Juan | GRS | GR_14554 | 0.112 | 1,257 | 0.2795 | 0.0684 | 3.65 | |
| Plomosas | San Juan | GRS | GR_14549 | 0.535 | 341 | 0.0857 | 0.1863 | 4.66 | |
| Plomosas | San Juan | GRS | GR_14939 | 0.812 | 1,024 | 0.5481 | 0.2437 | 3.8 | |
| | | | **Average** | **1.52** | **678** | **0.20** | **0.23** | | |

Source: Arseneau and Crowie (2021).

*Figure 13-9: Location of Samples—San Juan Deposit*




Source: Arseneau and Crowie (2021).

### 13.5.3 Testwork Description

Upon receipt at Base Met Labs, the samples were crushed and sampled for head-grade analysis. Each sample was assayed twice (tagged Hd 1 and Hd 2) and the two assays were averaged. The averages were compared against the "expected" value based on the original laboratory analyses. The results from the head assays can be found in Table 13-11.

***Table 13-11: Plomosas Mine and San Juan Sample Head Assays***

| Products | Element | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cu % | Pb % | Zn % | Fe % | Au g/t | Ag g/t | S % |
| *Method* | *FAAS* | *FAAS* | *FAAS* | *FAAS* | *FAAS* | *FAAS* | *LECO* |
| PH1-01 Hd 1 | 0.76 | 3.20 | 9.80 | 2.89 | 9.95 | 239 | 6.32 |
| PH1-01 Hd 2 | 0.79 | 3.05 | 9.20 | 2.94 | 9.51 | 246 | 6.23 |
| PH1-01 Average | 0.78 | 3.13 | 9.50 | 2.92 | 9.73 | 243 | 6.28 |
| **Expected** | **1.05** | **3.32** | **9.49** | | **11.46** | **267** | |
| PH1-02 Hd 1 | 0.62 | 0.40 | 1.02 | 2.76 | 9.26 | 121 | 1.10 |
| PH1-02 Hd 2 | 0.60 | 0.42 | 1.09 | 2.80 | 9.13 | 121 | 1.12 |
| PH1-02 Average | 0.61 | 0.41 | 1.06 | 2.78 | 9.20 | 121 | 1.11 |
| **Expected** | **0.72** | **0.59** | **0.71** | | **7.74** | **239** | |
| PH1-03 Hd 1 | 0.11 | 5.17 | 3.40 | 3.60 | 0.61 | 357 | 2.09 |
| PH1-03 Hd 2 | 0.10 | 4.83 | 3.30 | 3.60 | 0.63 | 272 | 2.12 |
| PH1-03 Average | 0.11 | 5.00 | 3.35 | 3.60 | 0.62 | 315 | 2.11 |
| **Expected** | **0.10** | **2.01** | **2.64** | | **0.70** | **235** | |
| PH1-04 Hd 1 | 0.04 | 14.9 | 19.3 | 2.24 | 1.98 | 54 | 12.2 |
| PH1-04 Hd 2 | 0.04 | 13.70 | 17.2 | 2.32 | 1.94 | 51 | 11.9 |
| PH1-04 Average | 0.04 | 14.30 | 18.25 | 2.28 | 1.96 | 53 | 12.1 |
| **Expected** | **0.12** | **13.37** | **17.79** | | **2.50** | **60** | |
| SJMT-01 Hd 1 | 0.010 | 0.92 | 1.11 | 3.59 | 0.26 | 63 | 1.57 |
| SJMT-01 Hd 2 | 0.009 | 0.82 | 1.12 | 3.47 | 0.14 | 47 | 1.55 |
| SJMT-01 Average | 0.010 | 0.87 | 1.12 | 3.53 | 0.20 | 55 | 1.56 |
| **Expected** | | **1.14** | **1.70** | | **0.07** | **81** | |
| SJMT-02 Hd 1 | 0.012 | 0.43 | 0.56 | 2.87 | 1.18 | 365 | 0.48 |
| SJMT-02 Hd 2 | 0.013 | 0.40 | 0.52 | 2.87 | 1.61 | 352 | 0.47 |
| SJMT-02 Average | 0.013 | 0.42 | 0.54 | 2.87 | 1.40 | 359 | 0.48 |
| **Expected** | | **0.20** | **0.23** | | **1.52** | **678** | |

Source: Base Met Labs (2021).

### 13.5.4 Discussion of Results

#### *Comminution Testwork*

The comminution parameters $Wi_{BM}$ and Axb were measured for each of the six samples.

The $Wi_{BM}$ used a closing size of 105 µm for the test, which results in a particle size that is sightly finer than the flotation testwork conducted. This results in the actual work index being a little lower for each of the samples if the grind size is maintained at 100 µm, although the difference will be very small.

The results of comminution testing given in Table 13-12 indicate that the Plomosas mine material is generally considered very hard, except for PH1-04, which is soft. The testwork results for the San Juan deposit indicate that this mineralized material is a little above average hardness.

***Table 13-12: San Juan Ore Hardness Test Results***

| Sample | $Wi_{BM}$ (kWh/t) | $Wi_{BM}$ $P_{80}$ (µm) | HIT Axb (A) | HIT Axb (B) | HIT Axb (Average) |
|---|---|---|---|---|---|
| PH1-01 | 19.4 | 77 | 108.2 | 95.7 | 102.0 |
| PH1-02 | 23.4 | 77 | 31.1 | 34.8 | 32.9 |
| PH1-03 | 19.6 | 77 | 55.2 | 88.6 | 71.9 |
| PH1-04 | 13.4 | 78 | 115.6 | 147.9 | 131.7 |
| SJMT-01 | 17.6 | 77 | 46.2 | 43.1 | 44.7 |
| SJMT-02 | 16.3 | 77 | 46.0 | 49.0 | 47.5 |

Source: Arseneau and Crowie (2021).

### *Flotation Testwork*

The flotation tests demonstrated that the Plomosas mine and San Juan deposit are amenable to recovery by flotation, and result in one or two concentrates based on the mineralization in the processing feed. All six samples produced a precious-metals concentrate that was generally high in lead, such that it could also be considered a lead concentrate. Samples that had high zinc grades (>3%) were able to produce a second concentrate that could be marketed as a zinc concentrate, with high silver credits.

A summary of the recoveries can be found in Table 13-13, and the corresponding concentrate grades in Table 13-14.

***Table 13-13: Plomosas Mine and San Juan Flotation Test Summary—Recoveries***

| Sample Name | Precious Metals Concentrate Recovery (%) | | | | | Zinc Concentrate Recovery (%) | |
|---|---|---|---|---|---|---|---|
| | Copper | Lead | Zinc | Gold | Silver | Zinc | Silver |
| PHI-01 | 69.9 | 65.6 | 25.2 | 79.6 | 65.1 | 50.4 | 2.6 |
| PHI-02 | 80.3 | 68.7 | 75.4 | 85.9 | 73.7 | | |
| PHI-03 | 60.3 | 78.5 | 42.1 | 72.5 | 72.5 | 37.6 | 12.5 |
| PHI-04 | 15.8 | 80.4 | 23.6 | 54.6 | 57.5 | 36.1 | 12.1 |
| SJMT-01 | 31.6 | 61.2 | 20.0 | 50.0 | 54.8 | | |
| SJMT-02 | 26.4 | 58.3 | 46.6 | 79.0 | 71.4 | | |

Source: Arseneau and Crowie (2021).

*Table 13-14: Plomosas Mine and San Juan Flotation Test Summary—Concentrate Grades*

| Sample Name | Concentrate 1 Grade (% or g/t) | | | | | Concentrate 2 Grade (% or g/t) | | |
|---|---|---|---|---|---|---|---|---|
| | Copper | Lead | Zinc | Gold | Silver | Zinc | Gold | Silver |
| PHI-01 | 6.87 | 26.48 | 29.97 | 107.7 | 2,143.3 | 61.58 | 4.01 | 89.70 |
| PHI-02 | 6.90 | 3.72 | 12.19 | 110.0 | 1,114.3 | - | - | - |
| PHI-03 | 0.65 | 31.63 | 11.06 | 3.7 | 2,102.8 | 50.20 | 2.33 | 1,848.00 |
| PHI-04 | 0.10 | 55.60 | 21.40 | 5.4 | 142.0 | 55.39 | 2.58 | 50.63 |
| SJMT-01 | 0.53 | 52.20 | 16.92 | 6.1 | 2,171.1 | - | - | - |
| SJMT-02 | 0.47 | 13.21 | 13.65 | 68.9 | 12,460.5 | - | - | - |

Source: Arseneau and Crowie (2021).

## 13.6 Final Metallurgical Assumptions

The final metal recoveries and concentrate grades assumed for this Technical Report can be found in Table 13-15. The copper, lead, zinc, gold, and silver recoveries are taken from the final cleaner tests for samples PHI-02 (Plomosas) and SJMT-02 (San Juan), and the locked cycle test on the San Marcial sulphide sample.

*Table 13-15: Plomosas, San Juan, and San Marcial Deposit Recoveries*

| Sample Name | Recoveries | | | | |
|---|---|---|---|---|---|
| | Copper | Lead | Zinc | Gold | Silver |
| San Marcial | 0 | 59 | 80 | 0 | 94 |
| Plomosas | 80 | 69 | 75 | 86 | 74 |
| San Juan | 26 | 58 | 47 | 79 | 71 |

Source: Crowie (2023).

# 14 MINERAL RESOURCE ESTIMATES

As previously described, there are no title, legal, taxation, marketing, permitting, socio-economic, or other relevant issues that may materially affect the Mineral Resources described in this Technical Report. Future changes to legislation (e.g., mining, taxation, environmental, human resources, and related issues) or government or local attitudes to foreign investment cannot be, and have not been, evaluated within the scope of this Technical Report.

The Mineral Resource models presented herein represent the second Mineral Resource evaluation at the San Marcial, Plomosas, and San Juan–La Colorada deposits. The Mineral Resource evaluations incorporate all drilling completed by IMMSA, Aurcana, First Majestic, and GR Silver for the Plomosas and San Juan deposits and from Silvermex, Goldplay, and GR Silver for the San Marcial deposit. In the QP's opinion, the block model MREs in the Technical Report are a reasonable representation of the initial global Mineral Resources found on the Plomosas Project at the current level of sampling. Mineral Resources for the Plomosas Project are reported in accordance with the guidelines of the Canadian Securities Administrators National Instrument 43-101; and have been estimated in conformity with the generally accepted Canadian Institute of Mining, Metallurgy and Petroleum's (CIM) *CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines* (CIM, 2019). Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserves. The MREs were completed by Dr. Arseneau, an "independent qualified person" as defined in NI 43-101 and Member 23474 of the APEGBC, ACS is licenced to operate in British Columbia under APEGBC Permit to Practice 1000256.

This section describes the QP's work and key assumptions and parameters used to prepare the Mineral Resource model for the San Marcial, Plomosas Mine, and San Juan–La Colorada, together with appropriate statements regarding the merits and possible limitations of such assumptions.

The QP reviewed and audited the database used to estimate the Mineral Resources, and also modelled mineralization boundaries using a geological interpretation prepared with assistance from GR Silver geological staff. The QP is of the opinion that the current drilling information is sufficiently reliable to interpret, with confidence, the boundaries of the mineralization domains, and that the assay data are sufficiently reliable to support estimating Mineral Resources.

The QP used GEMS (Version 6.8.4) to generate the base- and precious-metal mineralization solids, and the Mineral Resource estimation. Statistical analysis and Mineral Resource validations were carried out with non-commercial software and with SAGE2001.

## 14.1 Resource Database—All Deposits

The Plomosas Project database was provided to the QP in CSV format. The current drill-hole database consists of 923 holes totalling 147,886 m (Table 14-1), 520 of which were drilled by previous property owners; GR Silver has drilled 403 (Table 14-2).

***Table 14-1: Plomosas Project, Drilling by Area***

| Area | Holes | Metres |
|---|---|---|
| San Marcial | 122 | 19,451 |
| Plomosas | 432 | 60,349 |
| San Juan | 153 | 29,948 |
| La Colorada | 141 | 24,876 |
| Regional Exploration | 75 | 13,262 |
| **Total** | **923** | **147,886** |

***Table 14-2: Plomosas Project, Drilling by Company***

| Company | Holes | Metres |
|---|---|---|
| Aurcana | 30 | 6,836 |
| First Majestic | 131 | 37,141 |
| Gold Ore | 6 | 602 |
| Gold Ore—SSR Mining | 17 | 2,528 |
| GR Silver | 403 | 40,318 |
| IMMSA | 307 | 54636 |
| Silvermex | 7 | 1,768 |
| Silvermex—Terra Plata | 22 | 4,058 |
| **Grand Total** | **923** | **147,887** |

The Report's Mineral Resource models are limited to the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas. The San Marcial model area hosts 122 drill holes representing 19,451 m of drilling. The Plomosas Mine model area contains 60,349 m of drilling from 432 drill holes. The San Juan–La Colorada model areas includes 54,823 m of drilling from 294 holes.

In all, 137 historical drill holes (24,411 m) in the Plomosas Mine Area were excluded from the Mineral Resource database because of incomplete sampling within the mineralized zones—IMMSA sampling was generally limited to the higher-grade portions of the deposit where visible base-metal mineralization was present, leaving lower-grade portions of the deposit unsampled. To avoid biasing the MRE by inserting zero values in these unsampled intervals, the QP decided that it was appropriate to exclude the partially sampled holes from the Mineral Resource database.

For similar reasons, 19 historical drill holes in the San Juan Area and 13 from the La Colorada Area were excluded from the Mineral Resource database.

A digital terrain model for all the deposit areas was created using LIDAR technology.

Bulk specific gravity was determined using the water immersion method. In all, 9,970 measurements were collected from drill core. The QP determined that there were sufficient bulk density data to interpolate density in the model. For those blocks where density could not be estimated, a background value based on rock type was used to fill the un-estimated blocks, based on the information in Table 14-3.

***Table 14-3: Bulk Density Averages by Area***

| Zone | Bulk Density ($t/m^3$) |
|---|---|
| Plomosas | 2.59 |
| San Juan | 2.69 |
| La Colorada | 2.62 |
| San Marcial PB Zn Zone | 2.69 |
| San Marcial Ag Zone | 2.64 |
| Waste Rock | 2.56 |

## 14.2 Exploration Data Analysis

### *14.2.1 San Marcial Mineral Resource Model*

The San Marcial area Mineral Resource includes 122 drill holes representing 14,322 assay intervals. Of these, 3,105 assays are contained within the mineralized zones used to estimate the Mineral Resource. Assay information was provided for silver, gold, lead, zinc, and copper. Partial analyses were provided for 30 other elements.

Numerical rock codes were assigned to the raw data set accordingly to geological units representing main mineralization styles. Table 14-4 summarizes rock codes and domains used for the San Marcial block model.

***Table 14-4: Rock Codes for San Marcial Area***

| Zone | Model Code |
|---|---|
| Silver Zone | 2,000 |
| Pb + Zn Zone | 1,300 |
| Waste | 99 |
| Air | 0 |

Table 14-5 provides summary statistics for the uncapped assay data used in the estimation of the San Marcial model, and Table 14-6 shows the summary statistics of the capped assays.

***Table 14-5: Summary Statistics of Uncapped Assay Data for the San Marcial Area***

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone |
| *Count* | *2,132* | *883* | *2,132* | *883* | *2,132* | *883* | *2,132* | *883* | *2,132* | *883* |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 2.30 | 2.08 | 26,150.00 | 26,18.00 | 0.19 | 0.49 | 30.00 | 25.00 | 18.60 | 6.74 |
| Mean | 0.03 | 0.05 | 168.04 | 36.44 | 0.01 | 0.01 | 0.21 | 0.31 | 0.35 | 0.52 |
| SD | 0.07 | 0.12 | 716.73 | 113.30 | 0.01 | 0.02 | 0.93 | 0.97 | 0.77 | 0.59 |
| CoV | 2.33 | 2.40 | 4.27 | 3.11 | 1.00 | 2.00 | 4.43 | 3.13 | 2.20 | 1.13 |

Notes: CoV = coefficient of variation; SD = standard deviation.

**Table 14-6: Summary Statistics of Capped Assay Data for the San Marcial Area**

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone |
| *Count* | *2,132* | *883* | *2,132* | *883* | *2,132* | *883* | *2,132* | *883* | *2,132* | *883* |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 2.30 | 2.08 | 1,800.00 | 1,800.00 | 4.50 | 4.50 | 0.49 | 0.19 | 5.00 | 5.00 |
| Mean | 0.03 | 0.05 | 139.38 | 35.52 | 0.18 | 0.28 | 0.01 | 0.01 | 0.33 | 0.52 |
| SD | 0.07 | 0.12 | 266.61 | 93.84 | 0.42 | 0.42 | 0.01 | 0.02 | 0.56 | 0.57 |
| CoV | 2.33 | 2.40 | 1.91 | 2.64 | 2.33 | 1.50 | 1.00 | 2.00 | 1.70 | 1.10 |

Notes: CoV = coefficient of variation; SD = standard deviation.

### 14.2.2 Plomosas Mine Mineral Resource Model

The Plomosas area Mineral Resource model includes 432 drill holes representing 42,929 assay intervals. Of these, 13,693 assays are contained within the mineralized zones used to estimate the Mineral Resource. Assay information was provided for silver, gold, lead, zinc, and copper. Partial analyses were provided for 30 other elements.

Rock codes were assigned to the raw data set accordingly to geological units representing main mineralization styles. Table 14-7 summarize rock codes and domains used for the Plomosas block model.

**Table 14-7: Rock Codes for Plomosas Mine**

| Zone | Model Code |
|---|---|
| 20$US Zone | 100 |
| Pb + Zn Zone | 101 to 115 |
| Void | 998 |
| Waste | 99 |
| Air | 0 |

Notes: The 20$US zone outlines a higher-grade core to the Pb+Zn zone, which defines a volume where Pb + Zn is >0.5%.
The mineralized zones coincide with hydrothermal breccia and or epithermal veining.

Table 14-8 provides summary statistics for the uncapped assay data used in estimating the Plomosas mine area resource model and Table 14-9 shows the summary statistics of the capped assays.

*Table 14-8: Summary Statistics of Uncapped Assay Data for the Plomosas Mine Area*

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone |
| *Count* | *6,928* | *6,765* | *6,928* | *6,765* | *6,928* | *6,765* | *6,928* | *6,765* | *6,928* | *6,765* |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 48.00 | 67.81 | 7,177.00 | 2,728.00 | 6.07 | 3.09 | 49.00 | 24.80 | 42.14 | 22.20 |
| Mean | 0.40 | 0.14 | 59.97 | 10.60 | 0.09 | 0.03 | 0.89 | 0.19 | 1.08 | 0.34 |
| SD | 1.67 | 0.92 | 276.88 | 60.12 | 0.28 | 0.10 | 2.96 | 0.80 | 2.66 | 1.00 |
| CoV | 4.18 | 6.57 | 4.62 | 5.67 | 3.11 | 3.33 | 3.33 | 4.21 | 2.46 | 2.94 |

*Table 14-9: Summary Statistics of Capped Assay Data for the Plomosas Mine Area*

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20US$ Zone | Pb Zn Zone | 20US$ Zone | Pb Zn Zone | 20US$ Zone | Pb Zn Zone | 20US$ Zone | Pb Zn Zone | 20US$ Zone | Pb Zn Zone |
| *Count* | *6,928* | *6,765* | *6,928* | *6,765* | *6,928* | *6,765* | *6,928* | *6,765* | *6,928* | *6,765* |
| Minimum | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maximum | 15 | 2.5 | 800 | 200 | 20 | 6.5 | 1 | 1 | 15 | 8.3 |
| Mean | 0.38 | 0.12 | 43.73 | 8.3 | 0.08 | 0.03 | 0.84 | 0.18 | 1.03 | 0.33 |
| SD | 1.27 | 0.28 | 120.88 | 21.96 | 0.17 | 0.08 | 2.45 | 0.55 | 2.28 | 0.82 |
| CoV | 3.34 | 2.33 | 2.76 | 2.65 | 2.13 | 2.67 | 2.92 | 3.06 | 2.21 | 2.48 |

### *14.2.3 San Juan and La Colorada Mineral Resource Model*

The San Juan and La Colorada resource model includes 294 drill holes representing 16,863 assay intervals. Of these, 609 assays contained within the mineralized zones at San Juan, and 1,200 at La Colorada, are used in the Mineral Resource estimation. Assay information was provided for silver, gold, lead, zinc, and copper. Partial analyses were provided for 30 other elements.

Rock codes were assigned to the raw data set accordingly to geological units representing main mineralization styles at San Juan. Table 14-10 summarizes rock codes and domains used for the San Juan block model and Table 14-11 shows the La Colorada domains.

*Table 14-10: Rock Codes for San Juan Area*

| Zone | Model Code |
|---|---|
| SJ Main | 210 |
| SJ NE | 220 |
| SJ Stockwork 1 | 230 |
| SJ Stockwork 2 | 240 |
| Exploration 1 | 251 |
| Exploration 2 | 252 |
| Waste | 99 |
| Air | 0 |

***Table 14-11: Rock Codes for La Colorada Area***

| Zone | Model Code |
|---|---|
| LC-SJ Extension | 300 |
| La Colorada 01 | 310 |
| La Colorada 03 | 330 |
| La Colorada 04 | 340 |
| La Colorada 05 | 350 |
| La Colorada 06 | 360 |
| La Colorada 08 | 380 |
| La Colorada 09 | 390 |
| Waste | 99 |
| Air | 0 |

Table 14-12 provides summary statistics for the uncapped assay data used in estimating the San Juan–La Colorada Mineral Resource model and Table 14-13 shows the summary statistics of the capped assays.

***Table 14-12: Summary Statistics of Uncapped Assay Data for the San Juan and La Colorada Areas***

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SJ | LC | SJ | LC | SJ | LC | SJ | LC | SJ | LC |
| *Count* | *609* | *1,200* | *609* | *1,200* | *609* | *1,200* | *609* | *1,200* | *609* | *1,200* |
| Minimum | 0.00 | 0.00 | 0.25 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 7.92 | 46.95 | 5,600 | 8,519 | 0.86 | 1.96 | 8.49 | 31.52 | 17.90 | 38.50 |
| Mean | 0.16 | 0.40 | 101.41 | 22.84 | 0.03 | 0.02 | 0.43 | 0.73 | 1.04 | 1.12 |
| SD | 0.45 | 1.70 | 349.23 | 256.30 | 0.07 | 0.09 | 0.93 | 1.71 | 2.27 | 2.56 |
| CoV | 2.75 | 4.22 | 3.44 | 11.22 | 2.64 | 3.49 | 2.17 | 2.35 | 2.19 | 2.29 |

Notes: SJ = San Juan; LC = La Colorada.

***Table 14-13: Summary Statistics of Capped Assay Data for the San Juan and La Colorada Areas***

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SJ | LC | SJ | LC | SJ | LC | SJ | LC | SJ | LC |
| *Count* | *609* | *1,200* | *609* | *1,200* | *609* | *1,200* | *609* | *1,200* | *609* | *1,200* |
| Minimum | 0.00 | 0.00 | 0.25 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 3.00 | 5.00 | 825.00 | 350.00 | 0.86 | 0.50 | 4.00 | 10.00 | 8.00 | 13.00 |
| Mean | 0.16 | 0.33 | 78.03 | 13.62 | 0.03 | 0.02 | 0.40 | 0.69 | 0.93 | 1.05 |
| SD | 0.34 | 0.68 | 154.88 | 38.72 | 0.07 | 0.05 | 0.73 | 1.33 | 1.63 | 1.96 |
| CoV | 2.18 | 2.05 | 1.98 | 2.84 | 2.49 | 2.35 | 1.85 | 1.93 | 1.75 | 1.87 |

Notes: SJ = San Juan; LC = La Colorada.

## 14.3 Evaluation of Extreme Assay Values

Block-grade estimates may be unduly affected by high-grade assays. Therefore, the assay data were evaluated for high-grade outliers to determine if capping was appropriate.

### *14.3.1 San Marcial Model*

The capping values for San Marcial were established by checking the sample population grade distributions on cumulative probability plots and evaluating the effects of capping on the average grade of the sample population. Capping was applied to assays prior to compositing, as outlined in Table 14-14.

***Table 14-14: San Marcial Assay Capping Level***

| | Unit | San Marcial Silver Zone | San Marcial Pb Zn Zone |
|---|---|---|---|
| Gold | g/t | NC | NC |
| Silver | g/t | 1,800 | 850 |
| Copper | % | NC | NC |
| Lead | % | 4.5 | 4.5 |
| Zinc | % | 5.0 | 5.0 |

### *14.3.2 Plomosas Model*

The capping values for Plomosas were established by checking the sample population grade distributions on cumulative probability plots and evaluating the effects of capping on the average grade of the sample population. Capping was applied to assays prior to compositing, as outlined in Table 14-15.

The channel data were not used for estimating the Mineral Resource but were used to provide an estimate of the mined-out material within the mapped-out stopes.

*Table 14-15: Plomosas Assay Capping Level*

| | Unit | Plomosas 20$US Zone (DDH) | Plomosas Pb Zn Zone (DDH) | Plomosas Silver Zone (CH) |
|---|---|---|---|---|
| Gold | g/t | 15.0 | 2.5 | 6.0 |
| Silver | g/t | 800.0 | 200.0 | 1,800.0 |
| Copper | % | 1.0 | 1.0 | 1.5 |
| Lead | % | 20.0 | 6.5 | 10.0 |
| Zinc | % | 15.0 | 8.3 | 6.0 |

Notes: DDH = diamond drill holes, CH = Channels.

### 14.3.3 San Juan–La Colorada Model

The capping values for San Juan–La Colorada were established by checking the sample population grade distributions on cumulative probability plots and evaluating the effects of capping on the average grade of the sample population. Capping was applied to assays prior to compositing, as outlined in Table 14-16.

*Table 14-16: San Juan–La Colorada Assay Capping Level*

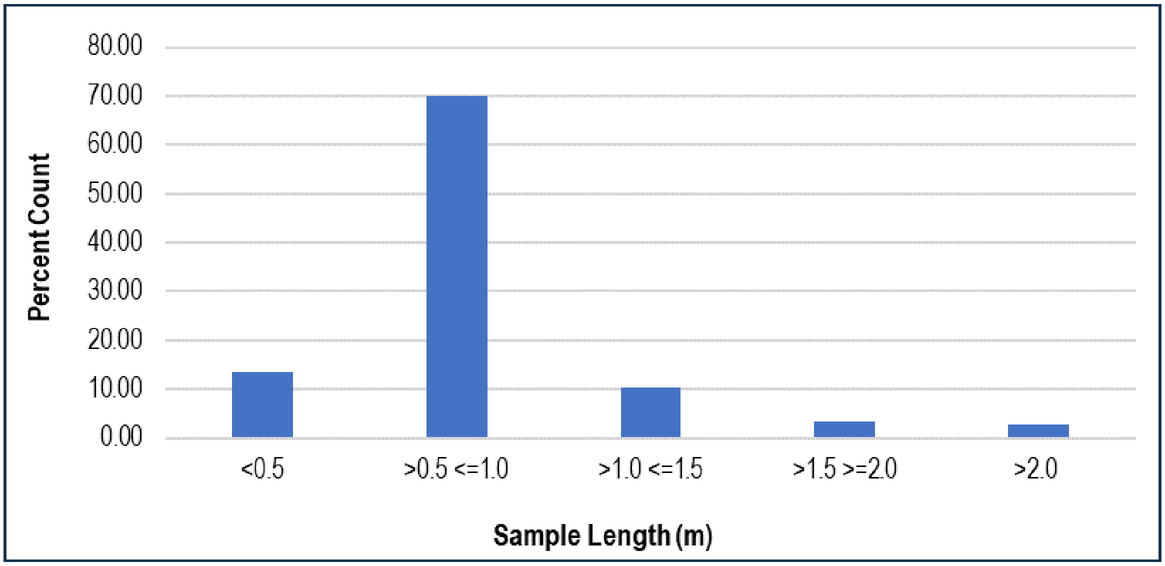
| Metal | Unit | San Juan | La Colorada |
|---|---|---|---|
| Gold | g/t | 3.0 | 5.0 |
| Silver | g/t | 825.0 | 350.0 |
| Copper | % | NC | 0.5 |
| Lead | % | 4.0 | 10.0 |
| Zinc | % | 8.0 | 13.0 |

## 14.4 Compositing

### 14.4.1 San Marcial Model

Almost all assayed samples inside the mineralized domains were collected at ≤1.0 m intervals. For this reason, the QP decided to composite all assay data to 1.0 m (Figure 14-1). Summary statistics of the composited capped assay data for the mineralized units in the San Marcial model are presented in Table 14-17.

*Figure 14-1: Histogram of Sample Lengths in the San Marcial Area*




Source: Arseneau and Crowie (2023).

*Table 14-17: Summary Statistics of Capped Composite Data for the San Marcial Area*

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone | Ag Zone | Pb Zn Zone |
| *Count* | *1,992* | *936* | *1,992* | *936* | *1,992* | *936* | *1,992* | *936* | *1,992* | *936* |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 0.97 | 1.95 | 1800 | 932 | 0.11 | 0.19 | 4.30 | 3.83 | 5.00 | 2.89 |
| Mean | 0.03 | 0.05 | 126.47 | 30.62 | 0.01 | 0.01 | 0.18 | 0.26 | 0.34 | 0.49 |
| SD | 0.05 | 0.11 | 209.04 | 68.16 | 0.01 | 0.01 | 0.35 | 0.33 | 0.49 | 0.46 |
| CoV | 1.67 | 2.20 | 1.65 | 2.23 | 1.00 | 1.00 | 1.94 | 1.27 | 1.44 | 0.94 |

### 14.4.2 Plomosas Mine Model

Almost all assayed samples inside the mineralized domains were collected at ≤1.0 m intervals. For this reason, the QP decided to composite all assay data to 1.0 m. Summary statistics of the composited capped assay data for the mineralized units in the Plomosas Mine model are presented in Table 14-18.

The compositing process integrated assay data inside the domains and applied zero values to unsampled intervals if they existed within the mineralized domains. A total of 60 zero-value composites was generated as part of the compositing of missing or unsampled intervals within the mineralized zones.

*Table 14-18: Summary Statistics of Capped Composite Data for the Plomosas Mine Area*

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone | 20$US Zone | Pb Zn Zone |
| *Count* | *5,230* | *5,583* | *5,230* | *5,583* | *5,230* | *5,583* | *5,230* | *5,583* | *5,230* | *5,583* |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 15.00 | 2.50 | 800.00 | 200.00 | 1.00 | 1.00 | 20.00 | 6.25 | 15.00 | 7.36 |
| Mean | 0.35 | 0.11 | 36.83 | 7.32 | 0.07 | 0.02 | 0.66 | 0.15 | 0.84 | 0.28 |
| SD | 1.04 | 0.24 | 93.70 | 16.35 | 0.13 | 0.06 | 1.72 | 0.36 | 1.64 | 0.56 |
| CoV | 2.99 | 2.23 | 2.54 | 2.23 | 1.90 | 2.83 | 2.60 | 2.43 | 1.95 | 1.99 |

### *14.4.3 San Juan–La Colorada Mineral Resource Model*

Almost all assayed samples inside the mineralized domains were collected at ≤1.0 m intervals. For this reason, the QP decided to composite all assay data to 1.0 m. Summary statistics of the composited capped assay data for the mineralized units in the San Juan–La Colorada Areas are presented in Table 14-19.

*Table 14-19: Summary Statistics of Capped Composite Data for the San Juan–La Colorada Area*

| Zone | Au (g/t) | | Ag (g/t) | | Cu (%) | | Pb (%) | | Zn (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SJ | LC | SJ | LC | SJ | LC | SJ | LC | SJ | LC |
| *Count* | *628* | *1,038* | *628* | *1,038* | *628* | *1,038* | *628* | *1,038* | *628* | *1,038* |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum | 3.00 | 5.00 | 825.00 | 350.00 | 0.77 | 0.50 | 4.00 | 10.00 | 8.00 | 13.00 |
| Mean | 0.14 | 0.32 | 77.92 | 15.44 | 0.02 | 0.02 | 0.30 | 0.61 | 0.70 | 0.91 |
| SD | 0.30 | 0.61 | 147.34 | 40.78 | 0.06 | 0.04 | 0.57 | 0.96 | 1.23 | 1.53 |
| CoV | 2.20 | 1.93 | 1.89 | 2.64 | 2.66 | 2.17 | 1.87 | 1.56 | 1.76 | 1.68 |

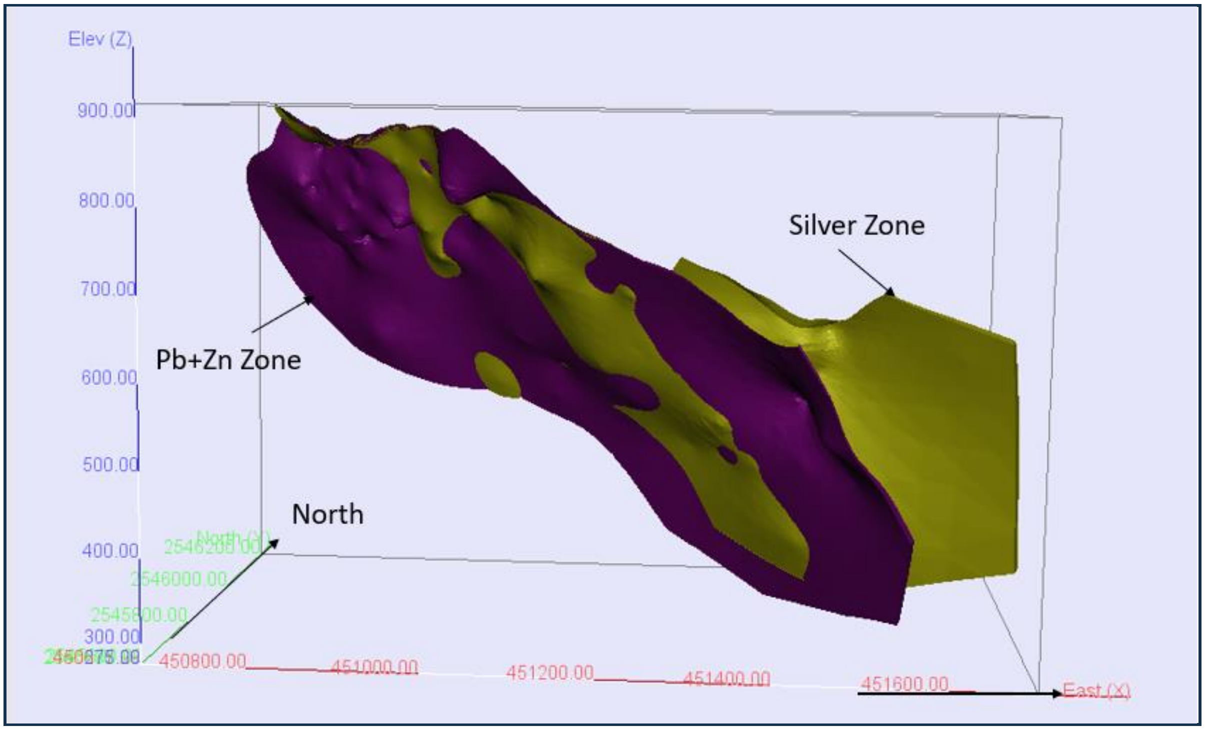
## 14.5 Solid Modelling

### *14.5.1 San Marcial Model*

Mineralization at San Marcial is contained within a brecciated andesite and includes both precious and base metal. The precious-metal mineralized unit consists mainly of a silver-rich zone overlapping a lead–zinc mineralized unit. Two solids were generated using Leapfrog Geo 2022.1. The two mineralized solids generally overlap, but diverge slightly in the eastern portion of the deposit. The mineralization generally strikes southeast and dips 50° northeast (Figure 14-2).

For modelling purposes, the silver zone was given priority, so that where the zones overlap, the blocks are coded as belonging to the silver zone. Other blocks are coded by majority rule.

***Figure 14-2: San Marcial Mineralized Domains—Perspective View Looking North***

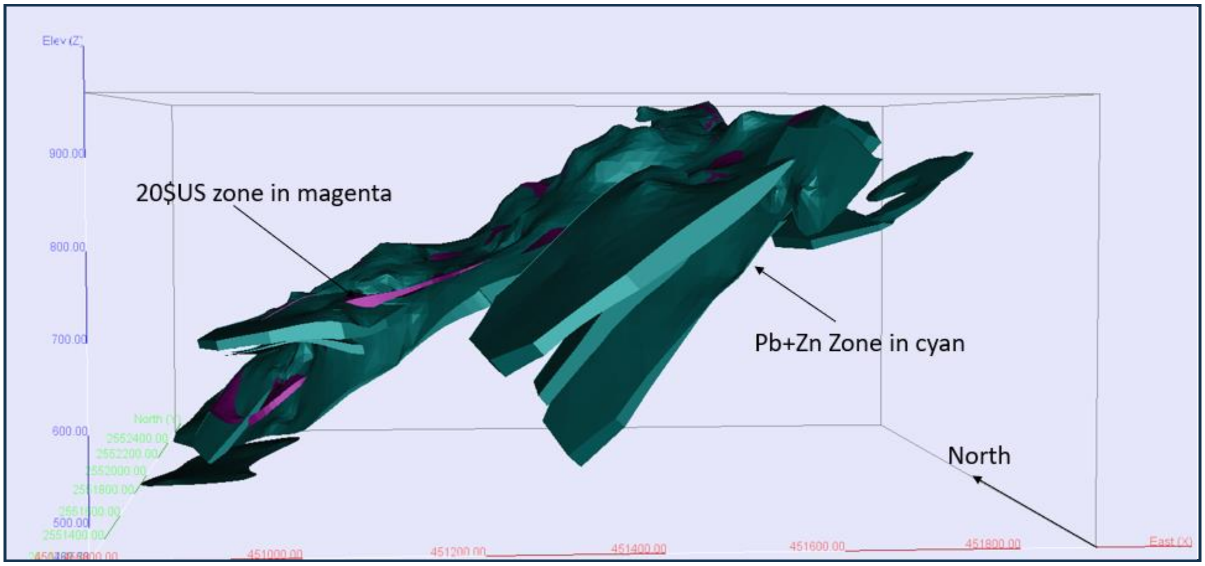



Source: Arseneau and Crowie (2023).
Note: Markers are 200 m apart on the X and Y axes and 100 m apart on the Z-axis.

### *14.5.2 Plomosas Mine Model*

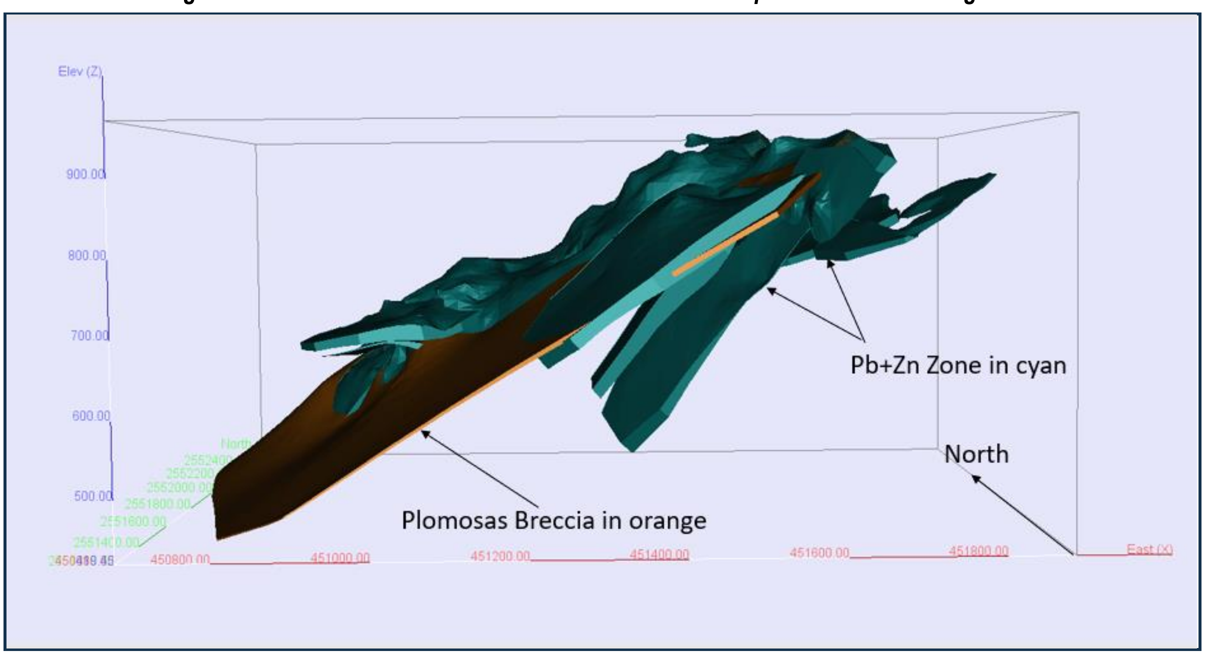
Precious- and base-metal mineralization in the Plomosas Mine Area is hosted in brecciated metavolcanic assemblages within the Plomosas fault structure. The Plomosas fault dips gently (about 30°) to the west and generally strikes north–south. Gold and silver mineralization also occurs in later structures that cut across the Plomosas fault at a steeper angle (45° to 50°). Two methods were applied to model the mineralization at Plomosas. The first method, based on combined lead and zinc content >0.5% generated fifteen discrete solids. The second method generated four solids based on total metal value of >=US$20.00. The total metal-value solids are somewhat discontinuous and are coincident and internal to the broader lead–zinc solid (Figure 14-3); they are mostly closely associated with the Plomosas breccia, but some clearly represent mineralization not related to the main Plomosas breccia (Figure 14-4). The thickness of the mineralization and breccia zones is variable from 5 to over 50 m, and they expand and contract along strike.

***Figure 14-3: 20$US Zone Internal to the Pb + Zn Zone—Perspective View Looking North***




Source: Arseneau and Crowie (2023).
Note: Markers are 200 m apart on the X and Y axes and 100 m apart on the Z-axis.

***Figure 14-4: Pb + Zn Zone and Plomosas Breccia—Perspective View Looking North***




Source: Arseneau and Crowie (2023).
Note: Markers are 200 m apart on the X and Y-axes and 100 m apart on the Z-axis.

The mineralization in the Plomosas Mine Area is divided into the inner 20US$ domains and the surrounding lead–zinc domains. Table 14-20 list the domains and rock codes assigned to each for modelling.

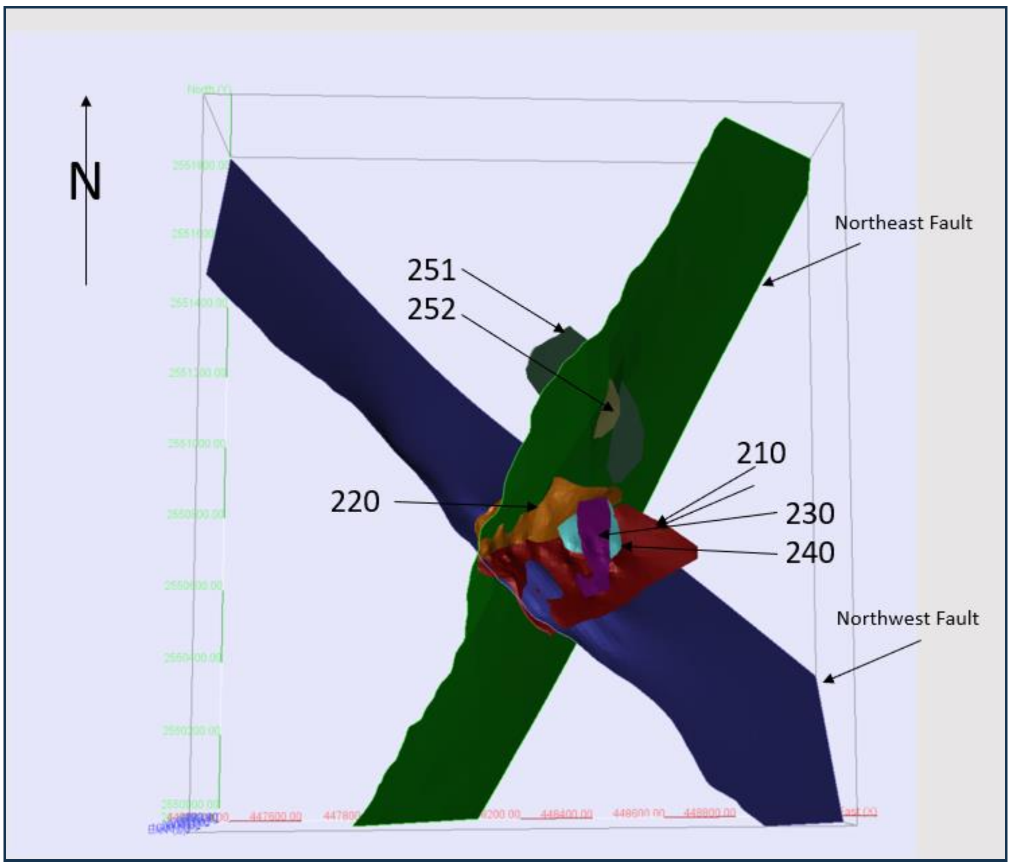
***Table 14-20: Rock Codes for Plomosas Area Model***

| Rock Code | Description |
|---|---|
| 100 | 20US$ Zone |
| 101 to 115 | Pb + Zn Domains |
| 99 | Waste Host Rock (Andesite) |
| 0 | Air |

### *14.5.3 San Juan–La Colorada Model*

The San Juan Area mineralization is generally associated with two intersecting fault structures striking northeast and northwest (Figure 14-5). The mineralization occurs within the fault or in the hanging wall and comprises volcanic breccia with a haematitic matrix and appears to be focused within breccia and shear zones that have been affected by hydrothermal alteration and sulphide mineralization. Table 14-21 lists the rock codes used to estimate the San Juan Mineral Resource.

***Figure 14-5: San Juan Faults and Mineralization—Plan Perspective View***



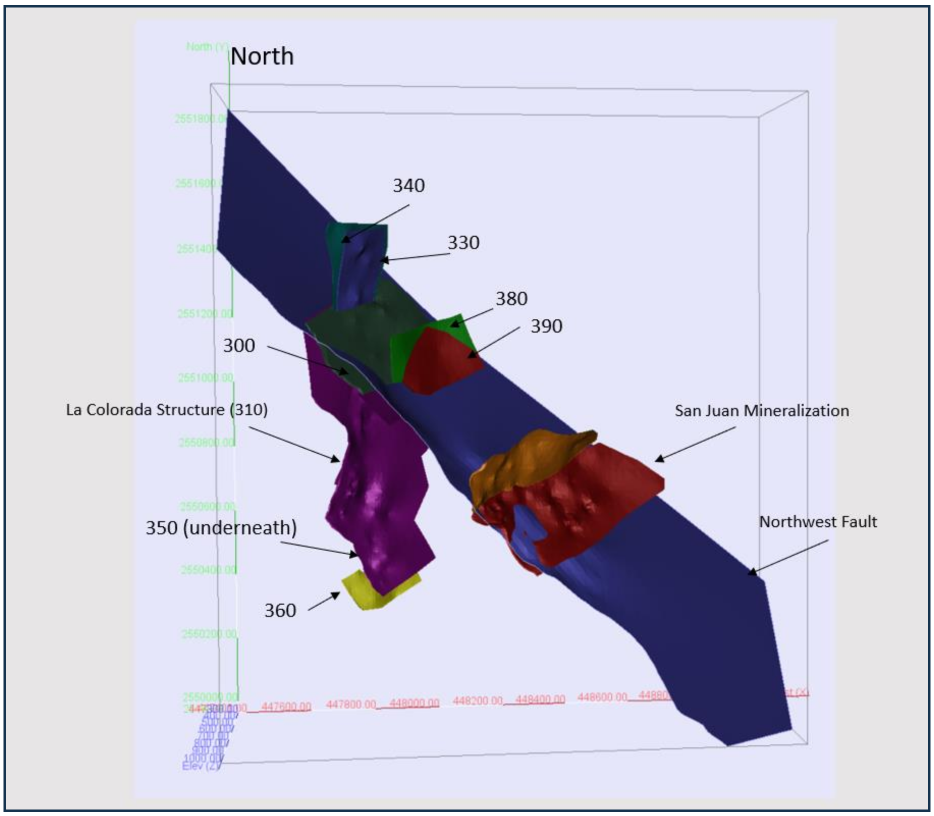

Source: Arseneau and Crowie (2023).
Note: Markers are 200 m apart; number labels are rock codes.

*Table 14-21: Rock Codes for San Juan and La Colorada Model*

| Rock Code | Description |
|---|---|
| 210, 220, 230 & 240 | San Juan mineralized zones along Northwest fault |
| 251 & 252 | San Juan mineralized zones along Northeast fault |
| 300, 380 & 390 | La Colorada mineralization along Northwest fault |
| 310, 330, 340, 350 & 360 | La Colorada mineralization along La Colorada Structure |
| 99 | Waste Host Rock (Andesite) |
| 0 | Air |

Mineralization at La Colorada is hosted within eight separate, subparallel, discrete vein structures. Mineralization occurs along the northwest structure hosting the San Juan mineralization and along an intersecting north-trending fault structure defining the La Colorada vein structure (Figure 14-6).

*Figure 14-6: La Colorada Faults and Mineralization—Plan Perspective View*




Source: Arseneau and Crowie (2023).
Note: Distance markers are 200 m apart; number labels are rock codes.

## 14.6 Variography

### 14.6.1 San Marcial Model

Experimental variograms were generated for the mineralization at San Marcial using SAGE2001 modelling software. Variogram model rotations were based on the general attitude of the mineralized zones. The nugget effects (that is, the variability at very close distance) were established from downhole variograms for each of the mineralized zones. The nugget values range from 20% to 30% of the total sill. Note that the sill represents the grade variability at a distance beyond which there is no correlation in grade. Variogram models used for grade estimation in the San Marcial model are summarized in Table 14-22.

***Table 14-22: Exponential Correlogram for the San Marcial Model***

| Metal | Nugget $C_0$ | Sill $C_{1/2}$ | Rotation (°) | | | Ranges (m) $a_1/a_2$ | | |
|---|---|---|---|---|---|---|---|---|
| | | | around Z | around Y | around Z | X-Range | Y-Range | Z-Range |
| Gold | 0.2 | 0.334/0.466 | 68 | 70 | −20 | 11/128 | 64/189 | 9/128 |
| Silver | 0.27 | 0.511/0.219 | 51 | 66 | −75 | 5/124 | 18/108 | 8/24 |
| Lead | 0.2 | 0.8 | 47 | 49 | 31 | 66 | 111 | 9 |
| Zinc | 0.3 | 0.7 | 47 | 49 | 31 | 136 | 46 | 12 |
| Copper | 0.2 | 0.8 | 47 | 49 | 31 | 66 | 111 | 9 |

### 14.6.2 Plomosas Mine Model

An experimental variogram and model were generated for the mineralized zones at the Plomosas Mine Area. Variogram model rotations for Plomosas were based on the general attitude of the mineralized zones. The nugget effects were established from downhole variograms for each of the mineralized zones. The nugget values range from 15% to 40% of the total sill. Note that the sill represents the grade variability at a distance beyond which there is no correlation in grade.

Variogram models used for grade estimation in the Plomosas Mine Area are summarized in Table 14-23.

***Table 14-23: Exponential Correlogram Models for the Plomosas Model***

| Metal | Nugget $C_0$ | Sill $C_{1/2}$ | Rotation (°) | | | Ranges (m) $a_1/a_2$ | | |
|---|---|---|---|---|---|---|---|---|
| | | | around Z | around Y | around Z | X-Range | Y-Range | Z-Range |
| Gold | 0.15 | 0.633/0.217 | −68 | 69 | 28 | 6/46 | 14/127 | 4/168 |
| Silver | 0.15 | 0.579/0.270 | −68 | 67 | 28 | 5/43 | 9/165 | 5/143 |
| Lead | 0.3 | 0.494/0.205 | −13 | 55 | −13 | 6/28 | 37/114 | 6/168 |
| Zinc | 0.32 | 0.382/0.297 | −28 | 59 | 3 | 15/35 | 21/91 | 5/153 |
| Copper | 0.32 | 0.382/0.297 | −28 | 59 | 3 | 15/35 | 21/91 | 5/153 |

#### *14.6.3 San Juan and La Colorada Model*

Attempts were made to generate correlograms for the San Juan and La Colorada mineralization, but the multiple mineralized zones striking at various angles resulted in small individual populations; thus, no variographic information could be derived from the data. The grades were instead interpolated using inverse distance squared interpolant ($ID^2$).

### 14.7 Resource Estimation Methodology

#### *14.7.1 San Marcial Model*

Mineral Resources for the San Marcial area were estimated in a single block model using Geovia Gems (Version 6.8.4). The geometrical parameters of the block models are summarized in Table 14-24.

***Table 14-24: San Marcial Block Model Parameters***

| | Minimum (m) | Maximum (m) | Extent (m) | Size (m) | Number of Blocks |
|---|---|---|---|---|---|
| Easting | 450,600 | 451,900 | 1,300 | 10 | 130 |
| Northing | 2,545,400 | 2,546,600 | 1,200 | 5 | 240 |
| Elevation | 250 | 1,100 | 850 | 10 | 85 |

Grades were estimated by ordinary kriging in three successive passes, as outlined in Table 14-25. The first pass considered a relatively small search ellipsoid; the second- and third-pass search ellipsoids were larger and estimated only blocks that had not been estimated by the previous pass. Search parameters were generally set to match the correlogram parameters, but were designed to capture sufficient data to estimate a grade in the blocks.

***Table 14-25: Grade Estimation Parameters for the San Marcial Model***

| Search Pass | Search Type | Rotation (°) | | | Search Radii (m) | | | Number of Composites | | Max. Samples per DDH |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Z | Y | Z | X (m) | Y (m) | Z (m) | Min. | Max. | |
| 1 | OK | 51 | 58 | −75 | 62 | 54 | 12 | 7 | 21 | 6 |
| 2 | OK | 51 | 58 | −75 | 93 | 81 | 18 | 6 | 21 | 5 |
| 3 | OK | 51 | 58 | −75 | 155 | 135 | 30 | 5 | 21 | 4 |

Note: DDH = diamond drill hole

#### *14.7.2 Plomosas Model*

Mineral Resources for the Plomosas Mine were estimated using Geovia Gems (Version 6.8.4). The geometrical parameters of the block models are summarized in Table 14-26.

***Table 14-26: Plomosas Mine Model Parameters***

| | Minimum (m) | Maximum (m) | Extent (m) | Block Size (m) | Number of Blocks |
|---|---|---|---|---|---|
| Easting | 450,600 | 452,000 | 1,400 | 5 | 280 |
| Northing | 2,551,200 | 2,552,600 | 1,400 | 5 | 280 |
| Elevation | 400 | 1,230 | 830 | 5 | 166 |

Grades for the Plomosas Mine Area model were estimated by ordinary kriging in three successive passes, as outlined in Table 14-27. The first pass considered a relatively small search ellipsoid and excluded all IMMSA drill holes. The second -and third-pass search ellipsoids were larger and included all holes. Search parameters were generally set to match the correlogram parameters, but were also designed to capture sufficient data to estimate a grade in the blocks. Because of the apparent folded nature of the Plomosas breccia, the search was divided into two discrete domains to better represent the folding of the mineralized zones.

***Table 14-27: Grade Estimation Parameters for Plomosas Mine Model***

| Domain | Search Pass | Search Type | Rotation (°) | | | Search Radii (m) | | | No. of Composites | | Max. Samples per DDH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z | Y | Z | X | Y | Z | Min. | Max. | |
| 1 | 1 | OK | −20 | 50 | 0 | 12 | 50 | 70 | 6 | 24 | 5 |
| | 2 | OK | −20 | 50 | 0 | 24 | 100 | 120 | 6 | 24 | 5 |
| | 3 | OK | −20 | 50 | 0 | 36 | 150 | 200 | 6 | 18 | 5 |
| 2 | 1 | OK | 20 | 50 | 0 | 12 | 50 | 70 | 6 | 24 | 5 |
| | 2 | OK | 20 | 50 | 0 | 24 | 100 | 120 | 6 | 24 | 5 |
| | 3 | OK | 20 | 50 | 0 | 36 | 150 | 200 | 6 | 18 | 5 |

Note: DDH = diamond drill hole

### *14.7.3 San Juan and La Colorada Model*

Mineral Resources for the San Juan and La Colorada area were estimated using Geovia Gems (Version 6.8.4). The geometrical parameters of the block models are summarized in Table 14-28.

***Table 14-28: San Juan and La Colorada Block Model Setup Parameters***

| | Minimum (m) | Maximum (m) | Extent (m) | Block Size (m) | Number of Blocks |
|---|---|---|---|---|---|
| Easting | 447,400 | 449,000 | 1,600 | 5 | 320 |
| Northing | 2,550,000 | 2,551,800 | 1,800 | 5 | 360 |
| Elevation | 400 | 1,500 | 1,100 | 5 | 220 |

Block grades for the San Juan and La Colorada Areas were estimated using $ID^2$ in four successive passes with increasing ranges. Table 14-29 summarizes the San Juan and La Colorada estimation parameters.

*Table 14-29: San Juan and La Colorada Estimation Parameters*

| Search Pass | Zone | Rotation (°) | | | Search Radii (m) | | | No. of Composites | | Max. Samples per DDH |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Z | Y | Z | X | Y | Z | Min. | Max. | |
| 1 | 210 | 48 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 210 | 48 | 36 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 210 | 48 | 36 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 210 | 48 | 36 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 220 | −30 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 220 | −30 | 36 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 220 | −30 | 36 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 220 | −30 | 36 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 230 & 240 | 28 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 230 & 240 | 28 | 36 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 230 & 240 | 28 | 36 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 230 & 240 | 28 | 36 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 251 | −42 | 46 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 251 | −42 | 46 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 251 | −42 | 46 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 251 | −42 | 46 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 252 | −48 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 252 | −48 | 36 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 252 | −48 | 36 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 252 | −48 | 36 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 300 | 16 | 48 | 35 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 300 | 16 | 48 | 35 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 300 | 16 | 48 | 35 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 300 | 16 | 48 | 35 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 310 | 4 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 310 | 4 | 36 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 310 | 4 | 36 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 310 | 4 | 36 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 310 | 4 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 330 & 340 | −22 | 46 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 330 & 340 | −22 | 46 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 330 & 340 | −22 | 46 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |
| 1 | 350, 360, 380 & 390 | 28 | 36 | 0 | 50 | 50 | 10 | 4 | 12 | 3 |
| 2 | 350, 360, 380 & 390 | 28 | 36 | 0 | 75 | 75 | 20 | 4 | 12 | 3 |
| 3 | 350, 360, 380 & 390 | 28 | 36 | 0 | 100 | 120 | 30 | 4 | 12 | 3 |
| 4 | 350, 360, 380 & 390 | 28 | 36 | 0 | 100 | 120 | 30 | 3 | 12 | 2 |

Note: DDH = diamond drill hole.

Because the Mineral Resources on the Plomosas Project are multi-element deposits, including both precious and base metals, the QP decided to calculate a dollar equivalent value for all the blocks using the information in Table 14-30 to Table 14-32. Note that the dollar equivalent is simply used to estimate the in situ value of each block to assist in determining if the blocks have a reasonable prospect of eventual economic extraction and are not intended to reflect the implied value of the deposit.

***Table 14-30: Parameters Used to Calculate the Dollar Equivalent Value for San Marcial***

| Metal | Unit | Price | Recovery (%) |
|---|---|---|---|
| Copper | US$/lb | 4.20 | 0.0 |
| Lead | US$/lb | 1.10 | 59.0 |
| Zinc | US$/lb | 1.30 | 80.0 |
| Gold | US$/oz | 1,750 | 0.0 |
| Silver | US$/oz | 22.00 | 94.0 |

Note: Metal prices are derived from *Energy & Metals Consensus Forecasts* long-term pricing.

***Table 14-31: Parameters Used to Calculate Dollar Equivalent Value for Plomosas Mine Area***

| Metal | Unit | Price | Recovery (%) |
|---|---|---|---|
| Copper | US$/lb | 4.20 | 80.0 |
| Lead | US$/lb | 1.10 | 69.0 |
| Zinc | US$/lb | 1.30 | 75.0 |
| Gold | US$/oz | 1,750.00 | 86.0 |
| Silver | US$/oz | 22.00 | 74.0 |

Note: Metal prices are derived from *Energy & Metals Consensus Forecasts* long-term pricing.

***Table 14-32: Parameters Used to Calculate Dollar Equivalent Value for San Juan and La Colorada***

| Metal | Unit | Price | Recovery (%) |
|---|---|---|---|
| Copper | US$/lb | 4.20 | 26.0 |
| Lead | US$/lb | 1.10 | 58.0 |
| Zinc | US$/lb | 1.30 | 47.0 |
| Gold | US$/oz | 1,750.00 | 79.0 |
| Silver | US$/oz | 22.00 | 71.0 |

Note: Metal prices are derived from *Energy & Metals Consensus Forecasts* long-term pricing.

## 14.8 Mineral Resource Classification

Mineral Resources were estimated in conformity with CIM (2019). Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. Mineral Resources were classified according to CIM (2014) by Dr. Arseneau, an “independent qualified person” as defined in NI 43-101 and Member 23474 of the APEGBC, ACS is licenced to operate in British Columbia under APEGBC Permit to Practice 1000256.

Mineral Resource classification is typically a subjective endeavour; industry best practices suggest that Mineral Resource classification should consider both the confidence in the geological continuity of the mineralized structures, the quality and quantity of exploration data supporting the estimates, and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating both concepts to delineate regular areas at similar Mineral Resource classification.

The QP is satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support Mineral Resource estimation. The sampling information was acquired by core drilling on sections spaced at about 25 to 30 m for most of the San Marcial and Plomosas Mine Areas and 35 to 50 m for the San Juan Area. At the current stage of drilling, the QP considers that the mineralization at the Plomosas Project satisfies the definition of Indicated and Inferred Mineral Resources (CIM, 2014).

Mineral Reserves can be estimated based only on the results of an economic evaluation as part of a preliminary feasibility study or feasibility study. Since no such studies have been undertaken as yet for the Plomosas Project, no Mineral Reserves have been estimated in this Technical Report. There is no certainty that all or any part of the MREs included in this Technical Report will be converted into Mineral Reserves.

The estimated blocks were classified according to:

- Confidence in interpreting the mineralized zones
- Continuity of grades as defined from a variogram model for the Plomosas Mine Area
- Number of drill holes used to estimate a block
- Average distance to the composites used to estimate a block.

### *14.8.1 San Marcial Model*

For the San Marcial area, blocks were classified as Indicated Mineral Resource if estimated during passes one and two and informed by at least three drill holes within the search volumes. All other estimated blocks were classified as Inferred Mineral Resource.

The San Marcial Mineral Resources may be impacted by further infill and exploration drilling that may result in an increase or decrease in future Mineral Resources defined for the deposit. Mineral Resources may also be affected by subsequent assessment of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. There is insufficient information at this early stage to assess the extent to which the MREs will be affected by these factors, which would be more-suitably assessed in a preliminary economic study (PEA).

### *14.8.2 Plomosas Model*

For the Plomosas Mine Area, blocks were classified as Indicated Mineral Resource if estimated during the first estimation pass not using any IMMSA drill holes) and informed by at least three drill holes within an average distance of 50 m. All other estimated blocks were classified as Inferred Mineral Resource.

The Plomosas Mineral Resources may be impacted by further infill and exploration drilling that may result in an increase or decrease in future Mineral Resources defined for this deposit. Mineral Resources may also be affected by subsequent assessment of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. There is insufficient information at this early stage to assess the extent to which the Mineral Resources will be affected by these factors, which would be more-suitably assessed in a PEA.

#### *14.8.3 San Juan–La Colorada Model*

For the San Juan–La Colorada Area, blocks were classified as Indicated Mineral Resources if estimated during the first or second estimation passes (not using any IMMSA drill holes) and informed with at least four drill holes.

The San Juan and La Colorada Mineral Resources may be impacted by further infill and exploration drilling that may result in an increase or decrease in future Mineral Resources defined for this deposit. The Mineral Resources may also be affected by subsequent assessment of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. There is insufficient information at this early stage to assess the extent to which the Mineral Resources will be affected by these factors, which would more-suitably assessed in a PEA.

### 14.9 Validation of the Block Model

The Mineral Resource block models were validated by completing a series of inspections, including:

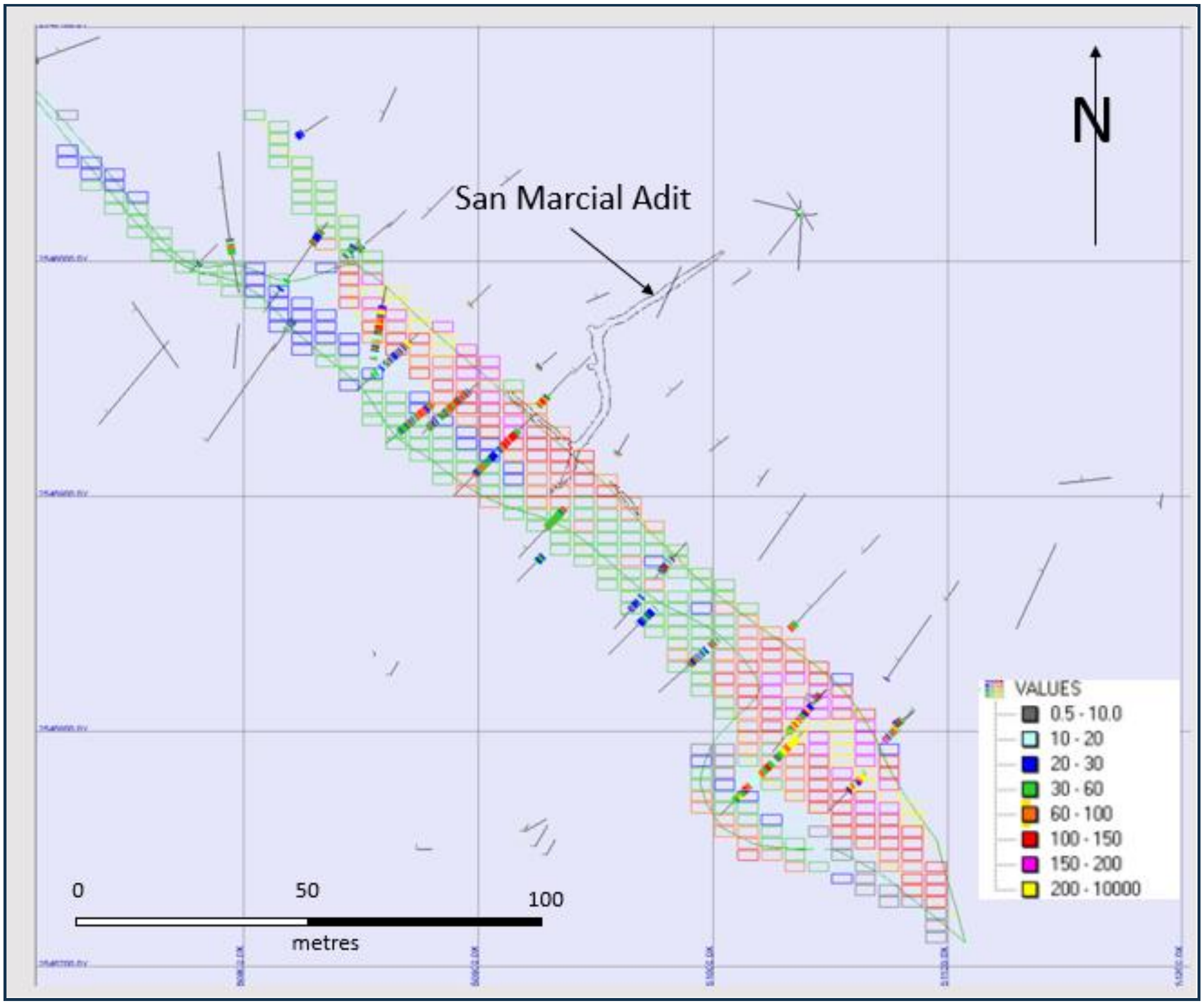
- Visually comparing estimated block grades with composited grades on sections and in plan
- Comparing the block grades with declustered composites grades in plan and sections along swath plots
- Validating mined-out volumes at Plomosas.

#### *14.9.1 Visual Comparison*

***San Marcial Model***

Figure 14-7 shows a comparison of estimated dollar-equivalent block values with drill-hole composite data for the San Marcial area. On average, the estimated blocks are similar to the composite data.

**Figure 14-7: Plan View Comparing Estimated Block Values with Drill-Hole Composited Values for San Marcial**

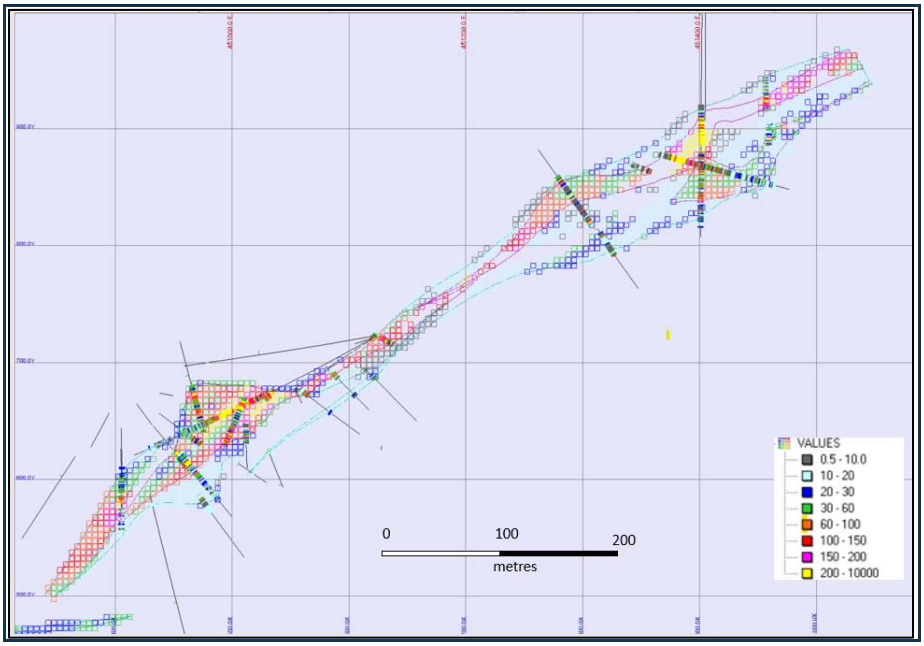



Source: Arseneau and Crowie (2023).

### *Plomosas Model*

Figure 14-8 shows a comparison of estimated dollar-equivalent block values with drill-hole composite data for the Plomosas Mine Area in section. On average, the estimated blocks are similar to the composite data; however, because the IMMSA samples were used only to populate blocks in the second and third passes, some blocks estimated without the IMMSA data do not always agree with the IMMSA drill holes.

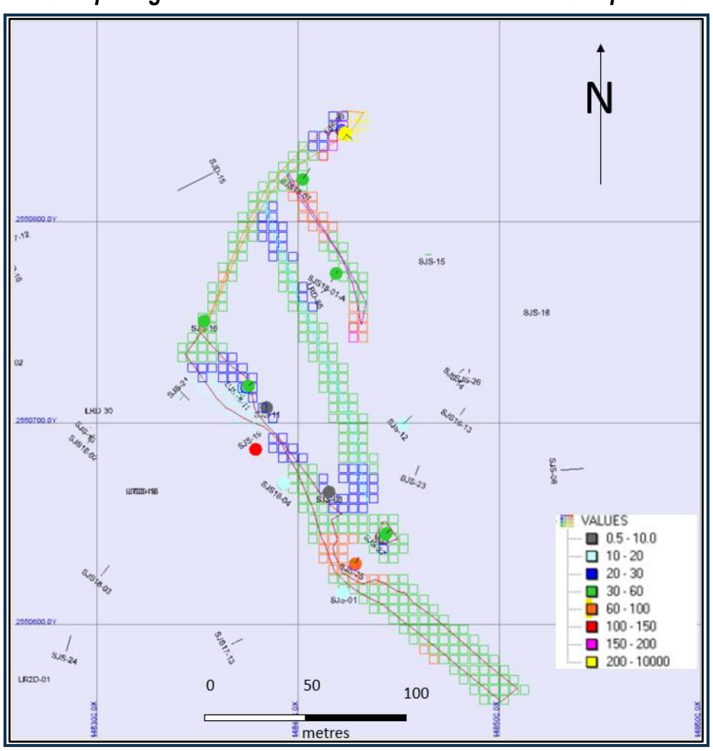
***Figure 14-8: Cross-Section Looking North Comparing Estimated Block Values with Drill-Hole Composited Values for Plomosas Mine Area***




Source: Arseneau and Crowie (2023).

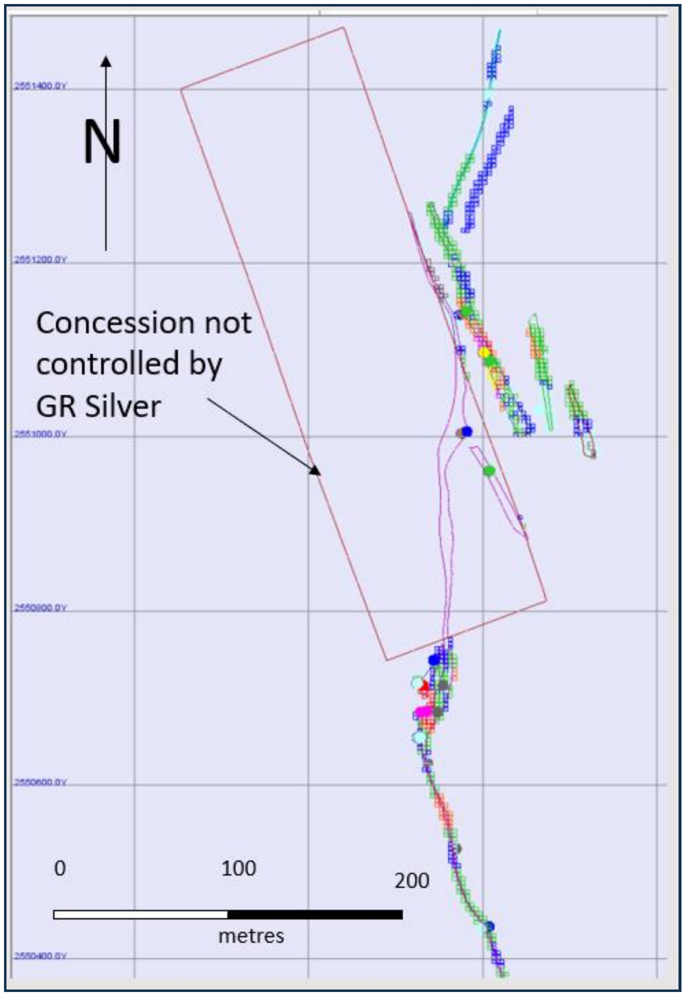
Figure 14-9 shows the San Juan model area and Figure 14-10 shows the La Colorada area.

***Figure 14-9: Plan View Comparing Estimated Block Value with Drill-Hole Composites for the San Juan Area***




Source: Arseneau and Crowie (2023).

***Figure 14-10: Plan View Comparing Estimated Block Value with Drill-Hole Composites for the La Colorada Area***




Source: Arseneau and Crowie (2023).

### *14.9.2 Swath Plots*

Swath plots compare the average composite grades and average estimated grades along different directions; this involved calculating declustered average composite grades and comparing them with average block estimates along east–west, north–south, and horizontal swaths.

Figure 14-11 to Figure 14-13 show the swath plots for the San Marcial, Plomosas, and San Juan block models. The average composite grades and the average estimated block grades are quite similar for all models. Overall, the comparison shows that the estimated block grades agree reasonably well with the composited drill data.

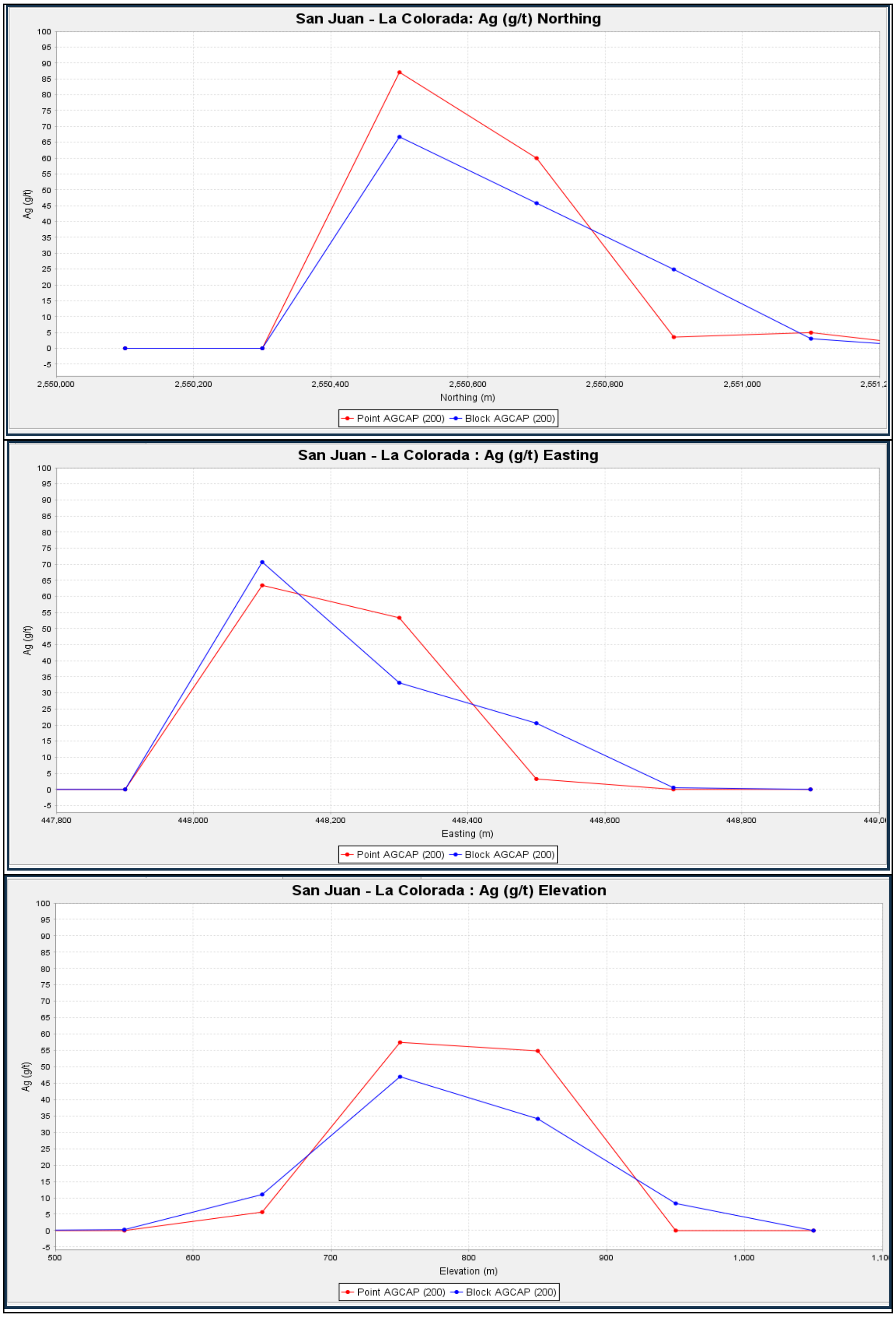
***Figure 14-11: Swath Plots for San Marcial Model***


Source: Arseneau and Crowie (2023).

***Figure 14-12: Swath Plots for Plomosas Model***


Source: Arseneau and Crowie (2023).

*Figure 14-13: Swath Plots for the San Juan–La Colorada Model*




Source: Arseneau and Crowie (2023).

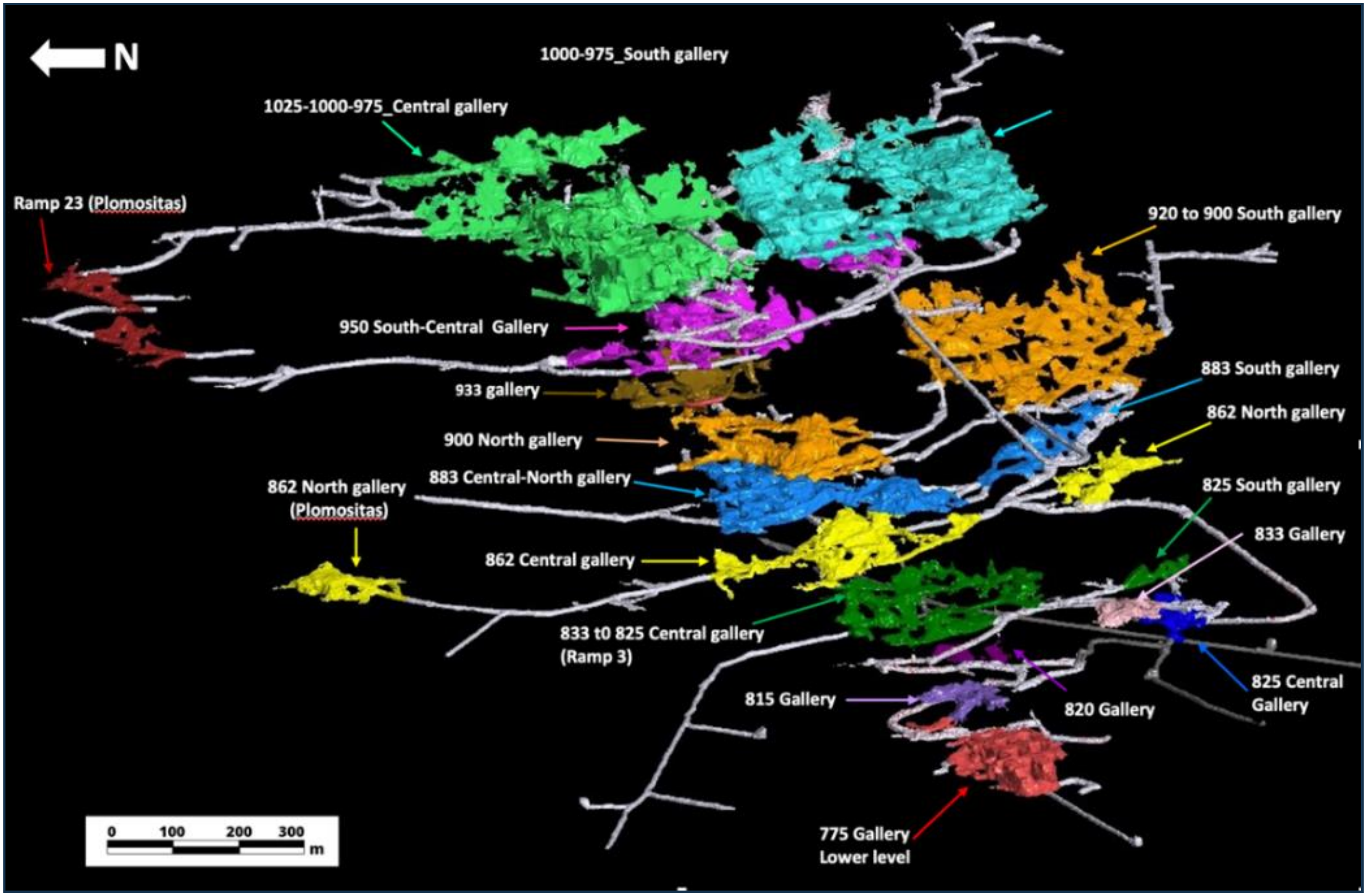
#### *14.9.3 Reconciliation of Plomosas Mined-Out Stopes*

To further validate the Plomosas mine model, an attempt was made to reconcile the historical grades and tonnage mined against the block model. A total of 2.5 Mt was extracted from the Plomosas mine between 1986 and 2000. The average grade of historical production was 173 g/t Ag, 0.62 g/t Au, 2.22% Pb, and 1.90% Zn.

To estimate the volume, or tonnage, mined, GR Silver carried out a laser survey of all accessible underground workings (Figure 14-14). Because not all areas of the mine could be accessed due to local collapse, and because the laser was not able to correctly assess the mined-out volume in areas where the existing stopes had been used for backfill, the laser surveyed volume was less than the total mined out volume. The total volume of the laser-surveyed stopes accounts for about 1.9 Mt of material compared to the 2.5 Mt mined. To compensate for the missing volume, the QP added 1.4 m in all directions for all surveyed workings. The expanded volume totalled 2.68 Mt, about 5% larger than all of the mined material reported for Plomosas.

To estimate the grade of the expanded mined-out volume, the QP used the channel samples IMMSA collected from the stopes during the mining operation. The estimated grades of the expanded volumes were compared with the records from historical production. The expanded volume generated about 5% less silver and 30% less lead and zinc than reported by the historical production records. The lower metal content in the mined-out volume is attributed to unsampled areas in the stopes which generated lower overall grades when compared to the production records.

*Figure 14-14: Surveyed Stope Volumes—Cross-Section Perspective Looking East*




Source: GR Silver (2021).

## 14.10 Mineral Resource Statement

CIM (2014) defines a Mineral Resource as:

> … a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.
>
> The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. (CIM, 2014, p. 4).

The "material of economic interest" refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals.

The "reasonable prospects for eventual economic extraction" requirement generally implies that the quantity and grade estimates meet certain economic thresholds, and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. The QP considers that parts of the Plomosas Project are amenable to open pit extraction, while the bulk of the deposits are more suited to underground mining methods.

In order to determine the quantity of material satisfying the "reasonable prospects for eventual economic extraction" by an open pit, the QP used a pit optimizer and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could "reasonably be expected" to be mined from an open pit.

The pit optimization parameters used in the MRE have been selected based on experience and benchmarking against similar projects (Table 14-33). The reader is cautioned that the pit optimization results are used solely for the purpose of testing the "reasonable prospects for eventual economic extraction" by an open pit, and do not represent an attempt to estimate Mineral Reserves. There are no Mineral Reserves on the Plomosas Project. The pit optimization results are used as a guide to assist in preparing a Mineral Resource statement and selecting an appropriate Mineral Resource reporting cut-off grade.

***Table 14-33: Assumptions for Conceptual Open Pit Optimization at the Plomosas Mine Area***

| Parameter | Unit | Value |
|---|---|---|
| Open Pit Mining Cost | US$/t mined | 6.80 |
| Processing | US$/t of feed | 19.00 |
| General and Administrative | US$/t mined | 7.35 |
| Overall Pit Slope | Degrees | 50 |
| Mill Throughput | t/d | 200 |
| Open Pit Cut-Off | US$ | 30 |

The QP considers that the blocks above cut-off within the conceptual pit envelope show "reasonable prospects for eventual economic extraction" and can be reported as a Mineral Resource. To evaluate the blocks that extend beyond the base of the Mineral Resource shell, the QP used a Mining Stope Optimizer (MSO) and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be "reasonably expected" to be mined from underground. Table 14-34 summarizes the parameters used to derive the "reasonable prospect of economic extraction" of blocks situated below the Mineral Resource pit.

***Table 14-34: Assumptions Considered for Underground Mining Conditions at the Plomosas Mine Area***

| Parameter | Unit | Value |
|---|---|---|
| Development OPEX | US$/t mined | 21.63 |
| Production Costs | US$/t mined | 13.34 |
| Processing and General and Administrative | US$/t of feed | 19 |
| General and Administrative | US$/t mined | 7.35 |
| Mill Throughput | t/d | 200 |
| Minimum Stope Size | m | 5 by 4 by 10 |
| Underground Mining Cut-Off | US$ | 60 |

Table 14-35 summarizes the estimated Mineral Resources for the Plomosas Project and Table 14-36 summarizes the estimated Mineral Resources by deposit area.

***Table 14-35: Plomosas Project, Mineral Resource Statement, ACS March 15, 2023***

| Mineral Resource Class | Type | Tonnage (Mt) | Average Grade | | | | | | Contained Metal | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) | AgEq (g/t) | Ag (Moz) | Au (Koz) | Pb (Kt) | Zn (Kt) | Cu (Kt) | AgEq (Moz) |
| Indicated | OP | 11 | 138 | 0.07 | 0.3 | 0.4 | 0.01 | 169 | 47 | 22.9 | 31 | 43 | 1 | 58 |
| Inferred | OP | 3 | 105 | 0.13 | 0.4 | 0.5 | 0.02 | 152 | 9 | 10.8 | 11 | 13 | 1 | 13 |
| Indicated | UG | 4 | 62 | 0.48 | 0.8 | 1.2 | 0.07 | 204 | 8 | 61.6 | 33 | 47 | 3 | 26 |
| Inferred | UG | 6 | 66 | 0.49 | 0.8 | 1.2 | 0.04 | 180 | 13 | 97.4 | 53 | 78 | 2 | 36 |
| **Total Indicated** | | **15** | **117** | **0.18** | **0.4** | **0.6** | **0.03** | **179** | **55** | **84.5** | **64** | **90** | **4** | **85** |
| **Total Inferred** | | **9** | **78** | **0.38** | **0.7** | **1.0** | **0.03** | **171** | **22** | **108.2** | **64** | **91** | **3** | **49** |

Notes: OP = open pit; UG = underground.
Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
The Mineral Resources in this Technical Report were estimated using the *CIM Definition Standards for Mineral Resources & Mineral Reserves* (CIM, 2014) and *CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines* (CIM, 2019).
Numbers may not add up due to rounding.
Silver equivalent is calculated by dividing the US$ value by the silver price x silver recovery. Dollar equivalent is estimated using the information in Table 14-30 to Table 14-32.
Open pit cut-off is US$ 30.00; underground cut-off is US$60.00.

***Table 14-36: Plomosas Project, Mineral Resource Statement by Area, ACS March 15, 2023***

| Area | Mineral Resource Class | Type | Tonnes (Mt) | Average Grade | | | | | | Contained Metal | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ag (g/t) | Au (g/t) | Pb (%) | Zn (%) | Cu (%) | AgEq (g/t) | Ag (Moz) | Au (Koz) | Pb (Kt) | Zn (Kt) | Cu (Kt) | AgEq (Moz) |
| San Marcial | Indicated | OP | 9 | 146 | 0.04 | 0.2 | 0.3 | 0 | 161 | 42 | 10.2 | 16 | 28 | 0 | 47 |
| | Inferred | OP | 2 | 127 | 0.03 | 0.1 | 0.2 | 0 | 136 | 6 | 1.4 | 1 | 3 | 0 | 7 |
| San Marcial | Indicated | UG | 1 | 176 | 0.06 | 0.3 | 0.6 | 0 | 206 | 4 | 1.5 | 2 | 4 | 0 | 5 |
| | Inferred | UG | 1 | 164 | 0.03 | 0.2 | 0.4 | 0 | 182 | 8 | 1.6 | 3 | 5 | 0 | 9 |
| Plomosas | Indicated | OP | 2 | 93 | 0.24 | 1.0 | 0.9 | 0.07 | 193 | 5 | 11.9 | 16 | 14 | 1 | 10 |
| | Inferred | OP | 1 | 66 | 0.28 | 1.0 | 1.0 | 0.06 | 174 | 2 | 7.8 | 9 | 9 | 1 | 5 |
| Plomosas | Indicated | UG | 3 | 35 | 0.57 | 0.9 | 1.3 | 0.08 | 204 | 4 | 58.0 | 30 | 42 | 3 | 21 |
| | Inferred | UG | 2 | 38 | 0.57 | 0.9 | 1.1 | 0.06 | 175 | 3 | 39.4 | 20 | 23 | 1 | 12 |
| San Juan/La Colorada | Indicated | OP | 0.1 | 161 | 0.29 | 0.3 | 0.6 | 0.02 | 211 | 0.4 | 0.8 | 0 | 1 | 0 | 1 |
| | Inferred | OP | 0.2 | 103 | 0.24 | 0.5 | 0.8 | 0.02 | 159 | 0.7 | 1.6 | 1 | 2 | 0 | 1 |
| San Juan/La Colorada | Indicated | UG | 0.1 | 90 | 0.61 | 1.1 | 0.8 | 0.04 | 199 | 0.3 | 2.1 | 1 | 1 | 0 | 1 |
| | Inferred | UG | 2.6 | 34 | 0.69 | 1.2 | 1.9 | 0.04 | 182 | 2.8 | 56.4 | 31 | 49 | 1 | 15 |
| **Total Indicated** | | | **15** | **117** | **0.18** | **0.4** | **0.6** | **0.03** | **179** | **55** | 84.5 | 64 | 90 | **4** | **85** |
| **Total Inferred** | | | **9** | **78** | **0.38** | **0.7** | **1.0** | **0.03** | **171** | **22** | 108.2 | 64 | 91 | **3** | **49** |

Notes: OP = open pit; UG = underground.
Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
The Mineral Resources in this Technical Report were estimated using the *CIM Definition Standards for Mineral Resources & Mineral Reserves* (CIM, 2014) and *CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines* (CIM, 2019).
Numbers may not add up due to rounding.
Silver equivalent is calculated by dividing the US$ value by the silver price x silver recovery. Dollar equivalent is estimated using the information in Table 14-30 to Table 14-32.
Open pit cut-off is US$ 30.00; underground cut-off is US$60.00.
Mineral Resources for the La Colorada deposit were clipped against the GR Silver property boundary to exclude material outside of the GR Silver property.
Gold was not used in the estimation of the silver equivalent for the San Marcial estimate because of limited metallurgical testwork for gold; however, the preliminary work does indicate that gold recoveries could be in the range of 70% to 80%.

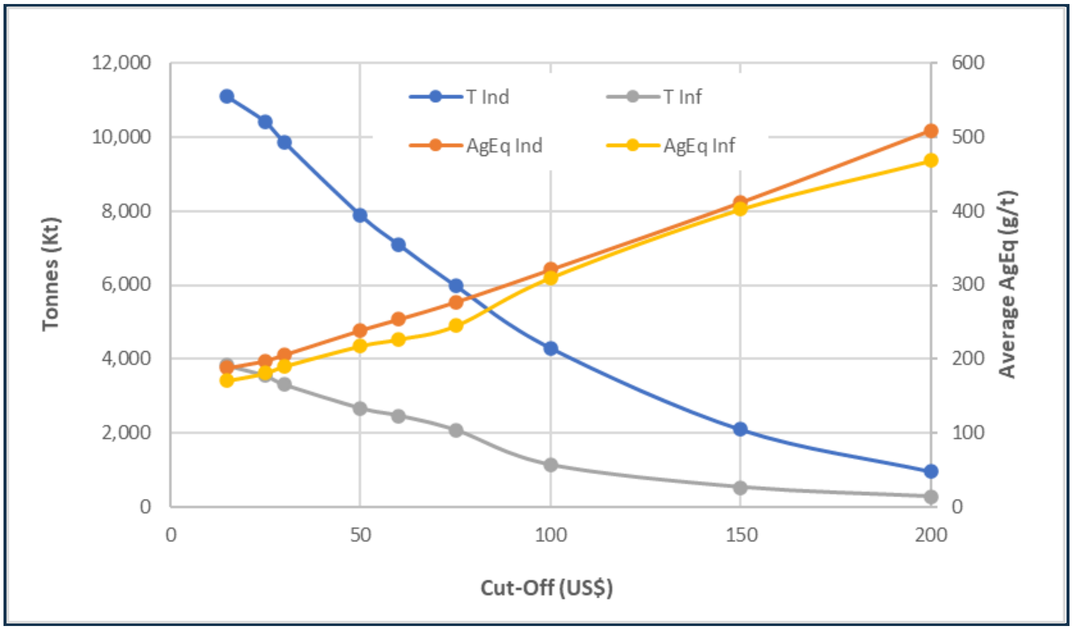
Mineral Resources were estimated by Dr. Gilles Arseneau of ACS on March 15, 2023. Dr. Arseneau is an "independent qualified person" as defined in NI 43-101 and Member 23474 of the APEGBC, ACS is licenced to operate in British Columbia under APEGBC Permit to Practice 1000256.

## 14.11 Grade Sensitivity Analysis

The Mineral Resources are sensitive to the selection of cut-off grade. Figure 14-15 shows the sensitivity of the Indicated and Inferred Mineral Resources for the San Marcial model at various cut-off grades, and Figure 14-16 and Figure 14-17 show the same for the Plomosas and San Juan models.

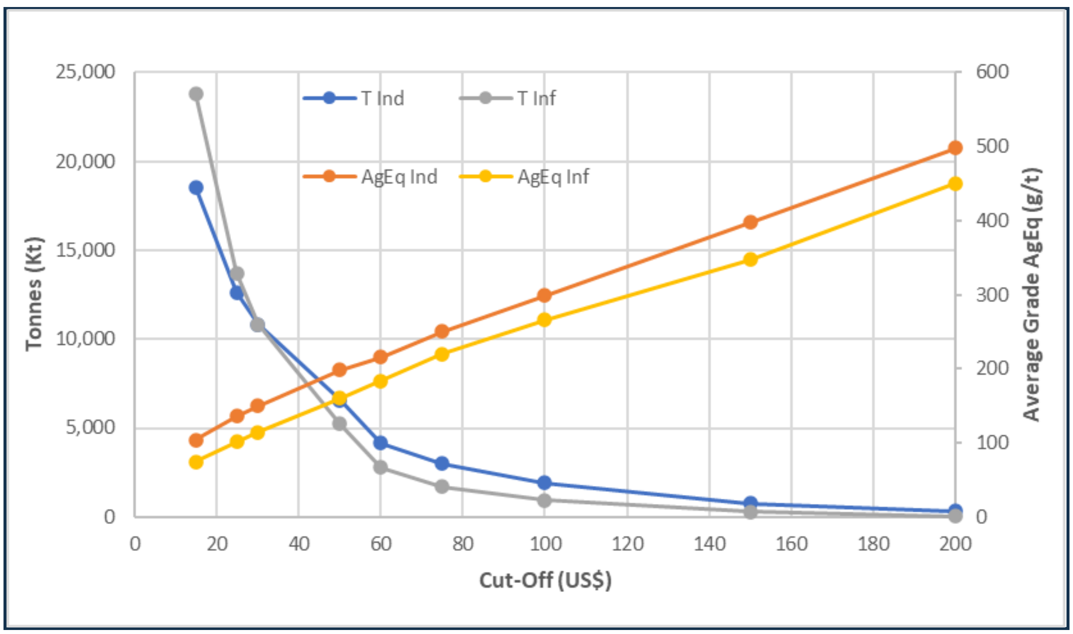
The reader is cautioned that these figures should not be misconstrued to represent a Mineral Resource. The reported quantities and grades are presented only as a sensitivity of the Mineral Resource model to the selection of cut-off grade.

***Figure 14-15: Grade Tonnage Curves for the San Marcial Model***



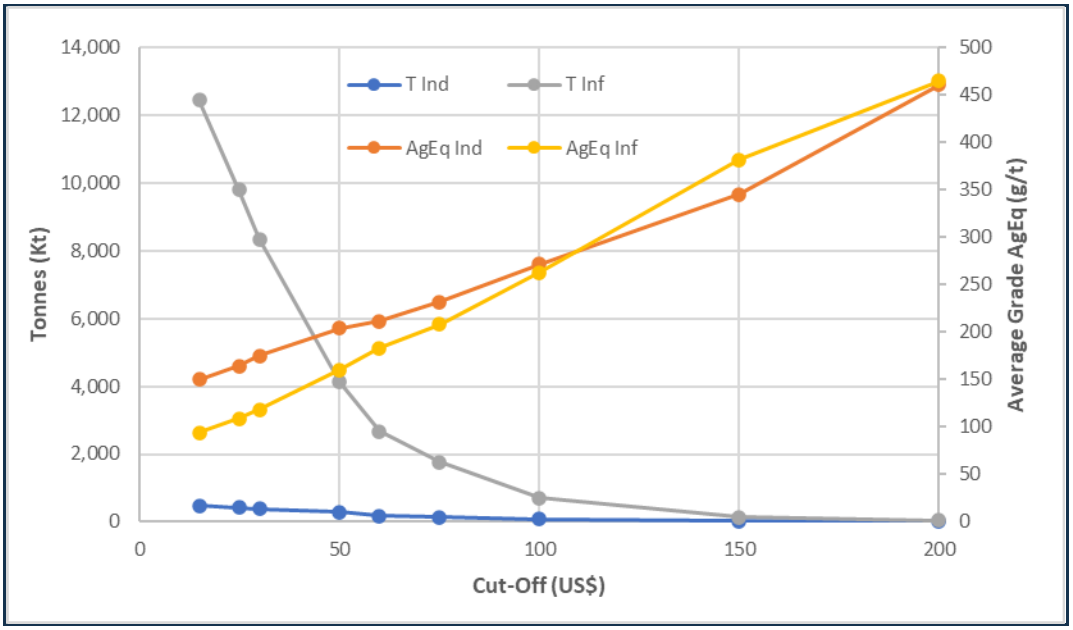

Source: Arseneau and Crowie (2023).

***Figure 14-16: Grade Tonnage Curves for the Plomosas Model***




Source: Arseneau and Crowie (2023).

***Figure 14-17: Grade Tonnage Curves for the San Juan Model***



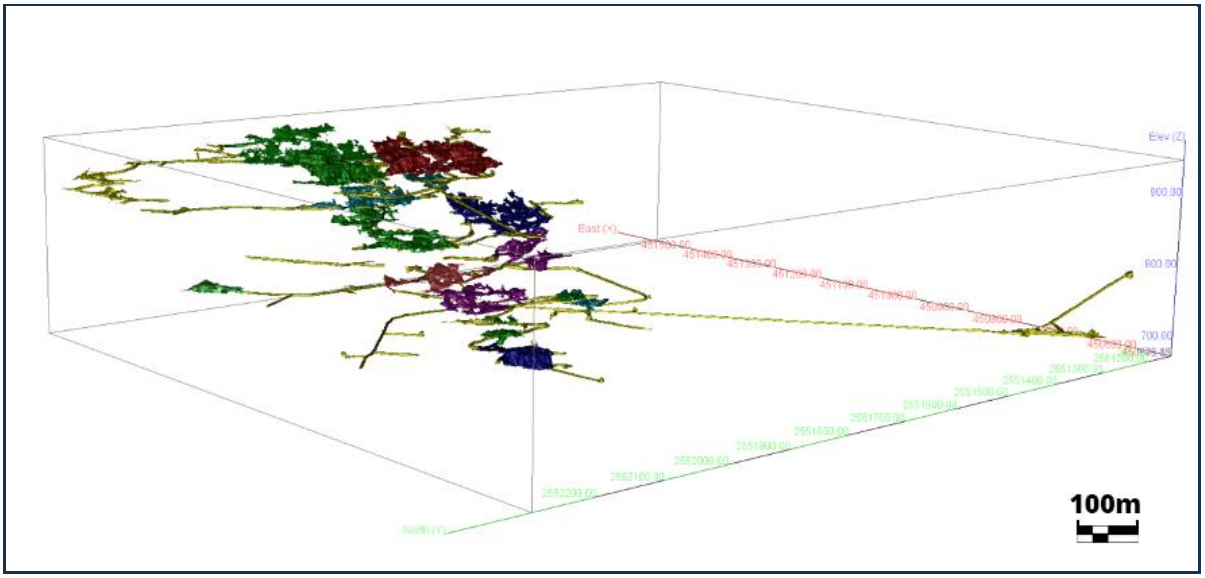

Source: Arseneau and Crowie (2023).

## 14.12 Risks and Opportunities

### *14.12.1 Risks*

The Mineral Resources for the Plomosas and San Juan Areas include volumes that have been previously mined. Although very limited tonnage (volume) has been mined at San Juan, historical mining at Plomosas is on the order of 2.5 Mt averaging 173 g/t Ag, 0.62 g/t Au, 2.22% Pb, and 1.90% Zn. To ensure that none of the material previously mined was included in the current estimate, GR Silver carried out a laser survey of the underground opening to generate a three-dimensional model of the underground workings (Figure 14-18). Not all areas of the mine could be accessed due to local collapse, and the laser was not able to correctly assess the mined-out volume in areas where the existing stopes had been used for backfill. The QP decided to expand all surveyed workings by 1.4 m in all directions to compensate for unsurveyed areas. To validate the expanded volume, the expanded volumes were compared with the records from historical production. The expanded volume generated a tonnage of 2.68 Mt, which is comparable to the historical mine production records.

***Figure 14-18: Perspective View Looking Southeast Showing Mined-Out Volumes Surveyed with Laser***




Source: Arseneau and Crowie (2023).
Note: Markers are 100 m apart.

While the expanded volume removed the appropriate amount of metal from the MRE, there exists a risk that some areas estimated in the Plomosas Mine model have already been mined, and some areas near open stopes may not be easily accessible to mining. The QP estimates that these areas do not necessarily negatively impact the global Mineral Resource, but may have an impact on the local Mineral Resource.

### *14.12.2 Opportunities*

Opportunities exists to expand the Mineral Resources at all of the deposit areas. The San Marcial Area is still open along strike to the southeast and down dip. Additional Mineral Resources can be developed within the Plomosas mine with continued drilling within the existing mine workings. Mineralization at San Juan and La Colorada is still open for expansion down dip. Additional drilling is required to update the Mineral Resources to Indicated in both areas.

# 15 ADJACENT PROPERTIES

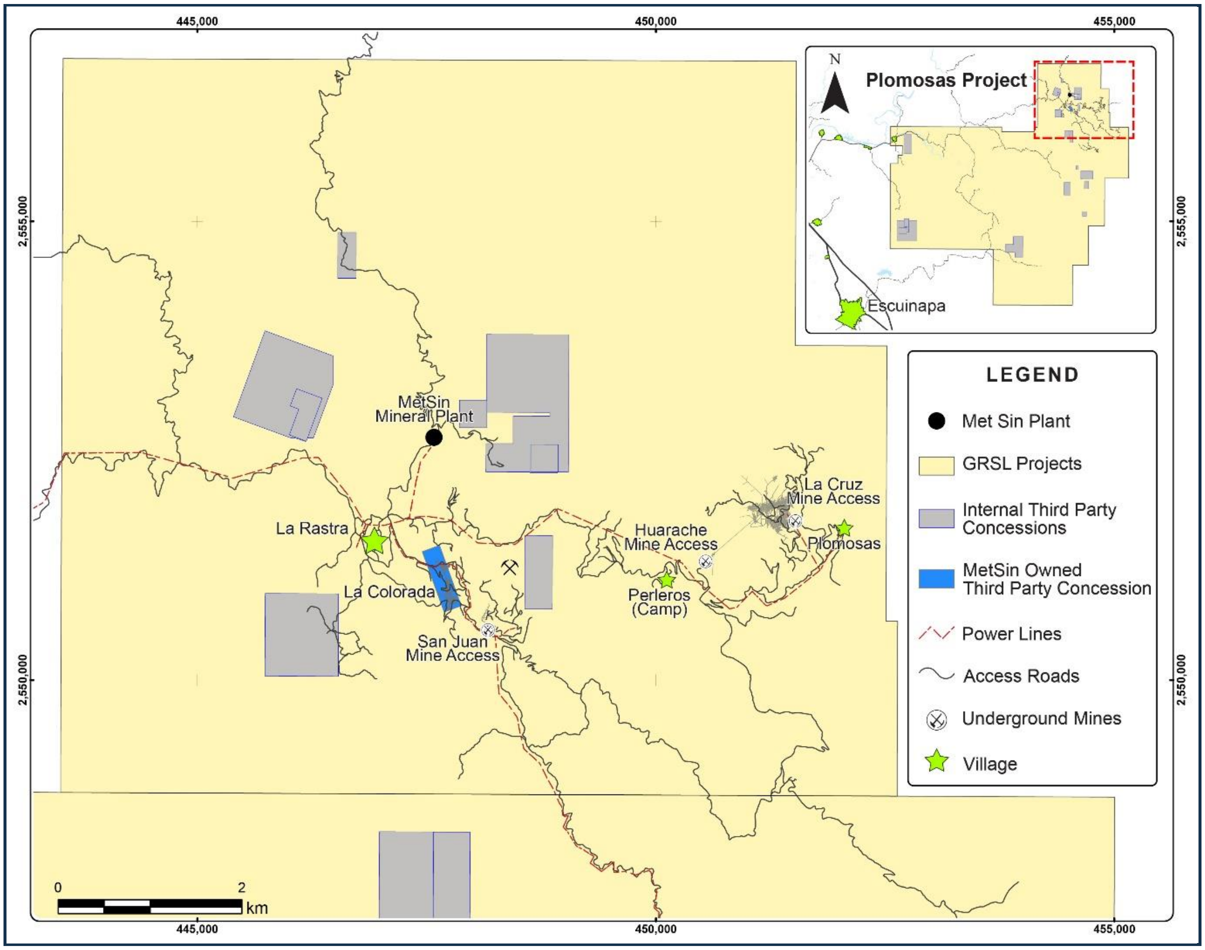
The Plomosas Project is in a historical mining district where private operators ran small-scale underground works and a processing plant in the district, beginning in the early 20th century.

One of the small-scale existing operations, still active and adjacent to the Plomosas Project, is the La Colorada Mine and processing plant (Figure 15-1). All the information presented here was obtained from direct communications with owners, and site visits.

The La Colorada mine is a 300 t/d underground mine that has been in operation since approximately 2005; it is in a concession controlled by Met-Sin (Figure 15-2).

*Figure 15-1: La Colorada Mine*

*Figure 15-2: La Colorada Mine Concession Location (Blue)—GR Silver Concessions*




Source: GR Silver (2023).

The underground mine comprises six levels, separated by an average of 15 m. The mineralized zone is generally wide, averaging 4 m, with a strike length of 550 m. The geological information collected during site visits and disclosed by the owner indicates silver mineralization hosted in quartz-rich hydrothermal breccias gently dipping 60° to the west towards the concessions 100% controlled by Minera La Rastra S.A. de C.V. (GR Silver's 100% controlled subsidiary in Mexico). The processing plant is a standard crushing, grinding, flotation circuit operating at maximum capacity of 200 t/d and producing silver-rich lead concentrate that is trucked to Manzanillo for trading with concentrate offtakers.

The QP has been unable to verify information collected during the site visits and provided by the owner, and the information is not necessarily indicative of the mineralization on the property that is subject of this Technical Report.

# 16 OTHER RELEVANT DATA AND INFORMATION

IMMSA ceased the mine and processing operations at the Plomosas Project, Plomosas Mine, and San Juan Areas in 2001. The historical 600 t/d operation, with underground mines and processing of materials to produce silver-rich lead and zinc concentrates operated for 15 years and left partial infrastructure still visible on site. Table 16-1 indicates the key infrastructure still present at the Plomosas Mine Area site.

***Table 16-1: Infrastructure Remaining at the Plomosas Mine Area***

| Description | Specifications | Status and Notes |
|---|---|---|
| 8 km Underground Tunnel with Direct Access to New Drilled Areas | Ramps and Tunnels with an average section of 4 m high and 4 wide | In good condition, with permanent access for drilling and future operations |
| Two Mine Accesses, the Upper and Lower Portion of the Mine | Huarache, 830 m long at the lower portion of the mine. Santa Cruz, 2,300 m at the upper access of the mine | In good condition, with permanent access |
| Water Tanks | 900,000 L-capacity steel tanks | In care and maintenance |
| Truck Shop | Capacity for 2 trucks | In care and maintenance |
| Laboratory Buildings | | In care and maintenance |
| Camp for Employees | Camp with a capacity for 190 employees | In good condition, with permanent access |
| Electrical Transformers at the Underground Mine Access | 500 kVA Transformer recently installed on site | In good condition, with permanent access |
| Secondary Access Roads | 24 km of access roads covering most of the key areas in the Plomosas Mine Area | In good condition, with permanent access |
| Power Line | 33 kV power line built to supply energy to the mine at the start-up in 1986, today serving communities and mine site | In good condition for future use. |
| Electric and Hydraulic Infrastructure Inside the Historical Mine | 30 HP pump for pumping from the bottom of the mine.<br>500 kVA transformer to lower the voltage for the equipment to 440 V | |
| Concrete Foundations and Steel Structures of Previous Processing Plant | General steel frames and foundations | In care and maintenance |

At the La Trinidad open pit heap leach operations, operational activities ceased in 2019 when the property was placed in a closure and reclamation stage. Table 16-2 lists the remaining infrastructure in the La Trinidad Area.

***Table 16-2: Remaining Infrastructure at the La Trinidad Area***

| Description | Specifications | Status and Notes |
|---|---|---|
| Heap Leach Pads with Lining | 70 ha of heap leaching infrastructure (partially leached material still on the heap leach pad), including ponds and related piping. | In good condition |
| General Buildings | Warehouse and general office buildings | In care and maintenance |
| Camp | Camp with a capacity for 50 employees | In care and maintenance |
| Power Line | 33 kV power line upgraded to supply energy to the mine at the start-up in 2013, today serving communities and mine site | In good condition for future use. |

# 17 INTERPRETATION AND CONCLUSIONS

The Plomosas Project is in southeastern Sinaloa State, Mexico, on the edge of the SMO. The Project combines three contiguous properties acquired and integrated by GR Silver between 2018 and 2021—the San Marcial Area in the San Marcial Property, the Plomosas Mine and San Juan–La Colorada Areas in the Plomosas Property, and the La Trinidad Property. The Project consists of 17 mining concessions totalling 43,187 ha, 100% owned by wholly owned subsidiaries of GR Silver in Mexico.

Mineralization at the Plomosas Project can be assigned to the low- to intermediate-sulphidation (IS) epithermal polymetallic type. The low sulphidation (LS) type has a lower total-sulphide content, with higher concentrations of precious-metal minerals (Ag, Au), which precipitated at lower temperatures compared to IS mineralization. IS epithermal deposits are richer in base metals, with high lead-, zinc-, and copper-bearing sulphide mineral content, significant silver content, and gold concentrations. At the Plomosas Project there are overlapping transitions from base-metal-rich to silver- and gold-rich zones, which is likely the result of fluctuations in the hydrothermal fluid conditions and changes of the system over time, resulting in several overprinting styles of mineralization.

The Plomosas Project is known historically as a significant area for silver, gold, lead, and zinc production. From the 1780s well into the 1900s, the La Rastra to San Marcial corridor was an active Ag–Au prospecting area with over 20 known prospects and small-scale mines. More modern underground, open pit, and processing plant operations were set up in the late 1980s, 1990s, and early 2000s, in the region that today forms the Plomosas Project. GR Silver acquired the Project in stages since 2018 and has carried out systematic exploration on the Project, including drilling 403 drill holes totalling 40,318 m since acquiring the Project.

The San Marcial Mineral Resources were estimated using data from 122 drill holes totalling 19,451 m. Within the Plomosas Mine model area, there are 432 drill holes totalling 60,349 m. The San Juan model area includes 54,823 m of drilling from a total of 294 holes. One hundred thirty-three historical IMMSA drill holes that were only partially sampled were removed from the database because nearby recent drilling indicated that the mineralized zone was wider than depicted by the IMMSA holes. The unsampled intervals in the remaining historical drill holes were assigned a zero grade-value during compositing and grade estimation. These holes negatively impact the block model grades, especially in areas where the IMMSA drilling dominates, and there were insufficient newer holes to estimate the block grades. These areas offer a good opportunity to improve the grade of the MRE if new drill holes can confirm that the unsampled intervals are not zero grade.

The QP reviewed and audited the database used to estimate the San Marcial, Plomosas Mine, and San Juan–La Colorada Area's Mineral Resources, then modelled the mineralization boundaries using a geological interpretation, assisted by GR Silver geological staff. The QP is of the opinion that the drilling information is sufficiently reliable to interpret, with confidence, the boundaries of the mineralization domains, and that the assaying data are sufficiently reliable to support Mineral Resource estimation.

Dr. Arseneau estimates that the Plomosas Project contains combined Indicated Mineral Resources totalling 15.0 Mt grading 0.18 g/t Au, 117 g/t Ag, 0.4% Pb, 0.6% Zn, and 0.03% Cu; there are also 9.0 Mt of Inferred Mineral Resources grading 0.38 g/t Au, 78 g/t Ag, 0.7% Pb, 1.0% Zn, and 0.03% Cu.

The MRE is based on interpretating geological models derived from observations of underground exposures and drill core. The geological model assumes geological and grade continuity between sample points and that all the underground excavations have been identified. As with all geological models, there is a risk that the geological continuity between sampled points is not as interpreted; this can affect the results negatively or positively.

The IMMSA drill holes represent a risk because no core remains and the calibre of its QA/QC programs is unknown. Therefore, to minimize the risk associated with IMMSA drill holes and their influence on the MRE estimate, the IMMSA drill holes were used only to guide the geological model and not for the classifying Indicated Mineral Resources.

MRE may be impacted by further infill and exploration drilling, which may increase or decrease future Mineral Resource estimation. The MREs may also be affected by a subsequent assessment of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. There is insufficient information at this early stage to assess the extent to which the MRE will be affected by these factors that are more suitably assessed in a conceptual or preliminary economic assessment.

The Plomosas Project contains multiple mineralized silver–gold epithermal systems either associated with well-defined structural corridors or related to major regional faults and intrusive bodies, or both. The Indicated and Inferred Mineral Resources associated with these systems that are the focus of this Technical Report are open along strike and at depth.

Indeed, the most recent success at the SE Area at San Marcial justifies the planning of additional drilling along strike to the southeast. The Mineral Resource estimate completed for the SE Area discovery zone covers only 300 m of the 900 m known strike length, as revealed by GR Silver's 2022 exploratory program. There is surface evidence that the mineralized unit extends another 600 m along strike to the southeast. This provides an immediate drill target for resource growth.

The Plomosas Project remains largely underexplored. GR Silver has previously identified a number of regional exploration targets, including Loma Dorada; San Francisco; El Saltito; Tebaira; Las Cuevas; Las Teresas; the area north of the Plomosas Mine; and areas surrounding the La Trinidad mine. These are all important target areas for silver and gold exploration.

# 18 RECOMMENDATIONS

Dr. Arseneau believes that the Plomosas Project has the potential to delineate additional Mineral Resources and that further exploration is warranted. The highly prospective nature of the Plomosas Project, seen in the presence of historical mines, existing Mineral Resources, and the recent GR Silver discovery of the SE Area at San Marcial, confirms that further activities by GR Silver exploration programs are warranted, including drilling.

Dr. Arseneau recommends that GR Silver continue exploration on the Plomosas Project, subject to funding and any other matters that may cause the recommended exploration program to be altered in the normal course of business. Future exploration should include additional surface mapping along strike to the southeast of the SE Area and shallow drilling to test the extent of mineralization at the San Marcial, Plomosas Mine, and San Juan–La Colorada Areas, which remain open at all deposit areas. This initial phase of drilling in 2023 might be followed by a second drilling phase depending on the availability of additional funding and results of the initial drilling program.

Specifically, the QP recommends that GR Silver continue its program of Mineral Resource expansion and exploration with key objectives as follows:

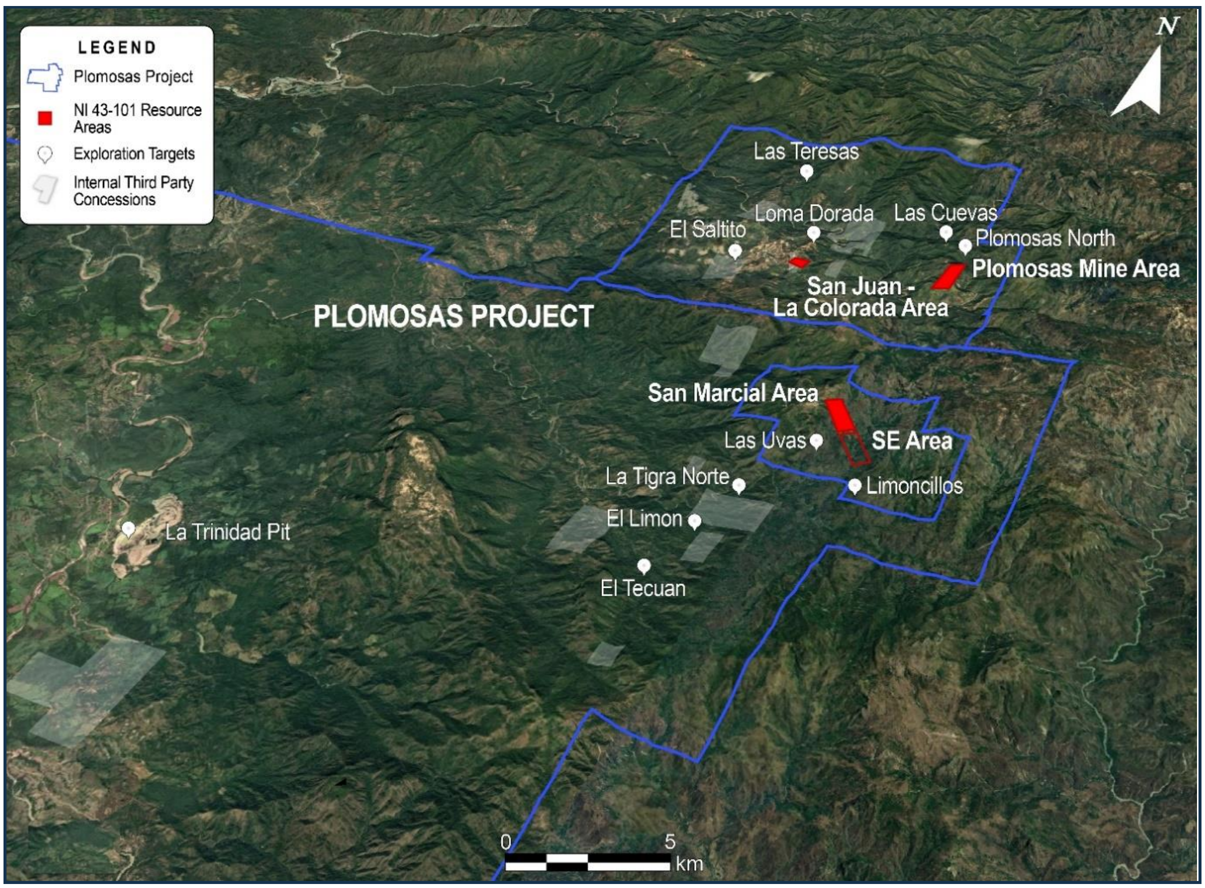
- San Marcial Area—SE Extension:
  - 5,000 m of step-out drilling along strike to the southeast, outside of the Mineral Resource in the SE Area discovery zone.
- San Marcial Area—Resource Extension and Infill Drilling:
  - 5,000 m of infill drilling aiming to upgrade Mineral Resources from Inferred to Indicated.
- Plomosas Mine Area—Incremental Infill Drilling
- Plomosas Mine Area—2,500 m of short underground drilling at the aiming to continue to increase the silver grades at the lower levels of the historic mine.
- Undertake early-stage exploration and drill-target generation; specifically:
  - The area to the south of San Marcial, which has seen little exploration, despite evidence of historical and artisanal mining activities.
  - Advance the surface exploration program with geological mapping, and lithogeochemical sampling in the target contact zone and around intrusive bodies known to be associated with positive geophysical anomalies in the San Marcial Area, particularly the continuity of the southeastern zone along the target contact.
  - Reconnaissance geological programs south of the San Marcial Area (Figure 18-1) to include identifying and characterizing existing old mine workings for follow-up exploration in 2023.
  - Continue to develop drill targets in the previously identified regional exploration targets by expanding the geological mapping and sampling in these areas.

The budgeted cost of the recommended GR Silver work by is estimated to be US$3.6 million, including:

- Drilling program (12,500 m) US$1,500,000
- Roads, pads, consultants, and drilling-related logistics US$500,000
- Core sampling and assaying US$500,000
- Surface exploration and litho-geochemistry U$100,000
- Expenses associated with Mexican salaries, logistics, and support US$1,000,000

GR Silver currently owns and operates five drill rigs, providing flexibility in case an increase in the recommended drilling program is necessary.

***Figure 18-1: Areas with Planned Allocation of the Recommended Budget***




Source: GR Silver (2023).

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# 20 CERTIFICATES OF QUALIFIED PERSON

## 20.1 Dr. Gilles Arseneau, P.Geo.

I, Dr. Gilles Arseneau, P.Geo., do hereby certify that:

1. I am President of ARSENEAU Consulting Services Inc. (ACS), a corporation with a business address of Suite 900, 999 West Hastings Street, Vancouver, British Columbia, Canada.
2. I am the author of the technical report titled *National Instrument 43-101 2023 Technical Report and Mineral Resource Update for the Plomosas Project, Sinaloa State, Mexico* (Technical Report), dated April 2, 2023, with an effective date of March 15, 2023 prepared for GR Silver Mining Ltd.
3. I am a graduate of the University of New Brunswick with a B.Sc. (Geology) obtained in 1979, the University of Western Ontario with an M.Sc. (Geology) obtained in 1984 and the Colorado School of Mines with a Ph.D. (Geology) obtained in 1995.
4. I have practiced my profession continuously since 1995. I have worked in exploration in North and South America and have extensive experience with precious- and base-metal mineralization similar to that found on the Plomosas Project.
5. I am a Professional Geoscientist and registered Member 23474, in good standing, with the Association of Professional Engineers & Geoscientists of British Columbia.
6. I have read the definition of "qualified person" set out in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I am a "qualified person" within the meaning of NI 43-101.
7. I have conducted a recent personal inspection of the Project occurred from December 5 to December 7, 2022.
8. I am responsible for Sections 1 to 12 and 14 to 19 of the Technical Report and accept professional responsibility for those sections of the Technical Report.
9. I am independent of GR Silver and of the Plomosas Project as defined in Section 1.5 of NI 43-101.
10. I have had prior involvement with the Plomosas Project. I am the author of the previous technical report titled *Technical Report for the Plomosas Precious and Base Metal Project, Sinaloa, Mexico*, dated October 7, 2021, with an effective date of March 15, 2021, prepared for GR Silver Mining Ltd.
11. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
12. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 3rd day of May 2023 in Vancouver, British Columbia.

*"Original Signed and Sealed"*

**Dr. Gilles Arseneau, P.Geo.**

## 20.2 Shane Tad Crowie, P.Eng.

*Inserted as PDF only*

# APPENDIX A

## Title Opinions—Las Rastra, Oro Gold, and San Marcial