# TECHNICAL REPORT FOR THE PLOMOSAS PROJECT

SINALOA, MEXICO



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#### 1 SUMMARY

Arseneau Consulting Services Inc. (ACS) was contracted by GR Silver Mining Ltd. (GR Silver) to prepare a mineral resource estimate and technical report (the "Report") in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101) for the Plomosas Project (the "Plomosas Project", the "Project" or "Plomosas") located near the village of La Rastra in Sinaloa, Mexico.

The Report was prepared to support a first-time disclosure of mineral resources by GR Silver for the Plomosas Project.

#### 1.1 Access and Location

The Plomosas Project consists of eleven mining concessions totalling 6,573.5 hectares (ha) and is located in the western Mexican state of Sinaloa about 100 kilometres (km) east-southeast of Mazatlán. Specifically, the Project is located within the southeastern corner of Sinaloa, stretching from near the historic mining town of La Rastra and another 5 km to the east, within the Rosario Mining District.

The Project is accessed from Mazatlán travelling along highway 15 or the modern toll road for approximately 70 km southeast to the town of El Rosario, then continuing on a local sealed road through the villages of Las Habitas and Matatán, then east along the local road for 11 km before veering left at a fork and continue 22 km along the unsealed local road to the village of La Rastra and continuing for 11 km past La Rastra to reach the Plomosas mine site and camp.

#### 1.2 History

Mineralization in the Plomosas area was first discovered in the middle of the 16th century. Limited mining activities were conducted intermittently from 1950 through the 1990s when the La Cruz Vein (in the Plomosas Mine Area) was discovered by Minera Nacional and became the center of exploration.



Grupo Mexico S.A. de C.V. (Grupo Mexico)'s subsidiary, Industrial Minera Mexico, S.A. de C.V. ("IMMSA") explored the Plomosas Project from the early 1970s to 2001, with a focus on Pb-Zn-Ag-Au polymetallic mineralization, hosted in the vicinity of the Plomosas mine. In 1986, IMMSA initiated underground operations (room and pillar) at the Plomosas mine, building a 600 tpd crushing-milling plant and large infrastructure for operation from 1986 to 2001. It completed a total of 7,400 m of underground development by the time it ceased operations in 2001 producing a total of 2.5 M (M) tonnes averaging 190 g/t Ag, 0.92 g/t Au, 2.02% Zn and 2.38% Pb. Historical documentation indicates historic sales of commercial grade Pb-Zn concentrates with Ag-Au credits to Trafigura throughout the entire period of the historical operations.

Aurcana Corporation ("Aurcana") acquired 100% of the Project 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.

Silvermex Resources Ltd. completed the acquisition of all outstanding shares of Aurcana de Mexico S.A. de C.V. from Aurcana, thereby acquiring the Project, on December 4, 2009.

First Majestic Silver Corp. ("First Majestic") completed the acquisition of all shares of Silvermex Resources Ltd, thereby acquiring 100% of the Project, on April 3, 2012. First Majestic carried out exploration from 2012 to 2019 including a diamond drilling program comprising 115 drill holes, 58 on surface and 58 underground drill holes, totalling 32,130 m, from 2016 to 2018.

None of the previous owners had completed a NI 43-101 report for the Project.

GR Silver and Minera Matatán S.A. de C.V., its 100% owned Mexican subsidiary, acquired all of the shares of Minera La Rastra S.A. de C.V. ("Minera La Rastra)") from First Majestic Silver, thereby acquiring 100% of the Project, on March 30, 2020. As consideration, GR Silver and its Mexican subsidiary paid CAD\$100,000; 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\$1.0M; and issued to First Majestic 17,097,500 common shares of GR Silver.





GR Silver carried out exploration including a diamond drilling program in 2020 and 2021. It has drilled 55 diamond core drill holes to date, on surface and underground, for a total of 10,877 m.

#### 1.3 Mineralization

Mineralization on the Project can be described as intermediate to low-sulphidation epithermal and occurs in multiple sites at the Project. The Plomosas Mine Area and the San Juan Area are the two main areas and the object of this report. Several episodes of mineralization have been identified and are intricately connected to the tectonic and structural evolution of the Sierra Madre Occidental during the Tertiary. At the Plomosas mine, a hydrothermal polymetallic breccia (Pb-Zn-Au-Ag) mineralization 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 main NW-SE oriented shallow-angle fault dipping to the west. Quartz and calcite are the main gangue minerals on the Breccia. Sulphide mineral assemblages include galena, sphalerite, pyrite, chalcopyrite and bornite. There is a common presence of silver rich minerals such as achantite and orgentite. Late-stage quartz Ag-Au epithermal 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 San Juan, about 3.5 km southwest of the Plomosas Mine Area, a large epithermal system has been identified. The intermediate to low-sulphidation epithermal Au-Ag system is hosted predominantly high angle faults whereas the Pb-Zn-Ag mineralization is preferentially in NW-SE oriented, east dipping, shallow-angle faults. The combination of these structures, together with favourable (permeability and porosity) host rocks, have generated numerous alteration halos (argillic, propylitic, oxidation and silicification. These halos have extensive surface exposure defining exploration targets.





#### 1.4 Exploration

Following the acquisition of the Plomosas Project, the Company completed a detailed data review and compilation of all available exploration data related to the geological, geochemical and geophysical exploration programs completed by previous owners in the last 40 years of exploration activity in the Project. This work was integrated in a GIS platform to prioritize the initial 11 exploration targets delineated outside of the drilled areas (Dunkley, 2020).

Field work has since defined multiple veins and a large epithermal system in the Plomosas Mine-San Juan areas, where the footprint of the intermediate to low-sulphidation epithermal system has been continuously expanded.

The extensive exploration data set, geophysical, geochemical and geological have allowed the company to advance priority drilling throughout the two areas and redefine geological concepts generating new exploration targets and geological models supporting a prolific geological setting for future exploration.

#### 1.5 Geology

The Project is situated in the Sierra Madre Occidental which formed as the result of Cretaceous-Cenozoic magmatic and tectonic episodes related to the subduction of the Farallón plate beneath North America, and to the opening of the Gulf of California. The province is divided into two main Tertiary volcanic units referred to as 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 sub-divided into two distinct underlying rock types: (1) bi-modal 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 age. Separated in places by a basal conglomerate the LVC is overlain by (2) thick layers of Oligocene to Miocene aged felsic ignimbrites and





rhyolites, and minor mafic units. Rock units are generally tilted 30-50 degrees to the W as a result of extensional faulting. More details are available in section 7.2.

#### 1.6 Drilling

Earlier drill programs were carried out by Grupo Mexico (IMMSA) between 1976 and 2000, by Aurcana between 2007 and 2008 and First Majestic between 2016 and 2018. From 1976 to 2000, IMMSA drilled 485 core holes totalling 85,989 m. From these, 280 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 129 holes drilled at the San Juan Area, 115 from surface totalling 21,566 m and seven from underground holes totalling 466 m. For the holes drilled by IMMSA at the Plomosas Mine Area and the San Juan Area, only 357 holes (66,755.2 m)were used in the resource estimation.

Aurcana drilled eight holes in the Plomosas Mine Area, four from underground and four from surface platforms, for a total of 2,269 m.

First Majestic drilled a total of 131 core holes on the Plomosas Project, 73 from surface and 58 from underground. Of these, 68 holes were in the immediate Plomosas Mine Area and 47 in the San Juan Area.

GR Silver had five drill rigs working at Plomosas during 2020-2021. Three in the immediate area of the Plomosas Mine Area and two in the San Juan Area. Three drill rigs were owned by GR Silver and operated by contract employees, and one surface rig was owned and operated by Maza Drilling of Mazatlán, Mexico and one underground drill rig was owned and operated by Intercore Drilling. In total, GR Silver drilled 56 drill holes totalling 11,028.7 m.





#### 1.7 Mineral Resource Estimate

The mineral resource model presented herein represents the initial resource evaluation on the Plomosas Project by GR Silver. The resource evaluation incorporates all drilling completed by GR Silver, recent drilling completed by First Majestic and Aurcana and validated historical drilling completed by IMMSA. In the opinion of the QP, the block model resource estimates reported herein offer a reasonable representation of the initial mineral resources found in the Plomosas Mine and San Juan Areas at the current level of drilling and 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 generally accepted CIM "Estimation and Mineral Resource and Mineral Reserve Best Practices" guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

The database used to estimate the Plomosas Mine Area and San Juan Area mineral resources was reviewed and audited by the QP. Mineralization boundaries were modelled by the QP 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 is sufficiently reliable to support estimation of mineral resources.

Within the Plomsas Mine model area, there a total of 70,635.9 m of drilling resulting from 353 validated drill holes. The San Juan model area includes 35,754.33 m of drilling from a total of 167 holes. Other areas have historical drilling that have not been incorporated in this report.

Mineral resources for the Plomosas Project were estimated in two separate threedimensional block models using Geovia Gems version 6.8.4 software. One model covers the Plomosas Mine Area while the second model covers the San Juan Area. The Plomosas Mine Area was estimated by ordinary kriging into 5 m cube blocks and the San Juan Area was estimated by inverse distance squared. Unsampled historical intervals inside the





mineralization domains were assigned zero values prior to compositing. Grades were capped prior to compositing to 1.0 m. Block grades were estimated in three successive passes for the Plomosas Mine Area and four passes for the San Juan Area. The IMMSA drill holes were only used for passes two and three at Plomosas and for passes three and four at San Juan. Blocks estimated with IMMSA drill holes were all classified as Inferred mineral resources. Blocks estimated during pass one with at least two drill holes or pass two at San Jan with at least four drill holes were classified as Indicated. Mineral resources are reported using a dollar equivalent based on the following metal prices and recoveries determined from recent metallurgical testwork (Table 1.1). Copper is not included in the dollar equivalent formula because of the preliminary knowledge of mineralization distribution.

Metal	Duite a	Recoveries (%)			
	Price	Plomosas	San Juan		
Gold	US\$1,600/oz	86	79		
Silver	US\$20/oz	74	71		
Lead	US\$0.90/lb	69	58		
Zinc	US\$1.10/lb	75	47		

Table 1-1: Recoveries for The Plomosas Mine and San Juan Areas

The reasonable prospect of eventual extraction was defined by generating a Whittle optimized pit shell based on the above metal prices and recoveries, and assuming a total open pit mining cost and processing cost of US\$36/t supported by data collected from similar deposit and operations in the Sinaloa state, Mexico. Underground resources were restricted to shapes defined by stope optimiser software and assuming combined underground mining and processing costs of US\$50/t supported by data collected from similar deposit and operations. In the Sinaloa state, Mexico.

ACS estimated that the Plomosas Project contained combined Indicated mineral resources totalling 2.4 M tonnes grading 0.68 g/t gold, 44 g/t silver, 0.9% lead and 1.4% zinc, and 5.8 M tonnes of Inferred mineral resources grading 0.46 g/t gold, 85 g/t silver,



0.9% lead and 1.2% zinc. The mineral resources as estimated by ACS are summarized in Table 1.2.

Plomosas Mine Area									
Туре	Classification	Cut-off (US\$)	Tonnage (MT)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	AgEq (g/t)
OP	Indicated	35	0.3	0.21	74	1.0	0.9	1.0	115
OP	Inferred	35	1.2	0.07	75	0.9	0.8	3.9	102
UG	Indicated	50	1.7	0.84	27	0.9	1.4	7.5	137
UG	Inferred	50	3.4	0.50	40	0.9	1.1	12.6	116
Total	Indicated		2.0	0.76	33	0.9	1.3	8.5	134
Total	Inferred		4.6	0.39	49	0.9	1.0	16.5	112

#### Table 1-2: Mineral Resource Estimate

San Juan Area									
Туре	Classification	Cut-off (US\$)	Tonnage (MT)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	AgEq (g/t)
OP	Indicated	35	0.1	0.19	115	0.3	0.6	0.3	111
OP	Inferred	35	0.2	0.37	92	0.6	0.7	0.8	111
UG	Indicated	50	0.4	0.35	87	1.0	1.7	1.6	132
UG	Inferred	50	1.0	0.77	22	0.9	2.0	3.6	116
Total	Indicated		0.5	0.32	92	0.9	1.5	1.9	128
Total	Inferred		1.2	0.7	36	0.9	1.7	4.5	115

Plomosas Project Total Resource									
Туре	Classification	Cut-off (US\$)	Tonnage (MT)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	AgEq (Moz)	AgEq (g/t)
OP	Indicated	35	0.3	0.20	83	0.8	0.8	1.3	114
OP	Inferred	35	1.4	0.12	78	0.9	0.7	4.8	103
UG	Indicated	50	2.1	0.76	38	0.9	1.5	9.1	136
UG	Inferred	50	4.4	0.57	36	0.9	1.3	16.2	116
Total	Indicated		2.4	0.68	44	0.9	1.4	10.3	133
Total	Inferred		5.8	0.46	46	0.9	1.2	21.0	113

Notes:

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.





- (2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- (3) 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.
- (4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
- (5) Numbers may not add up due to rounding.
- (6) Silver equivalent is calculated by dividing the US\$ value by the silver price. Dollar equivalent is estimated using the information in Tables 14.11 and 14.12.
- (7) 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 located in the western Mexican state of Sinaloa about 100 km east-southeast of Mazatlán. Specifically, the Project is located within the southeastern corner of Sinaloa, stretching from near the historic mining village of La Rastra and another 5 km to the east within the Rosario Mining District.

Grupo Mexico's subsidiary ("IMMSA") explored the Plomosas Project from the early 1970s to the mid-80s, 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 Project between 1986 to 2000. During this period, a total of 2.5M tonnes averaging 190 g/t Ag, 0.92 g/t Au, 2.02% Zn and 2.38% Pb were extracted. The operations ceased in 2001, due to unfavourable commodity prices preventing feasible economic returns at the time.

Mineralization on the Plomosas Mine Area 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 Plomosas Mine and San Juan 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 chalcopyrite, galena, sphalerite, pyrite and bornite. Recent exploration and drilling results suggests presence of high-grade precious metals only mineralized systems hosted with high angle faults.

GR Silver acquired the Project in 2020 and carried out a 10,877 m core drilling program until March 2021. The GR Silver drill program along with the historical drilling on the Project were compiled to prepare the mineral resources presented in this report.

The QP recommends that GR Silver continue to explore the Plomosas Project. Specifically, the QP recommends that GR Silver continue to expand the drill program to further define the mineralization at Plomosas and San Juan. The QP also recommends that in conjunction with the drill program, that GR Silver carry out infill core drilling in both areas to address opportunities for resource expansion.

The QP also recommends additional metallurgical testwork. The QP estimates that the recommended programs will cost in the order of US\$2.71 M.





#### 2 INTRODUCTION

Arseneau Consulting Services Inc. (ACS) was contracted by GR Silver Mining Ltd. (GR Silver) to prepare a mineral resource estimate and technical report (the "Report") in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101) for the Plomosas Project located near the village of La Rastra in Sinaloa, Mexico.

#### 2.1 Terms of Reference

The Report was prepared to support a first-time disclosure of mineral resources by GR Silver for the Plomosas Project.

This report includes technical information, which required subsequent calculations to derive subtotals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the author does not consider them to be material.

#### 2.2 Qualified Persons

Dr. Gilles Arseneau, PhD, P. Geo., of ARSENEAU Consulting Services Inc. is an independent qualified person as the term is defined in NI 43-101. Dr. Arseneau is a member of the Association of Professional Engineers and Geoscientist of British Columbia (APEGBC) (Member 23474). ARSENEAU Consulting Services Inc. operates under Permit number 1000256 issued by APEGBC on July 2, 2021.

Dr. Gilles Arseneau visited the Project from November 3rd to 7th, 2020.

Shane Tad Cowie, P.Eng. is an independent qualified person as the term is defined in NI 43-101. Mr. Cowie is currently employed as Sr. Metallurgist with JDS Energy & Mining Inc. I am a graduate of the University of British Columbia with a B.A.Sc. in Mining and Mineral





Process Engineering, 2001. Mr. Cowie is responsible for Sections 13 and 18 of this Technical Report.

The effective date for information contained within the Report is March 15, 2021.

#### 2.3 Information Sources and References

The primary source of information for this report was information collected during the 2020 site visit, data provided by GR Silver and information from a technical report prepared by WSP Canada Inc. on the adjacent San Marcial Project for Goldplay Exploration Ltd. (now GR Silver).

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

#### 2.4 Terms and Definitions

All units in this report are System International (SI) unless otherwise noted. Table 2.1 summarizes the commonly used abbreviations used throughout this report.

Unit	Abbreviation
silver	Ag
gold	Au
copper	Cu
lead	Pb
zinc	Zn
hectare	ha
square kilometre	km <sup>2</sup>
grams per metric ton	g/t

#### Table 2-1: List of Common Abbreviations





Unit	Abbreviation
troy ounces per short ton	oz/ton
metre	m
kilometre	km
centimetre	cm
gram	g
kilogram	kg
troy ounce	oz
metric ton	t, tonne
dry metric tonnes	DMT
million	Μ
M years	Ма
degrees Celsius	°C
degrees Fahrenheit	°F

#### 2.4.1 Monetary

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





#### 3 RELIANCE ON OTHER EXPERTS

The authors 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. This report includes technical information, which required subsequent calculations to derive subtotals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the author does not consider them to be material.

The Qualified Persons ("QP") who prepared this report have also relied on information provided by experts who are not QPs or persons who are not listed as authors for this 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 relevant to the technical report.

#### 3.1 Mineral Tenure

The author has not reviewed the mineral tenure, nor independently verified the legal status, ownership of the Project area or underlying property agreements, and has relied on an opinion of title provided by DBR Abogados, S.C. (GR Silver's legal counsel in Mexico), dated June 18, 2020 for all the information pertaining to mineral claims related to the Project, as well as ownership.

Further information on mineral tenure and ownership is provided in Section 4.1 of the Report and contained in the Title Report affixed herein as Appendix 1.





#### 4 **PROPERTY DESCRIPTION AND LOCATION**

The Plomosas Project is located in the western Mexican state of Sinaloa about 100 km east-southeast of Mazatlán. Specifically, located within the southeastern corner of Sinaloa, approximately 5 km east of the historic mining village of La Rastra within the Rosario Mining District (Figure 4.1). The Plomosas Project is centered at UTM coordinates 451,500E and 2,551,500N using WGS-84 datum. The elevation of the Project varies between 400 to 1200 m above sea level. The Plomosas Mine Area has elevation ranging from 500 to 1000 m and the San Juan Area has an elevation range from 600 to 900 m.





Source: Dunkley (2020)





#### 4.1 Land Tenure and Underlying Agreements

The Plomosas Project consists of eleven mining concessions totalling 6,573.5 ha (Figure 4-2). GR Silver acquired 100% of Minera La Rastra S.A. de C.V. ("Minera La Rastra"), a wholly owned subsidiary of First Majestic, and holder of the eleven mining concessions (Figure 4.2]. As consideration for a 100% interest in Minera La Rastra, GR Silver and its Mexican subsidiary paid CAD\$100,000; granted a subsidiary of First Majestic a 2% net smelter return ("NSR") royalty on the Plomosas Project, with half of the NSR being subject to a buy-back option for US\$1.0 M; and issued to First Majestic 17,097,500 common shares of GR Silver. GR Silver and its Mexican subsidiary signed a definitive agreement and completed acquisition on March 30, 2020.

Concession Name	Title Number	Concession Type	Area (ha)	Granted	Expiry
Plomosas	168698	Exploitation	12.00	02-07-1981	01-07-2031
Segunda Ampliación de Plomosas	168699	Exploitation	100.00	02-07-1981	01-07-2031
Continuación de Plomosas	168700	Exploitation	12.00	02-07-1981	01-07-2031
La Rastra 2	183443	Exploitation	25.43	20-10-1988	19-10-2038
San Juan	188174	Exploitation	24.57	15-06-1983	14-06-2033
La Estrella	202188	Exploitation	261.68	30-07-1992	29-07-2042
Plomosas 3	209251	Exploitation	23.27	19-03-1999	18-03-2049
Plomosas 2	210152	Exploitation	83.50	19-12-1991	18-12-2041
La Rastra	214304	Exploitation	5396.00	08-07-1994	07-07-2044
Plomosas 4	225024	Exploitation	420.96	08-07-2005	07-07-2055
Los Arcos	226222	Exploitation	214.13	08-05-1996	07-05-2046
Total			6,573.54		

#### Table 4-1: Plomosas Mining Concessions

Exploration 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. It commonly involves negotiations





and agreements detailing the exploration program and agreement for access and compensation. The surface rights covering the majority of the Plomosas Project are owned by the Ejido La Rastra. Surface rights over a portion of the project area are 100% owned by Minera La Rastra (See Figure 4.2 and 4.3).



Figure 4-2: Concessions Map: Mineral La Rastra S.A. de C.V. – Plomosas Project

Source: GR Silver (2020)





#### Figure 4.3: Location Map Ejido La Rastra and Four Properties A, B, C and D and 100% Owned by Minera La Rostra S.A. de C. V.



Source: GR Silver (2021)

Note: GRSL Land owned by La Minera La Rastra S.A. de C.V.





Minera La Rastra has executed agreements with Ejido La Rastra covering all areas under exploration to allow access and surface exploration activities. These agreements are in good standing, providing the Company full access to carry out its exploration programs. The first agreement between Minera La Rastra and Ejido La Rastra was executed on March 2, 2008 for a period of 20 years, authorizing exploration and exploitation activities, including mining and processing on the concessions. The original agreement defined commercial terms including an annual payment in Mexican Pesos per hectare agreed to be occupied by the Company. On May 3, 2017, Minera La Rastra and Ejido La Rastra additional clauses to address removal of vegetation in areas planned for exploration and related compensation to Ejido La Rastra in such cases.

The Mexican Mining Law was amended in 2005, with removal of distinction between an Exploration Concession and an Exploitation Concession. As a result, the property was converted under the new legislation and given expiry dates that are 50 years from the date they were originally recorded with the Public Registry of Mining.

Under the Mexican Mining Law, duties are assessed against each exploration concession, and they are calculated by multiplying a rate defined by the Mexican Government based on the age of the respective concession and by the number of hectares of the respective concession. These duties are paid semi-annually in January and July, to the Secretary of Finance (Secretaria de Hacienda y Crédito Público). All of the 11 concessions in Table 4-1 remain valid from the record date of title. Semi-annual mining duties were paid in January 2021 and minimum annual exploration work requirements have been met. In 2013, Minera La Rastra was approved to group all its 18 Exploration Concessions for reporting purposes. For the eleven Exploration Concessions that define the Plomosas Project, the mining duties of \$72,811 were paid in January 2021.

Mining Concessions can be extended at the conclusion of the expiry date for a period of an additional 50 years, according to Article 15 of the Mexican Mining Code. In order to obtain such an extension, the concession holder is required to submit a notice to the





Mexican Secretary of Mines requesting the extension five years prior to the stated expiry date.

#### 4.2 Permits and Surface Rights

Prior to starting specific work and/or exploration activity, an authorization from the Ministry of Environment and Natural Resources ("SEMARNAT") must be obtained. To request the authorization for an exploration project, the filing of an Exploration Preventive Report ("PR") or an Environmental Impact Statement ("EIS") is required. A PR may be submitted if the project meets the specifications provided in the Official Mexican Standard NOM-120-SEMARNAT-2011. Once filed, SEMARNAT determines if the submission of an EIS is required with respect to the project in question.

In 2017, Minera La Rastra submitted a PR to SEMARNAT, which was authorized by the environmental authority, according to permit number SG/145/2.1.1/1015/17.-1773 dated September 28, 2017, and valid for five years (until 2022). In 2011, Minera La Rastra was confirmed as title holder of a water use and wastewater discharge title, which was authorized by CONAGUA according to the permit number 03SIN118858/11IDDA11 and valid until the year 2039.

All surface rights are controlled by GR Silver. The Project has a 20-year surface rights agreement with the Ejido La Rastra which is in good standing. The agreement allows for Minera La Rastra to undertake exploration activities, local water usage (subject to CONAGUA permit), mine construction and commercial production.

Minera La Rastra owns surface rights in four properties (Figure 4.3) covering historical processing plant sites, underground mine development at the Plomosas Mine resource estimation area, water access and some of the historical camp buildings and infrastructure.





#### Figure 4-3: Surface Rights Location (Four Properties A, B, C and D) and Historical Plan Site



Source: GR Silver (2021)

Note: GRSL land owned by La Minera La Rastra S.A. de C.V.

#### 4.3 Royalties

Industrial Minera Mexico, S.A. de C.V. ("IMMSA"), a wholly owned subsidiary of Grupo Mexico S.A. de C.V., is entitled to receive a sliding scale NSR based on the price of zinc, to



be paid based on 25% of estimated annual production and sales. The NSR is based on the following sliding scale:

- 1.75% for zinc price is less than US\$1.00/lb
- 2.5% for zinc price is equal or greater than US\$1.00/lb
- 3.0% for zinc price is equal or greater than US\$1.20/lb
- 3.5% for zinc price is equal or greater than US\$1.50/lb

The royalties are based on net liquidation value. This is defined as the resulting amount after deducting a suite of costs from the payment made by the offtake buyer to the vendor. The costs deducted include the treatment charges, fees, penalties, taxes, as well as freight (when applicable) between the primary processing site and the point of sale. The sliding scale is reduced by 85% of the agreed percentage for resources greater than 895,512 tonnes.

The Project is also subject to a 2.0% net smelter return royalty payable to First Majestic, with half of the NSR (i.e., 1.0%) being subject to a buy-back option for US\$1.0 M, payable at any time.

#### 4.4 Environmental Considerations

The Plomosas Project is a former producing mine. The 600 tpd underground mine and processing facility were operated by Grupo Mexico from 1986 through to 2001. As such, the Project has several remnants of legacy infrastructure that were part of the historical mining operation. The processing plant has been removed but cement foundations, electrical, hydraulic, tailings impoundments, underground tunnels and workings are still at the site.

Other than the existing infrastructure, consisting of mining camp, foundations and steel structures for the processing plant, water tanks, warehouses and other buildings, there




are no other areas with constructions on-site. The site infrastructure also includes allweather gravel roads, high voltage power line right of way, as well as local farming activity.

GR Silver is currently responsible for maintaining the mining concession including the environmental maintenance. The Plomosas Project is permitted for 600 tpd mining and processing according to the 2008 agreement with Ejido La Rastra valid until 2028.





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

The main international airport for the state of Sinaloa, and one of the two main ports, is in Mazatlán, with direct flights to Mexico City and various ports in USA and Canada. The Property is accessed from Mazatlán travelling along either the Federal Highway 15D (toll road) or Highway 15 (no tolls) southeast to the town of El Rosario (Figure 4.1). From El Rosario it is a two-hour drive east to the Property. After leaving El Rosario, continue on Highway 15 for 2 km across the Baluarte River bridge before turning left at the second turnoff on Calle Melchor Ocampo Norte towards Matatán. Continue on the local sealed road through the villages of Las Habitas and Matatán, then east along the local road 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 outskirts of La Rastra to the east, continue for 11 km to reach the Plomosas Mine site and camp (Figure 5.1).



#### Figure 5-1: Access to Plomosas Project from El Rosario



# 5.1 Climate

The regional climate ranges from semi-warm to sub-humid, influenced by the semi-cold climate of the highlands and the tropical influences entering the Sierra Madre Occidental (SMO) through deep canyons to the west. Maximum temperatures typically average around the low to mid 30s (°C) during the middle of the year and drop to an average of mid to high 20s (°C) in the period from November to February. Minimum temperatures average low to mid 20s (°C) during the middle of the year and drop to an average of 15 °C in the colder months (Figure 5.2).





Source: www.worldweatheronline.com (2021)

Rainfall in the area is seasonal with the number of rain days and the volume of rainfall increasing from around May/June until October/November (Figure 5.3). The remaining period of the year is much drier with little rain of significance apart from isolated storms. The Project and all exploration activities operate all year around. The Project can be affected by excessive rain and temporary road washouts during the wet season and four-wheel drive vehicles are recommended year-round.







Figure 5-3: Average Monthly Rainfall La Rastra, Sinaloa, Mexico

Source: www.worldweatheronline.com (2021)

# 5.2 Local Resources and Infrastructure

The major population and supply centre for the region is El Rosario, which has a population of approximately 16,000. The closest accommodations to the Project are in the village of La Rastra and Matatán which offer numerous houses for rent with electricity and telephone, and local workforce (Figure 5.4).

Some extensive facilities and infrastructure are in place at the Plomosas site, including a secure, fully functional mining camp facility (Figure 5.5), tailings dam, 60 km – 33 KV power line (connected to the Mexican regional power grid), 190-person camp, infirmary, offices, core facilities, internet connection, general buildings and warehouses.





The Plomosas Project 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.

IMMSA operated the Plomosas underground mine and a 600 tpd processing plant from 1986 to 2001, and some of the foundations and other ancillary facilities remain on site today (Figure 5.6).



#### Figure 5-4: View of La Rastra Village Approximately 3.5 km from Plomosas Mine Area







Figure 5-5: View of Plomosas Camp and Office Facilities

Source: GR Silver (2021)



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





# 5.3 Physiography

The Project is situated in the western limit of the sub-province of Zona de Barrancas which is on the edge of the Sierra Madre Occidental ("SMO") physiographic province, very close to the plains and rolling hills of the coastal plain. The SMO physiographic province is characterized by a relief of high and large volcanic plateaus, dissected by deep gorges which drain westerly towards the Pacific Ocean. The Plomosas Project is in an area where the topography varies between 400 and 1200 metres above sea level (See Figure 5.7)

Vegetation at Plomosas is influenced by the semi-cold climate of the highlands and the tropical influences entering the Sierra Madre Occidental 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 reduces during the dry season.



#### Figure 5-7: Ariel View of the Plomosas Project

Source: GR Silver (202





# 6 **HISTORY**

#### 6.1 General History

Mineralization in the Plomosas area was first discovered in the middle of the 17<sup>th</sup> century by Spaniards exploring highlands in Sinaloa. The earliest recorded mining in the project area dates back to 1772 with the discovery of mineralization at Mina La Abundancia, now known as the Plomosas Mine Area. This was worked on a small scale by artisanal miners (gambusinos) up to 50 m below surface until 1821, prospecting Ag-Au rich veins, when the mine was abandoned due to flooding. Over the following decades the mine was intermittently worked on a small scale for silver by various operators.

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 exploitation was restricted to Ag-rich mineralization at shallower levels. As a result of economic considerations, the operation was later abandoned in 1888.

In 1930, the mine was acquired by the Mexican Premier company, but only worked for short periods. In addition to the Plomosas Mine Area, numerous other artisanal workings exist in the property, the most important being San Juan and La Colorada.

In the 1950s and 1960s, exploration and development work was undertaken by Minera Nacional and Asarco Mexicana (which later became Industrial Minera Mexico, S.A. de C.V. or IMMSA - a subsidiary of Grupo Mexico). This involved exploration and initial underground development and diamond drilling in the 1970s. Also In the 1970s, metallurgical research and test work was carried out to design a process for dealing with a Pb-Ag concentrate with high Zn content, that could be treated at IMMSA's smelter plant at Avalos, Chihuahua (Dunkley, 2020).

The development of the flotation process capable of separating and concentrating the complex Pb-Zn-Ag mineralization led to the commencement of large-scale mining





operations in the mid 1980s. In 1986, Grupo Mexico's subsidiary, IMMSA, commenced underground operations (room and pillar) at the Plomosas mine. The company constructed a 600 tpd crusher/mill/flotation processing circuit which operated until 2000. IMMSA completed almost 7.4 km of underground development to support the room and pilar operations. The following figure illustrates the results from a laser survey of the underground developments, ramps and stopes in the Plomosas Mine Area, completed by GR Silver in January 2021. (Figure 6.1)









The processing plant feed was mainly sourced from base metal rich, mineralized zones from the Plomosas historical underground mine, producing Zn and Pb concentrates with Ag-Au credits. During the first five years, IMMSA did not analyze Au in the material sourced from the mine. Historic production reports by IMMSA indicate that a total of 2.5 M tonnes of ore were extracted on selective high-grade Pb-Zn zones. Table 6.1 summarizes the historical production by IMMSA.





#### Table 6-1: Historical Production Plomosas Mine Area

# Plomasas Historic Production Table 1986-2000

Historic Production. During	mining	operatio	ns, in the	Plomosas lead	-La Cruz and zinc o	mine, the concentra	y extracte tes as sho	ed lead ar own in the	nd zinc m e table be	inerals wi low.	th variab	le silver, g	gold and c	opper co	ntent, as	well as
	_		-	1	10-10-10-10-10	10.00000		Product	ion Years				-	-	-	_
Concept	Unit	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ORE MILLED	tonne	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	1	-	1		1						-		-		1000	
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	1.4	1.83	2.66	2.28	2.28	2.17	1.85	2.02	2.42	2.08	2.57
METAL CONTENT		-						1000	-	1000			1	1.5	-	
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	1 mar 10	1. 18				1.1.1.1						10. A.				100
Au in Pb, Cu, Zn Concentrate	-	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 Concentrate		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	38-0-29	49-0-18	0
Pb in Pb Concentrate		49.5	62	34.5	70	79	67	58	59	56	54	56	57	58	64	0
Cu in Cu Concentrate		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zn in Zn Concentrate	10.000	0	0	0	0	0	0	21	15	36	44	50	51	51	52	0
CONCENTRATE PRODUCTION	t										-					1
Pb	1	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		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

Numbers are rounded

\*Source: Internal IMMSA reports



#### 6.1.1 Pre-2001 Exploration History

In the period prior to 2001, IMMSA carried out exploration programs while simultaneously advancing mining operations at the historical Plomosas mine. The exploration focused on Pb-Zn-Ag-Au polymetallic shallow mineralization, hosted in northwest-southeast trending structures in the vicinity of the Plomosas Mine Area. Historical reports and maps indicate that the following exploration programs were completed on the Project:

- 85,989 m of surface and underground drilling (485 drill holes) at the Plomosas Mine, San Juan and other targets from 1976 to 2000.
- Soil geochemistry survey on the southern extension of the mineralized trend from San Juan, La Colorada and La Valenzuela.
- Ground geophysical Induced Polarization (IP) survey to outcrop zone showing polymetallic mineralization, "Plomosas Breccia" and towards north in 1973.
- A ground geophysical survey in the area located from west of lower access to the Plomosas mine completed in 1978. It included an underground geophysical survey at the Plomosas Mine Area. (See Table 6.2)
- Ground IP surveys were also undertaken over several areas at different times between 1994 and 2002, as summarized in a final report by Vizcarra Lopez (2002).
- Ground geophysical survey (magnetometry) covering the San Juan Area and La Colorada





- A series of petrographic and mineralogical studies were completed with core and underground samples from the Plomosas Mine and San Juan Areas in the period from 1977 to 2001 (Muñoz et al., 1977).
- IMMSA engaged Telluris Consulting (UK) to complete a detailed Structural and Remote Sensing Analysis of the Rosario Mine District, including detailed analysis of the Project area (Starling T. 1996).

#### Table 6-2: Summary of 1978 Ground Geophysical Surveys

Method	Number of Lines	Stations	km		
Electro-magnetometry	43	998	29.94		
IP & Resistivity	32	477	13.03		
Magnetometry	5	240	3.60		
TOTAL	80	1,715	46.57		

**Figure 6.2** to **Figure 6.3** summarize the historical geophysical survey work completed by IMMSA at the project and other historical exploration work completed in the period from 1976 to 2000.







#### Figure 6.1: Location and Summary of Historical Exploration Geophysical Surveys IMMSA





# Figure 6.3: Historical Telluris Consulting (UK) Structural and Remote Sensing Analysis of the Rosario Mine District



Source: Telluris Consulting Report (1996)



Note: A – Distribution of major structures interpreted as post-mineralization in age. Yellow lines illustrate the E-W regional faults. Red lines illustrate the NE-SW and NW-SE regional faults.

Note: B – Distribution of main structures synthesised from published, Landsat TM and air phot interpretation data. Blue Lines illustrate the interpretation of the geological figures. Red lines illustrate the major faults.

#### 6.1.2 **Previous Operators Exploration – 2007 Through 2019**

Aurcana Corporation acquired 100% the Plomosas Project by entering into an Option Agreement with IMMSA on February 8, 2007. From 2007 until December 4, 2009, Aurcana completed limited surface exploration and 27 surface drill holes and limited surface and four underground drill holes. They repaired some of the foundations at the plant site and initiated exploration works, defining new drilling targets outside of the historical underground mine areas.

The limited exploration activities undertaken by Aurcana included:

- 410 underground samples totalling 614 m; and
- 31 diamond drill holes totalling 7,231 m (eight of which were on the Plomosas Mine Area and the remaining at the San Juan Area).

The 2008 surface and underground diamond drilling program undertaken by Aurcana consisted of 15 holes totalling 3,875 m (Figure 6.5). Remaining drill holes were drilled in 2009. The main objective of Aurcana's historical surface diamond drilling program was to test for grade and width continuity of mineralization at San Francisco, Yecora and the San Juan Area.

Aurcana's drilling campaign explored mineralization in some specific epithermal veins such as San Francisco, Yecora and the San Juan. Aurcana also undertook preliminary surface exploration on a property scale, including geological mapping and surface rock geochemical sampling, which resulted in the definition of 17 early-stage targets for more detailed follow-up exploration. As a result, Aurcana compiled a reconnaissance geological map with lithology, alteration and structure, which has subsequently been used for exploring the property.







#### Figure 6-2: Aurcana Historical Reconnaissance Exploration Targets

Source: Aurcana report, 2008

Pursuant to an agreement between Silver One and Aurcana dated October 9, 2009, Silver One acquired from Aurcana all the issued and outstanding shares of Aurcana de Mexico S.A. de C.V., thereby acquiring a 100% interest in the Plomosas Project. The Company subsequently changed its name to Minera La Rastra S.A. de C.V. ("Minera La Rastra"). Minera La Rastra carried out preliminary internal engineering studies to assess the restart of the operations including acquisition of equipment such as a mill, which was partially sold prior to divesting the project in 2010.





In November 2010, Silver One was acquired by Silvermex Resources Inc. ("Silvermex"). In 2011 and 2012, Silvermex undertook reconnaissance exploration including extensive surface rock geochemical sampling. These included the Plomosas Mine Area, San Juan, San Francisco, Maria Fernanda and La Colorada-Yecora.

In 2012, Silvermex planned to construct two 100 m crosscuts and drill 1,800 m to test down dip extensions of the Plomosas and Plomositas ore shoots that were previously mined by IMMSA. This underground development was not completed.

First Majestic completed the acquisition of all outstanding shares of Silvermex in May 2012 and thus became the sole owner of Minera La Rastra. Initially little exploration work is reported at Plomosas, but in November 2014, First Majestic recompiled a geology map of the property, based mainly on the earlier work of Aurcana, and proposed 16 exploration targets for further work, which essentially corresponded with those proposed by Aurcana during their studies in 2007-2009.

In 2016, as part of the exploration program, First Majestic commissioned a highresolution helicopter-borne magnetic survey, representing the second large-scale airborne geophysical survey on the Plomosas Project. The data acquisition was done by MPX Airborne Ltd. from November to December 2016. Lines were acquired in an eastwest direction at 75 m line spacing with nominal vertical clearance of 60 m. First Majestic contracted EGC Inc. to carry out the quality control, processing, inversion modelling and review of aeromagnetic data on the survey. A total of 1,152 line-kilometres of data were acquired over an area of 77 km<sup>2</sup> (**Error! Reference source not found.**).







#### Figure 6-3: Airborne Magnetic Interpretation, Plomosas Project

Source: First Majestic (2016)

The surface and underground diamond drilling program undertaken by First Majestic in 2017 and 2018 consisted of 131 holes totalling 30,900 m. The main objectives of the First Majestic drill program were to test for grade and width continuity of mineralization at the historical Plomosas mine, El Saltito vein, La Colorada vein and the historical San Juan vein. Apart from this initial drilling campaign, only minor surface exploration appears to have been undertaken by First Majestic. No geological or resource modelling was completed by First Majestic.





From early 2019 until its acquisition by GR Silver in March 2020, the Plomosas Project remained on a care and maintenance schedule.

# 6.2 Historical Mineral Resource and Mineral Reserves

In 2000, IMMSA estimated that the Plomosas deposit contained 638,756 tonnes grading 136 g/t Ag, 3.21% Zn, 2.23% Pb, and 1.05 g/t Au (source: internal IMMSA reports, 2001).

The IMMSA 2000 estimate is not considered to be compliant with the standards prescribed in NI 43-101 and GR Silver is not treating the historical estimate as a current mineral resource or mineral reserve and ACS has not done the work necessary to verify the historical estimate. The historical estimate should not be relied upon and is being superseded by the resource estimate presented in Section 14 of this technical report.

#### 6.3 Historical Production

IMMSA operated an underground mine at Plomosas between 1986 to 2000. During this period, a total of 2.5 M tonnes averaging 190 g/t Ag, 0.92 g/t Au, 2.02% Zn and 2.38% Pb were extracted (Table 6.1).





# 7 GEOLOGICAL SETTING AND MINERALIZATION

# 7.1 Regional Geology

Large sections of Sinaloa State, Mexico are dominated by the Sierra Madre Occidental ("SMO"), a prominent mountain range with a linear extent of 1,500 km that stretches from the US-Mexico border in the north to approximately the Nayarit-Jalisco state boundary in the south (Figure 7-1). It has a general width of about 200-400 km. 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 to 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- or syntectonic 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; and (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 development of the subduction of the Fallaron Plate (Henry et al., 2003). The following describes most important regional geological units within the respective geological time scale.

#### Late Cretaceous to early Eocene – Lower Volcanic Complex (LVC)

Most rock exposures in the SMO are Late Cretaceous to early Miocene that formed during two main periods of continental magmatic activity (Ferrari et al., 2017). The first period of activity (1) 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 NW Mexico (McDowell et al., 1977; Henry et al., 2003). Rock units of the LVC are generally coeval with the post-tectonic plutons (82-45 Ma). The LVC is composed of 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 Cu type and epithermal base and precious metal type (Montoya-Lopera et al., 2019; Valencia-Moreno et al., 2017).

#### Late Eocene to mid Miocene – Upper Volcanic Supergroup (UVS)

The second period of continental magmatic activity (2) started in the late Eocene, following a transitional quiet period. Most of the SMO is a silicic igneous province that was emplaced during the last phase of subduction of the Farallon Plate from 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 and 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).

# 7.1.1 Structural Setting

In southern Sinaloa 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) (**Error! Reference source not found.** to Figure 7).

- **D1:** During the Early Tertiary, 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 Piaxtla Valley; Rio Presidio Valley, Rio Baluarte in the Rosario Mining District, as seen in Figure 7.4). Early mineralized epithermal structures and veins have a E-W to ENE-WSW trends.
- **D2**: During the Early Oligocene, the principal horizontal stress rotated from ENEdirected to 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 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 succeeded in the early Oligocene to late Miocene (approximately 27 – approximately 15 Ma). Resulting NNW-SSE to NW-SE striking normal faults caused significant vertical displacement and created prominent graben structures with associated continental sedimentary deposits, such as the Concordia graben and the Panuco graben. 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).





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

Source: Horner and Enriques (1999)





# Figure 7-3: Schematic Evolution of Tectonic Stress and Structures of Deformational Phases D1 to D3 (left to right) in Southern Sinaloa



Source: Horner and Steyrer (2005)





#### Figure 7-4: Sinaloa Batholith Exposed in ENE-WSW-trending Canyons (D1 Stress Regime) of Southern Sinaloa



Source: Ferrari et al (2013)

The Rosario Mining District is a regional historical mining district in southern Sinaloa, encompassing mining areas that stretch from the town of Rosario on the west to the Plomosas Mine Area in the east, covering an area of over 1000 km<sup>2</sup>. It is in large parts covered by the western outreaches of Eocene to Oligocene volcanic rocks (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 NE of the Rosario Mining District are continuously covered by later second-pulse Miocene felsic flare-up events. Underlying bi-model 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 western-most 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 Property, on trend with the town of Rosario. Most of the western district is covered by alluvial deposits of Pleistocene to Quaternary age.



#### Figure 7-5: Rosario Mining District Regional Geology Map

Source: GR Silver (2021) Note: See legend Figure 7.6





Figure 7-4: Legend for Rosario Mining District Geology Map

Legend Lithologies
Water Holocene Alluvium Pleistocene Sedimentary Package Pliocene Sedimentary Package Pliocene Polimictic Conglomerate
Upper Volcanic Supergroup (UVS) Miocene Rhyolite Tuff Miocene Rhyolite Oligocene-Miocene Rhyolite Package Oligocene Ignimbrites Oligocene Monzonite Oligocene Dacite Porphyry Eccene - Miocene Rhyolite Porphyry Eccene - Miocene Rhyolite Porphyry Eccene - Oligocene Granodiorite
Lower Volcanic Complex (LVC) Eocene Oligomictic Conglomerate Eocene Diorite Eocene Diabase Paleocene-Oligocene Andesite Paleocene-Eocene Andesite Package
<ul> <li>Paleocene Granodiorite with Tonalite</li> <li>Cretaceous-Eocene Granodiorite</li> <li>Cretaceous Andesite</li> <li>Cretaceous Sandstones and Mudstones</li> <li>Jurassic Sed-Tuff Package</li> <li>Permian Metasedimentary Package</li> <li>Concessions and Topographic Symbols</li> </ul>
<ul> <li>Road</li> <li>Regional Third Party Concessions</li> <li>GRSL Concessions</li> </ul>



# 7.2 Local Geology

The geology of the Plomosas Project is principally composed of bi-modal volcanic rock units assigned to the Lower Volcanic Complex (LVC), dominated by andesitic pyroclastic units, tuffs and extrusive flows. Only the basal unit volcaniclastic-sedimentary rock unit is possibly of older age. Rock units are generally tilted 30-50 degrees to the W as a result of extensional faulting (Figure 7.5). The detailed stratigraphy and geology are outlined for both the Plomosas Mine area and the San Juan area. Both areas are separated by approximately 3.5 km but share a similar stratigraphy with mafic units dominating in the upper section and felsic units in the lower sequence. Both areas are show the presence of diorite intrusive bodies as well as rhyolitic dykes (Figure 7.4). The only available geological maps covering the Plomosas Project are 1:50,000 map sheets published by the Mexican Geologic Survey (Figure 7.5) and reconnaissance maps of veins and mineralized structures completed by previous workers Grupo Mexico, Silvermex, Aurcana and First Majestic. A 1:20,000 scale interpretational geological map was completed in November 2007 (Figure 7.6). Detailed maps at the deposit scale of 1:2,000 have been completed by GR Silver for the Plomosas Mine Area and the San Juan Area. Mapping at San Juan is largely based on maps compiled from previous exploration work programs.







#### Figure 7-5: Plomosas Project Local Geology Map

Source: GR Silver (2021)

Note: Detailed legend of the Plomsas Mine Area and the San Juan Area can be found in Figures 7.9 and 7.15 respectively.



# Figure 7-6: Schematic Cross-Section of the Plomosas Project Encompassing San Juan in the SW and Plomosas in the NE







#### 7.2.1 Geology - Plomosas Mine Area

Detailed mapping of the surface geology, drill core logging, and mapping of underground workings resulted in a detailed stratigraphic column of the Plomosas Mine Area (Figure 7.9 to 7.12).



#### Figure 7-7: General Stratigraphic Column of Plomosas Mine Area





# Volcaniclastic Basal Unit - Lapilli Ash and Breccia Tuff (V4lpt)

The oldest unit in the Plomosas Mine Area is a volcaniclastic unit of andesitic to dacitic composition. Despite being a volcaniclastic tuffaceous unit, it has retained its field name as "lapilli tuff" given the fact that the majority of it is expressed as tuffaceous breccia with lapilli-sized components. The unit is well sorted and shows regular variation of grainsize. It can vary from a volcanic siltstone to sandstone ash tuff with homogenous to banded aspects, to a lithic breccia with centimetre to decimetre-sized angular to subrounded volcanic breccia components in a tuffaceous matrix. It usually has a light to dark green colour due to abundant pervasive chlorite alteration. It is the basal unit overlying the Sinaloa Batholith, and appears to have significant thickness over at least 100 m. At the Plomosas Mine Area the lower limit of this unit has not yet been encountered by diamond core drilling. At Plomosas, the unit is tilted to the W with a approximately 30 degree dip angle, slightly flatter compared to the unconformably overlying rock units. The age of this unit remains undefined and could range from Jurassic to Eocene. The volcaniclastic rock unit appears to be permeable and reactive to hydrothermal fluids and often contains secondary minerals such as chlorite, magnetite, hematite, pyrite, calcite and epidote. Secondary minerals are found in irregular veinlets or pervasively replacing rock matrix. This unit is also a favourable host for base and precious metal mineralization where in contact with veins and breccias.

#### Dacitic-Andesitic Block and Ash Tuff (V3ba) and Dacite-Andesite Flows (V3fb)

Separated by an unconformity, overlying units consist of dacitic-andesitic ash and breccia tuffs flows with intercalated lava flows. These units often have large sections of decimetre-sized volcanic lithic clasts, dominantly andesite or dacitic, in a matrix of tuffaceous material and have collectively been described as "Block and Ash Tuffs". The reddish to greenish coloured units have strongly variable thickness and can be over 100 m thick. Up to two lava flows can be distinguished and are up to 50 m thick. The grey coloured units usually have aphanitic textures with small amounts of quartz, potassic feldspar and plagioclase crystals. In parts, autobreccia textures are observed with reddish hematite alteration of the matrix. Weak pervasive chlorite alteration is observed. Epidote, chlorite and hematite alteration are common in this unit.





# Rhyolitic Flow (V1fb), Ignimbrite (V1igm) and Tuff Flows (V1t)

Rhyolitic flows, ignimbrite and rhyolitic breccia tuffs are intercalated with andesitic tuffaceous units. Thickness is variable and they can be up to several 100 m of thickness in total. Rhyolite flows are frequently autobrecciated and tend to have a pseudo-equigranular aspect. The flows can show silicification, pyrite dissemination and pervasive illite-chorite dissemination. Tuff units contain flow banded feldspar and quartz crystals and oriented volcanic lithic and juvenile components. They can be commonly mistaken for lava flows with flow-oriented phenocrysts. Ignimbrites are typical rhyolitic welded tuff with significant amounts of juvenile flattened clasts.

# Andesite Flow "Plomosas Andesite" (V4pm) and Latite Flows (V5)

An andesitic flow, also known as the "Plomosas Andesite", is of reddish-grey colour and can have characteristic euhedral, 3-5 mm long hornblende phenocrysts, sometimes up to 1 cm. Where oxidized, it takes a stronger reddish colour due to disseminated secondary hematite. Light coloured plagioclase phenocrysts are commonly found in a fine-grained ground mass, as well as occasional pyroxene phenocrysts. Frequently these mafic phenocrysts are altered and not easily recognizable. Flow banding and autobreccia textures are observed. Within this unit a clearly identified mafic latite flow of reddish fine-grained matrix is distinguishable by small feldspar phenocrysts and lack of significant amounts of mafic mineral phases. This unit can be up to 400 m thick.

# Andesite Crystal Tuff and Ash Tuff (V4xt), (V4at)

Overlying the andesite flows, another unit of tuffaceous breccia and ash flows along with thick crystal tuff units, is the last of the LVC in the Plomosas Mine Area. Crystal tuff units are light grey coloured and can be distinguish from a lava flow by flow-banded lithic and juvenile clasts as well as the broken feldspar and amphibole crystals. Lithic components are frequently of andesitic and rhyolitic composition. Ash tuffs are well sorted, red coloured volcanic silt- to sandstone.





#### Basaltic Andesite Flow (V6)

A basaltic andesite with brownish colour and dark aspect overlies the andesitic tuff and flow rock units. It is rare in the Plomosas Mine Area but is identified further to the E and SE crossing the adjacent river. It typically occurs as an autobrecciated flow and contains typical dark green euhedral pyroxene phenocrysts which can be up to several mm long. In some areas it is several hundreds of metres thick.

# Andesitic Volcaniclastic Rock (V4vcl)

This volcaniclastic unit unconformably overlays westerly dipping andesitic tuffaceous units but has a completely different easterly dip, indicating a syn- or post-tilting tectonic environment of deposition, possibly related to the UVS. It contains mostly andesitic fragments, but also a significant amount of rhyolitic components. It is considered to have been deposited post-mineral, as it is largely fresh and devoid of discrete carbonate and chlorite alteration which affects most other units to some degree.

# Microdiorite Intrusion (I8) and Dykes (I8dk)

Microdiorite appears as dykes in one large intrusive body, that was identified in the SE and S of the central Plomosas Mine Area. It had not been recognized by previous workers due to its fine-grained equigranular texture and similarity with green coloured andesitic flows and fine-grained tuffaceous units. The intrusive unit has a fine-grained speckled aspect due to its fine-grained, pale, euhedral plagioclase crystals (<1 mm) in a fine-grained dark green matrix of mafic minerals (amphibole?) altered to chlorite. It contains magnetite, and is frequently altered with disseminated pyrite, weak illite alteration of feldspars, pervasive chlorite alteration and incipient hematite alteration of magnetite. It contains a small amount of quartz phenocrysts and is compositionally close to a quartz diorite.

# Rhyolite Dykes (V1dk) and Rhyolite Porphyry

Rhyolite dykes have an inconspicuous light-coloured aspect with volcanic texture, a finegrained matrix and small phenocrysts of feldspar, quartz and biotite. They occur together




in mostly N-S trending fault structures. Rhyolite porphyry was identified during deep drilling at the end of a number of holes and are likely to correspond to the rhyolite dykes mapped at surface and in the drill holes, which combined may indicate a domal structure being part of the UVS. These intrusive units found at depth are strongly silicified with disseminated chlorite, pyrite and clay (illite?) minerals. Their absolute age is not known, but the rhyolite dykes appear to be related to the steeply dipping N-S structures of the Early Oligocene D2 phase, pre-dating extensional tectonics.

## Andesite Dykes (V4dk)

Andesite dykes are up to several metres wide and cut all country rock and other intrusive rock units that have been encountered so far. They are fine-grained, but phaneritic, typically dark green and magnetic, with visible mafic (amphibole) minerals and plagioclase crystals. Alteration includes pervasive calcite and chlorite, and epidote replacing the mafic mineral phases.

# Upper Volcanic Supergroup (UVS) Units

Crossing the Plomosas River and immediately towards the E and S of the Plomosas Mine Area, steep topography with vertical rock faces indicates massive rhyolitic ignimbrite sequences. In some areas 5-20 m thick red conglomerate to volcaniclastic units have been identified overlying the basaltic andesite unit. Additionally, a 5 m thick red conglomerate unit can be found along an unconformity on top of the first 300 m thick ignimbritic units and underneath a felsic tuffaceous unit, marking the contact of two separate felsic eruptive phases, possibly the Oligocene (1) and Miocene (2) flare-up events. Conglomerates of both events consist of abundant felsic volcanic components. Rhyolite flows and intrusive plugs are found within these units. The lower group has large sections with low-temperature hydrothermal alteration including the formation of secondary quartz.







#### Figure 7-8: Detailed Geology of the Plomosas Mine Area

Source: GR Silver (2021) Note: See Legend in Figure 7.11





ithology	Structural element	S OLD	-WORKINGS
Ignimbrite	Fault direction	Туре	E
Vulcanoclastic	Inferred lineament	s X	Mine
Andesite Dyke	Lineaments	*	Old Working
Rhyolithic Dyke	Normal Fault	1	Target
Andesite Crystal Tuf	f HH H Normal Fault (Infe	rred) 💋	Underground
Diorite	Reverse Fault		
Trachyte-Latite	Breccia	Co	ncession
Rhyolithic Tuff	Vein	5	GR Silver
Andesite Prop	Bedding	5	Third Party
Block and Ash	Stockwork	Top	oography
Andesite	State Sulf	_	Contour 100 m interv Contour 10m interval
Lapilli	Stkgz	Ho	les
Plomosas Breccia	Stkhm		GR Silver
Fault Breccia	Sikini	1	First Majestic
Chepina Breccia			Aurcana

Figure 7-9: Legend for Detailed Geology of the Plomosas Mine Area

Source: GR Silver (2021)







## Figure 7-10: Geologic Cross-Section of Plomosas Mine Area (2551800N) (Refer Fig 7.10)

Source: GR Silver (2021) Note: See Legend in Figure 7.11





# Figure 7-11: Select Images of Scanned Rock Samples and Microphotographs from the Plomosas Mine Area



#### Source: GR Silver (2021)

Note: A: Banded "Lapilli Tuff" volcaniclastic unit (V4lpt), Drill hole PLS20-09; 404.4 – 404.6m; B: Dacitic-Andesitic Block and Ash Tuff (V3ba), Drill hole PLS18-02A; 473.7 - 473.9m; C: Andesite "Plomosas Andesite" (V4pm), Drill hole PLS18-02A; 65.6 – 64.7m; D: Microdiorite intrusion (I8); (AM = amphibole; PY = pyrite; PF = plagioclase; PX = pyroxene; QZ = quartz; SP = sphalerite;)





## 7.2.1.1 Structure – Plomosas Mine Area

Multiple systems of fault and breccia structures have been identified at the Plomosas Mine Area during mapping of surface and underground workings, and evaluation of historic and recent drill core. Following descriptions are organized from oldest to youngest, reflecting the interpretation of events summarized in Table 7.1.

## Plomosas Fault (low-angle N-S; D1)

The principal mineralized structure 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 S when in contact with the microdiorite intrusion, about 150 m S of the upper access to the historical underground mine. The fault has a general dip angle of 30°-40° 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 W 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 E side of the Plomosas River.

Microdiorite intrusion and NE-SW faulting (NE-SW to NNE-SSW; D2). A large elongate microdiorite body (1 km x 0.2 km) is emplaced along a NE-SW trending fault in the S and SW of the Plomosas Mine Area, dipping steeply  $55^{\circ}$  to the NW. Intrusion of the microdiorite deforms and cuts off the Plomosas Fault, providing evidence for this event to post-date compressional events of the D1 tectonic regime (Figure 7-12).







#### Figure 7-12: Plomosas Mine Area - Microdiorite Intrusion

Source: GR Silver (2021)

The microdiorite intrustion 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. For example, there are fault and breccia zones that are later mineralized, as seen in the Chepina breccia (NNE-SSW) north of the Plomosas mine entrance, as well as numerous NE-SW trending mineralized fault breccias in the vicinity of the microdiorite body. There is no clear evidence of early N-S strike-slip transtensional faulting on the project scale, and this event is likely to have been obscured by later reactivating during extension.





## 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 and only a couple of metres at most, as evidenced by cross-cutting relationships with the Plomosas Fault.

## E-W fault reactivation (D3)

Originally tensional faults of the compressional D1 tectonic regime, E-W fault reactivation during extension is commonly observed at Plomosas. They appear as fault brecciated zones, cutting the Plomosas Fault and providing structural zones of weakness allowing for rhyolite dyke emplacement. Relative movement on these steeply dipping faults is limited to 5 m maximum.

## 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 E. 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.

Cross-cutting relationships of the different fault systems can be seen in Figure 7.10. Looking north, parallel to the N-S faults and the Plomosas River, the Plomosas Fault/Breccia is cut and displaced by later NW-SE faults. These in turn are vertically displaced by N-S faults. Both NW-SE and N-S faulting are part of the D3 extensional tectonic regime of the mid-late Tertiary.

Rock units of the LVC are generally tilted 30-50° to the west. Based on observations from nearby areas, this tilting is assigned to the D3 extensional tectonic phase during the mid-





late Tertiary, also responsible for the principally NW-SE trending horst and graben features at regional scale.



Figure 7-13: Plomosas Mine Area - Cross-cutting Relationship of the Different Fault System

Source: GR Silver (2021) Note: Plomosas Bx = Pb-Zn-Ag-Au breccia





## 7.2.2 Geology – San Juan Area

The following sections summarize the geology of the San Juan Area including San Juan and La Colorada geological settings. The general stratigraphy is illustrated on Figure 7.16.

## 7.2.2.1 Structure – San Juan Area

Structural features in the San Juan Area are dominated by normal faulted structures that occurred during mid-late Tertiary extensional deformation (D3) and resulted in dismemberment of the San Juan 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.

## NW-SE / NNW-SSE Normal Faults (D3)

The most prominent features are the NW-SE faults which show significant vertical displacement of several hundred metres with dip angles of 45° to 50°. These faults can be traced along the La Colorada, Yecora and San Juan faults.

# N-S Normal Faults (D3)

Compared to the NW-SE faults and mineralized structures, the N-S have a more districtscale continuity and are visible in the south from the San Francisco vein system northwards towards the Trampolín area. At El Magistral further north, there is ample evidence of a felsic dyke and intrusive felsic porphyry steeply intruding the N-S trending structure, often occurring together with pervasive silicification. The San Francisco vein appears to be a clearly N-S oriented normal fault dipping about 50<sup>o</sup> to the east with significant vertical movement of several 100 metres.

# NE-SW Normal Faults (D3)

The Trampolín fault system would be a clear example of a D2 NE-SW trending system (Figure 7.17, and 7.18). It is unclear if this fault system is reactivated during D3. It has typical normal fault features that complement the NW-SE and N-S normal faults.







## Figure 7-14: General Stratigraphic Column of the San Juan Area

Source: GR Silver (2021)







Stockwork

SI

1:2,500

Scale

Scale

Graphic

Numerical

Topography

Contour 100 m interval Contour 10m interval

Cild Working

Undergrou

/ Target

#### Figure 7-15: Geology of the San Juan Area







# Figure 7-16: General Geologic Cross-Section of San Juan Area Looking to the NW (refer Figure 7.17)

Source: GR Silver (2021)

# 7.3 Mineralization and Alteration

Mineralization at the Plomosas Project is principally located in fault structures such as vein and breccia bodies (Figure 7-17). Base metal (Pb-Zn) and precious metal (Au-Ag) mineralization are of economic interest. Phases of base metal and precious metal mineralization are intricately connected to the tectonic and structural evolution of the Sierra Madre Occidental during the Tertiary, similar to that documented at San Dimas (Montoya et al., 2020).







#### Figure 7-17: Mineralized Veins and Breccia at the Plomosas Project with Key Targets

Source: GR Silver (2021)

## 7.3.1 Mineralization and Alteration - Plomosas Mine Area

At least three different epithermal hydrothermal mineralization events can be distinguished in the Plomosas Mine Area. See Table 7.1 for additional detail.

## Plomosas Breccia (or Brecha Plomosas) (1st mineralization event) Pb-Zn-Ag-Au





The principal mineralized structure at the Plomosas Mine Area is the Plomosas Breccia, a low-angle N-S trending fault breccia hosted by the Plomosas Fault, that contains the main Pb-Zn-(Ag) mineralized body. The mineralized zone is about 700 m long and the deepest exploration drill hole reaches a depth of approximately 500 m below surface. Deposition of hydrothermal minerals occurred after brecciation during reverse faulting, reactivation and normal faulting. It can be considered in large parts as a replacement mineral body, owing to the fact that most of the mineralization is replacing pre-existing fault breccia clasts and volcanic breccias in the hanging and footwall, depending on the host rock (Figure 7.15). However, parts of the mineralization are open space filling. Crackle breccia and irregular veining is common in the foot- and hanging wall areas.

Initial Plomosas Breccia Pb-Zn-Ag-Au mineralization is considered the first mineralization stage. Later steeper dipping structures cross-cut the Plomosas Breccia and deposit additional sulphide minerals, adding Ag, Au and base metals. The areas where the dip of the Plomosas Breccia steepens and "steps" form, appear to be dilational features that formed during the normal reversing of the fault (pinch and swell geometry). These areas frequently host the best endowed mineralization, especially where the dilational zones are enriched by later cross-cutting mineralized faults, such as in the 775 Level. The average width of the Plomosas Breccia is five metres with variations from one to eight metres. Preferential host lithologies are rhyolite flows and where the breccia straddles lithological boundaries.

Widespread silicification is a common feature and galena and sphalerite are the principal Pb and Zn sulphide minerals, respectively, often occurring together with pyrite. Smaller amounts of chalcopyrite can be present. Sphalerite is Fe-poor and of light green colour. Silver minerals are usually present as Ag sulfosalts.

# NE-SW Structures (1<sup>st</sup> and 2<sup>nd</sup> mineralization event)

NE-SW trending vein and breccia structures are nominally called "Au-Cu" structures as they appear to introduce elevated values of these metals compared to other paragenetic events. The NE-SW veins crosscut and mineralize the Plomosas Breccia in parts. It appears that an early Pb-Zn phase predates the second Au-Cu hydrothermal event. The





early Pb-Zn mineralization event could be related to the large-scale Pb-Zn replacement of the Plomosas Breccia but requires further study. Characteristically, the Au-Cu veins have an elevated content of Cu, which is notable but usually below 1% Cu (Figure 7.15). There is a correlation between Au-bearing hematite and pyrite-quartz bearing veinlets with NE-SW trending microdiorite intrusions.

## NW-SE and N-S (and E-W) Structures (3rd mineralization event)

NW-SE and N-S structures are generally Au- and/or Ag-rich but might contain appreciable values of Zn and Pb reaching several percent. These veins often have low-temperature epithermal characteristics, hosted in breccias and faults. Ag-rich veins can have ginguro-type bands in colloform late quartz, amethyst, and greenish-coloured quartz (Figure 7.15), as well as boiling textures with bladed calcite. Significant Au-only mineralization is related to inconspicuous specularite-silica mineralization in brecciated faults or fracture veinlets and quartz-pyrite veinlets in the NW-SE system. Veins are usually several centimetres to metres in width. Silver-bearing minerals so far identified are pyrargyrite, acanthite, argentite and Ag-tellurides.

Iron-oxide-coloured argillic leached patches of rock, as well as stockworks of quartz veining in silicified alteration zones, are present in the SW of the Plomosas Mine Area. They are the result of supergene alteration of disseminated pyrite and quartz-pyrite veining in partly brecciated and altered host lithologies surrounding parts of the microdiorite intrusion as haloes. These alteration patches can contain anomalous Au and serve as a guide to Au-rich mineralized structures.

Silicification with quartz stockwork and argillic alteration (possibly illite), are also found in the NW sector of the Plomosas Mine Area and are associated with principally N-S trending elongated fault structures where rhyolite dykes have intruded. The relationship between rhyolite dykes and alteration is unclear at this point, nevertheless, these alteration zones suggest mineralized fault structures and are therefore regarded as attractive exploration targets.





The basal volcaniclastic-sedimentary rock unit appears to be permeable and reactive to hydrothermal fluids and often contains secondary minerals such as chlorite, magnetite, hematite, pyrite, calcite and epidote, and occasionally secondary biotite, as well as quartzpyrite-chalcopyrite veinlets. Secondary minerals are found in irregular veinlets or pervasively replacing rock matrix. This unit is also a favourable host for base and precious metal mineralization where in contact with veins and breccias.

# Table 7-1: Summary and Correlation of Tectonic, Geologic and Mineralization Event Observed in thePlomosas Mine Area

Event	Tectonic Stress Regime	Structures	Geology	Mineralization
D1	Laramide Compressional: ENE - WSW	E-W tensional structures N-S low-angle reverse fault		E-W fault breccias, Plomosas Fault N-S Low-angle Plomosas Fault breccia
	Laramide Transtensional (Early)	N-S low-angle normal fault reactivation		Reactivation and normal faulting of Plomosas Fault breccia
D2	Laramide Transtensional: NE-SW	NE-SW tensional NNE-SSW, N-S dextral strike-slip	NE-SW: Microdiorite intrusion	<ul> <li>1<sup>st</sup> Mineralization event:</li> <li>Polymetallic Pb-Zn-Ag</li> <li>replacement mineralization</li> <li>(Plomosas Breccia)</li> <li>2<sup>nd</sup> Mineralization event</li> <li>NE-SW: Au-(Cu) veins and</li> <li>Chepina fault breccia</li> </ul>
D3	Extensional (Early?)	NW – SE trend	Tilting of stratigraphy	3 <sup>rd</sup> Mineralization event





Event	Tectonic Stress Regime	Structures	Geology	Mineralization
	Extensional (Late?)	N-S high-angle faults (D2) reactivation E-W faults (D1) reactivation	N-S: Intrusion of rhyolite dykes	NW-SE: Au-(Ag) and Ag veins and breccias N-S trending Au-(Ag) veins and breccias E-W trending Au-(Ag) vein ans breccias

# Figure 7-18: Selective Images of Mineralized Structures and Scanned Mineralized Rock Samples and Microphotographs from the Plomosas Mine Area









Note: Assay results of four samples shown in Table 7.2

Sample	Hole ID	Hole ID Width	g/t		%		
Sample	TIOLE ID	(m)	Au	Ag	Pb	Zn	Cu
26193	PLI20-05	0.65	19.95	227	1.3	4.7	-
EPL2056	PLI17-15	0.5	0.99	107	10.3	12.4	0.1
29249	PLI21-07	0.85	0.7	2,799	2.2	4.7	-
30775	PLI21-10	0.95	17.39	6	-	-	-

#### Table 7-2: Assay Data from Drill Core Samples in Figure 7.20



#### 7.3.2 Mineralization and Alteration – San Juan Mine Area

Mineralization in the San Juan Area is linked to a system of individual veins and breccia structures (Figure 7.16).

## San Juan Vein Breccia (BXSJ1)

The San Juan Fault is the principal structure in the San Juan Area. The San Juan mineralized zone is approximately 250 m long and 200 m deep, plunging ENE along a gap between two NNW faults. The mineralized zone geometry is more planar and does not display the same pinch and swell behaviour reported at the Plomosas mine. Two major pre-mineral structures control the mineralization. The San Juan vein breccia (BXSJ1) can be followed for about 200 m at surface along the brecciated footwall of a large NW-SE normal fault with moderate dip of 45° towards the NE. It is one to six metres wide. This structure shows strong silicification with most of the mineralization of interest in the footwall of the fault.

The other structure is a NNE-WSW structure dipping at approximately 50° to the SE and possible connects to another nearby mineralized vein-breccia system at Trampolín (BXST). This system appears rather low-temperature compared with the San Juan breccia. It has generally higher pyrite content with traces of Pb-Zn sulphides and no significant Ag and Au values. Pockets of more concentrated Pb-Zn are of interest from an exploration viewpoint.

Both vein structures are limited by other faults to the north and to the south. The breccias often have chaotic texture with angular to subangular clast components of mostly rhyolitic composition. The breccia is often supported by the matrix and cement which might be interpreted as silicified rock flower with colloform to chalcedonic quartz. This cement typically contains 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. A possible paragenesis is: (1) Pb-Zn(-Ag) sulphides; followed by (2) Ag-Zn-Pb(-Au) sulphides. Breccia clasts of (2) contain evidence of previous brecciation of (1) together with Pb-Zn sulphide mineralization (Figure 7.17).





## La Colorada Vein Breccia (BXLC1)

La Colorada is a hydrothermal vein breccia found along an approximately 400 m stretch of a NNW-SSE trending normal fault with a moderate dip of 45<sup>o</sup> towards the NE and significant vertical displacement, taking advantage of increased permeability along preexisting fault breccias. The Yecora vein breccia (BXYE1) is the southern extension and was modelled together with the La Colorada vein breccia as a single structure. The La Colorada-Yecora vein breccia can be followed for at least 700 m at surface along the brecciated footwall. The northern end of the structure displays smaller oblique horsetail veins and breccias however, the breccia remains open along strike. The breccias typically show crackle textures with chlorite and low temperature colloform silica and host-rock components with angular to subrounded composition (Figure 7.17).

La Colorada is principally a gold-bearing structure containing Au-Ag-Pb-Zn values in a mineralized quartz and hematite matrix. Compared to San Juan, La Colorada is mostly restricted to the felsic units, hosted by ignimbritic country rock. Irregular occurrence of hypogene hematite (specularite) in the matrix and the presence of small amounts of chalcopyrite correlate with high-grade intercepts of Au, the principal precious metal of interest at La Colorada. Sphalerite, galena and acanthite are found in the quartz veins in small quantities. Generally, two types of mineralized structures are observed, based on mineralogy, allowing a preliminary paragenesis of:

- Quartz-hematite-sphalerite-galena-pyrite-chalcopyrite; and
- Quartz-calcite-anhydrite (late mineralization).

The Yecora breccia is considered a southern continuation of the La Colorada vein and can be traced at surface for over 250 m. It has an average width of 2–2.5 m and is located along the same normal fault with significant vertical displacement. Similar to La Colorada, the volcaniclastic-sedimentary unit (V4lpt) is found in the footwall and rhyolitic ignimbrites in the hanging wall. Significant amounts of diorite intrusion were identified during the drill program, containing secondary biotite, magnetite and pyrite in places,





indicating a hotter temperature environment during emplacement, in contrast with low temperature epithermal mineralization encountered in both breccias

Other mineralization styles identified are small veining, stockwork, and hydrothermal breccias, and possibly disseminated mineralization. Compared with La Colorada, two distinct paragenetic events have been identified in the same structures, depositing: (1) Ag-Au-Zn-Pb sulphides; and (2) Pb-Zn sulphides. The second phase of sulphides is identified in fine veinlets as fracture fill.







Figure 7-19: San Juan Area Mineralization Styles: Veins, Stockwork and Breccia Structures

Source: GR Silver (2021) Note: Red boxes illustrate Third Party Concessions





# Figure 7-20: Selective Images of Mineralized Structures and Scanned Mineralized Rock Samples and Microphotographs from the San Juan Area





Sample	Hole ID	Width	g/t			%
•		(m)	Au	Ag	Pb	Zn
EPL9561	SJS18-04	0.9	0.10	212	1.3	4.4
EPL9558	SJS18-04	0.8	0.05	273	0.3	1.5
EPL8987	LCS18-03	0.85	46.94	76	3.3	2.2
34022	LCS21-05	1.25	0.07	10	0.2	0.2
33974	LCS21-04	1.1	18.77	8,519	8.9	0.7

## Table 7-3: Assay Data for Drill Core Samples in Figure 7.22





# 8 DEPOSIT TYPES

Mineralization at the Plomosas Project can be assigned to the intermediate to low sulphidation (IS) epithermal polymetallic type with transition to the low sulphidation (LS) epithermal type, following terminology by Hedenquist et al. (2000). Both are epithermal mineralization styles that typically display features such as veins, breccias and stockworks, as well as replacement bodies, and are common in Mexico (Camprubi and Albinson, 2007). They 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 contents of Pb-, Zn- and Cu-bearing sulphide minerals, and significant Ag content, as well as Au concentrations. The LS epithermal mineral type has a lower total content of sulphides with higher concentrations of precious metal minerals (Ag, Au), and precipitate at lower temperatures compared to the IS epithermal mineralization. Following the model by Buchanan (1981), LS deposits are located at a shallower level relative to the IS epithermal deposits. Deposits can be zoned vertically over 250 to 350 m from a base metal poor, Au-Ag rich top, to a relatively Ag-rich base metal zone and an underlying base metal-rich zone (Figure 8.1). At the Plomosas Project we see transitions from base metal-rich zones to Ag- and Au-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 (Table 8.1).

Structurally controlled, epithermal mineralization is usually centred on hydrothermal conduits such as faults and unconformities. Deposit can have hundreds of metres in strike length. Vein systems can be laterally extensive, but mineralized shoots have relatively restricted vertical extent. 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.







Figure 8-1: Schematic of Intermediate to Low-sulphidation System

Source: Buchanan (1981)





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

Areas	Mineralization Event	Deposit Type
	<b>1<sup>st</sup> Mineralization event:</b> Polymetallic Pb-Zn-Ag replacement mineralization (Plomosas Breccia)	Intermediate sulphidation epithermal
Plomosas Mine	<b>2<sup>nd</sup> Mineralization event</b> NE-SW: Au-(Cu) veins and breccias	Intermediate to low-sulphidation epithermal
	<b>3<sup>rd</sup> Mineralization event</b> NW-SE: Au-(Ag) and Ag veins and breccias N-S trending Au-(Ag) veins and breccias E-W trending Au-(Ag) vein and breccias	Intermediate to low-sulphidation epithermal
San Juan	NW-SE to NNE-WSW: Polymetallic Pb-Zn-Ag veins and breccia	Intermediate sulphidation epithermal
La Colorada	NNW-SSE: Au-Ag-Pb-Zn veins and breccias	Intermediate to low-sulphidation epithermal





# 9 EXPLORATION

Following the acquisition of the Plomosas Project in March 2020, the Company refurbished camp facilities and set up an exploration team based at the Project and completed a detailed data review and compilation of all available historic exploration data related to the geological, geochemical and geophysical exploration programs completed by previous operators. This work was integrated into GR Silver databases and GIS platforms to prioritize resource definition work for the Plomosas Project. Since the acquisition, a large investment has been made and significant exploration work has been carried out by GR Silver, as summarized in Table 9-1.

# Table 9-1: GR Silver Exploration Activity in 2020 and 2021 related to the Plomosas Project ResourceEstimation

Exploration Activity	Plomosas Mine Area	San Juan Area
Geologic mapping (km <sup>2</sup> )	2	1 5
Surface - Underground	Z	1.5
Core re-logging (m)	16,743	12,326
Channel sampling (m)	152	153.85
Channel sampling (nr.)	158	219
Composite samples – metallurgy (nr.)	4	2
Portable drill rig - diamond core drilling (m)	238	104.84
Diamond core drilling (m)	9.241.9	1,786.7
3D Geological modelling	X	Х

Mapping campaigns at the San Juan and Plomosas Mine Areas resulted in improved understanding of geologic and structural control of mineralization which allowed expansion of the known mineralization and discovery of new veins and breccias.





Underground mapping and channel sampling programs were carried out at both the Plomosas Mine and San Juan Areas. The Company engaged an independent mining consultant that reviewed all drawings related to the historic Plomosas mine, integrated them into a new survey and created a 3D underground mine model (**Error! Reference source not found.**). The Company engaged external consultants to compile and review historical exploratory data, geochemical and geophysical data completed by previous companies - Grupo Mexico, Aurcana and First Majestic (refer Section 6).

In 2020, a 2,700 t bulk sample was collected from inside the San Juan Vein tunnel for preliminary testing. Selective samples totalling 360 kg were collected from the Plomosas Mine Area and San Juan Area for the purpose of preliminary metallurgical investigations. (refer to Section 13).

## 9.1 Data Review and Compilation

In 2018, GR Silver engaged consultant, Nick Winer of Classical Discoveries, to review the regional geochemical and geophysical data sets covering the Rosario Mining District, which includes the Plomosas Project, but in the context of other projects held by the Company at that time, with the aim of generating exploration models for the area (Winer, 2018). Winer commented that "the District has many of the key earmarks for a highly prospective regional play with good structural preparation, (plumbing), multiphase intrusive activity (fluids, metal source and heat source to drive the systems) and the multiple mineral occurrences."

The regional aeromagnetic data was evaluated to understand the regional setting of the Rosario District, using a series of pre-processed images generated from the government aeromagnetic survey. The survey was flown with 1,000 m line spacing which provides good identification of crustal structures and allows a structural context to be put on the Rosario District and the historical mining prospects within it (Figure 9.1).





# Figure 9-1: Key Features of the Regional Structural Framework of the Rosario Mining District Interpreted from Regional Aeromagnetics



Source: Winer (2018)

The Rosario District is characterized by a number of major structures which dissipate into second and third order structures within the district. The main prospects lie in an area of structural complexity generated by the intersection of a major crustal E-W structure with NNW trending structures within the District. The NNW trending terrain margin forms a buffer against the propagation of the E-W structure. The behaviour of other crustal structures suggest that this region has been a major zone of strain release (ie., the terrain boundary structure dissipated its strain as it reached this zone). It appears that the NNW crustal structure may be playing a role in focusing mineralization and also controlling the Panuco Graben formation.





The District is associated with a number of potential large magma chambers (20–30 km diameter) as suggested by the magnetics. These appear to be segregated or polyphase in nature, characterized by both magnetic (mafic) and non-magnetic zones/pulses. Over or around the large magma chambers are a number of discrete magnetic anomalies probably reflecting related intrusions (1-2 km diameter) of mafic composition or with potassic (magnetite) alteration. Most mineral occurrences are spatially concentrated over or close to the intrusive centres (Winer, 2018).

Following the acquisition of the Plomosas Project, the Company engaged consultant, Peter Dunkley, to complete a detailed data review and compilation of all available surface exploration data related to the geological, geochemical and geophysical exploration programs completed by previous owners. This work was integrated in a GIS platform with the aim of providing recommendations for future project-wide exploration programs, and to prioritize the initial 11 exploration targets delineated outside of the drilled areas (Dunkley, 2020).

The surface geochemical data included rock chip, soils and trench sampling completed by the previous owners across the Plomosas Project. Each company analysed a different suite of elements and using different laboratories and analysis methods.

Geophysical information included several ground-based IP and magnetometry surveys over local prospects, undertaken by IMMSA between 1973 and 1998 (se Figure 6.2), and a heli-borne magnetic survey covering 77 km<sup>2</sup> by First Majestic in 2016 (see Figure 6.6).

# 9.2 Surface Mapping

## 9.2.1 Methods and Procedures

A geologic map at the scale of 1:2,000 was completed in the Plomosas Mine Area covering approximately 2 km<sup>2</sup>. The survey comprised detailed lithology, structure and alteration outcrop mapping. Data acquisition included structural data measurements for contacts, bedding, faults and veins/breccias, using standard dip direction and dip angle method.





In the San Juan Area, the existing historic geologic maps from the previous operators were improved over an area of 1.5 km<sup>2</sup>, adding significant corrections of lithology and structures in the area.

## 9.2.2 Results

At the Plomosas Mine Area, the main outcomes for surface mapping were important changes in the geology and structure compared to the limited extent of information available from historic maps. This resulted in a new and detailed stratigraphic column (Figure 7-5) detailed in Chapter 7 and a detailed geologic map (Figure 7.6). The mapping resulted in an improved understanding of the controls of multiple phases of base metal and precious metal mineralization in veins and breccias. A microdiorite intrusive unit was identified, possibly controlling hydrothermal fluids producing the Plomosas Breccia (see Section 7.3.1).

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 (Figure 9-1). 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 area.





# Figure 9-2: Surface Measurements of Structures Taken During the Plomosas Mine Area Mapping Campaign



Note: Rosette diagrams of bedding, faults and mineralized structures including veins and breccias; n = number of measurements





# 9.3 Underground Mapping and Sampling

## Plomosas Mine Area

Three campaigns of underground mapping and sampling were completed by GR Silver in the Plomosas Mine Area to obtain additional geochemical information of key areas and corroborate and validate historic sampling results. A total of 51 channels were cut by the Company, totalling 158 samples.

- (1) *First stage* was underground geological mapping at 1:250 scale plus channel sampling on the lower 775 Level to confirm high grade historical assay results;
- (2) *Second stage* was a channel sampling campaign on specific levels with structural mapping. Channel samples were obtained from Levels 833, 862, 883 and on the ramp 23 on Level 1000 north; and
- (3) *Third stage* comprised structural mapping of faults, breccias and veins in all accessible mine levels with emphasis on determining footwall and hanging wall blocks, as well as cross-cutting relationships between them.

## San Juan Area

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 were cut and sampled by the Company.

## 9.3.1 Methods and Procedures

## Channel Sampling

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 Area, the channels were cut 5 cm wide and 2.5 cm deep (Figure 9.3). The channels at San Juan were cut 3 cm wide and 3 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 (Figure 9.2). 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 9.3).

## 9.3.2 Analysis

All underground samples were prepared and analyzed at Bureau Veritas Minerals laboratory facilities located in Whitehorse, YT and Vancouver, BC respectively. Samples were prepared using the PRP70-250 method which involves crushing the sample to 2 mm and then splitting off and pulverizing up to 250 grams to 75 microns. The resulting pulp was analyzed by the AQ200 method, which involves dissolving 0.5 grams of material in a hot Aqua Regia solution and determining the concentration of 36 elements of the resulting analyte by the ICP-MS technique. Gold was analyzed by the FA430 method which involves fusing 30 grams of the 75-micron material in a lead flux to form a dore bead. The bead is then dissolved in acid and the gold quantity determined by Atomic Absorption Spectroscopy.

## 9.3.3 Results – Plomosas Mine Area

GR Silver's sampling on Level 775 identified Au-Ag and polymetallic (Pb-Zn-Cu) concentrations (Figure 9.4). Mineralized zones within the principal gallery on Level 775 are open to the north, follow the dip direction of the Plomosas breccia to the west and SE towards the upper Level 825.

As part of the second mapping/sampling campaign in the Plomosas Mine Area, channel sampling was done in Level 883, which was specifically designed to test a high-angle E-W structure containing visible pyrite-chalcopyrite mineralization and generating a silicification halo in the wall rock (Figure 9.5). Assay results returned a Cu-Zn anomaly with locally low-grade Au values. This structure is not high-grade, and hence, potentially




a fluid conduit, which may explain Au mineralization in the footwall below the Plomosas Breccia. At this location there is evidence of strong silicification with a high density of veinlets and stockwork.

Additionally, the Plomosas Breccia was sampled on Level 883, where high-angle NW trending faults and veining are intercepted. Historical underground geological maps describe Au anomalies in channel samples in the area. GR Silver assay results confirmed a high-grade polymetallic assemblage including individual values of up to 32.38 g/t Au and 2.3% Cu in the Plomosas Breccia, at the location where the high-angle NW fault system intersects the Plomosas Breccia.

Additional channel sampling programs were completed at Ramp 23 from Level 1000 to 950 north in the northern section of the Plomosas Breccia. (Figure 9.6). At this site the breccia is hosted by rhyolitic flows at the contact with andesite tuffs. The Plomosas Breccia develops from a N-S orientation and 30° to 45° dip to west, to more NE trend with lower angles dipping to the west (10° to 35°). This northern section of the Plomsas Breccia is geochemically different with a more typical Au-Ag assemblage with low Pb-Zn contents.

The third mapping stage at the Plomosas Mine was focused on locating and categorizing principal structural trends and cross-cutting relationships between them (Figure 9.7). The program covered all levels of the mine where entry was permitted. Besides the Plomosas Breccia, three additional structural systems and at least one reactivated system have been clearly identified:

- (1) NE-SW trending faults usually control visible copper mineralization;
- (2) NW-SE trending fault system which are usually better developed and common in the Plomosas Mine Area (Figure 9.8);
- (3) High-angle N-S trending faults which are reactivated; and
- (4) E-W trending faults, locally with low grade mineralization and frequently unmineralized





Rosette diagrams of the fault measurements reveal the predominance of NW-SE trending faults with smaller populations of NE-SW and N-S trending faults (Figure 9.8). Cross-cutting relationships of faults and mineralized structures in the Plomosas Mine Area reveal that the high-angle NE trending structures are older and are cross-cut by high-angle NW trending faults with less than 1-2 m displacement. Steeply dipping N-S reactivation and subsequent high-angle E-W trending faults are the youngest. The E-W trending faults cut all other systems and show a normal displacement of five metres.

#### Figure 9-3: Channel Sampling at Plomosas Mine









### Figure 9-4: Channel samples – Marking and Tagging at Plomosas Mine



### 9.3.4 Analysis

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Rosette diagrams of the fault measurements reveal the predominance of NW-SE trending faults with smaller populations of NE-SW and N-S trending faults (Figure 9-8). Cross-cutting relationships of faults and mineralized structures in the Plomosas Mine Area reveal that the high-angle NE trending structures are older and are cross-cut by high-angle NW trending faults with less than 1-2 m displacement. Steeply dipping N-S reactivation and subsequent high-angle E-W trending faults are the youngest. The E-W trending faults cut all other systems and show a normal displacement of five metres.







# Figure 9-5: Channel Sampling and Mapping on Level 775

Source: GR Silver (2021)



Channel ID	Location	Sample ID	Order ID	Length	g/1	:		%	
channel_iD	Location	Sample_ID		(m)	Au	Ag	Cu	Pb	Zn
	West Wall	15882	1	1.00	4.38	145	0.6	2.0	0.2
	West Wall	15821	2	2.00	18.91	395	0.6	1.9	11.4
	West Wall	15822	3	2.00	4.43	115	0.2	0.2	2.6
	West Wall	15824	4	0.75	9.28	127	0.2	0.6	16.1
PLM-CH-001	West Wall	15883	6	1.00	0.09	6	0.1	0.7	0.1
	West Wall	15884	7	1.00	0.06	16	0.1	0.4	1.3
	West Wall	15885	8	1.00	0.06	9	0.1	0.2	0.3
	West Wall	15886	9	1.00	1.95	65	1.0	0.3	1.7
	West Wall	15888	10	0.60	1.23	28	0.4	0.2	0.8
	North Wall	15818	1	1.25	2.44	623	0.1	0.3	0.8
	North Wall	15819	2	2.00	4.87	307	1.1	1.7	0.5
	North Wall	15820	3	2.00	4.87	130	0.6	0.2	0.9
PLM-CH-002	West Wall	15889	4	1.00	0.42	22	0.1	0.9	0.3
	West Wall	15890	5	1.00	3.79	38	0.6	0.2	0.6
	West Wall	15892	6	1.00	0.76	37	1.0	0.4	0.4
	North Wall	15825	1	1.00	0.65	94	0.2	0.1	1.7
	North Wall	15826	2	1.00	0.25	5	na	0.1	0.6
PLM-CH-003	North Wall	15827	3	1.00	0.25	5	na	0.1	0.6
	North Wall	15828	4	1.00	0.58	57	1.6	0.1	0.2
	North Wall	15829	5	1.00	1.67	98	0.9	0.2	0.9
	North Wall	15830	6	1.00	4.17	48	0.6	0.1	4.6
	North Wall	15832	1	0.40	3.91	73	1.4	0.1	0.1
	North Wall	15833	2	1.00	0.15	23	1.9	0.2	0.4
PLM-CH-004	North Wall	15834	3	1.00	0.58	29	1.3	0.2	1.0
	North Wall	15835	4	1.00	0.25	11	0.1	0.1	0.4
	North Wall	15836	5	1.00	5.96	69	0.9	0.9	7.5

# Table 9-2: Channel Sampling and Mapping on Level 775





Channel ID	Location	Sample ID	Order ID	Length	g/1	t	%			
channer_iD	Location	Sample_ID	D Order_ID	(m)	Au	Ag	Cu	Pb	Zn	
	Pillar 7	15845	1	0.75	0.41	13	0.1	1.4	2.0	
PLM-CH-005	Pillar 7	15846	2	1.00	5.30	75	0.5	2.7	11.4	
	Pillar 7	15848	3	1.00	10.44	136	0.4	8.0	14.6	
PLM-CH-005	Pillar 7	15849	4	1.00	4.08	73	0.1	0.5	6.7	
	Pillar 7	15850	5	1.00	0.83	29	0.2	3.3	8.9	
	Pillar 7	15852	6	1.00	1.35	53	0.5	0.9	10.0	
	Pillar 7	15853	7	1.00	0.47	16	na	0.6	3.4	
	Pillar 7	15854	8	1.00	0.06	1	na	0.2	0.2	
	Pillar 11	15838	1	0.40	10.27	119	0.6	0.6	0.9	
	Pillar 11	15839	2	1.00	8.44	368	4.5	1.8	14.1	
	Pillar 11	15840	3	1.00	2.67	52	0.2	0.3	0.5	
FEM-CII-000	Pillar 11	15842	4	1.00	0.25	9	0.1	0.3	0.7	
	Pillar 11	15843	5	1.00	1.01	29	0.4	0.2	0.9	
	Pillar 11	15844	6	1.00	37.52	287	1.1	0.5	1.1	
PLM-CH-007	Pillar 10	15855	1	1.00	6.89	140	3.3	2.9	6.5	
	Pillar 10	15856	2	1.00	6.43	50	1.2	0.7	2.3	
	Pillar 10	15858	3	1.00	21.27	175	0.6	3.0	7.6	
	Pillar 10	15859	4	1.00	0.74	13	0.2	1.1	3.2	
	Pillar 10	15860	5	1.00	1.06	9	0.3	0.6	1.7	
PLM-CH-006 PLM-CH-007 PLM-CH-008	Pillar 10	15862	6	1.00	0.66	6	0.1	0.3	2.0	
	SubLevel_780	15869	1	1.00	0.04	2	na	0.1	0.3	
	SubLevel_780	15870	2	1.00	0.05	2	na	0.1	0.3	
FEMI-CH-008	SubLevel_780	15872	3	1.00	2.97	59	na	28.5	20.1	
	SubLevel_780	15873	4	0.68	0.76	8	0.3	0.2	0.5	
	Northeast Wall	15863	1	0.60	0.09	2	na	0.1	1.1	
PLM-CH-009	Northeast Wall	15864	2	1.00	0.57	32	0.1	1.0	3.4	
PLM-CH-009	Northeast Wall	15865	3	1.00	3.22	85	0.1	10.7	27.6	
PLM-CH-010	SubLevel_780	15868	1	1.00	0.15	2	na	na	0.3	
PLM-CH-011	Northeast Wall	15866	1	1.00	4.30	93	0.1	14.1	30.0	
	Northeast Wall	15816	1	2.00	6.98	237	0.2	1.1	3.3	
	Northeast Wall	15817	2	0.75	31.72	1,104	0.5	26.4	14.1	





Channel ID	Location	Sample ID	Order ID	Length	g/t		%		
enumer_ib	Location	Sumple_ID	order_ib	(m)	Au	Ag	Cu	Pb	Zn
	SubLevel_780	15874	1	1.00	0.08	3	na	0.2	0.1
PLM-CH-013	SubLevel_780	15875	2	1.00	0.17	5	0.1	0.1	0.1
	SubLevel_780	15876	3	0.40	0.16	8	na	0.4	0.9
	SubLevel_780	15878	1	1.00	0.03	7	0.4	na	0.1
PLM-CH-014	SubLevel_780	15879	2	1.00	0.05	6	0.3	na	0.1
	SubLevel_780	15880	3	0.74	0.83	29	1.0	0.1	na
PLM-CH-015	SubLevel_781	15881	1	1.00	0.03	14	0.9	na	na

Numbers May Be Rounded. "na" = No Significant Assays







# Figure 9-6: Sampling of Mineralized Structure on Level 883

Source: GR Silver (2021)





Chanel Id	Location	Sample ID	Order ID	Length	g/1	t		%	
chanci_ia	Location	Sumple_ID		(m)	Au	Ag	Cu	Pb	Zn
	883_Center-North	19822	1	0.8	0.01	4	0.2	0.0	0.1
	883_Center-North	19823	2	0.7	0.02	6	0.3	0.0	0.9
	883_Center-North	19824	3	1	0.03	14	0.9	0.0	0.2
	883_Center-North	19826	4	1	0.13	7	0.4	0.1	0.6
PI M-CH-029	883_Center-North	19827	5	1.1	0.03	1	0.0	0.1	0.9
	883_Center-North	19828	6	1	0.02	1	0.0	0.0	0.2
	883_Center-North	19829	7	1.2	0.01	1	0.0	0.0	0.0
	883_Center-North	19830	8	1.1	0.05	3	0.1	0.0	0.1
	883_Center-North	19832	9	1.1	0.09	5	0.3	0.1	0.1
	883_Center-North	19833	10	0.8	0.02	1	0.0	0.1	0.2
	883_Pillar03-North	19834	1	1	1.69	18	0.1	6.0	5.8
	883_Pillar03-North	19836	2	1	18.40	35	0.6	1.9	2.9
PLM-CH-030	883_Pillar03-North	19837	3	0.9	32.38	50	2.3	0.9	1.5
	883_Pillar03-North	19838	4	0.9	4.90	16	0.1	2.0	3.2
	883_Pillar03-North	19839	5	1.1	0.57	52	0.1	2.0	1.0

Table 9-3: Assays from Sampling of Mineralized Structure on Level 883

Numbers May Be Rounded. "na" = No Significant Assays







# Figure 9-7: Underground Sampling at the Plomosas Mine, Ramp 23 from Level 1000 to 950 North

Source: GR Silver (2021)





# Table 9-4: Underground Sampling Assays at the Plomosas Mine, Ramp 23 from Level 1000 to 950 North

				Length	g	/t		%	
Channel_ID	Location	Sample_ID	Order_ID	(m)	Au	Ag	Cu	Pb	Zn
PLM-CH-031	Rmp-23	19840	1	1.00	0.01	10	na	0.1	0.3
	Rmp-23	19842	1	0.30	0.01	46	na	0.3	0.4
PLM-CH-032	Rmp-23	19843	2	1.00	0.02	46	0.1	0.5	0.6
	Rmp-23	19844	3	1.00	0.01	15	na	0.1	0.5
	Rmp-23	19846	1	1.00	0.58	78	0.2	0.7	0.7
PLM-CH-033	Rmp-23	19847	2	1.00	0.09	48	na	0.2	0.2
	Rmp-23	19848	3	0.50	na	1	na	na	na
PI M-CH-034	Rmp-23	19849	1	1.00	na	3	na	na	0.1
TEM CH 054	Rmp-23	19850	2	1.00	na	4	na	na	0.1
	Rmp-23	19852	1	1.00	0.28	1	na	na	na
PLM-CH-035	Rmp-23	19853	2	1.00	0.95	244	0.2	0.2	0.9
	Rmp-23	19854	3	1.00	0.07	175	0.1	0.5	0.8
	Rmp-23	19855	1	1.00	0.04	159	0.1	0.3	0.8
PLM-CH-036	Rmp-23	19856	2	0.90	na	2	na	na	na
	Rmp-23	19857	3	0.50	0.01	9	na	0.1	0.2
	Rmp-23	19858	1	1.00	0.11	1	na	na	na
PLM-CH-037	Rmp-23	19859	2	0.40	0.08	1	na	na	na
	Rmp-23	19860	3	1.00	1.13	248	0.3	1.4	1.6
PLM-CH-038	Rmp-23	19862	1	0.90	0.92	10	na	0.4	0.6
FEM-CH-038	Rmp-23	19863	2	1.00	0.28	304	na	0.8	2.1
PLM-CH-039	Rmp-23	19864	1	0.70	0.48	20	na	0.3	0.9
	Rmp-23	19866	1	0.80	0.03	1	na	na	na
PLM-CH-040	Rmp-23	19867	2	0.40	0.69	47	na	0.9	1.9
	Rmp-23	19868	3	0.80	0.01	14	na	na	0.1
PLM-CH-041	Rmp-23	19869	1	0.70	0.02	1	na	na	na
	Rmp-23	19870	1	1.00	na	2	na	na	na
PEMPCH-042	Rmp-23	19872	2	1.00	0.01	2	na	na	0.1
	Rmp-23	19873	1	1.00	na	4	na	na	0.1
PLM-CH-043	Rmp-23	19874	2	0.60	na	1	na	na	na
	Rmp-23	19875	3	0.70	na	1	na	na	na
	Rmp-23	19876	1	0.80	0.29	5	na	0.3	0.5
F EWI-CH-044	Rmp-23	19877	2	0.85	0.01	5	na	na	0.1
	Rmp-23	19878	1	0.50	1.02	38	0.1	2.8	0.7
PLM-CH-045	Rmp-23	19879	2	0.30	0.47	215	0.2	1.6	0.8
	Rmp-23	19880	3	1.00	0.02	55	0.1	0.3	0.3
	Rmp-23	19882	1	0.80	0.01	1	na	na	na
PLM-CH-046	Rmp-23	19883	2	1.00	0.30	136	0.2	0.4	0.5
	Rmp-23	19884	3	0.20	0.02	16	na	na	0.1
	Rmp-23	19886	1	1.00	0.13	47	na	0.3	0.5
FLINI-CH-047	Rmp-23	19887	2	0.85	0.04	8	na	na	na
	Rmp-23	19888	1	0.90	2.24	32	0.1	0.4	0.8
FLIVI-CH-048	Rmp-23	19889	2	0.60	0.18	58	0.1	0.2	0.4
PLM-CH-049	Rmp-23	19890	1	0.70	0.06	20	na	0.1	0.2
PLM-CH-050	Rmp-23	19892	1	0.80	0.02	3	0.1	na	0.1

Numbers May Be Rounded. "na" = No Significant Assays







## Figure 9-8: Third Stage Structural Mapping at Underground Plomosas Mine

Source: GR Silver (2021)

Note: A Detailed Database with Location, Dip Azimuth, Dip Angle and Cross-cutting Relationships Between Structural Systems was Compiled (BX = Breccia; FA = Fault)



# Figure 9-9: Measurements of Structures Taken During the Plomosas Mine Area Underground Mapping Campaign



Note: Rosette Diagrams of Bedding, Faults and Mineralized Structures Including Veins and Breccias; n = Number of Measurements

Many of the faults within the Plomosas Mine Area display mineralization, but close to the Plomosas Breccia, mineralization levels increase. As result, the Plomosas Breccia is interpreted to be a fault breccia which is more receptive to several stages of mineral deposition from different hydrothermal fluids and can produce additional mineral bodies at intersection with one or more structural trends.

Intermediate- to low-sulphidation type veins and breccias display different textures and have evidence of several crystallization stages. Figures 9.9 to 9.15 are representative examples of veins and breccias found at multiple locations along the Plomosas Breccia body with different paragenetic relationships observed.





Figure 9-10: Bladed Calcite Texture Indicating Boiling Temperatures of a Vein Structure Emplaced in the Hanging Wall of the N-S Trending Low-Angle Plomosas Breccia in Historical Underground Development on Level 862. Historical Samples from Aurcana (sample 1194), Located in Central Level 862 in the Start of Ramp 3 Access (451192E, 2551852N, 763.7 m elevation)







Figure 9-11: Colloform Banded Quartz and Amethyst Veins are Frequently Emplaced Along NW-SE Trending Faults and Contain Ag Anomalies. Present in Historical Underground Development in Ramp 9 from Levels 825 to 883 Below the Plomosas Breccia (451185E, 2551699N, 759.9 m elevation). No Sample Assays Data Available for This Location







Figure 9-12: Massive and Locally Crustiform Banded Quartz-Hematite Whitish-Grey and Brownish-Red Coloured Veins are frequently Associated with Au Anomalies. Emplaced Along N-S and NW Trending Faults. Located in the Historical Upper Plomosas Mine Levels, at Top of Level 900 North Gallery (451240E, 2551955N, 783.1 m elevation)







Figure 9-13: Chalcopyrite-pyrite Replace Galena-Sphalerite in Massive Sulphide Veins. Copper is Frequently Found in NE-SW Trending Mineralized Faults in Historical Underground Developments from Levels Central to North Level 975 (451413E, 2551892N, 878 m elevation). Dip Direction / Dip Angle are 310°/56° and Correspond to Veins of the NE-SW System with Au-Cu Anomalies. Historical Samples From IMMSA (sample 554) Returns 75 g/t Ag, 1.5% Pb, 1.5% Zn; However, Neither Cu nor Au Were Reported.







Figure 9-14: Massive Pb-Zn Replacement Breccia. Typical Plomosas Breccia in Historical Underground Developments from Level 833 in Southeast Gallery (451072E, 2551795N, 745 m elevation). Historical Samples from Aurcana (samples 833-19 & 833-20)







Figure 9-15: Colloform Ginguro-Textured Quartz-Calcite-Chlorite Vein Cutting Fine-Grained Massive Pb-Zn Breccia. These Veins are Emplaced in NW-SE Faults and Reactivated in Historical Underground Developments from Level 900 in Central Gallery (451226E, 2551878.1N, 799.4 elevation). Dip Direction / Dip Angle are 345°/40° and Correspond to E-W Mineralized Trends; Historical Sampling from IMMSA (sample 72)



N-S trending fault structures and are associated with high-grade Ag in acanthite and locally native Ag. Located in intermediate Level 862.





Figure 9-16: Paragenetic Sequence of Vein Breccia Frequently Found in N-S Trending Low Angle Plomosas A) Late Massive Fine-Grained Pb-Zn Vein Cutting Crustiform Banded Veins; B) Progressive Brecciation Destroys Initial Texture of Crustiform Veins by Later Quartz-Hematite Veins and Fine Grained Pb-Zn Mineralization; and C) Late Coarse-Grained Massive Pb-Zn Deposition in Open Spaces in The Breccia Post-Dating Quartz-Hematite Vein Textures in Historical Underground Developments from Levels 883 to 950. A) located in Ramp 21 in sublevel 910 (coordinates 451261E, 2551871N, 801.8 m elevation). Historical samples from IMMSA (sample 9-19) returns 120 g/t Ag, 3.8% Pb & 2.6% Zn; B) and C) are located in level 933 just above last sample (A) (451277E, 2551907N, 834 m elevation). No evidence of historical sampling was found here.







Sample	Location		g/t	%			
Sample	Location	Au	Ag	Pb	Zn	Cu	
1194	Level 862, Ramp 3	-	111	3.1	1.8	-	
83-108B	900 level north gallery	-	310	-	-	-	
554	Level 975, central to north	-	75	1.46	1.47	-	
833-19; 833-20	Levels 833 in southeast gallery	8.56	76	4.45	3.3	-	
72	Level 900 in central gallery	-	1035	2.46	4.36	-	
44458	Ramp 21 in sublevel 910	-	120	3.8	2.58	-	

#### Table 9-5: Assay Values for Samples in Figures 9-8 to 9-14

### 9.3.6 Results – San Juan Area

As a result of sampling and mapping in Level 871, the principal mine level at San Juan, andesite flows, tuffaceous rhyolitic and mafic units, and occasional mafic dykes, were identified. Mineralization was emplaced in pre-existing breccia fault structures that cut all host rock lithologies. Structures contain galena, sphalerite and pyrite and are of irregular nature. Post-mineral faulting cuts and displaces mineralized sections. Most of the samples were taken from the San Juan section and some from the intersecting NE-SW trending system on the northern section of the tunnel. Results are summarized in Table 9.6. The best values are obtained from the main San Juan vein breccia structure with Ag, Au, Pb and Zn values of interest. Results from the NE-SW trending structure have interesting results for Pb and Zn with occasional Ag values and traces of Au.





Sample	Width	g/t		%	
Sample	(m)	Au	Ag	Pb	Zn
GR_14515	1.0	1.58	918	0.1	0.3
GR_14516	1.0	0.23	1,410	0.1	0.4
GR_14522	0.23	0.06	497	1.9	3.2
GR_14526	0.2	0.28	1,435	1.3	0.4
GR_14529	0.1	0.33	3,051	4.5	0.3
GR_14530	0.3	0.13	1,388	0.5	0.2
GR_14531	0.5	0.76	2,343	1.4	0.5
GR_14532	0.2	0.55	1,287	0.6	0.3
GR_14534	0.6	0.52	1,018	1.1	0.4
GR_14540	2.1	0.12	372	0.9	0.6
GR_14541	1.3	0.14	340	0.6	1.6
GR_14542	0.2	0.38	1,541	0.6	2.2
GR_14543	0.25	1.13	741	1.2	1.7
GR_14547	0.9	0.07	713	0.5	1.5
GR_14554	1.0	0.11	1,257	0.3	0.1
GR_14915	1.0	0.12	533	0.7	0.7
GR_14924	0.4	0.16	381	1.4	0.9
GR_14939	1.2	0.81	1,024	0.5	0.2
GR_14952	0.6	0.08	309	0.8	2.2
GR_14953	1.0	0.09	331	0.7	2.3
GR_14955	0.45	0.31	1,142	0.8	0.6
GR_14956	0.2	0.02	856	0.8	0.6
GR_14957	0.2	0.25	609	0.9	0.4
GR_14977	0.17	2.45	6,128	5.8	6.0

# Table 9-6: Representative Channel Sample Results – San Juan Area





Sample	Width	g/1	t	%		
Sumple	(m)	Au	Ag	Pb	Zn	
GR_14994	0.62	0.19	754	1.3	0.7	
GR_14995	0.35	1.09	4,698	0.9	0.3	
GR_15554	0.2	0.17	12	1.9	1.5	
GR_15562	0.8	0.02	42	1.4	1.8	

Numbers May Be Rounded. "na" = No Significant Assays





# 10 DRILLING

The drill programs described in this section of the report include surface and underground core drilling carried out by GR Silver and by the previous owners of the Project. Figures 10.1 and 10.2 show drilling plans for both the San Juan and Plomosas Mine Areas respectively.







# Figure 10-1: San Juan Area Drilling Plan

Note: Purple is IMMS Drilling, Blue is First Majestic drilling, Green is Aurcana drilling and yellow illustrates drilling completed by GR Silver.





# Figure 10-2: Plomosas Mine Area Drilling Plan





Previous core drilling programs were carried out by IMMSA between 1976 and 2000, Aurcana from 2007 and 2008, and by First Majestic between 2016 and 2018.

# 10.1 IMMSA Drilling Program (1976-2000)

IMMSA drilling was carried out by a drill contractor or employees, it is stated on historical reports that drill rigs LY-38, LY-34 and CP-65 (UG Drilling) were operated by external or in house operators. From 1976 to 2000 the amount of surface and core drill holes completed by IMMSA is reported in a database with a total of 427 core holes totalling 76,941.5 m, which was delivered to GR Silver by First Majestic during the Due Diligence as part of the acquisition on March 30, 2020. From the 427 core holes related to IMMSA drilling in the database, a total of 343 core holes totalling 64,639 m had documentation or historical reports related to assay results. In Table 10.1, the 343 IMMSA core holes are identified by area and type. While drill core is not available for the IMMSA drill holes, some core has been recovered and kept as part of a core library at the Plomosas Project. Information regarding core sizes is available in historical and technical/operational monthly exploration reports, which indicate that core sizes varied from HQ-NQ-BQ-AQ. All the information related to the 343 IMMSA drill holes was reviewed and validated prior to import into MX Deposit. See Table 10.1 below for a summary of the number of drill holes and metres drilled by type and area.

#### Table 10-1: Breakdown of Number of IMMSA Exploration Drill Holes and Metres Drilled by Area

IMMSA	Total				
Area	No. holes	metres			
Plomosas	233	44,174.7			
San Juan (San Juan, La Colorada)	124	22,580.6			
Total	357	66,755.2			





### 10.1.1 Drill Hole Collar Locations

GR Silver geologists performed a field survey for physical evidence of drill collars in the areas drilled and in the underground workings. The Company was able to locate drill pads for approximately 20% of IMMSA core drill holes in the Plomosas Mine Area and 8% in the San Juan Area (See Figures 10.3 and 10.4 below). When evidence of existence of a drill collar on-site was confirmed, a cement monument was placed on the site and later surveyed by an independent surveyor to validate the location of historical drill holes. The discovery of the historical drill hole sites, combined with the reports and maps available on-site, allowed additional validation of coordinates of other historical IMMSA core drill holes, where the original site was covered or reforested. Below are examples of historical monuments found by GR Silver and surveyed.







Figure 10-3: Underground IMMSA Drill Hole Collar Locations







# Figure 10-4: Located Historical Surface Core Drill Holes by IMMSA





#### 10.1.2 Downhole Surveys

GR Silver encountered limited information to confirm that IMMSA holes were surveyed with downhole survey instruments. Most of the underground holes are less than 100 m in length with the average length being 94 m. The 105 surface core holes, drilled by IMMSA at the Plomosas Mine Area and San Juan Area, are normally no longer than 200 m. ACS reviewed the existing information related to the drill hole trace lines and compared with GR Silver and First Majestic drill holes nearby in 3D and defined that they are adequate for use in the estimation of the mineral resource.

# 10.1.3 Core Logging

IMMSA core logs were recovered from historical reports or original logs recovered during the due diligence and are now filed on-site. All relevant geological information was digitized initially in EXCEL spreadsheets and validated prior to import into MX Deposit. All original drill logs and any available assay certificates or other documentation have been filed on-site as historical information. Core libraries from some surface and underground drill holes are absent or may only be represented by remnants consisting of a series of 4 to 5 cm core pieces for a small number of drill holes. Assay results are also reported in some historical logs and reports, and paper or digitalized sections that are currently filed at the project as historical information.

#### 10.1.4 Recovery

Recovery information related to the IMMSA core drill holes is available in historical monthly exploration reports which also includes limited information on core logging sheets, however this data has not been digitalized or imported into MX Deposit. Core recovery for these holes is confirmed to be similar to those of GR Silver's recently completed core drilling.





## 10.1.5 Sample Length/True Thickness

Historical logs and reports provided information related to original sample lengths. The information was reviewed and validated between a series of historical documents where available. The IMMSA core sampling process concentrated mainly in zones with a presence of visible sulphide-rich mineralization. The definition of sample length was determined during logging by different geologists. The average sample length for the IMMSA drilling is reported as 1.0 m. Samples were generally taken at regular 1.0 m intervals within mineralized zones. Samples were generally broken at hard geological boundaries leading to situations where the length could be as short as 6 cm but a statistical review indicates that most (over 99%) are greater than or equal to 25 cm in length. Most of the sampling was selective concentrating in areas where sulphide is visible, leaving unsampled zones between mineralized intervals, or hanging wall or footwall of the Plomosas Breccia.

Most of the IMMSA core drill holes intersected the mineralization at different angles, due to their location and orientation. Table 10.2 and 10.3 summarize some of the best drill intersections reported from the IMMSA drilling at the Plomosas Mine and San Juan Areas.

Hole No.	From (m)	To (m)	Drilled width (m)	Ag g/t	Au g/t	Pb%	Zn%	Cu%
39	31.5	32.5	1.0	1,000	0.01	na	na	na
42	9.5	10.9	1.4	530	0.01	0.1	0.1	na
73	0.0	4.5	4.5	760	na	2.3	1.5	na
139	28.0	28.7	0.7	547	0.7	1.3	1.5	na
191	6.0	7.5	1.5	1,659	0.19	1.2	3.7	0.2
218	5.9	9.7	3.8	183	4.3	6.4	7.9	0.2
236	79.8	81.9	2.1	900	2.9	1.9	3.2	0.2
242	64.5	67.8	3.3	349	0.4	2.3	1.3	0.3

### Table 10-2: Significant Drill Intercepts for IMMSA Drilling at the Plomosas Mine Area





Hole	From	To (m)	Drilled width	Ag g/t	Au g/t	Pb%	Zn%	Cu%
No.	(m)	,	(m)					
253	113.9	116.2	2.3	2,600	0.1	1.4	3.6	0.1
253	119.3	121.0	1.7	4,209	0.5	1.8	5.6	0.3
253	112.2	123.2	11.1	1,235	0.23	0.8	1.9	na
258	166.8	170.5	3.7	1,469	0.46	2.2	3.2	na
258	166.8	168.6	1.8	2,827	0.5	2.8	4.6	0.7
258	170.5	171.5	1.0	17	43.0	na	0.1	na
259	232.0	235.4	3.4	398	0.01	0.3	0.7	0.2
259	275.3	275.9	0.6	1,285	0.5	0.8	1.6	0.2
315	21.0	39.0	18.0	321	0.9	1.9	2.7	na
279-IM	25.3	38.3	13.0	328	0.2	0.5	1.2	na
PD-121	47.5	48.5	1.0	72	2.8	18.5	27.5	na
PLS-3	98.8	103.9	5.1	16	19.2	0.1	0.1	na
PSD-13	96.9	97.1	0.2	383	1.88	22.2	na	na
SD-10	273.0	286.6	13.6	65	1.9	15.7	15.5	0.9
SD-13	234.8	236.6	1.8	17	15.8	1.1	3.9	na
SD-17	98.7	105.3	6.6	362	na	0.2	0.5	na
SD-31	41.7	42.7	1.0	850	0.14	0.8	1.2	na
SD-39	31.5	32.5	1.0	1,000	na	na	na	na
SD-39	37.5	45.4	7.9	128	na	0.1	0.1	na
SD-39	122.0	131.9	9.9	234	na	0.2	0.3	na
SD-43	106.0	108.0	2.0	2,484	na	0.7	0.3	0.3
SD-51	108.0	109.3	1.3	1,650	0.1	5.3	6.6	1.2
SD-51	126.7	128.2	1.5	526	0.13	1.1	1.6	0.2
SD-53	161.1	162.1	1.0	403	0.25	2.4	2.2	0.1
SD-8	279.8	280.8	1.0	450	1.5	0.4	2.0	0.9

Numbers May Be Rounded. "na" = No Significant Assays





Hole No.	From (m)	To (m)	Drilled width (m)	Est. true width (m)	Ag g/t	Au g/t	Pb%	Zn%
LR2D-06	157.3	159.7	2.4		770	0.07	0.7	1.8
LRD-37	53.2	59.5	6.3	5.7	154	0.96	1.2	0.4
LRD-52	69.2	70.3	1.1	1.0	781	0.21	1.5	0.3
LRD-59	71.2	72.3	1.1	0.9	2,300	2.1	7.6	16.3
SJS-06	248.6	249.1	0.5	0.4	2,154	0.1	0.2	0.3
SJS-09	301.1	303.8	2.7	2.1	931	0.1	1.9	4.0
SJS-09	301.1	302.5	1.4	1.1	1,478	na	1.3	1.6
SJS-10	295.9	299.4	3.5	2.8	737	0.1	0.1	0.2
SJS-16	238.0	238.9	0.9		5,600	1.04	na	na
SJS-19	257.8	259.4	1.6	1.3	271	na	0.5	1.1
SJS-25	301.6	303.4	1.8	1.5	92	0.1	3.2	8.5
YE-1	82.0	82.4	0.4	0.4	na	10.2	na	2.1

### Table 10-3: Significant Drill Intercepts for IMMSA Drilling at San Juan

Numbers May Be Rounded. "na" = No Significant Assays

# 10.2 Aurcana Drill Program (2007-2008)

Aurcana drilled eight core drill holes in the Plomosas Mine Area - four underground and four from surface drill platforms, for a total of 2,269 m. As evidenced in historical operational reports and logging data, the underground holes were drilled using a Diamec 232 drill rig owned by Aurcana and operated by a local contractor. Surface holes were drilled using a Longyear 38, operated by an independent drilling company named Britton Hermanos from Hermosillo, Sonora, Mexico. All Aurcana holes were designed to produce only NQ size core.




#### 10.2.1 Drill Hole Collar Locations

GR Silver validated and located on-site all underground drill holes and an independent surveyor completed collar surveys to be imported into the MX Deposit database. The Aurcana surface drill hole collars were not located in the field. Core and drill and assay records, together with logs, are available as well as information on original collar coordinates. The original coordinates were transformed from NAD27 to WGS84, adjusting the elevation to the current elevation model using Leapfrog Geo Software and control points surveyed by independent surveyors (See Figure 10-5).







Figure 10-4: Aurcana Drill Hole Collar Locations at Plomosas Mine Area

## 10.2.2 Downhole Surveys

There is a reference in the Aurcana Drill Hole Summary Sheet that all survey data was collected at the collar, beginning of the holes, and one reading in the last interval of the drilling. Plotting of data and survey was imported as reported in the Aurcana historical drill reports. No reference is available for the drill hole survey method in the core logging.





All core logging and technical tasks were completed by geologists and supervised geological technicians employed by Aurcana. Once the initial assessment was completed, core was measured and cut with a diamond saw for sampling. Drill core was photographed prior to sampling. All drill core from Aurcana is stored at the Plomosas site and in good condition. Drill hole logs in EXCEL format are available, as are assay files and assay certificates. Information collected included lithology, RQD, mineralization and fracture density.

#### 10.2.3 Recovery

Core recovery is reported as the average recovery for each hole. It is generally very good with most holes averaging over 90% recovery. The core was reviewed at the Plomosas core facility, confirming the good recovery conditions.

#### 10.2.4 Sample Length/True Thickness

The sample lengths were determined during logging by the geologist. The average sample length for the Aurcana drilling was 2.5 m. Samples were generally broken on geological contacts leading to some samples being as short as 80 cm but most (over 99 percent) were at least 1 m or longer.

As the holes cut the mineralization at different angles, they all have different true widths. In general, the true width is estimated to be 60% to 100% of the stated interval length. Table 10.4 summarizes the best results of the Aurcana drilling.

Table 10-4: Significant Drill Intersections From	n Aurcana Drilling At Plomosas
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Hole No.	From (m)	To (m)	Drilled width (m)	Ag g/t	Au g/t	Zn%	Pb%	Cu%
AU08-PLS-02	315.0	342.9	27.9	13	1.8	0.4	0.9	na

Numbers May Be Rounded. "na" = No Significant Assays





# 10.3 First Majestic Drill Program (2016-2018)

First Majestic drilled a total of 115 core holes on the Plomosas Project, 57 from surface and 58 from underground drill sites. Of these, 68 holes were in the Plomosas Mine Area, and 47 in San Juan and La Colorada for a total of 32,100 m. Table 10.5 summarizes the core drilling program completed by year and areas.

Area	Year	Surface		Unde	rground	Total		
		No. holes	metres	No. holes	metres	No. holes	metres	
la	2017	2	822	0	0	2	822	
Colorada	2018	16	6,590	0	0	16	6590	
	Sub Total	18	7412	0	0	18	7412	
Plomosas	2016	0	0	4	1,200	4	1,200	
	2017	2	1,188	52	9,257	54	10,445	
	2018	8	3,727	2	291	10	4,018	
	Sub Total	10	4915	58	10747	68	15,662	
	2017	15	3,784	0	0	15	3,784	
	2018	14	5,241	0	0	14	5,241	
San Juan	Sub Total	29	9025	0	0	29	9,025	
-	2017	3	1,184	0	0	3	1,184	
	2018	13	3,857	0	0	13	3,857	
	Sub Total	16	5040.9	0	0	16	5040.9	

#### Table 10-5: First Majestic Plomosas Project Drilling





Area	Year	Surface		Unde	rground	Total		
		No. holes	metres	No. holes	metres	No. holes	metres	
Other	2017	3	1,184	0	0	3	1,184	
l argets El Saltito	2018	13	3,857	0	0	13	3,857	
	2016	0	0	4	1199.65	4	1199.65	
Total	2017	22	6978	52	9257	74	16235	
	2018	51	19,415	2	291	53	19,706	
	Total	89	26392.6	58	10747.45	131	37140.05	

Drilling was carried out by the following independent drilling contractors: INTERCORE PERFORACIONES, S. de R.L. de C.V. (Guadalajara), DrilCor (Durango) and Servicios Drilling S.A. de C.V. (Durango). Table 10.6 provides a breakdown of drill holes by company.

#### Table 10-6: Contractors Drill Holes By Area

Company	Area	UG	Surface	
	La Colorada	0	0	
Intercore	San Juan	0	0	
	Plomosas	25	0	
	La Colorada	0	18	
DrilCor	San Juan	0	14	
	Plomosas	2	8	
	La Colorada	0	0	
Servicios Drilling	San Juan	0	15	
	Plomosas	31	2	





All drilling was completed using HQ size core. All First Majestic drill core boxes and relevant information are stored at the Plomosas camp and GR Silver has completed relogging and re-sampling programs of the First Majestic core in un-sampled, or in some specific re-sampled, core intervals. GR Silver has also recovered all available pulps and rejects related to the First Majestic core drilling programs.

## 10.3.1 Drill Hole Collar Locations

All drill hole locations were identified by GR Silver geologist utilizing a handheld GPS and azimuth line for the drill holes and established using a Brunton compass. Following drilling, a second handheld GPS reading was taken for the collar of each drill hole, which is marked by a cement block with a piece of PVC pipe to indicate hole azimuth and dip. A total of 57 out of 68 surface core drill holes were surveyed in the field by an independent surveyor contracted by GR Silver. The result of this independent survey was that 88% of the underground drill holes and 80% of the surface drill holes were located (See Figure 10.6 and 10.7 below).





# Figure 10-5: First Majestic Surface Drill Collar Markers -- San Juan SJS18-10 (2018)







# Figure 10-6: First Majestic Underground Drill Collar Markers – Plomosas PLI16-01 (2016)



### 10.3.2 Downhole Surveys

The tools used to measure down hole deviation were of two types: contractors Servicios Drilling and DrilCor used a Devico DeviShot<sup>™</sup> tool and Intercore used a Reflex EZ-TRAC<sup>™</sup> tool. All First Majestic core holes were surveyed at 15 m regular intervals from the collar and at 50 m intervals downhole to the end of the hole.





#### 10.3.3 Core Logging

All core logging and technical tasks were completed by geologists and supervised geological technicians employed by First Majestic at the Plomosas camp.

The logging protocols utilized by First Majestic seem to have followed standard industry practices. Logging was initially done using a word document, from which data was later transcribed to a series of Excel spreadsheets. For holes drilled in 2018, logging was completed utilizing LogChief. Geotechnical data (RQD) was collected by the geologists during the logging process. Data collected for all drill holes included recovery and rock quality data and mineralized holes tested with a Niton® XRF analyser. The logging geologist also recorded lithology, alteration, mineralization, and limited structural data. Sampling intervals for assay analyses were marked directly on the boxes by geologists, and they also inserted QA/QC samples at regular intervals along the core, placing 5 quality control samples in every 26-sample batch. This included 3 different CDN multielement standards, coarse and fine blanks, and field, reject and pulp duplicates (Source: internal memo 'Plomosas Project Site Visit' by First Majestic employees). Once logging was completed it is presumed the core was then photographed but GR Silver did not obtain copies of the image files and took new photographs of all First Majestic drill holes. The core was cut in half and placed into clear plastic sample bags. The remaining half core was returned to the core boxes and stored under cover at Plomosas (See Figure 10.9).







## Figure 10-7: First Majestic Half Core Sampling – Plomosas Underground, PLI17-15 (2017)







## Figure 10-8: First Majestic Drill Core Stored At Plomosas Camp Core Shed

## 10.3.4 Recovery

Core recovery was excellent (over 95%) based on data recorded and reviewed by GR Silver, except in the fault zones and at the beginning of drill holes where recovery was generally low in overburden.





## 10.3.5 Sample Length/True thickness

The samples lengths were determined during logging by the geologist. The average sample length for the diamond drill hole samples was 0.8 m with 99% of the samples being 1 m or less in length. All sample limits obeyed the geological contacts and mineralization controls. Tables 10.7 and 10.8 display the best First Majestic drilling results and highlights for both the Plomosas Mine and San Juan Areas.

Table 10-7: Selected Sample Results from First Majestic Plomosas Mine Area Drilling

Hole No.	From (m)	To (m)	Drilled width (m)	Est. true width (m)	Ag g/t	Au g/t	Pb %	Zn %
PLI17-24	63.1	65.5	2.4	1.93	96	4.1	0.8	5.9
includes	64.7	65.1	0.4	0.4	327	15.4	3.2	22.4
	226.9	228.3	1.4	1.39	10	6.7	0.1	0.1
includes	226.9	227.3	0.4	0.4	19	23.1	0.2	0.3
PLI17-36	50.9	51.8	0.9	0.84	445	0.9	1.1	0.1
PLI17-38	116.1	119.1	3.0	2.98	248	0.1	0.2	0.6
includes	118.1	119.1	1.0	1.0	485	0.1	0.1	0.3
PLI17-18	119.4	124.5	5.1	5.0	147	0.9	0.2	0.1
includes	91.0	95.6	4.6	4.6	88	0.7	5.3	5.8

Numbers May Be Rounded. "na" = No Significant Assays



	From	То	Drilled	Est. true			Dh 0/	7n 04
Hole No.	(m)	(m)	width (m)	width (m)	Ag g/t	Au g/t	PD %	211 %
LCS18-04	368.9	370.0	1.2	1.0	182	0.3	0.1	0.2
LCS18-05	242.9	270.7	27.8	25.0	26	0.3	0.6	0.8
includes	247.0	251.5	4.5	4.0	126	1.6	1.3	1.7
SJS18-01A	186.0	189.5	3.5	3.0	1,419	15.5	na	0.2
includes	188.3	189.0	0.7	0.6	6,438	70.9	na	0.6
SJS18-01A	379.5	382.3	2.8	2.5	2	na	0.5	0.8
SJS18-02	267.4	273.4	6.0	5.4	104	0.1	0.3	0.9
SJS18-03	260.3	261.4	1.1		244	0.5	1.0	2.1
SJS18-04	283.6	287.5	3.9	3.1	262	0.1	0.7	2.6
SJS18-04	291.5	292.3	0.8	0.7	193	na	0.2	0.4
SJS18-04	314.4	314.8	0.4	0.3	96	0.1	2.8	3.9
SJS18-07	47.1	49.1	2.0	1.5	103	0.5	0.1	na
SJS18-11	277.4	299.6	22.2	20.0	74	0.1	1.3	3.3
includes	277.4	292.4	15.0	13.5	108	0.1	1.9	4.7
includes	287.3	290.7	3.4	3.0	172	0.3	6.2	14.0

#### Table 10-8: Selected Sample Results from First Majestic Drilling, San Juan Area

Numbers May Be Rounded. "na" = No Significant Assays

# 10.4 GR Silver Drill Program (2020-2021)

GR Silver had five drill rigs working at Plomosas Mine and San Juan Areas from July 2020 to March 2021. Table 10.9 is a summary of drill rig type by operator and metres drilled.





# Table 10-9: Drill Rig Details – 2020-2021 GR Silver Drilling Campaign at Plomosas Mine And San Juan Areas

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

Drill rigs owned and operated by GR Silver drilled HQ-NQ size core while the independently owned drills also generated HQ-NQ size core. The 2020-2021 surface and underground core drilling campaign consisted of 56 drill holes for a total of 11,028.7 m. Table 10.10 below provides a summary of the drilling campaigns by year and type. Figures 10.8 to 10.11 show each type of drill rig used by GR Silver during the 2020-2021 drilling campaign.





Area			Surfac	e	Under	ground
	Target	Year	No. holes	metres	No. holes	metres
		2020	9	2,416.8	6	918.6
Plomosas	Plomosas	2021	16	4,018	14	1,888.5
		Sub Total	25	6,434.8	20	2,807.1
		2020	5	783,0	0	0
San Juan	San Juan	2021	6	1,003,7	0	0
Area		Sub Total	11	1,786.7	0	0
		2020	13	3,199.8	6	918.6
Total		2021	22	4,804.6	14	1,888.5
		Total	36	8,221.5	20	2,807.2

#### Table 10-10: Summary of GR Silver Drilling

Numbers may be rounded.





# Figure 10-9: VersaDrill KM 1.4 Owned and Operated by Maza Drilling - at Plomosas, PLS20-08







# Figure 10-10: Boart Longyear LM<sup>™</sup>75 Owned and Operated by Intercore – at Plomosas Underground Level 833









Figure 10-11: NW-150 Owned and Operated by GR Silver - at La Colorada, LCS21-05





### Figure 10-12: NW-500 Owned and Operated by GR Silver - at La Colorada, LCS21-04



#### 10.4.1 Drill hole collar locations

All drill hole locations are initially located by a Company geologist by way of handheld GPS. After drilling, the collar locations are located using differential GNSS Trimble GPS. Underground drill holes are located by surveying the drill collars and tying to underground survey points with a Total Station, which was carried out by an independent surveyor. 100% of the drill holes were surveyed. Below collar table for GR Silver Drilling.





HOLE-ID	LOCATION X	LOCATION Y	LOCATION Z	LENGTH	AREA	AZIMUTH	DIP
PLS20-03	451417.4	2551632.8	991.9	313.5	Plomosas	0	-90
PLS20-04	451559.4	2551450.0	936.5	150.5	Plomosas	0	-90
PLS20-05	451543.8	2552011.2	950.8	150.5	Plomosas	0	-90
PLS20-06	451443.5	2551716.8	990.9	181.5	Plomosas	90	-70
PLS20-07	451398.6	2551531.2	951.9	237.0	Plomosas	90	-75
PLS20-08	451051.6	2551792.8	967.2	561.0	Plomosas	180	-75
PLS20-09	451011.8	2551672.0	996.6	507.0	Plomosas	95	-70
PLS21-01	451597.0	2551541.2	949.3	218.5	Plomosas	90	-60
PLS21-02-A	451510.6	2552090.2	924.8	152.5	Plomosas	80	-67
PLS21-03	451418.1	2551627.5	992.6	420.0	Plomosas	90	-50
PLS21-04	451512.3	2552091.2	929.6	248.0	Plomosas	230	-50
PLS21-05	451095.5	2551974.1	1070.5	621.0	Plomosas	315	-70
PLS21-06	451592.0	2552247.7	910.3	109.5	Plomosas	90	-50
PLS21-07	451557.6	2552331.3	975.7	315.5	Plomosas	310	-60
PLS21-08	451286.7	2551868.8	1006.9	180.0	Plomosas	90	-80
PLS21-10	451562.1	2552330.6	976.5	264.0	Plomosas	90	-55
PLS21-11	451442.0	2552104.6	945.0	307.3	Plomosas	305	-60
PLS21-12	451442.3	2552104.1	943.1	257.0	Plomosas	255	-50
PLS21-13A	451523.6	2551901.5	976.5	115.5	Plomosas	90	-75
PLS21-14	451240.8	2551802.9	1012.5	372.0	Plomosas	72	-75
PLS21-15A	451518.8	2551965.9	977.8	101.3	Plomosas	90	-85
PLS21-16	451404.3	2551745.3	1010.9	219.0	Plomosas	64	-46
PLS21-17	451580.3	2551591.1	977.0	117.0	Plomosas	90	-80
LCS21-04	447888.9	2551114.9	887.9	179.0	La Colorada	250	-60
LCS21-05	447853.6	2551250.9	903.7	213.0	La Colorada	250	-50
PLS20-02	451487.1	2551540.2	928.3	165.0	Plomosas	0	-90

#### Table 10-10: GR Silver Collar Table





HOLE-ID	LOCATION X	LOCATION Y	LOCATION Z	LENGTH	AREA	AZIMUTH	DIP
PLI21-09	451038.1	2551669.0	740.9	228.0	Plomosas	112	5
PLS21-18	451541.6	2551610.4	973.6	195.0	Plomosas	75	-75
PLI21-08	451094.5	2551715.3	730.5	41.5	Plomosas	165	-55
PLI21-12	451207.9	2552089.9	770.2	63.0	Plomosas	90	-60
PLI20-01	451153.2	2551899.9	738.9	90.0	Plomosas	270	30
PLI20-02	451153.4	2551899.9	736.5	114.6	Plomosas	270	-76
PLI20-03	451121.5	2551922.4	722.6	165.0	Plomosas	270	-10
PLI20-05	451122.3	2551923.4	721.9	187.5	Plomosas	300	-30
PLI20-06	451123.8	2551923.8	722.6	127.5	Plomosas	315	-15
PLI20-08	451317.0	2551633.5	801.2	234.0	Plomosas	90	-60
PLI21-01	451312.8	2551631.8	803.9	64.5	Plomosas	270	35
PLI21-02	451001.0	2552209.0	742.2	148.5	Plomosas	90	-50
PLI21-03	451110.5	2551796.8	708.1	150.0	Plomosas	295	60
PLI21-04	451112.4	2551797.1	705.0	52.5	Plomosas	90	-45
PLI21-05	451110.7	2551796.7	708.0	93.2	Plomosas	95	50
PLI21-06	451073.0	2551749.4	728.0	144.0	Plomosas	110	0
PLI21-07	451099.5	2551713.5	732.0	147.3	Plomosas	115	10
PLI21-10	451209.5	2552085.4	771.5	180.0	Plomosas	118	0
PLI21-11	451204.5	2552086.1	771.5	87.0	Plomosas	230	0
PLI21-13	450995.5	2552210.5	742.7	294.0	Plomosas	260	-60
YES20-01	447747.8	2550716.6	800.3	118.5	Yecora	270	-70
YES20-02	447671.5	2550624.9	799.3	21.0	Yecora	252	-60
YES20-03	447930.7	2550703.3	841.7	350.0	Yecora	230	-80
YES20-04	447813.3	2550445.9	756.8	153.0	Yecora	235	-45
YES20-05	447846.5	2550438.1	756.1	140.5	Yecora	235	-50
SJS21-02	448237.3	2550573.1	894.9	99.8	San Juan	0	-90
SJS21-03-A	448288.1	2550667.1	965.1	184.5	San Juan	227	-60





HOLE-ID	LOCATION X	LOCATION Y	LOCATION Z	LENGTH	AREA	AZIMUTH	DIP
SJS21-04	448169.6	2550726.8	933.6	177.0	San Juan	196	-45
SJS21-05	448202.4	2550699.7	942.8	150.4	San Juan	208	-50

#### 10.4.2 Downhole Surveys

All 2020-2021 campaign drill holes were surveyed to monitor the down hole deviation. GR Silver and Maza Drilling used a Devico Devicore BBT Tool and Intercore used a Reflex EZ-TRAC<sup>™</sup> tool. An initial measure was done between 20-30 m and then in 50 m intervals.

#### 10.4.3 Core Logging

All core logging is performed by GR Silver geologists at the Plomosas camp.

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

All logging is done and recorded digitally by the logging geologist into MX Deposit directly, using a tablet. Geotechnical data such as RQD and recovery are collected by the logging geologist. The logging geologist also recorded lithology, alteration, mineralization, and structural data. All sampling intervals for assay analyses were marked by the geologist responsible for each specific drill hole, and they also inserted QA/QC samples at regular intervals along the core, using geological and structural features as a guide for the insertion of control samples such as CRMs, coarse blanks, and field duplicates. In the absence of zones of interest, the frequency for insertion of QC samples was every six samples.





Once logging and sample marking is completed, the core is photographed wet and dry, with the hole ID, box number, and start/end metreage clearly visible on a placard. The core boxes are then transferred from the logging facility to the core cutting shack. Tagged and labelled sample bags specific to the drill hole being sampled are provided to the core cutting technician. The core is cut in half and placed into the clear plastic sample bags. The remaining half core is placed back into the core boxes, which are then stacked outside the core shed on a wooden palette. Once a complete hole is cut, the core boxes are moved to the core storage location. All core is stored at the Plomosas camp site. Figure 10.14 illustrates different stages of the core logging process at the Plomosas core shed.





# Figure 10-13: Core Logging, RQD, Core Cleaning, Photography and Core Cutting at the GR Silver Core Shed Facilities at Plomosas







#### 10.4.4 Recovery

Core recovery is reported as excellent, for all core drill holes completed by all drill rigs. On average the recovery is 98%, except in the fault zones where recovery was generally poorer.

#### 10.4.5 Sample Length/True Thickness

The sample lengths were determined by the geologist during logging. Sample lengths for the diamond drill holes were typically between up to 2.0 m with the average length being 0.9 m. Samples were generally broken on geological contacts or mineralization controls/boundaries leading to some samples being as short as 10 cm but over 65% were at least 1.0 m or longer (Figure 10-15).







# Figure 10-14: Histogram of Sample Interval Length for GR Silver Drilling Campaign

As the drill holes cut the mineralization at different angles, they all have different true widths. In general, the true width is estimated to be 60% to 100% of the stated interval length. Table 10-11 and Table 10-12 summarize the significant intercepts from the





2020-2021 diamond drilling program at the Plomosas Mine and San Juan Areas, respectively.

Hole No.	From (m)	To (m)	Drilled width (m)	Est. true width (m)	Ag g/t	Au g/t	Zn %	Pb %
PLS20-01	8.0	16.5	8.5	6.0	85	0.40	0.6	1.1
includes	11.5	15.0	3.5	2.5	172	0.90	1.4	2.7
PLS20-02	72.4	98.1	25.7	22.3	48	0.10	0.6	0.3
PLI20-02	3.4	35.4	32.0	32.0	18	0.30	1.7	1.0
includes	3.4	7.6	4.2	4.2	107	1.70	9.6	6.6
PLI20-04	98.0	181.0	83.0		33	2.52	2.9	0.9
includes	139.0	150.0	11.0		135	9.41	9.8	5.7
PLI20-05	76.0	80.0	4.0		39	2.63	0.1	0.2
includes	77.0	78.0	1.0		136	8.95	0.1	0.6
includes	108.9	118.0	9.2		25	2.77	0.6	0.2
	108.9	109.5	0.6		227	19.95	4.7	1.3
PLI21-07	77.0	97.0	20.0	12.9	63	0.03	0.1	0.1
includes	89.5	97.0	7.5	4.8	126	0.03	0.1	na
PLI21-07	112.5	145.0	32.5		250	0.18	0.6	1.1
PLS21-20	50.0	59.3	9.3	9.0	141	0.31	0.7	na
includes	53.0	58.5	5.5	5.3	210	0.43	1.1	na
PLS21-13A	3.5	20.7	17.2	16.2	75	0.25	0.8	0.7
includes	4.8	11.0	6.2	5.8	171	0.41	0.7	1.1
PLI21-15A	22.5	30.5	8.0	7.6	227	0.27	1.4	1.7

#### Table 10-11: Significant Intercepts at Plomosas (2020-2021)

Numbers May Be Rounded. "na" = No Significant Assays





Hole No.	From (m)	To (m)	Drilled width (m)	Est. true width (m)	Ag g/t	Au g/t	Pb %	Zn %
LCS21-04	170.0	179.0	9.0		710	1.82	1.1	0.3
includes	176.9	177.5	0.6		8,519	18.77	8.9	0.7
SJS21-02	55.2	60.9	5.7		611	0.04	0.5	1.7
includes	55.2	56.9	1.7		1,762	0.10	1.3	4.9
includes	55.2	55.9	0.7		3,755	0.03	2.5	9.7
SJS21-04	117.0	127.5	10.5	9.8	242	0.31	0.4	0.8
includes	118.2	120.3	2.1	1.9	954	1.29	1.2	1.6
SJS21-04	118.2	119.2	1.0	0.9	1,184	2.27	1.3	0.9
SJS21-05	108.9	123.5	14.6	`12.5	52	0.05	0.1	0.4
YES20-01	37.0	42.5	5.5	5.5	264	0.40	0.3	0.6
includes	39.5	41.0	1.5	1.5	943	1.10	0.5	1.3

# Table 10-12: Significant Intercepts at San Juan (2020-2021)

Numbers May Be Rounded. "na" = No Significant Assays





# 11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

## 11.1 Sampling Methods

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

## 11.1.1 IMMSA

The sampling method for IMMSA's drilling is reported in a historical report. It is referred to as the sampling of drill core being carried out under the supervision of IMMSA personnel and geological staff. Samples were generally taken at regular intervals with sample length varying from 1.0 m to a couple of metres within mineralized zones, using a diamond saw to cut the core. The historical reports suggest 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 and have been scanned by the Company into digital files, with data entered into a digital database.

Sampling intervals are variable, based on the analysis of the historical logging and comparison with the assay database. It is apparent that sampling was performed selectively on the main mineralized zones, or where sulphide (galena and sphalerite) was visible. 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 selective historical IMMSA drill holes.

A review of available selective core confirms that cutting of half-core made use of standard diamond discs. No pulps or rejects are available on-site, nor have been provided by IMMSA to previous owners.

There is no reference to use of QA/QC protocols by IMMSA during their historical drilling program. Individual assays results have been encountered in historical operational monthly reports, internal memos, logs and other internal reports, which were scanned and entered into GR Silver's MX Deposit database. Confirmation drilling programs were carried out by both First Majestic and GR Silver, respectively.

## 11.1.2 Aurcana

Sampling of drill core was carried out by, or under the supervision of, Aurcana personnel. The sampling was performed at regular intervals. Samples were generally broken on 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, and later 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.

## 11.1.3 First Majestic

The core sampling protocols used by First Majestic followed standard industry practices based on the Company's review of core boxes in storage at Plomosas, internal technical reports and logging data documents and reports available on-site. Logging was carried out by First Majestic geologists and data was entered into Data Shed software. The core was initially photographed, and core boxes were marked with hole ID, box number, and





start/end metreage. The core was cut in half on-site at the dedicated diamond disc setting by First Majestic technicians and half was placed into 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 boxes and stored under cover 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. Although an internal operational laboratory at a mine site was used during this program, all required sample handling protocols followed internal standards, based on GR Silver's discussions with First Majestic operational management. In some specific drill holes, sections of core outside the main zones of interest remained unsampled.

#### 11.1.4 GR Silver

GR Silver's core sampling protocols followed standard industry best practices. After placing drilled core into boxes at the drill site, drill core boxes were reviewed by a GR Silver geologist, secured and transported daily to the core logging facility at the Plomosas camp. Once each drill hole was completed and boxes delivered to the core shed, all boxes were laid out on the logging table for validation of all drill hole details, including metreage tags and core conditions. The core was then photographed at the core shed and if core boxes required additional marking, for example to clarify hole ID tags, box number or start/end metreage, a technician completed this task on the logging table (Figure 11.1).





#### Figure 11-1: Validation of Core Boxes on Arrival at the Core Shed - Plomosas Project



Following validation of the core boxes, they were released for logging by GR Silver's geological staff. Initially, a summary core log was done, to mark the main geological contacts along the full length of the drill core. Data was then entered directly into the MX Deposit software using tablets at the core logging facility (Figure 11.2).







Figure 11-2: Logging Core at the Core Shed – Plomosas Project

During detailed logging, GR Silver geologists defined all sample intervals using lithological and alteration limits as boundaries, and subsequently marking the beginning and end of each sample, both on the core and on the box shoulder, with arrows. A line was then drawn using a yellow wax marker indicating the cutting line for the saw operator along the length of the core axis (Figure 11.3). Sample length protocols were implemented to have length not greater than 1 m and a minimum of 50 cm. However, a small number of narrow isolated structures were sampled with less than 50 cm length. Sample tags were then stapled to the shoulder of the box identifying the sample location and limits for each sample.





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









#### Figure 11-4: Visual Review of Core Samples at Plomosas Project

The "From" and "To" marked on the core box assisted the operator when cutting the specific core intervals in half with the diamond saw (Figure 11.4). Sample numbering booklets were used in the sampling process by the geologists to assist in the control of the process, to record proper numbering and avoid mixing of samples. The booklets have numbered tickets made of three identical numbered parts per ticket: (1) one part is kept with the database manager at the exploration office; (2) after sampling was authorized by the experienced geologist, two other tickets with same numbering sequence were provided to the geologist sampling the core with help of assistant. The sampling geologist placed the second ticket on the corresponding sample location, as previously marked during logging, after core was cut in half. (3) The sampling geologist placed the third ticket in an industry standard plastic bag and a trained technician placed half core samples matching the designated sample interval, corresponding to that ticket number, into the sample bag. Tickets from the core boxes were matched with tickets at the office and then





the numbered sample bags were reviewed by geological staff working at the core shed prior to storing in custody, prior to being collected by a courier and delivered to the independent laboratory for sample preparation and assaying.

## 11.2 Sample Analyses and Security

#### 11.2.1 IMMSA

Based on historical information (monthly reports, geological reports and internal documents), IMMSA completed sample preparation on-site and at the San Luis de Potosi IMMSA 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 mid 1980s until 2001, no QA/QC is available in relation to any of the assays completed by IMMSA. Historical documentation available on-site reports the elements assayed, results and date of assays for all IMMSA core drill holes. In many drill holes, a certificate type document was included on historical reports.

#### 11.2.2 Aurcana

Custody of samples by Aurcana is reported that all samples were stored at the Plomosas camp until a full batch shipment was completed. 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 and 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 inside the lab protocols. In Guadalajara, the original half core samples were dried by placing them in an oven at 90°C for 12 hours. After drying, the samples were crushed in a jaw crusher to 80% passing 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 85% passing 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 sub-sample was then obtained using a riffle splitting device and shipped to Vancouver for aqua regia digestion ICP-ES analysis. Acme Labs used the method denominated internally 7AR Group and 6 Group (Au 0.01 g/t Fire Assay on 30g sample). At Acme Labs in Vancouver, samples were digested using hot aqua regia immersion and base metal concentrations were determined using Inductively Coupled Plasma Optical Emission Spectrometry (Acme method code "ICP-ES"). Gold and silver values were analysed by lead fusion fire assay and gravimetric finish on a 30 g sample.

### 11.2.3 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 (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 for check assays. These pulps were analysed for Ag and Au 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, Pb and Zn, were analysed using Inductively Coupled Plasma Optical Emission Spectrometry.

GR Silver received sampling, sample preparation and 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 located in Durango, standard QA/QC programs and external validations were performed at SGS Laboratories in Durango, Mexico.

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 multi-element standards, coarse and fine blanks, and field, reject and pulp duplicates related to the 2016-2018 core drilling program are described in the following Table 11.1.

Name	Description
CDN-ME-1602	Multi-element standard - description on next section
CDN-ME-1603	Multi-element standard - description on next section
CDN-ME-1604	Multi-element standard - description on next section
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

## Table 11-1: First Majestic QA/QC Samples and Their Descriptions





The analytical methods used are described as follows:

- **Au:** 30 g by lead fusion with AAS finish (Atomic Absorption Spectrometry) for samples between 0.01-10 g/t Au. For samples >10 g/t by Fire Assay with gravimetric finish;
- Ag: 3 acid digestion with AAS finish for samples between 0.5–300 g/t Ag. For samples
   >300 g/t by Fire Assay with gravimetric finish;
- **Pb:** Aqua Regia Digestion ICP-20 element package Optical Emission Spectrometry for samples between 0.006-10% Pb up to August 2017, after that they used an Aqua Regia digestion ICP-34 element package for Pb between 4-100,000 ppm; and
- **Zn:** Aqua Regia Digestion ICP-20 element package Optical Emission Spectrometry for samples between 0.006-10% Zn up to August 2017, after that they used an Aqua Regia digestion ICP-34 element package for Zn between 5-100,000 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: 5 blanks and 3 standards (Table 11.1).

## 11.2.4 GR Silver

GR Silver adopted standard practices of core sampling and assaying, for precious and base metals, related to the mineralization styles presented at the Plomosas Project. After core samples were cut in half and returned to the core boxes, one half of the cut drill core was sampled under supervision of Company geologists. The samples were then collected from the core shed and maintained in custody at the Plomosas site. Samples were only released when a full batch of 50 samples was collected. 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, Mexico, 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 laboratory is ISO/IEC 17025 certified.

At SGS in Durango, all samples were delivered to the gate and stored under their custody in individual pallets separated by different companies. Bags with samples are 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 then dried by placing the samples on metal trays and in an oven at 105°C for 12 hours.

The next stage of sample preparation was crushing to reduce the sample size, typically to 1mm/18 US 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 1,000 g sub-sample for pulverizing, and subsequent split and analysis, and the remainder was 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 into a clean pot and the pot placed into a vibratory mill. The pulverizing of samples was done using pots made of either hardened chrome steel or mild steel material. Samples were typically pulverized to 105 microns/140 mesh. A series of control samples, internal blanks and GR Silver blanks were introduced in each batch and during the preparation process to ensure that no contamination is introduced. The frequency of insertion of control samples is detailed in Table 11.2. The sample preparation and analysis flowsheet for the SGS Laboratory in Durango is illustrated in Figure 11.5.









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

Crushing/Pulverizing Parameters	Frequency	<b>Quality Control Requirement</b> <i>If not specified otherwise by the client</i>
Crush Prep. Blank	At the start of batch	80% passing 18 mesh (1mm)
Crush Prep. Replicates	Every 35 samples	80% passing 18 mesh (1mm)
Crush % Passing Checks	Every 35 samples	80% passing 18 mesh (1mm)
Pulv. Prep. Blank	At the start of batch	95% passing 140 mesh (105um)
Pulv. Prep. Replicates	Every 35 samples	95% passing 140 mesh (105um)
Pulv. % Passing Checks	Every 35 samples	95% passing 140 mesh (105um)





After crushing and pulverizing, SGS generated a liquid of 50 g for analysis. Base metal values were analysed using a 4-acid digestion and Inductively Coupled Plasma Optical Emission Spectrometry (SGS method code "ICP-OES"). All samples with Pb, Zn and Cu >1% were re-assayed by Sodium Peroxide Fusion and ICP-OES, with an upper limit of 30%.

For Ag, SGS also used the ICP-OES analysis method. An aliquot of the pulp was prepared using 4-acid digestion, which is a combination of  $HNO_3$  (nitric acid), HF (hydrofluoric acid), HClO<sub>4</sub> (perchloric acid) and HCl (hydrochloric acid). The 4-acid digestion is based on a minimum sample weight of 0.5 g.

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

Gold was analysed by lead fusion and atomic absorption spectrometry (AAS). Over limit samples with >10 g/t Au were analysed 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

SGS is an internally recognised 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.

## 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, transferred to digital format and entered into GR Silver's MX Deposit.





#### 11.3.2 Aurcana

170 drill core samples were collected by Aurcana upon selectively sampling core from surface and underground drill holes. A set including a standard, a blank, and duplicate samples were 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.

#### 11.3.3 First Majestic

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

Table 11.3 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 were submitted in all batches of samples delivered to SGS in Durango.

Standard	Туре
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

#### Table 11-3: Summary of QC Sample Types Used by First Majestic





## 11.3.3.1 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, BC, Canada.

All QA/QC results did not report inconsistent values based on the data reviewed by the QP.

## 11.3.3.2 Blanks

Material used as blanks was purchased from a local Exploration and Mining Supplier named Sonora Naturals located in Hermosillo, Sonora, Mexico.

- a. SM3-BLANK-LP\_P95#200: Silicic sand;
- b. SM3-BLANK-LP\_P95#1/4: Gravel size silica;
- c. DM-3/4A1: Silicic gravel;
- d. SRM\_FINO\_PLQZ\_18: Silicic sand; and
- e. BLK\_Fino\_SMQZ\_17: Silicic sand.

### 11.3.3.3 Duplicates

As part of the QA/QC program, core duplicates, first split reject and pulp duplicates were included on the sample stream by First Majestic. One of each type of control sample was included per batch (average batch size 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.

## 11.3.3.4 External Lab Checks

First Majestic completed external lab check assays, using SGS Laboratories in Durango, México. A total of 570 pulps were 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 is the description of the assay methods applied at the SGS Laboratory:

- Au: 30 g by lead fusion with AAS finish for samples between 0.005-10 g/t Au (GE\_FAA313). For samples >10 g/t analysed by Fire Assay with gravimetric finish (GO\_FAG303);
- **Ag:** 4-acid digestion with AAS finish for samples between 0.3–100 ppm Ag (GE\_ASS42E). For samples >100 g/t by Fire Assay with gravimetric finish (GO\_FAG313);
- Pb: 2-acid digestion ICP-AES 34 element package for Pb between 2-10,000 ppm (GE\_ICP14B). For 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 1-10,000 ppm (GE\_ICP14B). For samples >10,000 ppm, Sodium Peroxide Fusion for values up to 30% Zn (GO\_ICP90Q).

Figures 11.6 to 11.9 illustrate the results and comparisons of check samples analysed at both the Laboratorio Central and the SGS Lab.







#### Figure 11-6: Ag ppm Laboratorio Central vs Ag ppm SGS Laboratory







#### Figure 11-7: Au ppm Laboratorio Central vs Au ppm SGS Laboratory







#### Figure 11-8: Pb ppm Laboratorio Central vs Pb ppm SGS Laboratory







Figure 11-9: Zn ppm Laboratorio Central vs Zn ppm SGS Laboratory

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, the following graphs illustrate results from the period of the drilling program. A few standard failures needed to be checked but no reruns were needed. There are 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 resource estimation.





#### 11.3.4 GR Silver

GR Silver's QA/QC protocols were introduced immediately at the beginning of the core drilling program in 2020, including blanks, standards and field duplicate samples in all the sample batches sent to the SGS laboratories. The QA/QC sample frequency in each sample batch is described as follows:

- a. **Duplicates**: In every 50 samples, 3 duplicates were included. This represents 6% of the sample stream. They represent half of the core left in the core box after sampling was complete;
- b. **Standards**: In every 50 samples, 3 standards acquired from CDN Resource Laboratories were included. The placement of the standard was determined according to the geologist in charge of logging the core, observing the mineralogical characteristics of the rock and the expected value. This represents 6% of the sample stream;
- c. **Blanks**: In every 50 samples, 3 coarse blanks were included. A blank was placed at the beginning and at the end of a mineralized zone checking for potential contamination throughout the whole preparation and assaying flow sheet. This represents 6% of the sample stream; and
- d. **Re-Assays**: A total of 559 samples (pulps) were sent to Bureau Veritas for External Assay checks.

### 11.3.4.1 Standards

The low- to medium-grade certified reference material (CRM) used during the sampling of core from the 2020-2021 drilling campaign was commercial standard reference material acquired from CDN Resource Laboratories. A total of four CRM types for Au, Ag, Cu, Pb, Zn were used in the 2020-2021 QA/QC Program.





Additionally, to cover gold overlimits, GR Silver acquired the high-grade CRM CDN-GS-20C.

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 samples results in the same batch.

### 11.3.4.2 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 having an excellent performance as a Blank material for both gold and silver.

### 11.3.4.3 Duplicates (Re-Assays)

GR Silver selected pulps received from SGS for re-analysis for the purposes of a quality control protocols and I 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 Resources. The re-assay program was carried out at Bureau Veritas, an accredited laboratory "17025:2017 General requirements for the competence of Assay and calibration laboratories".

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.

- 30g Fire Assay for Au, AAS (FA430);
- 0.25g 35 Element digest ICP-es (MA300);





- Special instructions: if Au>10 ppm GO FA530 lf Ag>100 ppm GO\_FAG530/lf Zn/Pb/Cu> 10,000ppm GO PF370;
- FA430-FA530 takes place in Hermosillo, Sonora; and
- MA300 takes place in Vancouver, Canada.

## 11.3.4.4 Re-Assay Program Results

The Following graphs illustrate the results for all pulps from Plomosas Mine and San Juan Areas.

### Figure 11-10: Results for All Pulps from Plomosas Mine Area and San Juan Area







As can be seen in the graphs, the coefficient of determination (R2) 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 reassaying did not report any inconsistency.

## 11.4 Bulk Density Determinations

Bulk density determinations for the Plomosas Property are routinely collected during the drill program. Full core samples (15 to 25 cm long) are collected every 30 m down hole. 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; and
- (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 QP Comments

The qualified person is of the opinion that the sample preparation, analytical procedures used by Aurcana are adequate for inclusion in resource estimation. The sample security, preparation, analytical procedures used by First Majestic, and GR Silver are in keeping with best practice industry standards and are acceptable for the estimation of mineral resources. The information from the IMMSA drilling program is insufficient for inclusion in the estimation of Indicated mineral resource. However, the IMMSA data can be used to identify the location of the mineralized body and can be used in geological interpretation of the Plomosas structure as well as the identification of Inferred mineral resource only.





# 12 DATA VERIFICATION

Dr. Arseneau of ACS carried out visits to the Plomosas Project on November 3 to 7, 2020. During the site visits, the surface and underground geology was examined at the Plomosas Mine and San Juan Areas. The mineralization was observed in drill core and fourteen drill pads were verified with hand-held GPS. The location of the drill pads agreed well in the easting and northing with the locations provided in the GR Silver drillhole database.

Selected samples were collected from drill core and from a high-grade pillar underground at Plomosas (Table 12.1).The samples collected were not intended to be true duplicates of samples collected by GR Silver but were only intended to identify that mineralization occurs at the Project to levels previously reported and that independent sampling can generate results similar to what has been reported for the Project in the past. The three samples that were collected from core did return similar values to previously collected samples.

		ACS	Result	ts		Original Assays				Description	
Sample	Au	Ag	Cu	Pb	Zn	Au	Ag	Cu	Pb	Zn	UG Sample/ high
No	(g/t)	(g/t)	(%)	(%)	(%)	(g/t)	(g/t)	(%)	(%)	(%)	grade pillar
21582	13.02	254	0.39	>30	>30	NS	NS	NS	NS	NS	Core Sample
21583	0.032	2	0	0.23	0.71	0.224	3	0.002	0.456	1.23	Core Sample
21584	0.124	5	0.06	0.7	2.14	0.099	3.9	0.06	0.55	1.49	Core Sample
21585	0.701	26	0.04	9.09	10.7	0.687	27.98	0.04	6.81	7.5	Core Sample
21586	0.282	66	0.01	0.05	0.14	NS	NS	NS	NS	NS	Core Sample

#### Table 12-1: Check Samples Collected by ACS During Site Visit





#### 12.1.1 Database Verifications

Drill core logs were verified by checking drill core against logged lithologies. On average, the QP is in agreement with 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.

Drill hole assays were verified by checking original assay certificates against the assay data in the drill hole database. A total of 3,494 First Majestic assay records were verified (22%) against and 13 errors were noted, all errors were corrected prior to resource estimation.

A total of 7,904 assay records were verified against original data provided by the assay lab and no significant errors were noted.

#### 12.1.2 Verification of Analytical Quality Control Data

There are no records of the QA/QC program used for the IMMSA drill program. Aurcana had a limited QA/QC program in place during their drill program, but no information is available on the results of their quality program.

The QP did verify the results of the QA/QC program implemented by First Majestic and GR Silver's program of re-sampling and re-assaying of the First Majestic core and found that the QA/QC program implemented by First Majestic to be acceptable for inclusion in resource estimation. The standards performed well there were no evidence of sample contaminations. The duplicates sent to SGS agreed reasonably well with the original assay data and seem to suggest that the original may even be returning lower lead and zinc values for the higher-grade assay (>7% Pb and >5% Zn).

The QP verified the QA/QC program implemented by GR Silver for the 2020-2021 drill program and has found it to be in keeping with industry standard practices, international standards are used to assure accuracy and blanks and duplicate samples are routinely





inserted in the assay stream. GR Silver has also implemented a program of pulp re-assay program where 559 samples were sent to Bureau Veritas for verification.

## 12.2 Verification of Metallurgical Results

The flotation test results were verified during the 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 this Resource Report.

### 12.3 QP Comments

The Qualified Person is of the opinion that the data included in the GR Silver database for the Plomosas Project is adequate for the estimation of mineral resources. The information from the IMMSA drilling program is insufficient for inclusion in the estimation of Indicated mineral resources. However, the IMMSA data can be used to identify the location of the mineralized body and can be used in geological interpretation of the Plomosas structure as well as the identification of Inferred mineral resources.





# 13 MINERAL PROCESSING AND METALLURGICAL TESTING

## 13.1 Metallurgical Testwork

Two different metallurgical tests were completed by GR Silver in the Plomosas Mine and San Juan Areas:

- Bulk sample testing at a third party mill in Mexico with sample sourced from San Juan Mine; and
- Metallurgical testing of six samples by Base Met Labs in Kamloops, BC, Canada, from material collected at the Plomosas Mine and San Juan Areas (Phase 1).

## Channel Sampling – Metallurgical Composite Samples

Channel sampling procedures for metallurgical samples are the same as described in Section 9.3.1, except that the width and depth of the channels vary. The channel dimensions were 20 cm and 2.5 cm for the Plomosas Mine Area, and 5 cm and 7 cm at the San Juan Area, respectively, in locations which had previously been sampled, and where metal values (Ag, Au, Pb, Zn) of interest had been assayed. The aim was to get large composite samples of 25 kg each. Samples were packed in 20 litre buckets and adequately labeled prior to shipping.

## 13.2 San Juan Bulk Sample

A bulk sample of the mineralized San Juan breccia was collected, 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 of the tunnel (Figure 13.1). The bulk sample extracted corresponds to 2,700 t from the main San Juan Breccia (BXSJ) structure, located inside the San Juan tunnel.







Figure 13-1: Sample Location of the Metallurgical Bulk Sample – San Juan Tunnel





#### 13.2.1 Methods and Procedures

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

The entire sample area selected for mineralized bulk sampling was cleaned to remove old loose material prior to excavation and extraction. The mining method utilized was similar to a cut-and-fill type of mining method. It consisted of cutting layers, starting from the lower part of the San Juan vein breccia structure, taking the cut upwards, leaving all the mined material on the floor to then be used as a work platform. Drilling and cutting was carried out utilizing two work shifts per day, under supervision of trained safety personnel. Once enough material was accumulated, the mined material was removed with a Scooptram and transported to the tunnel exit of the main level and accumulated as small piles of approximately 21 t each, for a total of 2,700 t.

The entire process of extraction to processing and sampling is illustrated in Figures 13.2 to 13.7.

The mineralized material was transported for processing to a local beneficiation plant owned by Met Sin Industriales, S.A. de C.V. This plant has a capacity of 70 tonnes per day and is located 3 km from the Plomosas Project. The sample material was then processed by crushing, milling and flotation, according to the attached flow sheet (Figure 13.7). The entire bulk sample (2,700 t) was processed in a circuit 100% dedicated to this sample during a period of 16 days. The mineralized material was crushed and ground to a particle size P<sub>80</sub> of 74 microns, prior to flotation. This particle size was chosen based on previous milling practice by IMMSA at the Plomsas mine.

Representative samples were collected during the operation of the pilo plant to characterize the feed, concentrate and tailings. Samples were collected twice per



day during the 16 days that the pilot plant operated. As such, 32 head (cabeza) samples, 32 concentrate (concentrado) samples and 32 tail (cola) samples were collected, a total of 96 samples (Table 13.1). The feed, concentrate and tailing samples were manually collected from the processing plant by taking cuts two times per day from the cyclone overflow pipe, concentrate launder and tailings pipe respectively. The sampling flow sheet is included in Figure 13.7.

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



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







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



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





Figure 13.6: Processing of Sample Material: Head Sample Point (Left), Concentrate Sampling (Centre), Tails Sampling (Right)









# Figure 13.7: Met Sin Industriales, S.A. De C.V. 70 Tonnes per Day Processing and Sampling Flow Sheet

## 13.2.2 Discussion of Results

During the pilot plant trial, 23.92 metric tonnes (reconciled with the Trafigura smelter in Mexico) of high-grade Ag and Au concentrate was produced, demonstrating that a high grade, Ag-Au concentrate is achievable using standard grinding and flotation processing technologies from the San Juan orebody.





Estimated results of the bulk sampling program indicate that the average Au recovery (based on independent assay data from SGS laboratories) is 65.34% and the average Ag recovery is 69.79% (Table 13.1). 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.

From the accumulated concentrate, homogeneous samples of the final product were taken, giving higher values of Ag and Au, and more consistent assay results. The 16 samples collected from the 27 t concentrate, weighing an average of 1.36 kg each, were analysed at SGS in Durango, Mexico and reported average concentrations of 15,147 g/t Ag and 46.2 g/t Au (Table 13.2). 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 the Company to continue the metallurgical test work program and to investigate further Au and Ag recoveries in more detail. The Company believes that the successful results of the preliminary bulk sample metallurgical test work on the San Juan bulk sample, provide valuable information and inputs towards defining a metallurgical flow sheet for future developments at the Plomosas Project.

Sample type	GR Silver Sample ID	SGS I	aboratory	Recovery - SGS		
		Au_GO_F AG333 g/t	Ag_GO_FAG333 g/t	Au	Ag	
HEAD	21192	1.61	119			
CONCENTRATE	21193	90.63	6,850	84.71%	75.10%	
TAIL	21194	0.25	30			

 Table 13.1: San Juan Bulk Sample - Processing Assay Results and Precious Metal

 Recoveries





Sample type	GR Silver Sample ID	SGS   Reco	aboratory very - SGS	Recove	ery - SGS
		Au_GO_F AG333 g/t	Ag_GO_FAG333 g/t	Au	Ag
HEAD	21196	0.76	146		
CONCENTRATE	21197	67.75	10,138	67.35%	69.01%
TAIL	21198	0.25	46		
HEAD	21199	0.63	150		
CONCENTRATE	21200	39.33	9,016	60.70%	72.57%
TAIL	21202	0.25	42		
HEAD	21203	0.56	147		
CONCENTRATE	21204	58.24	11,965	55.60%	63.27%
TAIL	21205	0.25	54		
HEAD	21206	0.88	174		
CONCENTRATE	21207	46.12	8,867	71.98%	74.75%
TAIL	21208	0.25	45		
HEAD	21209	0.96	185		
CONCENTRATE	21210	47.35	10,980	74.35%	72.47%
TAIL	21212	0.25	52		
HEAD	21213	0.95	243		
CONCENTRATE	21214	34.32	10,524	74.22%	79.70%
TAIL	21216	0.25	50		





Sample type	GR Silver Sample ID	SGS I Reco	aboratory very - SGS	Recovery - SGS	
		Au_GO_F AG333 g/t	Ag_GO_FAG333 g/t	Au	Ag
HEAD	21217	0.74	173		
CONCENTRATE	21218	37.07	10,528	66.67%	72.99%
TAIL	21219	0.25	47		
HEAD	21220	0.89	197		
CONCENTRATE	21222	46.26	10,255	72.30%	75.98%
TAIL	21223	0.25	48		
HEAD	21224	0.25	208		
CONCENTRATE	21225	38.99	15,058		69.41%
TAIL	21226	0.25	64		
HEAD	21227	0.55	203		
CONCENTRATE	21228	31.08	12,385	54.99%	68.91%
TAIL	21229	0.25	64		
HEAD	21230	0.25	194		
CONCENTRATE	21232	31.19	12,452		65.01%
TAIL	21233	0.25	68		
HEAD	21234	0.61	223	59.39%	67.61%





Sample type	GR Silver Sample ID	SGS I Reco	aboratory very - SGS	Recove	ery - SGS
		Au_GO_F AG333 g/t	Ag_GO_FAG333 g/t	Au	Ag
HEAD	21238	0.6	246		
CONCENTRATE	21239	102.77	29,212	58.48%	84.48%
TAIL	21240	0.25	39		
HEAD	21242	0.57	241		
CONCENTRATE	21243	105.04	23,122	56.27%	59.93%
TAIL	21244	0.25	97		
HEAD	21245	0.58	226		
CONCENTRATE	21246	86.73	19,407	57.06%	66.82%
TAIL	21247	0.25	76		
HEAD	21248	0.95	233		
CONCENTRATE	21249	90.47	19,938	73.89%	61.99%
TAIL	21250	0.25	89		
HEAD	21252	0.7	209	64.42%	59.99%
CONCENTRATE	21253	123.81	22,242		
TAIL	21254	0.25	84		
HEAD	21256	0.83	255	70.26%	53.42%
CONCENTRATE	21257	45.78	16,825		
TAIL	21258	0.25	120		





Sample type	GR Silver Sample ID	SGS   Reco	laboratory very - SGS	Recove	ery - SGS
		Au_GO_F AG333 g/t	Ag_GO_FAG333 g/t	Au	Ag
HEAD	21259	0.68	297		
CONCENTRATE	21260	36.63	17,593	63.67%	75.42%
TAIL	21262	0.25	74		
HEAD	21263	0.25	247		
CONCENTRATE	21264	37.91	20,771		67.28%
TAIL	21265	0.25	81		
HEAD	21266	0.58	341		
CONCENTRATE	21267	59.53	33,244	57.14%	74.48%
TAIL	21268	0.25	88		
HEAD	21269	0.63	326		
CONCENTRATE	21270	44.04	27,195	60.66%	71.62%
TAIL	21272	0.25	93		
HEAD	21273	0.25	247		
CONCENTRATE	21274	37.79	24,785	na	60.96%
TAIL	21276	0.25	97		
HEAD	21277	0.25	239		
CONCENTRATE	21278	32.7	32,388		
TAIL	21279	0.25	71		





Sample type	GR Silver Sample	SGS I	aboratory	Recove	ery - SGS
	ID		-		
		Au_GO_F AG333 g/t	Ag_GO_FAG333 g/t	Au	Ag
HEAD	21277	0.25	239		
CONCENTRATE	21278	32.7	32,388	na	70.27%
TAIL	21279	0.25	71		
HEAD	21280	0.25	253		
CONCENTRATE	21282	32.62	24,993	na	73.77%
TAIL	21283	0.25	67		
HEAD	21284	0.25	253		
CONCENTRATE	21285	34.72	28,786	na	65.02%
TAIL	21286	0.25	89		
HEAD	21287	0.25	245		
CONCENTRATE	21288	41.41	36,252	na	63.02%
TAIL	21289	0.25	91		
HEAD	21290	0.25	213		
CONCENTRATE	21292	30.46	25,160	na	64.69%
TAIL	21293	0.25	76		
HEAD	21294	0.25	247		
CONCENTRATE	21296	27.5	15,018	na	78.96%
TAIL	21297	0.25	53		





	GR Silver				
Sample type	Sample	SGS	aboratory	Recove	ery - SGS
	ID				
		Au_GO_F			
		AG333	Ag_00_FA0333	Au	Ag
		g/t	g/t		
HEAD	21298	0.6	10		
CONCENTRATE	21299	251.38	2,822	na	na
TAIL	21300	3.66	50		
HEAD	19379	2.05	32		
CONCENTRATE	19380	215.61	2,818	68.01%	84.55%
TAIL	19381	0.66	5		
			Average	65.34%	69.79%

Table 13.2: 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



Sample No.	Sample Wt. (kg)	Ag (g/t)	Au (g/t)
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		

## 13.3 Metallurgical Testwork by Base Met Labs - 2021

A total of six samples was sent to Base Met Labs in Kamloops, BC, Canada in April 2021. The samples were composited by area: 39 samples from the Plomosas Mine Area were composited into 4 samples (PH1-01, PH1-02, PH1-03 and PH1-04) for testing, and 15 samples from the San Juan Area were composited into 2 samples (SJMT-01 and SJMT-02) for metallurgical testing. The test work was then carried out on each composite.

The samples were chosen 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 Test work comprised of :

- Head assays;
- Bond Ball Mill Work Index (Wi<sub>BM</sub> and HIT Axb);
- Leach tests;
- Rougher Flotation tests;





- Initial Cleaner Flotation tests; and
- Follow-up Cleaner Flotation tests.

#### 13.3.1 Description of Sampling and Preparation - Plomosas Mine Area

Phase 1 metallurgical samples comprised underground channel samples taken inside the Plomosas mine between Levels 775 (lower level) to 862 (intermediate level). Assay results for selected samples combined information from GR Silver and historical samples from Aurcana Corp. For Aurcana Corp 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 Area:

- 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 Ag with Pb-Zn; and
- (4) Plomosas hydrothermal breccia. Massive Pb-Zn replacement with Au.

Table 13.3 summarizes the assay results and individual sample weights for metallurgical composites. Figure 13.8 displays the sample locations.

Metallurgical samples are named "PLMET-PH1-01" which means:

- PL = Plomosas
- MET = Metallurgical
- PH1 = Phase 1
- 01 = Consecutive numbering




## Table 13.3: Summary of Plomosas Mine Area Geochemical Samples Selected forMetallurgical Composite

	POLYMETALLIC (Ag-Au-Cu-Pb-Zn) QZ-SULFIDE VEINS (SOTCKWORK)													
Sample_ld	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.
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	
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	1
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 (NorthEast Wall)	2551924.61	451069.39	706.5	2.00	6.98	237	0.18	1.09	3.26	PLMET-PH1-01	6.56	-
15817	GRSILVER	775 (NorthEast Wall)	2551924.99	451069.03	706.5	0.75	31.72	1104	0.49	26.40	14.10	PLMET-PH1-01	5.25	2
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	-
15050	GRSILVER	775 (Pillar IU) 775 (North Moll)	2551903.71	451063.33	707.5	1.00	21.27	1/5	0.57	3.02	7.03	PLIVET-PHI-01	3.56	
15846	GRSILVER	775 (Noter Wall)	2551808.13	451048.47	705.5	1.00	5.30	75	0.49	2.65	14.10	PLIVET-PH1-01	7.73	3
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							267	1.05	3.32	9.49		55.86	
					Au-Ag (	Z-SULFIDE	EINS (STOC	KWORK)						_
Sample_Id	Assay Results	Location	UTM North	UTM East	Elevation	Length(m)	Au(ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Metallurgical	Weight	Bucket
	Sampler											Gample_id		140.
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	
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	1
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	-
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	2
15838	GRSILVER	775 (North Wall) 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	2
15844	GRSILVER GRSILVER	775 (North Wall) 775 (North Wall)	2551906.64	451046.04	707.5	1.00	2.07	287	0.15	0.28	1.08	PLMET-PH1-02 PLMET-PH1-02	3.60	-
10011	ONDIEVEN	Weig	btod Average	401047.47	700.0	1.00	7.74	239	0.72	0.40	0.71	T EMET TITL OF	35.85	
		Weig	Inted Average					233	0.72	0.55	0.71		55.05	
	Accav				T LOMOS		(Typical Ag	with 1 10-211)						
Sample_Id	Results	Location	UTM North	UTM East	Elevation	Length(m)	Au(ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Metallurgical Sample_ld	Weight	Bucket No.
Sample_ld	Results Sampler	Location	UTM North	UTM East	Elevation	Length(m)	Au(ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Metallurgical Sample_Id	Weight	Bucket No.
Sample_Id 777 758	Aurona Au	Location 825	UTM North 2551843.22 2551832.97	UTM East 451150.68 451126.69	Elevation 752.1	Length(m)	Au(ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)	Metallurgical Sample_Id PLMET-PH1-03 PLMET-PH1-03	Weight 10.82	Bucket No.
Sample_ld 777 758 1193	AURCANA	Location 825 Ramp 2 (800) Level 862 (central)	UTM North 2551843.22 2551832.97 2551861.79	UTM East 451150.68 451126.69 451203.40	Elevation 752.1 734.2 790.2	Length(m) 1.45 0.9 1.1	Au(ppm)	Ag (ppm) 159 235 20	Cu (%)	Pb (%)	Zn (%) 0.64 4.51 5.21	Metallurgical Sample_ld PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01	Bucket No.
Sample_ld 777 758 1193 1194	Results Sampler AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central)	UTM North 2551843.22 2551832.97 2551861.79 2551861.79	UTM East 451150.68 451126.69 451203.40 451203.40	Elevation 752.1 734.2 790.2 789.1	Length(m) 1.45 0.9 1.1 0.6	Au(ppm) 0.38 0.86 0.43 0.20	Ag (ppm) 159 235 20 111	Cu (%) 0.23 0.39 0.07 0.18	Pb (%) 1.86 7.93 4.13 3.12	Zn (%) 0.64 4.51 5.21 1.84	Metallurgical Sample_ld PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49	Bucket No. 1 2
Sample_ld 777 758 1193 1194 1213	Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana	Location           825           Ramp 2 (800)           Level 862 (central)           Level 862 (central)           Level 862 (south)	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551679.67	UTM East 451150.68 451126.69 451203.40 451203.40 451232.90	Elevation 752.1 734.2 790.2 789.1 792.2	Length(m) 1.45 0.9 1.1 0.6 1.2	Au(ppm) 0.38 0.86 0.43 0.20 0.18	Ag (ppm) 159 235 20 111 422	Cu (%) 0.23 0.39 0.07 0.18 0.04	Pb (%) 1.86 7.93 4.13 3.12 0.83	Zn (%) 0.64 4.51 5.21 1.84 1.70	Metallurgical Sample_ld PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29	Bucket No. 1 2
Sample_ld 7777 758 1193 1194 1213 1223	AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central)	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551679.67 2551755.38	UTM East 451150.68 451126.69 451203.40 451203.40 451232.90 451209.01	Elevation 752.1 734.2 790.2 789.1 792.2 791.3	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05	Ag (ppm) 159 235 20 111 422 316	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60	Metallurgical Sample_ld PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56	Bucket No. 1 2 3
Sample_ld 7777 758 1193 1194 1213 1223 1224	AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central)	UTM North 2551843.22 2551832.97 2551861.79 2551679.67 2551755.38 2551754.90	UTM East 451150.68 451126.69 451203.40 451203.40 451232.90 451209.01 451209.01	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07	Ag (ppm) 159 235 20 111 422 316 137	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64	Metallurgical Sample_Id PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51	Bucket No. 1 2 3
Sample_ld 777 758 1193 1194 1213 1223 1224 1228	Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (south) Level 862 (central) Level 862 (central) Level 862 (south)	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551679.67 2551755.38 2551754.90 2551744.75	UTM East 451150.68 451126.69 451203.40 451203.40 451203.90 451209.01 451208.75 451206.94	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2 1.3	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19	Ag (ppm) 159 235 20 111 422 316 137 625	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99	Metallurgical Sample_ld PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12	Bucket No. 1 2 3
Sample_ld 777 758 1193 1194 1213 1223 1224 1228 1229	Assay Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (contral) Level 862 (south) Level 862 (south)	UTM North 2551843.22 2551832.97 2551861.79 2551679.67 2551755.38 2551754.98 2551754.97 2551744.75 2551736.07	UTM East 451150.68 451126.69 451203.40 451203.40 451203.90 451209.01 451208.75 451206.94 451206.36	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3 791.3	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2 1.3 1.1	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19	Ag (ppm) 159 235 20 111 422 316 137 625 160	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23	Metallurgical Sample_Id PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02	Bucket No. 1 2 3 4
Sample_ld 777 758 1193 1223 1224 1228 1229 1237	Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana Aurcana	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 862 (south) Level 862 (south)	UTM North 2551843.22 2551832.97 2551861.79 2551679.67 2551755.38 2551754.90 2551754.90 2551736.07 2551725.77	UTM East 451150.68 451203.40 451203.40 451203.90 451209.01 451208.75 451206.94 451206.36 451207.55	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3 791.3 793.1	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2 1.3 1.1 1.5	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88	Ag (ppm) 159 235 20 111 422 316 137 625 160 99	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68	Metallurgical Sample_Id PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43	Bucket No. 1 2 3 4
Sample_ld 7777 758 1193 1194 1213 1223 1224 1228 1229 1237 1238	Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location           825           Ramp 2 (800)           Level 862 (central)           Level 862 (couth)	UTM North 2551843.22 2551861.79 2551861.79 2551679.67 2551755.38 2551754.90 2551754.90 2551736.07 2551736.07 2551723.49	UTM East 451150.68 451126.69 451203.40 451203.40 451203.01 451208.75 451206.94 451206.94 451207.55 451207.43	Elevation 752.1 734.2 790.2 789.1 791.3 791.3 791.3 791.3 793.1	Length(m) 1.45 0.9 1.1 0.6 1.2 1.3 1.2 1.3 1.1 1.5 1.2 1.2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 1.89	Ag (ppm) 159 235 20 111 422 316 137 625 160 99 232	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04 0.03	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 0.69	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68 1.97	Metallurgical Sample_Id PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59	Bucket No. 1 2 3 4 5
Sample_ld 7777 758 1193 1194 1213 1223 1224 1228 1229 1237 1238	Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location           825           Ramp 2 (800)           Level 862 (central)           Level 862 (couth)	UTM North 2551843.22 2551832.97 2551861.79 2551661.79 2551679.67 2551755.38 2551754.90 2551744.75 2551726.77 2551723.49 thed Average	UTM East 451150.68 451120.40 451203.40 451203.40 451203.70 451208.75 451208.75 451206.94 451206.94 451206.94 451207.55 451207.43	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3 791.3 793.1 793.1	Length(m) 1.45 0.9 1.1 0.6 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 1.89 0.70	Ag (ppm) 159 235 20 111 422 316 137 625 160 99 232 235	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04 0.03 0.10	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 0.69 2.01	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68 1.97 2.64	Metallurgical Sample_Id PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03 PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59 <b>93.37</b>	Bucket No. 1 2 3 4 5
Sample_ld 7777 758 1193 1213 1223 1224 1228 1229 1237 1238	Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 862 (south) Level 862 (south) Level 862 (south) Weig	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551867.96 2551755.38 2551755.38 2551754.90 2551744.75 2551746.07 2551723.49 htted Average	UTM East 451150.68 451120.40 451203.40 451203.40 451209.01 451208.75 451206.36 451207.43 PLOMO2	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3 791.3 791.3 793.1 793.1	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2 1.3 1.1 1.5 1.2 2.2 1.10 1.2 1.3 1.1 1.5 1.2 1.2 1.1 1.2 1.3 1.1 1.2 1.3 1.1 1.2 1.3 1.1 1.2 1.3 1.1 1.2 1.3 1.2 1.2 1.3 1.1 1.2 1.3 1.2 1.3 1.2 1.3 1.2 1.3 1.2 1.3 1.2 1.3 1.2 1.3 1.2 1.3 1.2 1.2 1.3 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.2 1.3 1.2 1.2 1.2 1.2 1.3 1.2 1.2 1.2 1.2 1.3 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 1.89 0.70 b-Zn sulfides	Ag (ppm) 159 235 20 1111 422 316 137 625 160 99 232 235 replacement	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04 0.03 0.10 t with Au	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 0.69 2.01	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68 1.97 2.64	Metallurgical Sample_Id           PLMET-PH1-03	Weight 10.82 6.53 7.01 7.49 6.56 6.51 12.12 9.02 10.43 11.59 <b>93.37</b>	Bucket No.           1           2           3           4           5
Sample_ld 777 758 1193 1194 1213 1223 1224 1228 1229 1237 1238 Sample_ld	Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA Sampler	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 862 (south) Level 862 (south) Level 862 (south) Level 862 (south) Level 862 (south) Level 862 (south)	UTM North 2551843.22 2551832.97 2551861.79 2551679.67 255175.38 255175.38 255175.38 2551724.90 2551723.49 hted Average UTM North	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451208.94 451208.94 451208.94 451208.94 451207.55 451207.43 PLOMOS	Elevation 752.1 734.2 790.2 799.1 792.2 791.3 791.3 791.3 791.3 793.1 793.1 793.1 Elevation	Length(m) 1.45 0.9 1.1 1.2 1.15 1.2 1.3 1.1 1.5 1.2 Length(m)	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 1.89 0.70 b-Zn sulfides Au(ppm)	Ag (ppm) 159 235 20 111 422 316 137 625 160 99 232 235 replacement Ag (ppm)	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04 0.03 0.10 t with Au Cu (%)	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 0.69 2.01 Pb (%)	Zn (%) 0.64 4.51 1.84 1.70 0.64 1.97 2.64 Zn (%)	Metallurgical Sample_ld PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight	Bucket No. 1 2 3 4 5 5 Bucket No.
Sample_ld 777 758 1193 1194 1213 1223 1224 1228 1229 1237 1238 Sample_ld 935	Assay Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 863 (south) Level 863 (south) Level 864 (south) Level 865 (south)	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551867.96 2551763.90 2551754.90 2551726.77 2551726.77 2551723.79 hted Average UTM North 2551905.52	UTM East 451150.68 4511203.40 451203.40 451203.40 451208.75 451208.75 451208.75 451206.38 451207.45 451207.43 PLOMO: UTM East 451106.97	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3 791.3 793.1 8AS BRECC Elevation 731.8	Length(m) 1.45 0.9 1.1 0.6 1.2 1.2 1.3 1.1 1.5 1.2 1.2 1.2 Length(m) 0.5	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 1.89 0.70 b-Zn sulfides Au(ppm) 4.05	Ag (ppm) 159 235 20 111 422 316 137 625 160 99 232 235 creptacement Ag (ppm) 86	Cu (%) 0.23 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04 0.03 0.10 t with Au Cu (%) 0.10	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 0.69 2.01 Pb (%) 28.55	Zn (%) 0.64 4.51 5.21 1.84 1.70 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30	Metallurgical Sample_ld PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-03 PLMET.PH1-04 PLMET.PH1-04 PLMET.PH1-04	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59 <b>93.37</b> Weight 8.52	Bucket No. 1 2 3 4 5 5 Bucket No.
Sample_ld 777 758 1193 1194 1213 1223 1224 1228 1229 1237 1238 Sample_ld 935 939	Assay Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 863 Location	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 255175.38 255175.38 255175.38 255174.75 2551723.49 hted Average UTM North 2551905.52 255188.20	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451208.75 451206.94 451206.94 451207.55 451207.43 PLOMOS UTM East 451106.97 451106.97	Elevation 752.1 734.2 790.2 799.1 792.2 791.3 791.3 791.3 791.3 793.1	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2 1.3 1.1 1.5 1.2 (A massive P Length(m) 0.5 2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.88 1.89 0.70 0.72 s.71 suffices Au(ppm) 4.05 2.62	Ag (ppm) 159 235 20 1111 422 316 137 625 160 99 232 235 replacement Ag (ppm) 86 73	Cu (%) 0.23 0.39 0.07 0.04 0.04 0.07 0.04 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02 0.01 0.02	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 0.69 2.01 Pb (%) 28.55 25.52	Zn (%) 0.64 4.51 5.21 1.60 0.64 1.70 1.60 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26	Metallurgical Sample_ld           PLMET-PH1-03           PLMET-PH1-04           PLMET-PH1-03           PLMET-PH1-04           PLMET-PH1-04           PLMET-PH1-04	Weight 10.82 6.53 7.01 5.29 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight 8.52 4.41	Bucket No. 2 3 4 5 5 8 8 8 0 8 0 8 0 1
Sample_ld 777 758 1193 1194 1223 1224 1228 1228 1238 Sample_ld 935 939 928	Assay Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (contral) Level 863 (contral) Level 865 (contral) L	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551755.38 2551755.38 2551756.37 2551723.49 httd Average UTM North 2551905.52 2551888.20	UTM East 451150.68 451120.89 451203.40 451203.40 451208.75 451208.75 451206.94 451206.36 451207.43 PLOMO: UTM East 451106.97 451102.47 851106.97 451102.47 851106.97 451024.78 151123.17 15112	Elevation 752.1 734.2 790.2 791.3 791.3 791.3 793.1 793.1 793.1 Elevation 731.8 732.4 713.7	Length(m) 1.45 0.9 1.1 0.6 1.2 1.3 1.1 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.5 2 2 2 2 2 2 2 2 2 2 2 2 2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 0.70 D.70	Ag (ppm) 159 235 20 1111 422 316 137 625 160 99 232 235 replacemen Ag (ppm) 86 73 31	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.04 0.07 0.04 0.07 0.04 0.03 0.10 t with Au Cu (%) 0.12 0.12	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.25 1.99 2.01 Pb (%) 28.55 25.55 2.33	Zn (%) 0.64 4.51 5.21 1.84 1.70 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26 4.74	Metallurgical Sample_dd           PLMET.PH1-03           PLMET.PH1-04           PLMET.PH1-03           PLMET.PH1-04           PLMET.PH1-04           PLMET.PH1-04           PLMET.PH1-04           PLMET.PH1-04           PLMET.PH1-04           PLMET.PH1-04           PLMET.PH1-04	Weight 10.82 6.53 7.01 5.29 6.56 6.51 12.12 9.02 9.3.37 Weight 8.52 4.41 6.05	Bucket No. 1 2 3 4 5 5 5 8 8 8 8 0 8 1
Sample_ld 777 756 11193 11194 1213 1224 1228 1224 1228 1229 1237 1238 Sample_ld 935 939 922 932	Aurcana Aurcana	Location           825           Ramp 2 (800)           Level 862 (central)           Level 862 (couth)           Level 862 (couth)           Level 815           Level 815           Level 815           Level 815	UTM North 2551843.27 2551832.97 2551861.79 255167.967 2551756.38 2551756.38 2551754.90 2551723.49 hted Average UTM North 2551905.52 2551884.12 2551988.20 2551884.12	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451206.94 451206.94 451206.94 451207.43 PLOMO2 UTM East 451106.97 451103.77 4511094.78 4511094.78	Elevation 752.1 734.2 790.2 789.1 791.3 791.3 791.3 793.1 79	Length(m) 1.45 0.9 1.1 0.6 1.2 1.15 1.2 1.3 1.1 1.5 1.2 Length(m) 0.5 2 2 2 2 2 2 2 2 2 2 2 2 2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 1.89 0.70 b-Zn sulfides Au(ppm) 4.05 2.62 1.19 1.99	Ag (ppm) 159 235 20 1111 422 316 25 160 99 235 replacement Ag (ppm) 86 73 31 44	Cu (%) 0.23 0.39 0.07 0.04 0.07 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.12	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 1.99 0.69 2.01 Pb (%) 28.55 25.52 2.33 6.28	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26 4.74 11.27	Metallurgical Sample_ld           PLMET.PH1-03           PLMET.PH1-04	Weight 10.82 6.53 7.01 7.49 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight 8.52 4.41 6.05 5.83	Bucket No. 1 2 3 4 5 5 5 5 5 5 7 8 8 8 8 8 8 8 8 8 8 8 8 8
Sample_ld 777 758 1193 1194 1213 1223 1224 1229 1237 1238 Sample_ld 935 939 928 936	Assay Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 863 Reamp 2 (800) Level 815 Level 815	UTM North 2551843.22 2551803.97 2551861.79 2551861.79 255167.9.67 2551755.38 2551755.38 2551723.49 2551723.49 Htel Average UTM North 2551906.52 2551888.20 2551905.30 2551905.32	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451206.36 451207.43 PLOMO: UTM East 451106.97 451106.97 451106.97 451106.47 451106.68	Elevation 752.1 734.2 789.1 790.2 791.3 791.3 791.3 793.1 793.1 793.1 793.1 <b>5AS BRECC</b> Elevation 731.8 732.4 732.4 732.4 732.3	Length(m) 1.45 0.9 1.1 1.2 1.3 1.1 1.5 1.2 Longth(m) 0.5 2 1.2 1.5 1.2 Longth(m)	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.89 0.70 b-Zn sulider Au(ppm) 4.05 2.66 1.19 1.99 2.86	Ag (ppm) 159 235 20 111 422 316 625 160 99 232 235 creptecemen Ag (ppm) 86 73 31 44 54	Cu (%) 0.23 0.39 0.07 0.04 0.07 0.04 0.07 0.04 0.07 0.04 0.03 0.10 t with Au Cu (%) 0.10 0.12 0.12 0.24	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.26 1.99 0.69 2.01 Pb (%) Pb (%) 28.55 25.52 2.33 6.26 14.92	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26 4.74 11.77 2.04	Metallurgical Sample_dt           PLMET.PH1-03           PLMET.PH1-04           PLMET.PH1-05           PLMET.PH1-04	Weight 10.82 6.53 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight 8.52 4.41 6.05 5.83 6.76	Bucket No. 1 2 3 4 5 5 5 5 5 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Sample_ld 777 758 11193 11193 1223 1224 1228 1228 1227 1238 1237 1238 Sample_ld 935 939 928 935 939 928 935 939 928 935	Aurcanka Aurcanka	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 863 (south) Level 815 Level 815	UTM North 2551843.22 2551861.79 2551861.79 2551861.79 2551753.39 2551754.90 255174.90 2551723.49 httd Average UTM North 2551905.52 2551888.20 2551888.20 2551915.30 2551903.85	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451206.94 451206.94 451206.35 451207.43 PLOMOS UTM East 451106.97 451103.478 451094.78 451094.78 451094.78 451096.01	Elevation 752.1 734.2 790.2 789.1 792.2 791.3 791.3 791.3 793.1 793.1 793.1 793.1 793.1 793.1 793.1 793.1 732.2 Elevation 731.8 732.4 732.3 730.9 716.5	Length(m) 1.45 0.9 1.1 0.6 1.2 1.3 1.5 1.2 1.3 1.5 1.2 1.2 1.3 1.1 Length(m) 0.5 2 1.25 1.25 1.2 1.3 1.1 Length(m) 0.5 2 1.25	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.07 0.19 1.19 1.88 0.70 D-Zn sufficter Au(ppm) D-Zn sufficter 4.05 2.62 1.19 1.99 2.86 1.42	Ag (ppm) 159 235 20 111 422 316 137 625 160 99 235 5 replacement Ag (ppm) 86 73 31 44 54	Cu (%) 0.23 0.39 0.07 0.01 0.04 0.07 0.01 0.06 0.07 0.04 0.03 0.07 0.04 0.03 0.10 t with Au Cu (%) 0.12 0.12 0.12 0.24	Pb (%) 1.86 7.93 4.13 1.67 0.43 1.67 1.25 1.99 0.69 2.01 Pb (%) 28.55 25.52 2.33 6.26 14.92 3.60	Zn (%) 0.64 4.51 5.21 1.84 1.70 1.60 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26 4.74 11.27 20.72	Metallurgical Sample_Id           PLMET.PH1-03           PLMET.PH1-04	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight 8.52 4.41 6.58 5.83 6.76 4.66	Bucket No. 1 2 3 4 5 5 5 8 ucket No. 1 1 2 2 3
Sample_ld 777 758 1193 1194 1213 1224 1223 1224 1229 1227 1237 1238 Sample_ld 935 939 928 935 936 936 888	Results Sampler AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA AURCANA	Location      825     Ramp 2 (800)     Level 862 (central)     Level 862 (central)     Level 862 (central)     Level 862 (south)     Level 815     Level 815     Level 815     Level 815     Ramp 2 (800)     Level 815     Ramp 2 (800)	UTM North 2551843.22 2551832.97 2551861.79 2551861.79 2551861.79 2551755.38 2551754.75 2551723.49 ted Average UTM North 2551905.52 2551888.20 2551884.12 2551915.30 2551918.47	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451208.75 451206.94 451206.36 451207.43 PLOMO: UTM East 451106.97 451123.17 451104.78 451106.68 4511098.01	Elevation 752.1 734.2 790.2 790.2 791.3 791.3 791.3 793.1 793.1 793.1 5AS BRECC Elevation 731.8 732.4 713.7 732.9 713.7 730.9 716.5	Length(m) 1.45 0.9 1.1 1.2 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.89 0.70 b-2n suffices Au(ppm) 4.05 2.62 1.19 1.99 2.66 1.42 2.66 1.42 2.66	Ag (ppm) 159 235 20 111 422 316 137 625 160 232 235 replacement Ag (ppm) 86 73 31 44 45 44 54 42 78	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.04 0.07 0.04 0.03 0.10 t with Au Cu (%) 0.12 0.12 0.12 0.12 0.24 0.13	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.54 1.29 0.69 2.69 2.69 2.55 2.55 2.53 6.26 14.92 3.60	Zn (%) 0.64 4.51 5.21 1.84 1.70 0.64 1.99 3.23 5.68 Zn (%) 32.30 20.26 4.74 11.27 20.72 20.72 12.24 18.87	Metallurgical Sample_dt           PLMET.PH1-03           PLMET.PH1-04	Weight           10.82           6.53           7.01           7.49           5.29           6.56           6.51           12.12           9.02           10.43           11.59           93.37           Weight           8.52           4.41           6.05           5.83           6.76           4.66           2.94	Bucket No. 2 3 4 5 5 5 5 5 5 7 1 2 2 3
Sample_ld 777 758 1193 1194 1213 1224 1224 1229 1237 1224 1238 Sample_ld 935 939 922 935 939 932 935 939 932 935 939 935 939 932 935 939 935 935 939 935 935 935 935 935	Aurcana Aurcana	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (south) Level 862 (south) Level 862 (south) Level 862 (south) Level 863 Location Level 815	UTM North 2551843.22 2551861.79 2551861.79 2551861.79 255175.38 255175.38 255175.38 255175.38 2551723.49 1251723.49 htted Average UTM North 2551905.52 2551888.20 2551888.20 2551918.47 2551918.47 2551918.47 2551918.47	UTM East 451150.68 451126.69 451203.40 451203.40 451208.75 451208.75 451208.75 451208.75 451206.34 451207.43 PLOMOS UTM East 451106.97 451123.17 451104.78 451106.97 451123.07 451123.07 451098.01 451098.01 451098.01 451098.01	Elevation 752.1 734.2 790.2 799.2 791.3 791.3 791.3 793.1 793.1 793.1 793.1 <b>SAS BRECC</b> Elevation 731.8 732.4 732.3 730.9 716.5 719.0	Length(m) 1.45 0.9 1.1 0.6 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.3 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.3 1.5 1.2 1.1 1.5 1.2 1.3 1.5 1.2 1.3 1.5 1.2 1.3 1.5 1.2 1.3 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.1 1.5 1.2 1.3 1.5 1.2 1.3 1.5 1.2 1.3 1.5 1.2 1.5 1.2 1.5 1.2 1.5 1.2 1.5 1.2 1.5 1.2 1.5 1.5 1.2 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Au(ppm) 0.38 0.86 0.43 0.20 0.18 0.05 0.07 0.19 1.19 1.88 0.70 0.72 s.27 sufficient Au(ppm) 4.05 2.62 1.19 1.99 2.86 1.42 1.42 2.66 3.322	Ag (ppm) 159 235 20 1111 422 316 137 625 160 99 232 235 replacement Ag (ppm) 86 73 31 44 44 42 78 85	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.07 0.01 0.06 0.07 0.04 0.03 0.10 0.03 0.10 0.12 0.12 0.12 0.12 0.12 0.12 0.13 0.06 0.13 0.06 0.07 0.04 0.07 0.04 0.06 0.07 0.04 0.06 0.07 0.04 0.06 0.07 0.04 0.06 0.07 0.04 0.07 0.10 0.10 0.10 0.12 0.12 0.12 0.12 0.12 0.13 0.06 0.13 0.10 0.12 0.12 0.13 0.06 0.13 0.06 0.14 0.15	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 1.25 1.99 0.69 2.01 Pb (%) 28.55 25.52 2.33 6.26 14.92 3.60 5.89 10.70	Zn (%) 0.64 4.51 5.21 1.84 1.70 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26 4.74 11.27 20.72 2.24 18.87 27.60	Metallurgical Sample_ld           PLMET.PH1-03           PLMET.PH1-04	Weight 10.82 6.53 7.01 7.49 5.29 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight 8.52 4.41 6.05 5.83 6.76 6.75 6.7	Bucket No. 1 2 3 4 5 5 8 8 0 8 0 8 0 1 1 2 2 3 3
Sample_ld 777 759 1193 1194 1213 1224 1224 1229 1227 1224 1229 1227 1237 1238 Sample_ld 939 939 928 939 939 939 939 939 939 939 93	Results Sampler AURCANA	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (south) Level 863 (south) Ramp 2 (800) Ramp 2 (800) Ramp 2 (800) 775 (East Wall) 775 (East Wall)	UTM North 2551843.22 2551861.79 2551861.79 2551861.79 2551861.79 255175.39 255175.39 2551725.77 2551725.77 2551725.77 2551725.77 2551725.77 2551725.77 2551725.77 2551725.77 2551725.77 2551905.52 2551905.52 2551905.52 25519184.72 2551918.47 2551918.47 2551918.47 2551918.47 2551918.47 2551918.47 2551918.47 25519120.80	UTM East 451150.68 451126.69 451203.40 451203.40 451203.41 451208.75 451208.75 451208.75 451207.43 451207.45 451207.45 451207.45 451207.45 451207.45 451207.45 451208.45 451208.45 451208.45 451108.47 451108.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451208.45 451108.45 4	Elevation 752.1 734.2 790.2 791.3 791.3 791.3 793.1 793.1 793.1 <b>SAS BRECC</b> Elevation 732.4 713.7 732.3 730.9 732.5 719.0 719.0 702.0	Length(m) 1.45 0.9 1.1 0.6 1.2 1.2 1.2 1.2 1.3 1.1 1.5 1.1 1.5 1.1 1.5 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.1 1.5 1.5	Au(ppm) 0.38 0.86 0.43 0.20 0.70 0.19 1.88 1.89 0.70 0.70 0.70 0.79 1.19 1.88 1.89 0.70 0.7	Ag (ppm) 159 235 20 111 1422 316 137 625 160 99 235 replacement Ag (ppm) 96 73 31 44 45 44 54 45 55 55 85 93	Cu (%) 0.23 0.39 0.07 0.04 0.07 0.04 0.03 0.09 0.04 0.03 0.10 0.04 0.03 0.10 0.04 0.07 0.04 0.07 0.04 0.07 0.07 0.04 0.07 0.07 0.04 0.07 0.07 0.04 0.01 0.04 0.02 0.01 0.04 0.02 0.02 0.04 0.02 0.04 0.01 0.04 0.02 0.02 0.04 0.02 0.02 0.04 0.02 0.04 0.02 0.02 0.04 0.02	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.63 1.99 0.69 2.01 Pb (%) 28.55 25.52 2.33 6.26 4.92 3.69 3.69 3.69 14.10	Zn (%) 0.64 4.51 5.21 1.84 1.70 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 3.23 2.64 4.74 1.1.27 20.26 4.74 1.1.27 20.26 4.74 1.1.27 20.26 4.74 1.1.27 20.26 4.74 1.2.24 18.87 18.87 2.66 3.00 20.26 4.74 1.1.27 2.64 3.00 20.26 3.00	Metallurgical Sample_dt           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-03           PLMET.PH1-04           PLMET.PH1-04	Weight           10.82           6.53           7.01           7.20           6.56           6.51           12.12           9.02           10.43           11.59           9.3.37           Weight           8.52           4.41           4.85           6.76           6.83           6.76           4.85           4.83           4.83	Bucket No. 1 2 3 4 5 5 5 5 5 5 7 7 8 8 8 8 8 8 8 8 8 8 8 8
Sample_ld 777 758 11193 11194 1213 1224 1228 1229 1237 1238 Sample_ld 935 939 932 932 932 932 933 899 15865 15865	Aurcana Aurcana	Location 825 Ramp 2 (800) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (central) Level 862 (south) Level 815 Ramp 2 (800) 775 (East Wall) 775 (East Wall)	UTM North 2551843.22 2551861.79 2551861.79 2551861.79 2551861.79 255175.38 255175.38 2551754.90 2551723.49 httel Average UTM North 2551905.52 2551888.20 2551888.20 2551888.20 2551918.47 2551918.00 255192180 2551925180 2551925185 255195185 255195185 255195	UTM East 451150.68 451126.69 451203.40 451203.40 451209.01 451208.75 451208.75 451206.36 451207.43 PLOMOS UTM East 451106.97 451106.97 451105.09 451106.88.01 451098.01 451098.01 451098.07 45	Elevation 752.1 734.2 790.2 790.2 791.3 791.3 791.3 793.1 793.1 793.1 5AS BRECC Elevation 731.8 732.4 713.7 732.9 716.5 719.0 703.6 702.0	Length(m) 1.45 0.9 1.1 1.2 1.15 1.2 1.3 1.1 1.5 1.2 IA massive P Length(m) 0.5 2 2 2 1.5 1.3 0.5 1 1 1 1 1 1 1 1 1 1 1 1 1	Au(ppm) 0.38 0.86 0.43 0.20 0.018 0.05 0.07 1.19 1.88 0.70 b-Zn sulfidet Au(ppm) 4.05 2.62 1.19 1.99 2.86 1.42 2.86 1.42 2.86 1.42 2.86 1.42 2.87 7.97 1.97 1.97 1.99 1.92 1.99 1.97 1.99 1.99 1.99 1.99 1.97 1.99 1.99 1.99 1.99 1.99 1.99 1.99 1.99 1.99 1.99 1.97 1.99 1.97 1.99 1.99 1.97 1.99 1.92 1.99 1.97 1.99 1.92 1.99 1.92 1.97 1.99 1.92 1.97 1.99 1.92 1.97 1.99 1.92 1.97 1.97 1.99 1.97 1.97 1.97 1.97 1.99 1.97 1.97 1.97 1.97 1.97 1.99 1.97 1.97 1.97 1.97 1.97 1.97 1.97 1.99 1.97	Ag (ppm) 159 235 20 111 422 316 137 625 625 160 99 233 6 235 6 replacement Ag (ppm) 86 73 31 44 44 44 45 62 59 93 93 86 73 31 42 73 73 73 73 73 73 73 73 73 73	Cu (%) 0.23 0.39 0.07 0.18 0.04 0.06 0.07 0.04 0.03 0.09 t with Au Cu (%) 0.10 0.12 0.04 0.0	Pb (%) 1.86 7.93 4.13 3.12 0.83 1.67 0.43 0.54 1.29 0.69 2.01 Pb (%) 28.55 25.52 2.33 6.26 14.92 3.60 5.89 10.70 14.90 28.50	Zn (%) 0.64 4.51 5.21 1.84 1.70 0.64 1.99 3.23 5.68 1.97 2.64 Zn (%) 32.30 20.26 4.74 11.27 20.72 12.24 18.77 27.60 30.00 20.10	Metallurgical Sample_dd           PLMET.PH1-03           PLMET.PH1-04	Weight 10.82 6.53 7.01 7.49 6.56 6.51 12.12 9.02 10.43 11.59 93.37 Weight 8.52 4.41 6.05 5.83 6.76 4.66 2.94 4.66 2.94 6.59 6.59 6.59 7.01 7.49 7.4	Bucket No. 1 2 3 4 5 5 5 5 5 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8



Figure 13.8: Plomosas Mine - Location of Individual Samples from Different Underground Levels with Metallurgical Composite Samples Shown by Same Colours





## 13.3.2 Description of Sampling and Preparation – San Juan Area

For this sampling phase for San Juan Area metallurgy, two samples SJMT-01 and SMT-02 were collected, which were made up of channel samples with previous results, most of which had been collected originally by GR Silver and the remainder by Aurcana.

	SJMT-01											
Proyecto	Target	Compañía	Muestra	Au ppm	Ag ppm	Pb ppm	Zn_ppm	peso (kg)	Total kg			
Plomosas	San Juan	GRS	GR_14522	0.057	497	18700	32000	1.81				
Plomosas	San Juan	GRS	GR_14523	0.021	35	7269	13400	2.07				
Plomosas	San Juan	GRS	GR_14524	0.029	34	8900	17800	1.17	-			
Plomosas	San Juan	GRS	GR_14552	0.163	23	18500	4895	4.12				
Plomosas	San Juan	GRS	GR_14553	0.018	22	8383	20700	3.87	31			
Plomosas	San Juan	GRS	GR_15553	0.086	16	3299	18500	5.04				
Plomosas	San Juan	GRS	GR_15554	0.166	12	19000	15000	3.01				
Plomosas	San Juan	GRS	GR_15556	0.107	49	4942	12900	7.34				
Plomosas	San Juan	GRS	GR_15562	0.022	42	13800	17800	2.57				
			Promedio	0.074	81	11421	16999					

Table 13.4: Summary of San Juan Area Geochemical Samples Selected for MetallurgicalComposites

	SJMT-02										
Proyecto	Target	Compañía	Muestra	Au ppm	Ag ppm	Pb %	Zn %	peso (Kg)	Total kg		
Plomosas	San Juan	Aurcana	SJ-196	1.61	117	0.2	0.37	6.17			
Plomosas	San Juan	Aurcana	SJ-291	5.9	1167	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	30.54		
Plomosas	San Juan	GRS	GR_14554	0.112	1257	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	1024	0.5481	0.2437	3.8			
			Promedio	1.52	678	0.20	0.23				

The samples were taken at different points within the San Juan tunnel due to the specifications requested regarding the preferred grade levels.









## 13.4 Testwork Description

Upon receipt at Base Met Labs, the samples were crushed and sampled for head grade analysis. Each sample was assayed twice (called 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.

Products				Element			
	Cu	Pb	Zn	Fe	Au	Ag	S
Method	FAAS	FAAS	FAAS	FAAS	FAAS	FAAS	LECO
Units	%	%	%	%	g/t	g/t	%
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	

Table 13.5 – Sample Head Assay



The assayed grades of the samples generally agreed with the expected grades with respect to low, medium, and high values, but it should be noted that there were significant differences between the expected value and the assayed value. The grade differences were not considered a concern as the expected values were simply provided to assist with sample collection and compositing.

## 13.5 Discussion of Results

## 13.5.1 Comminution Testwork

The comminution parameters Bond Ball Mill Work Index ( $Wi_{BM}$ ), and Axb (HIT test method) were measured for each of the six samples.

The  $Wi_{BM}$  used a closing size of 105  $\mu$ m for the test, which is a little finer than the flotation testwork was conducted. This will result in the actual work index to be a little lower for each of the samples if the grind size is maintained at 100  $\mu$ m.

Sample	Wi <sub>BM</sub>	<b>Wi</b> вм <b>P</b> 80	HIT Axb	HIT Axb	HIT Axb
Sample	kWhr/t	um	Α	В	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

#### Table 13.6: Ore Hardness Test Results

The results from the comminution testing, shown in **(Table 13.6)** indicate that the Plomosas deposit is generally considered very hard, except for PH1-04 which is considered to be soft. The results for the San Juan deposit indicate that this mineralized material is a little above average in terms of hardness.



## 13.5.2 Flotation Testwork

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

A summary of the recoveries can be found in **Table 13.7** and the corresponding concentrate grades in **Table 13.8**.

Sample Name		Concentrat	Concentrate 2 Grade (% or g/t)					
hame	Cu	Pb	Zn	Au	Ag	Zn	Au	Ag
PHI-01	6.87	26.48	29.97	107.7	2143	61.58	4.01	90
PHI-02	6.90	3.72	12.19	110.0	1114			
PHI-03	0.65	31.63	11.06	3.7	2103	50.20	2.33	1848
PHI-04	0.10	55.60	21.40	5.4	142.0	55.39	2.58	51
SJMT-01	0.53	52.20	16.92	6.1	2171			
SJMT-02	0.10	2.02	2.62	9.5	1828			

#### **Table 13.7: Flotation Test Summary – Recoveries**



Sample Name		Concentrat	Concentrate 2 Grade (% or g/t)					
Humo	Cu	Pb	Zn	Au	Ag	Zn	Au	Ag
PHI-01	6.87	26.48	29.97	107.7	2143	61.58	4.01	90
PHI-02	6.90	3.72	12.19	110.0	1114			
PHI-03	0.65	31.63	11.06	3.7	2103	50.20	2.33	1848
PHI-04	0.10	55.60	21.40	5.4	142.0	55.39	2.58	51
SJMT-01	0.53	52.20	16.92	6.1	2171			
SJMT-02	0.10	2.02	2.62	9.5	1828			

## Table 13.8: Flotation Test Summary – Concentrate Grades

## **13.5.3 Metallurgical Assumptions**

The metal recoveries and concentrate grades assumed for the resource report can be found in Table 13.8 for the Plomosas Mine Area and Table 13.9 for the San Juan deposit. 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). In both cases, a single precious metals concentrate is produced.



Parameter	Unit	Value
Process Recovery		
Cu Recovery	%	80
Pb Recovery	%	69
Zn Recovery	%	75
Au Recovery	%	86
Ag Recovery	%	74
Concentrate Grade		
Cu	%	6.9
Pb	%	3.7
Zn	%	12.2
Au	g/t	110
Ag	g/t	1114

## Table 13.9: Plomosas Mine Area Recovery and Concentrate Grade Estimates



Parameter	Unit	Value
Process Recovery		
Cu Recovery	%	26
Pb Recovery	%	58
Zn Recovery	%	47
Au Recovery	%	79
Ag Recovery	%	71
Concentrate Grade		
Cu	%	0.5
Pb	%	13.2
Zn	%	13.6
Au	g/t	69
Ag	g/t	12,460

 Table 13.10:
 San Juan Recovery and Concentrate Grade Estimates



Sample Name	Feed Grade					Precious Metals Concentrate Recovery				Zinc Concentrate Recovery		
	Cu	Pb	Zn	Au	Ag	Cu	Pb	Zn	Au	Ag	Zn	Ag
PHI-01	0.81	3.31	9.75	11.1	270.4	69.88	65.59	25.23	79.60	65.05	50.42	2.65
PHI-02	0.62	0.39	1.16	9.2	108.5	80.29	68.69	75.43	85.90	73.72		
PHI-03	0.12	4.64	3.03	0.6	334.1	60.28	78.53	42.12	72.51	72.51	37.56	12.52
PHI-04	0.13	13.97	18.32	2.0	49.9	15.80	80.39	23.61	54.60	57.49	36.11	12.12
SJMT-01	0.02	1.25	1.24	0.2	58.0	31.60	61.21	20.04	50.00	54.77		
SJMT-02	0.03	0.42	0.54	1.4	358.5	45.26	69.74	69.94	85.41	81.95		

Table 13.11: Flotation Test Summary – Recoveries for Plomosas Mine and San Juan Areas



## 14 MINERAL RESOURCE ESTIMATE

#### 14.1 Introduction

As previously described, there are currently 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 (mining, taxation, environmental, human resources and related issues) and/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 represents the first resource evaluation at the Plomosas Project for GR Silver. The resource evaluation incorporates all drilling completed by IMMSA, Aurcana, First Majestic and GR Silver to the effective date of this Technical Report. In the opinion of the QP, the block model resource estimates reported herein 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 generally accepted CIM "Estimation and Mineral Resource and Mineral Reserve Best Practices" guidelines. 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 resource estimates were completed by Dr. Gilles Arseneau, P. Geo. (APEGBC#23474) an independent qualified person as defined by NI 43-101 working for ARSENEAU Consulting Services Inc. operating under APEGBC permit to practice number 1000256.

This section describes the work undertaken by the QP and key assumptions and parameters used to prepare the initial mineral resource model for the Plomosas Mine and San Juan Areas, together with appropriate commentary regarding the merits and possible limitations of such assumptions.

The database used to estimate the Plomosas Mine and San Juan Areas mineral resources was reviewed and audited by the QP. Mineralization boundaries were modelled by the



QP 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 6.8.4 for generating the base and precious metal mineralization solids, a topography surface, and resource estimation. Statistical analysis and resource validations were carried out with non-commercial software and with Sage.



#### 14.2 Resource Database

The Plomosas Project database was provided to the QP in CSV format. The current drill hole database consists of over 100,672 m of drilling from 476 historical drill holes and 80 GR Silver drill holes. The resource model is limited to the Plomosas Mine Area and the San Juan Area. The San Juan Area also includes La Colorada, which occupies the same block model space. Within the Plomosas Mine model area, there are a total of 70,635.9 metres of drilling from 353 drill holes. The San Juan model area includes 35,754.33 metres of drilling from 167 holes.

A topography surface was created using LIDAR technology.

Bulk specific gravity was determined by the GR Silver geology staff using the water immersion method. A total of 6,881 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 couldn't be estimated, a background value based on rock type was used to fill the un-estimated blocks based on the information in Table 14-1.

Zone	Bulk Density (tonnes/m³)
Plomosas	2.58
San Juan	2.69
La Colorada	2.62
Waste Rock	2.58

Table 14-1: Bulk Density Averages by Area



## 14.3 Exploration Data Analysis

The portion of the deposit included in the mineral resource was sampled by a total of 19,963 assays. Assay information was provided for silver, gold, lead, zinc, and copper. Partial analyses were provided for other 30 elements.

Rock codes were assigned to raw data set accordingly to geological units and main mineralization styles. Table 14.2 summarize rock codes and domains

Domain	Rock code	Description
	Plomosas I	Mine Area
Pb+Zn>0.5%*	1300	Plomosas Footwall
	1200	Plomosas Breccia
	1100	Plomosas Hanging wall
Au Only	200	Central Gold Zone
	210	Upper Gold Zone
	220	Lower Gold Zone
Waste	99	Waste Host Rock (Andesite)
	San Jua	n Area
Pb+Zn>0.5%*	500	San Juan Main
	510	San Juan Upper
Pb+Zn>0.5%*	600	La Colorada Main
	610	La Colorada Lower 1
	620	La Colorada Lower 2

Table 14-2: List of Rock Codes for Plomosas Mine and San Juan Area



	630	La Colorada Upper 1
	640	La Colorada Upper 2
Waste	99	Waste Andesite

Note: Pb+Zn>0.5%, combined values of both elements used to define major outline for definition of 3D mineralized zones in combination with geological units (Hydrothermal Breccia and or Epithermal Veining).

Table 14-3 and Table 14-4 provide summary statistics for data used in the evaluation of extreme assay values and compositing inside 3D solids defining the deposits.



Element	Domain	Count	Min	Max	Mean	Variance	StDev
AUCAP	All	10073	0.01	130.0	0.34	6.16	2.48
	200	49	0.01	9.0	0.48	1.76	1.33
	210	85	0.01	6.7	0.49	0.91	0.96
	220	124	0.01	12.9	0.71	3.29	1.81
	1100	2544	0.01	27.0	0.33	1.33	1.15
	1200	5765	0.01	130.0	0.36	9.88	3.14
	1300	1506	0.01	17.2	0.26	0.77	0.88
AGCAP	All	17802	0.25	6321	13	10835	104
	200	61	0.25	9	3	4	2
	210	144	1	27	4	22	5
	220	186	0.25	28	5	23	5
	1100	5283	0.25	4436	17	12706	113
	1200	9795	0.25	6321	12	12109	110
	1300	2333	0.25	1659	8	2984	55
PBCAP	All	13250	0.01	41.5	0.3	2.1	1.4
	200	52	0.01	1.2	0.1	0.0	0.2
	210	92	0.01	8.0	0.2	0.8	0.9
	220	148	0.01	5.3	0.3	0.5	0.7
	1100	4074	0.01	41.5	0.5	3.7	1.9
	1200	7236	0.01	35.5	0.3	1.4	1.2
	1300	1648	0.01	25.5	0.2	1.2	1.1
ZNCAP	All	16625	0.01	28.0	0.4	1.7	1.3
	200	55	0.01	3.0	0.1	0.2	0.4
	210	132	0.01	2.2	0.1	0.1	0.3
	220	165	0.01	8.0	0.5	1.9	1.4
	1100	5019	0.01	22.2	0.5	2.6	1.6
	1200	9004	0.01	28.0	0.3	1.4	1.2
	1300	2250	0.01	15.1	0.3	0.7	0.9
	All	6758	0.01	6.0	0.1	0.07	0.3
CUCAP	200	30	0.01	0.1	0.0	0.00	0.0
	210	60	0.01	0.4	0.0	0.00	0.1
	220	86	0.01	0.1	0.0	0.00	0.0
	1100	2250	0.01	6.0	0.1	0.15	0.4
	1200	3662	0.01	3.1	0.1	0.02	0.2
	1300	670	0.01	1.2	0.1	0.02	0.2

 Table 14-3: Resource Drill Hole Summary Statistics Plomosas Mine Area



Element	Domain	Count	Min	Max	Mean	Variance	StDev
AUCAP	All	1197	0.01	47.0	0.41	2.6	1.61
	500	167	0.01	2.27	0.21	0.15	0.38
	510	98	0.01	1.53	0.16	0.07	0.27
	600	793	0.01	46.95	0.47	3.76	1.94
	610	18	0.08	2.45	0.56	0.51	0.72
	620	29	0.02	4.2	0.58	1.16	1.07
	630	47	0.01	2.86	0.29	0.25	0.5
	640	45	0.01	3.4	0.47	0.7	0.83
AGCAP	All	1674	0	5600.0	40.00	45592	214.00
	500	300	0	3755	94	86381	294
	510	232	0	5600	87	181540	426
	600	951	0	1886	17	6705	82
	610	18	1	16	5	19	4
	620	44	1	6	2	2	1
	630	80	1	68	7	127	11
	640	49	0	200.0	10.00	888	30.00
PBCAP	All	1542	0	31.5	0.60	2.3	1.50
	500	287	0	7.6	0.4	0.8	0.9
	510	201	0	8.5	0.3	1	1
	600	889	0	31.5	0.7	2.7	1.7
	610	12	0	0	0	0	0
	620	34	0	0.5	0.1	0	0.1
	630	70	0	17.7	1	8.2	2.9
	640	49	0	7.5	0.40	1.2	1.10
ZNCAP	All	1627	0	38.5	1.00	6.5	2.60
	500	293	0	16.8	1	4.7	2.2
	510	212	0	17.9	0.8	5.5	2.3
	600	933	0	38.5	1	6.7	2.6
	610	18	0	0.1	0	0	0
	620	42	0	17.9	1.9	15.1	3.9
	630	80	0	23.1	1.5	13.1	3.6
	640	49	0	10.0	1.10	3.6	1.90
CUCAP	All	805	0	2.0	0.00	0	0.10
	500	149	0	0.6	0	0	0.1
	510	83	0	0.4	0	0	0.1
	600	484	0	2	0	0	0.1
	610	3	0	0	0	0	0
	620	25	0	0.1	0	0	0
	630	57	0	0.2	0	0	0
	640	4	0	0.1	0.00	0	0.00

Table 14-4: Resource Drill Hole Summary Statistics San Juan Area



Prior to compositing, see section 14.5, all unsampled intervals related to historical holes, where no sample and assay is available inside the domains, were assigned a value of zero due to the absence of assay data.

#### 14.4 Evaluation of Extreme Assay Values

Block grade estimates may be unduly affected by very high-grade assays. Therefore, the assay data were evaluated for high-grade outliers.

The capping values were established by checking the sample population grade distributions (raw data prior to adding zero values) 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 14-5.

Metal	Plomosas	San Juan	La Colorada
Gold	20 g/t	10 g/t	10 g/t
Silver	450 g/t	360 g/t	350 g/t
Copper	1.50%	Not capped	Not capped
Lead	13%	13%	13%
Zinc	11%	8%	11%

Table 14-5: Capping of Assay Data

## 14.5 Compositing

Almost all assayed samples inside the mineralized domains were collected at 1.0 m or shorter intervals. For this reason, the QP decided to composite all assay data to 1.0 m (Figure 14.3). Basic statistics of the composited assay data for the various mineralized units in the Plomosas Project are presented in 1.





Figure 14-1 Histogram of Sample Lengths in the GR Silver Database

The compositing process integrated assay data inside the domains and applied zero values addressing the absence of data in some intervals inside the mineralized zone.

Table 14.6 summarizes the compositing data for each deposit and data inserted into the database as zero values to address unsampled intervals in mineralized zones reported by historical holes.

Area - Deposit	Number of	Composites	Number Co	mposites
	(With '	Values)	(Zero Va	alues)
Plomosas Mine	Au-Ag-Pb-	17,772	Au-Ag-Pb-	1440
PbZn>0.5	Zn-Cu		Zn-Cu	
Plomosas Mine	Au	360	Au	152
Au Zone				
San Juan – San Juan	Au-Ag-Pb-	745	Au-Ag-Pb-	219
Vein	Zn-Cu		Zn-Cu	
PbZn>0.5				
San Juan – La	Au-Ag-Pb-	1465	Au-Ag-Pb-	186
Colorada Vein	Zn-Cu		Zn-Cu	
PbZn>0.5				

Table 14-6: Summary Composite Data



Table 14-7 and Table 14-8 provide summary statistics for compositing data used in the resource estimation, without including zero values inserted in the database.

Element	Domain	Count	Min	Max	Mean	Variance	StDev
AUCAP	All	17772	0.01	19.4	0.16	0.52	0.72
	200	56	0.01	3.5	0.26	0.28	0.53
	210	147	0.01	3.0	0.25	0.36	0.60
	220	157	0.01	12.8	0.40	2.21	1.49
	1100	5510	0.01	17.4	0.15	0.43	0.66
	1200	9574	0.01	19.4	0.15	0.57	0.76
	1300	2328	0.01	13.9	0.16	0.4	0.63
AGCAP	All	17772	0.01	450	12	1411	38
	200	56	0.01	8	2	4	2
	210	147	0.01	25	2	11	3
	220	157	0.01	22	4	12	3
	1100	5510	0.01	450	16	1885	43
	1200	9574	0.01	450	10	1143	34
	1300	2328	0.01	446	10	1530	39
PBCAP	All	17772	0.01	13.0	0.2	0.6	0.8
	200	56	0.01	0.7	0.1	0.0	0.1
	210	147	0.01	3.3	0.1	0.1	0.3
	220	157	0.01	3.0	0.1	0.1	0.3
	1100	5510	0.01	13.0	0.3	1.0	1.0
	1200	9574	0.01	13.0	0.2	0.5	0.7
	1300	2328	0.01	12.3	0.2	0.4	0.6
ZNCAP	All	17772	0.01	11.0	0.3	0.9	0.9
	200	56	0.01	0.9	0.1	0.0	0.1
	210	147	0.01	1.4	0.1	0.0	0.2
	220	157	0.01	6.0	0.3	0.7	0.8
	1100	5510	0.01	11.0	0.5	1.4	1.2
	1200	9574	0.01	11.0	0.3	0.7	0.8
	1300	2328	0.01	9.0	0.3	0.5	0.7
	All	17772	0.01	1.5	0.0	0.0	0.1
CUCAP	200	56	0.01	0.0	0.0	0.0	0.0
	210	147	0.01	0.4	0.0	0.0	0.0
	220	157	0.01	0.1	0.0	0.0	0.0
	1100	5510	0.01	1.5	0.0	0.0	0.1
	1200	9574	0.01	1.5	0.0	0.0	0.1
	1300	2328	0.01	1.2	0.0	0.0	0.1

# Table 14-7 Resource Compositing Summary Statistics Plomosas Mine Area-Composites(After Capping- No Zero Values)



## Table 14.8: Resource Drill Hole Summary Statistics San Juan Area (San Juan and La Colorada Veins)

Element	Domain	Count	Min	Max	Mean	Variance	StDev
AUCAP	All	2210	0.01	10.00	0.26	0.40	0.63
	500	436	0.01	2.10	0.13	0.08	0.28
	510	309	0.01	1.38	0.08	0.04	0.19
	600	1287	0.01	10.00	0.34	0.58	0.76
	610	14	0.11	1.90	0.54	0.25	0.50
	620	35	0.01	4.20	0.53	1.22	1.10
	630	59	0.01	1.57	0.16	0.09	0.29
	640	70	0.01	2.29	0.35	0.27	0.52
AGCAP		2213	0.01	535	28	3830	62
	500	437	0.01	535	68	9627	98
	510	311	1	360	39	4329	66
	600	1287	0.2	341	14	1445	38
	610	14	1	14	5	17	4
	620	35	1	4	2	1	1
	630	59	0.1	21	6	30	5
	640	70	0.3	69	7	139	12
РВСАР		2199	0.01	9.6	0.5	0.8	0.9
	500	437	0.01	7.6	0.4	0.4	0.7
	510	311	0.01	8.4	0.3	0.9	0.9
	600	1273	0.01	9.6	0.6	0.9	0.9
	610	14	0.01	0.0	0.0	0.0	0.0
	620	35	0.01	0.4	0.0	0.0	0.1
	630	59	0.01	7.2	0.6	1.5	1.2
	640	70	0.01	3.6	0.4	0.4	0.6
ZNCAP		2199	0.01	11.0	0.8	1.7	1.3
	500	437	0.01	8.0	0.8	1.7	1.3
	510	311	0.01	8.0	0.6	1.6	1.3
	600	1273	0.01	11.0	0.8	1.5	1.2
	610	14	0.01	0.1	0.0	0.0	0.0
	620	35	0.01	10.2	1.3	8.1	2.8
	630	59	0.01	4.3	0.9	1.5	1.2
	640	70	0.1	5.3	0.9	1.6	1.3
CUCAP		2164	0.01	1.6	0.0	0.0	0.1
	500	398	0.01	0.5	0.0	0.0	0.1
	510	306	0.01	0.2	0.0	0.0	0.0
	600	1282	0.01	1.6	0.0	0.0	0.1
	610	14	0.01	0.0	0.0	0.0	0.00
	620	35	0.01	0.1	0.0	0.0	0.01
	630	59	0.01	0.1	0.0	0.0	0.02
	640	70	0.0	0.0	0.0	0.0	0.00



## 14.6 Solid Modelling

#### 14.6.1 Plomosas Mine Area

Precious and base metal mineralization in the Plomosas Mine Area is hosted in brecciated meta-volcanic assemblages within the Plomosas Fault structure. The Plomosas Fault dips gently (about 30 degrees) 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 degrees). Solids were generated using Leapfrog Geo for the Plomosas structure based on lead and zinc content (0.5% combined Pb+Zn) and for the precious metal zones based on gold content (0.5 g/t Au). The thicknesses of the mineralization and breccia zones are variable from 5 m to over 50 m, and they expand and contract along strike.

The mineralization in the Plomosas Mine Area is divided into Upper, Main and Lower zones with respect to the Plomosas Fault. The Upper zone sits in the hanging wall of the fault, the Main zone is bounded by the Plomosas Fault structure and the Lower zone sits in the footwall of the fault zone Table 14-9 and Figure 14.2

Description
Plomosas Footwall
Plomosas Breccia
Plomosas Hanging wall
Central Gold Zone
Upper Gold Zone
Lower Gold Zone
Waste Host Rock
(Andesite)
Air

Table 14-9: List of Rock Codes for Plomosas Mine Area Model







Note: markers along axes are 200 m apart

#### 14.6.2 San Juan Area

The San Juan Area mineralization is hosted within the San Juan and La Colorada structures. Mineralization at San Juan is hosted in two breccia zones, the Main and Upper breccia. Mineralization at La Colorada is hosted within five separate, discrete vein structures.





Figure 14-3: Perspective view of San Juan and La Colorada Mineralization

Note: Distance markers are 100 m apart

Mineralization appears to be focused within breccia and shear zones that have been affected by hydrothermal alteration and sulphide mineralization. Table 14.10 lists the various rock codes used for the San Juan Area model.

Rock Code	Description
500	San Juan Main
510	San Juan Upper
600	La Colorada Main
610	La Colorada Lower 1
620	La Colorada Lower 2
630	La Colorada Upper 1
640	La Colorada Upper 2
99	Waste Andesite
0	Air

Table 14-10: Rock Codes Used in the San Juan Area Model



## 14.7 Variography

An experimental variogram and model were generated for the mineralized zones at the Plomosas Mine Area. Mineralization at the San Juan Area didn't support robust variography because of the wider spaced drilling in this deposit and the high variability of grades within the mineralized zones. Variogram model rotations for Plomosas were based on the general attitude of the mineralized zones. The nugget effects (that is, the variability at very close distance) were established from down hole 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 14-11.

	Nugget		Correlogram			Ranges a <sub>1</sub> /a <sub>2</sub>		
Metal	C <sub>0</sub>	Sill C <sub>1/2</sub>	around Z	around Y	around Z	X-Rot	Y-Rot	Z-Rot
Gold	0.36	0.64	1	-33	84	123	167	20
Silver	0.15	0.003 /0.847	3	-37	-3	27/126	63/167	40/40
Lead	0.40	0.427 /0.173	-29	58	0	3.0/31	100/180	5/233
Zinc	0.40	0.34/0.26	-29	59	3	3.0/24	92/170	7.0/211

Table 14-11: Exponential Correlogram Models for the Plomosas Mineralized Domains

## 14.8 Resource Estimation Methodology

Mineral resources for the Plomosas Mine and San Juan Areas were estimated using Geovia Gems version 6.8.4 software. The geometrical parameters of the block models are summarized in Table 14-12 and Table 14-13.



	Minimum	Maximum	Extent	Block Size	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

Table 14-12: Plomosas Mine Area Block Model Parameters

Table 14-13: San Juan Area Block Model Parameters

				Block	Number of
	Minimum	Maximum	Extent	Size	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

Grade for the Plomosas Mine Area model were estimated in three successive passes as outlined in Table 14.14. 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 also designed to capture sufficient data to estimate a grade in the blocks.



Metal	Search	Search Type	Rotation			Search Radii			Number of Composites		Max. Samples
	Pass		Z	Y	Z	X (m)	Y (m)	Z (m)	Min.	Max.	
	1	OK	-29	59	3	12	50	70	6	24	5
Lead	2	OK	-29	59	3	24	100	120	6	24	5
	3	OK	-29	59	3	35	150	200	6	18	5
Zinc	1	OK	-29	59	3	12	50	70	6	24	5
	2	OK	-29	59	3	24	100	120	6	24	5
	3	OK	-29	59	3	35	150	200	6	18	5
	1	OK	5	50	0	50	70	12	6	24	5
Gold	2	OK	5	50	0	75	100	20	6	24	5
	3	OK	5	50	0	100	120	20	6	18	5
Silver	1	OK	5	50	0	50	70	12	6	24	5
	2	OK	5	50	0	75	100	20	6	24	5
	3	OK	5	50	0	100	120	20	6	18	5

Table 14-14: Grade Estimation Parameters for Plomosas Mine Area



All blocks for the Plomosas Mine Area model were estimated by ordinary kriging.

Block grades for the San Juan Area were estimated using inverse distance squared weighting (ID<sup>2</sup>) in four successive passes with increasing ranges. Table 14-15 summarises the San Juan Upper and Main Breccia estimation parameters and Table 14-16 summarises the La Colorada Vein System estimation parameters. In addition to the various grade estimates, the block models also include distance to nearest sample, the average distance of composites used, and the number of drill holes used to estimate each block.

Metal	Search Pass	Search Type	Rotation				Search I	Radii	Number of Composites		Max. Samples per DDH
			Z	Y	z	X (m)	Y (m)	Z (m)	Min.	Max.	
	1	ID	14	36	0	50	50	10	4	12	3
Lead	2	ID	14	36	0	75	75	20	4	12	3
Leau	3	ID	14	36	0	100	120	30	4	12	3
	4	ID	14	36	0	100	120	30	3	12	2
	1	ID	14	36	0	50	50	10	4	12	3
Zinc	2	ID	14	36	0	75	75	20	4	12	3
	3	ID	14	36	0	100	120	30	4	12	3
	4	ID	14	36	0	100	120	30	3	12	2
	1	ID	14	36	0	50	50	10	4	12	3
Gold	2	ID	14	36	0	75	75	20	4	12	3
Gold	3	ID	14	36	0	100	120	30	4	12	3
	4	ID	14	36	0	100	120	30	3	12	2
Silver	1	ID	14	36	0	50	50	10	4	12	3
	2	ID	14	36	0	75	75	20	4	12	3
	3	ID	14	36	0	100	120	30	4	12	3
	4	ID	14	36	0	100	120	30	3	12	2

Table 14-15: San Juan Upper and Main Breccia Block Model Estimation Parameters



Metal	Search Pass	Search Type	Rotation			Search Radii			Number of Composites		Max.
			z	Y	z	X (m)	Y (m)	Z (m)	Min	Ma x	per DDH
Lead	1	ID	0	52	0	50	50	10	4	12	3
	2	ID	0	52	0	75	75	20	4	12	3
	3	ID	0	52	0	100	120	30	4	12	3
	4	ID	0	52	0	100	120	30	3	12	2
Zinc	1	ID	0	52	0	50	50	10	4	12	3
	2	ID	0	52	0	75	75	20	4	12	3
	3	ID	0	52	0	100	120	30	4	12	3
	4	ID	0	52	0	100	120	30	3	12	2
Cold	1	ID	0	52	0	50	50	10	4	12	3
	2	ID	0	52	0	75	75	20	4	12	3
Gold	3	ID	0	52	0	100	120	30	4	12	3
	4	ID	0	52	0	100	120	30	3	12	2
Silver	1	ID	0	52	0	50	50	10	4	12	3
	2	ID	0	52	0	75	75	20	4	12	3
	3	ID	0	52	0	100	120	30	4	12	3
	4	ID	0	52	0	100	120	30	3	12	2

Table 14-16: La Colorada Vein System Block Model Estimation Parameters



Because the Plomosas Mine and San Juan Areas 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 14-17 for Plomosas Mine Area and Table 14-18 for San Juan Area. Note that the dollar equivalent is simply used to estimate the insitu value of each block to assist in determining if the blocks have a reasonable prospect of eventual economic extraction and not intended to reflect the implied value of the deposit.

Metal	Price (US\$) *	Recovery (%)
Copper	\$3.00/lb	80.0
Lead	\$0.90/lb	69.0
Zinc	\$1.10/lb	75.0
Gold	\$1,600.00/oz	86.0
Silver	\$20.00/oz	74.0

Table 14-17: Parameters Used to Calculate Dollar Equivalent Value for Plomosas Mine Area

Note: Metal prices are derived from Energy Metals Consensus Forecast long-term pricing.

Metal	Price (US\$) *	Recovery (%)
Copper	3.00/lb	26.0
Lead	\$0.90/lb	58.0
Zinc	\$1.10/lb	47.0
Gold	\$1,600.00/oz	79.0
Silver	\$20.00/oz	71.0

Note: Metal prices are derived from Energy Metals Consensus Forecast long-term pricing.



The dollar equivalent (US\$) was calculated using the following formula for Plomosas:

$$US$$
 = (*Pb* \* 13.69 + *Zn* \* 18.19 + *Au* \* 44.24 + *Ag* \* 0.48)

Similarly, the dollar equivalent for the San Juan Model was calculated using the following formula:

$$US\$ = (Pb * 11.51 + Zn * 11.40 + Au * 40.4 + Ag * 0.46)$$

#### 14.9 Mineral Resource Classification

Mineral resources were estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserve Best Practices" Guidelines. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Mineral resources were classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) by Dr. Gilles Arseneau, P. Geo. (APEGBC#23474) an "independent qualified person" as defined by NI 43-101.

Mineral resource classification is typically a subjective concept, industry best practices suggest that 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 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 resource evaluation. The sampling information was acquired by core drilling on sections spaced at about 25 m spacing for most of the Plomosas Mine Area and 35 to 50 m spacing 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 resource as defined by CIM.

Mineral reserves can only be estimated based on the results of an economic evaluation as part of a preliminary feasibility study or feasibility study. As such, no mineral reserves



have been estimated as part of this study. There is no certainty that all or any part of the mineral resources will be converted into a mineral reserve.

The estimated blocks were classified according to:

- Confidence in interpretation of 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.
- The inclusion or exclusion of historical holes drilled by IMMSA.

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.

For the San Juan Area, blocks were classified as indicated if estimated without IMMSA drill holes during pass one or during the second pass and informed with at least four drill holes.

The mineral resources may be impacted by further infill and exploration drilling that may result in increase or decrease in future resource evaluations. 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 in this early stage of study to assess the extent to which the mineral resources will be affected by these factors that are more suitably assessed in a conceptual study.

## 14.10 Validation of the Block Model

The resource block models were validated by completing a series of inspections including:



- Comparison of estimated block grades against composited grades on sections and in plan.
- Comparing the grades of blocks pierced by drill holes with the composite grades informing those blocks.

Figure 14.4 shows a comparison of estimated dollar equivalent block values with drill hole composite data for the Plomosas Mine Area in section and Figure 14. shows the same for the San Juan Area. On average, the estimated blocks are similar to the composite data, however, because the IMMSA samples were only used to populate blocks in the second and third passes, some blocks estimated without the IMMSA data don't always agree with the IMMSA drill holes.

## Figure 14-4: Section View Looking North Comparing Estimated Block Values with Drill Hole Composites Values for the Plomosas Mine Area



Note: Grid lines are 100 m by 100 m





Figure 14.5: Section View Comparing Estimated Block Value with Drill Hole Composites for the San Juan Area

Note: Grid lines are 100 m by 100 m

As a final check, average composite grades and average block estimates were compared along different directions. This involved calculating de-clustered average composite grades and comparison with average block estimates along east-west, north-south, and horizontal swaths. Figure 14-6 shows the swath plots for the Plomosas Mine Area. The average composite grades and the average estimated block grades are quite similar but higher than the estimated block grades. The difference is attributed to the exclusion of the IMMSA drill holes during the first pass. Because the IMMSA holes are excluded, their influence on the model is not considered and the model appears lower than the composites on the swath plot. Overall, the validation shows that current resource estimates are a good reflection of drill hole assay data as applied to the model.

The QP also notes that the block model grades may not offer a true representation of the historical grades mined at Plomosas because large portions of the Plomosas mine were not drilled prior to mining and several of the IMMSA drill holes were only sampled where high-grade mineralization was visible in drill core. These unsampled intervals in



the historical IMMSA drill holes were assigned a zero value when composited which probably negatively impacted the block grade estimates.



Figure 14-6: Swath Plots for Plomosas Mine Area


Figure 14-7 shows the swath plots for the San Juan Area block model. The San Juan Area block model agrees reasonably well with the composited data. The model swath plot is smoother than the composited data but on average the two follow similar trends.



Figure 14-7: Swath Plot for San Juan Area Block Model



To further investigate the differences between the estimated block grades from drill holes only with historically mined grades, additional validation was completed comparing mined out areas using values reported by channel samples against drill data inside the stopes. The average uncapped value was estimated by selecting group of channel samples inside each stope and comparing the average with drill hole data obtained from the same stope. The following graphs, Figure 14-8 and 14-9, illustrate the findings for gold and silver.



### Figure 14-8 Analysis & Validation Mined Out Stopes (Average Grade Au)





Figure 14-9 Analysis & Validation Mined Out Stopes (Average Grade Ag)

The previous graphs indicate that the estimated blocks grades inside the mined-out stopes are consistently reporting much lower average grades than values obtained by averaging channel samples and drill hole data. Additional drilling is warranted to further delineate these high-grade zones and to determine if the mineralization extends beyond the mined-out volumes.

## 14.11 Mineral Resource Statement

CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) defines a mineral resource as:

"A Mineral Resource is 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."

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 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 be "reasonably expected" to be mined from an open pit.

The optimization parameters were selected based on experience and benchmarking against similar projects Table 14.19. The reader is cautioned that the results from the pit optimization 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 results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.



Parameter*	Value	Unit			
Open Pit Mining Cost	6.50	US\$ per tonne mined			
Processing and G&A	29.00	US\$ per tonne of feed			
Overall Pit Slope	50	degrees			
Mill Throughput	200	tonnes per day			
Open Pit Cut-off	35	US\$			

Table 14-19 Assumptions Considered for Conceptual Open Pit Optimization at thePlomosas Mine Area

The QP considers that the blocks above cut-off located 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 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 14.20 summarises the parameters used to derive the "reasonable prospect of economic extraction" of blocks situated below the resource pit.

Table 14-20: Assumptions Considered for Underground Mining Conditions at the Plomosas Mine Area

Parameter*	Value	Unit
Underground Mining Cost	25	US\$ per tonne mined
Processing and G&A	29	US\$ per tonne of feed
Mill Throughput	200	tonnes per day
Minimum Stope Size	5 by 4 by 10	metres
Exchange Rate	0.77	CDN\$/US\$
Underground Mining Cut-off	50	US\$

Table 14-21 summarizes the mineral resources for the Plomosas Mine Area, Table 14.22 summarizes the mineral resources for the San Juan Area and Table 14.23 summarizes the total mineral Resources for the Plomosas Project. Mineral resources were estimated by Dr. Gilles Arseneau of ACS on August 24, 2021. Dr. Arseneau is an independent



qualified person as defined in NI 43-101 and a member of the association of Professional Engineers and Geoscientists of British Columbia (#23474), ACS is licenced to operate in British Columbia under permit to Practice number 1000256.

Plome	lomosas Mine Area												
Туре	Classification	Cut- off (US <b>\$</b> )	Tonnage (MT)	Au (g/t)	Au (Koz)	Ag (g/t)	Ag (Moz)	Pb (%)	Pb (Mibs)	Zn (%)	Zn (Mlbs)	AgEq (Moz)	AgEq (g/t)
OP	Indicated	35	0.3	0.21	2	74	0.6	1.0	5.9	0.9	5.0	1.0	115
OP	Inferred	35	1.2	0.07	3	75	2.9	0.9	24.3	0.8	20.0	3.9	102
UG	Indicated	50	1.7	0.84	46	27	1.4	0.9	33.5	1.4	52.9	7.5	137
UG	Inferred	50	3.4	0.5	55	40	4.3	0.9	68.5	1.1	83.0	12.6	116
Total	Indicated		2.0	0.76	48	33	2.1	0.9	39.4	1.3	57.9	8.5	134
Total	Inferred		4.6	0.39	58	49	7.2	0.9	92.8	1.0	103.0	16.5	112

Table 14-21: Mineral Resource Statement, Plomosas Mine Area, Sinaloa Mexico

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

(2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

(3) 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.

(4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

(5) Numbers may not add up due to rounding.

(6) Silver equivalent is calculated by dividing the US\$ value by the silver price. Dollar equivalent is estimated using the information in Tables 14.11 and 14.12.



_		Cut-off	Cut-off	Tonnage	Au	Au	Ag	Ag	Pb	Pb	Zn	Zn	AgEq	AgEq
туре	Classification	(US\$)	(MT)	(g/t)	(Koz)	(g/t)	(Moz)	(%)	(MIbs)	(%)	(MIbs)	(Moz)	(g/t)	
OP	Indicated	35	0.1	0.19	0	115	0.3	0.3	0.5	0.6	1.1	0.3	111	
ОР	Inferred	35	0.2	0.37	3	92	0.7	0.6	3.0	0.7	3.4	0.8	111	
UG	Indicated	50	0.4	0.35	4	87	1.1	1.0	8.2	1.7	13.8	1.6	132	
UG	Inferred	50	1.0	0.77	24	22	0.7	0.9	19.9	2.0	42.2	3.6	116	
Total	Indicated		0.5	0.32	5	92	1.3	0.9	8.7	1.5	14.9	1.9	128	
Total	Inferred		1.2	0.70	27	36	1.4	0.9	22.9	1.7	45.6	4.5	115	

## Table 14.22: Mineral Resource Statement San Juan Area, Sinaloa Mexico

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

(2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

(3) 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.

(4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

(5) Numbers may not add up due to rounding.

(6) Silver equivalent is calculated by dividing the US\$ value by the silver price. Dollar equivalent is estimated using the information in Tables 14.11 and 14.12.

(7) Mineral Resources for the La Colorada deposit were clipped against the GR Silver property boundary to exclude material outside of the GR Silver property



	Plomosas Project Total Resource												
Туре	Classification	Cut-off (US\$)	Tonnage (MT)	Au (g/t)	Au (Koz)	Ag (g/t)	Ag (Moz)	РЬ (%)	Pb (Mlbs)	Zn (%)	Zn (Mlbs)	AgEq (Moz)	AgEq (g/t)
OP	Indicated	35	0.3	0.20	2	83	0.9	0.8	6.4	0.8	6.1	1.3	114
OP	Inferred	35	1.4	0.12	5	78	3.6	0.9	27.3	0.7	23.5	4.8	103
UG	Indicated	50	2.1	0.76	50	38	2.5	0.9	41.7	1.5	66.7	9.1	136
UG	Inferred	50	4.4	0.57	79	36	5.0	0.9	88.4	1.3	125.1	16.2	116
Total	Indicated		2.4	0.68	53	44	3.4	0.9	48.1	1.4	72.8	10.3	133
Total	Inferred	_	5.8	0.46	85	46	8.6	0.9	115.7	1.2	148.6	21.0	113

### Table 14.23: Mineral Resource Statement Total Plomosas Project, Sinaloa Mexico

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.

(2) The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

(3) 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.

(4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

(5) Numbers may not add up due to rounding.

(6) Silver equivalent is calculated by dividing the US\$ value by the silver price. Dollar equivalent is estimated using the information in Tables 14.11 and 14.12.

(7) Mineral Resources for the La Colorada deposit were clipped against the GR Silver property boundary to exclude material outside of the GR Silver property.



## 14.12 Grade Sensitivity Analysis

The mineral resources are sensitive to the selection of cut-off grade. Figure 14-10 shows the sensitivity of the Indicated and Inferred mineral resources for the Plomosas Mine Area at various cut-off grades. Figure 14-11 shows the same for the San Juan Area.

The reader is cautioned that these figures should not be misconstrued as a mineral resource. The reported quantities and grades are only presented as a sensitivity of the resource model to the selection of cut-off grade.



Figure 14-10: Grade Tonnage Curves for the Plomosas Mine Area Model







## 14.13 Risks and Opportunities

The mineral resources for both areas include volumes that have been previously mined. Although very limited volume (tonnage) has been mined at San Juan, historical mining at Plomosas is in the order of 2.5 M tonnes averaging 190 g/t Ag, 0.92 g/t Au, 2.02% Zn and 2.38% Pb. To assure that none of the material previously mined was included in the current estimate, GR Silver initiated a program to survey all the underground workings. A laser was utilised to generate a three-dimensional model of the underground workings



Figure 14.12. 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 back fill. The QP decided to expand all surveyed workings by 2 m in all directions to compensate for un-surveyed areas. To validate the expanded volume, the expanded volumes were compared with the records from historical production. The expanded volume generated a tonnage of 2.7 M tonnes which is comparable with the historical mine production records.

Figure 14-12: Perspective View Looking Southeast Showing Mined-out Volumes Surveyed with Drone



Note: markers are 100 m apart

The grades reported from the mined-out volumes in the Plomosas Mine Area estimated model are considerably lower than the historical grades reported from the mine. The main reason for the lower reported grades from the block model is attributed to the lack of drill data for several mined-out volumes (Figure 14.13). These areas are assigned very low grade in the block model because of the lack of drilling but must have been of sufficient grade to support mining activities.





Figure 14-13: Planview Showing Mined-out Stopes and Drill Hole Coverage

The QP noted that several of the historical IMMSA drill holes were selectively sampled, with sampling being collected only where visible lead or zinc mineralization was observed (Figure 14-14). These un-sampled intervals were assigned a zero-grade value during compositing and grade estimation. As can be seen from the nearby drill holes, these intervals are not necessarily at zero-grade. These holes negatively impact the block model grades, especially in areas where the IMMSA drilling dominate and there were insufficient newer holes to estimate the block grades. These areas offer a good opportunity to improve the grade of the mineral resource if new drill holes can confirm that the unsampled intervals are not zero-grade.





Figure 14-14: Cross Section Showing Partially Sampled IMMSA Drill Holes Next to Aurcana and GR Silver Drill Holes

Additionally, the analysis presented on Figure 14-8 and 14-9 (evaluation of average grades inside mined out stopes) reveal opportunity to implement an infill drilling program aiming to better delineate unmined high-grade zones in the vicinity of historical stopes based on much higher average grades reported by historical production than estimated in the mineral resource estimation.



# **15 ADJACENT PROPERTIES**

The Picachos Exploration Project, held by Brigadier Gold Ltd, is an adjacent property situated 15 km northwest of the Plomosas Project, along the same NW-SE oriented trend on the western edge of the SMO. The mineralization at Pichachos consist of two regional-scale precious metal rich vein systems and a large porphyry copper prospect. There are reports of historic production from veins, but production data is not available. The largest vein system trends north-easterly for seven kilometers along a major fault zone and host the past-producing San Agustin underground mine.

Other adjacent property of relevance in the region is the open pit -heap leach historic operation at the Trinidad Mine located 10 km from the Plomosas Project. The Trinidad Mine occurs within the Rosario Mining District, of which the Rosario mine was the probably the most significant past Au-Ag producer. The Trinidad Mine hosts the Taunus deposit that was operated by Eldorado Gold Corporation as open pit heap leach mine from 1996 until 1999. Marlin Gold Mining Ltd brought the La Trinidad Mine back into commercial production in November 2014, operating until December 2018. Marlin Gold Mining Ltd mined 1.5 Mt @ 1.4 g/t Au producing approximately 42k ounces of gold. (See Figure 15-1)



## Figure 15-1: Location of Adjacent Properties



# 16 OTHER RELEVANT DATA AND INFORMATION

The Plomosas Project is located 5km (straight line) from San Marcial Exploration Project in south-eastern Sinaloa State, Mexico. The mineralization at the San Marcial Exploration Project comprise low sulphidation silver-lead-zinc epithermal veins, which host a near surface relatively high-grade silver, zinc, lead resource, with potential for bulk tonnage open pit development. The host rock is a 10 to 50 m wide hydrothermal breccia continuous along 500 m in the resource area and open along strike. The San Marcial Exploration Project host the San Marcial Deposit, which is current at exploration stage defined by surface drilling, with the following current NI 43 101 resource estimate, dated June 12. 2020.

Class		Туре	Cutoff AgEq g/t	Tonnage (000s)	Ag (g/t)	AgEq (g/t)	Zn (%)	Pb (%)	Ag (M oz.)	AgEq (M oz.)	Zn (M Ibs)	Pb (M lbs)
Indicated	Idicated Breccia Stockwork Iferred Breccia Stockwork	Breccia (OP)	30	2,909	202	241	0.7	0.4	19	23	42	29
Class Indicated Inferred		Breccia (UG)	80	55	90	124	0.6	0.3	0.2	0.2	0.8	0.3
		Breccia (Tota	al)	2,963	200	239	0.7	0.4	19	23	43	29
	Stockwork	Stockwork (OP)	30	4,551	64	88	0.4	0.2	9	13	42	23
		Stockwork (UG)	80	95	72	103	0.5	0.3	0.2	0.3	1.1	1
		Stockwork (To	tal)	4,646	64	89	0.4	0.2	10	13	43	24
1			30	7,460	118	148	0.5	0.3	28	35	84	52
			80	149	79	111	0.5	0.3	0.4	1	2	1
		Indicated Total	Total	7,609	117	147	0.5	0.3	29	36	86	53
Inferred	Breccia	Breccia (OP)	30	792	131	153	0.48	0.15	3	4	8	3
		Breccia (UG)	80	638	135	165	0.80	0.06	3	3	11	1
		Breccia (Tota	al)	1,430	133	158	0.62	0.11	6	7	20	3
	Stockwork	Stockwork (OP)	30	1,727	52	62	0.17	0.09	3	3	7	4
	1.1.1.1.1.1.1.1.1	Stockwork (UG)	80	233	121	140	0.03	0.17	1	1.1	0.1	1
	Stockwork (Total)		tal)	1,960	60	71	0.16	0.10	4	4	7	4
			30	2,519	77	90	0.27	0.11	6	7	15	29 23 1 24 52 1 53 3 1 3 4 1 4 6 2 8
			80	871	131	158	0.59	0.09	4	4	11	2
		Inferred Total	Total	3,390	91	108	0.35	0.10	10	12	26	8

Table 16-1: San Marcial Resource Summary – June 12, 2020

As previously described, there are currently 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 (mining, taxation, environmental, human resources and related issues) and/or government or local attitudes to foreign investment cannot be, and have not been, evaluated within the scope of this Technical Report.



# 17 INTERPRETATION AND CONCLUSIONS

## 17.1 Conclusions

The Plomosas Project is located in the western Mexican state of Sinaloa about 100 km east-southeast of Mazatlán. Specifically, the Project is located within the southeastern corner of Sinaloa, stretching from near the historic mining town of La Rastra and another 5 km to the east within the Rosario Mining District.

Grupo Mexico's subsidiary ("IMMSA") explored the Plomosas Project from the early 1970s to 2001 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). Grupo Mexico operated an underground mine at the Plomosas Project between 1986 to 2000. During this period, a total of 2.5 M tonnes averaging 190 g/t Ag, 0.92 g/t Au, 2.02% Zn and 2.38% Pb were extracted. The operations ceased in 2001, due to unfavourable commodity prices preventing feasible economic returns at the time.

Mineralization on the Plomosas Mine Area has been identified as belonging to intermediate 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 Plomosas Mine and San Juan 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 chalcopyrite, galena, sphalerite, pyrite and bornite.

GR Silver acquired the Project in 2020 and carried out a 16,859 m drilling program. The GR Silver drill program along with the historical drilling on the Project were compiled to prepare the mineral resources presented in this report.



The database used to estimate the Plomosas Mine Area and San Juan Area mineral resources was reviewed and audited by the QP. Mineralization boundaries were modelled by the QP 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 is sufficiently reliable to support estimation of mineral resources.

Within the Plomsas Mine model area, there a total of 70,635.9 m of drilling resulting from 353 drill holes. The San Juan model area includes 35,754.33 m of drilling from a total of 167 holes.

ACS estimated that the Plomosas Project contained combined Indicated mineral resources totalling 2.4 M tonnes grading 0.68 g/t gold, 44 g/t silver, 0.9% lead and 1.4% zinc, and 5.8 M tonnes of Inferred mineral resources grading 0.46 g/t gold, 85 g/t silver, 0.9% lead and 1.2% zinc.

The grades reported from the mined-out volumes in the Plomosas Mine Area estimated model are considerably lower than the historical grades reported from the mine. The main reason for the lower reported grades from the block model is attributed to the lack of drill data for several mined-out volumes. These areas are assigned very low grade in the block model because of the lack of drilling but must have been of sufficient grade to support mining activities.

The QP also noted that several of the historical IMMSA drill holes were selectively sampled, with sampling being collected only where visible lead or zinc mineralization was observed. These un-sampled intervals 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 dominate and there were insufficient newer holes to estimate the block grades. These areas offer a good opportunity to improve the grade of the mineral resource if new drill holes can confirm that the unsampled intervals are not zero-grade.



The QP recommends that GR Silver continue to explore the Plomosas Project. Additional drilling from underground near the historical mining areas could help in better defining the grade of the material near the mined areas and help to identify opportunities within the old mine. Additional surface drilling is also warranted to expand on the known mineralized zones along strike and down dip.



# 18 **RECOMMENDATIONS**

Further exploration is recommended for the Plomosas Project. Specifically, the QP recommends that GR Silver continue to expand the drill program, to further define the mineralization at the Plomosas Mine and San Juan Areas. Drilling should be focused from underground platforms to better outline and define areas within the defined resource where mainly Inferred resources are present and where the resource is mostly supported by IMMSA drill holes. Due to multiple targets present in the Plomosas Project the QP also recommends surface drilling in multiple additional epithermal veins, aiming at future resource estimation.

The QP estimates that the recommended programs will cost in the order of US\$ 2,710,000 as outlined in Table 18-1.

Future testwork on the Plomosas and San Juan deposits for the purpose of collecting additional information would include the following:

- Testing of two to four samples which represent expected mill feed material (based on grade and mineralogy);
- Detailed comminution testing:
  - Bond Ball Mill Work Index;
  - Bond Crushing Work Index;
  - Bond Rod Mill Work Index; and
  - Drop Weight testing.
- Flotation testwork including rougher, cleaner and locked cycle tests;
- Concentrate minor element assay analysis; and
- Settling testwork.

The estimated cost for the metallurgical testwork program is \$60,000.



ltem	Unit	Cost
Surface		
Drilling	14,000 m	\$2,100,000.00
Underground		
drilling	2,000 m	\$300,000.00
Assays	11,200	\$250,000.00
Metallurgical		
Testwork		\$60,000.00
Total		\$2,710,000.00

# Table 18-1: Proposed Budget



# **19 SIGNATURE PAGES**

This technical report was written by Dr. Gilles Arseneau, P. Geo. (APEGBC # 23474) and Shane Tad Cowie, P. Eng.

The effective date of this technical report is March 15, 2021.

Dr. Arseneau is President of ARSENEAU Consulting Services Inc. which is authorized to practice geoscience in British Columbia under licence number 1000256 granted by the Association of Professional Engineers and Geoscientists of British Columbia on July 2, 2021.

Mr. Cowie is graduate of the University of British Columbia with a B.A.Sc. in Mining and Mineral Process Engineering, 2001. I have practiced my profession continuously since 2001. I have worked in technical, operations and management positions at mines in Canada. I have been responsible for recovery optimization projects, capital improvement projects, budgeting, planning, and pilot plant operations.



# 20 CERTIFICATE OF QUALIFIED PERSON

## 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 entitled "Technical Report for the Plomosas Precious and Base Metal Project, Sinaloa, Mexico" dated October 7, 2021, with an effective date of March 15, 2021 (the "Technical Report") prepared for GR Silver Mining Ltd.
- 3. I am a graduate of the University of New Brunswick with a B.Sc. (Geology) degree obtained in 1979, the University of Western Ontario with an M.Sc. (Geology) degree 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 registered as a member, in good standing, with the Association of Professional Engineers & Geoscientists of British Columbia (no. 23474).
- 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. My most recent personal inspection of the Project occurred from November 3 to November 7, 2020.
- 8. I am responsible for all sections of the Technical Report and accept professional responsibility for all 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 no prior involvement with the Plomosas Project.
- 11. I have read NI 43-101, 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 7<sup>th</sup> day of October 2021 in Vancouver, British Columbia.

[Original "signed and sealed"]

Dr. Gilles Arseneau, P. Geo.



CERTIFICATE OF QUALIFIED PERSON

Shane Tad Crowie, P. ENG.

## I, Shane Tad Crowie, P. Eng., do hereby certify that:

- 1. This certificate applies to the Technical Report entitled "Technical Report for the Plomosas Precious and Base Metal Project, Sinaloa, Mexico", with an effective date of March 15, 2021, (the "Technical Report") prepared for GR Silver Mining Ltd..;
- I am currently employed as Sr. Metallurgist with JDS Energy & Mining Inc. with an office at Suite 900 999 West Hastings Street, Vancouver, British Columbia, V6C 2W2;
- 3. I am a graduate of the University of British Columbia with a B.A.Sc. in Mining and Mineral Process Engineering, 2001. I have practiced my profession continuously since 2001. I have worked in technical, operations and management positions at mines in Canada. I have been responsible for recovery optimization projects, capital improvement projects, budgeting, planning, and pilot plant operations;
- 4. I am a Registered Professional Mining Engineer in British Columbia (#34052);
- I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I fulfil the requirements of a Qualified Person as defined in National Instrument 43-101;
- 6. I have not visited the Plomosas Project;
- 7. I am responsible for Sections 12.2, 13, and 18. of this Technical Report;
- 8. I am independent of the Issuer and related companies applying all of the tests in Section 13 of the NI 43-101;
- 9. I have had no prior involvement with the property that is the subject of this Technical Report;
- 10. I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the Technical Report and that this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading; and
- 11. I have read National Instrument 43-101, Standards for Disclosure of Mineral Properties and Form 43-101F1. This technical report has been prepared in compliance with that instrument and form.

Effective Date: March 15, 2021 Signed Date: October 7, 2021

(Original signed and sealed) "Shane Tad Crowie, P. Eng."

Shane Tad Crowie, P. Eng.



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# 22 APPENDIX 1 – TITLE OPINION



Av. Nuevo Luón 22, Piso 4 Col. Hipódromo, 06100 Ciudad de México (52-55) 5207 2800

June 18, 2020.

Beacon Securities Limited 66 Wellington Street West, Suite 4050 Toronto, ON M5K 1H1

Raymond James Ltd. 40 King Street West, Suite 5300 Toronto, ON M5H 3Y2

Canaccord Genuity Corp. 609 Granville Street, Suite 2200 Vancouver, BC V7Y 1H2

Pollitt & Co. Inc. 330 Bay Street, Suite 405 Toronto, ON M5H 2S8

Borden Ladner Gervais LLP 22 Adelaide Street West, Suite 3400 Toronto, ON M5H 4E3

Re: Title Opinion mining concessions, "Plomosas Project".

Dear Sirs and Mesdames:

As requested by Marcio Fonseca CEO and President of GR Silver Mining Ltd. ("GR Silver"), and in connection with an underwriting agreement to be entered into on June 18, 2020, between GR Silver and Beacon Securities Limited, Raymond James Ltd., Canaccord Genuity Corp. and Pollitt & Co. Inc we are providing you with our opinion regarding title and related

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matters to the mining concessions covering the mining claims described herein-below (the "Concessions"), which are located in the Municipality of El Rosario, State of Sinaloa and Municipality of Pueblo Nuevo, State of Durango, Mexico, and upon which GR Silver has an interest, and currently are held by Minera La Rastra S.A. de C.V. ("La Rastra")).

The information provided with respect to the Concessions is based on a search done for that purpose during January, February and March 2020 at the General Bureau of Mines ("GBM") and the Public Registry of Mining (the "Registry") within the Ministry of Economy. Both the GBM and the Registry have been closed since March 2020 and remain closed due to the COVID-19 pandemic and as such, no changes to title have been registered with either the GBM or the Registry since March 2020.

#### L The Concessions.

La Rastra is duly recorded in the Registry as legal holder of the Concessions, which cover the mining claims listed below, in which La Rastra is entitled to carry out the exploration, exploitation and beneficiation (e.g. treatment, first hand smelting and refining of mineral products) of minerals or substances regulated by the Mining Law:<sup>2</sup>

<u>No.</u>	Name of Mining Claim	Title Certificate Number	Original Title Bioctive Date	Surface Area (Ha.)
1	Plomosas	168698	July 2, 1981	12.0000
2	Segunda Ampl. de Plomosas	168699	July 2, 1981	100.0000
3	Continuación de Plomosas	168700	July 2, 1981	12.0000
4	La Rastra 2	183443	October 20, 1968	25.4275
5	San Juan	188174	June 15, 1983	24.5725
6	Potrero No. 2	195916	September 23, 1992	221.0000
7	La Estrella	202188	July 30, 1992	261.6800

<sup>1</sup> The company changed its corporate name from Aureana de Mexico, S.A. de C.V. ("Aureana") to La Rastra, and completely amended its corporate bylaws through resolutions approved by the La Rastra Extraordinery Shareholders' Meeting dated Jare 15, 2010, certified and attested to by Mr. Oullebaldo Flores Trado, Notary Public number 118 for the city of Mazafan, Sindoa, Mexico under Public Instrument number 12,882 dated July 6, 2010, and daly recorded in the Public Registry of Commerce for the corporate domicile ander Mercantile Folio number 17080\*1, dated July 8, 2010. The corporates names Aureana and La Rastra, refer to the same company. 7 Articles 2, 3 and 10 of the Mining Law.

2



8	El Potrero	203534	May 11, 1990	100.0000
9	Plomosas 3	209251	March 19, 1999	23.2700
10	Plomosas 2	210152	December 19, 1991	83.5000
п	Roșario 4	212656	November 17, 2000	239.7766
12	La Chispera	213510	May 18, 2001	10.0000
13	La Rastra	214304	July 8, 1994	5,396.0027
14	Rosario I	221093	August 29, 1997	406.6851
15	Plomosas 4	225024	July 8, 2005	420.9633
16	La Chispera II	225866	November 18, 1999	226.0732
17	Los Arcos	226222	May 8, 1996	214.1300
18	Rosario II	228255	August 29, 1997	736.1767

The following data was also obtained at the Registry, and the Public Registry of Property and Commerce for the State of Sinaloa:

#### a) "Plomosas", title 168698

- i. Location: Municipality of El Rosario, State of Sinaloa, México;
- Original Concessionaire: Industrial Minera Mexico, S.A. de C.V. ("IMMSA"), as recorded on July 2, 1981 under Entry 598, at Page 150, Volume 224 of the Mining Concessions Book of the Registry;
- iii. Present Concessionaire: La Rastra, in terms of the Assignment of Rights and Obligations Agreement, entered into between IMMSA and Aurcana (presently La Rastra), dated August 7, 2007 (the "IMMSA Transfer Agreement"), which was entered into once Aurcana exercised its option to acquire under the Option Agreement dated February 8th, 2007.

The IMM5A Transfer Agreement was ratified before Mr. Cecilio González Márquez, Public Notary number 151 for the Federal District (now Mexico City), recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry.





- iv. Royalties: IMMSA Royalties and First Majestic Royalty (as defined in Section III below).
- v. Effective Period: From July 2, 1981 through July 1, 2031.
- vi. Liens: None; and
- vii. Status: In force.

### b) "Segunda Ampl. de Plomosas", title 168699.

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA as recorded on July 2, 1981, under Entry 599, at Page 151, Volume 224 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMM5A Transfer Agreement, as recorded on November 15, 2007 under Entry 116, at Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From July 2, 1981 through July 1, 2031;
- vi. Liens: None; and
- vii. Status: In force.

#### c) "Continuación de Plomosas", title 168700

- i. Location: Municipality El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on July 2, 1981 under Entry 600, at Page 51, Volume 224 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement, as recorded on November 15, 2007 under Entry 116, at Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From July 2, 1981 through July 1, 2031;





- vi. Liens: None; and
- vii. Status: In force.

### d) "La Rastra 2" title 183443

- i. Location: Municipality of El Rosario, State of Sinaloa, México;
  - Original Concessionaire: Minera Normex, S.A. de C.V. ("<u>Normex</u>"), as recorded on October 20, 1988 under Entry 343, at Page 87, Volume 250 of the Mining Concessions Book of the Registry;
  - Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement, as recorded on November 15, 2007 under Entry 116, at Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
  - iv. Royalties: IMMSA Royalties and First Majestic Royalty;
  - v. Effective Period: From October 20, 1988 through October 19, 2038;
  - vi. Liens: None; and
  - vii. Status: In force.

### e) "San Juan", title 188174

- i. Location: Municipality of El Rosario, State of Sinaloa, México;
- Original Concessionaire: Alejandro Fernández García, as recorded on June 15, 1983 under Entry 632, at Page 159, Volume 228 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, at Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From November 22, 1990 through November 21, 2040;
- vi. Liens: None; and
- vii. Status: In force.





### f) "Potrero No. 2", title 195916

- i. Location: Municipality of Pueblo Nuevo, State of Durango Mexico;
- Original Concessionaire: Normex as recorded on September 22, 1992 under Entry 456, at Page 115, Volume 270 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMM5A Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From September 23, 1992 through September 22, 2042;
- vi. Liens: None; and
- vii. Status: In force.

### g) "La Estrella", title 202188

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on July 30, 1992 under Entry 735, Page 185, Volume 268 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMM5A Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From November 8, 1995 through November 7, 2045;
- vi. Liens: None; and
- vii. Status: In force.

### h) "El Potrero", title 203534

i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;





- Original Concessionaire: IMMSA, as recorded on May 11, 1990 under Entry 449, Page 113, Volume 255 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From August 30, 1996 through August 29, 2046;
- vi. Liens: None; and
- vii. Status: In force.

#### i) "Plomosas 3", title 209251

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on March 19, 1999 under Entry 151, Page 76, Volume 307 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From March 19, 1999 through March 18, 2049;
- vi. Liens: None; and
- vii. Status: In force.
- j) "Plomosas 2", title 210152
  - i. Location: Municipality El Rosario, State of Sinaloa, Mexico;
  - Original Concessionaire: IMM5A, as recorded on December 18, 1991 under Entry 398, Page 100, Volume 267 of the Mining Concessions Book of the Registry;
  - Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;



- iv. Royalty: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From September 10, 1999 through September 9, 2049;
- vi. Liens: None; and
- vii. Status: In force.

#### k) "Rosario 4", title 212656

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on November 17, 2000 under Entry 316, Page 158, Volume 316 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From November 17, 2000 through November 16, 2050;
- vi. Liens: None; and
- vii. Status: In force.

### 1) "La Chispera", title 213510

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on May 17, 2001 under Entry 90, Page 45, Volume 319 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From May 18, 2001 through May 17, 2051;
- vi. Liens: None; and





#### vii. Status: In force.

#### m) "La Rastra", title 214304

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on September 6, 2001 under Entry 164, Page 82, Volume 321 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From September 6, 2001 through September 5, 2051;
- vi. Liens: None; and
- vii. Status: In force.

### n) "Rosario I", title 221093

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on September 29, 1997 under Entry 235, Page 128, Volume 296 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMM5A Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From November 19, 2003 through November 18, 2053;

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- vi. Liens: None; and
- vii. Status: In force.
- o) "Plomosas 4", title 225024



- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on September 22, 1992 under Entry 396, Page 100, Volume 270 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From July 8, 2005 through July 7, 2055;
- vi. Liens: None; and
- vii. Status: In force.

### p) "La Chispera II", title 225866

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on November 18, 1999 under Entry 148, Page 74, Volume 311 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From November 4, 2005 through November 3, 2055;
- vi. Liens: None; and
- vii. Status: In force.

### q) "Los Arcos", title 226222

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on May 8, 1996 under Entry 87, Page 44, Volume 290 of the Mining Concessions Book of the Registry;

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- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From December 2, 2005 through December 1, 2055;
- vi. Liens: None; and
- vii. Status: In force.

### r) "Rosario II", title 228255

- i. Location: Municipality of El Rosario, State of Sinaloa, Mexico;
- Original Concessionaire: IMMSA, as recorded on August 29, 1997 under Entry 251, Page 126, Volume 296 of the Mining Concessions Book of the Registry;
- Present Concessionaire: La Rastra in terms of the IMMSA Transfer Agreement as recorded on November 15, 2007 under Entry 116, Page 64, Volume 22 of the Mining Acts, Contracts and Agreements Book of the Registry;
- iv. Royalties: IMMSA Royalties and First Majestic Royalty;
- v. Effective Period: From October 17, 2006 through October 16, 2056;
- vi. Liens: None and
- vii. Status: In force.

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## II. Mining Acts, Contracts or Agreements in Force:

The Concessions are presently subject to the following agreements:

- IMMSA Transfer Agreement;
- 2) Temporary Occupation Agreement, entered into by and between Ejido de La Rastra and La Rastra dated March 2, 2008 ("La Rastra 1 Temporary Occupation"), certified and attested to by Mr. Manuel Guillermo García Rendon, Public Notary number 160 for El Rosario, Sinaloa on March 14, 2008, recorded on December 19, 2008 under Entry 227, at Page 139, Volume 1 of the Temporary Occupation Book of the Registry;
- 3) Amendatory, Fulfilment and Settlement Agreement to the IMMSA Transfer Agreement, entered into by and between IMMSA and La Rastra dated May 24, 2010 ("IMMSA & La Rastra Release Agreement"), certified and attested to by Mr. Guilebaldo Flores Tirado, Public Notary number 118 for the city of Mazatlan, Sinaloa, recorded on October 28, 2010, under Entry 93, Page 53, Volume 28 of the Mining Acts, Contracts and Agreements Book of the Registry;
- 4) Tailings Agreement entered into by and between La Rastra and Ejido de La Rastra dated May 5, 2015 ("Donation Tailings Agreement"), certified and attested to by Mr. Jorge Ernesto Milan Aragón, Public Notary number 151 for the city of Mazatlan, Sinaloa; and
- 5) Mining Exploration on Common Land Agreement entered into by and between Ejido de La Rastra and La Rastra dated May 3, 2017, ("La Rastra 2 Temporary Occupation"), certified and attested to by Mr. Manuel Guillermo García Rendon, Public Notary number 160 of El Rosario, Sinaloa.<sup>3</sup>

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<sup>&</sup>lt;sup>3</sup> This agreement is not recorded in the Registry.

- III. Royalties:
- III.1. IMMSA Royalties.

In terms of the IMMSA Transfer Agreement, the Concessions are subject to the IMMSA Royalties payable to IMMSA ("IMMSA Royalties"), as follows:

- i) 3.5% when the price of zinc is equal or more than US\$ 1.50 per pound.
- ii) 3.0% when the price of zinc is equal or more than US\$ 1.20 per pound.
- iii) 2.5% when the price of zinc is equal or more than US\$ 1.00 per pound.
- iv) 1.75% when the price of zinc is less than US\$ 1.00 per pound.
- III.2. First Majestic Royalty.

In terms of the Royalty Agreement entered into, among others, by and between La Rastra and Corporacion First Majestic, S.A. de C.V. ("First Majestic") dated March 26, 2020, ratified before the Public Notary number 79 for Mexico City, the Concessions are subject to a two percent (2.0%) Net Smelter Returns from the Concessions ("First Majestic Royalty") in favor of First Majestic.

This Agreement shall be recorded in the Registry by First Majestic.

## IV. Ejido La Rastra Agreements.

#### IV.1 La Rastra 1 Temporary Occupation.

Parties:	Minera La Rastra, S.A. de C.V. and Ejido La Rastra.
Execution Date:	March 2, 2008.
Effective Period:	March 2, 2008 through March 2, 2028.
Subject Matter:	Ejido La Rastra authorized La Rastra the use, enjoyment and occupation of a surface of 135.29.82 hectares of common use lands.





## Consideration:

Annual payment rent in the amount of \$500.00 Mexican Pesos for each hectare. This amount increases annually in 3.5% (3.5 percent). Payments shall be made within ten days following March 2 of each year.

# IV.2 La Rastra 2 Temporary Occupation.

Parties:	Minera La Rastra, S.A. de C.V. and Ejido La Rastra.
Execution Date:	May 3, 2017
Effective Period:	May 3, 2017 through May 3, 2022.
Subject Matter:	Ejido La Rastra authorized La Rastra to carry out exploration works on a surface of 13,864-50-80-080 common land hectares.
Consideration:	A. The amount of MXP\$6,000.00 shall be paid for each drilling pack built on common land, such amount will be adjusted annually according to the National Consumer Price Index reported by the Central Bank (Banco de Mexico);
	B. Compensation of \$300.00 Mexican Pesos for each felled tree with a diameter creater than 10 continueters





### V. Real Estate:

In accordance with the Purchase Agreement entered into by and between IMMSA and La Rastra, according to Public Instrument number 126,754, dated November 15, 2007, notarized and attested to by Mr. Cecílio González Márquez, Notary Public number 151 for Mexico City, recorded in the Public Registry of Property for the Municipality of Rosario, State of Sinaloa, under Entry 98, Book 100, and Section I, dated December 7, 2007, La Rastra acquired title on the following surface lands:

- 1) Lot A "Plomosas", with a surface of 100-00-00 hectares;
- 2) Lot B "Plomosas", with a surface of 125-00-00 hectares;
- 3) Lot C "Plomosas", with a surface 38-00-00 hectares; and
- 4) Lot D "Plomosas", with a surface of 74-00-00 hectares.

Presently the above-mentioned lots are free and clear of all liens, encumbrances or ownership limitations, in terms of the freedom certificate ("certificado de libertad de gravamen") issued by the Public Registry of Property and Commerce for Rosario, Sinaloa on January 31, 2020.

#### VI. Mining Obligations:

<u>Classification</u>. The obligations with which the holders of mining concessions must comply in order to maintain their concessions in full force and effect, pursuant to the Mining Law, its Regulations and the Federal Fees Law ("Applicable Laws") are as follows:

Assessment of Work Report. During the month of May of each year, they must file with the GMB, the work assessment report made on each property or group of properties for the immediately preceding calendar year. The Regulations to the Mining Law establish the tables containing the minimum investment amounts that must be made on a property. The amount will be updated annually in accordance with the variation to the Consumer Price Index.

On September 13, 2013 the GBM authorized the grouping of 18 mining concessions with a total surface area of 8,513.2556 hectares under the group head mining claim called "Plomosas", title certificate No. 168698 (the "Plomosas Grouping").

As a result of our search done at the GBM, we found that La Rastra filed the exploitation work assessment reports with respect to the Plomosas Grouping, for the latest five years. This evidences fulfilment of the obligation to which this subparagraph a. refers.



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Regarding the 2020 fiscal year the amount of \$23,504,440 MXP must be invested by La Rastra in the Plomosas Grouping. According to the latest assessment work report submitted by La Rastra in the GBM, the Plomosas Grouping has a superavit of \$44,191,646 MXP, which can be used total or partially for this 2020 fiscal year and/or the following years.

b. <u>Mining Duties</u>. During the months of January and July of each year, the concession holders must pay the mining duties (the "Mining Duties Payments") for the areas that pertain to each concession (on a per hectare basis).

As a result of our research done at the GBM, we found that La Rastra filed evidence of the Mining Duties Payments for the latest five years and covering the period ending June 30, 2020. This confirms fulfilment of the obligation to which this subparagraph b. refers.

In order to maintain the Concessions in good standing, La Rastra must pay the mining duties amounting \$1,449,214.00 MXP, during the month of July 2020 as a second biannual payment. From January of each fiscal year the amount of mining duties is updated according to publication in the Federal Official Gazette.

c. <u>Production Report.</u> During the first 30 working days of each year, the concession holders must file before the GBM, using the authorized forms and applications, the ore Production Reports including accurate information on the minerals and production obtained on each concession or group of concessions for the immediately preceding calendar year for statistical purposes.

As a result of our search done at the GBM, we found that the Concessions holder has filed the production reports with respect to the Concessions on time.

d. Technical Report. The holders must file the technical information, using the authorized formats, including information in respect of the works performed in the property during its concession validity. This obligation starts on the 6th year of each concession's validity.

As a result of our search done at the GBM, we found that the Concessions holder has filed the technical reports with respect to the Concessions on time.





## VII. Mining Cartography.

Based on information obtained at the GBM, the Concessions have the following mapping location, which appears in the map attached hereto as Schedule "A".

#### VIII. Relevant environmental regulation on mining activities.

The main environmental regulations applicable to the mining sector regarding exploration activities are mentioned below, however, there are official Mexican environmental standards that address other issues such as water, wastewater discharges, emissions into the atmosphere, hazardous waste, among others, which must also be fulfilled in due course.

#### **Exploration Activities**.

Prior to starting any work and/or exploration activity, authorizations from the Ministry of Environment and Natural Resources ("SEMARNAT") must be obtained. At this stage certain authorizations can be required regarding environmental impact, change of land use of forest land and works and/or activities in Natural Protected areas.

To request the authorization for an exploration project, filing of an Exploration Preventive Report ("PR") or an Environmental Impact Statement ("EIS") is required, which will be subject to the characteristics of each project.

A PR may be submitted if the project meets the specifications provided in the Official Mexican Standard NOM-120-SEMARNAT-2011; the foregoing, without prejudice to the fact that the SEMARNAT, once analyzed said report, determines that the submission of an EIS is required with respect to the project in question.

EIS is the document by means of which, based on studies, the environmental, significant and potential impact that a work or activity would generate is disclosed, as well as the way to avoid or mitigate it when such impact is negative.

In order to start its exploration activities in the mining claims covered by the Concessions, in 2017 La Rastra submitted a PR to SEMARNAT, which was authorized by the environmental authority according to permit number SG/145/2.1.1/1015/17.-1773 dated on September 28, 2017 valid for five years (2022).





## IX. Opinion.

Based on our research done at the GBM and the Registry, DBR is of the opinion that:

- IX.1 La Rastra is registered with the Registry as a company duly incorporated pursuant to the mining legislation of Mexico, and since it: (a) has a corporate purpose that provides, among other things, the exploration and exploitation of minerals or substances subject to the application of the Mining Law; (b) has its legal domicile within Mexico; and (c) has participation by foreign investors that complies with the provisions of the Foreign Investment Law, it is our opinion that La Rastra is legally qualified to hold the Concessions.
- IX.2 Except for the payment of royalties in terms of the IMMSA Transfer Agreement, there are no outstanding obligations pursuant to agreements with IMMSA that need to be fulfilled in order to maintain ownership of the Concessions.
- DL3 Having found that La Rastra filed the exploitation work assessment reports with respect to the Plomosas Grouping on time, for the latest five years, the Concessions are up to date on fulfilment of the obligation to which section VL a. above refers.
- IX.4 Having found that La Rastra filed before the GBM evidence of the mining duties payments for the latest five years and covering the period ending June 30, 2020, the Concessions are up to date on fulfilment of the obligation to which section VI. b. above refers.
- DX.5 Other than mining duties and other regulatory requirements described hereto, pursuant to Applicable Laws, there are no outstanding obligations that need to be fulfilled presently in order to maintain the legal ownership of the Concessions.
- IX.6 Based on that stated in section VIII. above, La Rastra has the authorization to conduct exploration works in the Concessions valid until September 27, 2022.
- DX.7 Based on our research done at the GBM, it is our opinion that the Concessions are in good standing, and except for the IMMSA Royalties and the First Majestic Royalty, the Concessions are free of any liens or encumbrances, and currently valid for purposes of exploitation of the properties covered by their certificates issued by the GBM, pursuant to the Mexican mining legislation.

We, DBR, are a law firm qualified to practice law in Mexico. We express no opinion as to any laws other than the federal laws of Mexico and we have assumed that there is nothing in any other law that affects our opinion, which is delivered, based upon applicable law as of the date hereof. In particular, we have made no independent investigation of the laws of Canada

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or any jurisdiction thereof as a basis for the opinions stated herein and do not express or imply any opinion on or based on the criteria or standards provided for in such laws. We express no opinions as to any matters (including change of law or other circumstances) arising subsequent to the date hereof.

In order to provide this opinion, we have assumed: (i) the authenticity of all of the documents provided, (ii) the genuineness of all of the signatures in the documents, (iii) the validity and authenticity of all of the seals affixed thereto, and (iv) the veracity of all of the representations made and information provided in all of those documents.

This opinion is solely for the benefit of the addressees, and no other entity or person shall be entitled to rely on its contents without the express written consent of GR Silver or DBR Abogados, S.C.

Should you have any questions with respect to this opinion, please do not hesitate to call on us.

Very truly yours,

DBR Abogados, S.C.

Juan Manuel Gonzalez Olguin

Senior Partner

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Schedule "A"

















